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Passport 4400 Release Notes for Release 5.2

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Chapter 1

Introduction

This document provides information on the Passport 4460, Release 5.2, available for general customer release. The Passport 4460 is a part of the Passport 4400 series of products which also includes the Passport 4430, Passport 4450, and Passport 4455.

This section of the Release Notes contains these topics:

- [“Upgrading to Release 5.2” on page 9](#)
- [“Software Distribution Web Site” on page 12](#)
- [“Software and Documentation CD-ROM” on page 12](#)
- [“Network Management Support” on page 13](#)
- [“Getting Started” on page 14](#)

Upgrading to Release 5.2

Passport 4400 units are shipped from the factory with the current software version and associated boot code pre-installed. Therefore, there is no need to install any software on a new unit.

The process of upgrading a unit is described in the following sections:

- [“Upgrading from a release earlier than 4.1.3.4” on page 10](#)
- [“Special upgrade instructions for release 5.2” on page 10](#)

Upgrading from a release earlier than 4.1.3.4

The process of upgrading Passport 4400 software via TFTP changed, beginning with Release 4.2. The change is as follows:

- If you are currently running release 4.1.3.4 (or later), you can directly upgrade to release 5.2
- If you are currently running any release *earlier than* 4.1.3.4, you must upgrade in two stages: first, upgrade to release 4.1.3.4, then upgrade to 5.2.

Refer to “Appendix B, Downloading System Software” in *Getting Started with Passport 4460* for detailed information about downloading and installing Passport 4400 software.

Note that there is no change in the upgrade process if you are using FTP (via the boot menu).

Troubleshooting

If you are running a software release earlier than 4.1.3.4 (such as 4.1.3 or 4.1.2), and you download the new Release 5.2 code via TFTP (using the `download base image specific` CLI command), you will receive a “Flash-Error”. The following message appears on the CLI screen:

```
CLI>TFTP sysBankErase: exp6chbin Image not
supported or .bld file is corrupted
```

At this point the CLI screen will freeze until you press the Enter key.

If you receive this error message, you need to first upgrade to release 4.1.3.4, and then upgrade to 5.2. (See [“Upgrading from a release earlier than 4.1.3.4”](#) on [page 10](#) for details.)

Special upgrade instructions for release 5.2

The following paragraphs provide instructions for performing an upgrade to release 5.2.

Purpose of these instructions

This procedure is needed to work around a known issue (Q00581777) in releases 5.0, 5.1, and 5.2. The issue is that Called Party Number addresses for an ISDN WAN link (primary or backup) will be lost after upgrading from release 4.x to release 5.0, 5.1, or 5.2.

Procedure

To upgrade to release 5.2, follow these steps:

- 1** If you are presently running a release older than 4.1.3.4, you need to first upgrade to release 4.1.3.4, then upgrade to 5.2. Refer to [“Upgrading from a release earlier than 4.1.3.4” on page 10](#).
- 2** Before starting the upgrade to release 5.2, you need to use the Mass Deployment and Reporting Tool to generate a CLI script. To do this:
 - a** Start up mdtReporter and establish a connection to the Passport 4400 that you are upgrading.
 - b** Choose “Complete Configuration Report” as the report type.
 - c** Choose “CLI format” as the report format.
 - d** Generate and save the report.
 - e** Optionally, generate a text or HTML report for reference.

Refer to *Using the Passport 4400 Mass Deployment and Reporting Tool* manual for detailed instructions.

- 3** Use the Replicator within the mdtReporter to create the CLI script file from the report generated in step 2.
- 4** Exit from mdtReporter.
- 5** Reset the unit to factory defaults.
- 6** Update the software to release 5.2.

Refer to “Appendix B, Downloading System Software” in *Getting Started with Passport 4460* for detailed information about downloading and installing Passport 4400 software.

- 7 Use the mdtDownload program to execute the CLI script that you created in steps 2 and 3.
- 8 Exit from the mdtDownload program.
- 9 Perform a Save & Reset on the Passport 4460.

Software Distribution Web Site

To obtain Passport 4400 software, access the Nortel Networks Web site (www.nortelnetworks.com), then select Downloads from the Support area.

Software and Documentation CD-ROM

Passport 4400 units are shipped from the factory with the current software version and associated boot code pre-installed. The system software is also included on the product CD-ROM.

The following paragraphs identify the versions and formats of the current software.

Passport 4460 System Software

The Release 5.2 system software includes:

- bt520090.bld (boot code loadable image)
- bt520090.bin (boot code binary format)
- pr520090.bld (application code)
- pr520090.tar (MIBs in tar format)
- pr520090.zip (MIBs in zip format)
- boot0_520090.bin (onboard boot0 image in binary format)
- boot0_520090.hex (onboard boot0 image in hex format)

System Software Version Numbers

The Release 5.2 system software versions are as follows:

- Boot Code Version: Passport_4460_Boot_Rel_5.2.0_Rev 0.9.0 03/02/04 13:01:37
- Application Code Version: Passport_4460_Appl_Rel_5.2.0_Rev 0.9.0 03/02/04 13:02:13

Mass Deployment and Reporting Tool

This version of the Mass Deployment and Reporting Tool supports Releases 4.0.x and 4.1.x, 4.2, 4.3, 5.0, 5.1, and 5.2. The software version and executable name are:

- mdt1000035.exe (Version: Passport Mass Deployment and Reporting Tool R1.0 SCM Build 35 01/13/2004)

Install Tool

This version supports Releases 3.1, 4.0.x, and 4.1.x, 4.2, 4.3, 5.0, 5.1, and 5.2. The software version and executable name are:

- it500001.exe (Version: Passport 4400 R5.0 Installtool 5.0 SCM Build 1 11/18/2003)

Network Management Support

The Preside Multiservice Data Manager (MDM) network management platform provides device-specific support (MDM 12.2 and higher) for the Passport 4400 product line. The Preside MDM-Passport 4400 application lets you monitor and provision the Passport 4400 series of devices using MDM software. You use the Preside MDM-Passport 4400 application to:

- receive alarms and state change information from Passport 4400 devices
- provision and download new software to Passport 4400 devices
- backup and restore Passport 4400 software

In addition, you can access the Passport 4400 Configurator from the Preside Multiservice Data Manager (MDM) menus.

