Passport 4400 Release Notes for R4.0.2

NORTEL NETWORKS™

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New Features and Software Enhancements 43

Chapter 1
Introduction

This document provides information on the Passport 4400, Release 4.0, 4.0.1 and Release 4.0.2 (referred to as 4.0.x) product available for general customer release. This document includes information about the Passport 4400 unit, the system software, Command Line Interface (CLI), Passport 4400 Configurator, and Install Tool. You will find information on the software files, the documentation, and the new features. Additionally, there is a section on current known issues with the software and a section for manual updates.

> **Note:** Release Notes are updated on an as needed basis. Please check the Web Page (*http://www25.nortelnetworks.com/library/tpubs/nav/ passport/passport.html*) to find out if there is a more current revision.

Occasionally, throughout this document, you will find at the end of a sentence or paragraph an 8-digit number in parenthesis (for example, 60058007 or 10265987). This number is an internal Service Request (SR) number used to track problems and fixes to the product software or its documentation.

Documentation

The documentation consists of the following:

- Passport 4400 Hardware Installation Manual, 800-1951-40 (provided in hard copy with your Passport unit)
- Using Passport 4400 Install Tool Version 4.0, 800-1983-40 (provided in hard copy in the Passport software kit)
- Passport 4400 Release 4 Configuration and Operation Document (provided on CD-ROM, this is software documentation for the system and all module options - except LDM - describing configuration/provisioning using the Passport 4400 Configurator and CLI)
- Release Notes, 209373-B (this document)
- Legacy Data Services Manual, 800-1961-20, Rev B (describes the LDM software)
- Passport 6400, 4400 Interworking Guide, 241-6401-115
- Passport 4400 and 6400 Quick Start Guide, 241-6401-280

These documents are directly accessible from Web Page URL: *http://www25.nortelnetworks.com/library/tpubs/nav/passport/passport.htm/*. Select Passport 4400, then Release 4.0.2. The documents are accessed from the links shown. We recommend that you save the document locally and then open it. These documents are also available on the software/documentation CD-ROM. These documents may be undated, so to ensure the most recent version, refer to the web page.

Online Documentation

Passport 4400 Configurator Documentation URL Update

When you have installed the online documentation, you must set the documentation URL for the Passport 4400 Configurator in order to be able to access the online documentation (Passport 4400 Release 4 Configuration and Operation Document) from within the Passport 4400 Configurator.

This URL can only be changed through the Passport 4400 Configurator web pages.

1 Click on *Administration*.

2 Click on *Document URL*. The Documentation URL window opens:

Documentation URL [Pubs B]

Documentation Server URL: http://www.25.nortelnetworks.com/library/tpubs/pa

Save

The URL in the window is where the online documentation is located, at the Nortel Internet site, on your PC, workstation, server, or on the CD at your PC.

3 If you have downloaded the documentation elsewhere, enter the URL in the Documentation Server URL field, and click *Save*. A "*Command Successful*" appears.

Accessing the Online Documentation

> **Note:** Documentation is sometimes updated and posted on the web page, *http://www25.nortelnetworks.com/library/tpubs/passport/v40* Check that location to ensure that you have the latest version.

- Directly access the documentation:
  - *From the Internet*, you can access the documentation from this URL:

    http://www25.nortelnetworks.com/library/tpubs/passport/v40

- *From the Passport 4400 Software/Documentation Distribution CD ROM*, you can access the documentation using a PC from this path:

  `D:\docs\Config_Ops_Doc\index.html`

  (where *D*: is the drive letter of your PC's CD ROM)

- Open the documentation:

→ **Note:** Some browsers require special setup. See the Browser Information section, which follows.

- If you are using the Passport 4400 Configurator, click on the Documentation link in the navigation menu. The online documentation will display in a new browser window.

- *If you have installed the online documentation onto your PC's hard drive*, you can access the documentation by opening the file named index.html, located in the directory where you installed the documentation.

- *If you have installed the online documentation on a Web server*, the URL you must use depends on where the documentation is installed on the server and how the Web site is configured and managed by the server's administrator or Web Master. An example URL could be the following:

  `http://yugi/`

  (This URL assumes that the server's name is yugi, the documentation is in the root directory of the Web site established on the server, and that index.html is the default file that is served when the Web site is accessed.)

  The server name "yugi" can be resolved by DNS; otherwise, use your server's IP address. An example could be the following:

  `http://192.168.1.1`

Browser Information

The Passport 4400 Release 4 Configuration and Operation Documentation (hereafter referred to as The Online Documentation) has been tested with the following browsers:

- Microsoft Internet Explorer 3, 4, and 5
- Netscape Communicator 4.5, 4.6, and 4.7
- Netscape Navigator 3 and 4
- Opera 3.60
- Mosaic 3

The Online Documentation has been tested with the following operating systems:

- Microsoft Windows 95
- Microsoft Windows NT 4, Workstation and Server

The best results are obtained when using the following combination:

Microsoft Internet Explorer 4 and 5 on a Pentium PC running Microsoft Windows 95 or NT, having a display of 800 by 600 minimum resolution and capable of displaying 32,000 colors or more.

Use the following table to get the optimum results from the browser you are using.

Browser	How to Get Optimum Results
Microsoft Internet Explorer 4 or 5	Normal browser setup will provide optimum results.
Microsoft Internet Explorer 3	For best results, you should set the browser to disable using style sheets: 1. Select View -> Options and select the Advanced tab. 2. Uncheck the box next to Use style sheets. 3. Click on the Apply button. Also, you should choose the No Frames option from the online documentation startup page. The frameset for the online documentation may not be stable in Microsoft Internet Explorer 3. You may encounter pages displayed outside of the frameset.

Browser	How to Get Optimum Results
Netscape Communicator 4.5, 4.6, 4.7	As a minimum, you should make sure the browser window size is at least 800 by 600 pixels. If you must run the browser in a smaller window size or you encounter display problems, you should set the browser to Disable using styles sheets: 1. Select Edit -> Preferences and select Advanced. 2. Uncheck the box next to Enable style sheets. 3. Click on the OK button.
Netscape Navigator 4.08	As a minimum, you should make sure the browser window size is at least 800 by 600 pixels. If you must run the browser in a smaller window size or you encounter display problems, you should set the browser to Disable using styles sheets: 1. Select Edit -> Preferences and select Advanced. 2. Uncheck the box next to Enable style sheets. 3. Click on the OK button.
Netscape Navigator 3	Normal browser setup will provide optimum results. However, Navigator 3 does not support cascading style sheets, so the browser's default fonts are used. Navigator 3 uses serif fonts, black on a white background, as the default display.
Opera 3.60	Normal browser setup will provide optimum results.
Mosaic 3	Normal browser setup will provide optimum results. However, Mosaic 3 does not support frames or cascading style sheets. The browser's default font set is used. Also, when you access the Passport 4400 Configuration and Operation Documentation with Mosaic 3, you will see a message that the browser does not support frames. Just click on the link provided to use the documentation without the frameset.

Navigating the Passport 4400 Release 4 Configuration and Operation Documentation (Online Documentation)

The *next* and *previous* buttons in the document pages navigate you through the pages sequentially. If, for example, you have jumped (hyperlinked) to a new page and wish to return to your previous location, use the *back* button in the browser.
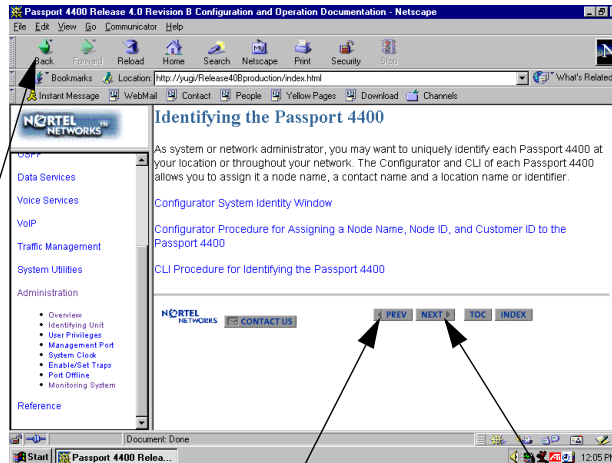
BACK. Returns you to the previous display. This is good for jumping between procedures or returning to the previous screen after a hyperlink jump.

PREV. This takes you to the previous page in the document regardless of how you got to this page. Do not confuse this PREV with BACK.

NEXT. This takes you to the next page in the document regardless of how you got to this page.

There are four navigation tools to help you locate the information you require:

- the Navigation Tree in the left window
- the Table of Contents accessible from the TOC button on each page
- the Index accessible from the index button on each page
- the Site Map in the right window (accessed from the Navigation Tree). This is shown on the next page

Site Map: see illustration which follows

Navigation Tree: Click on a major topic and sub topic will display.

TOC: Table of Contents. This will take you to a comprehensive Table of Contents (many pages). It is not the preferred method. Note that the Table of Contents does not match either the Navigation Tree or the Site Map. It is merely a different method of navigation.

Index: This will take you to the Index.

Site Map

The site map is an expanded version of the Navigation Tree. It permits you to browse through the documents to select the items you wish to view.
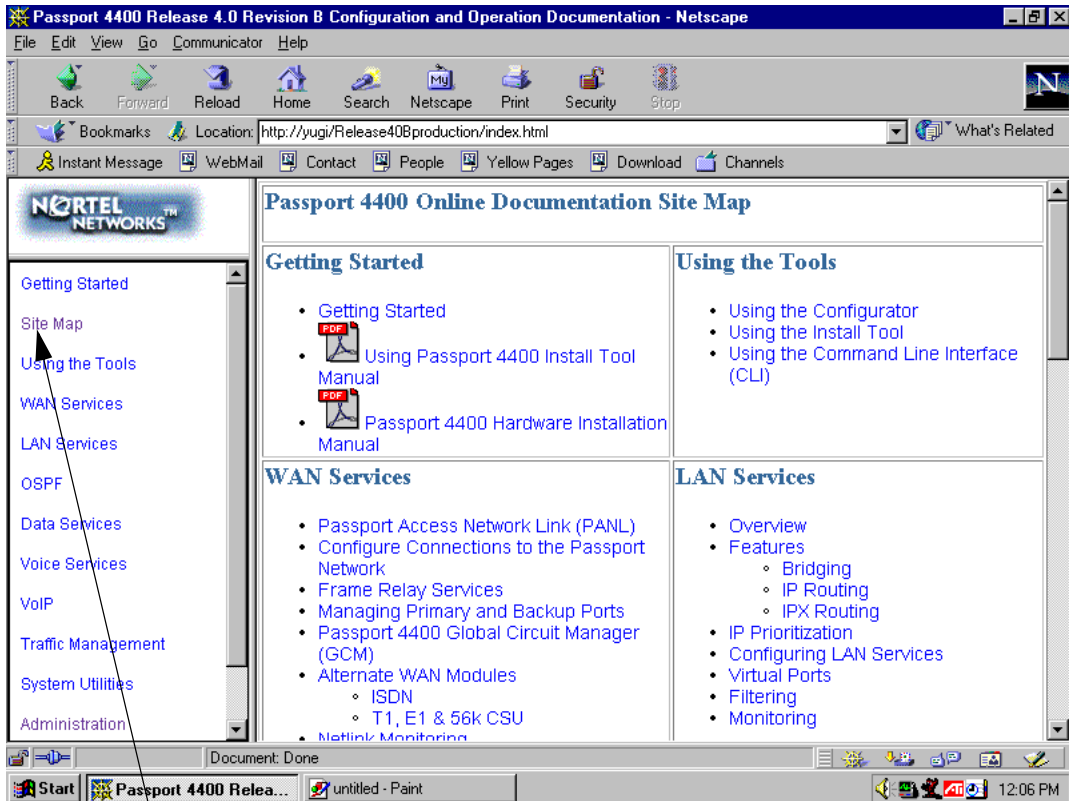
From any place in the documentation, select Site Map from the Navigation Tree to display the Site Map.

Within the documentation, there are two additional aids to help you: the end of topic sign and the end of procedure. When you see these aids, you have reached the end of the logical discussion. By pressing *next* you will be moved to new topic which may be completely unrelated.
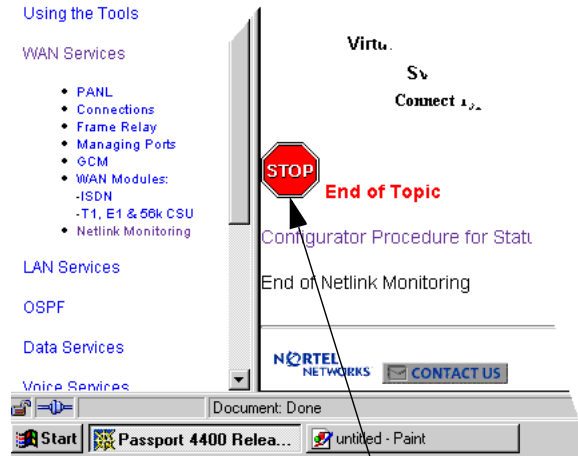
This is the end of this topic. By pressing the next button, you may or may not be at the next logical topic.
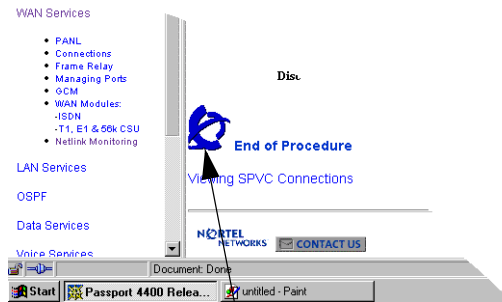
This lets you know that this procedure is now complete.

