Intuity™ CONVERSANT® System
Version 7.0
Administration
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- The equipment shall go on-hook for a period of not less than 30 seconds between the end of one attempts and the beginning of the next attempt.

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## Contents

### Copyright and Legal Notices

- Copyright ................................................................. ii
- Acknowledgment ...................................................... ii
- Trademarks ............................................................ ii
- Limited Warranty .................................................... iv
- United States FCC Compliance Information ................ iv
- Canadian Department of Communications (DOC) Interference Information .................... v
- European Union Declaration of Conformity ........................ v
- Telecom New Zealand Ltd Warning Notices ................................... vii
- Toll Fraud ............................................................. vii
- Documentation Ordering Information .............................. viii

### About This Book

- Overview .............................................................. xxxv
- Intended Audience ................................................. xxxvi
- How to Use This Book ............................................. xxxvi
- Administration Procedures and Information .................. xxxvi
- Reference Material ................................................ xxxviii
- Conventions Used in This Book ................................. xxxix
Terminology ................................................................. xxxix
Keyboard and Telephone Keypad Representations ................. xlii
Cross References and Hypertext .................................... xliii
Screen Displays ............................................................ xliii
Other Typography .......................................................... xliv
Safety and Security Alert Labels ...................................... xlv
Getting Help ............................................................... xlvii
Technical Assistance ..................................................... xlvii
Web Site ........................................................................ xlvii
Contact Numbers ............................................................ xlvii
Related Resources ........................................................... xlviii
Training ......................................................................... xlviii
Documentation ............................................................... xlix
Using the CD-ROM Documentation ..................................... li
Setting the Default Magnification ........................................ li
Adjusting the Window Size ................................................ li
Hiding and Displaying Bookmarks ...................................... li
Using the Button Bar ....................................................... li
Using Hypertext Links ..................................................... li
Navigating with Double Arrow Keys ................................... li
Searching for Topics ..................................................... li
Displaying Figures ........................................................... lii
Printing the Documentation ............................................. lii
How To Comment on This Book ......................................... liii
## 2 UNIX Administration

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overview</td>
<td>22</td>
</tr>
<tr>
<td>UnixWare Documentation</td>
<td>23</td>
</tr>
<tr>
<td>UNIX System Administration Access</td>
<td>23</td>
</tr>
<tr>
<td>Application Administration</td>
<td>25</td>
</tr>
<tr>
<td>Backup Scheduling, Setup, and Control</td>
<td>26</td>
</tr>
<tr>
<td>Basic Backup</td>
<td>28</td>
</tr>
<tr>
<td>Backup History</td>
<td>29</td>
</tr>
<tr>
<td>Backup of All Personal Files</td>
<td>30</td>
</tr>
<tr>
<td>Backup of Selected Personal Files</td>
<td>31</td>
</tr>
<tr>
<td>Schedule a Backup to Tape</td>
<td>33</td>
</tr>
<tr>
<td>Performing Extended Backup Services</td>
<td>42</td>
</tr>
<tr>
<td>File System Creation, Checking, and Mounting</td>
<td>43</td>
</tr>
<tr>
<td>Machine Configuration, Display, and Shutdown</td>
<td>44</td>
</tr>
<tr>
<td>Memory Size Disparity</td>
<td>45</td>
</tr>
<tr>
<td>Network Services Administration</td>
<td>46</td>
</tr>
<tr>
<td>Port Access Services and Monitors</td>
<td>47</td>
</tr>
<tr>
<td>Printer Configuration and Services</td>
<td>47</td>
</tr>
<tr>
<td>Restore From Backup Data</td>
<td>48</td>
</tr>
<tr>
<td>Performing Basic Restore Services</td>
<td>48</td>
</tr>
<tr>
<td>Performing Extended Restore Services</td>
<td>49</td>
</tr>
<tr>
<td>Schedule Automatic Task</td>
<td>50</td>
</tr>
</tbody>
</table>
3 Voice System Administration

Overview ................................................................. 58
Accessing the Voice System Administration Menu ........ 58
  Voice System Administration Menu Options ................. 59
    Application Package Administration ..................................... 60
    Backup/Restore ................................................................. 60
    Configuration Management .................................................. 60
    Feature Packages .............................................................. 61
    Reports ........................................................................... 61
    Script Builder Applications .................................................. 62
    Switch Interfaces ................................................................. 62
    System Monitor ................................................................. 62
    Unix Management ............................................................... 62
  Configuration Management .............................................. 63
  Feature Licensing ........................................................... 64
  Print a Feature License Report ......................................... 66
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Host Configuration</td>
<td>67</td>
</tr>
<tr>
<td>Access Host Sessions</td>
<td>68</td>
</tr>
<tr>
<td>Show Host Session Screens Window</td>
<td>69</td>
</tr>
<tr>
<td>Specify Terminal Emulator Sessions</td>
<td>70</td>
</tr>
<tr>
<td>Configure Host Sessions</td>
<td>71</td>
</tr>
<tr>
<td>Assign Host Sessions</td>
<td>72</td>
</tr>
<tr>
<td>Free a Host Sessions</td>
<td>74</td>
</tr>
<tr>
<td>Login Host Sessions</td>
<td>75</td>
</tr>
<tr>
<td>Logout Host Sessions</td>
<td>76</td>
</tr>
<tr>
<td>Renumber Host Sessions</td>
<td>78</td>
</tr>
<tr>
<td>Unassign Host Sessions</td>
<td>78</td>
</tr>
<tr>
<td>Display Host Sessions</td>
<td>80</td>
</tr>
<tr>
<td>Host Sessions: Actions Menu</td>
<td>84</td>
</tr>
<tr>
<td>Access the SDLC Protocol Menu</td>
<td>88</td>
</tr>
<tr>
<td>Add an SDLC Protocol</td>
<td>89</td>
</tr>
<tr>
<td>Change an SDLC Protocol</td>
<td>92</td>
</tr>
<tr>
<td>Deleting an SDLC Protocol</td>
<td>94</td>
</tr>
<tr>
<td>Diagnose the SDLC Connection</td>
<td>95</td>
</tr>
<tr>
<td>Display an SDLC Protocol</td>
<td>96</td>
</tr>
<tr>
<td>View SDLC Connection Information</td>
<td>97</td>
</tr>
<tr>
<td>Rename an SDLC Protocol</td>
<td>98</td>
</tr>
<tr>
<td>Access the Token Ring Protocol Menu</td>
<td>99</td>
</tr>
<tr>
<td>Add Token Ring Protocol</td>
<td>100</td>
</tr>
<tr>
<td>Change a Token Ring Protocol</td>
<td>102</td>
</tr>
<tr>
<td>Delete a Token Ring Protocol</td>
<td>104</td>
</tr>
</tbody>
</table>
Intuity™ CONVERSANT® System Version 7.0 Administration

Display a Token Ring Protocol .................................................. 105
Rename a Token Ring Protocol ................................................ 106
Message Administration ............................................................... 107
  Access Message Administration ............................................. 108
  Add Message Destinations .................................................... 111
  Remove Message Destinations .............................................. 113
  Add Thresholds ................................................................. 115
  Remove Thresholds ............................................................. 117
  Modify Message Priorities .................................................... 118
  Modify Threshold Periods .................................................... 119
  Save Changes and Exit Message Administration ..................... 122
Remote Alarming Administration ............................................... 123
  Access Remote Alarming Administration ................................ 123
System Control ................................................................. 126
  Diagnose ............................................................. 127
    Diagnose Equipment ................................................ 127
    Voice Port Loop Around Test ........................................ 130
  Renumber Voice Channels ................................................. 133
  Report Voice System Status .............................................. 135
  Stop the Voice System .................................................... 136
  Shut Down the System .................................................... 138
  Start the Voice System ................................................... 139
Voice Equipment ............................................................... 140
  Display the Voice Equipment Window ................................ 142
Modify the Display Voice Equipment Window Parameters .......................... 144
Equipment Options .................................................................................. 147
Equipment State ....................................................................................... 150
   Suggestions for Changing the Maintenance State of Channels ............. 154
Groups to Channels .................................................................................. 157
   Assign Groups to Channels .................................................................. 157
   Unassign Groups to Channels .............................................................. 159
PBX Extension .......................................................................................... 160
   Assign PBX Extension ........................................................................ 161
   Unassigning PBX Extensions from Channels ...................................... 162
SSP Functions ........................................................................................... 163
   Assign SSP Functions ......................................................................... 163
   Display SP/SSP Functions .................................................................. 166
PBX Extension .......................................................................................... 168
   Assign PBX Extension ........................................................................ 168
   Unassigning PBX Extensions from Channels ...................................... 169
Voice Services ........................................................................................... 170
   Channel Services ............................................................................... 171
   Number Services ................................................................................ 178
Print a Voice Equipment Report ................................................................. 184

4 Feature Package Administration ................................................................ 185
   Overview .............................................................................................. 185
   Script Builder Fax Actions Administration .......................................... 186
FAX Transmission Control .................................................. 187
  Update the FAX Transmission Control Window .................. 191
  Remove a Fax From the FAX Transmission Control Window ...... 192
  Load and Print Faxes. ................................................... 192
ASAI Administration ...................................................... 195
  Channel Administration ................................................ 198
    Add a Channel Entry ............................................... 202
    Change a Channel Entry ......................................... 203
    Remove a Channel Entry ......................................... 205
    Log In a Channel .................................................. 205
    Log Out a Channel ................................................ 206
Domain Administration ................................................... 207
  Add a Domain .......................................................... 213
  Change a Domain ...................................................... 214
  Remove a Domain ...................................................... 216
  Enable a Domain ....................................................... 216
  Disable a Domain ..................................................... 217
Parameter Administration ................................................ 217
  Show the ASAI Software Version ................................. 220
  Show the Status of the ASAI Link ............................... 222
UCID Administration ..................................................... 223

5 Switch Interface Administration ................................. 226
  Overview .............................................................. 226
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switch Interfaces Hardware</td>
<td>227</td>
</tr>
<tr>
<td>Analog Interfaces</td>
<td>227</td>
</tr>
<tr>
<td>Digital Interfaces</td>
<td>228</td>
</tr>
<tr>
<td>Access the Switch Interfaces Menu</td>
<td>230</td>
</tr>
<tr>
<td>Analog Interfaces</td>
<td>231</td>
</tr>
<tr>
<td>Access the Analog Interfaces Window</td>
<td>232</td>
</tr>
<tr>
<td>Set Default Analog Interfaces Parameters</td>
<td>233</td>
</tr>
<tr>
<td>Set Analog Interfaces Parameters</td>
<td>238</td>
</tr>
<tr>
<td>Standard Analog Interface Parameters</td>
<td>239</td>
</tr>
<tr>
<td>Blind Transfer Actions</td>
<td>242</td>
</tr>
<tr>
<td>Intelligent Transfer Actions</td>
<td>243</td>
</tr>
<tr>
<td>Print Analog Interface Information</td>
<td>245</td>
</tr>
<tr>
<td>Non-US Analog Switch Integration</td>
<td>245</td>
</tr>
<tr>
<td>Country-Specific Switch Packages</td>
<td>246</td>
</tr>
<tr>
<td>Digital Interfaces</td>
<td>247</td>
</tr>
<tr>
<td>Access the Digital Interfaces Menu</td>
<td>247</td>
</tr>
<tr>
<td>Display Digital Interface Assignments</td>
<td>248</td>
</tr>
<tr>
<td>Supported Digital Protocol Parameters</td>
<td>250</td>
</tr>
<tr>
<td>Line Side Protocols</td>
<td>255</td>
</tr>
<tr>
<td>Line Side DEFINITY Protocol</td>
<td>255</td>
</tr>
<tr>
<td>Line Side Galaxy Protocol</td>
<td>270</td>
</tr>
<tr>
<td>E1 CAS P2 - Australian DEFINITY Protocol</td>
<td>283</td>
</tr>
<tr>
<td>E1 CAS P2 - Australian Network Protocol</td>
<td>293</td>
</tr>
<tr>
<td>T1 A/B Robbed-bit E&amp;M Protocol</td>
<td>303</td>
</tr>
</tbody>
</table>
6 Database Administration

Overview .................................................. 342
Databases and the Voice System ......................... 342
Call Data Tables .......................................... 343
CCA Table ................................................ 345
CCASUM Table ........................................... 345
Voice System Database Administration ........................................ 376
Database Access ID Table Window........................................... 377
Database Access IDs ......................................................... 378
Add a Local Database Access ID ........................................... 379
Add a Remote Database Access ID Using SQL*NET V2 .......... 381
Completing ORACLE Environment Setup if Server is Not an Intuity CONVERSANT Server .................................................. 386
Accessing a Remote Database Using PRO*C or SQL*PLUS .......... 387
  Setting the Connect Descriptor ........................................ 387
  Setting Environment Variables ........................................ 388
Remove a Database Access ID .............................................. 393
SQL*PLUS Database Administration ....................................... 395
Administration for Applications and Databases ...................... 395
  Application Conventions ............................................... 396
Monitor the Database .......................................................... 396
  Database Commands .................................................... 396
  The dbcheck Command .................................................. 397
  The dbfree Command ................................................... 398
  The dbfrag Command ................................................... 399
  The dbused Command ................................................... 400
  Database Trace Files .................................................. 401

7 Peripheral Administration .................................................. 402
  Overview ........................................................................ 402
<table>
<thead>
<tr>
<th>Topics</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access the Unix Management Menu</td>
<td>403</td>
</tr>
<tr>
<td>Modem Administration</td>
<td>405</td>
</tr>
<tr>
<td>Install the Modem</td>
<td>405</td>
</tr>
<tr>
<td>Configure the Modem</td>
<td>406</td>
</tr>
<tr>
<td>Configure the Modem Via the Modem Control Panel</td>
<td>406</td>
</tr>
<tr>
<td>Configure the Modem Via a Terminal</td>
<td>413</td>
</tr>
<tr>
<td>Administer the Modem</td>
<td>415</td>
</tr>
<tr>
<td>Administering the Voice System to Recognize the Modem</td>
<td>415</td>
</tr>
<tr>
<td>Setting Up UnixWare to Use a Modem for Outgoing Calls</td>
<td>418</td>
</tr>
<tr>
<td>Setting Up UnixWare to Use a Modem for Incoming Calls</td>
<td>421</td>
</tr>
<tr>
<td>Printer Administration</td>
<td>427</td>
</tr>
<tr>
<td>Install the Printer</td>
<td>428</td>
</tr>
<tr>
<td>Configure the Printer on the Voice System</td>
<td>428</td>
</tr>
<tr>
<td>Administer the Printer on the Voice System</td>
<td>438</td>
</tr>
<tr>
<td>Set Up Printer</td>
<td>440</td>
</tr>
<tr>
<td>Remote Terminal Administration</td>
<td>441</td>
</tr>
<tr>
<td>Configure the Remote Terminal</td>
<td>442</td>
</tr>
<tr>
<td>Administer the Remote Terminal</td>
<td>444</td>
</tr>
<tr>
<td>TCP/IP Administration</td>
<td>446</td>
</tr>
<tr>
<td>Administer TCP/IP</td>
<td>446</td>
</tr>
</tbody>
</table>

8 Common Administration | 449 |

Overview | 449
<table>
<thead>
<tr>
<th>Command Menu</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access the Command Menu</td>
<td>450</td>
</tr>
<tr>
<td>System Monitor</td>
<td>450</td>
</tr>
<tr>
<td>Access System Monitor</td>
<td>451</td>
</tr>
<tr>
<td>Service Status Column</td>
<td>453</td>
</tr>
<tr>
<td>Change the System Monitor Refresh Rate</td>
<td>456</td>
</tr>
<tr>
<td>Print System Monitor-Voice Channel Report</td>
<td>457</td>
</tr>
<tr>
<td>Trace Service</td>
<td>457</td>
</tr>
<tr>
<td>Perform a Trace</td>
<td>458</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reports Administration</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access Reports Administration Menu</td>
<td>460</td>
</tr>
<tr>
<td>Call Classification Report</td>
<td>462</td>
</tr>
<tr>
<td>Display the Call Classification Report</td>
<td>463</td>
</tr>
<tr>
<td>Modify the Call Classification Report</td>
<td>465</td>
</tr>
<tr>
<td>Print the Call Classification Report</td>
<td>468</td>
</tr>
<tr>
<td>Update the Call Classification Report</td>
<td>469</td>
</tr>
<tr>
<td>Call Data Detail Report</td>
<td>469</td>
</tr>
<tr>
<td>Display the Call Data Detail Report</td>
<td>470</td>
</tr>
<tr>
<td>Modify the Call Data Detail Report</td>
<td>472</td>
</tr>
<tr>
<td>Print the Call Data Detail Report</td>
<td>475</td>
</tr>
<tr>
<td>Update the Call Data Detail Report</td>
<td>476</td>
</tr>
<tr>
<td>Call Data Summary Report</td>
<td>477</td>
</tr>
<tr>
<td>Display the Call Data Summary Report</td>
<td>477</td>
</tr>
<tr>
<td>Modify the Call Data Summary Report</td>
<td>480</td>
</tr>
<tr>
<td>Print the Call Data Summary Report</td>
<td>483</td>
</tr>
</tbody>
</table>
Update the Call Data Summary Report ........................................ 484
Form Filler Plus Reports ........................................................... 484
   Access Form Filler Plus Reports ............................................ 485
   Call Record Summary Report ................................................ 485
   Display Call Record Summary Report ...................................... 486
   Print the Call Record Summary Report .................................... 489
Last Audit Report ..................................................................... 489
Display Last Audit Report ........................................................ 490
Print Last Audit Report ............................................................. 491
Out of Call Fax Report ............................................................... 491
   Display the Out of Call Fax Report ......................................... 492
   Modify the Out of Call Fax Report ......................................... 496
   Print the Out of Call Fax Report ............................................ 498
Update the Fax Report .............................................................. 499
Message Log Report .................................................................. 500
   Display the Message Log Report ............................................ 500
   Explain Message Log Report ................................................ 504
   Modify the Message Log Report ............................................ 505
   Print the Message Log Report ............................................. 509
Update the Message Log Report ................................................ 510
Administrative Commands Log Report ........................................ 510
   Commands/ Activities Included in the Report ......................... 511
   Administrative Commands Log Report Content ....................... 511
   Display the Administrative Commands Log Report .................. 512
Print the Administrative Commands Log Report ......................... 516
<table>
<thead>
<tr>
<th>Command</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Update the Administrative Commands Log Report</td>
<td>517</td>
</tr>
<tr>
<td>Traffic Report</td>
<td>518</td>
</tr>
<tr>
<td>Display the Traffic Report</td>
<td>519</td>
</tr>
<tr>
<td>Modify the Traffic Report</td>
<td>520</td>
</tr>
<tr>
<td>Print the Traffic Report</td>
<td>523</td>
</tr>
<tr>
<td>Update the Traffic Report</td>
<td>524</td>
</tr>
<tr>
<td>Signal Processing Activity Report</td>
<td>524</td>
</tr>
<tr>
<td>Data Collection for Signal Processing Activity Report</td>
<td>525</td>
</tr>
<tr>
<td>Custom Database Reports</td>
<td>526</td>
</tr>
<tr>
<td>Common Administrative Procedures</td>
<td>527</td>
</tr>
<tr>
<td><strong>Appendix A: Summary of Commands</strong></td>
<td>528</td>
</tr>
<tr>
<td>Overview</td>
<td>528</td>
</tr>
<tr>
<td>3270dip_off</td>
<td>542</td>
</tr>
<tr>
<td>3270dip_on</td>
<td>543</td>
</tr>
<tr>
<td>add</td>
<td>544</td>
</tr>
<tr>
<td>addhdr</td>
<td>546</td>
</tr>
<tr>
<td>alarm disable</td>
<td>547</td>
</tr>
<tr>
<td>alarm display</td>
<td>548</td>
</tr>
<tr>
<td>alarm enable</td>
<td>549</td>
</tr>
<tr>
<td>alarm help</td>
<td>550</td>
</tr>
<tr>
<td>alarm reinit</td>
<td>551</td>
</tr>
<tr>
<td>alarm retire</td>
<td>552</td>
</tr>
<tr>
<td>Command</td>
<td>Page</td>
</tr>
<tr>
<td>--------------------</td>
<td>------</td>
</tr>
<tr>
<td>alarm status</td>
<td>553</td>
</tr>
<tr>
<td>alarm test</td>
<td>554</td>
</tr>
<tr>
<td>annotate</td>
<td>555</td>
</tr>
<tr>
<td>assign card/channel</td>
<td>556</td>
</tr>
<tr>
<td>assign_permissions</td>
<td>558</td>
</tr>
<tr>
<td>assign service/startup</td>
<td>560</td>
</tr>
<tr>
<td>attach</td>
<td>563</td>
</tr>
<tr>
<td>autoreboot</td>
<td>566</td>
</tr>
<tr>
<td>backup_appl</td>
<td>568</td>
</tr>
<tr>
<td>bbs</td>
<td>571</td>
</tr>
<tr>
<td>bk_appl</td>
<td>573</td>
</tr>
<tr>
<td>ccarpt</td>
<td>575</td>
</tr>
<tr>
<td>cddrpt</td>
<td>576</td>
</tr>
<tr>
<td>cdsrpt</td>
<td>579</td>
</tr>
<tr>
<td>checktf</td>
<td>581</td>
</tr>
<tr>
<td>codetype</td>
<td>583</td>
</tr>
<tr>
<td>configure</td>
<td>584</td>
</tr>
<tr>
<td>copy</td>
<td>590</td>
</tr>
<tr>
<td>cpuType</td>
<td>592</td>
</tr>
<tr>
<td>cvis_mainmenu</td>
<td>592</td>
</tr>
<tr>
<td>cvis_menu</td>
<td>593</td>
</tr>
<tr>
<td>dbcheck</td>
<td>594</td>
</tr>
</tbody>
</table>
dbfrag .................................................. 598
dbfree ................................................ 600
dbused ................................................. 602
decode .................................................. 604
defService ........................................... 605
delete card/channel .................................. 608
delete eqgrp .......................................... 610
delete service/startup ................................ 611
detach ................................................... 614
diagnose bus .......................................... 617
diagnose card ......................................... 618
dip_int .................................................. 622
display assignments .................................. 624
display card ........................................... 626
display channel ........................................ 633
display dnis ........................................... 635
display eqgrp/group .................................. 636
display messages ...................................... 637
display_permissions ................................... 649
display services ...................................... 650
edExplain ................................................ 651
encode .................................................. 653
erase .......................................................... 654
explain .......................................................... 656
faxit ............................................................ 660
Conversion Tools ............................................. 663
faxlog .......................................................... 664
faxq ............................................................ 665
faxrpt .......................................................... 668
findHomes ....................................................... 671
fixLogFile ....................................................... 673
get_config ....................................................... 676
gse .............................................................. 677
gse_add ........................................................ 679
gse_addpl ....................................................... 681
gse_copy ........................................................ 683
gse_copypl ...................................................... 685
hasRAID ........................................................ 686
hassign .......................................................... 687
hcapture ........................................................ 689
hconfig .......................................................... 692
hdefine ........................................................ 695
hdelete ........................................................ 698
hdiagnose ....................................................... 699
<table>
<thead>
<tr>
<th>Command</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>hdisplay</td>
<td>700</td>
</tr>
<tr>
<td>hdump</td>
<td>701</td>
</tr>
<tr>
<td>hfree</td>
<td>703</td>
</tr>
<tr>
<td>hlogin</td>
<td>704</td>
</tr>
<tr>
<td>hlogout</td>
<td>705</td>
</tr>
<tr>
<td>hnewscript</td>
<td>706</td>
</tr>
<tr>
<td>hsend</td>
<td>708</td>
</tr>
<tr>
<td>hspy</td>
<td>709</td>
</tr>
<tr>
<td>hstatus</td>
<td>711</td>
</tr>
<tr>
<td>iCk, iCkAdmin</td>
<td>713</td>
</tr>
<tr>
<td>install_appl</td>
<td>733</td>
</tr>
<tr>
<td>install_sw</td>
<td>735</td>
</tr>
<tr>
<td>lan_chk</td>
<td>737</td>
</tr>
<tr>
<td>lComp</td>
<td>740</td>
</tr>
<tr>
<td>list</td>
<td>743</td>
</tr>
<tr>
<td>logCat</td>
<td>745</td>
</tr>
<tr>
<td>logDstPri</td>
<td>751</td>
</tr>
<tr>
<td>logEvent/logMsg</td>
<td>753</td>
</tr>
<tr>
<td>logFmt</td>
<td>757</td>
</tr>
<tr>
<td>logit</td>
<td>760</td>
</tr>
<tr>
<td>logTest</td>
<td>762</td>
</tr>
<tr>
<td>mkAlerter</td>
<td>764</td>
</tr>
</tbody>
</table>
mkheader ................................................................. 767
mkimage ................................................................. 775
msgadm ................................................................. 778
newscript .............................................................. 783
pkgadd ................................................................. 784
pkginfo ................................................................. 787
pkgrm ................................................................. 791
raidconf .............................................................. 793
raidok ................................................................. 795
raidstat ............................................................... 796
reinitLog .............................................................. 800
remove ................................................................. 801
remove_appl .......................................................... 805
remove_sw ............................................................ 807
restore ................................................................. 808
restore_appl .......................................................... 812
rmdb ................................................................. 814
rs_appl ................................................................. 817
save_config ........................................................... 819
sb_backup ............................................................. 820
sb_restore ............................................................ 821
sb_te ................................................................. 822
<table>
<thead>
<tr>
<th>Command</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>sb_trace</td>
<td>824</td>
</tr>
<tr>
<td>show_config</td>
<td>828</td>
</tr>
<tr>
<td>show_devices</td>
<td>830</td>
</tr>
<tr>
<td>show_sys</td>
<td>831</td>
</tr>
<tr>
<td>soft_disc</td>
<td>834</td>
</tr>
<tr>
<td>soft_szr</td>
<td>836</td>
</tr>
<tr>
<td>spadc</td>
<td>837</td>
</tr>
<tr>
<td>spar</td>
<td>839</td>
</tr>
<tr>
<td>spCtlFlags</td>
<td>844</td>
</tr>
<tr>
<td>spres</td>
<td>849</td>
</tr>
<tr>
<td>spsav</td>
<td>851</td>
</tr>
<tr>
<td>spStatus</td>
<td>852</td>
</tr>
<tr>
<td>spVrsion</td>
<td>861</td>
</tr>
<tr>
<td>start_hi</td>
<td>862</td>
</tr>
<tr>
<td>start_vs</td>
<td>863</td>
</tr>
<tr>
<td>stop_hi</td>
<td>864</td>
</tr>
<tr>
<td>stop_vs</td>
<td>865</td>
</tr>
<tr>
<td>striphdr</td>
<td>866</td>
</tr>
<tr>
<td>sysmon</td>
<td>867</td>
</tr>
<tr>
<td>tas</td>
<td>868</td>
</tr>
<tr>
<td>tif2tif</td>
<td>871</td>
</tr>
<tr>
<td>tif2tif.exe</td>
<td>874</td>
</tr>
</tbody>
</table>
Appendix B: Country Switch Packages

Overview ......................................................... 900
Tunable Analog Circuit Card/Line Parameters ................. 901
Country-Specific Switch Packages ............................ 905
Country Switch Package Supported Call Progress Tones .... 1017
# Appendix C: Format Conversion Tools for Fax Files

## Overview

- File Inputs
- `tif2itf.exe` as a Post-Processor for the TiffWorks Driver

## Task Overview

- Requirements
- Installing the `tif2itf.exe` Tool for Windows Systems
  - Creating an Installation Diskette
  - Installing the Software
  - Uninstalling the Software
- Installing the TiffWorks Driver for the `tif2itf.exe` Post-Processor
- Converting Documents With the TiffWorks Driver and `tif2itf.exe` Tool
  - Converting a Hijaak Pro 4.01 Image File
  - Converting an HP Deskscan II Image File
  - Converting TIFF and FTF Files to Intuity CONVERSANT Fax Files
    - Optional Parameters
    - Cautions

## Glossary

Index
Overview

This book describes the procedures needed to perform full system administration for the Intuity CONVERSANT system in the following areas:

- The UNIX operating system
- The voice system
- Specialized feature packages
- Databases
- Switch interfaces

This document also describes the procedures needed to create and access system reports and to monitor the system.
Intended Audience

The primary audience for this document are system administrators. This includes:

- On-site technicians who perform system administration at the customer site
- End customers who choose to administer their own systems

The secondary audience includes personnel from the Technical Service Organization (TSO) who support the on-site technicians or customers.

We assume that the primary users of this book have completed the Intuity CONVERSANT administration course (see Training on page xlviii).

How to Use This Book

This book is designed to step you through the system administration process. Each chapter contains procedures for a specific product area that requires administration.

- Chapter 1, Administration Overview — familiarizes you with the user interface and the system administration process, including the user interface and the menus.
• Chapter 2, UNIX Administration — contains information about how to access the SYSADM menu, as well as the procedures to perform basic UnixWare-level administration.

• Chapter 3, Voice System Administration — contains information about how to access the Voice System Administration menu, and describes all the administrative options. This chapter contains the reference and procedural information for the Configuration Management option.

• Chapter 4, Feature Package Administration — contains information about administering Fax Actions and ASAI for use with the voice system.

• Chapter 5, Switch Interface Administration — contains procedures and reference information for administering the supported analog and digital switch interfaces.

• Chapter 6, Database Administration — contains procedures and information for administering databases for use with the voice system.

• Chapter 7, Peripheral Administration — contains procedures and information for configuring and administering the peripheral equipment connected to the voice system, namely modems, printers, and remote terminals.
• **Chapter 8, Common Administration** — contains quick reference information about some of the more common administrative tasks. Daily administration includes running system reports, common procedures such as system monitoring, media formatting, backups, and administering the date and time.

**Reference Material**

• **Appendix A, Summary of Commands** — provides an alphabetical list of every command in the Intuity CONVERSANT system command language.

• **Appendix B, Country Switch Packages** — provides an alphabetical list of the country-specific switch package for every country where the CONVERSANT system is sold, for both the DEFINITY switch and for public switched telephone networks (PSTNs). Also included in this appendix is a list of tunable circuit card/line parameters.

• **Glossary** — defines the terms, abbreviations, and acronyms used in the system documentation.

• **Index** — Alphabetically lists the principal subjects covered in the book.
Conventions Used in This Book

Understanding the typographical and other conventions used in this book is necessary to interpret the information.

Terminology

- The word “type” means to press the key or sequence of keys specified. For example, an instruction to type the letter “y” is shown as
  Type `y` to continue.
- The word “enter” means to type a value and then press the **ENTER** key on the keyboard. For example, an instruction to type the letter “y” and press **ENTER** is shown as
  Enter `y` to continue.
- The word “select” means to move the cursor to the desired menu item and then press **ENTER**. For example, an instruction to move the cursor to the start test option on the Network Loop-Around Test screen and then press **ENTER** is shown as
  Select **Start Test**.
- The system displays menus, screens, and windows. Menus allow you to select options or to choose to view another menu, screen, or window (Figure 1 on page xl). Screens and windows both show and request system information (Figure 2 on page xl through Figure 5 on page xlii).
Note: Screens shown in this book are examples only. The screens you see on your machine will be similar, but not exactly the same.

Figure 1. Example of an Intuity CONVERSANT Menu

Figure 2. Example of an Intuity CONVERSANT Window Showing Information
UnixWare Installation

In order to install LINCS, you should reserve a UNIX system partition (a portion of your hard disk’s space) containing 100% of the space on your primary hard disk. After you press ‘ENTER’ you will be shown a screen that will allow you to create new partitions, delete existing partitions or change the active partition of your primary hard disk (the partition that your computer will boot from).

WARNING: All files in any partition(s) you delete will be destroyed. If you wish to attempt to preserve any files from an existing UNIX system, do not delete its partitions(s).

The UNIX system partition that you intend to use on the primary hard disk must be at least 4200 MBs and labeled "ACTIVE."

Press ‘ENTER’ to continue
Figure 5. Example of Intuity CONVERSANT Screen Requesting Information

UNIX System Installation
Set Slice Sizes

Please select whether you would like the recommended slice sizes or would like to customize the slice sizes.

Your choices are:
1. Recommended Slice Sizes
2. Customize Slice Sizes

Press ‘1’ or ‘2’ followed by ‘ENTER’: 1

• Keys that you press on your terminal or PC are represented as small capitalized **BOLD** text. For example, an instruction to press the enter key is shown as
  
  Press **ENTER**.

• Two or three keys that you press at the same time on your terminal or PC (that is, you hold down the first key while pressing the second and/or third key) are represented in small capitalized **BOLD** text. For example, an instruction to press and hold the Alt key while typing the letter “d” is shown as

  Press **ALT + D**.
About This Book

• Function keys on your terminal, PC, or system screens, also known as soft keys, are represented as small capitalized **BOLD** text followed by the function or value of that key enclosed in parentheses. For example, an instruction to press function key 3 is shown as

  Press **F3** (Choices).

• Keys that you press on your telephone keypad appear in small capitalized **BOLD** text. For example, an instruction to press the first key on your telephone keypad is shown as

  Press **1** to record a message.

Conventions Used in This Book

• Cross References and Hypertext

  **Blue underlined** type indicates a cross reference or hypertext link that takes you to another location in the document when you click on it with your mouse.

• Screen Displays

  • Values, system messages, field names, prompts that appear on the screen, and simulated screen displays appear in typewriter-style **constant width** type, as in the following examples:

    Enter the number of ports to be dedicated to outbound traffic in the Maximum Simultaneous Ports field.

    Alarm Form Update was successful.

    Press <Enter> to continue.

  • The sequence of menu options that you must select to display a specific screen or submenu is shown as follows:
Start at the Voice System Administration menu and select:

- Reports

- Message Log Report

In this example, you would access the Voice System Administration menu and select the Reports menu. From the Reports menu, you would then select the Message Log Report option.

**Other Typography**

- Commands and text you type in or enter appear in **bold type**, as in the following examples:
  
  Enter `change-switch-time-zone` at the `Enter command: prompt`.
  
  Type `high` or `low` in the `Speed:` field.
  
  Command variables are shown in **bold italic** type when they are part of what you must type in, and in *blue italic type* when they are referred to, for example:
  
  Enter `ch ma machine_name`, where `machine_name` is the name of the call delivery machine you just created.

- Command options are shown inside square brackets, for example:
  
  Enter `connect switchname [-d] [-b | -w]`
Safety and Security Alert Labels

This book uses the following symbols to call your attention to potential problems that could cause personal injury, damage to equipment, loss of data, service interruptions, or breaches of toll fraud security:

⚠️ CAUTION:
Indicates the presence of a hazard that if not avoided can or will cause minor personal injury or property damage, including loss of data.

⚠️ WARNING:
Indicates the presence of a hazard that if not avoided can cause death or severe personal injury.

⚠️ DANGER:
Indicates the presence of a hazard that if not avoided will cause death or severe personal injury.

⚠️ SECURITY ALERT:
Indicates the presence of a toll fraud security hazard. Toll fraud is the unauthorized use of a telecommunications system by an unauthorized party.
Getting Help

The Intuity CONVERSANT system provides online help to assist you during installation, administration, and application development tasks.

To use the online help:

- Press **F1** (Help) when you are in a menu or window.
  The first time you press **F1**, the system displays information about the currently active window or menu.
  - When you are in a window, the help explains the purpose of the window and describes its fields.
  - When you are in a menu, the help explains how to use menus.

If you press **F1** again, the system displays a General Help screen that explains how to use the online help.

- Press **F2** (Choices) when you are in a field.
  The system displays valid field choices either in a pop-up window or on the status line directly above the function keys.

- Press **F6** (Cancel) to exit the online help.
Technical Assistance

Web Site

The following customer support web site contains resources where you can find solutions for technical problems:

http://support.lucent.com

Contact Numbers

Technical assistance on the Intuity CONVERSANT product is available through the following telephone contacts:

• In the United States, call 1-800-242-2121.

• In Canada, call one of the following numbers, depending on your location:
  ~ 1-800-363-1882 for assistance in Quebec and eastern Canada
  ~ 1-800-387-4268 for assistance in Ontario and western Canada

• In any other country, call your local distributor or check with your project manager or systems consultant.
Related Resources

Additional documentation and training material is available for you to learn more about the Intuity CONVERSANT product.

Training

To obtain training on the Intuity CONVERSANT product, contact the BCS Education and Training Center at one of the following numbers:

- Organizations within Lucent Technologies (904) 636-3261
- Lucent Technologies customers and all others (800) 255-8988

You can also view information on Intuity CONVERSANT training at the Global Learning Solutions (GLS) web site at one of the following web links:

- Organizations within Lucent Technologies
  http://training.gls.lucent.com
- Lucent Technologies customers and all others
  http://www.lucenttraining.com

The courses listed below are recommended. Other courses are available.

- For technicians doing repairs on Intuity CONVERSANT V7.0 systems
  ~ BTT509H, CONVERSANT Installation and Maintenance Voice Information System
### About This Book

- For technicians and administrators
  - BTC344M, Intuity CONVERSANT V7 Administration Overview (CD-ROM)

- For application developers
  - BTC128H, Introduction to Script Builder
  - BTC166H, Introduction to Voice@Work
  - BTC204H, Intermediate Voice@Work
  - BTC301H, Advanced CONVERSANT Programming

### Related Resources

- BTC344M, Intuity CONVERSANT V7 Administration Overview (CD-ROM)
- BTC128H, Introduction to Script Builder
- BTC166H, Introduction to Voice@Work
- BTC204H, Intermediate Voice@Work
- BTC301H, Advanced CONVERSANT Programming

### Documentation


**Note:** Always refer to the appropriate book for specific information on planning, installing, administering, or maintaining an Intuity CONVERSANT system.

### Additional Suggested Documentation

It is suggested that you also obtain and use the following book for information on security and toll fraud issues:

Obtaining Printed Versions of the Documentation
See Documentation Ordering Information on page viii of Copyright and Legal Notices for information on how to purchase Intuity CONVERSANT documentation in printed form. You can also print documentation locally from the CD-ROM (see Printing the Documentation on page lii).

Using the CD-ROM Documentation

Lucent Technologies ships the documentation in electronic form. Using the Adobe Acrobat Reader application, you can read these documents on a Windows PC, on a Sun Solaris workstation, or on an HP-UX workstation. Acrobat Reader displays high-quality, print-like graphics on both UNIX and Windows platforms. It provides scrolling, zoom, and extensive search capabilities, along with online help. A copy of Acrobat Reader is included with the documents.

Note: When viewing documents online, it is recommended that you use a separate platform and not the Intuity CONVERSANT system.

Setting the Default Magnification

You can set your default magnification by selecting File | Preferences | General. We recommend the Fit Page option.
<table>
<thead>
<tr>
<th>About This Book</th>
<th>Using the CD-ROM Documentation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Adjusting the Window Size</strong></td>
<td>On HP and Sun workstations, you can control the size of the reader window by using the <code>-geometry</code> argument. For example, the command string <code>acroread -geometry 900x900 mainmenu.pdf</code> opens the main menu with a window size of 900 pixels square.</td>
</tr>
<tr>
<td><strong>Hiding and Displaying Bookmarks</strong></td>
<td>By default, the document appears with bookmarks displayed on the left side of the screen. The bookmarks serve as a hypertext table of contents for the chapter you are viewing. You can control the appearance of bookmarks by selecting View</td>
</tr>
<tr>
<td><strong>Using the Button Bar</strong></td>
<td>The button bar can take you to the book’s Index, table of contents, main menu, and glossary. It also lets you update your documents. Click the corresponding button to jump to the section you want to read.</td>
</tr>
<tr>
<td><strong>Using Hypertext Links</strong></td>
<td>Hypertext links appear in blue underlined text. These links are shortcuts to other sections or books.</td>
</tr>
<tr>
<td><strong>Navigating with Double Arrow Keys</strong></td>
<td>The double right and double left arrows ( and ) at the top of the Acrobat Reader window are the go-back and go-forward functions. The go-back button takes you to the last page you visited prior to the current page. Typically, you use  to jump back to the main text from a cross reference or illustration.</td>
</tr>
<tr>
<td><strong>Searching for Topics</strong></td>
<td>Acrobat has a sophisticated search capability. From the main menu, select Tools</td>
</tr>
</tbody>
</table>
### About This Book

#### Displaying Figures
If lines in figures appear broken or absent, increase the magnification. You might also want to print a paper copy of the figure for better resolution.

#### Printing the Documentation

**Note:** For information on purchasing printed copies of the documents, see [Obtaining Printed Versions of the Documentation on page 1](#).

If you would like to read the documentation in paper form rather than on a computer monitor, you can print all or portions of the online screens.

**Printing an Entire Document**

To print an entire document, do the following:

1. From the documentation main menu screen, select one of the print-optimized documents. Print-optimized documents print two screens to a side, both sides of the sheet on 8.5x11-inch or A4 paper.

2. Select **File | Print**.

3. Enter the page range you want to print, or select **All**. Note that the print page range is different from the page numbers on the documents (they print two to a page).

4. The document prints.

5. Close the file. Do not leave this file open while viewing the electronic documents.
About This Book

Printing Part of a Document
To print a single page or a short section, you can print directly from the online version of the document.

1. Select File | Print.
2. Enter the page range you want to print, or select Current.

The document prints, one screen per side, two sides per sheet.

How To Comment on This Book

While we have tried to make this document fit your needs, we are interested in your suggestions for improving it and urge you to send your comments to us.

Comment Form
A comment form, available in paper and electronic versions, is available via the documentation CD-ROM. To use the comment form:

1. Select Comments from the Main Menu of the CD-ROM.
2. Follow the instructions provided on the CD-ROM to do one of the following:
   ~ Print the paper version of the form, complete it, and either fax or mail it to us.
   ~ Access a Lucent Technologies website where you can enter your comments electronically.
Contact Us Directly

If you prefer not to use the comment form, you can contact us directly at the following address or fax number.

**Note:** Direct your correspondence to the attention of the Lucent Technologies Intuity CONVERSANT writing team. Be sure to mention the title of the book on which you are commenting.

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Overview

This chapter provides an overview of system administration, the user interface, and the system administration process. Topics covered include:

- User Interface Overview on page 2
- Intuity CONVERSANT User Interface on page 2
  ~ Cursor Movement Keys on page 3
  ~ Menus and Windows on page 5
  ~ Message Line on page 10
  ~ Function Keys on page 11
  ~ Intuity CONVERSANT Main Administration Menu Options on page 20
- Online Help on page 17
- Access the Intuity CONVERSANT Administration Menus on page 18
User Interface Overview

A user interface is a method by which a computer user accesses the information on the computer. For example, Microsoft Windows is a graphical user interface (also known as GUI).

The Intuity CONVERSANT user interface is menu-driven; that is, you select an option from a list to display another menu or window. You can display more than one menu or window concurrently, but only the last one displayed is active. To return to the previous menu or window, you can cancel the active one.

Intuity CONVERSANT User Interface

Administering the voice system involves many activities, and all share a common user interface, or method of interaction. This means that regardless of the administrative task, the user interface follows a consistent format and style. Although the information on the screen changes often, the information arrangement does not change. The typical screen contents is as follows (Figure 6 on page 3):

- Menu and/or window
- Message line
- Function key labels
Cursor Movement Keys

Table 1 on page 4 lists the keys used to maneuver within a menu or window. They are referred to throughout this book as the cursor movement keys.
Table 1. Cursor Movement Keys

<table>
<thead>
<tr>
<th>Type of Movement</th>
<th>Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>Move to next line in menu, list, or text; “wrap” from last item to first item in a menu or form</td>
<td>⇌</td>
</tr>
<tr>
<td>Move to previous line in menu, list, or text; “wrap” from first item to last item in a menu or form</td>
<td>▲</td>
</tr>
<tr>
<td>Move down one “screenful”</td>
<td>PgDw</td>
</tr>
<tr>
<td>Move up one “screenful”</td>
<td>PgUp</td>
</tr>
<tr>
<td>Move to beginning of menu, text, or list</td>
<td>Home</td>
</tr>
<tr>
<td>Move to end of menu, text, or list</td>
<td>End</td>
</tr>
<tr>
<td>Move to next field in a screen or window</td>
<td>Tab, or Enter</td>
</tr>
<tr>
<td>Move to previous field in a screen or window</td>
<td>Shift, or Tab</td>
</tr>
<tr>
<td>Move to next character within a field</td>
<td>▶</td>
</tr>
<tr>
<td>Move to previous character within a field</td>
<td>◀</td>
</tr>
<tr>
<td>Delete character to the left of the cursor</td>
<td>BackSpace</td>
</tr>
</tbody>
</table>
Menus and Windows

You use menus and windows to exchange information with the voice system. This exchange may involve activities such as making menu selections or populating fields. Since the display may contain more than one menu or window at the same time, each menu/window is outlined so that it is clear what information it contains. At any given time, only one menu or window on screen is designated as active.

Menues

A menu allows you to select an option that takes you to the next menu or window (Figure 7 on page 5).

Figure 7. Sample Menu

![Sample Menu](image-url)
The components of a menu include:

- **Title** — The title describes the information contained within the menu, or the tasks you can accomplish using it. In this book, titles are shown with the first letter of each word capitalized, followed by the word *menu*, such as the *Configuration Management menu*.

- **Scroll Indicator** — The scroll bar indicates whether there is additional text to be displayed. The ▼ indicates there is more information to view below what is presently shown. The ▲ indicates there is more information to view above what is currently displayed. Not every menu has a scroll indicator.

### Selecting a Menu Item

To select a menu item, highlight it using one of the following methods and then press **ENTER**:

- **Use the cursor movement keys to move the highlight bar:**
  - Press ▼ to move the highlight bar down.
  - Press ▲ to move the highlight bar up.

  Menus have a “rollover” feature. When the cursor reaches the last item of the menu, press ▼ to return to the first menu item. If the cursor is highlighting the first menu item, press ▲ to move to the last menu item.
1 Administration Overview

- Type the first character(s) of the menu line. The system highlights the first menu item beginning with that letter. For example, in Figure 7 on page 5, type S to select System Control. If there is another menu item beginning with “s,” type more characters.

The menu items are not case-sensitive; that is, typing A is the same as typing a. If you type a letter for which there is no matching item, the system “beeps” and does not move the highlight bar.

Windows

A window allows you to enter and view information, and can range in size. See Figure 8 on page 7 and Figure 9 on page 8.

Figure 8. Sample Window
The components of a window include:

- **Title** — The title describes the information contained within the window, or the tasks you can accomplish using it. In this book, titles are shown with the first letter of each word capitalized, followed by the word *window*, such as the *Voice Equipment window*.

- **Scroll Indicator** — The scroll bar indicates whether there is additional text to be displayed. The [▼] indicates there is more information to view below what is presently shown. The [▲] indicates there is more information to view above what is currently displayed. Not every window has a scroll indicator.

- **Fields** — Fields are the areas on a window where you enter information. For example, in [Figure 6 on page 3](#) the fields are *Channel Numbers*, *Service Name*, and *Startup Service*. Use the **TAB** or **ENTER** keys to move through the fields in succession.
Populating Fields

You can enter information in a field in the following three ways:

- Type the first character(s) of the entry.

With the cursor positioned on the field, begin to type the entry. As soon as you type enough characters to uniquely identify the desired entry, the system automatically supplies the remaining characters. If the entry is invalid, the system beeps and removes the invalid characters.

For example, given the Day: field in Figure 10 on page 10, assume that valid entries are the names of the days in the week. When you type M, the system fills in the entire word Monday because there is only one valid entry that begins with M.

However, if you type S, the system waits before filling in the day of the week because there are two valid entries that begin with S (Saturday and Sunday). At this point, if you type a, the system fills in the word Saturday. If you type u, the system fills in the word Sunday. This technique is not case-sensitive. In other words, typing either M or m in the above example results in the system filling in the word Monday.
Figure 10. Fields in the Call Data Summary Report Window

- Type the entire entry.
  Move to the desired field and type the entire entry. While in a field, you can also edit the entry.

- Use the CHOICES screen selections.
  Press F2 (Choices) to open a menu which shows the available choices for a field. Select an option as you would in a standard menu. The content of the CHOICES menu varies depending on the situation, and sometimes no CHOICES menu is available for a screen or window.

Message Line

The message line, if present on the screen, contains a brief instruction to help you decide what to do next. The message line also reports the successful or unsuccessful completion of a task.
Function Keys

Your keyboard has eight to twelve function keys. The system uses the first eight function keys, labeled F1 through F8.

The boxed labels at the bottom of the display correspond to the function keys on your keyboard. Function keys are the means by which you command the system to perform a function within the active menu or window. The label describes the instruction that is sent to the system when you press the corresponding function key. The commands, and therefore the labels, that are available at any given time vary depending on the active menu/window. Menus and windows may have one or two rows of function key labels. See Figure 11 on page 12 for an example window with function key labels.

In Figure 11 on page 12 you would press F1 to access the Help screen for the System Monitor window. Also in Figure 11 on page 12, notice that the label for F4 is blank. This indicates that no command is issued if you press the F4 function key. If you press an inactive function key, the system beeps and the message line either indicates an undefined function key or continues to display the last message. The function key labels displayed apply only to the active menu/window.
1 Administration Overview

Figure 11. Function Key Labels — System Monitor Window

Standard Function Key Labels

Standard function key labels remain constant regardless of the active menu or window. They represent commands that are valid for every menu/window in the system. See Table 2 on page 13 for a description of standard function key labels.
## Table 2. Standard Function Key Labels

<table>
<thead>
<tr>
<th>Key</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1 (Help)</td>
<td>Opens an online help window. See <a href="#">Online Help on page 17</a> for more information about online help.</td>
</tr>
<tr>
<td>F6 (Cancel)</td>
<td>Closes the active screen and cancels any additions, deletions, or changes made. The screen that immediately precedes the just-closed screen becomes the active screen. If there is an activity in progress, such as making a back-up copy of an application on a floppy disk, pressing F6 (CANCEL) does not interrupt the operation.</td>
</tr>
<tr>
<td>F7 (Cmd-Menu)</td>
<td>Opens the Command Menu. Options include System Monitor, Trace Service, and Exit. See <a href="#">Command Menu on page 449</a> in Chapter 8, Common Administration, for more information.</td>
</tr>
</tbody>
</table>
Optional Function Key Labels

The optional function key labels change based on the active menu or window, and provide commands that are unique to the menu or window. See Table 3 on page 14 for a description of optional function key labels.

Table 3. Optional Function Key Labels

<table>
<thead>
<tr>
<th>Function Key Label</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>F2 (Choices)</td>
<td>Opens a menu screen containing choices for the current field, if there is a finite set of choices for a particular field. Move the cursor to the field you want to fill, then press F2 (CHOICES). The CHOICES menu opens, displaying the options available for that field.</td>
</tr>
<tr>
<td>F2 (Prevpage)</td>
<td>Scrolls back one full page, towards the beginning of text that is too long to fit within the active screen or window.</td>
</tr>
<tr>
<td>F3 (Nextpage)</td>
<td>Scrolls forward, toward the end of text that is too long to fit within the active screen, menu, or window. For example, pressing F3 in Figure 11 on page 12 orders the system to move to the next page, while pressing F3 in Figure 12 on page 16 sounds a beep, but does nothing else because that key is &quot;empty.&quot;</td>
</tr>
<tr>
<td>F3 (Save)</td>
<td>Preserves all changes made in the screen.</td>
</tr>
</tbody>
</table>

1 of 2
### Table 3. Optional Function Key Labels

<table>
<thead>
<tr>
<th>Function Key Label</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>F4 (Top)</td>
<td>Scrolls toward the top of a page.</td>
</tr>
<tr>
<td>F5 (Bottom)</td>
<td>Scrolls toward the bottom of a page.</td>
</tr>
<tr>
<td>F6 (Print)</td>
<td>Prints the information provided by the active screen, such as a report.</td>
</tr>
<tr>
<td>F7 (Frm-Mgmt)</td>
<td>Opens the Frame Management Menu. See <a href="#">Command Menu on page 449</a> in Chapter 8, Common Administration, for more information. Options include list, move, refresh, and UNIX system.</td>
</tr>
<tr>
<td>F8 (Chg-Keys)</td>
<td>Switches the function key labels displayed from standard to optional, or vice versa. For example, <a href="#">Figure 11 on page 12</a> and <a href="#">Figure 12 on page 16</a> show the System Monitor window. <a href="#">Figure 12 on page 16</a> displays the optional function key labels through the use of F8 (Chg-Keys) to switch between the standard (<a href="#">Figure 11 on page 12</a>) and optional (<a href="#">Figure 12 on page 16</a>) labels.</td>
</tr>
</tbody>
</table>
### Administration Overview

**Figure 12. Change Keys — System Monitor Screen**

<table>
<thead>
<tr>
<th>Channel</th>
<th>Service</th>
<th>Caller</th>
<th>Dialed</th>
</tr>
</thead>
<tbody>
<tr>
<td>48</td>
<td>0</td>
<td>*On Hook</td>
<td></td>
</tr>
<tr>
<td>49</td>
<td>0</td>
<td>*Foss</td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>0</td>
<td>*Foss</td>
<td></td>
</tr>
<tr>
<td>51</td>
<td>0</td>
<td>*Foss</td>
<td></td>
</tr>
<tr>
<td>52</td>
<td>0</td>
<td>*Foss</td>
<td></td>
</tr>
<tr>
<td>53</td>
<td>0</td>
<td>*Foss</td>
<td></td>
</tr>
<tr>
<td>54-0</td>
<td>0 BG</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:** The Host Mon function key selection does not appear unless host software is installed.
Online Help

Most screens and windows have a companion text window that contains helpful reference information. Figure 13 on page 17 shows the help screen associated with the Database Access ID Table window. The system online help windows are not designed to be a substitute for this book. They briefly describe each of your options for a given menu/window. Press F1 to access online help.

Figure 13. Sample Online Help Screen, Database Access ID Table

```
Database Access ID Table - Help

Use the PREVPAGE and NEXTPAGE function keys to move through this help window. Press the CANCEL function key to close this window.

The Database Access ID Table window displays all currently defined Database Access IDs. Each Database Access ID represents a connection (for script access) to an ORACLE database.

If the Remote Machine Name and DB SID fields are blank, the connection is to the local ORACLE database, instance A, on this machine. Otherwise, the connection is to an ORACLE database on the
```
Access the Intuity CONVERSANT Administration Menus

Use the following procedure to access the Intuity CONVERSANT administration menu:

1. At the Console Login prompt, enter root
   The system prompts you for a password.
2. Enter your root password.
   The system displays the system prompt #.
3. Enter one of the following commands at the prompt:
   ~ cvis_mainmenu
   The system displays the Intuity CONVERSANT menu (Figure 14 on page 18).

Figure 14. Intuity CONVERSANT Menu
1 Administration Overview

Access the Intuity CONVERSANT Administration Menus

~ cvis_menu

⚠️ CAUTION:
Do not create multiple, simultaneous cvis_menu processes, as this could severely impact performance and may lock up the system.

The system displays the Voice System Administration menu (Figure 15 on page 19). See Chapter 3, Voice System Administration, for more information and procedures on voice system administration.

Figure 15. Voice System Administration Menu

![Voice System Administration Menu](image)
From the Intuity CONVERSANT main menu, you can initiate two administration options, UNIX System Administration and Voice System Administration, or you can exit.

**UNIX System Administration**

The UNIX System Administration menu allows you to set up a variety of generic software operations including backups, printer operations, and peripheral setup. See Chapter 2, UNIX Administration, for more information and procedures on UNIX administration.

**Voice System Administration**

The Voice System Administration menu allows you to begin your session for administering the system, such as application package administration and reports. See Chapter 3, Voice System Administration, for more information and procedures on voice system administration.

**Exit**

Exit takes you out of the Intuity CONVERSANT administration menus and returns you to the UNIX system prompt.

Press **F6** (Cancel) from almost any place in the Intuity CONVERSANT Administration menu structure to close the active window and return to the previous menu. If you press **F6** (Cancel) enough times, depending on how deep into the menus you are, you will eventually exit the menu structure completely and return to the operating system prompt.
Access the Intuity CONVERSANT Administration Menus

**Note:** F6 (Cancel) does not exit from the UNIX System Administration menus. See Exit UNIX System Administration Menu on page 57 in Chapter 2, UNIX Administration, for the procedure to exit from the UNIX System Administration menus.
Overview

This chapter describes the UnixWare™ system administration user interface and the procedures to access the UnixWare administration menu, as well as the procedures to perform basic UnixWare-level administration.

The sections in this chapter are arranged in the same order as the administration services in the UnixWare administration main menu.
UnixWare Documentation

For additional information on UnixWare administration, see the Novell UnixWare documentation.

Start with the *System Administration Volume 1* for an overview of the UnixWare system administration and for an introduction to administration concepts and procedures.

Many of the procedures in this chapter reference various UnixWare system administration books. Follow the referenced procedures for additional information.

**UNIX System Administration Access**

Use the following procedure to access SYSADM (the OA&M menu interface of UnixWare):

1. At the Console Login: prompt, enter **root**
   - The system prompts you for a password.

2. Enter your root password.
   - The system displays the system prompt `#`. 
3 Enter `cvis_mainmenu`

The system displays the Intuity CONVERSANT menu (Figure 16 on page 24).

**Figure 16. Intuity CONVERSANT V7.0 Menu**

![Intuity CONVERSANT V7.0 Menu](image)

4 Select UNIX System Administration.

The system displays the UNIX System V Administration menu (Figure 17 on page 25).
All of the procedures in this book assume that you are using the SYSADM user interface menus. The procedures provide references to the books detailing command line interfaces when possible.

**Application Administration**

The Application Administration menu provides menu and task for administering custom applications. Application developers can use this option to place menus from which to administer add-on or custom applications.
Backup Scheduling, Setup, and Control

The Backup Service Management menu provides two backup options: basic and extended. Backup files can be stored on either tape or diskettes.

**Note:** Diskettes must be UNIX formatted when you begin this procedure; tapes may be unformatted.


The basic backup services allow you to:
- Display the date and time of the last system and incremental backup.
- Conduct a backup of all files or only selected files in your HOME directory.
- Add, change, delete, or display backup requests.
- Back up all system and user files that have been modified or created since your voice system was installed.

The extended backup services allow you to:
- Determine the backup rotation period.
- Specify how backups are to be done for file systems and data partitions.
- Display the backup history and backup status logs.
Establish lists of files that should not be backed up.
- Respond to system prompts during backup jobs.
- Schedule backups and the reminder messages that backups should be done.

**Note:** If you want to backup and restore speech files, see the `spsav` command in Appendix A, Summary of Commands.

Use the following procedure to access backup services:

1. Start at the UNIX System V Administration menu (Figure 17 on page 25) and select:

   ```
   > backup_service
   ```

   The system displays the Backup Service Management menu (Figure 18 on page 27).

**Figure 18. Backup Service Management Menu**
Basic Backup

Use the following procedure to perform a basic backup:

1. Start at the Backup Service Management menu (Figure 18 on page 27) and select:

   > basic

   The system displays the Backup to Removable Media menu (Figure 19 on page 28).

Figure 19. Backup to Removable Media Menu

   1. Backup to Removable Media
      - Backup History
      - Personal Backup
      - Schedule Backup to Tape
      - System Backup

Use the following procedures to access the different menu options of the Backup to Removable Media menu.
Backup History

The Backup History menu option displays the date and time of the last system and incremental backup.

Use the following procedure to view the backup history:

1. Start at the Backup to Removable Media menu (Figure 19 on page 28) and select:

   > Backup History

   The system displays the Backup History window (Figure 20 on page 29).

Figure 20. Backup History Window

2. Press F3 (Cont) to return to the Backup to Removable Media menu (Figure 19 on page 28).
Backup of All Personal Files

A personal backup copies all the files in your HOME (or personal) directory to either tape or formatted diskettes.

Use the following procedure to backup all files in your personal directory:

1. Start at the Backup to Removable Media menu (Figure 19 on page 28) and select:

   > Personal Backup

   > Backup Files under /

   The system displays the Select Removable Media menu (Figure 21 on page 30).

Figure 21. Select Removable Media Menu

<table>
<thead>
<tr>
<th>Select Removable Media</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC$1 CD-Rom Drive 1</td>
</tr>
<tr>
<td>Tape Drive 1</td>
</tr>
<tr>
<td>Floppy Drive 1</td>
</tr>
<tr>
<td>3.5 inch 1.44 Mbyte (High Density)</td>
</tr>
<tr>
<td>3.5 inch 720 Kbyte (Low Density)</td>
</tr>
<tr>
<td>3.5 inch 1.2 Mbyte (512 bytes/sector)</td>
</tr>
<tr>
<td>3.5 inch 1.2 Mbyte (1024 bytes/sector)</td>
</tr>
</tbody>
</table>
2 Select the removable media type.

The system displays a message showing the approximate number of diskettes or tapes, as well as the time required to backup the HOME directory.

The system prompts you to insert the first diskette or tape. The system will periodically prompt you to insert more diskettes/tapes, if needed, until the backup is complete.

3 Press ENTER when the backup is complete.

The system redisplays the Backup to Removable Media menu (Figure 19 on page 28).

Backup of Selected Personal Files

This procedure backs up selected files and directories in your HOME directory to either tape or formatted diskette.

Use the following procedure to back up selected personal files or directories:

1 Start at the Backup to Removable Media menu (Figure 19 on page 28) and select:

   > Personal Backup

   > Backup Files under /

The system displays the Select Removable Media menu (Figure 21).
2. Select the removable media type.

The system displays the Selective Backup of Files under / window (Figure 22 on page 32).

Figure 22. Selective Backup of Files under / Window

3. Enter the file names and directory names to be backed up separated by a space between each entry in the Files or directories to back up: field.

Note: All files and directories must be in the HOME directory or in a subdirectory of HOME.

4. Press F3 (Save).

The system displays a message showing the approximate number of diskettes or tapes, as well as the time required to back up the HOME directory.
The system prompts you to insert the first diskette or tape. The system will periodically prompt you to insert more diskettes/tapes, if needed, until the backup is complete.

5 Press ENTER when the backup is complete.

The system redisplays the Backup to Removable Media menu (Figure 19 on page 28).

Schedule a Backup to Tape

The Schedule Backup to Tape menu option allows you to:

- Add a system or incremental backup.
- Change a previously scheduled backup request.
- Delete a previously scheduled backup request.
- Display the scheduled backup list.

Note: You need either root or system administration privileges to add, change, or delete a scheduled backup. You do not need those privileges to display a list of scheduled backups.
Add a Backup

Use the following procedure to schedule a new backup to tape:

1. Start at the Backup to Removable Media Menu (Figure 19 on page 28) and select:

   > Schedule Backup to Tape

   > Add

   The system displays the Schedule a System Backup window (Figure 23 on page 34).

Figure 23. Schedule a System Backup Window
2 Press F2 (Choices) to toggle between System Backup and Incremental System Backup in the Type of Backup: field. A system backup (field default) performs a back up all system and user files installed or modified since the voice system was first installed. An incremental backup performs a back up all system and user files since the last backup.

3 Enter a value in the Month(s) of the Year: field:

~ Type a number from 1 to 12, where January is 1 and December is 12 to indicate a single month.

~ Type two numbers separated by a hyphen to indicate a range of months. For example, type 1–8 to instruct the system to perform backups of January through August.

~ Press F2 (Choices) and press F2 (Mark) to select one or more months. Press F3 (Enter) to save the selected month(s) and return to the Month(s) of the Year: field.

The default value is all to back up all months.

4 Enter a value in the Day(s) of the Month: field:

~ Type a number from 1 to 31 corresponding to the day of the month to indicate a single day.

~ Type two numbers separated by a hyphen to indicate a range of days. For example, type 14–20 to instruct the system perform a backup every day from the 14th through the 20th day of the month.
Press F2 (Choices) and press F2 (Mark) to select one or more days. Press F3 (Enter) to save the selected day(s) and return to the Day(s) of the Month: field.

The default is all to back up all days of the month.

5 Enter a value in the Day(s) of the Week: field:

Type the first letter of the day to indicate a single day of the week, or Press F2 (Choices) to select a single day from a menu.

Note: Sunday is Su and Thursday is Th. Every other day of the week is indicated by its first letter.

Type two days, separated by a hyphen to indicate a range of days. For example, type M–Th to instruct the system to perform a backup every Monday, Tuesday, Wednesday, and Thursday.

Press F2 (Choices) and press F2 (Mark) to select one or more days. Press F3 (Enter) to save the selected day(s) of the week and return to the Day(s) of the Week: field.

The default is all to back up all days of the week.
6 Set the Time of Day: field:
   a Type a number in the Hours portion of the field to indicate the hour,
      where 00 is midnight and 23 is 11:00 p.m. Or, press F2 (Choices) to
      select from a menu.
   b Press (v).
      The system places the cursor in the minutes portion of the field.
   c Type a number from 0 to 59 to indicate the minutes past the hour.
      The default time is 02:00, to start the backup at 2:00 A.M.

7 Press F3 (Save).
   The system displays a confirmation window that asks whether you want to
   continue to schedule the backup.

8 Do one of the following:
   ~ To confirm the backup schedule, press F3 (Cont).
      The system returns to the Schedule Backup to Tape menu.
   ~ To cancel the backup schedule, press F6 (Cancel).
      The system returns to the Schedule Backup to Tape menu.
Change Scheduled Backup Settings

Use the following procedure to change scheduled backup settings:

1. Start at the Backup to Removable Media menu (Figure 19 on page 28) and select:

   > Schedule Backup to Tape

   > Change

2. The system displays the Change Scheduled Backup window (Figure 24 on page 38).

Figure 24. Change Scheduled Backup Window

<table>
<thead>
<tr>
<th>Month:5</th>
<th>Change Scheduled Backup</th>
<th>Day:H-F</th>
<th>00:00</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Date:22</td>
<td>Day:F</td>
<td>19:00</td>
</tr>
<tr>
<td>I</td>
<td>Date:1</td>
<td>Day:F</td>
<td>19:00</td>
</tr>
<tr>
<td>I</td>
<td>Date:all</td>
<td>Day:all</td>
<td>19:00</td>
</tr>
</tbody>
</table>

3. Select the schedule backup to be changed and press F2 (Mark).

4. Press F3 (Enter).

   The system displays the Change Scheduled Backup Information window (Figure 25 on page 39).
2 UNIX Administration

Backup Scheduling, Setup, and Control

Figure 25. Change Scheduled Backup Information Window

5 Change the information as appropriate. See step 2 through step 6 in Add a Backup on page 34 for information on how to add data to the fields in this window.

6 Press F3 (Save).

The system displays a confirmation window that asks whether you want to continue to schedule the backup.

7 Do one of the following:

~ To confirm the backup schedule, press F3 (Cont).

The system returns to the Schedule Backup to Tape menu.

~ To cancel the backup schedule, press F6 (Cancel).

The system returns to the Schedule Backup to Tape menu.
Delete a Scheduled Backup

Use the following procedure to delete scheduled backups:

1. Start at the Backup to Removable Media menu (Figure 19 on page 28) and select:

   - Schedule Backup to Tape
   - Delete

   The system displays the Delete Scheduled Backups window (Figure 26 on page 40).

2. Select the scheduled backup to be deleted and press F2 (Mark). Select as many of the entries as necessary.

3. Press F3 (Enter).

   The system displays a confirmation window to confirm the marked backups for deletion.

Figure 26. Delete Scheduled Backups Window
Do one of the following:

- To confirm the backup deletion, press F3 (Cont).
  The system returns to the Schedule Backup to Tape menu.
- To cancel the backup deletion, press F6 (Cancel).
  The system returns to the Schedule Backup to Tape menu.

**Display Scheduled Backups**

Use the following procedure to display a list of scheduled backups:

1. Start at the Backup to Removable Media menu (Figure 19 on page 28) and select:

   > Schedule Backup to Tape

   > Display

   The system displays the Display Scheduled Backup window (Figure 27 on page 42).
2 Press **F3** (Cont) or **F6** (Cancel) to return to the Schedule Backup to Tape menu (**Figure 19 on page 28**).

### Performing Extended Backup Services

File System Creation, Checking, and Mounting

File Systems administration allows you to:

- Check for and repair errors on a file system.
- Set file system defaults.
- Monitor disk usage for all file systems.
- Display a list of installed file system types.
- List files by age or size.
- Identify the file system type.
- Create a new file system.
- Mount or unmount a file system.

Figure 28 on page 44 displays the options available for file system administration. See System Files and Devices Reference in the Novell UnixWare documentation set for additional information about each of these options.
Machine Configuration, Display, and Shutdown

Machine administration allows you to:

- Display system configuration information.
- Shut down the machine.
- Reboot the machine.
- Display a list of users who are logged on.
Figure 29 on page 45 displays the options available for machine administration. See System Files and Devices Reference in the Novell UnixWare documentation set for additional information about each of these options.

**Figure 29. Machine Configuration Display and Shutdown Menu**

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>configuration</td>
<td>System Configuration Display</td>
</tr>
<tr>
<td>shutdown</td>
<td>Stops All Running Programs and Halts Machine</td>
</tr>
<tr>
<td>reboot</td>
<td>Stops All Running Programs and Reboots Machine</td>
</tr>
<tr>
<td>whos on</td>
<td>Displays List of Users Logged onto Machine</td>
</tr>
</tbody>
</table>

**Memory Size Disparity**

The system may show that available memory is different than the amount that is actually available. See “Setting Up the UnixWare Environment,” in the “Installing the Base System Software” chapter in the maintenance book for your platform for information about this inequality.
Network Services Administration

Network Services administration allows you to:

- Make network selections.
- Manage distributed file systems.
- Perform name to address translations.
- Manage basic networking.

Figure 30 on page 46 displays the options available for network services administration. See Network Administration in the Novell UnixWare documentation set for additional information about each of these options.

Figure 30. Network Services Management Menu

<table>
<thead>
<tr>
<th>2</th>
<th>Network Services Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>attr_map</td>
<td>Attribute Mapping Administration</td>
</tr>
<tr>
<td>basic_networking</td>
<td>Basic Networking Utilities Management</td>
</tr>
<tr>
<td>crl</td>
<td>IAF Scheme crl Key Management</td>
</tr>
<tr>
<td>name_map</td>
<td>Name Mapping Administration</td>
</tr>
<tr>
<td>remote_files</td>
<td>Distributed File System Management</td>
</tr>
<tr>
<td>selection</td>
<td>Network Selection Management</td>
</tr>
<tr>
<td>name_to_address</td>
<td>Machine and Service Address Management</td>
</tr>
</tbody>
</table>
Port Access Services and Monitors

Ports administration allows you to monitor and service ports, set up quick terminal, and manage terminal line (tty) settings.

Figure 31 on page 47 displays the options available for ports administration. See System Administration Volume 1 in the Novell UnixWare documentation set for additional information about each of these options.

Figure 31. Service Access Management Menu

<table>
<thead>
<tr>
<th></th>
<th>Service Access Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;port_monitors</td>
<td>Port Monitor Management</td>
</tr>
<tr>
<td>port_services</td>
<td>Port Service Management</td>
</tr>
<tr>
<td>quick_terminal</td>
<td>Quick Terminal Setup</td>
</tr>
<tr>
<td>tty_settings</td>
<td>Terminal Line Setting Management</td>
</tr>
</tbody>
</table>

Printer Configuration and Services

See Chapter 7, Peripheral Administration, for the procedures needed to configure a printer for use with the voice system.
2 UNIX Administration

Restore From Backup Data

Restore service administration allows you to perform basic and extended restore services.

Note: If you want to backup and restore speech files, see the `spsav` command in Appendix A, Summary of Commands.

Figure 32 on page 48 displays the options available for restore service administration. See System Administration Volume 1 in the Novell UnixWare documentation set for additional information about each of these options.

Figure 32. Restore Service Management Menu

<table>
<thead>
<tr>
<th>2</th>
<th>Restore Service Management</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>basic</code></td>
<td>Basic Restore Service</td>
</tr>
<tr>
<td><code>extended</code></td>
<td>Extended Restore Service</td>
</tr>
</tbody>
</table>

Performing Basic Restore Services

Basic restore services allow you to perform a personal restore or a system restore. Figure 33 on page 48 displays the options available for the Basic Restore Service.

Figure 33. Restore from Removable Media Menu

<table>
<thead>
<tr>
<th>3</th>
<th>Restore from Removable Media</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>Personal Restore</code></td>
<td></td>
</tr>
<tr>
<td><code>System Restore</code></td>
<td></td>
</tr>
</tbody>
</table>
Performing Extended Restore Services

Extended restore services allow you to:

- Specify the login of the operator who should be notified when a request that requires operation intervention is queued.
- Respond to restore requests.
- Restore files, directories, file system, or a data partition from a backup archive.
- Display or modify the status of pending restore requests.

Figure 34 on page 49 displays the options available for the Extended Restore Service.

Figure 34. Extended Restore Service Menu

<table>
<thead>
<tr>
<th>3</th>
<th>Extended Restore Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>operator</td>
<td>Set/Display the Restore Operator</td>
</tr>
<tr>
<td>respond</td>
<td>Respond to Restore Job Prompts</td>
</tr>
<tr>
<td>restore</td>
<td>Restore from Backup Archives</td>
</tr>
<tr>
<td>status</td>
<td>Modify/Report Pending Restore Request Status</td>
</tr>
</tbody>
</table>
Schedule Automatic Task

Schedule task administration allows you to add, change, delete, and display a task scheduled through cron.

Figure 35 on page 50 displays the options available for schedule task administration. See System Administration Volume 1 in the Novell UnixWare documentation set for additional information about each of these options.

Figure 35. Schedule Automatic Task Menu
Security Management

Security management allows you to manage the security features on the system. Currently, this includes only the audit trail facility management.

Figure 36 on page 51 displays the options available for audit trail facility management. This menu includes the functions for:

- Managing audit criteria
- Enabling and disabling auditing
- Displaying audit information
- Displaying and setting event log parameters on the system

Note: To use the audit subsystem, you must be logged in at the SYS_PRIVATE security level, be a member of group audit, and be able to access the commands within the AUD role.

Figure 36. Audit Trail Facility Management Menu

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>criteria</td>
<td>Audit Criteria Management</td>
</tr>
<tr>
<td>disable</td>
<td>Disable Auditing</td>
</tr>
<tr>
<td>enable</td>
<td>Enable Auditing</td>
</tr>
<tr>
<td>parameters</td>
<td>Event Log Parameter Management</td>
</tr>
<tr>
<td>report</td>
<td>Display Audit Data</td>
</tr>
</tbody>
</table>
Software Installation and Removal

Software administration allows you to install software, display information about software packages, store software without installing it, and remove software.

Figure 37 on page 52 displays the options available for software administration. See System Files and Devices Reference in the Novell UnixWare documentation set for additional information about each of these options.

Figure 37. Software Installation and Information Management Menu

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>check</td>
<td>Checks Accuracy of Installation</td>
</tr>
<tr>
<td>defaults</td>
<td>Sets Installation Defaults</td>
</tr>
<tr>
<td>install</td>
<td>Installs Software Packages</td>
</tr>
<tr>
<td>interact</td>
<td>Stores Interactions with Package</td>
</tr>
<tr>
<td>list</td>
<td>Displays Information about Packages</td>
</tr>
<tr>
<td>read_in</td>
<td>Stores Packages Without Installing</td>
</tr>
<tr>
<td>remove</td>
<td>Removes Packages</td>
</tr>
</tbody>
</table>

Note: All the necessary software installation procedures for the Intuity CONVERSANT system are described in software installation chapters in the maintenance book for your platform.
Storage Devices Operations and Definition

Storage devices administration allows you to:

- Copy information from one volume to another.
- Display storage device information.
- Erase the contents of a volume.
- Configure a storage device on the system.
- Reconfigure a storage device on the system.

A storage device may be integral disks, floppy diskettes, SCSI data storage devices, 9-track tapes, and other devices configured on the system. The LINCS Server system uses integral disks (hard disks), floppy diskettes, and tapes as storage devices.

*Figure 38 on page 54* displays the options available for storage administration. See *System Files and Devices Reference* in the Novell UnixWare documentation set for additional information about each of these options.
System Name, Date/Time, and Initial Password Setup

System setup administration allows you to administer the following system characteristics:

- Environment (date, time, time zone)
- Passwords
- Machine name
- Network node name
- Initial user logins
CAUTION:

Your system’s machine name is used by the Feature Licensing software. Call your support center before changing the machine name and thus avoid losing any of your feature licenses.

Figure 39 on page 55 displays the options available for system setup administration. See System Owner Handbook in the Novell UnixWare documentation set for additional information about each of these options.

Figure 39. System Name, Date, Time and Initial Password Setup Menu

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>date/time</td>
<td>System Date and Time Information</td>
</tr>
<tr>
<td>file_maintenance</td>
<td>Maintain files in /etc/default</td>
</tr>
<tr>
<td>nodename</td>
<td>System Name and Network Node Name of the Machine</td>
</tr>
<tr>
<td>password</td>
<td>Assign Administrative Login Passwords</td>
</tr>
<tr>
<td>setup</td>
<td>Set up System Information for First Time</td>
</tr>
</tbody>
</table>
User Login and Group Administration

Users administration allows you to manage logins and groups on your system, including:

- Adding users or groups
- Defining defaults for adding users
- Listing users or groups
- Modifying attributes of users or groups
- Redefining user password information
- Removing users or groups

Figure 40 on page 56 displays the options available for users administration. See UnixWare System Administration User and Group Management for additional information about each of these options.

Figure 40. User Login and Group Administration Menu

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>add</td>
<td>Add Users or Groups</td>
</tr>
<tr>
<td>defaults</td>
<td>Define Defaults for Adding Users</td>
</tr>
<tr>
<td>list</td>
<td>List Users or Groups</td>
</tr>
<tr>
<td>modify</td>
<td>Modify Attributes of Users or Groups</td>
</tr>
<tr>
<td>password</td>
<td>(Re-)define User Password Information</td>
</tr>
<tr>
<td>remove</td>
<td>Remove Users or Groups</td>
</tr>
</tbody>
</table>
Exit UNIX System Administration Menu

To exit Unix System Administration:

1. Press F7 (Cmd-Menu).
   The system displays the Command Menu (Figure 41 on page 57).

   Figure 41. Command Menu

2. Select:

   > Exit

3. The system returns you to the system prompt #.
3 Voice System Administration

Overview

The Voice System Administration menu provides access to many administrative options. This chapter describes the procedures needed to perform voice system administration through the Voice System Administration user interface. All the administrative options are described.

This chapter contains the reference and procedural information for the Configuration Management option.

Accessing the Voice System Administration Menu

Use the following procedure to access the Voice System Administration menu:

1. At the Console Login prompt, enter root
   The system prompts you for a password.
2. Enter your root password.
   The system displays the system prompt #.
3 Enter `cvis_menu`

The system displays the Voice System Administration menu (Figure 42 on page 59).

**Figure 42. Voice System Administration Menu**

![Voice System Administration Menu](image)

**Voice System Administration Menu Options**

From the Voice System Administration menu, you have access to all the major administrative features of the voice system.

This section provides a brief overview of each administrative option in this menu.
3 Voice System Administration  

Application Package Administration

The Application Package Administration menu provides administrative access to the applications currently installed on your system. Administer the Script Builder FAX Actions, if installed, through the Application Package Administration menu.

See Chapter 4, Feature Package Administration for more information on administering Fax Actions.

Backup/Restore

The Backup/Restore menu simplifies the backup and restore procedures by providing a user interface for differential and full backups.

See “Common System Procedures”, in the Intuity CONVERSANT System Reference, 585-313-205, for more information on performing backup and restore procedures.

Configuration Management

The Configuration Management menu allows you to perform the following administrative tasks:

• Add or remove database access IDs
• License features to the voice system
• Configure host sessions and manage host protocols
• Modify system messages
• Administer alarms
• Diagnose equipment
3 Voice System Administration

Accessing the Voice System Administration Menu

- Report system status
- Stop and start the voice system
- Manage all voice system circuit card resources
- Administer channels numbers and functionality

See Configuration Management on page 63 for more information.

Feature Packages

The Feature Packages menu provides administrative access to the optional feature packages currently installed. Administer the Adjunct/Switch Application Interface (ASAI) package, if installed, through the Feature Packages menu.

See Chapter 4, Feature Package Administration, for more information about administering ASAI.

Reports

The Reports menu allows you to generate and customize reports for:

- Call classification and data
- System messages
- System traffic
- Feature and resource use

See Chapter 8, Common Administration, for more information on using the Reports menu.
## 3 Voice System Administration

### Accessing the Voice System Administration Menu

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Script Builder Applications</strong></td>
<td>The Script Builder Applications menu provides access to the Script Builder applications installed on the system.</td>
<td>See <em>Intuity CONVERSANT System Version 7.0 Application Development with Script Builder</em>, 585-313-206, for complete instructions for developing, installing, and administering Script Builder applications.</td>
</tr>
<tr>
<td><strong>Switch Interfaces</strong></td>
<td>The Switch Interfaces menu provides access to administer analog and/or digital switch parameters.</td>
<td>See Chapter 5, <em>Switch Interface Administration</em>, for information on using the Switch Interfaces menu.</td>
</tr>
<tr>
<td><strong>System Monitor</strong></td>
<td>The System Monitor window displays the voice channels on the system and provides input on channel states (on-hook, dialing, etc.), call states, and caller input.</td>
<td>See Chapter 8, <em>Common Administration</em>, for information on using the System Monitor window.</td>
</tr>
<tr>
<td><strong>Unix Management</strong></td>
<td>The Unix Management menu provides capabilities to format floppy diskettes and tapes, administer printers and modems, install and remove software, modify the system time and date, and administer TCP/IP.</td>
<td>See Chapter 7, <em>Peripheral Administration</em>, for information on administering printers, modems, and terminals.</td>
</tr>
</tbody>
</table>
Configuration Management

Use the following procedure to access the Configuration Management menu:

1. Start at the Voice System Administration menu (Figure 42 on page 59) and select:

   > Configuration Management

   The system displays the Configuration Management menu (Figure 43 on page 63).

Figure 43. Configuration Management Menu
Use the procedures in this section to perform voice system administration for the following Configuration Management menu options:

- Feature licensing (display Feature Licensing only)
- Message administration
- Remote alarming administration
- System control
- Voice equipment

See Chapter 6, Database Administration, for information on Database Administration.

**Feature Licensing**

Feature Licensing allows customers to purchase features on a per-channel basis. Only Lucent services personnel can activate and change the feature licenses. Feature licenses cannot be modified by the administrator.

An administrator can display and print a report of the current feature licenses.

**Note:** Your system’s machine name is used by the Feature Licensing software. Call your support center before changing the machine name and thus avoid losing any of your feature licenses.
Use the following procedure to access the Feature Licensing window and display the current feature licenses.

1. Start at the Configuration Management menu (Figure 43 on page 63) and select:

   > Feature Licensing

   The system displays the Display Feature Licensing window (Figure 44 on page 65).

   **Note:** Figure 44 on page 65 is a sample window. Your Display Feature Licensing window may look different depending on the feature packages you have purchased.

**Figure 44. Display Feature Licensing Window**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Text to Speech</td>
<td>144</td>
</tr>
<tr>
<td>Dial Pulse Recognition</td>
<td>144</td>
</tr>
<tr>
<td>Flextell Recognition</td>
<td>144</td>
</tr>
<tr>
<td>Whole Word Recognition</td>
<td>144</td>
</tr>
<tr>
<td>Fax</td>
<td>0</td>
</tr>
</tbody>
</table>
Print a Feature License Report

Use the following procedure to print a report of the current system feature licenses:

1. Start at the Display Feature Licensing window (Figure 44 on page 65) and press F8 (Actions).

   The system displays the Actions menu (Figure 45 on page 66).

   Figure 45. Actions Menu

   ![Actions Menu]

2. Select:

   > Print

   The system prints a copy of the Display Feature Licensing window (Figure 44 on page 65).

**Note:** A printer must be configured for use with the voice system for this report to print. See Printer Administration on page 427 in Chapter 7, Peripheral Administration, for more information about printer administration.
Host Configuration

Use the Host Configuration menu to access, configure, and display host sessions, and to define SDLC and Token Ring protocol information.

Use the following procedure to access the Host Configuration menu:

1. Start at the Configuration Management menu (Figure 43 on page 63) and select

   > Host Configuration

   The system displays the Host Configuration menu (Figure 46 on page 67).

Note: The Host Configuration menu displays either SDLC Protocol or Token Ring Protocol, but not both.

Figure 46. Host Configuration Menu
Access Host Sessions

Use the following procedure to access the Access Host Sessions menu:

1. Start at the Host Configuration menu (Figure 46 on page 67) and select

   > Access Host Sessions

   The system displays the Access Host Sessions menu (Figure 47 on page 68).

Figure 47. Access Host Sessions Menu
Use the following procedure to display the image that is currently connected to a Logical Unit (LU):

1. Start at the Access Host Sessions menu (Figure 47 on page 68) and select

   ![Show Host Sessions Screens](image)

   The system displays the Show Host Sessions Screens window (Figure 48 on page 69).

   **Figure 48. Show Host Sessions Screens Window**

   ![Show Host Sessions Screens](image)

2. Enter the desired host session in the Sessions: field, or press F2 (Choices) to select from a menu. Valid values are a single session number such as 0, 1, 2; a range of numbers such as 3–4; or all for all sessions.

3. Press F3 (Save).

   The system displays the selected host session information.
Specify Terminal Emulator Sessions

To specify the host sessions for which you want to use the terminal emulator program:

1. Start at the Access Host Sessions menu (Figure 47 on page 68) and select:

> Terminal Emulator

The system displays the Terminal Emulator window (Figure 49 on page 70).

Figure 49. Terminal Emulator Window

2. Enter the desired terminal emulator session in the Sessions: field, or press F2 (Choices) to select from a menu. Valid values are a single session number such as 0, 1, 2; a range of numbers such as 3–4; or all for all sessions. Only 10 LUs can be included if specific host sessions are listed. You can specify “all” even if more than 10 LUs are configured.

The system uses the terminal emulator program with the specified host sessions.
Configure Host Sessions

Use the Configure Host Sessions menu to:

- Assign and unassign applications
- Free (disconnect) the host link
- Log in and out of a host session
- Renumber host sessions
- Display host sessions
- Change the display options
- Print a host sessions report

Use the following procedure to access the Configure Host Sessions menu:

1. Start at the Host Configuration menu (Figure 43 on page 63) and select:

   > Configure Host Sessions

   The system displays the Configure Host Sessions menu (Figure 50 on page 72).
Figure 50. Configure Host Sessions Menu

<table>
<thead>
<tr>
<th>Configure Host Sessions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assign</td>
</tr>
<tr>
<td>Free</td>
</tr>
<tr>
<td>Login</td>
</tr>
<tr>
<td>Logout</td>
</tr>
<tr>
<td>Renumber</td>
</tr>
<tr>
<td>Unassign</td>
</tr>
</tbody>
</table>

This procedure allows you to assign installed applications to the host sessions or channels available on the system. These assignments supersede assignments currently in effect.

To assign host sessions:

1. Start at the Configure Host Sessions menu (Figure 50 on page 72) and select:

   > Assign

   The system displays the Assign Service to Host Sessions window (Figure 51 on page 73).
2 Enter the name of the application or service you want to assign to host sessions in the Service: field, or press F2 (Choices) to select from a menu. Valid entries are installed applications that have host control sessions defined.

3 Enter the session number(s) in the Sessions: field. Valid values are a single session number such as 0, 1, 2; a range of numbers such as 3–4; or all to assign the service to all channels, not just the channels that have no current service assignment.

4 Enter Yes in the File Transfer: field to have the service and session handle Enhanced File Transfer. Enter No if Enhanced File Transfer is not installed or if you do not want the service and session to handle enhanced file transfer. You can also press F2 (Choices) to select from a menu.

Note: This field applies only if the Enhanced File Transfer software package is installed.
3 Voice System Administration

Free a Host Sessions

5 Press F3 (Save–Assign).

The system saves the host session information.

Note: The LU must be logged in for the logout sequence to work.

1 Start at the Configure Host Sessions menu (Figure 50 on page 72) and select:

```
> Free
```

The system displays the Free Host Sessions window (Figure 52 on page 74).

Figure 52. Free Host Sessions Window
2  Do one of the following:
   ~ Enter the name that specifies the services associated with the host sessions you want to free in the Service: field, or press F2 (Choices) to select from a menu.
   ~ Enter the session number(s) you want to free in the Sessions: field. Valid values are a single session number such as 0, 1, 2; a range of numbers such as 3–4; or all for all sessions.

3  Press F3 (Save).
   The system frees the specified host session.

Login Host Sessions

Use the Login Host Sessions window to log in to a host to establish sessions.

1  Start at the Configure Host Sessions menu (Figure 50 on page 72) and select:

   > Login

   The system displays the Login Host Sessions window (Figure 53 on page 76).
**Voice System Administration**

**Host Configuration**

Figure 53. Login Host Sessions Window

**Login Host Sessions**

<table>
<thead>
<tr>
<th>Service:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>Sessions:</td>
<td></td>
</tr>
</tbody>
</table>

2 Do one of the following:

~ Enter the name that specifies the services associated with the host sessions you want to log in to in the **Service** field, or press F2 (Choices) to select from a menu.

~ Enter the session number(s) you want to log in to in the **Sessions** field. Valid values are a single session number such as 0, 1, 2; a range of numbers such as 3–4; or the **all** for all sessions.

3 Press F3 (Save).

The system logs in to the specified host session.

**Logout Host Sessions**

Use the Logout Host Sessions window to log out of existing host sessions.

**Note:** The LU must be logged out for the login sequence to work.
Start at the Configure Host Sessions menu (Figure 50 on page 72) and select:

> Logout

The system displays the Logout Host Sessions window (Figure 54 on page 77).

**Figure 54. Logout Host Sessions Window**

```
Logout Host Sessions

Service: [field]

OR

Sessions: [field]
```

Do one of the following:

1. Enter the name that specifies the services associated with the host sessions you want to log out of in the `Service:` field, or press F2 (Choices) to select from a menu.
2. Enter the session number(s) you want to log out of in the `Sessions:` field. Valid values are a single session number such as 0, 1, 2; a range of numbers such as 3–4; or all for all sessions.
3 Press F3 (Save).

The system logs out of the host session.

Renumber Host Sessions

Use the following procedure to renumber Host Sessions:

1. Complete the procedure Stop the Voice System on page 136.
2. Start at the Configure Host Sessions menu (Figure 50 on page 72) and select:

   ![Figure 50 on page 72]

   The system displays a message indicating that renumbering has begun.

Unassign Host Sessions

Use the Unassign Service from Host Sessions window to remove the service assignments for specific host sessions and free the host session channels. This deletes the host session assignment that was made using the Assign Host Sessions window, but does not make a new assignment. To change the host session assignments, use the Assign Host Session window, which will replace the current assignments with the new assignments you specify.
Use the following procedure to unassign host sessions:

1. Start at the Configure Host Sessions menu (Figure 50 on page 72) and select:

   ![Unassign Window]

   The system displays the Unassign Service from Host Sessions window (Figure 55).

   **Figure 55. Unassign Service from Host Sessions Window**

2. Do one of the following:

   - Enter the name that specifies the services associated with the host sessions you want to unassign in the Service: field, or press F2 (Choices) to select from a menu.

   - Enter the session number(s) you want to unassign in the Sessions: field. Valid values are a single session number such as 0, 1, 2; a range of numbers such as 3–4; or all for all sessions.
3 Press F3 (Save).

The system unassigns the selected host session(s).

Display Host Sessions

The Display Host Sessions window displays all host sessions currently running on the system, or a subset as specified by the Host Sessions Options window.

Use the following procedure to display host sessions:

1 Start at the Configure Host Sessions menu (Figure 50 on page 72) and select:

> Display Host Sessions

The system displays the Display Host Sessions window (Figure 56 on page 81).
Figure 56. Display Host Sessions Window

<table>
<thead>
<tr>
<th>SESSION</th>
<th>CONN NAME</th>
<th>LU</th>
<th>SERVICE</th>
<th>STATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>TKR1</td>
<td>2</td>
<td></td>
<td>free</td>
</tr>
<tr>
<td>1</td>
<td>TKR1</td>
<td>3</td>
<td></td>
<td>unassigned</td>
</tr>
<tr>
<td>2</td>
<td>TKR1</td>
<td>4</td>
<td></td>
<td>unassigned</td>
</tr>
<tr>
<td>3</td>
<td>TKR1</td>
<td>5</td>
<td></td>
<td>unassigned</td>
</tr>
<tr>
<td>4</td>
<td>TKR1</td>
<td>6</td>
<td></td>
<td>unassigned</td>
</tr>
<tr>
<td>5</td>
<td>TKR1</td>
<td>7</td>
<td></td>
<td>unassigned</td>
</tr>
<tr>
<td>6</td>
<td>TKR1</td>
<td>8</td>
<td></td>
<td>unassigned</td>
</tr>
<tr>
<td>7</td>
<td>TKR1</td>
<td>9</td>
<td></td>
<td>unassigned</td>
</tr>
<tr>
<td>8</td>
<td>TKR1</td>
<td>10</td>
<td></td>
<td>unassigned</td>
</tr>
<tr>
<td>9</td>
<td>TKR1</td>
<td>11</td>
<td></td>
<td>unassigned</td>
</tr>
</tbody>
</table>

Table 4 on page 82 describes the columns in this window.
# Table 4. Field Descriptions for Display Host Sessions Window

<table>
<thead>
<tr>
<th>Column Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SESSION</td>
<td>Identifies a logical session with the host. Numbers range from 0 to the maximum host session number allowed by the system. For each session number there is an LU number. Session numbers are unique across all connections, while LU numbers are unique per connection.</td>
</tr>
<tr>
<td>CONN NAME</td>
<td>Identifies a logical connection to a host.</td>
</tr>
<tr>
<td>LU</td>
<td>The logical unit number which can range from 2 to the maximum LU number allowed by the system. LU numbers are unique per connections. Session numbers are unique across all connections.</td>
</tr>
<tr>
<td>SERVICE</td>
<td>Application assigned to the system. This must be an application that is installed on the system.</td>
</tr>
</tbody>
</table>
Table 4. Field Descriptions for Display Host Sessions Window

<table>
<thead>
<tr>
<th>Column Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>STATE</td>
<td>Identifies the current state of a host session. Valid values are:</td>
</tr>
<tr>
<td></td>
<td>• <strong>Not Avail</strong> — Cannot open the device, the session is not configured, or the DIP cannot parse the host script</td>
</tr>
<tr>
<td></td>
<td>• <strong>Free</strong> — Session was freed manually; use the Assign Host Sessions window to put the session back in use</td>
</tr>
<tr>
<td></td>
<td>• <strong>Unassigned</strong> — Service was never assigned to the session, or service was assigned and later deleted manually</td>
</tr>
<tr>
<td></td>
<td>• <strong>Logging In</strong> — Temporary state while DIP tries to log into the session (part of the Assign Host Sessions or Login Host Session procedure)</td>
</tr>
<tr>
<td></td>
<td>• <strong>Logged In</strong> — Successfully logged in but not involved in a transaction; alternates with the Transaction state</td>
</tr>
<tr>
<td></td>
<td>• <strong>Transaction</strong> — Currently involved in a transaction; alternates with the Logged In state</td>
</tr>
<tr>
<td></td>
<td>• <strong>Recovering</strong> — Login procedure failed, the transaction ended on a window other than the transaction base window, or the recovery procedure ended on a window other than the transaction base window</td>
</tr>
</tbody>
</table>
3 Voice System Administration

Host Configuration

Table 4. Field Descriptions for Display Host Sessions Window

<table>
<thead>
<tr>
<th>Column Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>STATE (con't.)</td>
<td>Identifies the current state of a host session. Valid values are:</td>
</tr>
<tr>
<td></td>
<td>• <strong>Logging Out</strong> — Temporary state while DIP logs out of the session; appears immediately after the Logout Host Sessions window is used</td>
</tr>
<tr>
<td></td>
<td>• <strong>Logged Out</strong> — Shown only after the Logout Host Sessions window is used; use the Login Host Sessions window to put the session back in use</td>
</tr>
</tbody>
</table>

Host Sessions: Actions Menu

The Actions menu is another way to perform the same activities as described above in [Configure Host Sessions](#). In addition, the Actions menu has two additional functions: print a host session report, and change the display options.

Use the following procedure to access the Host Sessions: Actions menu:

1. Start at the Display Host Sessions window ([Figure 56 on page 81](#)) and press **F8** (Actions).

   The system displays the Host Sessions: Actions menu ([Figure 57 on page 85](#)).
Figure 57. Host Sessions: Actions Menu

See [Configure Host Sessions on page 71](#) for information on how to perform these assign, free, login, logout, renumber, and unassign actions.

See [Change Options for Display Host Sessions Window on page 85](#) and [Print a Host Sessions Report on page 87](#) for information on the options and print actions.

**Change Options for Display Host Sessions Window**

The Options action allows you to customize the Display Host Sessions window. You can display a full range of sessions, a subrange of sessions, or sessions assigned with a specific service name.
Use the following procedure to define the Display Host Sessions window options:

1. Start at the Host Sessions: Actions menu (Figure 57 on page 85) and select

   ![Options]

   The system displays the Display Host Sessions Options window (Figure 58 on page 86).

   **Figure 58. Display Host Sessions Options Window**

2. Enter the name of an application or service in the Service: field, or press F2 (Choices) to select from a menu.

3. Enter one or more session numbers or all in the Sessions: field, or press F2 (Choices) to select from a menu.
4 Press F3 (Save).

The system stores the information to use the next time it processes a Display Host Sessions request.

Print a Host Sessions Report

Use the following procedure to print a report showing all host sessions currently defined:

1 Start at the Host Sessions: Actions Menu (Figure 57 on page 85) and select:

> Print

The system sends the Display Host Sessions window to the system printer.

Note: This report will not print if a printer has not been configured for use with the voice system. See Printer Administration on page 427 in Chapter 7, Peripheral Administration, for more information about printer administration.
Access the SDLC Protocol Menu

Use the SDLC Protocol menu to perform the following procedures:

- Add an SDLC Protocol on page 89
- Change an SDLC Protocol on page 92
- Deleting an SDLC Protocol on page 94
- Diagnose the SDLC Connection on page 95
- Display an SDLC Protocol on page 96
- View SDLC Connection Information on page 97
- Rename an SDLC Protocol on page 98

Use the following procedure to access the SDLC protocol menu:

1. Start at the Host Configuration menu (Figure 46 on page 67) and select:

   > SDLC Protocol

The system displays the SDLC Protocol menu (Figure 59 on page 89).
Figure 59. SDLC Protocol Menu

Add an SDLC Protocol

Use the following procedure to add an SDLC protocol:

1. Start at the SDLC Protocol menu (Figure 46 on page 67) and select:

   > Add

   The system displays the Add SDLC Protocol window (Figure 60 on page 90).
Figure 60. Add SDLC Protocol Window

Table 5 on page 91 describes the fields on this window.

2 Enter the information described in Table 5 on page 91.

3 Press F3 (Save).

The system adds the SDLC Protocol with the selected parameters.
### Table 5. Field Descriptions for SDLC Protocols

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection Name</td>
<td>Identifies a logical connection to a host. The default value is SDLCn, where ( n ) is the circuit card number.</td>
</tr>
<tr>
<td>Card Number</td>
<td>Indicates which communications adapter circuit card this connection uses. The default value is 1 unless circuit card number 1 is in use; then the default is 2.</td>
</tr>
<tr>
<td>Line Type</td>
<td>Specifies the type of physical line being used. The default value is leased.</td>
</tr>
<tr>
<td>Node ID to Send</td>
<td>An 8-digit hexadecimal number that specifies the ID that is sent to the remote computer. The number is divided into a 3-digit block number and a 5-digit node number. Values 000 and FFF cannot be used for the block number, and 00000 cannot be used for the node number. Valid values range from 00100001 to FFEFFFFF. The default value is blank (no node ID to send).</td>
</tr>
<tr>
<td>Encoding</td>
<td>Specifies the encoding scheme of the modem for transmitting and receiving data. Valid values are nrz and nrzi. The default value is nrz.</td>
</tr>
<tr>
<td>Constant Carrier</td>
<td>Specifies whether the system will keep the RTS signal high. If Yes, the modem must support constant carrier. The default value is No.</td>
</tr>
</tbody>
</table>
Change an SDLC Protocol

Table 5. Field Descriptions for SDLC Protocols

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poll Address:</td>
<td>Specifies the polling address of the system. The poll address is a hexadecimal value that ranges from 00 to FF. The default value is C1.</td>
</tr>
<tr>
<td>LU:</td>
<td>Identifies the logical unit number. Valid values range from 2 to the maximum LU number allowed by the system. You can enter multiple LUs separated by commas, and a range of LUs using a dash, for example 2, 4–8, 10.</td>
</tr>
</tbody>
</table>

Use the following procedure to change SDLC protocol:

1. Start at the SDLC Protocol menu (Figure 46 on page 67) and select:

   > Change

   The system displays the Change SDLC Protocol window (Figure 61 on page 93).
2 Enter the name of the connection you want to change in the Connection Name field, or press F2 (Choices) to select from a menu.

3 Modify any of the fields as desired using Table 5 on page 91 as a guide.

4 Press F3 (Save).

The system overwrites the host connection with new SDLC information.
Deleting an SDLC Protocol

Use the following procedure to delete SDLC protocol:

1. Start at the SDLC Protocol menu (Figure 46 on page 67) and select:

   > Delete

   The system displays the Delete SDLC Protocol window (Figure 62 on page 94).

   **Figure 62. Delete SDLC Protocol Window**

   ![Delete SDLC Protocol Window]

   2. Enter the name of the connection you want to delete in the Connection Name field, or press F2 (Choices) to select from a menu.

   3. Press F3 (Delete).

   The system deletes the specified connection.
Diagnose the SDLC Connection

Use the following procedure to diagnose one SDLC connection or all SDLC connections:

1. Start at the SDLC Protocol menu (Figure 46 on page 67) and select:

   ![Diagnose SDLC Connection Window](image)

   The system displays the Diagnose SDLC Connection window (Figure 63).

2. Enter the connection name or **all** in the Connection Name field, or press **F2** (Choices) to select from a menu.

3. Press **F3** (Diagnose).

   The system diagnoses the selected SDLC connection and displays the results.
Use the following procedure to display an SDLC protocol:

1. Start at the SDLC Protocol menu (Figure 46 on page 67) and select:

```
> Display
```

The system displays the Display SDLC Protocol window (Figure 64 on page 96).

**Figure 64.  Display SDLC Protocol Window**

```
Connection Name: 
Card Number: 
Line Type: 
Node ID to Send: 
Encoding: 
Constant Carrier: 
Poll Address: 
LU: 
```

2. Enter the name of the connection in the Connection Name: field, or press F2 (Choices) to select from a menu.

The system fills in the remaining fields.

3. Press F3 (Display).

The system displays information about the selected SDLC protocol.
Use the following procedure to view information about an SDLC connection that could be helpful when troubleshooting the connection to a host machine.

1. Start at the SDLC Protocol menu (Figure 46 on page 67) and select:

   > Information

   The system displays the SDLC Connection Information window (Figure 65).

   **Figure 65. SDLC Connection Information Window**

   ![SDLC Connection Information Window]

2. Enter the connection name or **all** in the **Connection Name:** field, or press F2 (Choices) to select from a menu.

3. Press F3 (Save–Inform).

   The system displays information about the SDLC connection.
Use the following procedure to rename an SDLC protocol:

1. Start at the SDLC Protocol menu (Figure 46 on page 67) and select Rename.

The system displays the Rename SDLC Protocol window (Figure 66 on page 98).

2. Enter the alphanumeric string that identifies a logical connection to a host you want to rename in the Current Connection Name: field, or press F2 (Choices) to select from a menu.

3. Enter the alphanumeric string that identifies the connection that replaces the current connection name in the New Connection Name: field.

4. Press F3 (Save–Rename).

The system renames the SDLC protocol.
Access the Token Ring Protocol Menu

Use the Token Ring Protocol menu to perform the following procedures:

- Add Token Ring Protocol on page 100
- Change a Token Ring Protocol on page 102
- Delete a Token Ring Protocol on page 104
- Display a Token Ring Protocol on page 105
- Rename a Token Ring Protocol on page 106

Use the following procedure to access the Token Ring Protocol menu:

1. Start at the Host Configuration menu (Figure 46 on page 67) and select

   > Token Ring Protocol

   The system displays the Token Ring Protocol menu (Figure 67).

Figure 67. Token Ring Protocol Menu
3 Voice System Administration

Host Configuration

Add Token Ring Protocol

Use the following procedure to add token ring protocol to a host connection:

1. Start at the Token Ring Protocol menu (Figure 67 on page 99) and select Add.

The system displays the Add Token Ring Protocol window (Figure 68 on page 100).

Figure 68. Add Token Ring Protocol Window

Table 6 on page 101 describes the fields on this window.
### Table 6. Field Descriptions for Token Ring Protocols

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection Name:</td>
<td>Alphanumeric string that identifies a logical connection to a host. The default value is TKRn, where ( n ) is the first unused number starting from 1. For example, if the current connection names are TKR1 and TKR3, TKR2 would be the default.</td>
</tr>
<tr>
<td>Adapter Device Name:</td>
<td>Specifies the particular adapter used by this connection. The default value is ibmtok_0.</td>
</tr>
<tr>
<td>Local SAP Address:</td>
<td>2-digit hexadecimal number ranging from 04 to EC that specifies the SAP (Service Access Point) address that remote nodes must specify to contact the system. Must be a multiple of 4. The default value is 04.</td>
</tr>
<tr>
<td>Remote SAP Address:</td>
<td>2-digit hexadecimal number ranging from 04 to ED that specifies the address of the remote system SAP. Must be a multiple of 4. The default value is 04.</td>
</tr>
<tr>
<td>Node ID to Send:</td>
<td>8-digit hexadecimal number that specifies the ID that is to be sent to the remote computer. The number is divided into a 3-digit block number and a 5-digit node number. Values 000 and FFF cannot be used for the block number, and 00000 cannot be used for the node number. Valid values range from 00100001 to FFEFFFFF. The default value is blank (no node ID to send).</td>
</tr>
</tbody>
</table>
Enter the information as described in Table 6 on page 101.

3 Press F3 (Save–Add).

The system adds Token Ring protocol to the selected connection.

### Change a Token Ring Protocol

Use the following procedure to change a token ring protocol:

1 Start at the Token Ring Protocol menu (Figure 67 on page 99) and select:

   > Change

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remote Network Address:</td>
<td>12-digit hexadecimal number ranging from 000000000000 to FFFFFFFF0000 that specifies the address of the remote token ring node to which the system is connecting. There is no default.</td>
</tr>
<tr>
<td>LU:</td>
<td>Logical unit number ranging from 2 to the maximum LU number allowed by the system. Enter multiple LU numbers separated by commas, or specify a range of LUs using a dash, for example, 2, 4–6, 8. There is no default.</td>
</tr>
</tbody>
</table>
The system displays the Change Token Ring Protocol window (Figure 69 on page 103).

Figure 69. Change Token Ring Protocol Window

Table 6 on page 101 describes the fields on this window.

2 Enter the name of the connection you want to change in the Connection Name field or press F2 (Choices) to select from a menu.

The system fills in the remaining fields.

3 Change any of the remaining fields using Table 6 on page 101 as a guide.

4 Press F3 (Save–Change).

The systems replaces the old configuration information with the new information.
Delete a Token Ring Protocol

Use the following procedure to delete a Token Ring protocol:

1. Start at the Token Ring Protocol menu (Figure 67 on page 99) and select

   > Delete

   The system displays the Delete Token Ring Protocol window (Figure 70 on page 104).

   **Figure 70. Delete Token Ring Protocol Window**

   ![Delete Token Ring Protocol Window]

2. Enter the connection you want to delete in the Connection Name: field or press F2 (Choices) to select from a menu.

   The system fills in the remaining fields.

3. Press F3 (Delete).

   The system deletes the selected Token Ring.
Voice System Administration

Display a Token Ring Protocol

Use the following procedure to display a Token Ring protocol:

1. Start at the Token Ring Protocol menu (Figure 67 on page 99) and select

   > Display

   The system displays the Display Token Ring Protocol window (Figure 71 on page 105).

   Figure 71. Display Token Ring Protocol Window

2. Enter the name of the connection in the Connection Name: field, or press F2 (Choices) to select from a menu.

   The system fills in the remaining fields.

3. Press F4 (Display).

   The system displays information about the Token Ring protocol.
3 Voice System Administration

Use the following procedure to rename a Token Ring protocol:

1. Start at the Token Ring Protocol menu (Figure 67 on page 99) and select `> Rename`.

   The system displays the Rename Token Ring Protocol window (Figure 72 on page 106).

   Figure 72. Rename Token Ring Protocol Window

2. Enter the name of the Token Ring protocol you want to rename in the Current Connection Name: field, or press F2 (Choices) to select from a menu.

   Note: This is an alphanumeric string that identifies a logical connection to a host.

3. Enter the new connection name in the New Connection Name: field.

   Note: This is an alphanumeric string that replaces the current connection name.
4 Press F3 (Save–Rename).

The system renames the Token Ring protocol.

**Message Administration**

Messages are used to provide information about events and errors during system operations. System messages vary in content, priority, destination, and threshold parameters. Use the System Message Administration window to:

- List all the parameters associated with a particular system message.
- Add or remove a new destination to/from the current list of destinations for the current system message.
- Modify a message priority.
- Modify the system message threshold period.
- Add or remove a new threshold or threshold message ID pair to or from the current list of thresholds for the current system message.

**Note:** Some messages are generated with destinations and priorities that are not administrable through System Message Administration windows (that is, GEN001, GEN002, and THR001–4). Almost all other messages can be administered through the System Message Administration windows.
Access Message Administration

1. Start at the Configuration Management menu (Figure 43 on page 63) and select:

   > Message Administration

   The system displays the System Message Administration window (Figure 73).

   **Figure 73. System Message Administration Window**

2. Enter the message ID of the message you want to administer in the Message ID: field, or press F2 (Choices) to choose from a menu of currently defined messages.

3. Press F3 (Save).

   The system displays the System Message Display window (Figure 74 on page 109).
Figure 74. System Message Display Window

![System Message Display Window](image)

Table 7 on page 109 describes the fields in this window.

Table 7. Field Description for System Message Display Window

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Message ID:</td>
<td>Specifies a unique name for each message in the system.</td>
</tr>
<tr>
<td>Message Priority:</td>
<td>Specifies the urgency level of the message. The Message Priority may be</td>
</tr>
<tr>
<td></td>
<td>NONE or – (for none), * (for minor), ** (for major), or *C (for critical).</td>
</tr>
<tr>
<td>Message Destinations:</td>
<td>Specifies a list of destinations where the message should be sent. By</td>
</tr>
<tr>
<td></td>
<td>default, messages are sent to the message master log and either the alarm</td>
</tr>
<tr>
<td></td>
<td>(if the message is an alarm) or event (if the message is an event).</td>
</tr>
</tbody>
</table>
### Table 7. Field Description for System Message Display Window

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Threshold Period:</td>
<td>Specifies the length of time the message is included in the threshold count, provided that one or more thresholds are defined for this message.</td>
</tr>
<tr>
<td>Message Thresholds:</td>
<td>Shows the message threshold for the corresponding Message ID in the Threshold Message ID column. Most messages will not be associated with a threshold.</td>
</tr>
<tr>
<td>Threshold:</td>
<td>Specifies the number of messages to be generated within the threshold period necessary to trigger the threshold action.</td>
</tr>
<tr>
<td>Threshold Message ID:</td>
<td>Specifies the ID of the message to be generated when a threshold is reached. The priority and the destinations for the threshold message should be meaningful as a thresholding action. For example, message ID VROP003 may have a priority of minor (<em>), while its corresponding threshold message ID could be THR003 which has a major (**) priority. Generating the THR003 message after enough VROP003 messages have been generated within the Threshold Period is the threshold action. THR001, THR002, THR003, and THR004 have priorities of none (–), minor (</em>), Major (**), and critical (*C), respectively.</td>
</tr>
<tr>
<td>Message Text:</td>
<td>Text displayed when the message is generated. The message text can not be administered from the System Message Display window.</td>
</tr>
</tbody>
</table>
Add Message Destinations

The system’s message log provides a complete account of all messages generated by the voice system. All system messages are assigned to the appropriate destination during installation.

**Note:** If a message is changed from the event destination to the alarm destination, a similar change should be made on the message priority from none (–) to minor (*) and vice versa.

Use the following procedure to add a destination to a message:

1. Start at the System Message Display window ([Figure 74 on page 109](#)) for a given message, and press **F8** (Chg-Keys).
2. Press **F1** (Add–Dest).
   
   The system displays the Add Message Destination window ([Figure 75 on page 111](#)).

---

**Figure 75. Add Message Destination Window**

![Add Message Destination Window](image1.png)
3 Enter the destination for the message you want to add in the Message Destination field or press F2 (Choices) to select from a menu.

Valid message destinations are:

~ stderr — The standard error of the process generating the message. Since most system processes redirect standard error to the system console, specifying this destination may result in the message being sent to the system console.

~ console — The system console or /dev/console.

~ alertPipe — A specially named pipe for messages that must be sent directly to the alerter. The alerter pipe is used for some special system processes. Specification of the alerter pipe for other system messages has little or no effect on the system message facility or the alerter itself. The system is distributed with some messages specified with the alerter pipe as a destination. This destination should not be removed from the message.

Note: Separating alarm destinations from event destinations ensures that alarm messages do not overrun event messages, and vice versa.

~ alarm — Specifies that the delivery system send all alarm level messages (priority “*”, “*a” and “*C”) to the alarm log. The alarm log may be accessed via the display messages command or the Message Log Report window.
3 Voice System Administration

Message Administration

- event — Specifies that the delivery system send all event level messages (priority “–”) to the event log. The event log may be accessed via the display messages command or the Message Log Report window.

- mxmtr — Used only when the Netview Alarms package is installed. Messages sent to mxmtr are sent to the appropriate Netview Alarm device. If this package is not installed, messages with this destination have no effect on the system.

4 Press **F3** (Save).

The system redisplay the System Message Display window (Figure 74, on page 109) showing the new message destination.

5 Complete the Save Changes and Exit Message Administration on page 122 procedure.

The system installs the changes on the voice system.

Remove Message Destinations

This procedure allows you to remove a destination from the current list of destinations for the current system message.
Use the following procedure to remove a message destination:

1. Start at the System Message Display window (Figure 74 on page 109) for a given message, and press **F8** (Chg-Keys).

2. Press **F2** (Rem–Dest).
   
   The system displays the Remove Message Destination window (Figure 76 on page 114).

3. Enter the Message Destination that you want to remove in the **Message Destination:** field, or press **F2** (Choices) to select from a menu.

