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Passport 4400 Release Notes for Release 4.0.4

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Contents

Chapter 1
Introduction

This document provides information about the Passport 4400, Release 4.0.4, available for general customer release. The 4.0.x releases run on the Passport 4430, Passport 4450, and Passport 4455.

This section of the Release Notes contains these topics:

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.

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 are 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

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 4430/50

- bt404080.bld (Passport 4430/50 boot code)
- bt404080.bin (Passport 4430/50 boot code binary image)
- pr404080.bld (Passport 4430/50 application code)
- pr404080.tar (Passport 4430/50 MIB files in tar format)
- pr404080.zip (Passport 4430/50 MIB files in zip format)

System Software Version Numbers

The Release 4.0.4 system software versions for Passport 4400 4430/50 are as follows:

Boot Code:	Passport_4430/50_Boot_Rel_4.0.4_Rev 0.8.0 02/10/03 17:16:12
Application Code:	Passport_4430/50_Appl_Rel_4.0.4_Rev 0.8.0 02/10/03 17:17:29

Passport 4455

- thbt404080.bld (Passport 4455 boot code)
- thbt404080.bin (Passport 4455 boot code binary image)
- thpr404080.bld (Passport 4455 application code)
- thpr404080.tar (Passport 4455 MIB files in tar format)
- thpr404080.zip (Passport 4455 MIB files in zip format)

System Software Version Numbers

The Release 4.0.4 system software versions for Passport 4400 4455 are as follows

Boot Code:	Passport_4455_Boot_Rel_4.0.4_Rev 0.8.0 02/10/03 17:26:17
Application Code:	Passport_4455_Appl_Rel_4.0.4_Rev 0.8.0 02/10/03 17:27:05

LDM

- ACCGFELX.FIMG0410 (LDM code 4.1 for Passport 4400)
- r041.pdf (Release Notes for LDM code 4.1 in PDF format)
- r041.ps (Release Notes for LDM code 4.1 in PostScript format)

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, and 5.0. The software version and executable name are:

- mdt1000031.exe (Version: Passport Mass Deployment and Reporting Tool R1.0 SCM Build 31 01/28/2003)

Install Tool

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

- it500000.exe (Version: Passport 4400 R5.0 Installtool 5.0 SCM Build 0 01/30/2003)

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 executable images:

- Ethernet Base Module code (Version Passport_4430/50_Appl_Rel_4.0.4_Rev 0.4.0 or Passport_4455_Appl_Rel_4.0.4_Rev 0.4.0)
- DSP code for AVM (Version 2261 XdP)
- DSP code for UAVM (Version 2263 XdP)
- DSP code for the DVMs installed on the TVM, EVM, and DVEM (Version 2262 XdP)
- Code for the TVM (Version 909-2291 AX5)
- Code for the EVM (Version 909-2292 0A)
- Code for BRI (Version "t")

Note: You can show these versions by issuing the following CLI command **`show system image.`**

Upgrading Passport 4400 Software

Refer to "Upgrading Passport 4400 Software" on page 41 for detailed instructions for downloading and upgrading Passport 4400 software.

Network Management Support

The Preside Multservice 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 MDM Passport 4400 Integration Guide* (241-6001-109).

- 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.

  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.

Chapter 2
New In This Release

This section of the Release Notes provides a description of the new and enhanced features in Passport 4400 release 4.0.4:

IP Enhancement: RFC 1490 Voice Prioritization

The Passport 4400 now provides a Voice Priority feature that allows VoIP packets to take priority over data packets when transported over RFC 1490 PVCs. When Voice Priority is enabled, The Passport 4400 ensures that, when packets are transmitted over RFC 1490 PVCs, VoIP packets are sent out before data packets. Data packets are sent only when the voice queue is empty. This allows voice and data traffic to use the same Frame Relay PVC link without the data traffic affecting the voice quality.

This feature complements the QoS capabilities already existing for PANL WAN links, now enabling VoIP to operate effectively over standard RFC 1490 WAN links that do not require termination on another compatible Passport device.

Limitations and Restrictions

Note the following limitations and restrictions for the RFC 1490 voice prioritization feature:

- The feature applies only to RFC 1490 PVCs, not to PANL SVCs.

Note that the addition of this basic prioritization mechanism for VoIP over RFC 1490 is in addition to the QoS mechanisms that already exist for PANL WAN Links. PANL WAN links provide mechanisms for defining transfer priorities based on the type of traffic (service) carried.

- The prioritization applies to individual PVCs. There is no prioritization across PVCs.
- The feature is globally enabled. You cannot enable or disable specific ports or PVCs.
- This feature does not apply to VoIP over Ethernet LAN ports, because it is implemented for RFC 1490 WAN Links over Serial, T1, E1, or ISDN BRI WAN ports.
- Due to the serialization delay of large packets over low speed links (less than 1 Mbps WAN links, and especially below 500 Kbps), we recommend changes to the IP MTU to avoid undue jitter and delay (latency) that can adversely affect voice quality networks. We recommend that for WAN links below 1 Mbps, operators set the maximum IP MTU to a value less than 1,000 bytes. Depending on the traffic patterns and link speeds, good results can normally be achieved with the MTU set to a value between 500 to 800 bytes, although it may need to be set as low as 300 bytes in some cases. Use the following CLI command to set the IP MTU:

  ```
  define ip base parameter mtu <value>
  ```

  You can also set the IP MTU using the Configurator. To do so, select Configure > Protocols > IP > Interfaces, then click on the Modify link in the IP Interfaces window.

How To Enable RFC 1490 Voice Prioritization

You can use the following command to determine whether the Voice Priority Over RFC 1490 feature is enabled or disabled:

```
CLI> show fr system
```

Use the following command to enable or disable RFC 1490 Voice Prioritization:

```
CLI> define fr system VoicePriority
```

The VoicePriority value can be set to *enabled* or *disabled*. The default setting is *enabled*. When enabled, VoIP packets will take priority over data packets on RFC 1490 PVCs.