MDM supports the Passport 4400 using these tools:

- Passport 4400 releases 4.0 and 4.1 are supported by Base MDM (the embedded DCD).

For detailed information about Preside MDM-Passport 4400 support, refer to *Preside Passport 4400 Device Integration Cartridge User Guide* (241-6003-112).

- For Passport 4400 releases higher than 4.1, a Device Integration (DI) Cartridge must be loaded on top of MDM. The current GA DI cartridge for Passport 4400 V1.0.0 supports device version 4.0.3, 4.1.3 and 4.2.
- MDM_Passport4400_Cartridge_V1-0-2_ac is now available to support releases 4.3 and 5.2. It includes support for HootnHoller traps “50042115 SET/CLEAR alarm”. See “[Updated MDM support](#)” on page 19.

For detailed information about the DI cartridge, refer to *Preside Passport 4400 Device Integration Cartridge User Guide* (241-6003-112).

The Device Integration Cartridge, together with documentation (241-6003-112) and a support matrix, are available on <http://www.nortelnetworks.com>. Select Support, Software Downloads, then select Product: Preside Multiservice Data Manager Device Integration Cartridges.

The *Preside MDM Passport 4400 Integration Guide* (241-6001-109) is available from Helmsman Express.

Refer to <http://www.nortelnetworks.com/products/01/preside/> for more information about Preside product portfolio.

Getting Started

It is recommended that you consult the following manuals when setting up a Passport 4460:

- The *Passport 4460 Quick Start Guide* summarizes the tasks involved in the setup process.

- The *Getting Started with Passport 4460* manual provides a comprehensive overview of the startup process.
- The *Using the Passport 4400 Mass Deployment and Reporting Tool* manual provides detailed instructions relevant to the special upgrade instructions (detailed in [“Special upgrade instructions for release 5.2” on page 10](#)).
- The *Using Passport 4400 Install Tool* manual provides detailed information about setting up a management workstation.
- The *Reference for Passport 4460 Hardware* manual provides detailed information about setting up the hardware.
- The *Reference for Passport 4460 Cables* manual identifies the cables needed to set up the hardware.

Refer to [Chapter 7, “Product Documentation,” on page 47](#) for a list of all Passport 4460 documentation.

Chapter 2

New In This Release

This section of the Release Notes provides a description of the new and enhanced features in Passport 4460 release 5.1:

- [“Release 5.2 Overview” on page 17](#)
- [“ISDN/Analog/CAS Interworking” on page 17](#)
- [“Updated MDM support” on page 19](#)

Release 5.2 Overview

The main benefits of Passport 4460 Release 5.2 include the ability to build interworking solutions on top of the existing Passport 4400 voice networks (CAS and analog voice formerly supported with more advanced Q.SIG functionality). It also integrates voice access points employing different types of access signaling into a single, fully-accessible switched network.

ISDN/Analog/CAS Interworking

The Passport 4460 now provides support for calls between Passport 4460 analog and digital interfaces. Previously, only calls originating from digital interfaces were supported.

Further, the Passport 4460 can now accept calls from analog and digital interfaces that are received from the Passport 6400 or Passport 7400 side (for example, from a Passport 7400 QSIG ISDN interface to a Passport 4460 analog interface).

The following paragraphs provide more detail about this feature.

Overview

Analog and digital voice modules are an integral part of the Passport 4460. The Passport 4460 supports FXS and E&M analog expansion cards, T1 and E1 digital expansion cards running CAS signaling, and BRI/PRI expansion cards running QSIG or Euro ISDN (BRI interface only for the latter).

Current functionality (prior to release 5.2) can complete voice calls between these interfaces:

- analog/CAS to analog/CAS
- QSIG to QSIG
- Euro ISDN to Euro ISDN

Starting with Release 5.2, the Passport 4460 can handle and convert analog/CAS to ISDN QSIG signaling and vice versa. This means that an analog or CAS originated call can have a QSIG (BRI or PRI) destination and a QSIG originated call can be completed to an analog/CAS destination.

Release 5.2 will provide the interworking capability with the Passport 6400, Passport 7400, and Passport 4430/50/55 platforms, thereby supporting calls from and to any voice interface from and to any Passport 4460 voice interface (except Euro ISDN).

Voice interworking matrix

The following matrix shows the protocols that are tested and supported when interworking Passport 4460 Release 5.2 with Passport 6400/7400 units.

Passport 4460 Protocols	Passport 6400/7400 Protocols			
	CAS	QSIG	Euro ISDN	MCDN
Analog	yes	yes	yes	yes
CAS	yes	yes	yes	yes
QSIG (BRI and PRI)	yes ¹	yes	yes ²	no
Euro ISDN (BRI)	no	no	yes	no

¹ basic call

² basic call

Notes and limitations

The following notes and limitations apply to release 5.2:

- Passport 4460 Release 5.2 provides full support for calls between Passport 4460 and Passport 4430/50/55, with the exception of Euro ISDN.
- Voice and FAX calls are supported over IP, Frame Relay (RFC 1490), and PANL networks.
- There is no support in this release for supplementary services; only basic call service is supported.
- Changes required by the Passport 4430/50/55 platform will be added in a future 4.0.5 Release.
- Passport 4460 Release 5.2 has no support for Passport Voice Networking gateway functionality or signaling (as described in the Passport 6400 and Passport 7400 documentation; see MD-1998.0124)
- You must use a manipulation string on the egress side of all ISDN interfaces of the Passport 4460. The manipulation string (“#”) is required to terminate the call on the remote Passport ISDN trunk interface. For example:

```
EgressIndex      : 1
PhoneNumber      : "4302"
ManipulationString : "#"
ChannelList      : "B1-6"
```

User Interface

This feature is implemented in the base software and requires no user operation. Therefore, there are no new user interface implementations or changes (neither CLI nor Web Configurator).