   **Note:** **log** is not a valid destination choice since this destination cannot be removed using the Remove Message Destination window.

4. Press **F3** (Save).

   The system redispplays the System Message Display window (Figure 74, on page 109) showing the removed message destination.

5. Complete the Save Changes and Exit Message Administration on page 122 procedure.

   The system installs the changes on the voice system.
Add Thresholds

Message thresholds are triggering devices that alert operations personnel to take action when a certain number of messages are generated over a certain period of time. Message thresholding allows for escalation of message priority or criticality. A system message may be of little concern when it occurs in small numbers over long time intervals. However, if message occurrences increase over shorter time intervals, this may indicate more serious problems with the system. Message thresholding sends a new message to be sent when a threshold is reached. The new message may be higher in priority and have a different destination set than the original message.

This procedure adds a new threshold and thresholding message ID pair to the current list of thresholds for the current system message.

Use the following procedure to add a message threshold:

1. Start at the System Message Display window (Figure 74 on page 109) for a given message, and press F8 (Chg-Keys).
   The system displays the Add Threshold window (Figure 77 on page 116).
3 Enter a non-negative integer threshold value or none in the Threshold: field.

4 Enter THR001 (for none), THR002 (for minor), THR003 (for major), or THR004 (for critical) in the Threshold Message Id: field, or press F2 (Choices) to select from a menu.

5 Press F3 (Save).

The system redisplays the System Message Display window (Figure 74 on page 109) showing the new message threshold.

6 Complete the Save Changes and Exit Message Administration on page 122 procedure.

The system installs the changes on the voice system.
Remove Thresholds

This procedure allows you to remove a threshold or a threshold message ID pair from the list of thresholds for the current system message.

Use the following procedure to remove a message threshold:

1. Start at the System Message Display window (Figure 74 on page 109) for a given message, and press **F8** (Chg-Keys).

2. Press **F4** (Rem-Thsh).
   
   The system displays the Remove Threshold window (Figure 78 on page 117).

3. Enter a non–negative integer message threshold value in the **Threshold:** field.

4. Press **F3** (Save).
   
   The system redisplays the System Message Display window (Figure 74 on page 109) showing the message threshold removed.
5 Complete the Save Changes and Exit Message Administration on page 122 procedure.

The system installs the changes on the voice system.

Modify Message Priorities

This procedure allows you to modify message priority. When the system is installed, each message is assigned a particular priority. In most cases, these priorities are appropriate and do not need to be modified. Depending on the type of application, however, you may want to modify a message priority.

Events are messages of priority none (denoted by “–” in the System Message Administration window). Alarms are messages of priority minor, major, and critical (denoted by “*”, “**”, and “*C”, respectively, in the System Message Administration window).

Use the following procedure to modify a message priority:

1 Start at the System Message Display window (Figure 74 on page 109) for a given message, and press F8 (Chg-Keys).

2 Press F5 (Msg–Prio).

   The system displays the System Message Priority window (Figure 79 on page 119).
3 Enter a priority in the Message Priority field or press F2 (Choices) to select from a menu.

4 Press F3 (Save).

   The system redisplays the System Message Display window (Figure 74, on page 109) showing the message threshold removed.

5 Complete the Save Changes and Exit Message Administration on page 122 procedure.

   The system installs the changes on the voice system.

**Modify Threshold Periods**

This procedure allows you to modify the system message threshold period, or the interval of time over which messages are counted for a given threshold.

Use the following procedure to modify a threshold period:

1 Start at the System Message Display window (Figure 74 on page 109) for a given message, and press F8 (Chg-Keys).
2 Press F6 (Thsh-Per).

   The system displays the System Message Threshold Period window
(Figure 80 on page 120).

Figure 80. System Message Threshold Period Window

3 Enter a time interval in the Threshold Period: field or press F2
   (Choices) to select from a menu.

   You must enter the threshold period as a time interval with the following
   syntax:

   `number[dimension] number[dimension]`

   where `number` is a positive integer and `dimension` is one of the following
   single characters:
   ~ w for weeks
   ~ d for days
   ~ h for hours
   ~ m for minutes
   ~ s for seconds.
Table 8 on page 121 provides examples of threshold periods and the required syntax.

Table 8. Threshold Period Examples

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value or Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1s 1h</td>
<td>A 3601-second threshold period</td>
</tr>
<tr>
<td>2w</td>
<td>A 14-day threshold period</td>
</tr>
<tr>
<td>5m 30s</td>
<td>A 330-second threshold period</td>
</tr>
<tr>
<td>5m 3m</td>
<td>BAD INTERVAL — Two minute specifications.</td>
</tr>
</tbody>
</table>

4 Press F3 (Save).

   The system displays the System Message Display window (Figure 74 on page 109) showing the new threshold period.

5 Complete the Save Changes and Exit Message Administration on page 122 procedure.

   The system installs the changes on the voice system.
Save Changes and Exit Message Administration

⚠️ CAUTION:
You MUST perform this procedure if you want to save your message administration changes.

Use the following procedure to save message administration changes and exit the Message Administration menu.

1. Start from any menu/window in the Message Administration menus, and press **F6** (Cancel) until you return to the System Message Administration window (Figure 73 on page 108).

2. Press **F8** (Chg-Keys).
   The system displays the alternate function keys.

3. Press **F4** (Install).
   The system saves changes and returns to the Configuration Management menu (Figure 43 on page 63).
Remote Alarming Administration

Remote Alarming allows the field support personnel to receive notice when your system is experiencing difficulty. Alarms levels are categorized by their severity: critical, major, and minor.

Access Remote Alarming Administration

Use the following procedure to access the Alarm Management window:

1. Start at the Configuration Management menu (Figure 42 on page 59) and select:

   > Remote Alarming Administration

   The system displays the Alarm Management window (Figure 81 on page 124).
Figure 81. Alarm Management Window

Table 9 on page 124 describes the fields on this window.

Table 9. Field Descriptions for Remote Alarming Window

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product ID:</td>
<td>Must be either a null string or a 10-digit code; the first number must be 2.</td>
</tr>
<tr>
<td>Alarm Destination:</td>
<td>The telephone number to which the alarm will be sent</td>
</tr>
<tr>
<td></td>
<td>• 0 through 9</td>
</tr>
<tr>
<td></td>
<td>• = (to wait for dialtone)</td>
</tr>
<tr>
<td></td>
<td>• – (to pause)</td>
</tr>
<tr>
<td>Alarm Origination:</td>
<td>INACTIVE</td>
</tr>
<tr>
<td>Alarm Level:</td>
<td>MINOR</td>
</tr>
<tr>
<td>Alarm Suppression:</td>
<td>INACTIVE</td>
</tr>
<tr>
<td>Clear Alarm Notification:</td>
<td>ACTIVE</td>
</tr>
</tbody>
</table>

1 of 2
### Table 9. Field Descriptions for Remote Alarming Window

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alarm Origination:</td>
<td>Valid field only for Intuity CONVERSANT alarm messages ADMIN002, ADMIN003, ADMIN008, CGEN005, CGEN020, CGEN038, and MTC003.</td>
</tr>
<tr>
<td></td>
<td>• ACTIVE: enabled</td>
</tr>
<tr>
<td></td>
<td>• INACTIVE: disabled (default)</td>
</tr>
<tr>
<td>Alarm Level:</td>
<td>Not a valid field for the Intuity CONVERSANT system.</td>
</tr>
<tr>
<td>Alarm Suppression:</td>
<td>ACTIVE: temporarily overrides alarm origination even if the alarm origination field is set to ACTIVE (intended for use during troubleshooting).</td>
</tr>
<tr>
<td></td>
<td>INACTIVE: alarm origination determined by the alarm origination field (default)</td>
</tr>
<tr>
<td>Clear Alarm Notification:</td>
<td>Not a valid field for the Intuity CONVERSANT system.</td>
</tr>
</tbody>
</table>
System Control

Use the System Control menu to:

- Display the status of the Intuity CONVERSANT system
- Start and stop the voice system
- Diagnose circuit cards, channels, and buses

Use the following procedure to access the System Control menu:

1. Start at the Configuration Management menu (Figure 43 on page 63) and select:

   > System Control

   The system displays the System Control menu (Figure 82 on page 126).

Figure 82. System Control Menu

![System Control Menu Diagram]

Intuity™ CONVERSANT® System Version 7.0 Administration 585-313-501  Issue 3 January 2000  126
Diagnose

The Diagnose menu allows you to perform diagnostics on system equipment and voice port loop around test.

⚠️ CAUTION:
Run diagnostics on a TDM bus master circuit card during off–hours. The diagnostic procedure has a negative impact on call processing. See Modify the Display Voice Equipment Window Parameters on page 144 for more information about identifying the circuit card that serves as the TDM bus master.

You can run diagnostics on Tip/Ring, E1/T1 or SSP circuit cards or the TDM bus. Run diagnostics whenever the system displays a message indicating circuit card failure.

Use the following procedure to diagnose equipment:

1. Start at the System Control menu (Figure 82 on page 126) and select:

   > Diagnose

   > Diagnose Equipment
3 Voice System Administration

The system displays the Diagnose Equipment window (Figure 83 on page 128).

Figure 83. Diagnose Equipment Window

Table 10 on page 128 describes the fields in this window.

Table 10. Field Descriptions for Diagnose Equipment Window

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equipment to diagnose:</td>
<td>Specifies whether the type of equipment to be diagnosed is either a circuit card, channel, or bus. Enter card, channel, or bus, or press F2 (Choices) to select from a menu. There is no default value for this field. This is a required field.</td>
</tr>
<tr>
<td>Equipment number:</td>
<td>Number that identifies each Tip/Ring, E1/T1 and SSP circuit card. Equipment numbers are defined by the position of the circuit card in the circuit card table shown on the Display Voice Equipment window (Figure 90 on page 142). Card range can be from 0 (zero) to 15. When you specify a range of circuit cards, cards are diagnosed in order, one at a time. This is a required field. The bus value must be either 1 or all.</td>
</tr>
</tbody>
</table>
3 Voice System Administration

System Control

Table 10. Field Descriptions for Diagnose Equipment Window

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediate diagnosis?:</td>
<td>Specifies whether or not there should be immediate diagnosis on the selected circuit card or bus. Type y for yes, n for no, or press F2 (Choices) to select from a menu. If you choose yes, all calls on active channels for the specified equipment are terminated. If there are active calls and you choose no, the circuit card is returned to the original state and diagnostics are not performed. This is a required field.</td>
</tr>
</tbody>
</table>

2 Enter the information as described in Table 10 on page 128.

3 Press F3 (Save).

   The system displays a report showing the status of the specified equipment.

4 Press F6 (Cancel) repeatedly until you return to the System Control menu.
The voice port loop around test allows you to initiate loop around test for a given channel. Use the following procedure to run the voice port loop around test:

1. Start at the System Control menu (Figure 82 on page 126) and select

   - Diagnose
   - Voice Port Loop Around Test

   The system displays the Voice Port Loop Around Test window (Figure 83 on page 128).

   **Figure 84. Voice Port Loop Around Test Window**

   Table 11 on page 131 describes the fields in this window.
### Table 11. Field Descriptions for Voice Port Loop Around Test Window

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dialing Channel</td>
<td>Enter the channel number to use to diagnose the target channel, or AUTO to have the system select a channel.</td>
</tr>
<tr>
<td>Target Channel</td>
<td>Enter the channel you want to diagnose.</td>
</tr>
</tbody>
</table>
| Test Type       | Enter the test type, press F2 (Choices) to select a test type, or all to perform all tests. Regardless of the choice entered, the following test are always run:  
  - Manipulation of hook state  
  - Gain control  
  - Speed control  
  - Ring detection  
  - Touch-tone receive  
  - Touch-tone transmit  
  - Loop current/dial tone detection |
2 Enter the information as described in Table 11 on page 131.

3 Press F3 (Save).

The system displays a report showing the status of the specified channel.

4 Press F6 (Cancel) repeatedly until you return to the System Control menu.

### Table 11. Field Descriptions for Voice Port Loop Around Test Window

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediate diagnosis?:</td>
<td>Specifies whether or not there should be immediate diagnosis on the selected channel. Type y for yes, n for no, or press F2 (Choices) to select from a menu.</td>
</tr>
</tbody>
</table>

**Note:** Immediate diagnosis is not an option when AUTO is selected for the Dialing Channel.
Renumber Voice Channels

The Renumber Voice Channels option removes all nonexistent (NONEX) circuit cards from the voice equipment table, then reorders all existing equipment with E1/T1 circuit cards first, followed by Tip/Ring circuit cards, then SSP circuit cards. This reordering changes the channel numbers of some circuit cards. However, user-defined characteristics such as options, attributes, and script assignments do not change. If a circuit card is found in the system that was not in the voice equipment table, it is added under the appropriate heading (E1/T1, Tip/Ring, or SSP) with default settings.

⚠️ CAUTION:

Renumbering voice channels brings down the system immediately and restarts it. When you select this option, a warning is displayed and you are given the option of continuing with the procedure or returning to the System Control menu.

Use the following procedure to renumber voice channels:

1. Start at the System Control menu (Figure 82 on page 126) and select:

   > Renumber Voice Channels
The system displays the Renumber Voice Channels window (Figure 85 on page 134).

**Figure 85. Renumber Voice Channels Window**

- This command brings down the voice system immediately!
- Press RENUMBER to bring down the voice system and renumber, or press CANCEL to exit this form.

2. Press **F3** (Renumber) to continue.

   The system renumbers voice channels.
3 Voice System Administration

Report Voice System Status

Use the following procedure to see whether the voice system is running or stopped, and to view the current voice system run level.

1. Start at the System Control menu (Figure 82 on page 126) and select:

   > Report Voice System Status

   The system displays the Status of Voice System window (Figure 86 on page 135).

   **Figure 86. Status of Voice System Window**

   The voice system is up and running at runlevel 4.


   The system returns to the System Control menu (Figure 82 on page 126).
Stop the Voice System

This procedure stops the voice system by taking all system channels out of service with the option to wait for in-progress calls to end. Stopping the system is usually done when you are performing some type of routine service such as backup and restore. When the system is stopped, the CPU does the following:

- Places the entire system in the idle state when all lines are free
- Saves internal system tables
- Turns off voice system processes

Stopping the voice system takes approximately 2 to 3 minutes to complete.

Use the following procedure to stop the voice system:

1. Start at the System Control menu (Figure 82 on page 126) and select:

   > Stop Voice System

   The system displays the Wait Time window (Figure 87 on page 137).
2 Enter a time interval between 60 and 600 seconds in the **Second** field, or press **F2** (Choices). The default is 180.

**Note:** During this wait time, all calls in progress are completed, but no new calls are accepted.

3 Press **F3** (Save).

The system displays a message telling you it will stop the voice system if you press **ENTER**.

**Note:** Press **F6** (Cancel) to return to the System Control menu without stopping the system.

4 Press **ENTER**.

The system displays messages telling you it is stopping the voice system.
Shut Down the System

⚠️ CAUTION:
Always stop the voice system before executing a shutdown. Shutting down the system without stopping the voice system may negatively affect the software.

Use the following procedure to shut down the system:

1. Start at the System Control menu (Figure 82 on page 126) and select:

   > Shut Down the Voice System

   The system displays the Wait Time window (Figure 88 on page 138).

2. Enter a time interval between 0 and 60 seconds in the Seconds: field or press F2 (Choices).
Start the Voice System

This procedure allows you to start or restart the voice system. When this process is invoked, all channels that were deactivated when you stopped the voice system are returned to service in the maintenance state they had when the voice system was last running.

Use the following procedure to start the voice system:

1. Start at the System Control menu (Figure 82 on page 126) and select:

   > Start the Voice System

2. Press ENTER.

   The system displays messages telling you it is starting up the voice system.

3. Press F3 (Save).

   The system waits the amount of time indicated, then shuts the system down. The system then returns to the System Control menu (Figure 82 on page 126).
**Voice Equipment**

Voice equipment includes those circuit cards and their associated channels in the system that provide voice system functionality, such as the digital and analog circuit cards (E1/T1 and Tip/Ring, respectively), and the speech processing circuit cards (SSP cards).

Use the following procedure to access the Voice Equipment menu:

1. Start at the Configuration Management menu ([Figure 43 on page 63](#)) and select:

   ![Voice Equipment](#)

   The system displays the Voice Equipment menu ([Figure 89 on page 141](#)).

**Note:** Immediately after starting the voice system, you will be unable to perform some administrative commands and you may receive a system message indicating that MTC is busy. After the system is initialized, MTC will be free to handle administrative commands.

If you have started the system monitor (sysmon) prior to starting the voice system, sysmon must be stopped and restarted. If you do not do so, **sysmon** may display the channels in a pending state.
Use the Voice Equipment menu to:

- Assign, display, and unassign voice system equipment options and states
- Change channel maintenance states
- Assign, display, and unassign channel and telephone number services
- Assign, display, and unassign circuit card and channel functions
- Print a report of voice system circuit card and channel options
Display the Voice Equipment Window

Use the following procedure to access the Display Voice Equipment window:

1. Start at the Voice Equipment menu (Figure 89 on page 141) and select:

   > Display Equipment

   The system displays the Display Equipment window (Figure 90 on page 142).

Figure 90. Display Voice Equipment Window

<table>
<thead>
<tr>
<th>CARD</th>
<th>STATE</th>
<th>CLASS</th>
<th>O.S. INDEX</th>
<th>NAME</th>
<th>OPTIONS</th>
<th>FUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Manoos</td>
<td>Signal_Processor(LSPS)</td>
<td>3</td>
<td>6UBS</td>
<td>slave,tdml</td>
<td>CS_BASIC_TTS-6UBS{text2speech}</td>
</tr>
<tr>
<td>4</td>
<td>Manoos</td>
<td>Signal_Processor(SSP)</td>
<td>4</td>
<td>CB1</td>
<td>slave,tdml</td>
<td>UNASSIGNED</td>
</tr>
<tr>
<td>6</td>
<td>Manoos</td>
<td>Signal_Processor(SSP)</td>
<td>6</td>
<td>CB1</td>
<td>slave,tdml</td>
<td></td>
</tr>
</tbody>
</table>
This window, by default, displays all channels currently in the system, including:

- Channel circuit card and port (CD.PT)
- Channel number (CHN)
- Channel state (STATE)
- Time of last state change (STATE-CHNG-TIME)
- Associated service name (SERVICE-NAME)
- Telephone number (PHONE)
- Group number (GROUP)
- Options (OPTS)
- Circuit card type (TYPE)

This window can be several pages long, depending on the display parameters for the window, and the equipment installed in the system.

Press F2 (Prev Page) and F3 (Next Page) to move up and down through the pages of this window.

Press F4 (First Page) to view the first page of the window. Press F5 (Last Page) to view the last page of the window.

Use the following procedure to modify the default display parameters for the Display Voice Equipment window.
You can tailor the Display Voice Equipment window to show a full range of channels or a subrange. The parameters you specify are saved in a file and remain in effect until you change them.

Use the following procedure to change the display parameters:

1. Start at the Display Voice Equipment window (Figure 90 on page 142) and press F8 (Actions).

   The system displays the Actions menu (Figure 91 on page 144).

2. Select:

   > Modify

   The system displays the Modify Display Voice Equipment window (Figure 92 on page 145).
3 Enter **card**, **channel** (default), or **group** in the Equipment: field, or press **F2** (Choices) to select from a menu.

- **card** — This parameter displays the version of software running on each circuit card (in the FUNCTION: field), circuit card options, and the circuit card O.S. Index (dip switch setting) for each of the voice system circuit cards installed.

  - **SSP circuit cards**: Information on SSP circuit cards is displayed with the card options only. SSP circuit cards do not have channels associated with them.
  - **E1/T1 or Tip/Ring**: The circuit card parameter also shows all channel information (with the first two columns in the order **CHAN**, then **CD.PT**), since these types of circuit cards also have associated channels.
channel — Information displayed with the channel and card parameters is almost identical. However, the card parameter also displays the version of software running on each circuit card (in the FUNCTION field), circuit card options, and the circuit card O.S. Index (dip switch setting).

~ group — In the standard display, with the GROUP column last, only the first seven characters in that field are displayed. For example, a channel may be assigned to groups “1,2,3,4,5,6,7,8,9,10”, but the GROUP column only displays “1,2,3,4”.

4 (Optional) Enter a single number, or a range of numbers separated by commas or spaces, or all (default) in the Number field to specify a certain equipment number or number range to be displayed.

5 (Optional) In the Type field, enter SSP, E1/T1 or T/R to specify an equipment type, or press F2 (Choices) to select from a menu. If you leave this field blank, all equipment types are displayed.

6 (Optional) In the State field, enter a maintenance state, or press F2 (Choices) to select from a menu. This field limits the voice equipment display to circuit cards/channels in a particular state. If you leave this field blank, all maintenance states will be displayed.

See Equipment State on page 150 for a list and description of each maintenance state.
7 (Optional) In the Service: field, enter a service name, or press F2 (Choices) to select from a menu. This field is used to limit the voice equipment display to channels associated with a particular service or function. This field is valid only if the Equipment: field is channel. If you leave this field blank, the system does not restrict the display to any one service.

A special service name of "*DNIS_SVC" is available. If you enter *DNIS_SVC, the voice equipment display shows the number service based on the calling party’s number.

8 Press F3 (Save).

The system saves the display settings to a file and returns to the Display Voice Equipment window with the modified parameters.

Equipment Options

The equipment options, talk or tdm, indicate to the voice system the functionality of the analog and/or digital circuit cards (also known as voice circuit cards).
Use the following procedure to change voice equipment options for analog and digital circuit cards:

1. Start at the Voice Equipment menu (Figure 89 on page 141) and select:

> Equipment Options

The system displays the Change Options of Voice Equipment window (Figure 93 on page 148).

Figure 93. Change Options of Voice Equipment Window

2. Enter **talk** or **tdm** in the Talk-tdm: field, or press **F2** (Choices) to select from a menu.

   If you enter **talk**, the circuit card indicated is used for speech processing.

   When you enter **tdm**, the circuit card indicated is not used for speech processing. If you have an SSP circuit card in the system, it is used for speech processing.
For E1/T1 circuit cards, the only valid option is tdm. No speech processing function is available. The SSP circuit card performs the speech processing function. For IVP4 and IVP6 Tip/Ring circuit cards, the option can be either talk or tdm.

Table 12 on page 149 shows the valid equipment option settings.

<table>
<thead>
<tr>
<th>Card Type</th>
<th>Valid Setting</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>E1/T1</td>
<td>tdm</td>
<td>No speech processing function available. The SSP circuit card performs speech processing function.</td>
</tr>
<tr>
<td>Tip/Ring</td>
<td>talk</td>
<td>The Tip/Ring circuit card performs speech processing function.</td>
</tr>
<tr>
<td>Tip/Ring</td>
<td>tdm</td>
<td>The SSP circuit card performs speech processing function.</td>
</tr>
</tbody>
</table>

Note: If a system application uses background speech (or music), changing the equipment option may affect how the callers hear background speech. When the channel is set to tdm, foreground speech plays simultaneously with background speech. (Background speech plays at a lower volume than foreground speech.) If the channel is set to “talk,” foreground speech interrupts background speech.
3 Enter **circuit card** or **channel** in the **Equipment:** field, or press **F2** (Choices) to select from a menu. If you specify a circuit card, the option is set for all channels of that circuit card.

4 Enter a single number or range of numbers to select the voice circuit cards or channels to change in the **Equipment Number:** field, or **all** (default).

5 Press **F3** (Save).

    The system saves the voice equipment options.

**Equipment State**

The equipment states, listed below, indicate to the voice system whether or not a voice circuit card/channel is ready and able to receive calls, process speech, etc. — in other words, whether it can perform the job required of it.

The Change Equipment State menu option allows you to change the state, or maintenance state, of a card/channel. Some states are valid only for cards and cannot be used for channels. The following is a description of the different maintenance states for voice equipment:

- **MANOOS** (manual out-of-service) — Indicates the circuit card or channel has been taken out of service with a command issued manually.
Note: E1 (CAS) channel 0 and 16 are used for framing and signaling, respectively. They will always display as manoos even when the circuit card is in service and cannot be changed to inserv.

Change an SSP circuit card to the manoos state only when there are no active calls on the system. The manoos state disrupts voice playback on all SSP circuit card channels (if only one SSP circuit card is installed) or negatively affects voice playback performance on all channels (if more than one SSP circuit card is installed).

- INSERV (in service) — Indicates the circuit card or channel is in service and able to carry a transaction.
- FOOS (facility out-of-service) — Indicates the circuit card or channel has been taken out of service by the voice system because the link to the switch is out of service (not physically connected, switch down, etc.).
- BROKEN (broken) — Indicates the circuit card or channel did not pass the diagnostics and has been taken out of service by the system.

Channels are placed in the broken state by the system. An administrator cannot change a channel to the broken state.

- HWOOS (hardware out-of-service) — Indicates the circuit card or channel is out of service due to one or more of its dependencies being out of service, broken, or not physically connected.
Voice System Administration

• NETOOS (network out-of-service) — For digital circuit cards/channels only: Indicates the system is ready for the channel to go inserv, but is waiting for the network switch to also be ready for the channel to be inserv. Channels may freeze in this state if the switch is not ready for the channel to be inserv.

As indicated in the list, some maintenance states are reserved for the voice system only. A system administrator cannot place the equipment in these states. However, a system administrator can place the equipment into the manoos state, and then into the inserv state. See Table 13 on page 152 for a description of the valid administrator changes.

### Table 13. Valid Equipment State Changes

<table>
<thead>
<tr>
<th>If a Card/Channel is:</th>
<th>You May Change It to:</th>
<th>For Equipment Type:</th>
</tr>
</thead>
<tbody>
<tr>
<td>MANOOS</td>
<td>INSERV</td>
<td>circuit cards or channels</td>
</tr>
<tr>
<td>INSERV</td>
<td>MANOOS</td>
<td>circuit cards or channels</td>
</tr>
<tr>
<td>FOOS</td>
<td>MANOOS</td>
<td>circuit cards or channels</td>
</tr>
<tr>
<td>NETOOS</td>
<td>MANOOS</td>
<td>digital circuit cards or channels</td>
</tr>
<tr>
<td>HWOOS</td>
<td>MANOOS</td>
<td>circuit cards or channels</td>
</tr>
<tr>
<td>BROKEN</td>
<td>MANOOS</td>
<td>circuit cards or channels</td>
</tr>
</tbody>
</table>
Use the following procedure to change the maintenance state of a circuit card or channel:

1. Start at the Voice Equipment menu (Figure 89 on page 141) and select:

   > Equipment State

   The system displays the Change State of Voice Equipment window (Figure 94 on page 153).

   **Figure 94. Change State of Voice Equipment Window**

<table>
<thead>
<tr>
<th>Change State of Voice Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>New State:</td>
</tr>
<tr>
<td>Equipment:</td>
</tr>
<tr>
<td>Equipment Number:</td>
</tr>
<tr>
<td>Change Immediately?</td>
</tr>
</tbody>
</table>

2. Enter the state to which the designated equipment should be changed in the **New State:** field or press F2 (Choices) to select from a menu. Valid choices are **inserv** (in service) and **manoos** (manual out-of-service).

3. Enter **channel** or **card** for the type of equipment in the **Equipment:** field, or press F2 (Choices) to select from a menu.

   **Equipment State**

   | Equipment State | |
   |-----------------|
   | inserv         |
   | manoos         |

   **Equipment Number**

   | Equipment Number | |
   |------------------|
   | 1                |
   | 2                |
   | 3                |
4 Enter the equipment number or numbers for which you want to change the state in the Equipment Number: field. Type a single number, a range of numbers, separated by commas or spaces, or all (default).

5 (Optional) Enter Yes or No in the Change Immediately: field. If you enter Yes, active calls on the specified equipment are disconnected abruptly. If you enter No, the state is changed after all current calls end. The changes may not be displayed immediately if you use the No value. If you leave this field blank, the No value is used as the default.

6 Press F3 (Save).

The system changes the maintenance state of selected voice equipment.

Suggestions for Changing the Maintenance State of Channels

Use the following information to help you determine why a channel may be placed in a given maintenance state.

**Manoos E1/T1 Channels Using Line Side E1/T1 Protocol**

Certain switches, or switch configurations, cannot remove a large number of channels from service in a timely manner. Therefore, a delay has been added to the /vs/data/mtc.rc file to change the time between taking a channel out of service and taking the next channel out of service for a E1/T1 circuit card using Line Side E1/T1 protocol. To change this delay for a circuit card using
Line Side E1/T1 protocol, add or modify the following line in the /vs/data/mtc.rc file:

```
LST1_D_REMOVE_DELAY=xxx
```

where `xxx` is the amount of delay in milliseconds. The default is 200.

**Manoos E1/T1 Channels Using E&M Protocol**

The following suggestions apply only to individual manoos E1/T1 channels using the E&M protocol. Other E1/T1 protocols provide the ability to remove individual channels from service.

At times, you may want to limit the number of calls the system handles by removing some of the E1/T1 channels from service. Removing E1/T1 channels, however, may negatively impact the system if the switch uses an inappropriate hunting pattern.

The E&M protocol does not allow you to remove individual channels from service. If a switch using the E&M protocol does not recognize that a channel is in a manoos state, it continues to route calls to that channel.

The system thus returns a busy signal to the caller if the switch directs the call to a manoos channel. For some hunting patterns (for example, those using a round–robin pattern for new call delivery), this is not desirable. With round–robin style delivery, the switch routes a new call to the next channel in the hunt group. When the switch reaches the end of the group, it starts again at the beginning. Consequently, the caller may receive a busy signal even though there may be other idle channels that are in service.
Ideally, the switch should use all inserv channels before attempting to use any manoos channels. You can force the switch to use inserv channels before using manoos channels by requesting a switch hunting pattern that always scans for idle channels starting at the beginning of the hunt group. On a 4ESS switch, for example, this is achieved by requesting a “trunk hunt without memory.” You can then limit the number of simultaneous incoming calls by placing the least–used channels (channels at the end of the hunt group) into the manoos state. A new call is routed to a manoos channel only if all inserv channels are being used.

**Manoos E1/T1 Channels**

When all channels on a E1/T1 circuit card are in the manoos state, the circuit card generates a BLUE alarm to the switch. Calls are not routed to any of the channels on that E1/T1 circuit card.

**Manoos Tip/Ring Circuit Card**

Certain switches or switch configurations cannot remove a large number of channels from service in a timely manner. Therefore, a delay has been added to the /vs/data/mtc.rc file to change the time between taking a channel out of service and taking the next channel out of service for a Tip/Ring circuit card.

To change this delay for a Tip/Ring circuit card, add or modify the following line in the /vs/data/mtc.rc file:

```
TIP_RING_REMOVE_DELAY=xxx
```

where `xxx` is the amount of delay in milliseconds. The default is 0.
Groups to Channels

The Group to Channel menu option allows you to assign and unassign channels to equipment group(s). For example, an equipment group can be dedicated to outbound call bridging so that bridging does not interfere with incoming calls.

Assign Groups to Channels

Use the following procedure to assign an equipment group to channels:

1. Start at the Voice Equipment menu (Figure 89 on page 141) and select:

   > Groups to Channels

   > Assign

   The system displays the Assign Channels to Groups window (Figure 95, on page 157).

Figure 95. Assign Channels to Groups Window
3 Voice System Administration

2 Enter the channel or range of channels that you want to assign to equipment groups in the Channels: field. Type a single channel number or a range of channel numbers, separated by commas or spaces, or all — this assigns all channels to the equipment groups specified in the Groups: field.

3 Enter the equipment group or groups to which you want to assign the channels in the Groups: field. Type a single equipment group number, or a range of equipment group numbers separated by commas or spaces. Valid equipment group numbers are 0–30.

Note: Equipment group 31 is a reserved group, used to specify channels that the system should ignore when it executes a soft seizure (soft_szr command). This allows you to mark certain channels as not being in the channel group specified by a soft seizure request on “any channel, any equipment group.” If a channel is assigned to equipment groups 0 and 31, it is only considered for soft seizures that specifically request equipment group 0.

4 Press F3 (Save).

The system assigns the specified channels to the selected equipment groups.
Unassign Groups to Channels

Use the following procedure to unassign an equipment group to channels:

1. Start at the Voice Equipment menu (Figure 89 on page 141) and select:

   > Groups to Channels
   
   > Unassign

   The system displays the Unassign Channels From Groups window (Figure 96 on page 159).

   Figure 96.  Unassign Channels From Groups Window

2. Enter the channel or range of channels that you want to unassign to equipment groups in the Channels: field. Type a single channel number, a range of channel numbers separated by commas or spaces, or all — (to unassign all channels from the equipment groups specified in the Groups: field).

   Unassign Channels From Groups
   
   Channels:  
   Groups:  

   > Unassign
3 Enter the equipment group or groups to which you want to unassign the channels in the Groups: field. Type a single equipment group number, or a range of equipment group numbers separated by commas or spaces. Valid equipment group numbers are 0–30, with equipment group 31 used as a reserved group.

4 Press F3 (Save).

The system unassigns the specified channels from the selected equipment groups.

PBX Extension

The PBX Extension menu option allows you to assign an ASAI channel (only) to a PBX extension telephone number.

⚠️ CAUTION:
Be careful when assigning and reassigning ASAI channels to a PBX extension. Assignments made overwrite PBX extensions currently in effect on the specified channel.
Assign PBX Extension

Use the procedure below to assign a PBX extension telephone number to an ASAI channel:

1. Start at the Voice Equipment menu (Figure 89 on page 141) and select

   - PBX Extension
   - Assign

The system displays the Assign PBX Extension to a Channel window (Figure 97 on page 161).

Figure 97. Assign PBX Extension to a Channel Window

2. Enter the extension telephone number for the channel, up to 7 digits, in the PBX Extension: field.

3. Enter a single channel number in the Channel Number: field.
4 Press F3 (Save).
   The system assigns the specified PBX extension telephone number to the
   selected channel.

Unassigning PBX Extensions from Channels

Use the procedure below to unassign PBX extensions from channels:
1 Start at the Voice Equipment menu (Figure 89 on page 141) and select
   > PBX Extension
   > Assign

The system displays the Unassign PBX Extension from a Channel window (Figure 98 on page 162).

Figure 98. Unassign PBX Extension from a Channel Window

2 Enter the channel number from which you want to unassign in the
   Channel Number: field.
3 Press F3 (Save).
   The system unassigns the PBX extension from the specified channel.
SSP Functions

The SP/SSP Functions menu option allows you to assign functions to the SSP circuit cards, or to change the currently assigned functions of SSP circuit cards.

Assign SSP Functions

Use the following procedure to assign functions to SSP circuit cards:

1. Start at the Voice Equipment menu (Figure 89 on page 141) and select:

   - > SP/SSP Functions
   - > Assign/Change SP/SSP Functions

The system displays the Assign SSP Functions window (Figure 99 on page 164).
Figure 99. Assign/Change Functions to SSP Cards Window

⚠️ CAUTION:

The SSP circuit card must be in the manoos state before functions may be assigned to it. Be careful when making assignments and reassignments. Assignments made in the Assign Functions to SP/SSP Cards window overwrite any other assignments currently in effect on the specified circuit cards. See Equipment State on page 150 for information on changing states.

2 Enter a single number or press F2 (Choices) to select from a menu in the Card Number field. After entering the card number, the current settings are displayed.
In the remaining fields, enable the function with **Yes**, or disable with **No**.

The optional feature packages shown below may or may not appear in the **Assign/Change Functions for SP/SSP Cards** window, depending on the software installed on your voice system.

Several of these functions can be used in combination with another, depending on the type of circuit card, and the software installed. [Table 14 on page 165](#) describes the valid functionality combinations.

**Table 14. Valid SP/SSP Function Combinations**

<table>
<thead>
<tr>
<th>Function</th>
<th>Valid for SSP</th>
</tr>
</thead>
<tbody>
<tr>
<td>All functions</td>
<td>Yes (except ISDN-PRI which is not supported on SSP)</td>
</tr>
<tr>
<td>Call Classification Analysis (only)</td>
<td>Yes</td>
</tr>
<tr>
<td>FlexWord speech recognition (only)</td>
<td>Yes</td>
</tr>
<tr>
<td>ISDN-PRI (only)</td>
<td>No</td>
</tr>
<tr>
<td>Fax</td>
<td>Yes</td>
</tr>
<tr>
<td>Dial Pulse Recognition</td>
<td>Yes</td>
</tr>
<tr>
<td>Text to Speech (only)</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Use the following procedure to view the current assignments for the SSP cards in your system:

1. Start at the Voice Equipment menu (Figure 89 on page 141) and select:

   > SP/SSP Functions
   > Display SP/SSP Functions

   The system displays the Display SP/SSP Functions window (Figure 100 on page 167).

Table 14. Valid SP/SSP Function Combinations

<table>
<thead>
<tr>
<th>Function</th>
<th>Valid for SSP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code + Play</td>
<td>Yes</td>
</tr>
<tr>
<td>Code + Play + FlexWord</td>
<td>Yes</td>
</tr>
<tr>
<td>Code + Play + WholeWord + Echo Cancellation</td>
<td>Yes</td>
</tr>
<tr>
<td>WholeWord + Echo Cancellation</td>
<td>Yes</td>
</tr>
</tbody>
</table>
2 In the **Card Number:** field, enter a single number or press **F2** (Choices) to select from a menu. After entering the card number, the current settings are displayed.

3 Press **F6** (Cancel) twice to return to the Voice Equipment menu (Figure 89 on page 141).
PBX Extension

The PBX Extension menu option allows you to assign an ASAI channel (only) to a PBX extension telephone number.

⚠️ CAUTION:
Be careful when assigning and reassigning ASAI channels to a PBX extension. Assignments made overwrite PBX extensions currently in effect on the specified channel.

Assign PBX Extension

Use the procedure below to assign a PBX extension telephone number to an ASAI channel:

1. Start at the Voice Equipment menu (Figure 89 on page 141) and select

   > PBX Extension

   > Assign

   The system displays the Assign PBX Extension to a Channel window (Figure 101 on page 169).
2  Enter the extension telephone number for the channel, up to 7 digits, in the **PBX Extension**: field.

3  Enter a single channel number in the **Channel Number**: field.

4  Press **F3** (Save).

   The system assigns the specified PBX extension telephone number to the selected channel.

**Unassigning PBX Extensions from Channels**

Use the procedure below to unassign PBX extensions from channels:

1  Start at the Voice Equipment menu (**Figure 89 on page 141**) and select

   > PBX Extension

   > Assign

   The system displays the Unassign PBX Extension from a Channel window (**Figure 102 on page 170**).
Voice Services

The Voice Services menu option allows you to assign, display, and unassign channel and number services.

Use the following procedure to access the Voice Services menu:

1. Start at the Voice Equipment menu (Figure 89 on page 141) and select:

   > Voice Services

   The system displays the Voice Services menu (Figure 103 on page 171).

2. Enter the channel number from which you want to unassign in the Channel Number: field.

3. Press F3 (Save).

   The system unassigns the PBX extension from the specified channel.
The Channel Services menu option allows you to assign, display, and unassign channel services.

Use the following procedure to access the Channel Services menu:

1. Start at the Voice Services menu (Figure 103 on page 171) and select:

   > Channel Services

   The system displays the Channel Services menu (Figure 104).
3 Voice System Administration

Assign Service

The Assign Services to Channels window allows you to specify the service or application to use for incoming calls on one or more channels.

Use the following procedure to assign services to channels:

1. Start at the Channel Services menu (Figure 104 on page 171) and select:

   > Assign Service

   The system displays the Assign Services to Channels window (Figure 105 on page 172).

Figure 105. Assign Services to Channels Window
2 In the Channel Numbers: field, enter the channel number or range of numbers.

Valid numbers range from 0 to the maximum number of channels in the system. Multiple channels may be entered separated by commas, or a range of channels may be entered using a dash. For example, an entry of 1, 3–5, 10 would specify channels 1, 3, 4, 5, and 10.

3 Enter the name of service that will handle the incoming call in the Service Name: field. Valid names are a string of 16 characters or less, or press F2 (Choices) to select from a menu.

A special service name of “DNIS_SVC” is available. It allows you to select a number service based on the called and calling numbers. It is also used when multiple services are supported by a single trunk or special services are required for specific callers. DNIS (called party) is available with E1/T1 (E&M), E1 (CAS), and PRI. DNIS is also available when ASAI is used with a Tip/Ring, LST1, or LSE1 connection to a DEFINITY switch.

Another special service name “ANI” (calling party) is available with PRI, or when ASAI is used with a Tip/Ring, LST1, or LSE1 connection to a DEFINITY switch.
4  (Optional) Enter the name of the application that handles the call setup procedures in the Startup Service: field.

   This field can be used to collect additional information, such as ANI and DNIS via the use of the converse vector step, when a new call arrives. Currently, the Application Dispatch process only uses this service for new calls. When an exec action occurs on this channel, the prior service name field is used.

5  Press F3 (Save Assign).

   The system assigns the indicated services to the selected channel or range of channels.

**Display Channel Services**

The Display Channel Services window displays all currently assigned channel services.

Use the following procedure to display channel services:

1  Start at the Channel Services menu (Figure 104 on page 171) and select:

   > Display Services

   The system displays the Display Channel Services window (Figure 106, on page 175).
Figure 106. Display Channel Services Window

Table 15 on page 176 describes the columns in this window.
Unassign Channel Service

The Unassign Service menu option allows you to unassign services from one or more channels.

Use the following procedure to unassign channel service:

1. Start at the Channel Services menu (Figure 104 on page 171) and select:

   > Unassign Service

Table 15. Descriptions for Display Channel Services Window

<table>
<thead>
<tr>
<th>Column Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHANNEL</td>
<td>Channel number assigned to the service displayed in the SERVICE column</td>
</tr>
<tr>
<td>SERVICE</td>
<td>Name of the service that corresponds to the channel number displayed in the</td>
</tr>
<tr>
<td></td>
<td>CHANNEL column</td>
</tr>
<tr>
<td>STARTUP SERVICE</td>
<td>Name of the service that handles calls requiring special call set up procedures</td>
</tr>
</tbody>
</table>
The system displays the Unassign Services from Channels window (Figure 107 on page 177).

Figure 107. Unassign Services From Channels Window

2 Enter the channel number or range of numbers to be unassigned in the Channel Numbers: field.

Valid numbers range from 0 to the maximum number of channels in the system. You can enter multiple channels separated by commas or a range of channels can be entered using a dash. For example, an entry of 1, 3–5, 10 would specify channels 1, 3, 4, 5, and 10.

3 Press F3 (Save).

The system unassigns the selected channel or range of channels.
Number Services

The Number Services menu option allows you to assign, display, and unassign numbers services.

Use this procedure to access the Number Services menu:

1. Start at the Voice Services menu (Figure 103 on page 171) and select:

   > Number Services

   The system displays the Number Services menu (Figure 108 on page 178).

Figure 108. Number Services Menu

Assign Number Service

The Assign Services to Number window allows you to specify a service or application to use for incoming calls on the called number (DNIS) or calling number (ANI), and is only valid for channels assigned to *DNIS_SVC.
Use this procedure to assign number service:

1. Start at the Number Services menu ([Figure 89 on page 141](#)) and select:

   > Assign Service

   The system displays the Assign Number Service window ([Figure 109 on page 179](#)).

   **Figure 109. Assign Number Service Window**

   ![Assign Number Service Window](#)

2. Enter a number, range of numbers, or *any* in the Called Numbers: field.

   The number represents the telephone number to dial to reach the specified service. The number of digits must match those that the switch provides. You can enter numbers with a comma, a dash, or a space as delimiters. The first column contains a single number, the word *any*, or the first number in the range. The second column contains the last number in the range.
For example, to specify the extension 4876, enter 4876 in column 1 and leave column 2 blank. To specify any number, enter any in column 1 and leave column 2 blank. To specify a range 5554876–5555210, enter 555–4876 in column 1 and 555–5210 in column 2.

3 Enter the number, range of numbers, or any in the Calling Numbers: field.

This number represents the caller’s (or calling party) number. The number of digits must match those that the switch provides. You can enter numbers with a comma, a dash, or a space as delimiters. The first column contains a single number, the word any, or the first number in the range. The second column contains the last number in the range.

For example, to specify the single number 6148604876, enter 6148604876 in column 1 and leave column 2 blank. To specify any number, enter any in column 1 and leave column 2 blank. To specify a range 5554876–5555210, enter 555–4876 in column 1 and 555–5210 in column 2.

4 Enter a string of 16 characters or less in the Service Name: field or press F2 (Choices) to select from a menu. This field represents the name of the service that handles the incoming call on the channel(s).

5 Press F3 (Save).

The system assigns a service to the specified number or numbers.
Display Number Services
The Display Number Services window displays all currently assigned number services.

Use this procedure to display number services:

1. Start at the Number Services menu (Figure 108 on page 178) and select:

> Display Services

The system displays the Display Number Services window (Figure 110).

Figure 110. Display Number Services Window

Table 16 on page 182 describes the columns in this window.
The Unassign Service menu option allows you to unassign services from one or more numbers.

Use this procedure to unassign number service:

1. Start at the Number Services menu (Figure 108 on page 178) and select:

   > Unassign Service

The system displays the Unassign Number Service window (Figure 111 on page 183).

<table>
<thead>
<tr>
<th>Column Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CALLED NUMBERS</td>
<td>Displays the called number corresponding to the service (E&amp;M and PRI)</td>
</tr>
<tr>
<td>CALLING NUMBERS</td>
<td>Displays the calling number corresponding to the service (PRI)</td>
</tr>
<tr>
<td>SERVICE NAME</td>
<td>Displays the name of the service that corresponds to the called or calling number</td>
</tr>
</tbody>
</table>
2 Enter a number, range of numbers, or any in the Called Numbers: field. The number represents the telephone number to dial to reach the specified service. The number of digits must match those that the switch provides. You can enter numbers with a comma, a dash, or a space as delimiters. The first column contains a single number, the word any, or the first number in the range. The second column contains the last number in the range.

To specify the single number 6148604876, enter 6148604876 in column 1 and leave column 2 blank. To specify any number, enter any in column 1 and leave column 2 blank. To specify a range 5554876–5555210, enter 555–4876 in column 1 and 555–5210 in column 2.

3 Enter the number, range of numbers, or any in the Calling Numbers: field.

This number represents the caller’s (or calling party) number. The number of digits must match those that the switch provides. You can enter numbers with a comma, a dash, or a space as delimiters. The first column contains a single number, the word any, or the first number in the range. The second column contains the last number in the range.
To specify the single number 6148604876, enter **6148604876** in column 1 and leave column 2 blank. To specify any number, enter **any** in column 1 and leave column 2 blank. To specify a range 5554876–5555210, enter **555–4876** in column 1 and **555–5210** in column 2.

4 Press **F3** (Save).

The system unassigns a service from the specified number or numbers.

**Print a Voice Equipment Report**

Use the voice equipment print option to obtain a complete printout of the voice equipment report.

1 Start at the Display Voice Equipment window (Figure 90 on page 142) and press **F8** (Actions).

The system displays the Actions menu (Figure 45 on page 66).

2 Select:

> Print

**Note:** This report does not print if a printer is not configured for use with the voice system. See **Printer Administration on page 427** in Chapter 7, Peripheral Administration, for more information about printer administration.
Overview

This chapter describes the procedures to administer the following optional feature packages in the voice system:

- Script Builder Fax Actions
- Adjunct/Switch Application Interface (ASAI)
- Universal Call ID (UCID)
Script Builder Fax Actions Administration

Fax loading and printing and fax transmission queue management is accomplished through the Script Builder Fax Actions menu.

**Note:** To create applications using Script Builder Fax Actions, see Chapter 8, “Using Optional Features,” of *Intuity CONVERSANT System Version 7.0 Application Development with Script Builder*, 585-313-206. Once an application is developed, assign it to any fax-enabled analog or digital channel. See *Voice Equipment on page 140* in *Chapter 3, Voice System Administration*.

Use the following procedure to access the Script Builder Fax Actions menu:

1. Start at the Voice System Administration menu (Figure 42 on page 59) and select:

   - > Application Package Administration
   - > Script Builder FAX Actions

   The system displays the Script Builder FAX Actions menu (Figure 112 on page 187).
Figure 112. Script Builder FAX Actions Menu

Note: An application that uses the Script Builder FAX actions must be assigned to the specific channels and/or groups that have fax resources enabled. See Voice Equipment on page 140 in Chapter 3, Voice System Administration, for the procedures.

FAX Transmission Control

The FAX Transmission Control window allows you to view the list of jobs currently in the fax queue waiting for transmission. This feature also allows you to improve the performance of the system by:

- Eliminating jobs that overload the fax transmission queue and hinder system performance
- Canceling large jobs that may have been sent by mistake
Use the following procedure to access the FAX Transmission Control window:

1. Start at the Script Builder FAX Actions menu (Figure 112 on page 187) and select:

   > FAX Transmission Control

The system displays the FAX Transmission Control window (Figure 113 on page 188).

**Figure 113. FAX Transmission Control Window**

The FAX Transmission Control window lists the details (such as time, date, and size) for every fax job in queue. The fax jobs are listed in the order in which they appear in the fax transmission queue.
Table 17 on page 189 describes the columns and what they represent in this window.

### Table 17. Description of Columns on the FAX Transmission Control Window

<table>
<thead>
<tr>
<th>Column Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job ID</td>
<td>The job identification number</td>
</tr>
<tr>
<td>Date/Time Submitted</td>
<td>The date and time the fax request was submitted</td>
</tr>
<tr>
<td>Date/Time Next Attempted</td>
<td>The date and time the fax is to be processed; this is the time specified by</td>
</tr>
<tr>
<td></td>
<td>the application if no attempt to send the job has been made, or the</td>
</tr>
<tr>
<td></td>
<td>subsequent retry attempt time if the original attempt failed</td>
</tr>
</tbody>
</table>
### Table 17. Description of Columns on the FAX Transmission Control Window

<table>
<thead>
<tr>
<th>Column Name</th>
<th>Description</th>
</tr>
</thead>
</table>
| S           | The current status of the job; entries include:  
  - F — Job has failed (final failure)  
  - W — Job is waiting for a retry attempt  
  - R — Job is ready to be processed; the outgoing call is in progress  
  - D — Job is delayed by user (scheduled for future delivery)  
  - A — Job is waiting for an address; destination number is not found  
  - X — Job is transmitting the fax  
  - P — Job is being processed  
  - S — Job has sent the fax  
  - f — Job process has failed |
| Pgs/Snt     | The number of pages submitted and the number of pages transmitted |
Update the FAX Transmission Control Window

The system does not automatically update the FAX Transmission Control window when new entries are added to the fax queue.

Use the following procedure to update the FAX Transmission Control window:

1. From the FAX Transmission Control window (Figure 113 on page 188), press F6 (Cancel) to return to the Script Builder FAX Actions menu. You may need to press F8 (Chg-Keys) to access CANCEL.

2. In the Script Builder FAX actions menu, select FAX Transmission Control. The system displays the updated fax queue.

Table 17. Description of Columns on the FAX Transmission Control Window

<table>
<thead>
<tr>
<th>Column Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Destination</td>
<td>The telephone number where the fax is to be delivered</td>
</tr>
</tbody>
</table>
Remove a Fax From the FAX Transmission Control Window

It may be necessary to remove a fax from the queue to perform channel diagnostics or to relieve an overburdened system.

Use the following procedure to remove a fax from the fax job queue:

1. In the FAX Transmission Control window, select the fax to be removed.
2. Press F2 (Remove). You may need to press F8 (Chg-Keys) to access REMOVE.
   The system removes the selected fax.
3. Press F6 (Cancel) repeatedly to return to the Script Builder FAX Actions menu.

Load and Print Faxes

The FAX Loading and Printing window allows you to load a fax in the system, preview a fax, or send a fax to the printer.

Use the following procedure to access the FAX Loading, Printing window:

1. Start at the Script Builder FAX Actions menu (Figure 112 on page 187) and select:
   
   > FAX Loading and Printing

   The system displays the FAX Loading and Printing window (Figure 114 on page 193).
4 Feature Package Administration

Figure 114. Sample FAX Loading and Printing Window

<table>
<thead>
<tr>
<th>Code</th>
<th>FAX ID</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1001:</td>
<td>fax1</td>
<td>FAX Zapper FAX #1</td>
</tr>
<tr>
<td>1002:</td>
<td>fax2</td>
<td>FAX Zapper FAX #2</td>
</tr>
<tr>
<td>1003:</td>
<td>fax3</td>
<td>FAX Zapper FAX #3</td>
</tr>
<tr>
<td>1004:</td>
<td>fax4</td>
<td>FAX Zapper FAX #4</td>
</tr>
<tr>
<td>1005:</td>
<td>fax5</td>
<td>FAX Zapper FAX #5</td>
</tr>
<tr>
<td>1006:</td>
<td>fax6</td>
<td>FAX Zapper FAX #6</td>
</tr>
<tr>
<td>1007:</td>
<td>fax7</td>
<td>FAX Zapper FAX #7</td>
</tr>
<tr>
<td>1008:</td>
<td>fax8</td>
<td>FAX Zapper FAX #8</td>
</tr>
<tr>
<td>1009:</td>
<td>fax9</td>
<td>FAX Zapper Broadcast FAX</td>
</tr>
<tr>
<td>1010:</td>
<td>fax10</td>
<td>FAX Zapper Cover Sheet Top Half</td>
</tr>
</tbody>
</table>

Figure 114 on page 193 is a sample of the FAX Loading and Printing window. The window in your system may appear differently. The columns and what they represent, however, are the same. See Table 18 on page 194 for a description of the columns in this window.
### Table 18. Description of Columns on the FAX Loading and Printing Window

<table>
<thead>
<tr>
<th>Column Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FaxMenu Name</td>
<td>Name of the menu displayed in the window.</td>
</tr>
<tr>
<td>Page</td>
<td>Number of pages in the menu. (<a href="#">Figure 114 on page 193</a>) is one page.</td>
</tr>
<tr>
<td>Code</td>
<td>A 4-digit identifier; the first digit may not be a zero.</td>
</tr>
<tr>
<td>FAX ID</td>
<td>An alphanumeric string in the form of faxN where N is a number between 1 and 999 (<a href="#">Figure 114 on page 193</a>).</td>
</tr>
<tr>
<td>Comments</td>
<td>A description of the fax; maximum of 30 alphanumeric characters.</td>
</tr>
</tbody>
</table>

2 Press **F8** (Chg-Keys).

   The system displays the alternate set of function keys.

3 Press **F4** (FAX-ADM).

   The system displays the fax queue.
4 Select the fax to be loaded or printed, then do one of the following:

- Press F2 (Load-FX) to load the fax onto the system.
- Press F3 (Print-FX) to send the fax to the system printer.

See Chapter 8, “Using Optional Features,” of Intuity CONVERSANT System Version 7.0 Application Development with Script Builder, 585-313-206, for additional information on loading and printing faxes.

5 Press F6 (Cancel) repeatedly until you return to the Script Builder FAX Actions menu.

ASAI Administration

ASAI is a software standard that allows applications, such as those written in Script Builder, to effectively communicate with DEFINITY switches.

The ASAI Administration menu is used to:

- Administer channels, domains, and parameters
- Show the status of the ASAI link and the version of ASAI software
Use the following procedure to access the ASAI Administration menu:

1. At the Console Login: prompt, enter root
   The system prompts you for a password.

2. Enter your root password.
   The system displays the system prompt #.

3. Enter cvis_menu
   The system displays the Voice System Administration Menu (Figure 42 on page 59).

4. Select:

   > Feature Packages

   > ASAI Administration

   The system displays the ASAI Administration Menu (Figure 115 on page 197).
Figure 115. ASAI Administration Menu

Note: The following items listed in Figure 115 on page 197 are not supported in Intuity CONVERSANT Version 7.0 and are not included in this chapter:

- Diagnose IPCI Board
- Initialize IPCI Board
- Take IPCI Board Off-Line
Channel Administration

Channel Administration maps the voice system channels to the DEFINITY switch extension numbers. The Channel Administration window (Figure 116 on page 199) displays one entry for each Tip/Ring or LST1/LSE1 channel (voice system agent) that is a member of the voice system automatic call distributor (ACD) split.

Use the Channel Administration window to:

- Add an ASAI channel — Assigns a Tip/Ring or LST1 channel as a voice system agent
- Change an ASAI channel — Changes the switch extension assigned to a Tip/Ring or LST1 channel
- Remove an ASAI channel — Unassigns a Tip/Ring or LST1 channel as a voice system agent
- Log in an ASAI channel — Logs in a channel as an agent of the ACD split, enabling the channel to receive calls from the ACD
- Log out an ASAI channel — Unassigns a channel from the ACD split, and prevents the ACD from delivering calls to it
Use the following procedure to access the Channel Administration window:

1. Start at the ASAI Administration menu (Figure 115 on page 197) and select:

   > Channel Administration

   The system displays the Channel Administration window (Figure 116 on page 199).

**Figure 116. Channel Administration Window**

<table>
<thead>
<tr>
<th>CHANNEL</th>
<th>EXTENSION</th>
<th>SPLIT/AGT</th>
<th>PASSWORD</th>
<th>LOGIN</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>64</td>
<td>6000</td>
<td>3851</td>
<td>-</td>
<td>YES</td>
<td>manos</td>
</tr>
<tr>
<td>65</td>
<td>6001</td>
<td>3851</td>
<td>-</td>
<td>YES</td>
<td>manos</td>
</tr>
<tr>
<td>66</td>
<td>6002</td>
<td>3851</td>
<td>-</td>
<td>YES</td>
<td>manos</td>
</tr>
<tr>
<td>67</td>
<td>6003</td>
<td>3851</td>
<td>-</td>
<td>YES</td>
<td>manos</td>
</tr>
<tr>
<td>68</td>
<td>6004</td>
<td>3851</td>
<td>-</td>
<td>YES</td>
<td>manos</td>
</tr>
<tr>
<td>69</td>
<td>6005</td>
<td>3851</td>
<td>-</td>
<td>YES</td>
<td>manos</td>
</tr>
<tr>
<td>70</td>
<td>6006</td>
<td>3851</td>
<td>-</td>
<td>YES</td>
<td>manos</td>
</tr>
<tr>
<td>71</td>
<td>6007</td>
<td>3851</td>
<td>-</td>
<td>YES</td>
<td>manos</td>
</tr>
<tr>
<td>72</td>
<td>6008</td>
<td>3851</td>
<td>-</td>
<td>YES</td>
<td>manos</td>
</tr>
</tbody>
</table>

*Table 116 on page 199* describes the columns in the Channel Administration window.
### Table 19. Description of Columns in the Channel Administration Window

<table>
<thead>
<tr>
<th>Column Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHANNEL</td>
<td>Tip/Ring or LST1 channel number on the voice system.</td>
</tr>
<tr>
<td>EXTENSION</td>
<td>Switch extension number assigned for the channel.</td>
</tr>
</tbody>
</table>
| SPLIT/AGT   | DEFINITY switch login number, either ACD extensions or Agent IDs. Maximum length of 9 characters.  
  - If the channel is an ACD split extension, the number represents the split number.  
  - If the channel is an Agent ID in an expert agent select (EAS) environment, the number represents the Agent ID. |
| PASSWORD    | Password for the Agent ID. Channel password must match the password for the corresponding Agent ID. Maximum length of 9 characters. Dash indicates no channel password used. |
| LOGIN       | Yes represents channel login for ACD split. If No, ACD does not deliver any calls to this channel. |
### Status

Channel maintenance state; one of the following:
- **broken** — A possible malfunction is detected on the line.
- **foos** (facility out-of-service) — The line is not functional.
- **hwoos** (hardware out-of-service) — The channel cannot be logged in because ASAI digital link is not operating.
- **logout** (logged out) — The channel has not been administered to be logged in.
- **manoos** (manual out-of-service) — The channel has been taken out of service by the administrator.
- **netoos** (network out-of-service) — The ASAI link is up, but switch attempts to log into the channel are failing.
- **nonex** (nonexistent) — The channel does not exist.
- **login** — The Tip/Ring or LST1 channel is ready to receive calls from the ACD.

### Table 19. Description of Columns in the Channel Administration Window

<table>
<thead>
<tr>
<th>Column Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>STATUS</td>
<td>Channel maintenance state; one of the following:</td>
</tr>
<tr>
<td></td>
<td>• broken — A possible malfunction is detected on the line.</td>
</tr>
<tr>
<td></td>
<td>• foos (facility out-of-service) — The line is not functional.</td>
</tr>
<tr>
<td></td>
<td>• hwoos (hardware out-of-service) — The channel cannot be logged in because ASAI digital link is not operating.</td>
</tr>
<tr>
<td></td>
<td>• logout (logged out) — The channel has not been administered to be logged in.</td>
</tr>
<tr>
<td></td>
<td>• manoos (manual out-of-service) — The channel has been taken out of service by the administrator.</td>
</tr>
<tr>
<td></td>
<td>• netoos (network out-of-service) — The ASAI link is up, but switch attempts to log into the channel are failing.</td>
</tr>
<tr>
<td></td>
<td>• nonex (nonexistent) — The channel does not exist.</td>
</tr>
<tr>
<td></td>
<td>• login — The Tip/Ring or LST1 channel is ready to receive calls from the ACD.</td>
</tr>
</tbody>
</table>
Add a Channel Entry

Use the following procedure to add a channel entry:

1. Start at the Channel Administration window (Figure 116 on page 199) and press F8 (Chg-Keys).
   The system displays the alternate function keys.

2. Press F1 (Add).
   The system displays the Add A Channel Entry window (Figure 117 on page 202).

   Figure 117. Add A Channel Entry Window

3. Enter the Tip/Ring or LST1 channel number that you want to add in the Channel: field. The channel number must be unique.

4. Enter the switch extension number assigned to the application in the Extension: field. The extension number must be unique.

5. If the channel is an extension in an ACD split, enter the split number in the Split/Agent: field. If the channel is logged in as an Agent ID in an EAS environment, enter the Agent ID in the Split/Agent: field.
6 If the channel is used for an Agent ID, enter the password of the corresponding Agent ID on the DEFINITY switch in the Password field.

7 Press F3 (Save).
   The system adds the new agent line and returns to the Channel Administration window.

8 Complete the procedure in Log In a Channel on page 205.

Change a Channel Entry

Note: The channel must be logged out before it may be changed. If the channel is not logged out, complete the procedure in Log Out a Channel on page 206.

Use the following procedure to change the switch extension associated with a channel:

1 Start at the Channel Administration window (Figure 116 on page 199) and select the channel you want to change using the ▲ or ▼ keys or by typing the channel number.

2 Press F8 (Chg-Keys).
   The system displays the alternate function keys.

3 Press F2 (Change).
   The system displays the Change A Channel Entry Window (Figure 118 on page 204).
Figure 118. Change A Channel Entry Window

4 Enter the Tip/Ring or LST1 channel number extension you want to change in the Channel: field.

5 Enter the new switch extension number in the Extension: field.

Note: The new extension number must be unique.

6 If the channel is an extension in an ACD split, enter the split number in the Split/Agent: field. If the channel is logged in as an Agent ID in an EAS environment, enter the Agent ID in the Split/Agent: field.

7 If the channel is used for an Agent ID, enter the password of the corresponding Agent ID on the DEFINITY switch in the Password: field.

8 Press F3 (Save).

The system changes the switch extension of the selected channel and returns to the Channel Administration window.

9 Complete the procedure in Log In a Channel on page 205.
**Remove a Channel Entry**

**Note:** The channel must be logged out before you can remove it. If the channel is not logged out, complete the procedure in Log Out a Channel on page 206.

Use the following procedure to remove a channel entry:

1. Start at the Channel Administration window (Figure 116 on page 199) and select the channel you want to change using the or keys or by typing the channel number.

2. Press **F8** (Chg-Keys).
   - The system displays the alternate function keys.

3. Press **F3** (Remove).
   - The system displays a confirmation screen asking you if you want to remove the selected item.

4. Press **ENTER**.
   - The system unassigns the selected channel and returns to the Channel Administration window (Figure 116 on page 199).

**Log In a Channel**

**Note:** Once the Tip/Ring or LST1 channels are logged in, no manual intervention is required to log the channels back in during recovery (for example, switch or voice system reboot) or upon restarting the voice system.
Use the following procedure to log in a channel:

1. Start at the Channel Administration window (Figure 116 on page 199) and select the channel you want to change using the ▲ or ▼ keys or by typing the channel number.

2. Press F8 (Chg-Keys).
   - The system displays the alternate function keys.

3. Press F4 (Login).
   - The system logs in the selected channel to the ACD and returns to the Channel Administration window.

**Log Out a Channel**

Use the following procedure to log out a channel:

1. Start at the Channel Administration window (Figure 116 on page 199) and select the channel you want to change using the ▲ or ▼ keys or by typing the channel number.

2. Press F8 (Chg-Keys).
   - The system displays the alternate function keys.

3. Press F5 (Logout).
   - The system unassigns the selected channel from the ACD and returns to the Channel Administration window.
Domain Administration

Use the Domain Administration window to:

- Add a domain to the switch domain set.
- Change a voice system domain assignment.
- Remove a domain from the switch domain set.
- Enable a domain; place the domain in service.
- Disable a domain; take a domain out of service.

Once the domain is placed in service, no manual intervention is required to bring the domain back into service during recovery (for example, switch or voice system reboot) or upon restarting the voice system.

By default, the voice system updates the Domain Administration window every 2 seconds.

Use the following procedure to access the Domain Administration window:

1. Start at the ASAI Administration Menu (Figure 115 on page 197) and select:

   > Domain Administration

   The system displays the Domain Administration window (Figure 119 on page 208).
Figure 119. Domain Administration Window

<table>
<thead>
<tr>
<th>NAME</th>
<th>TYPE</th>
<th>EXT</th>
<th>SERVICE</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>trana</td>
<td>ACD</td>
<td>4805</td>
<td>UIS</td>
<td>inserv</td>
</tr>
<tr>
<td>tranb</td>
<td>CTL</td>
<td>ANY</td>
<td>bank_s1_2b</td>
<td>initing</td>
</tr>
<tr>
<td>tranc</td>
<td>RTE</td>
<td>3504</td>
<td>bank_s2_1c</td>
<td>initing</td>
</tr>
<tr>
<td>trand</td>
<td>RTE</td>
<td>3506</td>
<td>bank_s2_1c</td>
<td>initing</td>
</tr>
</tbody>
</table>

Table 20 on page 209 describes the columns in this window.
Table 20. Description of Columns in Domain Administration Window

<table>
<thead>
<tr>
<th>Column Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAME</td>
<td>Domain name</td>
</tr>
<tr>
<td>TYPE</td>
<td>Domain type for the voice system; must be one of the following:</td>
</tr>
<tr>
<td></td>
<td>• ACD — Monitors calls to the corresponding split domain on the switch.</td>
</tr>
<tr>
<td></td>
<td>• VDN — Monitors calls to the corresponding VDN domain on the switch.</td>
</tr>
<tr>
<td></td>
<td>• CTL — Monitors calls transferred away from the voice system (by a voice script using the <code>A_Tran</code> action) to destinations on the switch that are not monitored by an ACD or VDN domain (for example, monitor calls transferred using <code>A_Tran</code> to miscellaneous extensions). CTL domains are defined only by the voice system and do not correspond to any domain on the switch.</td>
</tr>
<tr>
<td></td>
<td>• RTE — Accepts Route Requests from the switch. RTE domains are defined by only the voice system and do not correspond to any domain on the switch.</td>
</tr>
</tbody>
</table>
### Feature Package Administration

**Table 20. Description of Columns in Domain Administration Window**

<table>
<thead>
<tr>
<th>Column Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXT</td>
<td>Extension; must enter <em>any</em> for calls transferred to any destination not already monitored by another domain, or one of the following, depending on the domain type:</td>
</tr>
<tr>
<td></td>
<td>• ACD switch extension — Corresponding ACD split switch extension being monitored.</td>
</tr>
<tr>
<td></td>
<td>• VDN switch extension — Corresponding VDN switch extension being monitored.</td>
</tr>
<tr>
<td></td>
<td>• CTL extension — Extension for which calls are being transferred by a voice system channel using the <code>A_Tran</code> action and processed by the CTL domain. Extension must correspond to an extension used in the <em>Destination</em> field of the <code>A_Tran</code> action used by an application assigned to the ASAI channel.</td>
</tr>
<tr>
<td></td>
<td>• RTE extension — Extension that limits the processing of route requests based on the extension that was dialed. Only route requests for the specified extension are processed.</td>
</tr>
</tbody>
</table>
Table 20. Description of Columns in Domain Administration Window

<table>
<thead>
<tr>
<th>Column Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SERVICE</td>
<td>Application name that services the domain, and can be assigned to any type of domain (ACD, VDN, etc.). <strong>SERVICE</strong> can be one of the following, depending on the domain type:</td>
</tr>
<tr>
<td></td>
<td>• ACD/VDN domains — If the application, ACD or VDN, directs calls to the voice system Tip/Ring or LST1 channel, must enter the special service <strong>VIS</strong>. VIS service provides the ability to start voice scripts on the Tip/Ring channels based on the DNIS. It also provides the ability for those voice scripts to use the <strong>A_Callinfo</strong> and <strong>A_Trans</strong> action.</td>
</tr>
<tr>
<td></td>
<td>The service can be assigned to multiple ACD or VDN domains. All channels that are administered as agents must be members of at least one ACD or VDN domain.</td>
</tr>
<tr>
<td></td>
<td>• CTL domains — The SERVICE must be monitoring. See Chapter 3, “Adjunct/Switch Application Interface,” in <strong>Intuity CONVERSANT® System Version 7.0 Communication Development</strong>, 585-313-202, for more information.</td>
</tr>
<tr>
<td></td>
<td>• RTE domains — The SERVICE must be routing. See Chapter 3, “Adjunct/Switch Application Interface,” in <strong>Intuity CONVERSANT® System Version 7.0 Communication Development</strong>, 585-313-202, for a more information.</td>
</tr>
</tbody>
</table>
STATUS

Domain maintenance state; one of the following:

- broken (broken) — A virtual channel could not be allocated for the service assigned to this domain.
- foos (facility out-of-service) — The ASAI digital link is not operating.
- initing (initializing) — The service assigned to the domain is failing initialization.
- inserv* (in service) — The domain is ready to receive call information from the switch.
- manoos (manual out-of-service) — The domain has not been placed into service.
- netoos (network out-of-service) — The ASAI link is up, but attempts to receive call information from the switch are failing.

* The default application is invoked if a voice system domain is in any state but inserv. If the domain for the voice system agent (Tip/Ring or LST1) line is disabled, the voice system still takes calls on these lines.

Table 20. Description of Columns in Domain Administration Window

<table>
<thead>
<tr>
<th>Column Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>STATUS</td>
<td>Domain maintenance state; one of the following:</td>
</tr>
<tr>
<td></td>
<td>- broken (broken) — A virtual channel could not be allocated for the service assigned to this domain.</td>
</tr>
<tr>
<td></td>
<td>- foos (facility out-of-service) — The ASAI digital link is not operating.</td>
</tr>
<tr>
<td></td>
<td>- initing (initializing) — The service assigned to the domain is failing initialization.</td>
</tr>
<tr>
<td></td>
<td>- inserv* (in service) — The domain is ready to receive call information from the switch.</td>
</tr>
<tr>
<td></td>
<td>- manoos (manual out-of-service) — The domain has not been placed into service.</td>
</tr>
<tr>
<td></td>
<td>- netoos (network out-of-service) — The ASAI link is up, but attempts to receive call information from the switch are failing.</td>
</tr>
</tbody>
</table>
Add a Domain

Use the following procedure to add a domain. The system supports 64 domains or fewer.

1. Start at the Domain Administration window (Figure 119 on page 208) and press F8 (Chg-Keys).
   The system displays the alternate function keys.

2. Press F1 (Add).
   The system displays the Add A Domain Entry window (Figure 120 on page 213).

Figure 120. Add A Domain Entry Window

3. Enter the domain name in the Name: field. This is the name that has been given to the ACD on the PBX.

4. Enter the domain type in the Type: field or press F2 (Choices) to select from a menu. Valid choices are ACD, VDN, CTL, or RTE.

5. Enter the switch extension of the domain in the Ext: field.
Enter the service for the domain in the Service: field or press F2 (Choices) to select from a menu. This may be any application that was designed and developed for use with the ASAI feature.

Press F3 (Save).

The system adds the new domain and returns to the Domain Administration window.

Complete the procedure in Enable a Domain on page 216.

**Change a Domain**

**Note:** The domain must be disabled before you may change it. If it is not disabled, complete the procedure Disable a Domain on page 217.

Use the following procedure to change a domain:

1. Start at the Domain Administration window (Figure 119 on page 208) and press F8 (Chg-Keys).
   
   The system displays the alternate function keys.

2. Press F2 (Change).

   The system displays the Change A Domain Entry Window (Figure 121 on page 215).
3 Enter the domain type in the **Type:** field or press **F2** (Choices) to select from a menu. Valid entries are ACD, VDN, CTL, or RTE.

4 Enter the switch extension number assigned to the ACD split in the **Ext.** field.

5 Enter the service that specifies how the calls offered to the domain are handled by the voice system in the **Service:** field or press **F2** (Choices) to select from a menu. This may be any application that was designed and developed for use with the ASAI feature.

6 Press **F3** (Save).

   The system makes the specified changes to the domain and returns to the Domain Administration window.

7 Complete the procedure in **Enable a Domain on page 216.**
## Remove a Domain

**Note:** The domain must be disabled before you may remove it. If it is not disabled, complete the procedure in [Disable a Domain on page 217](#).

Use the following procedure to remove a domain:

1. Start at the Domain Administration window ([Figure 119 on page 208](#)) and press **F8** (Chg-Keys).
   - The system displays the alternate function keys.
2. Press **F3** (Remove).
   - The system displays a confirmation screen asking you if you want to remove the selected item.
3. Press **ENTER**.
   - The system removes the selected domain and returns to the Domain Administration window.

## Enable a Domain

Use the following procedure to enable a domain:

1. Start at the Domain Administration window ([Figure 119 on page 208](#)) and press **F8** (Chg-Keys).
   - The system displays the alternate function keys.
2. Press **F4** (Enable).
   - The system changes the **Status:** field to “inserv”.

---

*Intuity™ CONVERSANT® System Version 7.0 Administration* 585-313-501  
Issue 3 January 2000  216
Disable a Domain

Use the following procedure to take a domain out of service:

1. Start at the Domain Administration window (Figure 119 on page 208) and press F8 (Chg-Keys).
   The system displays the alternate function keys.

2. Press F5 (Disable).
   The system changes the Status: field to “manoos”.

Parameter Administration

Use Parameter Administration menu option to administer:

- “Connect Event” reporting to the A_Event variable in an application assigned to an ACD, VDN, or CTL domain
- Details displayed with the trace dip7 command to monitor messages and events processed by the ASAI feature

Note: See Trace Service on page 457 in Chapter 8, Common Administration for more information on trace.
Use the following procedure to set ASAI parameters regarding connect event reporting and the level of trace detail:

1. Start at the ASAI Administration menu (Figure 115 on page 197) and select:

   - Parameter Administration

   The system displays the ASAI Parameters window (Figure 122 on page 218).

2. Enter either Connected or Alerting in the CONNECT Event: field to specify when the Connect event is reported to the A_Event action in a script assigned to an ACD, VDN, or CTL type domain. Or, you may press F2 (Choices) to select from a menu. The default is Connected.
3 Enter **Low**, **Normal**, or **High** in the **Trace Detail:** field to specify the amount of trace detail to display. Or, you may press **F2** (Choices) to select from a menu. Table 21 on page 219 summarizes the **trace** command settings and the level of detail achieved with each one.

### Table 21. Trace Detail Display Settings

<table>
<thead>
<tr>
<th>Setting</th>
<th>Display</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Information displayed about ASAI error and warning conditions.</td>
</tr>
<tr>
<td>Normal</td>
<td>All information displayed by the Low setting, plus ASAI script action (that is, A_Callinfo, A_Trans, A_Event, and A_RouteSel).</td>
</tr>
<tr>
<td>High</td>
<td>All information displayed by the Low and Normal settings, plus call event descriptions received from the PBX.</td>
</tr>
</tbody>
</table>

4 Press **F3** (Save).

The system displays the level of trace detail specified.

5 Press **F6** (Cancel) repeatedly to return to the ASAI Administration menu (Figure 115 on page 197).
Show the ASAI Software Version

This procedure displays the version information about the ASAI software loaded onto the voice system.

Use the following procedure to show the ASAI software version:

1. Start at the ASAI Administration menu (Figure 115 on page 197) and select:

   Show ASAI Software Version

The system displays the Show ASAI Software Version window (Figure 123 on page 221).
Figure 123. Show ASAI Software Version Window

2 Press ENTER.

The system returns to the ASAI Administration menu (Figure 115 on page 197).
Show the Status of the ASAI Link

**Note:** The ASAI link must be administered on the DEFINITY® switch. See *DEFINITY Communications System Generic 3i Implementation*, 555-230-650, for more information.

Use the following procedure to display the current maintenance state of the ASAI link using a LAN connection to the switch:

1. Start at the ASAI Administration menu ([Figure 115 on page 197](#)) and select:

   > Show Status of ASAI Link

   The system displays the Show Status of ASAI Link window ([Figure 124 on page 222](#)).

**Figure 124. Show Status of ASAI Link Window (LAN)**

```plaintext
Show Status of ASAI Link

LAN status is Talking

Press ENTER to continue
```
Table 22 on page 223 describes the messages that appear on the Show Status of ASAI Link screen if the LAN link is experiencing problems.

Table 22. Show Status ASAI Link (LAN) Messages

<table>
<thead>
<tr>
<th>Status Message</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAN is Talking</td>
<td>LAN connection is on-line.</td>
</tr>
<tr>
<td>LAN is Quiet</td>
<td>LAN connection is off-line.</td>
</tr>
</tbody>
</table>

2 Press ENTER.

The system returns to the ASAI Administration menu.

**UCID Administration**

The UCID Administration screen allows you to select the UCID network node identifier for an Intuity CONVERSANT system.

Use the following procedure to access the UCID Administration menu:

1 At the Console Login: prompt, enter root

   The system prompts you for a password.

2 Enter your root password.

   The system displays the system prompt #.
3 Enter cvis_menu

The system displays the Voice System Administration menu (Figure 42 on page 59).

4 Select:

> Feature Packages

> UCID Administration

The system displays the Universal Call ID Administration screen (Figure 125 on page 224).

Figure 125. Universal Call ID Administration Screen

Universal Call ID Administration

UCID Network Node ID: NONE
5 Enter a UCID Network Node ID. This value is used to uniquely identify this Intuity CONVERSANT system within a DEFINITY Enterprise Communication System (ECS) Call Center. Each node (DEFINITY ECS, Intuity CONVERSANT, etc.) must have a distinct UCID Network Node ID. Valid values are:

~ NONE — This node is not administered with a node number
~ nnnnn — A number between 1 and 32767

Note: The recommended range for Intuity CONVERSANT systems is 10000 to 19999.

6 Press F3 (Save) to save the values.

7 Press F3 (Cancel) twice to exit the screen and return to the Voice System Administration menu.

Note: In order for changes to take affect for UCID administration, stop and start the voice system. See Stop the Voice System on page 136 and Start the Voice System on page 139 in Chapter 3, Voice System Administration.
Overview

The Switch Interfaces menu lets you to define the interaction between the Intuity CONVERSANT system and the switches connected to it by allowing you to modify switch interface parameters and protocol options for both analog and digital interfaces.

This chapter provides procedural information and reference information for administering the supported analog and digital switch interfaces.
Switch Interfaces Hardware

A voice system can utilize analog and digital interfaces in the same platform. The circuit cards that provide analog and digital interfaces have a unique card number (Card 1, Card 2...Card n) that corresponds to the card slot number.

For information about slot allocation for digital and analog interface circuit cards, see Appendix A, “System Configuration,” of the maintenance book for your platform. For information about configuration limits, see Chapter 6, “Requirements and Specifications,” of Intuity CONVERSANT System Version 7.0 System Description, 585-313-204.

Once a card number is determined and assigned, this card number is used in the fields and windows discussed in this chapter.

Analog Interfaces

Analog interfaces are administered on a system-wide basis; that is, analog parameters apply to all analog circuit cards installed in the system.

The analog interfaces currently supports the following switches:

• DEFINITY System 25, System 75, and System 85
• Dimension
• MERLIN LEGEND
Advanced features for some switches (for example, message waiting lamp) are available with the purchase of optional switch integration packages.

To administer the analog interface, you may specify several parameters or accept the default values. Default values and parameters are discussed later in this chapter.

Digital Interfaces

Digital interfaces are administered on a card-by-card basis; that is, digital parameters apply to individual digital circuit cards installed in the system.

The digital interfaces currently support the following digital circuit cards and protocols:

<table>
<thead>
<tr>
<th>Protocol</th>
<th>Circuit Card Supported</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1 A/B Robbed-bit E&amp;M</td>
<td>T1</td>
</tr>
<tr>
<td>Line Side on the DEFINITY switch</td>
<td>T1 and E1</td>
</tr>
</tbody>
</table>

1 of 2
Administering the digital interface consists of selecting a protocol based on the circuit card type (Table 23 on page 228) and either accepting the default values as displayed, or changing the default values. If the default parameters are acceptable, you do not need to make any changes and can simply save the default values.
Access the Switch Interfaces Menu

Use the following procedure to access the Switch Interfaces menu:

1. At the Console Login prompt, enter root
   The system prompts you for a password.
2. Enter the root password.
   The system displays the system prompt #.
3. Enter cvis_menu
   The system displays the Voice System Administration menu (Figure 42 on page 59).
4. Select

   > Switch Interfaces

5. Press ENTER.
   The system displays the Switch Interfaces menu (Figure 126 on page 231).
The Switch Interfaces screen may offer two choices: Analog Interfaces (tip/ring) and Digital Interfaces (E1/T1), depending on the circuit cards and software drivers installed in the system.

**Analog Interfaces**

Use the Analog Interfaces window to define the analog interface parameters between the voice system and the switch. If you have not previously established your own parameter settings for analog interfaces, the default values appear in the window.

If you do not have any analog (tip/ring) circuit cards installed in your platform, the Analog Interfaces selection does not appear in the Switch Interfaces menu.

**Note:** The term PBX (private branch exchange) is used in some of the windows/menus discussed in the following sections. This term is used synonymously with the term switch.
Access the Analog Interfaces Window

Use the following procedure to access the Analog Interfaces window:

1. Start at the Switch Interfaces menu (Figure 126 on page 231) and select:

   Analog Interfaces

   The system displays the Analog Interfaces window (Figure 127).

Figure 127. Analog Interfaces Window

<table>
<thead>
<tr>
<th>Analog Interfaces</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>default</strong></td>
</tr>
<tr>
<td>Switch Hook Flash Duration: 500</td>
</tr>
<tr>
<td>Wink Disconnect Interval: 300</td>
</tr>
<tr>
<td>Type of Signaling: IT</td>
</tr>
<tr>
<td>Incoming Speech Volume: 4000</td>
</tr>
<tr>
<td>Outgoing Speech Volume: 1000</td>
</tr>
<tr>
<td>Outgoing Text Volume: 4000</td>
</tr>
<tr>
<td>Dial Tone Training: Yes</td>
</tr>
</tbody>
</table>

Blind Transfer Actions
- To Initiate Transfer: FW
- To Complete Transfer: H

Intelligent Transfer Actions
- To Initiate Transfer: FW
- To Complete Transfer: H
- To Reconnect Caller
- No Answer: FFP
- Busy: FFP
Set Default Analog Interfaces Parameters

Use the following procedure to set the default analog switch interface parameters:

1. Start at the Analog Interfaces window (Figure 127 on page 232) and press F8 (Chg-Keys).
   The system displays the alternate function keys.

2. Press F1 (Defaults).
   The system displays the PBX Defaults menu (Figure 128 on page 233).

**Figure 128. PBX Defaults Menu**

The switches listed depend on the switch interface software packages installed in your system.
3 Select the desired switch from the menu.

The system displays the Analog Interfaces window (Figure 127 on page 232) window showing the default values for the selected switch.

**Note:** If you select Other Switch/PBX/ACD, the values are the same as those under “AT&T System 75”.

If you select Merlin Legend, you must administer the lines connected to the voice system with “outside line” dial tone. See “Inside Dial Tone” in *MERLIN LEGEND Communications System Installation, Programming, and Maintenance* for additional information.

If you have a Nortel Meridian M1 switch, select **Definity(US)**.

Table 24 on page 235 shows the values that are displayed in the Analog Interfaces when that particular switch is selected.

4 (Optional) Make changes to any of the default switch value fields in the Analog Interfaces window to meet your requirements. See Table 24 on page 235 for information about the default values.

5 Press **F3** (Save).

The system saves the information as default values.
6 Stop and start the voice system if the current settings were modified so that the changes take effect. See Stop the Voice System on page 136 and Start the Voice System on page 139 in Chapter 3, Voice System Administration.

7 Reinstall any scripts that use transfer sequences.

Table 24. Default Parameter Values for Analog Switch Interfaces

<table>
<thead>
<tr>
<th>Parameter</th>
<th>AT&amp;T Dimension</th>
<th>Merlin Legend</th>
<th>AT&amp;T System 25</th>
<th>AT&amp;T System 75</th>
<th>AT&amp;T System 85</th>
<th>DEFINITY ECS and Nortel Meridian M1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switch Hook</td>
<td>700 msec</td>
<td>500 msec</td>
<td>700 msec</td>
<td>500 msec</td>
<td>600 msec</td>
<td>500 msec</td>
</tr>
<tr>
<td>Flash Duration</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wink Disconnect Interval</td>
<td>300 msec</td>
<td>300 msec</td>
<td>300 msec</td>
<td>300 msec</td>
<td>300 msec</td>
<td>300 msec</td>
</tr>
<tr>
<td>Type of Signaling</td>
<td>TT</td>
<td>TT</td>
<td>TT</td>
<td>TT</td>
<td>TT</td>
<td>TT</td>
</tr>
</tbody>
</table>
Table 24. Default Parameter Values for Analog Switch Interfaces

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Switch Name</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AT&amp;T Dimension</td>
</tr>
<tr>
<td>Incoming Speech Volume</td>
<td>4000 dB</td>
</tr>
<tr>
<td>Outgoing Speech Volume</td>
<td>1000 dB</td>
</tr>
<tr>
<td>Outgoing Text Volume *</td>
<td>4000 dB</td>
</tr>
<tr>
<td>Dial-Tone Training</td>
<td>Yes</td>
</tr>
<tr>
<td>Blind Transfer Actions</td>
<td></td>
</tr>
<tr>
<td>• To Initiate Transfer</td>
<td>FW</td>
</tr>
<tr>
<td>• To Complete Transfer</td>
<td>H</td>
</tr>
</tbody>
</table>

2 of 3
### Table 24. Default Parameter Values for Analog Switch Interfaces

<table>
<thead>
<tr>
<th>Parameter</th>
<th>AT&amp;T Dimension</th>
<th>Merlin Legend</th>
<th>AT&amp;T System 25</th>
<th>AT&amp;T System 75</th>
<th>AT&amp;T System 85</th>
<th>DEFINITY ECS and Nortel Meridian M1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intelligent Transfer Actions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• To Initiate Transfer</td>
<td>FW</td>
<td>FW</td>
<td>FW</td>
<td>FW</td>
<td>FW</td>
<td>FW</td>
</tr>
<tr>
<td>• To Complete Transfer</td>
<td>H</td>
<td>H</td>
<td>H</td>
<td>H</td>
<td>H</td>
<td>H</td>
</tr>
<tr>
<td>To Reconnect Caller</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• No Answer</td>
<td>FP</td>
<td>FPF</td>
<td>FPF</td>
<td>FPF†</td>
<td>FP†</td>
<td>FPF†</td>
</tr>
<tr>
<td>• Busy</td>
<td>FP</td>
<td>FPF</td>
<td>FP</td>
<td>FPF†</td>
<td>FP†</td>
<td>FPF†</td>
</tr>
</tbody>
</table>

* Appears only when Text-to-Speech is installed.
† Values represented support DEFINITY G3 switch.
‡ Values represented support DEFINITY G2 switch.
Table Key:
- TT = touch-tone signaling
- DP = dial-pulse signaling
- F = switch hook flash; the valid range for all switches is 0–1550 milliseconds
- W = wait for dial tone; if there is no dial tone after 5 seconds, an error conditions exists
- P = pause for 3 seconds
- H = hang-up (onhook)

Set Analog Interfaces Parameters

Use the following procedure to set the parameters in the Analog Interface window if the default parameters described above do not meet your switch interface needs.

**Note:** All selected options must match the corresponding options on the switch (either PBX or network) to avoid service problems.
### Standard Analog Interface Parameters

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Start at the Switch Interfaces menu (<a href="#">Figure 126 on page 231</a>) and select Analog Interfaces. The system displays the Analog Interfaces window (<a href="#">Figure 127 on page 232</a>).</td>
</tr>
<tr>
<td>2.</td>
<td>Enter the length of flash duration in the <strong>Switch Hook Flash Duration:</strong> field. Valid values are 0–1550 milliseconds. <strong>Note:</strong> Flash is a short, on-hook interval recognized by many switches as a request for special services, including hold or transfer.</td>
</tr>
<tr>
<td>3.</td>
<td>Enter the minimum amount of time needed for a loop current interruption to occur in the <strong>Wink Disconnect Interval:</strong> field. Valid values are 80–800 milliseconds. The default is 300.</td>
</tr>
<tr>
<td>4.</td>
<td>Enter the type of address signaling for outbound dialing in the <strong>Type of Signaling:</strong> field, or press <strong>F2 (Choices)</strong> to select from a menu. Valid values are <strong>TT</strong> (touch-tone signaling) or <strong>DP</strong> (dial-pulse signaling). The default is <strong>TT</strong>.</td>
</tr>
<tr>
<td>5.</td>
<td>Enter the volume adjustment for all incoming speech on analog circuit cards in the <strong>Incoming Speech Volume:</strong> field. Valid values are 0–32000. Values less than 100 or greater than 8000 may distort the incoming speech. The default is 4000.</td>
</tr>
</tbody>
</table>
Any adjustment occurs before the system processes the incoming speech for coding it later for playback. The value in the **Incoming Speech Volume** field represents a gain applied to the speech input using a logarithmic scale. A value of 1000 equals no gain; that is, the input is coded at the same level as it is received. Multiplying by 1.414 (the square root of two) approximately doubles the input volume, or increases it by 3 dB. Therefore, a value of 1414 in the field doubles the volume of incoming speech before it is coded, 2000 doubles it a second time, 2828 doubles it a third time, etc.

To decrease the incoming speech volume, multiply by 0.707 to approximately half the value or decrease it by 3 dB. Therefore, a value of 707 in the field reduces the volume by half, 500 by half a second time, etc.

Table 25 on page 240 shows the relationship between the volume number and the actual change in volume expressed in decibels.

**Table 25. Incoming Speech Volume Parameter Affect on Decibels**

<table>
<thead>
<tr>
<th>Parameter Setting</th>
<th>Gain in Decibels</th>
</tr>
</thead>
<tbody>
<tr>
<td>500</td>
<td>-6</td>
</tr>
<tr>
<td>707</td>
<td>-3</td>
</tr>
<tr>
<td>1000</td>
<td>0</td>
</tr>
</tbody>
</table>

*Intuity™ CONVERSANT® System Version 7.0 Administration 585-313-501  
Issue 3 January 2000  240*
Enter the volume adjustment for all outgoing speech played on analog circuit cards in the **Outgoing Speech Volume:** field. Valid values are 0–32000. The default value for analog (tip/ring) circuit cards is 1000.

The value in this field and its effect are the same as for the **Incoming Speech Volume:** field. Any adjustment is applied to recorded speech as it is processed for playback.

7 (Optional) Enter the outgoing volume of speech in the **Outgoing Text Volume:** field. Valid values are 0–32000 (-30 to +30 dB). The default value is 4000.

**Note:** The optional Text-to-Speech feature package must be installed on your system for this field to be visible.

---

**Table 25. Incoming Speech Volume Parameter Affect on Decibels**

<table>
<thead>
<tr>
<th>Parameter Setting</th>
<th>Gain in Decibels</th>
</tr>
</thead>
<tbody>
<tr>
<td>1414</td>
<td>+3</td>
</tr>
<tr>
<td>2000</td>
<td>+6</td>
</tr>
<tr>
<td>2828</td>
<td>+9</td>
</tr>
<tr>
<td>4000*</td>
<td>+12</td>
</tr>
</tbody>
</table>

* The default value.
8 Enter Yes or No in the Dial Tone Training: field to specify system training for existing dial tones. The default is Yes.

If this field is set to “Yes,” dial tone training is performed on each analog circuit card when the voice system is started or the state of the circuit card is changed to “inserv.” If the field is set to “No,” default dial-tone recognition parameters are used and no training is performed.

If a switch integration package is installed on your system, the package may specify that the default Dial Tone Training: field cannot be changed. If changing the field is not allowed, you receive an error message when you attempt to save your settings.

Blind Transfer Actions

1 Enter one or more code letters from Table 26 on page 244 in the To Initiate Transfer: field.

If you are using a DEFINITY switch with tip/ring circuit cards, FW is the default.

2 Enter one or more code letters from Table 26 on page 244 in the To Complete Transfer: field.

If you are using a DEFINITY switch with tip/ring circuit cards, H is the default.
5 Switch Interface Administration

Intelligent Transfer Actions

1 Enter one or more code letters from Table 26 on page 244 in the To Initiate Transfer: field.
   
   If you are using a DEFINITY switch with tip/ring circuit cards, FW is the default.

2 Enter one or more code letters from Table 26 on page 244 in the To Complete Transfer: field.
   
   If you are using a DEFINITY switch with tip/ring circuit cards, H is the default.

3 Enter one or more code letters from Table 26 on page 244 in the No Answer: field.
   
   If you are using a DEFINITY switch with tip/ring circuit cards, FPF is the default.

4 Enter one or more code letters from Table 26 on page 244 in the Busy: field.
   
   If you are using a DEFINITY switch with tip/ring circuit cards, FPF is the default.
5 Switch Interface Administration

5 Press F3 (Save).

The system displays the following message:

In order for the Analog Interface Parameters to be effective, execute Stop Voice System. For changes to Transfer Sequences to be effective, any installed applications must be reinstalled. Press ENTER to continue.

6 Press ENTER.

The system saves the specified analog switch parameters.

Table 26. Transfer Code Sequences Defined

<table>
<thead>
<tr>
<th>Code Letter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>Switch hook flash.</td>
</tr>
<tr>
<td>W</td>
<td>Wait for dial tone.</td>
</tr>
<tr>
<td>P</td>
<td>Pause (waits for approximately 3 seconds).</td>
</tr>
<tr>
<td>0-9, #, *</td>
<td>Transmit that touch-tone digit to the PBX.</td>
</tr>
<tr>
<td>H</td>
<td>Hangup.</td>
</tr>
</tbody>
</table>
Print Analog Interface Information

Use the following procedure to print analog interface information:

1. Start at the Analog Interfaces window (Figure 127) and press F8 (Chg-Keys).
   The system displays the alternate function keys.

2. Press F6 (Print).
   The system prints the selected analog interface information.

Note: This information does not print if a printer has not been configured for use with the voice system. See Printer Administration on page 427 in Chapter 7, Peripheral Administration, for more information about printer administration.

Non-US Analog Switch Integration

Currently, several international switch integration packages are available for the voice system. When a non-U.S. switch integration package is installed in the system, it includes the following packages:

- Country_name DEFINITY switch integration package
- Country_name Public Telephone Network switch integration package
These choices appear in the PBX Defaults menu (Figure 128 on page 233) if these packages are installed on the system. Select the DEFINITY switch choice for the country when you are connecting the voice system to a DEFINITY switch or select the telephone network package for that country if you are connecting the voice system to the public switch network. The differences in these two packages are in internal configuration.

To find out the countries for which switch integration packages are available, contact the International Technical Assistance Center (ITAC) at 800-538-4666.

**Country-Specific Switch Packages**

See Country-Specific Switch Packages on page 905 in Appendix B, Country Switch Packages for switch package parameters, and country switch package supported call progress tones.

For all countries, the following information applies:

- S/N Ratio is 55 dB
- Twist is +3 (dB)
- Frequency Deviation is +/- 3 Hz
Digital Interfaces

Administering the digital interfaces consists of selecting a protocol based on the circuit card type, and either accepting the default values as displayed, or changing the default values. If the default parameters are acceptable, you do not need to make any changes and can simply save the default values.

Access the Digital Interfaces Menu

The Digital Interfaces menu displays all digital protocols installed on your system.

If there are no E/1T1 circuit cards installed in your platform, the Digital Interfaces selection does not appear in the Switch Interfaces menu.

Note: All selected options must match the corresponding options on the switch (PBX or network) to avoid service problems.

Use the following procedure to access the Digital Interfaces menu:

1. Start at the Switch Interfaces menu (Figure 126 on page 231) and select

   > Digital Interfaces

   The system displays the Digital Interfaces menu (Figure 129 on page 248).
Figure 129. Digital Interfaces Menu

![Digital Interfaces Menu](image)

**Note:** Figure 129 on page 248 shows all currently supported digital protocols. All digital protocol packages must be installed before they are displayed in this menu.

From this menu, you can either display the current digital assignments or select the protocol that you want to administer. Each item in the menu is described in its own section.

**Display Digital Interface Assignments**

The Display Digital Interface Assignments window displays the E1/T1 circuit cards installed in the voice system and the function to which each is assigned.
Use the following procedure to display the installed E1/T1 circuit cards and their digital protocol assignments:

1. Start at the Digital Interfaces menu (Figure 129 on page 248) and select:

   - Display Assignments

   The system displays the Display Digital Interface Assignments window (Figure 130 on page 249).

**Figure 130. Sample Display Digital Interface Assignments Screen**

<table>
<thead>
<tr>
<th>CARD</th>
<th>PROTOCOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Digital R2 HFC - Mexico</td>
</tr>
<tr>
<td>1</td>
<td>Digital R2 HFC - Mexico</td>
</tr>
<tr>
<td>2</td>
<td>Line Side DEFINITY</td>
</tr>
</tbody>
</table>

By default, a circuit card is marked unassigned. A protocol must be installed on the voice system before it can be assigned to an E1/T1 card (CWB2).
The AYC21 can operate as either a T1 or E1 circuit card. See “Settings for Optional Circuit Cards,” in the “Installing or Replacing Circuit Cards” chapter in the maintenance book for your platform for more information on configuring the E1/T1 circuit card.

**Supported Digital Protocol Parameters**

Table 27 on page 250 and Table 28 on page 253 show the valid parameters and default values for digital protocols, T1 and E1, respectively. The procedures in this section detail each protocol and how to set the parameter values for each. Refer to these table as you set the parameters for your protocol.

**Table 27. Valid Parameter and Default Values for T1 Digital Protocols**

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Valid Parameter Value(s)</th>
<th>Protocol Name</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>T1 A/B</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Robbed-bit E&amp;M</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Default</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LST1-DEFINITY</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Default</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LST1 - Galaxy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Default</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ISDN-PRI Layer 1</td>
</tr>
<tr>
<td>Framing/Line Coding</td>
<td>D4ZCS, ESFB8ZS</td>
<td>D4ZCS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>D4ZCS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>D4ZCS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CEPTHDB3</td>
</tr>
<tr>
<td>DTMF Muting</td>
<td>Yes, No</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yes</td>
</tr>
</tbody>
</table>
### Table 27. Valid Parameter and Default Values for T1 Digital Protocols

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Valid Parameter Value(s)</th>
<th>Protocol Name</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>T1 A/B Robbed-bit E&amp;M Default</td>
</tr>
<tr>
<td>CSU Distance</td>
<td>0–666 ft</td>
<td>0–133 ft 0–133 ft 0–133 ft 0–133 ft</td>
</tr>
<tr>
<td>Wink Time</td>
<td>10–2550 msec</td>
<td>230 msec — — —</td>
</tr>
<tr>
<td>Post Wink Time</td>
<td>10–2550 msec</td>
<td>80 msec — — —</td>
</tr>
<tr>
<td>Max. Digits in Called Number1</td>
<td>0–16</td>
<td>4 — — —</td>
</tr>
<tr>
<td>D-channel on This Card?</td>
<td>Yes, No</td>
<td>— — — Yes</td>
</tr>
<tr>
<td>Wink Disconnect Interval</td>
<td>10–2550 msec</td>
<td>— 300 msec 300 msec —</td>
</tr>
<tr>
<td>Switch Hook Flash Duration2</td>
<td>10–2550 msec</td>
<td>— 700 msec 700 msec —</td>
</tr>
</tbody>
</table>
Table 27. Valid Parameter and Default Values for T1 Digital Protocols

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Valid Parameter Value(s)</th>
<th>Protocol Name</th>
<th>T1 A/B Robbed-bit E&amp;M Default</th>
<th>LST1-DEFINITY Default</th>
<th>LST1-Galaxy Default</th>
<th>ISDN-PRI Layer 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incoming Speech Volume</td>
<td>0–32000 (-30 to +30 dB)</td>
<td>1414</td>
<td>1414</td>
<td>1414</td>
<td>1414</td>
<td></td>
</tr>
<tr>
<td>Outgoing Speech Volume</td>
<td>0–32000 (-30 to +30 dB)</td>
<td>707</td>
<td>707</td>
<td>707</td>
<td>707</td>
<td></td>
</tr>
<tr>
<td>Outgoing Text Volume†</td>
<td>0–32000 (-30 to +30 dB)</td>
<td>1000</td>
<td>1000</td>
<td>1000</td>
<td>1000</td>
<td></td>
</tr>
</tbody>
</table>

* Applies only to T1 A/B Robbed-bit E&M protocol.
† Applies only to Line Side protocols.
‡ Applies only when Text-to-Speech is installed.
## Table 28. Valid Parameter and Default Values for E1 Digital Protocols

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Valid Parameter Value(s)</th>
<th>Protocol Name</th>
<th>E1 CAS Default</th>
<th>LSE1-DEFINITY Default</th>
<th>E1 PRI Default</th>
<th>ISDN PRI Layer 1 (with ACULAB) Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Framing/Line Coding</td>
<td>CEPTHDB3</td>
<td>CEPTHDB3</td>
<td>CEPTHDB3</td>
<td>CEPTHDB3</td>
<td>CEPTHDB3</td>
<td></td>
</tr>
<tr>
<td>DTMF Muting</td>
<td>Yes, No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>D-channel on This Card?</td>
<td>Yes, No</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Incoming Speech Volume</td>
<td>0–32000 (-30 to +30 dB)</td>
<td>1414</td>
<td>1414</td>
<td>1414</td>
<td>1414</td>
<td></td>
</tr>
<tr>
<td>Outgoing Speech Volume</td>
<td>0–32000 (-30 to +30 dB)</td>
<td>707</td>
<td>707</td>
<td>707</td>
<td>707</td>
<td></td>
</tr>
</tbody>
</table>
### Table 28. Valid Parameter and Default Values for E1 Digital Protocols

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Valid Parameter Value(s)</th>
<th>Protocol Name</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>E1 CAS Default</td>
</tr>
<tr>
<td>Outgoing Text Volume*</td>
<td>0–32000 (-30 to +30 dB)</td>
<td>1000</td>
</tr>
<tr>
<td>Idle Code</td>
<td>01010100</td>
<td>01010100</td>
</tr>
<tr>
<td>A-LAW or MU-LAW</td>
<td>A-LAW</td>
<td>A-LAW</td>
</tr>
<tr>
<td>CRC</td>
<td>Yes, No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

* Applies only when Text-to-Speech is installed.
Line Side Protocols

The Line Side protocols give you the ability to make line side connections through the digital circuit cards (T1 and/or E1) in the voice system.

This section describes how to set the parameters and assign circuit cards to support Line Side switch integration with the voice system.

The Line Side protocols are abbreviated as follows:

- Line Side T1 = LST1
- Line Side E1 = LSE1

Line Side DEFINITY Protocol

The Line Side DEFINITY protocol supports:

- DEFINITY G3i, Release 4.0, or G3r, Release 5.4 off-premise station (switch) with forward disconnect indication
- DEFINITY G2, Release 2, Generics 2.1 and 2.2 switches, using the ANN11E DS1 circuit pack configured for the off-premises extension (OPS) port type
- Nortel Meridian M1 switch
Access Line Side DEFINITY Menu

Use the following procedure to access the Line Side DEFINITY protocol:

1. Start at the Digital Interfaces menu (Figure 129 on page 248) and select

```
> Line Side DEFINITY
```

The system displays the Line Side DEFINITY menu (Figure 131 on page 256).

**Figure 131. Line Side DEFINITY Menu**

![Digital Interfaces menu]

Use the following procedures to assign/unassign the Line Side DEFINITY protocol to digital circuit cards, and administer DEFINITY switch interface parameters.
Assign Line Side DEFINITY Protocol to Digital Circuit Cards

Note: Before a new protocol can be assigned to a circuit card, any existing protocol must first be “unassigned.” See Unassign Line Side DEFINITY Protocol to Digital Circuit Cards on page 268 for more information.

Before attempting to make any assignment changes to circuit cards, they must be in the “manoos” state. See Equipment State on page 150 in Chapter 3, Voice System Administration, for additional information.

If you change digital protocol assignments on the voice system, you must make the change on the switch as well.

Use the following procedure to assign the Line Side DEFINITY protocol to a T1 or E1 circuit card:

1. Start at the Line Side DEFINITY menu (Figure 131 on page 256) and select

   > Assign Card

   The system displays the Assign Card: Line Side DEFINITY window (Figure 132 on page 258).
2 Enter the circuit card number in the Card Number: field, or press F2 (Choices) to select from a menu. Initially, all fields are populated with the default values for the circuit card number entered.

The Card Number: field is blank in Figure 132 on page 258. After you enter the circuit card number, certain fields disappear depending on the configuration of the selected circuit card, either E1 or T1.
The LSE1-specific fields are:
~ Idle Code
~ A-LAW or MU-LAW
~ CRC

The LST1-specific field is:
~ CSU Distance

3 Enter the name of the country in the Country: field, or press F2 (Choices) to select from a menu.

4 Enter Yes to enable or No to disable in the DTMF Muting: field, or press F2 (Choices) to select from a menu. Yes is the default.

Enter Yes to use dial-tone multifrequency (DTMF) muting to reduce false DTMF recognitions that sometimes result from the network echoing back sounds that the voice system falsely recognizes as touch tones. Yes, then turns on DTMF muting.

5 Enter the duration of the on-hook signal from the switch that indicates that the far end has hung up in the Wink Disconnect Interval: field. Valid values are multiples of 10 ranging from 10–2550. If you enter a value that is not a multiple of 10, the value is rounded down. The default is 300 milliseconds.
6 Enter the duration of the on-hook signal used to initiate a transfer in the Switch Hook Flash Duration: field. Valid values are multiples of 10 ranging from 10–2550. If you enter a value that is not a multiple of 10, the value is rounded down. The default is 700 milliseconds.

7 Enter the volume adjustment for all incoming speech on analog circuit cards in the Incoming Speech Volume: field. Valid values are 0–32000. Values less than 100 or greater than 8000 may distort the incoming speech. The default is 1414.

Any adjustment occurs before the system processes the incoming speech for coding it later for playback. The value in the Incoming Speech Volume: field represents a gain applied to the speech input using a logarithmic scale. A value of 1000 equals no gain; that is, the input is coded at the same level as it is received. Multiplying by 1.414 (the square root of two) approximately doubles the input volume, or increases it by 3 dB. Therefore, a value of 1414 in the field doubles the volume of incoming speech before it is coded, 2000 doubles it a second time, 2828 doubles it a third time, etc.

To decrease the incoming speech volume, multiply by 0.707 to approximately half the value or decrease it by 3 dB. Therefore, a value of 707 in the field reduces the volume by half, 500 by half a second time, etc.

See Table 25 on page 240 for the relationship between the volume number and the actual change in volume expressed in decibels.
5 Switch Interface Administration

Note: The incoming speech volume value is set on a per card basis for digital circuit cards, versus on a system wide basis for analog circuit cards.

8 Enter the volume adjustment for all outgoing speech played on the circuit card in the Outgoing Speech Volume: field. Valid values range from 0–32000. The default is 707.

The value in this field and its effect are the same as for Incoming Speech Volume: field. Any adjustment is applied to recorded speech as it is processed for playback.

9 (Optional) Enter the outgoing volume of speech in the Outgoing Text Volume: field. Valid values are 0–32000 (-30 to +30 dB). The default value is 1000.

Note: The optional Text-to-Speech feature package must be installed on your system for this field to be visible.

10 Enter the time from when the flash ends until control is returned to the script in the Dial Tone Delay: field. This is the amount of delay to be inserted before digits are dialed when originating a call or a blind transfer. The delay should be long enough to handle the maximum dial tone delay anticipated from the switch. The delay is dependent on the configuration of the switch. Valid values are multiples of 20 ranging from 20–5100. The default is 1000 milliseconds. If you enter a value that is not a multiple of 20, the value is rounded down.
Note: For blind transfers to work with the Line Side DEFINITY protocol, you must set the To Initiate Transfer: field to “FW”, and the To Complete Transfer: field to “H,” in the Analog Interface window. See Set Analog Interfaces Parameters on page 238 for more information.

U.S. and Canada: Intelligent transfer (full call classification analysis – Full CCA) is now supported for LST1 and LSE1 using an AYC21 digital circuit card. It is not supported with the AYC11 and AYC3B. In order for Full CCA to work with the Line Side DEFINITY protocol, you must set both the No Answer: and Busy: fields to “FPF” in the Analog Interface window. See Set Analog Interfaces Parameters on page 238 for more information.

11 (LST1 only) Enter the cable distance, in feet, between the Channel Service Unit (CSU) and the voice system in the CSU Distance: field, or press F2 (Choices) to select from a menu. Valid values are 0–133, 134–266, 267–399, 400–533, and 534–666. The default is 0–133 feet. If there is no CSU, the value entered in this field should be the cable distance between the voice system and the equipment to which it is connected.

⚠️ CAUTION:
The Idle Code:, A-LAW or MU-LAW:, and CRC: field parameters must match the settings on the DEFINITY switch to avoid service complications.
12 (LSE1 only) Enter the 8-digit code generated when the channel is idle in the *Idle Code:* field.

13 (LSE1 only) Enter *A-LAW* or *MU-LAW* in the *A-LAW* or *MU-LAW:* field.

14 (LSE1 only) Enter *Yes* to enable the cyclical redundancy check error checking or *No* to disable the error checking in the *CRC:* field.

15 Press F3 (Save).

The system saves the parameter information and assigns the Line Side DEFINITY protocol to the selected E1/T1 circuit card.

**Change Line Side DEFINITY Parameters**

The digital circuit card must first be assigned to the Line Side DEFINITY protocol to use this procedure. See [Assign Line Side DEFINITY Protocol to Digital Circuit Cards on page 257](#), for more information about making the initial assignment.

**Note:** Before attempting to make any assignment changes to circuit cards, they must be in the “manoos” state. See [Equipment State on page 150](#) in [Chapter 3, Voice System Administration](#), for additional information.

If you change digital protocol assignments on the voice system, you must make the change on the switch as well.
Use the following procedure to change the Line Side DEFINITY parameters:

1. Start at the Line Side DEFINITY menu (Figure 131 on page 256) and select "> Change Parameters"

The system displays the Change Parameters: Line Side DEFINITY window (Figure 133 on page 264).

Figure 133. Change Parameters: Line Side DEFINITY Window
2 Enter the circuit card number in the Card Number: field, or press F2 (Choices) to select from a menu. Initially, all fields are populated with the current values for the circuit card number entered.

The Card Number: field is blank in Figure 133 on page 264. After you enter the circuit card number, certain fields disappear depending on the configuration of the selected circuit card; either E1 or T1.

The LSE1-specific fields are:
~ Idle Code
~ A-LAW or MU-LAW
~ CRC

The LST1-specific field is:
~ CSU Distance

3 Change any of the parameters described in Assign Line Side DEFINITY Protocol to Digital Circuit Cards on page 257.

4 Press F3 (Save).

The system saves the changed parameters.
Display Line Side DEFINITY Parameters

The digital circuit card must first be assigned to the Line Side DEFINITY protocol to use this procedure. See Assign Line Side DEFINITY Protocol to Digital Circuit Cards on page 257, for more information about making the initial assignment.

Use the following procedure to display the Line Side DEFINITY parameters of a digital circuit card:

1. Start at the Line Side DEFINITY menu (Figure 131 on page 256) and select

   > Display Parameters

The system displays the Display Parameters: Line Side DEFINITY window (Figure 134 on page 267).
2 Enter the circuit card number in the Card Number: field, or press F2 (Choices) to select from a menu.

The Card Number: field is blank in Figure 134 on page 267. After you enter the circuit card number, certain fields disappear depending on the configuration of the selected circuit card; either E1 or T1.
The LSE1-specific fields are:
- Idle Code
- A-LAW or MU-LAW
- CRC

The LST1-specific field is:
- CSU Distance

3 Press F6 (Cancel) to return to the Line Side DEFINITY menu.

Unassign Line Side DEFINITY Protocol to Digital Circuit Cards

Note: Before attempting to make any assignment changes to circuit cards, they must be in the “manoos” state. See Equipment State on page 150 in Chapter 3, Voice System Administration, for additional information.

Use the following procedure to unassign the Line Side DEFINITY protocol:

1 Start at the Line Side DEFINITY menu (Figure 131 on page 256) and select

   > Unassign Card

The system displays the Unassign Card: Line Side DEFINITY window (Figure 135 on page 269).
Figure 135. Unassign Card: Line Side DEFINITY Window

Enter the circuit card number in the Card Number: field, or press F2 (Choices) to select from a menu.

The Card Number: field is blank in Figure 135 on page 269. After you enter the circuit card number, certain fields disappear depending on the configuration of the selected circuit card; either E1 or T1.

The LSE1-specific fields are:
- Idle Code
- A-LAW or MU-LAW
- CRC
The LST1-specific fields are:

~ CSU Distance

3 Press F3 (Save).

The system removes the Line Side DEFINITY assignment from the selected circuit card.

4 Press F6 (Cancel) repeatedly to return to the Digital Interfaces menu.

The Line Side Galaxy protocol is supported on the Rockwell Galaxy switch for use with T1 digital circuit cards. The Galaxy protocol is not supported for E1 digital interfaces.

Access Line Side DEFINITY Menu

Use the following procedure to access the Line Side Galaxy protocol:

1 Start at the Digital Interfaces menu (Figure 129 on page 248) and select

> Line Side Galaxy

The system displays the Line Side Galaxy menu (Figure 136 on page 271).
Assign Line Side Galaxy Protocol to Digital Circuit Cards

**Note:** Before a new protocol can be assigned to a circuit card, any existing protocol must first be “unassigned.” See [Unassign Line Side DEFINITY Protocol to Digital Circuit Cards on page 268](#) for more information.