Printing Online Documentation

In some cases, the HTML pages will not print properly. For print purposes, a copy of the documentation in PDF form is provided (config_ops_doc.pdf). Use the PDF file for printing requirements. It is recommended that you use a PostScript printer driver. (60101046, 60106502)

Passport 4400 Hardware Requirements

- Make sure that you have the 16 MB Flash SIMM installed.
- Make sure that you have 16 MB memory SIMM installed.
- Ethernet Base Module: NTAU01BA or later.
    - Model BA is required to support the hardware compression SIMM.
    - If you do not require hardware compression, you can use an NTAU01AA, Rev. 08 or later and upgrade it to 16MB Flash.
    - NTAU01CA Rev. 05 or later is required to support the new ISDN module NTAU76CA, Rev. 03 or later. If you are installing the new ISDN-BRI Module NTAU76CA, and you are unsure of the base module, contact your Certified Distributor and request that they contact Nortel Networks (refer to ECO E400399).
    - In a Passport 4450, if the ISDN Module is in the top slot, you must use Rev. 03 or later.

> **Note:** All Ethernet Base Modules shipped after January 2000 will be NTAU01CA, Rev. 05 or later.

- HDM 8-port Module: Your HDM must be Rev. 06, but it is recommended you use Rev. 08 or later. There is a known problem with Rev. 05 and earlier that requires a factory upgrade. For additional information, contact your Certified Distributor.

Checking Your Ethernet Base Module Part Number

The face plate on the Ethernet Base Module contains a tag with your part number.

Software and Documentation CD-ROM

Copy the appropriate files from the C-ROM to your TFTP server. The CD-ROM

- Software
    - Install Tool
    - Passport
        — Passport 4430/50
        — Passport 4455
    - Legacy Data Module
- All Product Documentation

Software

Passport units are shipped from the factory with the current software version and associated boot code installed. The Passport 4400 application software, boot code, and latest MIB files in the formats below are available on the Web/FTP site (this site is accessible by your Certified Distributor or Account Executive):

- Install Tool
- Passport 4430/4450
- Passport 4455
- Configurator

Install Tool

- it412007.exe
- 206906.C.00.PDF (Using Install Tool, Version 4.1.2)

Passport 4430/50

- bt402020.bld (Passport 4430/50 boot code)
- bt402020.bin (Passport 4430/50 boot code binary image)
- pr402020.bld (Passport 4430/50 application code)
- pr402020.tar (Passport 4430/50 MIB files in tar format)
- pr402020.zip (Passport 4430/50 MIB files in zip format)
- rs402020.pdf (These Release Notes in PDF format)
- rs402020.ps (These Release Notes in PostScript format)

Boot Code: Passport_4430/50_Boot_Rel_4.0.2_Rev 0.2.0 12/12/00 15:36:49

Application Code: Passport_4430/50_Appl_Rel_4.0.2_Rev 0.2.0 12/12/00 15:37:39

Passport 4455

- thb402020.bld (Passport 4455 boot code)
- thb402020.bin (Passport 4455 boot code binary image)
- th402020.bld (Passport 4455 application code)
- th402020.tar (Passport 4455 MIB files in tar format)
- th402020.zip (Passport 4455 MIB files in zip format)
- rs402020.pdf (These Release Notes in PDF format)
- rs402020.ps (These Release Notes in PostScript format)

Boot Code: Passport_4455_Boot_Rel_4.0.2_Rev 0.2.0 12/12/00 15:39:51

Application Code: Passport_4455_Appl_Rel_4.0.2_Rev 0.2.0 12/12/00 15:40:25

Application Code

The Passport 4400 application software is a single file (either thxxxxx.bld or prxxxxx.bld) supplied in a "**bld**" format consisting of the following six executable images:

- Ethernet Base Module code (Version Passport 4430/50. Appl. Rel. 4.0 Rev TBDor Passport 4455/50. Appl. Rel. 4.0.2 Rev)
- DSP code for AVM (Version 2261 XBP)
- DSP code for UAVM (Version 2263 XBP)
- DSP code for the DVMs installed on the TVM, EVM, and DVEM (Version 2262 XBP)
- Code for the TVM (Version 909-2291 AX5)
- Code for the EVM (Version 909-2292 0A)
- Code for BRI (Version 009)

> **Note:** You can show these versions by issuing the following CLI command **show voice channel table.**

Information About Your CD

A list of code on the CD you purchased is shown below. In the event you need to reload software to your unit, you may use the CD (Release 4.0) which can get you up and running immediately until the software can be downloaded. Manually copy all the required files from your CD to your TFTP.

Install Tool

it412007.exe

Passport 4430/50

- bt4002418.bld (Passport 4430/50 boot code)
- bt4002418.bin (Passport 4430/50 boot code binary image)
- pr4002418.bld (Passport 4430/50 application code)
- pr4002418.tar (Passport 4430/50 MIB files in tar format)
- pr4002418.zip (Passport 4430/50 MIB files in zip format)
- rs4002418.pdf (These Release Notes in PDF format)
- rs4002418.ps (These Release Notes in PostScrip format)

Boot Code: Passport_4430/50_Boot_Rel_4.0.0_Rev 2.41.8 05/17/00 08:09:39

Application Code: Passport_4430/50_Appl_Rel_4.0.0_Rev 2.41.8 05/17/00 08:09:04

Passport 4455

- thb4002418.bld (Passport 4455 boot code)
- thb4002418bin (Passport 4455 boot code binary image)
- th4002418.bld (Passport 4455 application code)
- th4002418tar (Passport 4455 MIB files in tar format)
- th4002418.zip (Passport MIB files in zip format)
- rs4002428.pdf (These Release Notes in PDF format)
- rs4002418.ps (These Release Notes in PostScrip format)

Boot Code: Passport_44550_Boot_Rel_4.0.0_Rev 2.41.8 05/17/00 08:48:49

Application Code: Passport_4430/50_Appl_Rel_4.0.0_Rev 2.41.8 05/17/00 08:09:04

LDM

- ACCGFELX.FIM0200 (LEM code 2.0 for Passport 4400)
- r020.pdf (Release Notes for LDM code 2.0 in PDF format)
- r020.ps (Release Notes for LDM code 2.0 in PostScript format)

All Product Documentation

- m195140a.pdf (Hardware Installation Manual)
- m198340a.pdf (Using Install Tool v40.0)
- 64n115.pdf Passport 6400, 4400 Interworking Guide)
- 64n280.pdf (Passport 4400 and 6400 Quick Start Guide)
- m1961B.pdf (Low-Speed Data Services Manual) (for the LDM)
- config_ops_doc.pdf (Configuring and Operating Passport 4400 Software in pdf format-delivered for printing requirements)
- config_ops_doc.exe (Configuring and Operating Passport 4400 Software in self-extracting executable archive format)
- config_ops_doc.tar (Configuring and Operating Passport 4400 Software in Unix format)
- ConfigOpsDoc (Configuring and Operating Passport 4400 Software files uncompressed, accessible from the CD-ROM)
- rs4002418.pdf (Previous Release Notes, 800-1953-40, Rev B in PostScript)

Upgrading from Previous Releases

> ➡️ **Note:** Be sure to upgrade your base unit and all your voice modules. This ensures that the unit will support all Release 4.0.x functionality.

- The 16 MB Flash SIMM and 16MB memory SIMM must be installed before upgrading. If it is not and you attempt to upgrade, an error message similar to the example will display:

```
CLI>
Bus Error
Program Counter: 0x11008b36
Status Register: 0x3004
Access Address : 0xffffffff
Special Status : 0x0085
Task: 0x11c381dc "TftpHndlr"
WachDogTask: TftpHndlr task is suspended with taskStack info:
11266650              : 11140ade (0, 0, 0, 0, 0, 0, 0, 0, 0, 0)
11140bc6              : 11141148 ([0, 0, 0, 11266652, 0])
11141218              : 11141598 ([0, 0, 0, 114a9874, 0])
1114168e              : 111418dc ([11c38126, 1, 1, 114a9874, 11c30001)
11141916              : 111430ee (11c10ae8, 200)
111433aa              : 111439a0 (2)
11143a7e              : 11143afa (11c13f28, 2, 7)
11143b8e              : 11008a8e (d5, 0)


RESETTING the system in 5 sec ...
```

Important! Always extract the latest MIBs from the software bundles and replace your old MIBs with the most current version. If there are several software versions, use the most current version of the MIBs.

Upgrading from Release 2.0

> ➡️ **Note:** You can only upgrade from 2.0, if your hardware supports the upgrade. See the Hardware Requirements page 17.

If you are upgrading from Release 2.0.3 through 2.0.7 to Release 4.0, you must first upgrade to Release 2.0.8 or later, then you must upgrade to Release 3.1 and finally to Release 4.0.x. This phased approach is required. Refer to the Procedure for Downloading Application Software; for this upgrade, you must use the CLI procedure.(60315765)

2.0.8➜3.1➜4.0

Procedure for converting from Release 2.0.8 to Release 3.1.x.

> ➜ **Note:** *When upgrading from 2.0.9 and earlier to 2.0.10 and above or 3.1.x,* during the upgrade the fax rate parameter (in voice profile) *must be* set to 7200. After upgrading, you may change the parameter. When upgrading from Release 2.0.x to 4.0, any IP routing RIP compatibility parameters that were configured as RIP1 will be converted automatically to RIP1Compatible. If RIP1Compatible is not the desired RIP setting, you will need to change this parameter back to RIP1.

1 Load the Passport 4400 Release 3.1.x software onto your TFTP server. The files can be obtained from your Certified Distributor or Account Manager. These are available to the Certified Distributor or Account Manager from one of the following sites:
http://esweb2.us.nortel.com/imds?pg=/prod/passport4000
http://www3.nortelnetworks.com/iso/protect/FtpServer
http://www3.nortelnetworks.com/iso/protect/passport/index.html
http://www57.nortelnetworks.com/gobal/products/passport/software.html

2 If necessary, start a Telnet session with the Passport 4400 and access the CLI.

3   If necessary, disable weighted round robin traffic management:

   `define tm weightedRoundRobin disabled`

4   Check for 16 MB Memory SIMM.

   `show system system`

   (If you do not have this, contact your Certified Distributor or Account Manager.)

5   Verify you can PING the TFTP server. If not, add an IP address to the Ethernet port or a route to the TFTP server.

6   Verify your config upload bank

   `show tftp parameters`

7   Upload the working 2.0.x config file to the TFTP server.

→   **Note:** If for any reason you need to return to 2.0.x. You will need a copy of this original 2.0.x configuration.

   `upload base config specific {TFTP Server address} {Config filename in quotes}`

8   Verify the upload succeeded.

   `show tftp err`

9   Download the Release 3.1.x application code onto the Passport 4400 using TFTP.

   a   Commit the application code bank that will be write-protected during the download. Example:

      `set system firmware commitcodebank bank1`

      This will write-protect application code bank 1. The application code will be downloaded into bank 2.

   b   Download the boot code. Example:

      `download base image specific 192.168.15.30 "bt31xxxx.bld"`

This will download the file bt31xxxx.bld from the TFTP host with the IP address 192.168.15.30. (where the *x*'s represent the current version/filename)

c Download the application code. Example:

```
download base image specific 192.168.15.30
"pr31xxxx.bld"
```

This will download the file pr31xxxx.bld from the TFTP host with IP address 192.168.15.30. (where the *x*'s represent the current version/filename)

10 Verify the downloads succeeded.

   a `show tftp err` shows the download successful

   b `sh sys image` shows the file name and bank

11 Commit the new application software to the write-protected bank. Example:

```
set system firmware commitcodebank bank2
```

12 Restart the Passport 4400.

```
reset system current reset
```

13 Upon bootup you will receive a message indicating the following: "This action requires a <save config update> to keep the changes."

14 Reboot the system and verify operation.

```
reset system curr reset
```

15 Reconnect to the CLI. If necessary, establish another Telnet session with the Passport 4400.

16 Re-enable weighted round robin traffic management, if necessary:

```
define tm weightedRoundRobin enabled
```

17 If you used rip1 operation, the upgrade will change the operation to rip1compatible. To return to rip1 operation, enter the following:

define ip base ripCompatibility rip1

> **Note:** When migrating from Release 2.0.8 to Release 3.1.x, the following parameters need to be checked:
>
> - Nodes using FR tunnel Ifindex 149. The parameters will return to the default parameter. You will have to reconfigure that parameter.
> - FR tunnel, after upgrade, defaults to 64 Kb/s, which will give you 5 voice calls. You must configure FRtunnel **(frtunnel)** parameters for additional calls.
> - In Release 3.1.6 and later the charidle default is now 126 (7E) (flag).

Additional Considerations:

Upgrading from Release 3.1

Refer to the Procedure for Downloading Boot and Application Software Using the CLI which follows. For this upgrade, you must use the CLI procedure.

> **Note:** You can only upgrade from 3.1, if your hardware supports the upgrade. See the Hardware Requirement page 17.

- IP Prioritization compatibility between Release 3.1 and Release 4.0.x: Do not enable IP Prioritization until all units in the network have been upgraded to Release 4.0.x. Release 3.1.x units do not recognize or support IP Prioritization.

- Hoot N Holler compatibility between Release 3.1 and Release 4.0.x: In mixed networks, the Release 4.0.x units should be set to **Master**, *not Slave*.