Updated MDM support

MDM support has been enhanced, starting with *MDM_Passport4400_Cartridge_V1-0-2_ac*, to support HootnHoller traps “50042115 SET/CLEAR alarm” in releases 4.3 and 5.2. (see [“MDM HootnHoller alarm example” on page 20.](#))

HootnHoller traps are received as soon as HootnHoller SVCs are established or, once established, when the SVC goes down. This is true only if:

- the unit has a trap subscription to the proper NMS,
- the Hoot and Holler traps feature is enabled/disabled. This is accomplished via the following CLI command:

```
set voice HHtraps enable/disabled
```

MDM HootnHoller alarm example

```
MAJORSET 50042115 03-08-20 20:55:57 MPA/JOS EXP/2 T1/1 CHAN/1  
ID: C24FFFE6 TYPE: communications CAUSE: outOfService  
CO: Slave HOOTnHOOLER connection failed  
RAW: oos
```

```
CLEARED CLR 50042115 03-08-20 20:56:07 MPA/JOS EXP/2 T1/1 CHAN/1  
ID: C24FFFE5 TYPE: communications CAUSE: outOfService  
CO: Slave HOOTnHOOLER connection recovered  
RAW: insv
```

Chapter 3

Issues Resolved in this Release

This section of the Release Notes describes the issues that have been successfully resolved in this release.

- An ISDN module in P3 is not properly displayed. The ISDN Index 2 corresponding to P3 is not displayed in operational mode (although it is present in configured mode).

This problem has been resolved. (Q00718712-03)

- The Passport 4400 IPX routing table is not flushed after node isolation.

This problem has been resolved. The IPX routing table is now flushed and updated correctly. (Q00745368-03)

- After booting, and after the Login prompt appears, the Ethernet port requires more time to come up than in earlier releases (such as release 4.2). It appears to require at least between 80 and 120 seconds.

This problem has been resolved. The Ethernet interface now comes up in 40 seconds after booting. (Q00748207-02)

- In some cases, you were unable to make a local call from an E&M to a T1 interface. After dialing the E&M prefix, you get a tone. When you then call the T1 number, you get a tone but dialing a PBX subscriber fails: the dial tone remains. Note that if the manipulation string on the T1 number is set to i3000 (automatically calls a number in the PBX), the call is successful. A remote call from an E&M on another Passport 4400 to the same T1 is also successful.

This problem has been resolved. (Q00680942-03)

- This is an enhancement request to change the way main Ethernet port is working when the Passport 4460 is set to routing mode. Previously, the Ethernet port was always operating in promiscuous mode.

This enhancement has been completed. Now, when the Passport 4460 is set to routing mode, the Ethernet port operates in non-promiscuous mode. That is, in routing mode the Passport 4460 ignores packets that have destination MAC addresses other than its own. In bridging mode the Passport 4460 accepts all the packets. (Q00746257-03)

- A problem was reported wherein the Passport 4460 resets due to a watchdog error with the message: “Streams: running out of buf[7]”. The problem was found in the IP reassembly routine.

This problem has been resolved. The unit now runs fine under constant UDP traffic input. (Q00767166-02)

- In some cases, the Passport 4460 was auto-resetting when TCP traffic was present on port 80. When reading data from the socket, a max 2000 byte buffer is used. When more than 2000 bytes were retrieved from the socket, the error occurred.

This problem has been resolved. A size condition is now used to ensure that the 2000 byte buffer is not exceeded. (Q00777096-02)

- A Passport 4460 WAN buffer leak error occurred when forwarding IP traffic to multiple subnets. The problem was found in the ARP module.

The buffer leak and the problem in the ARP module have been resolved. (Q00779846-02)

- When X.25 is set on all ports of 6-Port serial module, the Passport 4460 sometimes sends DISC to the remote terminal. The DISC signal is sent from the Passport 4460 about once every five minutes.

The root cause of the error was related to a set of four pins C0-C3 that give the cable type. Before reading the DSR pin, there is a procedure to get the cable type. Pin C0 on Port 1 was fluctuating. Consequently, the bit C0-C3 combination was from time to time different from the correct value.

This problem has been resolved by putting a mask on C0, since C0 is not used to determine cable type. (Q00770673-03)

- The Passport 4460 CLI hung after the “show port parameters table” command.

This problem has been resolved. Now when the “sh po pa t” command is issued, all ports are properly displayed. (Q00783906-03)

- Passport 4460 PANL (Primary and Backup) could not come back up after the primary link failed. This situation occurred when the primary link came up exactly during the backup activation.

This problem has been resolved. (Q00783893-01)

- When a port on the 2-Port Expansion Module was set to a baud rate higher than 1024K, traffic degrades to below 800K.

This problem has been resolved. (Q00784023-03)

- In some cases, there were problems establishing Hoot-and-Holler service. When this occurs, the slave end DSPOperStatus remains in a “ProgressSwitchConnect” state.

This problem has been resolved. Hoot-and-Holler service works properly now. Hoot-and-Holler connections between various interfaces were tested, with no problems detected. (Q00796022-01)

- If you configured a Passport 4460 with an E1 expansion module and a 4-port E&M card, the unit could come up with the DSPOperStatus of “dead”.

This problem has been resolved. (Q00776904)

- When Passport 4460 ports (6-ports, 2-port, or on-board ports) are configured as RS-232 DCE, and if the cable is unplugged at the other end, the OperStatus goes up and down.

This problem has been resolved. The solution was to stop routing the clock when the DSR lead reports the port operating status was down. (Q00802226-01)

- If a static route is configured for a route that was learned by OSPF, the static route will have preference. However, if the Passport 4400 is subsequently reset, the OSPF route will have preference. If the OSPF neighbor is disabled and the OSPF routes disappear from the Passport 4400 routing table, the static route does not return to the route table.

This problem has been resolved by modifying the OSPF software such that when a static route is overwritten by OSPF, the route will not be flushed. The static route will be copied as a backup of the new OSPF route; if the OSPF route is flushed, the static route will replace it. (Q00782122-01)

- Provisioning an invalid IP address causes the switch to hang. Resetting the node to default configuration was required to force a reboot.

This problem has been resolved. An attempt to introduce an invalid IP address now results in a “command failed” message. (Q00808200-03)

- With a loopback plug connected to a T1 module, following a reboot, the Passport 4460 sometimes runs errors. Rebooting again resolves the issue.

This problem has been resolved by changing the method the framer is using for synchronization. (Q00802721-01)

- You could not modify voice transport method using the Web Configurator. You could set it only by using the “set voice transport voip” CLI command.

