NORTEL NETWORKS

Passport 7400, 15000, 20000

Software Installation

Guide

241-5701-270

Passport 7400, 15000, 20000

Software Installation

Guide

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General availability. Contains information on Passport 7400, Passport 15000, and Passport 20000 for the PCR5.2 GA release.

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About this document

241-5701-270 *Passport 7400, 15000, 20000 Software Installation Guide* describes the process of connecting a newly-installed Passport node to Preside Multiservice Data Manager, and installing software on the node.

The following topics are discussed in this section:

Who should read this document and why

This document is intended for software installers who are installing software on a Passport node and performing basic configuration using StartUp, or manually.

What you need to know

This guide assumes that you have a basic understanding of Passport architecture and operation. In addition, you should understand network topologies and Passport software and configuration. Some experience using Preside Multiservice Data Manager and a basic knowledge of Unix is also beneficial.

For more information about the Passport 15000 and 20000 system, refer to 241-5701-030 *Passport 7400, 15000, 20000 Overview*. The 241-5701-030 *Passport 7400, 15000, 20000 Overview* contains basic information about the Passport 7400 system.

How this document is organized

241-5701-270 *Passport 7400, 15000, 20000 Software Installation Guide* contains the following sections:

- "Software installation work flow" (page 17)
- "Checking the version of active software on a node" (page 21)
- "Downloading software from the software distribution site to the node" (page 31)
- "Completing the software installation process" (page 39)

What's new in this document

There were no new features added to this document.

Other changes made to this document include the following:

- The section "Prerequisites of the software distribution site workstation" (page 51) was updated with information about disk space requirements for Passport software.

Text conventions

This document uses the following text conventions:

- `nonproportional spaced plain type`

  Nonproportional spaced plain type represents system generated text or text that appears on your screen.

- `nonproportional spaced bold type`

  Nonproportional spaced bold type represents commands that you should type on the screen.

- *italics*

  Words that appear in italics in text are for identifying components and component attributes. Words that appear in italics in procedure steps indicate specific text you must type on the screen or options you must select in a graphical user interface.

- [`optional_parameter`]

  Words in square brackets represent optional parameters. The command can be entered with or without the words in the square brackets.

- <`general_term`>

  Words in angle brackets represent variables in commands which must be replaced with specific values.

- UPPERCASE,lowercase

  Passport commands are not case-sensitive and do not have to match commands and parameters exactly as shown in this document, with the exception of string options values (for example, file and directory names) and string attribute values.

The term absolute pathname refers to the full specification of a path starting from the root directory. Absolute pathnames always begin with the slash (/) symbol. A relative pathname takes the current directory as its starting point, and starts with any alphanumeric character (other than /).

Procedure conventions

This document uses the following procedure conventions:

- The commands used in the procedures contain full component and attribute names. You can abbreviate the component and attribute names when you enter commands, however this document does not provide the

abbreviations. For more information on abbreviating component and attribute names, see 241-5701-060 *Passport 7400, 15000, 20000 Components*. All component and attribute names are formatted in italics.

- The introduction of every procedure states whether you must perform the procedure in operational mode or provisioning mode. For more information on these modes, see “Operational mode” (page 14) or “Provisioning mode” (page 14).

Operational mode

Procedures contained within this document can either be performed in operational mode or provisioning mode. When you initially log into a Passport node, you are in operational mode. Passport uses the following command prompt when you are in operational mode:

```
#>
```

where:
is the current command number

In operational mode, you work with operational components and attributes. In operational mode, you can

- list operational components and display operational attributes to determine the current operating parameters for the node
- control the state of parts of the node by locking and unlocking components
- set certain operational attributes and enter commands to perform diagnostic tests

Provisioning mode

To change from operational mode to provisioning mode, use the start Prov command. Only one user can be in provisioning mode at a time. Passport uses the following command prompt whenever you are in provisioning mode:

```
PROV #>
```

where:
is the current command number

In provisioning mode, you work with the provisionable components and attributes which contain the current and future configurations of the node. You can add and delete components, and display and set provisionable attributes. You can also verify your changes and then activate them as the new node configuration. You end provisioning mode and return to operational mode using the end Prov command.

For information on operational and provisionable attributes, see 241-5701-060 *Passport 7400, 15000, 20000 Components*.

Completing configuration changes

Several procedures in this document ask that you complete the configuration changes. When you complete the configuration changes, you are activating the configuration changes, confirming that you want to activate them, and saving the changes. Follow this procedure in provisioning mode when asked to complete the configuration changes. See the section “Provisioning mode” (page 14) for more information.

1. Verify that the provisioning changes you have made are acceptable:

   `check Prov`

   Correct any errors and then verify the provisioning changes again.

2. If you want to store the provisioning changes in a file, save the provisioning view:

   `save Prov`

3. If you want these changes as well as other changes made in the edit view to take effect immediately, activate and commit the provisioning changes:

   `activate Prov`

   `confirm Prov`

   `commit Prov`

4. End the provisioning session:

   `end Prov`

Related documents

See the following documents for related information:

- 241-1501-240 *Passport 15000, 20000 Hardware Installation, Maintenance and Upgrade*
- 241-7401-240 *Passport 7400 Hardware Installation, Maintenance and Upgrade*
- 241-5701-272 *Passport 7400, 15000, 20000 Software Upgrade*
- 241-5701-600 *Passport 7400, 15000, 20000 Configuration Guide*

For information on last-minute updates, see the *Passport Release Report*, which you receive with each software release.

How to get more help

For information on training, problem reporting, and technical support, see the "Nortel Networks support services" section in the product overview document.

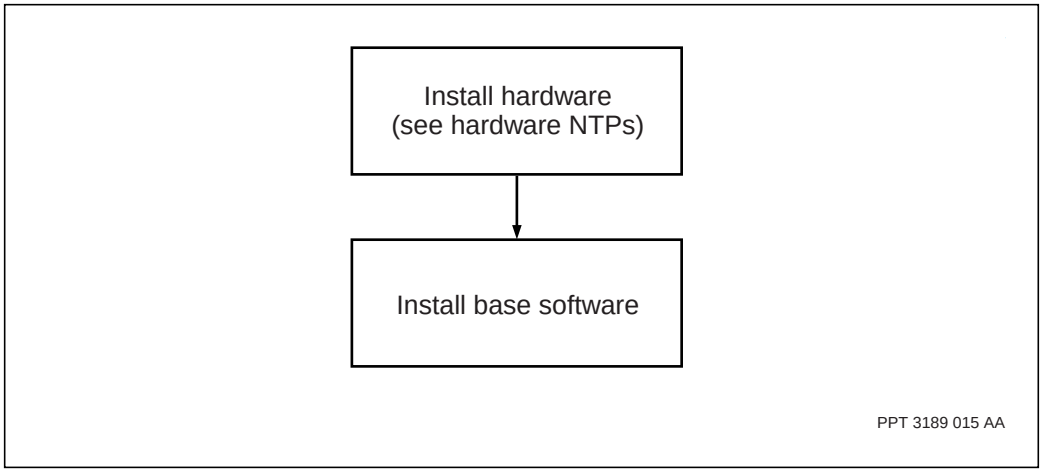
Chapter 1
Software installation work flow

After the Passport hardware has been completely installed as described in 241-7401-240 *Passport 7400 Hardware Installation, Maintenance and Upgrade* or 241-1501-240 *Passport 15000, 20000 Hardware Installation, Maintenance and Upgrade*, you can begin installing the software. The software installation process begins with verifying that the correct software has been installed on the node during commissioning and ends when you are ready to begin configuring specific services.