Before attempting to make any assignment changes to circuit cards, they must be in the “manoos” state. See [Equipment State on page 150](#) in Chapter 3, Voice System Administration, for additional information.

If you change digital protocol assignments on the voice system, you must make the change on the switch as well.
Use the following procedure to assign the Line Side Galaxy protocol to a T1 circuit card:

1. Start at the Line Side Galaxy menu (Figure 136 on page 271) and select > Assign Card.

The system displays the Assign Card: Line Side Galaxy window (Figure 137 on page 273).
2 Enter the circuit card number in the Card Number: field, or press F2 (Choices) to select from a menu. Initially, all fields are populated with the default values for the circuit card number entered.

The Card Number: field is blank in Figure 137 on page 273. After you enter the circuit card number, the fields are populated with the current settings.
3 Enter Yes to enable or No to disable in the DTMF Muting: field, or press F2 (Choices) to select from a menu. Yes is the default.

Enter Yes to use dial-tone multifrequency (DTMF) muting to reduce false DTMF recognitions that sometimes result from the network echoing back sounds that the voice system falsely recognizes as touch tones. Yes then turns on DTMF muting.

4 Enter the duration of the on-hook signal from the switch that indicates that the far end has hung up in the Wink Disconnect Interval: field. Valid values are multiples of 10 ranging from 10–2550. If you enter a value that is not a multiple of 10, the value is rounded down. The default is 300 milliseconds.

5 Enter the duration of the on-hook signal used to initiate a transfer in the Switch Hook Flash Duration: field. Valid values are multiples of 10 ranging from 10–2550. If you enter a value that is not a multiple of 10, the value is rounded down. The default is 700 milliseconds.

6 Enter the volume adjustment for all incoming speech on analog circuit cards in the Incoming Speech Volume: field. Valid values are 0–32000. Values less than 100 or greater than 8000 may distort the incoming speech. The default is 1414.
Any adjustment occurs before the system processes the incoming speech for coding it later for playback. The value in the **Incoming Speech Volume** field represents a gain applied to the speech input using a logarithmic scale. A value of 1000 equals no gain; that is, the input is coded at the same level as it is received. Multiplying by 1.414 (the square root of two) approximately doubles the input volume, or increases it by 3 dB. Therefore, a value of 1414 in the field doubles the volume of incoming speech before it is coded, 2000 doubles it a second time, 2828 doubles it a third time, etc.

To decrease the incoming speech volume, multiply by 0.707 to approximately half the value or decrease it by 3 dB. Therefore, a value of 707 in the field reduces the volume by half, 500 by half a second time, etc.

See Table 25 on page 240 for the relationship between the volume number and the actual change in volume expressed in decibels.

**Note:** The incoming speech volume value is set on a per card basis for digital circuit cards, versus on a system wide basis for analog circuit cards.

7 Enter the volume adjustment for all outgoing speech played on the circuit card in the **Outgoing Speech Volume** field. Valid values range from 0 –32000. The default is 707.

The value in this field and its effect are the same as for the **Incoming Speech Volume** field. Any adjustment is applied to recorded speech as it is processed for playback.
8 (Optional) Enter the outgoing volume of speech in the Outgoing Text Volume: field. Valid values are 0–32000 (-30 to +30 dB). The default value is 1000.

Note: The optional Text-to-Speech feature package must be installed on your system for this field to be visible.

9 Enter the time from when the flash ends until control is returned to the script in the Dial Tone Delay: field. This is the amount of delay to be inserted before digits are dialed when originating a call or a blind transfer. The delay should be long enough to handle the maximum dial tone delay anticipated from the switch. The delay is dependent on the configuration of the switch. Valid values are multiples of 20 ranging from 20–5100. The default is 1000 milliseconds. If you enter a value that is not a multiple of 20, the value is rounded down.

Note: U.S. and Canada: Intelligent transfer (full call classification analysis – Full CCA) is now supported for LST1 using an AYC21 digital circuit card. It is not supported with the AYC11 and AYC3B. In order for Full CCA to work with Line Side T1 Galaxy, you must set both the No Answer: field and Busy: field to “P” in the Analog Interface window.

See Set Analog Interfaces Parameters on page 238 for more information.
5 Switch Interface Administration

Digital Interfaces

10 Enter the cable distance, in feet, between the Channel Service Unit (CSU) and the voice system in the CSU Distance: field, or press F2 (Choices) to select from a menu. Valid values are 0–133, 134–266, 267–399, 400–533, and 534–666. The default is 0–133 feet. If there is no CSU, the value entered in this field should be the cable distance between the voice system and the equipment to which it is connected.

⚠️ CAUTION:
The Idle Code:, A-LAW or MU-LAW:, and CRC: field parameters must match the settings on the DEFINITY switch to avoid service complications.

11 Press F3 (Save).

The system saves the parameter information and assigns the Line Side Galaxy protocol to the selected T1 circuit card.

Change Line Side Galaxy Parameters
The digital circuit card must first be assigned to the Line Side Galaxy protocol to use this procedure. See Assign Line Side Galaxy Protocol to Digital Circuit Cards on page 271, for more information about making the initial assignment.

Note: Before attempting to make any assignment changes to circuit cards, they must be in the “manoos” state. See Equipment State on page 150 in Chapter 3, Voice System Administration, for additional information.

If you change digital protocol assignments on the voice system, you must make the change on the switch as well.
Use the following procedure to change the Line Side Galaxy parameters:

1. Start at the Line Side Galaxy menu (Figure 136 on page 271) and select

> Change Parameters

The system displays the Change Parameters: Line Side Galaxy window (Figure 138 on page 278).

Figure 138. Change Parameters: Line Side Galaxy Window
2 Enter the circuit card number in the Card Number: field, or press F2 (Choices) to select from a menu. Initially, all fields are populated with the current values for the circuit card number entered.

3 Change any of the parameters described in Assign Line Side Galaxy Protocol to Digital Circuit Cards on page 271.

4 Press F3 (Save).
   The system saves the changed parameters.

Display Line Side Galaxy Parameters
The digital circuit card must first be assigned to the Line Side Galaxy protocol to use this procedure. See Assign Line Side Galaxy Protocol to Digital Circuit Cards on page 271, for more information about making the initial assignment.

Use the following procedure to display the Line Side Galaxy parameters of a digital circuit card:

1 Start at the Line Side Galaxy menu (Figure 136 on page 271) and select

   > Display Parameters

   The system displays the Display Parameters: Line Side Galaxy window (Figure 139 on page 280).
2 Enter the circuit card number in the Card Number: field, or press F2 (Choices) to select from a menu.

3 Press F6 (Cancel) to return to the Line Side Galaxy menu.
Unassign Line Side Galaxy Protocol to Digital Circuit Cards

**Note:** Before attempting to make any assignment changes to circuit cards, they must be in the “manoos” state. See [Equipment State on page 150](#) in Chapter 3, Voice System Administration, for additional information.

Use the following procedure to unassign the Line Side Galaxy protocol:

1. Start at the Line Side Galaxy menu ([Figure 136 on page 271](#)) and select

   ![> Unassign Card](#)

   The system displays the Unassign Card: Line Side Galaxy window ([Figure 140 on page 282](#)).
Enter the circuit card number in the **Card Number:** field, or press **F2** (Choices) to select from a menu.

3 Press **F3** (Save).

   The system removes the Line Side DEFINITY assignment from the selected circuit card.

4 Press **F6** (Cancel) repeatedly to return to the Digital Interfaces menu.
E1 CAS P2 - Australian DEFINITY Protocol

Use the following procedure to access the E1 CAS P2 - Australian DEFINITY protocol menu:

1. Start at the Digital Interfaces menu (Figure 129 on page 248) and select

   > E1 CAS P2 – Australian DEFINITY

The system displays the E1 CAS P2 - Australian DEFINITY menu (Figure 141 on page 283).

Figure 141.  E1 CAS P2 - Australian DEFINITY Menu

Use the following procedures to assign/unassign the E1 CAS P2 - Australian DEFINITY protocol to digital circuit cards, and administer the switch interface parameters.
Assign E1 CAS P2 - Australian DEFINITY Protocol to E1 Circuit Cards

Note: Before a new protocol can be assigned to a circuit card, any existing protocol must first be “unassigned.” See Unassign E1 CAS P2 - Australian DEFINITY Protocol to E1 Circuit Cards on page 291 for more information.

Before attempting to make any assignment changes to circuit cards, they must be in the “manoos” state. See Equipment State on page 150 in Chapter 3, Voice System Administration, for additional information.

If you change digital protocol assignments on the voice system, you must make the change on the switch as well.

Use the following procedure to assign the E1 CAS P2 - Australian DEFINITY protocol to an E1 circuit card:

1 Start at the E1 CAS P2 - Australian DEFINITY menu (Figure 141 on page 283) and select

> Assign Card

The system displays the Assign Card: E1 CAS P2 - Australian DEFINITY window (Figure 142 on page 285).
Figure 142. Assign Card: E1 CAS P2 - Australian DEFINITY Window

2 Enter the circuit card number in the Card Number: field, or press F2 (Choices) to select from a menu. Initially, all fields are populated with the default values for the circuit card number entered.

3 Enter the values as shown in Table 29 on page 286 for each of the fields in the window.
4 Press F3 (Save).

The system saves the parameter information and assigns the E1 CAS P2 - Australian DEFINITY protocol to the selected E1 circuit card.

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Enter Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Framing/Line Coding:</td>
<td>CEPTHDB3</td>
</tr>
<tr>
<td>Idle Code:</td>
<td>01010100</td>
</tr>
<tr>
<td>DTMF Muting:</td>
<td>Yes</td>
</tr>
<tr>
<td>A-LAW or MU-LAW:</td>
<td>A-LAW</td>
</tr>
<tr>
<td>CRC:</td>
<td>Yes</td>
</tr>
<tr>
<td>Max. Digits in Called Number:</td>
<td>4</td>
</tr>
<tr>
<td>Outgoing Addressing Type:</td>
<td>DTMF</td>
</tr>
<tr>
<td>Incoming Addressing Type:</td>
<td>DTMF</td>
</tr>
<tr>
<td>Incoming Speech Volume:</td>
<td>1414</td>
</tr>
<tr>
<td>Outgoing Speech Volume:</td>
<td>707</td>
</tr>
</tbody>
</table>
Change E1 CAS P2 - Australian DEFINITY Parameters

The E1 circuit card must first be assigned to the E1 CAS P2 - Australian DEFINITY protocol to use this procedure. See Assign E1 CAS P2 - Australian DEFINITY Protocol to E1 Circuit Cards on page 284, for more information about making the initial assignment.

**Note:** Before attempting to make any assignment changes to circuit cards, they must be in the “manoos” state. See Equipment State on page 150 in Chapter 3, Voice System Administration, for additional information.

If you change digital protocol assignments on the voice system, you must make the change on the switch as well.

Use the following procedure to change the E1 CAS P2 - Australian DEFINITY parameters:

1. Start at the E1 CAS P2 - Australian DEFINITY menu (Figure 141 on page 283) and select
   > Change Parameters

   The system displays the Change Parameters: E1 CAS P2 - Australian DEFINITY window (Figure 143 on page 288).
2 Enter the circuit card number in the Card Number field, or press F2 (Choices) to select from a menu. Initially, all fields are populated with the current values for the circuit card number entered.

3 Change any of the parameters described in Assign E1 CAS P2 - Australian DEFINITY Protocol to E1 Circuit Cards on page 284.

4 Press F3 (Save).
The system saves the changed parameters.
Display E1 CAS P2 - Australian DEFINITY Parameters

The E1 circuit card must first be assigned to the E1 CAS P2 - Australian DEFINITY protocol to use this procedure. See Assign E1 CAS P2 - Australian DEFINITY Protocol to E1 Circuit Cards on page 284, for more information about making the initial assignment.

Use the following procedure to display the E1 CAS P2 - Australian DEFINITY parameters of an E1 circuit card:

1 Start at the E1 CAS P2 - Australian DEFINITY menu (Figure 141 on page 283) and select

> Display Parameters

The system displays the Display Parameters: E1 CAS P2 - Australian DEFINITY window (Figure 144 on page 290).
Figure 144. Display Parameters: E1 CAS P2 - Australian DEFINITY Window

2 Enter the circuit card number in the Card Number: field, or press F2 (Choices) to select from a menu.

The system displays the parameter values for the selected circuit card.

3 Press F6 (Cancel) to return to the E1 CAS P2 - Australian DEFINITY menu.
Unassign E1 CAS P2 - Australian DEFINITY Protocol to E1 Circuit Cards

Note: Before attempting to make any assignment changes to circuit cards, they must be in the “manoos” state. See Equipment State on page 150 in Chapter 3, Voice System Administration, for additional information.
5 Switch Interface Administration

Digital Interfaces

Use the following procedure to unassign the E1 CAS P2 - Australian DEFINITY protocol:

1. Start at the E1 CAS P2 - Australian DEFINITY menu (Figure 141 on page 283) and select > Unassign Card

   The system displays the Unassign Card: E1 CAS P2 - Australian DEFINITY window (Figure 145 on page 292).

Figure 145. Unassign Card: E1 CAS P2 - Australian DEFINITY Window

2. Enter the circuit card number in the Card Number: field, or press F2 (Choices) to select from a menu.
   The system displays the current parameter values for the selected circuit card.

3. Press F3 (Save).
   The system removes the E1 CAS P2 - Australian DEFINITY assignment from the selected circuit card.

4. Press F6 (Cancel) repeatedly to return to the Digital Interfaces menu.
Access E1 CAS P2 - Australian Network Menu

Use the following procedure to access the E1 CAS P2 - Australian Network protocol menu:

1. Start at the Digital Interfaces menu (Figure 129 on page 248) and select

   > E1 CAS P2 - Australian Network

The system displays the E1 CAS P2 - Australian Network menu (Figure 146 on page 293).

Figure 146. E1 CAS P2 - Australian Network Menu

Use the following procedures to assign/unassign the E1 CAS P2 - Australian Network protocol to digital circuit cards, and administer the switch interface parameters.
Assign E1 CAS P2 - Australian Network Protocol to E1 Circuit Cards

Note: Before a new protocol can be assigned to a circuit card, any existing protocol must first be “unassigned.” See Unassign E1 CAS P2 - Australian Network Protocol to E1 Circuit Cards on page 301 for more information.

Before attempting to make any assignment changes to circuit cards, they must be in the “manoos” state. See Equipment State on page 150 in Chapter 3, Voice System Administration, for additional information.

If you change digital protocol assignments on the voice system, you must make the change on the switch as well.

Use the following procedure to assign the E1 CAS P2 - Australian Network protocol to an E1 circuit card:

1. Start at the E1 CAS P2 - Australian Network menu (Figure 146 on page 293) and select > Assign Card

The system displays the Assign Card: E1 CAS P2 - Australian Network window (Figure 147 on page 295).
2 Enter the circuit card number in the Card Number field, or press F2 (Choices) to select from a menu. Initially, all fields are populated with the default values for the circuit card number entered.

3 Enter the values as shown in Table 30 on page 296 for each of the fields in the window.
5  Switch Interface Administration

Digital Interfaces

Table 30.  Parameter Values for Assign Card: E1 CAS P2 - Australian Network Window

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Enter Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Framing/Line Coding:</td>
<td>CEPTHDB3</td>
</tr>
<tr>
<td>Idle Code:</td>
<td>01010100</td>
</tr>
<tr>
<td>DTMF Muting:</td>
<td>Yes</td>
</tr>
<tr>
<td>A-LAW or MU-LAW:</td>
<td>A-LAW</td>
</tr>
<tr>
<td>CRC:</td>
<td>Yes</td>
</tr>
<tr>
<td>Max. Digits in Called Number:</td>
<td>4</td>
</tr>
<tr>
<td>Outgoing Addressing Type:</td>
<td>DTMF</td>
</tr>
<tr>
<td>Incoming Addressing Type:</td>
<td>DTMF</td>
</tr>
<tr>
<td>Incoming Speech Volume:</td>
<td>1414</td>
</tr>
<tr>
<td>Outgoing Speech Volume:</td>
<td>707</td>
</tr>
</tbody>
</table>

4  Press F3 (Save).

The system saves the parameter information and assigns the E1 CAS P2 - Australian Network protocol to the selected E1 circuit card.
Change E1 CAS P2 - Australian Network Parameters

The E1 circuit card must first be assigned to the E1 CAS P2 - Australian Network protocol to use this procedure. See Assign E1 CAS P2 - Australian Network Protocol to E1 Circuit Cards on page 294, for more information about making the initial assignment.

Note: Before attempting to make any assignment changes to circuit cards, they must be in the “manoos” state. See Equipment State on page 150 in Chapter 3, Voice System Administration, for additional information.

If you change digital protocol assignments on the voice system, you must make the change on the switch as well.

Use the following procedure to change the E1 CAS P2 - Australian Network parameters:

1. Start at the E1 CAS P2 - Australian Network menu (Figure 146 on page 293) and select

   > Change Parameters

   The system displays the Change Parameters: E1 CAS P2 - Australian Network window (Figure 148 on page 298).
2 Enter the circuit card number in the Card Number: field, or press F2 (Choices) to select from a menu. Initially, all fields are populated with the current values for the circuit card number entered.

3 Change any of the parameters as described in Assign E1 CAS P2 - Australian Network Protocol to E1 Circuit Cards on page 294.

4 Press F3 (Save).

The system saves the changed parameters.
Display E1 CAS P2 - Australian Network Parameters

The E1 circuit card must first be assigned to the E1 CAS P2 - Australian Network protocol to use this procedure. See Assign E1 CAS P2 - Australian Network Protocol to E1 Circuit Cards on page 294, for more information about making the initial assignment.

Use the following procedure to display the E1 CAS P2 - Australian Network parameters of an E1 circuit card:

1  Start at the E1 CAS P2 - Australian Network menu (Figure 146 on page 293) and select

> Display Parameters

The system displays the Display Parameters: E1 CAS P2 - Australian Network window (Figure 149 on page 300).
5 Switch Interface Administration

Digital Interfaces

Figure 149. Display Parameters: E1 CAS P2 - Australian Network Window

2 Enter the circuit card number in the Card Number field, or press F2 (Choices) to select from a menu.

The system displays the parameter values for the selected circuit card.

3 Press F6 (Cancel) to return to the E1 CAS P2 - Australian Network menu.
Unassign E1 CAS P2 - Australian Network Protocol to E1 Circuit Cards

Note: Before attempting to make any assignment changes to circuit cards, they must be in the “manoos” state. See Equipment State on page 150 in Chapter 3, Voice System Administration, for additional information.

Use the following procedure to unassign the E1 CAS P2 - Australian Network protocol:

1. Start at the E1 CAS P2 - Australian Network menu (Figure 146 on page 293) and select

   > Unassign Card

   The system displays the Unassign Card: E1 CAS P2 - Australian Network window (Figure 150 on page 302).
2 Enter the circuit card number in the Card Number: field, or press F2 (Choices) to select from a menu.

The system displays the current parameter values for the selected circuit card.

3 Press F3 (Save).

The system removes the E1 CAS P2 - Australian Network assignment from the selected circuit card.

4 Press F6 (Cancel) repeatedly to return to the Digital Interfaces menu.
T1 A/B Robbed-bit E&M Protocol

Make sure that the switch to which the system is connected is programmed with the following options:

- The T1 interface uses wink start robbed-bit E&M signaling on a link using D4 framing with zero code suppression (ZCS).
- The E1/T1 interface outpulses dual tone multifrequency (DTMF) tones at 7 pulses per second when originating outbound calls and requires DTMF when taking inbound calls.

Access T1 A/B Robbed-bit E&M Menu

Use the following procedure to access the T1 A/B Robbed-bit E&M menu:

1. Start at the Digital Interfaces menu (Figure 129 on page 248) and select:

   > T1 A/B Robbed-bit E&M

The system displays the T1 A/B Robbed-bit E&M menu (Figure 151 on page 304).
Assign T1 A/B Robbed-bit E&M to Digital Circuit Cards

Note: Before a new protocol can be assigned to a circuit card, any existing protocol must first be "unassigned". See Unassign T1 A/B Robbed-bit E&M to Digital Circuit Cards on page 314 below for more information.

Before attempting to make any assignment changes to circuit cards, they must be in the MANOOS state. See Equipment State on page 150 in Chapter 3, Voice System Administration, for additional information.

If you change digital protocol assignments on the voice system, you must make the change on the switch as well.
Use the following procedure to assign the T1 A/B Robbed-bit E&M protocol to a digital circuit card:

1. Start at the T1 A/B Robbed-bit E&M menu (Figure 151 on page 304) and select:

   > Assign Card

   The system displays the Assign Card: T1 A/B Robbed-bit E&M window (Figure 152 on page 306).
2 Enter the circuit card number in the Card Number: field, or press F2 (Choices) to select from a menu. Initially, all fields are populated with the default values for the circuit card number entered.

The Card Number: field is blank in Figure 152 on page 306. After you enter the circuit card number, certain E1-only fields disappear (Idle Code:, A-LAW or MU-LAW:, and CRC:).
3 Enter **Yes** to enable or **No** to disable in the DTMF Muting: field, or press **F2** (Choices) to select from a menu. **Yes** is the default.

Enter **Yes** to use dual-tone multifrequency (DTMF) muting to reduce false DTMF recognitions that sometimes result from the network echoing back sounds that the voice system falsely recognizes as touch tones.

Enter **No** when the interface is used for bridging; DTMF needs to pass through without muting.

4 Enter the cable distance, in feet, between the Channel Service Unit (CSU) and the voice system in the **CSU Distance:** field, or press **F2** (Choices) to select from a menu. Valid values are 0–133, 134–266, 267–399, 400–533, and 534–666. The default is 0–133 feet. If there is no CSU, the value entered in this field should be the cable distance between the voice system and the equipment to which it is connected.

5 Enter the desired wink time, in multiples of 10 between 10 and 2550 milliseconds in the **Wink Time:** field. The default is 230. This specifies the length of the wink returned to the calling end on incoming calls.

6 Enter the desired post-wink delay, in multiples of 10 between 10 and 2550 milliseconds in the **Post-Wink Delay:** field. The default is 80 milliseconds.

7 Enter the number of digits, between 0 and 16, that the interface waits for when receiving an incoming call in the **Max. Digits in Called Number:** field. The default value is 4.
5 Switch Interface Administration

Digital Interfaces

8 Enter addressing to be used with outgoing calls, either DTMF, MF, or DECADIC in the Outgoing Addressing Type: field. The default value is DTMF.

9 Enter addressing to be used with incoming calls, either DTMF, MF, or DECADIC in the Incoming Addressing Type: field. The default value is DTMF.

10 Enter signaling to be used with outgoing calls, either Wink or Immediate in the Outgoing Signaling Type: field. The default value is Wink.

11 Enter signaling to be used with incoming calls, either Wink or Immediate in the Incoming Signaling Type: field. The default value is Wink.

12 Enter the volume adjustment for all incoming speech on circuit cards in the Incoming Speech Volume: field. Valid values are 0–32000. Values less than 100 or greater than 8000 may distort the incoming speech. The default is 1414.

Any adjustment occurs before the system processes the incoming speech for coding it later for playback. The value in the Incoming Speech Volume: field represents a gain applied to the speech input using a logarithmic scale. A value of 1000 equals no gain; that is, the input is coded at the same level as it is received. Multiplying by 1.414 (the square root of two) approximately doubles the input volume, or increases it by 3 dB. Therefore, a value of 1414 in the field doubles the volume of incoming speech before it is coded, 2000 doubles it a second time, 2828 doubles it a third time, etc.
To decrease the incoming speech volume, multiply by 0.707 to approximately half the value or decrease it by 3 dB. Therefore, a value of 707 in the field reduces the volume by half, 500 by half a second time, etc.

See Table 33 on page 338 for the relationship between the volume number and the actual change in volume expressed in decibels.

Note: The incoming speech volume value is set on a per card basis for digital circuit cards, versus on a system wide basis for analog circuit cards.

13 Enter the volume adjustment for all outgoing speech played on the circuit card in the Outgoing Speech Volume: field. Valid values range from 0–32000. The default is 707.

The value in this field and its effect are the same as for Incoming Speech Volume: field. Any adjustment is applied to recorded speech as it is processed for playback.

14 (Optional) Enter the outgoing volume of speech in the Outgoing Text Volume: field. Valid values are 0–32000 (-30 to +30 dB). The default value is 1000.

Note: The optional Text-to-Speech feature package must be installed on your system for this field to be visible.

15 Ignore the last two fields: Idle Code: and A-LAW or MU-LAW:.

16 Press F3 (Save).

The system assigns the protocol to the selected circuit card.
The circuit card must first be assigned to the T1 A/B Robbed-bit E&M protocol to use this procedure. See Assign T1 A/B Robbed-bit E&M to Digital Circuit Cards on page 304 for more information about making the initial assignment.

**Note:** Before attempting to make any assignment changes to circuit cards, they must be in the MANOOS state. See Equipment State on page 150 in Chapter 3, Voice System Administration, for additional information.

If you change digital protocol assignments on the voice system, you must make the change on the switch as well.

Use the following procedure to change the T1 A/B Robbed-bit E&M parameters:

1. Start at the T1 A/B Robbed-bit E&M menu (Figure 151 on page 304) and select:

   ![Change Parameters](Figure 153 on page 311)

   The system displays the Change Parameters: T1 A/B Robbed-bit E&M window (Figure 153 on page 311).
2 Enter the circuit card number in the Card Number: field, or press F2 (Choices) to select from a menu. Initially, all fields are populated with the default values for the circuit card number entered.

The Card Number: field is blank in Figure 153 on page 311. After you enter the circuit card number, certain E1-only fields disappear (Idle Code:, A-LAW or MU-LAW:, and CRC:).
Change any of the parameters as described in Assign T1 A/B Robbed-bit E&M to Digital Circuit Cards on page 304.

Press F3 (Save).

The system changes the protocol parameters on the selected circuit card.

The circuit card must first be assigned to the T1 A/B Robbed-bit E&M protocol to use this procedure. See Assign T1 A/B Robbed-bit E&M to Digital Circuit Cards on page 304 for more information about making the initial assignment.

Use the following procedure to display the T1 A/B Robbed-bit E&M parameters:

1. Start at the T1 A/B Robbed-bit E&M menu (Figure 151 on page 304) and select:

   > Display Parameters

The system displays the Display Parameters: T1 A/B Robbed-bit E&M window (Figure 154 on page 313).
2 Enter the circuit card number in the Card Number: field, or press F2 (Choices) to select from a menu. Initially, all fields are populated with the default values for the circuit card number entered.

The Card Number: field is blank in Figure 154 on page 313. After you enter the circuit card number, certain E1-only fields disappear (Idle Code:, A-LAW or MU-LAW:, and CRC:).
The system displays the parameter values for the selected circuit card.

3 Press F6 (Cancel) to return to the T1 A/B Robbed-bit E&M menu.

Note: Before attempting to make any assignment changes to circuit cards, they must be in the MANOOS state. See Equipment State on page 150 in Chapter 3, Voice System Administration, for additional information.

If you change digital protocol assignments on the voice system, you must make the change on the switch as well.

Use the following procedure to unassign the T1 A/B Robbed-bit E&M protocol to a digital circuit card:

1 Start at the T1 A/B Robbed-bit E&M menu (Figure 151 on page 304) and select

> Unassign Card

The system displays the Unassign Card: T1 A/B Robbed-bit E&M window (Figure 155 on page 315).
2 Enter the circuit card number in the Card Number: field, or press F2 (Choices) to select from a menu.

   The system displays the current parameter values for the selected circuit card.

3 Press F3 (Save).

   The system removes the T1 A/B Robbed-bit E&M assignment from the selected circuit card.

4 Press F6 (Cancel) repeatedly to return to the Digital Interfaces menu.
ISDN-PRI Layer 1 Protocol

Access the ISDN-PRI Layer 1 Menu

Note: All selected options must match the corresponding options on the network switch, otherwise service problems can occur.

Use the following procedure to access the ISDN-Primary Rate Interface (ISDN-PRI) Layer 1 menu:

1. Start at the Digital Interfaces menu (Figure 129 on page 248) and select

   > ISDN-Primary Rate Interface

The system displays the ISDN-PRI Layer 1 menu (Figure 156 on page 316).

Figure 156. ISDN-PRI Layer 1 Menu
Assign an ISDN-PRI Layer 1 to Digital Circuit Cards

**Note:** Before a new protocol can be assigned to a circuit card, any existing protocol must first be unassigned. See Unassign T1 A/B Robbed-bit E&M to Digital Circuit Cards on page 314 for more information.

Before attempting to make any assignment changes to circuit cards, they must be in the MANOOS state. See Equipment State on page 150 in Chapter 3, Voice System Administration, for additional information.

If you change digital protocol assignments on the voice system, you must make the change on the switch as well.

Use the following procedure to assign the ISDN-PRI Layer 1 to a digital circuit card:

1. Start at the ISDN-PRI Layer 1 menu (Figure 156 on page 316) and select > Assign Card

The system displays the Assign Card: ISDN-PRI Layer 1 window (Figure 157 on page 318).
2 Enter the circuit card number in the Card Number: field, or press F2 (Choices) to select from a menu. Initially, all fields are populated with the default values for the circuit card number entered.

The Card Number: field is blank in Figure 157 on page 318.
The list below shows the LSE1-specific fields:

- Idle Code
- A-LAW or MU-LAW
- CRC

The list below shows the LST1-specific fields:

- CSU Distance

3 Enter the framing/line coding in the Framing/Line Coding: field, or press F2 (Choices) to select from a menu.

- The valid values for T1 PRI are D4ZCS or ESFB8ZS. ESFB8ZS is the default.
- The only valid choice for E1 PRI is CEPTHDB3.

4 Enter Yes to enable or No to disable in the DTMF Muting: field, or press F2 (Choices) to select from a menu. Yes is the default.

Enter Yes to use dual-tone multifrequency (DTMF) muting to reduce false DTMF recognitions that sometimes result from the network echoing back sounds that the voice system falsely recognizes as touch tones.

Enter No when the interface is used for bridging; DTMF needs to pass through without muting.
5 Enter **Yes** or **No** to specify whether or not the circuit card carries the D-channel in the D-channel on this Card?: field, or press **F2** (Choices) to select from a menu.

Up to thirteen PRI T1 circuit cards can have a D-channel. The voice system supports up to thirteen 23B+D interfaces (each with its own D-channel and each set to **Yes** in this field) or up to 311 B+D (where one card has the D-channel and the other twelve cards are controlled by that D-channel and are set to **No** in this field since they do not have a D-channel). The system also supports configurations with two to twelve D-channels. Typically, each E1 PRI interface has its own D-channel and the system supports up to three 30B+D interfaces.

6 Enter the volume adjustment for all incoming speech on circuit cards in the **Incoming Speech Volume:** field. Valid values are 0–32000. Values less than 100 or greater than 8000 may distort the incoming speech. The default is 1414.

Any adjustment occurs before the system processes the incoming speech for coding it later for playback. The value in the **Incoming Speech Volume:** field represents a gain applied to the speech input using a logarithmic scale. A value of 1000 equals no gain; that is, the input is coded at the same level as it is received. Multiplying by 1.414 (the square root of two) approximately doubles the input volume, or increases it by 3 dB. Therefore, a value of 1414 in the field doubles the volume of incoming speech before it is coded, 2000 doubles it a second time, 2828 doubles it a third time, etc.
To decrease the incoming speech volume, multiply by 0.707 to approximately half the value or decrease it by 3 dB. Therefore, a value of 707 in the field reduces the volume by half, 500 by half a second time, etc.

See Table 33 on page 338 for the relationship between the volume number and the actual change in volume expressed in decibels.

**Note:** The incoming speech volume value is set on a per card basis for digital circuit cards, versus on a system wide basis for analog circuit cards.

7 Enter the volume adjustment for all outgoing speech played on the circuit card in the **Outgoing Speech Volume:** field. Valid values range from 0–32000. The default is 707.

The value in this field and its effect are the same as for **Incoming Speech Volume:** field. Any adjustment is applied to recorded speech as it is processed for playback.

⚠️ **CAUTION:**

The Idle Code: , A-LAW or MU-LAW:, and CRC: field parameters must match the settings on the DEFINITY switch to avoid service complications.

8 (E1 only) Enter the 8-digit code that are generated when the channel is idle in the **Idle Code:** field.

9 (E1 only) Enter **A-LAW** or **MU-LAW** in the **A-LAW or MU-LAW:** field.
10 Enter the cable distance, in feet, between the Channel Service Unit (CSU) and the voice system in the CSU Distance: field, or press F2 (Choices) to select from a menu. Valid values are 0–133, 134–266, 267–399, 400–533, and 534–666. The default is 0–133 feet. If there is no CSU, the value entered in this field should be the cable distance between the voice system and the equipment to which it is connected.

11 (E1 only) Enter Yes to enable the cyclical redundancy check error checking or No to disable the error checking in the CRC: field.

12 (Optional) Enter the outgoing volume of speech in the Outgoing Text Volume: field. Valid values are 0–32000 (-30 to +30 dB). The default value is 1000.

**Note:** The optional Text-to-Speech feature package must be installed on your system for this field to be visible.

13 Press F3 (Save).

The system saves the parameter information and assigns the ISDN-PRI Layer 1 protocol to the selected E1/T1 circuit card.
PRI Layer 2 and Layer 3 Parameters

Your PRI service provider may need to know some Layer 2 and Layer 3 parameters used by the voice system. Table 31 on page 323 and Table 32 on page 324 provide a list of the most commonly requested parameters. Incoming calls to the voice system should be provisioned so that the channel number is exclusive and not preferred.

If the switch is configured to deliver ANI on a subscription basis, it is not possible for the voice system to request a different type of ANI on a call-by-call basis.

While it is not recommended to change timer values from their defaults, the /vs/man/cat4/pri.rc.4 manual page describes how PRI timer values and a few other parameters can be changed if that becomes necessary.

Table 31. PRI Layer 2 Parameters

<table>
<thead>
<tr>
<th>Layer 2 Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retry Count N200</td>
<td>3</td>
</tr>
<tr>
<td>Timer T200</td>
<td>1 sec.</td>
</tr>
<tr>
<td>Timer T203</td>
<td>30 sec.</td>
</tr>
<tr>
<td>HDLC (D4ZCS)</td>
<td>Inverted</td>
</tr>
<tr>
<td>HDLC (ESFB8ZS)</td>
<td>Noninverted</td>
</tr>
</tbody>
</table>
### Table 32. PRI Layer 3 Parameters

<table>
<thead>
<tr>
<th>Layer 3 Parameter</th>
<th>Value in Seconds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timer T302</td>
<td>15</td>
</tr>
<tr>
<td>Timer T303</td>
<td>4</td>
</tr>
<tr>
<td>Timer T305</td>
<td>4</td>
</tr>
<tr>
<td>Timer T308</td>
<td>4</td>
</tr>
<tr>
<td>Timer T310</td>
<td>10</td>
</tr>
<tr>
<td>Timer T313</td>
<td>4</td>
</tr>
<tr>
<td>Timer T316</td>
<td>120</td>
</tr>
<tr>
<td>Timer T3M1</td>
<td>120</td>
</tr>
<tr>
<td>Timer T309</td>
<td>30</td>
</tr>
<tr>
<td>Interface ID (with D-channel)</td>
<td>1</td>
</tr>
<tr>
<td>Interface ID (without D-channel)</td>
<td>2-5</td>
</tr>
<tr>
<td>Bearer Capability</td>
<td>64 kbit voice</td>
</tr>
</tbody>
</table>
5 Switch Interface Administration

*Change ISDN-PRI Layer 1 Card Parameters*

The circuit card must first be assigned to the ISDN-PRI Layer 1 protocol to use this procedure. See "Assign an ISDN-PRI Layer 1 to Digital Circuit Cards on page 317" for more information about making the initial assignment.

**Note:** Before attempting to make any assignment changes to circuit cards, they must be in the MANOOS state. See "Equipment State on page 150" in Chapter 3, Voice System Administration, for additional information.

If you change digital protocol assignments on the voice system, you must make the change on the switch as well.

Use the following procedure to change the ISDN-PRI Layer 1 parameters:

1. Start at the ISDN-PRI Layer 1 menu (Figure 156 on page 316) and select "Change Parameters".

   The system displays the Change Parameters: ISDN-PRI Layer 1 window (Figure 158 on page 326).
2 Enter the circuit card number in the *Card Number:* field, or press F2 (Choices) to select from a menu. Initially, all fields are populated with the default values for the circuit card number entered.

The *Card Number:* field is blank in Figure 158 on page 326. After you enter the circuit card number, certain fields disappear depending on the configuration of the selected circuit card.
The list below shows the LSE1-specific fields:
- Idle Code
- A-LAW or MU-LAW
- CRC

The list below shows the LST1-specific fields:
- CSU Distance

3. Change any of the parameters as described in Assign an ISDN-PRI Layer 1 to Digital Circuit Cards on page 317.

4. Press F3 (Save).
   The system changes the specified parameters for the selected circuit card.

Display ISDN-PRI Layer 1 Parameters
The circuit card must first be assigned to the ISDN-PRI Layer 1 protocol to use this procedure. See Assign an ISDN-PRI Layer 1 to Digital Circuit Cards on page 317 for more information about making the initial assignment.
Use the following procedure to display the ISDN-PRI Layer 1 parameters:

1. Start at the ISDN-PRI Layer 1 menu (Figure 156 on page 316) and select > Display Parameters

The system displays the Display Parameters: ISDN-PRI Layer 1 window (Figure 159 on page 328).

Figure 159. Display Parameters: ISDN-PRI Layer 1 Window
2 Enter the circuit card number in the Card Number: field, or press F2 (Choices) to select from a menu. Initially, all fields are populated with the default values for the circuit card number entered.

The Card Number: field is blank in Figure 159 on page 328. After you enter the circuit card number, certain fields disappear depending on the configuration of the selected circuit card.

The LSE1-specific fields are:
- Idle Code
- A-LAW or MU-LAW
- CRC

The LST1-specific fields are:
- CSU Distance

The LST-1 specific field is:
- CSU Distance

The system displays the parameter values for the selected circuit card.

3 Press F6 (Cancel) to return to the ISDN-PRI Layer 1 menu.
Before attempting to make any assignment changes to circuit cards, they must be in the MANOOS state. See Equipment State on page 150 in Chapter 3, Voice System Administration, for additional information.

If you change digital protocol assignments on the voice system, you must make the change on the switch as well.

Use the following procedure to unassign the ISDN-PRI Layer 1 protocol to a digital circuit card:

1. Start at the ISDN-PRI Layer 1 menu (Figure 156 on page 316) and select:

   > Unassign Card

   The system displays the Unassign Card: ISDN-PRI Layer 1 window (Figure 160 on page 331).
Figure 160.  Unassign Card: ISDN-PRI Layer 1 Window

2 Enter the circuit card number in the Card Number: field, or press F2 (Choices) to select from a menu.

The system displays the current parameter values for the selected circuit card.

3 Press F3 (Save).

The system removes the ISDN-PRI Layer 1 assignment from the selected circuit card.

4 Press F6 (Cancel) repeatedly to return to the Digital Interfaces menu.
E1 PRI Using the ACULAB Protocol Converter

With the use of the ACULAB protocol converter card to support the United Kingdom’s DASS2 and DPNSS protocols, it is no longer necessary to assign an SP card to PRI for use with the E1 PRI protocol. The D-channel processing can now be performed on the AYC21 circuit card leaving the SP circuit card available for other uses.

Countries that require the use of an Aculab Protocol Converter Card (for example, the United Kingdom) must connect the network, the AYC21 circuit card, and the Aculab Converter Card (Figure 161 on page 333).
When using the Aculab protocol converter, it is necessary to set the FLAGS and NPI_TOA parameters in the `/vs/data/pri/pri.rc` file as described in the `/vs/man/cat4/pri.rc.4` manual page. This administration must be performed manually.
The following options should be used when connecting an Intuity CONVERSANT system to a 4ESS via an E1/T1 line when using the E&M protocol.

**Note:** Some parameters on the switch side may require that you stop and restart the voice system once you have made changes. For example, when changing the frame format from D4ZCS to ESF, your PRI link to the switch may not come up if you have not stopped and started the voice system. See [*Stop the Voice System on page 136*](#) and [*Start the Voice System on page 139*](#) in [Chapter 3, Voice System Administration](#).

- **T1 E&M Options**
  The following options should be set on the E1/T1 circuit card when it is connected to an AT&T 4ESS:
  - Wink Timing: 230 msec
  - Maximum Digits in Called Number: 4 is typical
  - Post-wink Delay: 80 msec
E1/T1 E&M Fixed Parameters:
- Framing/Line Coding: D4/ZCS
  - Signaling: A or AB Robbed-bit E&M protocol
  - Incoming/Outgoing Start Dialing: wink/wink
  - Incoming/Outgoing Addressing: DTMF/DTMF
- Timing Source: Looped Timed

4ESS Options
The following information is requested by AT&T when provisioning the 4ESS for an E1/T1 connection:
- TYPE CPE: DIGITAL PBX/ACD (WITH DS1 INTERFACE)
  - 4E NETWORK SWITCHED BASED SERVICES: MEG (Megacom), MEG8 (Megacom 800), or MULTIQUEST* as desired
  - ACCESS TYPE: T1
  - TRUNK OPERATION: The voice system always allows two-way traffic. If you expect only incoming calls, it is recommended that you select 1W/IN TOWARDS CPE. If you expect only outgoing calls, it is recommended that you select 1W/OUT FROM CPE. If you expect two-way traffic, select 2WAY.
  - SUPERVISION: EM
5 Switch Interface Administration  T1 Configuration for the Intuity CONVERSANT System

- ADDRESS SIGNALING (TYPE OF PULSING) TO CPE: DTMF(TT)
- ADDRESS SIGNALING TT DELAY: 70MS
- ADDRESS SIGNALING from CPE: DTMF(TT)
- START DIAL SIGNALING PROVIDED BY CPE: WK
- START DIAL SIGNALING PROVIDED TO CPE: WK (senderized operation)
- CPE DOES NOT SUPPORT DIFFERENT SIGNALING BIDIRECTIONALLY
- NUMBER OF DIGITS OUTPULSED TO CPE: This number should match the number selected in the “Maximum Digits in Called Number” E1/T1 option
- THE CPE CAN ACCEPT “O” AS THE FIRST DIGIT
- GLARE CONTROL: CPE WILL YIELD (WILL RELEASE)
- DIRECT INWARD DIAL (DID): N
- PBX ANSWER SUPERVISION WITHHELD: N
- NETWORK AUTHORIZATION CODES: N
- FRAME FORMAT: D4
- IS PBX SENDERIZED: YES
Change Switch System Parameters

Use the following procedure to change the switch system parameters.

**Note:** Stop the voice system for changing the switch system parameters.

1. Start at the Switch Interfaces menu ([Figure 126 on page 231](#)) and select > Change Switch System Parameters

The system displays the Change Switch System Parameters window ([Figure 162 on page 338](#)).
2 Change the field values using the information in Table 33 on page 338 and Table 34 on page 339.

### Table 33. DTMF Tone Table

<table>
<thead>
<tr>
<th>Keys on Telephone Keypad</th>
<th>Corresponding DTMF Tone</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>*</td>
<td>0</td>
</tr>
</tbody>
</table>
Table 34. Switch System Parameters

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
<th>Valid Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTMF Connection Tone</td>
<td>This parameter indicates the DTMF tone that represents answer detection. This value is used in conjunction with the DEFINITY optional feature for DTMF Feedback to VRU. This parameter and the DTMF Disconnection Tone parameter must be selected so that the two tones are in the same row or column of the DTMF Tones table (Table 33 on page 338).</td>
<td>0–9, A–D, #, * N indicates that answer detection is not enabled. The default is C.</td>
</tr>
<tr>
<td>DTMF Disconnection Tone</td>
<td>This parameter indicates the DTMF tone that will represent the caller disconnection (hanging up). This value is used in conjunction with the DEFINITY optional feature for DTMF Feedback to VRU. This parameter and the DTMF Connection Tone parameter must be selected so that the two tones are in the same row or column of the DTMF Tones table (Table 33 on page 338).</td>
<td>0–9, A–D, #, * N indicates that answer detection is not enabled. The default is D.</td>
</tr>
<tr>
<td>Background Output Volume</td>
<td>This parameter specifies the adjustment to the output volume level in percent for the speech being played in the background.</td>
<td>A numeric entry for the percentage</td>
</tr>
</tbody>
</table>
### Switch Interface Administration

#### Change Switch System Parameters

**Press F2 (Choices) to select from a menu.**

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
<th>Valid Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Rings to Wait for DNIS</td>
<td>This parameter specifies the number of tries to obtain DNIS on a Tip/Ring channel before running a default script (if any).</td>
<td>A numeric entry</td>
</tr>
<tr>
<td>Hunt Group Method</td>
<td>This parameter specifies the order of hunting for idle channels.</td>
<td>ascending (default), descending, or random</td>
</tr>
</tbody>
</table>

3 Press F3 (Save).
   The system displays the message that the switch system parameters have been changed.

4 Press F1 to acknowledge the message.

5 Press F6 (Cancel) to return to the Switch Interfaces menu.

6 Start the Voice System on page 139 as described in Chapter 3, Voice System Administration.

---

*Intuity™ CONVERSANT® System Version 7.0 Administration 585-313-501*  
*Issue 3 January 2000  340*
Display Switch System Parameters

The Display Switch System Parameters window allows you to view the current setting for the switch system parameters. Use the following procedure to display the switch system parameters.

**Note:** Stop the voice system for changing the switch system parameters.

1. Start at the Switch Interfaces menu (Figure 126 on page 231) and select > Display Switch System Parameters

The system displays the Display Switch System Parameters window (Figure 163 on page 341).

**Figure 163. Display Switch System Parameters**

```
Display Switch System Parameters

DTMF Connection Tone: C
DTMF Disconnection Tone: D
Background Output Volume: 33
Number Rings to Wait for DNIS: 2
Hunt Group Method: ascending
```

2. Press **F6** (Cancel) to return to the Switch Interfaces menu.
6 Database Administration

Overview

ORACLE databases store voice system call data. This chapter describes how to administer the ORACLE databases used with the voice system, including how to determine database space requirements, size the databases, and administer database tables. In addition, this chapter reviews the SQL*PLUS software program, a tool used to access the ORACLE database.

Databases and the Voice System

Databases are used by the voice system to access various types of data, depending on the application. However, the information in this chapter focuses on ORACLE databases used to store/retrieve call data.

The information in databases is arranged into tables. The following section describes the database tables associated with call data.
The base ORACLE software package creates the following database tables to store call data (Table 35 on page 343):

**Table 35. ORACLE Call Data Tables**

<table>
<thead>
<tr>
<th>Table Name</th>
<th>Table Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCA</td>
<td>Call classification analysis data (contains one record for each attempted transfer or outdial)</td>
</tr>
<tr>
<td>CCASUM</td>
<td>Summary data for the CCA table (contains one record per hour, telephone number, and result code)</td>
</tr>
<tr>
<td>CALL*</td>
<td>Basic call information (contains one record per call)</td>
</tr>
<tr>
<td>SERVICE</td>
<td>Basic service information (contains one or more service records per call)</td>
</tr>
<tr>
<td>CDHSUM</td>
<td>Summary data for the CALL and SERVICE tables (contains one record per hour and service)</td>
</tr>
</tbody>
</table>
Note: All these tables are created and owned by the sqlplus user sti/sti. The voice system provides four reports that use the data accumulated in these tables. See Chapter 8, Common Administration, for procedures showing how to display, modify, print and update the available reports.
CCA Table

The CCA table contains the following information:

- **START_TIME** — A date field that specifies the starting time of each attempted transfer or outdialed call.
- **PHONE_NUM** — A variable-length character field that specifies the telephone number of an attempted transfer or outdialed call. This field can be up to 16 characters in length.
- **RESULT_CODE** — A variable-length character field that indicates the disposition of the call. This field can be 1 character in length.

**Note:** Full CCA is not supported on the SSP circuit card.

CCASUM Table

The CCASUM table contains the following information:

- **PHONE_NUM** — A variable-length character field that specifies the telephone number of an attempted transfer or outdialed call. This field can be up to 16 characters in length.
- **START_TIME** — A date field that specifies the starting time of the call summary period.
- **END_TIME** — A date field that specifies the ending time of the call summary period.
• SUM_TOT — A numeric field that indicates the number of calls transferred or outdialed in this period with this disposition and associated telephone number.

• RESULT_CODE— A variable-length character field that indicates the disposition of the call. This field can be 1 character in length.

*Note:* Records are generated on per hour, per telephone number, and per result_code basis.

**CALL Table**

The CALL table contains the following information:

• CID — A numeric field that specifies a unique identification number that joins one CALL.CID to multiple SERVICE.CID.

• CHANNEL — A positive numeric field that specifies the channel number on which the call was running. This field can be up to three digits in length.

• START_TIME — Date field that specifies the starting time of each call.

• END_TIME — Date field that specifies the ending time of each call.
SERVICE Table

The SERVICE table contains the following information:

- **CID** — Numeric field that specifies a non-unique identification number that joins multiple SERVICE.CID to one CALL.CID.

  Each call creates one or more SERVICE records, depending on the number of services used to handle the call. All SERVICE records associated with a call have the same SERVICE.CID as the CALL.CID in the CALL record. See Relationship Between the CALL, SERVICE, and EVENT Tables on page 351.

- **SID** — A numeric field that specifies a unique identification that joins one SERVICE.SID to multiple EVENTS.SID.

- **SERVICE**—Variable length character field that specifies the service (application) name. This field can be up to 16 characters in length.

- **START_TIME** — Date field that specifies the starting time of each service.

- **END_TIME** — Date field that specifies the ending time of each service.
**CDHSUM Table**

The CDHSUM table contains the following information:

- **SUMID** — Numeric field that specifies a unique identification number which joins CDHSUM.SUMID to EVSUM.SUMID.

- **SERVICE** — Variable length character field that specifies the service (application) name. This field can be up to 16 characters in length.

- **START_TIME** — Date field that specifies the start of the hour (for example 10:00:00).

- **DURATION** — Numeric field that specifies the sum of service run times during this hour in seconds.

- **USAGE** — Numeric field that indicates the total number of times the service was run for calls during a one-hour period.

**Note:** Records are generated on per hour and per service basis.
The EVENTS table contains the following information:

- **SID** — Numeric field that specifies a non unique identification number.

  **Note:** Each service run during a call creates a certain number of event records, depending on the number of events defined. All events records associated with this call have the same SID number as the SID field of the corresponding SERVICE record. See [Relationship Between the CALL, SERVICE, and EVENT Tables on page 351](#).

- **EVENT_NUMBER** — Numeric field that is an internal mapping number of each of the defined events. Their values can be found in the `appl.D` file in the `/att/trans/sb/appl` directory.

The value stored in EVENT_CNT, EVENT_TM, or EVENT_STR is the value of the Script Builder event variable when the script terminates. Two of the following three fields will have null values when the script terminates:

- **EVENT_CNT** — Numeric field that will contain the value of the event variable if the event type is a Script Builder number, otherwise it is null.
- **EVENT_TM** — Date field that will contain the value of the event variable if the event type is a Script Builder time or date, otherwise it is null.
- **EVENT_STR** — Character field that contains the value of the event variable if the event type is a Script Builder character string, otherwise it is null.
EVSUM Table

The EVSUM table contains the following information:

- **SUMID** — Numeric field that specifies a unique identification number.

**Note:** The values in this field are related to the SUMID values in the CDHSUM table.

- **EVENT_NUMBER** — Numeric field that specifies the internal mapping between the event and an internal number.

- **SUM_TOT** — Numeric field that indicates the total number of occurrences for this event.

**Note:** If the event type is a numeric, the value in SUM_TOT is the sum of the values of this event field for all the calls. For example, if an event field, NUM_TRANS, keeps track of the number of transactions for each call, SUM_TOT will contain the sum of NUM_TRANS for all calls during this time period. On the other hand, if the event type is not a number, each call will increment SUM_TOT by one.
TRASUM Table

The TRASUM table contains the following information:

- **START_TIME** — Date field that specifies the start of hour (for example 10:00:00).
- **CHANNEL** — Numeric field that indicates the channel number. This field can be up to 3 digits in length.
- **CALL_TOT** — Numeric field that specifies the total number of calls.
- **DUR_TOT** — Numeric field that specifies the total duration in seconds.

**Note:** Records are generated on per hour and per channel basis. No calls during this hour on this channel result in no record.

OLDCDH View

The OLDCDH view is an ORACLE database view provided to be compatible with the CDH table that is not supported in newer releases.

Relationship Between the CALL, SERVICE, and EVENT Tables

The relationship between these three call data handling tables can be summarized by the following statements and in Figure 164 on page 352:

- Each telephone call creates one record in the CALL table.
Each record in the CALL table is linked to one or more records in the SERVICE table.

Each record in the SERVICE table is linked to zero or more records in the EVENTS table.

Figure 164. Relationship of CALL, SERVICE and EVENTS Tables
Resize Call Data Tables

The sizes of the call data handling tables are defined in /oracle/dist/cdh.sql file. Although the sizes are carefully engineered, it is possible that one or more of the tables should be increased to accommodate the heavier traffic on the system or the greater number of events defined in your applications. The most likely candidates for resizing are the EVENTS, SERVICE, and CALL tables, and their index tables.

Use the following procedure to increase the size of a call data table:

1. At the Console Login prompt, enter root
   - The system prompts you for a password.
2. Enter your root password.
   - The system displays the system prompt #.
3. Enter cd /oracle/dist
   - The system changes to the oracle/dist directory.
4. Enter cp cdh.sql o.cdh.sql
   - The system saves the original copy of the cdh.sql file to a file named o.cdh.sql.
5. Enter dbused
   - The system displays the number of megabytes used by the table.
6 Write down this number.

7 Use the UNIX vi editor to modify the cdh.sql file as follows:
   a Find the create table `xxx` statement block, where `xxx` is the table name
      (for example, CALL, SERVICE or EVENTS).
   b Modify the statement storage (initial 999k) to a bigger number,
      where 999 is the current initial size for the table and k stands for
      kilobytes (1024 bytes).

   **Note:** The new values specified should be at least twice as large as the
   current table size you wrote down in step 6. You may use the
   megabyte format, 99m, where m is mbytes (1,000,000 bytes =
   mbyte). For example, modify the storage statement to read:

   ```
   storage (initial 3m)
   ```
   to make the table have an initial size of 3 mbytes.

8 Enter `stop_vs`
   The systems stops the voice system. See `stop_vs on page 865` in
   Appendix A, Summary of Commands for more information about the
   `stop_vs` command.

   **Note:** If you do not want to preserve existing call data, skip step 9
   through step 11.
9  Enter **systblsav file**
   The system saves the table storage information, where *file* is a UNIX file or a device name where the data will be saved (such as, /dev/rmt/c0s0).

10 Enter **sqlplus \@ /oracle/dist/cdh.sql**
    The system reinitializes the table(s).

11 Enter **systblres file**
    The system restores the table storage information from the UNIX file or device name where it was saved in step 9 (such as, /dev/rmt/c0s0).

12 Enter **start_vs**
    The system restarts the voice system. See **start_vs on page 863** in Appendix A, Summary of Commands for more information about the **start_vs** command.
Verify Call Data Tables

Periodically, the field definitions of a table need to be reviewed for accuracy, or to assist with troubleshooting.

Use the following procedure to verify the field definitions of a table (such as, the CCA table):

1. At the Console Login prompt, enter root
   - The system prompts you for a password.

2. Enter your root password.
   - The system displays the system prompt #.

1. Enter sqlplus sti/sti
   - The system starts a sqlplus session.

2. Enter describe CCA
   - The system displays the current definition of the CCA table, similar to the following:

<table>
<thead>
<tr>
<th>Name</th>
<th>Null?</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>START_TIME</td>
<td>DATE</td>
<td>DATE</td>
</tr>
<tr>
<td>PHONE_NUM</td>
<td>VARCHAR2(16)</td>
<td>VARCHAR2(16)</td>
</tr>
<tr>
<td>RESULT_CODE</td>
<td>VARCHAR2(1)</td>
<td>VARCHAR2(1)</td>
</tr>
</tbody>
</table>
Note: If the table name is lower case, do not use the `describe` command. Instead, use `desc` as follows:

```
desc table_name
```

3 Enter `quit`

The system exits the sqlplus session.

Table Searches

Think of a database table as a book. If you want to find information on a subject, you must search the book to find it. However, checking the index first helps you to locate the information in the book much more quickly than paging through the book. The same is true for finding data in a database table.

Indexes and Key Fields

For large databases, you can use indexes on key fields to greatly reduce the time necessary to search the tables.

Indexed fields can be especially important in applications that require a “lookup” from a large table based on user input. This input generates an SQL statement for accessing the database that has the following form:

```
SELECT * from "table_name" where "FIELD1" = 'data';
```
If FIELD1 has an index created for it in the database, all records that match the criteria specified in the select statement are located much faster than if there is no index.

FIELD1 is a key field in this example because it is the field used to specify selection criteria. Indexes only decrease read time when they are created on key fields.

An SQL statement may have more than one key field, as in the following example:

```sql
SELECT * from "table_name" where "FIELD1" = 'data1' AND "FIELD2" = 'data2';
```

In this example, FIELD1 and FIELD2 are key fields. Create an index for each of these fields to enhance system performance.

**Unique Indexes**

Unique indexes on fields enforce uniqueness of the data in that field across the entire table of records. For example, a field for which you might create a unique index is one that contains a social security number (SSN). A unique index on an SSN field ensures that only one record with a given SSN can exist in the table. Attempts to add records with that SSN will fail.
Use the following procedure to create a unique index on a field called FIELD1 in a table called table_name.

1. At the Console Login prompt, enter root
   The system prompts you for a password.
2. Enter your root password.
   The system displays the system prompt #.
3. Enter sqlplus sti/sti
   The system starts a sqlplus session.
4. Enter create unique index index_name on table_name ("FIELD1");
   The system creates a unique index for FIELD1 in the table.

Non-Unique Indexes
Non-unique indexes do not prevent the same data from appearing in that field in several records in the same table. For example, if a field contains the area code of a telephone number and an index is created for that field, it must be a non-unique index since other records may require the same number in their area code field.
Use the following procedure to create non-unique indexes on fields called FIELD1 and FIELD2 in a table called table_name:

1. At the Console Login prompt, enter root
   The system prompts you for a password.
2. Enter your root password.
   The system displays the system prompt #.
3. Enter sqlplus sti/sti
   The system starts a sqlplus session.
4. Enter create index index_name on table_name ("FIELD1");
   The system creates a non-unique index for FIELD1 in the table.
5. Enter create index index_name on table_name ("FIELD2");
   The system creates a non-unique index for FIELD2 in the table.

Database Interface Process

A voice system application accesses the database tables through a single database interface process (DIP). A DIP is a software program that connects to the database and provides the only interface between the application and the database.
Database DIP Timeout

The voice system and remote database ORACLE connection is established when the voice system starts. After the connection is established, the voice system does not keep track of status changes on the remote machine. The connection between it and the voice system is dropped if the remote machine is turned off or rebooted. If the remote machine is shut down and rebooted while the voice system is still active, the voice system detects this status change only when calls come in to the system that involve remote database access for call processing. The voice system attempts to reestablish the remote connection and is not able to process calls during this time.

In certain cases, the database DIP (oraldb) may not receive a timely response from the server machine. This may be due to a variety of factors, such as the server machine being down, the server machine is operating slowly, an application query of a large non-indexed table, network congestion, etc.

While the DIP is waiting for a response from the server machine, the message queue of the DIP may back up. A full message queue (current maximum is 255) may result in performance problems for the voice system.

In order to prevent this, the DIP is equipped with a timeout mechanism. By default, the DIP will timeout every 45 seconds while waiting for a response. After the timeout, the DIP deletes the messages currently queued and continues to wait for a response from the database. The DIP continues to timeout every 45 seconds and to empty the message queue. After the default of 300 seconds, the DIP will automatically respawn and reinitialize.
The 45- and 300-seconds timeout values can be altered in `/vs/data/ldbdip.rc` file. This file is included with the generic package and contains the following default values:

```plaintext
FIRST_TMOUT=45
SECOND_TMOUT=300
```

You may change these default values to any number that is appropriate for your database and applications. If the `ldbdip.rc` file is missing, the DIP uses the default timeout values of 45 and 300 seconds.

⚠️ **CAUTION:**

Always stop the voice system before shutting down the remote database machine to avoid an unexpected interruption of service.

### Database Cursors

An internal data structure called a database cursor is used to monitor the point from which the DIP is reading in a specific database table. One cursor is allocated for each read of each database table by each channel running a service that requires access to that database. The cursor remains assigned to that table until the service ends on the channel for which the cursor was allocated.
The number of cursors is tunable in the /oracle/dbs/initA.ora file (open_cursors is a tunable parameter). At least 500 cursors are supported in the Intuity CONVERSANT system. Once the limit of cursors is reached, database transactions do not complete successfully; that is, table reads may fail and inserts or updates may not occur.

### Database Cursor Calculations

To insure the integrity and consistency of the data in the database, you must keep this limiting factor in mind when you design your applications. Use the following formula to determine the number of database tables that may be accessed by an application with the voice system:

channel \( \times \) read \( \times \) cursor < 500

where:

- channel = number of channels running application with database access
- read = number of read table operations performed on different tables by applications (per channel)
- cursor = number of cursors involved in read table

**Note:** Multiple reads of the same table use only one cursor.

The following are sample calculations using various configurations and numbers of read table operations.
If you have a 24-channel system running an application that performs four read table operations on four different tables per channel, the calculation is:

\[24 \times 4 \times 1 = 96\]

Since 96 is less than 500, the database operations proceed properly.

If you have a 36-channel system running an application that performs four read table operations on a single table per channel, the calculation is:

\[36 \times 1 \times 1 = 36\]

Since 36 is less than 500, the database operations proceed properly.

If you have a 48-channel system running an application with five Read table operations on five different tables per channel, the calculation is:

\[48 \times 5 \times 1 = 240\]

In this case, if all 48 channels are performing five read table operations, some database operations may fail because of the multiple read table operations on the same channels.

An application developer wants to develop an application that executed six read table operations on six different tables per channel:

\[500 \div (6 \times 1) = 83.33\]

Therefore, the application can run on as many as 80 channels before it encounters database access problems.
An application developer wants to develop an application to run on 72 channels simultaneously:

\[
\frac{500}{(72 \times 1)} = 6.94
\]

Therefore, the application can perform up to six read table operations on up to six different tables per channel before it encounters database access problems.

### Increase Database Storage Size

The amount of storage space needed for the database should be decided at the initial installation because the size of the database can affect the disk partition sizes (the database is stored in the `/oracle` file system).

Use the following procedure to increase the database size:

**Note:** The voice system does not need to be stopped while resizing the database.

1. **At the Console Login prompt, enter `root`**
   
   The system prompts you for a password.

2. **Enter your root password.**
   
   The system displays the system prompt `#`. 
Enter `/vs/bin/util/dbfrag`

The system displays the number of free database blocks.

Multiply the number of free database blocks by 4 to get the actual number of free 512-byte blocks.

Enter `df /oracle`

The system displays the number of free blocks available in the `/oracle` file system.

Determine the number of bytes to add to the database by subtracting the current database size (in blocks) from the optimum size.

Enter `/oracle/bin/svrmgrl`

The system enters the server manager mode.

Enter `connect internal`

Enter `alter tablespace system`

Enter `add datafile '/oracle/dbs/dbsA2.dbf'`

Note: The file name `dbsA2.dbf` is a recommended name. If this file already exists in this directory, use `dbsA3.dbf`

Enter `size number`

where `number` is the number of bytes calculated in step 6 that you want to add to the database.
Enter \texttt{exit}

**Note:** We recommend that you use the above commands as written. However, if you are concerned about the \texttt{/oracle} file system size, substitute the command,
\begin{verbatim}
add datafile '/home2/dbsA2.dbf'
\end{verbatim}
for
\begin{verbatim}
add datafile '/oracle/dbs/dbsA2.dbf'
\end{verbatim}

Enter \texttt{/vs/bin/util/dbfrag}

The system displays the number of free database blocks.

Check that the database size has been increased as desired.

Enter \texttt{exit}

The system exits the server manager mode.

Enter \texttt{exit}

**Decrease Database Storage Size**

In order to minimize database storage and access problems, the voice system provides two ways to minimize the storage space required for call data: store fewer call data events, or store fewer days of information in your applications.
Reduce the Amount of Call Data Stored

You can decrease the amount of database space needed by reducing the number of stored call data events. This reduction must be accomplished at the application design level. Unlike Reduce the Number of Days Data Is Stored, there are no system variables to modify. This minimization technique involves modifying every application that stores call data events to store fewer of them.

Reduce the Number of Days Data Is Stored

Another way to minimize the amount of storage required for call classification and call data detail information is to store fewer than seven days worth of data. The voice system knows how many days of data to archive by reading the contents of the `croncdh` file in the `/vs/bin/util` directory.

The following is a sample `croncdh` file:

```bash
# Start the ORACLE DBMS
VSUTIL=/vs/bin/util
ORACLE_SID=A;export ORACLE_SID
ORACLE_HOME='/usr/lbin/dbhome $ORACLE_SID'
PATH=$PATH:$ORACLE_HOME/bin;export PATH
ulimit 2113674
if /usr/lbin/orastat -s >/dev/null
```
then
:
else
  ulimit 2113674; ior w
  fi
  # perform the cron jobs
  $VSUTIL/cdhs
  $VSUTIL/cd
def
  $VSUTIL/cas
  $VSUTIL/cc
def
  # cleanout the unwanted ORACLE log files
  $VSUTIL/logd

Change the Data Storage Number of Days

Currently, the only report produced for the call classification data is the Call Classification Summary report. Therefore, saving zero days worth of call classification data saves database space without affecting the reports produced by the voice system. Storing zero days worth of data means that only the call classification data for the current day is available until the clean up and summary programs run each night after midnight. The voice system always maintains the current day’s data.
To change the number of data days, modify the following commands in the `croncdh` file, where \( x \) is the number of days of data to store:

\[
\begin{align*}
$\text{VSUTIL/cdhdel} & \ -x \\
$\text{VSUTIL/ccadel} & \ -x
\end{align*}
\]

**Note:** If `cdhdel` and `ccadel` do not have any arguments, the default of seven days is used, as illustrated in the sample `croncdh` file in Reduce the Number of Days Data Is Stored on page 368.

To store two days worth of call detail data information, and four days of call classification data, modify your `croncdh` file as follows:

```bash
# Start the ORACLE DBMS
VSUTIL=/vs/bin/util
ORACLE_SID=A;export ORACLE_SID
ORACLE_HOME='/usr/lbin/dbhome $ORACLE_SID';export ORACLE_HOMEPATH=$PATH:$ORACLE_HOME/bin;export PATH
if /usr/lbin/orastat -s >/dev/null
then :
else
  ulimit 2113674; ior w
fi
# perform the cron jobs
```

```
```

---

*Intuity™ CONVERSANT® System Version 7.0 Administration 585-313-501* Issue 3 January 2000 370
Increase Shared Pool Size

Perform this procedure to allocate additional memory resources for ORACLE. You may need to do this if trying to write to several database tables at once and you receive the ORACLE error message number ORA-04031 in the message log.

Note: This procedure increases the amount of main memory that ORACLE uses.

1 Check the message log for ORA-04031. The text portion of this message indicates there is not enough shared memory space.

2 Access the /oracle/dbs/initA.ora file.

3 Place a pound sign (#) in front of the value shared_pool_size=3500000.

4 Remove the # from the front of the value shared_pool_size=6000000.
5  Save and exit the file.

6  Enter `/oracle/bin/ior c` to stop the database system.

7  Enter `/oracle/bin/ior w` to start the database system.

Rollback Segment

A rollback segment is a storage buffer that records actions that can be undone under certain circumstances. The rollback segment grows as needed as long as there is available space in the database. However, the rollback segment does not automatically decrease in size and some ORACLE operations can cause the rollback segment to grow dramatically. Consequently, you may wish to restore the rollback segment to the original size by first eliminating it, and then recreating it.

The installation of the Base ORACLE software package creates one rollback segment called **R1**.

This section provides information on verifying and reducing the size of this rollback segment.
Verify or Reduce the Size of the Rollback Segment

Note: The procedure to reduce the size of the R1 rollback segment requires that the voice system and the database system be stopped. If possible, avoid reducing the size of the rollback segment when call traffic is heavy. The procedure to verify the size of the rollback segment does not require that the voice system and the database system be stopped. Consequently, you may verify the size of the rollback segment at any time.

Use the following procedure to verify or reduce the size of the rollback segment:

1. At the Console Login prompt, enter root.
   The system prompts you for a password.

2. Enter your root password.
   The system displays the system prompt #.

3. Enter /vs/bin/util/rb_init to display the current size of the rollback segment, R1.
   The system displays a message similar to the following:

   Rollback segment R1 is currently 653312 bytes in size, would you like to reduce the size of this rollback segment? (y/n)
The original size of the rollback segment was set to 653312 bytes. If the current size is close to this number, or if it is less than 1/4 of your total database size, you do not need to reduce the size of the rollback segment.

~ To terminate this procedure, go to step 4.
~ To continue with this procedure and reduce the size of the rollback segment, go to step 5.

4 To terminate the `rb_init` command without reducing the size of the rollback segment, enter `n`

The system returns to the system prompt `#`. You have completed this procedure.

5 Enter `y` to reduce the size of the rollback segment.

The system executes the `rb_init` command. The system displays the following message if the voice system is running:

The voice system is running. Is it OK to stop the voice system? (y/n)
6 Enter y to shut down the voice system and continue with the procedure to reduce the size of the rollback segment.

The system displays the following message if the database system is running:

The database system is running. Is it OK to shutdown the database? (y/n)

7 Enter y

The system stops the database system and executes the `rb_init` command.

When the `rb_init` command is finished, the system displays the following message:

Would you like to restart the voice system? (y/n)

8 Enter y to restart the voice system, or enter n to wait to start the voice system.

If you do not wish to restart the voice system and the database at this point, you may do so manually at a later time.
Voice System Database Administration

Use the following procedure to access the Database Administration window:

1. At the Console Login: prompt, enter root
   The system prompts you for a password.
2. Enter your root password.
   The system displays the system prompt #.
3. Enter cvis_menu
   The system displays the Voice System Administration menu (Figure 42 on page 59).
4. Start at the Voice System Administration menu and select:

   > Configuration Management
   > Database Administration

The system displays the Database Access ID Table window (Figure 165 on page 377).
Figure 165. Database Access ID Table Window

<table>
<thead>
<tr>
<th>DATABASE ACCESS ID</th>
<th>REMOTE/DESCRIPTOR</th>
<th>DB SID</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB1_local</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Press CHG-KEYS to ADD or REMOVE a Database Access ID. Press CANCEL to exit.

Database Access ID Table Window

The Database Access ID Table window displays currently recognized database IDs. Use the Database Access ID Table window to perform the following tasks:

- Add a local or remote database access ID
- Remove a local or remote database access ID

Table 36 on page 378 describes each field in the Database Access ID Table window.
Database Access IDs

Each ID listed in the Database Access ID Table window represents an established local or remote connection to an ORACLE database. This connection is used by the voice system’s applications to access a customer’s database tables. The database ID, then, represents each local or remote database to the voice system.

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database Access ID</td>
<td>List of database access IDs, each representing an established ORACLE database connection to the system. See <a href="#">Database Access IDs on page 378</a> for more information.</td>
</tr>
<tr>
<td>Remote Machine</td>
<td>Remote machine name.</td>
</tr>
<tr>
<td>DB SID*</td>
<td>Database instance, ORACLE_SID or database name (dbname) on ORACLE systems. There could be multiple instances on a remote machine.</td>
</tr>
</tbody>
</table>

* If these fields are blank, the connection is to a local ORACLE database. If these fields are populated, connection is to an ORACLE database on the system machine or to an ORACLE database on the machine specified in the Remote Machine field.
An application can access multiple database tables in a local database (that is, residing on the voice system’s hard disk). However, you can improve the access performance by adding multiple database access IDs to that local database to split the access evenly between the multiple database access IDs.

**Add a Local Database Access ID**

Use the following procedure to add a local database access ID:

1. Start at Database Access ID Table window (Figure 165 on page 377).
2. Press F8 (Chg–Keys).
   
   The system displays the alternate function keys.
3. Press F1 (Add).
   
   The system displays the Add A Database Access ID menu (Figure 166 on page 379).

**Figure 166. Add A Database Access ID Menu**
4 Select:

> Add a Local Database Access ID

The system displays the Add a Local Database Access ID window (Figure 167 on page 380).

Figure 167. Add a Local Database Access ID Window

5 Enter the local database access ID in the Database Access ID: field, or press F2 (Choices) to select from a menu. Valid values are DB2_local, DB3_local, DB4_local, and DB5_local.

DB1_local is the standard connection to a local ORACLE database. The CHOICES menu lists only those local database access IDs that have not yet been added.

6 Press F3 (Save) to save the database access ID and exits the window. The Add a Database Access ID menu remains active, allowing you to add other database access IDs, if desired.

7 If you are finished adding database access IDs, press F6 (Cancel) twice to return to the Configuration Management menu.
8 Stop and start the voice system. See Stop the Voice System on page 136 and Start the Voice System on page 139 in Chapter 3, Voice System Administration, for more information.

The system establishes the local database connection(s).

Add a Remote Database Access ID Using SQL*NET V2

You must have the SQL*NET TCP/IP installed on your system to use SQL*NET V2 for remote database access.

See “Installing the Oracle SQL*NET TCP/IP Package,” in Chapter 7, “Installing the Optional Feature Software,” in the maintenance book for your platform for information on installing the SQL*NET V2 software.

Before you establish an SQL*NET V2 connection, verify that the following are true:

- The SQL*Net V2 listener for TCP/IP is running on the remote database server.
- The $ORACLE_HOME/network/admin/tnsnames.ora configuration file on the Intuity CONVERSANT system has been updated to provide system information for the server. The Intuity CONVERSANT software automatically attempts to update the existing tnsnames.ora file (or create a new file if none exists), but manual alterations are sometimes necessary. For assistance with this requirement, see the database administrator for the server.
See “Configuring the TNS Listener: LISTENER.ORA” and “Identifying the Servers: TNSNAMES.ORA” in the ORACLE Server Administrator’s Guide Release 7.3, for more information on these configuration files.

Use the following procedure to add a remote database access ID using SQL*NET V2:

1. Start at Database Access ID Table window (Figure 165 on page 377).
2. Press F8 (Chg–Keys).
   The system displays the alternate function keys.
3. Press F1 (Add).
   The system displays the Add a Database Access ID menu (Figure 168 on page 382).

Figure 168.  Add a Database Access ID Menu

<table>
<thead>
<tr>
<th>Add a Database Access ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add a Local Database Access ID</td>
</tr>
<tr>
<td>Add a SQL*Net V2 Remote Database Access ID</td>
</tr>
</tbody>
</table>
4 Select:

> Add a SQL*Net V2 Remote Database Access ID

The system displays the Add V2 Remote Database ID window (Figure 169 on page 383).

Figure 169. Add V2 Remote Database Access ID Window

5 Complete the fields in this window using the information in Table 37 on page 384.
## Table 37. Field Descriptions for Add V2 Remote Database Access ID

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
<th>Valid Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database Access ID</td>
<td>This field specifies the name by which you want to refer to this connection. This name can be used in Script Builder when referring to tables in that database.</td>
<td>—</td>
</tr>
<tr>
<td>Remote DB’s Connect Descriptor</td>
<td>This field specifies the database instance on the remote database server to which you want to connect. This connect descriptor is put into the <code>/oracle/network/admin/tnsnames.ora</code> file if it is not already in that file.</td>
<td>—</td>
</tr>
<tr>
<td>Remote Server’s DB Instance</td>
<td>This field specifies the name of the ORACLE database instance on the remote database server. This field is also known as the ORACLE SID.</td>
<td>This name must match the corresponding ORACLE SID on the server system. Contact the server’s database administrator for this name.</td>
</tr>
</tbody>
</table>
### Table 37. Field Descriptions for Add V2 Remote Database Access ID

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
<th>Valid Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remote Server’s Network Name</td>
<td>This field specifies the network name or TCP/IP address of the remote database server. If the network name is entered, it must already exist in the local /etc/hosts file.</td>
<td>Contact the network administrator for this name or TCP/IP address.</td>
</tr>
<tr>
<td>TCP/IP Port Number</td>
<td>This field contains the TCP/IP port number.</td>
<td>This port number must match the one on the remote database server. Contact the server’s database administrator for this port number.</td>
</tr>
<tr>
<td>Will this CONVERSANT be a DB server?</td>
<td>This field indicates whether this is a database server.</td>
<td>Yes or No</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> It is strongly recommended that the local system not be used as a database server due to performance considerations.</td>
<td>If No, the system can only be a client to a remote database server. If Yes, the system can be both a client and a database server. Also, if Yes, the system sets up a listener process and a connect descriptor entry is created in the tnsnames.ora file for this system.</td>
</tr>
</tbody>
</table>
6 Database Administration

6 Press F3 (Save).
   The system saves the information and redisplay the Database Access ID Window.

7 Press F6 (Cancel) twice.
   The system closes the Database Access ID Table.

8 Stop and start the voice system. See Stop the Voice System on page 136
   and Start the Voice System on page 139 in Chapter 3, Voice System Administration, for more information.

Completing ORACLE Environment Setup if Server is Not an Intuity CONVERSANT Server

If the database server is a UNIX based system running ORACLE V7 but not
an Intuity CONVERSANT system, you must perform the following procedures
to complete the ORACLE environment setup:

Note: This procedure assumes the following:
   ~ The network is a TCP/IP local area network and consists of a single
     server and any number of clients (Intuity CONVERSANT systems).
   ~ The server runs a single listener process to permit access to the
     server’s database.
   ~ The ora7sql package is installed on all the clients
6 Database Administration

- The entries for the server and all clients are in the `/etc/hosts` file on the server and all the clients.
- All remote database files are created and/or updated on the server.
- Files can be remotely copied from the server to all clients.

1 Administer the SQL*NET V2 product so that the listener process can be launched.
2 Start the listener process.
3 Provide the server’s network name and database instance name (ORACLE_SID) to each Intuity CONVERSANT client system.

Accessing a Remote Database Using PRO*C or SQL*PLUS

The following are application development issues related to accessing a remote database using PRO*C or SQL*PLUS programs.

Setting the Connect Descriptor

If you are using PRO*C or SQL*PLUS with an IRAPI application, you must change or verify the correct form of the connect string. The database interface assigns the node name of the system with the remote database as the connect string. The connect string should be in the form “remote_system” with the name of the system contained in quotes. For example, if the remote system name is `cop3`, the connect string must be “`cop3`”.
If you are using PRO*C, you must set the environment variables ORACLE_HOME and ORACLE_SID. Two methods are available:

- Shell wrapper approach
- `putenv` function call

### Shell Wrapper Approach

Perform the following:

1. Compile the original source files that communicates with the DB along with all the other source files.
2. Rename the executable file using the move command, but keep it in the same directory.
3. Using your favorite editor, edit a file with the same name as the original executable file.
4. Enter the following on the first line:

   ```bash
   ORACLE_SID=ORACLE_SID_name;export ORACLE_SID
   ```

   where `ORACLE_SID_name` is the name of the instance of the ORACLE database on the server.
Enter the following on the second and third line:

```
ORACLE_HOME=/usr/lbin/dbhome $ORACLE_SID';export
ORACLE_HOME
exec new_executable_file_name
```

where `new_executable_file_name` is the full path name of the newly-renamed executable file.

Save the file and exit the editor.

Change the mode of shell file with the original name to `rwxr_xr_x`.

Add the original executable file name along with all the other executable files to `/etc/inittab` file as before using the same tools as before.

The following example is used to illustrate these steps. The executable file that communicates with the DB is called `get_pin_uac`. The name of the instance of the ORACLE DB is “A”.

Compile the `get_pin_uac` executable file along with all the other executable files as before.

Enter `mv get_pin_uac getPinUac` in the `/home/gar/irapi` directory.

In the `/home/gar/irapi` directory, enter `vi get_pin_uac`

Enter the following first line to the file:

```
ORACLE_SID=A;export ORACLE_SID
```
5 Add the following second and third line to the file:

```
ORACLE_HOME='"/usr/lbin/dbhome $ORACLE_SID"'; export ORACLE_HOME
exec /home/gar/irapi/getPinUac
```

6 Save the file and exit the editor.

7 Enter `chmod 755 get_pin_uac`

8 Place the `/home/gar/irapi/get_pin_uac` entry along with all the other executable files in the `/etc/inittab` file as before using the same tools as before.

**putenv Approach**

The following description is the `putenv` approach. The `putenv` function call permits the developer to directly place the ORACLE_SID and the ORACLE_HOME environmental shell variables into a Pro*C program. Do the following:

1 Using an editor, open the Pro*C source file for editing.

2 Add the following line at the top of the source file:

```
#include <stdlib.h>
```
Near the beginning of main, add the following two lines of code:

```c
putenv("ORACLE_SID=ORACLE_SID_name");
putenv("ORACLE_HOME=ORACLE_HOME_name");
```

where `ORACLE_SID_name` is the name of the DB instance on the server and `ORACLE_HOME_name` is the ORACLE_HOME directory on the server. For additional information on the `putenv` function call, see the *UnixWare Operating System API Reference: Library Reference*.

Recompile this source code file along with all the source files that make up the custom software.

The following example is used to illustrate these steps. The name of the instance of the ORACLE DB is “A”. The name of the ORACLE_HOME directory is `/oracle`.

```c
/* start of header files */
...
#include <stdlib.h>
...
/* end of header files */
...
...
main (argc,argv)
int argc;
char *argv[];
```
{  
/* start of local variables */  
...  
/* end of local variables */  
/* start of executable code */  
/* start of putenv changes */  
  putenv ( "ORACLE_SID=A" );  
  putenv ( "ORACLE_HOME=/oracle" );  
/* end of putenv changes */  
...  
...  
...  
}
Remove a Database Access ID

The Remove a Database Access ID window allows you to remove one or more existing database access IDs, thereby dropping the connection to the associated ORACLE database.

⚠️ CAUTION:
When you remove a remote database access ID, make sure that no applications use that Database Access ID. If an application uses an ID that has been removed, the application will fail when it tries to access data stored in that database.

1. Start at Database Access ID Table window (Figure 165 on page 377).
2. Press F8 (Chg–Keys).
   The system displays the alternate function keys.
3. Press F2 (Remove).
   The system displays the Remove a Database Access ID window (Figure 170 on page 394).

Note: DB1_local represents the standard connection to the local ORACLE database and cannot be removed, because there must always be at least one connection to the local database.
4 Enter the access ID of the database you want to remove in the Database Access ID: field, or press F2 (Choices) to select from a menu.

5 Press F3 (Save).

The system saves the ID of the remote database connection to be deleted.

Stop and start the voice system. See Stop the Voice System on page 136 and Start the Voice System on page 139 in Chapter 3, Voice System Administration, for more information.

The system removes the database connection.
SQL*PLUS Database Administration

The SQL*PLUS software program is a tool used to access the ORACLE RDBMS. It is included in the Base ORACLE software package. This tool can be used to review database information without having to access the voice system directly.

⚠️ CAUTION:
Do not alter any data, schema, logins, or passwords using SQL*PLUS. Doing so may corrupt the voice system and Script Builder software and result in non-warranty maintenance. The ORACLE right-to-use license is restricted solely to Intuity CONVERSANT applications.

Administration for Applications and Databases

Application table manipulation (creation, drop, or schema change) is best administered using Script Builder software. If you use SQL*PLUS to drop a table or change a table schema, you must reverify and reinstall the application referring to the table. The applications may not be able to communicate with the database correctly if you fail to reverify and reinstall them.
Script Builder and SQL*PLUS have different conventions for naming tables and columns. Script Builder is case sensitive; table or column names may use either uppercase or lowercase characters in Script Builder.

SQL*PLUS is not case sensitive; table or column names using lowercase characters are interpreted to uppercase characters. Consequently, if you use lowercase characters while naming a table or column in Script Builder, when later executing SQL*PLUS, you must enclose the lowercase references (including table names and columns) in double quotes ("').

An easy way to avoid this confusion would be to use upper case letters on all tables and columns in Script Builder.

Monitor the Database

See the ORACLE Server Administrator’s Guide for information on commands and procedures used to monitor the database.

Database Commands

The following commands may be used to monitor database space utilization. See the information under the command name in Appendix A, Summary of Commands.
The dbcheck Command

The dbcheck command checks space usage and rollback segment growth.

The dbcheck Command Options

The dbcheck command has three different options:

- 
  -i — installs cron entries and error messages. The cron job can be placed in either the root cron file or added to the end of /vs/bin/util/croncdh job that runs once a day. The -i option also asks if you want new error messages added to the att errors file along with explanations used with the explain command. This installation only needs to be run if you want the warnings to show up in the system message log or you want to schedule automatic checking at regular intervals.

- 
  -r — removes any cron entry set up by the -i option

- 
  [-w n][m][s][-e][-m user[~user...]] — checks database space against user-set thresholds. The following occurs:

  ~ Free space is checked against the user set threshold \( n \), 15% default
  ~ Rollback segment growth is checked against the user set threshold \( m \), 20% default

When executed, the dbcheck command generates the appropriate warnings if the database falls below \( n \) percent free or if the rollback segments grow to be more than \( m \) percent of the total database size.
The command, by default, sends warning messages to the error log indicating a threshold has been exceeded (the -i option must be run first). The -e option will disable entries from going into the log file. The -s option will print the warning messages to standard output. The -m user option allows for the messages to be mailed to user. Multiple users can be sent the mail by separating the user names with ~. Following are sample outputs:

(Output to error log when less than 13% available or more than 23% used by rollback)

```
# dbcheck -w13,23
```

**The dbcheck Command Output**

The dbcheck program returns the following values:

- 0 — Success (no limits exceeded)
- 1 — Threshold exceeded
- 2 — Processing error
- 3 — Database is not running

**The dbfree Command**

The dbfree command is a shell script that lists the amount of free space in the database by free contiguous blocks. The result will be a detailed listing of each free memory area followed by the sum of each tablespace. The free blocks listed are in 2048 bytes/block (ORACLE blocks). There is also a column that lists the same information in Mbytes.
The dbfree Command Options
The `-h` option removes the column headers.

The dbfree Command Output
The `dbfree` program returns the following values:
- 0 — success
- 1 — processing error

The dbfrag Command
The `dbfrag` command is a shell script that reports on database allocation, usage, and fragmentation. The block size reported is in ORACLE blocks (2048 bytes). This command is useful to get a quick check on database usage and provides a shell interface into some key ORACLE statistics. This command only reports on information in the 'SYSTEM' tablespace.

The dbfrag Command Options
The dbfrag command has two options:
- `-b` — requests the information be reported in Mbytes.
  Example: `# dbfrag -b`
- `-h` — the listing is printed without a header. This option is useful if you want to parse the output to select a specific field.
6  Database Administration

Monitor the Database

The dbfrag Command Output

The dbfrag program returns the following values:
- 0 — success
- 1 — processing error

The dbused Command

The dbused command is a shell script that displays the amount of space used by each object for a given user. Objects are tables, indexes, clusters, rollback, and cache. The default user is sti/sti.

The dbused Command Options

The dbused command has three options:
- -h — Print the listing without a header. This option is useful if you want to parse the output to select a specific field.
- -s — Produce only summary information grouped by objects.
- -u uid/passwd — Specify ORACLE user id and password (sti/sti is default) for all users.

The dbused Command Output

The dbused program returns the following values:
- 0 — success
- 1 — processing error
**Database Trace Files**

ORACLE creates a trace file in the `/oracle/rdbms/log` directory each time the system is rebooted. These trace files are not automatically removed by ORACLE and must be removed by the user or administrator if the files are no longer wanted. In addition, ORACLE creates a log file `/oracle/tcp/log/orasrv.log` that contains all the remote login information which is automatically created and appended by ORACLE. This log file is not automatically removed by ORACLE and may be removed or truncated by the user or administrator.
Overview

This chapter provides the information and procedures needed to configure and administer the peripheral equipment connected to your voice system.

Topics covered include:
- Modem Administration on page 405
- Printer Administration on page 427
- Remote Terminal Administration on page 441
Access the Unix Management Menu

Use the following procedure to access the Unix Management menu:

1. At the Console Login: prompt, enter root
   The system prompts you for a password.
2. Enter your root password.
   The system displays the system prompt #.
3. Enter cvis_menu
   The system displays the Voice System Administration menu (Figure 171 on page 403).

Figure 171. Voice System Administration Menu
4 Select Unix Management.

The system displays the Unix Management menu (Figure 172 on page 404).

**Figure 172. Unix Management Menu**

<table>
<thead>
<tr>
<th>UNIX Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Format UNIX Floppy/Tape</td>
</tr>
<tr>
<td>Modem/Terminal Administration</td>
</tr>
<tr>
<td>Printer Administration</td>
</tr>
<tr>
<td>Software Install</td>
</tr>
<tr>
<td>Software Remove</td>
</tr>
<tr>
<td>UNIX Date and Time</td>
</tr>
<tr>
<td>TCP/IP Administration</td>
</tr>
</tbody>
</table>

The procedures in this chapter detail administration for peripherals: modems, printers, and TCP/IP.

The other menu options in the UNIX Management menu are discussed in detail in Chapter 8, Common Administration.
Modem Administration

Procedures to configure and administer a 3820 or 3920 modem for use with your voice system include the following:

- Install the Modem on page 405
- Configure the Modem on page 406
- Administer the Modem on page 415

Install the Modem

Use the following procedure to install the modem:

1. Physically connect the modem to the system.

See “Connecting the 3820 Modem to the Platform,” in Chapter 4, “Completing System Installation,” in Intuity CONVERSANT New System Installation, 585-313-106, for the procedure to physically connect the modem.
Configure the Modem

For the 3820 or 3920 plus modem to work properly with the voice system, you must configure the modem using one of the two following methods:

• Configure the modem via its control panel after connecting it to the COM port on the hardware platform. See Configure the Modem Via the Modem Control Panel on page 406 for more information.

• Connect the modem to a terminal that acts as a DTE and configure the modem via the terminal. See Configure the Modem Via a Terminal on page 413 for more information.

Configure the Modem Via the Modem Control Panel

The 3820 and 3920 Plus modems have a Diagnostic Control Panel (DCP) that is the user interface to the modem. Complete the following procedures to configure the 3820 modem via its control panel:

• Activate the Unix Dial Default Factory Configuration on page 407
• Set the Async DTE Rate on page 408
• Set the DTR Action and DSR Control to Standard RS-232 on the Modem on page 410
• Set the Error Control Mode to Buffer Mode on the 3820 Modem on page 412
Activate the Unix Dial Default Factory Configuration

Use the following procedure to activate the UNIX Dial default factory setting:

1. Turn the modem off and then back on.
2. Press \textasciicircum or \textasciitilde on the modem to display \texttt{Configure}.
3. Press the function key under \texttt{Configure} (\texttt{F1} or \texttt{F2}).
   
   Modem response:
   
   \texttt{Ld EditArea frm.}
4. Press \textasciicircum or \textasciitilde to display \texttt{Factory}.
5. Press \texttt{F1} to display the factory preset configuration.
   
   Modem response:
   
   \texttt{LD Fact Preset:}
6. Press \textasciicircum or \textasciitilde to display \texttt{Unix Dial}.
7. Press \texttt{F2} (Select).
   
   Modem response:
   
   \texttt{Choose Function}
   
   \texttt{Edit and Save.}
8 Press F3 (Save).
Modem response:
Sav EditArea to
Active.

9 Press F1 (Save).
~ 3820 modem: Modem response:
Command Complete
~ 3920 Plus modem: After a power reset, modem response:
Idle: 288

10 Press  to return to the top-level menu.

Set the Async DTE Rate
Use the following procedure to set the Async DTE rate to the required speed:

1 Press  or  on the modem to display Configure.

2 Press the function key under Configure (F1 or F2).
Modem response:
Ld EditArea frm.

3 Press  or  to display Active.
4 Press F1 (Save).
   Modem response:
   Choose Function
   Edit and Save

5 Press F1 (Edit).
   Modem response:
   Edit StrapGroup
   DTE Interface

6 Press F1 (Edit).
   Modem response:
   Async/Sync Mode

7 Press F1 (Next) to display Async DTE Rate.

8 Press or to display baud rates.

9 Press F2 (Select).
   The LCD displays the baud rate.

10 Continue with the procedure in Set the DTR Action and DSR Control to
   Standard RS-232 on the Modem on page 410. Do not return to the
   top-level menu.
Set the DTR Action and DSR Control to Standard RS-232 on the Modem

Use the following procedure to set the DTR action to standard RS-232 on the modem:

1. Press F1 (Next), more than once if necessary, to display DTR Action.
2. Press ▼ or ▲ to display Stndrd_RS-232.
3. Press F2 (Select).
4. Press F1 (Next) to display DSR Control.
5. Press ▼ or ▲ to display Stndrd_RS-232.
6. Press F2 (Select).
7. Press the single ▲.
   Modem response:
   Edit StrapGroup
   Edit StrapGroup
8. Press ▼ or ▲ to display DTE Dialer.
   Modem response:
   DTE Dialer Type
10. Press F1 (Next) to display AT Escape Char.
11. Use ▼ or ▲ and F2 (Select) to adjust the number to 128 ASCII.
12 Press \( \text{A} \).
   Modem response:
   Edit StrapGroup

13 Press \( \text{a} \) or \( \text{b} \) to display Dial Line.

14 Press \( \text{F1} \) (Edit).
   Modem response:
   Dial Line Rate

15 Press \( \text{a} \) or \( \text{b} \) to display baud rates.

16 Press \( \text{F2} \) (Select).
   The LCD displays the baud rate.

17 Press the single \( \text{A} \).
   Modem response:
   Edit StrapGroup

18 Continue with the procedure in Set the Error Control Mode to Buffer Mode on the 3820 Modem on page 412. Do not return to the top-level menu.
Set the Error Control Mode to Buffer Mode on the 3820 Modem

Use the following procedure to set the error control mode to buffer mode:

1. Press \( \textasciitilde \) or \( \textasciitilde \) to display V42/MNP/Buffer.
2. Press F1 (Edit).
   
   Modem response:
   
   \( \text{Err Control Mode} \)

3. Press \( \textasciitilde \) or \( \textasciitilde \) to display BufferMode.
4. Press F2 (Select).

5. Press F1 (Next) to display Flw Cntl of DTE.
6. Press \( \textasciitilde \) or \( \textasciitilde \) to display CTS_to_DTE.
7. Press F2 (Select).

8. Press \( \textasciitilde \).
   
   Modem response:
   
   Edit StrapGroup

9. Press \( \textasciitilde \).
   
   Modem response:
   
   Choose Function
   
   Edit and Save
Configure the Modem Via a Terminal

Use the following procedure to configure the modem terminal:

1. Connect a terminal to the 3820 modem.

**Note:** See the documentation provided with the terminal.

2. Verify that the terminal is acting as a DTE.

3. Set the terminal line to 8 bits, no parity, and 1 stop bit.

4. Set the baud rate of the terminal line to the required modem speed.

5. Enter AT from the terminal.

   Modem response:
   
   OK

10. Press F3 (Save).
    
    Modem response:
    
    Sav EditArea to
    
    Active

    
    Modem response:
    
    Command Complete

12. Press 1 to return to the top-level menu.
Note: If the modem does not display OK, the modem is unable to accept AT commands from the terminal. Check the connection and the terminal setup.

6 Enter

AT&F3L0&D2&S1\N0\Q3S41=dial_line_rateS2=128&W0

where dial_line_rate is one of the following baud rates:

~ 3 = 9600
~ 5 = 4800
~ 6 = 2400
~ 7 = 200, V.22
~ 8 = 1200, 212A
~ 20 = 19200

For example, to set the 3820 modem to use COM1, where the baud rate is 19200, enter 20 as the dial_line_rate as shown here:

AT&TF3L0&D2&S1\N0\Q3S41=20S2=128&W0

Modem response:

OK

7 Disconnect the terminal.

8 Connect the modem to the communication port (COM port 1).

The system activates the RTS, CTS, and LSD indicators.
Administer the Modem

The following procedures are necessary to administer the modem:

- Administering the Voice System to Recognize the Modem on page 415
- Setting Up UnixWare to Use a Modem for Outgoing Calls on page 418
- Setting Up UnixWare to Use a Modem for Incoming Calls on page 421

For the 3820 or 3920 plus modem to work properly with the voice system, you must administer the voice system to recognize the modem port.

Use the following procedure to administer the voice system to recognize the modem:

1. At the Console Login: prompt, enter root
   The system prompts you for a password.
2. Enter your root password.
   The system displays the system prompt #.
3. Enter cvis_menu
4 Select:

> UNIX Management

> Modem/Terminal Administration

> Install Modem/Terminal Software

The system displays the Install Modem/Terminal window (Figure 173 on page 416).

Figure 173. Install Modem/Terminal Window

5 Enter `modem` in the `Device:` field.
6 Press **F2** (Choices) to display a list of valid port numbers for the **Serial Port Number:** field.

7 Select one of the port numbers from the list.
   - If you physically connected the modem to COM port 1, choose `/dev/tty00`
   - If you physically connected the modem to COM port 2, choose `/dev/tty01`
   - If you physically connected the modem to one of the multi-port serial ports, choose `/dev/ttyaa – /dev/ttysah` (ports 1–8 on multi-port serial card).

8 Enter **19200** in the **Speed:** field.

9 Press **F3** (Save).
   The system displays a confirmation window.

10 Press **F6** (Cancel) to finish and return to the Modem/Terminal Installation menu.
Use the following procedure to configure UnixWare for a modem:

1. Start at the UNIX System V Administration menu (Figure 17 on page 25) and select:

   ```
   > network services
   > basic networking
   > devices
   > add
   ```

2. The system displays the Adds a Device for Use by Basic Networking window (Figure 174 on page 418).

   **Figure 174. Adds a Device for Use by Basic Networking Window**

   ```
   Adds a Device for Use by Basic Networking
   Device category: Modem
   ```

3. Enter **Modem** in the Device category field, or press F2 (Choices) to select from a menu. The default is **Modem**.
4. Press F3 (Save).

The system displays the Add a Modem Device for use by Basic Networking (1) window (Figure 175 on page 419).

**Figure 175. Add a Modem Device for use by Basic Networking (1) Window**

5. Enter ACU in the **Device Type:** field.

6. Enter the appropriate modem in the **Modem Type:** field, or press F2
(Choices) to select from a menu. If your modem uses the “atdt” command set, select one of the Hayes modems.

7. Press F3 (Save).

The system displays the Add a Modem Device for use by Basic Networking (2) window (Figure 176 on page 420) with several of the fields already filled in.
Figure 176. Add a Modem Device for use by Basic Networking (2) Window

<table>
<thead>
<tr>
<th>Device Type: ACU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modem Type: att2212c</td>
</tr>
<tr>
<td>Port:</td>
</tr>
<tr>
<td>Speed: 1200</td>
</tr>
<tr>
<td>Flow Control: Software</td>
</tr>
</tbody>
</table>

8 Enter a port number in the Port: field, or press F2 (Choices) to select from a menu. A port number is the full pathname of port devices recognized by UNIX.

- If you physically connected the modem to COM port 1, select /dev/tty00
- If you physically connected the modem to COM port 2, select /dev/tty01
- If you physically connected the modem to one of the multi-port serial ports, select /dev/ttysaa − /dev/ttysah (ports 1–8 on the multi-port serial card).

Note: The port devices In the Choices menu are usually listed twice: once with hardware flow control, and once with software flow control. If you select term/01h, you are choosing port 1 with hardware flow control, and Hardware displays in the Flow.
Control: field. If you select term/01s, you are choosing port 1 with software flow control, and Software displays in the Flow Control: field.

9 Enter 9600 in the Speed: field, or accept the default.

10 Press F3 (Save).

The system displays the following message:

Entry was added to the system. Use Ports menu to add a port monitor for a bidirectional port.

---

Use the following procedure to configure UnixWare for a modem that can process incoming calls:

1 Start at the UNIX System V Administration menu (Figure 17 on page 25) and select:

```
> ports
> port_monitors
> add
```

The system displays the Add A Port Monitor window (Figure 177 on page 422).
Figure 177. Add A Port Monitor Window

<table>
<thead>
<tr>
<th>Sequence</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Enter <strong>ModemMon</strong> in the Port monitor tag: field.</td>
</tr>
<tr>
<td>3</td>
<td>Enter <strong>ttymon</strong> in the Port monitor type: field.</td>
</tr>
<tr>
<td>4</td>
<td>Enter <code>/usr/lib/saf/ttymon</code> in the Command to start the port monitor:</td>
</tr>
<tr>
<td>5</td>
<td>Enter 2 in the Version number: field.</td>
</tr>
<tr>
<td>6</td>
<td>Enter Yes in the Start port monitor immediately: field.</td>
</tr>
</tbody>
</table>

Fill in the form and then press SAVE.
7 Enter **Enabled** in the Start state: field.

8 Enter 0 in the Restart count: field.

9 Press F3 (Save).

The system displays the Service Access Management menu (Figure 178 on page 423).

**Figure 178. Service Access Management Menu**

```
<table>
<thead>
<tr>
<th>&gt; port_monitors</th>
<th>Port Monitor Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>port_services</td>
<td>Port Service Management</td>
</tr>
<tr>
<td>quick_terminal</td>
<td>Quick Terminal Setup</td>
</tr>
<tr>
<td>tty_settings</td>
<td>Terminal Line Setting Management</td>
</tr>
</tbody>
</table>
```

10 Select:

```
<table>
<thead>
<tr>
<th>&gt; port services</th>
</tr>
</thead>
</table>

| > add |

| > add to one |

| > ModemMon |
```
11 The system displays the Add Port Services to Port Monitor window (Figure 179 on page 424).

Figure 179. Add Port Services to Port Monitor Window

12 Enter Modem in the Service Tag: field.

13 Enter login in the Identification & Authentication Scheme: field.

14 Leave the Service invocation identity: field blank.

15 Enter ENABLED in the Port/service State: field.
16 Enter YES in the utmp entry to be created for this service: field.

17 Enter 2 in the Version number: field.

Leave the remaining fields blank.

18 Press F3 (Save).

The system displays the Add Port Services for ttymon window (Figure 180 on page 425).

Figure 180. Add Port Services for ttymon Window

<table>
<thead>
<tr>
<th>Name of TTY device:</th>
<th>/dev/(serial port)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ttylabel:</td>
<td>19200</td>
</tr>
<tr>
<td>Service command:</td>
<td>/usr/bin/shserv</td>
</tr>
<tr>
<td>TTY line options:</td>
<td></td>
</tr>
<tr>
<td>Hangup:</td>
<td>No</td>
</tr>
<tr>
<td>Bidirectional:</td>
<td>Yes</td>
</tr>
<tr>
<td>Connect-on-carrier:</td>
<td>No</td>
</tr>
<tr>
<td>Wait-read:</td>
<td>Yes</td>
</tr>
<tr>
<td>(Wait-read count:</td>
<td>0</td>
</tr>
<tr>
<td>Timeout:</td>
<td>0</td>
</tr>
<tr>
<td>Prompt message:</td>
<td>login:</td>
</tr>
<tr>
<td>(Optional fields)</td>
<td></td>
</tr>
<tr>
<td>Modules to be pushed:</td>
<td>idterm</td>
</tr>
<tr>
<td>Disabled response message:</td>
<td></td>
</tr>
</tbody>
</table>

Fill in the form and then press [SAVE].
19. Enter `/dev/serial_port_selected` in the Name of TTY device: field, where `serial_port_selected` is the port connected to the modem.

20. Enter `19200` in the `ttylabel:` field.

21. Enter `/usr/bin/shserv` in the Service command: field.

22. Enter `No` in the `Hangup:` field.

23. Enter `No` in the `Connect-in-Carrier:` field.

24. Enter `Yes` in the Bidirectional: field.

25. Enter `Yes` in the `Wait-read Count:` field.

26. Enter `0` in the `Timeout:` field.


28. Enter `ldterm` in the Modules to be Pushed: field.

29. Leave the Disabled Response Message: field blank.

30. Press F3 (Save).

The system saves the configuration information and displays the following message:

```
Service <tty00s> is added successfully.
```
31 Press F3 (Cont).

The system returns to the Port Service Management menu (Figure 181 on page 427).

Figure 181. Port Service Management Menu

<table>
<thead>
<tr>
<th></th>
<th>Port Service Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>add - Add Port Services</td>
</tr>
<tr>
<td></td>
<td>disable - Disable Port Services</td>
</tr>
<tr>
<td></td>
<td>enable - Enable Port Services</td>
</tr>
<tr>
<td></td>
<td>list - List Port Service Information</td>
</tr>
<tr>
<td></td>
<td>modify - Modify Port Services</td>
</tr>
<tr>
<td></td>
<td>remove - Remove Port Services</td>
</tr>
</tbody>
</table>

32 Press F6 (Cancel) repeatedly to return to the UNIX System V Administration menu.

Printer Administration

The printer must be configured and administered for use with the voice system. Procedures for the printer include the following:

- Install the Printer on page 428
- Configure the Printer on the Voice System on page 428
- Administer the Printer on the Voice System on page 438
- Set Up Printer on page 440
Install the Printer

See “Connecting the Printer,” in Chapter 4, “Connecting Peripherals and Powering up,” in Intuity CONVERSANT New System Installation, 585-313-106, for the procedure to physically connect the printer.

Configure the Printer on the Voice System

Lucent Technologies supports the standard parallel printers that have the UnixWare 2.1.3 driver. Contact your field support personnel if you want to connect a serial printer to the system.

Use the following procedure to configure a local parallel printer.

1. At the Console Login: prompt, enter root
   The system prompts you for a password.
2. Enter your root password.
   The system displays the system prompt #.
3. Enter cvis_mainmenu
   The system displays the menu (Figure 182 on page 429).
4 Select:

- UNIX System Administration
  - printers
    - Printers
    - Add

The system displays the Add a New Printer window (Figure 183 on page 430).
Figure 183. Add a New Printer Window

5 Enter the name of the new printer in the Printer Name: field.

6 Enter the local system name in the System Name: field.

7 Enter oki-320 in the Printer Type: field.

8 Enter none in the Similar printer to use for defaults: field.

9 Enter no in the Do you want to use standard configurations? (eg alerts, banners): field.

10 Enter yes in the Do you want to use standard port settings? (eg baud rate, parity): field.

11 Enter no in the Is this a Dial-up Printer? field.

Note: If you enter yes, the system displays a Dial-info: field.

12 Enter /dev/lp0 in the Device or Address: field.
13 Press F3 (Save).

The system displays the Configure New Printer window (Figure 184 on page 431).

**Figure 184. Configure New Printer Window**

<table>
<thead>
<tr>
<th>Printer: okidata</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class: none</td>
</tr>
<tr>
<td>Description of the printer: none</td>
</tr>
<tr>
<td>File types printable without filtering: simple</td>
</tr>
<tr>
<td>Can a user skip the banner page? no</td>
</tr>
<tr>
<td>Default character pitch: Use printer defaults</td>
</tr>
<tr>
<td>Default line pitch: Use printer defaults</td>
</tr>
<tr>
<td>Default page width: Use printer defaults</td>
</tr>
<tr>
<td>Default page length: Use printer defaults</td>
</tr>
<tr>
<td>Command to run for alerts: mail lp</td>
</tr>
<tr>
<td>Frequency of alert (in minutes): once</td>
</tr>
<tr>
<td>Printer recovery method: beginning</td>
</tr>
<tr>
<td>Is the printer also a login terminal? no</td>
</tr>
</tbody>
</table>

14 Enter **none** in the Class: field.

15 Enter **printer one** in the Description of the printer: field.

16 Enter **simple** in the File types printable without filtering: field.

17 Enter **yes** in the Can a user skip the banner page? field.
18 Enter **printer defaults** in the following fields:
   ~ Default char. pitch:
   ~ Default line pitch:
   ~ Default page width:
   ~ Default page length:

19 Enter **mail lp** in the **Command to run for alerts:** field.

20 Enter **once** in the **Frequency of alert (in minutes):** field.

21 Enter **beginning** in the **Printer recovery method:** field.

22 Enter **no** in the **Is Printer also a login terminal:** field.

23 Press **F3 (Save).**

The system displays the Printer: Successfully Added window (**Figure 185 on page 433**).
Figure 185. Printer: Successfully Added Window

Press F8 (Cont).

The system displays the Setup Printer Access window (Figure 186 on page 433).

Figure 186. Setup Printer Access Window

Press CONT to Continue.

Information on tmp:
printer tmp disabled since Fri Nov 22 10:13:23 EST 1996. available.
new printer
Form mounted: simple
Printer types: oki-320

Printer: tmp

Users who are allowed access to this printer: all

Users who are denied access to this printer: none

Forms allowed on this printer: none

Forms denied on this printer: all
25 Enter all in the Users who are allowed access to this printer: field.

Note: Do not press ENTER until all of the fields are complete.

26 Enter none in the Users who are denied access to this printer: field.

27 Enter all in the Forms allowed on this printer: field.

28 Enter none in the Forms denied on this printer: field.

29 Press F3 (Save).

The system displays the Configure Printers for the Printer Service window (Figure 187 on page 434).

Figure 187. Configure Printers for the Printer Service Window

30 Press F6 (Cancel).

The system displays the Line Printer Services Configuration and Operations window (Figure 188 on page 435).
Figure 188. Line Printer Services Configuration and Operations Window

2. Line Printer Services Configuration and Operation
   classes - Manage Classes of Related Printers
   filters - Manage Filters for Special Processing
   forms - Manage Pre-Printed Forms
   operations - Perform Daily Printer Service Operations
   printers - Configure Printers for the Printer Service
   priorities - Assign Print Queue Priorities to Users
   requests - Manage Active Print Requests
   status - Display Status of Printer Service
   systems - Configure Connections to Remote Systems

Note: Wait at least 10 minutes before continuing with step 31.

31 Select:

> operation

> accept

The system displays the Allow Classes/Printers to Accept Requests window (Figure 189 on page 436).
Enter the name of the printer in the Printer(s) and/or Class(es): field, or press F2 (Choices) to select from a menu. If you select from the Choices menu, you must press F2 (Mark) to mark each class or printer you want to accept print requests, then press F3 (Enter).

33 Press F3 (Save).

34 Press F6 (Cancel) twice.

The system displays the Line Printer Services Configuration and Operations window (Figure 188 on page 435).

35 Select:

```
> operation
> enable
```

The system displays the Enable Printer for Printing window (Figure 190 on page 437).
Figure 190. Enable Printer for Printing Window

<table>
<thead>
<tr>
<th>4</th>
<th>Enable Printer(s) for Printing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Printer(s):</td>
<td></td>
</tr>
</tbody>
</table>

36 Enter the name of the printer in the Printer(s): field, or press F2 (Choices) to select from a menu. If you select from the Choices menu, you must press F2 (Mark) to mark each printer you want to enable, then press F3 (Enter).

37 Press F3 (Save).

38 Press F6 (Cancel).

The system displays the Line Printer Services Configuration and Operations window (Figure 188 on page 435).

39 Select:

```
> operation

> set default
```

The system displays the Set Default Print Destination window (Figure 191 on page 438).
Peripheral Administration

Printer Administration

Figure 191. Set Default Print Destination Window

40 Enter the name of the printer in the Default Printer or Printer Class: field, or press F2 (Choices) to select from a menu.

41 Press F3 (Save).

The system saves the printer configuration information.

Administer the Printer on the Voice System

Use the following procedure to administer the voice system to recognize the printer:

1 At the Console Login: prompt, enter root

   The system prompts you for a password.

2 Enter your root password.

   The system displays the system prompt #.

3 Enter cvis_menu
4 Select one of the following:

> UNIX Management

> Printer Administration

> Install Okidata 320 Printer Software

OR

> UNIX Management

> Printer Administration

> Install Okidata Laser Printer Software

The system installs the printer software.

5 Press F6 (Cancel) to finish and return to the Printer Administration menu.
Set Up Printer

Use the following procedure to set up a parallel printer for use with the system:

1. Log on to the system as root.
2. Enter `cd /etc/uucp`
3. Edit the Systems file to add an entry for the printer. This entry must include the hex representation for the printer IP address and port.

   `hp4si Any hplaser \x002 hex_value_for_port hex_value_for_IP_address`

   For example, `hp4si Any hplaser \x000238cc776928` would use 238c as the hex representation for port 9100 and c7769828 as the hex representation for IP address 199.118.152.40.

4. Edit the Devices file with the following line:

   `hp4si tcp - - TLI \D`

5. Save and exit the Devices file.

6. Enter:

   `lp -bsd -Tnever -R0 -y"printer_name IP_address" hp4si`

   where `printer_name` and `IP_address` are appropriate for the printer you are adding.

7. Enter `lpadmin -php4si -Uhp4si -Ipcl -Thplaserjet`
If you do not want a banner page, perform the following procedure. Otherwise, go to step 9.

a. Enter `/usr/lib/lp/model`
b. Enter `cp standard LANHP`
c. Edit the `LANHP` file and change `nobanner="no"` to `nobanner="yes"`.

Enter `lpstat -t`

The output should indicate the `lpstat` spooler is running and the printer you added should be displayed.

To make this printer the default, enter `lpadmin -d hp4si`

Remote Terminal Administration

Procedures to configure and administer a remote terminal for use with the voice system include the following:

- Configure the Remote Terminal on page 442
- Administer the Remote Terminal on page 444
Configure the Remote Terminal

Use the following procedure to configure a terminal (monitor):

1. Start at the UNIX System V Administration menu (Figure 17 on page 25) and select:

   ```
   > ports
   > quick_terminal
   > add
   ```

   The system displays the Quick Terminal Setup window (Figure 192 on page 443).
2 If you know the name of the port monitor, enter the name in the Port
Number(s): field, or press F2 (Choices) to select from a menu.

3 Enter the speed in the Speed: field, or press F2 (Choices) to select from a menu. The default speed is 19200.

4 Press F3 (Save).

The system adds the terminal to the selected port monitor names, and
displays a confirmation window.

5 Press F3 (Cont).

The system displays the Quick Terminal Setup menu.
Administer the Remote Terminal

Use the following procedure to administer the voice system to recognize the modem:

1. At the Console Login: prompt, enter root
   The system prompts you for a password.
2. Enter your root password.
   The system displays the system prompt #.
3. Enter cvis_menu
4. Select:
   > UNIX Management
   > Modem/Terminal Administration
   > Install Modem/Terminal Software

   The system displays the Install Modem/Terminal window (Figure 193 on page 445).
5 Enter **terminal** in the **Device:** field.

