

Staging Instructions

Version 1 for Network Access Control System Release 9.0

1. Introduction

This document describes the steps required to produce a factory installed Lucent Network Access Control System R9.0 software product. This document provides a single source for the factory staging process that includes the following Network Access control system products:

- 1) **Network Access Control System (NAC) with Web Application Software**
- 2) **Central System Access Control System (CSAC) with Web Application Software**
- 3) **Remote Access Control System (RAC)**

2. Hardware Requirements

The following table identifies the appropriate hardware configuration expected when installing each of the NAC products.

HP Part number	Hardware Component
A3560A	Model 370 1-Way Enterprise Server
A3183A	4GB DDS DAT Drive with Data Compression
A3408A	128 MB ECC Memory
A3643A	(2) 4GB FWD SCSI 2 Hot SWAP Disk Drive
IC1064AX	Black/White Console
Lucent NS ED5P181-32 G1	Datakit II VCS Multiplexed Host Interface
A3715A	Embedded CD-ROM, Factory Integrated
	Localization Kit
	EISA Adapter Card
	Fiber Loop Cable
	LAN Terminator Pair

NOTE

This document assumes that the hardware has been completely assembled and tested according to the factory procedures, before the NAC staging tapes are loaded.

This includes installation of additional memory

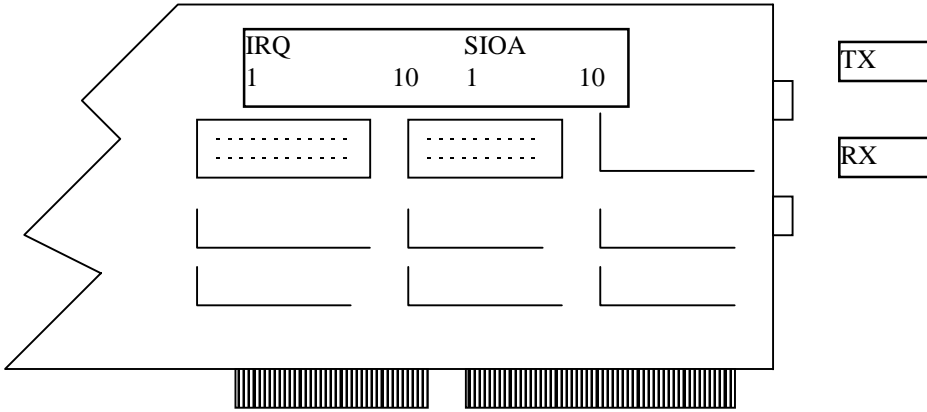
2.1 Configuring the DKHOST board

The DKHOST interface board contains the firmware required for the host computer to interface with the node (or concentrator) via a fiber optic cable. The DKHOST board is a standard AT-style accessory board. It must be installed in a slot on the EISA adapter card in the host computer. Slot 1 is required.

NOTE: The DKHOST board has an IRQ and SIOA jumper strip that must be configured prior to installation.

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Use the following diagram to locate the two jumper strips on the DKHOST board.



2.1.1 Setting the IRQ Vector

On the IRQ jumper strip, a single blue jumper is installed to set the vector. Only one position is used. In the following table, a **yes** indicates the location of a jumper, and a **no** indicates the absence of a jumper. Place the jumper across pins one and two, leaving all other positions open.

Position										
Pins	1	3	5	7	9	11	13	15	17	19
	2	4	6	8	10	12	14	16	18	20
Jumper	yes	no	no	no	no	no	no	no	no	no

2.1.2 Setting the SIOA Jumper Settings

On the Start I/O Address (SIOA) jumper strip, several positions are left open to set the SIOA. In the following table, a yes indicates the location of a jumper, and a no indicates the absence of a jumper.

Position										
Pins	1	3	5	7	9	11	13	15	17	19
	2	4	6	8	10	12	14	16	18	20
Jumper	no	yes	yes	yes	yes	yes	no	yes	no	no

3.0 Software Installation

The following software tapes are needed to produce a fully installed product.

Datatek/Lucent Identifier	Description
J1P 373MA-1 L73	HP-UX 10.20 CD-ROM
J1P 373MA-1 L71	93303J DKREL A.03.20.02
407962455	Informix SQL 4.20.UC1

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407962463	Informix ONLINE 5.10.UC1
J1P 373MA-1 L3	CSAC 9.0 Installation tape
J1P 373MA-1 L2	RAC 9.0 Installation tape
J1P 373MA-1 L1	NAC 9.0 Installation tape

3.1 Staging the Machine with software

You will need to determine what version of HPUX this machine has. It should have 10.20. The procedure below is to determine what version of HPUX this machine is running.