For a detailed view of the sequence of tasks you perform to install software on a Passport node see “Software installation work flow” (page 19). Each box in the work flow represents a task that comprises one or more procedures. Each task has a corresponding section in this guide that contains the relevant procedures. To link to any task, go to the list that follows the work flow.

- “Software installation overview navigation links” (page 18)
- “Software installation work flow navigation links” (page 19)
- “Prerequisites to software installation” (page 19)

Figure 1
Software installation overview

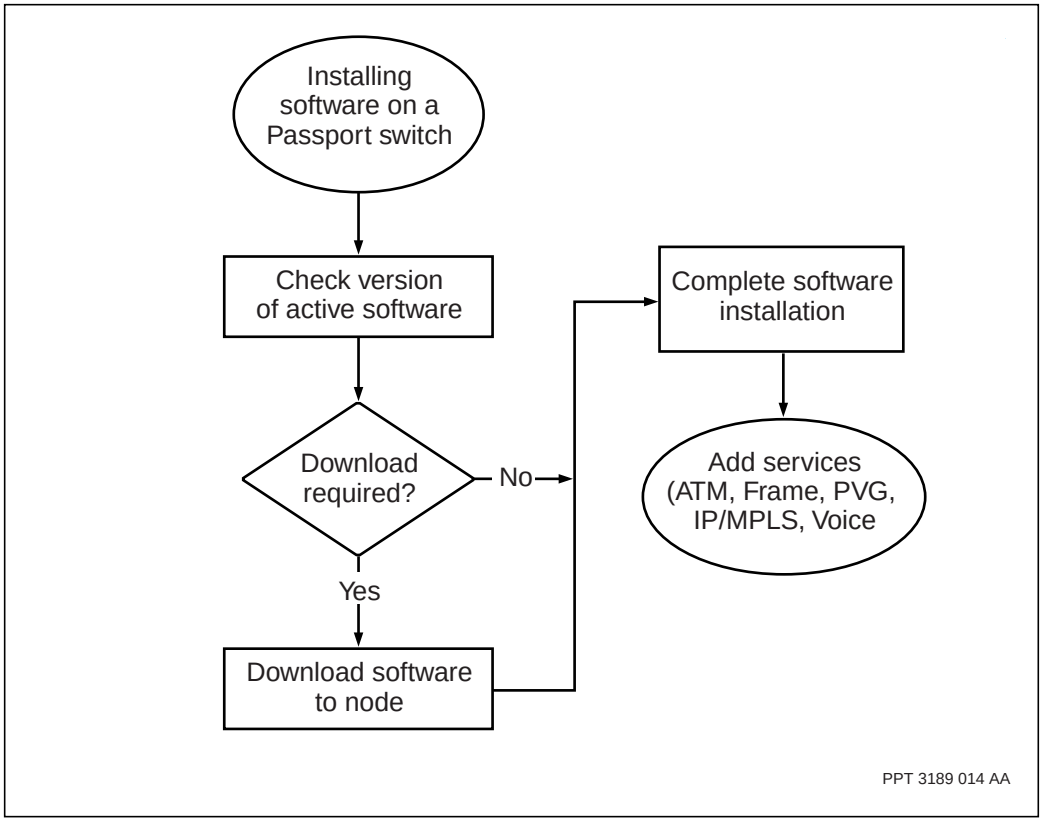


Software installation overview navigation links

To install Passport hardware, see

- 241-1501-240 *Passport 15000, 20000 Hardware Installation, Maintenance and Upgrade*
- 241-7401-240 *Passport 7400 Hardware Installation, Maintenance and Upgrade*

Figure 2
Software installation work flow



Software installation work flow navigation links

- "Checking the version of active software on a node" (page 21)
- "Downloading software from the software distribution site to the node" (page 31)
- "Completing the software installation process" (page 39)

Prerequisites to software installation

- All necessary hardware is installed

- Preconfiguration tasks such as running StartUp are complete. See 241-5701-271 *Passport 7400, 15000, 20000 Network Management Connectivity*

CAUTION

Potential breach of security.

The new Passport node is fully connected to your network, but has no access control. Therefore, any user can log in from any other location with full privileges. It is strongly recommended that you provision access control as soon as possible. For provisioning procedures, see NN10600-606 *Passport - MDM Network Security: User Access Configuration*.

Chapter 2
Checking the version of active software on a node

Determine what software is already on the node and check the version of the base software loaded automatically by StartUp. You can remove any unwanted software component once you have verified that you do not need it on your node.

- "Prerequisites to checking the version of active software" (page 21)
- "Checking the version of active software task flow" (page 21)

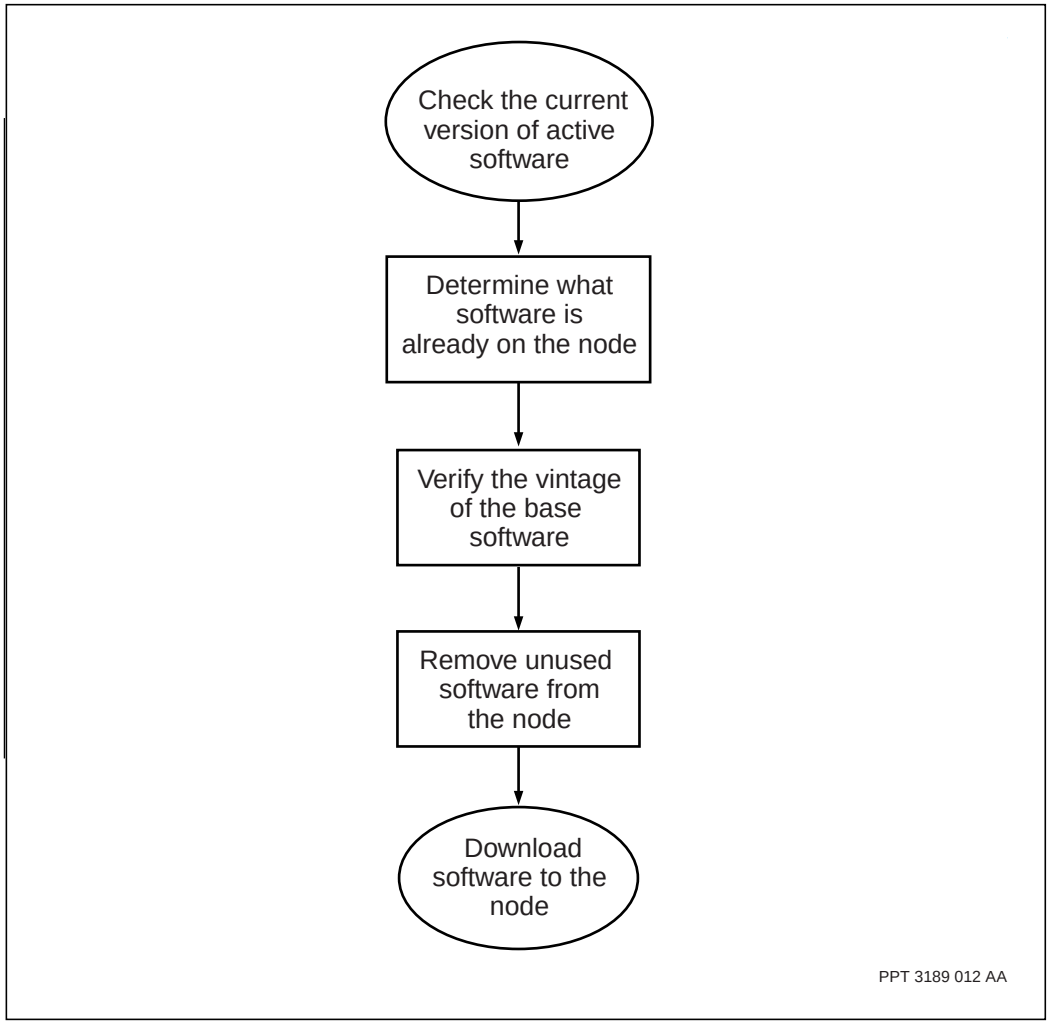
Prerequisites to checking the version of active software