6 Enter a serial port number or press **F2** (Choices) to display a list of valid port numbers for the **Serial Port Number:** field.

7 Enter **19200** in the **Speed:** field.

8 Press **F3** (Save).

   The system displays a confirmation window.

9 Press **F6** (Cancel) to finish and return to the Modem/Terminal Installation menu.
TCP/IP Administration

The following procedure is necessary to administer TCP/IP for use with the voice system:

- **Administer TCP/IP on page 446**

**Administer TCP/IP**

Use the following procedure to administer the voice system to administer TCP/IP:

1. **At the** Console Login: **prompt, enter** root
   
   The system prompts you for a password.

2. **Enter your root password.**
   
   The system displays the system prompt #.

3. **Enter cvis_menu**
Select:

> UNIX Management

> TCP/IP Administration

The system displays the TCP/IP Administration window (Figure 194 on page 447).

Figure 194. TCP/IP Administration Window

5 Enter your machine name in the UNIX Machine Name: field.

6 Enter your machine’s IP address in the IP Address: field.

7 Enter your network domain address in Subnet Mask: field.
8 Enter a default address to route to in the Default Gateway IP Address field.

9 Press F3 (Save).
   The system redisplays the TCP/IP Administration window.
   Press F6 (Cancel) to finish and return to the Unix Management menu.
8 Common Administration

Overview

The information and procedures in this chapter are organized together to provide quick reference for some of the more common, or daily, administrative tasks. Common administration includes running system reports, and common procedures such as system monitoring, media formatting, backups, and administering the date and time.

Command Menu

The Command Menu enables you to quickly access the System Monitor and Trace services, and exit the voice system. The Command Menu key appears as F7 on almost every administration menu or window.
Access the Command Menu

Use the following procedure to access the Command Menu:

1. Once you have accessed the Voice System Administration menus (see Chapter 3, Voice System Administration), from almost any menu or window, press F7 (Cmd-Menu).

   The system displays the Command Menu (Figure 195 on page 450).

Figure 195. Command Menu

System Monitor

System administrators frequently use System Monitor first when troubleshooting a voice channel problem because the System Monitor window displays several important pieces of data in one location.
Use the following procedure to access the System Monitor window from the Command Menu:

1. Start at the Command Menu (Figure 195 on page 450) and select:

   > System Monitor

   The system displays System Monitor-Voice Channels window (Figure 196 on page 451).

**Figure 196. System Monitor-Voice Channels Window**

<table>
<thead>
<tr>
<th>Channel</th>
<th>Today</th>
<th>Voice</th>
<th>Service</th>
<th>Status</th>
<th>Caller</th>
<th>Dialed</th>
<th>Digits</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>*On Hook</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>0</td>
<td>0</td>
<td>*On Hook</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>0</td>
<td>*On Hook</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>0</td>
<td>0</td>
<td>*On Hook</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>0</td>
<td>0</td>
<td>*On Hook</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>0</td>
<td>0</td>
<td>*On Hook</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>0</td>
<td>0</td>
<td>*On Hook</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>0</td>
<td>0</td>
<td>*On Hook</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>0</td>
<td>0</td>
<td>*On Hook</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>0</td>
<td>0</td>
<td>*On Hook</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>0</td>
<td>0</td>
<td>*On Hook</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>0</td>
<td>0</td>
<td>*On Hook</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 38 on page 452 describes the columns in the System Monitor-Voice Channels window.

## Table 38. Columns in the System Monitor Window

<table>
<thead>
<tr>
<th>Column</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Channel</td>
<td>Lists the existing channels on the voice system. Virtual channels have the letter v appended to the channel number. These channels are not voice channels but are instead used for “data-only” applications. The number of virtual channels in the system depends on the software applications installed. In most systems, there is a single virtual channel for the playing of background speech.</td>
</tr>
<tr>
<td>Calls Today</td>
<td>Lists the number of calls made to a particular channel within the system. This column reflects the number of calls received during the day for the particular channel since the last stop and start of the voice system. When the end of the day occurs or the voice system is stopped and then restarted, the number of calls in the Calls Today column starts at zero. Calls are monitored for a 24-hour period, on any day beginning at midnight (12 a.m.). For virtual channels, this value is the number of times the service was used to run a data-only service.</td>
</tr>
<tr>
<td>Voice Service</td>
<td>Provides the name of the service associated with the corresponding voice or virtual channel.</td>
</tr>
</tbody>
</table>
Table 38. Columns in the System Monitor Window

<table>
<thead>
<tr>
<th>Column</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Status</td>
<td>State of each channel in the voice system. All hardware states (for example, On Hook, Foos, Manoos, Broken) are marked with an asterisk. This field is blank for virtual channels except when a transaction with a DIP is running. See Table 39 on page 454 for a description of the status entries.</td>
</tr>
<tr>
<td>Caller Input</td>
<td>Last set of digits entered by the caller. For example, when a caller enters their account number in response to a transaction prompt, a series of touch-tone digits is registered in the voice system from the caller. This information is collected by the voice system and displayed in this column by the System Monitor. This field always is blank for virtual channels.</td>
</tr>
<tr>
<td>Dialed Digits</td>
<td>Last set of digits dialed by the voice system during this transfer process. In many cases, the application transfers the caller to an attendant. The numbers used in this transfer process are collected by the voice system and displayed in this column. This field always is blank for virtual channels.</td>
</tr>
</tbody>
</table>

**Note:** All hardware states are marked with an asterisk (*).
Table 39. Entries for Service Status Column

<table>
<thead>
<tr>
<th>Service Status Entry</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>*BROKEN</td>
<td>Channel is broken</td>
</tr>
<tr>
<td>CCA</td>
<td>Channel is in process of call classification</td>
</tr>
<tr>
<td>Coding</td>
<td>Channel is performing voice coding</td>
</tr>
<tr>
<td>Collect</td>
<td>Channel is waiting for caller input</td>
</tr>
<tr>
<td>db dip1</td>
<td>Channel is used by local database DIP</td>
</tr>
<tr>
<td>*DIAGNOSE</td>
<td>Channel is on a circuit card that is being diagnosed</td>
</tr>
<tr>
<td>Dialing</td>
<td>Channel is dialing digits</td>
</tr>
<tr>
<td>*D-BROKEN</td>
<td>(PRI feature only) D-channel is broken</td>
</tr>
<tr>
<td>*D-HWOOS</td>
<td>(PRI feature only) D-channel hardware is out-of-service</td>
</tr>
<tr>
<td>*D-INSERV</td>
<td>(PRI feature only) D-channel is in service</td>
</tr>
<tr>
<td>*D-MANOOS</td>
<td>(PRI feature only) D-channel is manually out-of-service</td>
</tr>
<tr>
<td>D-NETOOS</td>
<td>(PRI feature only) D-channel network is out-of-service</td>
</tr>
<tr>
<td>D-NONEX</td>
<td>(PRI feature only) D-channel is non-existent</td>
</tr>
<tr>
<td>DIP &lt;0 34&gt;</td>
<td>Channel is processing a request from data interface process</td>
</tr>
</tbody>
</table>
## Common Administration

### Command Menu

#### Table 39. Entries for Service Status Column

<table>
<thead>
<tr>
<th>Service Status Entry</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>*FOOS</td>
<td>Channel is facility out-of-service</td>
</tr>
<tr>
<td>Host</td>
<td>Channel is currently accessing a host</td>
</tr>
<tr>
<td>*HWOOS</td>
<td>(PRI feature only) Channel hardware is out-of-service</td>
</tr>
<tr>
<td>*INITING</td>
<td>Channel is on a circuit card being initialized</td>
</tr>
<tr>
<td>*MANOOS</td>
<td>Channel is manually out-of-service</td>
</tr>
<tr>
<td>*NETOOS</td>
<td>(PRI feature only) Channel is in a network that is out-of-service</td>
</tr>
<tr>
<td>Nonex</td>
<td>Channel is non-existent</td>
</tr>
<tr>
<td>Offhook</td>
<td>Channel is in service and has answered a call</td>
</tr>
<tr>
<td>*ON HOOK</td>
<td>Channel is in service and waiting for a call</td>
</tr>
<tr>
<td>Pending</td>
<td>Channel is going into or leaving an operational state</td>
</tr>
<tr>
<td>Talking</td>
<td>Channel is playing speech</td>
</tr>
<tr>
<td>Transfer</td>
<td>Channel is transferring a call</td>
</tr>
<tr>
<td>*UNKNOWN</td>
<td>Channel is experiencing a breakdown in communications or an internal voice system error has occurred</td>
</tr>
</tbody>
</table>
Change the System Monitor Refresh Rate

By default, the system updates the voice channel status every 5 seconds. Use the following procedure to specify the refresh rate:

1. Start at the System Monitor-Voice Channels window (Figure 196 on page 451) and press F8 (Chg-Keys).
   The system displays the alternate function keys.
2. Press F1 (Chg-Rate).
   The system displays the Change Refresh Rate window (Figure 197 on page 456).

3. Enter the refresh rate, in seconds, in the Refresh Rate: field. Valid values are 1–30 seconds. The shorter the refresh rate, the more system resources are used to update the window.

Note: Changing the refresh rate for the System Monitor window also changes the refresh rate for the Host Session Monitor window and vice versa.
Press F3 (Save).

The system closes the Change Refresh Rate window and saves the new rate. The new refresh rate is automatically activated in the system.

Use the following procedure to print a System Monitor-Voice Channel report:

1. Start at the System Monitor-Voice Channels window (Figure 196 on page 451) and press F8 (Chg-Keys).

   The system displays the alternate function keys.

2. Press F6 (Print).

   The system prints the System Monitor-Voice Channel Report.

Trace Service

A trace is a record of the events that have occurred on a voice channel, the voice system, or a host system.

See trace on page 874 in Appendix A, Summary of Commands, for more information on the trace command-line format.
Perform a Trace

Use the following procedure to trace a channel or session or both:

1. Start at the Command Menu (Figure 195 on page 450) and select:

   ![Trace Service Window](image)

   The system displays the Trace Service window (Figure 198 on page 458).

Figure 198. Trace Service Window

2. Enter a single channel or session number, or all in the Channel or Session: field.

3. Press F3 (Save).

   The system displays the Trace Output window (Figure 199 on page 459).
4 Select one of the following options while in the Trace Output window:

- Press F1 (Pause) to stop the information from scrolling.
- Press F2 (Prev Page) and F3 (Next Page) to maneuver within the display.
- Press F1 (Resume) to continue scrolling through the trace output.
- Press DELETE to stop the trace.
- Press F2 (Print) from the Trace Service window.

The last 250 lines of output will be printed.

**Note:** Space in the root partition may become full from the trace service, so you should occasionally remove old files from the /vs/trans/hostdata directory.
The Reports Administration window gives you access to the following system reports:

- Call Classification Report on page 462
- Call Data Detail Report on page 469
- Call Data Summary Report on page 477
- Form Filler Plus Reports on page 484
- Out of Call Fax Report on page 491
- Message Log Report on page 500
- Administrative Commands Log Report on page 510
- Traffic Report on page 518
- Signal Processing Activity Report on page 524
- Custom Database Reports on page 526

The system allows you to tailor each report to meet your needs and requirements.
Access Reports Administration Menu

Use the following procedure to access the Reports Administration menu:

1. At the Console Login prompt, enter root
   The system prompts you for a password.
2. Enter your root password.
   The system displays the system prompt #.
3. Enter cvis_menu
   The system displays the Voice System Administration menu (Figure 42 on page 59).
4. Select:

   > Reports

   The system displays the Reports menu (Figure 200 on page 462).
Use the procedures in this section to access and run the various reports in this menu.

**Call Classification Report**

The Call Classification Report provides the following information for each extension or number dialed:
- The total number of calls
- The total number of failed calls
- The number of blind or intelligent transfer attempts that:
  - Were answered
  - Were busy
  - Rang with no answer
  - Experienced network problems
- Summary statistics
Use the following procedure to display the Call Classification Report:

1. Start at the Reports menu (Figure 200 on page 462) and select:

> Call Classification Report

The system displays the Call Classification Report window (Figure 201 on page 463).

**Figure 201. Call Classification Report Window**

![Call Classification Report Window]

**Table 40 on page 464** defines the columns in this window.
Table 40. Column Description for Call Classification Report

<table>
<thead>
<tr>
<th>Column Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dialed Number</td>
<td>Specifies the telephone number from the transfer attempt. Telephone numbers have a 16-digit maximum, however only 12 digits are displayed in the report. Longer numbers are truncated and displayed with an asterisk (*).</td>
</tr>
<tr>
<td>Total</td>
<td>Specifies the total transfer attempts to connect to the Dialed Number. This number is the sum of Failed, Unclass, and Class attempts.</td>
</tr>
<tr>
<td>Failed</td>
<td>Specifies the number of transfer attempts that failed because no dial tone or no energy was detected. This number corresponds to call dispositions equal to 1, 2, 3, 4, E, or p.</td>
</tr>
<tr>
<td>Unclass</td>
<td>Specifies the number of blind transfer attempts. This number corresponds to call dispositions equal to X.</td>
</tr>
<tr>
<td>Class</td>
<td>Specifies the number of intelligent transfer attempts. These are either Full CCA or Intelligent attempts. This number corresponds to call dispositions not equal to 1, 2, 3, 4, E, p, or X.</td>
</tr>
<tr>
<td>Answer</td>
<td>Specifies the number of transfer attempts that were answered. This number corresponds to call dispositions equal to A.</td>
</tr>
</tbody>
</table>
Modify the Call Classification Report

You can specify the beginning and ending dates for the Call Classification Report.

Use the following procedure to modify the Call Classification Report:

1. Start at the Call Classification Report window (Figure 201 on page 463) and press F8 (Actions).

   The system displays the Actions Menu (Figure 202 on page 466).

<table>
<thead>
<tr>
<th>Column Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Busy</td>
<td>Specifies the number of transfer attempts that were busy. This number corresponds to call dispositions equal to ( B ).</td>
</tr>
<tr>
<td>Ring</td>
<td>Specifies the number of transfer attempts that rang with no answer. This number corresponds to call dispositions equal to ( N ).</td>
</tr>
<tr>
<td>Other</td>
<td>Specifies the number of times the network is busy and cannot complete a call (fast busy). This number corresponds to call dispositions F, H, T, or a recognized SIT.</td>
</tr>
<tr>
<td>Total</td>
<td>Specifies the sums of each column.</td>
</tr>
<tr>
<td>Percent</td>
<td>Specifies the percentage of the Total.</td>
</tr>
</tbody>
</table>

Table 40. Column Description for Call Classification Report
Figure 202. Actions Menu

2 Select:

Modify

The system displays the Modify Call Classification Report window (Figure 203 on page 466).

Figure 203. Modify Call Classification Report Window

Modify Call Classification Report

Start Date: 04/13/99
End Date: 04/13/99
3 Enter the beginning and ending dates for the report in the Start Date: and End Date: fields using the format of mm/dd/yyyy for month, day, and year to limit the report to a certain date range. If you do not specify the year, the report uses the current year.

A start date of 04/01/1999 and an end date of 04/30/1999 means that the voice system displays call classification information on calls made in the month of April 1999. You can specify a range of up to 365 days, including the current date. If you specify only the start date or the end date, you receive a report for that day only. The end date must be greater than or equal to the start date. Future start dates and end dates are invalid.

4 Press F3 (Save).

The system displays the previous Call Classification Report window.

5 (Optional) Press F8 (Actions).

The system displays the Actions Menu (Figure 202 on page 466).

6 (Optional) Select:

> Update

The system redisplay the Call Classification Report reflecting the new dates.
Print the Call Classification Report

The print option provides a complete printout of the Call Classification report.

**Note:** This report will not print if a printer has not been configured for use with the voice system. See [Printer Administration on page 427](#) in Chapter 7, Peripheral Administration, for more information about printer administration.

Use the following procedure to print the Call Classification Report:

1. Start at the Call Classification Report window ([Figure 201 on page 463](#)) and press F8 (Actions).
   
   The system displays the Actions Menu ([Figure 202 on page 466](#)).

2. Select:

   > Print

   The system prints the Call Classification Report using the last set of options saved to the voice system.
Update the Call Classification Report

Use the Update function to redisplay the report. The report reflects the values last saved to the voice system.

Use the following procedure to update the Call Classification Report:

1. Start at the Call Classification Report window (Figure 201 on page 463) and press F8 (Actions).
   The system displays the Actions Menu (Figure 202 on page 466).

2. Select:

   > Update

   The system updates the report and displays the values last saved.

Call Data Detail Report

The Call Data Detail Report keeps data on the following voice system call date, time, and duration of the call:

- Service run on the call
- Channel receiving the call
- Assigned database record number
Use the following procedure to display the Call Data Detail Report:

1. Start at the Reports menu (Figure 200 on page 462) and select:

   > Call Data Detail Report

   The system displays the Call Data Detail Report window (Figure 204 on page 470).

**Figure 204. Call Data Detail Report Window**

<table>
<thead>
<tr>
<th>Record</th>
<th>Channel</th>
<th>Start</th>
<th>Duration</th>
<th>Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>16</td>
<td>02:04:32pm(04/13/99)</td>
<td>23</td>
<td>agent</td>
</tr>
<tr>
<td>1</td>
<td>82</td>
<td>02:03:37pm(04/13/99)</td>
<td>90</td>
<td>SVC_Prou</td>
</tr>
<tr>
<td>3</td>
<td>81</td>
<td>02:03:00pm(04/13/99)</td>
<td>35</td>
<td>SVC_Prou</td>
</tr>
<tr>
<td>5</td>
<td>16</td>
<td>02:02:21pm(04/13/99)</td>
<td>23</td>
<td>agent</td>
</tr>
<tr>
<td>4</td>
<td>80</td>
<td>02:01:26pm(04/13/99)</td>
<td>90</td>
<td>SVC_Prou</td>
</tr>
<tr>
<td>6</td>
<td>79</td>
<td>02:00:01pm(04/13/99)</td>
<td>71</td>
<td>SVC_Prou</td>
</tr>
<tr>
<td>8</td>
<td>16</td>
<td>01:59:23pm(04/13/99)</td>
<td>22</td>
<td>agent</td>
</tr>
</tbody>
</table>

(Intuity™ CONVERSANT® System Version 7.0 Administration 585-313-501)
Table 41 on page 471 defines the columns on this window. If multiple applications are invoked during a call, the report displays a line of summary data for the call, followed by a line of data for each application in the call.

**Table 41. Column Description for Call Data Detail Report**

<table>
<thead>
<tr>
<th>Column Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Record</td>
<td>Specifies the database record number of each call made to the voice system.</td>
</tr>
<tr>
<td>Channel</td>
<td>Specifies the channel on which the call was made.</td>
</tr>
<tr>
<td>Start</td>
<td>Specifies the time and date the call began. If multiple applications were invoked during the call, the first line of the display shows the time and date the call began. Subsequent lines for the call show the time and date that each application began.</td>
</tr>
<tr>
<td>Duration</td>
<td>Specifies the length of the call in seconds. If multiple applications were invoked during the call, the first line of the display for the call shows the total length of all applications in the call. Subsequent lines for the call show the length of each application invoked in the call.</td>
</tr>
<tr>
<td>Service</td>
<td>Specifies the script that was associated with the call. If multiple applications were invoked during the call, the first line of the display for the call (the summary line) is blank. Subsequent lines for the call show the script associated with each application invoked in the call.</td>
</tr>
</tbody>
</table>
You can tailor the Call Data Detail Report to limit the display by changing one or more of the following parameters:

- Number of most recent call records you want to include
- Date of the data to include in the report
- Service associated with the call data

Use the following procedure to modify the Call Data Detail Report:

1. Start at the Call Data Detail Report window (Figure 204 on page 470) and press F8 (Actions).
   The system displays the Actions Menu (Figure 202 on page 466).

2. Select:

   > Modify

   The system displays the Modify Call Data Detail Report window (Figure 205 on page 473).
3 Enter the number, range of numbers, or all in the Number of Call Records: field to specify the number of most recent records to include in the report. The default is all.

4 Enter the date to which you want to limit the report information, or all, in the Date: field. Use the format of mm/dd/yyyy for month, day, and year. If you do not specify a year, the system uses the current year. The default is all, meaning the report displays all dates.

Note: The Number of Call Records: field and the Date: field work independently of each other. That is, if you search for a specific number of records, the Call Data Detail Report displays only the most recent call records up to that limit. From that set of records, it displays those that match the specified date and service.

For example, if the system contains 10 records for yesterday and 10 records for today and you enter 6 in the Number of Call Records: field and enter yesterday’s date in the Date: field, the
Call Data Detail Report displays no records. This is because the last six records were created for the current day, not for yesterday's date.

However, if you enter **all** in the **Number of Call Records:** field and yesterday's date in the **Date:** field, the Call Data Detail Report displays only the records from yesterday.

5 Enter a service name in the **Service:** field to limit the report to a particular service, or **all**, or press **F2** (Choice) to select from the menu. The default is all, meaning the report includes every service recognized by the voice system.

6 Enter **Yes** or **No**, or press **F2** (Choice) to select from a menu, in the **Include Call Data Fields?:** field to specify if call event data should be included in the report. The default is **No**. If call event data does exist for a particular record, the information appears immediately after the record entry on the Call Data Detail Report window (**Figure 204 on page 470**).

7 Press **F3** (Save).
   The system displays the previous Call Data Detail Report window.

8 (Optional) Press **F8** (Actions).
   The system displays the Actions Menu (**Figure 214 on page 504**).
9 (Optional) Select:

> Update

The system redisplay the Call Data Detail Report window with the new parameters.

Print the Call Data Detail Report

The print option provides a complete printout of the Call Data Detail report.

Note: This report will not print if a printer has not been configured for use with the voice system. See Printer Administration on page 427 in Chapter 7, Peripheral Administration, for more information about printer administration.

Use the following procedure to print the Call Data Detail report:

1 Start at the Call Data Detail Report window (Figure 204 on page 470) and press F8 (Actions).

The system displays the Actions Menu (Figure 202 on page 466).
Select:

> Print

The system prints the Call Data Detail Report using the last set of options saved to the voice system.

Update the Call Data Detail Report

Use the Update function to redisplay the report. The report reflects the values last saved to the voice system. See Modify the Call Data Detail Report on page 472.

Use the following procedure to update the Call Data Detail Report:

1. Start at the Call Data Detail Report window (Figure 204 on page 470) and press F8 (Actions).
   The system displays the Actions Menu (Figure 202 on page 466).

2. Select:

> Update

The system updates the report and displays the values last saved.
The Call Data Summary Report provides an hourly summary of the calls made to the voice system. This report is similar to the Call Data Detail Report, except that the Call Data Summary Report shows the calls on an hourly basis by service. The system maintains approximately 7 days worth of data.

**Note:** Call data summary information is prepared at midnight for the entire day. Therefore, call data summary information for the current day is not available until after midnight.

**Display the Call Data Summary Report**

Use the following procedure to display the Call Data Summary Report:

1. Start at the Reports menu ([Figure 200 on page 462](#)) and select:

   > Call Data Summary Report

   The system displays the Call Data Summary Report window ([Figure 206 on page 478](#)).
Table 42 describes the columns on this window.

Table 42. Column Description for Call Data Summary Report

<table>
<thead>
<tr>
<th>Column Name</th>
<th>Description</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Period</td>
<td>Time, in hourly increments, when calls were made to the voice system.</td>
<td></td>
</tr>
<tr>
<td>Service</td>
<td>Script associated with a group of calls made during the specified time.</td>
<td></td>
</tr>
<tr>
<td>Column Name</td>
<td>Description</td>
<td>Comment</td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Average Hold Time</td>
<td>Average duration of a call for the specified time in minutes and seconds.</td>
<td></td>
</tr>
<tr>
<td>Calls</td>
<td>Total number of calls for the specified time.</td>
<td></td>
</tr>
<tr>
<td>Event Description</td>
<td>Name of the call data field.</td>
<td>Appears only when the Include Call Data Fields? field is set to Yes. See Modify the Call Data Summary Report on page 480.</td>
</tr>
<tr>
<td>Event No</td>
<td>Identifying number for each call data message.</td>
<td>Appears only when the Include Call Data Fields? field is set to Yes. See Modify the Call Data Summary Report on page 480.</td>
</tr>
<tr>
<td>Count</td>
<td>Either the total value of all calls for this event during the period if the event is a numeric field or the total number of all calls during the period if the event is a non-numeric field.</td>
<td>Appears only when the Include Call Data Fields? field is set to Yes. See Modify the Call Data Summary Report on page 480.</td>
</tr>
</tbody>
</table>
Modify the Call Data Summary Report

You can tailor the Call Data Summary Report to limit the display by changing one or more of the following parameters:

- Day of the week and hours to perform data collection
- Service to include
- Whether to show call data fields

Use the following procedure to modify the Call Data Summary Report:

1. Start at the Call Data Detail Report window (Figure 204 on page 470) and press F8 (Actions).
   The system displays the Actions Menu (Figure 202 on page 466).

2. Select:

   > Modify

   The system displays the Options for Call Data Summary Report window (Figure 207 on page 481).
3 Enter the day of the week, **Monday** through **Sunday**, for which you want to obtain report information in the **Day** field, or press **F2 (Choices)** to select from a menu.

4 Enter the hours for which you want report information, or **all**, in the **Hours** field. A valid range between 0–23 can be specified in this field, with 0 representing midnight and 23 representing 11 p.m.

If you enter a range between 9 and 16, the system displays call data for calls made between 9 a.m. and 5 p.m. The default is **all**; the system displays call data for the entire 24 hour period for the day.

**Note:** Hourly Call Data Summary Reports are not processed until midnight of each day. If you made a request for information on Tuesday, you would not see the information displayed until the following day, Wednesday.

5 Enter a service name, or **all**, or press **F2 (Choices)** to select from a menu in the **Service** field to limit the report to a particular service. The default is **all** to have the report displays call data for all services.
6 Enter **Yes** or **No**, or press **F2** (Choices) to select from a menu in the Include Call Data Fields?: field to specify if event data should be included on the report. The default is **No**. If call event data exists for a particular record, this information appears immediately after the record entry on the Call Data Summary Report window.

7 Press **F3** (Save).
   
The system displays the previous Call Data Summary Report window.

8 (Optional) Press **F8** (Actions).
   
The system displays the Actions Menu (Figure 214 on page 504).

9 (Optional) Select:

   > Update

   The system redisplay the Call Data Summary Report window with the new parameters.
Print the Call Data Summary Report

The print option provides a complete printout of the Call Data Summary report.

Note: This report will not print if a printer has not been configured for use with the voice system. See Printer Administration on page 427 in Chapter 7, Peripheral Administration, for more information about printer administration.

Use the following procedure to print the Call Data Summary Report:

1. Start at the Call Data Summary Report window (Figure 206 on page 478) and press F8 (Actions).

   The system displays the Actions Menu (Figure 202 on page 466).

2. Select:

   > Print

   The system prints the Call Data Summary Report using the last set of options saved to the voice system.
8 Common Administration

Update the Call Data Summary Report

Use the Update function to redisplay the report. The report reflects the values last saved to the voice system. See Modify the Call Data Summary Report on page 480.

Use the following procedure to update the Call Data Summary Report:

1 Start at the Call Data Summary Report window (Figure 204 on page 470) and press F8 (Actions).
   The system displays the Actions Menu (Figure 202 on page 466).

2 Select:

   > Update

   The system updates the report and displays the values last saved.

Form Filler Plus Reports

The two Form Filler Plus Reports store call records for the Form Filler database. The Call Record Summary Report and the Last Audit Report represent two looks at the information in the database.
Access Form Filler Plus Reports

Use the following procedure to access the Form Filler Plus Reports menu:

1. Start at the Reports menu (Figure 200 on page 462) and select:

   > Form Filler Plus Reports

   The system displays the Form Filler Plus Reports menu (Figure 208 on page 485).

Figure 208. Form Filler Reports Menu

   Form Filler Reports
   > Call Record Summary Report
   Last Audit Report

Call Record Summary Report

The Call Record Summary Report provides summary statistics on the call records in the Form Filler database, such as the:

- ID of the script used to store call records in Form Filler database
- Number of call records ready for review or transcription
- Oldest and newest call records in the database
• Amount of disk space used to store recorded speech (all recorded speech, not just Form Filler speech), including the:
  ~ Name of the disk partition
  ~ Number of disk blocks associated with that disk partition
  ~ Number of disk blocks that are free
  ~ Percentage of free disk space in the partition

Display Call Record Summary Report

Use the following procedure to display the Call Record Summary Report:

1. Start at the Form Filler Plus Reports menu (Figure 208 on page 485) and select:

> Call Record Summary Report

The system displays the Form Filler Call Record Summary Report window (Figure 209 on page 487).
### Figure 209. Form Filler Call Record Summary Report Window

<table>
<thead>
<tr>
<th>Script ID</th>
<th>Records to Transcribe</th>
<th>Records to Review</th>
<th>Oldest Record</th>
<th>Newest Record</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>51</td>
<td>0</td>
<td>Oct 21 12:22 T</td>
<td>Nov 12 15:08 T</td>
</tr>
</tbody>
</table>

**Total:** 51

**Speech Space Statistics**

<table>
<thead>
<tr>
<th>Partition Name</th>
<th>Total Blocks</th>
<th>Free Blocks</th>
<th>Percent Free</th>
</tr>
</thead>
<tbody>
<tr>
<td>/home2/ufs/talkfiles</td>
<td>2487</td>
<td>1366</td>
<td>55%</td>
</tr>
</tbody>
</table>

**Note:** Figure 209 on page 487 is actually three pages in length. It is presented here on one page for clarity.
Table 43 describes the columns on the Form Filler Call Summary Report.

**Table 43. Column Description for Form Filler Call Summary Report**

<table>
<thead>
<tr>
<th>Column</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Script ID</td>
<td>ID of script that stores call records to Form Filler database.</td>
</tr>
<tr>
<td>Records to Transcribe</td>
<td>Number of call records to transcribe.</td>
</tr>
<tr>
<td>Records to Review</td>
<td>Number of call records to review.</td>
</tr>
<tr>
<td>Oldest Record</td>
<td>Date of the oldest call record.</td>
</tr>
<tr>
<td>Newest Record</td>
<td>Date of the most recent call record.</td>
</tr>
<tr>
<td>Partition Name</td>
<td>Name of disk partition where recorded speech is stored.</td>
</tr>
<tr>
<td>Total Blocks</td>
<td>Amount of disk space used for recorded speech.</td>
</tr>
<tr>
<td>Free Blocks</td>
<td>Number of free blocks free of disk storage.</td>
</tr>
<tr>
<td>Percentage Free</td>
<td>Amount of free disk space as a percentage of disk partition.</td>
</tr>
</tbody>
</table>
8 Common Administration

Print the Call Record Summary Report

Note: This report will not print if a printer has not been configured for use with the voice system. See Printer Administration on page 427 in Chapter 7, Peripheral Administration, for more information about printer administration.

Use the following procedure to print the Call Record Summary Report:

1 Start at the Call Record Summary Report window (Figure 209 on page 487) and press F8 (Chg-Keys).
   The system displays the alternate function keys.

2 Press F6 (Print).
   The system prints the report.

Last Audit Report

The Last Audit Report checks for inconsistency between Form Filler talkfiles and the Form Filler database. When it finds an inconsistency, it performs the following actions:

- Removes speech phrases from the transcription talkfile that do not exist in Form Filler database
- Deletes phrases from the database that are not in the talkfile
- Deletes the entire call record from the Form Filler database if none of its speech phrases exist in the talkfile
- Rebuilds the database index when corrupted

The Last Audit Report runs automatically when the voice system is started, however it can be manually run at any time.
Display Last Audit Report

Use the following procedure to display the Last Audit Report:

1. Start at the Form Filler Plus Reports menu (Figure 208 on page 485) and select:

   \[
   > \text{Last Audit Report}
   \]

   The system displays the Last Audit Report window (Figure 210 on page 490).

Figure 210. Form Filler Last Audit Report Window

Form Filler Last Audit Report

Form Filler Audit for Nov 11 17:22:18 1996

Remove Errors option (-r) used.
Rebuilding data base index files ...
... Done.
No errors found.
Print Last Audit Report

**Note:** This report will not print if a printer has not been configured for use with the voice system. See [Printer Administration on page 427](#) in Chapter 7, Peripheral Administration, for more information about printer administration.

Use the following procedure to print the Last Audit Report:

1. Start at the Last Audit Report window ([Figure 209 on page 487](#)) and press **F8** (Chg-Keys).
   
   The system displays the alternate function keys.

2. Press **F6** (Print).
   
   The system prints the report.

Out of Call Fax Report

The Out of Call Fax Report lists the transmission status of out-of-call faxes. It provides information that identifies each fax, including the date, time, job ID and destination number. It also indicates whether transmission was successful and the number of pages transmitted. If transmission was unsuccessful, the report provides a reason for failure.
The report displays information from the out-of-call fax log, which contains records for the most recent 14 days that faxes were transmitted. Faxes older than 14 days may be displayed if no faxes were transmitted on some days.

Note: The Out of Call Fax Report does not list incoming faxes or faxes sent when the delivery number is specified as CURRENT for a FAX_Send action. See "FAX_Send" in Chapter 8, "Using Optional Features," in Intuity CONVERSANT System Version 7.0 Application Development with Script Builder, 585-313-206, for more information on CURRENT and out of call faxes. The report also does not include active fax jobs. Use the faxstat command for information on activity queued jobs. See Chapter 8, Common Administration, for information about the faxstat command.

Display the Out of Call Fax Report

Use the following procedure to display the Out of Call Fax Report:

1. Start at the Reports menu (Figure 200 on page 462) and select:

   ```plaintext
   >Fax Report
   ```

   The system displays the Out of Call Fax Report window (Figure 211 on page 493).
Figure 211. Out of Call Fax Report Window

Table 44 on page 493 defines the information on the Out of Call Fax Report window.

Table 44. Column Description for Out of Call Fax Report

<table>
<thead>
<tr>
<th>Column</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td>Date the fax job completed.</td>
</tr>
</tbody>
</table>
### Table 44. Column Description for Out of Call Fax Report

<table>
<thead>
<tr>
<th>Column</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td>Time the fax job completed.</td>
</tr>
<tr>
<td>JobID</td>
<td>A string identifying the fax job. The numeric portion of the JobID (the part after the dash) is the Return Field: value associated with the fax transmission for non-CURRENT deliveries in the definition for the FAX_Send action. See &quot;FAX_Send&quot; in Chapter 8, &quot;Using Optional Features&quot;, in <em>Intuity CONVERSANT System Version 7.0 Application Development with Script Builder</em>, 585-313-206, for more information. For non-CURRENT fax deliveries,</td>
</tr>
<tr>
<td>Status</td>
<td>Status of the fax transmission:</td>
</tr>
<tr>
<td></td>
<td>• Failed</td>
</tr>
<tr>
<td></td>
<td>• Sent</td>
</tr>
</tbody>
</table>
Table 44. Column Description for Out of Call Fax Report

<table>
<thead>
<tr>
<th>Column</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cause</td>
<td>OK if transmission was successful.</td>
</tr>
<tr>
<td></td>
<td>One of the following failure types if transmission failed:</td>
</tr>
<tr>
<td></td>
<td>~ NoProtocol (no protocol)</td>
</tr>
<tr>
<td></td>
<td>~ Remote-DCN (remote disconnect)</td>
</tr>
<tr>
<td></td>
<td>~ DI-Error (internal error)</td>
</tr>
<tr>
<td></td>
<td>~ Loopback</td>
</tr>
<tr>
<td></td>
<td>~ FTT (failure to train)</td>
</tr>
<tr>
<td></td>
<td>~ ProtoTmout (protocol timeout)</td>
</tr>
<tr>
<td></td>
<td>~ Halted</td>
</tr>
<tr>
<td></td>
<td>~ ProtoError (protocol error)</td>
</tr>
<tr>
<td></td>
<td>~ RTN (retrain negative)</td>
</tr>
</tbody>
</table>

See "Repairing Script Builder FAX Actions Troubles" in *Intuity CONVERSANT System Version 7.0 System Reference*, 585-313-205, for troubleshooting information on these failure types.

| Pgs    | The number of pages transmitted. |
You can modify the Out of Call fax report parameters to specify the time period for which fax information is displayed.

Use this following procedure to modify the Out of Call Fax Report:

1. Start at the Fax Report window (Figure 211 on page 493) and press F8 (Actions).
   - The system displays the Actions Menu (Figure 202 on page 466).
2. Select:
   - >Modify

   The system displays the Modify Fax Report window (Figure 212 on page 497).
3 To display information about:

- A single fax, enter the numerical portion (the characters after the dash) of the Fax Job ID in the Fax Job ID: field, and leave the other fields blank.

- All fax transmissions during a specified time period, enter all in the Fax Job ID: field and enter the beginning and ending dates for the report in the Start Date: and End Date: fields. Use the format of "mm/dd/yy" for month, day, and year. If you leave the End Date: field blank, the system uses today’s date. If you leave the Start Date: field blank, the system uses the oldest date for which there is data in the fax log.

4 Press F3 (Save).

5 Update the Out of Call Fax Report to display the new information. See Update the Fax Report on page 499.
6 (Optional) Press F8 (Actions).

The system displays the Actions Menu (Figure 202 on page 466).

7 (Optional) Select:

> Update

The system redisplay the Out of Call Fax Report window with the new parameters.

**Print the Out of Call Fax Report**

The print option provides a complete printout of the Out of Call Fax Report.

**Note:** This report will not print unless the printer has been configured for use with the voice system. See Printer Administration on page 427 in Chapter 7, Peripheral Administration, for more information about printer administration.

Use the following procedure to print the Out of Call Fax Report:

1 Start at the Out of Call Fax Report window (Figure 211 on page 493) and press F8 (Actions).

The system displays the Actions Menu (Figure 202 on page 466).
2 Select:

>Print

The system prints the Out of Call Fax Report using the last set of options saved to the voice system.

Update the Fax Report

Use the Update function to redisplay the report to reflect the values last saved to the voice system. See Modify the Out of Call Fax Report on page 496.

Use the following procedure to update the Out of Call Fax Report:

1 Start at the Out of Call Fax Report window (Figure 211 on page 493) and press F8 (Actions).

   The system displays the Actions Menu (Figure 202 on page 466).

2 Select:

>Update

The system updates the report and displays the values last saved.
Message Log Report

The Message Log Report allows you to access voice system error messages including the:

- Priority level of the error
- Date and time the error occurred
- Source of the message
- Type of circuit card associated with the message, as well as the circuit card number and channel number
- Descriptive text

Display the Message Log Report

Use the following procedure to display the Message Log Report:

1. Start at the Reports menu (Figure 200 on page 462) and select:

   > Message Log Report

   The system displays the Message Log Report window (Figure 213 on page 501).
Figure 213. Message Log Report Window

Use **F2** (Prev Page) and **F3** (Next Page) to scroll through the report.

*Table 45 on page 502* defines the information on the Message Log Report window.
Table 45. Entry Description for Message Log Report

<table>
<thead>
<tr>
<th>Entry</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pr</td>
<td>Priority classification of error messages. The priority is identified by one of the following codes:</td>
</tr>
<tr>
<td></td>
<td>• *C (critical) — indicates the problem is interrupting service; immediate action is needed.</td>
</tr>
<tr>
<td></td>
<td>• ** (major) — indicates a potentially serious problem and should be fixed soon.</td>
</tr>
<tr>
<td></td>
<td>• * (minor) — indicates no immediate action is necessary, but the system condition should be monitored.</td>
</tr>
<tr>
<td></td>
<td>• – (none) — no error; informational purposes only.</td>
</tr>
<tr>
<td>Time</td>
<td>Date and time when error message was generated.</td>
</tr>
</tbody>
</table>
Source

Originating software process; messages are divided into subgroups according to the software process that outputs them. Possible sources include:

- The call data handler (CDH) process accumulates generic call statistics and application messages.
- The data interface process (DIP).
- The maintenance (MTC) process runs temporary diagnostics.
- The Tip/Ring interface process (TRIP).
- The transaction state machine (TSM) process controls transactions via script execution and commands.
- The voice response output process (VROP) manages speech data base and downloads speech data to VRU.
- The DIO processes are the disk input/output for VROP.
- The T1 interface process (TWIP).
- The speech processing interface process (SPIP).
- The integrity checking (iCk) process.

<table>
<thead>
<tr>
<th>Entry</th>
<th>Description</th>
</tr>
</thead>
</table>
| Source | Originating software process; messages are divided into subgroups according to the software process that outputs them. Possible sources include:  
- The call data handler (CDH) process accumulates generic call statistics and application messages.
- The data interface process (DIP).
- The maintenance (MTC) process runs temporary diagnostics.
- The Tip/Ring interface process (TRIP).
- The transaction state machine (TSM) process controls transactions via script execution and commands.
- The voice response output process (VROP) manages speech data base and downloads speech data to VRU.
- The DIO processes are the disk input/output for VROP.
- The T1 interface process (TWIP).
- The speech processing interface process (SPIP).
- The integrity checking (iCk) process. |
The Explain option on the Actions Menu allows you to display more information about a specific message.

Use the following procedure to get additional information about a particular message in the Message Log Report window:

1. Start at the Message Log Report window (Figure 213 on page 501) and press **F8** (Actions).
   
   The system displays the Actions Menu (Figure 214 on page 504).

2. Press **F3** (Explain).
   
   The system displays the Explain Message ID window (Figure 215 on page 505).
Enter the ID of the message you want to have more information about in the Message ID: field.

Press F3 (Save).
The system displays additional information about the specified message.

You can tailor the Message Log Report to limit the display by changing one or more of the following parameters:

- Message priority
- Message source
- Circuit card
- Start and stop time for the report
- Message ID
- Number of most recent messages to be displayed

By default, the Message Log Report is configured to display every message.
Use the following procedure to limit what is displayed in the Message Log Report window:

1. Start at the Message Log Report window (Figure 213 on page 501) and press F8 (Actions).
   The system displays the Actions Menu (Figure 214 on page 504).

2. Select:

   > Modify

   The system displays the Modify Message Log Report window (Figure 216 on page 506).

**Figure 216. Modify Message Log Report Window**
3 Enter *C (critical), ** (major), * (minor), alarms, all, or events in the Priority: field to limit the type of messages you want to see based on priority. Or, you may press F2 (Choices) to select from a menu. The default is all.

4 Enter a single message source or multiple message sources separated by commas (for example, TSM,MTC) in the Source: field to limit the report to specific software processes, or press F2 (Choices) to select from a menu. The default is all; all message sources are included.

5 Enter a single circuit card number or multiple circuit card numbers separated by commas in the Card: field to limit the display to specific circuit cards. There is no default value and the Choices menu is not available. If you specify all in the Card: field, the display is limited to messages about voice system circuit cards only.

6 Enter the start time for the message search in the Start Time: field, that is, the time of the first message to be displayed. For example, entering 02/05 10:00 indicates that you want to search messages that occurred on February 5 after 10 a.m.

Use the format MM/DD HH:MM for month, day, hour, and minute. If left blank, the beginning of the message log is used. If you enter today, all entries since the beginning of the current day are searched.
7 Enter the stop time for the message search in the Stop Time: field, that is, the time of the last message to be displayed.

Use the format MM/DD HH:MM for month, day, hour, and minute. If the Stop Time: field is left blank, the end of the message log is used. If you enter today, all messages logged up to (but not including) the current day are displayed.

**Note:** If nothing is entered in the Start Time: and Stop Time: fields, these fields default to 00:00 of the current date. As a result, no records are displayed in the Message Log Report.

8 Enter the ID of the messages to be displayed in the Message ID: field. Enter a single ID, multiple IDs separated by commas (for example, TSM001,TWIP003), or all.

9 Enter a single number from 1 to 999, or all in the Number of Messages to be Displayed: field to specify the number of most recent messages to be displayed. If you enter all, the report displays all messages maintained by the log. If you enter 5, the voice system searches all records and displays only the five most recent records that match the specified start and stop time, priority, circuit card, and source.

10 Press F3 (Save).

The system displays the previously displayed Message Log report.

Use F2 (Prev Page) and F3 (Next Page) to scroll through the report.
(Optional) Press F8 (Actions).
The system displays the Actions Menu (Figure 214 on page 504).

(Optional) Select:

> Update

The system updates the report and displays the values last saved.

Print the Message Log Report

The print option provides a complete printout of the Message Log Report.

Note:  This report will not print if a printer has not been configured for use with the voice system. See Printer Administration on page 427 in Chapter 7, Peripheral Administration, for more information about printer administration.

Use the following procedure to print the Message Log Report:

1  Start at the Message Log Report window (Figure 213 on page 501) and press F8 (Actions).
The system displays the Actions Menu (Figure 214 on page 504).

2  Select:

> Print

The system prints the Message Log Report using the last set of options saved to the voice system.
Update the Message Log Report

Use the Update function to redisplay the report. The report reflects the values last saved to the voice system. See Modify the Message Log Report on page 505.

Use the following procedure to update the Message Log Report:

1. Start at the Message Log Report window (Figure 213 on page 501) and press F8 (Actions).

   The system displays the Actions Menu (Figure 214 on page 504).

2. Select:

   > Update

   The system updates the report and displays the values last saved.

Administrative Commands Log Report

The Administrative Commands Log report provides the ability to log the use of critical administrative commands and activities such as voice system stops and starts. The Administrative Commands Log report identifies when the command was successfully executed and whether it was done manually or by the voice system.
8 Common Administration

The following administrative commands/activities are monitored for inclusion in this report:

- Analog and Digital switch interface changes
- Enable/disable Adjunct/Switch Application Interface (ASAI)
- Script Builder commands: `hnewscript`, `verify`, `install`
- Voice equipment commands: `spfunc`, `t1prot`, `eqprot`, `hconfig`
- Host interface commands: `assign`, `hassign`
- System control commands: `start_vs`, `stop_vs`, `disable`, `autoreboot`, `delete`, `remove`, `restore`, `hdelete`, `trace`, `erase`, `diagnose`, `vs_enable`
- Talkfile (speech files) commands: `add phrase`, `copy phrase`

The command/activity results in either one or two entries to the Administrative Commands Log:

- Start message entries — indicate the execution of the administrative command/activity
- End message entries — indicate the result of the command/activity if the information would be critical for troubleshooting purposes

**Note:** Some commands/activities log only a Start message entry.
Display the Administrative Commands Log report through the Message Log Report.

Use the following procedure to display the Administrative Commands Log Report:

1. Start at the Reports menu (Figure 200 on page 462) and select:

   > Message Log Report

   The system displays the Message Log Report window (Figure 213 on page 501).

2. Press F8 (Actions).
   The system displays the Actions Menu (Figure 214 on page 504).

3. Select:

   > Modify

   The system displays the Modify Message Log Report window (Figure 217 on page 513).
4 Enter **admin** in the **Priority:** field.

5 Enter a software process source in the **Source:** field, or enter **all** to include all software process sources.

6 Leave the **Card:** field blank.

7 Enter the start time for the message search in the **Start Time:** field, that is, the time of the first entry to be displayed. For example, entering **02/05 10:00** indicates that you want to search entries that occurred on February 5 after 10 a.m.

Use the format **MM/DD HH:MM** for month, day, hour, and minute. If left blank, the beginning of the administrative command log is used.
8 Enter the stop time for the message search in the Stop Time: field, that is, the time of the last message to be displayed.

Use the format MM/DD HH:MM for month, day, hour, and minute. If the Stop Time: field is left blank, the end of the administrative command log is used.

Note: If nothing is entered in the Start Time: and Stop Time: fields, the entire administrative command log is displayed.

9 Leave the Message ID: field blank.

10 Enter a single number from 1 to 999, or all in the Number of Messages to be Displayed: field to specify the number of most recent entries to be displayed. If you enter all, the report displays all entries maintained by the log. If you enter 5, the voice system searches all records and displays only the five most recent entries that match the specified start and stop time, and source.

11 Press F3 (Save).

The system displays the Message Log Report window, now with the Administrative Commands Log Report data (Figure 218 on page 515).
Figure 218. Administrative Commands Log Report Window (Displayed under Message Log Report Window)

<table>
<thead>
<tr>
<th>Time</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thu Apr 3 15:29:14 1997</td>
<td>LOGDAEMON</td>
</tr>
<tr>
<td>LOG001</td>
<td>START OF LOGFILE</td>
</tr>
<tr>
<td></td>
<td>'/usr/spool/log/data/admin093.15.29' openLog</td>
</tr>
<tr>
<td>Thu Apr 3 15:29:14 1997</td>
<td>LOGDAEMON</td>
</tr>
</tbody>
</table>

Use F2 (Prev Page) and F3 (Next Page) to scroll through the report.

The list below describes the entries in the Administrative Commands Log window:

~ Time — Date and time when the command/activity was executed
~ Source — Name of the originating software process that executed the command/activity
~ Login ID — Login ID that executed the command/activity (if applicable). A common login ID to see is root
12 (Optional) Press F8 (Actions).

The system displays the Actions Menu (Figure 214 on page 504).

13 (Optional) Select:

> Update

The system updates the report and displays the values last saved.

The print option provides a complete printout of the Administrative Commands Log Report.

**Note:** This report will not print if a printer has not been configured for use with the voice system. See Printer Administration on page 427 in Chapter 7, Peripheral Administration, for more information about printer administration.
Use the following procedure to print the Administrative Commands Log Report:

1. Start at the Administrative Commands Log Report window (Figure 218 on page 515) displayed under the Message Log Report window and press F8 (Actions).

   The system displays the Actions Menu (Figure 214 on page 504).

2. Select:

   > Print

   The system prints the Administrative Commands Log Report using the last set of options saved to the voice system.

Use the Update function to redisplay the report. The report reflects the values last saved to the voice system. See Modify the Message Log Report on page 505.

Use the following procedure to update the Message Log Report:

1. Start at the Administrative Commands Log Report window (Figure 218 on page 515) displayed under the Message Log Report window and press F8 (Actions).

   The system displays the Actions Menu (Figure 214 on page 504).
2 Select:

> Update

The system updates the report and displays the values last saved.

**Traffic Report**

The Traffic Report provides call volume information for approximately the last seven days, including the:

- Number of calls coming in to the system during a specific time period
- Average holding time
- Percentage of time a channel was occupied for a specific hour

**Note:** Traffic summary information is prepared at midnight for the entire day. Therefore, traffic summary information for the current day is not available until after midnight.
Display the Traffic Report

Use the following procedure to display the Traffic Report:

1. Start at the Reports menu (Figure 200 on page 462) and select:

   > Traffic Report

   The system displays the Traffic Report window (Figure 219 on page 519).

Figure 219. Traffic Report Window

<table>
<thead>
<tr>
<th>Channel</th>
<th>Period</th>
<th>Calls</th>
<th>Hold Time</th>
<th>Occ</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>07:00 am - 08:00 pm (04/12)</td>
<td>1</td>
<td>0:23</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>01:00 am - 02:00 am (04/12)</td>
<td>3</td>
<td>0:14</td>
<td>1</td>
</tr>
<tr>
<td>16</td>
<td>07:00 pm - 08:00 pm (04/12)</td>
<td>1</td>
<td>0:22</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 46 describes the information on this window.
Modify the Traffic Report

You change the Traffic Report with the Modify function on the Actions Menu. You can specify the date and time when you want the system to monitor call traffic, and whether you would like the data summarized.

Use the following procedure to modify the Traffic Report:


   The system displays the Actions Menu.

### Table 46. Entry Description for Traffic Report Window

<table>
<thead>
<tr>
<th>Entry</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Channel</td>
<td>Channel that handled the call.</td>
</tr>
<tr>
<td>Period</td>
<td>Time period when system traffic is monitored.</td>
</tr>
<tr>
<td>Calls</td>
<td>Number of calls made during the indicated time period.</td>
</tr>
<tr>
<td>Average Hold Time</td>
<td>Average duration of a call for the specified time in minutes and seconds.</td>
</tr>
<tr>
<td>%Occ</td>
<td>Percentage of occupancy (that is, the proportion of the hour that the channel was in use).</td>
</tr>
</tbody>
</table>
2 Select:

> Modify

The system displays the Modify Traffic Report window (Figure 220 on page 521).

Figure 220. Modify Traffic Report Window

3 Enter a day of the week, Monday through Sunday, or Yesterday in the Day: field, or press F2 (Choices) to make a selection from a menu. The default is Yesterday.

4 Enter the hours for which you want the voice system to obtain report information in the Hours: field using 0 to represent midnight and 23 to represent 11 p.m. The default is all; directs the system to collect traffic data for the entire 24 hour period of the day specified in the Day: field.
5 Enter Yes or No in the Summarize?: field to specify whether or not you want to see a Traffic Summary Report. The default is No; the system displays the Traffic Report instead of the Traffic Summary Report. The two reports are described below:

- The Traffic Summary report provides information on the total traffic volume for each channel for the range of hours specified in the Traffic Report window.

- The Traffic Report provides traffic volume for each channel in one hour increments starting and ending with the hours specified in the Traffic Report window.

6 Press F3 (Save)

   The system displays the previously displayed call traffic report.

7 (Optional) Select:

   > Update

   The system updates the report and displays the values last saved.
Print the Traffic Report

The print option provides a complete printout of the Traffic Report.

**Note:** This report will not print if a printer has not been configured for use with the voice system. See [Printer Administration on page 427](#) in [Chapter 7, Peripheral Administration](#), for more information about printer administration.

Use the following procedure to print the Traffic Report:

1. Start at the Traffic Report window ([Figure 219 on page 519](#)) and press **F8** (Actions).
   - The system displays the Actions Menu ([Figure 202 on page 466](#)).
2. Select:
   - **Print**

   The system prints the Traffic Report using the last set of options saved to the voice system.
Update the Traffic Report

Use the Update function to redisplay the report. The report reflects the values last saved to the voice system. See Modify the Traffic Report on page 520.

Use the following procedure to update the Traffic Report:

1 Start at the Traffic Report window (Figure 219 on page 519) and press F8 (Actions).

The system displays the Actions Menu (Figure 202 on page 466).

2 Select:

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; Update</td>
</tr>
</tbody>
</table>

The system updates the report and displays the values last saved.

Signal Processing Activity Report

The Signal Processing Activity report display information about the voice system signal processing resources. These resources include:

- Signal processing algorithms
- Speech and signal processing (SSP) circuit cards
- Feature licensing
The data in the Signal Processing Activity report is collected by the `spadc` command. The `spar` command then summarizes and displays the data in an ASCII file.

Data Collection for Signal Processing Activity Report

The `spadc` command collects data for the day of the week on which the command is executed, and outputs the data to an ASCII file named `mm-dd-yyyy` (for example, 09-12-1999).

The `mm-dd-yyyy` file contains one line of data for each 5-minute period during which the voice system is running. Each line consists of 10 fields:

- Field 1 — Date and time using the format mm/dd/yyyy:HH:MM.
- Field 2 — Feature licensing usage information. This field contains 10 entries representing average and peak values for the Text-to-Speech, Dial Pulse Recognition, and WholeWord Speech Recognition feature package use of the signal processing resources.
- Fields 3–8 — One field for each of the SSP circuit cards in the system. Each field contains entries representing average and peak values for circuit card occupancy, followed by average and peak values for use by each of the following processes/features:
  - WholeWord Speech Recognition
  - FlexWord Speech Recognition
  - Echo cancellation
  - Call Classification Analysis
Common Administration

- Text-to-Speech
- Dial Pulse Recognition
- Play
- Code
- CELP

See spadc on page 837 and spar on page 839 in Appendix A, Summary of Commands, for more information about creating a Signal Processing Activity report.

Custom Database Reports

To write a cron job that generates your own ORACLE database reports, include the following ORACLE environment variables in the shell application:

```
# beginning of ORACLE environment variable definition
ORACLE_SID=A;export ORACLE_SID
ORACLE_HOME=/oracle;export ORACLE_HOME
PATH=$PATH:$ORACLE_HOME/bin;export PATH
ulimit 2113674
# end of ORACLE environment variable definition
```
Common Administrative Procedures

See “Common System Procedures”, in the Intuity CONVERSANT System Version 7.0 System Reference, 585-313-205, for information and procedures to perform the following common administrative tasks:

- Format floppy diskettes and cartridge tapes
- Create system backup
- Restore a system from backup
- Change the system date and/or time
# A Summary of Commands

## Overview

This appendix provides an alphabetical list and brief description of all commands. [Table 47 on page 528](#) shows all the commands.

<table>
<thead>
<tr>
<th>Command</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>3270dip_off</td>
<td>Turns off the 3270 DIP.</td>
</tr>
<tr>
<td>3270dip_on</td>
<td>Turns on the 3270 DIP.</td>
</tr>
<tr>
<td>add</td>
<td>Adds a phrase to a UNIX talkfile.</td>
</tr>
<tr>
<td>addhdr</td>
<td>Adds a voice or code header to a speech file.</td>
</tr>
<tr>
<td>alarm disable</td>
<td>Disables the specified Alarm Contact Set.</td>
</tr>
<tr>
<td>alarm display</td>
<td>Displays all Message IDs associated with a specified Alarm Contact Set.</td>
</tr>
<tr>
<td>alarm enable</td>
<td>Enables the specified Alarm Contact Set for use.</td>
</tr>
</tbody>
</table>
### A Summary of Commands Overview

#### Table 47. Command Synopsis

<table>
<thead>
<tr>
<th>Command</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>alarm help</strong></td>
<td>Provides the user a means of assigning or removing Message IDs to each of 3 Alarm Contact Sets.</td>
</tr>
<tr>
<td><strong>alarm reinit</strong></td>
<td>Causes the alarm process to reinitialize all internal data structures referring to alarms.</td>
</tr>
<tr>
<td><strong>alarm retire</strong></td>
<td>Retires the specified Alarm Contact Set.</td>
</tr>
<tr>
<td><strong>alarm status</strong></td>
<td>Displays the state and status of the specified Alarm Contact Set.</td>
</tr>
<tr>
<td><strong>alarm test</strong></td>
<td>Tests the specified Alarm Contact Set for use.</td>
</tr>
<tr>
<td><strong>annotate</strong></td>
<td>Annotates a TSM trace stream with a message.</td>
</tr>
<tr>
<td><strong>assign card/channel</strong></td>
<td>Assigns a group number to a card or channel.</td>
</tr>
<tr>
<td><strong>assign permissions</strong></td>
<td>Assigns voice system security permissions to the user.</td>
</tr>
<tr>
<td><strong>assign service/startup</strong></td>
<td>Assigns an installed service to DNIS and ANI numbers or directly to a channel.</td>
</tr>
<tr>
<td><strong>attach</strong></td>
<td>Attaches a unit.</td>
</tr>
<tr>
<td><strong>autoreboot</strong></td>
<td>Changes or displays the parameters associated with the autoreboot feature.</td>
</tr>
</tbody>
</table>
### A Summary of Commands

#### Overview

Table 47. Command Synopsis

<table>
<thead>
<tr>
<th>Command</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>backup_appl</code></td>
<td>Backs up an application if enhanced file transfer is installed.</td>
</tr>
<tr>
<td><code>bbs</code></td>
<td>Reports the status of the voice system Bulletin Board.</td>
</tr>
<tr>
<td><code>bk_appl</code></td>
<td>Backs up the speech and/or transaction component of a Script Builder application.</td>
</tr>
<tr>
<td><code>ccarpt</code></td>
<td>Generates a call classification data summary report.</td>
</tr>
<tr>
<td><code>cddrpt</code></td>
<td>Generates a call data detail report.</td>
</tr>
<tr>
<td><code>cdsrpt</code></td>
<td>Generates a call data summary report for a specific date.</td>
</tr>
<tr>
<td><code>checktf</code></td>
<td>Checks for the existence of talkfiles in the voice system.</td>
</tr>
<tr>
<td><code>codetype</code></td>
<td>Identifies the type of coding header in a speech file.</td>
</tr>
<tr>
<td><code>configure</code></td>
<td>Determines the allocation of resources for all devices to be included in the system configuration for a given hardware platform.</td>
</tr>
<tr>
<td><code>copy</code></td>
<td>Copies a phrase from one UNIX file to another UNIX file.</td>
</tr>
<tr>
<td><code>cpuType</code></td>
<td>Returns the type of CPU used in the system.</td>
</tr>
<tr>
<td><code>cvis_mainmenu</code></td>
<td>Accesses the administrative menu.</td>
</tr>
</tbody>
</table>
### Table 47. Command Synopsis

<table>
<thead>
<tr>
<th>Command</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>cvis_menu</td>
<td>Accesses the Voice System Administration menu.</td>
</tr>
<tr>
<td>dbcheck</td>
<td>Checks the resources available in the database.</td>
</tr>
<tr>
<td>dbfrag</td>
<td>Lists fragmentation information on the database.</td>
</tr>
<tr>
<td>dbfree</td>
<td>Checks the space available in the database by partition.</td>
</tr>
<tr>
<td>dbused</td>
<td>Provides database use by ORACLE user.</td>
</tr>
<tr>
<td>decode</td>
<td>Converts adpcm16 or adpcm32 files to pcm64 files.</td>
</tr>
<tr>
<td>defService</td>
<td>Defines an IRAPI service.</td>
</tr>
<tr>
<td>delete card/channel</td>
<td>Removes a card or channel from a service or an equipment group.</td>
</tr>
<tr>
<td>delete eqgrp</td>
<td>Removes an equipment group.</td>
</tr>
<tr>
<td>delete service/startup</td>
<td>Removes the assignment of a service to DNIS and ANI numbers or</td>
</tr>
<tr>
<td></td>
<td>of a service assigned directly to a channel.</td>
</tr>
<tr>
<td>detach</td>
<td>Places a unit in the nonexistent state.</td>
</tr>
<tr>
<td>diagnose bus</td>
<td>Tests a bus while it is in service.</td>
</tr>
<tr>
<td>diagnose card</td>
<td>Tests a card while it is in service.</td>
</tr>
</tbody>
</table>
## Summary of Commands

### Overview

Table 47. Command Synopsis

<table>
<thead>
<tr>
<th>Command</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>dip_int</td>
<td>Sends a DIP interrupt to a script on a channel or a range or channels.</td>
</tr>
<tr>
<td>display assignments</td>
<td>Displays the services assigned to channels.</td>
</tr>
<tr>
<td>display card</td>
<td>Displays information about specified cards.</td>
</tr>
<tr>
<td>display channel</td>
<td>Displays channel information.</td>
</tr>
<tr>
<td>display dnis</td>
<td>Displays the services assigned to DNIS and ANI numbers.</td>
</tr>
<tr>
<td>display eqgrp/group</td>
<td>Displays an equipment group report.</td>
</tr>
<tr>
<td>display messages</td>
<td>Displays system messages.</td>
</tr>
<tr>
<td>display permissions</td>
<td>Displays voice system security permission information for the user.</td>
</tr>
<tr>
<td>display services</td>
<td>Lists all valid services to scripts.</td>
</tr>
<tr>
<td>edExplain</td>
<td>Edits the explanation text for one or more message tags.</td>
</tr>
<tr>
<td>encode</td>
<td>Converts ADPCM16 or ADPCM32 files to PCM64 files.</td>
</tr>
<tr>
<td>erase</td>
<td>Deletes a phrase from a UNIX talkfile.</td>
</tr>
<tr>
<td>explain</td>
<td>Displays on-line error message explanations.</td>
</tr>
</tbody>
</table>

*Intuity™ CONVERSANT® System Version 7.0 Administration 585-313-501 Issue 3 January 2000*
### Command Synopsis

<table>
<thead>
<tr>
<th>Command</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>faxit</td>
<td>Queues or sends a fax.</td>
</tr>
<tr>
<td>faxlog</td>
<td>Displays a status of all fax transmission and reception attempts.</td>
</tr>
<tr>
<td>faxq</td>
<td>Outputs a report of all active fax jobs.</td>
</tr>
<tr>
<td>faxrpt</td>
<td>Prints a report of completed or failed out-of-call faxes.</td>
</tr>
<tr>
<td>findHomes</td>
<td>Populates a users home directory with files saved as part of assisted upgrade.</td>
</tr>
<tr>
<td>fixLogFile</td>
<td>Upgrades existing logging files.</td>
</tr>
<tr>
<td>get_config</td>
<td>Retrieves the <code>/vs/data/conf_data</code> file from a floppy disk.</td>
</tr>
<tr>
<td>gse</td>
<td>Invokes the Graphical Speech Editor.</td>
</tr>
<tr>
<td>gse_add</td>
<td>Transfers a speech phrase from a UNIX file to the UNIX file in the Graphical Speech Editor (GSE) format.</td>
</tr>
<tr>
<td>gse_addpl</td>
<td>Adds (restores) phrases to a specific speech pool from UNIX files in the GSE format.</td>
</tr>
<tr>
<td>gse_copy</td>
<td>Extracts a speech phrase from the speech file system to a UNIX file in the GSE format.</td>
</tr>
</tbody>
</table>
### A Summary of Commands

**Table 47. Command Synopsis**

<table>
<thead>
<tr>
<th>Command</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>gse_copypl</td>
<td>Copies multiple speech phrases from the speech file system in the GSE format.</td>
</tr>
<tr>
<td>hasRAID</td>
<td>Reports whether the system has RAID.</td>
</tr>
<tr>
<td>hasassign</td>
<td>Assigns host services to host sessions.</td>
</tr>
<tr>
<td>hcapture</td>
<td>Captures the unrecognized screen exchanged between the host and CONVERSANT.</td>
</tr>
<tr>
<td>hconfig</td>
<td>Configures the host interface parameters.</td>
</tr>
<tr>
<td>hdefine</td>
<td>Displays the host screens created by hcapture in a two page format.</td>
</tr>
<tr>
<td>hdelete</td>
<td>Removes host services from host sessions.</td>
</tr>
<tr>
<td>hdiagnose</td>
<td>Diagnoses the SDLC communication card.</td>
</tr>
<tr>
<td>hdisplay</td>
<td>Shows host applications that have been successfully verified and installed.</td>
</tr>
<tr>
<td>hdump</td>
<td>Dumps screens exchanged between the host and CONVERSANT.</td>
</tr>
<tr>
<td>hfree</td>
<td>Releases host sessions from Script Builder host application assignments.</td>
</tr>
</tbody>
</table>
### Summary of Commands

#### Table 47. Command Synopsis

<table>
<thead>
<tr>
<th>Command</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>hlogin</code></td>
<td>Runs the login sequence of a host script.</td>
</tr>
<tr>
<td><code>hlogout</code></td>
<td>Runs the log out sequence of the host script.</td>
</tr>
<tr>
<td><code>hnewscript</code></td>
<td>Installs a changed host script.</td>
</tr>
<tr>
<td><code>hsend</code></td>
<td>Sends a file to the host via Intuity CONVERSANT file transfer.</td>
</tr>
<tr>
<td><code>hspy</code></td>
<td>Displays a screen currently present on the specified host session.</td>
</tr>
<tr>
<td><code>hstatus</code></td>
<td>Shows the current status of the host sessions.</td>
</tr>
<tr>
<td><code>iCheck</code>, <code>iCheckAdmin</code></td>
<td>Performs various integrity checks based on the rules in a script file.</td>
</tr>
<tr>
<td><code>install_appl</code></td>
<td>Installs an application if enhanced file transfer is installed.</td>
</tr>
<tr>
<td><code>install_sw</code></td>
<td>Installs a software package if enhanced file transfer is installed.</td>
</tr>
<tr>
<td><code>iComp</code></td>
<td>Combines message files to produce compressed and expanded format files.</td>
</tr>
<tr>
<td><code>tif2itif</code></td>
<td>On a UnixWare system, converts a Tag Image File Format (TIFF) file to the TIFF Class F format used by the Intuity CONVERSANT FAX Actions Package. A command with the same functionality, <code>tif2itif</code>, is available for Windows systems.</td>
</tr>
</tbody>
</table>
### Summary of Commands

#### A. Overview

#### Intuity™ CONVERSANT® System Version 7.0 Administration

585-313-501 Issue 3 January 2000 536

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#### Table 47. Command Synopsis

<table>
<thead>
<tr>
<th>Command</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>tif2itf.exe</td>
<td>On a Windows 95, Windows 98, and Windows NT systems, converts a Tag Image File Format (TIFF) file to the TIFF Class F format used by the Intuity CONVERSANT FAX Actions Package. This command is a PC-based version of the tif2itf command.</td>
</tr>
<tr>
<td>list</td>
<td>Lists the directory entries for specific phrases.</td>
</tr>
<tr>
<td>logCat</td>
<td>Reads compressed logging files and outputs human readable messages.</td>
</tr>
<tr>
<td>logDstPri</td>
<td>Creates the shared memory containing the dynamic destinations and priorities of logging messages using logMsg.</td>
</tr>
<tr>
<td>logEvent/logMsg</td>
<td>Allows shell scripts to log a specific message.</td>
</tr>
<tr>
<td>logFmt</td>
<td>Displays and changes the parameters used to display messages and explanation texts.</td>
</tr>
<tr>
<td>logit</td>
<td>Logs the specified message in the logging files.</td>
</tr>
<tr>
<td>logTest</td>
<td>Reads a script of logging messages to be sent to the logdaemon and sends the messages at the specified times and as the specified process.</td>
</tr>
</tbody>
</table>

---
## A Summary of Commands

### Overview

Table 47. Command Synopsis

<table>
<thead>
<tr>
<th>Command</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>mkAlerter</td>
<td>Reads an alerter description and generates the code that implements the description.</td>
</tr>
<tr>
<td>mkheader</td>
<td>Allocates user memory for script variables.</td>
</tr>
<tr>
<td>mkimage</td>
<td>Performs a complete system backup of all the contents of the root disk file system.</td>
</tr>
<tr>
<td>msgadm</td>
<td>Facilitates the administration of system messages.</td>
</tr>
<tr>
<td>newscript</td>
<td>Updates the changes to all currently assigned scripts.</td>
</tr>
<tr>
<td>pkgadd</td>
<td>Transfers the contents of a software package from the distribution medium or directory to the voice system.</td>
</tr>
<tr>
<td>pkginfo</td>
<td>Displays information about software packages which are installed on the system, or which reside on a particular device or directory.</td>
</tr>
<tr>
<td>pkgrm</td>
<td>Removes a software package from the system.</td>
</tr>
<tr>
<td>raidconf</td>
<td>Reports the configuration of the RAID subsystem.</td>
</tr>
<tr>
<td>raidok</td>
<td>Reports the state of the RAID subsystem.</td>
</tr>
<tr>
<td>raidstat</td>
<td>Reports the status of the entire RAID subsystem.</td>
</tr>
</tbody>
</table>
Table 47. Command Synopsis

<table>
<thead>
<tr>
<th>Command</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>reinitLog</td>
<td>Used when adding custom error messages.</td>
</tr>
<tr>
<td>remove</td>
<td>Places a unit in the manual-out-of-service (MANOOS) state.</td>
</tr>
<tr>
<td>remove_appl</td>
<td>Removes an application if enhanced file transfer is installed.</td>
</tr>
<tr>
<td>remove_sw</td>
<td>Removes an installed package if enhanced file transfer is installed.</td>
</tr>
<tr>
<td>restore</td>
<td>Restores a unit to the in-service (INSERV) state.</td>
</tr>
<tr>
<td>restore_appl</td>
<td>Restores an application if enhanced file transfer is installed.</td>
</tr>
<tr>
<td>rmdb</td>
<td>Displays the state of the resource manager and modify debug levels.</td>
</tr>
<tr>
<td>rs_appl</td>
<td>Restores the speech and/or transaction component of a Script Builder application.</td>
</tr>
<tr>
<td>save_config</td>
<td>Saves the /vs/data/conf_data to floppy disk.</td>
</tr>
<tr>
<td>sb_backup</td>
<td>Backs up a Script Builder application.</td>
</tr>
<tr>
<td>sb_restore</td>
<td>Restores a Script Builder application.</td>
</tr>
<tr>
<td>sb_te</td>
<td>Invokes the 3270 terminal emulator.</td>
</tr>
</tbody>
</table>
## A Summary of Commands

### Overview

<table>
<thead>
<tr>
<th>Command</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>sb_trace</td>
<td>Displays trace messages and screens being sent between Script Builider applications and the host mainframe for the specified host channel.</td>
</tr>
<tr>
<td>show_config</td>
<td>Displays and prints to a file the valid or incomplete voice system configuration.</td>
</tr>
<tr>
<td>show_devices</td>
<td>Displays and prints to a file all devices and their attributes as represented in the <code>/vs/data/device_data</code>.</td>
</tr>
<tr>
<td>show_sys</td>
<td>Allows you to retrieve configuration and administration information from customer sites.</td>
</tr>
<tr>
<td>soft_disc</td>
<td>Sends a disconnect to a script on a channel or channels.</td>
</tr>
<tr>
<td>soft_szr</td>
<td>Starts a script on a channel.</td>
</tr>
<tr>
<td>spadc</td>
<td>Collects data on the signal processing resources. Use the spar command to generate reports on the data.</td>
</tr>
<tr>
<td>spar</td>
<td>Generates reports on the signal processing data activity collected by the spadc command.</td>
</tr>
<tr>
<td>spCtlFlags</td>
<td>Sets and clears flags used to control the behavior on SP executive pack files as they run on an SSP card.</td>
</tr>
</tbody>
</table>

Table 47. Command Synopsis
## Summary of Commands

### Table 47. Command Synopsis

<table>
<thead>
<tr>
<th>Command</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>spres</code></td>
<td>Restores speech from a backup.</td>
</tr>
<tr>
<td><code>spsav</code></td>
<td>Backs up speech.</td>
</tr>
<tr>
<td><code>spStatus</code></td>
<td>Displays information about the pack file running on an SSP card.</td>
</tr>
<tr>
<td><code>spVrsion</code></td>
<td>Prints the version of the SSP driver currently installed on a machine.</td>
</tr>
<tr>
<td><code>start_hi</code></td>
<td>Starts the 3270 host interface software.</td>
</tr>
<tr>
<td><code>start_vs</code></td>
<td>Brings the voice system up to a fully operational state.</td>
</tr>
<tr>
<td><code>stop_hi</code></td>
<td>Stops the 3270 host interface software.</td>
</tr>
<tr>
<td><code>stop_vs</code></td>
<td>Stops the voice system software gracefully.</td>
</tr>
<tr>
<td><code>striphdr</code></td>
<td>Strips voice or code headers from a speech file.</td>
</tr>
<tr>
<td><code>sysmon</code></td>
<td>Executes a program that monitors incoming telephone lines and the associated cards to see that they are functional.</td>
</tr>
<tr>
<td><code>tas</code></td>
<td>Executes the transaction assembler program to assemble script instructions.</td>
</tr>
<tr>
<td><code>trace</code></td>
<td>Outputs trace messages for the specified processes and channels.</td>
</tr>
</tbody>
</table>
### Table 47. Command Synopsis

<table>
<thead>
<tr>
<th>Command</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>trarpt</td>
<td>Generates the call traffic report file systems.</td>
</tr>
<tr>
<td>unassign_permissions</td>
<td>Removes voice system security permissions for the user.</td>
</tr>
<tr>
<td>vfyLogMsg</td>
<td>Verifies the information associated with a specific logging message format.</td>
</tr>
<tr>
<td>vsdisable</td>
<td>Disables the automatic restarting of the voice system.</td>
</tr>
<tr>
<td>vsenable</td>
<td>Enables the automatic starting of the voice system at system reboot.</td>
</tr>
<tr>
<td>vusage</td>
<td>Displays the current load on the voice system.</td>
</tr>
<tr>
<td>wl_copy</td>
<td>Copies FlexWord vocabularies to disk.</td>
</tr>
<tr>
<td>wl_edit</td>
<td>Edits FlexWord wordlists.</td>
</tr>
<tr>
<td>wl_gen</td>
<td>Creates data files for a FlexWord vocabulary.</td>
</tr>
<tr>
<td>wl_init</td>
<td>Generates an initial FlexWord wordlist from a set of words.</td>
</tr>
<tr>
<td>wl_install</td>
<td>Reads FlexWord vocabularies from floppy disk.</td>
</tr>
<tr>
<td>xferdip_off</td>
<td>Deactivates the bridging capability.</td>
</tr>
<tr>
<td>xferdip_on</td>
<td>Activates the bridging capability.</td>
</tr>
</tbody>
</table>

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**Intuity™ CONVERSANT® System Version 7.0 Administration 585-313-501**

**Issue 3 January 2000  541**
The `3270dip_off` command turns off the 3270 data interface process (DIP).

**Synopsis**
3270dip_off

**Description**
The `3270dip_off` command deactivates the 3270 DIP the next time the voice system is started.

⚠️ **CAUTION:**
You must stop and start the voice system for this command to take effect.

**Files**
/vs/data/HOST3270
/etc/inittab

**Example**
The following example turns off the 3270 DIP:

```
3270dip_off
```

**See Also**
3270dip_on
start_vs
stop_vs
The **3270dip_on** command turns on the 3270 data interface process (DIP).

**Synopsis**

3270dip_on

**Description**

The **3270dip_on** command activates the 3270 DIP the next time the voice system is started.

⚠️ **CAUTION:**

You must stop and start the voice system for this command to take effect.

**Example**

The following example turns on the 3270 DIP.

```bash
3270dip_on
```

**See Also**

3270dip_off
The **add** command adds a phrase to a Unix talkfile.

**Synopsis**

`add phrase phrase_number to talkfile talkfile_number from file_name`

**Description**

The **add** command adds phrases to the specified talkfile that were previously extracted from another talkfile using the **copy** command. The path name for the file may be the full pathname or the relative pathname. If no path is specified, the file is created in the current working directory. If you are not in the directory from which the phrase to be added is stored, give the full path name for the talkfile and the source file. If the phrases already exists, the system displays the following message:

Phrase <phrase_number> already exists in talkfile <talk file number>
Do you want to overwrite existing phrase? (y/n)

If an error occurs, system messages are printed on the controller screen. The source file may be a full path name or a relative path name. See Chapter 4, “Alarm and Log Messages,” in *Intuity CONVERSANT System Reference*, 585-313-205, for how to respond to a system message.
A Summary of Commands

add

Note: The add command adds a phrase to the SPEECHDIR default directory, which is \texttt{/home2/vfs/talkfiles}. In order to add a phrase, the conventional naming scheme must be followed.

Files
\texttt{/speech/talk/*.pl}

Examples
The following example adds phrase number 275 to talkfile 25 from the phrase stored in the UNIX file \texttt{phr275} in the directory \texttt{/tmp/junk}.

\begin{verbatim}
add phrase 275 to talkfile 25 from /tmp/junk/phr275
\end{verbatim}

The following example adds phrase 104 to talkfile 18 from the phrase stored in the UNIX file \texttt{phr104} in the directory \texttt{/speech/talk}.

\begin{verbatim}
add phrase 104 to talkfile 18 from /speech/talk/phr104
\end{verbatim}

See Also
\begin{itemize}
\item copy
\item erase
\item list
\end{itemize}
addhdr

The addhdr command adds a voice or code header to a speech file.

Synopsis

addhdr [voice | pcm64 | adpcm32 | adpcm16 | sbc24 | sbc16 | celp16] [tag]

Description

The addhdr command is a filter that adds a header to a speech file. Two mutually exclusive types of headers are supported: voice and code. A voice header identifies a file as being editable, and includes an optional identifying tag. A code header (which can be PCM64, ADPCM32, ADPCM16, SBC24, SBC16, or CELP16) identifies the way in which the file is encoded. Code headers are required on any file that is to be played on the voice system.

Before converting between voice and code headers, you must strip off any existing headers.

Note: Customers using gse_add, gse_addpl, gse_copy, and gse_copypl do not need to use this command directly.

See Also
codetype, striphdr
**alarm disable**

The `alarm disable` command disables the specified alarm and makes it unavailable for use.

**Synopsis**

`alarm disable [all | 1 | 2 | 3...]`

**Description**

The `alarm disable` command disables the specified Alarm Contact Set. This command does not affect the state of the contacts themselves. If an alarm occurs that is assigned to a disabled Alarm Contact Set, then the contacts will not close. Note that the alarm retire and test commands cause the contacts to close and open even though the set is disabled.

The numeric arguments refer to the alarm contact set.

**Examples**

The following is an example of the output for the `alarm disable 2` command:

```
Alarm Contact Set 2 now disabled
```

The following is an example output for the `alarm disable all` command:

```
Alarm Contact Set 1 already disabled
Alarm Contact Set 2 now disabled
Alarm Contact Set 3 now disabled
```
**alarm display**

The **alarm display** command displays all message IDs assigned to Alarm Contact Sets.

**Synopsis**

```
alarm display [all | 1 | 2 | 3...]
```

**Description**

The **alarm display** command displays all Message IDs associated with a specified Alarm Contact Set. The numeric arguments refer to the alarm contact set. This command is used in conjunction with the `all` or `n` options (where `n` is the alarm contact set number). A warning message is output if the specified Alarm Contact Sets are already disabled.

**Examples**

The following is a sample output for the **alarm display 1** command:

```
No Message IDs currently assigned to Alarm Contact Set 1.
```

The following is a sample output for the **alarm display 2** command:

```
Alarm Contact Set 2
 TWIP001 TWIP002 TWIP003
```
The following is a sample output for the `alarm display all` command:

```
Alarm Contact Set 1
  VROP001  VROP002  VROP003
Alarm Contact Set 2
  TWIP001  TWIP002  TWIP003
Alarm Contact Set 3
  TSM001  TSM002  TSM003
```

**alarm enable**

The `alarm enable` command enables the specified alarms to be available for use.

**Synopsis**

```
alarm enable [all | 1 | 2 | 3...]
```

**Description**

The `alarm enable` command enables the specified Alarm Contact Set for use. This command does not affect the state of the contacts themselves. If an alarm occurs that is assigned to an enabled Alarm Contact Set, then the contacts will close if they are not already closed. The numeric arguments refer to the alarm contact sets on the alarm relay card. This command is used in conjunction with the `all` or `n` options (where `n` is the alarm contact set number). A warning message is output if the specified Alarm Contact Sets are already enabled.
Examples

The following is a sample output for the **alarm enable 2** command:

```
Alarm Contact Set 2 now enabled
```

The following is a sample output for the **alarm enable all** command:

```
Alarm Contact Set 1 already enabled
Alarm Contact Set 2 now enabled
Alarm Contact Set 3 now enabled
```

**alarm help**

The **alarm help** command provides output information on each alarm command.

**Synopsis**

```
alarm help
```

**Description**

External Alarm administration provides the user a means of assigning or removing Message IDs to each of three Alarm Contact Sets. It also provides the user with the capability of enabling or disabling specific Alarm Contact Sets. The user can also test the functionality of each Alarm Contact Set without initiating a system alarm by using the test command to close a specific Alarm Contact Set. The **alarm retire** command will reopen the closed set.
alarm reinit

The *alarm reinit* command forces alarm processes to reinitialize internal data structures.

**Synopsis**

`alarm reinit`

**Description**

The *alarm reinit* command causes the alarm process to reinitialize all internal data structures referring to alarms. When *alarm reinit* is executed, all alarm contact sets are reset (alarm contacts are open), all alarm contact sets are enabled, the `/vs/data/alarms/alarmX` files are reread, and the `/vs/data/alarms/maskfile` is reread. If the file `/vs/data/alarms/timer` exists, it is also reread. In essence, execution of alarm reinit results in placing the system in a state identical to the state expected after system startup.

This command is useful for making changes take effect after the configuration file is modified. Any errors encountered in the configuration files are logged to the logger. Refer to the information on the alarm display command for additional information.

**Examples**

There is no sample output for the *alarm reinit* command. You may check the System Message Display screen for the results of the *alarm reinit* command.
alarm retire

The **alarm retire** command shuts off an alarm.

**Synopsis**

```
alarm retire [all | 1 | 2 | 3...]
```

**Description**

The **alarm retire** command retires the specified Alarm Contact Set. The command removes external alarm by opening contacts on the specified Alarm Contact Set whether set is enabled or not. This command is used in conjunction with the **all** or **n** options (where **n** is the alarm contact set number).

**Examples**

The following is a sample output for the **alarm retire 2** command:

```
Alarm Contact Set 2 retired
```

The following is a sample output for the **alarm retire all** command:

```
Alarm Contact Set 1 already retired
Alarm Contact Set 2 retired
Alarm Contact Set 3 retired
```
The **alarm status** command displays the status of Alarm Contact Sets.

**Synopsis**

```
alarm status [all | 1 | 2 | 3...]
```

**Description**

The **alarm status** command displays the state and status of the specified Alarm Contact Set. The numeric arguments refer to the alarm contact set. This command is used in conjunction with the **all** or **n** options (where **n** is the alarm contact set number).

**Examples**

The following is a sample output for the **alarm status 2** command:

```
Alarm Contact Set 2
   Enabled: Yes  Status: off (open)
```

The following is a sample output for the **alarm status all** command:

```
Alarm Contact Set 2
   Enabled: Yes  Status: off (open)
Alarm Contact Set 3
   Enabled: No   Status: on (closed)
```
alarm test

The alarm test command manually initiates alarms.

Synopsis
alarm test [all | 1 | 2 | 3...]

Description
The alarm test command tests the specified Alarm Contact Set for use. The command initiates external alarm by closing contacts on specified Alarm Contact Set whether set is enabled or not. This command is used in conjunction with the all or n options (where n is the alarm contact set number).

Examples
The following is a sample output for the alarm test 2 command:
   Alarm Contact Set 2 is now on (closed)

The following is a sample output for the alarm test all command:
   Alarm Contact Set 1 already on (closed)
   Alarm Contact Set 2 is now on (closed)
   Alarm Contact Set 3 is now on (closed)
The **annotate** command annotates the transaction state machine (TSM) trace stream with a message.

**Synopsis**

`annotate [channel] "message"`

**Description**

The **annotate** command sends a message to TSM requesting that the given message be put into TSM’s trace stream. This command is useful for testing and debugging scripts.

If a channel is specified, the message is associated with the channel’s trace stream. The message must be fewer than 160 characters.

The **annotate** trace message is displayed in the trace output if a trace is running when the **annotate** command is executed. If no **trace** command is running, the annotate trace message is discarded.

**Files**

`/vs/bin/tools`

**Example**

The following example sends a message to TSM to put the message “This is test 1 for channel 1” in channel one’s trace stream.

`annotate 1 "This is a test 1 for channel 1"`
assign card/channel

The assign card command assigns a group number to a card. The assign channel command assigns a group number to a channel.

Synopsis
assign card card [.port] to [eqgrp] group_number [grpname]
assign channel number to [eqgrp] group_number [grpname]

Description
The assign card/channel command is used when a system is installed, the number of channels or cards changes, scripts are added or deleted, telephone numbers change, or the user wants to reconfigure the system. The system uses the card and channel assignments to route an incoming call to the group.

Parameters for the assign card/channel command are:

- **number** — The channel number (a single card or channel number, a range of card or channel numbers specified in the format m–n, or all for all card or channel numbers)
- **eqgrp** — The “eqgrp” when assigning to an equipment group
**Summary of Commands**

**assign card/channel**

- **group_number** — The number of the equipment group or service group
- **grpname** — An optional character string that can be associated with "grp"

Reference to a nonexistent channel or nonexistent group in this command causes it to fail.

**Examples**

The following example assigns channels 0 through 47 to equipment group 1.

```
assign chan 0-47 to eqpgrp 1
```

**See Also**

- assign service/startup
- display eqpgrp/group
- delete eqpgrp
assign_permissions

The **assign_permissions** command assigns voice system security permissions to a user.

**Synopsis**

`assign_permissions user_login permissions_level`

**Description**

The **assign_permissions** command assigns voice system security permissions to a user. Security permissions determine the areas of the voice system that the user may access. See Chapter 2, UNIX Administration, for more information on creating user logins.

Parameters for the **assign_permissions** command are:

- **user_login** — represents the user who is to be assigned security permissions.
- **permissions_level** — Specifies the specific security class permission to be assigned. The security classes are:
  - administration
    - Allows the user full voice system capabilities
A Summary of Commands

assign_permissions

~ applications

Allows the user Script Builder, configuration management, reports administration, and system monitor capabilities

~ operations

Allows configuration management, reports administration, and system monitor capabilities

Example

The following example executes the command to assign voice system security to a user with the user login of brown.

assign_permissions brown operations

See Also

unassign_permissions
display_permissions
The `assign service/startup` command assigns an installed service to DNIS and ANI numbers or directly to a channel.

**Synopsis**

assign service `service_name` [startup `startup_name`] to chan `chan_list`
assign service `service_name` to dnis `phone_list` [ani `phone_list`]
assign service `service_name` to ani `phone_list` [dnis `phone_list`]

**Description**

The `assign service/startup` command is used to assign services to either a set of channels or to a DNIS and ANI numbers. Services should be assigned after the service has been verified and installed, the number of channels changes or the system is reconfigured. Use the `display script` command to see a list of valid service names.

Parameters for the `assignservice/startup` command are:

- `chan_list` — Indicates channel numbers or channel number ranges in the form chan1-chan2. A comma or space is used to separate channel numbers in the list of channel numbers or ranges.
Summary of Commands

• **phone_list** — Indicates telephone numbers or telephone number ranges in the form phone1:phone2. A comma or space is used to separate the list of telephone numbers or ranges.

Examples

The following example assigns service stdin (standard in as an arbitrary name for a script) to channel 0.

```
assign service stdin to chan 0
```

The following example assigns service stdout (standard out as an arbitrary name for a script) to channel 1.

```
assign service stdout to chan 1
```

The following example assigns service dnis to all channels.

```
assign service *DNIS_SVC to chan all
```

The following example assigns startup service stdout to channels 4 through 7.

```
assign startup stdout to chan 4-7
```

The following example assigns the service stdout and startup service stdin to channels 4 through 7.

```
assign startup stdin service stdout to chan 4-7
```
The following example assigns the service stdout to DNIS 5000 through 5008 and ANI any.

```
assign service stdout to dnis 5000:5008
```

The following example assigns the service stdout to DNIS 5000 through 5008.

```
assign service stdout to dnis 5000:5008 ani 6000
```

The following example assigns the service stdout to DNIS any and ANI 6000 through 9000.

```
assign service stdout to ani 6000:9000
```

The following example assigns the service stdout to DNIS 3000 and ANI 2000-3000.

```
assign service stdout to dnis 3000 ani 2000:3000
```

See Also

display eqpgrp/group

delete eqpgrp
The **attach** command attaches a unit (card).

**Synopsis**

```
attach unit number [-i] [-n]
```

**Description**

The **attach** command is used to attach a card that has been “detached.” The unit (card) is logically attached by changing its permanent state from nonexistent (NONEX) to manual-out-of-service (MANOOS). To put the unit into service, use the **restore** command.

Parameters for the **attach** command are:

- **unit** — Identifies the unit; the choices are **channel** or **card**.
- **number** — Specifies the channel or card number, a range of channel or card numbers in the form m–n, or **all** for all channel or card numbers. Card numbers are in the format card#.[port#] where **port#** is a port of the **card#**. If **port#** is not given, all ports of the card specified are attached. If no card number or channel number is given, the system displays a syntax message.
-n — Disables prompting from the system whether to wait until a conflict has been resolved (see the -i option below) or to terminate the request to attach.

-i — Used to enable secondary command registration. If T1 diagnostics are being run, this option allows the “attaching” of another card. If -i is used and another maintenance command is being run (remove, detach, attach, restore, or diagnose), the request to attach is blocked and a message is printed to the screen. If -i is not used and any maintenance command is being run, the request to attach is blocked and a message is printed to the screen.

If the command is permitted to run, it is determined if the command is in conflict with another command. A command is in conflict if the card or card associated with the command meets any of the following conditions:

~ T1 card is being diagnosed
~ Causes a change in the existing TDM bus master assignment
~ An interdependency exists with the T1 card being diagnosed (for example, PRI)

If one of the above conflicts exist and -n is not used, the user is asked whether to wait until the conflict is resolved or to terminate the request. If T1 diagnostics are executing on-line tests and a conflict is detected, the attach command is blocked. If T1 diagnostics are executing off-line tests and a conflict is detected, the user is asked whether to wait until the conflict is resolved or to terminate the request to attach.
To delete out of the command, press **DELETE**. If this does not terminate the command, you may need to press **CONTROL+ ALT + DEL**. If, while running **attach**, you abort the command, a message similar to the following may appear:

At the user’s request, administration of the following cmd(s) has been interrupted.
CARD NUMBERS: <card numbers>
To assure proper operation of the identified card(s), run diagnostics at the earliest opportunity.

It is recommended when **attach** is aborted, diagnostics be run on all cards being administered to ensure they are returned to a fully functional state.

**Examples**
The following example attaches a card to channel 2.

```
attach card 2
```
The following example attaches channels 0 through 2 and channel 5.

```
attach channel 0-2,5
```
The following example attaches a card to channel 2, port 1.

```
attach card 2.1
```

**See Also**
detach
restore
remove
The `autoreboot` command provides a means of changing or displaying the parameters associated with the automatic reboot feature.

**Synopsis**

```
autoreboot [enable | disable] [reboots numbers] [window minutes] [uptime minutes]
autoreboot [status | s]
autoreboot [help | h]
```

**Description**

The `autoreboot` command is used to change parameters associated with the auto-reboot feature and to monitor the status of these parameters.

Parameters for the `autoreboot` command are:

- **enable|disable** — Specifies whether to enable or disable the autoreboot feature. The default is enable.
- **reboots number** — Specifies the number of unanticipated reboots tolerated within the time period specified by `window`. The default is 5.
- **window minutes** — Specifies the time period for the `reboots` parameter. The default is 60 minutes.
A Summary of Commands

autoreboot

- **uptime minutes** — Specifies the amount of time that the system must be in service before the autoreboot feature is activated. The default is 5 minutes.

- **status** — Shows the current values of the automatic reboot parameters, plus the number of unanticipated reboots that occurred in the window time period preceding the most recent system boot.

When the autoreboot feature is enabled and activated, the system automatically reboots after a UNIX panic. The autoreboot feature is activated as follows:

If there were fewer reboots than unanticipated reboots during the window minutes prior to the most recent system boot, the automatic reboot feature is activated (if enabled) **uptime minutes** after the most recent system boot.

For example, assume the automatic reboot parameters are set to their default values. A system crash occurs. The system reboots at 8:00. If there were fewer than 5 unanticipated reboots between 7:00 and 8:00, the autoreboot feature is activated as 8:05. Otherwise, it is activated at 9:00.

An unanticipated reboot is a system boot that occurs after a system crash. A system crash can be caused (for example) by a UNIX panic, a system restart via **RESET** or a sudden power loss.
Example
The following example enables autoreboot feature and changes the window parameter to 2 hours:

    autoreboot enable window 120

Caveat
This command must be run from ksh (KORN shell).

backup_appl

The backup_appl command backs up an application.

Note: This command is valid only if the Enhanced File Transfer package is installed.

Synopsis
backup_appl -n application_name [-d database_file] [-t transaction_file] [-s speech_file] [-p path]
Summary of Commands

**backup_appl**

**Description**

The **backup_appl** command is used to backup a Script Builder application to files on the local machine. The files in each component (database, speech, transaction) of the application are bundled into one cpio file per component. If the cpio file names and path are not specified, default names and a default path are used and all three components are backed up. The following are the default file names for each component:

- **database**  
  Dbase
- **speech**  
  Spch
- **transaction**  
  Trans

**Files**

/tmp/sb/BkUpAppl/application_name

**Return Values**

If the **backup_appl** command is successful, a 0 value is returned. If any value other than 0 is returned, the **backup_appl** command failed. The following are the possible reasons for failure for the **backup_appl** command:

- The hard disk is low in space.
- You are not logged in as root or a superuser.
- The command syntax is incorrect.
• The backup tables has failed.
• The backup speech has failed.
• The backup transaction has failed.

Example
The following example backs up the “bank_balance” application using the default names for the transaction, database, and speech.

```
backup_appl -n bank_balance
```

See Also
install_appl
remove_appl
restore_appl
The **bbs** command reports status of the voice system Bulletin Board (BB).

**Synopsis**

`bbs [-d] [-h] [-l]`

**Description**

The **bbs** command displays the field values of the BB slots. This information is sent to standard out (stdout). Without any options, information is extracted only from the dynamic portion of the BB and printed in short format. Otherwise the information displayed is controlled by following command options:

- `-d` — Prints information about the dynamic portion of the BB (the default).
- `-h` — Prints information about the hardcoded portion of the BB.
- `-l` — Generates a long listing. The system displays all fields.

The column headings and meaning of the columns in the **bbs** listing are given in Table 48 on page 572. In the table, the letter "l" indicates the `-l` (long) option, which causes the corresponding heading to appear. The **all** option means that the heading always appears.
### Table 48. bbs Column Headings

<table>
<thead>
<tr>
<th>Column Name</th>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLT</td>
<td>all</td>
<td>The slot number</td>
</tr>
<tr>
<td>BBNAME</td>
<td>all</td>
<td>The name associated with process and slot</td>
</tr>
<tr>
<td>QKY</td>
<td>all</td>
<td>The message queue key</td>
</tr>
<tr>
<td>PID</td>
<td>all</td>
<td>The process ID</td>
</tr>
<tr>
<td>INS</td>
<td>all</td>
<td>The process instance</td>
</tr>
<tr>
<td>D</td>
<td>all</td>
<td>“YES” if process is a message-sending DIP type; otherwise “NO”</td>
</tr>
<tr>
<td>CDATE</td>
<td>I</td>
<td>The last process creation time</td>
</tr>
<tr>
<td>WK</td>
<td>I</td>
<td>The ET work state</td>
</tr>
<tr>
<td>SKEY</td>
<td>I</td>
<td>The semaphore key associated with process and slot</td>
</tr>
<tr>
<td>QID</td>
<td>I</td>
<td>The message queue ID</td>
</tr>
<tr>
<td>RE-SPA</td>
<td>I</td>
<td>The number of respawns from last restart of the voice system</td>
</tr>
<tr>
<td>WKCNT</td>
<td>I</td>
<td>The ET work count for process</td>
</tr>
</tbody>
</table>
Upon successful completion, `bbs` returns an exit status of zero. Otherwise, `bbs` prints an error message on stderr and returns a non-zero exit status if the voice system is not running, or if for some other reason, it can not access the BB.

**Example**

The following example prints a long listing, displaying all possible fields.

```
  bbs -l
```

**bk_appl**

The `bk_appl` command backs up the speech or transaction component of a Script Builder application.

**Synopsis**

```
bk_appl [a | s | t] application_name [0 | 1 | 2 | f=filename]
```

Options for the `bk_appl` command are:

- **a** — Used for backing up both the speech and transaction components of an application.
- **s** — Used for backing up the speech component only of an application.
- **t** — Used for backing up the transaction component only of an application.
The \texttt{bk\_appl} command is used to back up a Script Builder application to a type of media on the local machine. This command can be used to back up either a single component (for example, speech or transaction) or both of the components (speech and transaction).

The \texttt{bk\_appl} command supports backing up on floppy diskettes, magnetic tapes, and to a file. Two separate sets of floppy diskettes or a set of magnetic tapes is required in order to backup both of the components of an application. Only a single component can be backed up to a file.

\textbf{Note:} When a file is used as a backup media, the backed up file is available either in the specified directory (file name is given with the full path name) or in the current working directory (only the filename is given) when this command is invoked.
The `ccarpt` command generates a call classification data summary report.

**Synopsis**

`ccarpt`  
`ccarpt date`  
`ccarpt start_date end_date`

**Description**

The `ccarpt` command generates a call classification data summary report. This report is stored in standard out (stdout).

The `date`, `start_date`, and `end_date` arguments can be in the format `mm/dd/yy` or `mm/dd/yyyy`.

If a 2-digit year argument is used, the following rules apply:

- If the year argument is 70 or greater, the 20th century is assumed; for example, 5/27/99 is interpreted as May 27, 1999.
- If the year argument is 00 through 69, the 21st century is assumed; for example, 5/27/06 is interpreted as May 27, 2006.
A  Summary of Commands

Examples
The following two examples generate the call classification data summary report for October 10, 1993, and are equivalent command statements.

ccarpt 10/20/93
ccarpt 10/20/1993

The following two examples generate the call classification data summary report from October 14 through October 20, 1993, and are equivalent command statements.

ccarpt 10/14/93 10/20/93
ccarpt 10/20/1993 10/20/1993

cddrpt

The cddrpt command generates a call data detail report.

Synopsis

cddrpt records service calldata date
A Summary of Commands

cddrpt

Description
The cddrpt command generates the call data detail report. This report is sent to standard out (stdout). Before this can be done, the database system must be up and running, but the voice system does not need to be up.

Parameters for the cddrpt command are:

- **records** — Represents the number of records to be reported. It can be any number, a range of numbers, or **all**, indicating all records in the system.

- **service** — Represents the script (application) name, or **all** for all applications.

- **calldata** — Represents a flag indicating whether to include call event data or not. The valid options are either **n** for not including event data or **y** for including event data.

- **date** — The date the data was collected in the system. The valid options are a date in either the mm/dd/yy or mm/dd/yyyy format, or **all**, indicating all records in the system.

If a 2-digit year argument is used, the following rules apply:

- If the year argument is 70 or greater, the 20th century is assumed; for example, 5/27/99 is interpreted as May 27, 1999.
- If the year argument is 00 through 69, the 21st century is assumed; for example, 5/27/06 is interpreted as May 27, 2006.
Summary of Commands

Examples
The following examples generate a call data detail report for the first 100 call data collected on date October 20, 1993 for application “balance_chk” and are equivalent command statements. (Call event data if any is also included in the report.)

```
cddrpt 100 balance_chk y all 10/20/93  
cddrpt 100 balance_chk y all 10/20/1993  
```

The following example generates a call data detail report for all call data in the system without including call event data.

```
cddrpt all all n all  
```

Error Messages
CANNOT FIND /vs/trans/<application>.D OR MALLOC SPACE FOR IT

If you get the above message while running `cddrpt`, take the following remedial steps:

- Make certain the `/vs/trans/application.D` file exits and is current.
- Remove unnecessary files from the `/vs/trans/` directory.
cdsrpt

The **cdsrpt** command generates a call data summary report for a specific date.

**Synopsis**

```
  cdsrpt  hours  service  event_data  date
```

**Description**

The **cdsrpt** command generates the call data summary report for a date specified. The report is stored in standard out (stdout). Before this can be done, the database system must be up and running, but the voice system does not need to be up.

Parameters for the **cdsrpt** command are:

- **hours** — The hour the call data was collected. It can be any number from 0 to 24 or **all**, indicating all 24 hours.
- **service** — The script (application) name, or **all**, indicating all applications.
- **event_data** — A flag indicating whether to include call event data or not. The valid options are either **n** for not including event data, or **y** to include event data.
**Summary of Commands**

- **date** — The date the data was collected in the system, in the format `mm/dd/yy` or `mm/dd/yyyy`.
  
  If a 2-digit year argument is used, the following rules apply:
  
  - If the year argument is 70 or greater, the 20th century is assumed; for example, 5/27/99 is interpreted as May 27, 1999.
  
  - If the year argument is 00 through 69, the 21st century is assumed; for example, 5/27/06 is interpreted as May 27, 2006.

**Examples**

The following examples generates call data summary report for call data collected between 2 p.m. and 4 p.m. on date October 20, 1993 for all applications on the system, and are equivalent command statements. Call event data summary is included in the report.

```
cdsrpt 14-16 all y 10/20/93
```

```
cdsrpt 14-16 all y 10/20/1993
```

The following example generates call data summary report for all call data collected on date October 20, 1993 for the application “balance_chk.” Call event data summary is not included in the report.

```
cddrpt all balance_chk n 10/20/93
```
A  Summary of Commands

checktf

Error Messages
CANNOT FIND /vs/trans/<application>.D OR MALLOC SPACE FOR IT

If you get the above message while running cdrspt, take the following remedial steps:

- Make certain the /vs/trans/application.D file exits and is current.
- Remove unnecessary files from the /vs/trans/ directory.

checktf

The checktf command outputs a list of talkfiles in the voice system.

Synopsis
checktf [all | talkfile [talkfile...]]

Description
Parameters for the checktf command are as follows:

- all — Lists all talkfiles on the system
- talkfile — Specifies a talkfile by number
A  Summary of Commands

checktf

The output of the `checktf` command includes:

- The talkfile number
- The name of the application associated with the talkfile
- The status of the talkfile, either recorded or not recorded.

The format of the output is as follows:

<table>
<thead>
<tr>
<th>Talkfile</th>
<th>Application</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>jst</td>
<td>recorded</td>
</tr>
<tr>
<td>101</td>
<td>mgtst</td>
<td>recorded</td>
</tr>
<tr>
<td>102</td>
<td>UNKNOWN</td>
<td>recorded</td>
</tr>
<tr>
<td>103</td>
<td>cmj_test</td>
<td>recorded</td>
</tr>
<tr>
<td>104p</td>
<td>w1</td>
<td>recorded</td>
</tr>
<tr>
<td>105</td>
<td>pez</td>
<td>recorded</td>
</tr>
<tr>
<td>200</td>
<td>CTC_test1</td>
<td>not recorded</td>
</tr>
</tbody>
</table>

Example

The following command checks talkfile 103:

`checktf 103`
The `codetype` command identifies the type of coding header in a speech file.

**Synopsis**
`codetype file`

**Description**
The `codetype` command identifies the type of coding header that is present in a speech file. Codetype recognizes PCM64, ADPCM32, ADPCM16, SBC24, SBC16, or CELP16 headers.

**See Also**
addhdr
strip hdr
configure

The **configure** command determines allocation of resources for all devices to be included in a system configuration for a given hardware platform.

**Synopsis**

```bash
 /vs/bin/util/configure [new]
```

**Description**

The **configure** command is an interactive command that automatically determines allocation of the following resources within a voice system:

- Slot number
- Interrupt
- Direct memory address (DMA) channel
- Input/output (IO) address
- Random access memory (RAM) address
- Serial port number
- Parallel port number
A Summary of Commands

The program is mainly for use by factory personnel for determining the configuration of a system being built for a customer. It is also useful in the field as a tool for field service personnel who are upgrading (adding new devices to) an existing configuration. All user input is in the form of user friendly prompts or menu selections.

All output from a successful configuration is written to the /vs/data/confData file. An unsuccessful or incomplete configuration is written to the /vs/data/failData file so that it may be examined to see why the configuration was not successful. Output to these files is in a compressed format. The /vs/bin/util/show_config command is used to view the configurations represented by these files.

The Hardware Resource Allocator (HRA) program allows users to choose the hardware platform they are attempting to configure, followed by all devices that could be included in a configuration. The HRA ensures that all required devices for the platform are selected.

The program has built-in rules that prevent users from entering devices that are not supported on the hardware platform they have selected. It also checks hardware feature rules, such as how many of a particular device are supported on the chosen platform. In all cases of device rejection by the program, you are prompted with a message clearly explaining why the device is being rejected.
Upgrading an Existing Configuration

When `configure` is executed with no argument, it checks to see if a `/vs/data/confData` file currently exists. If so, the configuration represented by this file is read and used as the base configuration. This is useful in the case of a field upgrade to an existing voice system. A copy of the `confData` file is saved in `/vs/data/conf_MMDDYY` where `MM`=month, `DD`=day and `YY`=year. The existing `confData` file is saved because, upon determination of a valid configuration that includes the newly specified devices, the current `confData` file is replaced by a new one. It may be useful at times to see what the previous configuration looked like. An option on the `/vs/bin/util/show_config` command allows you to view the configuration represented by the saved `conf_MMDDYY` file.

**Note:** Only one `conf_MMDDYY` file is saved per day. If the `configure` command is executed repeatedly on a single day, the previous `confData` and `conf_MMDDYY` files are overwritten.

Once the file is read, you are presented a menu of devices they may attempt to add to the current configuration. Once the new devices are specified, the program attempts to allocate resources to the new devices from the pool of resources not currently used by devices already in the configuration.
Specifying a New Configuration

If configure is executed with no argument and a /vs/data/confData file does not exist, three screens request information about the chassis, backplane and central processing unit (CPU) for the hardware platform you want to configure. These screens are followed by the menu of devices that may be configured with that platform. You select the platform and devices desired, indicating when finished. The program attempts to allocate resources to each device selected. If successful, the program terminates. Otherwise, you are advised of an problems encountered (for example, a missing device).

The configure command should be executed with an argument of new. This forces a new configuration, as described above, even if a /vs/data/confData file exists.

Presetting Device Hardware Resources

Note: This procedure should only be performed under special circumstances.

You may wish to preset certain resources of a single new device being selected for a configuration. For example, you may want to force the Hardware Resource Allocator to select a specific interrupt for a particular device being specified. Whenever a single device is specified, the following prompt is displayed:

Do you wish to preset any hardware options of device_name? [y|n]
If \( y \) is specified, you are allowed to preset any of the following hardware attributes of the selected device (where applicable):

- Interrupt
- DMA Channel
- IO Address
- RAM Address

When you finish selecting devices, the Hardware Resource Allocator terminates normally if a valid configuration is determined. If a valid configuration cannot be determined, the system displays a message indicating this, and the program terminates.

**Device Data**

The devices presented in the menus described above are kept in the `/vs/data/deviceData` file. This file is in compressed format. The `/vs/bin/util/show_devices` command may be used to view its contents. All attributes of each device are stored in this file.

**Note:** The format of the `/vs/data/deviceData` file is very specific. A user should not edit or alter this file.
Files
/vs/data/deviceData
/vs/data/platData
/vs/data/devSetData
/vs/data/confData
/vs/data/fail_data

Note: The format of the above files is very specific. A user should not edit or alter these files.

The Hardware Resource Allocator should only be run by persons familiar with system configurations and hardware platforms. See Appendix A, “System Configuration,” in the appropriate platform maintenance book for slot position and numbering information. See the documentation on each device for the switch or jumper settings that correspond to the hardware resources determined by the Hardware Resource Allocator.

See Also
get_config
save_config
show_config
show_devices
copy

The `copy` command copies a phrase from a UNIX talkfile to a UNIX talkfile.

**Synopsis**

`copy phrase phrase_number from talkfile talkfile_number to filename`

**Description**

The `copy` phrase command copies a phrase from one UNIX talkfile to another UNIX talkfile. The path name for the file may be the full path name or the relative path name. If no path is specified, the file is created in the current working directory. If you are not in the directory in which the phrase to be added is stored, be sure to give the full path name for the talkfile and source file.

**Note:** Only the `root` login can copy a phrase to any of the root directories. Users without root permission can copy phrases only to directories for which they have permission, usually under their login id.

**Note:** The `copy` command copies a phrase from a UNIX talkfile within the SPEECHDIR default directory (`/home2/vfs/talkfiles`) to a UNIX file.
A Summary of Commands

copy

Examples
The following example copies phrase number 2 from talkfile1 to the file /speech/talk/a.1.

   copy phrase 2 from talkfile 1 to /speech/talk/a.1

The following example copies phrase number 174 from talkfile 25 to the file /speech/talk/h.4.

   copy phrase 174 from talkfile 25 to /speech/talk/h.4

See Also
   add
   erase
   list
The `cpuType` command returns the type of central processing unit (CPU) used in the system.

**Synopsis**

cpuType

**Description**
The `cpuType` command returns the type of CPU on the system, either a 386 or a 486. If the `cpuType` command returns a 3, you are using a 386. If the `cpuType` command returns a 4, you are using a 486. To determine the return value, examine the shell variable `$?`.

The `cvis_mainmenu` command accesses the administration menus.

**Synopsis**
cvis_mainmenu
cvis_menu

The **cvis_menu** command accesses the Voice System Administration menu.

**Synopsis**

cvis_menu

**Description**

This command provides access to the Voice System Administration menu.

**See Also**

cvis_mainmenu
dbcheck

The `dbcheck` command checks the resources available in the database (Version 7 ORACLE).

**Synopsis**

`dbcheck -i`

`dbcheck r`

`dbcheck [w n[,m]] [-s] [-e] [-m user[~user...]]`

**Description**

The `dbcheck` command checks spaces, usage, and rollback segment growth. The `dbcheck` command has three different usages.

- The `-i` option installs cron entries (optional) to run `dbcheck` at regular intervals and support for logger/aleter messages. (The `-i` option only needs to run once). The cron job can be placed in either roots cron file or added to the end of the `/vs/bin/util/croncdh` job that runs once a day. The `-i` option also asks if you want new alerter messages added to the logger/aleter database along with explanations used with the `explain` command. This installation only needs to be run if you want the warnings to show up in the system event log or if you want to schedule automatic checking at regular intervals.
The `-r` option removes any cron entry set up by the `-i` option.

The third usage actually checks database space against a user set “water marks.” Three different things are checked:

- Free space
- Extents against the user-set threshold $n$ (15% default)
- Rollback segment(s) growth against the user-set threshold $m$ (20% default)

When executed, the `dbcheck` command generates the appropriate warnings (see Diagnostics on page 597) if the database falls below $n$ percent free or if the rollback segment grows to be more than $m$ percent of the total database size.

The `dbcheck` command, by default, sends warning messages to the logger/alerner indicating a threshold has been exceeded (the `-i` option must be run first). The `-e` option disables the entries from going into the log file. The `-s` option prints the warning messages to standard output. The `-m user` option allows for the messages to be mailed to `user`. Multiple users can be sent the mail by separating the user names with `~`. Below are sample outputs.

(Output to error log when less than 13% available space/extents or more than 23% used by rollback.)
# dbcheck -w13,23

* Mon Feb 15 16:35:06 1993 dbcheck logTest.c:418
DBC001       -- -- ---  Database 10 percent free, 3072 Blocks of 30
             Reason: Low DB Space.

* Mon Feb 15 16:35:06 1993 dbcheck logTest.c:418
DBC002       -- -- ---  Extents low, 100 used of 121, on object MY_
             Reason: Low DB Extents

* Mon Feb 15 16:35:06 1883 dbcheck logTest.c:418
DBC003       -- -- ---  Rollback segments=7680 blocks, 25 percent

Files
LOGROOT=${[LOGROOT:-"/usr/spool/log"]}
$(LOGROOT)/head/logDBC.h
$(LOGROOT)/formats/DBCmsg
$(LOGROOT)/formats/formats.mk
$(EXPLAINDR)/translateLst
/vs/bin/util/croncdh
/usr/spool/cron/crontabs/root
/usr/spool/cron/crontabs/root.bu
Diagnostics

The **dbcheck** command returns the following values:

- 0  Success, no limits exceeded
- 1  Threshold exceeded
- 2  Processing error
- 3  Database is not running

Caveat

Once **dbcheck** log messages are installed using **dbcheck -i**, the alarm priorities, destinations, and thresholds can not be changed through the System Message Display screen as described in **Message Administration on page 107**, of Chapter 3, **Voice System Administration**.