- Idle Char parameter: In Release 3.1.3 and earlier, the default of 255 set the idle character as flag (7E). In Release 3.1.4 and later, 255 sets the character to mark (FF). In Release 3.1.6 the default has been changed to 126 (7E) (flag), so if you factory default the unit, the idle fill character will be 126 (7E). If you are upgrading from 3.1.5 or below and do not factory default the unit, you must manually change the parameter to 126 (7E).

Upgrading from Release 4.0

Refer to the Procedure for Downloading Boot and Application Software which follows. For this upgrade, you can use either the Passport 4400 Configurator or CLI.

Downloading Software Using CLI

Procedure for Downloading Boot and Application Software Using the CLI

> **Note:** You can use this procedure for upgrading software for Release 3.1 and 4.0.

1 Load the Passport 4400 Release 4.0.x software onto your TFTP server. The files can be obtained from your Certified Distributor or Account Manager. These are available to the Certified Distributor or Account Manager from one of the following sites:
http://esweb2.us.nortel.com/imds?pg=/prod/passport4000
http://www3.nortelnetworks.com/iso/protect/FtpServer
http://www3.nortelnetworks.com/iso/protect/passport/index.html

2 If necessary, start a Telnet session with the Passport 4400 and access the CLI.

3 If necessary, disable weighted round robin traffic management:

```
define tm weightedRoundRobin disabled
```

4 Check for a 16 MB Flash SIMM.

```
show system system
```

5 Check for the required hardware revisions on the cards. (Refer to Ethernet Base Module: NTAU01BA or later. The face plate on the Ethernet Base Module contains a tag with your part number. (For further information see .)

6 Verify you can PING the TFTP server. If not, add an IP address to the Ethernet port or a route to the TFTP server.

7 Verify your config upload bank

```
show tftp parameters
```

8 Upload the working 3.1.x config file to the TFTP server.

→ **Note:** If for any reason you need to return to 3.1.x. You will need a copy of this original configuration.

```
upload base config specific {TFTP Server address} {Config
filename in quotes}
```

9 Verify the upload succeeded.

```
show tftp err
```
shows the upload successful

10 Download the Release 4.0.x code onto the Passport 4400 using TFTP.

a Commit the application code bank that will be write-protected during the download. Example:

```
set system firmware commitcodebank bank1
```

This will write-protect application code bank 1. The application code will be downloaded into bank 2.

b Download the boot code. Example:

```
download base image specific 192.168.15.30
"bt40xxxx.bld"
```

This will download the file bt40xxxx.bld from the TFTP host with the IP address 192.168.15.30. (where the *x*'s represent the current version/filename)

c Download the application code. Example:

```
download base image specific 192.168.15.30
"pr40xxxx.bld"
```

This will download the file pr40xxxx.bld from the TFTP host with IP address 192.168.15.30. (where the *x*'s represent the current version/filename)

11 Verify the downloads succeeded.

a `show tftp err` shows the download successful

b `sh sys image` shows the file name and bank

12 Commit the new application software to the write-protected bank. Example:

```
set system firmware commitcodebank bank2
```

13 Reboot the system and verify operation.

```
reset system curr reset
```

14 Reconnect to the CLI. If necessary, establish another Telnet session with the Passport 4400.

15 Re-enable weighted round robin traffic management, if necessary:

```
define tm weightedRoundRobin enabled
```

16 If you used rip1 operation, the upgrade will change the operation to rip1compatible. To return to rip1 operation, enter the following:

```
define ip base ripCompatibility rip1
```

17 The last step is to extract the latest MIBs from the software bundle and replace your old MIBs with the new ones. If there are several software versions, use the most current version of the MIBs.

Procedure for Downloading DSP and T1/E1 Module Software Using the CLI

When the Passport 4400 unit initializes for the first time using the 4.0.x software, one or both of the following messages may be displayed on the CLI (60105233, 60105242):

• DSP software version on the voice module (*version number*) does not match the one in image bundle (*version number*). Downloading the new voice software is mandatory.

• E1/T1 software version on the E1/T1 module (*version number*) does not match the one in image bundle (*version number*). Downloading the new E1/ T1 software is mandatory.

The following procedures should then be performed (as required):

• Downloading Voice Software

• Downloading T1/E1 Software

> **→** **Note:** You cannot use the Passport 4400 Configurator to perform the procedures described in this section.

Procedure for Local Download of Voice Software Using CLI

1 Enter the following command to download 4.0 voice software to a specific voice channel on your Passport 4400 unit:

```
download voice channel (card number) (channel number)
download
```

Logical Location number:	LimB | LimC | LimD | LimE	The location of the voice module within the Passport 4400 unit.
Channel number:	INTEGER (1..12)	The voice channel number.

2 Enter the following command to download 4.0 voice software to all voice channels on your Passport 4400 unit:

```
download voice allChannels download
```

Procedure for Local Download of T1/E1 Software Using CLI

Enter the following command to download Release 4.0.x T1/E1 software to the T1/E1 module on your Passport 4400 unit:

```
download t1e1 download
```

Downloading Software Using the Passport 4400 Configurator

Procedure for Downloading Application Software Using the Passport 4400 Configurator

> ➡ **Note:** This procedure works for downloading software at Release 4.0 and later. You cannot use the Passport 4400 Configurator for upgrading from Release 3.1.x and earlier.

Use the procedure below to download application code. The following steps must be performed:

- Commit the application code bank.
- Enter the IP Address of the TFTP host workstation that contains the download code files.
- Save the Current Configuration and Reset the Unit.

Commit the Application Code Bank

1 Click on *Administration*.

2 Click on *Code Bank*. The Code Bank window opens:

Code Bank

System Code Image Read From Bank: 2

Commit Bank: [2 ▼]

[Save]

3 Next to Commit Bank, use the pull down menu to select *1*.

Bank 2 is now uncommitted, and a subsequent application code download will write to Bank 2.

4 Click *Save*. A "*Command Successful*" appears.

Enter the IP Address of the TFTP Host Workstation that Contains the Download Code Files

1 Under Administration, click on *TFTP* Operation. The TFTP Operation window opens:

TFTP Operations [PUB SB]

Server IP Address: 199.20.30.77

Save

2 In the Server IP field, enter the IP address of the TFTP host workstation where the download code files reside.

3 Click *Save*. A "*Command Successful*" appears.

4 At the top of the window, click on *Code Download*. The TFTP Code Download window opens:

TFTP Code Download [PUB SB]

Filename: pr400008.bld

Download (from Server)

5 In the Filename field, enter the filename and path (if applicable).

6   Click *Download (from Server)*. The TFTP Status window opens:

TFTP Status [PUBSB]

Current State: Retrieving File

Transfer Mode: None

Last Transfer Status: Transferring File

This window displays the progress of the download process.

7   You must reset the unit and save the configuration. Refer to Save the Current Configuration and Reset the Unit.

Save the Current Configuration and Reset the Unit

1   Click on *Administration*.

2   Click on *System Reset*. The System Reset window opens.

3   In the Reset Type field, use the pull down menu to select *Configuration*. Click *Reset*. A unit reset confirmation message is displayed.
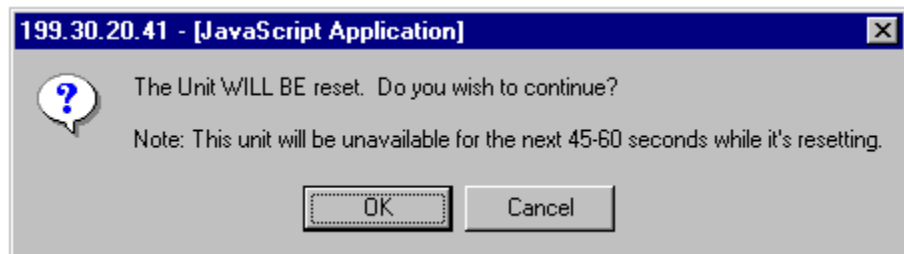
4   Click *OK*. A display will show you the reset progress.

When the autoboot sequence begins, the newly-saved configuration in bank 4 will be read and loaded into DRAM, and the rollback timer will start.

Upgrading DSP Code and T1/E1 Module Software Using Passport 4400 Configurator

Configurator Procedure for Downloading the Local T1/E1 Software

> **→** **Note:** This procedure works only for downloading Release 4.0 and later software. You cannot use the Passport 4400 Configurator web pages for upgrading from Release 3.1.x and earlier.

1 To begin downloading local T1/E1 software, select *Configure, Voice,* and *System Action*.

▼ Configure
  ▶ System
  ▶ Physical Interfaces
  ▶ WAN/Data
Services
  ▶ Protocols
▼ Voice
  ◆ Channels
  ◆ ISDN BRI
  ◆ T1 / E1
  ◆ V / IP
  ◆ System Action

You will see the Voice System Action window:

Voice System Action [Pubs B]

System Action: [Download ▼]

[Save]

2 At the top of the window, select the *T1E1 System Action* link. You will see the *T1E1 System Action* window:

T1E1 System Action [Pubs B]

System Action: Download

Save

3 Use the pull down menu to select *download*.

4 Click *Save*. A "*Command Successful*" appears. The download is now being performed.

Configurator Procedure for Downloading the Local Voice Software

> **Note:** This procedure works only for downloading Release 4.0.x software and later. You cannot use the Passport 4400 Configurator web pages for upgrading from Release 3.1.x and earlier.

The following procedure executes a voice download for all voice channels. The Configurator does not perform specific voice channel downloads.

1 To begin downloading local voice software, select *Configure, Voice,* and *System Action*.

▼ Configure
  ▶ System
  ▶ Physical Interfaces
  ▶ WAN/Data
Services
  ▶ Protocols
▼ Voice
  ◆ Channels
  ◆ ISDN BRI
  ◆ T1 / E1
  ◆ V / IP
  ◆ System Action

You will see the Voice System Action window:

Voice System Action [Pubs B]

System Action: Download ▼

Save

2 Use the pull down menu to *Download*.

3 Click on *Save.* A *Command Successful* appears. The download is now being performed.

Returning to Release 3.1.x

Returning to an earlier release is a difficult process, which should only be attempted by your Account Manager or Certified Distributor. All application files and configuration must first be removed using the bootup menu. Bootcode and image must then be downloaded to the unit. (50125969)

Upgrading Install Tool from Previous Releases

Install Tool is the recommended tool for initially configuring the basic services of your Passport 4400. It is sufficient to make the unit accessible within a Passport network. Install Tool Version 4.1 supports Release 4.1 and Release 3.1 of the Passport 4400 software. To install Install Tool, you must first remove the previous version of the software. Since configuration parameters are not stored in the software, you will not lose any previous configuration. Refer to *Using Passport 4400 Install Tool v4.1* for instructions in installing and initializing the software.

Passport 4400 and 6400 Interworking

In the case of Passport 6400 to Passport 440 interworking, it should be noted that the Passport 4400 does not support or recognize the octothorpe (#) character in the dialed digit string from the Passport 6400. For this reason, the dialed number from the Passport 6400 is restricted to the characters 0 - 9. (10372948)

For proper interworking between the Passport 4400, Release 4.0 and the Passport 6400, the following 6400 release levels are required:

- Release 7.0
- Release 5.1
- Release 5.0
- Release 4.2

> **Note:** Support for Passport 6400 Release 4.2 and 5.0 is not available after June 30, 2000. For more information, contact your Certified Distributor or Account Manager.

> **Note:** Not all Passport 4400 features are supported on all releases of Passport 6400. Check with your Certified Distributor or Account Manager to understand the feature set compatibility.

> **Note:** When configuring FRDCE service with frame relay SVCs between a Passport 4400 and the Passport 6400, the Passport 4400 must be set to **Master**, and the Passport 6400 to **Slave**. Traffic Management with rate enforcement "enabled" allows for correct operation of the configured CIR bandwidth. (60107059)

For Passport 6400 to Passport 4400 interworking, an incoming Passport 4400 call request is invoked by one of the following conditions:

- An inter-digit time out occurred
- The maximum number of digits was reached
- The end-of-dial character was hit and the profile was changed

The octothorpe (#) character in the ingress table (representing a wildcard) allows for any incoming dialed digits to be processed until any of the above conditions are satisfied for a call request to be invoked. (60333263)

On the Passport 4460, the WAN link will not establish a connection through the serial port if the baud rate is above 134.4 Mb/s. If the baud rate is set lower, the SVC and link will establish a connection. When using a V.35 or V.36 interface, it is recommended that the "Transmit Signal Element Timing (DTE Source)" signal be used, especially at high data rates. (60335312)

Passport 4400 and Meridian Interworking

Meridian Release 24 does not work with Passport 4400 BRI voice applications. Release 23 has been fully validated with Passport 4400 Releases 3.1 and 4.0. Testing in the Simi Valley labs has determined that Meridian Release 24 will not interwork over the BRI using Qsig. (10284598)

Network Management

- OMS Release 4.0.1.
- NMS Release:
    - 11.3 C (You will need the 11.3 CD plus the 11.3C CD for 4400 management). This one is recommended for Release 4.0.
    - 11.2 (plus the NMS 11.2C companion CD).

> → **Note:** If you are using the SNMP Integrator for Passport 4400 Management in NMS 10.9, upgrading involves an HP OpenView-based solution. You will need HPOV 5.01 or 6.01 as part of the Passport 4400 data collection to feed into NMS.

Chapter 2
New Features and Software Enhancements

New Features in Release 4.0.1

The ability to enable or disable the daylight savings time feature is now possible. Previously, daylight savings time was an automatic feature which could not be disabled. By default, daylight savings time is turned on.