- The node has an operational software load running (for an initial installation, this may require running StartUp, see 241-5701-271 *Passport 7400, 15000, 20000 Network Management Connectivity*)
- All network connections have been established

Checking the version of active software task flow

This task flow shows you the sequence of procedures you perform to check the active software on your node. To link to any procedure, go to the list that follows the task flow.

Figure 3
Checking the version of active software task flow



Task flow navigation

- “Determining what software is already on the node” (page 24)
- “Verifying the vintage of the base software” (page 27)
- “Removing unused software from the Passport node” (page 28)

- Return to “Software installation work flow” (page 19)

Determining what software is already on the node

Before you download new software to a Passport node, check to see what software already exists on the node and how it is configured. If the control processors were shipped loaded with all the software you need, you may not need to download any additional software from the software distribution site (SDS). You also need to check that the software you plan to download is compatible with the software already on the node.

Use this procedure to determine what software (application versions and patches) is on the node and how it is configured, and the feature lists that are associated with the applications.

Prerequisites

- Perform this procedure in operational mode. See the section "Operational mode" (page 14) for more information.

Procedure steps

1 Determine which versions of the application software are already available on the node:

```
list Software ApplicationVersion/*
```

A list of the currently available software applications is displayed.

2 Determine which of these software applications have been configured and added to the application version list so that they can be used by the logical processors:

```
display Software AvList
```

A list of the software applications included in the application version list is displayed.

3 Determine which features are associated with a particular software application:

```
list Software ApplicationVersion/* Feature/*
```

A list of the software applications and the features supported in each of these applications is displayed.

4 Determine which processor types each version of the application software supports:

```
display Software ApplicationVersion/* processorTargets
```

A table containing the currently available software applications and their supported processor types is displayed. The processors supported in Passport 15000 and 20000 are the i960 processor and the PPC processor.

Note: If the Passport 7400 node is running pre-P6.0 software, the software only supports i960 processor types. Since you cannot display the *processorTargets* attribute, use the following command to determine which versions of application software are currently available on the node:

```
display Software ApplicationVersion/*
```

5 Determine what patches to application versions are currently available on the node's disk:

```
list Software ApplicationVersion/* Patch/*
```

All of the currently available patches display.

6 Determine which version of the software is currently active by displaying the application version list:

```
display Software AvList
```

7 Determine which patches are currently active by displaying the patch list:

```
display Software PatchList
```

8 Determine which features and logical processors have been configured for each logical processor type (LPT):

```
display Software LogicalProcessorType/* featureList,
logicalProcessors
```

A table containing the features and logical processors assigned to each LPT is displayed.

Procedure job aid

Figure 4
Software version naming formula

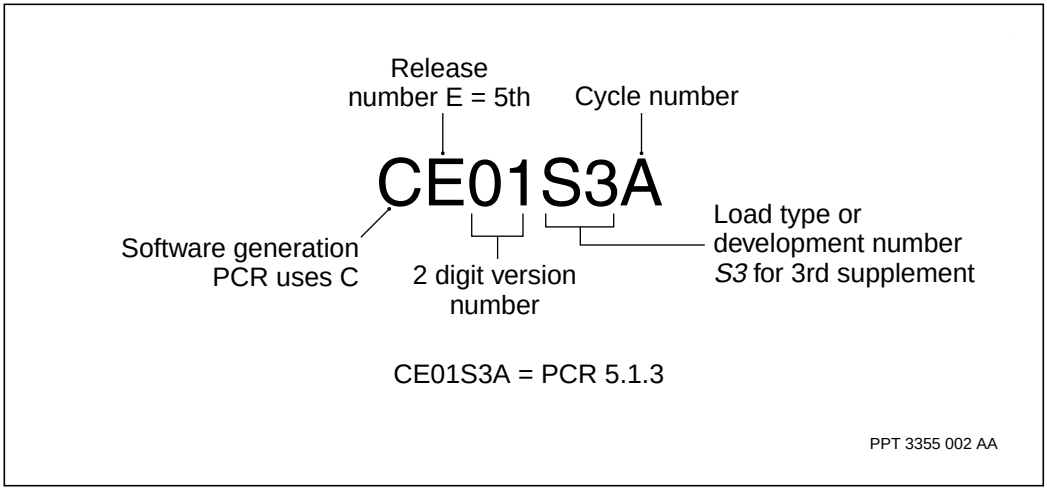
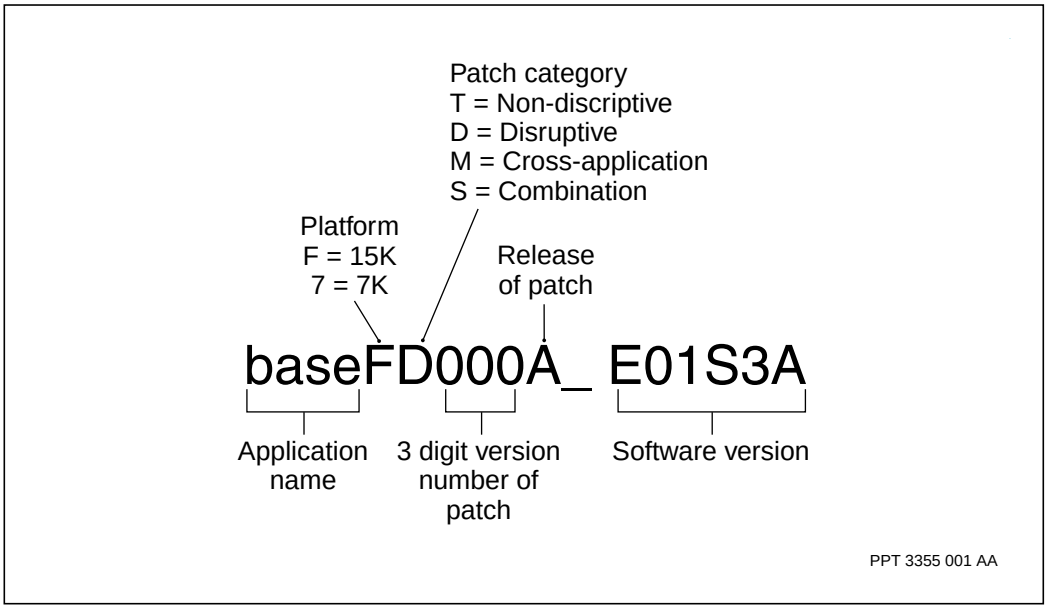


Figure 5
Software-patch naming formula



Verifying the vintage of the base software

Verify that the current base software is the correct version for the Passport node.

