DigitalNetworks

Network Access Software Installation Guide

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This book describes how to install the Network Access software.

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Preface

Purpose

This guide describes how to install the Network Access Software on a system that runs the Windows 95/98/2000/ME/XP, Windows NT, Windows 2003 Server and OpenVMS. It describes:

- Installing Network Access Software distribution software onto the appropriate system.

- Configuring the system so that it can operate as a load host for the Network Access Software.

- Verifying the installation by downloading the software to the network access server and testing a number of representative access server commands.

Intended Audience

The audience for this guide is the system or network manager responsible for making network access server products available on their Ethernet(s). The system manager is responsible for the system that is to be established as a load host. The network manager is responsible for the local area network (LAN). Readers should be familiar with both Internet network management concepts and the load host's operating system.

Supported Platforms

The Network Access Software runs on Digital Network's access server products, including the DECserver 90M+, DECserver ConX^4, DECserver 716, DECserver 732 family, and the DECserver 900TM.

Although Digital Networks currently only supports the aforementioned hardware platforms, this software also runs on the retired DECserver 900GM, DECserver 900MC, DECserver 700-08 and DECserver 700-16 products.

Conventions

This guide uses the following conventions:

- The generic term access server instead of using the specific hardware product name.

- All numbers are decimal unless otherwise noted.

- All Ethernet addresses are hexadecimal.

Typographical Conventions

In addition, this guide uses the following typographical conventions:

Convention	Description
special type	This special type indicates system output or user input.
bold	All commands, file names, and directories are in bold type.
lowercase	If a command appears in lowercase letters in a command format or an example, you must enter it in lowercase letters.
italic	Italic type in command syntax or examples indicates variables for which either you or the system supplies a value.
Ctrl/X	Hold down the Control key and simultaneously press the key specified by X. The access server displays this key combination as ^X.
#	The pound sign (#) is the Tru64 UNIX and UNIX superuser prompt.

Associated Documents

The following documents are available:

- *Network Access Software Management* guide

- *Network Access Software Command Reference* guide

- Access Server Manager online help

Introduction

Overview

In This Chapter

This chapter describes the components in your access server product kit.

The following are the topics in this chapter:

*   Product Components List

*   Component Descriptions

Product Components List

Introduction

Your access server product kits contain:

*   Hardware components consisting of:

    — DECserver access server

    — User documentation

*   Network Access Software (DNAS) CD consisting of:

    — Network Access Software

        *   WWENG2: Load image for DECserver 7xx and DECserver 900 series of access servers configured with at least 4Mb RAM.

        *   MNENG4: Load image for the DECserver 90M+ and ConX4 access server.

        *   MNBOOT: Bootrom image for the DECserver 90M+ and ConX4 access server.

— Network Access Software support files

— Access Server Manager, the access server management tool

- Digital Networks RADIUS Software (DRAS)

  — Installation guides

  — All software guides

Component Descriptions

Hardware Components

The access server unit is a network access server that you can use to connect asynchronous devices (terminals, printers, modems, and PCs) to an Ethernet local area network (LAN). You can also use your access server unit with a modem for remote access connections. Remote access allows remote PC, Macintosh, and workstation users to dial into a remote network access server and use all of a network's available resources.

Hardware Installation

Follow the instructions in the access server user documentation and the documentation that shipped with the network device that you are connecting to the access server.

Network Access Software (DNAS) CD

The Network Access Software CD contains the software you need to download the operational software to the access server and to configure the hardware. The PC-based kit includes the Access Server Loader and the Access Server Manager. These are PC-based, Graphical User Interface loading and management tools.

The DNAS CD also includes the Digital Networks RADIUS Server software. The software allows you to install and configure a RADIUS server for remote access authentication and authorization. The DNAS CD also includes all DNAS software manuals in Adobe^{TM} Acrobat (.pdf) format.

Software Installation

If you have a PC available, install the software on the DNAS CD on your PC and configure the Access Server Loader so it can download the DNAS software to your access server. If you do not have a PC, use an OpenVMS MOP or a U*ix system BOOTP/TFTP as a load host to download the software. Use the access server console commands to configure the unit. Refer to the *Network Access Software Command Reference Guide*,

Network Access Software Management Guide, or the online help for more information about the console commands.

Windows 95/98/2000/Me/XP/2003 Server and Windows NT Installation

Overview

In This Chapter

This chapter describes the procedures necessary to install the access server management software on a Windows 95/98/2000/Me/XP/2003 Server or Windows NT management station and configure the access server for remote access. The topics in this chapter are:

*   Introduction

*   Installation Requirements

*   Step 1: Installing Management Software

*   Step 2: Configuring the Access Server Loader

*   Step 3: Installing the Access Server and Network Device

*   Step 4: Configuring the Access Server for Remote Access

*   Step 5: Preparing for Client Installation

Introduction

Access Server Configuration

The windows-based kit includes tools that allow you to download the DNAS software and configure the hardware. The following table describes when to use the Access Server Loader and the Access Server Manager software:

Use the Access Server Loader Software to:	Use the Access Server Manager Software to:
Install the Network Access Software on access servers.	Configure your access server unit for remote access.
Set Internet addresses and subnet masks for access servers.	Reboot an access server and set IP characteristics.

Installation and Configuration Process

To install and configure a remote access server, you need to:

Step	Action
1	Install the software on the Network Access Software CD on a PC that runs the Windows NT or Windows 95/98/2000/Me/XP/2003 Servr operating system. This is the PC management station.
2	Configure the Access Server Loader. The Access Server Loader is a BOOTP and TFTP server that allows you to download the DNAS software from the PC management station to the access server. Keep the Access Server Loader running continuously to ensure that the DNAS image downloads when an access server requires it.
3	Install the access server and network devices.
4	Configure the access server. See the DNAS documentation and your network device documentation for details about configuration tasks. You can find the documentation in the DOCS directory of the DNAS CD.
5	Collect and distribute information for remote access client installation. Typically, the remote user installs the client software.

Other Configuration Tasks

For all other configuration tasks, use the access server console commands. Refer to the DNAS documentation located in the DOCS directory of the DNAS CD.