New Hardware Features for Release 4.0

Voice/Fax Switching Interface Module

Introduced in this release, this module combines an FXS interface with a line-sharing/fax-sharing unit, which permits a fax machine to receive a call from either a voice/fax channel in the Passport 4400 network or from the PSTN.

Hardware Data Compression

- SIMM that plugs into base module.
- Hi-fn (STAC) chip, providing a 2:1 compression ratio.
- Conforms to FRF.9.
- Additional compression achieved through idle flag suppression.
- Compression configurable for all RFC 1490 data streams such as SNA traffic, IP/IPX LAN traffic, and X.25 traffic.
- Modes 0, 1, and 2.

ISDN BRI Voice Module Update/Upgrade (NTAU76CA)

- External synchronization is now provided via a clock sync module (daughter board) installed on this module.
- No configuration required to operate this feature. The module will always look for its clock source from WAN 2 port when configured as NT.
- Required Ethernet Base Module NTAU01CA Rev. 05 or later.
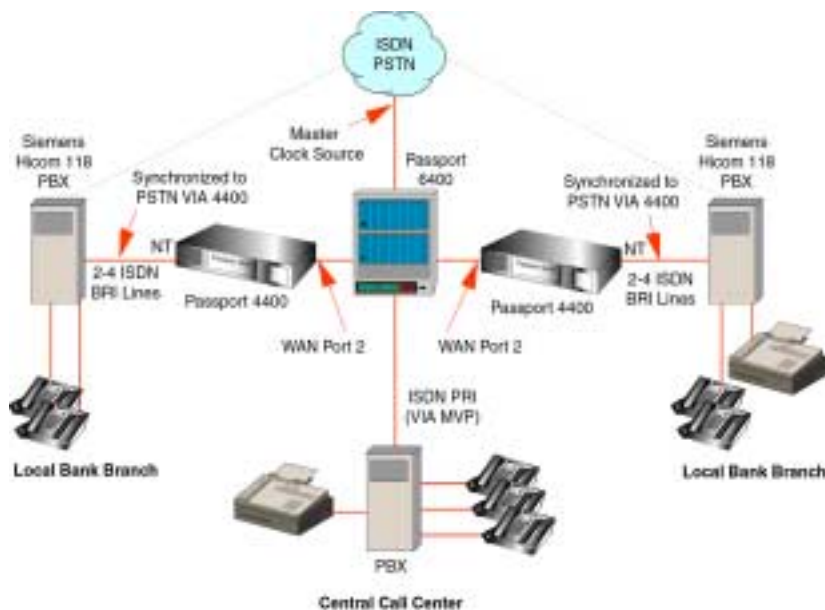
> **Note:** The connections will depend on the specific site requirements. If you are not sure of the connections required for the Passport 4400 unit, consult your system administrator or Certified Distributor or Account Manager.

> **Note:** Refer to the Manual Update section of these notes for additional information on this module.

New Software Features for Release 4.0

LEAPS (Legacy Access Protocol Services)

- New legacy services that connect directly to the base and HDM serial ports.

SNA Services

- SNA Services provide the Passport 4400 unit the ability to switch and transport SNA over SDLC and SNA over LLC2 (Ethernet). SNA data can be switched between local ports on the unit, or, data can be carried across the WAN over a PANL link or over a frame relay network. SNA SDLC supports the following:
  - multi-drop
  - local spoofing
- When sending SNA services over the WAN, either SDLC or LLC2, all packets are encapsulated in Boundary Access Node (BAN). BAN encapsulation allows connectivity to the following:
  - Passport 6400
  - Bay router products
  - 3rd party FRADs

X.25 Services

The X.25 services provide connectivity between X.25 data terminal equipment (DTE) over a Passport WAN (PANL). The X.25 services also support X.25 calls between a DTE connected to a Passport 4400 unit and a DTE connected to a FRAD over a frame relay network using RFC 1490 PVC conforming to ANSI T1.617a 1994 Annex G. The X.25 services include the following:

- local flow control
- local termination and spoofing
- switching to multiple destinations
- X.25 PVCs and SVCs

Async over TCP/IP (AOT)

- A wide area network protocol that enables transport of asynchronous data packets over a transmission control protocol/internet protocol (TCP/IP) network. TCP/IP transport provides built-in error correction.

- Can either be a point-to-point or multi-point interface.

> → **Note:** If a multi-point network is required, an AN/ARN router must be used as the multi-point node.

- X-on/X-off software controls/prevents data loss.

OSPF (Open Shortest Path First)

OSPF minimizes network convergence times within IP networks. OSPF is an IP routing protocol, classified as an Interior Gateway Protocol (IGP). This means that it distributes routing information between routers belonging to a single Autonomous System (AS). The OSPF protocol is based on link-state or Shortest Path First (SPF) technology. OSPF allows interworking with Passport 6400, Bay Routers, and third party FRADs/Routers.

IP Filtering and Prioritization

IP Prioritization is used in the Passport 4400 network to enhance the performance of various application packets. Application packets are often transferred with regular traffic. If priority control has not been configured, smaller packets are blocked by larger ones, which can cause long delays and packet loss.

IP Prioritization enables three SVCs utilizing high, medium, and low traffic management.

The IP traffic filtering and prioritization feature allows you to configure the prioritization of an IP packet based on the layer protocol type, source address, destination address, and port number.

> → **Note:** IP Prioritization is a PANL feature only.

Support for Dual DHCP Servers

This feature offers redundancy if the primary DHCP server is unreachable.

Auto Ring Down (ARD)

- When the telephone goes off-hook, the remote side rings with NO set up delay. This is used with Hoot N Holler for "nailed up" applications.
- Enables voice mail applications by passing the call through to the remote end causing the remote phone to ring. If there is no answer, the call will go to voice mail.

Premium Voice (Tandem Voice Passthrough)

- Compressed voice is now passed through a tandem PBX without decompression.
- PBX provides CCS switching without additional voice delay.

> **Note:** This feature only works with another Passport 4430/50/55 with Release 4.0.

Voice over IP (VoIP)

- Voice over IP over Ethernet and frame relay.
- Voice over IP is a new service that allows voice calls to be transported within Ethernet LANs, the Internet, and corporate TCP/IP networks. This new service uses:
  - NAS/NAC (Directory Server) for automated look up and routing of calls
  - ToS (Type of Service) to help ensure QoS (Quality of Service), and RTP (Real Time Protocol) provides end-to-end delivery services for IP packets with real-time requirements.

- Voice over IP and Voice over Frame Relay operate simultaneously in the same unit.
- Available in all Passport 4400 voice modules and voice services.

> ➡ **Note:** VoIP is not supported over RFC 1490 PVCs.

Install Tool 4.1

- Now supports 4.0 features (as well as 3.1 and 4.1).
- Adds service-specific wizards.
- Increases the amount of information collected for the Passport 4400 regarding status and troubleshooting/diagnostic information.

Passport 4400 Configurator

The Passport 4400 Configurator is an embedded web server and HTML pages, which resides in the operating code of each Passport 4400 unit. Passport 4400 Configurator performs complete Passport 4400 device configuration, monitoring and diagnostics using Netscape Communicator Release 4.5 (with Navigator browser 4.08) or later and Internet Explorer 4.01 SP2 or later. Passport 4400 Configurator serves as an alternative to the Command Line Interface (CLI).

> ➡ **Note:** Passport 4400 Configurator is released at Version 4.0. Some references in the documentation may reference Version 1.0; this was a preliminary version number. Version 1.0 and 4.0 are essentially the same.

Software Enhancements from the Previous Release

- Enhanced video support for CBR. You can now run video up to 512 Kb/s. Previously this was not supported.
- Increased RFC 1490 PVCs from one to twelve.
- CRC errors and CTS/RTS control signals now displayed via Command Line Interface.
- Backup Link Switchback timer is now configurable to 24 hours.
- Interdigit delay and Regeneration Delay Timers are now configurable from .1 sec (100ms).
- Management port parameters are now fixed at 8 data bits, 1 stop bit, no parity.

Chapter 3
Operational Notes and Known Issues

> **Note:** To further ensure proper operation of the Passport 4400 4.0.x software, please refer to the Passport 4400 Engineering Notes and Guidelines document, which can be found on the following Web site:
>
> http://esonline2.us.nortel.com/imds?pg=/dept/cse/eng_notes/pp4000
>
> This document provides guidelines to proper integration of the Passport 4400 into your network, and offers suggested configuration settings based upon specified network scenarios.

Resets

In resetting the unit, it is recommended that you use the **reset system current** option to reset all the devices within the unit (hardware reset). In many cases, selecting **reset system cpu** is not adequate, because only the cpu software will reset.

General Operational Notes

- Changing the IP address of the unit without changing the PC dial-in IP address for the PPP over management port functionality may prevent access of the Configurator or Install Tool.

- Idle Character: In Release 4.0, the idle character default is now 126 (7E) flag; to get a mark (FF), set your idle character to 255. (60319119)

- When using the IP priority feature between the Passport 4400 and Passport 6400, a problem has been seen where the priority of an outgoing FTP file transfer tagged as *High* is erroneously tagged as *Low* when forwarded from the Passport 6400. This problem has only been seen with FTP and not with other types of IP traffic. It is being researched if this is a product defect or configuration issue. Contact your Certified Distributor or Account Manager for additional information and updates.

- Before opening/starting your Passport 4400 Configurator, ensure that "cookies" is enabled in your web browser (refer to your browser documentation).

- The standard idle character for SDLC multi point is flag 126, (7E). In the event mark 255 (FF) is required and the primary station uses "two-way alternating data transfer protocol", set the window size to "1" (def sna switching Node defsendwindow 1). This eliminates the retransmission of frames. (60329981)

- CBR: The choice of transfer modes does not apply to CBR. CBR service must use cut-through transfer mode. Do not configure CBR with store and forward mode. (30326640)

- In applications where the Passport 4400 is connected to bank ATM machines: To verify the connection, use the CLI command sho wan parameters port operation table. The DTR or DSR will show the control lead status, active or not active. This is application for RS-232, V.35, V.36 interfaces. For X.21 applications, the status indicators are not applicable. The indicators will show NA (not applicable). (50324704)

- Before reconfiguing Async over TCP (AOT) to a different interface, you must first delete the AOT interface and AOT peer. If you do not do this, the streams associated with AOT will not release the WAN driver. (60330327)

SNA Services

- 60316562

  In certain network configurations the host may poll the controllers before the Passport 4400 unit establishes SNA communications. Some SDLC PUs may not become active immediately. The PUs may require a second poll from the host in order to become active after the Passport 4400 unit is restarted.

  One or more PUs may require an additional poll from the host before they will become active.

In order to reduce the amount of time the additional polls are sent from the host to the Passport 4400 unit, the poll timer can be set to a shorter interval. On the AS/400, within the controller description, the NDMPOLLTMR parameter can be set to a value of 1, which will cause the AS/400 poll the controller after 0.1 seconds, if there has been no response by the controller.

- 60320500

  When the unit is configured as SNA DCE with mark fill and frames are fragmented, set the window to 1 (one). This will eliminate possible retransmits.

Async over TCP/IP

The following sequence of commands needs to be performed when changing a port from async service to synchronous services (CBR, HTDS).

> del aot int IfIndex [number]
>
> def wan port ProtocolSupport cbr

> **Note:** Any WAN port protocol service must follow the same sequence of CLI commands.

If this is done out of sequence the system administrator will have to delete the new service switchmap, reset the node, re-define the port protocol as AOT, and then follow the sequence defined above. (60330327)

Voice Requirements

- Passport 4400 Network:
- You must set up the NAS/NAC services prior to establishing a call across the network.

- Note that when you set the fax rate (in voice profile) to 9600, voice calls will have 13,000 b/s reserved bandwidth. Because of this, the number of calls permitted across the WAN will be reduced. In Release 4.0 and later, there is feature that disables the bandwidth allocation. Information on this feature is documented in the Configuration and Operation online documentation. Be very careful with this parameter as it permits bandwidth overbooking which can result in voice degradation.

- RSI Server DNA: Do not add any RSI servers with a DNA that duplicates an existing RSI server's DNA.

- Voice over IP (VoIP) is designed in this release for operation in only two ways:

- As a gateway behind a router.

- Connecting a frame relay and IP network together. (10309543)

> → **Note:** Do not use VoIP over RFC 1490.

- Passport 4400 Interworking with a Passport 6400:

- You must provision the VNCS RSA/RSI services prior to establishing a call across the network.

- Regardless of the configured fax rate, all calls from the Passport 6400 MVPs will have 13,000 b/s reserved bandwidth for the voice session.