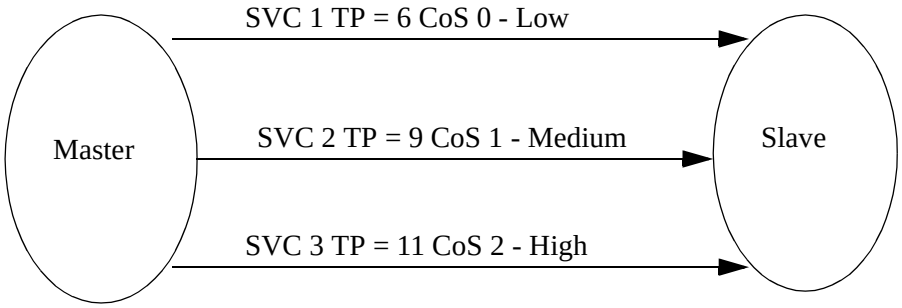
Example:

```
define fr system VoicePriority disabled
```

IP Enhancement: DSCP Filter for IP Prioritization

The Passport 4400 now provides a mechanism that allows a user to specify the class of service (Low, Medium, or High) which is to be used for passing traffic through the network, based on the Differentiated Services Codepoint (DSCP) field in the IP header.

A separate SVC is created for each class of service (CoS). A maximum of three DLCIs can be created for the same destination. For example:



This enhancement provides increased flexibility in the IP Filters for traffic forwarding or IP Prioritization on PANL WAN Links (PANL over Serial, T1, E1, or ISDN BRI WAN ports). It does not apply to Ethernet LAN ports or RFC1490 WAN Links.

Limitations

The current implementation supports the DSCP field within the existing IP Prioritization framework (filtering and mapping to the three classes). It does not provide full support for DiffServ (per RFC 2474, RFC 2597, RFC 2598) or the Nortel Networks guidelines.

Filter Configuration Based on DSCP

The `add filters`, `define filters`, `delete filters`, and `show filters` commands have been expanded to support DSCP (Differentiated Services Codepoint) filters.

The expanded port-based commands are:

```
CLI> add filters ip dscp port [incoming/outgoing]
<IfIndex> <DSCPMap> <DSCPMask> <Action>

CLI> define filters ip dscp port [incoming/outgoing]
order <IfIndex> <DSCPMap> <DSCPMask> (<Order))

CLI> define filters ip dscp port [incoming/outgoing]
priority <IfIndex> <DSCPMap> <DSCPMask> (<Priority))

CLI> delete filters ip dscp port [incoming/outgoing]
<IfIndex> <DSCPMap> <DSCPMask>

CLI> show filters ip dscp port [incoming/outgoing]
```

The expanded system-wide commands are:

```
CLI> add filters ip dscp system <DSCPMap> <DSCPMask>
<Action)

CLI> define filters ip dscp system order <DSCPMap>
<DSCPMask> (<Order))

CLI> define filters ip dscp system priority <DSCPMap>
<DSCPMask> (<Priority))

CLI> delete filters ip dscp system <DSCPMap> <DSCPMask>

CLI> show filters ip dscp system
```

Refer to the *Reference for Passport 4400 Command Line Interface (CLI)* manual, part number 211576-B, for detailed descriptions of these commands.

DSCP Filter Example

Following is a small example of how DSCP filters can be used to prioritize traffic:

```
add filter ip dscp port outgoing 2 0x19 0x3F forward
def filter ip dscp port outgoing priority 2 0x19 0x3F high

add filter ip dscp port outgoing 2 0x1A 0x3F forward
def filter ip dscp port outgoing priority 2 0x1A 0x3F medium

add filter ip dscp port outgoing 2 0x1B 0x3F forward
def filter ip dscp port outgoing priority 2 0x1B 0x3F low

add fr port svcLANData 2 "11110000" 0
add fr port svcLANData 2 "11110000" 6
add fr port svcLANData 2 "11110000" 9
```

The effect of this sequence of commands is that all outgoing traffic on WAN port 2 with the DSCP field set to `0x19` is forwarded using the high priority SVC; traffic with the DSCP field set to `0x1A` is using the medium priority SVC; and traffic with the DSCP field set to `0x1B` is using the low priority SVC. All other outgoing traffic on this port is discarded.

DSCP Filter Considerations

The following notes apply to the use of DSCP filters:

- When the DSCPMask value is `0x0`, the DSCPMap value has no effect. You can use this for “catch all traffic” DSCP filtering/prioritization. For example, you can use a DSCPMask of `0x0` to set a low priority filter and then set specific DSCP filters for medium and high priority traffic. In this case, the traffic is prioritized and no traffic is discarded.
- Do not mix DSCP filters with other types of filters that use the Order field. The other filters will override the priority of the DSCP filters.
- The DSPC value is not identical to the ToS value. The ToS value is obtained from all eight bits in the Service Type field of the IP header, whereas the DSCP value is obtained from the first six bits of the Service Type field. For example, to filter IP traffic that has a Service Type field of 10110110 (0xB6), use 101101 (0x2D) as the DSCPMap value. This is the ToS value shifted right by 2.

IP Enhancement: DSCP Updates for Voice Packets (RFC 2474)

The DSCP field for VoIP packets has been updated in accordance with RFC 2747, as follows:

Packet	Value
Speech packets - EF (Expedited Forwarding)	0xB8
Management packets - CS5 (Class Selector 5)	0xA0

Note that these are hard-coded values: they are not user-configurable.