This problem has been resolved. You can now use the Web Configurator to modify the voice transport method. (Q00817197)

- No trap is sent when a Hoot and Holler SVC fails.

This problem has been resolved. Hoot and Holler traps are now sent properly when a connection goes up/down. (Q00796404-01)

Note:

Hoot and Holler traps are received as soon as Hoot and Holler SVCs are established or, once established, if the SVC is going down. This is true only if:

- the unit has a trap subscription to the proper NMS,
- the Hoot and Holler traps feature is enabled/disabled (by new command: “set voice HHtraps enable/disabled”).

- The Hoot and Holler slave should accept calls only from its Hoot and Holler master.

This problem has been resolved. Now, if the ingress number at the slave side is not the same as the egress number of the master, then the Hoot and Holler connection does not come up. (Q00835711-02)

- This CR identified a need to provide the option to use a Hoot and Holler keepalive mechanism with minimal impact on network upgrades.

This request has been satisfied by adding two new values for autoCallType parameter under switchingProfile. (Q00817734-02)

Documentation changes:

Two new values has been added for autoCallType parameter under switchingProfile: masterHootnHoller_keepalive and slaveHootnHoller_keepalive. When used, these will enable the keepalive mechanism for the voice application level that makes the Hoot and Holler connections more reliable. Keepalive must be enabled in both (master and slave) sides of a voice Hoot and Holler connection.

The command used to enable the keepalive mechanism is:

```
set voice switchingProfile autoCallType
```

Parameter	Values
<Profile>	INTEGER (1..60)
<AutoCallType>	normal masterHootnHoller slaveHootnHoller masterHootnHoller_keepalive slaveHootnHoller_keepalive

- The Hoot and Holler keepalive enhancement is not working for local Hoot and Holler.

This problem has been resolved. (Q00821003-01)

- If the command “res sys voi all res” is issued quickly at HootnHoller master and slave side not all HootnHoller connections come up.

This problem has been resolved. All HootnHoller connections now establish correctly after resets. (Q00827117-02)

- Cannot receive mcmFrPvcLmiLinkUp and mcmFrPvcLmiLinkDown traps.

This problem has been resolved. (Q00829077-02)

- No traps are generated for BW utilization and slave CPU utilization.

This problem has been resolved. Implemented traps for SlaveCPUUtilization, SlaveRAMUtilization and BandwidthUtilization. The thresholds are the same for Master and Slave side (under cli command set sy tr). The bandwidth utilization threshold is set for LinkTxBWUtilization (see sh sy stat). (Q00820871)

- Received “unable to build trap” message when switching primary/backup.

This problem has been resolved. When Switching from primary to backup (and back), the Passport 4460 is now sending the correct traps to the NMS. (Q00835744-02)

- Compression was incorrectly negotiated when traffic is present on the SVC.
This problem has been resolved. (Q00716921-02)
- QON Communication Server Open fails.
This problem has been resolved. Changes has been made in order to control the remote's CTS pin when the node is not ready to receive. This is done by controlling UNA signal locally (for Passport 4460 newer cables).
(Q00807270-02)
- After build 15 of release 4.3, the Xircom card could not be pinged, unless a E1/T1 voice card or a 6-Port serial card was inserted in an expansion slot.
This problem has been resolved. (Q00821606-03)
- In some cases, the Passport 4460 was unable to use two T1 cards simultaneously.
This problem has been resolved. (Q00806570-03)
- The Passport 4460 doesn't boot when there is a CAS E1 card (with all 30 channels) in the first expansion slot and a QSIG E1 voice card in the second slot.
This problem has been resolved. (Q00770924-01)
- Passport 4460 - Passport 6400 Fr Switch SPVC could not startup automatically.
This problem has been resolved. (Q00786803-02)
- The SPVC A-Bit status remains inactive after resetting the unit.
This problem has been resolved. (Q00799083-01)
- The Web Configurator does not show the interface type when displaying "isdn-pri-e1" interface voice status.
This problem has been resolved. (Q00823401)

Chapter 4

Known Open Issues

This section of the Release Notes describes the known open issues in this release, organized by these categories:

- [“Passport 4400 Configurator” on page 27](#)
- [“Passport 4400 Install Tool” on page 27](#)
- [“Passport 4400 System Software” on page 28](#)
- [“Passport 4400 and Passport 6400/7400 Interworking” on page 32](#)

Passport 4400 Configurator

- The Passport 4400 Configurator provides only a limited set of SNA statistics (SDLC Link Station Statistics and SDLC Port Statistics). You can use the CLI `show sna switching circuit` commands to obtain additional statistics and status for SNA links. (60331288)
- The default Documentation URL specified in the Configurator is no longer correct. As a workaround, you can change it to point to either the Passport 4400 Documentation Web site, or the location where you have installed the documentation. For more information, refer to [Chapter 7, “Product Documentation,” on page 47](#). You can also find a description of this process in the Configurator online help: access the Documentation URL page from the Administrator menu in the Configurator, then select About This Page.

Passport 4400 Install Tool

- Invalid entries entered through the X.25-Annex G or SNA 1490 dialog panels may cause incomplete configuration for the feature. (60334618, 60334681)

Passport 4400 System Software

General

- For an ARP entry that has been learned over the WAN link, the CLI command “show arp table” displays the ARP entry as 00:00:00:01 or :00:00:00:02. The APR table should capture the actual Q.922 address, rather than the 00:00:00:01 address. (Q00533434)
- In both G.164 and G.165 modes, the tone disabler does not release until the end of a call. This violates G.168 section 4.8:
“4.8 Release time:
The disabler should not release for signal drop-outs less than the ITU-T recommended value of 100 ms. To cause a minimum of impairment upon accidental speech disabling, it should release within 250 plus or minus 150 ms after a signal in the holding band falls at least 3 dB below the maximum holding sensitivity in both directions of signal transmission.”
(Q00417941)
- The “show vo ch t” CLI command for an E1 WAN card doesn't show the last ten channels. The command output ends with this error message: “voiceIPC: Message Queue Receive Error”. This happens only in case of high voice traffic on the unit (more than 50 voice channels used). (Q00497070)
- When upgrading from Release 4.1.2 to Release 4.2 (or above), and after downloading the boot code and viewing the image with option 1 on the boot menu, an “image corrupted” message is displayed. This is a false error message that appears because the 4.1.2 boot code does not correctly detect the 6-port serial data module alpha and beta images. Beginning with Release 4.1.3.4, a software upgrade will not display this message because a correction was made in the flash memory software. Refer to [“Upgrading from a release earlier than 4.1.3.4” on page 10](#) for a description of the revised software upgrade process. If you follow this process, the error message should not occur. (Q00092116)
- The “show fr line dlci table” reports information incorrectly on channel bundles. (60324201)
- Unit resets may occur when X.25 traffic is present due to Streams running out of buffers when attempting to establish 96 SVC connections. (60330743)