- When you have voice or fax operating over the network and you perform a save function (from CLI, Passport 4400 Configurator, or Install Tool), there will be a momentary loss of voice or fax quality. Your fax call may drop. (60107780)

Issues Resolved in Release 4.0.2

Passport 4400 Configurator

- **Issue Resolved:** Several spelling errors were corrected in the help pages. (60334958)

System Software

- **Issue Resolved:** The "show port parameters entry" command now shows the correct status after a "set port admin down" command is requested. (10348821)

- **Issue Resolved:** ISDN BRI voice path replacement and Call Diversion are now working correctly. (10354128) (10354543)

- **Issue Resolved:** When the ninth IPX virtual port was configured and the configuration was invoked, the Passport 4400 initialization of the port was not successful. To improve this situation, the maximum number of IPX ports was increased from 8 to 16. (50340810)

- **Issue Resolved:** The X.21 interface reflects a "NA" (not applicable) status for the DTR control status indication. (60326757)

- **Issue Resolved:** The CLI command "show status for CBR service with X.21 interface" now correctly displays the status of the physical connection when the cable is connected or disconnected to the Passport 4400. (60329942)

- **Issue Resolved:** RFC 1490-links now recover properly after a link goes down. Also, the PVC status updates correctly. (60329971)

- **Issue Resolved:** The CBR service with X.21 interface now displays the correct status for LocalPVCDLCIState, SVCUserDLCIState, SwitchDisconnReason when the CLI command "show fr switch map operation table" is used. (60332988)

- **Issue Resolved:** The BRI voice now displays the voice input level in the CLI show command. (60330131)

- **Issue Resolved:** Frame relay services now transfer information in full-duplex after a loss and recovery of the ISDN primary line. (60330504)

- **Issue Resolved:** ISDN primary services now restore correctly after a physical connection and reconnection of the cable. (60330559)

- **Issue Resolved:** When executing the CLI command "show voice channel table," the display RemoteChsig protocol erroneously indicated a blank field. It now correctly displays the remote channel signaling for a switched call. It also shows the remote channel signaling for Hoot and Holler. (60330610)

- **Issue Resolved:** The HTDS Flag Fill mode now uses DTR control to activate the service. (60332610)

- **Issue Resolved:** The end-of-dial character (#) now activates a call immediately for BRI voice application in overlap mode. (60333377)

- **Issue Resolved:** The CBR service now works correctly with the X.21 interface. (60333665)

- **Issue Resolved:** The CBR service now uses less CPU processing at 4800 b/s. (60333696)
- **Issue Resolved:** The version for BRI voice software is now displayed in the "show table channel table" command. (60333451)
- **Issue Resolved:** The ARD Hoot and Holler voice channels would time out and needed the system reboot to recover. To deal with this, the Timeout interval was set to 10 seconds and a new timeout retry counter was added to prevent voice channels from having erroneous timeouts. (60335713)

Issues Resolved in Release 4.0.1

Hardware

- **Issue Resolved:** Hardware Device U67 device has been replaced with a more robust device. This device is the RS232 receiver for the Management Port. (60094049)

Configurator

- **Issue Resolved:** A new page has been added for configuring GCM Global settings and pages to Add, Delete, and Modify and view GCM links. The GCM Unit Admin Status is "greyed out" if the Global AutoAct Sel status is set to hardware Config. The RegionalLinkIndex parameter has been added to the Modify GCM Unit page. (60105647)
- **Issue Resolved**: Added a script creating the table color-based Progress Bar used specifically for IE. (60105253)
- **Issue Resolved**: Changed field title 'Name' to 'System Name' in the Configure/Protocols/IPX/Interfaces/Add circuit. (60318313)
- **Issue Resolved**: Added the SNA Switching Node page and renamed the SNA Switching references to the SNA Switching Link. (60318505, 60318506)
- **Issue Resolved**: The problem regarding the Individual X.25 Statistics HTML page has been corrected. The Call Request/Indication Packets Received will now return a value. (60318693)
- **Issue Resolved**: 'Local and Remote Component Names' has been added to the MSM Link Status page. (60319275)

- **Issue Resolved**: Modified internal index to verify IP address fields. Previous version had tried to validate the IfIndex as an IP address, which always failed. (60321263)
- **Issue Resolved**: The encountering of missing status/statistics information was due to duplicate SNMP object names being present in the 'mibtable' file, which is used to translate the SNMP object names to OIDs on the Web pages. (60322170)
- **Issue Resolved**: The user can enable or disable daylight savings time through the Configurator. (60325577)
- **Issue Resolved**: Two new objects were added to 'WAN Signaling Status' page to track the DTR and DSR status through the Configurator. (60325661)
- **Issue Resolved**: A new parameter, LlcPortLocalRingNum, was added to 'Modify an SNA LLC2 Port' page to keep track of the number of LAN rings. (60325709)
- **Issue Resolved**: Changed the 'Save Bank' field from a 'select box' to a static text field, preventing the user from selecting a non-configurable option. (60329002)
- **Issue Resolved**: Added support for a new voice parameter (Configure ->Voice ->Channels: Voice Switching Profile). (60329123)
- **Issue Resolved**: Added an improvement which forces the page to reload itself from the server instead of using the cache each time the page is displayed. Resolved a problem where 'cached' information was being displayed instead of 'actual' information. (60329249)

System Software

- **Issue Resolved:** The Lost Control Frames voice statistics no longer registers when the voice channel is connected to a Passport 6400 voice channel. (10272707)
- **Issue Resolved:** Any remote connection reports the same message (PP MVP DS1) for either an MVP or an MVPe. (10344820)
- **Issue Resolved:** The system software can detect a migration and the version to which the system is migrating. In the event it is 3.1.3 or lower to 3.1.4 and higher or 4.0 or higher, then a warning message prompts to reconfigure the idle character. (50321447)
- **Issue Resolved:** The parameter value for EgressString has been changed to 0 to 36. (50318825)

- **Issue Resolved:** Passport 4400 Basic Mode and Spoofing enabled now allows clients to attach to servers. (60088213)

- **Issue Resolved:** A problem sometimes occur when a configuration panel and a test panel were opened simultaneously on the same port. The flashing affected all the ports and the backpanel display. (60103370)

- **Issue Resolved:** The Embedded Web Server has self-imposed restrictions on maximum OID (Object Identifier) length. The limits have been increased. Specifically, kMaxNumIndices has been increased from 10 to 20; kMaxOldLen has been increased from 64 to 80. (60106750)

- **Issue Resolved:** The default for "virtualsegmentlfsize has been changed from 516 to 521. (60314773)

- **Issue Resolved:** CBR and HTDS Sync Functions. The Passport 4455 running one or two 8-channel High Speed Data Modules (HDM) experience some problems when running CBR and HTDS. (10311756, 60315773)

- **Issue Resolved:** The Passport 4455 now displays the correct system speed. (60319365)

- **Issue Resolved:** The CLI command now displays correctly in the configured and operational tables of the RFC 1490 services: `sh fr port pvc netlink config` table. (60319490)

- **Issue Resolved:** A WanTxISR error message was erroneously being generated on the CLI. This no longer occurs. (60320965)

- **Issue Resolved:** The IP software now responds to the 127.0.0.1 address for an internal loopback. (60321247)

- **Issue Resolved:** When a call is made from a Passport 4400 BRI module to a Passport 6400 MVP card, the phone now displays the called name. (60321397)

- **Issue Resolved:** Interworking problems with 3rd party FRADs and Routers. The Local Ring Number is currently set to null, which is an invalid entry. The SDLC service to 3rd party devices will not initialize. (60322142)

- **Issue Resolved:** Daylight savings time can now be enabled/disabled in the unit. (60322600)

- **Issue Resolved:** The system no longer resets using the async service. (60322880)

- **Issue Resolved:** SPVCs with different priorities connected to three unique DLCI's are now properly reported to the Passport 6400 ARP tables. (60322890)

- **Issue Resolved:** The unit now filters out local Ethernet traffic from being bridged via SNA LLC2. (60323519)

- **Issue Resolved:** Local ring number has been added to SNA LLC2 via CLI. This allows for the correct operation with the Bay router ARN product to support SNA applications properly. (60323650)

- **Issue Resolved:** The time of day has been added to the trap mcmTFTPDownloadFail. (60323910)

- **Issue Resolved:** The command `sh port parameters table now` displays the ISDN Signaling Interface information correctly. (60325463)

- **Issue Resolved:** During the 3.1.5 to 4.0 software upgrade, the system experienced a reset after 20 minutes. This has been resolved and no longer occurs. (60325533)

- **Issue Resolved:** The boot software has been corrected so that the 4-port HDM power up diagnostics no longer fail when WAN ISDN S/T is put in port 3. (60325543)

- **Issue Resolved:** The primary now recovers correctly when using backup manual switching mode. (60325897)

- **Issue Resolved:** The CBR clock drift problem has been resolved. The clock is corrected as soon as any deviation occurs. (60104400, 60317092)

- **Issue Resolved:** No more than 36 digits are now allowed to be entered into the voice ingress and egress numbers. (60320384, 60320390)

- **Issue Resolved:** Virtual ports are retained when switching from primary to backup or from backup to primary links. (60320707, 60320770)

- **Issue Resolved:** The command `sh sy card` displayed an incorrect part number for the single port TVM. This has been corrected.

- **Issue Resolved:** A new parameter, 'LocalRouting', has been added to voice in the voice switching profile. This allows the administrator to turn off local routing (switching) if no local routing is needed. This simplifies the ingress/egress table configurations. (60323048)

- **Issue Resolved:** The length of MAC (Media Access Control) addresses and SAP (Service Access Protocol) addresses were provided from the CLI (Command Line Interface) to the SNMP (Simple Network Management Protocol) agent.

  — Previously, code would only copy MAC and SAP addresses from the SNMP agent buffer area to the LCM (Line Control Module) buffer area. For this reason, the 'sh entry' command never worked unless this command was preceded by the 'sh table' command. Copying the length of SAP and MAC addresses corrected the problem.

— The query buffer, circuit_buffer (defined in sofinitr.c) was mistakenly released in sofstub.c. That caused the lockup of the system. (60323781)

- **Issue Resolved:** When the ISDN S/T module resided in port 3, a 4 port HDM power up diagnostics error occurred. An added chip select fixed the problem of the HDM manufactured information being corrupted when retrieved during the diagnostic test. (60325543)

- **Issue Resolved:** Making a 'Save Con Up' CLI command prevents switching between configuration banks 3 and 4. (60326058)

- **Issue Resolved:** The Passport 4400 at times encountered a data lock up. This was determined to occur when the AOT (Asynchronous over TCP/IP) peer was deleted and added. This instance has been resolved. (60327116)

- **Issue Resolved:** Multinetting is now available on the Ethernet interface. The ARP (Address Resolution Protocol) is now sent for all addresses assigned to the interface. (60327252)

- **Issue Resolved:** When a voice call comes into the Passport 4400 and the requested bandwidth is any value other than 10.8K, the reserved claimed-bandwidth will be 13K. If a Passport 6400 MVP (Multipurpose Voice Processor) call is generated to the Passport 4400, 13K of bandwidth will be reserved. The bandwidth allocation now allows fax operation at 9600 b/s between the Passport 6400 and the Passport 4400. (60327481)

- **Issue Resolved:** The loss of composite a WAN port and the resynchronization of a composite WAN port caused the Frame Relay tunnel to be incorrect. The status, as shown in CLI command, 'Show FR Tunnel Operation Table,' is now shown as active rather than inactive. (60328272)

- **Issue Resolved:** There are no longer instances of Panic Errors and resets when AOT (Asynchronous over TCP/IP) services are configured as *self*. (60328738)

- **Issue Resolved:** A PVC (Permanent Virtual Circuit) LMI (Layer Management Interface) Link Up Trap feature as been added. (60329021)

- **Issue Resolved:** Applications passing SNA (System Network Architecture) traffic from a Passport 4400 unit to the Passport 6400 with token ring interface, now operate correctly. Prior, 802.5_FCS frame checksum for LLC SNA frames were not supported. (60329106)

- **Issue Resolved:** The operational status of the primary link now changes correctly when a switch is made between the backup and the primary link. (60329383)

- **Issue Resolved:** The pulse dial format and 'maxNumFwdDigits=7' now operate correctly when any number of digits are dialed. (60329398)

Issues Resolved in Release 4.0

Install Tool

- **Issue Resolved:** The X.25 Annex G configuration and SNA RFC 1490 configuration screens did not check if the DLCI was already in use on the selected port. This caused a failure when part of the configuration was not completed. This has been resolved. (60102950)

- **Issue Resolved:** The SNA local screen only displayed one Link Station Address, although you could add as many as desired. The problem has been corrected. (60102887)

- **Issue Resolved:** When configuring Transparent CCS, Install Tool assumed that for a dual port E1 card, the signaling data was on Time Slot 16 of the L1 (Local) port. This has been resolved. (60104966)

System Software

- Issue Resolved: The trace log in the debug has been improved to capture and store information when a reset occurs. (10181419)

- **Issue Resolved:** The SNMP Agent did not generate a clear trap for traps cpuutilization or ramutilization. This no longer occurs. (10241428)

- **Issue Resolved:** Meridian 1, Release 24 did not work with Passport 4400 BRI voice applications. This is now fixed. (10284598)

- **Issue Resolved:** Unable to build trap rsiTrap. This is now resolved. (10304112)

- **Issue Resolved:** For every fax call made between Passport 6400 MVP and Passport 4400, the attribute frmLostInNetwork increases. This no longer occurs. (10307212)

- **Issue Resolved:** The Passport 4400 resetting from a HICOM PBX call no longer occurs. If a Call Setup Indication is received from the PBX as a BRI Interface Type in the Channel Identification IE, the call is rejected with Cause Code 66, Channel Type Not Implemented. (30131393)

- **Issue Resolved:** The parameter enums (for dcswitch) has been changed to disabled/enabled to be consistent with other objects in same table. (50134675)

- **Issue Resolved:** The bandwidth utilization displayed for only one primary port when the `show system statistics <port ID>` command was used. This is now corrected. (60082859)

- **Issue Resolved:** When the 56K CSU tx Out of Frame service was invoked and the PANL status displayed *Down*, the 56K link status displayed *Operational* instead of showing an alarm condition. This has been corrected. (60089712)