Prerequisites

- An operational base software load.

Procedure steps

1 Enter the following command to verify the version.

```
display software AvList
```

Passport displays a list of the base software applications on the node and the current date and time.

Removing unused software from the Passport node

Remove software files from your node that are no longer required by the current view, edit view, or any semantically checked saved view using the Tidy Software command. The command removes application versions and their associated patches.

Use the Tidy Prov command to remove unused provisioning views. For more information, see 241-5701-050 *Passport 7400, 15000, 20000 Commands*.

Note: If an Ethernet function processor resets while the Tidy Software command or the Remove Software ApplicationVersion command is in progress, the ports on the Ethernet function processor are not available until the command completes.

Procedure steps

1 List the application versions that currently exist on the node:

```
list Software ApplicationVersion/*
```

A list of all the available application versions is displayed.

2 Remove the software application:

```
remove Software ApplicationVersion/<av_name>
```

The AV is either removed, or the system responds with a list of provisioning views that reference that AV. Typically, all of the provisioning views that reference the AV are views on disk.

3 If the system responds with a list of provisioning views that reference the AV, remove those provisioning views:

```
Tidy -rm<view_names> Prov
```

If the system issues alarms when you enter this command, see 241-5701-500 *Passport 6400, 7400, 15000, 20000 Alarms* for more information.

4 List the patches that currently exist on the node:

```
list Software ApplicationVersion/* Patch/*
```

A list of all the available patches is displayed.

Note: If the node is currently running a software level that does not support patches, the above command fails.

5 Check which applications versions the Tidy Software command will delete when you issue it:

```
tidy -query Software
```

6 Delete the application versions not needed by the current view, edit view, or any semantically checked saved views:

```
tidy Software
```

The node indicates which application versions it has deleted. This command also deletes all patches associated with those application versions.

7 Verify that the unused software has been removed:

```
list Software ApplicationVersion/*
```

8 Verify that the unused patches have been removed.

```
list Software ApplicationVersion/* Patch/*
```

Note: If the node is currently running a software level that does not support patches, the above command fails.

Variable definitions

Variable	Definition
av_name	The name of the application version you want to remove.
view_names	The name of the provisioning views that reference the AV.

Chapter 3
Downloading software from the software distribution site to the node

Download software from a software distribution site if current active software on the node does not meet your network requirements.

> ***Note:*** You can also download the software to your node using Preside Multiservice Data Manager. For more information, see 241-6001-100 *Preside MDM Installer Guide*.

Prerequisites to downloading software from the software distribution site

Before beginning to download your release software, you need

- an available software distribution site (SDS). If you need to create an SDS, see "The software distribution site" (page 47)
- to have a userid with a command scope of 'device' and a command impact of 'configuration'.

  To determine your command scope and impact, type ***me*** in operational mode. Information about your userid is displayed.

Note: After running StartUp, user access will not be configured. However, by default you will have network command scope and debug command impact; as a result, you will be able to download software.

- the IP address or host name of the software distribution site (SDS) workstation
- the userid and the password to log into the SDS workstation

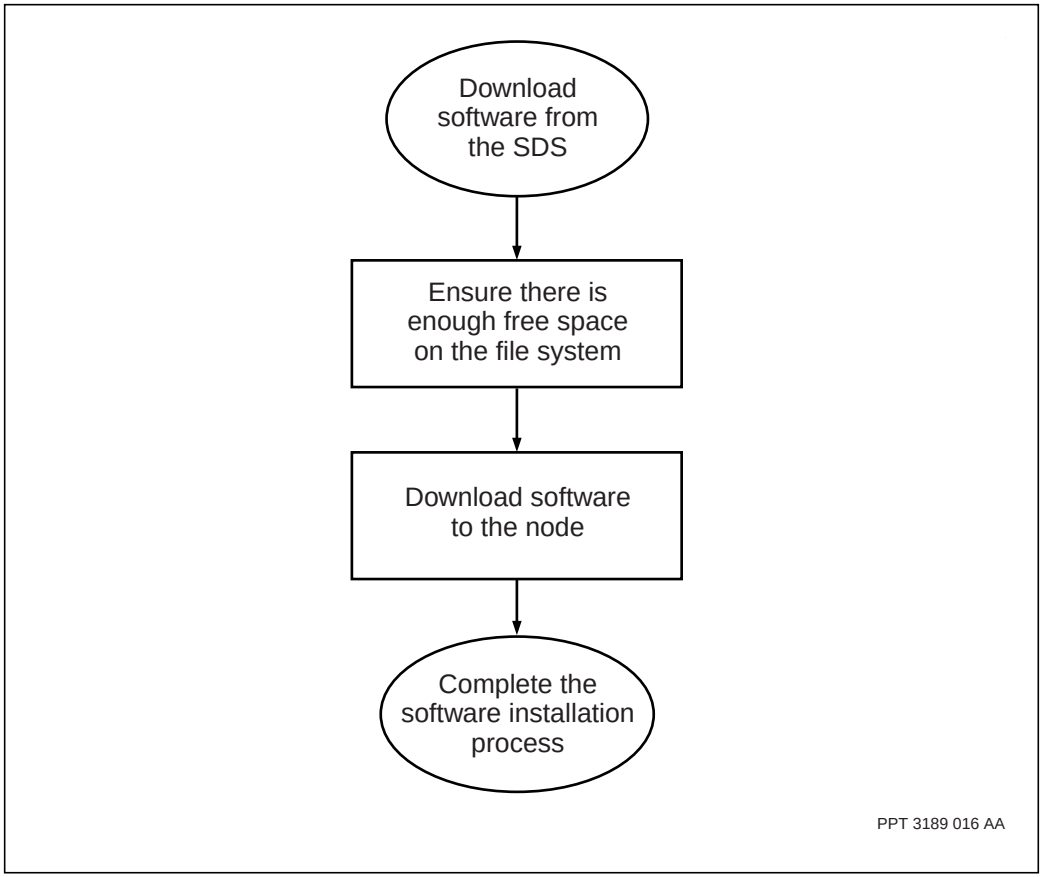
  Note: If you have a Passport 7400 SDS and a Passport 15000 or 20000 SDS, you will have two unique userids, one for each product line. Ensure that you have the correct userid associated with product software you want to download.