- Unit reset may occur with more than six channel bundles configured as “casBypass”, or with more than one channel bundle configured as “bypass”. Only use one channel in a bundle for CAS per T1/E1 voice expansion slot. (60332364)
- The values, NegRxThroughput and NegRxBurstSize, are not reported properly on LAN SPVCs. (60332794)
- The “set port admin 150 down” command resulted in a “Command Failed” response (it took approximately 10 seconds), and afterwards, any other command executed (such as “show wan pa po o t”) causes a client time-out in approximately 60 seconds. The node lockup portion of this problem has been fixed. However, the command itself has been disabled and has no effect. (Q00157547, Q00578122, 60332408, 60334795)
- Unit does not prioritize traffic properly with 1500-byte packets on the LAN SVC. (60335184)
- With a # in the manipulation string of the egress table, the Passport 4460 should forward the dialed DTMF digits, but does not. (60335277)
- CCS Bypass with one bundle of multiple time slots fails. The number of time slots supported by one bundle without running into problems is limited to three to four time slots. This is without any other services. Once the number of time slots increases, CPU utilization increases significantly resulting in calls dropping. (60335288)
- The “show system statistics” command reports bandwidth utilization only for Port 2 and Port 3 PANL links. In the particular case where PANL is active on both ports, the show command displays bandwidth utilization for port 3 only. The values displayed will be reported in LinkTxBwUtilization and LinkRxBwUtilization. For all other ports, the correct Tx and Rx bandwidth utilization statistics per port can be viewed by using the “show wan stat port table” command. (Q00106746)
- If the PCMCIA Ethernet port or the build-in Ethernet port of a Passport 4460 is cross-connected to an auto-sensing device, the two devices are unable to communicate with each other (although they can still ping each other). Until an enhancement is available, it is suggested that one or both of the following work-arounds be used:
 1. Lock the Ethernet speed on the other device to 10 Mb/s.
 2. Install a 10/100 Mb/s hub and install both devices on it.(60325766)

- The Called Party Number address for an ISDN WAN link (primary or backup) will be lost after upgrading from release 4.x to release 5.x.
Work-around: Refer to [“Special upgrade instructions for release 5.2” on page 10](#) for an explanation of the work-around. (Q00581777)
- In some cases, the Passport 4400 can crash when VoIP is used. (Q00856271)
- The Passport 4400 can crash when "acceptKnown" is used for the ISDN wan. (Q00833791)
- Passport 4460 CLI not working after a software upgrade on 05Dec but other services are still working. (Q00819483)
- The Passport 4460 hung, It would not respond to the serial port console. (Q00822801)
- When telnetting to the node, the Passport 4460 response is very slow. Executing a command takes a few seconds to display one line of the output. Master CPU usage remains 100%. (Q00843821)
- Voice doesn't pass if dtmfToneDetector is enabled. This was observed in a configuration with two Passport 4400s in back-to-back configuration, each equipped with two full T1 voice cards. All 48 voice channels on one Passport 4400 are connected to the other Passport 4400 using Hoot'n'Holler connections. (Q00856109)
- CAS configuration problem after changing from QSIG setup.
The workaround is to reset to default before reverting from QSIG to CAS setup. (Q00856096)
- Passport 4460 Primary MPANL failure. After resetting the node for upgrading the software from SSUP 4.3.0.5.17.0 to SSUP 4.3.0.29.17.1 at a customer site, MPANL was established on the backup link. The error occurred for the 6K version more than for P7.0.11 (BG00SBB), and for the 7K version more than PCR 4.2.4. (Q00846634)
- Passport 4460 sometimes reports the wrong node under “show voice channel table”. (Q00817935)
- In testing a Passport 4460 equipped with T1 or E1 modules configured as QSIG exp1=T1 QSIG (6 channels) and exp2=T1 QSIG (6 channels), the last two channels of exp2 have aDSP status of "forcedConnected". The same was true when the unit was configured with exp1=T1 QSIG (all channels) and exp2=T1 QSIG (all channels), and it was also true when the unit was

configured with exp1=T1 QSIG (6 channels) and exp2=E1 QSIG (all channels). There were no problems when the unit was configured with exp1=E1 QSIG (all channels) and exp2=E1 QSIG (all channels). (Q00839779)

- In testing a Passport 4460 equipped with E1 modules configured as exp1= E1 QSIG (all channels) and exp2= E1 QSIG (all channels), the state of the last 3 ports corresponding to the last 3 channels are "unknown". This is problem is present for both cards. Also 'admin status' for all channels is down. (Q00839811)
- In testing a Passport 4460 configured with P2 = empty, P3 = empty, Exp1= empty, and Exp2= E1_QSIG; after adding virtual port 77 and resetting the unit, the virtual port disappeared when the unit came back up. (Q00842634)
- Passport 4460 crashes for 5.2 ISDN-specific command. With exp1=E1 PRI voice module and exp2=2-port FXS module, issuing the command "sh isdn ph bear t " is causing a Passport 4460 crash. (Q00823611)
- Passport 4460 PC Ethernet Card port "Last change" incorrect. LastChange should indicate the duration time since the last status change on the port. (Q00707227)
- The LED on the primary port (port 2) stays green when the Passport 4460 switches to the backup port (port 3) and port 2 is disconnected from the ISDN simulator. The Passport 4460 is configured as regional. If configured as branch it behaves normally. (Q00726391)
- When both MPANLs (primary and secondary) are unlocked in the same time, sometimes both of them will stay up. (Q00647086)
- Xircom PCMCIA Ethernet port - "show port parameters" problems. (Q00632100)