- **Issue Resolved:** IPX performance was degraded when the Passport 4400 unit was operating at 100% utilization. This has been corrected. Note: Please consult the Passport 4400 Engineering Guidelines document (URL: http://esweb2.us.nortel.com/imds?pg=/ prod passport4000&view=TechnicalTools) to make sure you have configured your Passport 4400 unit(s) to operate properly in your network. (60089850)

- **Issue Resolved:** E1 CSU set commands required the `save configuration update` and `system reset` commands before the parameter configuration took effect. This is now fixed. (60090108)

- **Issue Resolved:** The CLI show presentations were not accurate when you requested a show command after provisioning more than the maxdlcsperline configuration allowed. This is now fixed. (60090355, 60090367)

- **Issue Resolved:** When provisioning an ISDN BRI WAN interface as a *leased line* backup from the Passport 4400 to the Passport 6400, the PANL protocol fails to establish a connection. This is fixed in Release 4.0. (60090368)

- **Issue Resolved:** The CLI command `sh ipx rip cir t` was always 0 for Tx Pkts for all ipx circuits. This has been resolved. (60090878)

- **Issue Resolved:** The loopback feature for troubleshooting the ISDN BRI U interface is now functional. (60091331)

- **Issue Resolved:** The Passport 4400 unit continually output the message *reset dte 162* to the mb3XAP. This no longer occurs. (60096111)

- **Issue Resolved:** The voice channel status has been changed when the digital voice channel is not mapped to a T1/E1 time slot. It was "pcmChannelNotInstalled" and now is "pcmChannelNotAssigned". (60096861)

- **Issue Resolved:** SDLC traffic: There was an extreme delay (300 sec.) before SDLC traffic began to pass through an RFC-1490 BAN network. The SDLC link now becomes active within one minute. (60099706)

- **Issue Resolved:** X.25 PVC stayed in 'out-of-order' state and required a reset. This no longer occurs. (60101926)

- **Issue Resolved:** MIB object rxQueueSize in the WAN MIB has been removed. Is is no longer supported. (60103118, 60103119)

- **Issue Resolved:** A memory leak was found: Basically, all **sh sna** commands caused a memory leak. Install Tool sent **sh sna** commands to a Passport 4400 unit continuously, and the operating system memory depleted very quickly. This no longer occurs. (60103672)
- **Issue Resolved:** Improvements have been made to show the correct remote voice channel status for Hoot N Holler applications. (60103821)
- **Issue Resolved:** LMI failed conformance test cases. This has been resolved and LMI now passes the conformance tests. (60104490, 60104492)
- **Issue Resolved:** The following CLI presentations have been corrected to show 1-36 as the range of options: (60314486)
    — set voice egressTable manipulationString
    — set voice egressTable phoneNumber
    — set voice ingressTable ingressNumber
    — set voice ingressTable ManipulationString
    — set voice nac cache egressString
- **Issue Resolved:** Frame relay CLI displayed a wrong name for attribute "TxPriority." This is now fixed. (60109523)
- **Issue Resolved:** The ISDN hardware revision 8 "U" interface now passes diagnostic after code download during initialization. (60314787)
- **Issue Resolved:** At the Central site, when the ISDN cable was removed, frame relay remained *up*. This no longer occurs. (60314963)
- **Issue Resolved:** GCM MIB correction: it was missing enums for object mcmGcmHwStatusIndex. (60316984)
- **Issue Resolved:** When committing software after downloading new operating code, the Passport 4400 displayed BRI voice channel trap frame sync loss traps erroneously. This has been corrected. (60317396)
- **Issue Resolved:** A BRI voice trap now occurs if the BRI hardware is defective. (60317451)
- **Issue Resolved:** PANL link synchronization was intermittently lost and recovered only after a node reset. PANL recovery has been corrected. (60317464)
- **Issue Resolved:** Setting the SNA llc inact timer to 0 no longer causes a bus error. (60317816)
- **Issue Resolved:** Voice parameters BckGrndNoiseLevel and SilenceHngOvrTime now migrate properly during an upgrade to a new software version of Passport 4400. (60317864)

- **Issue Resolved:** The BRI Voice Module statistics have two new statistic counters: Egrbufunderrun (egress overrun) and egrbufoverrun – (egress overrun). (60317918)

- **Issue Resolved:** Whenever the T1/E1 software residing on the module was different from the one in image bundle, a message prompted you to download the image software. This message sometimes did not show up and sometimes it was misleading. This is now corrected. (60318120)

- **Issue Resolved:** The BRI voice channel did not always complete a call successfully if the call was originated from an external ISDN network. This has been improved for calls from Passport 4400 to Passport 4400. A future upgrade to MVP is required for calls from a Passport 4400 to Passport 6400 to be successful (60318543)

- **Issue Resolved:** The ISDN backup port did not come up after being temporally set to *down* and *up* with CLI commands. This has been corrected. (60318790)

- **Issue Resolved:** After switching to an ISDN backup link and the primary link on port 2 went up and down, PANL connection sometimes did not recover until a node reset was invoked. This has been corrected. (60318813)

- **Issue Resolved:** With the BRI Voice Module in NT mode, during power up diagnostics for the Logical Interface Module (LIM) B, BVM/1 Failed. However, the hardware was operational. This has been corrected to reflect proper status of the diagnostics. (60318868)

- **Issue Resolved:** There is now a fix for the BRI Voice channel fax issue with Cannon model B100. (60319278)

- **Issue Resolved:** The ISDN backup intermittently failed to connect if physical cable was disconnected and connected. This has been resolved. (60319279)

- **Issue Resolved:** The branch node was configured with an SVC call where the DNA was set only to the DNA prefix of the remote side. After rebooting the branch side, the remote side reset after 10-20 minutes. The cause was the system ran out of stream buffers. This has been corrected. (60320321)

Open Known Issues

Passport 4400 Configurator

- **Note:** Passport 4400 Configurator requires **Netscape Communicator, Release 4.7** or later or **Microsoft Internet Explorer, Release 4.01 SP2** or later. Note that it does not work with Netscape *Navigator* 4.0.8 (even though the browsers carry the same release number). (60101711)

- You may experience problems if using Netscape Navigator and resizing the Navigator Tree windows. Microsoft Internet Explorer does not exhibit these problems. (60107223, 60107227, 60107233)

- **Issue:** When using Win 98, you *may* need to manually switch between the PPP Adapter and the Ethernet NIC in order to establish the connection. This can be done using the winipcfg utility. (60098956)

- **Issue:** When using, Internet Explorer, the system reset progress bar does not update properly after resetting the Passport 4400 unit from the System Reset page.

  Resolution: Use Netscape Communicator. This will be fixed in a future release.

- **Issue:** Unable to add a static route. There is a problem with the validation functions.

  Resolution: Use the CLI to add static routes. This will be fixed in a future release.

Install Tool

- **Issue:** When both Install Tool and Telnet are used on a 9600 baud PPP connection, Telnet response will be slow. (60105799)

  Resolution: Increase the baud rate on the management port to a higher speed (such as 38400). If this doesn't work for you, you can Telnet to the Passport 4400 unit outside the Install Tool application.

- **Issue:** Install Tool does not support the creation of virtual ports for "Basic" routing of IP on a Central or Regional site. It automatically turns on Easy-Routing on Interface 2 when the site is Regional or Central. (60104820)

- **Issue:** Install Tool chooses default priorities for the voice and data services it configures. It does not configure the IP Prioritization feature on a Passport 4400 unit. (60099843)

  Resolution: You can do the basic setup using Install Tool, then use the Passport 4400 Configurator or the CLI to customize the data flow by creating new virtual ports and SVCs for the data you want to have at a different priority. This feature will be included in a future release.

- **Issue:** Microsoft Windows icons sometimes display improperly. There are several instances documented in the MS Developers Documentation where icons are displayed improperly. This is due to a problem with the "ShellIconCache" file saved by Windows on shutdown and re-loaded on startup. If this file gets corrupted (and simply changing the contents of an Icon file without changing the name can do it), icon display problems can occur. (For further information see article Q133733 in the Microsoft Developers documentation on their web page.) (60102656)

  Resolution: To resolve this issue, restart the computer in MS-DOS, delete the ShellIconCache from the Windows/Winnt directory and then start windows.

- **Issue:** On Windows platforms with less than 128 MB of memory, and Windows managing virtual memory, you may need as much as 120 MB of disk space on the C: drive if your swap space, Windows directory, and Install Tool installation directory are all located on that drive. This memory is only used during installation; Install Tool uses only 20 MB or so after the installation finishes. Install the Install Tool on another drive, or free up enough room on the primary drive.

- **Note:** It is recommended that you delete ifIndex 147/149 if you are not using them. If they exist but are not used, Install Tool reports a yellow status for the port, indicating that one or more DLCIs are not functioning properly.

System Software

- **Issue:** Meridian Release 24 does not work with Passport 4400 BRI voice applications. Release 23 has been fully validated with Passport 4400 Release 3.1 and 4.0. Testing in Simi Valley labs has determined that Meridian Releases 23 and 24 will not interwork together over the BRI using Qsig. (10284598)

- **Issue:** PVCs in the X.25 services might not recover properly when a reset is requested by the packet layer protocol or when a Reset command is issued from an X.25 terminal. The reset would normally occur after error conditions such as protocol violation, out of sequence errors, or network failure. (60101926, 6009611)

  Resolution: If the PVCs do not recover, you can either issue a Restart command from an X.25 terminal, or you can reset the Passport 4400 unit. In either case, all calls are cleared.

- **Issue:** It is impossible to establish a call from a Passport 6400 to a Passport 4400 after an unspecified period of time. (30318566)

- When you have voice or fax operating over the network and you perform a save function (from CLI, Passport 4400 Configurator, or Install Tool), there will be a momentary loss of voice or fax quality. Your fax call may drop. (60107780)

- **Issue:** When deleting RFC 1490 tunnels more than one time and rebooting, the configuration table becomes corrupted. Adding tunnels does not cause any problems. (60319490)

  Resolution: To work around the issue, currently use the following procedure:

  - Upload the original configuration via ftp to a pc/workstation.
  - Remove and add tunnels, or to simply remove more than one tunnel, do the following:
    — remove all undesired tunnels
    — add all new tunnels
    — save configuration update
    — reset the unit

  If, in the future, you need to delete another tunnel, repeat the procedure.

- **Issue:** The ARP table on the Passport 6400 displayed only one entry which was the lowest TP SPVC coming from the Passport 4400. Even though there is only one entry shown, the other two SPVCs were passing traffic. After several locks and unlocks of the DLCIs all 3 ARP entries will display. After a reboot of the Passport 4400, the Passport 6400 will display only the lowest priority entry again. (60320016)

- **Issue:** A new message type has been added to the PANL protocol, 'Payloads in Pump'. This improves BRI voice application operations. A change of code for the Passport 6400 is required to allow an interchange between the Passport 6400 and Passport 4400 nodes. (60325424)

- **Issue:** Routes disappearing from the Routing Table. The local interface should be seen in the Routing Table when the system is in bridging mode after a default gateway is added. (60327559)

- I**ssue:** Ingress manipulation with E&M interfaces is not a supported application. (60331581)

- **Issue:** The receive throughput reported with the command "fr port spvc circuit table" displays a false reading. The "NegRxThroughput" displays a value (64K), which is inconsistent with the configured parameter. (60330282)

- **Issue:** The sho sna sdlc link operation table does not properly increment the protocol error count (60315231)

- **Issue:** Busyout mode in system control does not busyout hoot and holler circuits in ARD mode. Only dead air or silence is heard. This will be fixed in a future release. (60331035)

- **Issue:** The BRI voice bootup diagnostic intermittently fails the self-test. (60333644)

- **Issue:** The X.21 interface with HTDS (HDLC Transparent Data Service) is not operational. This will be fixed in the next release. (60337179)

Online Documentation

- **Issue**: Default window size causes problems with the text. (60105290)

  Resolution: Set your browser window to 800 by 600 pixels or greater. Nortel Networks recommends that you maximize the window for optimal viewing.

Chapter 4
Corrections/Additions to the Documentation

Install Tool (800-1983-40)

Null Driver

- Locating the Null Driver: The Install Tool installation process copies the null modem driver to your Install Tool installation directory. (The name of the modem is **PP4400Direct**.) The file name is *PassportNullModem.inf*. (60109124)

- Null Modem Driver Troubleshooting Tip: When you install Install Tool for the first time on a Windows 95 or Windows 98 workstation, the installation process installs TCP/IP, Dial-Up Networking, and the Passport 4400 null modem driver for you.

  The Problem

  However, if you uninstall the null modem driver and then reinstall Passport 4400, the installation process does *not* automatically reinstall that driver. Consequently, you will be unable to configure a Dial-Up Networking connection between your workstation and the Passport 4400.

  The Solution

  To avoid this problem, perform the follow sequence of tasks before reinstalling Install Tool:

  a Go to the *Windows* directory.

  b Change the display attribute to show all files (including hidden files).

  c Go to the *Windows\inf* directory (normally, this directory is hidden).

  d Delete the *Windows\inf\passport.inf* file.

  e Change the *Windows* directory display attribute back to its normal state.

Once you remove the *passport.inf* file, the Passport 4400 installation process will automatically reinstall the null modem driver. (60109069)

Security Considerations

There are two security-related issues to consider when planning your Passport 4400 device management operations.