See Also

- dbfrag
- dbfree
- dbused
- explain
- logCat
dbfrag

The `dbfrag` command lists fragmentation information on the database (Version 7 ORACLE).

Synopsis

```
dbfrag [-h -b]
```

Description

The `dbfrag` command is a shell script that reports on database allocation, usage, and fragmentation. The block size reported is in ORACLE blocks (2048 bytes). You can request the information to be reported in Mbytes with the `-b` option. This tool is useful to get a quick check on database usage and provides a shell interface into some key ORACLE statistics.

This tool only reports on information in the ‘SYSTEM’ tablespace. With the `-h` option, the listing will be printed without a header. This option is useful if you want to parse this output to select a specific field.
A Summary of Commands

dbfrag

The following requests fragmentation information in Mbytes (using the -b option).

```
# dbfrag -b
```

**Examples**
The following example gets the largest contiguous ORACLE space available.

```
dbfrag -h | awk '{length>1 {print $5}}'
```

10240

**Diagnostics**
The program returns the following:

0 Success
1 Processing Error

**See Also**
dbcheck
dbfree
dbused
The `dbfree` command checks the space available in the database by partition (Version 7 ORACLE).

**Synopsis**
```
dbfree [-h]
```

**Description**
The `dbfree` command is a shell script that lists the amount of free space in the database by free contiguous blocks. The result is a detailed listing of each free memory area followed by the sum of each partition. The free blocks are listed in 2048 bytes/block (ORACLE blocks). There is also a column that lists the same information in Mbytes. The `-h` option removes the column headers. Below is a sample output of the `dbfree` command.
A Summary of Commands

Contiguous extents

<table>
<thead>
<tr>
<th>TABLE SPACE NAME</th>
<th>FILE_ID</th>
<th>START_BLOCK</th>
<th>MBYTES FREE</th>
<th>ORACLE BLOCKS FREE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYSTEM</td>
<td>1</td>
<td>5142</td>
<td>.02</td>
<td>12</td>
</tr>
<tr>
<td>SYSTEM</td>
<td>1</td>
<td>5560</td>
<td>.03</td>
<td>13</td>
</tr>
<tr>
<td>SYSTEM</td>
<td>1</td>
<td>4892</td>
<td>.04</td>
<td>18</td>
</tr>
<tr>
<td>SYSTEM</td>
<td>1</td>
<td>7892</td>
<td>.04</td>
<td>19</td>
</tr>
<tr>
<td>SYSTEM</td>
<td>1</td>
<td>4164</td>
<td>.05</td>
<td>28</td>
</tr>
</tbody>
</table>

sum 47.18 24070

29 rows selected.

Diagnostics
The program returns the following values:

0 Success
1 Processing Error

Caveats
The dbfree command creates a temporary table “dba_fragments” under user system that compresses the adjacent entries provided by the dictionary view “dba_free_space.”
dbused

The `dbused` command provides database use by oracle user (Version 7 ORACLE).

**Synopsis**
```
dbused [hs] [u uid|passwd]
```

**Description**
The `dbused` command is a shell script that shows the amount of space used by each object for a given user. Objects are tables, indexes, clusters, rollback, and cache. The default user is sti/sti. The `-s` option reports summary information grouped by objects. The special user `all`, reports information for the entire database. The `-h` option skips the header message. This option is useful if you are parsing. The `-u uid|passwd` option allows you to specify the oracle user id and password (the default is `sti/sti`, `all` is used for all users).

Below is an output summary for user `all`. 
### A Summary of Commands

**# dbused -su all**

Space allocated to objects. Oracle blocks (2048 Bytes/Block)

<table>
<thead>
<tr>
<th>NAME</th>
<th>TYPE</th>
<th>BLOCKS</th>
<th>MBYTES</th>
<th>EXTENTS</th>
<th>MAX_EXTENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>INDEX</td>
<td>5</td>
<td>.01</td>
<td>1</td>
<td>99</td>
</tr>
<tr>
<td>CCA</td>
<td>TABLE</td>
<td>5</td>
<td>.01</td>
<td>1</td>
<td>99</td>
</tr>
<tr>
<td>CCASUM</td>
<td>TABLE</td>
<td>5</td>
<td>.01</td>
<td>1</td>
<td>99</td>
</tr>
<tr>
<td>CDH</td>
<td>TABLE</td>
<td>5</td>
<td>.01</td>
<td>1</td>
<td>99</td>
</tr>
<tr>
<td>CDHSUM</td>
<td>TABLE</td>
<td>5</td>
<td>.01</td>
<td>1</td>
<td>99</td>
</tr>
<tr>
<td>E2</td>
<td>TABLE</td>
<td>5</td>
<td>.01</td>
<td>1</td>
<td>99</td>
</tr>
<tr>
<td>EVENTS</td>
<td>TABLE</td>
<td>5</td>
<td>.01</td>
<td>1</td>
<td>99</td>
</tr>
<tr>
<td>EVSUM</td>
<td>TABLE</td>
<td>5</td>
<td>.01</td>
<td>1</td>
<td>99</td>
</tr>
<tr>
<td>LDBCOLS</td>
<td>TABLE</td>
<td>5</td>
<td>.01</td>
<td>1</td>
<td>99</td>
</tr>
</tbody>
</table>

Below is output for user “sti.”

**# dbused**

Space allocated to objects. Oracle blocks (2048 Bytes/Block)

<table>
<thead>
<tr>
<th>NAME</th>
<th>TYPE</th>
<th>BLOCKS</th>
<th>MBYTES</th>
<th>EXTENTS</th>
<th>MAX_EXTENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>INDEX</td>
<td>5</td>
<td>.01</td>
<td>1</td>
<td>99</td>
</tr>
<tr>
<td>CCA</td>
<td>TABLE</td>
<td>5</td>
<td>.01</td>
<td>1</td>
<td>99</td>
</tr>
<tr>
<td>CCASUM</td>
<td>TABLE</td>
<td>5</td>
<td>.01</td>
<td>1</td>
<td>99</td>
</tr>
<tr>
<td>CDH</td>
<td>TABLE</td>
<td>5</td>
<td>.01</td>
<td>1</td>
<td>99</td>
</tr>
<tr>
<td>CDHSUM</td>
<td>TABLE</td>
<td>5</td>
<td>.01</td>
<td>1</td>
<td>99</td>
</tr>
<tr>
<td>E2</td>
<td>TABLE</td>
<td>5</td>
<td>.01</td>
<td>1</td>
<td>99</td>
</tr>
<tr>
<td>EVENTS</td>
<td>TABLE</td>
<td>5</td>
<td>.01</td>
<td>1</td>
<td>99</td>
</tr>
<tr>
<td>EVSUM</td>
<td>TABLE</td>
<td>5</td>
<td>.01</td>
<td>1</td>
<td>99</td>
</tr>
<tr>
<td>LDBCOLS</td>
<td>TABLE</td>
<td>5</td>
<td>.01</td>
<td>1</td>
<td>99</td>
</tr>
</tbody>
</table>
decode

The decode command converts adpcm16 or adpcm32 files to pcm64 files.

Synopsis
decode [adpcm32|adpcm16]

Description
Decode is a filter that converts ADPCM16 or ADPCM32 files to PCM64 files.

Diagnostics
The program returns the following values:

0 Success
1 Processing Error

See Also
dbfial
dbfree
dbcheck
Warning
Coding headers should be stripped (using the stripdh command) before running decode.

See Also
addhdr
codetype
encode
stripdh

defService

The defService command defines an IRAPI service.

Synopsis
defService [-h] [-n] [-s servicename] [-p process] [-t P | T] [-a 0 | 1 | 2 | 3 | 4] [application]

Description
The defService command is intended to be used by IRAPI application developers to create the registration file for an IRAPI service that is necessary for assigning/deleting service to/from a channel or DNIS and/or
ANI. For TSM scripts, the output of the `tas` command serves as the registration file for the script.

If the `defService` command is entered with no options, `defService` prompts you for all of the necessary information. You will need to respond to fewer prompts if you enter the majority of the information from the command line.

The `-h` option allows you to print the usage statement and then exit.

The `-n` option uses the default values for all options not specified on the command line. However, no defaults exist for the `process` and `application` parameters.

When the application is started by the Application Dispatch (AD) process, the `IRP_SERVICE_NAME` is set to the `-s servicename` argument if `servicename` is non-NULL. Otherwise, `IRP_SERVICE_NAME` is set to `application`, where the default is NULL.

The `-t` option specifies whether the process that provides the IRAPI application `application` is a permanent (P) or transient (T) process. The default is P for permanent.

If the process that provides the IRAPI application `application` is a permanent process, then `-p process` must be the name the process uses as an argument to `irRegister(3irAPI)`. If the process that provides the IRAPI application `application` is a transient process, then `-p process` must be the full pathname of the process. No default exists for this option.
A  Summary of Commands  defService

When the application is executed on a PRI line, the [-a 0 |1 |2 |3 |4] option specifies how the ANI should be supplied to the application. The valid values for this option are as follows:

- 0 (No ANI supplied) — the default
- 1 (ANI type billing number only)
- 2 (ANI type billing number preferred)
- 3 (ANI type calling party (SID) only)
- 4 (ANI type calling party (SID) preferred)

The application argument specifies the IRAPI application. No default exists for this argument.

Upon successful completion, the defService command creates the /vs/trans/application.T file.

Files

/vs/trans/*.T

See Also

assign
delete
tas
iRAPI -AD(4irAPI-AD)
irRegister(3irAPI)
The **delete card/channel** command removes a card or channel from a service or an equipment group.

**Synopsis**

`delete card card#.port# from [eqpgrp] group_number`

`delete channel number from [eqpgrp] group_number`

**Description**

The **delete card/channel** command removes the specified card or channel from a service or equipment group. The parameters for the **delete card/channel** command are:

- **card#.port#** — Specifies the card/channel number (a single card/channel number from a range of 0–255, a range of card/channel numbers in the form m–n, or **all**, for all card/channel numbers).

- **eqpgrp** — Specifies **svcgrp** when deleting from a service group or **eqpgrp** when deleting from an equipment group. If no group type is given, the **svcgrp** is assumed.

- **group_number** — Identifies the equipment group or service group.
If you want to remove all cards or channels from a equipment group, it may be easier to delete the entire equipment group than to delete channels or cards. To delete an equipment group, use the `delete eqpgrp` command.

**Examples**

The following example deletes card 4 from service group 1.

```
delete card 4 from svcgrp 1
```

The following example deletes channels 10 through 13 from equipment group 3.

```
delete channel 10-13 from eqpgrp 3
```

**See Also**

`delete eqpgrp`

`delete service`
delete eqgrp

The `delete eqgrp` command removes an equipment group.

**Synopsis**

`delete eqgrp group_number`

**Description**

The `delete eqgrp` removes an equipment group. The `group_number` argument is the equipment group list. To remove all equipment groups, use `all` as the group number.

**Examples**

The following example removes equipment group number 3.

```
delete eqgrp 3
```

The following example removes all equipment groups.

```
delete eqgrp all
```

**See Also**

assign card/channel
delete service/startup

The `delete service/startup` command unassigns the assignment of a service to DNIS and ANI numbers or of a service assigned directly to a channel.

**Synopsis**

detect service `service_name` [startup `startup_name`] from chan `chan_list`
detect startup `startup_name` [service `service_name`] from chan `chan_list`

detect service `service_name` from dnis `phone_list` [ani `phone_list`]
detect service `service_name` from ani `phone_list` [dnis `phone_list`]

**Description**
The `delete service/startup` removes the specified telephone number or channel from the group to which a script is assigned. The parameters for the `delete service/startup` command are:

- `service_name` — Specifies the name of application.
- `chan|dnis` — Specifies the name of the service group.
### Summary of Commands

#### delete service/startup

- **chan_number|phone_number** — Contains a list of one or more channels or telephone numbers separated by blanks. The words *any* or *all* show that service is removed from all calls regardless of what number was dialed.

The **chan_list** variable indicates channel numbers or channel number ranges in the form chan1-chan2. A comma or space should be used to separate the list of channel numbers or ranges.

The **phone_list** variable indicates telephone numbers or telephone number ranges in the form phone1:phone2. A comma or space should be used to separate the list of telephone numbers or ranges.

**Note:** Only telephone numbers that have been assigned using the assign service/startup command can be deleted.

#### Examples

The following example deletes startup service stdout from channels 4 through 7.

```
delete startup stdout from chan 4-7
```

The following example deletes the service stdout and startup service stdin from channels 4 through 7.

```
delete startup stdin service stdout from chan 4-7
```
A  Summary of Commands

delete service/startup

The following example deletes the service stdout to DNIS 5000 through 5008 and ANI any.

**delete service stdout from dnis 5000:5008 and ANI any**

The following example deletes the service stdout from DNIS 5000 through 5008 and ANI 6000.

**delete service stdout from dnis 5000:5008 ani 6000**

The following example deletes the service stdout from DNIS any and ANI 6000 through 9000.

**delete service stdout from DNIS any and ani 6000:9000**

The following example deletes the service stdout from DNIS 3000 and ANI 2000-3000.

**delete service stdout from dnis 3000 ani 2000:3000**

See Also

assign service/startup
display services
display dnis
The `detach` command places a unit in the nonexistent state.

**Synopsis**

`detach unit number [-i] [-n]`

**Description**

The `detach` command places a unit currently in the manual-out-of-service (MANOOS) state into the nonexistent (NONEX) state. Before this can be done, the unit must be taken from the in-service (INSERV) or broken (BROKEN) state and put in the MANOOS state using the `remove` command.

The parameters for the `detach` command are:

- **unit** — Identifies the unit. The choices are *channel* or *card*.
- **number** — Specifies the channel or card number, a range of channel or card numbers in the form m–n, or all, for all the channel or card numbers. Card numbers are in the form card#[,port#] where port# is the port of the card#. If port# is not given, all ports of the card specified are detached. If no card number or channel is given, the system displays a syntax message.
A Summary of Commands

```
detach

- -n — This optional parameter disables prompting from the system whether to wait until a conflict has been resolved (see the -i option below) or to terminate the request to detach.

- -i — This optional parameter is used to enable secondary command registration. If T1 diagnostics are being run, this option allows the “detaching” of another card. If -i is used and another maintenance command is being run (remove, detach, attach, restore, diagnose), the request to detach is blocked and a message is printed to the screen. If -i is not used and any maintenance command is being run, the request to detach is blocked and a message is printed to the screen.

If the command is permitted to run, a check is made to see if the command is in conflict with another. A command is in conflict if the card or card associated with it:

~ Is the T1 card being diagnosed
~ Will cause a change in the existing TDM bus master assignment
~ Has an interdependency with the T1 card being diagnosed (for example, PRI)

If one of the above conflicts exist and -n is not used, you are asked whether to wait until the conflict is resolved or to terminate the request. If T1 diagnostics are executing on-line tests and a conflict is detected, the detach command is blocked. If T1 diagnostics are executing off-line tests and a conflict is detected, you are asked whether to wait until the conflict is resolved or to terminate the request to detach.
```
A Summary of Commands

detach

To delete out of the command, press **DEL**. If this does not stop the command, you may need to press **CTRL** and \ (backslash key) simultaneously. If, while running **detach**, you wish to abort the command, a message similar to the following may appear:

At the user’s request, administration of the following cmd(s) has been interrupted.
CARD NUMBERS: <card numbers>

To assure proper operation of the identified card(s), run diagnostics at the earliest opportunity.

It is recommended when **detach** is aborted, diagnostics be run on all cards being administered to ensure they are returned to a fully functional state.

Examples
The following example detaches card 4 and places it in the nonexistent state as far as the system is concerned.

**detach card 4**

The following example detaches channels 1 through 3 and places them in the nonexistent state as far as the system is concerned.

**detach channel 1-3**

See Also
attach
remove
restore
diagnose bus

The `diagnose bus` command tests a bus while it is in service.

**Synopsis**

diagnose bus *bus_number* [immed]

**Description**

The `diagnose bus` command tests the bus while it is in service. If the `immed` option is used, any calls currently being processed are dropped immediately.

This command changes the temporary state of a unit to diagnostic (DIAG). If a unit fails the diagnostics, the permanent state is changed to BROKEN; otherwise, the permanent state is unchanged.

This output is saved to a file in `/vs/data/diagnose` called `busDiag.1`.

**Example**

The following example diagnoses bus 1.

`diagnose bus 1`
### diagnose card

The **diagnose card** command tests a card while it is in service.

#### Synopsis

diagnose card card_number [option]...

#### Description

The **diagnose card** command is done at the card level for any card in the system. The *card_number* is the card number you want to diagnose. To specify all cards, use **all**.

This command changes the temporary state of a unit to diagnostic (DIAG). If a card is stuck in the INSERV state, use the **diagnose card card_number immed** command. This temporarily removes the unit from the busy state unconditionally and places it in the manual-out-of-service (MANOOS). Note that any calls on the card when the **immed** option is used are dropped immediately.

For T1 cards the valid options are:

- **-n** — Prevents prompting from the system during diagnostic tests. The diagnostics assume the default values during the test and the user is informed when the diagnostics are completed.

- **-i** — Enables secondary command registration. See the description of **-i** for Tip/Ring and SSP cards below.
A Summary of Commands

diagnose card

For Tip/Ring and SSP cards, the valid options are:

- **-n** — Disables prompting from the system whether to wait until a conflict has been resolved (see the **-i** option for SSP cards below) or to terminate the request to diagnose.

- **-i** — Enables secondary command registration. If T1 diagnostics are being run, this option allows the diagnose of another card to be performed. If **-i** is used and another maintenance command is being run (**remove, detach, attach, restore**), the request to diagnose a non-T1 card is blocked and a message printed to the screen. If **-i** is not used and any maintenance command is being run, the request to **diagnose card** is blocked and a message printed to the screen.

If the command is permitted to run, a check is made to see if the command is in conflict with another. A command is in conflict if the card or card associated with it:

- Is the T1 card being diagnosed
- Has an interdependency with the T1 card being diagnosed (for example, PRI)

If one of the above conflicts exist and **-n** is not used, you are asked whether to wait until the conflict is resolved or to terminate the request. If T1 diagnostics are executing on-line tests and a conflict is detected, the **diagnose card** command is blocked. If T1 diagnostics are executing off-line tests and a conflict is detected, you are asked whether to wait until the conflict is resolved or to terminate the request to diagnose.
If a unit fails the diagnostics, the permanent state is changed to BROKEN. If the unit being diagnosed previously was marked BROKEN and it passes diagnostics, it is put in the MANOOS state. Otherwise, the permanent state is unchanged.

When diagnostics are complete, T1 and SSP cards are reinitialized and the appropriate software is downloaded to the cards.

For Tip/Ring cards, additional diagnostics first check the hardware status of the card specified. Then the system tests for dial tone on the card’s channels not in the NONEX state. The result of the dial tone test is one of the following:

- Nonex state — This channel is not checked for dial tone.
- Dial Tone Found — This channel is operational.
- NO Loop Current — The hardware cannot find telephone loop-current from the Central Office, PBX, or ACD. There probably is no telephone line on this port.
- NO Dial Tone — The hardware has found telephone loop-current but could not detect dial tone on this port.

If at least one channel detects dial tone, the entire card detects these frequencies as dial tone. If no channels detect dial tone, the card defaults to 330 and 440 Hz. The outcome of the dial tone tests do not affect the pass or fail results of the diagnostics. If no loop current is detected on a channel and the channel passed diagnostics, and the card is not MANOOS, the channel is placed in FOOS. In this case, the card does not become IDLE regardless of its previous state.
If an Tip/Ring and/or SSP card passes diagnostics, the system displays a message similar to the following:

Diagnose <card> n, Passed.

If a T1 card passes diagnostics, the system displays a message similar to the following:

All tests passed.

You may also receive a message for a Tip/Ring and/or SSP card saying:

Diagnose <card> n, failed <reason>

If a T1 card fails diagnostics, a help screen is provided giving you information to help resolve the reason for the failure. If you try to diagnose cards that are not installed in the system or if they are installed but are in the nonexistent state, the system displays an error message.

To delete out of the command, press DELETE. If this does not stop the command, you may need to press CTRL and \ (backslash key) simultaneously. Be aware, however, that this fixes the console, but does not terminate the diagnostic routine. If, while running diagnose, you wish to abort the command, a message similar to the following may appear:

At the user’s request, administration of the following cmd(s) has been interrupted.

CARD NUMBERS: <card numbers>

To assure proper operation of the identified card(s), run diagnostics at the earliest opportunity.
**Summary of Commands**

It is recommended when `diagnose` is aborted, diagnostics be run again on all cards being administered to ensure they are returned to a fully functional state.

**Examples**

The following example runs diagnostics on card number 3.

```
diagnose card 3
```

The following example runs diagnostics on cards 4 through 7.

```
diagnose card 4-7
```

The following example runs diagnostics on cards 4 through 7 immediately, dropping all calls currently in progress.

```
diagnose card 4-7 immed
```

**dip_int**

The `dip_int` command sends DIP interrupt to a script on a channel or a range of channels.

**Synopsis**

```
dip_int channel
```

```
dip_int channelStart-channelEnd
```
The `dip_int` command sends a message or messages to TSM requesting that TSM send interrupt messages to the script running on `channel` or the range of channels `channelStart-channelEnd`. If no script is running on the channel or if TSM does not own the channel, no action is taken for the channel. The `dip_int` command does not wait for a response from TSM. Scripts running on the channel receive the EDIPINT event.

⚠️ **CAUTION:**

Be careful when you use this command. It may affect other applications running on the system.

**Examples**

The following example requests that TSM send interrupt messages to channel two.

```
dip_int 2
```

The following example requests that TSM send interrupt messages on channels one through 32.

```
dip_int 1-32
```
Summary of Commands

Return Values
If the dip_int command is successful, a 0 value is returned. If any value other than 0 is returned, the dip_int command completely or partially failed.

If the dip_int command returns a value of 2, then dip_int failed due to temporary condition. In this case, the user should attempt the dip_int command again.

See Also
soft_disc

display assignments

The display assignments command displays the services assigned to channels.

Synopsis
disp assignments [option] [option]

Description
The display assignments command is used to display all the services and startup services assigned to channels. The display assignments command options are as follows:

- all (default) — Displays information on all services
- service_name — Displays channels assigned with a specific service
A Summary of Commands

display assignments

- **startup startup_name** — Displays channels assigned with a specific startup service

- **channel chan#** — Displays assignments for channel specified by chan#. A range of channels can be specified.

**Note:** If more than one option is used, the system displays only channels that satisfy all the options given. If an invalid combination of options is given, the system displays an error message.

**Examples**
The following example displays information for channel 1:

```
disp assignments channel 1
```

The following example displays information for all channels that have the service xxx assigned:

```
disp assignments xxx
```

The following example displays information for all channels that have the startup service xxx assigned:

```
disp assignments startup xxx
```
display card

The display card command displays information about specified cards.

Synopsis

disp[lay] card [option [option] ]

Description

The display card command displays data about a specified card or about cards in a specified state. In the output, the physical slot number, the osindex, and the voice system card number are all the same. The output also correctly reflects which card is primary master, which is secondary master, and which cards are slave.

The display card command options are:

- card# port# — Displays information on card card# and on port port# of the specified card. All ports are shown if port# is not given. A range of cards may be specified in the form m–n without using the port# option.
- all — Displays information on all cards.
- mtc — Displays all cards being used by the maintenance process.
- tr — Displays all Tip/Ring (T/R) cards.
- manoos — Displays all cards in the manual out-of-service state.
A Summary of Commands

- **nonex** — Displays all cards in the nonexistent state.
- **broken** — Displays all cards in the broken state.
- **ins[erv]** — Displays all cards that have at least one channel in the in-service state.
- **t1** — Displays all T1 cards.
- **e1** — Displays all E1 cards.
- **sp** — Displays all SSP cards.
- **netoos** — Displays all cards that have at least one channel in the network out-of-service state.
- **hwoos** — Displays all cards that have at least one channel in the hardware out-of-service state.
- **foos** — Displays all cards that have at least one channel in the facility out-of-service state.

If more than one option is used, only cards that satisfy all the options given are displayed. If an invalid combination of options is given, the system displays an error message.

**Examples**
The following example displays card information on channel 2 port 0.

```disp card 2.0```
The following example displays information on all cards.

`disp card all`

Sample output:

CARD 4  STATE: Manoos  CLASS: Signal_Processor(SSP)  O.S.INDEX:  4  
NAME: CWB1  OPTIONS: slave,tdm1  
FUNCTION: play+code

CARD 6  STATE: Manoos  CLASS: Digital(T1)  O.S.INDEX:  6  
NAME: CWB2  OPTIONS: primary_master,tdm1  
FUNCTION: E&M

<table>
<thead>
<tr>
<th>CD. PT</th>
<th>CHN</th>
<th>STATE</th>
<th>STATE-CHNG-TIME</th>
<th>SERVICE-NAME</th>
<th>PHONE</th>
<th>GROUP</th>
<th>OPTS</th>
<th>TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0</td>
<td>0</td>
<td>Manoos</td>
<td>Mar 24 11:26:02</td>
<td>feature_tst</td>
<td>-</td>
<td>2</td>
<td>tdm</td>
<td>T1.5</td>
</tr>
<tr>
<td>6.1</td>
<td>1</td>
<td>Manoos</td>
<td>Mar 24 11:26:02</td>
<td>feature_tst</td>
<td>-</td>
<td>2</td>
<td>tdm</td>
<td>T1.5</td>
</tr>
<tr>
<td>6.2</td>
<td>2</td>
<td>Manoos</td>
<td>Mar 24 11:26:02</td>
<td>feature_tst</td>
<td>-</td>
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A Summary of Commands
display card

6.13  13 Manoos  Mar 24 11:26:02  feature_tst  -  2  tdm  T1.5
The following example displays information on all cards.

CARD  4  STATE: Manoos  CLASS: Signal_Processor(SSP)  O.S.INDEX:  4
NAME:  CWB1  OPTIONS: slave,tdm
FUNCTION: play+code

CARD  6  STATE: Manoos  CLASS: Digital(T1)  O.S.INDEX:  6
NAME:  CWB2  OPTIONS: primary_master,tdm
FUNCTION: E&M

CD.PT  CHN  STATE  STATE-CHNG-TIME  SERVICE-NAME  PHONE  GROUP  OPTS  TYPE
6.0    0  Manoos  Mar 24 11:26:02  feature_tst  -  2  tdm  T1.5
6.1    1  Manoos  Mar 24 11:26:02  feature_tst  -  2  tdm  T1.5
6.2    2  Manoos  Mar 24 11:26:02  feature_tst  -  2  tdm  T1.5
6.3    3  Manoos  Mar 24 11:26:02  feature_tst  -  2  tdm  T1.5
6.4    4  Manoos  Mar 24 11:26:02  feature_tst  -  2  tdm  T1.5
6.5    5  Manoos  Mar 24 11:26:02  feature_tst  -  2  tdm  T1.5
6.6    6  Manoos  Mar 24 11:26:02  feature_tst  -  2  tdm  T1.5
6.7    7  Manoos  Mar 24 11:26:02  feature_tst  -  2  tdm  T1.5
6.8    8  Manoos  Mar 24 11:26:02  feature_tst  -  2  tdm  T1.5
6.9    9  Manoos  Mar 24 11:26:02  feature_tst  -  2  tdm  T1.5
6.10  10  Manoos  Mar 24 11:26:02  feature_tst  -  2  tdm  T1.5
6.11  11  Manoos  Mar 24 11:26:02  feature_tst  -  2  tdm  T1.5
6.12  12  Manoos  Mar 24 11:26:02  feature_tst  -  2  tdm  T1.5
6.13  13  Manoos  Mar 24 11:26:02  feature_tst  -  2  tdm  T1.5
A Summary of Commands
display card

13  14 Manoos Mar 24 11:26:02 feature_tst -  2   tdm T1.5
14  15 Manoos Mar 24 11:26:02 feature_tst -  2   tdm T1.5
15  16 Manoos Mar 24 11:26:02 feature_tst -  2   tdm T1.5
16  17 Manoos Mar 24 11:26:02 feature_tst -  2   tdm T1.5
17  18 Manoos Mar 24 11:26:02 feature_tst -  2   tdm T1.5
18  19 Manoos Mar 24 11:26:02 feature_tst -  2   tdm T1.5
19  20 Manoos Mar 24 11:26:02 feature_tst -  2   tdm T1.5
20  21 Manoos Mar 24 11:26:02 feature_tst -  2   tdm T1.5
21  22 Manoos Mar 24 11:26:03 feature_tst -  2   tdm T1.5
22  23 Manoos Mar 24 11:26:03 feature_tst -  2   tdm T1.5
23  24 Manoos Mar 24 11:26:15 feature_tst -  2   tdm T1.5
24  25 Manoos Mar 24 11:26:15 feature_tst -  2   tdm T1.5
25  26 Manoos Mar 24 11:26:15 feature_tst -  2   tdm T1.5
26  27 Manoos Mar 24 11:26:15 feature_tst -  2   tdm T1.5
27  28 Manoos Mar 24 11:26:15 feature_tst -  2   tdm T1.5
28  29 Manoos Mar 24 11:26:16 feature_tst -  2   tdm T1.5
29  30 Manoos Mar 24 11:26:16 feature_tst -  2   tdm T1.5
30

CARD 13  STATE: Manoos  CLASS: Signal_Processor(SSP)  O.S.INDEX: 13
NAME:  CWB1  OPTIONS: slave,tdm1
FUNCTION: play+code

CARD 15  STATE: Manoos  CLASS: Digital(T1)  O.S.INDEX: 15
NAME:  CWB2  OPTIONS: slave,tdm1
FUNCTION: E&M

CD.PT CHN STATE STATE-CHNG-TIME SERVICE-NAME PHONE GROUP OPTS TYPE
15.0  24 Manoos Mar 24 11:26:15 feature_tst -  2   tdm T1.5
15.1  25 Manoos Mar 24 11:26:15 feature_tst -  2   tdm T1.5
15.2  26 Manoos Mar 24 11:26:15 feature_tst -  2   tdm T1.5
15.3  27 Manoos Mar 24 11:26:15 feature_tst -  2   tdm T1.5
15.4  28 Manoos Mar 24 11:26:15 feature_tst -  2   tdm T1.5
15.5  29 Manoos Mar 24 11:26:16 feature_tst -  2   tdm T1.5
15.6  30 Manoos Mar 24 11:26:16 feature_tst -  2   tdm T1.5
### Summary of Commands display card

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CARD 16 STATE: Manoos CLASS: Digital(T1) O.S.INDEX: 16
NAME: CWB2 OPTIONS: secondary_master,tdm1
FUNCTION: E&M

CD.PT CHN STATE STATE-CHNG-TIME SERVICE-NAME PHONE GROUP OPTS TYPE
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*Intuity*™ CONVERSANT® System Version 7.0 Administration 585-313-501  Issue 3 January 2000  631
### Summary of Commands

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</table>

The following example displays information on all e1 cards.

```
disp card e1
```

The following example displays information on all cards in the Mtc "state.

```
disp card mtc
```

The following example displays information on all T1 cards in the Broken state.

```
disp card t1 broken
```
display channel

The **display channel** command displays channel information.

**Synopsis**

disp[lay] channel *option [option]*
disp chan *option [option]*

**Description**
The **display channel** command is used to list information at the channel level. The **display channel** command options are:

- **number** — Displays information on the channel specified by channel number. A range of channels may be specified in the form m–n.
- **all** — Displays information on all channels.
- **mtc** — Displays all channels being used by the maintenance process.
- **telephone** *tel_number* — Displays channels with telephone numbers assigned.
- **tr** — Displays all Tip/Ring channels.
- **manoos** — Displays all channels in the manual out-of-service state.
- **nonex** — Displays all channels in the nonexistent state.
A Summary of Commands

**display channel**

- **broken** — Displays all channels in the broken state.
- **t1** — This option displays all channels assigned on T1 cards.
- **sp** — This option displays all channels assigned to SSP service.
- **netoos** — This option displays all channels assigned to network service.
- **hwoos** — This option displays all channels assigned to hardware service.
- **foos** — This option displays all channels assigned to facility service.

If more than one option is used, the system displays only channels that satisfy all the options given. If an invalid combination of options is given, the system displays an error message.

**Examples**

The following example displays information for channel 1.

```
disp channel 1
```

The following example displays information all channels being used by the TSM process.

```
disp channel tsm
```

The following example displays information on all channels.

```
disp channel all
```
display dnis

The **display dnis** command displays the services assigned to DNIS and ANI numbers.

**Synopsis**

disp dnis

**Description**
The **display dnis** command is used to display all the services assigned to DNIS and ANI numbers.

**Example**
The following example displays information for all the services assigned to DNIS and ANI numbers:

disp dnis
The `display eqpgrp/group` command displays an equipment group report.

**Synopsis**

```
disp eqpgrp group_number
disp group group_number
```

**Description**

The `display eqpgrp` command is used to list all the equipment assigned to the specified equipment group. The `group_number` is the number of the equipment group. If the group number is missing, the system displays a syntax message. If you specify “all,” the system displays every equipment group.

**Examples**

The following example lists all the equipment assigned to equipment group 1.

```
disp eqpgrp 1
```

The following example lists all the equipment assigned to equipment groups 2 through 20.

```
disp group 2-20
```
The following example lists all equipment assigned to all equipment groups.

```
disp eqpgroup all
```

See Also
assign card/channel
delete eqpgroup

display messages

The `display messages` command displays system (error) messages.

Synopsis
```
display messages
[priority <alarms, critical, 'C', major, 'M', minor, 'm', events, all>] [-c]
[start mm/dd HH:MM:SS]
[stop mm/dd HH:MM:SS]
[card <range, T1, TR, SP, ..., all>]
[channel <range, T1, TR, SP, ..., all>]
[ID <message ID1, message ID2, all>]
[source <TSM, VROP, SPIP, TRIP, ..., all>]
[pattern regular_expression_search_pattern]
[number, all]
```
Description

The `display messages` command displays error and status messages that have been logged by the voice system. Various options are provided so that the display can be limited to specific types of messages. If no arguments are supplied to `display messages`, information is displayed on how to read the messages (the message format) as well as command usage. The messages are written to standard output.

If more messages exist than can be displayed on the screen, you will be prompted with Press the ENTER key to see more, or enter "q" to quit. If you do not wish to be prompted to press ENTER (that is, display all of the messages at once), you may use the -c option.

The `priority` argument should be used to display messages with specific types of urgencies. Two groups of priorities exist: alarms and events. Alarms are messages that have been reported as *C (critical), ** (major), or * (minor) priorities. Events are all the remaining messages that have no priority (for example, status messages). For example, to display the last 100 alarms, type the following:

```
display messages priority alarms 100
```

You can also display specific priorities using the `priority` option. You can specify either the name of the priority or its symbol (for example, critical or *C)

To display all of the critical messages, type the following:

```
display messages priority critical all
```
**A Summary of Commands**

`display messages`

**Note:** You should use the `priority alarm` argument when alarms are needed, otherwise use the `priority events` argument. The priority argument must be used with this command.

Combinations of priorities can also be displayed by listing each priority separated with a comma. For example, to display the last 100 alarms messages, type the following:

```
display messages priority "C","","" all
```

where "C," , " and " must be enclosed in quotes.

**Display Message Options**

If you wish to display only specific types of messages, you may precede the number of messages to be displayed with one or more of the following options:

- `start`
- `stop`
- `card`
- `channel`
- `id`
- `source`
- `pattern`
- `number`
A Summary of Commands

**display messages**

If more than one of the options is specified, the system displays only messages that meet all of the specifications.

**start**

The **start** option allows you to specify a starting time for display of messages. The system displays only messages that were logged on or after the time you specify. The time can be specified by date and/or a time. Using **today** is equivalent to specifying the current date. Examples of specifying the date are:

- “May 1, 1992”
- “05/01/93”
- “05-01-93”

Examples of specifying the time are:

- hh:mm:ss
- hour=hh
- min=mm
- sec=ss

where hh is 0 to 23, and mm and ss can be 0 to 59.

DO NOT mix the hh:mm:ss format with the item==xx format. If portions of the time are not specified, the time default is 0 hours, 0 minutes, and 0 seconds.
Also, giving only the time of day indicates the current date. For example, if today is January 15, 1993, the command `display messages start “12/31 09:00”` displays all of the messages that were logged starting at 9 am on December 31, 1993. In order to display messages from a previous year, you must specify the year. The entire start date and time must be enclosed in quotes (for example, `display messages start “April 21, 1993 13:00:00”`).

If only the date is specified, the time defaults to the beginning of the day. For example, `display messages start today` displays all of the messages that were logged today (the day in which the command is executed).

**stop**

The `stop` option allows you to display messages logged up to a specific time. The date and time syntax is the same as that for the `start` option. Therefore, `display messages stop today` displays all messages that were logged before today.

The `start` and `stop` options can be used together to display messages that were logged over a specific period of time. For example, `display messages start “May 1” stop “May 2”` displays all messages logged on May 1 of this year.

If you want the start and stop options to be the same day (for example, May 1), you must specify the hours and minutes for which you want to display messages. Otherwise, the time defaults to 00:00 for both the start and stop options and no messages are displayed.
card
The card option allows you to specify messages logged about a specific card or cards. For example, display messages card 2 displays all messages logged that are associated with card 2. You can display combinations of cards. For example, display messages card 2,3 displays messages for cards 2 and 3 and display messages card 0-2 displays messages for cards 0, 1, and 2.

You can also use the card option to display messages logged about a specific type of card. For example, display messages card t1 displays all messages logged about T1 cards.

channel
The channel option works like the card option. For example, display messages channel t1 displays all messages logged about T1 channels, whereas display messages channel 5 displays all messages logged about channel 5.

Note: The channel option requires an argument. Typing display messages channel 100 attempts to display all messages pertaining to channel 100. If you want to display the last 100 messages pertaining to any channel, type display messages channel all 100.)
A Summary of Commands

display messages

Note that specifying both the card option and the channel option displays all of the specified card-related messages but, of the channels that are specified, only those that reside on the specified cards are displayed. For example, display messages card t1 channel all 100 displays the last 100 messages logged for T1 cards and T1 channels, whereas display messages card t1 channel tr never displays no messages because it is impossible for a Tip/Ring channel to reside on a T1 card.

id

The id option allows you to display specific message ids that have been logged. For example, display messages id TWIP004 displays all occurrences of that message. For example, display messages id TWIP004,TWIP009 displays all occurrences of both messages.

source

The source option allows you to display messages logged by a particular system process. For example, some of the standard system processes are:
Table 49. Standard System Processes

<table>
<thead>
<tr>
<th>Process Name</th>
<th>Function</th>
<th>Types of Messages Reported</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASAI</td>
<td>Adjunct/Switch Application Process</td>
<td>ASAI Problems/Status.</td>
</tr>
<tr>
<td>MTC</td>
<td>System Maintenance Process</td>
<td>Card/Channel status, Diagnostic Results</td>
</tr>
<tr>
<td>SPIP</td>
<td>SP Card Interface Process</td>
<td>Speech, TTS, PRI, SR Problems/Status</td>
</tr>
<tr>
<td>TSM</td>
<td>Script interpreter/processor</td>
<td>Script Problems</td>
</tr>
<tr>
<td>TRIP</td>
<td>Tip/Ring (Analog) Interface Process</td>
<td>TR Problems/Status</td>
</tr>
<tr>
<td>TWIP</td>
<td>T1 Interface Process</td>
<td>T1 Problems/Status</td>
</tr>
<tr>
<td>VROP</td>
<td>Speech Database Process</td>
<td>Playback/Coding Database Problems</td>
</tr>
</tbody>
</table>

For example, **display messages source TWIP** displays all messages logged regarding T1 cards and channels.
A  Summary of Commands  display messages

pattern
The pattern option allows you to specify a regular expression as accepted by logCat that may appear in any part of a message. (See logCat on page 745 for additional information.) The pattern must enclosed in quotes and surrounded by slashes (/). For example, display messages pattern '/XYZ/' provides all messages that use the pattern XYZ anywhere in the message.

Note: The pattern option is case-sensitive.

number
The number option specifies the number of messages you want to display, or you can use the all value to display all messages. The command accepts a three-digit number so you can display up to 999 messages.

Note: Although the number option only allows up to 3 digits, you may have more than 999 messages logged. Therefore, you can only view up to 999 messages in the message log report with the display messages command. The logCat command with the -t option can be used to display all logged messages. See the logCat command later in this book for more information.
Display Format

All messages are displayed with two or three lines of information. Messages are separated by a blank line to ease viewing. Table 50 on page 646 lists the system message formats along with definitions and examples. Each message displayed conforms to the format shown as follows:

PR DAY MON DD HH:MM:SS ZZZ YYYY   SOURCE
TTTTTTTT YY UU NUM TEXT...
TEXT (Continuation if necessary.)
blank line

Table 50. System Message Formats

<table>
<thead>
<tr>
<th>Field</th>
<th>Definition</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>PR</td>
<td>Priority</td>
<td>*C (Critical), ** (Major), * (Minor), &quot;&quot; (Event)</td>
</tr>
<tr>
<td>DAY</td>
<td>Day</td>
<td>Sun - Sat</td>
</tr>
<tr>
<td>MON DD</td>
<td>Date</td>
<td>Jan 1 - Dec 31</td>
</tr>
<tr>
<td>HH:MM:SS</td>
<td>Time</td>
<td>00:00:00 - 11:59:59</td>
</tr>
<tr>
<td>ZZZ</td>
<td>Time Zone</td>
<td>EST, EDT, CST...</td>
</tr>
<tr>
<td>YYYY</td>
<td>Year</td>
<td>1992,...</td>
</tr>
</tbody>
</table>
### Table 50. System Message Formats

<table>
<thead>
<tr>
<th>Field</th>
<th>Definition</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOURCE</td>
<td>Source</td>
<td>TSM, TWIP, VROP,...</td>
</tr>
<tr>
<td>TTTTTTTT</td>
<td>8 char Msg ID (Tag)</td>
<td>TWIP2104,...</td>
</tr>
<tr>
<td>YY</td>
<td>FRU Type</td>
<td>TR, TI, SP, or HO or -- if N/A</td>
</tr>
<tr>
<td>UU</td>
<td>Unit Type</td>
<td>CA (Card) or CH (Channel) or -- if N/A</td>
</tr>
<tr>
<td>NUM</td>
<td>Unit Number</td>
<td>000 to 999 or --- if N/A</td>
</tr>
<tr>
<td>TEXT</td>
<td>Message Text</td>
<td>Varies with message (See example below); can be more than one line long.</td>
</tr>
</tbody>
</table>

2 of 2
Example
The following example is representative of the output from typing `display messages`:

```
MESSAGE LOG REPORT
Pr  Time          Source
  --  ----          ------
   TWIP017  T1 CA   0 Facility out of service.
               Reason: Blue alarm
*  Wed Jan  6 13:38:21 1993  TRIP
  TRIP002  TR CA   1 Corrupted data detected on TDM bus.
               Timeslot 254. Reason: TDM Parity Error
*  Wed Jan  6 13:41:52 1993  TRIP
  TRIP005  TR CH  24 No loop current.
```
display_permissions

The `display_permissions` command displays the current voice system security permissions for a particular user.

**Synopsis**

`display_permissions user_login`

**Description**

The `display_permissions` command displays the current voice system security permissions for a particular user if any has been assigned.

The `user_login` argument represents the user for which permissions are to be displayed.

**Example**

The following example executes the command to display voice system security permissions for a specific user.

```bash
display_permissions brown
```

**See Also**

`unassign_permissions`

`assign_permissions`
display services

The display services command lists all valid services or scripts.

Synopsis

display services
disp services

Description

The display services command lists all valid services, or scripts, on a system.

Example

The following example lists all valid services or scripts currently on the system.

disp services
edExplain

The edExplain command edits the explanation text for one or more message tags.

Synopsis

edExplain {msgID} [...]  

Description

The edExplain command edits the explanation text for one or more message tags.  

Environment variables for the edExplain command are:

- EDITOR — The program used to edit the explanation text (default: vi).
- EXPLAINDIR — The root directory of the explanation texts (default: /gendb/data/explain).
- VERBOSITY — If set to anything, edExplain will run verbosely.

An explanation file is basically a clear text file. Its contents are displayed “as is” to the user when this explanation is requested. If it is a primary explanation procedure (an explanation that the end user will want to reference by name), it should begin with a line of the form:

<< {tag} [(tag)...] >>
This identifies the explanation or procedure and all its alternate names as defined in the translation file, $EXPLAIN_DIR/translateLst.

The translateLst file should be updated to include the msgID, msg string, and file name, in which the explain text can be found (usually just the msgID name). When exiting the translateLst file, enter :w! followed by q.

Two exceptions exist to the rule that the file contains clear text that will be displayed to the user:

1. Any line beginning with a pound sign (#) character is considered to be an internal comment and is not displayed.
2. Lines beginning with .explain are special directives to include at this point another explanation text in place of this line.

Example

In the following example, the first line is the SCCS identification line and is not displayed to the end user. The second line identifies the explanation. Then the text describing the problem follows.

# %W% %T% %H%
<< TWIP007 TWIP_BDERR >>
.... text of explanation describing what a T1 card error means...
**encode**

The **encode** command converts ADPCM16 or ADPCM32 files to PCM64 files.

**Synopsis**

`encode [adpcm32 | adpcm16]`

**Description**

The **encode** command is a filter that converts PCM64 files to ADPCM16 or ADPCM32 files.

**Note:** ADPCM16 is easy to code and saves space, but does not provide good quality sound.

**Warning**

The voice header used by GSE should be stripped (using stripdhr) before running encode.

Appropriate code headers must be added (using addhdr) before the converted file can be played on the voice system.

**See Also**

`addhdr`
`codetype`
`decode`
`stripdhr`
The `erase` command deletes a phrase from a UNIX talkfile.

**Synopsis**
```
erase phrase phrase_number from talkfile talkfile_number
```

**Description**
The `erase` command deletes the phrases identified by the phrase ID from the UNIX file. The phrase number may be any of the following:

- A single phrase (for example, 1)
- A set of phrases (for example, 1, 2, 5)
- A range of phrases (for example, 1–5)
- All phrases (for example, all)

After you enter the `erase` command, the system displays the following message, asking you to confirm the command before each phrase is erased:
```
Do you want to erase phrase <phrase#>? (y/n)
```

If the `all` option is used for phrases, the system prompts you only once to confirm the command:
```
Are you sure you want to erase ALL phrases from talkfile <talkfile#>? (y/n)
```
If the specified phases does not exist, the system displays:

Phrase <phrase#> does not exist in talkfile <talkfile#>
No action taken.

When the system has deleted the phrase(s), the system prompt is displayed.

**Note:** The `erase` command removes a phrase from the SPEECHDIR default directory, which is `/home2/vfs/talkfiles`.

**Example**

The following command erases phrase 174 from talkfile 23.

`erase phrase 174 from talkfile 23`

The following example erases phrases 218 through 222 and phrase 225 from talkfile 26.

`erase phrase 218-222, 225 from talkfile 26`

The following example erases all phrases from talkfile 29.

`erase phrase all from talkfile 29`

See Also

`add`
`copy`
`list`
explain

The `explain` command displays on-line error message explanations.

**Synopsis**

`explain {msgID} [...]`
`explain -l {pattern} [...]`
`explain -d {msgID} [...]`

**Description**

The `explain` command displays on-line error message explanations. The `{msgID}` is one of the two forms of identification that comes with each message. The primary form is `{CLASS}nnn`, where `{CLASS}` is the class of messages, such as CGEN, TSM, etc., and `nnn` is the index of the message within the class of messages. The second form, available with most messages is the mnemonic form (for example, CGEN_NOMSGQ or CGEN_MSGRCV).

If the explanation of the message fits in 24 lines and only a single explanation has been requested, it is printed without interruption. If the explanation is longer than 24 lines or more than one explanation is requested, the output is paged via the use of a paging program. Use the `-d` option to disable paging. The default paging program is `/bin/pg`. 
If the -l option is used, `explain` looks up all messages whose `{msgID}` matches the pattern. For example, `explain -l A V` lists the names of explanations available that begin with either “A” or “V,” while `explain -l VROP` lists all explanation names available that begin with `VROP`. In other words, the `(pattern)` is anchored at the beginning of the `{msgID}` and assumes a match of anything after the pattern selected.

Variables for Advanced Users

The `explain` command is also affected by certain environment variables. These environment variables are intended for advanced users only.

- **PAGER** — The pager program used if the explanation is longer than 24 lines or more than one explanation is requested. The default is `pg`. If you do not want paging even for long explanations, using `-d` or setting `PAGER=cat` disables paging. A one line form would be:

  ```
  PAGER=cat explain {msgID} or explain -d {msgID}
  ```

- **EXPLAINDIR** — The directory in which the explanation directories are found. The default is `${PRODUCTROOT}/gendb/data/explain`.

- **PRODUCTROOT** — This is the installation directory and defaults to `/ (root)`.

- **VERBOSITY** — This is a debugging aid. Setting it to anything causes debugging output to be generated while `explain` performs its job.
The `edExplain` command allows you to add or change explanations. An explanation comes in two parts, a file containing the explanation itself, and a set of synonyms or translations that allow the `explain` command to find the file under more than one tag. To create a new explanation, you must provide both. When modifying an existing explanation, all you need to do is edit the file containing the explanation.

The explanation file itself is almost a clear text file of what you want the user to see when they ask for the explanation. There are two features of the file that are not plain clear text. All lines beginning with the pound sign (`#`) character are treated as internal comments and are not output. Also lines of the form `explain {msgID}` have special meaning. They cause the inclusion of the explanation text specified by the `{msgID}`. This allows you to have common explanations and reference from more than one explanation.

The recommended format for an explanation procedure is:

```
# Comment and SCCS keywords
<< {msgID} [{msgID}...] >>
{text of message}
...
```

When creating a new explanation procedure, you will be asked to edit the synonyms list and be placed in the appropriate `translateLst` file. There are instructions at the top of the file. Each non-comment line is a list of synonyms, with the right most word on the line being the name of the file in which the text is located. For example:
The descriptions for ADM001 and ADM_SYSERR are found in a file named ADM_SYSERR. The descriptions for ALERT003 and AL_INVALID_THRESHOLD are found in a file named AL_INVALID_T. The second example has a truncated file name, because file names are limited to 14 characters in most UNIX systems and if you want to use source code control, then the file name must not be longer than 12 characters. The recommended way to store an explanation is under a file name related to the mnemonic \{msgid\} rather than the \{CLASS\}nnn name, since the later is meaningless. A file name of the form \{CLASS\}nnn does not provide a sophisticated user with much information about the contents of the file, while the mnemonic form does. If the mnemonic is longer than 12 characters, then you should create a shorter name related to the mnemonic that is unique within 12 characters.

There are some environment variables that affect the behavior of edExplain:

- EDITOR — This is the name of your preferred text editor. The default is vi.
- EXPLAINDIR — This is the directory in which the explanation directories are found. The default is ${PRODUCTROOT}/gendb/data/explain.
- PRODUCTROOT — This is the installation directory and defaults to / (root).
- VERBOSITY — This is a debugging aid. Setting it to anything cause debugging output to be generated while edExplain performs its job.
A  Summary of Commands

Files
/gendb/data/explain # directory in which explanation directories are located.
/gendb/data/explain/translateList # file containing the synonym list of {msgID}s.

See Also
edExplain

faxit

The faxit command allows you to queue or send a fax from the command line.

Synopsis
• To queue a fax:
  /sbfax/bin/faxit -q -f fax_file
• To send a fax:
  /sbfax/bin/faxit -s -n delivery_number
    [-t delivery_time_in_hhmm] [-i retry interval in minutes]
    [-c retry_count] [-T "TSI_string"] [-G Equipment_Group]
To queue and send a fax:

```
/sbfax/bin/faxit -S -f fax_file -n delivery_number
[-t delivery_time_in_hhmm] [-i retry_interval_in_minutes]
[-c retry_count] [-T "TSI_string"] [-G Equipment_Group]
```

**Description**

The basic parameters for the `faxit` command are as follows:

- `-q` — Queues a fax
- `-s` — Sends a fax in that is queue
- `-S` — Queues and sends a fax

Depending on the action (queue and/or send), the `faxit` command has the following parameters:

- `-f fax_file` — Specifies the name of the file you want to be queued for fax transmission. The field has the following requirements:
  - You can specify the entire pathname of the file, or a file name under `/usr/faxdb/FR/WORKFAX`.
  - The file must be either in ASCII text or TIFF Class F format.

**Note:** A fax loaded through the Loading and Printing Screen is in the TIFF Class F format.
-n delivery_number — Enter the telephone number to which the fax will be delivered.

A total of 32 characters can be entered for the delivery number.

The following characters can be used in the FAX Delivery Number field:
0, 1, 2, 3, 4, 5, 6, 7, 8, 9, asterisk (*), pound sign (#), comma (,), and dash (-).

- Using a comma (,) causes a 1-second pause during dialing on lines in all equipment groups, both digital (T1) and analog (Tip/Ring). For longer pauses, multiple commas can be used.
- For lines in analog equipment groups, using a dash (-) causes a short (0.1-second) pause during dialing.

Note: The dash (-) cannot be used on digital (T1) lines.

The pauses are useful in situations where a delay is required in the dial string, for example, when dialing out through a restricted trunk that requires a pause before input of a PIN (personal identification) number. For example, the following entry includes a 6-second delay between the dial string and the 5-digit PIN (12345): “9-614551212, , , , , , 12345”
A Summary of Commands

- **-t delivery_time_in_hhmm** — Enter the time the out-of-call (as opposed to the current call) fax should be delivered. Specify a 2-digit hour (hh) and a 2-digit minute (hhmm) using a 24-hour clock, or use the string `immediate`.

  If the FAX does not require immediate delivery, specify a time outside normal business hours to reduce transmission costs.

- **-i retry_interval_in_minutes** — Enter the interval (in minutes) between fax retries for a fax whose delivery has been attempted but has failed.

- **-c retry_count** — Enter the number of times the fax delivery should be retried in the case of a failure.

- **-T "TSI_String"** — The user-definable “Transmitting Subscriber Identification” for Group 3 faxes. This contents of this field is printed at the top of each received page with the page number, date sent, etc. Use this field to specify the sender’s fax telephone number, company name, or other numeric string. The string is also displayed on the receiving fax machine’s LED screen. The string must be contained in quotes.

- **-G Equipment_Group** — Enter the equipment group number to use for this action.

Conversion Tools

You may require a tool to convert files in other formats to fax files. For information on installing and using the `tif2tiff.exe` and `tif2itf` conversion tools provided with the Intuity CONVERSANT system see Appendix E, “Format Conversion Tools for Fax Files,” in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.
faxlog

The faxlog command displays all the fax transmission and reception attempts.

**Synopsis**

faxlog

**Description**

Every fax transmission or reception attempt results in an entry to the faxlog command output. The faxlog command provides the following information for each fax:

- Indicator of whether fax is incoming or outgoing
- Start time of the transmission or reception
- Job identification of the fax
- Destination number for the fax
- Length of the transmission or reception
- Number of pages
- Status of the fax
- Substatus of the fax
A Summary of Commands

Faxq

For information on the entries in the SUB-STATUS field, see "Repairing Script Builder FAX Actions Troubles" in Chapter 1, "Troubleshooting," in Intuity CONVERSANT System Version 7.0 System Reference, 585-131-205.

Example

Figure 221 on page 665 shows an example of output from the faxlog command.

Figure 221. faxlog Output

<table>
<thead>
<tr>
<th>START TIME</th>
<th>JOB-ID</th>
<th>DESTINATION</th>
<th>DUR</th>
<th>PG</th>
<th>STATUS</th>
<th>SUB-STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>02/23/98 13:12:43</td>
<td>map100p6-00080</td>
<td>-</td>
<td>02:45</td>
<td>3</td>
<td>Received Ready</td>
<td></td>
</tr>
<tr>
<td>03/04/98 11:31:20</td>
<td>map100p6-00000</td>
<td>-</td>
<td>00:14</td>
<td>1</td>
<td>Received Ready</td>
<td></td>
</tr>
<tr>
<td>03/04/98 12:10:53</td>
<td>map100p6-00001</td>
<td>-</td>
<td>00:14</td>
<td>1</td>
<td>Received Ready</td>
<td></td>
</tr>
<tr>
<td>02/23/98 13:23:25</td>
<td>map100p6-00001 111</td>
<td>-</td>
<td>00:00</td>
<td>2</td>
<td>Failed Halted</td>
<td></td>
</tr>
<tr>
<td>02/23/98 13:24:24</td>
<td>map100p6-00002 123</td>
<td>-</td>
<td>00:00</td>
<td>1</td>
<td>Failed Halted</td>
<td></td>
</tr>
<tr>
<td>03/05/98 08:59:14</td>
<td>map100p6-00007 3409</td>
<td>-</td>
<td>00:00</td>
<td>1</td>
<td>Failed Halted</td>
<td></td>
</tr>
</tbody>
</table>

Faxq

The faxq command outputs a report of all Script Builder FAX Actions delivery jobs currently in the system.

Synopsis

faxq
A fax job is any fax waiting in the system for delivery. Completed fax jobs are not reported by the faxq command. For information on all completed fax jobs, use the faxlog command. For information on completed out-of-call fax jobs only, use the faxrpt command or the Out of Call Fax Report. See Out of Call Fax Report on page 491 in Chapter 8, Common Administration for more information.

The faxlog command provides the following information for each fax:

- **Job ID** — The job ID returned by irAPI or by the FAX_Send action.
- **Date/Time Submitted** — The date and time that the job was submitted.
- **Date/Time Next Attempt** — The date and time the job is to be processed. This is the time specified by the application is no attempt has been made, or the subsequent retry due time if an attempt has been made but failed.
- **Pgs/Snt** — The number of pages submitted (Pgs) and the number of pages transmitted (Snt).
- **S** — The current status of the job:
  - ~ F — The job failed (final failure).
  - ~ W — The job is waiting to be retried.
  - ~ D — The job is delayed by the user by being scheduled for future delivery.
A Summary of Commands

faxq

~ A — The job is awaiting addressing because the destination number is not found.
~ X — The job is being transmitted.
~ P — The job is being processed.
~ S — The job has been sent.
~ F — The job process failed.
• Destination — The telephone number where the fax is to be delivered.

Example
Figure 222 on page 667 shows an example of output from the faxq command.

Figure 222. faxq Output

<table>
<thead>
<tr>
<th>Job Id</th>
<th>Date/Time</th>
<th>Date/Time</th>
<th>Submitted</th>
<th>Next Attempt</th>
<th>S</th>
<th>Pgs/Snt</th>
<th>Destination</th>
</tr>
</thead>
<tbody>
<tr>
<td>jay3-00581</td>
<td>12/02/99 13:30</td>
<td>R</td>
<td>002/000</td>
<td>9,551212, , , , , , , , ,</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The `faxrpt` command prints a report on completed or failed out-of-call faxes. It provides information that identifies each fax, including the date, time, job ID and destination number. It also indicates whether transmission was successful and the number of pages transmitted. If transmission was unsuccessful, the report provides a reason for failure.

The report displays information from the out-of-call fax log, which contains records for the most recent 14 days that faxes were transmitted. Faxes older than 14 days may be displayed if no faxes were transmitted on some days.

**Note:** The `faxrpt` command does not list incoming faxes or faxes sent when the delivery number is specified as CURRENT for a FAX_Send action. See "FAX_Send" in Chapter 8, "Using Optional Features," in *Intuity CONVERSANT System Version 7.0 Application Development with Script Builder*, 585-313-206, for more information on CURRENT and out-of-call faxes. The report also does not include active fax jobs. Use the `faxq` command for information on actively queued jobs.

**Synopsis**

`faxrpt jobID [start_date] [end_date]`
Description
This command provides output from the same out-of-call fax log as the Out of Call Fax Report. See Out of Call Fax Report on page 491 in Chapter 8, Common Administration for more information.

The faxrpt command has the following parameters:

- **jobID** — The job ID returned by irAPI or by the FAX_Send action, or all. Using all causes faxrpt to print all fax jobs in the out-of-call fax log for the date specified.

**Note:** FAX_Send returns only the numerical portion of a job ID.

- **start_date** — The start date for which data is to be reported, in the format mm/dd/yy, or mm/dd/yyyy, where mm is the month, dd is the day, and yy or yyyy is the year. If this parameter is omitted, the system uses the date of 0 AD.

- **end_date** — The end date for which data is to be reported, in the format mm/dd/yy or mm/dd/yyyy. If a 2-digit year argument is used, the following rules apply:
  ~ If the year argument is 70 or greater, the 20th century is assumed; for example, 11/27/99 is interpreted as November 27, 1999.
  ~ If the year argument is 00 through 69, the 21st century is assumed; for example, 11/27/06 is interpreted as November 27, 2006.
A Summary of Commands

Examples
The following example prints the entire out-of-call fax log.

`faxrpt all`

The following example prints the entire contents of the out-of-call fax log from November 30, 1999 to the present.

`faxrpt all 11/30/99`

The following example outputs the entire out-of-call fax log for the month of November 1999.

`faxrpt all 11/01/99 11/30/99`

The following example prints the out-of-call fax log entry for job falcon2-08000.

`faxrpt falcon2-08000`

Figure 223 on page 670 shows an example of output from the `faxrpt` command.

Figure 223. faxrpt Output

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>JobId</th>
<th>Status</th>
<th>Cause</th>
<th>Pgs</th>
<th>Destination</th>
</tr>
</thead>
<tbody>
<tr>
<td>03/16/99</td>
<td>11:30:11</td>
<td>08000</td>
<td>Sent</td>
<td>OK</td>
<td>1</td>
<td>601,1033</td>
</tr>
</tbody>
</table>
findHomes

The **findHomes** command populates your home directory with user files saved as part of assisted upgrade.

**Synopsis**

```bash
findHomes [-?] [-v] [-D dir]
```

**Description**

The **findHomes** command provides a convenient way to restore your files from the location where they are saved by the Upgrade Assistance Package to the home directory for each user defined in the `/etc/passwd` directory, if the user has the same login ID as they had on the pre-upgrade system.

For each user, the entire directory structure (including all files) preserved from the user home directory on the pre-upgrade machine is moved to the user home directory on the upgraded system. If a saved file has the same name as a file which already exists in a user’s home directory on the upgraded system, the saved version is moved to `o.filename` in that directory.

Files for any users whose login ID changes from the pre-upgrade system to the upgraded system must be manually moved from their saved location to their new home directory. This manual intervention will also be required for users who did not use their login ID as the name of their home directory on the pre-upgrade system.
Summary of Commands

The `findHomes` command should be run after the assisted software upgrade has completed and logins for all users expected to move from the pre-upgrade system to the upgraded system have been administered on the upgraded system.

Parameters for the `findHomes` command are:
- `?` — Displays a help message.
- `-v` — Causes a list of saved files to be printed as they are moved.
- The `-D dir` — Specifies an additional directory to be searched for saved user files.

The Upgrade Assistance Package saves user files in `/home/o.homedir`, where `homedir` is the last directory in the full-path-name home directory specified for each user in the `/etc/passwd` file on the pre-upgraded system. Often, `homedir` is the user’s login ID. If the file restoration to this directory fails, then the files are restored in a directory with the full pathname of the user’s home directory on the pre-upgraded system.

Note: A message is printed indicating any directory for which all the files are not successfully relocated.

Example
The following example causes all files found in `/home/o.homedir` and `/usr/homedir` to be moved to the home directory specified for each non-system user specified in the `/etc/passwd` file on the upgraded system:

```
findHomes -v -D/usr
```
The `fixLogFile` command upgrades existing logging files after `lComp` is run so that data continues to be readable by `logCat`.

### Synopsis

```
fixLogFile [-d] [-s {save-file}] [-r] [-a] [-S] [-o {spec}] [-n {spec}]
file1 [file2...]
```

### Description

When classes of logging messages are expanded, contracted, inserted, or removed, `fixLogFile` can change the index assignments of messages. When this happens, messages whose indexes changed and were logged under the previous environment become unexpandable by `logCat`. The `fixLogFile` command, given information about the previous assignments and the new assignments, upgrades logged data so that it remains expandable by `logCat`.

Each message is examined. If the class of messages appears in the new environment and still covers the index assigned to the message, a new index is assigned based on where it appears in the new environment. If the class of messages is no longer part of the message logging environment or if a class is reduced in size so that it no longer covers the index of a message, then it is necessary to do one of three things:

- `-d` — Deletes the message entirely from the logging file.
• **-r** — Demaps the message. This entails expanding the message in the old environment and then creating a new logging message using the LOG_REMAP_DISCARD format so that the data is still readable in the log files, but is marked as being part of a discarded message environment. This is the default behavior.

• **-s {save_file}** — Removes the message from the original logging file and saves it in the specified file, thus preserving the unique data for possible later retrieval.

Normally, `fixLogFile` generates a short message about each file that it converts. The `-s` flag suppresses this output.

The `fixLogFile` command requires access to the old `o.systemLog.h` and `o.textLogFmt` files and the new `systemLog.h` file to perform its job. It expects to find these files in `$LOGROOT/formats`. If alternate sources of these files are to be used, the `-o` and `-n` flags are used. Each of these flags takes a `{spec}` argument, which has the following form:

```
{dir}[,{systemLog.h}][,{textLogFmt}]
```

The default values for these two specifications is:

- `-o ${LOGROOT}/formats,o.systemLog.h,o.textLogFmt`
- `-n ${LOGROOT}/formats,systemLog.h,textLogFmt`
The `{dir}` portion specifies an alternate directory in which the
{systemLog.h} and {textLogFmt} files are to appear. If the remainder of
the `{spec}` is missing, the default file names apply. If specified, the
{systemLog.h} and {textLogFmt} portions specify the names of these two
files as they appear in the specified `{dir}`. Any section of the specification that
is skipped retains its previous or default value.

A list of one or more logging files may be specified. If they are listed, each
one is assumed to be a compressed logging file and is converted. The `-a`
option automatically converts all of the compressed logging files found in
${LOGROOT}/data. No file names can be provided if the `-a` option is
specified. When the `-a` option is used, each regular file found in
${LOGROOT}/data is examined to see if it is a compressed logging file. If it is
not, it is ignored. If it is, it is converted.

After the files are converted, the time stamps are reapplied so they have the
same date after conversion as they did before the conversion.

Caveats
The `fixLogFile` command only takes care of changes in classes of logging
message. For example, if the class PERM was added, removed, or moved,
fixLogFile could correctly deal with the changes to the logging files. The
fixLogFile command does not deal with reorganizations or changes of
messages within a class. Do not change the order of appearance messages
or the arguments to a logging message if you expect to be able to expand the
data in the future or save the previous textLogFmt file for the expansions.
If the conversion takes place while the `logdaemon` process is running, be sure to either stop and restart `logdaemon` or reinitialize it using the `reinitLog` command.

See Also

`logCat`
`logdaemon`

get_config

The `get_config` command gets the `/vs/data/confData` file from floppy disk.

Synopsis

`/vs/bin/util/get_config`

Description

The `get_config` command is used to retrieve from the CONFIGURATION DATA floppy for a particular machine the `/vs/data/confData` file. That file represents the configuration of the voice system machine as it was shipped from the factory or as determined by the Hardware Resource Allocator (/vs/bin/util/configure command) after the last upgrade was performed on the machine.

The `get_config` command should be used as the first step in upgrading an existing voice system machine in the field.
A Summary of Commands

gse

Files
/vs/data/confData

See Also
configure
save_config
show_config
show_devices

gse

The `gse` command invokes the Graphical Speech Editor (GSE) used for speech files.

Synopsis

gse [-l chan#] [-p playchan#] [-r recchan#]

Description

The `gse` command invokes the GSE for speech files. Speech files are opened using a standard Motif interface, and various editing tasks such as cutting, pasting, and changing speech volume can be performed. Recording and playback is provided through the tipring card as well.
A Summary of Commands

**gse**

**Note:** The voice system can be stopped while using the GSE. Entering the **gse** command results in a system prompt asking you if it is okay to stop the voice system.

**Parameters** for the **gse** command are:

- **-l chan#** — Argument used to specify a single channel to use for speech playback and recording. If this argument is not specified, and if the **-p** and **-r** arguments are not specified, then the channel number defaults to 0.
- **-p playchan#** — Argument used to specify which channel to use for speech playback.
- **-r recchan#** — Argument used to specify which channel to use for speech recording.
- **-D directory** — Argument used to specify that the program will start in the given directory.
- **-O** — Option used for debugging purposes that causes certain tipring events to be displayed in an output window.
- **-I** — Option that inhibits automatic resetting of the tipring circuit cards.

The designated channels must be configured for both input and output; this will facilitate recording and playing back speech phrases. The **-l** channel is used for telephone lines and incorporates both audio input and output. Alternatively, the **-p** and **-r** channels must be used together to establish the audio input/output, where **-r** (input) is designated for the microphone, and **-p** (output) for the speaker.
CAUTION:
Channel numbers for the gse are hardware channel numbers, not voice system channel numbers. For the method for computing hardware channel numbers, see Appendix C, “Calculating the O.S. Index,” of Intuity CONVERSANT System Version 7.0 Speech Development, Processing, and Recognition, 585-313-201.

See Also
- gse_add
- gse_addpl
- gse_copy
- gse_copypl

**gse_add**

The **gse_add** command transfers a speech phrase from a UNIX file to a UNIX file in the Graphical Speech Editor (GSE) format.

**Synopsis**

```
gse_add talkfile_number phrase_number codestyle input_file
```
Description
The `gse_add` command transfers a speech phrase from a UNIX file to a talkfile in a GSE format. Use this command when a phrase that does not belong to a speech pool needs to be added to a talkfile.

The `talkfile_number` and `phrase_number` parameters refer to the talkfile and phrase identifiers in the speech file system. The talkfile and phrase numbers of the phrases to be added must be known. Use the `list` command when this information is not known. The `codestyle` parameter can be pcm64, adpcm32, or adpcm16. The `input_file` parameter is the file from which the phrase is to be taken.

Example
The following example adds the phrase 100 to talkfile 103 using ADPCM32 format from the file `/usr/speech/103/1000`.

```
gse_add 103 100 adpcm32 /usr/speech/103/1000
```

See Also
`gse_addpl`
`gse_copy`
`gse_copypl`
The gse_addpl command adds (restores) phrases to a specific speech pool from UNIX files in the Graphical Speech Editor (GSE) format.

**Synopsis**

```
gse_addpl speech_pool input_directory codestyle [file1...fileN]
```

**Description**

The `gse_addpl` command reads the phrase list file in the speech pool (`/speech/talk/speech_pool.pl`) to determine the talkfile, phrase numbers, and file names of the phrases to be added. Use the Shared Speech Pools screen for the Script Builder application to determine which speech pools are being used by the application.

Parameters for the `gse_addpl` command are:

- **speech_pool** — The name of the speech pool to which the speech is to be added.
- **input_directory** — The name of the directory where the GSE edited files are located.
- **codestyle** — Either pcm64, adpcm16, or adpcm32.
A Summary of Commands

<table>
<thead>
<tr>
<th>gse_addpl</th>
</tr>
</thead>
</table>
| file1 through fileN — Optional file names identifying the phrase names to be added. If no file names are specified on the command line, all phrases in the speech pool for which file are found in input_directory are added. If file names are given, only the phrases with the particular file names that are specified in the phrase list file are added.

An unrecorded phrase is marked with a negative number in the phrase list file. If gse_addpl is used to add a previously unrecorded phrase, the phrase number is changed to a positive value to indicate the phrase exists. The applications using that phrase list must then be verified and installed with the specific speech pool.

Example

The following example adds phrases 1000, 1001, and 1002 to talkfile 103 using ADPCM32 format from files f1000, f1001, and f1002 in the directory /speech/talk/talk3.files.

```
gse_addpl talk3 /speech/talk/talk3.files adpcm32
```

See Also

gse

gse_add

gse_copy

gse_copypl
The \texttt{gse_copy} command extracts a speech phrase from the speech file system to a UNIX file in the Graphical Speech Editor (GSE) format.

**Synopsis**

\texttt{gse_copy talkfile_number phrase_number output file ["tag"]}

**Description**

The \texttt{gse_copy} command extracts a speech phrase from the speech file system to a UNIX file. This command may be used when a phrase that does not belong to a speech pool needs to be edited.

- The \texttt{talkfile_number} and \texttt{phrase_number} parameters refer to the talkfile and phrase identifiers in the speech file system. The talkfile and phrase numbers of the phrases to be added must be known. Use the \texttt{list} command when this information is not known.

- The \texttt{output_file} parameter is the file where the speech phrase is to be placed.

- The \texttt{"tag"} parameter is an optional 50-character string that is placed into the GSE voice header of the output file. The GSE displays the tag value when the file is being edited.
A  Summary of Commands

**gse_copy**

**Note:** You must keep record of which extracted files are associated with what talkfile and phrase in order to return the speech to its proper place after editing. We recommend that the **output_file** be the same as the **phrase_number** and the directory containing the **output_file** be the same as the **talkfile_number**. See the example below.

**Example**
The following example extracts phrase 1000 from talkfile **103** and places it in the file **/usr/speech/103/1000** for editing by the GSE.

```
gse_copy 103 1000 /usr/speech/103/1000
```

**See Also**
- gse
- gse_add
- gse_addpl
- gse_copypl
The `gse_copypl` command allows multiple speech phrases to be copied from the speech file system in the Graphical Speech Editor (GSE) format.

**Synopsis**

```
gse_copypl speech_pool output_directory [file1...fileN]
```

**Description**

The `gse_copypl` command allows you to copy multiple speech phrases from the speech file system. It reads the phrase list file belonging to the speech pool (`/speech/talk/speech_pool.pl`) to determine the talkfile, phrase numbers, and output file names for the phrases to be extracted. Use the Shared Speech Pools screen for the Script Builder application to determine which speech pools are being used by the application.

The `speech_pool` parameter is the name of the speech pool from which the speech is to be retrieved. The `output_directory` parameter is the name of the directory where the output files are to be placed. The `file1` through `fileN` parameters are the optional file names identifying the particular phrase names to be extracted. If no output file names are specified on the command line, all phrases in the speech pool are extracted. If file names are given, only phrases with those file names specified in the phrase list file are extracted.
Example
The following example extracts phrases 1000, 1001, and 1002 from talkfile 103 and places them in files f1000, f1001, and f1002 (respectively) in the directory/speech/talk/talk3.files. These files are then ready to be editing using the GSE.

    gse_copypl talk3 /speech/talk/talk3.files

See Also
    gse_add
    gse_addpl
    gse_copy

hasRAID

The hasRAID command reports whether the system has a RAID configuration.

Synopsis
    hasRAID

Description
The hasRAID command prints one of two responses to standard out:

- yes — This is a RAID system.
- no — This is not a RAID system.
The `hassign` command assigns host service to host sessions.

**Synopsis**

```
hassign [hostsvc] host_application to session# [FTSCRT]
```

**Description**

The `hassign` command assigns applications to session numbers. It is necessary to use this command to associate an application with host interactions to a given logical unit (LU). One host session corresponds to one LU.

The `FTSCRT` argument is required to assign that session for file transfer. If you are using file transfer, valid session numbers are 0–31 (that is, only sessions on the first host communication card can be used for file transfer).

The `hassign` command automatically executes the host maintenance login sequence on the specified session.
If the application "appl" is currently assigned to a particular session, and a new application "new_app" is assigned to that same session, the old application "appl" is logged out and "new_app" is logged in. In other words, the application currently assigned to the session is replaced by the new application you wish to assign.

If the application "my_appl" is assigned to session 0 and you wish to assign the application "your_appl" to session 0, you must:

1. hlogout the application "my_appl"
2. hfree the application "my_appl"
3. hlogin the application "your_appl"

If the application "my_appl" is already assigned to session 0 but the state is logged out and hassign is run on "my_appl" again, nothing happens. You need to run hlogin to log the application "my_appl" back in.

Example
In the following examples, the user is assigning the host application "my_appl" to session 0, to session 0–19, and to all sessions (up to 64 total with 2 host communications cards installed), respectively.

hassign my_appl to 0
hassign my_appl to 0-19
hassign my_appl to all
In the following example, the user is assigned in the host application “file_trans” to session 0 for file transfer.

```
hassign file_trans to 0 FTSCR
```

**See Also**

hdelete

**hcapture**

The **hcapture** command saves the unrecognized screen exchanged between a host and the Intuity CONVERSANT system.

**Synopsis**

- `hcapture [-a application | -l LU_range]`
- `hcapture -m <on> -a application | -l LU_range`
  `-d directory_name`  `-s number_of_screens`
- `hcapture -m <off> -a application | -l <LU range 0~28>`
A Summary of Commands

hcapture

Description

**Hcapture** saves the unrecognized screen exchanged between a host and CONVERSANT based on a specified range of logical units (LUs) or the LUs of the specified application. The captured screen is saved in a binary format for display by **hdefine** and can be inserted into Script Builder application `.sc` files. The information saved is the screen image, time of capture, application name, LU number, and voice channel number. This information is stored in a file name associated with the Script Builder application and the LU (such as `application.01` for LU1) in the directory specified in the command line or the default directory: `/vs/data/hcapture`.

The number of screens to be saved is established by the command line `-s` option; the default is 100. A subsequent command to turn on **hcapture** will supersede the previous `-s` setting. However, the new data will be captured for that LU until the utility is turned on again with the size larger than the current setting or the files will be removed.

You must make sure the system has enough space to store the data; each screen consumes about 2K bytes of disk space.

Hcapture terminates when the hostdip goes down or when the hdefine command is executed. All command line settings are lost.
### Summary of Commands

#### hcapture

The **command line** parameters are:

- **-m** — Turns the operation mode of `hcapture` on/off.

- **-a** — Specifies the application name. If this option is used, the application has to be associated with an LU. The command will check against the `/vs/data/hostsvc` file for that. This option is mutually exclusive with the `-l` option.

- **-l** — Specifies the range of LUs. The LU does not have to associated with an application.

- **-d** — Directory where the screen should be saved if specified. The default directory and file is `/vs/data/hcapture/application.01 ~ 128`.

- **-s** — Number of screens allowed. Default is 100 screens.

**See Also**

- `hdefine`
- `hdump`
hconfig

The hconfig command configures host interface parameters.

Note: See Configure Host Sessions on page 71 in Chapter 3, Voice System Administration, to configure host interface parameters.

Synopsis

hconfig [-t {SDLC / TR}] [connection_name]
hconfig -c [-t {SDLC / TR}]
hconfig -l [-t {SDLC / TR}]
hconfig -w fieldname_1=value_1...fieldname_n=value_n

connection_name

hconfig -d connection_name
hconfig -r old_name new_name
hconfig -n
hconfig -s
hconfig -b
hconfig -a connection_name
hconfig -m
Description
The `hconfig` command is the command interface used to read and write LINKix configuration files.

When used with no options, the `hconfig` command outputs the current values for the connection parameters for the specified connection, or all connections, if no connection is specified.

If the `-t` option is specified, only connections of the specified type, SDLC or Token Ring, are displayed. If a connection is an SDLC connection, the following fields are displayed: connection name, adapter, local sap, remote sap, node id to send, encoding, constant carrier, poll address, and LU. If a connection is a Token Ring connection, the following fields are displayed: connection name, adapter, local sap, remote sap, node id to send, remote address, and LU.

Parameters for the `hconfig` command are:

- `-c` — Generates a list of defined connection names. If the `-t` option is specified, only the names of connections of the specified type, SDLC or Token Ring, are displayed.
- `-l` — Generates a list of defined LUs and their associated connection names. If the `-t` option is specified, only the LUs of the specified type, SDLC or Token Ring, are displayed.
Summary of Commands

- **-w** — Writes the value `value` to the fieldname `fieldname` parameter of the connection `connection_name`. The following fields are supported for SDLC connections: name, card_number, line_type, node_send, encoding, const_carrier, poll_address, LU.

- **-d** — Deletes a connection.

- **-r** — Renames a connection from `old_name` to `new_name`.

- **-n** — Renumbers host sessions. The voice system must be stopped before renumbering is done.

- **-s** — Synchronizes the `/vs/data/hostsvc` file with the current configuration. The voice system must be stopped before resynchronization can be done.

- **-b** — Generates a list of the SDLC cards in the system. The output shows the card number, whether a connection has been configured for that card, the card type (PC/XL or FIFO/SIB), the IRQ, the I/O address, and the RAM address (for PC/XL cards only).

- **-a** — Specifies the connection over which NetView Alerts are sent.

- **-m** — Determines the Token Ring MAC Address of the voice system.

**Note:** The voice system must be restarted before any configuration changes take effect.
Example
In the following examples, the user is unassigning the host application “my_appl” from session 0, from session 0–19, and from all sessions (up to 64 total with 2 host communications cards installed), respectively.

   hdelete my_appl from 0
   hdelete my_appl from 0-19
   hdelete my_appl from all

See Also
hassign
hfree

hdefine

The hdefine command displays the host screen files created by hcapture.

Synopsis
hdefine [-d directory_name]
### Description

**Hdefine** displays the host screen information saved with the **hcapture** command in a two-page format. The first page shows the full host screen image. The second page shows related information such as the time the image was captured, the application name, the logical unit (LU) number, the voice channel number, and control instructions such as how to go to the next page, the previous page, how to delete the current screen or how to append the screen to an **application.sc** file for Script Builder applications.

**Hdefine** causes **hcapture** to be terminated.

The **hdefine** command option is:

- **-d** — Directory where the host screen is stored. The default directory is `/vs/data/hdump`.

Table 51 describes the control options.

#### Table 51. Control Sequences

<table>
<thead>
<tr>
<th>Sequence</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>n RETURN or RETURN by itself</td>
<td>Means go to next page. A beep sounds when you are at the last page.</td>
</tr>
</tbody>
</table>

Table 51 on page 696 describes the control options.
## Table 51. Control Sequences

<table>
<thead>
<tr>
<th>Sequence</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>p RETURN</td>
<td>Means go to previous page. A beep sounds when you are at the first page.</td>
</tr>
<tr>
<td>d RETURN</td>
<td>Means delete the current screen and its related information page.</td>
</tr>
<tr>
<td>a RETURN</td>
<td>Means the name of the <code>application.sc</code> you want to append the screen to.</td>
</tr>
<tr>
<td>q RETURN</td>
<td>Means exit <code>hdefine</code>.</td>
</tr>
</tbody>
</table>

General control sequence information will be shown before the first screen is displayed. A message is displayed if no screen is found in the captured files.

### See Also
- `hcapture`
- `hdump`
**hdelete**

The **hdelete** command removes host service from host sessions.

**Synopsis**

```
hdelete [hostsvc] host_application from [session_number | range | all]
```

**Description**

The **hdelete** command executes the logout sequence that is defined in the application’s host session maintenance section and automatically removes the host application association from the session number. One host session corresponds to one logical unit (LU).

**Note:** The **hfree** command works similarly to the **hdelete** command except that does not execute the logout sequence and should be used only when you need to release the session immediately.

**Example**

In the following examples, the user is unassigning the host application “my_appl” from session 0, from session 0–19, and from all sessions (up to 64 total with 2 host communications cards installed), respectively.

```
hdelete my_appl from 0
hdelete my_appl from 0-19
hdelete my_appl from all
```

**See Also**

- hassign
- hfree
The **hdiagnose** command diagnoses the SDLC communication card.

**Synopsis**

```
hdiagnose conn connection_name
hdiagnose info connection_name
```

**Description**

The **hdiagnose** command runs card-level diagnostics on the SDLC card associated with the connection `connection_name`.

The **hdiagnose info** command attempts to determine actual values for host protocol parameters by watching link traffic.

The `connection_name` variable should be a valid name of a host connection or you can specify the connection name as `all`.

**Note:** The voice system must be down for hdiagnose to run. All host connections, including connections not being diagnosed, will be disrupted during command execution.

**Example**

The following example runs card-level diagnostics on the SDLC communication card SDLC1.

```
hdiagnose conn SDLC1
```
**hdisplay**

The **hdisplay** command shows host applications that have been successfully verified and installed, as well as the application assignments on the host sessions.

**Synopsis**

```
hdisplay [hostsvc]
```

**Description**

The **hdisplay** command displays the host applications that have been verified and installed on the system. The **hdisplay** command also displays the current session assignments for each host application.

**Example**

The following example displays the host application currently verified and installed on the system, as well as the current session assignments:

```
hdisplay
```
**Synopsis**

**hdump**

**hdump -l LU_range**

**hdump -m <on> -l LU_range [-d directory_name]**

[-s number_of_screens]

**hdump -m <off> -l LU_range**

**Description**

**Hdump** dumps the screens exchanged between the host and CONVERSANT including the OIA line to two ASCII files based on the specified range of logical units (LUs). The two dump files are named for their corresponding LU. **LUa.01** and **LUb.01** are assigned to LU1; **LUa.02** and **LUb.02** are assigned to LU2, and so forth. The maximum number of LUs is 128.

For LU1, **LUa.01** collects the host screens up to the screen limit, then **LUb.01** collects the screens up to the screen limit. When **LUb.01** reaches the screens limit, **LUa.01** is cleared and the process begins again. The output format is similar to the existing **trace chan #** output with the addition of an extra OIA line.
**A Summary of Commands**

**hdump**

**Hdump without argument** prints out the current **hdump** status of all LUs, including directory name, number of screens limit, and LU on/off state.

**Hdump with the** `-l LU_range` **argument** prints out the current **hdump** status of a range of LUs, including directory name, number of screens limit, and LU on/off state.

Subsequent **hdumps** with `-m on` option supersede the previous **hdump** setting.

**Hdump** terminates when the host dip goes down; no information regarding the previous command line settings are saved. The command parameters are as follows:

- `-m` — Turn the operation mode on/off.
- `-l` — Specify the range of LUs.
- `-d` — Directory where the screen should be saved if specified. The default directory is `/vs/data/hdump/`. The default filenames are `LUa.01 - LUa.128` and `LUb.01 - LUb.128`.
- `-s` — Number of screens to be collected. Default is 100.

**See Also**

*hcapture*

*hdefine*
The `hfree` command unconditionally releases host sessions from Script Builder host application assignments.

**Synopsis**

```
hfree [host_application | session_number | range | all]
```

**Description**

The `hfree` command releases sessions from their Script Builder application assignments. One host session corresponds to one logical unit (LU). It frees the assignment and leaves the host session on the screen it was currently. This command can be helpful in resolving a problem with a particular screen. Normally, the `hdelete` command should be used to make a session available. The `hfree` command is used commonly when problems occur on sessions and troubleshooting is needed.

**Note:** The `hfree` command does not automatically log out the specified session. Use the `hdelete` command to log out a session and make the specified session available.

**See Also**

`hdelete`
hlogin

The **hlogin** command runs the login sequence of a host script.

**Synopsis**

hlogin [host_application | session_number | range | all]

**Description**

The **hlogin** command invokes the login procedure that is defined in the application's host session maintenance section. This command is often used in the system's cron table to automatically log in the host as soon as it is available each day.

**Note:** The session must be in the logged out state before you may execute this command.

**Example**

The following example invokes the login procedures for the host application "my_appl."

    hlogin my_appl

The following example invokes the login procedures for the host applications assigned to sessions 0 through 9.

    hlogin 0-9
The `hlogout` command runs the log out sequence of the host script.

**Synopsis**

```
hlogout [host_application | session_number | range | all]
```

**Description**

The `hlogout` command invokes the logout procedure that is defined in the application’s host session maintenance section. This command is often used in the system’s cron table in order to log off the host automatically before it goes down each night. It is a clean, convenient way to log out of the host application.

**Note:** The session must be in the logged in state before you may execute this command.

This command should be performed once an application has been developed and hassigned to a session to test the logout procedure.
**hnewscript**

The **hnewscript** command installs a changed host script.

**Synopsis**

```
hnewscript host_application
```
A Summary of Commands

**hnewscript**

**Description**
The **hnewscript** command updates the system memory with the newest copy of the specified host application. This can cause the host application to be logged out and then logged back in using the newly defined host maintenance. This is required to put the updated version into effect, and Script Builder automatically prompts you when the verify and install have been composed and the host maintenance has changed.

**Example**
The following example updates the system memory with the most current copy of the host application “my_appl.”

```
   hnewscript my_appl
```

⚠️ **CAUTION:**
The **hnewscript** command may temporarily prevent access to any host sessions that have been modified while they are in the process of logging out and logging back in.
**Synopsis**

```
hsend file=cs_file [dest=file_destination] [opt=option_list/n]
```

**Description**

The `hsend` command is used to send a file to the host via CVIS_FTS. The arguments for the `hsend` command are:

- **file** — A mandatory argument for the `hsend` command. The `cs_file` parameter is the full path name of the UNIX system file to be sent to the host. See *Intuity CONVERSANT System Version 7.0 Communication Development*, 585-313-202, for file name guidelines for file transfer.

- **dest** — An optional argument, where `file_destination` is the final destination of the file at the host. If this parameter is not specified, the DESTINATION parameter value in the file `/vs/data/fts_config` is used.

- **opt** — An optional argument, where `option_list/n` is the list of option parameters or `n` (for no options). Options must be separated by a space. See *Intuity CONVERSANT System Version 7.0 Communications Development*, 585-313-202, for a detailed options list.
If \texttt{opt=n}, the PARAM1, PARAM2, and PARAM3 values in the \\texttt{/vs/data/fts\_config} file are not used. If this argument is missing (the default), the PARAM1, PARAM2, and PARAM3 values in the \\texttt{/vs/data/fts\_config} file are used.

**Return Values**

See *Intuity CONVERSANT System Version 7.0 Communication Development*, 585-313-202, for information on Cleo file transfer return codes.

**hspy**

The \texttt{hspy} command displays a screen currently present on a specified host session.

**Synopsis**

\texttt{hspy [session\_number | range | all]}

**Description**

The \texttt{hspy} command shows what screen currently is being presented on that specified session, a range, or all. One host session corresponds to one logical unit (LU). This information helps to isolate what screens might be involved in a problem, should one occur. This tool can help to resolve problems, but should not be the only source of problem isolation.
**Example**

The following example displays the screen currently be presented on session 0.

```
hsy 0
```

**Output**

A screen of data representing what is currently present on a host session.

⚠️ **CAUTION:**

This screen presents what the process that communicates with the host believes is present, but it may not be the actual screen present on that host session.
hstatus

The `hstatus` command shows the current status of the host sessions.

**Synopsis**

```
hstatus [host_application | session_number | range | all]
```

**Description**

The `hstatus` command reports the current status of the host application assigned to the associated host sessions. One host session corresponds to one logical unit (LU). The possible status states are as follows:

- **Logging in** — This is a temporary state indicating the session is in the process of logging in immediately after a manual `hassign` or `hlogin`.

- **Logged in** — This state occurs after a successful login. The session is ready to accept a transaction (the transaction base screen is reached).

- **Logging out** — This is a temporary state indicating the session is in the process of logging out immediately after a manual `hlogout`.

- **Logged out** — This state indicates that service is still assigned, but the session has been logged out.
Recovering — This state occurs if the login procedure fails, the transaction ends somewhere other than the transaction base screen, or the recovery procedure ends somewhere other than the transaction base screen.

Unassigned — This state indicates that service was never assigned to the session or service was assigned and later manually deleted.

Not available — This state indicates the session is not available for use.

Free — This state indicates the session was manually freed.

Transaction — This state indicates the session is currently involved with a transaction.

This command is helpful in debugging problems with host applications and to check on the number of sessions actively involved on a call. See Chapter 8, Common Administration, for information on the Host Monitor screens.

Example
The following example displays the current status of the host applications assigned to sessions 0 through 9.

```
  hstatus 0-9
```

The following example displays the current status of all session numbers.

```
  hstatus all
```
The **iCk** process is the daemon process that performs various integrity checks on the system based on rules in a script file.

The **iCkAdmin** command is a related administration command to **iCk**.

**Synopsis**

```
iCk [-v NNN] [{envName}=value]) [(rule-file)]
iCk -c [-i | -f {file} | cmd...]
iCkCmd [-i | -f {file} | cmd...]
iCkAdmin [-c] [-a {on/off}] [s {entryType [:{ID}]}]
  [-e {entryType [:{ID}]} [iCk.rules-file]]
```

**Description**

The **iCk** process performs various jobs that fall into the category of integrity checks. It is driven by an ASCII file containing rules describing the checks desired to be performed. Its primary job is to run as a daemon process, started by **init**, and to perform the specified jobs at the intervals specified by the rules. **iCk** 's secondary job is to serve as a command interface to a human user and convey commands to the **iCk** process, which is running as a daemon process.
As a daemon process, iCk accepts one flag, -v, which initializes the internal verbosity flags according to the value NNN provided. This value can be in decimal, hexadecimal, or octal. None of the symbolic flag names apply in this mode. Table 52 on page 714 describes the bit meanings.

Table 52. Verbosity Flag Values

<table>
<thead>
<tr>
<th>Bit</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0x0001</td>
<td>V_RESCANBB</td>
<td>Log messages whenever the Bulletin Board is rescanned</td>
</tr>
<tr>
<td>0x0002</td>
<td>V_TIMINGMSG</td>
<td>Log messages when timing messages are sent</td>
</tr>
<tr>
<td>0x0004</td>
<td>V_HUNGPROCESS</td>
<td>Log messages when hung process checking is performed</td>
</tr>
<tr>
<td>0x0008</td>
<td>V_AUTOREBOOT</td>
<td>Log messages when autoreboot processing is performed</td>
</tr>
<tr>
<td>0x0010</td>
<td>V_FILEMAX</td>
<td>Log messages when maximum file checks are performed</td>
</tr>
<tr>
<td>0x0020</td>
<td>V_FILECHECK</td>
<td>Log messages when file ownership/modes are checked</td>
</tr>
</tbody>
</table>
Environment Variables

The iCk command also accepts environment variables from the command line of the form:

\{variable-name\} = \{value\}

These can be used to set the following environment variables that also affect iCk’s behavior:

- VERBOSITY — This is an alternative way to set the internal verbosity flags. The meanings of the bits are the same as for the value supplied to the -v flag.
- SHELL — This specifies the name of the shell to be used when executing commands. The default is /bin/sh.
**A  Summary of Commands  **

- **UTMP** — This specifies where the “utmp” file associated with the system is located. Currently, this value is not used except for debugging purposes.

- **PATH** — This indicates where iCk finds executable programs. The default is `/bin:/etc:/usr/bin:/vs/bin:/vs/bin/util:/vs/bin/tools`.

When running as a daemon process, iCk accepts a file name, which is the name of the rules file from which it is supposed to operate. If not specified, the default rules file is `/vs/etc/iCk.rules`.

When iCk is executed with the `-c` flag or by the alternate name iCkCmd, is run as the command interface to the iCk daemon process.

- **-i** — This option specifies that iCk to run in interactive mode. This causes it to generate prompts as it requests information from its standard input. Without the `-i` flag, iCk silently accepts input from its standard input. This might be useful if used in a shell script.

- **-f {file}** — This value causes iCk to read a series of commands from the specified file or device instead of from its standard input.

- **{cmd}...** — This field causes iCk to use the remaining arguments on the command line as the commands to be sent to the iCk daemon process.

See Commands on page 726 for details about commands to which iCk responds.
Administers Rules File

The `iCkAdmin` command administers the `iCk` rules file. It has no direct communication with the `iCk` daemon process. Changes it might make to the rules file do not take effect until the `iCk` daemon process is requested to read the modified rules file.

- `-c` — Causes `iCkAdmin` to verbosely check out the rules file and report complaints.
- `a {on|off}` — Causes the rules file to be read, the `autoReboot` entry set the specified state, and written back out again.
- `-s {entryType[:ID]}` — Causes the rules for the specified entries to be shown.
- `-e {entryType[:ID]}` — Allows interactive editing of the specified entries.

Note: This feature is not yet complete.

For both the `-s` and `-e` options, the `entryType` is the name of a type of entry minus the "$" character, that is, `rescanBB`, `timingMsg`, etc. The optional `{ID}` field means the name of the process for `timingMsg` and `hungProcess` entries and the name of the file for `fileMax` and `fileCheck` entries.

Rules File

Comments begin with a pound sign (#) character and continue to the end of the line. All blank lines are ignored. Activity requests are indicated by keywords, all of which begin with the "$" character.
In the descriptions of the activities, the following definitions apply:

- **{process}** — This is the ASCII name of a process appearing in the Bulletin Board, that is, TSM or MTC.

- **{runlevels}** — This is specification of which run levels at which to perform the activity. The syntax is the same as used by init, that is, 4 = run level 4, 234 = run levels 2, 3, or 4.

- **{checkPeriod/Time}** — This indicates the activities performed repetitively will have a specification of either how often to perform the activity or at what times of the day or week to perform the activity. One of three forms is used:

  - `~` —
    
    Perform the activity once when the rules are first read and then do not perform it again.

  - `~ checkPeriod`
    
    A period of time is specified as the sum of a number of different time elements: [NNd] [NNh] [NNm] [NNs]. For example, 5m means “every 5 minutes,” and 5h 30m means “every five and a half hours.” Each element is a number followed by the type of specifier, d, days, h, hours, m, minutes, s, seconds. The order is irrelevant. 5h 30m is the same as 30m 5h.
~ Time

If it is more important that an activity be performed at a specific time of
day or week, then the “time” format should be used. It has the following
form:  \[ X \{monthday\} \{weekday\} \{hour\} \{min\} \{sec\} \]

All five elements are required for the specification to be accepted. Each
element can be:

- * — All items in class (days of the month, hours in the day, etc.).
- N — The specific item.
- N-M — The items between N and M inclusive.
- N,M — The individual items N and M in the class.

The items within each class are:

- \{monthday\} — 1-31
- \{weekday\} — ASCII day of the week (sun, mon,...)
- \{hour\} — 0-23
- \{min\} — 0-59
- \{sec\} — 0-59

For example: “** * 0 0” means perform each hour on the hour.
“13 fri 12 0 0” means perform the activity at noon on any Friday the
13th.
A Summary of Commands

• `{cmd}` — This specific command is executed if the activity so dictates. Within the command itself, there are four meta-words that can be used to generate flexible commands. Not all four meta-words have meaning in all cases.

  ~ `%f` The full file name.
  ~ `%d` The directory portion of the file name.
  ~ `%b` The base name of the file name.
  ~ `%p` The process identification (PID) of the process.

Activities

• `$timingMsg {process} {runlevels} {checkPeriod/Time}`
  
  This activity causes a timing message to be sent to a specified process at regular intervals whenever the system is at one of a specified run levels. Currently, the TSM and the VROP processes expect to receive timing messages, once every 2 seconds.

• `$hungProcess {process} {runlevels} {checkdPeriod/Time} {timeout{fill|report|exec cmd}}`  

  This activity causes a specific process, whose name appears in the Bulletin Board, to be evaluated to see if it is hung in regard to reading its messages. Processing only takes place when the system is at one of the specified run levels. `{timeout}` is the length of time the process can stay in
the “working” state before being declared hung. Once a process is
determined to be hung, one of three responses are possible:

~ kill
   The process is killed by sending it first a **SIGUSR1** signal, followed by
   a **SIGKILL** signal if it does not voluntarily exit.

~ report
   A message is logged to the effect that the process is hung. No other
   action is taken.

~ exec
   The specified command is executed. The %p meta-word has the value
   of the PID of the process associated with the rule.

- **$autoReboot {off/on} {u-reboots} {ubPeriod} {runlevels} {setPeriod}**

This activity controls the feature that automatically sets the UNIX kernel
auto-reboot flag. If the entry is marked “off,” then the auto-reboot flag is
not automatically turned on. It can still be manually set with an iCK
command. If the entry is marked “on,” then the automatic setting is
enabled. The remaining parameters control when the flag is set. The
algorithm that controls the setting of the flag is as follows:
The number of unanticipated reboots of the kernel is determined by examining the /etc/wtmp file (the history file of init actions) for "change of run level" entries and "boot time" entries. Any entry falling within the \{ubPeriod\} of time prior to the most recent system boot time are considered. If a "boot time" entry is preceded by a "change of run level" to levels 0, 5, or 6, the boot is considered anticipated, since someone deliberately entered the command to reboot the system. If a "boot time" entry is NOT preceded by such a "change of run level" entry, then the reboot is considered unanticipated. This includes power failures, reset button pushes, and panics of the UNIX kernel.

If the number of unanticipated reboots is LESS than \{u-reboots\}, the auto-reboot flag is set \{setPeriod\} amount of time AFTER the system comes up to one of the run levels specified by \{runlevels\}.

If the number of unanticipated reboots is GREATER THAN OR EQUAL to \{u-reboots\}, setting of the auto-reboot flag is inhibited and is not set until the system has been up at one of the run levels specified by \{runlevels\} for a \{ubPeriod\} of time.

For example: typing $autoReboot on 5 60m 4 5m, which is the standard default setting specifies that if LESS THAN 5 unanticipated reboots have occurred in the past 60 minutes, the auto-reboot flag is set in the UNIX kernel 5 minutes after reaching run level 4. If 5 or more unanticipated reboots have occurred in the past 60 minutes, then the auto-reboot flag is not set until 60 minutes after reaching run level 4.
A Summary of Commands

- $fileMax {file} {maxSize} {checkPeriod/Time} reduce {minSize}
- $fileMax {file} {maxSize} {checkPeriod/Time} remove
- $fileMax {file} {maxSize} {checkPeriod/Time} exec {cmd}

This activity checks one or more files to insure that they have not grown too large. {file} is the name of a file or a pattern specifying a set of files. {maxSize} is the maximum size in bytes that a file to grow to before it triggers a response from iCk. A check on the size of the file or files is made as specified by {checkPeriod/Time}. One of three responses to a file becoming too large can occur:

- reduce
  The offending file is reduced in size by saving the last {minSize} bytes of the file and discarding the rest.

- remove
  The offending file is removed entirely.

- exec
  The command specified is executed. In this case the meta-words %f, %d, and %b are defined as the various parts of the file name and can be used in the command.
$fileCheck {file} {runlevels} {checkPeriod/Time} {type} {owner} {groups} {modemask} {modes} [cmd]

This activity can be used to insure that a specific file or files exist and have the proper ownership and modes. {file} specifies the file or a pattern that selects a set of patterns. {runlevels} specify at which run levels the checks are made. {checkPeriod/Time} specifies the frequency of checks. {type} specifies the type of file. It can take one of seven values:

- The type does not matter.
- The file is a "regular" file.
- The file is a directory.
- The file is a named pipe.
- The file is a character special device.
- The file is a block special device.
- On SVR5.4 systems, the file is a symbolic link.

The {owner} variable specifies who owns the file. If this value is - then who owns the files is not of interest. {group} specifies which group owns the file. If this value is - then which group owns the files is not of interest. {modeMask} specifies which bits of the mode are of interest while {modes} is the state of the bits desired. For example, if both {modeMask} and {modes} were 0444, then the check would be to insure that the file was readable by anyone, but whether it was writable or executable is not of interest. If on the other hand {modeMask} was 0777, while {modes}
A Summary of Commands

was 0444, then the check would be to insure that the file was only
readable and must not be writable or executable by anyone. If a file fails
to pass a $fileCheck test, it is always reported. If the optional [cmd]
is
specified, then this command is executed. The meta-words %f, %d, and
%b are set to the various parts of the file name for use in the command.

• $EOF

This special mark indicates the end of the rules. Anything beyond this
mark in the rules file is ignored.

Example Rules

$fileMax   /etc/wtmp   360000   ~*   *   *   0   0~   reduce   36000

If the file /etc/wtmp exceeds 360,000 bytes, reduce it to 36,000 bytes.
Check the size of the file on the hour. (The structures in this file are
36 bytes in length and it must be an integral number of structures, hence
the chosen sizes.)

$fileCheck   /etc/passwd   -   -   f   root   -   0777   0444

Check only once. The /etc/passwd file should be owned by root and be
read-only to everyone.

$fileCheck   /etc/shadow   -   -   f   root   -   0777   0400

Check only once. The /etc/shadow file should be owned by root and be
read-only to root.
$fileMax /tmp/*.lst 10000 - remove

Remove all the files in /tmp ending with an extension of .lst if they are bigger than 10,000 bytes. Do this only once.

$fileMax /tmp/*.hist 0 - exe $ /bin/mv %f %d/o.%b~

For any non-zero length files in /tmp with an extension of .hist, save them as /tmp/o.*.hist

Commands

In command mode, iCk responds to the following commands. Each command sends a message to the iCk daemon process except for the first command. All commands can be abbreviated to the shortest unique string, hence au is sufficient to identify the autoreboot function and ac the activate function. For most commands one letter is sufficient.

- x " | " exit " | " ^D

This command exits from the interactive command mode. This does not affect the iCk daemon process.

- bootCnts [period]

This command computes the UNIX reboot information from the /etc/wtmp file. If period is supplied, this length of time is used. If it is not supplied, then the window period of time for the $autoReboot rule is used. This command generates three numbers, the total number of reboots in the
specified period of time prior to and including the current boot of the system, the number that were anticipated (or deliberate) and the number of unanticipated reboots. This request does not communicate with the iCk daemon process.

- **autoReboot**  \{set | clear\}
  This command forces the kernel auto-reboot flag into the specified state.

- **readRules**  [rule-file]
  This command rereads the rules file. If a new file name is provided, then it is read instead of the previous file. Before using this command, the new rules should be checked with the iCkAdmin command to insure syntactic correctness.

- **wakeup**
  This command makes the iCk daemon wakeup immediately and check its state.

- **rescanBB**
  This command makes the iCk daemon wakeup and reexamine the Bulletin Board for new instances of known process types.
A Summary of Commands

• **quit**
  This command causes the iCk daemon to exit gracefully. (Since iCk is normally run from the /etc/inittab file, init immediately respawns the daemon.) In interactive mode, the command requires confirmation.

• **verbosity {value}**
  This command sets the iCk daemon’s verbosity flags to the specified values. In this case the symbolic names are accepted as well as octal, decimal, or hexadecimal values. Combined values can be produced by separating values with the ‘|’ character.

• **activate {spec}**
  This object, in conjunction with the V_TRACE flag, causes the activities specified by {spec} to be logged whenever they execute.

• **inhibit {spec}**
  This object, in conjunction with the V_TRACE flag, causes the activities specified by {spec} to not be logged whenever they execute.

• **print {spec}**
  This object logs the status of the activities specified by {spec}. The status information logged as a result of the print command varies based on the activity. The common information printed is the activity index, which may be used in future {spec}’s, the rule index, which should correspond to the position of the rule in the rules file, and the type of the activity. In addition,
there is the `a_clockID`, which is non-zero if an alarm is running for the current activity and the `a_nextAlarm`, which indicates at what time the next alarm is set to expire. At the end of the entry is the `a_flags`, 0, meaning no flags are set, AF_SUPPRESS_TIMING, meaning that timing is deliberately suppressed for the time being, AF_CHECK_NEW_RUNLEVEL, meaning that when the run levels change, this activity is checked to see if it should reactivate, and AF_DEBUG_OFF, which is set for any activity that has been inhibited by the `inhibit` command. There is also the `a_state`, which indicates the current state of the activity. Its values are:

- AS_INACTIVE — This value is currently not being processed.
- AS_TIMER_RUNNING — There is currently an alarm outstanding for this activity.
- AS_SERVICE_QUEUED — An alarm has expired for this activity, but has not yet been processed.
- AS_IN_PROGRESS — An activity is currently being processed.

The above-mentioned commands, `activate`, `inhibit`, and `print`, require an activities specification. Such a specification is defined from the following list of objects. More than one object can be combined with the | character:

- `rescanBB` — This object is the $rescanBB activity.
- `timingMsg` — This object is all the $timingMsg activities.
- `hungProcess` — This object is all the $hungProcess activities.
**A Summary of Commands**

- **autoReboot** — This object is the `$autoReboot` activity.
- **fileMax** — This object is all the `$fileMax` activities.
- **fileCheck** — This object is all the `$fileCheck` activities.
- **miscellaneous** — This object applies to the `print` command only. It causes a report of whether the autoreboot flag has been automatically set or not, the state of the UNIX kernel autoreboot flag, the current run level, the number of rules read, and the number activities currently in force to be logged.
- **all/ALL** — This object specifies all activities.
- **NNN** — This object, where `NNN` are digits, specifies an explicit activity by its index in the array of all activities.

All remaining information is activity specific. By activity, the information logged is:
- **$timingMsg** — The name of the process, the Bulletin Board slot, and instance.
- **$hungProcess** — The name of the process, the PID, the Bulletin Board state, work count, time, flag, slot, and instance. The flag can have values of `HP_STUCK`, meaning that it does not seem to be reading its message queue, `HP_SIGUSR1`, meaning it has been sent a SIGUSR1 signal to request it to die, and `HP_SIGKILL`, meaning that it has been killed with the uncatchable SIGKILL signal.
A Summary of Commands

- $autoReboot — The computed unanticipated reboot count at the time the system was last rebooted plus the length of the period over which the computation is made.
- $fileMax — The name of the file.
- $fileCheck — The name of the file.
- core — This command is available for debugging purposes. It causes iCk to produce a core file in /tmp/iCk.core via a core dump operation is a spawned child process. In other words, iCk itself does not stop, but you do get a reliable core of iCk for debugging evaluation.

Default File

The iCk process responds to default parameters placed in /vs/etc/default/iCk. Initially there are two values, which set specific internal parameters:

- RUNLEVELTIMEOUT — Specifies how long to wait after changing run levels before accepting the value from /etc/utmp without confirmation from iCkCmd. The default is 3 minutes.
- RECHECKTIMEOUT — Specifies how long to wait after changing run levels before rechecking for new processes in the Bulletin Board. The default is 30 seconds.

Also any environment variables desired can be set in the default file.
Files

/vs/etc/iCk.rules       # the default rules file
/tmp/iCkPipe           # the named pipe used to speak to iCk
/vs/etc/default/iCk    # default parameters

Caveats

The iCk process is a daemon process running as root. Since the rules support the concept of executing an arbitrary command, the /vs and the /vs/etc directories need to be protected against tampering and the iCk.rules file should only be writable by authorized users.

See Also

logCat
install_appl

The **install_appl** command installs an application.

**Note:** This command is valid only if the Enhanced File Transfer package is installed.

**Synopsis**

install_appl -n [o] application_name

**Description**

The **install_appl** command is used to install a verified application received from the host, bundled using the **backup_appl** command. It requires the name of the application. The **o** option overwrites the existing application.

**Note:** You must use the **restore_appl** command before using the **install_appl** command.
Return Values
If the `install_appl` command is successful, a 0 value is returned. If any value other than 0 is returned, the `install_appl` command failed. The following are the possible reasons for failure for the `install_appl` command:

- The hard disk is low in space.
- The command syntax is incorrect.
- The application already exists.
- The application has not been verified.
- Unrecorded phrases exist.
- An inconsistency is found in the transaction.

Example
The following example installs the application “bank_balance” received from the host.

```
install_appl -n bank_balance
```

See Also
`backup_appl`
`remove_appl`
`restore_appl`
install_sw

The install_sw command installs a software package.

**Note:** This command is valid only if the Enhanced File Transfer package is installed.

**Synopsis**

install_sw [-p path] [-n cpio_file_name]

**Description**

The install_sw command is used to install a software package received from the host. The package is a file in cpio format. If the path and the cpio file name are not specified, the default path (/tmp/stag) and the default file name (h_install) is used.

Use the following command to view the contents of a floppy to determine if it is an installable package and that is does not use full path names, like /etc/profile:

```
cpio -iBcvtI /dev/rdsk/f0
```

The following files are needed to perform the pkgadd command: **Size, Name, Files, Install, Remove**, and **package_name**.
Summary of Commands

A  Summary of Commands

install_sw

The following steps creates a sample “bundled” cpio file called fts from an installable UNIX package:

1  Insert the first floppy of the package to be bundled in the floppy disk drive.
2  Enter mkdir mydir
3  Enter cd mydir
4  Enter cpio -iBacvd /dev/rdsk/f0
5  Enter find . -print | cpio -ocd > fts
6  Transfer this binary file to the target system using file transfer or enhanced file transfer.
7  Enter install_sw on the target system.

Return Values

If the install_sw command is successful, a 0 value is returned. If any value other than 0 is returned, the install_sw command failed. The following are the possible reasons for failure for the install_sw command:

• The hard disk is low in space.
• The user is not root or a super user.
• The command cannot read path/name.
• The package already exists.
• The command syntax is incorrect.
• The package is missing the necessary installation programs.
Example

The following example installs the `sbpkg` cpio file that contains the Intuity CONVERSANT Script Builder Version 7.0 package.