1. Assemble all the hardware.
2. Turn on the computer. Power up the monitor and then the system unit. No special timing is necessary, just make sure you power up the system unit last. The machine will boot.
3. When asked to connect the machine to a network, press: **n** [ENTER]
4. You will be prompted for the system name. Enter the name: **UNIX**.
5. Respond to the prompts to set the geographic location, time zone, and time, and root password. **NOTE:** Do not worry if this information is incorrect. The customer will customize his machine.
6. At the Console login prompt, type : **root** [ENTER]
7. At the root prompt, type: **uname -a** [ENTER]
 - If the UNIX Version is 10.20 go to step 3.3, **Partition the 2nd Disk**
 - If it is not 10.20 go to section 3.2 "**Loading HP-UX 10.20**"

3.2 Loading HP-UX 10.20

1. Power up your HP machine or reboot your machine by typing: **reboot -qr** [ENTER]

The boot menu will look something like this:

Firmware Version 37.28				
Duplex Console IO Dependent Code (IODE) revision 4				
© Copyright 1995-1998, Hewlett-Packard Company, All rights reserved				
<u>Processor</u>	<u>Speed</u>	<u>State</u>	<u>CoProcessor State</u>	<u>Cache Size</u>
0	160MHz	Active	Functional	512 KB
Central Bus Speed (in MHz)		:	120	
Model: D370/1				
Available Memory (bytes):		134217728		
Good memory required (bytes):		20242432		
Primary boot path:		8/4.5 (dec)		
Alternate boot path:		8/16/5.0 (dec)		
Console Path:		8/0/0.0 (dec)		
Keyboard Path:		816/8.0 (dec)		
Processor is booting from first available device.				
To discontinue, press any key within 10 seconds.				

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2. **Stop the boot process by holding down any key.**

You will see the following menu:

Boot terminated.

----- Main Menu -----	
Command -----	Description -----
B0ot	Boot from specified path
PAth ...	Display or modify a path
SEArch	Search for boot devices
.	
.	
.	
RESET	Restart the system.
Main Menu: Enter command >	

- 3 Insert the CD-ROM labeled HP-UX 10.20 Core into the cd drive.
- 4 At the following prompt enter the boot path for the media device (CD-ROM)

Main Menu: Enter command > **BO 8/16/5.2**

5. You will be prompted to Interact with IPL. Type: **n**
Interact with IPL (Y, N, or Cancel)?> **n**

It will take approximately 5 minutes to boot from the tape. When the tape boot process stops continue with the installation.

- 6 If a PS/2 DIN interface has been detected on the system, you will be prompted to Enter the number of the language you want. Enter **45**. If not, go to the next step.

Enter the number of the language you want: **45**

Next you will see a **Welcome to the HP-UX installation process!** screen

- 7 Choose **Install HP-UX** by hitting the **[RETURN]**
- 8 You will be prompted to enable networking, Type **n**
Would you like to enable networking now [**n**]

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NOTE: In the following menus you will have to use the **TAB** key to navigate through the fields on the screen. You can also use the arrow keys. Use the **TAB** key to Select the **OK** field, then press Return.

- 9 Select the system root disk from the screen. You should select **8/4.5.0**. Then select **OK**

Hardware Path	Product Id	Size (Megabytes [Mb])
8/4.5.0	ST34572WC	4096
8/4.8.0	ST34572WC	4096

- 10 Select **Standard LVM configuration**, and select OK
- 11 Change the primary **swap** size to **400MB** and then select OK
12. Select the **Modify FS Parameter** option and use the following table to modify parameters. After the filesystem parameters have been configured, select **OK**

Filesystem	Size	Option
/usr	1800	Modify
/var	300	Modify
/home	100	Modify
/opt	1300	Modify

13. Select NO to not interact with installation.
Do you want to interact with SD-UX swinstall[No->] [**RETURN**]

The process of loading the HP-UX 10.20 operating system will take approximately **10** minutes on the D370 Server.

3.3 Setting up the machine

After the HP-UX operating system has been loaded you will see the following Welcome Screen:

```
WELCOME to HP_UX

Before using your system, .....
.....
.....

Are you ready to link the system to a network
Press [y] for yes or [n] for no, the press [Return]
```

1. Enter **n** to not link the system to a network
2. The next screen for time zone and system name will prompt if you want to continue, Enter **y**
3. The system will now ask you to enter a system name, Enter "**UNIX**" to the following prompt, Then **y** to confirm.

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Enter the system name, then press [Return]. Just pressing [Return] will keep the (not recommended) name “unknown” : **UNIX**

The system will respond with:

You have chosen **UNIX** as the name for this system. Is this correct?

Press [y] for yes or [n] for no , then press [Return]y

4. You will then be prompted to set the date and time of the machine. **Please follow prompts.** Don't worry about setting the wrong date and time, since the customer will reset the date and time.
5. You will be asked to set the root password. Enter **n** [Return]
Do you want to set the root password at this time?
Press [y] for yes or [n] for no , then press [Return] **n**
6. You will be asked to configure your system as a font server, skip this configuration. Enter **s** to skip this configuration step. Then **y** to confirm

Please enter a letter choice and then press [Return] **s**

You have chosen to skip this configuration step , is this correct?