Installation Requirements

PC Management Station Hardware Requirements

The PC management station is the PC you use to manage the access server. It requires the following hardware to support the PC-based management applications:

- An Intel 386 or greater processor.

- A minimum of 16 megabytes of random access memory (RAM). Additional memory improves performance.

- A CD-ROM drive.

- A minimum of 5 megabytes of available disk space.

- A network interface card (NIC).

- A network cable connected to the PC.

PC Management Station Software Requirements

You need Microsoft Windows 95/98/2000/Me/XP/2003 Server or Windows NT Version 3.51 or greater to install the Windows-based management software.

Step 1: Installing Management Software

Introduction

Use this step to install the software from the Network Access Software CD on your PC management station. After you complete this step, you can:

- Configure the Access Server Loader and activate the BOOTP and TFTP servers.

- Use the Access Server Manager to configure and manage an access server for remote access.

Installing the Network Access Software

To install the Network Access Server software, do the following:

Step	Action
1	Insert the DNAS CD in your CD-ROM drive. The CD automatically mounts as an ISO 9660 volume.
2	Are you using the Windows NT operating system? • If no, go to step 3. • If yes, do the following: a. For **Intel** systems only: From the Program Manager or Start menu, run the following: X:\DNAS\WIN95NT\SETUP.EXE The letter X represents the drive letter of your CD-ROM drive. This launches the Access Server Setup program. a. For **Alpha** systems only: From the Windows Explorer, click the Fx!32 folder and then double click instlx86.exe. From the instlx86 installation dialog, run the following: **(This is unsupported)** X:\DNAS\WIN95NT\SETUP.EXE The letter X represents the drive letter of your CD-ROM drive. This launches the instlx86 Setup program. b. Click Next in the Welcome dialog box. c. Go to step 4.

Step	Action
3	Are you using the Windows 95/98/2000/Me/XP operating system? • If no, go to step 2. • If yes, do the following: a. Select Start and choose Control Panel from the Settings menu. b. Select Add/Remove Programs from the Control Panel. c. Click Install in the Add/Remove Programs Properties dialog box. d. Click Next in the Install Program From Floppy Disk or CD-ROM dialog box. e. Enter the letter of your CD-ROM drive followed by \DNAS\WIN95NT\SETUP in the Run Installation Program dialog box and click Finish. f. This launches the Setup Program. Click Next in the Welcome dialog box. g. Go to step 4.
4	Select the components you want to install from the Select Components dialog box and click Next. The default is to install all components.
5	Are you installing the Access Server Loader? • If no, go to the step 6. • If yes, do the following: a. Choose the target drive and directory in the Choose Destination Location dialog. Click Next to accept the displayed default or click Browse and enter a new destination and click Next. b. If running Windows NT, enter the name of the Program Folder where you want the icons installed, or click Next to accept the displayed default.

Step	Action
6	Are you installing the Access Server Manager? • If no, go to step 7. • If yes, do the following: a. Choose the target drive and directory in the Choose Destination Location dialog. Click Next to accept the displayed default or click Browse, enter a new destination, and click Next. b. Choose the target drive and directory for the data and backup files. Click Next to accept the displayed defaults or click Browse, enter a new destination, and click Next. c. If running Windows NT, enter the name of the Program Folder where you want the icons installed, or click Next to accept the displayed default. d. Click Yes to open the README.TXT file when prompted to do so.
7	When the installation procedure displays the Installation Complete dialog box, click OK. Restarting Windows: If files that the installation procedure needs to update are in use, the procedure displays the Restart Windows dialog box instead of the Installation Complete dialog box. Select the restart option and click OK.

Step 2: Configuring the Access Server Loader

Introduction

Use this step to configure the Access Server Loader and activate the BOOTP server. After you complete this step, you can use the Access Server Loader to:

• Load the Network Access Software (DNAS) image on your access server.

• Configure IP characteristics on an access server.

Before You Start

Before beginning this procedure, make sure you have:

• An Internet address for the access server

• The subnet mask for the access server

• The Ethernet address for the access server

Procedure

To configure the Access Server Loader, do the following:

Step	Action
1	Start the Access Server Loader on the PC management station. To learn about all of the Access Server Loader options, click Help on any of the application windows.
2	Select Setup. If a database file does not exist, the application asks if you want to create it. Click Yes.
3	Select the Clients tab and enter the following information for the access server: • Host name for the access server • Ethernet address • Internet address • Subnet mask • Gateway Internet address • Image file name for the access server. The default image for the DECserver 90M+ and DECserver ConX^4 access server is MNENG4; WWENG2 is the default image for the DECserver 7xx-xx and DECserver 900 models. • Click OK when finished.
4	Select the Files tab and enter the Request and Response file names. The Request File field contains the name of the file you expect to get from the access server in a BOOTP request. The Response File field contains the name of the factory load image you want to load on the access server using TFTP. Disabling Other Load Hosts: If other access server load hosts exist, you may want to disable them or load the new factory image on the other BOOTP loaders. This ensures that the access server receives the new factory image (WWENG2 or MNENG4) for the current device during a load operation.
5	Select the Options tab and check that the displayed PC management station's host name and IP address are correct.
6	Select the Logging tab and select any of the logging options. (This step is optional.)
7	Click on OK to close the Clients, Files, Options, or Logging dialog box and return to the Access Server Loader main window.
8	Start the BOOTP and TFTP servers by clicking on the server On/Off buttons. If you want the Access Server Loader to start automatically when you start Windows, copy the Access Server Loader icon into the Windows StartUp group. **Result**: Once activated, the Access Server Loader waits for access servers to send BOOTP and TFTP requests to it. When the Access Server Loader receives requests, it downloads the DNAS image file to the access server.

Step 3: Installing the Access Server and Network Device

Introduction

Use this step to:

- Download a new Network Access Server (DNAS) image to the access server.

- Configure IP characteristics on your access server.

Completing this step sets your access server configuration back to factory defaults. Your current access server configuration is lost.