Community Strings

The Passport 4400 uses SNMP version 1 for all of its device management operations (configuring, monitoring, resetting, and so forth). SNMP version 1 uses community strings to control access to devices in a network. Since these are cleartext strings, they are relatively insecure.

You can use the Passport 4400 Configurator or the Passport 4400 CLI to change your community strings.

Dial-Up Connections

The Passport 4400 provides a PPP stack, thereby enabling access to Passport 4400 nodes through dial-up connections. This PPP implementation does not provide authentication controls. Therefore, if you connect a modem to a Passport 4400 to support a dial-up connection, that node becomes accessible to any remote host that knows the phone number of the modem and the community string of that node. Furthermore, any host that successfully connects to a dial-up port can potentially gain access to all devices that are visible to the Passport 4400.

It is recommended that you take appropriate measures to protect your network from unauthorized access. For example:

- If you access a Passport 4400 through a dial-up connection, disconnect the modem from the Passport 4400 at the completion of your session.
- Consider using a dial-back modem rather than a dial-up modem.
- Treat your community strings as passwords and manage them as you would any other password system.

For more information about dial-up connections, refer to Using the Passport 4400 Install Tool V4.0 (800-1983-40).

Hardware Installation

- We now offer the following cable as an optional purchase. It is an alternate to the management cable you received with your hardware. It provides both DB-25 and DB-9 termination.
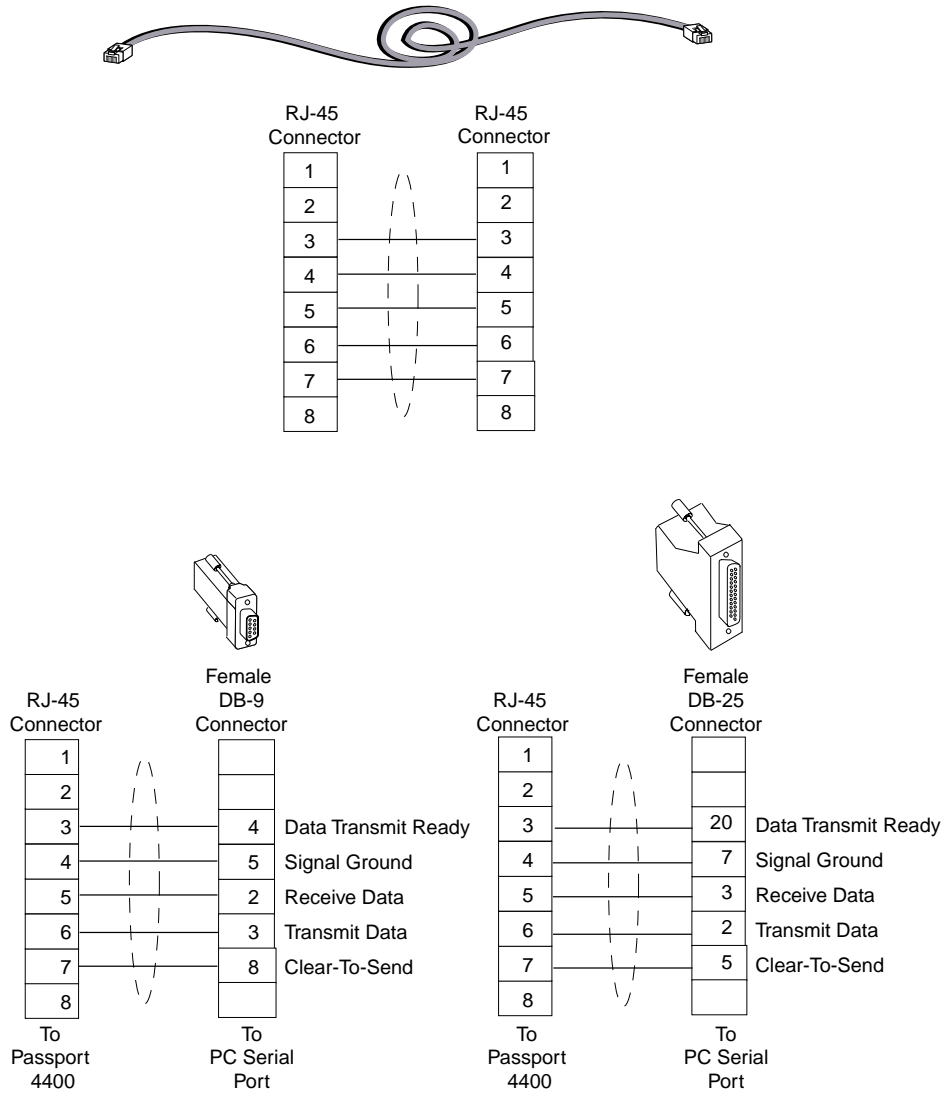
Note: RJ-45 to either DB-25 or DB-9 DTE

Figure 1   NT0227AA Management Cable

- The following information is missing from the current manual. weight of the Passport 4400 unit:

  Passport 4430: 13.7 lbs (6.2 kg)

  Passport 4450/55: 17.1 lbs (7.75 kg)

  Passport 4450/55 (Redundant): 20.1 lbs (9.18 kg)

- The ISDN BRI Voice Module has been updated to the following:

The ISDN BRI Voice Module (IVM-BRI/ST/2 - NTAU76CA) provides the Passport 4400 unit with an ISDN interface for connection to an ISDN PBX, ISDN phone, or other ISDN protocol and provides external clocking capability.

> ➡ **Note:** The NTAU76BA, the previous release of the module (NTAU76AA), did not provide the BRI clock sync module for external clocking.

Attention

The ISDN BRI Voice Module will not operate with the Passport 4455. It is used only with the Passport 4430 and Passport 4450.

The NTAU76C requires Ethernet Base Module NTAU01CA Rev. 05 or later.

> ➡ **Note:** With a Passport 4450, if the ISDN BRI Voice Module is in the top slot, you must use Rev. 03 or later.

The BRI module connects to the trunk side of an ISDN PBX, serving as one half of an ISDN tie trunk that connects two ISDN PBXs.
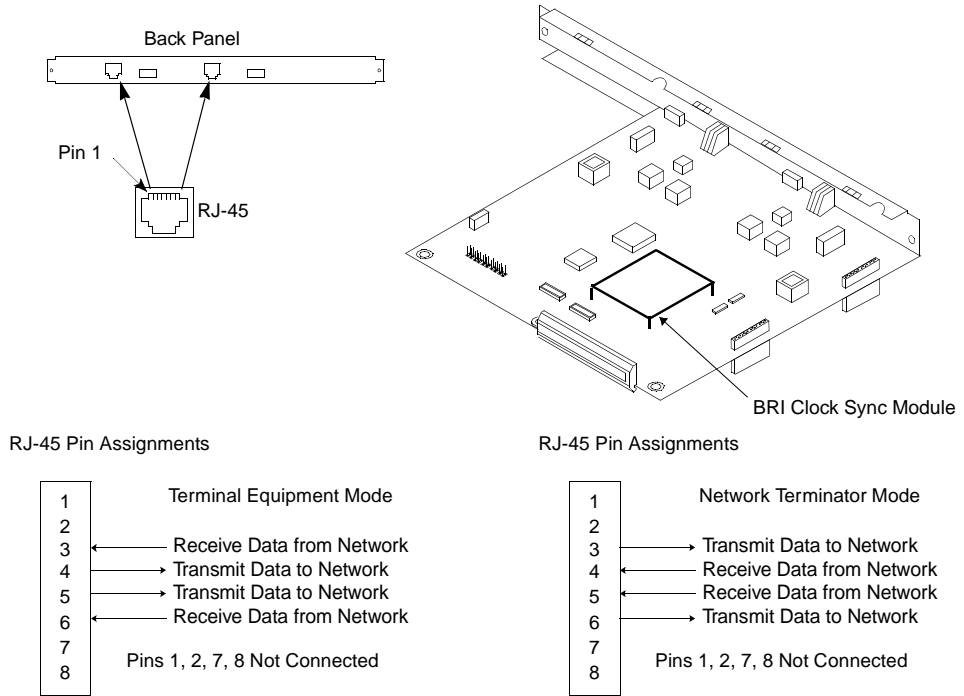
Figure 2 ISDN BRI Voice Module (S/T) and Pin Assignments

To ensure that your unit is equipped with the External Synchronization feature, check the part number tag on the face plate of the Ethernet Base Module. All units shipped from the factory after January 2000 to non-North American locations will have this modification. The tag should read

NTAU01CA Revision level 05 (or higher). If there is any doubt about the unit you have, contact Nortel Networks Customer Service and refer to ECO E400399. They will let you know if the revision level of your unit includes the necessary features.

→ **Note:** If this module is installed in a unit that does not have a wiring change, it will revert to its internal clock and otherwise perform all other functions.

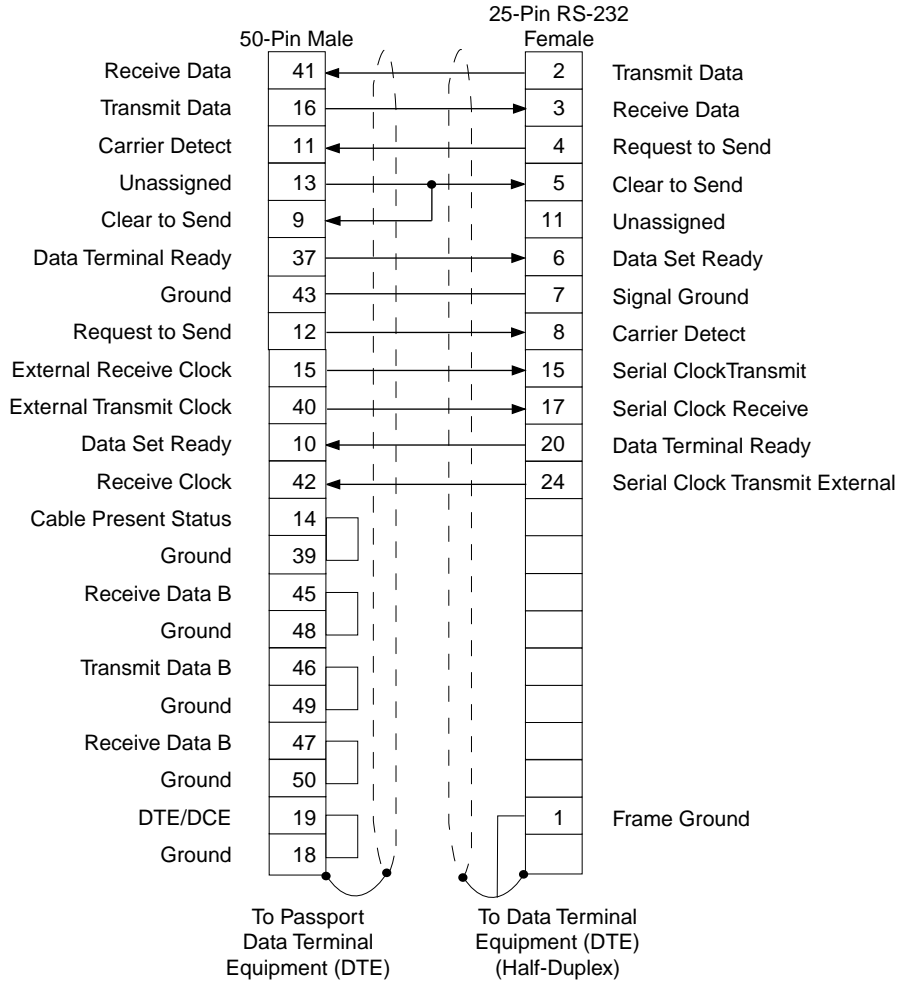• The following table replaces Table 10-1 on page 10-2 of the Hardware Manual and now includes the ISDN BRI Module (60106517):

Table 1   Module Stacking Order

Module	Maximum Number in Unit	LIM (Logical Location)	Slot (Physical Location)	Stacking Rules to Follow
Analog Voice Module (AVM)	4	B, C, D, E	B, C, D, E	Anywhere
Universal Analog Voice Module (UAVM)	4	B, C, D, E	B, C, D, E	Anywhere
Digital Voice Expansion Module (DVEM)	2	C, D, E	C, D, E	Directly above TVM/EVM
T1 Voice Module or E1 Voice Module (TVM/EVM)	1	LIM B only	B, C, D, E	Anywhere
ISDN BRI Voice Module (IVM-BRI)	4	B, C, D, E	B, C, D, E	Must be directly above data modules, base module, or another ISDN BRI module
Legacy Data Expansion Module (LEM)	2	2, 3, 4	C, D, E	Directly above LDM
Legacy Data Module (LDM)	1	1, 2, 3, 4	B, C, D, E	Directly above EBM or HDM
High-Speed Data Module (HDM)	2	1, 2	B, C	Directly above EBM or other HDM
Ethernet Base Module (EBM)	1	N/A	A	Always at bottom

• The following cable, NTO263AA, has been added. This cable sets the CTS high regardless of the idle character setting. This can be used in place of the

NTAU19AA.