IP Enhancement: Wildcards in IP Filters

The Passport 4400 now provides the ability to specify a wildcard character as the Protocol type and/or Port ID when setting up IP filters. This enhances the existing filtering capability such that the IP filter can match any and all traffic from or to a particular IP address, without regard to the Protocol type or Port ID.

This enhancement provides increased flexibility in the IP Filters for traffic forwarding or IP Prioritization on PANL WAN Links (PANL over Serial, T1, E1, or ISDN BRI WAN ports). It does not apply to Ethernet LAN ports or RFC1490 WAN Links.

When you add a filter, the Passport 4400 checks the Protocol Type parameter, and processes the filter as follows:

- If ProtocolType is neither TCP (6) nor UDP (17), the Passport 4400 ignores the PortID parameter (whether or not it is a wildcard).
- If ProtocolType is either TCP (6) or UDP (17), the Passport 4400 filters the traffic based on both parameters.
- If both ProtocolType and PortID are wildcards, the Passport 4400 filters all the traffic based on source and destination.

Using Wildcards in IP Filters

The following CLI commands are used to configure IP filters (system-wide and port-specific):

```
CLI> add filter ip forward system <destination mask>
<destination address> <source mask> <source address>
<protocol type> <port ID> <action>

CLI> add filter ip forward port incoming <IfIndex>
<filter mask> <filter address> <protocol type> <port ID>
<direction> <action>

CLI> add filter ip forward port outgoing <IfIndex>
<filter mask> <filter address> <protocol type> <port ID>
<direction> <action>
```

You use an asterisk (*) as the wildcard character to designate either or both `<protocol type>` and `<port ID>`.

For example:

```
CLI> add filter ip forward port incoming 2
255.255.255.255 192.168.1.1 * * destination forward
```

In this example, both `<protocol type>` and `<port ID>` are defined as wildcards. The Passport 4400 forwards all the traffic from the port with IfIndex 2 that is destined for IP address 192.168.1.1. All traffic from that port destined for any other IP address is discarded.

CBR Traffic Starts Without Waiting for Sync Char

An enhancement has been implemented in release 4.0.4 that enables the start of CBR traffic without waiting for a Sync character. In prior releases, the Passport 4400 waited for a sync character before passing CBR traffic. If you were running CBR traffic and the primary link failed, the unit would not resume passing CBR traffic when the link recovered. This enhancement resolves this problem.

The following command has been modified to support this enhancement:

```
CLI> define wan port syncChar <IfIndex> <SyncChar>
```

The <SyncChar> range has been changed from (1..255) to (1..256). If you set the SyncChar value to 256, then the port starts receiving CBR traffic as soon as it is up; there is no need to receive the defined syncChar pattern as in the normal cases.

This enhancement is needed by customers who are using CBR service for HDLC traffic and the end devices are using some signaling before HDLC traffic is started.

CR Reference: Q00318523-01

Chapter 3
Issues Resolved in Release 4.0.4

This section Describes issues that have been resolved in release 4.0.4, organized into the following topics:

SNMP Vulnerabilities

Multiple vulnerabilities in SNMP version 1 request and trap handling (as outlined in the CERT advisory CA-2002-03) have been corrected.

- SNMP Agent Vulnerability - getn-req-ber-t-number. (Q00283892-01)
- SNMP Agent Vulnerability - get-req-ber-l-length. (Q00283886-01)
- SNMP Agent Vulnerability - getn-req-ber-l-length. (Q00283896-01)
- SNMP Client Vulnerability. (Q00283939-01)
- SNMP Client Vulnerability - trap enterprise missing data. (Q00283959-01)
- SNMP Client Vulnerability trap neighloss missing data. (Q00283956-01)
- SNMP Client Vulnerability - trap authfail missing data. (Q00283955-01)
- SNMP Client Vulnerability - trap link missing data. (Q00283951-01)
- SNMP Client Vulnerability - trap start missing data. (Q00283948-01)
- SNMP Client Vulnerability - trap enterprise OID. (Q00283945-01)

System Software

The following system software issues have been resolved:

General

- Issue: Statistics of TxOctets and RxOctets fail to Increment (always display '0') for LAPB defined ports (automatically defined or user defined). The command used to see this is "sh p p t".

  Resolution: This problem has been resolved. LAPB counters,on the Passport 4400 now increment correctly. (Q00092077-01)

- Issue: If you had one port of 6-port serial data expansion module set up at a BaudRate lower than the traffic you enter on that port, the command “sh wan st p t” for that port showed TxBwUtilization = 199 and RxBwUtilization = 199. That is, it showed a utilization greater than 100%. (For example: the port was set up for CBR traffic and had a baudRate of 64000 and you enter CBR with 128000 bps.)

  Resolution: This problem has been resolved. The command now shows a maximum of 100%. (Q00121930-01)

- Issue: With a Passport 4400 in bridge mode, no RIP configured, deleting the default IP address (192.168.200.200) and adding another IP address on ifindex 3 causes a crash after a save and reset. This happens only if the Ethernet cable is plugged in.

  Resolution: This problem has been resolved. (Q00225063)

- Issue: IP system filters with action "forward" are not implemented properly. All the traffic is passing through the box with or without filters.

  Resolution: System IP filters are not working properly. The current implementation allow the user to use the "discard" filters in order to discard specified traffic (by source destination, protocol and port number) and "forward" filters to forward the information to the destination blocking all other (between the specified source and destination). (Q00247148-01)

- Issue: Ring Back tone is missing for E&M card call. This is true only fo pulse dialing phone in FXS.

  Resolution: This problem has been resolved. Ring back tone and fast busy tone are both working. (Q00247792)

- Issue: The RELEASE COMPLETE message is not sent if AdviceOfCharge IE is received.

  Resolution: This problem has been resolved. (Q00248751-01)

- Issue: The Passport 4400 does not comply with RFC 1490, section 7 for Address Resolution over Frame Relay. As per RFC 1490, the Hardware type should be 15 which is Frame Relay. Instead the Passport 4400 specifies it as 1 (which is 10 Mb Ethernet).