```
install_sw -n sbpkg
```

See Also

`remove_sw`

### lan_chk

The `lan_chk` command displays or changes certain configuration options on the different versions of the Ethernet LAN circuit card.

**Synopsis**

```
 mtce/bin/lan_chk [-i] [-p] [-P [brd#]:[AMD | BNC | AUI | UTP-Link | UTPFD | STP100 | UTP100FD | UTP10Link | 10MBLink]]
```

**Description**

The `lan_chk` command allows you to check or change the following options on the Ethernet LAN interfaces:

- `-i` — Display and/or change the setup of the ISA LAN.
- `-p` — Display the setup of the PCI LAN.
A Summary of Commands

- `lan_chk`

- **-P** — Change the media type specified on the PCI LAN:

  `-P [brd#]:[AMD | BNC | AUI | UTP-Link | UTPFD | STP100 | UTP100FD | UTP10Link | 10MBLink]`

  - `brd#` — Circuit card number.
  - `AMD` — Sets the card for SMC8432, operating in the auto media detect mode.
  - `BNC` — Sets the card for SMC8432, operating in the BNC mode.
  - `AUI` — Sets the card for SMC8432, operating in the AUI mode.
  - `UTP-Link` — Sets the card for SMC8432, unshielded twisted pair mode with link integrity set to “on”.
  - `UTPFD` — Sets the card for SMC8432, unshielded twisted pair mode with full duplex.
  - `STP100` — Sets the card for SMC9332, shielded or unshielded twisted pair mode, at 100 mbps.
  - `UTP100FD` — Sets the card for SMC9332, unshielded twisted pair mode at 100 mbps with full duplex.
  - `UTP10Link` — Sets the card for SMC9332, unshielded twisted pair mode at 10 mbps with link integrity set to “on”.
  - `10MB-Link` — Sets the card for SMC9332, at 10 mbps with link integrity set to “on”.

---

Intuity™ CONVERSANT® System Version 7.0 Administration 585-313-501 Issue 3 January 2000 738
**Example**

```
/mtce/bin/lan_chk -P 1:UTP-Link
```

This command configures the PCI LAN interface number 1 for use by an SMC8432 circuit card, in the unshielded twisted pair mode, with link integrity set to “on”.

**Files**

```
/mtce/bin/lan_chk
/etc/conf/pack.d/smpw0/space.c
/etc/conf/sdevice.d/smpw0
```

**Caveats**

If the system is using multiple PCI LAN circuit cards, they must all be the same type (either all SMC9332 or all SMC8432).

If the `lan_chk` command is used with the `-P` option to change the media type for a particular interface, the command does not check to see if all of the interfaces maintain matching circuit cards. It will allow you to set one interface for SMC8432, and another interface for SMC9332. However, the circuit cards will not operate correctly until they are the same type, and match the operation modes set for the interfaces.

**See Also**

See the `ezsetup` utility associated with the LAN circuit card.
The **IComp** command combines a series of message files and produces a file of compressed format files and an expansion format file.

**Synopsis**

IComp [-s name] [-c name] [-t name] [-d name] [-m name] file1 [file2...]

**Description**

IComp compiles logging format files. The input files are in the form:

XXX...NNN... message.....%fff<<SQL spec>>]....%fff<<SQL spec>>]....%fff<<SQL spec>>]...

In other words, the input files contain standard C format statements, with optional SQL field definitions included. Long lines may be broken up with backslash, newline sequences. Such lines are concatenated, discarding the backslash and newline characters, by IComp and treated as one long line during compilation.

IComp produces five files, a header file, a compressed format file, an expansion format file, a data dictionary file, and a data dictionary mapping file. The default names are: systemLog.h, cmpLogFmt, textLogFmt, dataDictLog, and ddMapLog.
A Summary of Commands

- `-s name` — Changes the `systemLog.h` file to `name`
- `-c name` — Changes the `cmpLogFmt` file to `name`
- `-t name` — Changes the `textLogFmt` file to `name`
- `-d name` — Changes the `dataDictLog` file to `name`
- `-m name` — Changes the `ddMapLog` file to `name`

The `systemLog.h` file contains a series of defines of the form:

```
#define _{FILE}_START NN
```

where `{FILE}` is the all uppercase form of the input file name. This header file allows applications to refer to errors of a specific class relative to the beginning of the class of errors and so avoid having to edit code as the various classes of errors codes grow or shrink.

The `cmpLogFmt` file contains the compressed formats, which the log subroutine uses to produce compressed logging messages.

The `textLogFmt` file contains two sections. The first section is a series of offsets to each expansion format and its length. The second section contains the expansion formats, which `expandLog` uses to convert a compressed logging file into a human readable statement.

The `dataDictLog` file contains SQL names for the variable fields in each message. They are of the form:

```
abs_index <FS>fld-name,type[,length[,precision]]<FS>...
```

The `abs_index` is the index number of the message within the universe of all messages compiled by `IComp`. If the optional SQL specification does not appear after the format, `IComp` generates one of the form:

```
CLASSNNN_M,type[len[,precision]]
```

based on the format. `CLASS` is the uppercase name of the file the message came from, `NNN` is the index of the message within the file, and `M` is the field within the message, starting at 1.

The `ddMapLog` file contains structures describing where to find each data dictionary entry for each message. It also contains an array with the class names.

**See Also**

`logCat`
The `list` command lists the directory entries for specific phrases in the UNIX file.

**Synopsis**

`list -l [phrase phrase_list ] [in] [talkfile talkfile_list ]`

**Description**

The `list` command displays the phrases stored in the specified talkfile. The valid arguments for the `list` command are:

- **phrase_list** — Specifies the number (or range) of phrase(s) to be listed. If you want to list all phrases in a particular talkfile, enter `all` for `phrase_number`.

  The following example displays all phrases in talkfile 104:

  ```
  list phrase all in talkfile 104
  ```

- **talkfile_list** — Specifies the number (or range) of talkfile(s) containing phrase(s) to be listed. If you want to list a particular phrase number in all talkfiles, enter `all` for `talkfile_number`.

  The following example displays phrase 1010 in all talkfiles:

  ```
  list phrase 1010 in talkfile all
  ```
A Summary of Commands

list

The listed entries are sorted by talkfile number and phrase. The information printed for each phrase consists of talkfile number, phrase number, phrase size in bytes, phrase size in blocks, the phrase length in seconds, and the speech coding type.

Note: The list command lists the directory entries for specific phrases in the SPEECHDIR default directory, which is /home2/vfs/talkfiles.

Examples
The following example displays phrase 174 as stored in talkfile 25.

list phrase 174 in talkfile 25

The following example displays phrase 12 as stored in talkfile 1.

list phrase 12 in talkfile 1

The following example displays all phrases stored in all talkfiles:

list phrase all in talkfile all

See Also
add
copy
erase
**logCat**

The **logCat** command reads the compressed logging files and outputs human readable messages.

**Synopsis**

```
logCat [-{t|b} lines] [-a locant] [-z locant] [-v] [-c] [-m] [-r root]
[-s locant] [-q locant] [-w width] [-p continuation-prefix]
[-d data -l log-prefix | file] [-f format] [-V]
```

**Description**

The **logCat** command reads in a file of compressed logging messages generated by **log** and expands them to a readable format.

The default action, with no arguments, is to list all log files of the type specified first in the Config file. For example, `logCat -d${LOGROOT}/data -l{primary-log-prefix}`. The options are as follows:

- `-t lines` — Tails the last “lines” of file.
- `-b lines` — Shows beginning “lines” of file.
- `-v` — Specifies the verbose mode (that is, report the names of the files examined).
- `-c` — Continuously displays the last lines of file. If the logdaemon switches to a new file, follow it.
A Summary of Commands

- **-m** — This option is the meticulous time check. Normally, the log file name and the creation date are used to determine the date of the file. If the creation dates have been messed up, the **-m** flag causes the time stamp of the first message in each log file to be used instead of the name and modification date. This is slower but more reliable.

- **-r root** — Specifies an alternate root directory for **textLogFmt** file. The default is `/usr/spool/log`. Also, the **data** directory containing the compressed logging data files is expected to be in the root directory if not overridden by the **-d** flag or the LOGDATA environment variable.

- **-a locant** — Specifies the place to start printing.

- **-z locant** — Specifies the place to stop printing.

- **-s locant** — Searches for specific patterns or times. This is the same as **-s** if the locant is a time locant. If the locant is a search pattern, the search is applied to the raw compressed log data instead of the expanded log data. This means that the pattern can only include variable portions of the logged messages. It is much faster than the **-s** option when properly applied.

A locant is one of two things, either a date/time stamp or a search pattern.
A Summary of Commands

Dates can be any of the standard readable formats: mmm dd, yyyy, mm/dd/yy, mm-dd-yy, etc. The time is hh:mm:ss. It is also possible to specify the separate elements as: sec=nn min=nn hour=nn mday=mm mon=nn or mon=mmm year=nn[nn] wday=n or wday=ddd yday=nnn. Portions left out default to this date, 0 hours, 0 minutes, and 0 seconds, that is, giving only the time of day indicates today’s date. If the form “item=xxx” form is used, all elements not specified default to “*”, hence “wday=Sun” means all messages on any Sunday. Do not mix standard format with the “item=xxx” format. The results are not predictable.

Spaces should be enclosed in quotes, for example, -a“7/14/87 05:08:30”.

Search patterns are enclosed in ‘\’ characters, with an optional repetition count following, for example, -z/GEN006/2 means the second message containing GEN006. The repetition count has no meaning with the -s or -q locants, but does for the -a and -z locants.

The search capability supports the following meta-search constructs:

- ^ Beginning of message
- $ End of message
- * Any number of unspecified characters
- ? A single unspecified character
- [xxx] Any character in the list “xxx”
- [!xxx] Any character not in the list “xxx”
- \[chr\] Normal C backslash conventions, \n \t \b \f \r \NNN \v \v \f
A Summary of Commands

- **-w width** — If lines are to be wrapped, this is the width at which the wrapping should take place. 0 means no wrapping and is the default. The width can also be supplied via the environment variable LOGCOLUMN.

- **-p continuation-prefix** — This is the string to be appended to each continuation line. The default is no continuation prefix. The continuation prefix can also be provided via the environment variable LOGCONTPREFIX data.

- **-d data** — This option is the name of the directory to find the log files in. The data directory can be provided in the environment variable: LOGDATA. The default is `$(LOGROOT)/data`. The -d argument takes precedence over the environment variable.

- **-l log-prefix** — Prefix of the log files to examine. The default is the first log file in the Config file. The log-prefix can also be provided via the environment variable LOGFILEPREFIX file.

- **file** — Explicit file to be displayed. If “-”, use standard input. The use of a file name overrides the -d and -l options.
A Summary of Commands

- **-f format** — Format specification for printing messages. The default is
  %P %T %N %S:%L \n%M
  The format specifier uses the following notations:
  %P(...) Priority level format: %d or %s
  %T(...) Time level format: all options supported by "date" command
  %N Name of process specified by the loginit call of the process
  %S Source file name
  %L Line number
  %M Message text
  %\% The % character
  \(chr\) Standard C backslash conventions
  ... All other characters are printed as is. The format can be
  provided via the environment variable LOGFORMAT

- **-V** — This option makes the control characters visible. They are printed
  as \X if they have a special C notation, otherwise as **NNN**, where **NNN** is
  the octal value.
Environment Variables

Environment variables are checked whenever the related command argument is missing from the command line. If both the command argument and the environment variable are missing, the specified default is used.

- LOGROOT — The directory in which the textLogFmt is found, containing the expansion formats. Also, the directory in which the data directory is found if LOGDATA is not specified.
- LOGDATA — This variable is the directory in which the log data files are to be found. The default is ${LOGROOT}/data.
- LOGFORMAT — This variable is the format in which to print the log messages. The default is %P %T %N %S:%L n%M.
- LOGCOLUMN — This variable is the column at which to wrap long expansions. The default is 0, meaning do not wrap long messages.
- LOGCONTPREFIX — This variable is the string to be prepended to continuation lines when long lines are being wrapped. The default is no prefix.
- LOGFILEPREFIX — This variable is the logfile prefix to be examined in no -l argument is specified. If neither a -l argument is specified nor LOGFILEPREFIX set, then the first log destination in the Config file of the type ‘L’ is used.

See Also

lComp
The `logDstPri` command creates the shared memory containing the dynamic destinations and priorities of logging messages using the `logMsg()` interface.

**Synopsis**

```
logDstPri [-H {dir}] [-c] [-v] [-d] [-x {cnt}] [rules]
```

**Description**

The `logDstPri` command reads an ASCII rules file, described in `msgDst`, and then sets up a shared memory segment using the information in the rules file so that any process in the system using the `logMsg()`, `vlogMsg()`, or `logSysError()` library calls can determine the appropriate priority and logging destinations for each message they send.

By default, the rules files are expected to appear in

`${LOGROOT}/msgDst.rules`, where `${LOGROOT}` is `/usr/spool/log`. By default, the header files used to translate ASCII names of message indices into numbers are expected to appear in the directory `${LOGROOT}/head`. An alternate directory for the header files can be specified via the `-H` option on the command line. An alternate rules file can be specified as a file name on the command line.

After changing the rules file, it is recommended that the rules be checked before they are put into service. The `-c` flag causes `logDstPri` to read the rules file and report any rules that are misformatted or not understood. The return value from `logDstPri` is the number of errors detected.
To see the error complaints and install the rules all at once, specify the -v flag. This causes the verbose complaints to be generated. The -c flag implies the -v flag.

When logDstPri is resetting the values in shared memory, as opposed to creating the shared memory for the first time, it can be requested to delete the old shared memory and create a new segment by specifying the -d flag. Do not use the -d flag on a running system because any process that is already using the old shared memory continues to use it even after it is “deleted.” This means that two different rules files might be in force at the same time. It may be necessary to specify the -d flag if a large number of new messages have been added to the rules file. Currently, logDstPri creates the shared memory 200 entries larger than the highest logging message index found in its rule file. This means that as long and the new rules file does not go beyond 200 entries higher than the current highest entry, everything is okay. The number of extra entries can be altered by specifying the -x option.

Files

${LOGROOT} Default is /usr/spool/log
${LOGROOT}/msgDst.rules The message priority and destination file
${LOGROOT}/head/*.h Header files used by the logging system

Shared Memory Segment

The shared memory segment is keyed off the inode of the rules file and the define symbol LDP_KEY, defined in log/head/logDstPri.h. The library routine ftok({file},LDP_KEY) is used to generate the shared memory key.
logEvent/logMsg

The **logEvent/logMsg** command allows shell scripts to log a specific message.

**Synopsis**

```
logEvent [script] [msg] [dst] [pri] [srcFile] [srcLine] arg1 ...  
logMsg [script] [msg] [srcFile] [srcLine] arg1 ...  
```

**Description**

The **logEvent/logMsg** command allows shell procedures to log messages using specific messages. This is as opposed to the **logit** command, which generates messages within the logging system, but which always uses SYSMSGS as the message format for the messages it generates. The **logEvent** command emulates the logEvent( ) library routine, while the **logMsg** command emulates the logMsg( ) library routine.
A Summary of Commands

The `logEvent` command requires a destination and a priority when it is called, and messages logged via this interface are explicitly logged to the specified destinations and at the specific priority.

The `logMsg` command does not take a destination mask or a priority. It gets these pieces of information from the logging destination and a priority shared memory maintained by the `logDstPri` command via the `/usr/spool/log/msgDst.rules` file.

Both `logEvent` and `logMsg` require that the proper number of arguments be supplied for the specified message and that numeric arguments in the message format match pure numbers from the argument list. For example:

```
GEN012 OUT_OF_RANGE %D<<value,D>> is out of range \ for %s<<arg,S>> in %s<<routine,S>>.
```

This format requires that the first argument be a number, therefore,

```
logMsg XXX LG_OUT_OF_RANGE -- yes var compute
```

would fail because “yes” is not a number, while

```
logMsg XXX LG_OUT_OF_RANGE -- 10 var compute
```

would work.
The command line arguments are as follows:

- **script** — Name of the shell script for which the message is being logged. Normally, this would either be `basename$0` or in ksh `${##*}`

- **msg** — The symbolic name of the message, for example:
  
  `LG_OUT_OF_RANGE`

- **dst** — This is only used with the `logEvent` command. It is the bit mask specification of where the message will be sent. It may be a number or symbolic destinations, as specified in `msgDst.rules`. If more than one symbolic destination is specified, they should be concatenated with `+`, for example, `stderr+log`

- **pri** — The priority of the message. This is only used with the `logEvent` command. It may be any of the following:
  
  0, - or **NONE**, 1, M or **MANUAL**, 2, * or **MINOR**, 3, ** or **MAJOR**, 4, *C or **CRITICAL**

- **srcFile Q** — The name of the file from which the `logEvent` or `logMsg` command is being issued. If you do not care, you may use “-.” Supplying the correct value is of value for debugging purposes, particularly if a script might generate at the same message from more than one place. If there are many individual functions within your script, you might find it advantageous to use the name of the function instead of the file.
A Summary of Commands

logEvent/logMsg

- **srcLine** — The line within the file from which the logEvent or logMsg command is being issued. If you do not care, you may use “-.” You might use $LINENO from the ksh environment, which is the line with the script or within a function.

- **arg1** — For each argument required by a specific message format, one argument is required. Neither too many or not enough is acceptable. Also, the size and type of the argument must be appropriate:
  - `%s` (takes any kind of argument)
  - `%d %u %o %x %X` (argument must be a pure integer type number, for example, `-10, 5, 0177, 0x8e`)
  - `%f %e %g %E %G` (argument will be interpreted as a pure floating point number, for example, `15, 15.3, 1.56E3`)
  - `%c` (argument must be a single character, for example, `x, 5, %`)

See Also
logCat
logit
logDstPri
log
logFmt

The `logFmt` command displays and changes the parameters used to display messages and explanation texts, specifically the messages mnemonics and screen width.

**Synopsis**

```
logFmt [global] {display | interactive | {opt}={value}}
```

**Description**

Each logging message has a class name and a mnemonic name associated with it. A class name, for example ICK001, is the combination of the name of the class, for example, ICK, and the index of the message within the class, for example, 001. The mnemonic name is a short composite string of characters that identifies the type of logging message. The mnemonic name for ICK001 is ICK_BAD_CMD. By default the mnemonic names of messages are not displayed when `display messages` is used to examine the logging files. If you want the mnemonic message names to appear, then `logFmt` allows you to alter the system so that they either appear for everyone by default or appear for you specifically.

You can also adjust the width of the screen display. By default the screen width is set to 75 characters. If you have a wider screen, you may wish to specify that more of the screen be used to display messages.
The `logFmt` command line arguments are as follows:

- **global** — This modifier causes the action specified to operate on the "global" (system wide) parameters that control the behavior of `display messages`. You must be `root` if you want to change the global parameters. You can examine the global parameters without being `root`.

- **display** — This verb causes `logFmt` to display the current parameters. If `global` is specified, then the system-wide parameters are displayed, otherwise your personal parameters are displayed.

- **defaults** — Specifying `defaults` without the `global` option causes your personal preferences about mnemonics and screen width to be removed. You then get the system-wide settings. Specifying `defaults` with the `global` option causes the system-wide settings to be reset so that mnemonics are off and the default screen width is 75 characters.

- **interactive** — This option interactively prompts for the parameters controlled by `logFmt`. Pressing `ENTER` in response to any query causes the current value to be retained. The current value appears within square braces (``).

- **mnemonics=enable** — This option causes mnemonics to be displayed when logging messages are examined with `display messages`.

- **mnemonics=disable** — This option causes mnemonics to not be displayed when logging messages are examined with `display messages`.
A  Summary of Commands  logFmt

- **width=NN** — This option causes the screen width to be set, where \( NN \) is between 40 and 199 columns. The default setting is 75. Do not attempt to set the screen width to a value wider than your screen can actually handle or the display will be unpleasant when using **display messages**. When mnemonics are enabled, they also show up when **explain** is used to examine the description of a message. Whether mnemonics are enabled or not, the mnemonic name can always be used to select an explanation using **explain**.

**Files**

- `/vs/data/logFmtParms` # Global parameters file
- `$(HOME)/.logFmtParms` # User's parameter file
- `/usr/spool/log/textLogFmt` # Current default expansion format file
- `/usr/spool/log/textLogFmt.Mne` # Expansion file with mnemonics
- `/usr/spool/log/textLogFmt.NoM` # Expansion file without mnemonics

**Examples**

The following example enables the mnemonics. This affects only you and overrides the system-wide setting.

```
logFmt mnemonics=enable
```
A Summary of Commands

logit

The following example sets the system wide default so that mnemonics are not displayed. Any user wishing to see mnemonics has to personally enable mnemonics. You need to be root to execute this command.

logFmt global mnemonics=disable

The following example displays the system wide settings for mnemonics and screen width.

logFmt global display

The following example sets your personal screen width to 130 characters when displaying messages using display messages.

logFmt width=130

logit

The logit command logs the specified message in the logging files.

Synopsis

logit [-p priority] [-d destinations] message
Description

The parameters for the logit command are as follows:

- **-p priority** — Specifies the priority of the message being logged. Options are:
  - none (default)
  - manual
  - minor
  - major
  - critical

- **-d destinations** — specifies the destinations to which the message is to be sent. By default MASTER_LOG is always included. The destination can be specified as either a number (for example, 0x11) or as a series of symbolic names separated by a plus sign (+), using the following list:
  - MASTER_LOG
  - SYSBG
  - SCREEN
  - SYSCONS
  - ALERTERMSGS

See the /vs/spool/log/head/log.h file for definitions. The symbolic names can be abbreviated to the shortest string that uniquely identifies one of the symbolic names.
logTest

The **logTest** command reads a script of logging messages to be sent to the logdaemon and sends the messages at the specified times and as the specified process.

**Synopsis**

```
logTest [-s dir] [-v] [-x] [file...]
```

**Description**

This command allows a repeatable sequence of messages to be sent through the logging and alerting system for test purposes.

Parameters for this command are:

- `-s dir` — Specifies the directory in which the `systemLog.h` file resides.
- `-v` — Increases verbosity when processing messages.
- `-x` — Suppresses transmission to the logdaemon. This parameter automatically implies `-v` so that something happens.

**Example**

```
logit -d MASTER_LOG+ALERTERMGS+0x40
```
The format of the messages to `logTest` is:

```
interval dst priority process index [arg arg...]
```

where:

- **interval** is the number of seconds since the last message was logged.
- **dst** is the destination flag based on possible destinations specified by the `Config` and `log.h` files.
- **priority** is the priority of the message. Values range from 0 (NONE) to 4 (CRITICAL).
- **process** is the name of the process to be listed as sender.
- **index** is the index of log message. This can be:
  - An absolute numeric value.
  - A symbolic value of the form `logMODULE(index)`, for example `logGEN(20)`.
  - A symbolic form such as the symbolic names found in the `logCLASS.h` header files, for example `SYSMSG`.

To use symbolic values, `logTest` must have access to the `systemLog.h` file.

- **arg arg...** are arguments associated with the message. The number of arguments must match the number required by the specific log message or the resulting information in the logging data file will not be expandable.
mkAlerter

The **mkAlerter** command reads an alerter description and generates C or C++ code that implements the description.

**Synopsis**

```
mkAlerter [-M] [-o {executable}] [-p {templ-path}] [-t [-f]] [-q]
[-v] [-l] [X=Y...] [{alerterfile}.A...]
```

**Description**

The **mkAlerter** command is a program that reads an alerter description and translates it, with the help of code template files, into compilable C or C++ code. It also produces a make file for compiling the code. Alerter description files always have a .A extension. By default **mkAlerter** produces a single source file, with an extension of .c. It also produces a header file (extension .h) and a make file (extension .mk). If the make file already exists, **mkAlerter** does not overwrite the existing file. This allows you to modify the make file as desired without fear of it being destroyed the next time **mkAlerter** is used, but does take advantage of the knowledge contained in the make file template used by **mkAlerter** when it does create a make file. The source file and the header are always overwritten each time **mkAlerter** is run. No modifications should ever be made to these intermediate source files, since the changes are lost the next time **mkAlerter** is run. If the -M flag is specified at execution time, **mkAlerter** splits the source file produced into two pieces, one
containing `main()` and the other containing everything else. The source file containing `main()` ends in `Main.c` with truncation as necessary. Once produced, this file, like the make file, is overwritten. If you wish to produce your own initialization, you can use the `-M` option and then make your changes to the `*Main.c` file.

Normally, the make file specifies that the executable to be produced by this alerter description is the same as the name of the alerter description minus the `.A` extension. The `-o` option allows you to specify an alternate executable name. This is used when the make file is generated.

The code template files are normally expected to exist either in the current directory or in `/usr/lib/alerter`. If the templates are not found in either of these places, `mkAlerter` uses its own internal copies, but also reports the fact. If the templates exist elsewhere, an alternate path can be specified with the `-p` option. Each directory that should be searched is separated by colon characters (`:`) characters, the same as a normal UNIX PATH description.

To get the initial template files, the user can specify the `-t` option. This causes `mkAlerter` to create each of the required template files using its internal copies. At this point each site may, if desired, alter these templates to produce alerter code appropriate for its needs. By itself the `-t` flag does overwrite existing template files. The `-f` flag causes the new templates to overwrite existing ones.
The current list of template files and their contents follows:

- **AlertInc.t**: Description of include files.
- **AlertCopyR.t**: Copyright notice.
- **AlertHead.t**: Template of the header file.
- **AlertMain.t**: Description of `main()` function.
- **Alerter.t**: Primary template describing the alerter program.
- **AlertTest.t**: Description of the code to respond to timeouts for alerting.
- **AlertMsg.t**: Template describing a subroutine to process messages for a particular logging destination.
- **AlertDir.t**: Template describing the subroutine to handle logging messages sent directly to the alerter process.
- **AlertMk.t**: Template for the makefile.
- **AlertObj.t**: Template for each `.o` file in the makefile.

The `-q` option is not currently implemented. It is meant to check the templates for completeness. The `-v` flag increases the verbosity of `mkAlerter` while it performs some of its activities.
Normally `mkAlerter` produces `#line` directives, which are used by the C compiler to report where errors are detected during compilation. While these are good during the compiling phase, they mislead most debuggers and make debugging difficult. The `-l` option suppresses the `#line` directives and is recommended when the debugging phase includes the use of a process debugger, such as `sdb` or `pi`.

It is also possible to specify variable assignments that appears in the make file via the `X=Y` syntax. Of particular interest is `CC=CC`, which also causes `mkAlerter` to generate C++ code rather than C code.

**See Also**

`readAlerterDesc`

---

### mkheader

The `mkheader` command allocates user memory for script variables.

**Synopsis**

```
mkheader application_name
```
Description

The `mkheader` program creates an address in user memory for each script variable. This information is stored in an `application_namedef.h` header file and is used in naming both the output file and the allocation program. The joint usage of the same header file enables the script to interact with the transaction state machine (TSM). The `-e` option specifies exact string matches.

The `mkheader` program prompts an operator to enter three types of information at the system console. The information may be entered interactively or batched together in a single file. Interactive entries are ended by entering `CTRL + D`. The system prompts for:

- Variable names
- Header file names in order of dependency
- Structure names with header file locations

When `mkheader` is entered with an argument (limited to 7 characters) for `application-name`, an `application_namedef.h` header file is created for the output information. The `mkheader` program then prompts for three types of information that it uses in producing the output file.

1. It prompts the operator for the name of one of the variables - char, int, or short. Char is the only variable that requires a length (default = 1).

It then allocates space for the variables at the beginning of the allowable user memory and places this information in the newly created header file.
A Summary of Commands

mkheader

2 Mkheader prompts the operator to enter header files that are needed in order to make the files covered in the third section compile. They should be named in the order of dependence. For example, if information in the header file `b.h` is needed by the header file `a.h`, header file `b.h` must be entered first and then header file `a.h`.

Full pathnames must be given. The file `mesg.h` and the structure `mbhdr` are common to all scripts and are entered automatically.

The header files can be stored in a batch file. The batch file could contain the following header files:

```
#include “/att/msgipc/dbcom.h”
#include “/att/include/shmemtab.h”
#include “/att/msgipc/ msm stop.h”
#include “/att/msgipc/cdata.h”
```

3 The last prompt is used for allocating the space for each structure. The operator is prompted to enter each header file name and its structure names. For each header file, the operator enters all (if all structures are needed) or specific structure names.

Mkheader recursively allocates memory and produces

```
application-namedef.h
```
defines for structure members that are themselves structures (except for struct `mbhdr`).
As a shortcut, the input for the three prompts may be stored in another file (data file) and read in each time. For example:

```
    mkheader application_name < data file
```

Once the header files have been entered, mkheader writes a program called `application_name_aloc.c` to allocate the rest of user memory. The resulting source code is automatically compiled, using `mkheader.a` library functions, and then executed. This adds the remaining structure definitions to the `application_namedef.h` header file. TSM does not allow a script to use more than 50,000 bytes of user memory. Scripts that exceed this limit are not run when data beyond the limit are accessed.

**Files**

```
/vs/bin/vs/mkheader
/vs/bin/vrs/mkheader.a
```

**Examples**

The following are examples of the prompts and the output for the mkheader program. This example shows a user who needs some space for 20 characters, 2 integers, and a short variable. The user also needs to have space declared for a structure called `dowj`, which is used by the script. The header file is found in `/att/msgipc/tsmdipappl.h`. 
In the example, the structure size of SZDOWJ is 16, which is automatically supplied by mkheader.

**console input:** *mkheader application_name*

**FIRST PROMPT:** Type in the variables you need space for according to the following format:
- type name [length]
- Example 1: int yn
- Example 2: char dg 20
  (End input with CTRL-D)
- Variable?: char dg 20
- Variable?: int yn
- Variable?: short cid
- Variable?: int iom
- Variable?: (CTRL-D)

**SECOND PROMPT:** Please enter any dependency files that the header files in the next section will need in order to compile. Use full path names. (End input with CTRL-D)
- File name?: /u/factory/file.h
- File name?: (CTRL-D)

**THIRD PROMPT:** Enter the header file name and structure names needed to create the def.h file. Use full path names. (End input with CTRL-D)
- Header file?: /att/msgipc/tsmdiappl.h
- Structures or all?: dowj
- Header file?: (CTRL-D)
Compiling:      application-name alloc.c
Running:        application-name alloc
Output is called: application-name def.h

This is the final application_name def.h file produced by this example.

/*****PRE-ALLOCATION OF USER SPACE *****/
#define DG:0
#define YN:20
#define CID:24
#define IOM:26
/***** DOWJ STRUCTURE *****/
#define DOWJ:30
#define RCODE:30
#define TIMEDATE:31
#define CATNUM:42
#define MKTSTAT:43
#define DOWHOUR:44
#define SZDOWJ:16

In this second example, the command line includes a data file from which the system gets the information usually entered by the users in response to system prompts.

The data file, called data in this example, contains the following information:

    char name 20
    int answer
    short reply
    ^D
/att/include/shmemtab.h
The following appears on the screen:

Conversant% mkheader test6 < data
Type in the variables you need space for according to the following format:
   type name [length]
Example 1: int yn
Example 2: char dg 20
(End input with CTRL-D)
Variable?:
Variable?:
Variable?:
Variable?:
Please enter any dependency files that the header files in the next section will need in order to compile.
Use full path names.
(End input with CTRL-D)
File name?:
Enter the header file names and structure names needed to create the def.h file. Use full path names.
(End input with CTRL-D)
Header file?: List of structures or all?:
Compiling /usr/has/another/test6_aloc.c
Running /usr/has/another/test6_aloc
Output is called /usr/has/another/test6def.h
I am now checking for any duplicate defines that will cause problems.
The following is the contents of the test6def.h file:

```c
/******* PRE-ALLOCATION OF USER SPACE *******/
#define NAME:0
#define ANSWER:20
#define REPLY:24
/******* DAY_PNTR STRUCTURE *******
#define DAY_PNTR 26
#define FILE_FIRST 26
#define REC_FIRST 28
#define FILE_LAST 30
#define REC_LAST 32
#define SZDAY_PNTR 8
/******* CDATA STRUCTURE *******
#define CDATA 34
#define SCRIPT 34
#define CHAN 50
#define EQUIP 52
#define STARTTIME 54
#define STOPTIME 58
#define EV0 62
#define EV1 66
#define EV2 70
#define EV3 74
-:
-:
-:
#define EV96 446
#define EV97 450
```
mkimage

The **mkimage** command performs a complete system backup of all the contents of the root disk file system.

**Note:** Mkimage performs only complete backups. The option to perform a partial backup of the root disk file system is no longer available.

**Synopsis**

**mkimage**

**Description**

The **mkimage** command performs a complete system backup by copying the UNIX files in the **root** and **usr** file systems to cartridge tape.

**Note:** This command can only be run from the **root** directory.
When specifying the `mkimage` command, the voice system requests to place the system into single-user mode. The `mkimage` command aborts if you do not give the system permission. Once in single-user mode, you must relogin and re-execute the `mkimage` command to continue the `mkimage` process. The `mkimage` unmounts all mountable file systems and then mounts `/usr`, `/var`, `/home`, and `/home2` file systems, which are the only file systems beside the root file system and `/stand` that appear on the root disk in a standard voice system. The system then creates a list of files to archive to tape and prompts you to insert a tape.

⚠️ **CAUTION:**
Do not rename the file systems mentioned above as the newly named file system would not be included in the image tape.

Once the image creation has finished, the tape is verified by reading the table of contents from the tape and comparing it with the original list of files used to create the tape. If any errors are found, you see the following message that directs you to check for specific files for further information about the failure:

```
ERROR: Verification failed. Wait for the light on the tape unit to go off before removing the tape.

Three files have been written to the /tmp directory which show the results of the backup and verification. $DISK_FILES contains a list of all the files which were to be backed up. $TAPE_TOC contains a list of all files which were actually written to the tape. $DIFFOUT contains the difference between these two files.
```
Analysis of these files may help in understanding the nature of the failure.

Also, be sure you are using the supported cartridge type and that your tape drive is being cleaned regularly. Execute the -init 6- command to return to multi-user mode.

The **mkimage** command then returns the voice system to multi-user mode by rebooting. If no errors are found, you are prompted to make a note of the file system partition sizes after the voice system returns to multi-user mode.

**Note:** You do not get a warning from the voice system before it reboots to return to multi-user mode.

**Note:** The **mkimage** command can run anywhere from 45 minutes to a couple of hours creating the image tape. Several tapes could be required depending on the amount of space used in the root disk file systems.

**Note:** The complete system image tape should only be used to restore a system root disk that has been severely damaged and needing file-system reconstruction at the lowest level. Use the **backup** and **restore** commands to recover from minor file damage or corruption.

**Example**

The following example backs up the **root** and **usr** file system to cartridge tape:

```
    mkimage
```
msgadm

The **msgadm** command provides an interface to the Intuity CONVERSANT logger and alerter administrative files.

**Synopsis**

```
msgadm [-e] [-f [command_file | -]]command
```

**Description**

Commands to **msgadm** can be specified individually on the command line using **msgadm command** or can be multiply specified as input from a file or standard input using the `-f` flag and a file name argument, as in **msgadm -f filename** or **msgadm -f -** for file input and standard input respectively. The `-e` flag forces **msgadm** to write $EOT after completing each operation resulting in command output to standard out.

Each command may require one or more of the following arguments:

- **message_ID** — A member of the set of system message IDs that includes all those whose message class is indexed through the **systemLog.h** file and whose mnemonics appear in a configured **logXXX.h** file.

- **priority** — A priority tag as defined with the $priority operator in the **/vs/data/msgDst.rules** file. To see the list of priority tags configured with the system, enter **msgadm priorities**
A  Summary of Commands

msgadm

- **time** — A non-zero positive integer with unit suffix indicating time in seconds if suffixed by "s", minutes if suffixed by "m" or hours if suffixed by "h".

- **dst** — The set of destination tags defined in the /usr/spool/log/msgDst.rules file through the $destination operator. To see the list of destination tags, enter msgadm destination. Note that only the latest destination specified in the /usr/spool/log/msgDst.rules file is recognized.

- **threshold** — A non-zero positive integer indicating a threshold value.

The following form sets the priority of message_ID to priority if message_ID is already in the msgDst.rules file. If message_ID does not exists, an entry is created with the indicated priority and the default destination(s).

    msgadm set message_ID priority priority

In the following form, if add is specified and message_ID exists in the msgDst.rules file, a new destination entry is added to the file. If the entry does not exists a new entry is created with the default destination plus the specified destination. The priority is set to the default priority. If delete is specified, dst is removed from the destination set for message_ID. The log or MASTER_LOG destination cannot be removed from a message.

    msgadm [add|delete] message_ID destination dst
A  Summary of Commands

msgadm

The following form sets the threshold window time of threshold message_ID to time. If no threshold structure has yet been created for message_ID, one is created with a threshold of 100 and threshold message set to THR01.

   msgadm set message_ID window time

The following form adds a threshold/thres_message_ID pair to the thresh.rules file. If no entry for message_ID exists, an entry is created with a threshold window of 1 hour.

   msgadm add message_ID threshold threshold message thres_message_ID

In the following form, the threshold associated with message_ID of threshold value threshold is deleted. If delete is specified and threshold is the last threshold for message_ID, then the entire threshold structure is removed for that message.

   msgadm delete message_ID threshold threshold

The following form lists all administrative parameters associated with message_ID or all system messages if all is specified.

   msgadm display [message_ID\all]

The following form outputs the default list of message priorities.

   msgadm priorities
A Summary of Commands

msgadm

The following form outputs the default list of message destinations (since all messages are sent to the lot destination, it is omitted from the list).

**msgadm destinations**

The following form outputs the set of thresholding messages.

**msgadm thresholds**

The following form makes all changes made through previous calls to **msgadm** take affect in the live logger/alerter system. If **sync** is not used, a system reboot is required to make changes take effect.

**msgadm sync**

The following form forces **msgadm** to read from **input_file**, or standard in if **-** is specified. The expected input is msgadm command line arguments as defined above. One complete set of command line arguments is expected per line. Errors in the input result in no changes to the logger/alerter configuration files regardless of where the error occurred in the input.

**msgadm -f [input_file|-]**

**Examples**

The following example sets the priority of message VROP003 to critical. The string *C is quoted to protect it from the shell.

**msgadm set VROP003 priority "C"**
A Summary of Commands

The following example adds a threshold of 10 with a threshold message of THR001 to the thresholding structure for the VROP003 message. It is assumed that THR001 is a valid message ID.

**msgadm add VROP003 threshold 10 message THR001**

The following example displays the message administration parameters associated with message SPIP001:

**msgadm display SPIP001**

```
Message Id: SPIP001 (SPIP_SBRK)  
Message Priority: *  
Message Destinations: log|alarm  
Threshold Period: 1h  
Message Thresholds:  
Threshold Threshold Message Id  
-------------------------------------  
1000 THR003 (THRESH_MAJOR)  
```

Message Text:

SPIP001  SP CA %s (SPIP_SBRK) Speechbreak detected on channel %s

The following example shows the use of the file input mechanism. It sets VROP003 to priority “-” (None), changes its destination from the alarm to the event, and removes its thresholding structures (if any exist). It then sets the priority of TSM002 to “-C” (Critical), assuming “-C” is defined in the `msgDst.rules` file, and makes the changes take effect in the current environment through the `sync` directive.
A Summary of Commands

newscript

message -f - <<!
set VROP003 priority -
delete VROP003 destination alarm
add VROP003 destination event
delete VROP003 threshold 10|
delete VROP003 threshold 100
set TSM002 priority "C"
sync
!

See Also
explain
display

newscript

The **newscript** command updates the changes to all currently assigned scripts.

**Synopsis**

e newscript

**Description**

The **newscript** command notifies the TSM and CDH processes that an existing script in the /vs/trans directory has been changed. After **newscript** is run, TSM reloads all scripts from disk the next time it is run instead of using a copy in the system memory.
A Summary of Commands

pkgadd

Files
/vs/bin/util/newscript

Example
The following example notifies the TSM and CDH processes that an existing application in the directory /vs/trans has changed.

newscript

pkgadd

The pkgadd command transfers a software package to the voice system.

Synopsis
pkgadd [-n] [-a admin] [-d device] [-R rootpath] [-r response] [pkginst1 [pkginst2] ...]

pkgadd -s spool [-d device] [ pkginst1 [ pkginst2 ] ... ]

Description
The pkgadd command transfers the contents of a software package from the distribution medium or directory to the system. Used without the -d option, pkgadd looks in the default spool directory for the package (/var/spool/pkg).
A Summary of Commands

pkgadd

Used with the -s option, it reads the package to a spool directory instead of installing it.

The pkgadd command has the following parameters:

**Note:** When executed without options, `pkgadd` uses `/var/spool/pkg` (the default spool directory).

When transferring a package to a spool directory, the -r, -n, and -a options cannot be used.

- **-a** — Define an installation administration file, admin, to be used in place of the default administration file. The token none overrides the use of any admin file, and thus forces interaction with the user. Unless a full path name is given, `pkgadd` looks in the `/var/sadm/install/admin` directory for the file.

- **-d** — Install or copy a package from device. Device can be a full path name to a directory or the identifiers for tape, floppy disk or removable disk (for example, `/var/tmp` or `/floppy/floppyname`). It can also be a device alias (for example, `/floppy/floppy0`).

- **-n** — Installation occurs in non-interactive mode. The default mode is interactive.

**Note:** The -n option causes the installation to halt if any interaction is needed to complete it.
A Summary of Commands

pkgadd

- **pkginst** — Specify the package instance or list of instances to be installed. The token all may be used to refer to all packages available on the source medium. The format `pkginst.*` can be used to indicate all instances of a package.

- **-r** — Identify a file or directory that contains output from a previous pkgask session. This file supplies the interaction responses that would be requested by the package in interactive mode. Response must be a full pathname.

  **Note:** The `-r` option can be used to indicate a directory name as well as a filename. The directory can contain numerous response files, each sharing the name of the package with which it should be associated. This would be used, for example, when adding multiple interactive packages with one invocation of `pkgadd`.

  Each package would need a response file. If you create response files with the same name as the package (that is, `pkinst1` and `pkinst2`), then name the directory in which these files reside after the `-r`.

- **-R** — Define the full path name of a subdirectory to use as the rootpath. All files, including package system information files, are relocated to a directory tree starting in the specified rootpath.

- **-s** — Reads the package into the directory spool instead of installing it.
A  Summary of Commands

 pkginfo

 Examples
 The following example installs a package from a floppy diskette. The system prompts you for the name of the package you want to install.

 pkgadd -d diskette1

 See also
 pkginfo
 pkgrm

 pkginfo

 The pkginfo command displays software package information.

 Synopsis
 pkginfo [-q | -x | -l] [-p | -i] [-r] [-a arch] [-v version] [-c category1, [ category2 [ , ... ]]] [pkginst [ , pkginst [ , ... ]]]

 pkginfo [-d device] [-R rootpath] [-q | -x | -l] [-a arch] [-v version] [-c category1, [ category2 [ , ... ]]] [pkginst [ , pkginst [ , ... ]]]
Description

The **pkginfo** command displays information about software packages installed on the system (with the first synopsis), or which reside on a particular device or directory (with the second synopsis).

**pkginst** designates a package by its instance. An instance can be the package abbreviation or a specific instance (for example, inst.1 or inst.beta). All instances of package can be requested by inst.*.

Without options, **pkginfo** lists the primary category, package instance, and the names of all completely installed and partially installed packages. It displays one line for each package selected.

The parameters for the **pkginfo** command are:

**Note:** The `-p` and `-i` options are meaningless if used in conjunction with the `-d` option.

- `-a` — Specify the architecture of the package as arch.
- `-c` — Display packages that match the category. Categories are defined in the category field of the **pkginfo** file. If more than one category is supplied, the package needs to match only one category in the list. The match is not case specific.
**Summary of Commands**

- **-d** — Defines a device on which the software resides. Device can be an absolute directory pathname or the identifiers for tape, floppy disk, removable disk, and so forth. The special token spool may be used to indicate the default installation spool directory (/var/spool/pkg).
- **-i** — Display information for fully installed packages only.
- **-l** — Specify long format, which includes all available information about the designated package(s).
- **-p** — Display information for partially installed packages only.
- **pkginst** — Specify the package instance or list of instances to be installed. The token all may be used to refer to all packages available on the source medium. The format `pkginst.*` can be used to indicate all instances of a package.
- **-q** — Do not list any information. Used from a program to check whether or not a package has been installed.
- **-r** — List the installation base for relocatable packages.
- **-R** — Define the full path name of a subdirectory to use as the root path. All files, including package system information files, are relocated to a directory tree starting in the specified root path.
Summary of Commands

pkginfo

- **-v** — Specify the version of the package as version. All compatible versions can be requested by preceding the version name with a tilde (~). Multiple white spaces are replaced with a single white space during version comparison.

- **-x** — Designate an extracted listing of package information. The listing contains the package abbreviation, package name, package architecture (if available) and package version (if available).

See Also
pkgadd
pkgrm
The `pkgrm` command removes a software package from the voice system.

**Synopsis**

`pkgrm [-n] [-R root_dir] [-a admin] [ pkginst1 [ pkginst2 ] ...]

`pkgrm -s spool [ pkginst ]`

**Description**

`pkgrm` will remove a previously installed or partially installed package from the system. A check is made to determine if any other packages depend on the one being removed. If a dependency exists, the action taken is defined in the `admin` file.

The default state for the command is in interactive mode, meaning that prompt messages are given during processing to allow the administrator to confirm the actions being taken. Non-interactive mode can be requested with the `-n` option.

The `-s` option can be used to specify the directory from which spooled packages are to be removed.
A  Summary of Commands

pkgrm

Options

The pkgrm command has the following parameters:

- **-n** — Non-interactive mode. If there is a need for interaction, the command will exit. Using this option requires that at least one package instance be named when the command is invoked.

- **-R** — Define the full path name of a subdirectory to use as the root path. All files, including package system information files, are relocated to a directory tree starting in the specified root path.

- **-a** — Use the installation administration file, admin, in place of the default admin file.

- **-s** — Removes the specified package(s) from the directory spool.

- **pkginst** — Specifies the package to be removed. The format pkginst.* can be used to remove all instances of a package.

See also

pkgadd
pkginfo
### raidconf

The `raidconf` command reports the configuration of the RAID subsystem.

**Synopsis**

`raidconf`

**Description**

The `raidconf` command prints the following information to standard out:

- The number, size, and state of all logical system drives
- The number, size, and state of all physical SCSI devices attached to the RAID controller. In this list, target (tgt) 7 is the RAID controller itself.

This command reports a subset of the information reported by the `raidstat -v` command.
### Summary of Commands

#### raidconf

**Examples**

The following information is an example of `raidconf` output:

**Logical System Drives Installed**

<table>
<thead>
<tr>
<th>ctl</th>
<th>dev</th>
<th>raid</th>
<th>blocksize</th>
<th>SIZE(MB)</th>
<th>state</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>5</td>
<td>512</td>
<td>9216000</td>
<td>4500 ONLINE</td>
</tr>
<tr>
<td>0</td>
<td>1</td>
<td>5</td>
<td>512</td>
<td>35399680</td>
<td>17285 ONLINE</td>
</tr>
</tbody>
</table>

**Physical SCSI Devices on RAID Controller**

<table>
<thead>
<tr>
<th>ctl</th>
<th>ch</th>
<th>tgt</th>
<th>lun</th>
<th>blksize</th>
<th>SIZE(MB)</th>
<th>devstate</th>
<th>devtype</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>512</td>
<td>8925000</td>
<td>4357 ONLINE</td>
<td>00 : Disk</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>512</td>
<td>8925000</td>
<td>4357 ONLINE</td>
<td>00 : Disk</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>512</td>
<td>8925000</td>
<td>4357 ONLINE</td>
<td>00 : Disk</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>512</td>
<td>8925000</td>
<td>4357 ONLINE</td>
<td>00 : Disk</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>512</td>
<td>8925000</td>
<td>4357 ONLINE</td>
<td>00 : Disk</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td>512</td>
<td>8925000</td>
<td>4357 ONLINE</td>
<td>00 : Disk</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>7</td>
<td>0</td>
<td>512</td>
<td>0</td>
<td>0 ONLINE</td>
<td>C7 : Host</td>
</tr>
</tbody>
</table>

**See Also**

- hasRAID
- raidok
- raidstat
The `raidok` command reports the state of the RAID subsystem.

**Synopsis**

```
raidok
```

**Description**

The `raidok` command prints one of three responses to standard out:

- Normal — This response indicates that the RAID subsystem is in the normal mode with all system drives online.
- Critical — This response indicates that all system drives are in the critical (degraded) mode. A physical drive is in the offline (dead) state.
- Rebuild — This response indicates that all system drives are in the critical mode. The offline physical drive is in the process of being rebuilt. When the rebuild completes, the system will return to normal mode.

**See Also**

`hasRAID`  
`raidconf`  
`raidstat`
 raidstat

The **raidstat** command reports the status of the entire RAID subsystem to standard out.

**Synopsis**

```
raidstat [-v]
```

**Description**

The information provided by the **raidstat** command includes the state of the system and physical drives.

When entered without the `-v` option, **raidstat** returns a quick summary of the status of the RAID subsystem.

When entered with the `-v` option, more details on individual logical drives and physical SCSI drives are provided.

- The command output displays the number, size, and state of all logical system drives. The logical drive state can be one of the following:
  - ONLINE
  - CRITICAL (degraded)
A Summary of Commands

raidstat

- The command output displays the number, size, and state of all physical SCSI devices attached to the RAID controller. The physical drive state can be one of the following:
  ~ ONLINE
  ~ OFFLINE
  ~ REBUILD

When a SCSI drive fails, `raidstat -v` reports all logical system drives as being in the critical state. The failed SCSI drive is reported as being the offline state before it is replaced. After it is replaced and while it is being rebuilt, it is reported as being in the rebuild state.

**Note:** In the physical device listing, target (tgt) 7 is the RAID controller itself.

**Example**
The following example shows output when the RAID subsystem is normal:

```bash
raidstat
The status of the RAID sub-system is normal.
There are 2 logical system drives
All System Drives are on-line
There are 6 Physical Devices
All drives are on-line
```
The following example also shows output when the RAID subsystem is normal, but the \-v option provides more detail:

```
raidstat -v
```

The status of the RAID sub-system is normal.

There are 2 logical system drives
All System Drives are on-line

cntl dev raid blocksize (blocks) SIZE(MB) state
0 0 5 512 9216000 4500 ONLINE
0 1 5 512 35399680 17285 ONLINE

There are 6 Physical Devices
All drives are on-line

cntl ch tgt lun blksize (blocks) SIZE(MB) devstate devtype
0 0 0 0 512 8925000 4357 ONLINE 00 : Disk
0 0 1 0 512 8925000 4357 ONLINE 00 : Disk
0 0 2 0 512 8925000 4357 ONLINE 00 : Disk
0 0 3 0 512 8925000 4357 ONLINE 00 : Disk
0 0 4 0 512 8925000 4357 ONLINE 00 : Disk
0 0 5 0 512 8925000 4357 ONLINE 00 : Disk
0 0 7 0 512 0 0 ONLINE C7 : Host

In the following example, the RAID subsystem is in critical (degraded) mode with the failed SCSI drive in the process of being rebuilt:

```
raidstat -v
```
The status of the RAID sub-system is degraded.

There are 2 logical system drives
All System Drives are critical

```
ctl dev raid blocksize (blocks)SIZE(MB) state
0 0 5 512 9216000 4500 CRITICAL
0 1 5 512 80363520 39240 CRITICAL
```

There are 6 Physical Devices
At least one physical drive is off-line

```
ctl ch tgt lun blksize (blocks)SIZE(MB) devstate devtype
0 0 0 0 512 17916240 8748 REBUILD 00 : Disk
0 0 1 0 512 17916240 8748 ONLINE 00 : Disk
0 0 2 0 512 17916240 8748 ONLINE 00 : Disk
0 0 3 0 512 17916240 8748 ONLINE 00 : Disk
0 0 4 0 512 17916240 8748 ONLINE 00 : Disk
0 0 5 0 512 17916240 8748 ONLINE 00 : Disk
0 0 7 0 512 0 0 ONLINE C7 : Host
```

See Also

hasRAID
raidconf
raidok
reinitLog

The reinitlog command is the control program and is used to inform logdaemon that a new config file is to be used.

Synopsis
reinitLog

Description
The reinitlog command is used during the procedure of creating a new logger message destination, as it sends a message to the logdaemon that informs the logdaemon that a new config file is to be used. The reinitlog command causes the logdaemon to reread the configuration file and reopen the various logging files.

Files
$LOGROOT/Config   The configuration file that defines destinations.
$LOGROOT/data     The directory in which logging files are created.
$LOGROOT/logpipe  The FIFO which logdaemon reads.

See Also
ckConfig
logCat
logit
The **remove** command places a unit in the manual-out-of-service state.

**Synopsis**

```plaintext
remove unit number immed min_delay [-i] [-n]
rem unit number immed min_delay [-i] [-n]
```

**Description**

The **remove** command is used to remove a unit from service when its temporary state is idle. It changes the permanent state of the unit to manual-out-of-service (MANOOS). It does not remove a unit that has a temporary state of busy. If a unit must be interrupted immediately or appears to be stuck busy, use the **rem unit number immed** command.

The parameters for the **remove** command are:

- **unit** — Identifies the unit. The choices are **channel** or **card**.
- **number** — Specifies the channel or card number, a range of channel or card numbers in the form m n, or **all**, for all the channel or card numbers. Card numbers are in the form card#[:port#], where port# is a port of card#. If port# is not given, all ports of the card specified are removed. If no card number or channel number is given, the system displays a syntax message.
A  Summary of Commands

- **remove**
  
  - -n — Disables prompting from the system whether to wait until a conflict has been resolved (see the -i option below) or to terminate the request to remove.
  
  - -i — Enables secondary command registration. If T1 diagnostics are being run, this option allows the removing of another card. If -i is used and another maintenance command is being run (**remove, detach, attach, restore, diagnose**), the request to **remove** card is blocked and a message is printed to the screen. If -i is not used and any maintenance command is being run, the request to **remove** card is blocked and a message is printed to the screen.

  If the command is permitted to run, a check is made to see if the command is in conflict with another. A command is in conflict if the card or card associated with it:

  ~ Is the T1 card being diagnosed
  ~ Will cause a change in the existing TDM bus master assignment
  ~ Has an interdependency with the T1 card being diagnosed (for example, PRI)

  If one of the above conflicts exist and -n is not used, the user is asked whether to wait until the conflict is resolved or to terminate the request. If T1 diagnostics are executing on-line tests and a conflict is detected, the **remove card** command is blocked. If T1 diagnostics are executing off-line tests and a conflict is detected, the user is asked whether to wait until the conflict is resolved or to terminate the request to remove.
A Summary of Commands

**remove**

- **immed** — Removes a card or channel even if it is in use. Active calls are likely to be dropped when this option is specified. This option is necessary when the card or channel must be removed from service as soon as possible, and you are willing to terminate any active calls. You may also want to use this option to get control of a channel that is hung and not providing useful service.

- **min_delay** — Used to avoid waiting for channels to be granted. This option applies to **remove chan** and **remove card** requests that are removing network interface channels (for example, T1 and Tip/Ring). This option specifies to minimize the delay in removing channels from service by not waiting for the channel to be granted. This option speeds up execution of the **remove** command, especially when a large number of channels are currently active.

When using this option, you must display the status of the channels with the **display card** command to determine when they are in the MANOOS state. This option can be used with or without the immed option and improves the response time in either case.

⚠️ **CAUTION:**

Removing a large number of channels from service with the min_delay option may cause momentary load problems on the switch.

To delete out of the command, press **DELETE**. If this does not stop the command, you may need to press **CTRL** and backslash simultaneously. If, while running **remove**, you wish to abort the command, a message similar to the following may appear:
At the user’s request, administration of the following cmd(s) has been interrupted.

CARD NUMBERS: <card numbers>

To assure proper operation of the identified card(s), run diagnostics at the earliest opportunity.

When remove is aborted, you should run diagnostics on all cards being administered to ensure they are returned to a fully functional state.

**Example**

The following example removes card 0 from service.

```plaintext
rem card 0
```

The following example removes channels 0 through 2 and channel 4 from service.

```plaintext
rem channel 0-2,4
```

The following example removes all cards from service.

```plaintext
rem card all
```

**See Also**

attach

detach

restore
The `remove_appl` command removes an application.

**Note:** This command is valid only if the Enhanced File Transfer package is installed.

**Synopsis**

```
remove_appl  [-d | s | t | f] -n application_name
```

**Description**

The `remove_appl` command is used to remove an application. Only one of the following options is allowed at one time:

- `-d` — Removes the database tables.
- `-s` — Removes the speech.
- `-t` — Removes the transaction.
- `-f` — Removes the installed files.

If no option is specified, the whole application is removed.
Summary of Commands

**remove_appl**

**Return Values**
If the `remove_appl` command is successful, a 0 value is returned. If any value other than 0 is returned, the `remove_appl` command failed. The following are the possible reasons for failure for the `remove_appl` command:

- The hard disk is low in space.
- The command syntax is incorrect.
- The voice system is not running.
- The command to remove the database tables failed.
- The command to remove the installed files failed.
- The command to remove the speech failed.
- The command to remove the transaction failed.

**Example**
The following example removes the application “bank_balance.”

```
remove_appl -n bank_balance
```

**See Also**
`backup_appl`
`install_appl`
`restore_appl`
The `remove_sw` command removes an installed package.

**Note:** This command is valid only if the Enhanced File Transfer package is installed.

**Synopsis**

```
remove_sw package_name
```

**Description**

The `remove_sw` command is used to remove any of the installed software package.

The `package_name` argument is the name that appears when the `pkginfo` command is executed and should be enclosed in double quotes (" ").

**Return Value**

If the `remove_sw` command is successful, a 0 value is returned. If any value other than 0 is returned, the `remove_sw` command failed. The following are the possible reasons for failure of the `remove_sw` command:

- The hard disk is low in space.
- You are not logged in as root or super user.
- The package name is not specified.
The package does not exist.

• The command can not find the removal script for the package.

Example
The following example removes the Script Builder software package.

```
remove_sw "Intuity CONVERSANT Script Builder Version 7.0"
```

See Also
install_sw

restore

The `restore` command restores a unit to the in-service state.

Synopsis

```
restore unit number [-i] [-n]
```

Description

The `restore` command is used to change the permanent state of a unit from manual-out-of-service (MANOOS) to in service (INSERV). The specified unit is placed in the INSERV state unconditionally, unless its current state is not MANOOS.
The parameters for the `restore` command are:

- **unit** — Identifies the unit. The choices are `channel` or `card`.
- **number** — Specifies the channel or card number, a range of channel or card numbers in the form m n, or `all`, for all the channel or card numbers. Card numbers are in the form `card#.[port#]` where `port#` is a port of `card#`. If `port#` is not given, all ports of the card specified are restored. If no card number or channel number is given, the system displays a syntax message.
- `-n` — Disables prompting from the system whether to wait until a conflict has been resolved (see the `-i` option below) or to terminate the request to restore.
- `-i` — Enables secondary command registration. If T1 diagnostics are being run, this option allows “restoring” of another card to be performed. If `-i` is used and another maintenance command is being run (`remove`, `detach`, `attach`, `restore`, `diagnose`), the request to `restore` card is blocked and a message is printed to the screen. If `-i` is not used and any maintenance command is being run, the request to `restore` card is blocked and a message is printed to the screen.

If the command is permitted to run, a check is made to see if the command is in conflict with another. A command is in conflict if the card or card associated with it:

- Is the T1 card being diagnosed
A Summary of Commands

```
restore
~ Will cause a change in the existing TDM bus master assignment
~ Has an interdependency with the T1 card being diagnosed (for example, PRI)

If one of the above conflicts exist and -n is not used, the user is asked whether to wait until the conflict is resolved or to terminate the request. If T1 diagnostics are executing on-line tests and a conflict is detected, the restore command is blocked. If T1 diagnostics are executing off-line tests and a conflict is detected, the user is asked whether to wait until the conflict is resolved or to terminate the request to restore.

To delete out of the command, press DELETE. If this does not stop the command, you may need to press CTRL and backslash simultaneously. If, while running restore, you wish to abort the command, a message similar to the following may appear:

At the user’s request, administration of the following cmd(s) has been interrupted.
CARD NUMBERS: <card numbers>

To assure proper operation of the identified card(s), run diagnostics at the earliest opportunity.

It is recommended when restore is aborted, diagnostics be run on all cards being administered to ensure they are returned to a fully functional state.
```
Example
The following example restores card 0 to service.

   restore card 0

The following example restores channels 0, 1 and 5 to service.

   restore channel 0-1,5

The following example restores all cards to service.

   restore card all

See Also
attach
detach
remove
The `restore_appl` command restores an application.

**Note:** This command is valid only if the Enhanced File Transfer package is installed.

**Synopsis**
```
restore_appl -n application_name [-d database_file] [-t transaction_file] [-s speech_file] [-p path]
```

**Description**
The `restore_appl` command is used to restore an application from backed up files existing on the same machine or from backed up files sent from the host. The files are cpio files. If the file names are not specified, default file names are used and all three components (database tables, speech, transaction) are restored. The following are the default file names for each component:

- database: `Dbase`
- speech: `Spch`
- transaction: `Trans`
The default path to restore all three components is:

/tmp/sb/BkUpAppl/application_name

**Note:** You must use the `restore_appl` command before using the `install_appl` command.

**Return Values**

If the `restore_appl` command is successful, a 0 value is returned. If any value other than 0 is returned, the `restore_appl` command failed. The following are the possible reasons for failure of the `restore_appl` command:

- The hard disk is low on space.
- You are not logged in as root or super user.
- The command syntax is incorrect.
- The command to restore the database tables failed.
- The command to restore the speech failed.
- The command to restore the transaction failed.

**Example**

The following example restores the application “bank_balance” from backed up files.

```
restore_appl -n bank_balance
```
A Summary of Commands

rmdb

See Also
backup_appl
install_appl
remove_appl

rmdb

The `rmdb` command displays the state of the resource manager (RM) and modifies the debug levels.

Synopsis

```
```

Description

The `rmdb` displays the state of the resource manager and modifies the debug levels. The valid syntax for ranges is as follows:

```
value [-value] [, value] | [value-value]*
```

Specifying a value and odd number of times indicates it will be displayed. Specifying a value an even number of times indicates it will not be displayed.
For example, 7-10,9 will display the items associated with values 7,8, and 10. The 9th entry would be excluded since it was specified two times.

The `rmdb` command accepts the following arguments:

- `-l` — Takes the `rmLOCK` while sampling data structures. This ensures that the sample is internally consistent. However, if the RM data structures are left in a locked state, this causes the `rmdb` to block until they are unlocked. (Leaving the `rm` data structures locked is a system fault). Also, other processes that attempt to use the RM data structures are temporarily blocked until `rmdb` completes its query.

- `-s` — Prints the values of the RM parameters and debug variables.
- `-u` — Prints function’s usage statistics.
- `-d` — Prints device table entries by device number.
- `-g` — Prints out group lists (by index in the group table).
- `-f` — Prints out the function table (by index in the function table).
- `-p` — Prints out the packfile table (by index in the packfile table).
- `-c` — Prints out the card table (by card # in the card table).
- `-C` — Prints out the channel table (by channel number).
- `-T` — Prints out the channel touch-tone queues (by channel #).
- `-P` — Prints out channel profiles (by channel #).
- `-i` — Repeats the display, with a sleep interval of the specified number of seconds between samples.
The `-L levelMask` sets the trace level mask. Supported masks are shown in Table 53 on page 816.

### Table 53. Rmdb Trace Level Masks

<table>
<thead>
<tr>
<th>Mask</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>RM_TL_ERROR</td>
<td>0x1</td>
</tr>
<tr>
<td>RM_TL_GENERAL</td>
<td>0x2</td>
</tr>
<tr>
<td>RM_TL_ENTEREXIT</td>
<td>0x4</td>
</tr>
</tbody>
</table>

The `-A levelMask` sets the trace area mask. Supported masks shown in Table 54 on page 816.

### Table 54. Rmdb Trace Area Mask

<table>
<thead>
<tr>
<th>Mask</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>RM_TA_TIMER</td>
<td>0x1</td>
</tr>
<tr>
<td>RM_TA_RESOURCE</td>
<td>0x2</td>
</tr>
<tr>
<td>RM_TA_INPUT</td>
<td>0x4</td>
</tr>
<tr>
<td>RM_TA_PROFILE</td>
<td>0x8</td>
</tr>
</tbody>
</table>
The `-tC` channel sets the trace channel high end.

The `-tc` channel sets the trace channel low end.

### rs_appl

The `rs_appl` command restores the speech or transaction component of a Script Builder application.

**Synopsis**

```
rs_appl [ [a] [s] [t] ] application_name [ [0] [1 | 2 | f=filename]
```

The `rs_appl` command arguments are:

- **a** — Used for restoring both the speech and transaction component of an application.
- **s** — Used for restoring the speech component of an application.
- **t** — Used for restoring the transaction component of an application.

---

**Table 54. Rmdb Trace Area Mask**

<table>
<thead>
<tr>
<th>Mask</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>RM_TA_MTC</td>
<td>0x10</td>
</tr>
<tr>
<td>RM_TA_MSG</td>
<td>0x20</td>
</tr>
<tr>
<td>RM_TA_INTERNAL</td>
<td>0x40</td>
</tr>
</tbody>
</table>

---

2 of 2
Description
The `rs_appl` command is restore a Script Builder application from a type of media on the local machine. This command can be used to restore either a single component (for example, speech or transaction) or both of the components (speech and transaction).

The `rs_appl` command supports restoring from floppy diskettes, magnetic tapes, and to a file. Two separate sets of floppy diskettes or a set of magnetic tapes is required in order to restore both of the components of an application. Only a single component can be restored from a file.

**Note:** When a file is used as a restore media, the file must be available either in the specified directory (file name is given with the full path name) or in the current working directory (only the filename is given) when this command is invoked.

**See Also**
`bk_appl`
The `save_config` command saves the `/vs/data/confData` to floppy disk.

**Synopsis**

```
/vs/bin/util/save_config
```

**Description**

The `save_config` command is used to save the `/vs/data/confData` file to floppy disk. The `/vs/data/confData` file represents the configuration of a voice system machine as determined by the Hardware Resource Allocator program (`/vs/bin/util/configure` command).

The `save_config` command should be used after upgrading a voice system machine in the field to store the newly determined configuration file to the CONFIGURATION DATA floppy for that particular machine.

**Files**

`/vs/data/confData`

**See Also**

configure
get_config
show_config
show_devices
sb_backup

The **sb_backup** command backs up a Script Builder application.

**Synopsis**

```
sb_backup [a | d | s | t] application_name [table1 table2...tablen]
```

**Description**

The **sb_backup** command is used to back up a Script Builder application to a media on the local machine. This command can be used to backup either a single component (for example, database, speech, or transaction) or all three components. This command supports backing up on either floppy diskettes or magnetic tapes.

**Note:** If floppy diskettes are used for backup, a separate set of floppy diskettes will be needed for each component of an application when you select a component or all components of an application. However, a single set of tape cartridge is enough to back up all components of an application.

The **sb_backup** command arguments are:

- **a** — Used for backing up all components of an application.
- **d** — Used for backing up an application database only.
- **s** — Used for backing up speech only.
- **t** — Used for backing up an application transaction only.
The `sb_restore` command restores a Script Builder application.

**Synopsis**

```
sb_restore [a | d | s | t] application_name
```

**Description**

The `sb_restore` command is used to restore a Script Builder application from a media on the local machine. This command can be used to restore either a single component (for example, database, speech, or transaction) or all three components. This command supports restoring either from floppy diskettes or from magnetic tapes.

**Note:** This command allows you to restore applications from any previous release.

The `sb_restore` command arguments are:

- **a** — Used for restoring all components of an application.
- **d** — Used for restoring an application database only.
- **s** — Used for restoring speech only.
- **t** — Used for restoring an application transaction only.
The `sb_te` command invokes the 3270 Terminal Emulator.

**Synopsis**

```
 sb_te session_number
```

**Description**

The `sb_te` command is used to invoke the 3270 terminal emulator and interact as a terminal to a host. This is used to first prove that a host communications link has been established. It can also be helpful in verifying that there have not been any changes to the host application screens. Sometimes changes can occur on the host end that are not passed down to the voice system end. The `session_number` chosen must be released from the host interface process before invoking `sb_te`. This can be accomplished by stopping the custom data interface process (DIP) for non-Script Builder applications or by using the `hdelete` command for Script Builder applications.

Sessions are mapped to logical unit (LU) numbers, with sessions numbered from 0 to 127 mapped to LUs that are numbered from 2 to 128. For example, session number 0 corresponds to the first LU number specified in the
Configure Host Link screen for Link 0, while session number 1 corresponds to the second LU number in the Host Configure Link screen. LUs are configured dynamically. However, it is possible that LU's on a single connection may be non-contiguous.

A range of session numbers (for example, 5–38) can be specified to sequentially emulate each session in turn. Press CTRL+Y to emulate the next session in the specified range. The CTRL + Y command may only be used for multiple sessions.

If a session is not specified, the system assumes the value all for sessions 0–63 for both cards in a two card installation. If the first session the first card is not configured, sb_te automatically proceeds to the first session on the next card. For example, if session 0 on card 0 is specified and that session is not configured, the system displays a failure message and the sb_te command proceeds to the first session on card 1.

**Example**

The following example invokes the 3270 terminal emulator for card 0 and session 0.

```
sb_te 0
```

The next example invokes the 3270 terminal emulator for sessions 35–40 for card 1.

```
sb_te 35-40
```
sb_trace

The sb_trace command displays the trace messages and the screens being sent between Script Builder applications and the 3270 host mainframe for the specified channel.

Synopsis

sb_trace all

sb_trace voice_channel_number

Description

The sb_trace command displays on its stdout (usually the terminal screen) messages about what actions the Script Builder applications are executing on specified channels or sessions. It also captures screens sent between the 3270 host mainframe and Script Builder applications assigned to voice channels on the voice cards (Tip/Ring and T1) and/or sessions on the host interface card.

Once it starts running, sb_trace outputs the screens and trace messages that are generated from that time until the user terminates sb_trace by pressing DELETE. The sb_trace command outputs messages and screens when the specified voice channels or sessions are executing their Script Builder actions and/or sending or getting screens while logging-in, recovering, or in-transaction. The sb_trace command invokes the trace command when it is run.
The **sb_trace** command displays high level trace messages from the DIP and TSM on its stdout. The following is an example of the possible messages that appears:

```
Tracing started on channel 0
DIP0: CH 0 get screen form
DIP0: CH 0 save_bal =
TSM: CH 0 STEP: 0. VALUE: 10
TSM: CH 0 STEP: 1.
DB: Read Table
DB: index 0
```

The “step” refers to the corresponding action step in the transaction definition outline. “Value” refers to whatever value is given with the indicated action step.

Certain Script Builder external actions and functions may generate trace messages when they are passed invalid data or when they encounter other failures. These messages are recognizable by the fact that the “step” number is out of the range of normal action numbers that appear in the transaction definition.

If the buffer (storage area) where information is stored gets re-used before the information is completely shown on the screen, trace information may not get reported by **sb_trace**. The information you see may be incomplete. To see any missing information, place a “play message” action in the transaction to play a long silence. Insert it before the critical action whose trace you are interested in.
The `sb_trace` command accepts a voice channel as argument to output only messages and screens that relate to the specified voice channel and associated session number. For example, `sb_trace 15` limits its output to the following:

- The actions being executed from the Script Builder application on channel 15.
- If channel 15 is handling a call that interacts with the host, `sb_trace` also outputs the screen’s name, fields being sent and received, and the entire screen’s contents (24x80 bytes) for the “in-transaction” session associated with channel 15 to the file `/vs/trans/hostdata(chan#)`.
- If channel 15 is not handling a call that interacts with the host, `sb_trace` treats the channel number directly as a session number, and outputs the actions being executed and the screens sent and received by session number 15. Session 15 must be assigned to an application via `hassign` before `sb_trace` is invoked or else `sb_trace` quits without tracing. Also `sb_trace` only outputs the actions and screens while session 15 is “logging-in” or “recovering.”

Note that the voice channel must exist in the system or `sb_trace` quits without tracing.

The `sb_trace` command also accepts the keyword `all` to mean that all channels and sessions will generate output. However to trace sessions that are “logging-in” or “recovering” the corresponding session numbers must fall in the range of existent voice channels. For example, a system with 25 voice...
channels can only trace the first 25 sessions if they’re “logging-in” or “recovering”. The 26th, 27th, and so on sessions can only be traced when “in-transaction” and associated with a voice channel.

The screen dumps are useful for debugging Script Builder applications while they interact with the 3270 host. A file with screen dumps is created for each voice channel or session number being traced. Screens appear in chunks of 24 text lines, appended to the files in the order that they are sent or received along with their name and time of transmission or reception. They can be viewed using the standard `cat` or `pg` commands.

The files are stored in `/vs/trans/hostdata` and are named as `chanX` or `chanXX`, where `X` or `XX` is a one- or two-digit channel or session number. If they exist, `sb_trace` moves these files to `chanX.old` or `chanXX.old` before starting the trace.

**Note:** These files tend to be voluminous requiring lots of disk space. If it is necessary to remove these files, it is recommended that they be removed after stopping the voice system. Otherwise if they are removed while the voice system is running `sb_trace` stops dumping the screens until the voice system is restarted.

**See Also**
- `db_pr`
- `db_put`
- `trace`
show_config

The show_config command prints to file the valid Intuity CONVERSANT system configuration represented by the /vs/data/confData file or the incomplete configuration represented by the /vs/data/failData file.

Synopsis

/vs/bin/util/show_config [ fail | filename ]

Description

The output of the /vs/bin/util/configure program is either the /vs/data/confData file or the /vs/data/failData file depending respectively on whether the program arrives at a complete and valid configuration, or an incomplete configuration based on the user’s input. In either case, the data in these files is compressed and cannot be easily understood. The /vs/bin/util/show_config command formats the data in these files and writes it in tabular form to a file in the current directory.

If the configure program was successful, executing show_config with no argument creates a ./configuration file, by expanding the contents of /vs/data/confData. This file can then be printed for hard copy of the successful configuration.
If the configure program was unsuccessful at determining a configuration, executing `show_config fail` creates a `/vs/data/failed_config` file by expanding the contents of `/vs/data/fail_conf`. The `/vs/data/failed_config` file may be examined or printed.

The `show_config` command always checks for the presence of either `/configuration` or `/vs/data/failed_config` and asks the user whether it is acceptable to overwrite the current file by that name if it exists.

When the configure program is used to upgrade an existing machine, the current `/vs/data/confData` file is saved in `/vs/data/conf_MMDDYY`, where `MM` = month, `DD` = day and `YY` = year. It may be desirable at times to see what configuration is represented by these saved configuration files. The `show_config` command may be used to expand the contents of a saved configuration file by specifying the filename as the first argument. The user is prompted for an output file name whenever the first argument is an input configuration filename.

**Files**

`/vs/data/confData`  
/configuration  (show sample output, describe each HEADING)  
`/vs/data/failData`  
`/vs/data/failed_config`
A Summary of Commands

show_devices

See Also
configure
get_config
save_config
show_devices

Note: The show_config command takes zero or one argument. The fail and filename arguments are mutually exclusive.

show_devices

The show_devices command displays and prints to file all devices and their attributes as represented in the /vs/data/deviceData file.

Synopsis

/vs/bin/util/show_devices

Description

The /vs/bin/util/show_devices command uncompresses the database of devices and their attributes contained in the /vs/data/deviceData file and displays the information to the screen. At the same time, a /devices file is created so that hard copy of this information may be generated. If a /devices file already exists, the user is prompted as to whether it is acceptable to overwrite the file.
**show_sys**

The `show_sys` command allows you to retrieve configuration and administration information from customer sites.

**Synopsis**

```
/vs/bin/tools/show_sys [-l]
```

**Description**

The following information can be retrieved with the `show_sys` command:

- UNIX version machine type
- Installed software

**Files**

`/vs/data/deviceData`  
`./devices` (show sample output)

**See Also**

`configure`  
`get_config`  
`save_config`  
`show_config`
A Summary of Commands

- Memory
- Configuration of hard disk(s)
- Free space in UNIX file system
- Tunable parameter changes
- Free space in swap
- Free space in speech file system
- Free space in Oracle database
- Oracle database tables
- Directory files in /oracle/dbs
- Cron information for root
- Local/remote database information
- ASP driver (speech card) version
- DNIS information (if T1s are present)
- T1 card information (if T1s are present)
- Device Information
- SAR Snapshot
- Parallel Printer Information
A Summary of Commands

show_sys

- UUCP information
- Devices file
- Permissions file
- Systems file
- Analog transfer parameters
- Installed cards
- Parameter file(s) for assigned applications
- Databases used in each application
- Status of Host LU’s
- CCA report for the previous week
- Call data report for a specific day of the previous week
- Traffic report for a specific day of the previous week

The -l option prints details about each of the information that can be retrieved with the show_sys command.

Example

show_sys
soft_disc

The soft_disc command sends a disconnect to a script on a channel or channels.

**Synopsis**

soft_disc channel

soft_disc channelStart-channelEnd

**Description**

The soft_disc command sends a message or messages to TSM requesting that the script running on channel or the range of channels channelStart-channelEnd be sent interrupt messages. If no script is running on the channel or if TSM does not own the channel, no action is taken for the channel.

The soft_disc command waits for a response from TSM. When it exits, TSM has acted on all the requests for all the channels by sending disconnects to the scripts or rejecting the requests. Scripts running on the channel receive the ESOFTDISC event.
Summary of Commands

soft_disc

Return Values
If the soft_disc is successful, a 0 value is returned. If any other value than 0 is returned, the soft_disc command completely or partially failed. If soft_disc returns a value of 2, then dip_int command failed due to temporary condition. In this case, the user should attempt the dip_int command again.

Example
The following example requests that TSM send interrupt messages to channel 2.

soft_disc 2

The following example requests that TSM send interrupt messages to channels 1 through 32.

soft_disc 1-32

See Also
dip_int
soft_szr

The **soft_szr** command starts a script on a channel.

**Synopsis**

`soft_szr channelStart-channelEnd script`

**Description**

The **soft_szr** command can be used to start a script on a channel. The **soft_szr** command sends a message to TSM requesting that a script be started on a channel. If the channel is in use, the script is not started. **Soft_szr** waits for a response from TSM. When **soft_szr** exits, TSM has either accepted the request and started the script or rejected the request.

There are two arguments to the **soft_szr** command: *channel* and *script*. The *channel* argument specifies the channel or range of channels on which you want to start the script. The *script* argument specifies the script to be started. The script does not have to be in the table of assigned scripts.

The channel number(s) must be valid and the channel(s) must not be busy, and the channel(s) must be in the inserv state. If you specify a channel that is busy, the command fails. If you specify a range of channels and one or more of the channels is busy, the command seizes the idle channels but fails for the busy channels.
Example

The following example starts the script “sodapop” on channels 0 through 4.

```
soft_szr 0-4 sodapop
```

The following example starts the script “test1” on channel 10.

```
soft_szr 10 test1
```

Return Values

If the `soft_szr` is successful, a 0 value is returned. If any value other than 0 is returned, the `soft_szr` command completely or partially failed. If `soft_szr` returns a value of 2, then `soft_szr` command failed due to temporary condition. In this case, the user should attempt the `dip_int` command again.

**spadc**

The `spadc` command collects data on the signal processing resources.

**Synopsis**

`spadc [-m min] [-s sec] [-D dir]`
The `spadc` command executes a program that collects data on the voice system signal processing resource utilization. Data is sampled every `-s` seconds, and average and peak measurements are written to a file called `mm-dd-yyyy` for the day of the month and year on which the command was executed (for example, 09-12-1997). The file is written in the `-D` directory every `-m` minutes.

The `spadc` command uses the following options:

- `-m` — minutes; used to specify how many minutes of data are represented in each output line of the `mm-dd-yyyy` file.
- `-s` — seconds; used to specify how many seconds pass between each data collection. Valid entries are from 5 to 60. The default is 60.
- `-D` — directory; used to specify the directory for the output. The default is `/var/adm/spa`.

Example

`spadc -m 20 -s 10`

This command collects the signal processing resource data in 10 second increments for a total of 20 minutes.

See Also

spar
The `spar` command is the signal processing resource reporter.

**Synopsis**

`spar [-ablmp] [-t min] [-f file]`

**Description**

The `spar` command executes a program that reports on the signal processing data activity collected by the `spadc` command.

The `spar` command options determine the report format:

- `-b` — board (circuit card)
- `-a` — algorithm
- `-l` — feature licensing
- `-m` — mean (average) data
- `-p` — peak data
- `-t` — time; used to specify how many minutes of data are summarized in each report line. The value must be 5-60, in increments of 5 (for example, 5, 10, or 15, etc.). The default is 20. To ensure valid data, the value for `-t` should be equal to or greater than the time increment specified for data collection by the `spadc` command.
A Summary of Commands

spar

- **-f** — file; used to specify an input data file. If no -f argument is given, the `/var/adm/spa/mm-dd-yyyy` file is used for the current day. If the data file is not in `/var/adm/spa`, you must provide a full pathname to the input data file.

Examples

Note that values of “NA” in a report indicate that data was not available for that period (for example, if `spadc` data collection was not active, or if the system had to be rebooted). A value of zero indicates data collection was activated but no activity occurred.

**spar -ap**

This command creates a report showing peak percent usage for the entire board and for each of the different algorithms allocated to the board. A partial sample output is shown below.
### Signal Processing Activity Report (Peak Percent Usage By Algorithm) 10/20/1997

<table>
<thead>
<tr>
<th>Time</th>
<th>brd</th>
<th>wwr</th>
<th>fwr</th>
<th>echo</th>
<th>cca</th>
<th>tts</th>
<th>dpr</th>
<th>play</th>
<th>code</th>
<th>celp</th>
<th>fax</th>
</tr>
</thead>
<tbody>
<tr>
<td>00:20</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>00:40</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>01:00</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>01:20</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>01:40</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>02:00</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>02:20</td>
<td>16</td>
<td>5</td>
<td>0</td>
<td>8</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>02:40</td>
<td>22</td>
<td>13</td>
<td>0</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>03:00</td>
<td>32</td>
<td>15</td>
<td>0</td>
<td>9</td>
<td>5</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>03:20</td>
<td>47</td>
<td>26</td>
<td>0</td>
<td>10</td>
<td>5</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>03:40</td>
<td>55</td>
<td>33</td>
<td>0</td>
<td>12</td>
<td>4</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>04:00</td>
<td>57</td>
<td>28</td>
<td>0</td>
<td>9</td>
<td>11</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>04:20</td>
<td>68</td>
<td>37</td>
<td>0</td>
<td>11</td>
<td>13</td>
<td>8</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>04:40</td>
<td>69</td>
<td>42</td>
<td>0</td>
<td>10</td>
<td>9</td>
<td>8</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>05:00</td>
<td>71</td>
<td>44</td>
<td>0</td>
<td>11</td>
<td>10</td>
<td>9</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>05:20</td>
<td>66</td>
<td>42</td>
<td>0</td>
<td>4</td>
<td>10</td>
<td>11</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>05:40</td>
<td>91</td>
<td>58</td>
<td>0</td>
<td>15</td>
<td>8</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>06:00</td>
<td>80</td>
<td>47</td>
<td>0</td>
<td>12</td>
<td>16</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>06:20</td>
<td>77</td>
<td>39</td>
<td>0</td>
<td>10</td>
<td>15</td>
<td>13</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
A Summary of Commands

Column headings reflect percent usage for the following:

- **brd** — All algorithms allocated to the board; note that in a given row, the peak percentage for the board may be slightly different than the sum of the algorithm percentages because the peaks may not have occurred during the same interval. For example, if the **spadc** command collects data at 5-minute intervals, and the **spar** report displays the peak percentages for 20-minute periods, the peak percentage for the board and for each of the algorithms may have occurred during any of the four different 5-minute **spadc** periods that provide data for the 20-minute **spar** interval.

- **wwr** — WholeWord Recognition
- **fwr** — FlexWord Recognition
- **echo** — Echo Cancellation
- **cca** — Call Classification Analysis
- **tts** — Text to Speech
- **dpr** — Dial Pulse Recognition
- **play** — Play speech
- **code** — Record speech
- **celp** — Record speech with CELP algorithm
- **fax** — FAX
### Summary of Commands

**spar -l**

This command creates a report showing average percent usage of licenses for each algorithm. A partial sample output is shown below.

#### RTU Report (Average Percent License Utilization Across System)
10/23/1997

<table>
<thead>
<tr>
<th>time</th>
<th>tts</th>
<th>dpr</th>
<th>flex</th>
<th>whole</th>
<th>swtts</th>
<th>fax</th>
</tr>
</thead>
<tbody>
<tr>
<td>00:20</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>00:40</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>01:00</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>07:00</td>
<td>23</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>07:20</td>
<td>23</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>07:40</td>
<td>26</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>08:00</td>
<td>12</td>
<td>0</td>
<td>21</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>08:20</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>08:40</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>09:00</td>
<td>31</td>
<td>0</td>
<td>14</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>09:40</td>
<td>19</td>
<td>0</td>
<td>15</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>10:00</td>
<td>18</td>
<td>0</td>
<td>12</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>10:20</td>
<td>13</td>
<td>0</td>
<td>19</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>10:40</td>
<td>13</td>
<td>0</td>
<td>22</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
</tbody>
</table>
spCtlFlags

Column headings reflect percent usage for the following:

- **tts** — Text to Speech
- **dpr** — Dial Pulse Recognition
- **flex** — FlexWord recognition
- **whole** — Whole Word recognition
- **swtts** — Software Text to Speech
- **fax** — FAX

See Also

spadc

spCtlFlags

The **spCtlFlags** command sets and clears flags used to control the behavior on SP Executive pack files as they run on an SSP card.

Synopsis

```
spCtlFlags [-b SP-index] [-t] [[+ | -]flag ]
```


Description

The CTL flags provide a means to alter the behavior of code running on the SP from the PC without distracting it from the job at hand. At the current time the CTL flags integer is divided into three parts, the upper 16 bits, which are general purpose flags to be used to turn on and off code and **printfs**, the bottom 8 bits, which are reserved for the SP Executive functions, and bits 8 15, which are currently not used by anyone officially. There is an unofficial use of these bits to prime the verbosity level for layer 3 of PRI.

The following are the options that can be used with the `spCtlFlags` command:

- **-b SP-index** — Index of the SP card to be examined.
- **-t** — (terse) Only output hex value of flag.

**Note:** The `spCtlFlags` command only works with SP executive applications (currently, the PRI and CCA pack files).

With no flag argument, `spCtlFlags` just prints the current value. With a flag argument, it either resets the value (no `+` or `-`), logically ORs in the flag (+), or logically and compliments out the flag (-). A flag can either be a number or use one of the following symbolic names:

- **printf** — Controls whether printfs from within an SP card actually generate output or not.
- **letters** — Contains executive trace flag of letters arriving from the PC.
A Summary of Commands

- **terminations** — Generates reports on all process and action terminations.
- **dbgpanics** — If this flag is set, panics by SP executive go to debugging monitor. If not set, panics go immediately to ROM for reloading.
- **timefcns** — Enables timing of TDM and DSP functions.
- **checkmem** — Enables checking of the “malloc” arenas to insure that they have not been corrupted. (This is fairly expensive in terms of CPU cycles expended per allocation reference.)
- **enabledbg** — Enables various general purpose debugging code if it is compiled into the executive.
- **dbg{1-16}** — A general purpose flag that can be used for debugging.

Symbolic and numerical flags can be combined with the + sign between them, that is, +dbg1+printf or -0x20+printf.

The current value of the flags is printed if no other arguments are specified and starting the flags with + causes them to be added to those already in place rather than just replacing the current flags with the new ones. Table 55 on page 847 provides additional information for each of the symbolic names.
Table 55. Symbolic Name Description for `spCtlFlags`

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>printf</code></td>
<td>If this flag is not set, all <code>printf()</code> operations from within the SP Executive are essentially NOPs. This flag must be set for any print information to be sent to the PC and logged.</td>
</tr>
<tr>
<td><code>letters</code></td>
<td>If this flag is on, the SP Executive attempts to report, via <code>printf()</code> the arrival of each letter that it is processing from the PC.</td>
</tr>
<tr>
<td><code>terminations</code></td>
<td>If this flag is on, the SP Executive sends a termination letter to the SP whenever a process or an action completes. This, in turn, is logged.</td>
</tr>
<tr>
<td><code>dbgpanics</code></td>
<td>If this flag is set and the SP Executive calls the <code>panic()</code> routine, it stops and waits for a debugger to examine what has happened. If this flag is not set and <code>panic()</code> is called, the SP Executive returns immediately to the ROM for reloading.</td>
</tr>
<tr>
<td>Name</td>
<td>Description</td>
</tr>
<tr>
<td>--------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>timefcns</td>
<td>If this flag is set, the SP Executive starts timing operations on each of the following four things, TDM interrupt servicing, the length of time between TDM interrupts, the length of time DSP loading is taking, and the length of time DSP servicing is taking. This information is requestable in the future via a letter from the PC. Currently it must be examined via a debugger.</td>
</tr>
<tr>
<td>checkmem</td>
<td>If this flag is set, each attempt to <code>malloc()</code>, <code>realloc()</code>, or <code>free()</code> memory causes the malloc arena to be checked for consistency. If the define symbol <code>SM_FULLCHECK</code> is set when the <code>spaceMngr.c</code> file is compiled, this check is very complete (though more time consuming) and detects problems sooner. If it is compiled without <code>SM_FULLCHECK</code>, the check is more cursory in nature.</td>
</tr>
<tr>
<td>enabledbg</td>
<td>Much of the special history keeping code is conditional upon this flag being set. If it is not set, the overhead of saving and timing is avoided. If it is set, then whatever history mechanism has been compiled in, saves its form of history information for debugging purposes.</td>
</tr>
</tbody>
</table>
The `spres` command restores speech from a backup.

**Synopsis**

`spres -l file [-v] -t [talkfile list] [phrase list] [listfile list]`

**Description**

The `spres` command restores the specified talkfile number, phrase number, listfile, or phrase and talkfile of the speech. Only speech that is backed up using the `spsav` command can be restored with the `spres` command.

### Table 55. Symbolic Name Description for spCtlFlags

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
</table>
| `dbg[1-16]` | The use of these flags is up to each task. It is assumed that they will be used during debugging phases, but not be in use for final distribution. Code using them does tests of the following form: <br> 
if (spcon->status[SPS_CTL_FLAGS] & SPCF_DBGnn) to determine whether a certain section of code or not should be executed. |
The parameters for the `spres` command are as follows:

- `-l file` — This parameter specifies the input device. Typically, this is cartridge tape (`/dev/rmt/c0s0`).
- `-v` — This parameter is the verbose flag that gives a running commentary of the `restore` procedure.
- `-t` — This parameter is the tape flag. This is required for restore from cartridge tape.
- `talkfile list` — This parameter specifies the list of talkfiles to be restored, specified as a single digit, a range m-n, or `all`. If no value is given, the default is `all`.
- `phrase list` — This parameter specifies the list of phrases to be restored, specified as a single digit, a range m-n, or `all`. If no value is given, the default is `all`.
- `listfile list` — This parameter specifies the list of listfiles and associated speech to be restored (for example, `listfile list.cabnt`).

The `spres` command invokes an interactive program asking you to insert and remove cartridge tapes periodically. If the `-v` option is used, the system displays information about each step of the recovery.

**Example**

The following example restores listfile `list.cabnt` verbosely from cartridge tape:

```
spres -l /dev/rmt/c0s0 -v -t listfile list.cabnt
```
The `spsav` command backs up speech.

**Synopsis**

`spsav -O file [-v] -t [talkfile list] [phrase list] [listfile list]`

**Description**

The `spsav` command backs up the specified talkfile number, phrase number, listfile, or phrase and talkfile of the speech. Only speech in the speech file system can be backed up using the `spsav` command.

The parameters for the `spsav` command are as follows:

- `-O file` — This parameter specifies the output device. Typically, this is cartridge tape (`/dev/rmt/c0s0`).

- `-v` — This parameter is the verbose flag that gives a running commentary of speech being saved.

- `-t` — This parameter is the tape flag. This is required for back up to cartridge tape.

- `talkfile list` — This parameter specifies the list of talkfiles to be backed up, specified as a single digit, a range m-n, or all. If no value is given, the default is all.
A Summary of Commands

spStatus

- **phrase list** — This parameter specifies the list of phrases to be backed up, specified as a single digit, a range m-n, or **all**. If no value is given, the default is **all**.

- **listfile list** — This parameter specifies the list of listfiles and associated speech to be backed up (for example, **listfile list.cabnt**).

The **spsav** command invokes an interactive program asking you to insert and remove cartridge tapes periodically. If the **-v** option is used, the system displays information about each step of the backup.

**Example**

The following example saves listfile **list.cabnt** from cartridge tape:

```
spsav -O /dev/rmt/c0s0 -v -t listfile list.cabnt
```

spStatus

The **spStatus** command displays information about the pack file running on an SP card.

**Synopsis**

```
spStatus [-b SP-index] [-i interval] [-c count] [-r] [-B]
```
A  Summary of Commands

spStatus

Description
A substantial amount of information about the state of an SP Executive pack (PRI and CCA pack files) is available via shared memory and the program spStatus, which displays the information. The information is defined in include/spStatus.h.

The following options can be used with the spStatus command:

• -b SP-index — Index of the SP card to be examined.
• -i interval — Interval between examinations of SP status. Minimum: 2 seconds. Default: 60 seconds.
• -c count — Number of times SP status is to be examined. Default: 1.
• -r — Reset the executive and task counts before starting.
• -B — No bell when running in iterative mode.

The spStatus command can be run in a one-shot mode, which is the default, or an iterative mode. In the iterative mode, it prints the changes between each successive examination of the values stored in the spcon structure in shared memory.

Sample Format
The following is an example of the sample output if spStatus is against the CCA pack.
Fri Dec 7 13:06:03 1990
Romstate: 0x0 Romcmd: 0x0 Romargs: 0x0 0x0
Ramstate: 0x245 Pack Features: C Pack Type: SP executive
Bootcnt: 0x0 Spctime: 0x6a5 Spusage: 0x0
Debug ID: 0 spFreeMemory: 1,164,152
<< Status Information >>
  Free Actions: 46
  Busy Actions: 4
  Active Letters: 4
  Free DSPs: 2
  Broken DSPs: 0
  Busy DSPs: 0
  Run Queue Length: 0
  Sleep Queue Length: 4
  Running Process ID: 5
  Running Action Index: 3
  DSP Requests: 4
  RPC Requests Done: 0
  RPC Requests Queued: 0
  RPC Requests Discard: 0
  Exception #: 0x0 0-Reset
  Exception Addr: 0x0
    Routine: 0x0
  PC at last TDM Intr: 0x99f05b62
  PC at last DSP Intr: 0x99f05b46
  DSP Count: 2247
  CTL Flags: 0x0
  Timer Requests: 0
  Active Timers: 0
  Completed Timers: 0
A Summary of Commands

Killed Timers: 0
Work Search Loops * 1000: 53
TDM Overruns: 0
TDM Servicings Deferred: 0
Letters Received: 8
Letters Sent: 0
Letters Deferred: 0
Letters Discarded: 0
Executive Time: 57
Idle Time: 489

Task[6]: 1156

<< Mailbox Information >>
Index 1st Empty 1st Full
0 -> PC 00
1 <- PC 00
2 <- PC 4040
3 <- PC 00
4 <- PC 00
5 <- PC 00
6 <- PC 00
7 <- PC 00
8 -> PC 00

=====================================
1 Fri Dec 7 13:06:09 1990
Bootcnt: 0x0 SPtime: 0x7df SPusage: 0x0

<< Status Information >>
Run Queue Length: 1(+1)
Sleep Queue Length: 3(-1)
Running Process ID: 4(-1)
Running Action Index: 2(-1)
The following is a brief description of each element of the display:

- **Romstate, Romcmd, Romargs** — These three values are active if either the ROM is in control of the SP card or a debugger is in charge.

- **Ramstate, Pack Features, Pack Type** — If a packfile is running or being debugged Ramstate contains the ID of the pack. If the pack is an SP Executive type pack, the Pack Features indicate which tasks are available in this pack. The Pack Type is either “SP executive” or “Original.”

- **Bootcnt, SPtime, SPusage** — Bootcnt is incremented each time the ROM restarts. Only diagnostics currently alter it in any other way. SPtime is the time in 16 msec increments since the pack started. If spStatus is running in recursive mode, this value is not changing, and the debugger is not active, the following warning is generated:

  "No Clock! Check TDM master,"

One of two things is happening, either there is no TDM master and hence no TDM interrupts, or the pack file is stuck at priority level 6 or 7 and so all interrupts are blocked. In the former situation, check your T1 or Tip/Ring...
cards and make sure that one of them is the TDM master. In the latter case, you have a bug. Use `msdb` and examine the pack file. `SPusage` is the current load factor on the SSP card. This is the last value of meaning if the pack is an original-style pack. The remaining information applies only to SSP Executive packs.

- **Debug ID, spFreeMemory** — Debug ID is set to the pid of the UNIX process currently debugging this SP card. It is used to avoid collisions between people attempting to debug code running on a card. `spFreeMemory` is the amount of memory free in the memory allocation arenas, which are managed by `malloc()`, `realloc()`, and `free()`.

- **Free Actions** — The number of Action structures not currently assigned to a time slot. This value is initially 50.

- **Busy Actions** — The number of Action structures currently assigned to time slots.

- **Active Letters** — The number of letters being carried in Chainmail structures for long time processing via Action structures.

- **Free DSPs, Broken DSPs, Busy DSPs** — The number of DSP processors available to do work, broken, and assigned to work.

- **Run Queue Length, Sleep Queue Length** — The number of processes waiting to run and the number waiting for some event to wake them up.
A Summary of Commands

Running Process ID, Running Action Index — The process ID of the SP Executive process currently running and the index of the Action structure currently active.

DSP Requests — The number of DspRequest structures active.

RPC Requests Done, RPC Requests Queued, RPC Requests Discard — The number of remote procedure call requests that have been performed, the number that are waiting to be done, and the number of requests that had to be discarded before the backlog was too large.

Exception #, Exception Adr — The 680X0 hardware exception number and the name of the exception that has stopped the 680X0 processor and either sent it to the ROM or to the debugger and the address where the exception took place. These can be very valuable in case of a fatal error.

Routine — Currently not used.

PC at last TDM Intr, PC at last DSP Intr — Addresses at which the TDM and DSP last interrupted.

Info Flags — Currently there are two pieces of information conveyed by these flags, whether the processor is currently within a DSP interrupt and whether it is within a TDM interrupt. Both, neither, or any combination could be true.

DSP Count — The number of DSP interrupts processed.
A Summary of Commands

spStatus

- **CTL Flags** — The current value of the CTL flags. These are used to control optional code within a pack. See `spCtlFlags` for further information.

- **Timer Requests** — The number of timer requests that have been made.

- **Active Timers, Completed Timers, Killed Timers** — The number of timer requests currently outstanding, the total number of timer requests that have run to completion, the number of timer requests that were removed prior to execution. If these values do not total up properly, there is also a warning indicating that there is trouble.

- **Work Search Loops** — The number of times divided by 1000 that the SP Executive has gone through its base level work search loop, trying to find something productive to do. The change in the number goes down as the SP Executive becomes busier and busier doing productive work.

- **TDM Overruns** — This number should always be zero. If it is not, it indicates that some activity is taking too long and blocking the processing of a TDM interrupt before it rolls over and starts overwriting data. This is serious.

- **TDM Servicings Deferred** — The number of times that a TDM servicing was deferred because the TDM interrupt came in on top of a DSP interrupt for a time slot. It is not serious. It just indicates that the hardware is busy and conflicts are being resolved. It can be a potential area of difficulty if the DSP routine is too slow and the TDM overruns while it is waiting to be serviced.
Summary of Commands

• Letters Received, Letters Sent, Letters Deferred, Letters Discarded — The number of letters received from the PC, the number of letters sent to the PC, the number of letters going to the PC that had to be temporarily stored in the overflow area because the PC was not keeping up, and the number of letters that even the overflow area could not handle and had to be discarded. Going into the overflow area is an indication of potential trouble, but is not bad if the duration is short. If the SP code continues to generate too many letters in too short of a period of time, then it is real trouble. The same thing can happen if the PC gets bogged down and cannot keep up.

• Executive Time, Idle Time, Task[] — These counts indicate the load being placed on each portion of the system. The executive time is the number of times the TDM interrupted some activity of the SP Executive that was considered to be the idle look-for-work activity. The idle time is the number of times the TDM interrupted the look-for-work activity. When tasks are active, a line appears for each task. The index of the task is its position in the tasks[] array found in the associated sp/config/taskTbl*.c file.

• Mailbox Information — Index, Empty, Full — Rudimentary information about activity within each mailbox. It does not tell you how many letters have been sent via each mailbox, though that may come eventually, but it does tell you whether the mailbox is empty (1st Empty == 1st Full) and if the values are changing from one display to the next, you know mail is passing through that mailbox. Keep in mind that mailbox 1,
spVrsion

The **spVrsion** command prints the version of the SSP driver currently installed on a machine.

**Synopsis**

```
spVrsion
```

**Description**

The **spVrsion** command prints which version of the SP driver has been installed. The two versions that can be installed are the 12-Mbyte version and the 44-Mbyte version.
The `start_hi` command starts the 3270 host interface software.

**Synopsis**
```
start_hi
```

**Description**
The `start_hi` command starts the 3270 host interface software appropriately for voice system use.

**Example**
The following example starts the 3270 host interface software:
```
start_hi
```

**See Also**
`stop_hi`
start_vs

The start_vs command brings the system up to a fully operational state.

**Synopsis**

start_vs

**Description**

The start_vs command returns the voice system software to fully operational state. If you use the stop_vs command to stop the system, you should use the start_vs command to start it again. The start_vs also should be used if the system was rebooted or powered down after stop_vs was used.

The start_vs command checks to see if the user stopped the system with the stop_vs command. The start_vs command places all cards placed in the manual-out-of-service (MANOOS) state with the stop_vs command in the in-service (INSEIV) state.

You must be logged on to the system console as root to use the start_vs command.

Since the /vs/data/spchconfig file cannot be edited while the voice system processes are running, it is a good idea to check the value of nbufs in the /vs/data/spchconfig file before executing the start_vs command. The value of nbufs defines the number of speech buffers. In order for the voice system to operate properly, nbufs must be set to 2.5 times the number of active channels.
### stop_hi

The `stop_hi` command stops the 3270 host interface software.

**Synopsis**

```
stop_hi
```

**Description**

The `stop_hi` command stops the 3270 host interface software.

**Example**

The following example stops the 3270 host interface software:

```
stop_hi
```

**See Also**

`start_hi`
stop_vs

The `stop_vs` command gracefully stops the voice system software.

**Synopsis**

`stop_vs [time_out] [-n]`

**Description**

The `stop_vs` command gracefully stops the voice system software. If the system is receiving calls, `stop_vs` waits for approximately 3 minutes before it unconditionally stops the software. By waiting, the system allows callers to finish their transactions. The `stop_vs` command disables incoming call recognition on all cards to prevent them from being reactivated by an incoming call.

The `time_out` option is the time to wait before the voice system is stopped. The default value for this option is 180 seconds. The `-n` option prompts you with a message that another maintenance command (`restore`, `remove`, `attach`, `detach`, `diagnose`) is being performed. It asks if you wish to continue or to terminate the `stop_vs` command. The `stop_vs` command terminates another maintenance command in progress when initiated. The default value for this option is Yes.

If you use `stop_vs` to stop the system, you should use `start_vs` to reactivate it. If you use `stop_vs` to stop the software and then reboot the machine, be sure to execute `start_vs` after logging in as `root`. This ensures that the system is returned to the state it was in before it was rebooted.
If an active host link is established, the `stop_vs` command checks the LUs and logs out the application(s). The command waits up to 60 seconds (6 series of 10 seconds each), then continues stopping the voice system.

**Example**
The following example stops the voice system software:

```
stop_vs
```

**See Also**
`start_vs`

---

### striphdr

The `striphdr` command strips voice or code headers from a speech file.

#### Synopsis

```
striphdr [voice | code]
```

#### Description

`Striphdr` is a filter that removes either the voice or code headers from a speech file. Voice headers are required for files being edited by the GSE, and code headers are required for speech that is to be used with the voice system.

**See Also**
`addhdr`
The `sysmon` command executes a program that monitors incoming telephone lines and the associated cards to see that they are functional.

**Synopsis**

`sysmon page_number`

**Description**

The `sysmon` command verifies that each incoming telephone line and its associated card are functional. Before initializing the test, locate a touch-tone telephone close to the system controller and get a telephone number to be used for dialing into the system. Use the `assign channel` command to assign to a group any channels you want to test. Then, use the `assign service/startup` command to assign a script to the same group.

Once the channels and service are assigned, enter the `sysmon` command followed by the number of pages, or screens, you want to see. Each page displays 120 to 140 channels.

The resulting display shows all channels and their current states. Note that only equipped channels can be in the IDLE or MOOS state, while unequipped channels are followed by dashes (--).
**A Summary of Commands**

Enter the telephone number for the touch-tone phone. Watch the display on the monitor and note the channels that receives the call. Follow the instructions provided by the voice system. Enter **0000** to end the test.

**Example**

The following example shows page four of the system monitor display.

```
syson 4
```

**tas**

The **tas** command executes the transaction assembler (tas) program to assemble script instructions.

**Synopsis**

```
tas [-e] [-I include_directory -T talk_directory -U name -Dname
-Dname_def -Y dir -H] -O output_file application_name.t
```

**Description**

The **tas** command is used to assemble script instructions recorded in an **application-name.t** file. It produces an executable file designated **application-name.T**, which is stored in a table as a list of executable script instructions.
A Summary of Commands

The -e option requires exact string matches for speech phrases.

The arguments must be in the order given above for the command to work properly. The directory search specified by the arguments are: I (include file) and T (listfile).

**Note:** No space is allowed between the -I and -T flags and their pathnames, but space is allowed after the -e flag. Note that the -I option to `tas` is interpreted by `cpp(1)`.

The remaining arguments are:

- **-U** `name` — Remove any initial definition of name, where name is a reserved symbol that is predefined by the particular preprocessor (this option is interpreted by `cpp(1)`).

- **-D** `name` and **-D** `name_def` — Define `name` with value `def` as if by a `#define`. If no `def` is given, `name` is defined with value 1. The -D option has lower precedence than the -U option. That is, if the same name is used in both a -U option and a -D option, the name is undefined regardless of the order of the options (this option is interpreted by `cpp(1)`).

- **-Y** `dir` — Use directory `dir` in place of the standard list of directories when searching for #include files (this option is interpreted by `cpp(1)`).

- **-H** — Print, one per line on standard error, the path names of included files (this option is interpreted by `cpp(1)`).

- **-o** `output_file` — The name of the output file. The default is `out.T`.
A Summary of Commands

Note that the maximum number of literals per script allowed by the `tas` command is 450. If there are more than 450 literals in a script, the system displays the error message `literal table overflow`. Additional limitations enforced by the `tas` command are (whichever occurs first in a list file):

- 1,000 phrases
- 4,000 words
- 40,000 characters

If more phrases are needed by an application, use multiple list files and `tfile` instructions within the script.

Note: If your script contains a large number of define statements, `tas` may report messages such as the following during compilation:

```
script.t: 1068: too much defining
```

where `script.t` is the script source file and `1068` is the line in which the define appears. The limit to the number of define statements that a script may have depends on the number of defined macros and their size. If this type of message appears, reduce the number of define statements in your script.

Files

`/vs/bin/tas`
Example

tas example.t

The program includes applicable header files and replaces literal definitions with corresponding numbers to produce an assembled version of the script. The assembled code is stored on disk under the label example.T. The unassembled instructions are found in the file /var/applN/trans/example.t.

    tas example.t -l/var/include -T/var/speech

In addition to performing the same functions described for the previous example, tas checks the files in /var/include when processing include statements and the file in /var/speech when processing T-file statements.

tif2itif

The tif2itif command converts a Tag Image File Format (TIFF) file to the TIFF Class F format used by the Intuity CONVERSANT FAX Actions Package. The conversion does not handle files that contain color information. The input TIFF file must have the BitsPerSample and SamplesPerPixel fields set to 1 in the directory header.

**Note:** For detailed information on using this command, see Appendix C, Format Conversion Tools for Fax Files.

**Synopsis**

tif2itif [-f|n] [-h +|-num] [-v +|-num] infile outfile
A  Summary of Commands  
tif2itif

Description
The parameters for the tif2itif command are:

- **-f** — Forces the output to fine resolution. A file converted to fine resolution has twice as many horizontal data lines as the original. The image should look identical to the original.

- **-n** — Forces the output to normal (not fine) resolution. Converting a fine resolution file to normal resolution removes every other horizontal data line from the file. The resulting image is not as sharp as the original.

**Note:** If you do not specify either the -f or the -n option, the converted file retains the resolution of the original file.

- **-h+num** or **-h -num** — Creates a horizontal offset where + (plus sign) indicates right, - (minus sign) indicates left, and num specifies the number of units in inches or centimeters. Use c to indicate centimeters and i or no unit (blank) to indicate inches. For example, to specify 1.5 inches, use 1.5 or 1.5i; to specify 1 centimeter use 1c.

- **-v +num** or **-v -num** — Creates a vertical offset where + (plus sign) indicates down, - (minus sign) indicates up, and num specifies the number of inches or centimeters. Use c to indicate centimeters and i or no unit (blank) to indicate inches. For example, to specify 1.5 inches, use 1.5 or 1.5i; to specify 1 centimeter, use 1c.

- **infile** — The name of the file to be converted.

- **outfile** — The name you select for the converted file.
A Summary of Commands

Note: You may want to assign a .tif suffix to the input file and a .itf suffix to the output file to distinguish them. No particular suffix is required, however.

Example
The following examples remove an existing fax banner from a TIFF file by creating a vertical offset of a quarter inch.

tif2itif -v -.25 infile.tif outfile.itf
tif2itif -v -.25i infile.tif outfile.itf

Equivalent Command for Windows Environment
The Intuity CONVERSANT system provides a tif2itf.exe tool with the same functionality as the tif2itif command for UnixWare systems for use on Windows systems. The command syntax, parameters and use of the tif2itf.exe tool are identical to those for the tif2itf command. For more information about converting files to TIFF format on Windows systems, see Appendix C, Format Conversion Tools for Fax Files.

See Also
tif2itf.exe
A Summary of Commands

tif2itf.exe

The tif2itf.exe command has the same functionality, syntax, and parameters as the tif2itif command. Both commands convert files to the TIFF Class F format used by the Intuity CONVERSANT FAX Actions Package. The Intuity CONVERSANT system provides the tif2itif command for use on UnixWare systems, and the tif2itf.exe command for use on systems running the Windows 95, 98, or NT operating system.

See tif2itif on page 871 for information on the command syntax and parameters. See Appendix C, Format Conversion Tools for Fax Files, for information on installing and using the tif2itf.exe command on a Windows system.

See Also

tif2itif

trace

The trace command outputs trace messages to standard output, while the system is taking calls, for specified processes and channels.

Note: This information may be useful for debugging applications and dips.
A Summary of Commands

trace

Synopsis
trace [name]...[chan \,range]...[card <card#[,port#]>][area [,area...]]...[level [,level...]]...[date] [tracelog | startlog][sleep sleeptime]

Description
The trace command prints trace messages to the standard output device (stdout) according to specified options. Executing trace also causes trace output to be logged to the trace shared memory buffer or to the trace log.

When trace is specified with name, all process-specific trace messages from process name, are printed. Process-specific trace messages are printed regardless of which channels that process may own or on which are operating.

When trace is specified with chan or card options, all channel-specific messages, from any process are printed. The card option is applicable only to network interface cards (that is, cards that have channels). The card option is a special case of the channel option.

A combination of the name variable and chan options prints trace messages from both the name variable and chan options. These options act collectively rather than selectively.

If area is specified, only the process or channel messages associated with area are printed. The area option is, therefore, selective. Areas may be integers ranging from 1 to 32. Areas 1 through 16 are available for user applications. The voice system reserves areas 17 through 32.
The trace area arguments are as follows:

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS (area 17)</td>
<td>Trace advanced service operations such as TTS and speech recognition.</td>
</tr>
<tr>
<td>EM (area 18)</td>
<td>Trace event management operations.</td>
</tr>
<tr>
<td>IN (area 19)</td>
<td>Trace caller input operations including touchtone and speech recognition.</td>
</tr>
<tr>
<td>PM (area 20)</td>
<td>Trace parameter management operations.</td>
</tr>
<tr>
<td>RM (area 21)</td>
<td>Trace resource management operations.</td>
</tr>
<tr>
<td>SE (area 22)</td>
<td>Trace script execution. This includes trace entries made implicitly by Script Builder applications and through <code>tas(1)</code> scripts via the <code>trace(3TSM)</code> command.</td>
</tr>
<tr>
<td>ST (area 23)</td>
<td>Trace call and application initialization and completion operations.</td>
</tr>
<tr>
<td>TS (area 24)</td>
<td>Trace telephony service operations.</td>
</tr>
<tr>
<td>VS (area 25)</td>
<td>Trace voice code and play operations.</td>
</tr>
<tr>
<td>ER (area 26)</td>
<td>Trace error processing operations.</td>
</tr>
</tbody>
</table>
The default, if area is omitted, is all areas except SI (area 28). Trace areas may also be specified numerically with lists and ranges. For example, the following is legal:

```
trace chan 5 area 1-7,10,TS
```

A level argument may also be specified. Levels range from 1 through 32, where level 1 indicates the least amount of detail and level 32 indicates the greatest level of detail. Levels may be specified as a single number, comma-separated list, or ranges. The current internal voice system levels in use (levels 17 through 32) may be identified through mnemonics. A complete list of area and level mnemonics can be displayed by executing the `trace`
A

Summary of Commands

The `trace` command with no arguments. The current voice system levels (areas 1 through 32) are as follows.

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>U (levels 1-16)</td>
<td>Trace all user levels.</td>
</tr>
<tr>
<td>AE (level 17)</td>
<td>Trace internal application error messages.</td>
</tr>
<tr>
<td>AG (level 18)</td>
<td>Trace internal application general messages.</td>
</tr>
<tr>
<td>AX (level 19)</td>
<td>Trace internal application enter/exit messages.</td>
</tr>
<tr>
<td>A (levels 17-19)</td>
<td>Trace all internal application levels.</td>
</tr>
<tr>
<td>FE (level 20)</td>
<td>Trace user-callable function error messages.</td>
</tr>
<tr>
<td>FG (level 21)</td>
<td>Trace user-callable function general messages.</td>
</tr>
<tr>
<td>FX (level 22)</td>
<td>Trace user-callable function enter/exit messages.</td>
</tr>
<tr>
<td>F (levels 20-22)</td>
<td>Trace all user-callable function levels.</td>
</tr>
<tr>
<td>PE (level 23)</td>
<td>Trace process interface function error messages.</td>
</tr>
<tr>
<td>PG (level 24)</td>
<td>Trace process interface function general messages.</td>
</tr>
<tr>
<td>PX (level 25)</td>
<td>Trace process interface function enter/exit messages.</td>
</tr>
</tbody>
</table>
### Argument Description

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P (levels 23-25)</td>
<td>Trace all process interface function levels.</td>
</tr>
<tr>
<td>IE (level 26)</td>
<td>Trace error processing operations.</td>
</tr>
<tr>
<td>IG (level 27)</td>
<td>Trace internal library operations.</td>
</tr>
<tr>
<td>IX (level 28)</td>
<td>Trace script instructions. Every TSM script instruction displays a trace message.</td>
</tr>
<tr>
<td>I (levels 26-28)</td>
<td>Trace script instructions. Every TSM script instruction displays.</td>
</tr>
<tr>
<td>RH (level 29)</td>
<td>Trace RM Helper function enter/exit messages.</td>
</tr>
<tr>
<td>RE (level 30)</td>
<td>Trace RM Helper function error messages.</td>
</tr>
<tr>
<td>RG (level 31)</td>
<td>Trace RM Helper function general messages.</td>
</tr>
<tr>
<td>RX (level 32)</td>
<td>Trace RM function enter/exit messages.</td>
</tr>
<tr>
<td>R (levels 29-32)</td>
<td>Trace all RM Helper and RM function messages.</td>
</tr>
<tr>
<td>S (level 17-32)</td>
<td>Trace all irAPI system levels.</td>
</tr>
<tr>
<td>ALL (levels 1-32)</td>
<td>Trace all levels.</td>
</tr>
</tbody>
</table>

The default, if level is omitted, is levels U, A, AE, FE, PE, IE, and RE. Trace levels may also be specified numerically with lists and ranges.
If the `tracelog` option is specified, all trace messages are logged to the trace log file and sent to stdout. If `startlog` is specified, tracing is done to the trace log but no trace output is sent to `stdout`. The trace log file may be queried for data deposited from prior executions of the `trace` command by using the `display` command with the tracelog option.

Trace messages may be printed with or without the date and time when they are generated. If `date` is specified, the date and time are printed with each trace message. The date and time are always printed for messages in the trace log file.

If the `sleep` argument is specified, trace will sleep `sleeptime` milliseconds between reading the trace buffer. The default is 200 ms.

The `trace stop` command clears any active trace settings, ensuring that no trace output is generated to the trace log.

By default, all trace messages are saved in a trace shared memory buffer. The trace buffer is a circular buffer. If trace messages are written to the trace buffer faster than the trace command can read them, eventually the trace buffer will overflow and trace messages will be lost. When this happens, trace will print the message `TRACE: ***** LOST XXX RECORDS`, where `XXX` is the number of trace messages lost. Two ways to minimize the number of trace messages lost exists:

- Use the `sleep` argument of the trace command to decrease the time that trace sleeps between reading the buffer (default `sleeptime = 200 ms`).
A  Summary of Commands

- Increase the size of the trace buffer by adding or modifying the line
  `TRACE_BUFFER_SIZE=X` in the `/vs/data/irAPI.rc` file, where X is the
  number of messages that the trace buffer can hold (default = 256).
  Increasing the value of X should reduce the chance of losing trace
  messages.

⚠️ CAUTION:

If you change the size of the trace buffer, you must stop and restart the voice
system (`stop_vs` and `start_vs`). Otherwise, you will not be able to run trace.

Examples

The following are examples of valid level lists and ranges:

- `1,2`   Trace levels at 1 and 2
- `1-4,FE` Trace at levels 1, 2, 3, 4, and 20
- `all`   Trace at levels 1-32.

Note: Levels are not hierarchically inclusive. That is, level 3 does not
imply that tracing at levels 1 and 2 also occurs, which could be
achieved by using a range starting from 1. For example, `1-3` for
levels 1, 2, and 3.

Note that a user input (touchtone and speech recognition) log can be
implemented by the following trace command:

```
trace chan all area IN level F
```
The `trarpt` command generates a call traffic report.

**Synopsis**

`trarpt` `hours` `summarize` `date`

**Description**

The `trarpt` command generates a call traffic report. Information in this traffic report includes the number of calls coming in to the system during a specified time period, average holding time, and the percentage of time the channel was occupied for a certain hour. This report is sent to standard out (stdout). Before this can be done, the database system must be up and running, but the voice system does not need to be up.

The parameters for the `trarpt` command are:

- `hours` — Specifies the hours in which the traffic data was collected. The valid options can be a range between 0 to 23 (with 0 representing midnight and 23 representing 11 p.m.), or `all`. 

**Files**

```
/usr/spool/log/data/trace*
/vs/data/irAPI.rc
```
• **summarize** — Indicates a traffic report or a traffic summary report to be generated. If the option is **n**, the report provides information on the total traffic volume for each channel in one-hour increments. If the option is **y**, the report is a summary report that provides information on the total traffic volume for each channel for the whole period specified in the **hours** parameter.

• **date** — Specifies the date the data was collected in the system. This parameter can be in the format mm/dd/yy or mm/dd/yyyy.

  If a 2-digit year argument is used, the following rules apply:

  ~ If the year argument is 70 or greater, the 20th century is assumed; for example, 5/27/99 is interpreted as May 27, 1999.

  ~ If the year argument is 00 through 69, the 21st century is assumed; for example, 5/27/06 is interpreted as May 27, 2006.

**Examples**

The following two examples generate a traffic summary report for data collected on date August 24, 1993 between 8 a.m. and 5 p.m. on multiple entries per channel, and are equivalent command statements.

- `trarpt 8-17 y 08/24/93`
- `trarpt 8-17 y 08/24/1993`
The following two examples generate a traffic report for data collected on date August 24, 1993, one entry per channel, and are equivalent command statements.