AOT Traffic

- Unit may reset due to improper flow control of switched AOT traffic through a central node. When the Passport 4460 is configured as a "Regional Node," flow control works normally. (60332800)

Hoot & Holler

- The Passport 4460 Wink Start on Hoot & Holler interworks with Passport 4430/50 units. However, it works for wink-to-wink only; wink-to-non-wink protocol or Q.421 will not work. This works the same as the setup between a Passport 4430/50 and a Passport 4430/50. The Passport 4460 to Passport 4460 setup does not have this limitation. All protocols and hardware interface types can talk to each other on Hoot & Holler, as well as switch calls. (60330060)
- After several successive channel resets, not all HootnHoller connections come up. (Q00843732)
- Initial state for HootnHoller Traps is “Unknown.” (Q00856093)

Passport 4400 and Passport 6400/7400 Interworking

- This CR addresses a G 711 interworking limitation between Passport 4460 and Passport 6400/7400. G 711 calls are not passed successfully between Passport 4460 and Passport 6400/7400 units. See [“Voice Interworking” on page 43](#) for a more detailed description. Also see [60334509](#) in this section. (Q00159619)
- Unable to correctly negotiate G.711 calls initiated by the Passport 6400/7400 to Passport 4460. (60334509)
- Fax traffic between Passport 6400/7400 PRI and Passport 4460 BRI TE mode yields low completion rates when the fax call originates from an MVP or MVPE card (10372023).
 - MVPE to Passport 4460 yields a 75 percent completion rate (a Canon Model B 340 is the destination machine)
 - MVP to Passport 4460 yields an 81.3 percent completion rate
 - Passport 4460 to MVPE or MVP yields a 100 percent completion rate with Passport 6400/7400 version 7.03.
- BRI fax calls from Passport 6400/7400 (NT or TE mode) to Passport 4460 fail. The MPS and MCF signals are repeated two to three times after the transmission of each page. If the direction of the call is reversed, however (that is, the call originates at the Passport 4460 going to the Passport 6400/7400), then there are no errors or repeated signals. (60329391)

- The Lost Control Frames statistics counter for voice channels will register for Passport 4460 to all other Passport 4400-series units. It will not register for Passport 4460 to Passport 6400/7400 units. (60329976)
- The Call Forward feature on the Passport 4460 did not function from an external number. This has been partially corrected and the following list shows which functionality is supported and which is not:
 - Passport 4400 to Passport 4400 - supported
 - Passport 6400/7400 to Passport 6400/7400 - supported
 - Passport 4400 to Passport 6400/7400 - supported
 - Passport 6400/7400 to Passport 4400 - NOT supported(60329975)
- ISDN Generic Functions (GF) Path Replacement was not working properly between Passport 4400 and Passport 6400/7400. Corrections to Passport 4400 Path Replacement and Call Diversion have been implemented to increase the length of Pump messages to allow long messages to pass through PANL links. However, an equivalent implementation is still required on the Passport 6400/7400. (60332649)
- The X.21 interface on the Passport 4460 does not currently support the “DTE Signal Element Timing” signal. Refer to [“Passport 4400 and Passport 6400/7400 Interworking” on page 44](#) for more information. (60335312).

Chapter 5

Operational Notes

This section of the Release Notes contains operational notes for these topics:

- [“Flash Card” on page 35](#)
- [“Configurator” on page 35](#)
- [“Install Tool” on page 36](#)
- [“System Software Notes” on page 37](#)
- [“Voice/Fax” on page 40](#)
- [“Passport 4400 and Passport 6400/7400 Interworking” on page 41](#)
- [“Obtaining Technical Bulletins” on page 42](#)

Flash Card

The Passport 4460 uses a Centennial Linear Flash PC Card (16MB). Note that, unlike the Flash cards used on the BayRS and Passport 2430/5430 products, this card does not support external file manipulations (such as list, delete, compress, and write). Also note that the Passport 4460 does not support standard ATA Flash cards.

For more information about the Passport 4460 Flash card, consult the *Configuring and Operating the Passport 4400* manual. Or, launch the Passport 4400 Configurator, select Code Bank from the Administration menu, then click on “About This Page”.

Configurator

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

- Changing the IP address of the unit without changing the PC dial-in IP address for the PPP (Point-to-Point Protocol) over management port functionality may prevent access to the Configurator or Install Tool. Refer to Appendix D of the *Using Passport 4400 Install Tool* manual for a description of IP address usage in bridging and routing environments.

Install Tool

- All CSU and ISDN WAN ports only allow switching. A serial WAN port, if not configured as either primary or backup, will allow additional protocol selections. Otherwise only switching is allowed. (50338043)
- Several enhancements to SNA support are planned for a future release. These include the following:
 - The ability to configure Switched Node Virtual Segment size. (60318864)
 - The ability to remove the defaulted MAC (Media Access Control) and SAP (Service Access Protocol) addresses. (60318203)
 - The ability to configure SNA over Multi-Point. (60318863)
- Install Tool now supports the configuration of X.25 or SNA over channelized T1/E1 PANL or RFC-1490 links. From a non-primary and non-backup WAN serial port, launch the configuration dialog panel. Select X.25 or SNA from the protocol selection panel, apply, and verify X.25-Annex G panel or SNA 1490 panel works properly. (60322195)

Note that invalid entries entered through the X.25-Annex G or SNA 1490 dialog panels may cause incomplete configuration for the feature. (60334618, 60334681)

System Software Notes

ISDN BRI Voice Module

Configuring BRI as Master Clock

To configure the System Master clock to be the BRI card in EXP1 or EXP2, IfIndex 159 or 183 should be used. However, when listing System IfIndexes these two IfIndexes do not show on the list. With the 2-port serial data expansion module and the E1 Voice module, these IfIndexes do show up.

You can use ifIndexes 159 and 183 for clock sync purposes (master clock setting) even though these are not displayed for BRI voice cards. When specifying the Master Clock source, if you want EXP1 to provide clock, you issue the “set sys mas 159” command. It doesn’t matter what card is installed in the expansion slot (Voice, T1/E1/ISDN BRI, Serial). The same is true for EXP2, except that you use IfIndex 183. (Q00092053)

ISDN BRI Clock source selection

Since both ports of a 2 port BRI Voice Module (BVM) on the Passport 4460 share one TDM interface internally, a single clock source must be used as primary clock for internal operations.