  Resolution: The ARP header parameter has been changed in accordance with RFC 1490 and RFC 1340. (Q00287729)

- Issue: Once configured, an RFC 1490 netlink cannot be deleted.

  This problem has been resolved.RFC 1490 netlinks can now be deleted with the “delete fr tunnel” command. (Q00287423)

- Issue: Some parameters in filtering configuration should allow wildcards.

  Resolution: Port and Protocols parameters for IP filtering now accept a wildcard as a valid parameter. (Q00360054-02)

- Issue: SPVC cannot re-establish after a PANL restart.

  Resolution: This problem has been resolved by modifying the disconnection processing. SPVC now comes up fine after a reset. (Q00474979-02)

- Issue: The Passport 4400 does not send out Rollback feature related traps. There are four different traps for Rollback: mcmSysRollbackArmed, mcmSysRollbackDisarmed, mcmSysRollbackenabled, and mcmSysRollbackdisabled. According to those traps, a message should be sent out to the NMS station when the feature is enabled, disabled, or confirmed, however, NMS does not receive any of those traps

  Resolution: This problem has been resolved. (Q00497334)

- Issue: Disconnecting NMS can cause Buf (32) to increment until the unit resets. This can occur if a port generate continuous Port Up/Port Down traps that should be sent to the NMS. This leads to memory exhaustion.

  Resolution: This problem has been resolved by implementing a process that ensure that memory will not be exhaused in this situation. (Q00419023)

- Issue: Memory banks can be corrupted when upgrading code. After upgrade a Passport 4400 from 3.1.6 to 4.0.3, all Config banks have the same value.

  Resolution: This problem has been resolved. (Q00493131)

- Issue: The Passport 4450 E1 CSU may stop passing traffic if link errors occur on the E1 CSU port.

  Resolution: This problem has been resolved by implementing a change in the processing and discarding of frames in this situation. With this change, the CPU utilization does not increase in case of error condition on E1CSU port. Also the link comes up after error condition is cleared. (Q00493275)

- If an MPANL backup link is activated but for any reason is unable to successfully negotiate the MPANL link, the GCM link status changes to "protocol down". It remains in this state until the unit is reset.

  Resolution: This problem has been resolved. The backup link recovers correctly from "protocol down" state and, when the primary link comes up again, it goes to "inactive" state. (Q00515835)

- Issue: sysUpTime does not comply with RFC 1213. According to RFC 1213, the TimeTicks should be in 100th of a second. The Passport 4400 MIB value is 100 times fewer than that.

  Resolution: This problem has been resolved. The system UpTime now displays correctly. (Q00520946)

- Issue: SPVC connection failure. The observed symptom is that, in case of using backup manual switch, SPVC's cannot be shifted from Primary MPANL to Backup MPANL when MPANL is switched to the backup link (when the primary line is dropped). The problem is caused by the fact that the Passport 6400 does not implement a restart procedure for DLCI-0. In order to clear the allocated DLCIs, a restart should be performed on DLCI-0. This procedure is implemented on Passport 4400 but it is not available on Passport 6400. In the case of Passport 6400, the DLCI's are cleared upon a restart on DLCI-16.

  Resolution: A workaround has been implemented on the Passport 4400. A restart on DLCI-16 will asynchronously be sent each time the LAPF layer comes up; this ensures that the DLCI's allocated on the remote end are cleared. The fix is planned for the next Passport 6400 software release. (Q00537896)

- Issue: When the primary link fails, ISDN backup kicks in without a problem. However, when the signalling on the ISDN link is flapping, ISDN backup will go to a ProtocolDown state, and will not recover.

  Resolution: This was shown to be a Meridian PBX issue. The problem was resolved by upgrading to Meridian software version 25. (Q00552228)

- Issue: The “show fr sys o” command does not work if ports 2 and 3 on the WAN card are not populated.

  Resolution: This problem has been resolved. (Q00569945)

ISDN Backup

- Issue: The MIB states are incorrect when the backup connection of a serial primary link fails, and the primary is re-established. The problem is that this MIB inaccuracy causes alarms on the NMS when the link is to a Passport 6400. When this occurs, the “sho po pa e” commands show the OperStatus as “up”, when they should be shown as “down.” This problem only occurs when an ISDN backup of a Primary serial link does not establish correctly; then, when the Primary is re-established the backup ISDN MIBs stay in this condition, causing NMS alarms.

  Resolution: Changes were made in GCM in order to disable D channel on the backup link when this in not in charge. MIBs are now set with the correct value. (60328969, Q00092066-01)

- Issue: ISDN back up cannot established when Primary link is flapping

  Resolution: Correction was made in GCM in order to solve the conflict between disconnecting and activating ISDN on backup. (Q00208469)

- Issue: The Passport 4400 does not initiate ISDN backup after numerous primary link outages. When the primary link goes down, ISDN kicks in properly. When the primary link recovers, ISDN releases. However, after eight or more times of link outage and recovery, ISDN does not kick in again.

  Resolution: The problem has been resolved. (Q00279602)

Async Over TCP (AOT)

- Issue: Deleting or disabling an AOT connection causes data transfers to stop on the other port.

  Resolution: This problem has been resolved. (Q00455526)

- Issue: Disabling and Enabling an AOT Port causes CLI to hang for 50-60 seconds.

  Resolution: This problem has been resolved. (Q00509412)

- Issue: Disabling an AOT port causes all traffic flow to stop in one direction.

Resolution: This problem has been resolved. AOT connections through PANL (over Passport 6400) comes up properly after locking-unlocking the PANL connection. (Q00525516)

- Issue: AOT Connections not consistent with node availability. When all nodes are booted, not all AOT peer connections are established, although all nodes are pingable. Also, if a node is lost, the state of the AOT port does not go to the DOWN state.