```
trarpt all n 08/24/93
trarpt all n 08/24/1993
```

**unassign_permissions**

The `unassign_permissions` command removes voice system security permissions for a specific user.

**Synopsis**

```
unassign_permissions user_login
```

**Description**

The `unassign_permissions` command removes voice system security permissions for a specific user.

The `user_login` argument represents the user for which voice system permissions are to be removed. The user login will still exist; however, the user will not be able to access the voice system.
Example
The following example executes the command to remove voice system security permissions.

```
unassign_permissions brown
```

See Also
- display_permissions
- assign_permissions

vfyLogMsg

The `vfyLogMsg` command verifies the information associated with a specific logging message format.

Synopsis

```
IComp msgnum
```

Description

The `vfyLogMsg` command, given a message number or symbolic message name, recomposes the message format from the information stored in the `cmpLogFmt` files generated by the `IComp` command.
**Note:** You cannot use the `vfyLogMsg` command to look up a message format for a message class that you have just created, but not yet installed.

The `msgnum` argument can be in any of the following formats:

- Absolute message number — The absolute message number would be if you were examining compressed logging files with an editor, for example, 238
- Symbolic name — The symbolic name is found in the associated `log{CLASS}.h` header file, for example, `SYSMSG`
- Message class/relative index in class pair
- `logGEN(2)` or `GEN.2`

This last format can be specified in two ways: `logGEN(2)` or `GEN.2`. Two forms exist because the `log{CLASS}(index)` form must be enclosed in quotes when used from the command line because ‘(‘ and ‘)’ are shell meta-characters, and this is difficult to type.

The output of the `vfyLogMsg` command contains up to five different types of information about the message format:

- Interpretations of the message number — The first block of information contains the three interpretations of the message number.
A  Summary of Commands

vfylLogMsg

- Restored message format — The second block of information includes the restored message format without any SQL field names that might have been specified in the original format.

- SQL field name information — This information is the SQL field name information either as specified in the original format or as generated by lComp for those fields that did not have specifications in the input description. One description line exists for each argument on the machine.

- Current message priority — The fourth block of information describes the current priority assigned to this message in that shared memory and the destination bit mask. This block of information is available only if the logging destination/priority shared memory exists on the machine.

- Description of each destination bit — The fifth block of information describes each destination bit specified in the destination bit mask, starting with the lowest order bit.

Example

lComp

See Also

logCat
logDstPri
The `vsdisable` command disables the automatic restarting of the voice system.

**Synopsis**

```
vsdisable
```

**Description**

The `vsdisable` command is used to prevent the voice system from being started when the system is rebooted. Running `vsdisable` allows you to log into the system before the voice system is started. The voice system may be started manually at any time with the `start_vs` command.

**Example**

```
vsdisable
```

**See Also**

`vsenable`
vsenable

The vsenable command enables the automatic starting of the voice system at system reboot.

**Synopsis**

vsenable

**Description**

When the vsenable command is run, UNIX system files are modified to allow the voice system to be automatically started when the system is rebooted. By default, the voice system is installed with the automatic startup enabled. If there were any non-fatal problems during installation, the voice system is still installed but it has not enabled for automatic startup at system reboot. After the installation problems have been cleared, use vsenable to enable automatic voice system startup at reboot.

**Example**

vsenable

**See Also**

vsdisable
The `vusage` command displays the current load on the voice system.

**Synopsis**

```
vusage
```

**Description**

The `vusage` command enables the voice system administrator to determine the load on the voice system. It queries the voice system and prints the response on the screen, indicating the maximum number of channels in the system and the number of channels playing or coding, and the maximum number of buffers and the number in use.

**Example**

The following is an example of the `vusage` command and sample output.

```
$ vusage
    Max (Current) Speech Buffers used:   0   (0)
    Max (Current) Chans playing/coding:  0   (0)

$  
```

⚠️ **CAUTION:**

The voice system must be running to execute this command.
A Summary of Commands

wl_copy

See Also
display chan
sysmon

wl_copy

The `wl_copy` command copies FlexWord wordlists to disk.

Synopsis

```bash
wl_copy wordlist_file
```

Description

The `wl_copy` command copies the wordlist files or directories given by names out to a floppy disk. Names should be relative pathnames, not absolute pathnames, since they will be used to load the vocabularies onto a FlexWord system.

Note: Make sure change to the directory where your FlexWord wordlists are located, usually `/att/asr/wordlists/active`

If any of the names are directory names, the contents of the directories and any subdirectories are also copied to floppy disk.

Example

```bash
wl_copy database
```
The \texttt{wl\_edit} command edits FlexWord wordlists.

\textbf{Synopsis}
\[ \texttt{wl\_edit [-l chan#] [-s ssp#] [-L language] [-D directory] [-O] [-I] [-?] \]

\textbf{Description}
The \texttt{wl\_edit} command invokes a Motif-based phoneme editor for wordlists. Wordlists are opened using a standard Motif interface, and then words can be added, changed, or deleted.

Audible playback is provided with Text-to-Speech so that you can hear the pronunciation of any word. You must dial into the channel specified with the \texttt{-l} option in order to hear the pronunciations.

Error messages are written to a small window at the bottom of the screen. Error messages are also logged to the file \texttt{/usr/tmp/wledit.output}.

The Tip/Ring \texttt{-l chan#} argument is used to specify which Tip/Ring channel to use for speech playback. If this argument is not specified, then playback will default to channel 0. See Appendix C, “Calculating the O.S. Index,” of \textit{Intuity CONVERSANT System Version 7.0 Speech Development, Processing, and Recognition}, 585-313-201, for information about computing channel numbers.
A Summary of Commands

**Note:** Be sure to validate the Tip/Ring channel number before executing the *wl_edit* command.

The command arguments are as follows:

- **-s ssp#** — Specifies which SSP circuit card to use for speech playback. Circuit cards are referenced by O.S. index displayed in the *display card* command.
- **-L language** — Specifies the language output that appears on the screen.
- **-D directory** — Specifies directory the program will start in.
- **-O** — Used for debugging purposes and causes certain events to be recorded in the output window.
- **-I** — Inhibits forced initialization of the SSP circuit cards. The *wl_edit* command usually determines if the cards need to be reset and provides a forced initialization. The advantage of using this option is that the FlexWord Editor comes up faster. The disadvantage is that in some unusual situations you may not be able to hear the pronunciation of your words. If this happens, run *wl_edit* again without specifying the -I option.

**CAUTION:**

If the voice system is running, *wl_edit* will prompt you to stop the voice system before continuing.
Example
To dial into Tip/Ring channel 0 and use the SSP with O.S. index 5, enter the following command: `wl_edit -l0 -s5 -D /att/asr/wordlists/active -O -l`

See Also
`wl_init`

wl_gen

The `wl_gen` command creates data files for a FlexWord vocabulary.

Synopsis
`wl_gen -L language`

Description
The `wl_gen` command uses the wordlists in `/att/asr/wordlists/active` and the models in `/att/asr/models/seg.yy21` to create all of the data files needed for FlexWord recognition. In particular, `wl_gen` creates the following files:

- `/att/asr/grammar_hs/sw_grammar.h` — A header file for FlexWord recognition scripts
- `/att/asr/sr_files/sr_file.sw` — Reformatted active wordlists
The \texttt{wl\_gen} command should be called whenever there is a change to an active wordlist or when a wordlist has been activated or deactivated. You need to diagnose the FlexWord SSP circuit card after using the \texttt{wl\_gen} command.

The [-L language] argument is used to specify the language output that appears on the screen, that is, Brazilian, English, French, German, Japanese, or Spanish.

If more than 38 phonemes, including the underscore character (_), are found with any word or phrase within a wordlist by the \texttt{wl\_gen} command, you receive an error message. Once \texttt{wl\_gen} finds an error within a wordlist, it quits looking at that wordlist, and the wordlist containing that word or phrase is not used when generating the FlexWord data files. Therefore, if you receive an error, you may have to run \texttt{wl\_gen} several times to iteratively locate each error.
An example of the error message you would receive regarding the filename ACCT_NUM is as follows:

Generating the FlexWord data files ...

'ACCT_NUM' ignored: it contains a word with more than 38 phonemes

(Six_Six_Six_Six_Six_Six_Six_Six_Six_)

The `wl_gen` command retains the wordlist numbers of any active wordlist. This means that scripts do not have to be recompiled unless they use a wordlist that was not active on the previous invocation of `wl_gen`.

Example

`wl_gen`

See Also

`wl_edit`
`diagnose card`
wl_init

The `wl_init` command generates an initial wordlist from a set of words.

**Synopsis**

```
wl_init file
```

**Description**

The `wl_init` command takes a file consisting of words and/or phrases and adds a phonetic pronunciation for each word or phrase. The pronunciation is determined by a dictionary lookup, and uses the phonetic alphabet “cecilbet.” The input file should consist of one word or phrase per line, with an underscore character (_) instead of white space between words of a phrase. For example, “call Rachel” should be written “call_Rachel.” Words are case insensitive. Each line of the file will be augmented with a tab followed by the cecilbet phonetic transcription of the line.

**Example**

```
wl_init database
```

**See Also**

`wl_edit`
### wl_install

The `wl_install` command reads FlexWord vocabularies from floppy disk.

**Synopsis**

```bash
wl_install
```

**Description**

The `wl_install` command reads FlexWord vocabularies from a floppy disk, and copies them into `att/asr/wordlist/inactive`. It then asks whether any wordlists are to be activated, and if necessary, whether `wl_gen` should be run.

**Example**

```bash
wl_install
```

### xferdip_off

The `xferdip_off` command deactivates the bridging capability.

**Synopsis**

```bash
xferdip_off
```
xferdip_on

The xferdip_on command activates the bridging capability.

Synopsis
xferdip_on

Description
The xferdip_on command activates the bridging capability. If the voice system is running, this command starts the xferdip.

Example
xferdip_on

xferdip_off

Description
The xferdip_off command deactivates the bridging capability. If the xferdip is running, this command stops it.

Example
xferdip_off
Country Switch Packages

Overview

This appendix provides reference material on country-specific switch packages and related parameters.

It lists the switch package for every country where the Intuity CONVERSANT system is currently sold for both the DEFINITY private branch exchange (or switch) and public switched telephone networks (PSTN) where applicable. That list is present in alphabetical order by country name.

This appendix also includes a list of tunable circuit card/line parameters.
Tunable Analog Circuit Card/Line Parameters

A component of analog switch integration is tunable analog circuit card/line parameters. These parameters are set in country-specific packages through a trParms file. The parameters that are adjustable are:

- **Touch-tone_generation**
  
  To meet DTMF generation requirements in various countries, parameters are available to adjust:
  
  ~ The power level of the high and low group frequency components of DTMF digits
  ~ DTMF on and off duration (in milliseconds) of dialed digits

- **Speech_Clipping.**
  
  To limit maximum output speech energy levels of outgoing speech, parameters are available to adjust:
  
  ~ The energy level at which clipping will start
  ~ The energy level to clip back to upon violation
  ~ The time (msec) that energy levels can be violated before clipping starts
• CPT_detection
  To meet power level detection requirements for some target countries, there are parameters associated with the Call Progress Tone (CPT) detection algorithm.

• Touch-tone_detection
  To meet power level detection requirements for some target countries, there are parameters associated with the DTMF detection algorithm.

• Speech_energy_detection
  Parameters are available to enhance the speech energy detection.

• Ring_duration/Answer_Delay
  In-coming AC ring detection is adjustable to meet country specifications.

• Post_On/Off_Hook_delays
  Parameters associated with delays between the time an On/Off hook request is serviced and the time the acknowledgment is sent back to the requesting process. It can be used to limit the time between successive call attempts, and network required billing delays.

• Dial-Pulse_Generation
  Parameters are available to adjust the MAKE/BREAK and interdigit durations of out-dialed dial-pulse digits.
B Country Switch Packages Tunable Analog Circuit Card/Line Parameters

- DTMF_Muting
  A parameter is available to allow DTMF muting on a bridged call to be disabled. DTMF muting is a feature that is currently always enabled. When enabled, the DTMF detection accuracy is increased because outgoing speech is muted when the presence of a DTMF tone is initially detected (early detect). By disabling the outgoing speech, the DTMF detector increases its accuracy by eliminating false detections and broken touch-tones caused by reflected speech.

  When muting is disabled, outgoing speech will continue to play when a DTMF tone is detected. Muting may be disabled in application where call bridging is used. This allows DTMF tones to be passed on bridged calls without the receiving end cutting out speech, or tones.

- Polarity_Reversal

  **Note:** This parameter applies only to the NGTR (AYC30).

  Timer values are available to adjust the steady state timer and minimum reversal duration.
B Country Switch Packages

Tunable Analog Circuit Card/Line Parameters

- **CODEC_Filter_Coefficients**
  
  **Note:** This parameter applies only to the NGTR (AYC30).
  
  Filter coefficients for the CODEC are settable to adjust line impedance, gain, echo return loss, and trans-hybrid loss. Calculation of these coefficients comes from a modeling tool from the component manufacture.

- **AC_Ring_detector**
  
  **Note:** This parameter applies only to the NGTR (AYC30).
  
  Card-level parameters are available to support incoming AC ring frequency discrimination. This is required for countries with very specific requirements on must detect and must not detect ranges, such as Germany.

- **Companding**
  
  **Note:** This parameter applies only to the NGTR (AYC30).
  
  Both Mu-Law and A-Law companding are supported at five different companding points. A bit mapped (0 ~ 31) card level parameter controls which companding to do at which point. A header file (`tr_compand.h`) defines each of these areas. The areas are:
  
  ~ TDM bus side of the Scotch NPE
  ~ Concentration Highway side of the Scotch NPE
Country-Specific Switch Packages

This section lists the switch package parameters for every country where the Intuity CONVERSANT system is currently sold for both the DEFINITY PBX and PSTNs. Table 72 on page 976 through Table 96 on page 1066 are presented in alphabetical order by country name.
## Table 47. DEFINITY Switch Package Parameters for Argentina

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_DTMF_ONTIME</td>
<td>80</td>
<td>msec</td>
<td>CTR21 &gt; 65 msec</td>
</tr>
<tr>
<td>TR_DTMF_OFFTIME</td>
<td>80</td>
<td>msec</td>
<td>CTR21 &gt; 65 msec</td>
</tr>
<tr>
<td>TR_DTMF_H_LEVEL</td>
<td>-9</td>
<td>dBm</td>
<td>CTR21 -9.0 dBm +2.0/-2.5 dB</td>
</tr>
<tr>
<td>TR_DTMF_L_LEVEL</td>
<td>-11</td>
<td>dBm</td>
<td>CTR21 -11.0 dBm +2.0/-2.5 dB</td>
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<tr>
<td>TR_PULSE_ON</td>
<td>60</td>
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<tr>
<td>TR_PULSE_OFF</td>
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<td>TR_PULSE_INTERDIGIT</td>
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<td>TR_CLIPPING_LIMIT</td>
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<td>TR_CLIPPING_DUR</td>
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<td>msec</td>
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<tr>
<td>TR_CLIPPING_THRESH</td>
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<td>dBm</td>
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<tr>
<td>TR_TRANSHYBRID_LOSS</td>
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<td>ohms</td>
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<tr>
<td>TR_RECALL_TYPE</td>
<td>0</td>
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<td>No earth recall</td>
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### Table 47. DEFINITY Switch Package Parameters for Argentina

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<tr>
<th>Parameter</th>
<th>Value</th>
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<th>Specification, Notes</th>
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<tr>
<td>TR_ANSWER_DELAY</td>
<td>0</td>
<td>rings</td>
<td>Number of rings before answering</td>
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<td>TR_MAX_RING_INTERVAL</td>
<td>6400</td>
<td>msec</td>
<td>Time between start of ring voltage signals</td>
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<tr>
<td>TR_MIN_RING_DUR</td>
<td>200</td>
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<tr>
<td>TR_MAX_RING_DUR</td>
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<td>msec</td>
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<tr>
<td>TR_EDETECT_MIN</td>
<td>-38</td>
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<td>TR_CPT_DETECT_MIN</td>
<td>-29</td>
<td>dBm</td>
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<tr>
<td>TR_DTMF_DETECT_MIN</td>
<td>-25</td>
<td>dBm</td>
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<tr>
<td>TR_POST_OFFHK_DELAY</td>
<td>1500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_POST_ONHK_DELAY</td>
<td>2000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_MUTE</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_CALLER_ID</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_POLARITY_SS_TMR</td>
<td>500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_POLARITY_MIN_DUR</td>
<td>200</td>
<td>msec</td>
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### Table 47. DEFINITY Switch Package Parameters for Argentina

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<th>Parameter</th>
<th>Value</th>
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<th>Specification, Notes</th>
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<tr>
<td>TR_COMPANDING</td>
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<td>TR_MIN_RING_FREQ</td>
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<td>Hz</td>
<td></td>
</tr>
<tr>
<td>TR_MAX_RING_FREQ</td>
<td>90</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>TR_V21_GAIN</td>
<td>-9</td>
<td>dBm</td>
<td></td>
</tr>
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<td>TR_V27_24GAIN</td>
<td>-4.7</td>
<td>dBm</td>
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<tr>
<td>TR_V27_48GAIN</td>
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<td>dBm</td>
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<td>TR_V29_72GAIN</td>
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<tr>
<td>TR_V29_96GAIN</td>
<td>-3.1</td>
<td>dBm</td>
<td></td>
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<tr>
<td>TR_FAX_RECV_GAIN</td>
<td>0</td>
<td>dB</td>
<td></td>
</tr>
<tr>
<td>TR_D_RINGTONE_DISCONNECT</td>
<td>0</td>
<td></td>
<td>Do NOT disconnect on ring tone</td>
</tr>
<tr>
<td>TR_D_BUSYTONE_DISCONNECT</td>
<td>0</td>
<td></td>
<td>Do NOT disconnect on busy tone</td>
</tr>
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Table 47. DEFINITY Switch Package Parameters for Argentina

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
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<tr>
<td>TR_D_REORDERTONE_DISCONNECT</td>
<td>0</td>
<td></td>
<td>Do NOT disconnect on reorder tone</td>
</tr>
<tr>
<td>TR_D_DIALTONE_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on dial tone</td>
</tr>
<tr>
<td>TR_D_STUTTERDT_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on stutter dial tone</td>
</tr>
<tr>
<td>ANALOG_LOSS_COMP</td>
<td>0</td>
<td>dB</td>
<td></td>
</tr>
<tr>
<td>Switch Hook Flash Duration</td>
<td>500</td>
<td>msec</td>
<td>Register recall</td>
</tr>
<tr>
<td>Wink Disconnect Interval</td>
<td>300</td>
<td>msec</td>
<td>Minimum time to declare disconnect</td>
</tr>
<tr>
<td>Type of Signaling</td>
<td>TT</td>
<td></td>
<td>Network address signaling</td>
</tr>
<tr>
<td>Incoming Speech Volume</td>
<td>4000</td>
<td></td>
<td>+ 12 dB gain</td>
</tr>
<tr>
<td>Outgoing Speech Volume</td>
<td>1000</td>
<td>Unity gain</td>
<td></td>
</tr>
<tr>
<td>Outgoing Text Volume</td>
<td>4000</td>
<td></td>
<td>+ 12 dB gain (TTS)</td>
</tr>
<tr>
<td>Dial tone training enabled</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blind Transfer, Initiate</td>
<td>FW</td>
<td></td>
<td></td>
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### Table 47. DEFINITY Switch Package Parameters for Argentina

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
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</thead>
<tbody>
<tr>
<td>Blind Transfer, Complete</td>
<td>H</td>
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<tr>
<td>Intelligent Transfer, Initiate</td>
<td>FW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (No Ans)</td>
<td>FPF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (Busy)</td>
<td>FPF</td>
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### Table 48. DEFINITY Switch Package Parameters for Australia

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
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<th>Specification, Notes</th>
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<tbody>
<tr>
<td>TR_DTMF_ONTIME</td>
<td>100</td>
<td>msec</td>
<td>50 &lt; digit duration</td>
</tr>
<tr>
<td>TR_DTMF_OFFTIME</td>
<td>60</td>
<td>msec</td>
<td>70 &lt; interdigit pause &lt; 3000</td>
</tr>
<tr>
<td>TR_DTMF_H_LEVEL</td>
<td>-8</td>
<td>dBm</td>
<td>-22dbm &lt; hlev &lt; -5</td>
</tr>
<tr>
<td>TR_DTMF_L_LEVEL</td>
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<td>dBm</td>
<td>-22dbm &lt; hlev &lt; -5</td>
</tr>
<tr>
<td>TR_PULSE_ON</td>
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<td>msec</td>
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### Table 48. DEFINITY Switch Package Parameters for Australia

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<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
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<tbody>
<tr>
<td>TR_PULSE_OFF</td>
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<td>msec</td>
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<tr>
<td>TR_PULSE_INTERDIGIT</td>
<td>800</td>
<td>msec</td>
<td></td>
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<tr>
<td>TR_CLIPPING_LIMIT</td>
<td>-12.0</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING_DUR</td>
<td>500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING_THRESH</td>
<td>-12</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_TRANSHYBRID_LOSS</td>
<td>25000</td>
<td>ohms</td>
<td>TN468B DEFINITY Circuit Pack</td>
</tr>
<tr>
<td>TR_RECALL_TYPE</td>
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<td></td>
<td>No earth recall</td>
</tr>
<tr>
<td>TR_ANSWER_DELAY</td>
<td>2</td>
<td>rings</td>
<td>Number of rings before answering</td>
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<tr>
<td>TR_MAX_RING_INTERVAL</td>
<td>6400</td>
<td>msec</td>
<td>Time between start of ring voltage signals</td>
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<tr>
<td>TR_MIN_RING_DUR</td>
<td>100</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_MAX_RING_DUR</td>
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<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_EDETECT_MIN</td>
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<th>Parameter</th>
<th>Value</th>
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<td>TR_DTMF_DETECT_MIN</td>
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<td>dBm</td>
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<tr>
<td>TR_POST_OFFHK_DELAY</td>
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<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_POSTONHK_DELAY</td>
<td>2000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_MUTE</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_CALLER_ID</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_POLARITY_SS_TMR</td>
<td>500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_POLARITY_MIN_DUR</td>
<td>200</td>
<td>msec</td>
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<tr>
<td>TR_ONHOOK_SUP</td>
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<tr>
<td>TR_COUNTRY_CODE</td>
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<td></td>
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<tr>
<td>TR_COMPANDING</td>
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<td></td>
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<tr>
<td>TR_MIN_RING_FREQ</td>
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<td>Hz</td>
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<tr>
<td>TR_MAX_RING_FREQ</td>
<td>90</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>TR_V21_GAIN</td>
<td>-9</td>
<td>dBm</td>
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### Table 48. DEFINITY Switch Package Parameters for Australia

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<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
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<tr>
<td>TR_V27_24GAIN</td>
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<td>dBm</td>
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<td>TR_V27_48GAIN</td>
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<td>dBm</td>
<td></td>
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<tr>
<td>TR_V29_72GAIN</td>
<td>-7.1</td>
<td>dBm</td>
<td></td>
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<tr>
<td>TR_V29_96GAIN</td>
<td>-3.1</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_FAX_RECV_GAIN</td>
<td>0</td>
<td>dB</td>
<td></td>
</tr>
<tr>
<td>TR_D_RINGTONE_DISCONNECT</td>
<td>0</td>
<td>dB</td>
<td>Do NOT disconnect on ring tone</td>
</tr>
<tr>
<td>TR_D_BUSYTONE_DISCONNECT</td>
<td>0</td>
<td>dB</td>
<td>Do NOT disconnect on busy tone</td>
</tr>
<tr>
<td>TR_D_REORDERTONE_DISCONNECT</td>
<td>0</td>
<td>dB</td>
<td>Do NOT disconnect on reorder tone</td>
</tr>
<tr>
<td>TR_D_DIALTONE_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on dial tone</td>
</tr>
<tr>
<td>TR_D_STUTTERDT_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on stutter dial tone</td>
</tr>
<tr>
<td>ANALOG_LOSS_COMP</td>
<td>-3</td>
<td>dB</td>
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Table 48. DEFINITY Switch Package Parameters for Australia

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<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
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<tr>
<td>Switch Hook Flash Duration</td>
<td>300</td>
<td>msec</td>
<td>Register recall</td>
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<tr>
<td>Wink Disconnect Interval</td>
<td>350</td>
<td>msec</td>
<td>Minimum time to declare disconnect</td>
</tr>
<tr>
<td>Type of Signaling</td>
<td>TT</td>
<td></td>
<td>Network address signaling</td>
</tr>
<tr>
<td>Incoming Speech Volume</td>
<td>4000</td>
<td></td>
<td>+ 12 dB gain</td>
</tr>
<tr>
<td>Outgoing Speech Volume</td>
<td>1000</td>
<td></td>
<td>Unity gain</td>
</tr>
<tr>
<td>Outgoing Text Volume</td>
<td>4000</td>
<td></td>
<td>+ 12 dB gain (TTS)</td>
</tr>
<tr>
<td>Dial tone training enabled</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blind Transfer, Initiate</td>
<td>FW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blind Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Initiate</td>
<td>FW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (No Ans)</td>
<td>FPF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (Busy)</td>
<td>FPF</td>
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### Table 49. PSTN Switch Package Parameters for Australia

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<th>Specification, Notes</th>
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</thead>
<tbody>
<tr>
<td>TR_DTMF_ONTIME</td>
<td>100</td>
<td>msec</td>
<td>50 &lt; digit duration</td>
</tr>
<tr>
<td>TR_DTMF_OFFTIME</td>
<td>60</td>
<td>msec</td>
<td>70 &lt; interdigit pause &lt; 3000</td>
</tr>
<tr>
<td>TR_DTMF_H_LEVEL</td>
<td>-8</td>
<td>dBm</td>
<td>-22dbm &lt; hlev &lt; -5</td>
</tr>
<tr>
<td>TR_DTMF_L_LEVEL</td>
<td>-10</td>
<td>dBm</td>
<td>-22dbm &lt; hlev &lt; -5</td>
</tr>
<tr>
<td>TR_PULSE_ON</td>
<td>60</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_PULSE_OFF</td>
<td>40</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_PULSE_INTERDIGIT</td>
<td>800</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING_LIMIT</td>
<td>-12.0</td>
<td>dBm</td>
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<tr>
<td>TR_CLIPPING_DUR</td>
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<td>msec</td>
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<tr>
<td>TR_CLIPPING_THRESH</td>
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<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_TRANSHYBRID_LOSS</td>
<td>25000</td>
<td>ohms</td>
<td>TN468B DEFINITY Circuit Pack</td>
</tr>
<tr>
<td>TR_RECALL_TYPE</td>
<td>0</td>
<td></td>
<td>No earth recall</td>
</tr>
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Table 49. PSTN Switch Package Parameters for Australia

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
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</thead>
<tbody>
<tr>
<td>TR_ANSWER_DELAY</td>
<td>1</td>
<td>rings</td>
<td>Number of rings before answering</td>
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<tr>
<td>TR_MAX_RING_INTERVAL</td>
<td>6200</td>
<td>msec</td>
<td>Time between start of ring voltage signals</td>
</tr>
<tr>
<td>TR_MIN_RING_DUR</td>
<td>100</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_MAX_RING_DUR</td>
<td>5000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_EDetect_MIN</td>
<td>-38</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_CPT_DETECT_MIN</td>
<td>-25</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_DETECT_MIN</td>
<td>-25</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_POST_OFFHK_DELAY</td>
<td>1500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_POSTONHK_DELAY</td>
<td>2000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_MUTE</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>TR_CALLER_ID</td>
<td>0</td>
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<tr>
<td>TR_POLARITY_SS_TMR</td>
<td>500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_POLARITY_MIN_DUR</td>
<td>200</td>
<td>msec</td>
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<table>
<thead>
<tr>
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<th>Specification, Notes</th>
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<tr>
<td>TR_ONHOOK_SUP</td>
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<td>TR_COUNTRY_CODE</td>
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<tr>
<td>TR_COMPANDING</td>
<td>0</td>
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<tr>
<td>TR_MIN_RING_FREQ</td>
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<tr>
<td>TR_MAX_RING_FREQ</td>
<td>90</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>TR_V21_GAIN</td>
<td>-9</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V27_48GAIN</td>
<td>-4.7</td>
<td>dBm</td>
<td></td>
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<tr>
<td>TR_V29_72GAIN</td>
<td>-7.1</td>
<td>dBm</td>
<td></td>
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<tr>
<td>TR_V29_96GAIN</td>
<td>-3.1</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_FAX_RECV_GAIN</td>
<td>0</td>
<td>dB</td>
<td></td>
</tr>
<tr>
<td>TR_D_RINGTONE_DISCONNECT</td>
<td>0</td>
<td></td>
<td>Do NOT disconnect on ring tone</td>
</tr>
<tr>
<td>TR_D_BUSYTONE_DISCONNECT</td>
<td>0</td>
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<td>Do NOT disconnect on busy tone</td>
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### PSTN Switch Package Parameters for Australia

<table>
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<tr>
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<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
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<tr>
<td>TR_D_REORDERTONE_DISCONNECT</td>
<td>0</td>
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<td>Do NOT disconnect on reorder tone</td>
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<tr>
<td>TR_D_DIALTONE_DISCONNECT</td>
<td>2</td>
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<td>Disconnect on dial tone</td>
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<tr>
<td>TR_D_STUTTERDT_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on stutter dial tone</td>
</tr>
<tr>
<td>ANALOG_LOSS_COMP</td>
<td>-9</td>
<td>dB</td>
<td></td>
</tr>
<tr>
<td>Switch Hook Flash Duration</td>
<td>300</td>
<td>msec</td>
<td>Register recall</td>
</tr>
<tr>
<td>Wink Disconnect Interval</td>
<td>350</td>
<td>msec</td>
<td>Minimum time to declare disconnect</td>
</tr>
<tr>
<td>Type of Signaling</td>
<td>TT</td>
<td></td>
<td>Network address signaling</td>
</tr>
<tr>
<td>Incoming Speech Volume</td>
<td>4000</td>
<td></td>
<td>+ 12 dB gain</td>
</tr>
<tr>
<td>Outgoing Speech Volume</td>
<td>1000</td>
<td>Unity gain</td>
<td></td>
</tr>
<tr>
<td>Outgoing Text Volume</td>
<td>4000</td>
<td></td>
<td>+ 12 dB gain (TTS)</td>
</tr>
<tr>
<td>Dial tone training enabled</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blind Transfer, Initiate</td>
<td>FW</td>
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# Country Switch Packages

## PSTN Switch Package Parameters for Australia

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<th>Specification, Notes</th>
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<tbody>
<tr>
<td>Blind Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Initiate</td>
<td>FW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (No Ans)</td>
<td>FPF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (Busy)</td>
<td>FPF</td>
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## DEFINITY Switch Package Parameters for Belgium

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<th>Specification, Notes</th>
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<tr>
<td>TR_DTMF_ONTIME</td>
<td>80</td>
<td>msec</td>
<td>CTR21 &gt; 65 msec</td>
</tr>
<tr>
<td>TR_DTMF_OFFTIME</td>
<td>80</td>
<td>msec</td>
<td>CTR21 &gt; 65 msec</td>
</tr>
<tr>
<td>TR_DTMF_H_LEVEL</td>
<td>-9</td>
<td>dBm</td>
<td>CTR21 -9.0dBm +2.0/-2.5 dB</td>
</tr>
<tr>
<td>TR_DTMF_L_LEVEL</td>
<td>-11</td>
<td>dBm</td>
<td>CTR21 -11.0dBm +2.0/-2.5 dB</td>
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## B Country Switch Packages

### Intuity™ CONVERSANT® System Version 7.0 Administration

*Issue 3 January 2000 920*

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### Table 50. DEFINITY Switch Package Parameters for Belgium

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<th>Units</th>
<th>Specification, Notes</th>
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<tbody>
<tr>
<td>TR_PULSE_ON</td>
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<td></td>
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<tr>
<td>TR_PULSE_OFF</td>
<td>40</td>
<td>msec</td>
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<tr>
<td>TR_PULSE_INTERDIGIT</td>
<td>800</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING LIMIT</td>
<td>-12.0</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING DUR</td>
<td>1000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING_THRESH</td>
<td>-12</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_TRANSHYBRID_LOSS</td>
<td>40000</td>
<td>ohms</td>
<td>TN2149, TN2183 DEFINITY Circuit Packs</td>
</tr>
<tr>
<td>TR_RECALL_TYPE</td>
<td>0</td>
<td></td>
<td>No earth recall</td>
</tr>
<tr>
<td>TR_ANSWER_DELAY</td>
<td>0</td>
<td>rings</td>
<td>Number of rings before answering</td>
</tr>
<tr>
<td>TR_MAX_RING_INTERVAL</td>
<td>6400</td>
<td>msec</td>
<td>Time between start of ring voltage signals</td>
</tr>
<tr>
<td>TR_MIN_RING_DUR</td>
<td>100</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_MAX_RING_DUR</td>
<td>5000</td>
<td>msec</td>
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*2 of 6*
Table 50. DEFINITY Switch Package Parameters for Belgium

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<th>Value</th>
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<th>Specification, Notes</th>
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<tr>
<td>TR_EDetect_MIN</td>
<td>-38</td>
<td>dBm</td>
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<td>TR_CPT_Detect_MIN</td>
<td>-30</td>
<td>dBm</td>
<td></td>
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<tr>
<td>TR_DTMF_Detect_MIN</td>
<td>-25</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_POST_OFF_HK_DELAY</td>
<td>1500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_POST_ON_HK_DELAY</td>
<td>2000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_MUTE</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_CALLER_ID</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_POLARITY_SS_TMR</td>
<td>500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_POLARITY_MIN_DUR</td>
<td>200</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_ONHOOK_SUP</td>
<td>0</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_COUNTRY_CODE</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_COMPANDING</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_MIN_RING_FREQ</td>
<td>20</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>TR_MAX_RING_FREQ</td>
<td>90</td>
<td>Hz</td>
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### Table 50. DEFINITY Switch Package Parameters for Belgium

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<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
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<tbody>
<tr>
<td>TR_V21_GAIN</td>
<td>-9</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V27_24GAIN</td>
<td>-4.7</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V27_48GAIN</td>
<td>-4.7</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V29_72GAIN</td>
<td>-7.1</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V29_96GAIN</td>
<td>-3.1</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_FAX_RECV_GAIN</td>
<td>0</td>
<td>dB</td>
<td></td>
</tr>
<tr>
<td>TR_D_RINGTONE_DISCONNECT</td>
<td>0</td>
<td></td>
<td>Do NOT disconnect on ring tone</td>
</tr>
<tr>
<td>TR_D_BUSYTONE_DISCONNECT</td>
<td>0</td>
<td></td>
<td>Do NOT disconnect on busy tone</td>
</tr>
<tr>
<td>TR_D_REORDERTONE_DISCONNECT</td>
<td>0</td>
<td></td>
<td>Do NOT disconnect on reorder tone</td>
</tr>
<tr>
<td>TR_D_DIALTONE_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on dial tone</td>
</tr>
<tr>
<td>TR_D_STUTTERDT_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on stutter dial tone</td>
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### Table 50. DEFINITY Switch Package Parameters for Belgium

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
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</thead>
<tbody>
<tr>
<td>ANALOG_LOSS_COMP</td>
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<td>dB</td>
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</tr>
<tr>
<td>Switch Hook Flash Duration</td>
<td>500</td>
<td>msec</td>
<td>Register recall</td>
</tr>
<tr>
<td>Wink Disconnect Interval</td>
<td>300</td>
<td>msec</td>
<td>Minimum time to declare disconnect</td>
</tr>
<tr>
<td>Type of Signaling</td>
<td>TT</td>
<td></td>
<td>Network address signaling</td>
</tr>
<tr>
<td>Incoming Speech Volume</td>
<td>4000</td>
<td></td>
<td>+ 12 dB gain</td>
</tr>
<tr>
<td>Outgoing Speech Volume</td>
<td>1000</td>
<td>Unity gain</td>
<td></td>
</tr>
<tr>
<td>Outgoing Text Volume</td>
<td>4000</td>
<td></td>
<td>+ 12 dB gain (TTS)</td>
</tr>
<tr>
<td>Dial tone training enabled</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blind Transfer, Initiate</td>
<td>FW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blind Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Initiate</td>
<td>FW</td>
<td></td>
<td></td>
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### Table 50. DEFINITY Switch Package Parameters for Belgium

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intelligent Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (No Ans)</td>
<td>FPF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (Busy)</td>
<td>FPF</td>
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<td></td>
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</table>

### Table 51. DEFINITY Switch Package Parameters for Brazil

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_DTMF_ONTIME</td>
<td>80</td>
<td>msec</td>
<td>CTR21 &gt; 65 msec</td>
</tr>
<tr>
<td>TR_DTMF-OFFTIME</td>
<td>80</td>
<td>msec</td>
<td>CTR21 &gt; 65 msec</td>
</tr>
<tr>
<td>TR_DTMF_H_LEVEL</td>
<td>-9</td>
<td>dBm</td>
<td>CTR21 -9.0dBm +2.0/-2.5 dB</td>
</tr>
<tr>
<td>TR_DTMF_L_LEVEL</td>
<td>-11</td>
<td>dBm</td>
<td>CTR21 -11.0dBm +2.0/-2.5 dB</td>
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<tr>
<td>TR_PULSE_ON</td>
<td>66</td>
<td>msec</td>
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</tr>
<tr>
<td>TR_PULSE_OFF</td>
<td>33</td>
<td>msec</td>
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### Table 51. DEFINITY Switch Package Parameters for Brazil

<table>
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<th>Parameter</th>
<th>Value</th>
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<td>TR_PULSE_INTERDIGIT</td>
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<td>TR_CLIPPING_LIMIT</td>
<td>-12.0</td>
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<td>TR_CLIPPING_DUR</td>
<td>1000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING_THRESH</td>
<td>-12</td>
<td>dBm</td>
<td></td>
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<td>TR_TRANSHYBRID_LOSS</td>
<td>25000</td>
<td>ohms</td>
<td></td>
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<tr>
<td>TR_RECALL_TYPE</td>
<td>0</td>
<td></td>
<td>No earth recall</td>
</tr>
<tr>
<td>TR_ANSWER_DELAY</td>
<td>0</td>
<td>rings</td>
<td>Number of rings before answering</td>
</tr>
<tr>
<td>TR_MAX_RING_INTERVAL</td>
<td>6400</td>
<td>msec</td>
<td>Time between start of ring voltage signals</td>
</tr>
<tr>
<td>TR_MIN_RING_DUR</td>
<td>200</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_MAX_RING_DUR</td>
<td>5000</td>
<td>msec</td>
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<tr>
<td>TR_EDETECT_MIN</td>
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<td>TR_CPT_DETECT_MIN</td>
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### Table 51. DEFINITY Switch Package Parameters for Brazil

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<th>Value</th>
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<th>Specification, Notes</th>
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<tr>
<td>TR_POST_OFFHK_DELAY</td>
<td>1500</td>
<td>msec</td>
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<tr>
<td>TR_POSTONHK_DELAY</td>
<td>2000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_MUTE</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>TR_CALLER_ID</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_POLARITY_SS_TMR</td>
<td>500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_POLARITY_MIN_DUR</td>
<td>200</td>
<td>msec</td>
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<tr>
<td>TR_ONHOOK_SUP</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>TR_COUNTRY_CODE</td>
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<td></td>
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<tr>
<td>TR_COMPANDING</td>
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</tr>
<tr>
<td>TR_MIN_RING_FREQ</td>
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<tr>
<td>TR_MAX_RING_FREQ</td>
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<td>Hz</td>
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<tr>
<td>TR_V21_GAIN</td>
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<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V27_24GAIN</td>
<td>-4.7</td>
<td>dBm</td>
<td></td>
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<tr>
<td>TR_V27_48GAIN</td>
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<td>dBm</td>
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### Table 51. DEFINITY Switch Package Parameters for Brazil

<table>
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<th>Value</th>
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<th>Specification, Notes</th>
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<td>TR_V29_72GAIN</td>
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<tr>
<td>TR_V29_96GAIN</td>
<td>-3.1</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_FAX_RECV_GAIN</td>
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<td>dB</td>
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<tr>
<td>TR_D_RINGTONE_DISCONNECT</td>
<td>0</td>
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<td>Do NOT disconnect on ring tone</td>
</tr>
<tr>
<td>TR_D_BUSYTONE_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Do NOT disconnect on busy tone</td>
</tr>
<tr>
<td>TR_D_REORDERTONE_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Do NOT disconnect on reorder tone</td>
</tr>
<tr>
<td>TR_D_DIALTONE_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on dial tone</td>
</tr>
<tr>
<td>TR_D_STUTTERDT_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on stutter dial tone</td>
</tr>
<tr>
<td>ANALOG_LOSS_COMP</td>
<td>0</td>
<td>dB</td>
<td></td>
</tr>
<tr>
<td>Switch Hook Flash Duration</td>
<td>500</td>
<td>msec</td>
<td>Register recall</td>
</tr>
<tr>
<td>Wink Disconnect Interval</td>
<td>300</td>
<td>msec</td>
<td>Minimum time to declare disconnect</td>
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*Intuity™ CONVERSANT® System Version 7.0 Administration 585-313-501 Issue 3 January 2000 927*
## Table 51. DEFINITY Switch Package Parameters for Brazil

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<th>Parameter</th>
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<td>TT</td>
<td></td>
<td>Network address signaling</td>
</tr>
<tr>
<td>Incoming Speech Volume</td>
<td>4000</td>
<td></td>
<td>+ 12 dB gain</td>
</tr>
<tr>
<td>Outgoing Speech Volume</td>
<td>1000</td>
<td></td>
<td>Unity gain</td>
</tr>
<tr>
<td>Outgoing Text Volume</td>
<td>4000</td>
<td></td>
<td>+ 12 dB gain (TTS)</td>
</tr>
<tr>
<td>Dial tone training enabled</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blind Transfer, Initiate</td>
<td>FW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blind Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Initiate</td>
<td>FW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (No Ans)</td>
<td>FPF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (Busy)</td>
<td>FPF</td>
<td></td>
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### Country Switch Packages

#### Country-Specific Switch Packages

### Table 52. Switch Package Parameters for Canada

<table>
<thead>
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<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
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<tbody>
<tr>
<td>Same as US built-in defaults</td>
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### Table 53. DEFINITY Switch Package Parameters for France

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<thead>
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<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_DTMF_ONTIME</td>
<td>80</td>
<td>msec</td>
<td>CTR21 &gt; 65 msec</td>
</tr>
<tr>
<td>TR_DTMF_OFFTIME</td>
<td>80</td>
<td>msec</td>
<td>CTR21 &gt; 65 msec</td>
</tr>
<tr>
<td>TR_DTMF_H_LEVEL</td>
<td>-9</td>
<td>dBm</td>
<td>CTR21 -9.0dBm +2.0/-2.5 dB</td>
</tr>
<tr>
<td>TR_DTMF_L_LEVEL</td>
<td>-11</td>
<td>dBm</td>
<td>CTR21 -11.0dBm +2.0/-2.5 dB</td>
</tr>
<tr>
<td>TR_PULSE_ON</td>
<td>66</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_PULSE_OFF</td>
<td>33</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_PULSE_INTERDIGIT</td>
<td>750</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING_LIMIT</td>
<td>-12.0</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING_DUR</td>
<td>1000</td>
<td>msec</td>
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### Country Switch Packages

#### Table 53. DEFINITY Switch Package Parameters for France

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_CLIPPING_THRESH</td>
<td>-12</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_TRANSHYBRID_LOSS</td>
<td>30000</td>
<td>ohms</td>
<td>TN2183 DEFINITY Circuit Pack</td>
</tr>
<tr>
<td>TR_RECALL_TYPE</td>
<td>0</td>
<td></td>
<td>No earth recall</td>
</tr>
<tr>
<td>TR_ANSWER_DELAY</td>
<td>0</td>
<td>rings</td>
<td>Number of rings before answering</td>
</tr>
<tr>
<td>TR_MAX_RING_INTERVAL</td>
<td>6400</td>
<td>msec</td>
<td>Time between start of ring voltage signals</td>
</tr>
<tr>
<td>TR_MIN_RING_DUR</td>
<td>100</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_MAX_RING_DUR</td>
<td>5000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_EDETECT_MIN</td>
<td>-38</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_CPT_DETECT_MIN</td>
<td>-30</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_DETECT_MIN</td>
<td>-25</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_POST_OFFHK_DELAY</td>
<td>1500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_POSTONHKDELAY</td>
<td>2000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_MUTE</td>
<td>1</td>
<td></td>
<td></td>
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Table 53. DEFINITY Switch Package Parameters for France

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_CALLER_ID</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_POLARITY_SS_TMR</td>
<td>500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_POLARITY_MIN_DUR</td>
<td>200</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_ONHOOK_SUP</td>
<td>0</td>
<td></td>
<td></td>
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<tr>
<td>TR_COUNTRY_CODE</td>
<td>3</td>
<td></td>
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<td>TR_COMPANDING</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_MIN_RING_FREQ</td>
<td>20</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>TR_MAX_RING_FREQ</td>
<td>90</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>TR_V21_GAIN</td>
<td>-9</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V27_24GAIN</td>
<td>-4.7</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V27_48GAIN</td>
<td>-4.7</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V29_72GAIN</td>
<td>-7.1</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V29_96GAIN</td>
<td>-3.1</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_FAX_RECV_GAIN</td>
<td>0</td>
<td>dB</td>
<td></td>
</tr>
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### Table 53. DEFINTITY Switch Package Parameters for France

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_D_RINGTONE_DISCONNECT</td>
<td>0</td>
<td></td>
<td>Do NOT disconnect on ring tone</td>
</tr>
<tr>
<td>TR_D_BUSYTONE_DISCONNECT</td>
<td>0</td>
<td></td>
<td>Do NOT disconnect on busy tone</td>
</tr>
<tr>
<td>TR_D_REORDERTONE_DISCONNECT</td>
<td>0</td>
<td></td>
<td>Do NOT disconnect on reorder tone</td>
</tr>
<tr>
<td>TR_D_DIALTONE_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on dial tone</td>
</tr>
<tr>
<td>TR_D_STUTTERDT_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on stutter dial tone</td>
</tr>
<tr>
<td>ANALOG_LOSS_COMP</td>
<td>0</td>
<td>dB</td>
<td>Loss added during bridging</td>
</tr>
<tr>
<td>Switch Hook Flash Duration</td>
<td>500</td>
<td>msec</td>
<td>Register recall</td>
</tr>
<tr>
<td>Wink Disconnect Interval</td>
<td>300</td>
<td>msec</td>
<td>Minimum time to declare disconnect</td>
</tr>
<tr>
<td>Type of Signaling</td>
<td>TT</td>
<td></td>
<td>Network address signaling</td>
</tr>
<tr>
<td>Incoming Speech Volume</td>
<td>4000</td>
<td></td>
<td>+ 12 dB gain</td>
</tr>
<tr>
<td>Outgoing Speech Volume</td>
<td>1000</td>
<td></td>
<td>Unity gain</td>
</tr>
<tr>
<td>Outgoing Text Volume</td>
<td>4000</td>
<td></td>
<td>+ 12 dB gain (TTS)</td>
</tr>
<tr>
<td>Dial tone training enabled</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
</tbody>
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4 of 5
### Table 53. DEFINITY Switch Package Parameters for France

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blind Transfer, Initiate</td>
<td>FW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blind Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Initiate</td>
<td>FW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (No Ans)</td>
<td>FPF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (Busy)</td>
<td>FPF</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 54. DEFINITY Switch Package Parameters for Germany

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_DTMF_ONTIME</td>
<td>80</td>
<td>msec</td>
<td>CTR21 &gt; 65 msec</td>
</tr>
<tr>
<td>TR_DTMF_OFFTIME</td>
<td>80</td>
<td>msec</td>
<td>CTR21 &gt; 65 msec</td>
</tr>
<tr>
<td>TR_DTMF_H_LEVEL</td>
<td>-9</td>
<td>dBm</td>
<td>CTR21 -9.0dBm ±2.0/-2.5 dB</td>
</tr>
</tbody>
</table>
### Country Switch Packages

#### Country-Specific Switch Packages

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_DTMF_L_LEVEL</td>
<td>-11</td>
<td>dBm</td>
<td>CTR21 -11.0dBm +2.0/-2.5 dB</td>
</tr>
<tr>
<td>TR_PULSE_ON</td>
<td>60</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_PULSE_OFF</td>
<td>40</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_PULSE_INTERDIGIT</td>
<td>800</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING_LIMIT</td>
<td>-12.0</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING_DUR</td>
<td>1000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING_THRESH</td>
<td>-12</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_TRANSHYBRID_LOSS</td>
<td>42000</td>
<td>ohms</td>
<td>Based on in-country testing</td>
</tr>
<tr>
<td>TR_RECALL_TYPE</td>
<td>0</td>
<td></td>
<td>No earth recall</td>
</tr>
<tr>
<td>TR_ANSWER_DELAY</td>
<td>0</td>
<td>rings</td>
<td>Number of rings before answering</td>
</tr>
<tr>
<td>TR_MAX_RING_INTERVAL</td>
<td>6400</td>
<td>msec</td>
<td>Time between start of ring voltage signals</td>
</tr>
<tr>
<td>TR_MIN_RING_DUR</td>
<td>200</td>
<td>msec</td>
<td></td>
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Table 54. DEFINITY Switch Package Parameters for Germany
### Table 54. DEFINITY Switch Package Parameters for Germany

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_MAX_RING_DUR</td>
<td>5000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_EDETECT_MIN</td>
<td>-38</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_CPT_DETECT_MIN</td>
<td>-25</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_DETECT_MIN</td>
<td>-32</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_POST_OFFHK_DELAY</td>
<td>1500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_POSTONHK_DELAY</td>
<td>2000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_MUTE</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_CALLER_ID</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_POLARITY_SS_TMR</td>
<td>500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_POLARITY_MIN_DUR</td>
<td>200</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_ONHOOK_SUP</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_COUNTRY_CODE</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_COMPANDING</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_MIN_RING_FREQ</td>
<td>20</td>
<td>Hz</td>
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## Table 54. DEFINITY Switch Package Parameters for Germany

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_MAX_RING_FREQ</td>
<td>90</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>TR_V21_GAIN</td>
<td>-9</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V27_24GAIN</td>
<td>-4.7</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V27_48GAIN</td>
<td>-4.7</td>
<td>dBm</td>
<td></td>
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<tr>
<td>TR_V29_72GAIN</td>
<td>-7.1</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V29_96GAIN</td>
<td>-3.1</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_FAX_RECV_GAIN</td>
<td>0</td>
<td>dB</td>
<td></td>
</tr>
<tr>
<td>TR_D_RINGTONE_DISCONNECT</td>
<td>0</td>
<td>dB</td>
<td>Do NOT disconnect on ring tone</td>
</tr>
<tr>
<td>TR_D_BUSYTONE_DISCONNECT</td>
<td>0</td>
<td>dB</td>
<td>Do NOT disconnect on busy tone</td>
</tr>
<tr>
<td>TR_D_REORDERTONE_DISCONNECT</td>
<td>0</td>
<td>dB</td>
<td>Do NOT disconnect on reorder tone</td>
</tr>
<tr>
<td>TR_D_DIALTONE_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on dial tone</td>
</tr>
</tbody>
</table>
### Table 54. DEFINITY Switch Package Parameters for Germany

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_D_STUTTERDT_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on stutter dial tone</td>
</tr>
<tr>
<td>ANALOG_LOSS_COMP</td>
<td>-6</td>
<td>dB</td>
<td>Add 6 dB of loss on TR bridged calls</td>
</tr>
<tr>
<td>Switch Hook Flash Duration</td>
<td>500</td>
<td>msec</td>
<td>Register recall</td>
</tr>
<tr>
<td>Wink Disconnect Interval</td>
<td>300</td>
<td>msec</td>
<td>Minimum time to declare disconnect</td>
</tr>
<tr>
<td>Type of Signaling</td>
<td>TT</td>
<td></td>
<td>Network address signaling</td>
</tr>
<tr>
<td>Incoming Speech Volume</td>
<td>4000</td>
<td></td>
<td>+ 12 dB gain</td>
</tr>
<tr>
<td>Outgoing Speech Volume</td>
<td>1000</td>
<td></td>
<td>Unity gain</td>
</tr>
<tr>
<td>Outgoing Text Volume</td>
<td>4000</td>
<td></td>
<td>+ 12 dB gain (TTS)</td>
</tr>
<tr>
<td>Dial tone training enabled</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blind Transfer, Initiate</td>
<td>FW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blind Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Initiate</td>
<td>FW</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 54. DEFINITY Switch Package Parameters for Germany

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intelligent Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (No Ans)</td>
<td>FPF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (Busy)</td>
<td>FPF</td>
<td></td>
<td></td>
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</table>

### Table 55. Switch Pkg. Parameters (Germany: PSTN)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_DTMF_ONTIME</td>
<td>80</td>
<td>msec</td>
<td>CTR21 &gt; 65 msec</td>
</tr>
<tr>
<td>TR_DTMF_OFFTIME</td>
<td>80</td>
<td>msec</td>
<td>CTR21 &gt; 65 msec</td>
</tr>
<tr>
<td>TR_DTMF_H_LEVEL</td>
<td>-9</td>
<td>dBm</td>
<td>CTR21 -9.0dBm +2.0/-2.5 dB</td>
</tr>
<tr>
<td>TR_DTMF_L_LEVEL</td>
<td>-11</td>
<td>dBm</td>
<td>CTR21 -11.0dBm +2.0/-2.5 dB</td>
</tr>
<tr>
<td>TR_PULSE_ON</td>
<td>60</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_PULSE_OFF</td>
<td>40</td>
<td>msec</td>
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</table>
### Table 55. Switch Pkg. Parameters (Germany: PSTN)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_PULSE_INTERDIGIT</td>
<td>800</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING_LIMIT</td>
<td>-12.0</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING_DUR</td>
<td>1000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING_THRESH</td>
<td>-12</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_TRANSHYBRID_LOSS</td>
<td>42000</td>
<td>ohms</td>
<td></td>
</tr>
<tr>
<td>TR_RECALL_TYPE</td>
<td>0</td>
<td></td>
<td>No earth recall</td>
</tr>
<tr>
<td>TR_ANSWER_DELAY</td>
<td>0</td>
<td>rings</td>
<td>Number of rings before answering</td>
</tr>
<tr>
<td>TR_MAX_RING_INTERVAL</td>
<td>10000</td>
<td>msec</td>
<td>Time between start of ring voltage signals</td>
</tr>
<tr>
<td>TR_MIN_RING_DUR</td>
<td>600</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_MAX_RING_DUR</td>
<td>5000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_EDetect_MIN</td>
<td>-38</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_CPT_DETECT_MIN</td>
<td>-30</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_DETECT_MIN</td>
<td>-32</td>
<td>dBm</td>
<td></td>
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Table 55. Switch Pkg. Parameters (Germany: PSTN)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_POST_OFFHK_DELAY</td>
<td>1500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_POSTONHK_DELAY</td>
<td>2000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_MUTE</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_CALLER_ID</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_POLARITY_SS_TMR</td>
<td>500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_POLARITY_MIN_DUR</td>
<td>200</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_ONHOOK_SUP</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_COUNTRY_CODE</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_COMPAINDING</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_MIN_RING_FREQ</td>
<td>20</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>TR_MAX_RING_FREQ</td>
<td>90</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>TR_V21_GAIN</td>
<td>-9</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V27_24GAIN</td>
<td>-4.7</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V27_48GAIN</td>
<td>-4.7</td>
<td>dBm</td>
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### Table 55. Switch Pkg. Parameters (Germany: PSTN)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_V29_72GAIN</td>
<td>-7.1</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V29_96GAIN</td>
<td>-3.1</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_FAX_RECV_GAIN</td>
<td>0</td>
<td>dB</td>
<td></td>
</tr>
<tr>
<td>TR_D_RINGTONE_DISCONNECT</td>
<td>0</td>
<td></td>
<td>Do NOT disconnect on ring tone</td>
</tr>
<tr>
<td>TR_D_BUSYTONE_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Do NOT disconnect on busy tone</td>
</tr>
<tr>
<td>TR_D_REORDERTONE_DISCONNECT</td>
<td>0</td>
<td></td>
<td>Do NOT disconnect on reorder tone</td>
</tr>
<tr>
<td>TR_D_DIALTONE_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on dial tone</td>
</tr>
<tr>
<td>TR_D_STUTTERDT_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on stutter dial tone</td>
</tr>
<tr>
<td>ANALOG_LOSS_COMP</td>
<td>-6</td>
<td>dB</td>
<td>Add 6 dB of loss on TR bridged calls</td>
</tr>
<tr>
<td>Switch Hook Flash Duration</td>
<td>500</td>
<td>msec</td>
<td>Register recall</td>
</tr>
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## Table 55. Switch Pkg. Parameters (Germany: PSTN)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wink Disconnect Interval</td>
<td>300</td>
<td>msec</td>
<td>Minimum time to declare disconnect</td>
</tr>
<tr>
<td>Type of Signaling</td>
<td>TT</td>
<td></td>
<td>Network address signaling</td>
</tr>
<tr>
<td>Incoming Speech Volume</td>
<td>4000</td>
<td></td>
<td>+ 12 dB gain</td>
</tr>
<tr>
<td>Outgoing Speech Volume</td>
<td>1000</td>
<td></td>
<td>Unity gain</td>
</tr>
<tr>
<td>Outgoing Text Volume</td>
<td>4000</td>
<td></td>
<td>+ 12 dB gain (TTS)</td>
</tr>
<tr>
<td>Dial tone training enabled</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blind Transfer, Initiate</td>
<td>FW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blind Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Inititate</td>
<td>FW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (No Ans)</td>
<td>FPF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (Busy)</td>
<td>FPF</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 56. **DEFINITY Switch Package Parameters for Hong Kong**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_DTMF_ONTIME</td>
<td>100</td>
<td>msec</td>
<td>50 &lt; digit duration &lt; 200</td>
</tr>
<tr>
<td>TR_DTMF_OFFTIME</td>
<td>60</td>
<td>msec</td>
<td>50 &lt; digit duration &lt; 200</td>
</tr>
<tr>
<td>TR_DTMF_H_LEVEL</td>
<td>-7</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_L_LEVEL</td>
<td>-9</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_PULSE_ON</td>
<td>60</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_PULSE_OFF</td>
<td>40</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_PULSE_INTERDIGIT</td>
<td>720</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING_LIMIT</td>
<td>-9.0</td>
<td>dBm</td>
<td>Speech limit &lt; -10 dBm</td>
</tr>
<tr>
<td>TR_CLIPPING_DUR</td>
<td>500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING_THRESH</td>
<td>-9.0</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_TRANSHYBRID_LOSS</td>
<td>25000</td>
<td>ohms</td>
<td>TN746B DEFINITY Circuit Pack</td>
</tr>
<tr>
<td>TR_RECALL_TYPE</td>
<td>0</td>
<td></td>
<td>No earth recall</td>
</tr>
</tbody>
</table>
### Table 56. DEFINITY Switch Package Parameters for Hong Kong

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_ANSWER_DELAY</td>
<td>0</td>
<td>rings</td>
<td>Number of rings before answering</td>
</tr>
<tr>
<td>TR_MAX_RING_INTERVAL</td>
<td>6400</td>
<td>msec</td>
<td>Time between start of ring voltage signals</td>
</tr>
<tr>
<td>TR_MIN_RING_DUR</td>
<td>300</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_MAX_RING_DUR</td>
<td>5000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_EDETECT_MIN</td>
<td>-38</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_CPT_DETECT_MIN</td>
<td>-25</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_DETECT_MIN</td>
<td>-25</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_POST_OFFHK_DELAY</td>
<td>1500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_POSTONHK_DELAY</td>
<td>2000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_MUTE</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_CALLER_ID</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_POLARITY_SS_TMR</td>
<td>500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_POLARITY_MIN_DUR</td>
<td>200</td>
<td>msec</td>
<td></td>
</tr>
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</table>
### Table 56. DEFINITY Switch Package Parameters for Hong Kong

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_ONHOOK_SUP</td>
<td>0</td>
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<td></td>
</tr>
<tr>
<td>TR_COUNTRY_CODE</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_COMPANDING</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_MIN_RING_FREQ</td>
<td>20</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>TR_MAX_RING_FREQ</td>
<td>90</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>TR_V21_GAIN</td>
<td>-9</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V27_24_GAIN</td>
<td>-4.7</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V27_48_GAIN</td>
<td>-4.7</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V29_72_GAIN</td>
<td>-7.1</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V29_96_GAIN</td>
<td>-3.1</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_FAX_RECV_GAIN</td>
<td>0</td>
<td>dB</td>
<td></td>
</tr>
<tr>
<td>TR_D_RINGTONE_DISCONNECT</td>
<td>0</td>
<td></td>
<td>Do NOT disconnect on ring tone</td>
</tr>
<tr>
<td>TR_D_BUSYTONE_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on busy tone</td>
</tr>
</tbody>
</table>
### Table 56. DEFINITY Switch Package Parameters for Hong Kong

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_D_REORDERTONE_DISCONNECT</td>
<td>0</td>
<td>dB</td>
<td>Do NOT disconnect on reorder tone</td>
</tr>
<tr>
<td>TR_D_DIALTONE_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on dial tone</td>
</tr>
<tr>
<td>TR_D_STUTTERDT_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on stutter dial tone</td>
</tr>
<tr>
<td>ANALOG_LOSS_COMP</td>
<td>default(0)</td>
<td>dB</td>
<td></td>
</tr>
<tr>
<td>Switch Hook Flash Duration</td>
<td>500</td>
<td>msec</td>
<td>Register recall</td>
</tr>
<tr>
<td>Wink Disconnect Interval</td>
<td>300</td>
<td>msec</td>
<td>Minimum time to declare disconnect</td>
</tr>
<tr>
<td>Type of Signaling</td>
<td>TT</td>
<td></td>
<td>Network address signaling</td>
</tr>
<tr>
<td>Incoming Speech Volume</td>
<td>4000</td>
<td></td>
<td>+ 12 dB gain</td>
</tr>
<tr>
<td>Outgoing Speech Volume</td>
<td>1000</td>
<td>Unity gain</td>
<td></td>
</tr>
<tr>
<td>Outgoing Text Volume</td>
<td>4000</td>
<td>+ 12 dB gain (TTS)</td>
<td></td>
</tr>
<tr>
<td>Dial tone training enabled</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 56. DEFINITY Switch Package Parameters for Hong Kong

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blind Transfer, Initiate</td>
<td>FW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blind Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Initiate</td>
<td>FW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (No Ans)</td>
<td>FPF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (Busy)</td>
<td>Fpf</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 57. PSTN Switch Package Parameters for Hong Kong

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_DTMF_ONTIME</td>
<td>100</td>
<td>msec</td>
<td>50 &lt; digit duration &lt; 200</td>
</tr>
<tr>
<td>TR_DTMF_OFFTIME</td>
<td>60</td>
<td>msec</td>
<td>50 &lt; digit duration &lt; 200</td>
</tr>
<tr>
<td>TR_DTMF_H_LEVEL</td>
<td>-7</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_L_LEVEL</td>
<td>-9</td>
<td>dBm</td>
<td></td>
</tr>
</tbody>
</table>
### Table 57. PSTN Switch Package Parameters for Hong Kong

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_PULSE_ON</td>
<td>60</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_PULSE_OFF</td>
<td>40</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_PULSE_INTERDIGIT</td>
<td>720</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING_LIMIT</td>
<td>-9.0</td>
<td>dBm</td>
<td>Speech limit &lt; -10 dBm</td>
</tr>
<tr>
<td>TR_CLIPPING_DUR</td>
<td>500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING_THRESH</td>
<td>-9.0</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_TRANSHYBRID_LOSS</td>
<td>25000</td>
<td>ohms</td>
<td>TN746B DEFINITY Circuit Pack</td>
</tr>
<tr>
<td>TR_RECALL_TYPE</td>
<td>0</td>
<td></td>
<td>No earth recall</td>
</tr>
<tr>
<td>TR_ANSWER_DELAY</td>
<td>0</td>
<td>rings</td>
<td>Number of rings before answering</td>
</tr>
<tr>
<td>TR_MAX_RING_INTERVAL</td>
<td>6400</td>
<td>msec</td>
<td>Time between start of ring voltage signals</td>
</tr>
<tr>
<td>TR_MIN_RING_DUR</td>
<td>300</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_MAX_RING_DUR</td>
<td>5000</td>
<td>msec</td>
<td></td>
</tr>
</tbody>
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### Table 57. PSTN Switch Package Parameters for Hong Kong

<table>
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<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_EDETECT_MIN</td>
<td>-38</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_CPT_DETECT_MIN</td>
<td>-25</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_DETECT_MIN</td>
<td>-25</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_POST_OFFHK_DELAY</td>
<td>1500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_POSTONHK_DELAY</td>
<td>2000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_MUTE</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_CALLER_ID</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_POLARITY_SS_TMR</td>
<td>500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_POLARITY_MIN_DUR</td>
<td>200</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_ONHOOK_SUP</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_COUNTRY_CODE</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_COMPANDING</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_MIN_RING_FREQ</td>
<td>20</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>TR_MAX_RING_FREQ</td>
<td>90</td>
<td>Hz</td>
<td></td>
</tr>
</tbody>
</table>
Table 57: PSTN Switch Package Parameters for Hong Kong

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_V21_GAIN</td>
<td>-9</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V27_24GAIN</td>
<td>-4.7</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V27_48GAIN</td>
<td>-4.7</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V29_72GAIN</td>
<td>-7.1</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V29_96GAIN</td>
<td>-3.1</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_FAX_RECV_GAIN</td>
<td>0</td>
<td>dB</td>
<td></td>
</tr>
<tr>
<td>TR_D_RINGTONE_DISCONNECT</td>
<td>0</td>
<td>dB</td>
<td>Do NOT disconnect on ring tone</td>
</tr>
<tr>
<td>TR_D_BUSYTONE_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on busy tone</td>
</tr>
<tr>
<td>TR_D_REORDERTONE_DISCONNECT</td>
<td>0</td>
<td></td>
<td>Do NOT disconnect on reorder tone</td>
</tr>
<tr>
<td>TR_D_DIALTONE_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on dial tone</td>
</tr>
<tr>
<td>TR_D_STUTTERDT_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on stutter dial tone</td>
</tr>
<tr>
<td>ANALOG_LOSS_COMP</td>
<td>default(0)</td>
<td>dB</td>
<td></td>
</tr>
</tbody>
</table>
## B Country Switch Packages

### Country-Specific Switch Packages

#### Table 57. PSTN Switch Package Parameters for Hong Kong

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switch Hook Flash Duration</td>
<td>500</td>
<td>msec</td>
<td>Register recall</td>
</tr>
<tr>
<td>Wink Disconnect Interval</td>
<td>300</td>
<td>msec</td>
<td>Minimum time to declare disconnect</td>
</tr>
<tr>
<td>Type of Signaling</td>
<td>TT</td>
<td></td>
<td>Network address signaling</td>
</tr>
<tr>
<td>Incoming Speech Volume</td>
<td>4000</td>
<td></td>
<td>+ 12 dB gain</td>
</tr>
<tr>
<td>Outgoing Speech Volume</td>
<td>1000</td>
<td></td>
<td>Unity gain</td>
</tr>
<tr>
<td>Outgoing Text Volume</td>
<td>4000</td>
<td></td>
<td>+ 12 dB gain (TTS)</td>
</tr>
<tr>
<td>Dial tone training enabled</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blind Transfer, Initiate</td>
<td>FW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blind Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Initiate</td>
<td>FW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (No Ans)</td>
<td>FPF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (Busy)</td>
<td>FPF</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Table 58. DEFINITY Switch Package Parameters for Ireland**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_DTMF_ONTIME</td>
<td>80</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_OFFTIME</td>
<td>80</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_H_LEVEL</td>
<td>-11</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_L_LEVEL</td>
<td>-13</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_PULSE_ON</td>
<td>66</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_PULSE_OFF</td>
<td>33</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_PULSE_INTERDIGIT</td>
<td>750</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING_LIMIT</td>
<td>-12</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING_DUR</td>
<td>1000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING_THRESH</td>
<td>-12</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_TRANSHYBRID_LOSS</td>
<td>25000</td>
<td>ohms</td>
<td>TN468B, TN2183 DEFINITY Circuit Packs</td>
</tr>
<tr>
<td>TR_RECALL_TYPE</td>
<td>0</td>
<td></td>
<td>No earth recall</td>
</tr>
</tbody>
</table>
### Table 58. DEFINITY Switch Package Parameters for Ireland

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_ANSWER_DELAY</td>
<td>0</td>
<td>rings</td>
<td>Number of rings before answering</td>
</tr>
<tr>
<td>TR_MAX_RING_INTERVAL</td>
<td>6400</td>
<td>msec</td>
<td>Time between start of ring voltage signals</td>
</tr>
<tr>
<td>TR_MIN_RING_DUR</td>
<td>300</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_MAX_RING_DUR</td>
<td>5000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_EDetect_MIN</td>
<td>-43</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_CPT_DETECT_MIN</td>
<td>-30</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_DETECT_MIN</td>
<td>-25</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_POST_OFFSETK_DELAY</td>
<td>1500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_POSTONHK_DELAY</td>
<td>2000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_MUTE</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_CALLER_ID</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_POLARITY_SS_TMR</td>
<td>500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_POLARITY_MIN_DUR</td>
<td>200</td>
<td>msec</td>
<td></td>
</tr>
</tbody>
</table>
Table 58. DEFINITY Switch Package Parameters for Ireland

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_ONHOOK_SUP</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_COUNTRY_CODE</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_COMPANDING</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_MIN_RING_FREQ</td>
<td>20</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>TR_MAX_RING_FREQ</td>
<td>90</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>TR_V21_GAIN</td>
<td>-9</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V27_24_GAIN</td>
<td>-4.7</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V27_48_GAIN</td>
<td>-4.7</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V29_72_GAIN</td>
<td>-7.1</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V29_96_GAIN</td>
<td>-3.1</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_FAX_RECV_GAIN</td>
<td>0</td>
<td>dB</td>
<td></td>
</tr>
<tr>
<td>TR_D_RINGTONE_DISCONNECT</td>
<td>0</td>
<td></td>
<td>Do NOT disconnect on ring tone</td>
</tr>
<tr>
<td>TR_D_BUSYTONE_DISCONNECT</td>
<td>0</td>
<td></td>
<td>Do NOT disconnect on busy tone</td>
</tr>
</tbody>
</table>
### Table 58. DEFINITY Switch Package Parameters for Ireland

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_D_REORDERTONE_DISCONNECT</td>
<td>0</td>
<td></td>
<td>Do NOT disconnect on reorder tone</td>
</tr>
<tr>
<td>TR_D_DIALTONE_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on dial tone</td>
</tr>
<tr>
<td>TR_D_STUTTERDT_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on stutter dial tone</td>
</tr>
<tr>
<td>ANALOG_LOSS_COMP</td>
<td>-3</td>
<td>dB</td>
<td>Loss added during bridging</td>
</tr>
<tr>
<td>Switch Hook Flash Duration</td>
<td>200</td>
<td>msec</td>
<td>Register recall</td>
</tr>
<tr>
<td>Wink Disconnect Interval</td>
<td>80</td>
<td>msec</td>
<td>Minimum time to declare disconnect</td>
</tr>
<tr>
<td>Type of Signaling</td>
<td>TT</td>
<td></td>
<td>Network address signaling</td>
</tr>
<tr>
<td>Incoming Speech Volume</td>
<td>4000</td>
<td></td>
<td>+ 12 dB gain</td>
</tr>
<tr>
<td>Outgoing Speech Volume</td>
<td>1000</td>
<td></td>
<td>Unity gain</td>
</tr>
<tr>
<td>Outgoing Text Volume</td>
<td>4000</td>
<td></td>
<td>+ 12 dB gain (TTS)</td>
</tr>
<tr>
<td>Dial tone training enabled</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blind Transfer, Initiate</td>
<td>FW</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 58. DEFINITY Switch Package Parameters for Ireland

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blind Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Initiate</td>
<td>FW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (No Ans)</td>
<td>FPF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (Busy)</td>
<td>FPF</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 59. DEFINITY Switch Package Parameters for Italy

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_DTMF_ONTIME</td>
<td>80</td>
<td>msec</td>
<td>CTR21 &gt; 65 msec</td>
</tr>
<tr>
<td>TR_DTMF_OFFTIME</td>
<td>80</td>
<td>msec</td>
<td>CTR21 &gt; 65 msec</td>
</tr>
<tr>
<td>TR_DTMF_H_LEVEL</td>
<td>-6</td>
<td>dBm</td>
<td>CRT21 -9.0 dBm, +2.0/-2.5 dB</td>
</tr>
<tr>
<td>TR_DTMF_L_LEVEL</td>
<td>-8</td>
<td>dBm</td>
<td>CRT21 -11 dBm, +2.5/-2.0 dB</td>
</tr>
</tbody>
</table>
### Table 59. **DEFINTY Switch Package Parameters for Italy**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_PULSE_ON</td>
<td>60</td>
<td>msec</td>
<td>61.5 +/- 10 msec</td>
</tr>
<tr>
<td>TR_PULSE_OFF</td>
<td>40</td>
<td>msec</td>
<td>38.5 +/- 7.5 msec</td>
</tr>
<tr>
<td>TR_PULSE_INTERDIGIT</td>
<td>750</td>
<td>msec</td>
<td>interdigit pause &gt; 700 msec</td>
</tr>
<tr>
<td>TR_CLIPPING_LIMIT</td>
<td>-12.0</td>
<td>dBm</td>
<td>Speech limit &lt; -10 dBm</td>
</tr>
<tr>
<td>TR_CLIPPING_DUR</td>
<td>1000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING_THRESH</td>
<td>-12.0</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_TRANSHYBRID_LOSS</td>
<td>25000</td>
<td>ohms</td>
<td>TN2135 DEFINITY Circuit Pack</td>
</tr>
<tr>
<td>TR_RECALL_TYPE</td>
<td>0</td>
<td></td>
<td>No earth recall</td>
</tr>
<tr>
<td>TR_ANSWER_DELAY</td>
<td>0</td>
<td>rings</td>
<td>Number of rings before answering</td>
</tr>
<tr>
<td>TR_MAX_RING_INTERVAL</td>
<td>6400</td>
<td>msec</td>
<td>Time between start of ring voltage signals</td>
</tr>
<tr>
<td>TR_MIN_RING_DUR</td>
<td>200</td>
<td>msec</td>
<td></td>
</tr>
</tbody>
</table>
### Table 59. DEFINITY Switch Package Parameters for Italy

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_MAX_RING_DUR</td>
<td>5000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_EDETECT_MIN</td>
<td>-38</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_CPT_DETECT_MIN</td>
<td>-28</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_DETECT_MIN</td>
<td>-32</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_POST_OFFHK_DELAY</td>
<td>1500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_POSTONHK_DELAY</td>
<td>2000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_MUTE</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_CALLER_ID</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_POLARITY_SS_TMR</td>
<td>500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_POLARITY_MIN_DUR</td>
<td>200</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_ONHOOK_SUP</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_COUNTRY_CODE</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_COMPANDING</td>
<td>0</td>
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<td></td>
</tr>
<tr>
<td>TR_MIN_RING_FREQ</td>
<td>20</td>
<td>Hz</td>
<td></td>
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</table>
### Table 59. DEFINITY Switch Package Parameters for Italy

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_MAX_RING_FREQ</td>
<td>90</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>TR_V21_GAIN</td>
<td>-9</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V27_24GAIN</td>
<td>-4.7</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V27_48GAIN</td>
<td>-4.7</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V29_72GAIN</td>
<td>-7.1</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V29_96GAIN</td>
<td>-3.1</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_FAX_RECV_GAIN</td>
<td>0</td>
<td>dB</td>
<td></td>
</tr>
<tr>
<td>TR_D_RINGTONE_DISCONNECT</td>
<td>0</td>
<td>dB</td>
<td>Do NOT disconnect on ring tone</td>
</tr>
<tr>
<td>TR_D_BUSYTONE_DISCONNECT</td>
<td>0</td>
<td>dB</td>
<td>Do NOT disconnect on busy tone</td>
</tr>
<tr>
<td>TR_D_REORDERTONE_DISCONNECT</td>
<td>0</td>
<td>dB</td>
<td>Do NOT disconnect on reorder tone</td>
</tr>
<tr>
<td>TR_D_DIALTONE_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on dial tone</td>
</tr>
<tr>
<td>Parameter</td>
<td>Value</td>
<td>Units</td>
<td>Specification, Notes</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>-------</td>
<td>-------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>TR_D_STUTTERDT_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on stutter dial tone</td>
</tr>
<tr>
<td>ANALOG_LOSS_COMP</td>
<td>0</td>
<td>dB</td>
<td></td>
</tr>
<tr>
<td>Switch Hook Flash Duration</td>
<td>500</td>
<td>msec</td>
<td>Register recall</td>
</tr>
<tr>
<td>Wink Disconnect Interval</td>
<td>300</td>
<td>msec</td>
<td>Minimum time to declare disconnect</td>
</tr>
<tr>
<td>Type of Signaling</td>
<td>TT</td>
<td></td>
<td>Network address signaling</td>
</tr>
<tr>
<td>Incoming Speech Volume</td>
<td>4000</td>
<td></td>
<td>+ 12 dB gain</td>
</tr>
<tr>
<td>Outgoing Speech Volume</td>
<td>1000</td>
<td></td>
<td>Unity gain</td>
</tr>
<tr>
<td>Outgoing Text Volume</td>
<td>4000</td>
<td></td>
<td>+ 12 dB gain (TTS)</td>
</tr>
<tr>
<td>Dial tone training enabled</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blind Transfer, Initiate</td>
<td>FW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blind Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Initiate</td>
<td>FW</td>
<td></td>
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### Table 59. DEFINITY Switch Package Parameters for Italy

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
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<tbody>
<tr>
<td>Intelligent Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (No Ans)</td>
<td>FPF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (Busy)</td>
<td>FPF</td>
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### Table 60. DEFINITY Switch Package Parameters for Japan

<table>
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<th>Parameter</th>
<th>Value</th>
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<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_DTMF_ONTIME</td>
<td>80</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_OFFTIME</td>
<td>80</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_H LEVEL</td>
<td>-10.2</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_L LEVEL</td>
<td>-11.2</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_PULSE_ON</td>
<td>66</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_PULSE_OFF</td>
<td>33</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_PULSE_INTERDIGIT</td>
<td>700</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>Parameter</td>
<td>Value</td>
<td>Units</td>
<td>Specification, Notes</td>
</tr>
<tr>
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<td>-------</td>
<td>-------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>TR_CLIPPING_LIMIT</td>
<td>-16.0</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING_DUR</td>
<td>1000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING_THRESH</td>
<td>-16.0</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_TRANSHYBRID_LOSS</td>
<td>3000</td>
<td>ohms</td>
<td>TN46B DEFINITY Circuit Pack</td>
</tr>
<tr>
<td>TR_RECALL_TYPE</td>
<td>0</td>
<td>ohms</td>
<td>No earth recall</td>
</tr>
<tr>
<td>TR_ANSWER_DELAY</td>
<td>0</td>
<td>rings</td>
<td>Number of rings before answering</td>
</tr>
<tr>
<td>TR_MAX_RING_INTERVAL</td>
<td>6400</td>
<td>msec</td>
<td>Time between start of ring voltage signals</td>
</tr>
<tr>
<td>TR_MIN_RING_DUR</td>
<td>140</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_MAX_RING_DUR</td>
<td>5000</td>
<td>msec</td>
<td>Ignore constant ring</td>
</tr>
<tr>
<td>TR_EDetect_MIN</td>
<td>-38</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_CPT_DETECT_MIN</td>
<td>-30</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_DETECT_MIN</td>
<td>-25</td>
<td>dBm</td>
<td></td>
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### Table 60. DEFINITY Switch Package Parameters for Japan

<table>
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<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
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<tbody>
<tr>
<td>TR_POST_OFFHK_DELAY</td>
<td>3000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_POSTONHK_DELAY</td>
<td>2000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_MUTE</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_CALLER_ID</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_POLARITY_SS_TMR</td>
<td>500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_POLARITY_MIN_DUR</td>
<td>200</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_ONHOOK_SUP</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_COUNTRY_CODE</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_COMPANDING</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_MIN_RING_FREQ</td>
<td>20</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>TR_MAX_RING_FREQ</td>
<td>90</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>TR_V21_GAIN</td>
<td>-9</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V27_24GAIN</td>
<td>-4.7</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V27_48GAIN</td>
<td>-4.7</td>
<td>dBm</td>
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### Table 60. DEFINITY Switch Package Parameters for Japan

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<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
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<tbody>
<tr>
<td>TR_V29_72GAIN</td>
<td>-7.1</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V29_96GAIN</td>
<td>-3.1</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_FAX_RECV_GAIN</td>
<td>0</td>
<td>dB</td>
<td></td>
</tr>
<tr>
<td>TR_D_RINGTONE_DISCONNECT</td>
<td>0</td>
<td>dB</td>
<td>Do NOT disconnect on ring tone</td>
</tr>
<tr>
<td>TR_D_BUSYTONE_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on busy tone</td>
</tr>
<tr>
<td>TR_D_REORDERTONE_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on reorder tone</td>
</tr>
<tr>
<td>TR_D_DIALTONE_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on dial tone</td>
</tr>
<tr>
<td>TR_D_STUTTERDT_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on stutter dial tone</td>
</tr>
<tr>
<td>ANALOG_LOSS_COMP</td>
<td>0</td>
<td>dB</td>
<td></td>
</tr>
<tr>
<td>Switch Hook Flash Duration</td>
<td>500</td>
<td>msec</td>
<td>Register recall</td>
</tr>
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## Table 60. DEFINITY Switch Package Parameters for Japan

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
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<tbody>
<tr>
<td>Wink Disconnect Interval</td>
<td>300</td>
<td>msec</td>
<td>Minimum time to declare disconnect</td>
</tr>
<tr>
<td>Type of Signaling</td>
<td>TT</td>
<td></td>
<td>Network address signaling</td>
</tr>
<tr>
<td>Incoming Speech Volume</td>
<td>4000</td>
<td></td>
<td>+ 12 dB gain</td>
</tr>
<tr>
<td>Outgoing Speech Volume</td>
<td>1000</td>
<td></td>
<td>Unity gain</td>
</tr>
<tr>
<td>Outgoing Text Volume</td>
<td>4000</td>
<td></td>
<td>+ 12 dB gain (TTS)</td>
</tr>
<tr>
<td>Dial tone training enabled</td>
<td>No</td>
<td></td>
<td>Interrupted dial tone</td>
</tr>
<tr>
<td>Blind Transfer, Initiate</td>
<td>FW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blind Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Initiate</td>
<td>FW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (No Ans)</td>
<td>FPF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (Busy)</td>
<td>FPF</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 61. PSTN Switch Package Parameters for Japan

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_DTMF_ONTIME</td>
<td>80</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_OFFTIME</td>
<td>80</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_H_LEVEL</td>
<td>-10.2</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_L_LEVEL</td>
<td>-11.2</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_PULSE_ON</td>
<td>66</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_PULSE_OFF</td>
<td>33</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_PULSE_INTERDIGIT</td>
<td>700</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING_LIMIT</td>
<td>-16.0</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING_DUR</td>
<td>1000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING_THRESH</td>
<td>-16.0</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_TRANSHYBRID_LOSS</td>
<td>30000</td>
<td>ohms</td>
<td></td>
</tr>
<tr>
<td>TR_RECALL_TYPE</td>
<td>0</td>
<td></td>
<td>No earth recall</td>
</tr>
<tr>
<td>TR_ANSWER_DELAY</td>
<td>0</td>
<td>rings</td>
<td>Number of rings before answering</td>
</tr>
</tbody>
</table>
### Table 61. PSTN Switch Package Parameters for Japan

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_MAX_RING_INTERVAL</td>
<td>6400</td>
<td>msec</td>
<td>Time between start of ring voltage signals</td>
</tr>
<tr>
<td>TR_MIN_RING_DUR</td>
<td>140</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_MAX_RING_DUR</td>
<td>5000</td>
<td>msec</td>
<td>Ignore constant ring</td>
</tr>
<tr>
<td>TR_EDTECT_MIN</td>
<td>-38</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_CPT_DETECT_MIN</td>
<td>-30</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_DETECT_MIN</td>
<td>-25</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_POST_OFFHK_DELAY</td>
<td>3000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_POSTONHK_DELAY</td>
<td>2000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_MUTE</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_CALLER_ID</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_POLARITY_SS_TMR</td>
<td>500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_POLARITY_MIN_DUR</td>
<td>200</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_ONHOOK_SUP</td>
<td>0</td>
<td></td>
<td></td>
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### Table 61. PSTN Switch Package Parameters for Japan

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
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</thead>
<tbody>
<tr>
<td>TR_COUNTRY_CODE</td>
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<tr>
<td>TR_COMPANDING</td>
<td>0</td>
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<td></td>
</tr>
<tr>
<td>TR_MIN_RING_FREQ</td>
<td>20</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>TR_MAX_RING_FREQ</td>
<td>90</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>TR_V21_GAIN</td>
<td>-9</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V27_24GAIN</td>
<td>-4.7</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V27_48GAIN</td>
<td>-4.7</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V29_72GAIN</td>
<td>-7.1</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V29_96GAIN</td>
<td>-3.1</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_FAX_RECV_GAIN</td>
<td>0</td>
<td>dB</td>
<td></td>
</tr>
<tr>
<td>TR_D_RINGTONE_DISCONNECT</td>
<td>0</td>
<td></td>
<td>Do NOT disconnect on ring tone</td>
</tr>
<tr>
<td>TR_D_BUSYTONE_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on busy tone</td>
</tr>
<tr>
<td>TR_D_REORDERTONE_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on reorder tone</td>
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### Table 61. PSTN Switch Package Parameters for Japan

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
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<tbody>
<tr>
<td>TR_D_DIALTONE_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on dial tone</td>
</tr>
<tr>
<td>TR_D_STUTTERDT_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on stutter dial tone</td>
</tr>
<tr>
<td>ANALOG_LOSS_COMP</td>
<td>0 dB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Switch Hook Flash Duration</td>
<td>500 msec</td>
<td></td>
<td>Register recall</td>
</tr>
<tr>
<td>Wink Disconnect Interval</td>
<td>300 msec</td>
<td></td>
<td>Minimum time to declare disconnect</td>
</tr>
<tr>
<td>Type of Signaling</td>
<td>TT</td>
<td></td>
<td>Network address signaling</td>
</tr>
<tr>
<td>Incoming Speech Volume</td>
<td>4000</td>
<td></td>
<td>+ 12 dB gain</td>
</tr>
<tr>
<td>Outgoing Speech Volume</td>
<td>1000</td>
<td>Unity gain</td>
<td></td>
</tr>
<tr>
<td>Outgoing Text Volume</td>
<td>4000</td>
<td></td>
<td>+ 12 dB gain (TTS)</td>
</tr>
<tr>
<td>Dial tone training enabled</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blind Transfer, Initiate</td>
<td>FW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blind Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
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### Table 61. PSTN Switch Package Parameters for Japan

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intelligent Transfer, Initiate</td>
<td>FW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (No Ans)</td>
<td>FPF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (Busy)</td>
<td>FPF</td>
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<td></td>
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### Table 62. DEFINITY Switch Package Parameters for Luxembourg

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_DTMF_ONTIME</td>
<td>80</td>
<td>msec</td>
<td>CTR21 &gt; 65 msec</td>
</tr>
<tr>
<td>TR_DTMF_OFFTIME</td>
<td>80</td>
<td>msec</td>
<td>CTR21 &gt; 65 msec</td>
</tr>
<tr>
<td>TR_DTMF_H_LEVEL</td>
<td>-9</td>
<td>dBm</td>
<td>CTR21 -9.0dBm +2.0/-2.5 dB</td>
</tr>
<tr>
<td>TR_DTMF_L_LEVEL</td>
<td>-11</td>
<td>dBm</td>
<td>CTR21 -11.0dBm +2.0/-2.5 dB</td>
</tr>
<tr>
<td>TR_PULSE_ON</td>
<td>60</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_PULSE_OFF</td>
<td>40</td>
<td>msec</td>
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### Table 62. DEFINITY Switch Package Parameters for Luxembourg

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
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<tbody>
<tr>
<td>TR_PULSE_INTERDIGIT</td>
<td>800</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING LIMIT</td>
<td>-12.0</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING DUR</td>
<td>1000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING_THRESH</td>
<td>-12</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_TRANSHYBRID_LOSS</td>
<td>40000</td>
<td>ohms</td>
<td>TN2149, TN2183 DEFINITY Circuit Packs</td>
</tr>
<tr>
<td>TR_RECALL_TYPE</td>
<td>0</td>
<td></td>
<td>No earth recall</td>
</tr>
<tr>
<td>TR_ANSWER_DELAY</td>
<td>0</td>
<td>rings</td>
<td>Number of rings before answering</td>
</tr>
<tr>
<td>TR_MAX_RING_INTERVAL</td>
<td>6400</td>
<td>msec</td>
<td>Time between start of ring voltage signals</td>
</tr>
<tr>
<td>TR_MIN_RING_DUR</td>
<td>100</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_MAX_RING_DUR</td>
<td>5000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_EDETECT_MIN</td>
<td>-38</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_CPT_DETECT_MIN</td>
<td>-25</td>
<td>dBm</td>
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2 of 5
Table 62. DEFINITY Switch Package Parameters for Luxembourg

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<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
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<tr>
<td>TR_DTMF_DETECT_MIN</td>
<td>-25</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_POST_OFFHK_DELAY</td>
<td>1500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_POSTONHK_DELAY</td>
<td>2000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_MUTE</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_CALLER_ID</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_POLARITY_SS_TMR</td>
<td>500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_POLARITY_MIN_DUR</td>
<td>200</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_ONHOOK_SUP</td>
<td>0</td>
<td></td>
<td></td>
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<tr>
<td>TR_COUNTRY_CODE</td>
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<td></td>
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<tr>
<td>TR_COMPANDING</td>
<td>0</td>
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<tr>
<td>TR_MIN_RING_FREQ</td>
<td>20</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>TR_MAX_RING_FREQ</td>
<td>90</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>TR_V21_GAIN</td>
<td>-9</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V27_24GAIN</td>
<td>-4.7</td>
<td>dBm</td>
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### Table 62. DEFINITY Switch Package Parameters for Luxembourg

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<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
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</thead>
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<tr>
<td>TR_V27_48GAIN</td>
<td>-4.7</td>
<td>dBm</td>
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<tr>
<td>TR_V29_72GAIN</td>
<td>-7.1</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V29_96GAIN</td>
<td>-3.1</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_FAX_RECV_GAIN</td>
<td>0</td>
<td>dB</td>
<td></td>
</tr>
<tr>
<td>TR_D_RINGTONE_DISCONNECT</td>
<td>0</td>
<td></td>
<td>Do NOT disconnect on ring tone</td>
</tr>
<tr>
<td>TR_D_BUSYTONE_DISCONNECT</td>
<td>0</td>
<td></td>
<td>Do NOT disconnect on busy tone</td>
</tr>
<tr>
<td>TR_D_REORDERTONE_DISCONNECT</td>
<td>0</td>
<td></td>
<td>Do NOT disconnect on reorder tone</td>
</tr>
<tr>
<td>TR_D_DIALTONE_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on dial tone</td>
</tr>
<tr>
<td>TR_D_STUTTERDT_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on stutter dial tone</td>
</tr>
<tr>
<td>ANALOG_LOSS_COMP</td>
<td>0</td>
<td>dB</td>
<td></td>
</tr>
<tr>
<td>Switch Hook Flash Duration</td>
<td>500</td>
<td>msec</td>
<td>Register recall</td>
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### Table 62. DEFINITY Switch Package Parameters for Luxembourg

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
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<tbody>
<tr>
<td>Wink Disconnect Interval</td>
<td>300</td>
<td>msec</td>
<td>Minimum time to declare disconnect</td>
</tr>
<tr>
<td>Type of Signaling</td>
<td>TT</td>
<td></td>
<td>Network address signaling</td>
</tr>
<tr>
<td>Incoming Speech Volume</td>
<td>4000</td>
<td></td>
<td>+ 12 dB gain</td>
</tr>
<tr>
<td>Outgoing Speech Volume</td>
<td>1000</td>
<td></td>
<td>Unity gain</td>
</tr>
<tr>
<td>Outgoing Text Volume</td>
<td>4000</td>
<td></td>
<td>+ 12 dB gain (TTS)</td>
</tr>
<tr>
<td>Dial tone training enabled</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blind Transfer, Initiate</td>
<td>FW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blind Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Initiate</td>
<td>FW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (No Ans)</td>
<td>FPF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (Busy)</td>
<td>FPF</td>
<td></td>
<td></td>
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</tbody>
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### B Country Switch Packages

#### Country-Specific Switch Packages

Table 63. **DEFINITY Switch Package Parameters for Mexico**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
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<tbody>
<tr>
<td>TR_DTMF_ONTIME</td>
<td>80</td>
<td>msec</td>
<td>&gt; 40 ms duration of digit</td>
</tr>
<tr>
<td>TR_DTMF_OFFTIME</td>
<td>80</td>
<td>msec</td>
<td>&gt; 40 ms interdigit pause</td>
</tr>
<tr>
<td>TR_DTMF_H_LEVEL</td>
<td>-6</td>
<td>dBm</td>
<td>~ -6dbm, high band 2 +/- 1 above low band</td>
</tr>
<tr>
<td>TR_DTMF_L_LEVEL</td>
<td>-8</td>
<td>dBm</td>
<td>~ -8dbm, high band 2 +/- 1 above low band</td>
</tr>
<tr>
<td>TR_PULSE_ON</td>
<td>66</td>
<td>msec</td>
<td>10 +/- 1 pulses/sec, 67ms +/- 3%</td>
</tr>
<tr>
<td>TR_PULSE_OFF</td>
<td>33</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_PULSE_INTERDIGIT</td>
<td>600</td>
<td>msec</td>
<td>300 &lt; interdigit pause &lt; ?</td>
</tr>
<tr>
<td>TR_CLIPPING_LIMIT</td>
<td>-12.0</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING_DUR</td>
<td>1000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING_THRESH</td>
<td>-12.0</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_TRANSHYBRID_LOSS</td>
<td>25000</td>
<td>ohms</td>
<td>TN746B DEFINITY Circuit Pack</td>
</tr>
</tbody>
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1 of 5
### Table 63. DEFINITY Switch Package Parameters for Mexico

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_RECALL_TYPE</td>
<td>0</td>
<td></td>
<td>No earth recall</td>
</tr>
<tr>
<td>TR_ANSWER_DELAY</td>
<td>0</td>
<td>rings</td>
<td>Number of rings before answering</td>
</tr>
<tr>
<td>TR_MAX_RING_INTERVAL</td>
<td>6400</td>
<td>msec</td>
<td>Time between start of ring voltage signals</td>
</tr>
<tr>
<td>TR_MIN_RING_DUR</td>
<td>100</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_MAX_RING_DUR</td>
<td>5000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_EDETECT_MIN</td>
<td>-38</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_CPT_DETECT_MIN</td>
<td>-25</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_DETECT_MIN</td>
<td>-35</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_POST_OFFHK_DELAY</td>
<td>1500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_POSTONHK_DELAY</td>
<td>2000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_MUTE</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_CALLER_ID</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_POLARITY_SS_TMR</td>
<td>500</td>
<td>msec</td>
<td></td>
</tr>
</tbody>
</table>
### Table 63. DEFINITY Switch Package Parameters for Mexico

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_POLARITY_MIN_DUR</td>
<td>200</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_ONHOOK_SUP</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_COUNTRY_CODE</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_COMPANDING</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_MIN_RING_FREQ</td>
<td>20</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>TR_MAX_RING_FREQ</td>
<td>90</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>TR_V21_GAIN</td>
<td>-9</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V27_24GAIN</td>
<td>-4.7</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V27_48GAIN</td>
<td>-4.7</td>
<td>dBm</td>
<td></td>
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<tr>
<td>TR_V29_72GAIN</td>
<td>-7.1</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V29_96GAIN</td>
<td>-3.1</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_FAX_RECV_GAIN</td>
<td>0</td>
<td>dB</td>
<td></td>
</tr>
<tr>
<td>TR_D_RINGTONE_DISCONNECT</td>
<td>0</td>
<td></td>
<td>Do NOT disconnect on ring tone</td>
</tr>
</tbody>
</table>
### Table 63. DEFINITY Switch Package Parameters for Mexico

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_D_BUSYTONE_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on busy tone</td>
</tr>
<tr>
<td>TR_D_REORDERTONE_DISCONNECT</td>
<td>0</td>
<td></td>
<td>Do NOT disconnect on reorder tone</td>
</tr>
<tr>
<td>TR_D_DIALTONE_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on dial tone</td>
</tr>
<tr>
<td>TR_D_STUTTERDT_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on stutter dial tone</td>
</tr>
<tr>
<td>ANALOG_LOSS_COMP</td>
<td>default</td>
<td>dB</td>
<td></td>
</tr>
<tr>
<td>Switch Hook Flash Duration</td>
<td>500</td>
<td>msec</td>
<td>Register recall</td>
</tr>
<tr>
<td>Wink Disconnect Interval</td>
<td>300</td>
<td>msec</td>
<td>Minimum time to declare disconnect</td>
</tr>
<tr>
<td>Type of Signaling</td>
<td>TT</td>
<td></td>
<td>Network address signaling</td>
</tr>
<tr>
<td>Incoming Speech Volume</td>
<td>4000</td>
<td></td>
<td>+ 12 dB gain</td>
</tr>
<tr>
<td>Outgoing Speech Volume</td>
<td>1000</td>
<td>Unity gain</td>
<td></td>
</tr>
<tr>
<td>Outgoing Text Volume</td>
<td>4000</td>
<td>+ 12 dB gain (TTS)</td>
<td></td>
</tr>
<tr>
<td>Dial tone training enabled</td>
<td>Yes</td>
<td></td>
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### Country Switch Packages

#### Table 63. DEFINITY Switch Package Parameters for Mexico

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<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blind Transfer, Initiate</td>
<td>FW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blind Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Initiate</td>
<td>FW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (No Ans)</td>
<td>FPF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (Busy)</td>
<td>FPF</td>
<td></td>
<td></td>
</tr>
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</table>

### PSTN Switch Package Parameters for Mexico

#### Table 64. PSTN Switch Package Parameters for Mexico

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
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</thead>
<tbody>
<tr>
<td>TR_DTMF_ONTIME</td>
<td>80</td>
<td>msec</td>
<td>&gt; 40 ms duration of digit</td>
</tr>
<tr>
<td>TR_DTMF_OFFTIME</td>
<td>80</td>
<td>msec</td>
<td>&gt; 40 ms interdigit pause</td>
</tr>
<tr>
<td>TR_DTMF_H_LEVEL</td>
<td>-6</td>
<td>dBm</td>
<td>~ -6dbm, high band 2 +/− 1 above low band</td>
</tr>
</tbody>
</table>
### Table 64. PSTN Switch Package Parameters for Mexico

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
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</thead>
<tbody>
<tr>
<td>TR_DTMF_L_LEVEL</td>
<td>-8</td>
<td>dBm</td>
<td>~ -8dbm, high band 2 +/- 1 above low band</td>
</tr>
<tr>
<td>TR_PULSE_ON</td>
<td>66</td>
<td>msec</td>
<td>10 +/- 1 pulses/sec, 67ms +/- 3%</td>
</tr>
<tr>
<td>TR_PULSE_OFF</td>
<td>33</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_PULSE_INTERDIGIT</td>
<td>600</td>
<td>msec</td>
<td>300 &lt; interdigit pause &lt; ?</td>
</tr>
<tr>
<td>TR_CLIPPING_LIMIT</td>
<td>-12.0</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING_DUR</td>
<td>1000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING_THRESH</td>
<td>-12.0</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_TRANSHYBRID_LOSS</td>
<td>25000</td>
<td>ohms</td>
<td>TN746B DEFINITY Circuit Pack</td>
</tr>
<tr>
<td>TR_RECALL_TYPE</td>
<td>0</td>
<td></td>
<td>No earth recall</td>
</tr>
<tr>
<td>TR_ANSWER_DELAY</td>
<td>0</td>
<td>rings</td>
<td>Number of rings before answering</td>
</tr>
<tr>
<td>TR_MAX_RING_INTERVAL</td>
<td>6400</td>
<td>msec</td>
<td>Time between start of ring voltage signals</td>
</tr>
</tbody>
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### Table 64. PSTN Switch Package Parameters for Mexico

<table>
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<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
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<tbody>
<tr>
<td>TR_MIN_RING_DUR</td>
<td>100</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_MAX_RING_DUR</td>
<td>5000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_EDetect_MIN</td>
<td>-38</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_CPT_DETECT_MIN</td>
<td>-25</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_DETECT_MIN</td>
<td>-35</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_POST_OFFHK_DELAY</td>
<td>1500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_POSTONHK_DELAY</td>
<td>2000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_MUTE</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_CALLER_ID</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_POLARITY_SS_TMR</td>
<td>500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_POLARITY_MIN_DUR</td>
<td>200</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_ONHOOK_SUP</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_COUNTRY_CODE</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_COMPANDING</td>
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<td></td>
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### Table 64. PSTN Switch Package Parameters for Mexico

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_MIN_RING_FREQ</td>
<td>20</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>TR_MAX_RING_FREQ</td>
<td>90</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>TR_V21_GAIN</td>
<td>-9</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V27_24_GAIN</td>
<td>-4.7</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V27_48_GAIN</td>
<td>-4.7</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V29_72_GAIN</td>
<td>-7.1</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V29_96_GAIN</td>
<td>-3.1</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_FAX_RECV_GAIN</td>
<td>0</td>
<td>dB</td>
<td></td>
</tr>
<tr>
<td>TR_D_RINGTONE_DISCONNECT</td>
<td>0</td>
<td></td>
<td>Do NOT disconnect on ring tone</td>
</tr>
<tr>
<td>TR_D_BUSYTONE_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on busy tone</td>
</tr>
<tr>
<td>TR_D_REORDERTONE_DISCONNECT</td>
<td>0</td>
<td></td>
<td>Do NOT disconnect on reorder tone</td>
</tr>
<tr>
<td>TR_D_DIALTONE_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on dial tone</td>
</tr>
</tbody>
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### Table 64. PSTN Switch Package Parameters for Mexico

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_D_STUTTERDT_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on stutter dial tone</td>
</tr>
<tr>
<td>ANALOG_LOSS_COMP</td>
<td>default</td>
<td>dB</td>
<td></td>
</tr>
<tr>
<td>Switch Hook Flash Duration</td>
<td>100</td>
<td>msec</td>
<td>Register recall</td>
</tr>
<tr>
<td>Wink Disconnect Interval</td>
<td>300</td>
<td>msec</td>
<td>Minimum time to declare disconnect</td>
</tr>
<tr>
<td>Type of Signaling</td>
<td>TT</td>
<td></td>
<td>Network address signaling</td>
</tr>
<tr>
<td>Incoming Speech Volume</td>
<td>4000</td>
<td></td>
<td>+ 12 dB gain</td>
</tr>
<tr>
<td>Outgoing Speech Volume</td>
<td>1000</td>
<td></td>
<td>Unity gain</td>
</tr>
<tr>
<td>Outgoing Text Volume</td>
<td>4000</td>
<td></td>
<td>+ 12 dB gain (TTS)</td>
</tr>
<tr>
<td>Dial tone training enabled</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blind Transfer, Initiate</td>
<td>FW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blind Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Initiate</td>
<td>FW</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 64. PSTN Switch Package Parameters for Mexico

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intelligent Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (No Ans)</td>
<td>FPF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (Busy)</td>
<td>FPF</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 65. DEFINITY Switch Package Parameters for the Netherlands

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_DTMF_ONTIME</td>
<td>80</td>
<td>msec</td>
<td>CTR21 &gt; 65 msec</td>
</tr>
<tr>
<td>TR_DTMF_OFFTIME</td>
<td>80</td>
<td>msec</td>
<td>CTR21 &gt; 65 msec</td>
</tr>
<tr>
<td>TR_DTMF_H_LEVEL</td>
<td>-9</td>
<td>dBm</td>
<td>CTR21 -9.0dBm +2.0/-2.5 dB</td>
</tr>
<tr>
<td>TR_DTMF_L_LEVEL</td>
<td>-11</td>
<td>dBm</td>
<td>CTR21 -11.0dBm +2.0/-2.5 dB</td>
</tr>
<tr>
<td>TR_PULSE_ON</td>
<td>60</td>
<td>msec</td>
<td>61.5 +/- 10 msec</td>
</tr>
<tr>
<td>TR_PULSE_OFF</td>
<td>40</td>
<td>msec</td>
<td>38.5 +/- 7.5 msec</td>
</tr>
</tbody>
</table>
### Table 65. DEFINITY Switch Package Parameters for the Netherlands

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_PULSE_INTERDIGIT</td>
<td>750</td>
<td>msec</td>
<td>Interdigit pause &gt; 700 msec</td>
</tr>
<tr>
<td>TR_CLIPPING LIMIT</td>
<td>-12</td>
<td>dBm</td>
<td>Speech limit &lt; -10 dBm</td>
</tr>
<tr>
<td>TR_CLIPPING_DUR</td>
<td>1000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING_THRESH</td>
<td>-12</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_TRANSHYBRID_LOSS</td>
<td>27000</td>
<td>ohms</td>
<td>TN2144, TN2183 DEFINITY Circuit Packs</td>
</tr>
<tr>
<td>TR_RECALL_TYPE</td>
<td>0</td>
<td></td>
<td>No earth recall</td>
</tr>
<tr>
<td>TR_ANSWER_DELAY</td>
<td>0</td>
<td>rings</td>
<td>Number of rings before answering</td>
</tr>
<tr>
<td>TR_MAX_RING_INTERVAL</td>
<td>6400</td>
<td>msec</td>
<td>Time between start of ring voltage signals</td>
</tr>
<tr>
<td>TR_MIN_RING_DUR</td>
<td>600</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_MAX_RING_DUR</td>
<td>5000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_EDETECT_MIN</td>
<td>-38</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_CPT_DETECT_MIN</td>
<td>-25</td>
<td>dBm</td>
<td></td>
</tr>
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### Table 65. DEFINITY Switch Package Parameters for the Netherlands

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_DTMF_DETECT_MIN</td>
<td>-25</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_POST_OFFHK_DELAY</td>
<td>1500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_POSTONHK_DELAY</td>
<td>2000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_MUTE</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_CALLER_ID</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_POLARITY_SS_TMR</td>
<td>500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_POLARITY_MIN_DUR</td>
<td>200</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_ONHOOK_SUP</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_COUNTRY_CODE</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_COMPANDING</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_MIN_RING_FREQ</td>
<td>20</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>TR_MAX_RING_FREQ</td>
<td>90</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>TR_V21_GAIN</td>
<td>-9</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V27_24_GAIN</td>
<td>-4.7</td>
<td>dBm</td>
<td></td>
</tr>
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## Table 65. DEFINITY Switch Package Parameters for the Netherlands

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_V27_48GAIN</td>
<td>-4.7</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V29_72GAIN</td>
<td>-7.1</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V29_96GAIN</td>
<td>-3.1</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_FAX_RECV_GAIN</td>
<td>0</td>
<td>dB</td>
<td></td>
</tr>
<tr>
<td>TR_D_RINGTONE_DISCONNECT</td>
<td>0</td>
<td></td>
<td>Do NOT disconnect on ring tone</td>
</tr>
<tr>
<td>TR_D_BUSYTONE_DISCONNECT</td>
<td>0</td>
<td></td>
<td>Do NOT disconnect on busy tone</td>
</tr>
<tr>
<td>TR_D_REORDERTONE_DISCONNECT</td>
<td>0</td>
<td></td>
<td>Do NOT disconnect on reorder tone</td>
</tr>
<tr>
<td>TR_D_DIALTONE_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on dial tone</td>
</tr>
<tr>
<td>TR_D_STUTTERDT_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on stutter dial tone</td>
</tr>
<tr>
<td>ANALOG_LOSS_COMP</td>
<td>default</td>
<td>dB</td>
<td></td>
</tr>
<tr>
<td>Switch Hook Flash Duration</td>
<td>500</td>
<td>msec</td>
<td>Register recall</td>
</tr>
</tbody>
</table>
### B Country Switch Packages

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wink Disconnect Interval</td>
<td>300</td>
<td>msec</td>
<td>Minimum time to declare disconnect</td>
</tr>
<tr>
<td>Type of Signaling</td>
<td>TT</td>
<td></td>
<td>Network address signaling</td>
</tr>
<tr>
<td>Incoming Speech Volume</td>
<td>4000</td>
<td></td>
<td>+ 12 dB gain</td>
</tr>
<tr>
<td>Outgoing Speech Volume</td>
<td>1000</td>
<td></td>
<td>Unity gain</td>
</tr>
<tr>
<td>Outgoing Text Volume</td>
<td>4000</td>
<td></td>
<td>+ 12 dB gain (TTS)</td>
</tr>
<tr>
<td>Dial tone training enabled</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blind Transfer, Initiate</td>
<td>FW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blind Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Initiate</td>
<td>FW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (No Ans)</td>
<td>FPF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (Busy)</td>
<td>FPF</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 65. DEFINITY Switch Package Parameters for the Netherlands
### Table 66. DEFINITY Switch Package Parameters for New Zealand

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_DTMF_ONTIME</td>
<td>100</td>
<td>msec</td>
<td>50 &lt; digit duration</td>
</tr>
<tr>
<td>TR_DTMF_OFFTIME</td>
<td>60</td>
<td>msec</td>
<td>70 &lt; interdigit pause &lt; 3000</td>
</tr>
<tr>
<td>TR_DTMF_H_LEVEL</td>
<td>-8</td>
<td>dBm</td>
<td>-22dbm &lt; hlevel &lt; -5</td>
</tr>
<tr>
<td>TR_DTMF_L_LEVEL</td>
<td>-10</td>
<td>dBm</td>
<td>-22dbm &lt; hlevel &lt; -5</td>
</tr>
<tr>
<td>TR_PULSE_ON</td>
<td>60</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_PULSE_OFF</td>
<td>40</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_PULSE_INTERDIGIT</td>
<td>800</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING_LIMIT</td>
<td>-12.0</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING_DUR</td>
<td>500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING_THRESH</td>
<td>-12.0</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_TRANSHYBRID_LOSS</td>
<td>25000</td>
<td>ohms</td>
<td>TN468B, TN2183 DEFINTY Circuit Packs</td>
</tr>
<tr>
<td>TR_RECALL_TYPE</td>
<td>0</td>
<td></td>
<td>No earth recall</td>
</tr>
</tbody>
</table>

**Notes:**
- **TR_DTMF_ONTIME**: 100 msec
- **TR_DTMF_OFFTIME**: 60 msec, 70 < interdigit pause < 3000
- **TR_DTMF_H_LEVEL**: -8 dBm, -22dbm < hlevel < -5
- **TR_DTMF_L_LEVEL**: -10 dBm, -22dbm < hlevel < -5
- **TR_PULSE_ON**: 60 msec
- **TR_PULSE_OFF**: 40 msec
- **TR_PULSE_INTERDIGIT**: 800 msec
- **TR_CLIPPING_LIMIT**: -12.0 dBm
- **TR_CLIPPING_DUR**: 500 msec
- **TR_CLIPPING_THRESH**: -12.0 dBm
- **TR_TRANSHYBRID_LOSS**: 25000 ohms
- **TR_RECALL_TYPE**: 0, No earth recall

*INTUITY™ CONVERSANT® System Version 7.0 Administration 585-313-501*
### Country Switch Packages

#### Country-Specific Switch Packages

Table 66. DEFINITY Switch Package Parameters for New Zealand

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_ANSWER_DELAY</td>
<td>1</td>
<td>rings</td>
<td>Number of rings before answering</td>
</tr>
<tr>
<td>TR_MAX_RING_INTERVAL</td>
<td>6200</td>
<td>msec</td>
<td>Time between start of ring voltage signals</td>
</tr>
<tr>
<td>TR_MIN_RING_DUR</td>
<td>100</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_MAX_RING_DUR</td>
<td>5000</td>
<td>msec</td>
<td>Ignore constant ring</td>
</tr>
<tr>
<td>TR_EDETECT_MIN</td>
<td>-38</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_CPT_DETECT_MIN</td>
<td>-30</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_DETECT_MIN</td>
<td>-25</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_POST_OFFHK_DELAY</td>
<td>1500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_POSTONHK_DELAY</td>
<td>2000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_MUTE</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_CALLER_ID</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_POLARITY_SS_TMR</td>
<td>500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_POLARITY_MIN_DUR</td>
<td>200</td>
<td>msec</td>
<td></td>
</tr>
</tbody>
</table>

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*Intuity™ CONVERSANT® System Version 7.0 Administration 585-313-501 Issue 3 January 2000 990*
### Country Switch Packages

**B**

#### Table 66. DEFINITY Switch Package Parameters for New Zealand

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_ONHOOK_SUP</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_COUNTRY_CODE</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_COMPANDING</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_MIN_RING_FREQ</td>
<td>20 Hz</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_MAX_RING_FREQ</td>
<td>90 Hz</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_V21_GAIN</td>
<td>-9 dBm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_V27_24_GAIN</td>
<td>-4.7 dBm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_V27_48_GAIN</td>
<td>-4.7 dBm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_V29_72_GAIN</td>
<td>-7.1 dBm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_V29_96_GAIN</td>
<td>-3.1 dBm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_FAX_RECV_GAIN</td>
<td>0 dB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_D_RINGTONE_DISCONNECT</td>
<td>0</td>
<td></td>
<td>Do NOT disconnect on ring tone</td>
</tr>
<tr>
<td>TR_D_BUSYTONE_DISCONNECT</td>
<td>0</td>
<td></td>
<td>Do NOT disconnect on busy tone</td>
</tr>
</tbody>
</table>
### Table 66. DEFINITY Switch Package Parameters for New Zealand

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_D_REORDERTONE_DISCONNECT</td>
<td>0</td>
<td></td>
<td>Do NOT disconnect on reorder tone</td>
</tr>
<tr>
<td>TR_D_DIALTONE_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on dial tone</td>
</tr>
<tr>
<td>TR_D_STUTTERDT_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on stutter dial tone</td>
</tr>
<tr>
<td>ANALOG_LOSS_COMP</td>
<td>-9</td>
<td>dB</td>
<td></td>
</tr>
<tr>
<td>Switch Hook Flash Duration</td>
<td>500</td>
<td>msec</td>
<td>Register recall</td>
</tr>
<tr>
<td>Wink Disconnect Interval</td>
<td>350</td>
<td>msec</td>
<td>Minimum time to declare disconnect</td>
</tr>
<tr>
<td>Type of Signaling</td>
<td>TT</td>
<td></td>
<td>Network address signaling</td>
</tr>
<tr>
<td>Incoming Speech Volume</td>
<td>4000</td>
<td></td>
<td>+ 12 dB gain</td>
</tr>
<tr>
<td>Outgoing Speech Volume</td>
<td>1000</td>
<td>Unity gain</td>
<td></td>
</tr>
<tr>
<td>Outgoing Text Volume</td>
<td>4000</td>
<td></td>
<td>+ 12 dB gain (TTS)</td>
</tr>
<tr>
<td>Dial tone training enabled</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blind Transfer, Initiate</td>
<td>FW</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 66. DEFINITY Switch Package Parameters for New Zealand

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blind Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Initiate</td>
<td>FW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (No Ans)</td>
<td>FPF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (Busy)</td>
<td>FPF</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 67. DEFINITY Switch Package Parameters for Spain

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_DTMF_ONTIME</td>
<td>80</td>
<td>msec</td>
<td>CTR21 &gt; 65 msec</td>
</tr>
<tr>
<td>TR_DTMF_OFFTIME</td>
<td>80</td>
<td>msec</td>
<td>CTR21 &gt; 65 msec</td>
</tr>
<tr>
<td>TR_DTMF_H_LEVEL</td>
<td>-9</td>
<td>dBm</td>
<td>CTR21 -9.0dBm +2.0/-2.5 dB</td>
</tr>
<tr>
<td>TR_DTMF_L_LEVEL</td>
<td>-11</td>
<td>dBm</td>
<td>CTR21 -11.0dBm +2.0/-2.5 dB</td>
</tr>
</tbody>
</table>
## Country Switch Packages

### Country-Specific Switch Packages

### Table 67. DEFINITY Switch Package Parameters for Spain

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_PULSE_ON</td>
<td>66</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_PULSE_OFF</td>
<td>33</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_PULSE_INTERDIGIT</td>
<td>750</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING_LIMIT</td>
<td>-12.0</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING_DUR</td>
<td>1000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING_THRESH</td>
<td>-12</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_TRANSHYBRID_LOSS</td>
<td>35000</td>
<td>ohms</td>
<td>TN2180, TN2183 DEFINITY Circuit Packs</td>
</tr>
<tr>
<td>TR_RECALL_TYPE</td>
<td>0</td>
<td></td>
<td>No earth recall</td>
</tr>
<tr>
<td>TR_ANSWER_DELAY</td>
<td>0</td>
<td>rings</td>
<td>Number of rings before answering</td>
</tr>
<tr>
<td>TR_MAX_RING_INTERVAL</td>
<td>6400</td>
<td>msec</td>
<td>Time between start of ring voltage signals</td>
</tr>
<tr>
<td>TR_MIN_RING_DUR</td>
<td>140</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_MAX_RING_DUR</td>
<td>5000</td>
<td>msec</td>
<td></td>
</tr>
</tbody>
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### Table 67. DEFINITY Switch Package Parameters for Spain

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_EDETECT_MIN</td>
<td>-38</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_CPT_DETECT_MIN</td>
<td>-25</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_DETECT_MIN</td>
<td>-25</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_POST_OFFHK_DELAY</td>
<td>1500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_POSTONHK_DELAY</td>
<td>2000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_MUTE</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_CALLER_ID</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_POLARITY_SS_TMR</td>
<td>500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_POLARITY_MIN_DUR</td>
<td>200</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_ONHOOK_SUP</td>
<td>0</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_COUNTRY_CODE</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_COMPANDING</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_MIN_RING_FREQ</td>
<td>20</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>TR_MAX_RING_FREQ</td>
<td>90</td>
<td>Hz</td>
<td></td>
</tr>
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### Table 67. DEFINITY Switch Package Parameters for Spain

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_V21_GAIN</td>
<td>-9</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V27_24GAIN</td>
<td>-4.7</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V27_48GAIN</td>
<td>-4.7</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V29_72GAIN</td>
<td>-7.1</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V29_96GAIN</td>
<td>-3.1</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_FAX_RECV_GAIN</td>
<td>0</td>
<td>dB</td>
<td></td>
</tr>
<tr>
<td>TR_D_RINGTONE_DISCONNECT</td>
<td>0</td>
<td>dB</td>
<td>Do NOT disconnect on ring tone</td>
</tr>
<tr>
<td>TR_D_BUSYTONE_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on busy tone</td>
</tr>
<tr>
<td>TR_D_REORDERTONE_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on reorder tone</td>
</tr>
<tr>
<td>TR_D_DIALTONE_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on dial tone</td>
</tr>
<tr>
<td>TR_D_STUTTERDT_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on stutter dial tone</td>
</tr>
<tr>
<td>ANALOG_LOSS_COMP</td>
<td>-3</td>
<td>dB</td>
<td></td>
</tr>
<tr>
<td>Switch Hook Flash Duration</td>
<td>500</td>
<td>msec</td>
<td>Register recall</td>
</tr>
</tbody>
</table>
### Table 67. DEFINITY Switch Package Parameters for Spain

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wink Disconnect Interval</td>
<td>300</td>
<td>msec</td>
<td>Minimum time to declare disconnect</td>
</tr>
<tr>
<td>Type of Signaling</td>
<td>TT</td>
<td></td>
<td>Network address signaling</td>
</tr>
<tr>
<td>Incoming Speech Volume</td>
<td>4000</td>
<td></td>
<td>+ 12 dB gain</td>
</tr>
<tr>
<td>Outgoing Speech Volume</td>
<td>1000</td>
<td></td>
<td>Unity gain</td>
</tr>
<tr>
<td>Outgoing Text Volume</td>
<td>4000</td>
<td></td>
<td>+ 12 dB gain (TTS)</td>
</tr>
<tr>
<td>Dial tone training enabled</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blind Transfer, Initiate</td>
<td>FW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blind Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Initate</td>
<td>FW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (No Ans)</td>
<td>FPF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (Busy)</td>
<td>FPF</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 68. PSTN Switch Package Parameters for Spain

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_DTMF_ONTIME</td>
<td>160</td>
<td>msec</td>
<td>CTR21 &gt; 65 msec</td>
</tr>
<tr>
<td>TR_DTMF_OFFTIME</td>
<td>80</td>
<td>msec</td>
<td>CTR21 &gt; 65 msec</td>
</tr>
<tr>
<td>TR_DTMF_H_LEVEL</td>
<td>-5</td>
<td>dBm</td>
<td>CTR21 -9.0dBm ±2.0/-2.5 dB</td>
</tr>
<tr>
<td>TR_DTMF_L_LEVEL</td>
<td>-7</td>
<td>dBm</td>
<td>CTR21 -11.0dBm ±2.0/-2.5 dB</td>
</tr>
<tr>
<td>TR_PULSE_ON</td>
<td>66</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_PULSE_OFF</td>
<td>33</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_PULSE_INTERDIGIT</td>
<td>750</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING_LIMIT</td>
<td>-12.0</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING_DUR</td>
<td>1000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING_THRESH</td>
<td>-12</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_TRANSHYBRID LOSS</td>
<td>45000</td>
<td>ohms</td>
<td>TN2180, TN2183 DEFINITY</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Circuit Packs</td>
</tr>
<tr>
<td>TR_RECALL_TYPE</td>
<td>0</td>
<td></td>
<td>No earth recall</td>
</tr>
</tbody>
</table>
## B  Country Switch Packages

### Table 68. PSTN Switch Package Parameters for Spain

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_ANSWER_DELAY</td>
<td>0</td>
<td>rings</td>
<td>Number of rings before answering</td>
</tr>
<tr>
<td>TR_MAX_RING_INTERVAL</td>
<td>6400</td>
<td>msec</td>
<td>Time between start of ring voltage signals</td>
</tr>
<tr>
<td>TR_MIN_RING_DUR</td>
<td>740</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_MAX_RING_DUR</td>
<td>5000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_EDETECT_MIN</td>
<td>-38</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_CPT_DETECT_MIN</td>
<td>-35</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_DETECT_MIN</td>
<td>-30</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_POST_OFFHK_DELAY</td>
<td>1500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_POSTONHK_DELAY</td>
<td>2000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_MUTE</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_CALLER_ID</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_POLARITY_SS_TMR</td>
<td>500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_POLARITY_MIN_DUR</td>
<td>200</td>
<td>msec</td>
<td></td>
</tr>
</tbody>
</table>
### Table 68. PSTN Switch Package Parameters for Spain

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_ONHOOK_SUP</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_COUNTRY_CODE</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_COMPANDING</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_MIN_RING_FREQ</td>
<td>20</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>TR_MAX_RING_FREQ</td>
<td>90</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>TR_V21_GAIN</td>
<td>-9</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V27_24GAIN</td>
<td>-4.7</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V27_48GAIN</td>
<td>-4.7</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V29_72GAIN</td>
<td>-7.1</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V29_96GAIN</td>
<td>-3.1</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_FAX_RECV_GAIN</td>
<td>0</td>
<td>dB</td>
<td></td>
</tr>
<tr>
<td>TR_D_RINGTONE_DISCONNECT</td>
<td>0</td>
<td></td>
<td>Do NOT disconnect on ring tone</td>
</tr>
<tr>
<td>TR_D_BUSYTONE_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on busy tone</td>
</tr>
</tbody>
</table>
### Table 68. PSTN Switch Package Parameters for Spain

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_D_REORDERTONE_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on reorder tone</td>
</tr>
<tr>
<td>TR_D_DIALTONE_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on dial tone</td>
</tr>
<tr>
<td>TR_D_STUTTERDT_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on stutter dial tone</td>
</tr>
<tr>
<td>ANALOG_LOSS_COMP</td>
<td>default</td>
<td>dB</td>
<td></td>
</tr>
<tr>
<td>Switch Hook Flash Duration</td>
<td>100</td>
<td>msec</td>
<td>Register recall</td>
</tr>
<tr>
<td>Wink Disconnect Interval</td>
<td>100</td>
<td>msec</td>
<td>Minimum time to declare disconnect</td>
</tr>
<tr>
<td>Type of Signaling</td>
<td>TT</td>
<td></td>
<td>Network address signaling</td>
</tr>
<tr>
<td>Incoming Speech Volume</td>
<td>4000</td>
<td></td>
<td>+ 12 dB gain</td>
</tr>
<tr>
<td>Outgoing Speech Volume</td>
<td>1000</td>
<td></td>
<td>Unity gain</td>
</tr>
<tr>
<td>Outgoing Text Volume</td>
<td>4000</td>
<td></td>
<td>+ 12 dB gain (TTS)</td>
</tr>
<tr>
<td>Dial tone training enabled</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blind Transfer, Initiate</td>
<td>FW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blind Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 68. PSTN Switch Package Parameters for Spain

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intelligent Transfer, Initiate</td>
<td>FW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (No Ans)</td>
<td>FPF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (Busy)</td>
<td>FPF</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 69. Switch Pkg. Parameters (Thailand)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Same as US built-in defaults</td>
<td></td>
<td></td>
</tr>
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### Table 70. DEFINITY Switch Package Parameters for the United Kingdom

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_DTMF_ONTIME</td>
<td>80</td>
<td>msec</td>
<td>Not less than 68ms, duty cycle &lt; 52%</td>
</tr>
<tr>
<td>TR_DTMF_OFFTIME</td>
<td>80</td>
<td>msec</td>
<td>Not less than 68ms, duty cycle &lt; 52%</td>
</tr>
<tr>
<td>TR_DTMF_H_LEVEL</td>
<td>-9</td>
<td>dBm</td>
<td>CTR21 -9.0dBm +2.0/-2.5 dB</td>
</tr>
<tr>
<td>TR_DTMF_L_LEVEL</td>
<td>-11</td>
<td>dBm</td>
<td>CTR21 -11.0dBm +2.0/-2.5 dB</td>
</tr>
<tr>
<td>TR_PULSE_ON</td>
<td>66</td>
<td>msec</td>
<td>10 +/- 1 pulses/sec, 67 +5,-4% break ratio</td>
</tr>
<tr>
<td>TR_PULSE_OFF</td>
<td>33</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_PULSE_INTERDIGIT</td>
<td>750</td>
<td>msec</td>
<td>720 &lt; interdigit pause &lt; 920</td>
</tr>
<tr>
<td>TR_CLIPPING_LIMIT</td>
<td>-12.0</td>
<td>dBm</td>
<td>CTR21 &lt;-9.7dBm over 1 minute</td>
</tr>
<tr>
<td>TR_CLIPPING_DUR</td>
<td>500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING_THRESH</td>
<td>-12.0</td>
<td>dBm</td>
<td>CTR21 &lt;-9.7dBm over 1 minute</td>
</tr>
</tbody>
</table>
### Country Switch Packages

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_TRANSHYBRID LOSS</td>
<td>18000</td>
<td>ohms</td>
<td>TN468B, TN2183 DEFINITY Circuit Packs</td>
</tr>
<tr>
<td>TR_RECALL_TYPE</td>
<td>0</td>
<td></td>
<td>No earth recall</td>
</tr>
<tr>
<td>TR_ANSWER_DELAY</td>
<td>0</td>
<td>rings</td>
<td>Number of rings before answering</td>
</tr>
<tr>
<td>TR_MAX_RING_INTERVAL</td>
<td>6400</td>
<td>msec</td>
<td>Time between start of ring voltage signals</td>
</tr>
<tr>
<td>TR_MIN_RING_DUR</td>
<td>100</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_MAX_RING_DUR</td>
<td>5000</td>
<td>msec</td>
<td>Ignore constant ring</td>
</tr>
<tr>
<td>TR_EDetect_MIN</td>
<td>-38</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_CPT_DETECT_MIN</td>
<td>-30</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_DETECT_MIN</td>
<td>-25</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_POST_OFFHK_DELAY</td>
<td>1500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_POSTONHK_DELAY</td>
<td>2000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_MUTE</td>
<td>1</td>
<td></td>
<td></td>
</tr>
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### Table 70. DEFINITY Switch Package Parameters for the United Kingdom

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_CALLER_ID</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_POLARITY_SS_TMR</td>
<td>500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_POLARITY_MIN_DUR</td>
<td>200</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_ONHOOK_SUP</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_COUNTRY_CODE</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_COMPANDING</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_MIN_RING_FREQ</td>
<td>20</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>TR_MAX_RING_FREQ</td>
<td>90</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>TR_V21_GAIN</td>
<td>-9</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V27_24GAIN</td>
<td>-4.7</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V27_48GAIN</td>
<td>-4.7</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V29_72GAIN</td>
<td>-7.1</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V29_96GAIN</td>
<td>-3.1</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_FAX_RECV_GAIN</td>
<td>0</td>
<td>dB</td>
<td></td>
</tr>
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## Table 70. DEFINITY Switch Package Parameters for the United Kingdom

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_D_RINGTONE_DISCONNECT</td>
<td>0</td>
<td></td>
<td>Do NOT disconnect on ring tone</td>
</tr>
<tr>
<td>TR_D_BUSYTONE_DISCONNECT</td>
<td>0</td>
<td></td>
<td>Do NOT disconnect on busy tone</td>
</tr>
<tr>
<td>TR_D_REORDERTONE_DISCONNECT</td>
<td>0</td>
<td></td>
<td>Do NOT disconnect on reorder tone</td>
</tr>
<tr>
<td>TR_D_DIALTONE_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on dial tone</td>
</tr>
<tr>
<td>TR_D_STUTTERDT_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on stutter dial tone</td>
</tr>
<tr>
<td>ANALOG_LOSS_COMP</td>
<td>-12</td>
<td>dB</td>
<td></td>
</tr>
<tr>
<td>Switch Hook Flash Duration</td>
<td>500</td>
<td>msec</td>
<td>Register recall</td>
</tr>
<tr>
<td>Wink Disconnect Interval</td>
<td>80</td>
<td>msec</td>
<td>Minimum time to declare disconnect</td>
</tr>
<tr>
<td>Type of Signaling</td>
<td>TT</td>
<td></td>
<td>Network address signaling</td>
</tr>
<tr>
<td>Incoming Speech Volume</td>
<td>4000</td>
<td></td>
<td>+12 dB gain</td>
</tr>
<tr>
<td>Outgoing Speech Volume</td>
<td>1000</td>
<td>Unity gain</td>
<td></td>
</tr>
</tbody>
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### Country Switch Packages

#### Country-Specific Switch Packages

Table 70. **DEFINITY Switch Package Parameters for the United Kingdom**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outgoing Text Volume</td>
<td>4000</td>
<td></td>
<td>+ 12 dB gain (TTS)</td>
</tr>
<tr>
<td>Dial tone training enabled</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blind Transfer, Initiate</td>
<td>FW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blind Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Initiate</td>
<td>FW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (No Ans)</td>
<td>FPF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (Busy)</td>
<td>FPF</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 71. PSTN Switch Package Parameters for the United Kingdom

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_DTMF_ONTIME</td>
<td>80</td>
<td>msec</td>
<td>Not less than 68 ms, duty cycle &lt; 52%</td>
</tr>
<tr>
<td>TR_DTMF_OFFTIME</td>
<td>80</td>
<td>msec</td>
<td>Not less than 68 ms, duty cycle &lt; 52%</td>
</tr>
<tr>
<td>TR_DTMF_H_LEVEL</td>
<td>-9</td>
<td>dBm</td>
<td>CTR21 -9.0dBm +2.0/-2.5 dB</td>
</tr>
<tr>
<td>TR_DTMF_L_LEVEL</td>
<td>-11</td>
<td>dBm</td>
<td>CTR21 -11.0dBm +2.0/-2.5 dB</td>
</tr>
<tr>
<td>TR_PULSE_ON</td>
<td>66</td>
<td>msec</td>
<td>10 +/− 1 pulses/sec, 67 +5, -4% break ratio</td>
</tr>
<tr>
<td>TR_PULSE_OFF</td>
<td>33</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_PULSE_INTERDIGIT</td>
<td>750</td>
<td>msec</td>
<td>720 &lt; interdigit pause &lt; 920</td>
</tr>
<tr>
<td>TR_CLIPPING LIMIT</td>
<td>-12.0</td>
<td>dBm</td>
<td>CTR21 &lt;-9.7dBm over 1 minute</td>
</tr>
<tr>
<td>TR_CLIPPING DUR</td>
<td>500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING_THRESH</td>
<td>-12.0</td>
<td>dBm</td>
<td>CTR21 &lt;-9.7dBm over 1 minute</td>
</tr>
</tbody>
</table>
### Table 71. PSTN Switch Package Parameters for the United Kingdom

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_TRANSHYBRID_LOSS</td>
<td>18000</td>
<td>ohms</td>
<td>TN468B, TN2183 DEFINITY Circuit Packs</td>
</tr>
<tr>
<td>TR_RECALL_TYPE</td>
<td>0</td>
<td></td>
<td>No earth recall</td>
</tr>
<tr>
<td>TR_ANSWER_DELAY</td>
<td>0</td>
<td>rings</td>
<td>Number of rings before answering</td>
</tr>
<tr>
<td>TR_MAX_RING_INTERVAL</td>
<td>6400</td>
<td>msec</td>
<td>Time between start of ring voltage signals</td>
</tr>
<tr>
<td>TR_MIN_RING_DUR</td>
<td>100</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_MAX_RING_DUR</td>
<td>5000</td>
<td>msec</td>
<td>Ignore constant ring</td>
</tr>
<tr>
<td>TR_EDETECT_MIN</td>
<td>-38</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_CPT_DETECT_MIN</td>
<td>-30</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_DETECT_MIN</td>
<td>-25</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_POST_OFFHK_DELAY</td>
<td>1500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_POSTONHK_DELAY</td>
<td>2000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_MUTE</td>
<td>1</td>
<td></td>
<td></td>
</tr>
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</table>
### Table 71. PSTN Switch Package Parameters for the United Kingdom

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_CALLER_ID</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_POLARITY_SS_TMR</td>
<td>500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_POLARITY_MIN_DUR</td>
<td>200</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_ONHOOK_SUP</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_COUNTRY_CODE</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_COMPANDING</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_MIN_RING_FREQ</td>
<td>20</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>TR_MAX_RING_FREQ</td>
<td>90</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>TR_V21_GAIN</td>
<td>-9</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V27_24_GAIN</td>
<td>-4.7</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V27_48_GAIN</td>
<td>-4.7</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V29_72_GAIN</td>
<td>-7.1</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V29_96_GAIN</td>
<td>-3.1</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_FAX_RECV_GAIN</td>
<td>0</td>
<td>dB</td>
<td></td>
</tr>
</tbody>
</table>
## B Country Switch Packages

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_D_RINGTONE_DISCONNECT</td>
<td>0</td>
<td></td>
<td>Do NOT disconnect on ring tone</td>
</tr>
<tr>
<td>TR_D_BUSYTONE_DISCONNECT</td>
<td>0</td>
<td></td>
<td>Do NOT disconnect on busy tone</td>
</tr>
<tr>
<td>TR_D_REORDERTONE_DISCONNECT</td>
<td>0</td>
<td></td>
<td>Do NOT disconnect on reorder tone</td>
</tr>
<tr>
<td>TR_D_DIALTONE_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on dial tone</td>
</tr>
<tr>
<td>TR_D_STUTTERDT_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on stutter dial tone</td>
</tr>
<tr>
<td>ANALOG_LOSS_COMP</td>
<td>-12</td>
<td>dB</td>
<td></td>
</tr>
<tr>
<td>Switch Hook Flash Duration</td>
<td>80</td>
<td>msec</td>
<td>Register recall</td>
</tr>
<tr>
<td>Wink Disconnect Interval</td>
<td>80</td>
<td>msec</td>
<td>Minimum time to declare disconnect</td>
</tr>
<tr>
<td>Type of Signaling</td>
<td>TT</td>
<td></td>
<td>Network address signaling</td>
</tr>
<tr>
<td>Incoming Speech Volume</td>
<td>4000</td>
<td></td>
<td>+ 12 dB gain</td>
</tr>
<tr>
<td>Outgoing Speech Volume</td>
<td>1000</td>
<td>Unity gain</td>
<td></td>
</tr>
<tr>
<td>Parameter</td>
<td>Value</td>
<td>Units</td>
<td>Specification, Notes</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>-------</td>
<td>-------</td>
<td>----------------------</td>
</tr>
<tr>
<td>Outgoing Text Volume</td>
<td>4000</td>
<td></td>
<td>+ 12 dB gain (TTS)</td>
</tr>
<tr>
<td>Dial tone training enabled</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blind Transfer, Initiate</td>
<td>FW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blind Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Initiate</td>
<td>FW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (No Ans)</td>
<td>FPF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (Busy)</td>
<td>FPF</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 72. DEFINITY Switch Package Parameters for the United States

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_DTMF_ONTIME</td>
<td>100</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_OFFTIME</td>
<td>60</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_H_LEVEL</td>
<td>-7</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_L_LEVEL</td>
<td>-7</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_PULSE_ON</td>
<td>60</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_PULSE_OFF</td>
<td>40</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_PULSE_INTERDIGIT</td>
<td>600</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING_LIMIT</td>
<td>-11.0</td>
<td>dBm</td>
<td>Speech limit &lt; -10 dBm</td>
</tr>
<tr>
<td>TR_CLIPPING_DUR</td>
<td>500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_CLIPPING_THRESH</td>
<td>-8.8</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_TRANSHYBRID_LOSS</td>
<td>25000</td>
<td>ohms</td>
<td>TN746B DEFINITY Circuit Pack</td>
</tr>
<tr>
<td>TR_RECALL_TYPE</td>
<td>0</td>
<td></td>
<td>No earth recall</td>
</tr>
</tbody>
</table>
### Table 72. DEFINITY Switch Package Parameters for the United States

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_ANSWER_DELAY</td>
<td>0</td>
<td>rings</td>
<td>Number of rings before answering</td>
</tr>
<tr>
<td>TR_MAX_RING_INTERVAL</td>
<td>6400</td>
<td>msec</td>
<td>Time between start of ring voltage signals</td>
</tr>
<tr>
<td>TR_MIN_RING_DUR</td>
<td>80</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_MAX_RING_DUR</td>
<td>5000</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_EDetect_MIN</td>
<td>-38</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_CPT_DETECT_MIN</td>
<td>-28</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_DETECT_MIN</td>
<td>-35</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_POST_OFFHK_DELAY</td>
<td>1500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_POSTONHK_DELAY</td>
<td>2000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_DTMF_MUTE</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_CALLER_ID</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_POLARITY_SS_TMR</td>
<td>500</td>
<td>msec</td>
<td></td>
</tr>
<tr>
<td>TR_POLARITY_MIN_DUR</td>
<td>200</td>
<td>msec</td>
<td></td>
</tr>
</tbody>
</table>
### Table 72. DEFINITY Switch Package Parameters for the United States

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_ONHOOK_SUP</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_COUNTRY_CODE</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_COMPANDING</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR_MIN_RING_FREQ</td>
<td>20</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>TR_MAX_RING_FREQ</td>
<td>90</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>TR_V21_GAIN</td>
<td>-9</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V27_24_GAIN</td>
<td>-4.7</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V27_48_GAIN</td>
<td>-4.7</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V29_72_GAIN</td>
<td>-7.1</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_V29_96_GAIN</td>
<td>-3.1</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>TR_FAX_RECV_GAIN</td>
<td>0</td>
<td>dB</td>
<td></td>
</tr>
<tr>
<td>TR_D_RINGTONE_DISCONNECT</td>
<td>0</td>
<td></td>
<td>Do NOT disconnect on ring tone</td>
</tr>
<tr>
<td>TR_D_BUSYTONE_DISCONNECT</td>
<td>0</td>
<td></td>
<td>Do NOT disconnect on busy tone</td>
</tr>
</tbody>
</table>
### Table 72. DEFINITY Switch Package Parameters for the United States

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR_D_REORDERTONE_DISCONNECT</td>
<td>0</td>
<td></td>
<td>Do NOT disconnect on reorder tone</td>
</tr>
<tr>
<td>TR_D_DIALTONE_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on dial tone</td>
</tr>
<tr>
<td>TR_D_STUTTERDT_DISCONNECT</td>
<td>2</td>
<td></td>
<td>Disconnect on stutter dial tone</td>
</tr>
<tr>
<td>ANALOG_LOSS_COMP</td>
<td>default (0)</td>
<td>dB</td>
<td></td>
</tr>
<tr>
<td>Switch Hook Flash Duration</td>
<td>500</td>
<td>msec</td>
<td>Register recall</td>
</tr>
<tr>
<td>Wink Disconnect Interval</td>
<td>300</td>
<td>msec</td>
<td>Minimum time to declare disconnect</td>
</tr>
<tr>
<td>Type of Signaling</td>
<td>TT</td>
<td></td>
<td>Network address signaling</td>
</tr>
<tr>
<td>Incoming Speech Volume</td>
<td>4000</td>
<td></td>
<td>+ 12 dB gain</td>
</tr>
<tr>
<td>Outgoing Speech Volume</td>
<td>1000</td>
<td></td>
<td>Unity gain</td>
</tr>
<tr>
<td>Outgoing Text Volume</td>
<td>4000</td>
<td></td>
<td>+ 12 dB gain (TTS)</td>
</tr>
<tr>
<td>Dial tone training enabled</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Country Switch Package Supported Call Progress Tones

Table 72. **DEFINITY Switch Package Parameters for the United States**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
<th>Specification, Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blind Transfer, Initiate</td>
<td>FW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blind Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Initiate</td>
<td>FW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Complete</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (No Ans)</td>
<td>FPF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Transfer, Reconnect (Busy)</td>
<td>FPF</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 96 on page 1066 lists the supported call progress tone parameters for every country where the Intuity CONVERSANT system is currently being sold for both the DEFINTY PBX and, where applicable, for public switched telephone networks (PSTNs) in alphabetic order by country name.
<table>
<thead>
<tr>
<th>Country</th>
<th>Switch</th>
<th>Tone</th>
<th>Frequency (Hz)</th>
<th>Deviation (Hz)</th>
<th>Level (dBm)</th>
<th>Cadence on/off (msec)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>PSTN</td>
<td>Dial Tone</td>
<td>425 or 400</td>
<td>+/- 3</td>
<td>-30 - +1</td>
<td>Steady (2.3 sec min)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ring Back</td>
<td>400 or 400+450</td>
<td></td>
<td></td>
<td>400/200/400/2000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Busy</td>
<td>425 400</td>
<td></td>
<td></td>
<td>375/375</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reorder/# Unobtainable</td>
<td>425 or 400</td>
<td></td>
<td></td>
<td>2500/500</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FAX cng</td>
<td>1100 425 400</td>
<td>+/-12</td>
<td>-25 - +1</td>
<td>500/3000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Stutter Dial Tone</td>
<td>404 + 450</td>
<td>+/- 3</td>
<td>-20 - +1</td>
<td>150/150/150/150 steady</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ring Back</td>
<td>425</td>
<td></td>
<td></td>
<td>400/200/400/2000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Busy/Reorder Intercept</td>
<td>400/400</td>
<td></td>
<td></td>
<td>2500/500</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FAX cng</td>
<td>1100</td>
<td>+/-12</td>
<td>-25 - +1</td>
<td>500/3000</td>
</tr>
</tbody>
</table>
## Country Switch Packages

### Country Switch Package Supported Call Progress Tones

**Table 73. Switch Package Supported Call Progress Tones**

<table>
<thead>
<tr>
<th>Country</th>
<th>Switch</th>
<th>Tone</th>
<th>Frequency (Hz)</th>
<th>Deviation (Hz)</th>
<th>Level (dBm)</th>
<th>Cadence on/off (msec)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>DEFINITY</td>
<td>Dial Tone</td>
<td>425</td>
<td>+/- 3</td>
<td>-20 - +1</td>
<td>Steady (1.0 sec min)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Stutter</td>
<td></td>
<td></td>
<td></td>
<td>150/150</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dial Tone</td>
<td>440 + 480</td>
<td></td>
<td></td>
<td>150/150</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ring Back</td>
<td>480 + 620 or</td>
<td></td>
<td></td>
<td>150/steady</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Busy</td>
<td>425</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reorder</td>
<td>425 or</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>480 + 620</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>FAX cng</td>
<td>1100</td>
<td>+/- 12</td>
<td>-25 - +1</td>
<td></td>
</tr>
<tr>
<td>Belgium</td>
<td>DEFINITY</td>
<td>Dial Tone</td>
<td>425</td>
<td>+/- 3</td>
<td>-20 - +1</td>
<td>Steady (1.2 Sec min)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Stutter</td>
<td>NA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dial Tone</td>
<td></td>
<td></td>
<td></td>
<td>Not used in default configuration</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ring Back</td>
<td>425</td>
<td>+/- 3</td>
<td>-20 - +1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Busy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reorder</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>FAX cng</td>
<td>1100</td>
<td>+/- 12</td>
<td>-25 - +1</td>
<td></td>
</tr>
</tbody>
</table>
## B Country Switch Packages

### Country Switch Package Supported Call Progress Tones

Table 73. Switch Package Supported Call Progress Tones

<table>
<thead>
<tr>
<th>Country</th>
<th>Switch</th>
<th>Tone</th>
<th>Frequency (Hz)</th>
<th>Deviation (Hz)</th>
<th>Level (dBm)</th>
<th>Cadence on/off (msec)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brasil</td>
<td>DEFINITY</td>
<td>Dial Tone</td>
<td>425 or 425</td>
<td>+/- 3</td>
<td>-20 - +1</td>
<td>Steady (1.2 Sec min)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Stutter Dial Tone</td>
<td>425</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ring Back Busy/Reorder</td>
<td>425</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canada</td>
<td>PSTN</td>
<td>FAX cng</td>
<td>1100 + 300</td>
<td>+/- 12</td>
<td>-25 - +1</td>
<td>500/3000 Steady (1.2 sec min)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dial Tone</td>
<td>350 + 440</td>
<td>+/- 3</td>
<td>-25 - +1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ring Back Busy</td>
<td>440 + 480</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reorder</td>
<td>480 + 620</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>FAX cng</td>
<td>1100</td>
<td>+/- 12</td>
<td>-25 - +1</td>
<td>500/3000</td>
</tr>
</tbody>
</table>

### Table 73. Switch Package Supported Call Progress Tones

<table>
<thead>
<tr>
<th>Country</th>
<th>Switch</th>
<th>Tone</th>
<th>Frequency (Hz)</th>
<th>Deviation (Hz)</th>
<th>Level (dBm)</th>
<th>Cadence on/off (msec)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brasil</td>
<td>DEFINITY</td>
<td>Dial Tone</td>
<td>425 or 425</td>
<td>+/- 3</td>
<td>-20 - +1</td>
<td>Steady (1.2 Sec min)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Stutter Dial Tone</td>
<td>425</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ring Back Busy/Reorder</td>
<td>425</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canada</td>
<td>PSTN</td>
<td>FAX cng</td>
<td>1100 + 300</td>
<td>+/- 12</td>
<td>-25 - +1</td>
<td>500/3000 Steady (1.2 sec min)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dial Tone</td>
<td>350 + 440</td>
<td>+/- 3</td>
<td>-25 - +1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ring Back Busy</td>
<td>440 + 480</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Reorder</td>
<td>480 + 620</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>FAX cng</td>
<td>1100</td>
<td>+/- 12</td>
<td>-25 - +1</td>
<td>500/3000</td>
</tr>
</tbody>
</table>
### B Country Switch Packages

#### Country Switch Package Supported Call Progress Tones

<table>
<thead>
<tr>
<th>Country</th>
<th>Switch</th>
<th>Tone</th>
<th>Frequency (Hz)</th>
<th>Deviation (Hz)</th>
<th>Level (dBm)</th>
<th>Cadence on/off (msec)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>DEFINITY</td>
<td>Dial Tone</td>
<td>350+440</td>
<td>+/- 3</td>
<td>-20 - +1</td>
<td>Steady (1.2 sec min)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Stutter Dial Tone</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ring Back</td>
<td>440 + 480</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Busy</td>
<td>480+620</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reorder</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>FAX cng</td>
<td>1100</td>
<td>+/- 12</td>
<td>-25 - +1</td>
<td></td>
</tr>
<tr>
<td>Columbia</td>
<td>DEFINITY</td>
<td>Dial Tone</td>
<td>425</td>
<td>+/- 3</td>
<td>-20 - +1</td>
<td>Steady (1.3 sec min)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Stutter Dial Tone</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Ring Back</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Busy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reorder</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<td></td>
<td></td>
<td>FAX cng</td>
<td>1100</td>
<td>+/- 12</td>
<td>-25 - +1</td>
<td></td>
</tr>
</tbody>
</table>
## Country Switch Packages

### Country Switch Package Supported Call Progress Tones

<table>
<thead>
<tr>
<th>Country</th>
<th>Switch</th>
<th>Tone</th>
<th>Frequency (Hz)</th>
<th>Deviation (Hz)</th>
<th>Level (dBm)</th>
<th>Cadence on/off (msec)</th>
</tr>
</thead>
<tbody>
<tr>
<td>France</td>
<td>PSTN</td>
<td>Dial Tone</td>
<td>425 or 450</td>
<td>+/- 3</td>
<td>-30 - +1</td>
<td>Steady (2 sec min)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ring Back</td>
<td>425 or 450</td>
<td></td>
<td></td>
<td>1000/4000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>425 or 450</td>
<td></td>
<td></td>
<td>1000/5000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>425 or 450</td>
<td></td>
<td></td>
<td>1000/9000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>425 or 450</td>
<td></td>
<td></td>
<td>960/3840</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Busy</td>
<td>425 or 425</td>
<td></td>
<td></td>
<td>500/500</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>425 or 425</td>
<td></td>
<td></td>
<td>310/310</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>425 or 425</td>
<td></td>
<td></td>
<td>250/250</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>425 or 425</td>
<td></td>
<td></td>
<td>150/475</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>425 or 425</td>
<td></td>
<td></td>
<td>150/475</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reorder</td>
<td>425 or 425</td>
<td></td>
<td></td>
<td>310/310</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>425 or 425</td>
<td></td>
<td></td>
<td>250/250</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>425 or 425</td>
<td></td>
<td></td>
<td>150/475</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reorder</td>
<td>425 or 425</td>
<td>+/- 12</td>
<td>-25 - +1</td>
<td>500/3000</td>
</tr>
</tbody>
</table>
# B Country Switch Packages

<table>
<thead>
<tr>
<th>Country</th>
<th>Switch</th>
<th>Tone</th>
<th>Frequency (Hz)</th>
<th>Deviation (Hz)</th>
<th>Level (dBm)</th>
<th>Cadence on/off (msec)</th>
</tr>
</thead>
<tbody>
<tr>
<td>France</td>
<td>DEFINITY</td>
<td>Dial Tone</td>
<td>330</td>
<td>+/- 5</td>
<td>-30 - +1</td>
<td>Steady (2 sec min)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Stutter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dial Tone</td>
<td>440</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ring Back</td>
<td>440</td>
<td></td>
<td>1500/3500</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Busy</td>
<td></td>
<td></td>
<td>500/500</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reorder</td>
<td></td>
<td></td>
<td>200/200</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>FAX cng</td>
<td>1100</td>
<td>+/- 12</td>
<td>-25 - +1</td>
<td>500/3000</td>
</tr>
</tbody>
</table>
## Country Switch Packages

### Country Switch Package Supported Call Progress Tones

<table>
<thead>
<tr>
<th>Country</th>
<th>Switch</th>
<th>Tone</th>
<th>Frequency (Hz)</th>
<th>Deviation (Hz)</th>
<th>Level (dBm)</th>
<th>Cadence on/off (msec)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Germany</strong></td>
<td><strong>PSTN</strong></td>
<td><strong>Dial Tone</strong></td>
<td>425 or 450 or 400+425</td>
<td>+/- 3</td>
<td>-30 - +1</td>
<td>Steady (1.3 sec min)</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Ring Back</strong></td>
<td>425 or 450 or 425</td>
<td></td>
<td>750/750/250/250</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>450</td>
<td></td>
<td>700/800/200/300</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Busy</strong></td>
<td>425 or 425 or 450 or 425</td>
<td></td>
<td>1000/4000</td>
<td>1000/5000/1000/9000/960/3840</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Reorder</strong></td>
<td>425 or 425 or 425 or 450</td>
<td></td>
<td>150/475</td>
<td>150/475/250/250/150/475</td>
</tr>
<tr>
<td></td>
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Table 73. Switch Package Supported Call Progress Tones
### Country Switch Package Supported Call Progress Tones

#### Table 73.

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<th>Frequency (Hz)</th>
<th>Deviation (Hz)</th>
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## Country Switch Packages

### Country Switch Package Supported Call Progress Tones

Table 73. Switch Package Supported Call Progress Tones

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### Switch Package Supported Call Progress Tones

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### Table 73. Switch Package Supported Call Progress Tones

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11 of 19
### Table 73. Switch Package Supported Call Progress Tones

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### Table 73. Switch Package Supported Call Progress Tones

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### Country Switch Packages

#### Country Switch Package Supported Call Progress Tones

Table 73. Switch Package Supported Call Progress Tones

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<th>Tone</th>
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### Table 73. Switch Package Supported Call Progress Tones

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<td>Dial Tone</td>
<td></td>
<td></td>
<td></td>
<td>150/150</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ring Back</td>
<td>440 + 480</td>
<td></td>
<td></td>
<td>150/steady 1000/4000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Busy</td>
<td>480 + 620</td>
<td></td>
<td></td>
<td>500/500</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reorder</td>
<td></td>
<td></td>
<td></td>
<td>250/250</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FAX cng</td>
<td>1100</td>
<td>+/- 12</td>
<td>-25 - +1</td>
<td>500/3000</td>
</tr>
<tr>
<td>Country</td>
<td>Switch</td>
<td>Tone</td>
<td>Frequency (Hz)</td>
<td>Deviation (Hz)</td>
<td>Level (dBm)</td>
<td>Cadence on/off (msec)</td>
</tr>
<tr>
<td>--------------</td>
<td>--------</td>
<td>------------</td>
<td>----------------</td>
<td>----------------</td>
<td>-------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>PSTN</td>
<td>Dial Tone</td>
<td>350 + 440</td>
<td>+/- 3</td>
<td>-30 - +1</td>
<td>Steady (1.2 sec min)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ring Back</td>
<td>400 + 450</td>
<td></td>
<td></td>
<td>400/200/400/2000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Busy</td>
<td>400</td>
<td></td>
<td></td>
<td>375/375</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reorder</td>
<td></td>
<td></td>
<td></td>
<td>400/350/225/525</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FAX cng</td>
<td>1100</td>
<td>+/- 12</td>
<td>-25 - +1</td>
<td>500/3000</td>
</tr>
<tr>
<td>DEFINITY</td>
<td></td>
<td>Dial Tone</td>
<td>350 + 440</td>
<td>+/- 3</td>
<td>-20 - +1</td>
<td>Steady (1.2 sec min)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Stutter</td>
<td></td>
<td></td>
<td></td>
<td>100/100</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dial Tone</td>
<td></td>
<td></td>
<td></td>
<td>100/100</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dial Tone</td>
<td></td>
<td></td>
<td></td>
<td>100/steady</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ring Back</td>
<td>404 + 450</td>
<td></td>
<td>-30 - +1</td>
<td>400/200/400/2000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Busy</td>
<td>404</td>
<td></td>
<td></td>
<td>375/375</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reorder</td>
<td></td>
<td></td>
<td></td>
<td>400/350/225/525</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FAX cng</td>
<td>1100</td>
<td>+/- 12</td>
<td>-25 - +1</td>
<td>500/3000</td>
</tr>
</tbody>
</table>
### Country Switch Packages

<table>
<thead>
<tr>
<th>Country</th>
<th>Switch</th>
<th>Tone</th>
<th>Frequency (Hz)</th>
<th>Deviation (Hz)</th>
<th>Level (dBm)</th>
<th>Cadence on/off (msec)</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>DEFINITY</td>
<td>Dial Tone</td>
<td>350 + 440</td>
<td>+/- 3</td>
<td>-20 - +1</td>
<td>Steady (1.0 sec min)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Stutter Dial Tone</td>
<td></td>
<td></td>
<td></td>
<td>150/150</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ring Back</td>
<td>440 + 480</td>
<td></td>
<td></td>
<td>1000/4000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Busy</td>
<td>480 + 620</td>
<td></td>
<td></td>
<td>500/500</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reorder</td>
<td></td>
<td></td>
<td></td>
<td>250/250</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FAX cng</td>
<td>1100</td>
<td>+/- 12</td>
<td>-25 - +1</td>
<td>500/3000</td>
</tr>
</tbody>
</table>
Overview

The Intuity CONVERSANT system provides a tool to convert files in tag image file format (TIFF) or FTF format to the TIFF Class F format compatible with the Intuity CONVERSANT V7 FAX Actions feature.

**Note:** Files in the format suitable for faxing on the Intuity CONVERSANT system are referred to as fax files to distinguish them from files in ASCII text format that can also be faxed on the system.

The fax files resulting from the conversion can be used with:

- The faxit command
  See Appendix A, Summary of Commands for information on faxit.
- The Fax_Queue or Fax_Send actions
  For Script Builder applications, see "Fax_Queue" and "Fax_Send" in Chapter 8 "Using Optional Features," in Intuity CONVERSANT System Version 7.0 Application Development with Script Builder, 585-313-206; for Voice@Work applications, see the chapter on external functions in Voice@Work, 585-313-206.
- The irFAXPrint or irFAXEnd irAPI functions
The tool can crop TIFF files to remove fax banners (headers) that appear at the top of faxes recorded by the Intuity CONVERSANT system. It can also change the horizontal offset and the resolution of the file.

Two versions of the tool are available, one for use on the Intuity CONVERSANT system and one for use on a personal computer (PC).

- The tif2itif tool runs on the UnixWare operating system on the Intuity CONVERSANT system.
- The tif2itf.exe tool runs on personal computers running the Microsoft Windows 95, Windows 98, or Windows NT operating system. Fax files created on a PC can be copied to the Intuity CONVERSANT system for faxing.

File Inputs

Both tools can convert the following types of files:

- Graphics interface format (GIF) image files converted to FTF format with the IMSI Hijaak Pro 4.01 software
- Files produced by scanning documents with the Hewlett-Packard Deskscan II, Version 2.3.1a software

For these conversions, you must manually run the tif2itif or tif2itf.exe tool on the appropriate computer.

Note: Other files may be successfully converted by these two tools, but the tools are not certified to convert all TIFF formats. Lucent Technologies welcomes reports of incompatibilities with specific...
TIFF formats, but cannot guarantee that the problem can always be corrected. You may be advised to choose another source for TIFF files for your image and document needs.

tif2itf.exe as a Post-Processor for the TiffWorks Driver

Besides being able to convert the file types listed in File Inputs on page 1038, the tif2itf.exe tool for Windows systems is also designed to work as a post-processor for documents converted to TIFF format with the Informatik, Inc.TiffWorks driver. This driver is compatible with virtually any Microsoft Windows application that has a print option. When the tif2itf.exe tool and the TiffWorks driver are both installed on a Windows PC, you can save a file to Intuity CONVERSANT fax file format without the need to manually run the tif2itf.exe tool.
Table 74 on page 1040 lists the tasks necessary to use the tif2itif and tif2itf.exe tools.

Table 74. Task Overview for Fax File Conversion Tools

<table>
<thead>
<tr>
<th>Tool</th>
<th>Runs On</th>
<th>Tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>tif2itif</td>
<td>Intuity CONVERSANT system</td>
<td>1 Ensure that the tif2itif tool is installed on the Intuity CONVERSANT system. See Requirements on page 1042.</td>
</tr>
<tr>
<td></td>
<td>(UnixWare operating system)</td>
<td>2 Create a file with either of the following procedures:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>~ Converting a Hijaak Pro 4.01 Image File on page 1050</td>
</tr>
<tr>
<td></td>
<td></td>
<td>~ Converting an HP Deskscan II Image File on page 1052</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 Perform the procedure in Converting TIFF and FTF Files to Intuity CONVERSANT Fax Files on page 1053.</td>
</tr>
<tr>
<td>Tool</td>
<td>Runs On</td>
<td>Tasks</td>
</tr>
<tr>
<td>------------------</td>
<td>--------------------------</td>
<td>-------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| tif2itf.exe      | Windows 95, 98, or NT PCs| 1 Install the tif2itf.exe tool on the PC. See Installing the tif2itf.exe Tool for Windows Systems on page 1042.  
|                  |                          | 2 Create a file with either of the following procedures:  
|                  |                          | ~ Converting a Hijaak Pro 4.01 Image File on page 1050  
|                  |                          | ~ Converting an HP Deskscan II Image File on page 1052  
|                  |                          | 3 Perform the procedure in Converting TIFF and FTF Files to Intuity CONVERSANT Fax Files on page 1053.  
| tif2itf.exe as    |                          | 1 Install the tif2itf.exe tool on the PC. See Installing the tif2itf.exe Tool for Windows Systems on page 1042.  
| a post-processor |                          | 2 Install the TiffWorks driver on the PC. See Installing the TiffWorks Driver for the tif2itf.exe Post-Processor on page 1047.  
| for the TiffWorks|                          | 3 Perform the procedure in Converting TIFF and FTF Files to Intuity CONVERSANT Fax Files on page 1053.  
| driver           |                          |                                                                                           |
Requirements

The **tif2itf** tool for UnixWare and the **tif2itf.exe** tool for Windows are both part of the "INTUITY Fax Package - Update B (fax+b)" for the Intuity CONVERSANT System Version 7.0. This package must be installed on your system to use these tools.

- To use the **tif2itf.exe** PC version of the conversion tool, you must also perform the procedure in [Installing the tif2itf.exe Tool for Windows Systems](#).
- To use the **tif2itf.exe** tool on a PC as a post-processor for the TiffWorks driver, you must install the driver. See [Installing the TiffWorks Driver for the tif2itf.exe Post-Processor](#). For Windows NT systems, you must have NT4SETUP to install the driver.

Installing the tif2itf.exe Tool for Windows Systems

Installing the **tif2itf.exe** tool on a Windows PC includes the following procedures:

- [Creating an Installation Diskette](#)
- [Installing the Software](#)

**Note:** Once the **tif2itf.exe** tool is installed, you can uninstall it with the following procedure:

- [Uninstalling the Software](#)
Creating an Installation Diskette

The installation diskette for tif2itf.exe is created on the Intuity CONVERSANT system. To complete this procedure, you must have one of the following:

- A diskette formatted for the Windows operating system that has at least 220 kB of free space
- An unformatted diskette
- A diskette formatted for any operating system that you can reformat

⚠️ CAUTION:
Reformatting a diskette destroys any data stored on it.

On the Intuity CONVERSANT system, use the following procedure to create a tif2itf.exe installation diskette:

1. At the console prompt, enter mktifdisk
   
   The system displays the following prompt:
   
   Insert Diskette into Floppy Drive and press ENTER.

2. Insert a diskette into the diskette drive on the Intuity CONVERSANT system and press Enter.
Note: If the diskette is not formatted for the Windows operating system, the system displays the following message:

Diskette is not formatted for DOS/Windows. OK to reformat? (n)

Enter y

The system displays the following message:

Insert new diskette for /dev/rdsk/f03ht and press <RETURN> when ready.

Press Enter.

The system displays the following message followed by a listing of the byte count on the diskette:

Formatting... Format complete.
## Installing the tif2itf.exe Tool for Windows

The system displays the following message:

```
Copy tif2itf files to Diskette...Done.
Files successfully copied. Insert diskette in Windows PC and using Notepad read instructions in *.readme.txt.
```

3 Remove the diskette from the diskette drive, label it "tif2itf Installation Diskette," and store it according to local practice.

Use the following procedure to install the tif2itf.exe tool on a PC:

1 Insert the tif2itf installation diskette you made in the procedure Creating an Installation Diskette on page 1043 in the diskette drive on the PC.
2 Click the Start button on the Windows task bar.
3 Click Run
4 In the Open: field on the Run window, enter a:setup
5 Click OK

The PC displays the following messages:

```
A:\> rem Install Script for tif2itf
A:\> rem Installing tif2itf
A:\> mkdir c:\tif2itf
A:\> copy a:tif2itf.* ca:\tif2itf
1 file(s) copied.
```
A:\> notepad a:readme.txt
A:\> rem Installation Completed
A:\> Press any key to continue.

6 Press any key.

7 Remove the **tif2itf** installation diskette from the diskette drive and store it according to local practice.

**Uninstalling the Software**

The **tif2itf** executable, **tif2itf.exe**, is installed on the PC in the directory **C:\tif2itf**. To uninstall the software, remove the **C:\tif2itf** directory. See the Windows documentation for your PC for the procedure to remove a directory.
Installing the **TiffWorks Driver for the tif2itf.exe** Post-Processor

To use the **tif2itf.exe** tool on a PC as a post-processor for the TiffWorks driver, you must first install the driver on the PC.

Use the following procedure to procure the TiffWorks driver and install it on a Windows PC.

**Note:** For Windows NT systems, you also need NT4SETUP.

1. Use a web browser to access the Informatik, Inc. web site at [http://www.informatik.com/](http://www.informatik.com/)
2. Either download an evaluation copy of the TiffWorks driver or purchase a copy by following the instructions on the website.
3. Use the vendor procedures to install the TiffWorks driver on the PC.

**Note:** The recommended setting for the resolution option is 200x192.
C Format Conversion Tools for Fax Files  Installing the TiffWorks Driver for the tif2itf.exe

4 Customize the configuration file as follows.

**Note:** You must already have installed the **tif2itf.exe** tool on the PC to complete this step. See **Installing the tif2itf.exe Tool for Windows Systems on page 1042.**

- If you are using an evaluation copy of TiffWorks V5.81, (or equivalent), you can use the configuration file installed from the tif2itf installation diskette. To do so, enter the following command:

  ```
  copy c:\tif2itf\tif2itf.ini c:\tiffwk32\Tiffwk32.ini
  ```

- If you are using a registered copy of the TiffWorks driver, edit the **Settings** parameters in the file **C:\tiffwk32\Tiffwk32.ini** by using the following information as a guide:

  ```ini
  [Settings]
  Compression =14
  Singlestrip=1
  Fillorder=
  Defaultdir=c:\n
  FileName=c:\tif2itf\temp\tif
  Serialization=0
  PoseEXE=c:\tif2itf\tif2itf.exe
  C:\L\tif2itf\temp.tif
  Status=
  Save=
  Resolution=
  Pages=1
  ```

  **Note:** This configuration supports only one file conversion at a time.
Converting Documents With the TiffWorks Driver and tif2itf.exe Tool

Use the following procedure on a PC to convert a document to an Intuity CONVERSANT fax file by using the TiffWorks driver with the tif2itf.exe tool as a post-processor. The tif2itf.exe tool and the TiffWorks driver must both be installed on the PC (see Installing the tif2itf.exe Tool for Windows Systems on page 1042 and Installing the TiffWorks Driver for the tif2itf.exe Post-Processor on page 1047).

The tif2itf.exe tool is automatically invoked as a post-processor when you print a document and select the TiffWorks driver. Only one document can be converted at a time. The converted file can be used directly with the Intuity FAX Actions feature.

1 On the PC, open a document in any Windows application with a print capability.
2 On the File menu, click Print to access the Print window.
3 In the printer Name: box, select TIFFWORKS32
4 Click OK
   The system displays a window titled Save Document in Intuity TIF Format?. This is the window for the tif2itf.exe post-processor.
5 Enter a filename for the Intuity CONVERSANT fax file.
6 Click Save.
7 Copy the converted file to an Intuity CONVERSANT V7 system for use with the Intuity FAX Actions feature.

Converting a Hijaaq Pro 4.01 Image File

Use the following procedure to convert a Hijaaq Pro 4.01 image file to an Intuity CONVERSANT fax file. This procedure has two stages.

• On a PC, the image file is first saved in FTE format with the Hijaaq Pro 4.01 software.
• Once the file is in FTE format, you can use either the tif2itf.exe or tif2itf tool to convert it to an Intuity CONVERSANT fax file.

Note: To complete the conversion on the PC, the tif2itf.exe tool must be installed on the PC (see Installing the tif2itf.exe Tool for Windows Systems on page 1042). To complete the conversion on the Intuity CONVERSANT system, the tif2itf tool must be installed on the system (see Requirements on page 1042).

1 On the PC, open the image file with Hijaaq Pro 4.01 software.
2 On the File menu, click Save As
3 Enter a filename for the FTE-converted file.
**Format Conversion Tools for Fax Files**  
**Converting a Hijaaq Pro 4.01 Image File**

4 In the **Save as type:** box, select **FTF - Faxable TIF**

5 Click **Options** and select the following FTF options:
   - **Scaling:** Fit in Width
   - **Units:** Inches
   - **Maximum Width:** (your choice in inches)
   - **Distort aspect:** 12
   - **Horizontal offset:** (leave blank)
   - **Vertical offset:** (leave blank)

6 Click **OK**

7 Click **Save**

8 Do one of the following:
   - On the PC, use the **tif2itf.exe** tool to convert the FTF file to an Intuity CONVERSANT fax file. Then copy the file to the Intuity CONVERSANT system.
   - Copy the file to the Intuity CONVERSANT system, and use **tif2itf** tool to convert the FTF file to an Intuity CONVERSANT fax file.

The file can now be used with the Intuity FAX Actions feature.
Converting an HP Deskscan II Image File

Use the following procedure on a PC to convert an HP Deskscan II, Version 2.3.1a image file to an Intuity CONVERSANT fax file. This procedure has two stages.

- The image file is first converted to TIFF5 format with the Deskscan software.
- Once the file is in TIFF5 format, you can use either the tif2itf.exe tool or tif2itif tool to convert it to an Intuity CONVERSANT fax file.

Note: To complete the conversion on the PC, the tif2itf.exe tool must be installed on the PC (see Installing the tif2itf.exe Tool for Windows Systems on page 1042). To complete the conversion on the Intuity CONVERSANT system, the tif2itif tool must be installed on the system (see Requirements on page 1042).

1. Scan the image using the procedures provided by the vendor.
   - Select the high resolution black and white option.
   - Save the file in TIFF5 format.

2. Do one of the following:
   - On the PC, use the tif2itf.exe tool to convert the TIFF5 file to an intuity CONVERSANT fax file. Then copy the file to the Intuity CONVERSANT system.
Copy the file to the Intuity CONVERSANT system, and use \texttt{tif2itif} tool to convert the TIFF5 file to an Intuity CONVERSANT fax file. The file can now be used with the Intuity FAX Actions feature.

Converting TIFF and FTF Files to Intuity CONVERSANT Fax Files

Use this procedure to convert TIFF and FTF files to Intuity CONVERSANT fax files with the \texttt{tif2itif} tool on the Intuity CONVERSANT system or the \texttt{tif2itf.exe} tool on a PC. Both tools use the same arguments and options.

\textbf{Note}: To perform the conversion on the PC, the \texttt{tif2itf.exe} tool must be installed on the PC (see Installing the \texttt{tif2itf.exe} Tool for Windows Systems on page 1042). To perform the conversion on the Intuity CONVERSANT system, the \texttt{tif2itif} tool must be installed on the system (see Requirements on page 1042).

1. If you are using the UnixWare version of the tool (\texttt{tif2itif}), copy the file to be converted to the Intuity CONVERSANT system.
Enter:

~ (on a PC)
  tif2itf.exe [options] infile outfile
~ (on the Intuity CONVERSANT system)
  tif2itf [options] infile outfile

where

~ infile is the name of the file to be converted.
~ outfile is a name you select for the converted file.

Note: You may want to assign a .tif suffix to the infile and a .itf suffix to the outfile to distinguish them. No particular suffix is required, however.

~ [options] indicates the optional parameters (see Optional Parameters on page 1055).

3 If you created the fax file on a PC, copy the file to the Intuity CONVERSANT system.
Optional Parameters

You can adjust the position of the image and the resolution in the converted file by using the following parameters:

- `-f` or `-n` — Forces the output to fine (`-f`) or normal (`-n`) resolution

   The converted file by default maintains the same resolution as the input file. Converting a normal resolution file to fine resolution creates a file with twice as many horizontal data lines. The resulting image looks identical to the original. Converting a fine resolution file to normal resolution removes every other horizontal data line. The resulting image does not look as sharp as the original.

- `-h +num` or `-h -num` — Horizontal offset in inches (+ for left, - for right)

- `-v +num` or `-v -num` — Vertical offset in inches (+ for down, - up)

   The vertical offset is commonly used to crop the top of a file to remove a fax banner.

**Note:** The default unit (blank) for offsets is inches. Use `i` to specify inches. Use `c` to specify centimeters.

**Examples**

The following examples create a fax file in normal resolution with the image moved to the right 5 centimeters and the top 0.25 inches cropped:

(on a PC)

```
 tif2itf.exe -n -h 5c -v -.25 infile.tif outfile.itf
```

(on the Intuity CONVERSANT system)

```
tif2itf -n -h 5c -v -.25 infile.tif outfile.itf
```
Cautions

- Neither the `tif2itif` nor the `tif2itf.exe` tool can convert TIFF files that contain color information.
- The `tif2itf.exe` configuration with the TiffWorks driver described in this appendix supports only one file conversion at a time. This type of restriction normally does not apply on a Windows platform.
- Customers are responsible for evaluating the performance impact of using the `tif2itif` tool on a production Intuity CONVERSANT system. For this reason, it is strongly recommended that for Intuity CONVERSANT systems with medium to large capacity, TIFF conversions be performed on another system, either a UnixWare system such as another Intuity CONVERSANT system or a Windows system.
- The input TIFF file must have the BitsPerSample and SamplesPerPixel fields set to 1 in the directory header. These fields are set correctly in the conversion types described in this appendix. If conversions of other file types are attempted, these fields may need to be reset.
Numerics

**23B+D**
23 bearer (communication) and 1 data (signaling) channel on a T1 PRI circuit card.

**30B+D**
30 bearer (communication) and 1 data (signaling) channel (plus framing channel 0) on an E1 PRI circuit card.

**3270 interface**
A link between one or more Intuity CONVERSANT machines and a host mainframe. In Intuity CONVERSANT system documentation, the 3270 interface specifically means the link between one or more system machines and an IBM host mainframe.

**47B+D**
47 bearer (communication) and 1 data (signaling) channel on two T1 PRI circuit cards.
4ESS®
A large Lucent central office switch used to route calls through the telephone network.

AC
alternating current

ACD
automatic call distributor

AD
application dispatch

AD-API
application dispatch application programming interface

adaptive differential pulse code modulation
A means of encoding analog voice signals into digital signals by adaptively predicting future encoded voice signals. This adaptive modulation method reduces the number of bits required to encode voice. See also "pulse code modulation."
adjunct products

Products (for example, the Adjunct/Switch Application Interface) that the Intuity system administers via cut-through access to the inherent management capabilities of the product itself; this is in opposition to the ability of the Intuity CONVERSANT system to administer the switch directly.

Adjunct/Switch Application Interface

An optional feature package that provides an Integrated Services Digital Network-based interface between Lucent Technologies PBXs and adjunct processors.

ADPCM

adaptive differential pulse code modulation

ADU

asynchronous data unit

advanced speech recognition

A speech recognition ability that allows the system to understand WholeWord and FlexWord™ inputs from callers.

affiliate

A business organization that Lucent controls or with which Lucent is in partnership.
**AGL**

application generation language

**alarm relay unit**

A unit used in central office telecommunication arrangements that transmits warning indicators from telephone communications equipment (such as an Intuity CONVERSANT system) to audio.

**ALERT**

System alert process

**alerter**

A system process that responds to patterns of events logged by the “logdaemon” process.

**American Standard Code for Information Interchange**

A standard code for data representation that represents alphanumeric characters as binary numbers. The code includes 128 upper- and lowercase letters, numerals, and special characters. Each alphanumeric and special character has an ASCII code (binary) equivalent that is 1 byte long.
analog
An analog signal, such as voice or music, that varies in a continuous manner. An analog signal may be contrasted with a digital signal, which represents only discrete states.

ANI
automatic number identification

announcement
A message the system plays to the caller to provide information. The caller is not asked to give a response. Compare to “prompt.”

API
Application programming interface

application
The automated transaction (interactions) among the caller, the voice response system, and any databases or host computers required for your business. See also “application script.”
**application administration**

The component of the Intuity CONVERSANT system that provides access to the applications currently available on your system and helps you to manage and administer them.

**application installation**

A two-step process in which the Intuity CONVERSANT system invokes the TSM script assembler for the specific application name and moves files to the appropriate directories.

**application script**

The computer program that controls the application (the transaction between the caller and the system). The Intuity CONVERSANT system provides several methods for creating application scripts, including Voice@Work, Script Builder, Transaction Assembler Script (TAS) language, and the Intuity Response Application Programming Interface (IRAPI).

**application verification**

A process in which the Intuity CONVERSANT system verifies that all the components needed by an application are complete.

**ASCII**

American Standard Code for Information Interchange
**ASI**

analog switch integration

**ASR**

advanced speech recognition

**asynchronous communication**

A method of data transmission in which bits or characters are sent at irregular intervals and spaced by start and stop bits rather than by time. Compare to “synchronous communication.”

**asynchronous data unit**

An electronic communications device that allows computer systems to communicate over asynchronous lines more than 50 feet (15 m) in length.

**automatic call distributor**

That part of a telephone system that recognizes and answers incoming calls and completes these calls based on a set of instructions contained in a database. The ACD can send the call to an operator or group of operators as soon as the operator has completed a previous call or after the system has played a message to the caller.
automatic number identification

A method of identifying the calling party by automatically receiving a string of digits that identifies the calling station of a particular customer.

AYC5B
The IVP6 Tip/Ring (analog) circuit card.

AYC10
The IVC6 Tip/Ring (analog) circuit card.

AYC21
The E1/T1 (digital) circuit card.

AYC30
The NGTR (analog) circuit card.

AYC43
The speech and signal processor (SSP) circuit card.
back up

The preservation of the information in a file in a different location, so that the data is not lost in the event of hardware or system failure.

backing up an application

Using a utility that makes an archive copy of a completed application or an interim copy of an application in progress. The back-up copy can be restored to the system if the on-line version is damaged, or if you make revisions and want to go back to the previous version.

barge-in

A capability provided by WholeWord speech recognition and Dial Pulse Recognition (DPR) that allows callers to speak or enter their responses during the prompt and have those responses recognized (similar to the Speak with Interrupt capability). See also "echo cancellation."

batch file

A file containing one or more lines, each of which is a command executable by the UNIX shell.

BB

bulletin board
**binary synchronous communications**
A character-oriented synchronous link protocol.

**blind transfer protocol**
A protocol in which a call is completed as soon as the extension is dialed, without having to wait to see if the telephone is busy or if the caller answered.

**bps**
bits per second

**BRDG**
call bridging process

**bridging**
The process of connecting one telephone network connection to another over the Intuity CONVERSANT system TDM bus. Bridging decreases the processing load on the system since an active bridge does not require speech processing, database access, host activity, etc., for the transaction.

**BSC**
binary synchronous communications
bundle
In the context of the Enhanced File Transfer package, this term is used to denote a single file, a group of files (package), or a combination of both.

byte
A unit of storage in the computer. On many systems, a byte is 8 bits (binary digits), which is the equivalent of one character of text.

call classification analysis
A process that enables application designers to use information available within the system to classify the disposition of originated and transferred calls. Intelligent CCA is provided with the system. Full CCA is an optional feature package.

call data event
A parameter that specifies a list of variables that are appended to a call data record at the end of each call.

call data handler process
A software process that accumulates generic call statistics and application events.
called party number

The number dialed by the person making a telephone call. Telephone switching equipment can use this number to selectively route an incoming call to a particular department or agent.

caller

The party who calls for a service, gets connected to the Intuity CONVERSANT system, and interacts with it. As the Intuity CONVERSANT system can also make outbound calls for service, the caller can also be the person who responds to those outbound calls.

call flow

See "transaction."

call progress tones

Standard telephony sounds that indicate the status of the call. These sounds include busy, fast busy, ringback, reorder, etc.

card cage

An area within a Intuity CONVERSANT system platform that contains and secures all of the standard and optional circuit cards used in the system.
cartridge tape drive
A high-capacity data storage/retrieval device that can be used to transfer large amounts of information onto high-density magnetic cartridge tape based on a predetermined format. This tape can be removed from the system and stored as a backup, or used on another system.

CAS
channel associated signalling

cautions
An admonishment or advisory statement used in Intuity CONVERSANT system documentation to alert the user to the possibility of a service interruption or a loss of data.

CCA
call classification analysis

CDH
call data handler process

CELP
code excited linear prediction
central office
An office or location in which large telecommunication devices such as telephone switches and network access facilities are maintained. These locations follow strict installation and operation requirements.

central processing unit
See “processor.”

CGEN
Voice system general message class

channel
See “port.”

channel associated signaling
A type of signaling that can be used on E1 circuit cards. It occurs on channel 16.

CICS
Customer Information Control System
circuit card upgrade
A new circuit card that replaces an existing card in the platform. Usually the replacement is an updated version of the original circuit card to replace technology made obsolete by industry trends or a new system release.

cluster controller
A bisynchronous interface that provides a means of handling remote communication processing.

CMS
Call Management System

CO
central office

code excited linear prediction
A means of encoding analog voice signals into digital signals that provides excellent quality with use of minimum disk space.
**command**

An instruction or request the user issues to the system software to make the system perform a particular function. An entire command consists of the command name and options.

**configuration**

The arrangement of the software and hardware of a computer system or network. The Intuity CONVERSANT system configuration includes either a standard or custom processor, peripheral equipment (for example, printers and modems), and software applications. Configuration also refers to the way the switch network is set up; that is, the types of products that are in the network and how those products communicate.

**configuration management**

The component of the system that allows you to manage the current configuration of voice channels, host sessions, and database connections, assign scripts to run on specific voice channels or host sessions, assign functionality to SSP and E1/T1 circuit cards, and perform various maintenance functions.

**connect and disconnect (C and D) tones**

DTMF tones that inform the system when the attendant has been connected (C) and when the caller has been disconnected (D).
connected digits
A sequence of digits that the system can process as a group, rather than requiring the caller to enter the digits one at a time.

Converse Data Return (conv_data)
A Script Builder action that supports the DEFINITY® call vectoring (routing) feature by enabling the switch to retain control of vector processing in the system environment. It supports the DEFINITY “converse” vector command to establish a two-way routing mechanism between the switch and the system to facilitate data passing and return.

controller circuit card
A circuit card used on a computer system that controls its basic functionality and makes the system operational. These circuit cards are used to control magnetic peripherals, video monitors, and basic system communications.

copying an application
A utility in which information from a source application is directed into the destination application.
**coresidency**

The ability of two products or services to operate and interact with each other on a single hardware platform. An example of this is the use of an Intuity CONVERSANT system along with a package from a different vendor on the same system platform.

**CPE**

customer provided equipment or customer premise equipment

**CPN**

called party number

**CPT**

call progress tones

**CPU**

central processing unit

**crash**

An interactive utility for examining the operating system core and for determining if system parameters are being exceeded.
CSU
channel service unit

custom speech
Unique words or phrases to be used in Intuity CONVERSANT system voice prompts that Lucent Technologies custom records on a per-customer basis.

custom vocabulary
A specialized package of unique words or phrases created on a per-customer basis and used by WholeWord or FlexWord speech recognition.

Customer Information Control System
Part of the operating system that manages resources for running applications (for example, IND$FILE). Note that TSO and CMS provide analogous functionality in other host environments.

CVS
converse vector step
danger
An admonishment or advisory statement used in Intuity CONVERSANT system
documentation to alert the user to the possibility of personal injury or death.

data interface process
A software process that communicates with Script Builder applications.

database
A structured set of files, records, or tables.

database field
A field used to extract values from a local database and form the structure upon
which a database is built.

database record
The information in a database for a person, product, event, etc. The database record
is made up of individual fields for each information item.
**database table**

A structure, made up of columns and rows, that holds information in a database. Database tables provide a means of storing information that changes too often to “hard-code,” or store permanently, in the transaction outline.

**dB**

decibel

**DB**

database

**DBC**

database checking process

**DBMS**

database management system

**DC**

direct current

**DCE**

data communications equipment
DCP

digital communications protocol

default

The way a computer performs a task in the absence of other instructions.

default owner

The owner of a channel when no process takes ownership of that channel. The default owner holds all idle, in-service channels. In terms of the IRAPI, this is typically the Application Dispatch process.

diagnose

The process of performing diagnostics on a bus or on Tip/Ring, E1/T1, or SSP circuit cards.

dial ahead

The ability to collect and process touch-tone inputs in sequence, even when they are received before the prompts.
dial pulse recognition
A method of recognizing caller pulse inputs from a rotary telephone.

dialed number identification service
A service that allows incoming calls to contain information about the telephone number for which it is destined.

dial through
A capability provided by touch-tone and dial pulse recognition that allows callers to enter their responses during the prompt and have those responses recognized (similar to the Speak with Interrupt capability). See also “barge-in” and “echo cancellation”.

dictionary
A reference book containing an alphabetical list of words, with information given for each word including meaning, pronunciation, and etymology.

DIMM
dual in-line memory module

DIO
disk input and output process
**DIP**

**data interface process**

**directory**

A type of file used to group and organize other files or directories.

**display errdata**

A command that displays system errors sent to the logger.

**DMA**

direct memory address

**DNIS**

dialed number identification service

**DPR**

dial pulse recognition

**DSP**

digital signal processor
DTE

data terminal equipment

DTMF

dual tone multi-frequency

DTR

data terminal ready

dual 3270 links

A feature that provides an additional physical unit (PU) for a cost-effective means of connecting to two host computers. The customer can connect a system to two separate FEPs or to a single FEP shared by one or more host computers. Each link supports a maximum of 32 LUs.

dual tone multi-frequency

A touch-tone sound that is an audio signal including two different frequencies. DTMF feedback is the process of the “switch” providing this information to the system. DTMF muting is the process of ignoring these tones (which might be simulated by human speech) when they are not needed for the application.
dump space
An area of the disk that is fixed in size and should equal the amount of RAM on the system. The operating system “dumps” an image of core memory when the system crashes. The dump can be fetched after rebooting to help in analyzing the cause of the crash.

E
E&M
Ear and Mouth

E1 / T1
Digital telephony interfaces, commonly called trunks. E1 is an international standard at 2.048 Mbps. T1 is a North American standard at 1.544 Mbps.

Ear and Mouth
A common T1 trunking protocol for connection between two “switches.”

EBCDIC
Extended Binary Coded Decimal Interexchange Code
**echo cancellation**
The process of making the channel quiet enough so that the system can hear and recognize WholeWord and dial pulse inputs during the prompt. See also “barge-in.”

**ECS**
Enterprise Communications Server

**editor system**
A system that allows speech phrases to be displayed and edited by a user. See “Graphical Speech Editor.”

**EFT**
Enhanced File Transfer

**EIA**
Electronic Industries Association

**EISA**
Extended Industry Standard Architecture

**EMI**
electromagnetic interference
enhanced basic speech
Pre-recorded speech available from Lucent Technologies in several languages. Sometimes called “standard speech.”

Enhanced File Transfer
A feature that allows the transferring of files automatically between the Intuity CONVERSANT system and a synchronous host processor on a designated logical unit.

Enhanced Serial Data Interface
A software- and hardware-controlled method used to store data on magnetic peripherals.

Enterprise Communications Server
The telephony equipment that connects your business to the telephone network. Sometimes called a “switch.”

error message
A message on the screen indicating that something is wrong with a possible suggestion of how to correct it.
<table>
<thead>
<tr>
<th><strong>Glossary</strong></th>
<th><strong>ESD</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ESD</strong></td>
<td>electrostatic discharge</td>
</tr>
<tr>
<td><strong>ESDi</strong></td>
<td>Enhanced Serial Data Interface</td>
</tr>
<tr>
<td><strong>ESS</strong></td>
<td>electronic switching system</td>
</tr>
<tr>
<td><strong>EST</strong></td>
<td>Enhanced Software Technologies, Inc.</td>
</tr>
<tr>
<td><strong>ET</strong></td>
<td>error tracker</td>
</tr>
<tr>
<td><strong>Ethernet</strong></td>
<td>A name for a local area network that uses 10BASE5 or 10BASE2 coaxial cable and InterLAN signaling techniques.</td>
</tr>
<tr>
<td><strong>Event</strong></td>
<td>The notification given to an application when some condition occurs that is generally not encountered in normal operation.</td>
</tr>
</tbody>
</table>
**EXTA**

external alarms feature message class

**external actions**

Specific predefined system tasks that Script Builder can call or *invoke* to interact with other products or services. When an external action is invoked, the systems displays a form that provides choices in each field for the application developer to select. Examples are Call_Bridge, Make_Call, SP_Allocate, SR_Prompt, etc. In Voice@Work, external actions are treated as “external functions.”

**external functions**

Specific predefined (or customer-created) system tasks that Voice@Work or Script Builder can call or *invoke* to interact with other products or services. The function allows the application developer to enter the argument(s) for the function to act on. Examples are concat, getarg, length, substring, etc. See also “external actions.”

**F**

**FAX Actions**

An optional feature package that allows the system to send fax messages.
Glossary

FCC
Federal Communications Commission

FDD
floppy disk drive

feature
A function or capability of a product or an application within the Intuity CONVERSANT system.

feature package
An optional package that may contain both hardware and software resources to provide additional functionality to a standard system.

feature_tst script package
A standard Intuity CONVERSANT system software program that allows a user to perform self-tests of critical hardware and software functionality.

FEP
front end processor
FFE
Form Filler Plus feature message class

field
See “database field.”

FIFO
first-in-first-out processing order

file
A collection of data treated as a basic unit of storage.

file transfer
An option that allows you to transfer files interactively or directly to and from UNIX using the file transfer system (FTS).

filename
Alphabetic characters used to identify a particular file.

**FlexWord™ speech recognition**
A type of speech recognition based on subword technology that recognizes phonemes or parts of words in a specific language. See also “subword technology.”
foos

facility out-of-service state

Form Filler Plus

An optional feature package that provides the capability for application scripts to record a caller’s responses to prompts for later transcription and review.

FTS

file transfer process message class

Full CCA

A feature package that augments the types of call dispositions that Intelligent CCA can provide.

function key

A key, labeled F1 through F8, on your keyboard to which the Intuity CONVERSANT system software gives special properties for manipulating the user interface.

GEN

PRISM logger and alerter general message class
grammar

The inputs that a recognizer can match (identify) from a caller.

Graphical Speech Editor

A window-driven, X Windows/Motif based, graphical user interface (GUI) that can be accessed to perform different functions associated with the creation and editing of speech files for applications. The editing is done on the Intuity CONVERSANT system.

GSE

Graphical Speech Editor

GUI

graphical user interface

H

hard disk drive

A high-capacity data storage/retrieval device that is located inside a computer platform. A hard disk drive stores data on nonremovable high-density magnetic media based on a predetermined format for retrieval by the system at a later date.
hardware
The physical components of a computer system. The central processing unit, disks, tape, and floppy drives, etc., are all hardware.

Hardware Resource Allocator
A software program that resolves or blocks the allocation of CPU and memory resources for controlling and optional circuit cards.

hardware upgrade
Replacement of one or more fundamental platform hardware components (for example, the CPU or hard disk drive), while the existing platform and other existing optional circuit cards remain.

HDD
hard disk drive

High Level Language Applications Programming Interface
An application programming interface that allows a user to write custom applications that can communicate with a host computer via an API.

HLLAPI
High Level Language Applications Programming Interface
HOST

host interface process message class

host computer

A computer linked to a network to provide a range of services, such as database access and computation. The host computer operates in a time-sharing manner with other computers linked to it via the network.

hwoos

hardware out-of-service state

Hz

Hertz

IBM

International Business Machines

iCk or ICK

The system integrity checking process.
ID
identification

IDE
integrated disk electronics

idle channel
A channel that either has no owner or is owned by its default owner and is onhook.

IE
information element

IND$FILE
The standard SNA file transfer utility that runs as an application under CICS, TSO, and CMS. IND$FILE is independent of link-level protocols such as BISYNC and SDLC.

independent software vendor
A company that has an agreement with Lucent Technologies to develop software to work with the Intuity CONVERSANT system to provide additional features required by customers.
indexed table
A table that, unlike a nonindexed table, can be searched via a field name that has been indexed.

industry standard architecture
A PC bus standard that allows processors and other circuit cards to communicate with each other.

INIT
voice system initialization message class

initialize
To start up the system for the first time.

inserv
in-service state

Integrated Services Digital Network
A network that provides end-to-end digital connectivity to support a wide range of voice and data services.
Integrated Voice Processing (IVP) circuit card

The IVP6 circuit card that provides Tip/Ring connections. The NGTR (AYC30) card also provides the same functions.

intelligent CCA

Monitoring the line after dialing is complete to determine whether a busy, reorder (fast busy), or other failure has been encountered. It also recognizes when the extension is answered or if the extension is not answered after a specified number of rings. The monitoring capabilities are dependent on the network interface circuit card and protocol used.

interface

The access point of a system. With respect to the Intuity CONVERSANT system, the interface is designed to provide you with easy access to the software capabilities.

interrupt

The termination of voice and/or telephony functions when some condition occurs.

Intuity Response Application Programming Interface

A library of commands that provide a standard development interface for voice-telephony applications.
<table>
<thead>
<tr>
<th>Glossary</th>
<th>IPC</th>
</tr>
</thead>
<tbody>
<tr>
<td>IPC</td>
<td>interprocess communication</td>
</tr>
<tr>
<td>IPC</td>
<td>intelligent ports card (IPC-900)</td>
</tr>
<tr>
<td>IPCI</td>
<td>integrated personal computer interface</td>
</tr>
<tr>
<td>IRAPI</td>
<td>Intuity Response Application Programming Interface</td>
</tr>
<tr>
<td>IRQ</td>
<td>interrupt request</td>
</tr>
<tr>
<td>ISA</td>
<td>industry standard architecture</td>
</tr>
<tr>
<td>ISDN</td>
<td>Integrated Services Digital Network</td>
</tr>
</tbody>
</table>
ISV

independent software vendor

ITAC

International Technical Assistance Center

IVC6 circuit card (AYC10)

A Tip/Ring (analog) circuit card with six channels.

IVP6 circuit card (AYC5B)

A Tip/Ring (analog) card with six channels.

Kbps

kilobytes per second

Kbyte

kilobyte
### Glossary

<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>keyboard mapping</td>
<td>In emulation mode, this feature enables the keyboard to send 3270 keyboard codes to the host according to a configuration table set up during installation.</td>
</tr>
<tr>
<td>keyword spotting</td>
<td>A capability provided by WholeWord speech recognition that allows the system to recognize a single word in the middle of an entire phrase spoken by a caller in response to a prompt.</td>
</tr>
</tbody>
</table>

**L**

<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAN</td>
<td>local area network</td>
</tr>
<tr>
<td>LDB</td>
<td>local database</td>
</tr>
<tr>
<td>LED</td>
<td>light-emitting diode</td>
</tr>
<tr>
<td>library states</td>
<td>The state information about channel activities maintained by the IRAPI.</td>
</tr>
</tbody>
</table>
Glossary

LIFO
last-in-first-out processing order

line side E1
A digital method of interfacing an Intuity CONVERSANT system to a PBX or “switch” using E1-related hardware and software.

line side T1
A digital method of interfacing an Intuity CONVERSANT system to a PBX or “switch” using T1-related hardware and software.

listfile
An ASCII catalog that lists the contents of one or more talkfiles. Each application script is typically associated with a separate listfile. The listfile maps speech phrase strings used by application scripts into speech phrase numbers.

local area network
A data communications network in a limited geographical area. The LAN provides communications between computers and peripherals.

local database
A database residing on the Intuity CONVERSANT system.
**LOG**

Intuity CONVERSANT system logger process message class

**logical unit**

A type of SNA Network Addressable Unit.

**logdaemon**

A UNIX system information and error logging process.

**logger**

See “logdaemon.”

**logging on/off**

Entering or exiting the Intuity CONVERSANT system software.

**LSE1**

*line side E1*

**LST1**

*line side T1*
LU

logical unit

M

magnetic peripherals
Data storage devices that use magnetic media to store information. Such devices include hard disk drives, floppy disk drives, and cartridge tape drives.

main screen
The Intuity CONVERSANT system screen from which you are able to enter either the System Administration or Voice System Administration menu.

maintenance process
A software process that runs temporary diagnostics and maintains the state of circuit cards and channels.

manoos
manually out-of-service state

MAP/100P
multi application platform 100P
**Glossary**

**MAP/100C**
- multi application platform 100C

**MAP/40P**
- multi application platform 40P

**MAP/5P**
- multi application platform 5P

**masked event**
- An event that an application can ignore (that is, the application can request not to be informed of the event).

**master**
- A circuit card that provides clock information to the TDM bus.

**Mbps**
- megabits per second

**MByte**
- megabyte
megabyte
A unit of memory equal to 1,048,576 bytes (1024 x 1024). It is often rounded to one million.

menu
Options presented to a user on a computer screen or with voice prompts.

MF
multifrequency

MHz
megahertz

Microsoft
A manufacturer of software products, primarily for IBM-compatible computers.

mirroring
A method of data backup that allows all of the data transactions to the primary hard disk drive to be copied and maintained on a second identical drive in near real time. If the primary disk drive crashes or becomes disabled, all of the data stored on it (up to 1.2 billion bytes of information) is accessible on the second mirrored disk drive.
ms
millisecond

msec
millisecond

MS-DOS
A personal computer disk operating system developed by the Microsoft Corporation.

MTC
maintenance process

multifrequency
Dual tone digit signalling (similar to DTMF), used for trunk addressing between network switches or by network operators.

multithreaded application
A single process/application that controls several channels. Each thread of the application is managed explicitly. Typically this means state information for each thread is maintained and the state of the application on each channel is tracked.
### Glossary

**NCP**

Network Control Program

**NEBS**

Network Equipment Building Standards

**NEMA**

National Electrical Manufacturers Association

**netoos**

network out-of-service state

**NetView**

An optional feature package that transmits high-priority (major or critical) messages to the host as operator-generated alerts (OGAs) over the 3270 host link. The NetView Alarm feature package does not require a dedicated LU.

**next generation Tip/Ring (AYC30) circuit card**

An analog circuit card with six channels.
<table>
<thead>
<tr>
<th><strong>Glossary</strong></th>
<th><strong>NFAS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NFAS</strong></td>
<td>non-facility associated signalling</td>
</tr>
<tr>
<td><strong>NFS</strong></td>
<td>network file sharing</td>
</tr>
<tr>
<td><strong>NGTR</strong></td>
<td>next generation Tip/Ring (AYC30) circuit card</td>
</tr>
<tr>
<td><strong>NM-API</strong></td>
<td>Network Management - Application Programming Interface</td>
</tr>
<tr>
<td><strong>NMVT</strong></td>
<td>network management vector transport</td>
</tr>
<tr>
<td><strong>nonex</strong></td>
<td>nonexistent state</td>
</tr>
<tr>
<td><strong>nonindexed table</strong></td>
<td>A table that can be searched only in a sequential manner and not via a field name.</td>
</tr>
</tbody>
</table>
nonmasked event
   An event that must be sent to the application. Generally, an event is nonmaskable if the application would likely encounter state transition errors by trying to it.

NRZ
   non return to zero

NRZI
   non return to zero inverted

null value
   An entry containing no value. A field containing a null value is normally displayed as blank and is different from a field containing a value of zero.

obsolete hardware
   Hardware that is no longer supported on the Intuity CONVERSANT system.

OEM
   original equipment manufacturer
OGA

operator-generated alert

on-line help
Messages or information that appear on the user’s screen when a “function key” (F1 through F8) is pressed.

operator-generated alert
A system-monitoring message that is transmitted from the Intuity CONVERSANT system or other computer system to an IBM host computer and is classified as critical or major.

option
An argument used in a command line to modify program output by modifying the execution of a command. When you do not specify any options, the command executes according to its default options.

ORACLE
A company that produces relational database management software. It is also used as a generic term that identifies a database residing on a local or remote system that is created and maintained using an ORACLE RDBMS product.
P

P&C
Prompt and Collect Script Builder action step

PBX
private branch exchange

PC
personal computer

PCB
printed circuit board

PCI
peripheral component interconnect

PCM
pulse code modulation

PEC
price element code
Glossary

peripheral (device)
Equipment such as printers or terminals that is in addition to the basic processor.

peripheral component interconnect
A newer, higher speed PC bus that is gradually displacing ISA for many components.

permanent process
A process that starts and initializes itself before it is needed by a caller.

phoneme
A single basic sound of a particular spoken language. For example, the English language contains 40 phonemes that represent all basic sounds used with the language. The English word “one” can be represented with three phonemes, “w” - “uh” - “n.” Phonemes vary between languages because of guttural and nasal inflections and syllable constructs.

phrase filtering (screening)
The rejection of unrecognized speech. The WholeWord and FlexWord speech recognition packages can be programmed to reprompt the caller if the Intuity CONVERSANT system does not recognize a spoken response.
phrase tag
A string of up to 50 characters that identifies the contents of a speech phrase used by an application script.

platform migration
See “platform upgrade.”

platform upgrade
The process of replacing the existing platform with a new platform.

pluggable
A term usually used with speech technologies, in particular standard speech, to indicate that a basic algorithmic technique has been implemented to accept one or more sets of parameters that tailors the algorithm to perform in one or more languages.

poll
A message sent from a central controller to an individual station on a multipoint network inviting that station to send if it has any traffic.
polling

A network arrangement whereby a central computer asks each remote location whether it wants to send information. This arrangement enables each user or remote data terminal to transmit and receive information on shared facilities.

port

A connection or link between two devices that allows information to travel to a desired location. See “telephone network connection.”

PRI

Primary Rate Interface

Primary Rate Interface

An ISDN term for connections over E1 or T1 facilities that are usually treated as trunks.

private branch exchange

A private switching system, either manual or automatic, usually serving an organization, such as a business or government agency, and usually located on the customer’s premises.
processor
In Intuity CONVERSANT system documentation, the computer on which UnixWare and Intuity CONVERSANT system software runs. In general, the part of the computer system that processes the data. Also known as the “central processing unit.”

prompt
A message played to a caller that gives the caller a choice of selections in a menu and asks for a response. Compare to “announcement.”

prompt and collect (P and C)
A message played to a caller that gives the caller a choice of selections in a menu and asks for a response. The responses is collected and the script progresses based on the caller’s response.

drivers
A driver that does not control any hardware.

PS&BM
power supply and battery module
PSTN
public switch telephone network

pulse code modulation
A digital modulation method of encoding voice signals into digital signals. See also “adaptive differential pulse code modulation.”

RAID
redundant array of independent disks

RAID array
An assembly of disk drives configured to provide some level of RAID functionality.

RAM
random access memory

RDMBS
ORACLE relational database management system
RECOG

speech recognition feature message class

recognition type
The type of input the recognizer can understand. Available types include touch-tone, dial pulse, and Advanced Speech Recognition (ASR), which includes WholeWord and FlexWord speech recognition.

recognizer
The part of the system that compares caller input to a grammar in order to correctly match (identify) the caller input.

record
See “database record.”

recovery
The process of using copies of the Intuity CONVERSANT system software to reconstruct files that have been lost or damaged. See also “restore.”

remote database
Information stored on a system other than the Intuity CONVERSANT system that can be accessed by the Intuity CONVERSANT system.
remote maintenance circuit card

An Intuity CONVERSANT system circuit card, available with a built-in modem, that allows remote personnel (for example, field support) to access all Intuity CONVERSANT system machines. This card is standard equipment on all new MAP/100, MAP/40, and MAP/5P purchases.

REN
ringer equivalence number

reports administration
The component of Intuity CONVERSANT system that provides access to system reports, including call classification, call data detail, call data summary, message log, and traffic reports.

restore
The process of recovering lost or damaged files by retrieving them from available back-up tapes or from another disk device. See also “recovery.”

restore application
A utility that replaces a damaged application or restores an older version of an application.
reuse
The concept of using a component from a source system in a target system after a software upgrade or platform migration.

RFS
remote file sharing

RM
resource manager

RMB
remote maintenance circuit card

roll back
To cancel changes to a database since the point at which changes were last committed.

rollback segment
A portion of the database that records actions that should be undone under certain circumstances. Rollback segments are used to provide transaction rollback, read consistency, and recovery.
RTS
request to send

SBC
sub-band coding

**screen pop**
A method of delivering a screen of information to a telephone operator at the same time a telephone call is delivered. This is accomplished by a complex chain of tasks that include identifying the calling party number, using that information to access a local or remote ORACLE database, and pulling a “form” full of information from the database using an ORACLE database utility package.

**script**
The set of instructions for the Intuity CONVERSANT system to follow during a transaction.
Script Builder
An optional software package that provides a menu-oriented interface designed to assist in the development of custom voice response applications on the Intuity CONVERSANT system (see also “Voice@Work”).

SCSI
small computer system interface

SDLC
synchronous data link control

SDN
software defined network

shared database table
A database table that is used in more than one application.

shared speech
Speech that is a part of more than one application.
shared speech pools
A parameter that allows the user of a voice application to share speech components with other applications.

SID
station identification

signal processor circuit card (AYC2, AYC2B, AYC2C, or AYC9d)
A speech processing circuit card that is an older, lower-capacity version of the speech and signal processor (SSP) circuit card (AYC43).

SIMMs
single inline memory modules

single inline memory modules
A method of containing random access memory (RAM) chips on narrow circuit card strips that attach directly to sockets on the CPU circuit card. Multiple SIMMs are sometimes installed on a single CPU circuit card.

single-threaded application
An application that runs on a single voice channel.
slave
A circuit card that depends on the TDM bus for clock information.

SLIP
serial line interface protocol

small computer system interface
A disk drive control technology in which a single SCSI adapter circuit card plugged into a PC slot is capable of controlling as many as seven different hard disks, optical disks, tape drives, etc.

SNA
systems network architecture

SNMP
simple network management protocol

software
The set or sets of programs that instruct the computer hardware to perform a task or series of tasks — for example, UnixWare software and the Intuity CONVERSANT system software.
**software upgrade**

The installation of a new version of software in which the existing platform and circuit cards are retained.

**source system**

The system from which you are upgrading (that is, your system as it exists before you upgrade).

**speech and signal processor circuit card (AYC43)**

The high-performance signal processing circuit card introduced in V6.0 capable of simultaneous support for various speech technologies.

**speech energy**

The amount of energy in an audio signal. Literally translated, it is the output level of the sound in every phonetic utterance.

**speech envelope**

The linear representation of voltage on a line. It reflects the sound wave amplitude at different intervals of time. This envelope can be plotted on a graph to represent the oscillation of an audio signal between the positive and negative extremes.
speech file
A file containing an encoded speech phrase.

speech filesystem
A collection of several talkfiles. The filesystem is organized into 16-Kbyte blocks for efficient management and retrieval of talkfiles.

speech modeling
The process of creating WholeWord speech recognition algorithms by collecting thousands of different speech samples of a single word and comparing them all to obtain a statistical average of the word. This average is then used by a WholeWord speech recognition program to recognize a single spoken word.

speech space
An area that contains all digitized speech used for playback in the applications loaded on the system.

speech phrase
A continuous speech segment encoded into a digital string.

speech recognition
The ability of the system to understand input from callers.
**Glossary**

**SPIP**
- signal processor interface process

**SPPLIB**
- speech processing library

**SQL**
- structured query language

**SR**
- speech recognition

**SSP**
- speech and signal processor circuit card (AYC43)

**standard speech**

The speech package available in several languages containing simple words and phrases produced by Lucent Technologies for use with the Intuity CONVERSANT system. This package includes digits, numbers, days of the week, and months, each spoken with initial, medial, and falling inflection. The speech is in digitized files stored on the hard disk to be used in voice prompts and messages to the caller. This feature is also called enhanced basic speech.
standard vocabulary
A standard package of simple word speech models provided by Lucent Technologies and used for WholeWord speech recognition. These phrases include the digits “zero” through “nine,” “yes,” “no,” and “oh,” or the equivalent words in a specific local language.

string
A contiguous sequence of characters treated as a unit. Strings are normally bounded by white spaces, tabs, or a character designated as a separator. A string value is a specified group of characters symbolized by a variable.

structured query language
A standard data programming language used with data storage and data query applications.

subword technology
A method of speech recognition used in FlexWord recognition that recognizes phonemes or parts of words. Compare to “WholeWord speech recognition.”

switch
A software and hardware device that controls and directs voice and data traffic. A customer-based switch is known as a “private branch exchange.”
switch hook

The device at the top of most telephones that is depressed when the handset is resting in the cradle (in other words, is on hook). The device is raised when the handset is picked up (in other words, when the telephone is off hook).

switch hook flash

A signaling technique in which the signal is originated by momentarily depressing the “switch hook.”

switch interface administration

The component of the Intuity CONVERSANT system that enables you to define the interaction between the Intuity CONVERSANT system and switches by allowing you to establish and modify switch interface parameters and protocol options for both analog and digital interfaces.

switch network

Two or more interconnected telephone switching systems.

synchronous communication

A method of data transmission in which bits or characters are sent at regular time intervals, rather than being spaced by start and stop bits. Compare to “asynchronous communication.”
SYS

UNIX system calls message class

sysgen

system generation

System 75
An advanced digital switch supporting up to 800 lines that provides voice and data communications for its users.

System 85
An advanced digital switch supporting up to 3000 lines that provides voice and data communications for its users.

system administrator
The person assigned the responsibility of monitoring all Intuity CONVERSANT system software processing, performing daily system operations and preventive maintenance, and troubleshooting errors as required.

system architecture
The manner in which the Intuity CONVERSANT system software is structured.
**system message**

An event or alarm generated by either the Intuity CONVERSANT system or end-user process.

**system monitor**

A component of the Intuity CONVERSANT system that tests to verify that each incoming telephone line and its associated Tip/Ring or T1 circuit card is functional. Through the “System Monitor” component, you are able to see displays of the Voice Channel and Host Session Monitors.

**T1**

A digital transmission link with a capacity of 1.544 Mbps.

**table**

See “database table.”

**tag image file format**

A format for storing and exchanging digital image data associated with fax modem data transfers and other applications.
talkfile
An ASCII file that contains the speech phrase tags and phrase tag numbers for all the phrases of a specific application. The speech phrases are organized and stored in groups. Each talkfile can contain up to 65,535 phrases, and the speech filesystem can contain multiple talkfiles.

talkoff
The process of a caller interrupting a prompt, so the prompt message stops playing.

target system
The system to which you are upgrading (that is, your system as you expect it to exist after you upgrade).

TAS
transaction assembler script

TCC
Technology Control Center

TCP/IP
transmission control protocol/internet protocol
TDM

time division multiplexing

TE

terminal emulator

telephone network connection

The point at which a telephone network connection terminates on an Intuity CONVERSANT system. Supported telephone connections are Tip/Ring, T1, and E1.

terminal emulator

Software that allows a PC or UNIX process to look like a specific type of terminal. In particular, it allows the Intuity CONVERSANT system to temporarily transform itself into a "look alike" of an IBM 3270 terminal. In addition to providing full 3270 functionality, the terminal emulator enables you to transfer files to and from UNIX.

text-to-speech

An optional feature that allows an application to play US English speech directly from ASCII text by converting that text to synthesized speech. The text can be used for prompts or for text retrieved from a database or host, and can be spoken in an application with prerecorded speech. text-to-speech application development is supported through Voice@Work and Script Builder.
ThickNet
A 10-mm (10BASE5) coaxial cable used to provide interLAN communications.

ThinNet
A 5-mm (10BASE2) coaxial cable used to provide interLAN communications.

TIFF
tag image file format

time-division multiplex
A method of serving a number of simultaneous channels over a common transmission path by assigning the transmission path sequentially to the channels, with each assignment being for a discrete time interval.

Tip/Ring
Analog telecommunications using four-wire media.

token ring
A ring type of local area network that allows any station in the network to communicate with any other station.
trace
A command that can be used to monitor the execution of a script.

traffic
The flow of information or messages through a communications network for voice, data, or audio services.

transaction
The interactions (exchanges) between the caller and the voice response system. A transaction can involve one or more telephone network connections and voice responses from the Intuity CONVERSANT system. It can also involve one or more of the system optional features, such as speech recognition, 3270 host interface, FAX Actions, etc.

transaction assembler script
The computer program code that controls the application operating on the voice response system. The code can be produced from Voice@Work, Script Builder, or by writing directly in TAS code.

transaction state machine process
A multi-channel IRAPI application that runs applications controlled by TAS script code.
transient process

A process that is created dynamically only when needed.

TRIP

Tip/Ring interface process

troubleshooting

The process of locating and correcting errors in computer programs. This process is also referred to as debugging.

TSO

Technical Services Organization

TSO

time share operation

TSM

transaction state machine process

TTS

text-to-speech
**TWIP**

T1 interface process

**UK**

United Kingdom

**US**

United States of America

**UNIX Operating System**

A multiuser, multitasking computer operating system originally developed by Lucent Technologies.

**UNIX shell**

The command language that provides a user interface to the UNIX operating system.

**upgrade scenario**

The particular combination of current hardware, software, application and target hardware, software, applications, etc.
### Glossary

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>usability</strong></td>
<td>A measurement of how easy an application is for callers to use. The measurement is made by making observations and by asking questions. An application should have high usability to be successful.</td>
</tr>
<tr>
<td><strong>USOC</strong></td>
<td>universal service ordering code</td>
</tr>
<tr>
<td><strong>UVL</strong></td>
<td>unified voice library</td>
</tr>
<tr>
<td><strong>VDC</strong></td>
<td>video display controller</td>
</tr>
<tr>
<td><strong>vi editor</strong></td>
<td>A screen editor used to create and change electronic files.</td>
</tr>
</tbody>
</table>
virtual channel

A channel that is not associated with an interface to the telephone network (Tip/Ring, T1, LSE1/LST1, or PRI). Virtual channels are intended to run “data-only” applications which do not interact with callers but may interact with DIPs. Voice or network functions (for example, coding or playing speech, call answer, origination, or transfer) will not work on a virtual channel. Virtual channel applications can be initiated only by a “virtual seizure” request to TSM from a DIP.

vocabulary

A collection of words that the Intuity CONVERSANT system is able to recognize using either WholeWord or FlexWord speech recognition.

vocabulary activation

The set of active vocabularies that define the words and wordlists known to the FlexWord recognizer.

vocabulary loading

The process of copying the vocabulary from the system where it was developed and adding it to the target system.
Glossary

Voice@Work
An optional software package that provides a graphical interface to assist in development of voice response applications on the Intuity CONVERSANT system (see also “Script Builder”).

voice channel
A channel that is associated with an interface to the telephone network (Tip/Ring, T1, E1, LSE1/LST1, or PRI). Any Intuity CONVERSANT system application can run on a voice channel. Voice channel applications can be initiated by being assigned to particular voice channels or dialed numbers to handle incoming calls or by a “soft seizure” request to TSM from a DIP or the soft_szr command.

voice processing co-marketer
A company licensed to purchase voice processing equipment, such as the Intuity CONVERSANT system, to market and sell based on their own marketing strategies.

voice response output process
A software process that transfers digitized speech between system hardware (for example, Tip/Ring and SSP circuit cards) and data storage devices (for example, hard disk, etc.)
voice response unit

A computer connected to a telephone network that can play messages to callers, recognize caller inputs, access and update databases, and transfer and monitor calls.

voice system administration

The means by which you are able to administer both voice- and nonvoice-related aspects of the system.

VPC

voice processing co-marketer

VROP

voice response output process

VRU

voice response unit
warning

An admonishment or advisory statement used in Intuity CONVERSANT system documentation to alert the user to the possibility of equipment damage.

WholeWord speech recognition

An optional feature, available in several languages, based on whole-word technology that can recognize the numbers one through zero, “yes”, and “no” (the key words). This feature is reliable, regardless of the individual speaker. This feature can identify the key words when spoken in phrases with other words. A string of key words, called connected digits, can be recognized. During the prompt announcement, the caller can speak or use touch tones (or dial pulses, if available). See also “whole-word technology.”

whole-word technology

The ability to recognize an entire word, rather than just the phoneme or a part of a word. Compare to “subword technology.”

wink signal

An interruption of current to a busy lamp indicating that there is a line on hold.

word

A unique utterance understood by the recognizer.
wordlist
A set of words available for FlexWord recognition by an application during a Prompt & Collect action step.

word spotting
The ability to search through extraneous speech during a recognition.
Index

Numerals
3270dip_off command 542
3270dip_on command 543

A
Acrobat Reader
adjusting the window size li
hiding and displaying bookmarks li
navigating li
printing from lii
searching lii
setting the default magnification li
add command 544
addhdr command 546

adding remote database access ID 381
Adjunct/Switch Application Interface (ASAI)
channel administration 198
description 195
domain administration 207
parameter administration 217
show software version 220
status of link 222
Administrative Commands Log
commands/activities included 511
description 510
display report 512
print report 516
report content 511
update report 517
### Index

| B | B backup services 26 |
| B | backup_appl command 568 |
| B | bbs command 571 |
| B | bk_appl command 573 |
| C | call classification report 462 |
| C | call data detail report 469 summary report 480 tables |
| C | CCA 345 |
| C | CCASUM 345 |
| C | CDH 346 |
| C | CDHSUM 348 |
| C | EVENTS 349 |
| C | EVSUM 350 |
| C | resizing 353 |
| C | TRASUM 351 |
| C | call data handler (CDH) tables 347 |
| C | call record summary report 485 |
| C | cards, diagnosing 127 |

| alarm 112 |
| disable command 547 |
| display command 548 |
| enable command 549 |
| help 550 |
| reinit command 551 |
| retire command 552 |
| status command 553 |
| test command 554 |
| alertPipe 112 |
| analog interfaces overview 227 |
| annotate command 555 |
| ASAI, see Adjunct/Switch Application Interface (ASAI) |
| assign commands card/channel 556 permissions 558 service/startup 560 |
| attach command 563 |
| autoreboot command 566 |
CCA table 345
ccarpt command 575
CCASUM table 345
ccdrt command 576
CDHSUM table 348
cdsrpt command 579
changing
channel states 150
maintenance states, T1 channels 154
channels
assigning to groups 157
checktf command 581
codetype command 583
command menu
accessing 449
system monitor 450
trace service 457
configuration management
equipment 140
host link 67
system control 126
configure command 584
console 112
copy command 590
country-specific analog switch integration 905
cpuType command 592
cvis_mainmenu command 592
cvis_menu command 593
data interface processes (DIP)
database DIP timeout 361
database
access ID
adding 381
remote 381
removing 393
administration
adding remote database access ID 381
removing database access ID 393
commands 396
DIP timeout 361
limitations 396
monitoring commands 396
optimization 342
sizing, increasing 372
dbcheck command 397, 594
Index

dbfag command 598
dbfree command 398, 600
dbused command 602
decode command 604
defining
  SNA Link 68
defService command 605
delete commands
  card/channel 608
eqpgrp 610
  service/startup 611
detach command 614
dfrag command 399
diagnose
  commands
    bus 617
card 618
equipment 127
digital interfaces
  overview 228
digital protocol parameters 334
dip_int command 622
display commands
  assignments 624
card 626
  channel 633
dnis 635
eqpgrp/group 636
  messages 637
  permissions 649
  services 650
dual tone multifrequency (DTMF)
  tone table 340
edExplain command 651
electronic documentation, printing lii
encode command 653
equipment
  diagnostics 127
erase command 654
event 113
EVENTS table 349
EVSUM table 350
explain command 656

Intuity™ CONVERSANT® System Version 7.0 Administration 585-313-501
Issue 3 January 2000 1144
Index

F

F

G
get_config command 676

fax
converting documents to fax files 663, 1037
report (out of call) 491

gse command 677
gse_add command 679

FAX transmission control 187

gse_addpl command 681

faxit command 660

gse_copy command 683

faxlog command 664

gse_copypl command 685

faxrpt command 668
feature licenses 64
feature packages 185

H

findHomes command 671

hasRAID command 686

fixLogFile command 673

hassign command 687

Form Filler Plus
reports 484

hcapture command 689

function keys
labels 2, 11
optional 14
standard 12

hdefine command 695

hconfig command 692
hdelete command 698
hdiagnose command 699
hdisplay command 700
hdump command 701
headFIX command 703

Intuity™ CONVERSANT® System Version 7.0 Administration 585-313-501

Issue 3 January 2000 1145


Index

help screens 17
hfree command 703
hlogin command 704
hlogout command 705
hnewscript command 706
host link
  session screens 69
  SNA links 68
host_cfg command 708
hsend command 708
hspy command 709
hstatus command 711

I
iCk command 713
iCkAdmin command 713
install_appl command 733
install_sw command 735

L
last audit report 489
lComp 740
license management 64
list command 743
logCat command 745
logDstPri command 751
logEvent/logMsg commands 753
logFmt command 757
logit command 760
logTest command 762

M
manual out of service T1 channels 155
menus
  choosing an item 6
Index

message
  administration
    capabilities 107
    destinations 111, 113
    threshold period 119
    thresholds 115, 117
  destinations 111
  line 2, 10
  log
    explain 509, 516
    options 505
    report 500
    priority 118
    thresholds 117
mkAlerter command 764
mkheader command 767
mkimage command 775
modems
  administration 405
modifying message priorities 118
monitoring
  database 396
msgadm command 778
mxmtr process 113

N

NetView alarm interface
  messages sent to 113
newscript command 783
non-unique indexes 359

O

online help 17
options
  call data detail 472
  message log 505
ORACLE
  administration 376
  database
    decrease storage 367
    rollback segment 372
  environment variables 388
  PRO*C 387
  shared pool size 371
Index

P

pkgadd command 784
pkginfo command 787
pkgrm command 791
printers
  administration 427
priorities, setting for messages 118
PRO*C 387
putenv function call 390

R

raidconf command 793
raidok command 795
raidstat command 796
refresh rate 456
reinitLog command 800
remote database access ID
  adding 381
  removing 393
remote terminal administration 441

remote terminal configuration, see remote
terminal administration
remove command 801
remove_appl command 805
remove_sw command 807
removepkg command 808
removing
  message destinations 113
renumbering voice channels 133
reports
  administrative commands log 510
  call classification 462
  call data detail 469
  call data summary 477
  fax (out of call) 491
  Form Filler Plus
    call record summary 485
    last audit 489
  message log 500
  signal processing activity 525
  voice system status 135
restore command 808
restore_appl command 812
rmdb command 814

Intuity™ CONVERSANT® System Version 7.0 Administration 585-313-501
Issue 3 January 2000  1148
rollback segment reducing 373
   verifying size 373
rs_appl command 817

soft_disc command 834
soft_szr command 836
spadc command 837
spar command 839
spCtlFlags command 844
spres command 847
spsav command 851
spStatus command 852
spVrsion command 861
start_voice_system 139
start_hi command 862
start_vs command 863
stderr 112
stop_voice_system 136
stop_hi command 864
stop_vs command 865
strphdr command 866
switch_interface_administration
   analog interfaces 227
digital interfaces 228

Index S

S
save_config command 819
sb_backup command 820
sb_restore command 821
sb_te command 822
sb_trace command 824
screens
   example 3
   online help 17
show_config command 828
show_devices command 830
show_sys command 831
shutting down system 138
Signal Processing Activity report
   contents 524
   spadc command 837
   spar command 839
Index

switch system parameters
  change 337
  display 341
sysadm 22
sysmon command 867
system
  control
    accessing 126
    diagnosing equipment 127
    renumbering voice channels 133
    reporting status 135
    shutting down system 138
    starting voice system 139
    stopping voice system 136
monitor 456
reports
  administrative commands log 510
  call classification 462
  call data detail 469
  call data summary 477
  fax (out of call) 491
  Form Filler 484
  message log 500
  traffic 518

systems
  online help support xlvi

T
  T1
    channels, changing states 155
    E&M interface 303
    ISDN-PRI 316
  tas command 868
  tif2tif.exe command 871, 874
  timeout, database DIP 361
  trace command 874
  trace service 457
  traffic report 520
  trarpt command 882
  TRASUM table 351

U
  UCID, see Universal Call ID
  unassign_permissions command 884
  Universal Call ID (UCID)
    administration 223
    network node ID 225
  Unix Administration menu 403
UnixWare 22
user interfaces
    INTUITY CONVERSANT menus 2

V
vfyLogMsg command 885
voice
    channels, renumbering 133
    equipment
        changing maintenance states 150
    system operations
        renumbering channels 133
        shutting down 138
        starting 139
        stopping 136
        system status 135
    vsdisable command 888
    vsenable command 889
    vusage command 890

W
    wl_copy command 891
    wl_edit command 892
    wl_gen command 894
    wl_init command 897
    wl_install command 898

X
    xferdip_off command 898
    xferdip_on command 899