Access Server Configuration Upgrade

If you want to upgrade your Network Access Software and preserve your current access server configuration, refer to Appendix C.

Flash RAM Upgrades

If your access server has Flash RAM, use the procedure in Appendix C to load the new DNAS image from ethernet and permanently save the new image in Flash RAM.

Procedure

To install the access server and network device, do the following:

Step	Action
1	Install the access server hardware. (Refer to the access server user documentation.)
2	Connect the Ethernet cable to the Ethernet connector on the access server.
3	Install the network device on the desired access server port using the appropriate cable. (Refer to the table in Step 4: Configuring the Access Server for Remote Access in this topic or the documentation that shipped with the device.)

Step	Action
4	Are you installing a modem? • If no, go to step 5. • If yes, and you did not preconfigure the modem for dial-in operations, reset it to factory defaults.
5	Turn on the power to the network device. Once loaded, the BOOTP requester in the access server activates and the BOOTP responder installed on the Access Server Loader or other load host responds with the Internet address for the access server. Initialization Time: See your access server user documentation for the time required for initialization.

Step 4: Configuring the Access Server for Remote Access

Introduction

Use this step to configure your access server for remote access. To configure the access server, you can do one (or both) of the following:

• Use the Access Server Manager to configure your access server and modems for remote access. The following sections describe how to configure an access server for remote access using this application.

• Use the access server console commands to configure your access server as a terminal server or for remote access use. After you complete this step, you can use your dial-up clients to make remote connections to the network.

For More Information

If using the Access Server Manager, see the application's How To... online help topics for step-by-step instructions for each step in the configuration process.

If using the access server command line interface, see the *Network Access Software Management* guide in the collection on the DOCS directory of the DNAS CD.

Before You Start

You need the following information:

- Access server type (DECserver 90M+, DECserver ConX[4], DECserver 7xx series, DECserver 900TM).

- Internet address currently assigned to the access server.

- For IPX, unique internal network number (optional).

- For IP remote client dial-in, unique Internet address for each port (optional).

- Modem manual for each modem that you want to configure. In some cases, the Access Server Manager prompts you to enter some modem commands to properly initialize the modem.

- New login and privilege passwords, if ports use login passwords for security (optional).

- If a port is to use Kerberos security, realm and domain name or Internet address of the Kerberos server.

- If a port is to use RADIUS security, realm, client secret, and domain name or Internet address of the RADIUS authentication and accounting servers.

- If a port is to use SecurID security, realm, encryption type, and domain name or Internet address of the SecurID ACE/server.

NOTE
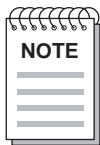
Telnet remote console must be enabled on the access server. This is the factory-default condition.

A: Start the Configuration Process

See the Access Server Manager's How To... online help topics to read step-by-step instructions for all of the configuration procedures. The application leads you through the configuration process by displaying the appropriate dialog boxes where you enter the required information.

The first step in the configuration process is to add your access server to the Browser view. Do the following:

Step	Action
1	Start the Access Server Manager on the PC management station.
2	Add the access server to the Browser. This step opens a new configuration data file for the access server.
3	Verify the access server's remote console connection using the Test Connection option on the Utilities tab.
4	Save the access server's Internet address and subnet mask in NVRAM (nonvolatile random access memory) using the Configuration tab. Click Apply to write your settings to the access server. See the online help for step-by-step instructions.

B: Configure Protocols

The next step is configuring the access server protocols. To configure the protocols:

Step	Action
1	Select Server Protocol IP and click Configure.
2	Configure the access server's Internet gateway address using the Gateway tab. Click Apply to execute the commands on the access server.
3	Configure the access server's Domain Name System using the DNS tab. Click Apply to execute the commands on the access server.
4	Configure other server protocols by selecting the appropriate server protocol option (Server IP, Server IPX, or Server AppleTalk). Depending on the protocol you select, you may need to select tabs to configure all protocol properties.
5	Click Apply to apply the server protocol settings on the access server.

C: Configure Ports

After configuring the access server protocols, configure the port properties. Do the following:

Step	Action
1	Configure the port that has the modem attached for PPP dial-up service by selecting the Port Dial-Up Service option. The application prompts you to specify modem data and network protocols for the port (IP, IPX, or AppleTalk). Initially, configure the port without security or dial-back properties. You configure these properties after you configure the port protocols. Use Your Modem Manual: If you add a modem that does not appear in the list of modems that the Access Server Manager displays, use your modem manual to find the modem commands required to configure the modem.
2	Click Apply to write the port settings to the access server.
3	Test the PPP dial-up service on the port you just configured by using a remote dial-up client, such as Microsoft's Windows 95/98/2000/Me/XP/2003 Server Dial-Up Networking.
4	Were you able to successfully connect to the access server? • If yes, go to the next step in the configuration process, D: Configure Dial-Back Services. • If no, refer to your modem manual and check that the modem commands are correct. Check that you configured the correct server protocols. Refer to the *Network Access Software Problem Solving* guide for more details.

D: Configure Dial-Back Services

Dial-back services enable the access server to terminate a user's session and dial the user with a specified telephone number. If you want to provide dial-back services to your users, do the following:

Step	Action
1	Configure dial-back services by selecting the Port Dialer Service option and enabling dial-back on a port configured for PPP dial-up service.
2	Click Write to apply the dial-back settings on the access server.
3	Test your dial-back configuration by using your dial-up client to make a network connection.
4	Did the access server respond properly to the remote access attempt? • If yes, go to the next step in the configuration process, E: Configure Security. • If no, see the Access Server Manager's online help or the DNAS documentation for information about configuring dial-back services.

E: Configure Security

The next step is configuring security for the access server. If you configure security settings on the access server, you may also need to have the appropriate security server on the network. Your security methods include:

*   PAP or CHAP with the access server's login password (no network security server required)

*   PAP or CHAP with the access server's local user accounts (no network security server required)

*   PAP or CHAP with RADIUS security

*   PAP with Kerberos V4 security

*   PAP with SecurID security

The Access Server Manager's online help provides step-by-step instructions for configuring security. If you do not want to use any of these security methods, go to the next step.