  Resolution: This problem has been resolved. The state of AOT connections goes to DOWN/UP properly after PANL lock/unlock. (Q00520574)

- Issue: Deleting an Async over IP port causes unit to reboot. When there is more than one AOT interface defined, continually deleting and adding interfaces will cause a unit restart. If port 159 is selected, it will fail after three iterations.

  Resolution: This problem has been resolved. (Q00550699)

VoIP Hoot n' Holler

- Issue: VoIP hoot 'n holler signaling problem ports. If a Hoot 'n Hooler connection is set up on VoIP, when the link is down the Hoot 'n Hooler connections do not display the correct status: one end shows connected and the other end remains in "callinProgress" state.

  Resolution: This problem has been resolved. If the IP link between the Passport units fails, in about 1 minute, both the master and the slave will signal correctly that the Hoot 'n Hooler connection is down.(Q00557580)

- Issue: VoIP hoot'n holler recovery problem. If a Hoot'n Hooler connection is set up on VoIP, after a link failure, the connection will not recover on its own after the IP connection is reestablished. Both channels, the local and the remote, have to be reset manually.

  Resolution: This problem has been resolved. The Hoot 'n Hooler connection recovers, by itself, after an IP link failure. There is no longer any need for a manual reset of the channels.(Q00557592)

Chapter 4
Open Known Issues

This section contains descriptions of open know issues with release 4.0.4, organized into these categories:

Passport 4400 Configurator

The following are open know issues in the Passport 4400 Configurator:

- **Issue:** 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)
- **Issue:** The default Documentation URL specified in the Configurator is no longer correct. As a workaround, you can change the URL to point to either the Passport 4400 Documentation Web site, or the location where you have installed the documentation. For more information, refer to "Passport 4400

Configurator Documentation URL Update" on page 58. 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.

- **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 Microsoft Windows 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

The following are open know issues in the Passport 4400 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

The following are open know issues in the Passport 4400 system software:

- **Issue:** If a Passport 4400 has three DLCIs (each for a different class of service) linking to the same virtual port, it allows data on the medium and high priority queues to exceed their respective CIRs but does not allow the low priority queue to exceed its CIR. (Q00618239)
- **Issue:** The output of the “show filter ip for sys c t” command displays continuously if DSCPMap and DSCPMask are both 0.0.0.0.

  You can interrupt the output by pressing Q on the keyboard. (Q00626824)
- **Issue:** After configuring the Ethernet interface on the Passport 4400 and resetting the unit with the “reset system current reset” command, the Ethernet interface is unable to ping any device on the Ethernet segment. External devices also cannot get a response from the Passport 4400 when pinging it.

  You can avoid this problem by using the “reset system cpu reset” command. (Q00593258)
- **Issue:** According to RFC 1157, SNMP PDU trap Agent IP should be the address generating the trap, whereas the Agent IP should be the IP of Ifindex 4 for the Passport 4400. However, when RIP or OSPF are used to learn IP routes, the Passport 4450 uses the IP address of the interface which learns the route. Note that there is no issue if static routes are used for IfIndex 4. (Q00504513)
- **Issue:** The UpTime counter is resetting after 19 days of operation. (Q00427865)
- **Issue:** SNMP Get and Get-Next gives a random series of values on org/dod/internet/mgmt/mib-2/interfaces/ifTable. Specifically, the ifInOctets, ifInUCastPkts, ifInNUCastPkts, ifOutOctets, ifOutUCastPkts, and ifOutNUCastPkts attributes in the Signaling Interface entry for BRI and B interfaces have random values. (Q00153396)
- **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. Lab testing has determined that Meridian Releases 23 and 24 will not interwork together over the BRI using Qsig. (10284598)

  Note: This issue is resolved with M1 release 25 (25.04E) on the Meridian. There were no changes made to Passport 4400 code.

- **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)

- 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

The following are open know issues in the Passport 4400 online documentation (HTML-based documentation)

- **Issue**: Default window size may cause problems with the display of 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 5
Operational Notes

This section contains general operational notes for the Passport 4400, organized into these categories:

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

- If the “Disconnect Supervision” setting in a voice profile is set to “tone” (which is the default), the FXO interface will not be able to establish a call with an E&M interface. To establish a call from a Passport 4400 FXO interface to a Passport 4400 E&M interface, set discSupervision to “powerInterrupt”. (Q00157546)
- 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)
- 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)

SNA Services

- 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. (60316562)
- 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. (60320500)

Async over TCP/IP

- 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)
- 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 that 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)

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)

Passport 4400 and 6400 Interworking

In the case of Passport 6400 to Passport 4400 interworking, 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 (does not interwork over the BRI using QSIG). Release 23 has been fully validated with Passport 4400 Releases 3.1 and 4.0. (10284598)

This issue is resolved with M1 release 25 (25.04E) on the Meridian. There were no changes made to Passport 4400 code.

Chapter 6
Upgrading Passport 4400 Software

This section provides instructions for downloading and upgrading software for Passport 4400, Release 4.0.4.

This section of the Release Notes contains these topics:

Upgrading from Previous Releases

The process of upgrading a Passport 4400 unit running pre-4.0.4 software is described in the following paragraphs.

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.

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.