- to ensure that the software you are installing is compatible with the other software already on the node.
- to ensure that the Passport node has the "secure FTP authentication" feature enabled so that all FTP sessions with the SDS workstations are secured. See NN10600-607 *Passport - MDM Network Security: Secure Communications Configuration* for details.
- that the CPs and FPs are compatible with the software running on the node where the cards are to be inserted. To verify the minimum software requirements for each FP, see 241-5701-615 *Passport 7400, 15000, 20000 FP Configuration Reference*. To verify the software requirements of the CPs, see 241-1501-240 *Passport 15000, 20000 Hardware Installation, Maintenance and Upgrade*.

Downloading software from the software distribution site task flow

This task flow show you the sequence of procedures you perform to download software to your node. To link to any procedure, go to the list that follows the task flow.

Figure 6
Downloading software from the software distribution site task flow



Task flow navigation

- "Ensuring that there is enough free space on the file system" (page 34)
- "Downloading software to the node" (page 35)
- Return to "Software installation work flow" (page 19)

Ensuring that there is enough free space on the file system

Before beginning the software download, ensure that you have sufficient disk space to download the software applications that you need. If you do not have enough free space, you will have to remove unused software and provisioning files from the file system before you install the new software.

Prerequisites

- Perform this procedure in operational mode. See the section "Operational mode" (page 14) for more information.

Procedure steps

1 Determine the space currently available on the file system:

```
display FileSystem freeSpace
```

The number of bytes available on the file system is displayed.

2 Determine how much disk space you need to accommodate the software you want to download.

3 If the file system does not have enough available space, remove any unused software and provisioning files.

Note: Removing unused software will usually free up sufficient disk space. However, it is possible that a significant amount of disk space is being used by spooling files if they are not being removed often enough by the Management Data Provider (MDP). If this is the case, use MDP to retrieve and delete spooling files. For more information on MDP, see 241-6001-309 *Preside MDM Management Data Provider User Guide*.

For information on using the *tidy Prov* command to remove provisioning files from the Passport node, see 241-5701-050 *Passport 7400, 15000, 20000 Commands*.

Downloading software to the node

Once you are aware of the current state of the node, you can download new software from the software distribution site (SDS) using the software downloader.

Passport automatically downloads any patches included with the application versions it is downloading. If any patches for the application version are not already available on the node, Passport includes them on the download. For more information on patches, see 241-5701-600 *Passport 7400, 15000, 20000 Configuration Guide*.

Prerequisites

- Perform this procedure in provisioning mode. See the section "Provisioning mode" (page 14) for more information.
- If you are migrating a Passport 7400 node from pre-P6.0 software and you have PowerPC processor cards on your node, you must download the files twice. The first time you download, you will not be able to set the *processorTargets* attribute to specify that you need the software for the PowerPC processor type. After you have migrated the Passport 7400 node to P6.0 or later software, you can set the *processorTargets* attribute and download the necessary files. For more information on migrating the software, see 241-5701-272 *Passport 7400, 15000, 20000 Software Upgrade*.
- If you are migrating from a software level that does not support patches, you must download application versions that contain patches twice. The first download gets the software required to support patches. The second download, which you perform after migrating to the new software, automatically downloads the patches. For information on the support of patches in a software level, see the *Passport 7400, 15000, 20000 Release Notes*.

Procedure steps

1 Verify that the downloader is inactive:

```
display Software Download status
```

The value of the *status* attribute must be inactive.

2 If the node is running P6.0 or later software, set the processor type for the application versions. The default value of i960 may not be appropriate for some processors. Verify the processor type listed in the *Release Notes* before entering a value here:

```
set Software Download processorTargets (<type>)
```

3 Create the list of software applications that you want to download. Note that the names of software packages are case sensitive and must be entered exactly as they appear.

```
set Software Download avListToDownload
<application_versions>
```

Passport will also download patches associated with the application versions you specify.

4 Verify that the software applications that you want to download are in the list of software that will be downloaded:

```
display Software Download avListToDownload
```

5 Start downloading the software:

```
start -host(<ipAddress>) -user(<userId>)
-password(<password>) Software Download
```

The download process begins.

6 Monitor the progress of the download:

```
display Software Download
```

When the *status* attribute is *inactive* and the *filesToTransfer* attribute is *0*, the download is complete.

7 Verify that the correct software was downloaded:

```
list Software ApplicationVersion/*
```

8 Verify that the correct patches were downloaded:

```
list Software ApplicationVersion/* Patch/*
```

A list of the software applications and associated patches now available on the node is displayed.

Note: If the node is currently running a software level that does not support patches, the above command fails.

Once you have downloaded the new software, you must add the software applications to the application version list (AVL) or patch list using the procedures in 241-5701-272 *Passport 7400, 15000, 20000 Software Upgrade*. Once the applications have been added to the AVL or patch list, the logical processors can access the features contained within those applications.

Variable definitions

Variable	Definition
<application_versions>	a space-separated list of application versions.
<ipAddress>	the IP address of the SDS.
<password>	the password for the <userid> on the SDS.
<type>	a space-separated list of processor types. Use i960 for the i960 processor, PPC for the PowerPC processor. To turn off a particular type, precede it with a tilde (~) character.
<userID>	a userid on the Passport SDS that has read access to the Passport software files.

Chapter 4
Completing the software installation process

Complete the software installation process by activating the software, configuring the feature list, and performing a final provisioning cycle.