When one of the ports is configured for TE mode, that port is selected as the primary clock source. When both ports are configured for TE mode, the first port is selected as primary clock source, but the second port still receives clock from trunk to terminate the external interface.

The following table lists the effective primary clock source depending on mode of operation of each port of a 2-port BVM:

Operation mode: Port1 - Port2	Primary clock source for internal operation	Resulting clock source for Port1	Resulting clock source for Port2
NT - NT	Internal/backplane	Internal/backplane	Internal/backplane
NT - TE	From Port2	From Port2	External trunk on port2

Operation mode: Port1 - Port2	Primary clock source for internal operation	Resulting clock source for Port1	Resulting clock source for Port2
TE - NT	From Port1	External trunk on port1	From Port1
TE - TE	From Port1	External trunk on port1	External trunk on port2

WAN Port IfType Value

Following is a clarification of the effects of setting, and the meanings of the displays of, the WAN port IfType values.

Defining the IfType

- You can use the “def wan port ifType” command to set the IfType value whether or not you have a cable connected to the port. To effect the value that you set, you need to issue a “save” command before resetting the unit.
- If the Passport 4460 is booted with a cable plugged in, the specific port operates according to the cable type. (The unit is able to detect the type of cable plugged in and configure the port according to this information at boot time. In this case, the FLASH stored value has no effect.)
- The “def wan port ifType none” command has no effect.

Showing the IfType

- The “show wan parameter port configured” command displays the interface type of the cable that is connected.
- The “show wan parameter port operational” command shows how the port is currently operating.
- The “show wan parameter port configured” command displays “none” if no cable is connected.

General

- When entering date and time, do not enter leading zeros. If you enter a leading zero, the Passport 4400 will display an “invalid parameter” message.
- Idle Character: In this release, the default idle character is 126 (7E) flag. To achieve mark (FF), set the idle character to 255.

- The channelized E1 CSU can only run at speeds up to 1.92 Mb/s. This allows the user the use of the 16th time slot which provides for speeds up to 2.048 Mb/s on the E1 CSU. Timeslot 16 may be configured for both channelized and unchannelized E1 ports. On the CLI, Timeslot 16 is referenced by 31. Using “1-31” will select all E1 time slots, including Timeslot 16 (this excludes Timeslot 0 which is typically used for framing). (60323052)
- Call progress tones give a fast busy tone, not a slow busy tone when the channel is busy. The system provides the fast busy tone under the following conditions:
 - When all trunks are busy
 - When no trunk cable is connected
 - When the MPANL (Master Passport Access Network Link) is congested and the call is from the MVP (Multipurpose Voice Processor) side. (60324167)
- CAS/CCS Bypass will only support one bundle per expansion slot (maximum of two per unit: exp1 and exp2). These bundles may contain any number of available timeslots (1-24 for T1 / 1-30 for E1). (60328369)
- The Lost Control Frames statistics counter for voice channels will only register for Passport 4460 to Passport 4400 units. It will not register for Passport 4400 to Passport 6400 units. (60329976)
- The “localRouting” parameter in the voice switching profile allows the administrator to turn off local call routing (switching) if no local routing is needed. It was put in to simplify the ingress/egress table configurations.

For example, if the entire network has four-digit calling numbers and all channels in a node are in the same hunt group, the ingress and the egress phone numbers in all the nodes can be set to a wild card of “*****”. All DN/DNA (Directory Number/Data Network Address) resolutions will be done in VNCS (Voice Networking Call Server). (60330055)
- Ingress profiles give priority to the # sign over the * sign. In the case of the Passport 6400 to Passport 4400 interworking, it should be noted that the Passport 4400 does not support or recognize the octothorpe (#) or asterisk (*) character in the incoming dialed digit string. For this reason, it is recommended that digit manipulation operations involving Passport 6400 to Passport 4400 interworking be restricted to the characters 0 to 9. (60333263)

SNA Services

- In certain network configurations the host may poll the controllers before the Passport 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 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 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 to poll the controller after 0.1 seconds, if there has been no response by the controller. (60317212)

- Local ring enhancement was added to SNA, allowing SDLC interworking over a RFC-1490 link with non-Passport devices. (60322142)
- When the unit is configured as SNA DCE (Data Communications Equipment) with mark fill and frames are fragmented, set the window to 1 (one). This will eliminate possible retransmits. (60322707)

Voice/Fax

- G.711: Passport 4460 supports ten (10) G.711 voice channels with SAD (Speech Activity Detection) turned *off* and twenty (20) G.711 voice channels with SAD turned *on*.
- Fax support for BRI (Basic Rate Interface) Voice Module: Due to the BRI Voice Module (BVM) clocking requirements for fax support, fax is only supported on the BVM when it is used in conjunction with an E1 CSU WAN (Channel Service Unit Wide Area Network) module.

```
CLI> set voice profile bri
<Profile>          : INTEGER (1..3)
<BRIClockSource>  : internal | backplane
```

- For transparent CCS (Common Channel Signaling) connections, T1/E1 cables must be connected to the expansion modules prior to configuration and reset. Otherwise calls may fail to connect.

- Per call Transport Method: For Voice Transport Method, the SNMP index is a value with a numeric starting at “1”, and the internal Ingress table index first number is “0”. Use the following table when configuring Voice Transport Method on a per call basis (`set voice ingressTable transportMethod`). Note: Do not use this table when configuring `ingressNumber` and `manipulationString`. (60324068)

You should configure Ingress Index number:	For the parameter to take effect on Ingress Index number:
2	1
3	2
4	3
5	4
.	.
.	.
.	.
60	59

- “Dead” DSPs (Data Signal Processors):
When entering the CLI command `show voice channelStatus`, the *DSPOperStatus* may be displayed as “*Dead*”. This can be misleading. It can mean either “Down” or “Not currently in use” (Timeslot not assigned). To determine which, look at the *TimeSlotAssigned* parameter.
 - If *TimeSlotAssigned* is “-1”, then it indicates “Not currently in use” or “No timeslot assigned”.
 - If *TimeSlotAssigned* is any value *other than* “-1”, then it indicates a “Down” DSP. (60324166)
- When entering the CLI command `show voice channelStatus`, the *DSPOperStatus* may be displayed as “*ChannelDisabled*”. This means a Timeslot is not assigned. If DS0 is bad, it will be displayed as “*Dead*”.