16 MB Flash and Memory SIMMs

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 ...
```

Upgrading from Release 2.0

If you are upgrading from Release 2.0.3 through 2.0.7 to Release 4.0.x, 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

Note: You can only upgrade from 2.0, if your hardware supports the upgrade. Refer to “Passport 4400 Hardware Requirements” on page 9.

Upgrading 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. (Refer to "Software Distribution Web Site" on page 9 for information about obtaining software from the Support web site.)
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).

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. Refer to "Passport 4400 Hardware Requirements" on page 9.

- 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 the 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. (Refer to "Software Distribution Web Site" on page 9 for information about obtaining software from the Support web site.)
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 refer to "Passport 4400 Hardware Requirements" on page 9.)
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.

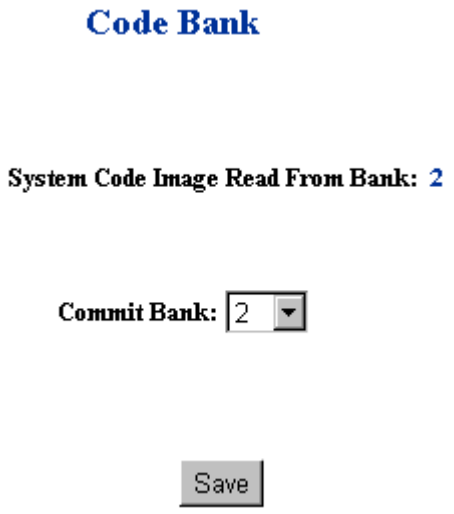
Use the procedure below to download application code. The following steps must be performed:

- 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:



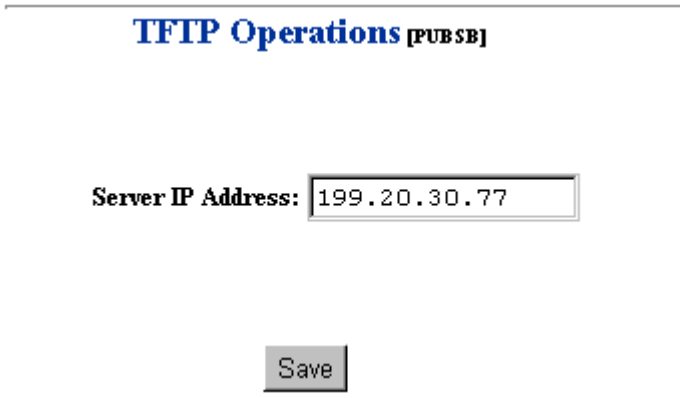
3 Next to Commit Bank, use the pull down menu to select *1*.

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:



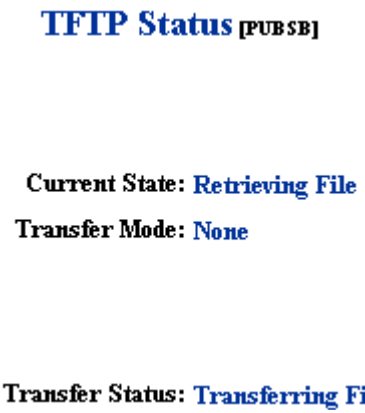
2 In the Server IP field, enter the IP address of the TFTP host workstation where the download code files reside.

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

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

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

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



This window displays the progress of the download process.

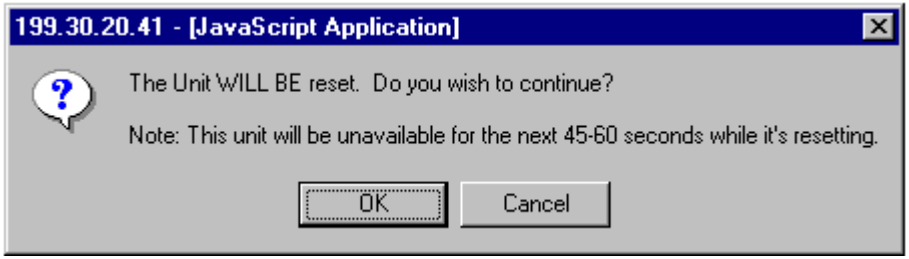
7 You must reset the unit and save the configuration. Refer to "Save the Current Configuration and Reset the Unit".

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.

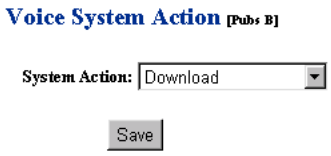
Upgrading DSP Code and T1/E1 Module Software Using Passport 4400 Configurator

Configurator Procedure for Downloading the Local T1/E1 Software

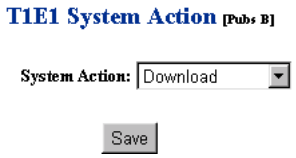
Note: This procedure works only for downloading Release 4.0 and later software. You cannot use the Passport 4400 Configurator web pages for upgrading from Release 3.1.x and earlier.

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

You will see the Voice System Action window:



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



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

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

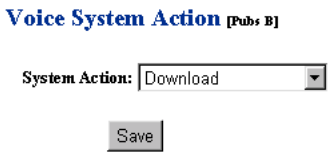
Configurator Procedure for Downloading the Local Voice Software

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*.

You will see the Voice System Action window:



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 supports Releases 5.0, 4.3, 4.2, 4.1.x, 4.0.x, and 3.1 of the Passport 4400 software. To install Install Tool, it is recommended that you 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* for instructions in installing and initializing the software.

Chapter 7
Product Documentation

This section of the Release Notes includes these topics:

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 4400 includes the following product documentation, available from Nortel Networks Web site (www.nortelnetworks.com), and delivered on the product CD-ROM:

- *Release Notes for Passport 4400 Release 4.0.4*, 211755-B (this document)
- *Passport 4430/50/55 Quick Start Guide*, 214585-A
- *Reference for Passport 4430/50/55 Hardware*, 211768-A
- *Reference for Passport 4430/50/55 Command Line Interface (CLI)*, 211576-B
- *Using Passport 4400 Install Tool*, 206906-F
- *Using Passport 4400 Mass Deployment and Reporting Tool*, 209665-D
- *Configuring and Operating the Passport 4400*, 206916-E (provided in PDF and HTML format on the product CD and on the web)
- *Getting Started with Passport 4400 / 6400 Interworking*, 209371-D
- *Reference for Passport 4400 / 6400 Interworking*, 209372-D
- *Passport 4430/50/55 Installation Instructions for Release 4.0 16MB Flash Memory*, 210140-A
- *Low Speed Data Services Manual*, 800-1961-21 Rev B

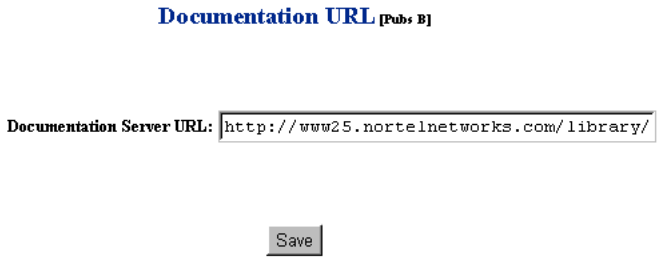
Passport 4400 Configurator Documentation URL Update

If you install the HTML-version of the Passport 4400 online documentation (*Configuring and Operating 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 "Setting Up Online Documentation" on page 61 for detailed instructions for setting up and using the online HTML-based Passport 4400 documentation.

Chapter 8
Setting Up Online Documentation

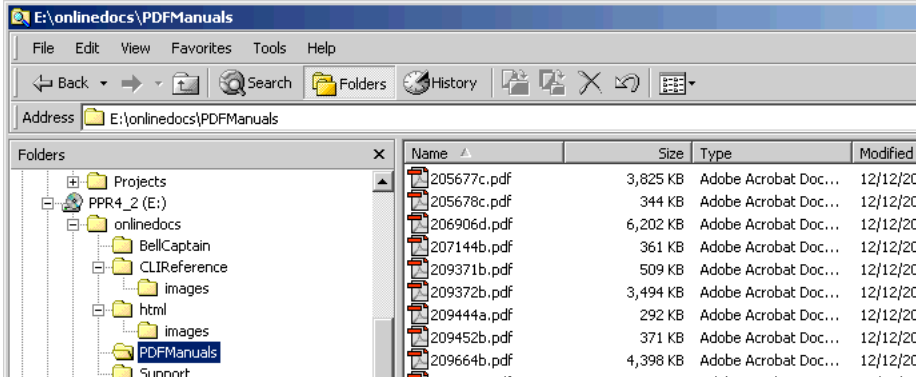
The Passport 4400 online documentation (*Configuring and Operating the Passport 4400*) resides on the CD-ROM in your software accessory kit, in both HTML and PDF formats. The documentation provides comprehensive information for configuring and operating your Passport 4460 unit.

Topics in this chapter:

Accessing the Documentation from CD-ROM

To access the documentation directly from the CD-ROM:

1. Place the CD into the CD-ROM drive.
2. Display the contents of the CD in Windows Explorer.



3 Display the contents of the onlinedocs folder.

4 To open any of the PDF manuals, display the contents of the PDFManuals folder, then double-click on the filename for that manual.

You will need Adobe* Acrobat Reader* to display PDF manuals.

5 To access the HTML-based documentation directly from the CD-ROM, Display the contents of the onlinedocs folder, then double-click on the index.html icon.

Your browser will display the home page of the HTML version of the online documentation (*Configuring and Operating Passport 4400*).

You can copy the entire set of documentation from the Passport 4400 product CD to a workstation or web server. If you want to use the HTML version of the online documentation, be sure to copy the entire onlinedocs folder, intact. If you want to use only the PDF manuals, you can copy only the PDFManuals folder.

Access the Documentation from the Internet

The latest Passport 4400 documentation is available for download from the the Nortel Networks Web site (www.nortelnetworks.com). From this site, select Technical Documentation from the “Products, Services and Solutions” area.

Using the Online Documentation

The online documentation is presented in a combination of PDF and HTML files. Refer to the following topics for general guidelines for using these documents:

- “Open the documentation” on page 63
- “Browsers” on page 63
- “Navigating the Online Documentation” on page 66

Open the documentation

- 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. Ensure that the documentation URL has been updated. (refer to "Passport 4400 Configurator Documentation URL Update" on page 58 for details).
- If you have copied 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 copied the documentation.
- If you have copied the online documentation on a Web server, the URL you 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 WebMaster. 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://192.168.21.41
  ```