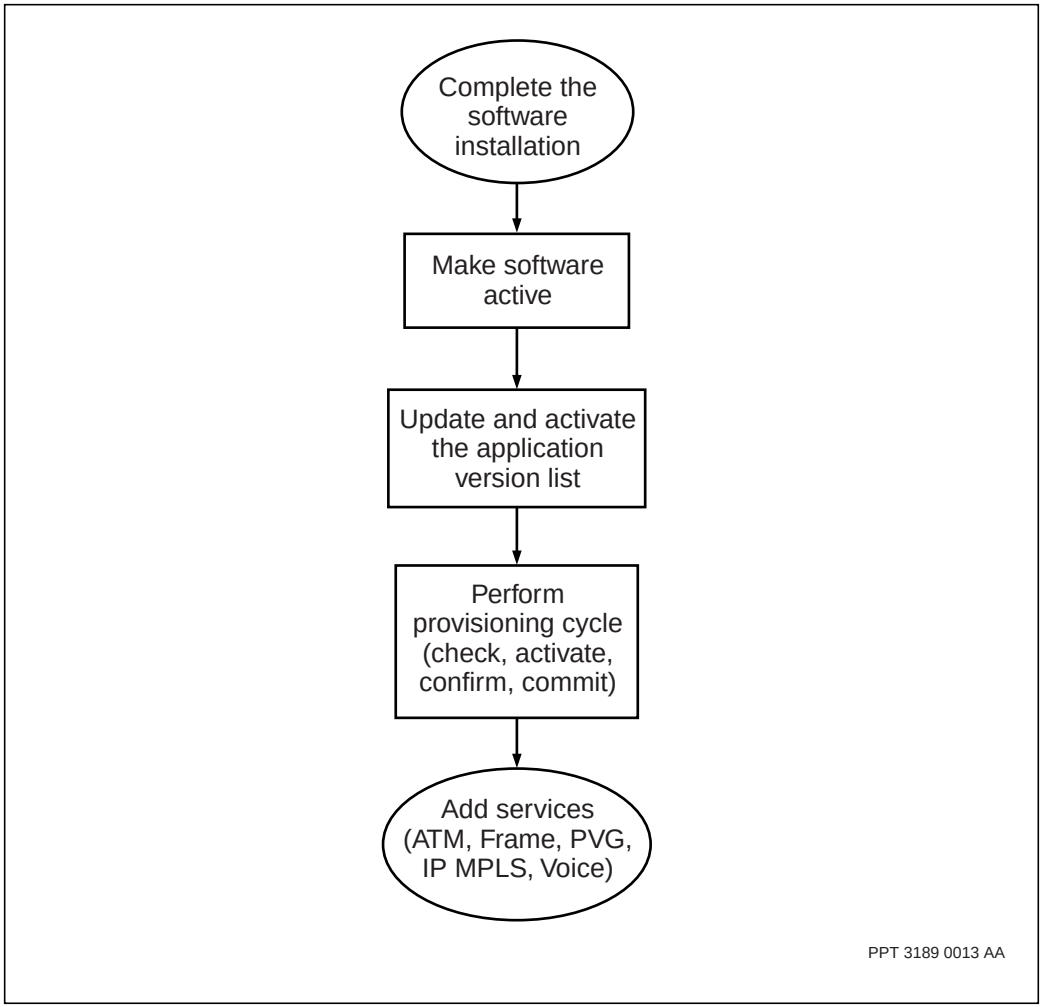
Prerequisites to completing the software installation

- Ensure that the current active software is the correct software version for you network. See "Checking the version of active software on a node" (page 21).
- This task should not be used for upgrading the Passport software. If you downloaded software with the intent to upgrade or patch existing software use the work flow in 241-5701-272 *Passport 7400, 15000, 20000 Software Upgrade*.

Completing the software installation task flow

This task flow show you the sequence of procedures you perform to check the active software on your node. To link to any procedure, go to the list that follows the task flow.

Figure 7
Completing the software installation task flow



Task flow navigation

- “Making the software active” (page 42)
- “Updating and activating the application version list” (page 43)
- “Performing the provisioning cycle” (page 45)

- To configure services, see the individual service guides
- Return to “Software installation work flow” (page 19)

Making the software active

Activate the software currently installed on the node

Procedure steps

1 Activate the provisioning changes:

```
activate prov
```

Updating and activating the application version list

Update the application version list (AVL) to add additional application versions to the Passport node.

Prerequisites

- Perform this procedure in provisioning mode. See the section "Provisioning mode" (page 14) for more information.

Procedure steps

1 Display the current AVL:

```
display software avl
```

The screen displays the current AVL. For example:

```
Sw avList = base_AQ0123B, frameRelay_AQ0123B,
networking_AQ0123B, trunks_AQ0123B
```

2 Replace the old applications in the AVL with the new application versions that represent the release you are installing on the Passport node.

To replace all the application versions at once with new versions, empty the AVL by preceding the new versions with an exclamation mark (!) in a single set command. Separate the application versions with a space. For example:

```
set software avl ! <av_name1> <av_name2> <av_name3>
```

3 Display the edited AVL to verify that the proper software is set and that all software packages come from the same release:

```
display software avl
```

The screen displays the current AVL. For example:

```
Sw avList = base_AQ0123C, frameRelay_AQ0123C,
networking_AQ0123C, trunks_AQ0123C
```

4 Verify that the provisioning changes you have made are acceptable:

```
check prov
```

The Passport responds with a warning that indicates that all processors will reboot when the new provisioning data is activated.

5 Save the edit view with portable formats:

```
save -file(<filename>) -portable prov
```

Note: It is recommended that you save the editing view. Otherwise, the provisioning system will automatically save the view into a temporary location (_TMP_SystemReload_TMP_.full.xxx). The system removes these temporary views automatically. Automatic deletion of these views may not occur if the Software Installation steps are not correctly followed. In such an event, these views may be removed using the following command:

```
tidy -remove(_TMP_SystemReload_TMP_file.full.xxx)
prov
```

6 Activate the edit view:

```
activate prov
```

Variable definitions

Variable	Definition
<av_name>	The name of a new application version.
<filename>	The name of the file in which the edit view is saved.

Performing the provisioning cycle

To complete the software installation process on a Passport node, you must check, save, and commit the provisioning changes before you end the provisioning session.

Prerequisites

- Perform the following procedure in provisioning mode. See the section "Provisioning mode" (page 14) for more information.

Procedure steps

1 Verify the provisioning changes are still valid on the new software:

```
check prov
```

Correct any error and then verify the provisioning changes again.

2 Save the current view:

```
save -current prov
```

3 Activate and confirm the provisioning changes:

```
activate prov
```

```
confirm prov
```

4 Optional: Commit the current view:

```
commit -file(<filename>) prov
```

Note: Do not commit the current view unless the new software is the software to which you want to roll back.

5 End provisioning mode:

```
end prov
```

Note: If the active CP fails before the current view is made the committed view, rollback to the committed provisioning view occurs. This results in a complete shelf outage.

Variable definitions

Variable	Definition
<filename>	The name of the file that contains the new, upgraded provisioning data.

Appendix
The software distribution site

The first step in the software installation process is to set up the software distribution site (SDS) workstation and then download the most current release software onto this workstation.

This section contains the following information:

For more information on downloading the release software to your node from the SDS, see the section "Downloading software from the software distribution site to the node" (page 31).

What is the software distribution site?

The software distribution site (SDS) is a workstation used to store, manage, and distribute the Passport software. Ultimately, you will download this software to your node. You only need to set up the SDS once, after which you can update it with each new release of software by downloading the software from a CD-ROM or from the Nortel Networks' website (www.nortelnetworks.com).

The information is stored on the SDS workstation in a standard directory structure. For information on this SDS directory structure, see the section "Software distribution site directories" (page 48).

Software distribution site directories

When you receive new Passport software on CD-ROM or download it from the Nortel Networks' website, you install the software on a workstation that serves as a software distribution site (SDS). The SDS is a repository of software that you access when downloading software applications to your nodes.