Passport 4400 and Passport 6400/7400 Interworking

For further information, refer to [Chapter 6, “Interworking,”](#) on page 43.

Obtaining Technical Bulletins

To obtain Passport 4400 technical bulletins online, access the Nortel Networks Web site (www.nortelnetworks.com), select Technical Documents from the Customer Support menu, then choose Passport 4400. (The Passport 4400 documentation is included with the Access Products product family.) Scroll down the page to the Technical Bulletins heading. These bulletins are available in PDF and/or HTML format.

Chapter 6

Interworking

Voice Interworking

The following voice interworking functionality has been tested and is supported:

Passport 4460	to Passport 6400/7400 MVP		to Passport 6400/7400 MVPe		to Passport 4430/50/55	to Passport 4460
	<i>Rel 5.1¹</i>	<i>Rel 7.0</i>	<i>Rel 5.1¹</i>	<i>Rel 7.0</i>	<i>Rel 4.0 and Earlier</i>	<i>Rel 4.1 and Higher</i>
G.729	Yes	Yes	Yes	Yes	Yes	Yes
G.711	No	No	No	No ²	No	Yes
¹ Tested with 5.1.20 (SSUP #20—BEO1SKB) ² Working if initiated by a Passport 4460 to a Passport 6400/7400 (see SR 60334509)						



Note: Not all Passport 4400 features are supported on all releases of Passport 6400/7400. Check with your Certified Distributor or Account Manager to understand the feature set compatibility.

Premium Voice

Premium Voice on the Passport 4460 interworks with Marathon products, but does not interwork with Passport 4400 products Release 4.0 and earlier.

Passport 4400 and Passport 6400/7400 Interworking

Release 4.1 and higher of the Passport 4460 provides interworking support for the following Passport 6400 release levels:

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



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.

Call Forwarding Limitation

The Call Forward feature on the Passport 4460 did not function from an external number. This has been partially corrected and the following list shows which functionality is supported and which is not (60329975):

- Passport 4400 to Passport 4400 - supported
- Passport 6400/7400 to Passport 6400/7400 - supported
- Passport 4400 to Passport 6400/7400 - supported
- Passport 6400/7400 to Passport 4400 - NOT supported

High Speed WAN Link Limitation

On the Passport 4460, if Transmit Signal Element Timing (DTE Source) is not used on the Passport 6400/7400 side, the WAN link will not establish a connection through the serial port if the baud rate is above 1.344 Mbps. 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 on Passport 6400/7400, especially at high data rates.

However, the X.21 interface on the Passport 4460 does not currently support the “DTE Signal Element Timing” signal (60335312). Use the following table to determine the appropriate maximum cable length for the desired data rate:

Cable Length (in feet)	Data Rates	
	X.21 Terminated	X.21 Unterminated
15	2,048,000.0000	1,024,000
25	2,048,000.0000	400,000
50	2,048,000.0000	200,000
100	1,523,229.2460	100,000
150	1,173,364.6230	70,000
200	954,198.4733	50,000
250	804,020.1005	45,000
300	694,685.6547	38,000
400	546,149.6450	28,000
500	449,943.7570	24,000

For More Information

Refer to [“Passport 4400 and Passport 6400/7400 Interworking”](#) on page 32 for more information about known issues involving Passport 4400 and Passport 6400/7400 interworking.

Passport 4400 and Other Routers

The Passport 4400 interworks with third-party routers. The Passport 4400 supports frame relay PVC connection with third-party routers using RFC 1490 standard encapsulation method. In addition, the Passport 4400 interworks with Passport 6400 and Passport 7400 Virtual Routers and Bay RS Routers.

Chapter 7

Product Documentation

Documentation Web Site

To obtain Passport 4400 documentation online, access the Nortel Networks Web site (www.nortelnetworks.com), then select Technical Documents from the Products, Services and Solutions area. The Passport 4400 documentation is included with the Access Products product family.



Note: Any reference to a URL for documentation in any of the manuals should now refer to www.nortelnetworks.com.

List of Manuals

The Passport 4460 includes the following product documentation, available from Nortel Networks Web site (www.nortelnetworks.com), and delivered on the product CD-ROM:

- *Passport 4400 Release Notes for Release 5.2*, 214148-C (this document)
- *Passport 4460 Quick Start Guide*, 213450-B
- *Getting Started with Passport 4460*, 209664-D
- *Using Passport 4400 Install Tool*, 206906-F
- *Using the Passport 4400 Mass Deployment and Reporting Tool*, 209665-D
- *Implementing QSIG on Passport 4460*, 214280-C
- *Reference for Passport 4400 Command Line Interface (CLI)*, 214371-C
- *Configuring and Operating the Passport 4400*, 214372-C

- *Reference for Passport 4460 Hardware*, 205677-G
- *Reference for Passport 4460 Cables*, 205678-F
- *Installing the EMC Control Clamp*, 209823-A
- *Getting Started with Passport 4400 and 6400 Interworking*, 209371-E
- *Reference for Passport 4400 / 6400 Interworking*, 209372-F

Passport 4400 Configurator Documentation URL Update

If you install the HTML-version of the Passport 4460 online documentation (*Configuring and Operating the Passport 4400*) on a web site, you must set the Documentation URL for the Passport 4400 Configurator before you can access the documentation from within the Configurator. You change this URL through the Passport 4400 Configurator web pages.

To change the Documentation URL:

- 1 Click on *Administration*.
- 2 Click on *Document URL*.

The Documentation URL window opens:



The URL displayed in this window indicates where the online documentation is located (either at the Nortel Networks site (the default), or at a location that you designate).

- 3 If you have downloaded the documentation elsewhere, enter the URL in the Documentation Server URL field, and click *Save*.

A “*Command Successful*” message appears.

For More Information

Refer to the *Getting Started with Passport 4460* manual for information about accessing the HTML-based documentation (delivered on the product CD-ROM).

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Passport 4400 Release Notes for Release 5.2

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