To configure security on your access server:

Step	Action
1	Select the Port Dial-Up service option, enable port security, and select a security method.
2	Click Apply to apply the port security commands.
3	Configure security properties by selecting the Server Security option, selecting the type of security you want to configure, and entering the required information. References: Refer to the online help and the *Network Access Software Management* guide for more details about configuring security on the access server.
4	Click Apply to apply the security settings on the access server.

Step	Action
5	Test your security configuration by using your dial-up client to make a network connection. If using a remote server for authentication, make sure you install and configure the security server before you perform this test. Do the following: a. Log in using incorrect security information. If the access server rejects the access request, the test is successful. Go to the next test. b. Log in using correct security information. If the access server accepts the access request, the test is successful. Go to the next step.
6	Did the access server respond properly to the remote access attempts? • If yes, go to the next step in the configuration process, F: Save the Configuration File. • If no, reconfigure the security settings and check that your security server is properly installed, configured, and active.

F: Save the Configuration File

To save all of the configuration settings, select Save from the File menu.

Step 5: Preparing for Client Installation

Introduction

Use this step to prepare for client installation. If you are not configuring your access server for remote access, you can skip this step.

• If you plan to use the Windows 95/98/2000/Me/XP/2003 Server or Windows NT Dial-Up Networking client, see your Windows 95/98/2000/Me/XP/2003 Server or Windows NT documentation.

• If you plan to use a client other than the Windows 95/98/2000/Me/XP/2003 Server or Windows NT clients, refer to the documentation that shipped with it.

Information You Will Need

As the network administrator, you need to provide each user with one or more of the following:

• Remote access dial-up client. The DNAS software is compatible with most standard remote access clients, including the Windows 95/98/2000/Me/XP Dial-Up Networking client and the Windows NT dial-up client software.

- Access server's telephone number for dial-in.

- Port authentication login user name and password consistent with the method used during the access server configuration.

- Type of modem to specify during the installation.

- IRQ and I/O port settings for the modem.

- Type of LAN operating system to select.

- PPP IP address for port dial-in (optional).

- PC's IP address (optional).

- IP name server address and local domain name (optional).

Client Information

For additional information, refer to the client documentation.

OpenVMS Installation

Overview

In This Chapter

This chapter describes how to install the Network Access Software on an OpenVMS system. This system is referred to as the load host.

This chapter contains the following topics:

- Preparing to Install the Software

- Installing the Software

- Updating the Access Server Database

- Downloading the Software Image

- Verifying the Image Download

- Completing the Installation

- Installing Software on Additional OpenVMS Hosts

Preparing to Install the Software

Procedure

Before you install the software on your load host, do the following:

Step	Action
1	If you have a new access server with Flash RAM, follow the procedure to update the access server database. (See the Updating the Access Server Database section in this chapter.)
2	Check your load host for the following: a. OpenVMS V5.0 or any subsequent release is installed. b. DECnet VAX Phase IV or DECnet/OSI is running. c. The Ethernet controller is on the same Ethernet as the access server.
3	Make sure that the CMKRNL and SYSPRV privileges are set. For DECnet/OSI systems, make sure you have WORLD privilege and the NET$MANAGE rights identifier.
4	Verify that the load host has enough available disk space. (Refer to the release notes for memory requirements.)
5	Back up the system before installing the software.
6	Unless you are installing from save sets copied from another load host, mount the software media on an appropriate device drive.
7	Write down the access server DECnet node address and DECnet node name (Phase IV only), which the network manager supplies. Write down the Ethernet hardware address, which the hardware installer supplies.
8	Make sure the access servers have a minimum of 4 megabytes (MB) of physical memory.

Installation Time Required

Installation requires approximately 5 minutes to complete.

LMF Not Required

License Management Facility (LMF) is not required.

Installing the Software

Introduction

To install the Network Access Software on the load host, use the VMSINSTAL utility. To stop the installation at any time, press Ctrl/Y.

Step 1: Start VMSINSTAL

Do the following:

Step	Action
1	Log in to the system manager account.
2	Mount the CD-ROM drive as a ISO 9660 volume using the following command syntax: $ MOUNT device-id DNAS0xx/MEDIA=CD The device-id variable is the name of the CD-ROM drive on your system.
3	Invoke VMSINSTAL using the following command syntax: $ @SYS$UPDATE:VMSINSTAL DNASnnn -_$ device-id:[DNAS.OpenVMS] OPTIONS N where nnn is the software version, for example, DNAS036. Substitute your device drive identifier for device-id. The procedure displays the following: OpenVMS VAX Software Product Installation Procedure Vx.x It is 9-FEBRUARY-1999 at 17:05. Enter a question mark (?) at any time for help.
4	If there are any active processes, VMSINSTAL lists them and asks if you want to continue. Enter YES to continue the installation. Example: %VMSINSTAL-W-ACTIVE, The following processes are still active: SERVER_006C DECW$SERVER_0 DECW$TE_00EB DECW$TE_00F2 * Do you want to continue anyway [NO]? YES

Step 2: Confirm System Backup and Device Mount

If you have backed up your system disk, press the Return key when the procedure prompts you to do so. If you mounted the software media on the appropriate device, enter YES.

Example

* Are you satisfied with the backup of your system disk [YES]?

Please mount the first volume of the set on DDCU:

* Are you ready? YES

%MOUNT-I-MOUNTED, DNASxx mounted on _SYSTEM$DDCU:

Step 3: Install Kit Components

The procedure asks which components of the installation kit you want to install.

If:	Then:
You are installing a load host for a DECserver 7xx series or DECserver 900TM access server or updating a previously installed version of the NA7 kit	Enter YES when the procedure asks if you want to install Network Access Software DS7xx/DS900 images.
You are installing a load host for a DECserver 90M+, DECserver ConX[4] or updating a previously installed version of the NA9 kit	Enter YES when the procedure asks if you want to install Network Access Software DS90M+ or ConX[4] images.
You want to install support and informational files to help manage access servers and your load host more easily	Enter YES when the procedure asks if you want to install Network Access Software common support files. Enter NO if you plan to use your system only to downline load access servers and want to save disk space.