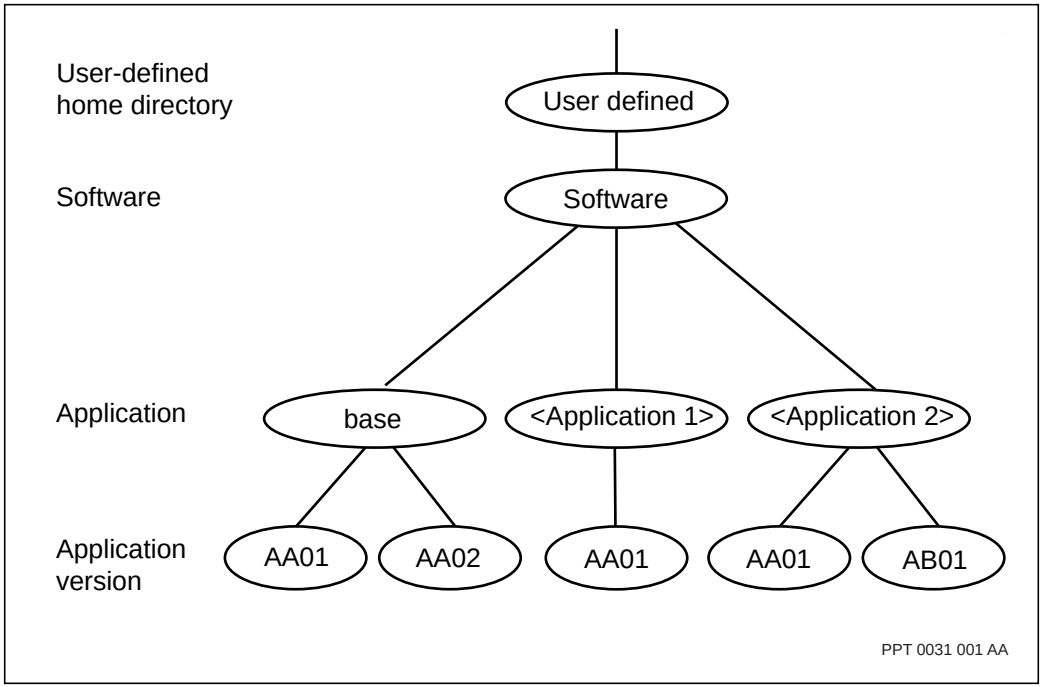
If you already have an SDS for Passport 7400 software, you will need to create another SDS for Passport 15000 or 20000 software. You should copy the directory structure from your existing SDS to ensure that the SDS directory structure is identical. Each SDS, however, must have a unique userid to ensure access to the correct software. When you log into the SDS using the Passport 15000 or 20000 userid, you will be accessing the Passport 15000 or 20000 software. Similarly, if you log into the SDS using the Passport 7400 userid, you will be accessing Passport 7400 software.

The figure "Passport software directory structure at a software distribution site" (page 49) shows the directory structure on the SDS, including the following directories:

- a user-defined home directory, which is the default login directory. The home directory must have a subdirectory called Software.
- application directories, which contain the software application version directories
- software application version directories, which contain all the control files and object files for a particular version of an application

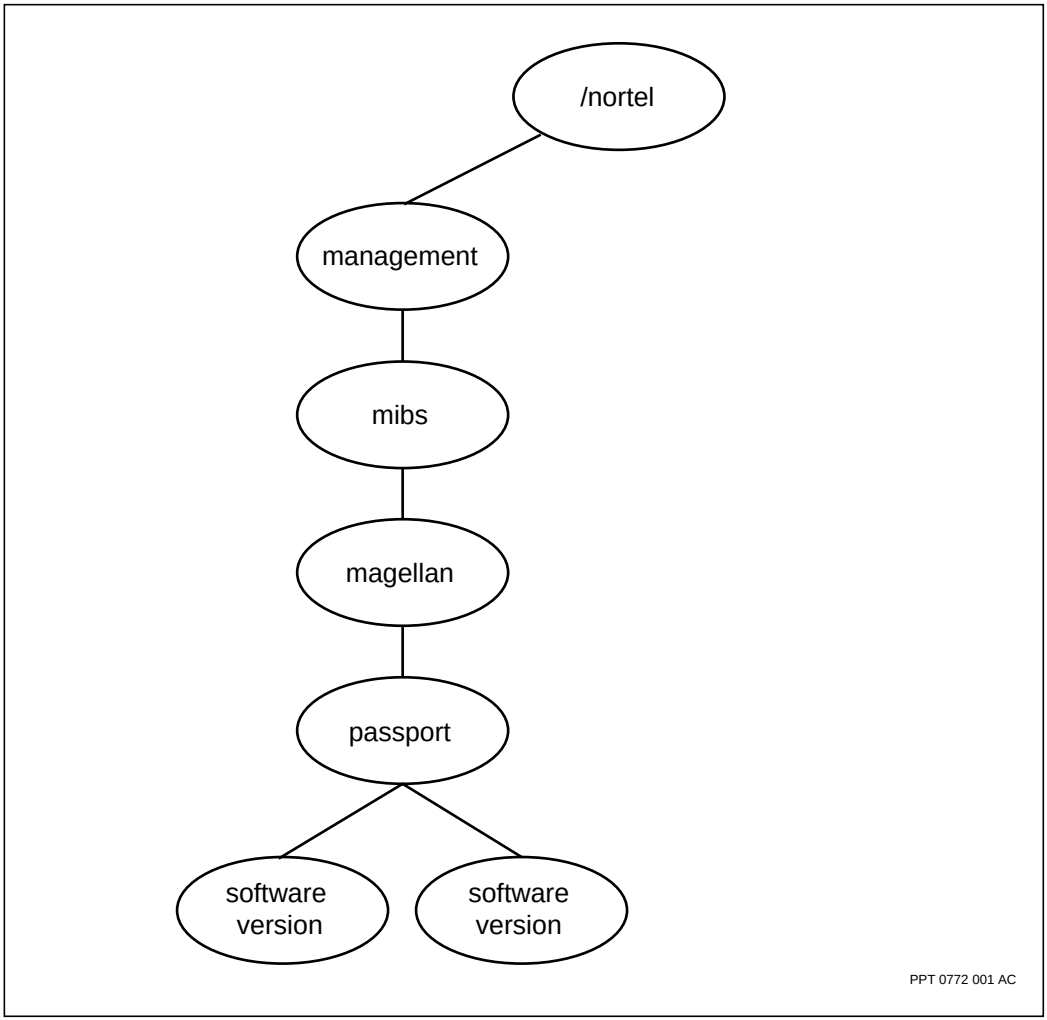
The directory structure maintained on a Passport node is similar to the structure on the SDS workstation.

Figure 8
Passport software directory structure at a software distribution site



You can also install the files for the management information bases (MIB) on the SDS. The figure “Passport SDS software directory structure: optional MIB” (page 50) illustrates the directory structure for this option.

Figure 9
Passport SDS software directory structure: optional MIB



Prerequisites for setting up the software distribution site

Before you set up the software distribution site, you must meet the prerequisites described in the following sections:

- “Prerequisites of the software distribution site workstation” (page 51)

Prerequisites of the software distribution site workstation

Before you can set up the software distribution site (SDS), you need to install the workstation to which you will download the feature software. Once the SDS workstation is operational you can use it as the software distribution site. This workstation must

- run under the Sun OS, Solaris, HP, or IBM UNIX operating system.
- have sufficient disk space to accommodate the Passport software. The space required depends on the number of software releases you have stored on the SDS. The approximate disk space requirements for each Passport 15000 or 20000 release are
  - — Passport 15000 or 20000 software: 290 Mbyte
  - — management information base (MIB) files: 30 Mbyte
- be connected to the network with an IP address. Record this IP address for when you download the software to the node.
- have a CD-ROM drive (Rockridge format) if you are going to download the software from the CD-ROM
- have userids and passwords set up for FTP and remote login sessions. Make sure that the userids have read access to all software files and that their default login directories have a subdirectory called software.