Browsers

You can access the HTML version of the *Configuring and Operation Passport 4400 online documentation using any web browser that supports HTML 4.0. You will achieve best results using a browser that supports cascading style sheets (CSS) and Javascript.*

The HTML version of the *Configuring and Operating the Passport 4400 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, 4, and 6
- 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

Best results are obtained when using a display of 800 by 600 minimum resolution and capable of displaying 32,000 colors or more.

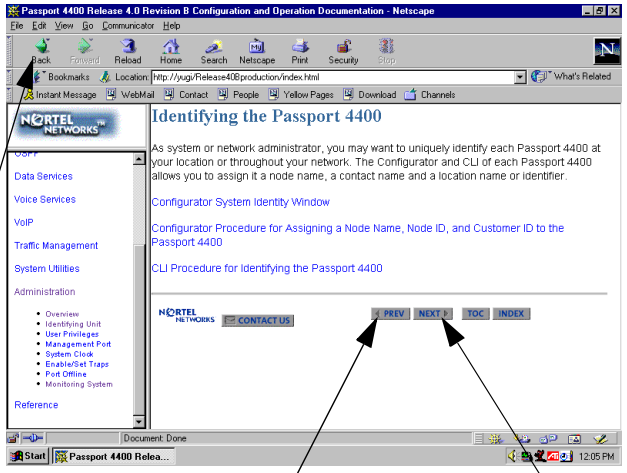
Use the following table to get the optimum results from the browser you are using.