50-Pin Male		25-Pin RS-232 Female	
Receive Data	41	2	Transmit Data
Transmit Data	16	3	Receive Data
Carrier Detect	11	4	Request to Send
Unassigned	13	5	Clear to Send
Clear to Send	9	11	Unassigned
Data Terminal Ready	37	6	Data Set Ready
Ground	43	7	Signal Ground
Request to Send	12	8	Carrier Detect
External Receive Clock	15	15	Serial ClockTransmit
External Transmit Clock	40	17	Serial Clock Receive
Data Set Ready	10	20	Data Terminal Ready
Receive Clock	42	24	Serial Clock Transmit External
Cable Present Status	14		
Ground	39		
Receive Data B	45		
Ground	48		
Transmit Data B	46		
Ground	49		
Receive Data B	47		
Ground	50		
DTE/DCE	19	1	Frame Ground
Ground	18		

To Passport
Data Terminal
Equipment (DTE)

To Data Terminal
Equipment (DTE)
(Half-Duplex)

Modem Connection

Null Modem Pin Assignments

Use this cable if DSR on the modem follows CD:

	25-Pin	25-Pin	
Receive Data (RD)	3	2	Transmit Data (TD)
Transmit Data (TD)	2	3	Receive Data (RD)
Clear To Send (CTS)	5	4	Request To Send (RTS)
Request To Send (RTS)	4	5	Clear To Send (CTS)
Data Terminal Ready (DTR)	20	6	Data Set Ready (DTR)
Data Set Ready (DSR)	6	20	Data Terminal Ready (DTR)
Signal Ground (SG)	7	7	Signal Ground (SG)
Unassigned	25	22	Ring Indicator (RI)
Ring Indicator (RI)	22	25	Unassigned

Use this cable if DSR on the modem does *not* follow CD:

	25-Pin	25-Pin	
Receive Data (RD)	3	2	Transmit Data (TD)
Transmit Data (TD)	2	3	Receive Data (RD)
Clear To Send (CTS)	5	4	Request To Send (RTS)
Request To Send (RTS)	4	5	Clear To Send (CTS)
Data Terminal Ready (DTR)	20	8	Carrier Detect (CD)
Carrier Detect (CD)	8	20	Data Terminal Ready (DTR)
Signal Ground (SG)	7	7	Signal Ground (SG)
Unassigned	25	22	Ring Indicator (RI)
Ring Indicator (RI)	22	25	Unassigned

(60321990)

Passport 4400 R4 Configuration and Operation Documentation (Online Documentation)

- When configuring the Egress table manipulation string, there is another symbol you can use. Some PBX units require the hash symbol (#). Use the "h" key to insert the hash character (#). Note that the pound symbol (#) on the keyboard is used for a different function. Do not use that for the hash symbol. (60324408)

- SNA Services, Local Ring Number: You must specify the number of the ring (Token Ring) to which the Passport 4400 unit is connected. This will make the Passport 4400 SNA services interoperate with third party routers over RFC 1490.

  Using the CLI:

  CLI> define sna llc localRingNum

  <IfIndex>   :INTEGER (1..255)

  <LocalRingNum>   :INTEGER (0..4095)

  Using the Configurator:

  Select Configure ➜ WAN/Data Services ➜ LLC2 Ports (menu at the top of the screen). Click on Modify next to the LLC2 port to set the local ring number. You will see the Modify an SNA LLC2 Port screen. Enter the Local Ring Number in the field provided and click on the Save button.

  The default local ring number is 0 and the range of values is 0 to 4095.

- Daylight Savings Time: On the first Sunday in April, the time increments from 1:59:59 a.m. to 3:00:00 a.m. On the last Sunday in October when the time first reaches 1:59:59 a.m., it changes to 1:00:00 a.m. The following screen has been updated to provide the opportunity to disable the Daylight Savings Time feature. Previously, the feature automatically shifted the time to accommodate daylight savings time. By default, the feature is enabled and the unit will shift time for daylight savings time.

- If you prefer to use the CLI, use the following commands:

  set sys daylightSavingTime (will disable the feature; to re-enable it, use the same command)

  sho sys daylightSavingTime (will disable the feature; to re-enable it, use the same command)

- Pathway: Data Services ➜ HTDS & CBR ➜ CBR ➜ Next (Transfer Modes).

> ➜ **Note:** The choice of transfer modes does not apply to CBR. CBR collects data for a period of a few milliseconds and then transfers it. This mode is similar to, but different from, the Cut-Through transfer mode. Hence, the CBR transfer mode is neither Cut-Through nor Store and Forward.

- When configuring FRDCE Service with frame relay SVC between a Passport 4400 and the Passport 6400, the Passport 4400 must be set to **Master**, and the Passport 6400 to **Slave**. Traffic Management with rate enforcement allows for correct operation of the configured CIR bandwidth. (60107059)

- Pathway: Voice Service ➜ Switch Profiles ➜ CLI Procedure for Setting the Voice Switch Profile Commands ➜ (Main window) Auto Call Type ➜ Next. Above the H4 "Configuration - at the Master End" (ref 60102653)

> ➜ **Note:** The following is an example of how to set up a single Hoot N Holler channel. To configure multiple Hoot N Holler channels, each channel must have a unique switching profile number, and each switching profile must have a VNCS or NAS pointer.

- If you are configuring more than 8 PANL links, you need to set the max frame size to 100 (bytes). This reduces the possibility of running out of memory. (60323344)

- Pathway: VoIP ➜ Setting Up ➜ Initial VoIP Setup ➜ next ➜ next ➜ next ➜ next:

Select NAS as the Address Server in the Voice Switching Profile

From the Configurator:

Select Configure and Voice from the navigation menu:

◆ Main
▶ Attributes
▶ Administration
▼ Configure
　▶ System
　▶ Physical Interfaces
　▶ WAN/Data Services
　▶ Protocols
　▼ Voice
　　◆ Channels
　　◆ ISDN BRI
　　◆ T1 / E1
　　◆ V / IP
　　◆ System Action
　　◆ Transport
　　◆ Overbooking

Click on *Channels*. You will see the Voice Channels screen:

At Voice Switching Profiles, select the profile you intend to use for the VoIP channels and click on the Modify button. You will see the Voice Switching Profile screen. Change the Address Server to **NAS** and click on the Save button:

At this point, the VoIP configuration is complete. You must reset the Passport 4400 unit to put the configuration into effect.

From the CLI:

Enter the following command:

```
CLI> set voice switchingProfile addServerSelect
```

Parameter	Range of Values	Required Action
<Profile>	INTEGER (1..32)	Enter the number of the switching profile to be used for VoIP channels.
<addServerSelect>	nas | vncs	Select **nas** for VoIP operation.

Example: **set voice switchingProfile addServerSelect 1 nas**

At this point, the VoIP configuration is complete. You must reset the Passport 4400 unit to put the configuration into effect.

- Pathway: Voice Services ➜ T1/E1 ➜ Diagnostics. The following procedure replaces the existing procedures:

Configurator Procedure for Using the Test Commands

To execute the system action parameters for the T1/E1 module, follow the Configurator procedures below:

a Click on *Configure, Voice.*

```
◆ Main
▶ Attributes
▶ Administration
▼ Configure
  ▶ System
  ▶ Physical Interfaces
  ▶ WAN/Data Services
  ▶ Protocols
  ▼ Voice
    ◆ Channels
    ◆ ISDN BRI
    ◆ T1 / E1
    ◆ V / IP
    ◆ System Action
    ◆ Transport
    ◆ Overbooking
```

b Click on *System Action*. The Voice System Action window opens:

Voice System Action [Pubs B]

System Action: Download ▼

Save

c At the top of the window, click on *T1E1 System Action*. The T1E1 System Action window opens:

d Click on the desired setting from the dropdown menu and click on *Save*. A *Command Successful* message appears.

The following table describes the available options:

Parameter	Description
Download	Downloads T1/E1 Module software from the local image bundle.
LED Test	Initiates a T1/E1 Module LED Test.
Stop LED Test>	Terminates a T1/E1 Module LED Test.
Reset T1E1	Resets the T1/E1 Module.

- Pathway: TOC or Contents (from Reference) ➜ Administrating the SNA Services ➜ Configurator Administration Functions ➜ Defining SNA Parameters ➜ Defining SDLC Link Station.

Revised Retry Sequence Function for Configurator

The retry sequence is set for the local SDLC link station. A retry sequence is a series of retransmitted frames, data, or control, for which no positive acknowledgement is received. The retry sequence starts with a series of slow polls, followed by an indefinite number of fast polls if no positive acknowledgement is received during the slow polls.

The retry sequence function is different from that described in the Configuring and Operating the Passport 4400 Software. Here is the correct description of the parameters affecting the retry sequence.

The retry sequence parameters are accessed from the Modify a SDLC Link Station screen:

Modify a SDLC Link Station [PUBSA]

SDLC Port:	Port 2 EBM
Link Station Address:	11
Local Name:	sdlc
Group Poll Address:	0 (0 - 254)
Reply Timeout:	255 (10 - 255)
Rxmits per Retry Sequence:	15 (0 - 128)
Retry Sequence Interval:	50 (0 - 255)
Retry Seqence Count:	40 (0 - 255)
RNR Limit:	18000 (0 - 65535)
RR Turn-Around Timer:	500 (0 - 5000)
Poll I-Frame:	Yes ⦿ No ○

Save

The parameters involved with the retry sequence are,

- Rxmits per Retry Sequence
- Retry Sequence Interval
- Retry Sequence Count

Parameter	Range of Values	Default Value	Required Action
Rxmits per Retry Sequence	0..128	15	Enter the number of retries in a retry sequence for the local SDLC link station. Related parameters: • Retry Sequence Interval • Retry Sequence Count A retry sequence is a series of retransmitted frames, data or control, for which no positive acknowledgement is received. The retry sequence starts with a series of slow polls, followed by an indefinite number of fast polls if no positive acknowledgement is received during the slow polls. 0 means no retries. If Rxmits per Retry Sequence is 0, then Retry Sequence Interval and Retry Sequence Count also must be 0.

Parameter	Range of Values	Default Value	Required Action
Retry Sequence Interval	0..255	50	Enter the length of time between retry sequences for the local SDLC link station. This parameter is effective only if Rxmits per Retry Sequence is greater than 1.
			Related parameters: Rxmits per Retry Sequence
			• Retry Sequence Count
			For slow polls, the retry sequence interval is 4 times the value specified for this parameter, in milliseconds (example: 50 * 4 = 200 milliseconds).
			For fast polls, the retry sequence interval is 2 times the value specified for this parameter, in milliseconds (example: 50 * 2 = 100 milliseconds).
			Setting this parameter to a low value (less than 50) may impact overall CPU utilization of the Passport 4400 unit.
Retry Sequence Count	0..255	40	Enter the number of times a retry sequence is repeated for the local SDLC link station.
			Related parameters:
			• Rxmits per Retry Sequence
			• Retry Sequence Interval

• Pathway: TOC or Contents (from Reference) ➜ Administrating the SNA Services ➜ CLI Administration Functions ➜ Defining SDLC Link Station.

Revised Retry Sequence Function for the CLI

The retry sequence is set for the local SDLC link station. A retry sequence is a series of retransmitted frames, data, or control, for which no positive acknowledgement is received. The retry sequence starts with a series of slow polls, followed by an indefinite number of fast polls if no positive acknowledgement is received during the slow polls.

The retry sequence function is different from that described in the Configuring and Operating the Passport 4400 Software. Here is the correct description of the parameters affecting the retry sequence.

The retry sequence parameters are accessed from the Modify a SDLC Link Station screen.

The parameters involved with the retry sequence are,

- define sna sdlc linkstation mRetries
- define sna sdlc linkstation nRetries
- define sna sdlc linkstation tRetries

```
CLI> define sna sdlc linkstation mRetries
```

Parameter	Range of Values	Required Action
<IfIndex>	Integer (1..255)	Enter the IfIndex of the link station.
<Address>	Integer (1..254)	Enter the link station address (in decimal).
<MRetries>	Integer (0..128)	Enter the number of retries in a retry sequence for the local SDLC link station. Related parameters: • define sna sdlc linkstation tRetries • define sna sdlc linkstation nRetries A retry sequence is a series of retransmitted frames, data or control, for which no positive acknowledgement is received. The retry sequence starts with a series of slow polls, followed by an indefinite number of fast polls if no positive acknowledgement is received during the slow polls. 0 means no retries. If mRetries is 0, then tRetries and nRetries also must be 0. The default value is 15.

```
CLI> define sna sdlc linkstation nRetries
```

Parameter	Range of Values	Required Action
<IfIndex>	Integer (1..255)	Enter the IfIndex of the link station.

Parameter	Range of Values	Required Action
<Address>	Integer (1..254)	Enter the link station address (in decimal).
<NRetries>	Integer (0..255)	Enter the number of times a retry sequence is repeated for the local SDLC link station. Related parameters: • define sna sdlc linkstation mRetries • define sna sdlc linkstation tRetries The default value is 40.

```
CLI> define sna sdlc linkstation tRetries
```

Parameter	Range of Values	Required Action
<IfIndex>	Integer (1..255)	Enter the IfIndex of the link station.

Parameter	Range of Values	Required Action
<Address>	Integer (1..254)	Enter the link station address (in decimal).
<TRetries>	Integer (0..255)	Enter the length of time between retry sequences for the local SDLC link station.
		Related parameters:
		• define sna sdlc linkstation mRetries
		• define sna sdlc linkstation nRetries
		This parameter is effective only if mRetries is greater than 1.
		For slow polls, the retry sequence interval is 4 times the value specified for this parameter, in milliseconds (example: 50 * 4 = 200 milliseconds).
		For fast polls, the retry sequence interval is 2 times the value specified for this parameter, in milliseconds (example: 50 * 2 = 100 milliseconds).
		Setting this parameter to a low value (less than 50) may impact overall CPU utilization of the Passport 4400 unit.
		The default value is 50.

Passport 4400 Release Notes for R4.0.2

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