Example

```
The following products will be processed:

DNAS Vx.x

Beginning installation of DNAS Vx.x at 17:06

%VMSINSTAL-I-RESTORE, Restoring product save set A ...

(c) Copyright 2000 Digital Networks - All rights reserved.
```

You will now be asked if you wish to install certain
components of this kit. These components used to be
available under the product kit names NA7xxx and NA9xxx. If
you need help understanding which of these components to
install, entering a question mark ("?") in response to any
one of these questions will display additional information
on the contents of that component.

*Do you want to install the Network Access Software
DS7xx/DS900 images [YES]?

*Do you want to install the Network Access Software
DS90M+/ConX^4 images [YES]?

*Do you want to install the Network Access Software common
support files [YES]?

Step 4: Purge Files

The procedure asks if you want to purge files. Enter YES to purge the files replaced by this installation.

Example

```
* Do you want to purge files replaced by this installation
[YES]?
```

Step 5: Run the IVP

The system asks if you want to run the Installation Verification Procedure (IVP). To run the IVP, which is recommended, press the Return key when prompted to do so.

The IVP verifies that the DECSERVER directory exists and all the files from the distribution kit are in the DECSERVER directory. After the procedure runs the IVP, VMSINSTAL is completed. See the Updating the Access Server Database section in this chapter.

Example

The IVP command procedure described in this example is for informational purposes.

You do not need to run it again at this time.

```
* Do you want to run the IVP after the installation [YES]?

%DNAS-I-RELAX, No further questions will be asked

%VMSINSTAL-I-RESTORE, Restoring product save set B ...

%VMSINSTAL-I-RESTORE, Restoring product save set C ...

%VMSINSTAL-I-RESTORE, Restoring product save set D ...

%VMSINSTAL-I-SYSDIR, This product creates system directory

[DECSERVER].
```

```
If you intend to execute this layered product on other nodes
in your VAXcluster, and you have the appropriate software
license, you must prepare the system-specific roots on the
other nodes by issuing the following command on each node
(using a suitably privileged account):

$ CREATE /DIRECTORY SYS$SPECIFIC:[DECSERVER]
```

System Display

The procedure continues and displays the following message. (If you do not receive this message, no modifications to the system startup file are necessary.)

```
Your installation is now complete. After exiting from
VMSINSTAL:

1. Add the following command to your system startup file,

SYS$STARTUP:SYSTARTUP_VMS.COM:

$@SYS$STARTUP:DSV$STARTUP

Installing the Software

This procedure includes the SYS$SYSROOT:[DECSERVER]
directory specification in all the MOM$LOAD or MOP$LOAD
logical name search list, and loads all access server
information into the volatile MOP database.

If you have other directories of MOP load images or dump
files, be sure to place the customized DEFINE/SYSTEM
commands for MOM$LOAD, MOP$LOAD, and/or MOP$DUMP ahead of
the execution of DSV$STARTUP.COM in the system startup file.

2. Configure the server into your host's database.

Execute the command procedure called DSV$CONFIGURE.COM. This
command procedure is in the SYS$COMMON:[DECSERVER]
directory. If you have already executed this procedure from
previous installations, you only need to configure
additional units.

All previously defined units will still be configured.

The Installation Verification Procedure (IVP) for the
DECserver can be found in SYS$TEST and may be run at any time
by executing the command procedure DNAS$IVP.COM

VMSINSTAL-I-MOVEFILES, Files will now be moved to their
target directories...

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Installation Verification Procedure for Network Access
Software for OpenVMS VX.X

Verifying Network Access Software images for DECserver 7xx
and DECserver 900s.....
```

```
Verifying Network Access Software images for DECserver 90M+
....

Verifying Network Access Software common support files ....

Installation Verification Procedure succeeded.

$
```

Updating the Access Server Database

Introduction

DSV$CONFIGURE enables you to:

*   Maintain system information about access servers.

*   Modify the local MOP (Maintenance Operations Protocol) client configuration.

*   Connect to the access server using the remote console port.

DSV$CONFIGURE supports both DECnet Phase IV and DECnet/OSI.
DSV$CONFIGURE also supports data created by the procedure DSVCONFIG. When you
install the current version of the Network Access Software, DSV$CONFIGURE
automatically converts any DSVCONFIG data to the format of the current version.

Command Information

For more information about DSV$CONFIGURE commands, refer to the *Network Access Software Management Guide*.

Executing DSV$CONFIGURE

Enter the following command to start DSV$CONFIGURE:

```
$ @SYS$COMMON:[DECSERVER]DSV$CONFIGURE
```

Defining a Symbol

You may find it useful to define a symbol for this procedure in your LOGIN.COM file as follows:

```
$ DSV == "@SYS$COMMON:[DECSERVER]DSV$CONFIGURE"
```

Example

If you define the symbol DSV, the following example shows how to start the procedure. This example also shows how to use HELP to display a list of DSV$CONFIGURE commands.

```
$ DSV

% DSV-I-IDENT, executing DSV$CONFIGURE version X.X.X-nnn

-DSV-I-HELP, type ? any time for help

DSV> HELP

ADD - Add a server to the system

MODIFY - Modify an existing server's information

SET - Synonym for MODIFY

DELETE - Remove a comm. server from the system

LIST - Display information on one or all servers

SHOW - Synonym for LIST

CONNECT - Connect to a server via remote console

USE - Synonym for CONNECT

HELP - Displays summary of valid commands

EXIT - Exit this procedure
```

Adding New Access Servers

Do the following:

Step	Action
1	Enter one of the following commands: • $ @SYS$COMMON:[DECSERVER]DSV$CONFIGURE • $ DSV The system displays the following: %DSV-I-IDENT, executing DSV$CONFIGURE version X.X.X-nnn -DSV-I-HELP, type ? any time for help
2	Enter the ADD command using the following syntax: DSV> ADD [SERVER] [server-name] After you enter the ADD command, DSV$CONFIGURE displays a series of prompts. Some prompts display with defaults specified in square brackets. The values of the defaults are based on the running system.
3	DSV$CONFIGURE determines the load host service circuit-ID and displays this ID as the default. Press the Return key to select the default service circuit-ID. DECnet Errors: DSV$CONFIGURE adds the entry for the new access server to the NCP or MOP databases. If you get an error from DECnet while adding an access server, enter the DELETE command to remove the entry, correct the problem, then try again. The format of the DELETE command is identical to the ADD command. Example: The following example shows the ADD command on a DECnet/OSI system. In this example, a command not followed with a value indicates the selection of the default value. DSV> ADD SERVER -Server Name: DGD7xx -Ethernet Address: 08-00-2B-26-AE-32 -Server Type: DS7xx -Service Circuit: [SVA-0]: -Maintenance Password: [none]: %XBADCFE -Dump File [MOP$DUMP:DS7DGD7xx.DMP] -Load Image [MOP$LOAD:WWENG2.SYS]

Exiting DSV$CONFIGURE

To exit DSV$CONFIGURE, press Ctrl/Z or type EXIT.

Downloading the Software Image

Introduction

When you turn on power to the access server, it automatically requests downloading of the software image.

Procedure

Do the following to download software from your OpenVMS load host to your access server:

Step	Action
1	Do you have DECnet Phase IV software? • If no, go to the next step. • If yes, do the following: Enter the NCP CONNECT NODE node-name command to connect to the access server. Substitute your access server DECnet node name for node-name. If the access server manager defined a maintenance password, such as FEDCBA, enter the following command: $ MCR NCP Example: NCP> CONNECT NODE node-name SERVICE PASSWORD FEDCBA Console connected (press CTRL/D when finished)
2	If you have DECnet/OSI software, enter the following command: $ SET HOST/MOP=node-name/VERIFICATION=%XBADCFE % CCR-I-CONNEST, connection established to remote system 08-00-2B-26-AE-32 Note: For DECnet/OSI software, entering %XBADCFE equates to the DECnet Phase IV maintenance password FEDCBA.
3	Press the Return key to get the access server prompt. Enter the login password. ACCESS is the access server default login password. Example: # ACCESS (not echoed) Network Access SW Vn.n for DS716 (BLxx-xx) (c) Copyright 2004, Digital Networks - All Rights Reserved Please type HELP if you need assistance Downloading the Software Image
4	Enter your user name (any string of 1 to 16 characters). Example: Enter username> MANAGER

Step	Action
5	Enter the SET PRIVILEGED command and enter the password. SYSTEM is the default password. Example: Local> SET PRIVILEGED Password> SYSTEM (not echoed)
6	The Network Access Software is stored under the load image name of WWENG2 or MNENG4 depending on your hardware. WWENG2 is used for the DECserver 7xx or DECserver 900TM hardware. MNENG4 is used with DECserver 90M+ and DECserver ConX[4]. The software requires hardware with at least 4 MB of physical memory. To complete the upgrade, all access servers must be aware of the new load image on the access server. Enter the CHANGE SERVER SOFTWARE command. Example: Local> CHANGE SERVER SOFTWARE WWENG2
7	Determine if you have Flash RAM installed. Enter the following command: Local> SHOW MEMORY CONFIGURATION Example: This command displays information about memory installed on the access server and the functional status of Flash RAM. Dynamic RAM: 4 M bytes Non-Volatile RAM: 32 K bytes Flash RAM: Installed: Yes Total size: 2 M bytes Boot block: Valid Load Image: Name: WWENG2 Size: 1771348 bytes Version: Network Access SW Vn.n BLnn-xx Step Action Downloading the Software Image
8	Do you have Flash RAM? • If no, go to the next step. • If yes, do the following: Enter the following command to update your Flash RAM from the network. The qualifier, DELAY nn, causes the access server to wait nn minutes before initializing. This permits any existing users time to log out. You must also wait nn minutes before you can continue with the procedure. Local> INITIALIZE FROM ETHERNET UPDATE FLASHRAM [DELAY 10]
9	If you do not have Flash RAM, enter the following command to update your load image from the network: Local> INITIALIZE FROM ETHERNET [DELAY 10]

Verifying the Image Download

Procedure

To verify the image download, do the following:

Step	Action
1	Enter the NCP CONNECT NODE node-name command to connect to the access server. Substitute your access server DECnet node name for node-name. If the access server manager defined a maintenance password, such as FEDCBA, enter the following command: Example: $ MCR NCP NCP> CONNECT NODE node-name SERVICE PASSWORD FEDCBA Console connected (press CTRL/D when finished) DECnet/OSI Command: If you have DECnet/OSI, enter the following command: $ SET HOST/MOP=node-name/VERIFICATION= %XBADCFE % CCR-I-CONNEST, connection established to remote system 08-00-2B-26-AE-32 Note: For DECnet/OSI, entering %XBADCFE equates to the DECnet Phase IV maintenance password FEDCBA.
2	Press the Return key to get the access server prompt. Enter the login password. ACCESS is the access server default login password. Example: # ACCESS (not echoed) Network Access SW Vn.n for DS716 (BLxxx-xxx) (c) Copyright 2004, Digital Networks - All Rights Reserved Please type HELP if you need assistance
3	Read the identification message to ensure the latest version of the DECserver Network Access Software image was downloaded. Verifying the Image Download Next Step If this installation is a software upgrade, you can now reload all existing access servers.
4	Return to the NCP prompt by pressing Ctrl/D (Phase IV) or Ctrl/ \ (DECnet/OSI). DECnet Phase IV Example: Local> <Ctrl/D> DECnet/OSI Example: Local> <Ctrl/\>

Next Step

If this installation is a software upgrade, you can now reload all existing access servers

Completing the Installation

Procedure

To complete the installation, do the following:

Step	Action
1	Install the software kit on at least two load hosts (this is optional). Digital Networks recommends that you have one load host for every 10 access servers. See the section, Installing Software on Additional OpenVMS Hosts, for more information.
2	Inform the system or network manager that the installation is complete.
3	Give this guide and any other software documents to the person who will be managing the access server.