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.
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.

Browser (continued)	**How to Get Optimum Results**
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 *Configuring and Operation Passport 4400 Rel. 4.2 Software, 206916-B* 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 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.



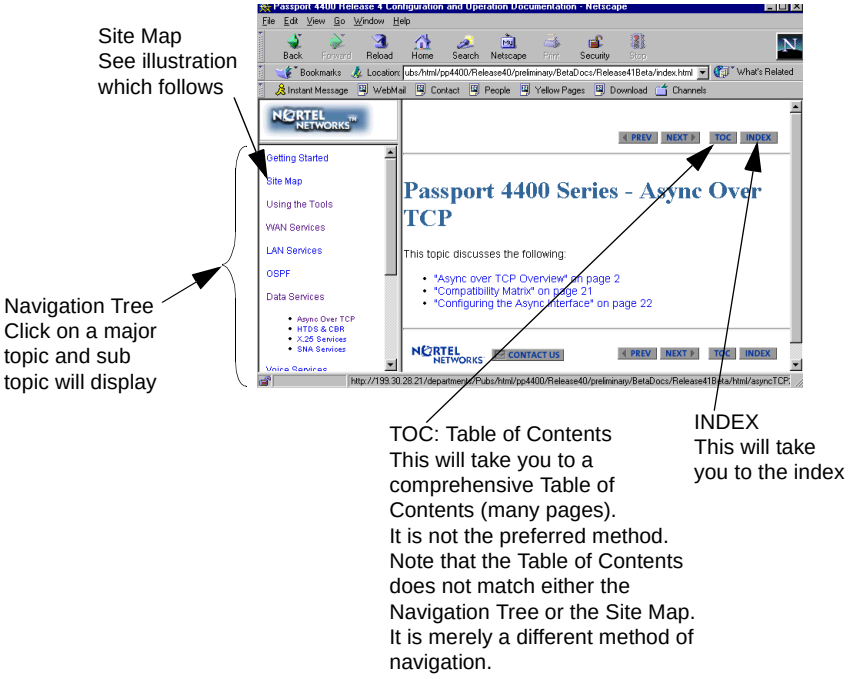
Back. Returns you to the previous display. This is good for jumping between procedures or returning to the previous screen after a hyperlink jump.

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.

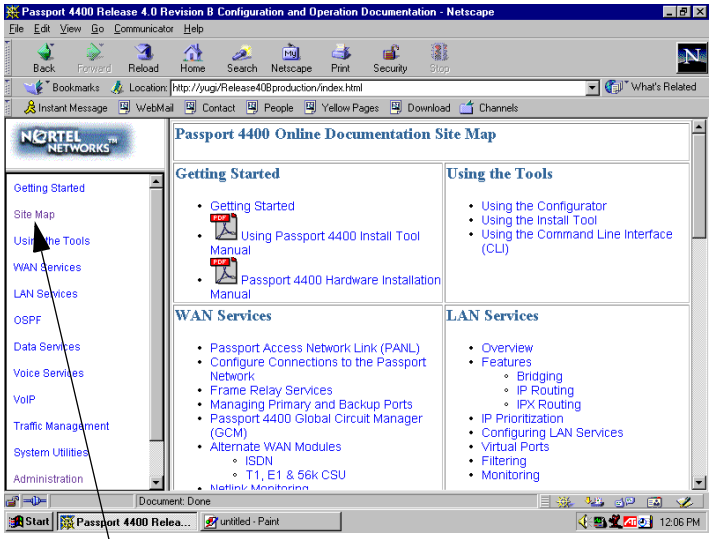
There are four navigation tools to help you locate the information you require:

- the navigation menu 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 page 68.

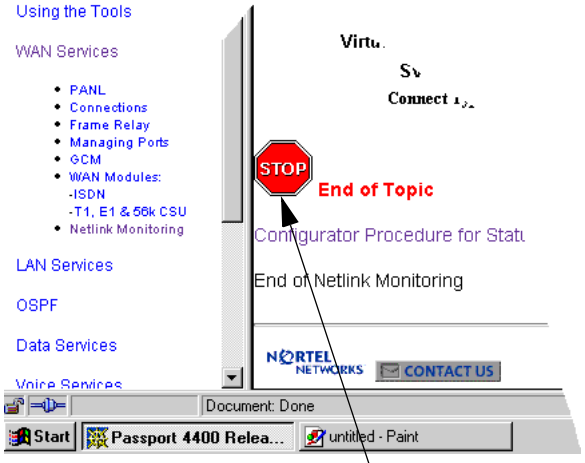


Site Map

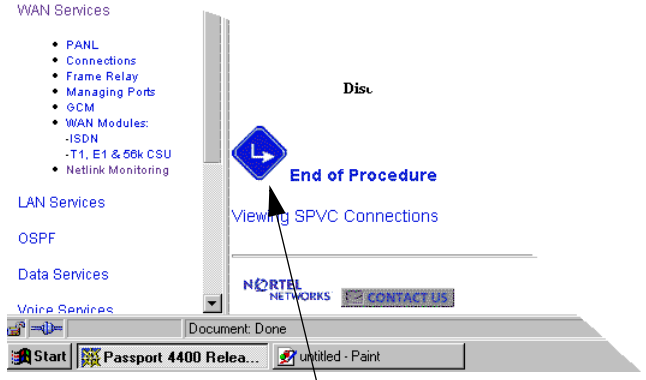
The site map is an expanded version of the Navigation Tree. It permits you to browse through the documents to select the items you wish to view.



Within the documentation, there are two additional aids to help you: the end of topic sign and the end of procedure sign. When you see these aids, you have reached the end of the logical discussion. By pressing *next* you will be moved to a 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

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Passport 4400 Release Notes for Release 4.0.4

Address comments to:
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