  Note: If you have a Passport 7400 software distribution site and a Passport 15000 or 20000 software distribution site, you will need to have two unique userids, one for each product site.

  Record these userids and passwords to use when you download the software to the node.

General prerequisites of the software distribution site

Before beginning to set up your software distribution site (SDS), ensure that you

- have a copy of the *Release Report* which is available on the Nortel Networks' website (www.nortelnetworks.com)

- can access the software that is to be downloaded to the SDS. Talk to your Nortel Networks customer representative about getting this software in one of two ways:
  - on CD-ROM
  - through the Nortel Networks' website (www.nortelnetworks.com)
- have an installed and functional SDS workstation. For more information, see the section "Prerequisites of the software distribution site workstation" (page 51).

Downloading software to the software distribution site

Once the software distribution site (SDS) workstation is operational, it can function as the software distribution site. You can then download the release software to the software distribution site.

> ***Note:*** If the control processors were shipped loaded with all of your required software, you may not need to download any additional software from the SDS.

You can access the software in one of two ways:

- off of a CD-ROM. See the procedure "Installing the software from a CD-ROM" (page 53).
- from the Nortel Networks' website. See the procedure "Installing the software from the Nortel Networks website" (page 54).

Installing the software from a CD-ROM

The installation program on the Passport CD-ROM lets you install a release's software and management information base (MIB) files onto the software distribution site (SDS). Contact your Nortel Networks customer representative for information on how to order a CD.

The following procedure contains instructions for installing Passport software on a Sun OS, Solaris, HP, or IBM UNIX workstation. You need to be logged on as root to perform some steps in the procedure.

1 Log on to the SDS workstation with a userid that has the appropriate privileges.

2 Create a directory for mounting the CD:

```
cd /
mkdir /cdrom
```

If mountable CDs have been used in the past for other applications, you may not have to create this directory.

3 If you have a Sun OS workstation, mount the CD by typing

```
mount -rt hsfs /dev/sr0/cdrom
```

If you have an HP (HPUX) workstation, mount the CD by typing

mount -rt cdfs /dev/dsk/c20ld2s0/cdrom

If you have an IBM (AIX) workstation, mount the CD by typing

mount -rv cdrfs /dev/cd0/cdrom

If you have a Solaris workstation, do not perform this step.

4 If you have a Sun OS, HP, or IBM workstation, start the installation program by typing

/cdrom/install

If you have a Solaris workstation, start the installation program by typing:

/cdrom/cdrom0/install

5 Follow the installation program's prompts.

Note: Use the *Release Report* to determine which versions of the software you want to install.

The installation program indicates when the installation is complete at which time, the following have been installed:

- the Passport 15000 or 20000 release software in the directory you defined when prompted by the installation program
- the MIBs in the directory /nortel/management/mibs/magellan/passport

6 Once the software has been successfully installed, log back into the SDS workstation with a userid that has the appropriate privileges.

7 If you have a Sun OS, HP, or IBM workstation, unmount the CD by typing:

umount /cdrom

If you have a Solaris workstation, unmount the CD by typing:

eject cdrom

Installing the software from the Nortel Networks website

You can access software updates, product information, Passport 7400, 15000, 20000 Release Notes, technical tips, and technical newsgroups from Nortel Networks' website. Before accessing the Nortel Networks' website, you need an account with a user name and password, and a dropbox must be set up for you. Contact your Nortel Networks customer representative for more information on accessing the Nortel Networks' website.

The following procedure contains instructions on how to install the software from the Nortel Networks' website to the software distribution site (SDS) workstation. When you download the software from this site, a copy of the software is placed in your directory.

1. On the web, go to *www.nortelnetworks.com*.
2. Click the *Customer Support page* link.
3. From the Customer Support window, click the *Software Distribution* link.
4. From the Software Distribution window, select *Data and Internet* from the Select a Product Family drop-down menu.
5. From the Software Distribution window, select a Passport product from the Select a Product drop-down menu.
6. Enter your user name and password for the Nortel access login.
7. From the Software Download window, select the Passport product that you want to download.
8. From the Software Download window, select a site, distribution type, product line, product description, and product revision.
9. From the Software Download window, click *Download*.

   A Save As dialog is displayed.
10. Enter the directory where you want the software placed.
11. Click *Save*.
12. Close the windows and exit from the Nortel Networks' website.

Verifying the software download

After you have downloaded the software to the software distribution site (SDS), verify that the correct files were downloaded and placed in the correct place. To verify, follow this procedure:

1. On the SDS workstation, change to the software directory:

   ```
   cd software
   ```
2. Verify the contents of the directory:

   ```
   ls
   ```

   A subdirectory for each of your features is displayed.

Maintaining the software distribution site

The following sections describe how to maintain the software distribution site (SDS) workstation. To conserve disk space on the software distribution site (SDS), periodically remove software applications and other files associated with old software releases.

Removing an application version from the software distribution site

To remove an application version from the software distribution site (SDS), you must remove its directory and all the files it contains.

1 Change to the software directory:

```
cd <home>/software
```

where:

<home> is the home directory of the SDS login account. If you are using the SDS login account, you can use the tilde character (~) to represent the home directory.

2 Remove the AV directory and all its files using the UNIX rm (remove) command:

```
rm -rf <application>/<version>
```

where:

<application> is the name of the application.

<version> is the version number of the application.

For example, to remove version AA01 of base, type the following:

```
rm -rf base/AA01
```

Removing an application

You can remove an application and all its versions by deleting the application directory and all its subdirectories.

1 Go to the software directory:

```
cd <home>/software
```

where:

<home> is the home directory of the SDS login account. If you are using the SDS login account, you can use the tilde character (~) to represent the home directory.

2 Remove the application use UNIX rm (remove) command:

```
rm -rf <application>
```

where:

<application> is the name of the application.

For example, to remove all versions of the FrameRelay application, type:

```
rm -rf FrameRelay
```

Removing other software distribution site directories

If you know the name of the directory, you can use the UNIX rm (remove) and rmdir (remove directory) commands to remove it.

1 Change to the appropriate directory:

```
cd <directory_name>
```

2 Check to make sure you are in the correct directory:

```
pwd
```

The actual name (not the alias) of the directory you are in is displayed.

3 Ensure that the files you want to remove are in that directory:

```
ls -l
```

4 Use the UNIX remove command to remove all the subdirectories and files in that directory:

```
rm -r *
```

5 Go back up one level in the directory hierarchy:

```
cd ..
```

6 Remove the directory whose files you have just deleted:

```
rmdir <directory_name>
```

Passport 7400, 15000, 20000

Software Installation

Guide

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