Problem Solving Information

If you have any problems installing the software, refer to the *Network Access Software Problem Solving Guide*.

Next Step

After you complete the installation, you are ready to configure the access server. You can use the Access Server Manager, a PC-based management tool, or the access server's command line interface.

If using the Access Server Manager, see the application's online help for instructions. If using the command line interface, see the *Network Access Software Management* and the *Network Access Software Command Reference Guides* for instructions.

Installing Software on Additional OpenVMS Hosts

Procedure

To install the access server distribution software onto an additional OpenVMS load host that is not a member of a VAXcluster system, do the following:

Step	Action
1	Invoke VMSINSTAL at the original load host using the following command syntax. Substitute your device drive identifier for device-id. $ @VMSINSTAL DNASnnn device-id:[DNAS.OpenVMS] OPTIONS G SYS$UPDATE: OPTIONS G: OPTIONS G stores the save sets in the SYS$UPDATE directory.
2	Copy the save sets from the original load host to the alternate load host SYS$UPDATE directory. The save sets are: DNASnnn .A, .B, .C, and .D where nnn is the version number of the software. For example, 020 stands for version 2.0.
3	Run VMSINSTAL on the alternate load host.

Distribution Files

Overview

Introduction

This appendix lists the Network Access Software distribution files for the DECserver 7xx, DECserver 90M+, DECserver ConX^4 and DECserver 900TM access servers.

In This Appendix

This appendix contains the following topics:

- OpenVMS Distribution Files

- Windows Distribution Files

About File Names

Most of the files listed are common to the above-listed products. If an asterisk (*) is in the file name, it means the number of your hardware module should be inserted (90, 900, or 7xx). An xx in a file name represents the current software version.

OpenVMS Distribution Files

OpenVMS Distribution File Listing

The following table lists the OpenVMS distribution files:

File Name	Description
SYS$TEST:DNAS$IVP.COM	Installation Verification Procedure.
The following files are located in SYS$COMMON:[DECSERVER]:	
DSV$CONFIGURE.COM	Configuration procedure.
NA*_0xx_CRASH_DISPLAY.COM	Crash dump identification procedure.
WWENG2.SYS	DECserver Network Access Software Version 2.n for DECserver 7xxs or DECserver 900s with at least 4 MB RAM.
MNENG3.SYS	DECserver Network Access Software Version 2.n for DECserver 90Ms configured with at least 4 MB RAM and >1MB Flash RAM.
MNENG4.SYS	DECserver Network Access Software Version 3.n for DECserver 90M+ and DECserver ConX^4 configured with 4 MB RAM and > 4 MB Flash RAM.
RFC-1158.TXT	SNMP MIB II user reference file.
RFC-1213.TXT SNMP	MIB II user reference file (obsoletes RFC1158.TXT).
RFC-1243.TXT	SNMP MIP: AppleTalk.
RFC-1243_ENROLL.TXT	Text for enrolling into an SNMP management station (edited version of RFC1243.TXT).
RFC-1284.TXT	SNMP MIB: Definitions of managed objects for Ethernet-like interfaces.
RFC-1284_ENROLL.TXT	Text for enrolling into an SNMP management station (edited version of RFC1284.TXT).
RFC-1316.TXT	SNMP MIB: Definitions of managed objects for character stream devices.
RFC-1316_ENROLL.TXT	Text for enrolling into an SNMP management station (edited version of RFC1316.TXT).

File Name	Description
RFC-1317.TXT	SNMP MIB: Definitions of managed objects for RS232-like hardware devices.
RFC-1317_ENROLL.TXT	Text for enrolling into an SNMP management station (edited version of RFC1317.TXT).
RFC-1471.TXT	SNMP MIB: The definitions of managed objects for the Link Control protocol of the Point-to-Point protocol.
RFC-1471_ENROLL.TXT	Text for enrolling into an SNMP management station (edited version of RFC1471.TXT).
RFC-1473	SNMP MIB: The definitions of managed objects for the IP Network Control Protocol of the Point-to-Point protocol.
RFC-1473_ENROLL	Text for enrolling into an SNMP management station (edited version of RFC1473.TXT).
IPX_MIB	MIB for IPX network stack. A Novell private MIB.
IPXCP_MIB	MIB for PPP IPXCP configuration. Digital Networks private MIB.
DEC-DECSERVER-ACCOUNTING-MIB.TXT	Accounting MIB for host systems.
DEC-DECSERVER-ACCOUNTING_MIB.HP	Accounting MIB for HP host systems.
DEC-DECSERVER-ACCOUNTING_MIP.SUN	Accounting MIB for Sun host systems.
HARVESTD1-3.TAZ	Compressed tar file for the harvestd utility.
RADIUS_SURVIVAL.TXT	Guide to the access server's RADIUS client implementation.
SNMP_SURVIVAL.TXT	Guide to managing access servers through SNMP.

Windows 95/98/2000/Me/XP/2003 Server or Windows NT Distribution Files

Windows Distribution File Listing

The following table lists the Windows distribution files:

File Name	Description
C:\Program Files\Digital\Access Server Loader	
Loader*	Access Server Loader program files
WWENG2	DECserver Network Access Software for DECserver 7xxs or DECserver 900s with at least 4 MB RAM.
MNBOOT	Bootrom Version 2.8 for DECserver 90M+ and DECserver ConX.
MNENG4	DECserver Network Access Software for DECserver 90M+ and DECserver ConX4.
C:\Program Files\Digital\Access Server Loader\DNAS Docs	
RFC-1158.TXT	SNMP MIB II user reference file.
RFC-1213.TXT SNMP	MIB II user reference file (obsoletes RFC1158.TXT).
RFC-1243.TXT	SNMP MIP: AppleTalk.
RFC-1243_ENROLL.TXT	Text for enrolling into an SNMP management station (edited version of RFC1243.TXT).
RFC-1284.TXT	SNMP MIB: Definitions of managed objects for Ethernet-like interfaces.
RFC-1284_ENROLL.TXT	Text for enrolling into an SNMP management station (edited version of RFC1284.TXT).
RFC-1316.TXT	SNMP MIB: Definitions of managed objects for character stream devices.
RFC-1316_ENROLL.TXT	Text for enrolling into an SNMP management station (edited version of RFC1316.TXT).
RFC-1317.TXT	SNMP MIB: Definitions of managed objects for RS232-like hardware devices.

File Name	Description
RFC-1317_ENROLL.TXT	Text for enrolling into an SNMP management station (edited version of RFC1317.TXT).
RFC-1471.TXT	SNMP MIB: The definitions of managed objects for the Link Control protocol of the Point-to-Point protocol.
RFC-1471_ENROLL.TXT	Text for enrolling into an SNMP management station (edited version of RFC1471.TXT).
RFC-1473	SNMP MIB: The definitions of managed objects for the IP Network Control Protocol of the Point-to-Point protocol.
RFC-1473_ENROLL	Text for enrolling into an SNMP management station (edited version of RFC1473.TXT).
DEC-DECSERVER-ACCOUNTING-MIB.TXT	Accounting MIB for host systems.
DEC-DECSERVER-ACCOUNTING_MIB.HP	Accounting MIB for HP host systems.
DEC-DECSERVER-ACCOUNTING_MIP.SUN	Accounting MIB for Sun host systems.
RADIUS_SURVIVAL.TXT	Guide to the access server's RADIUS client implementation.
SNMP_SURVIVAL.TXT	Guide to managing access servers through SNMP.
C:\Program Files\Digital\Access Server Manager	
Serv*	Access Server Manager program files
README.TXT	Access Server Manager Release Notes
C:\Program Files\Digital\Access Server Manager\DATA\CommandFiles	
*.cmd	Access Server Manager Scripts
C:\Program Files\Digital\Access Server Manager\DATA\Modem	
*.ini	Access Server Manager Modem Initilization Files

Cabling and Hardware

Overview

Introduction

This appendix lists the recommended cabling hardware for connecting various network devices to your access server.

More Information

For further information, refer to the User's Guide included with your access server hardware.

Cables and Hardware

Cables and Hardware Table

The following table lists the hardware you need to connect different network devices to your access server:

To Connect:	To DECserver 90M+ DECserver 716, or DECserver 732, DECserver 900TM (32 port)	To DECserver 708
Terminal/printer with MMJ port	BN24H-xx cable	H8575-A adapter and BC16E-xx cable
Terminal/printer with DB25 male port	H8575-A adapter and BN24H-xx cable	BC17D-xx (10-wire) cable or BC22D-xx (6-wire) cable
Terminal/printer with DB9 male port	H8575-B adapter and BN24H-xx cable	H8575-A and H8571-J adapters and BC16E-xx cable
PC communication interface with DB9 male port	H8585-AA adapter and BN25G-xx cable	H8575-A and H8571-J adapters and BC16E-xx cable
Modem using RI-DCD-DSRS-DTRsignals (typically <9600 baud) with DB25 female port	H8585-AB adapter and BN25G-xx cable	BC22E-xx (10-wire) cable or BC22F-xx (25-wire) cable
Modem using CTS-DSR-RTS-DTR signals (typically =>9600 baud) with DB25 female port	H8585-AC adapter and BN25G-xx cable	BC22E-xx (10-wire) cable or BC22F-xx (25-wire) cable
Non-Digital Networks systems with DB25 male ports (reverse-LAT configuration)	N/A	BC22R-xx cable

Upgrading Access Server Software

Overview

Introduction

This appendix describes how to upgrade your access server (with or without Flash RAM) with the latest Network Access Software using the PC-based management tools. This procedure:

- Turns on power to the access server and loads the latest software upgrade while preserving your current access server configuration. This can also upgrade your Flash RAM.

- Assigns an Internet address to the access server if necessary.

- Prepares the access server's default Telnet remote console for connection.

In This Appendix

This appendix contains the following topic:

Upgrade Procedure

Procedure

Do the following to upgrade your access server:

Step	Action
1	Start the Access Server Loader utility on the PC management station.
2	Click on Setup and enter the host name, Ethernet address, Internet address, subnet mask, gateway Internet address, and image file name for the access server in the Clients dialog box. If the access server already has an Internet address assigned, you do not need to change it. If you decide to change the Internet address, enter the new IP address in the Clients dialog box and manually change the address on the access server before issuing the INIT command described in step 11.
3	Click on the Files tab and verify that one of the request file names (default is MNENG4, and WWENG2) corresponds to the request file name that the access server requests. The access server default request file names are MNENG4 for the DECserver 90M+ and ConX^4 servers and WWENG2 for the DECserver 7xx and DECserver 900 servers. If the file names do not match, add an entry on the Files dialog box with a request file name that matches the file the access server requests.
4	Disable other network load hosts that could load the access server (this is optional). This ensures that the Access Server Loader loads the access server with the latest image. Alternatively, you may want to load the access server upgrade image on the other load hosts.
5	Start the Access Server Loader BOOTP and TFTP servers by clicking on the server On/Off buttons. When on, the button lights are green.
6	If necessary, install the modem(s) on the desired access server ports using the appropriate modem cable (see the documentation included with your modem).
7	If you did not preconfigure your modem for dial-in previously, reset it to factory defaults.
8	Turn on the power to the modem. If power to the the access server is off, turn on the power and wait for it to finish rebooting.

Step	Action
9	Connect to the server console by means of a directly attached terminal, MOP, or Telnet.
10	Make sure that the default Telnet remote console is enabled in the permanent database by issuing the following command: Local> PURGE TELNET LISTENER 23
11	To load the access server with the upgraded image, use one of the following commands: For an access server with Flash RAM Local>INIT FROM ETHERNET UPDATE FLASHRAM DELAY 0 For an access server without Flash RAM (or an access server with Flash RAM that you do not want to permanently upgrade) Local> INIT FROM ETHERNET DELAY 0 To continue installation and configuration, refer to Installation and Configuration Process in Chapter 2.