Press y for yes or n for no then press return: **y**

7. Enter [**Return**] to continue ...
8. Enter [**Return**] to continue....

The System is now configured with HP-UX 10.20. You will see HP Start-up in progress. When finished, you will see the following

The system is ready.
Generic SysName [HP Release B.10.20] (see /etc/issue)
Console Login:

3.3 Partitioning the 2nd disk

To partition the 2nd disk you must use “sam”. This is an administrative command for HP-UX. Please read the instructions on your screen for maneuvering the cursor through the screens.

1. Log in as root at the Console Login prompt.
2. Type the command **sam**
3. Read the Instructions on the screen, then Press **Return** to continue
4. Select **Disks and File System**
5. Select **Disk Devices**
6. Select the 2nd disk **8/4.8.0**.
7. Select **Actions** from the top menu.
8. Select **Add** from the Actions sub menu.
9. Select the **Not using the Logical volume Manager** option from the sub menu.

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The following screen should appear:

Select Disk: Seagate
Size: 4095
Use Hardware Path: 8/4.8.0

Use Disk for: [File System]
Mount Directory: _____

[Modify Defaults]

[OK] [Cancel] [Help]

10. In the Mount Directory field, type in: `/usr2`
11. Select **OK**
A new file system will now be created
12. Select **File** from the Top menu, then **Exit**.
13. Select **File** from the Top menu, then **Exit Sam**

3.4 Loading the Datakit Software

1. Login in as root
2. Insert the tape labeled HP Datakit Fiber Optic Interface software into the tape drive.
Type in the following command:
`/usr/sbin/swinstall -xautoreboot=true -s /dev/rmt/0m EisaDatakit`

The swinstall command performs the entire installation, including building a new kernel, creating the necessary device files, rebooting the system and starting Datakit server or the listener for the first Datakit interface board. This takes about 10 minutes.

Wait for the system shutdown and reboot to occur. This may take about 10 minutes. When you see the login prompt, Do not remove the DDS tape from the tape drive.

3.5 Loading The NAC Configuration Files

1. Login as root, at the Console Login prompt
2. Insert the tape labeled nac, rac or csac into the tape drive.
3. Type in the following commands:
`mkdir /tmp/nac [Return]`
`cd /tmp/nac [Return]`
`cpio -icuvdBm </dev/rmt/0m [Return]`

After the configuration files are loaded into the /tmp/nac directory, run the **mkdisk** command to setup the EISA configuration and configure the UNIX kernel. Type the following command:

`./mkdisk`

It takes about 10 minutes to run. After the system reboots, you will see the Login Console prompt. Remove the NAC tape from the DDS drive.

3.6 Loading Informix and NAC software

1. Login as root at the Console login prompt.
2. Type in the following commands:

```
cd /tmp/nac [Return]  
./install [Return]
```

The install command will first load Informix and then the NAC software. **Follow the instructions on the screen for loading the Informix software. You will need the informix tapes along with their serial numbers.**

After the Informix files are loaded, the nac application files will be loaded. You will be prompted to enter a passwd for sg and xport. Enter **sgnac** for both.

The installation script will now complete with no further interaction. This should take about 10 minutes.

3.7 Loading Web Applications software

Loading the Web Application Package

There are two packages that need to be loaded:

- Xitami Web Server
- JAVA Runtime Environment

Note: Section 2.6 can be done at any time i.e. before or after NAC installation because it is independent of NAC installation and upgrade.

Instructions for installing xitami Web server

1. Log into the NAC server as root.
2. Insert the tape labeled "WEB-Application Package".
3. Execute the command **cd /opt** to change to directory **/opt**.
4. Execute the command **tar x xitami_web_server**.
All files will be extracted from the tape to the **./xitami_web_server** directory.

Instructions for installing the java run-time

1. Log into the NAC server as root.
2. Insert the tape labeled "WEB-based Packages".
3. Kill and disable the *tb*tape process if it is running.
4. Execute the command **tar x jre11800wjpi_os10.depot**.
The **jre11800wjpi_os10.depot** file will be extracted from the tape to the **/tmp** directory.
5. Execute the command **/usr/bin/cksum /tmp/jre11800wjpi_os10.depot** and verify the result is:
192698267 31744000 jre11800wjpi_os10.depot
6. Execute the command **/usr/sbin/swinstall&**
Wait for the *SD Install - Software Selection(host)* window to appear.
If the *Specified Source(host)* window also appear, click the *Cancel* button to close the window.
7. From the *SD Install - Software Selection(host)* window, select *Change Options...* from the *Options* menu to bring up the *Options(host)* window.

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8. From the *Options(host)* window, unselect "Mount filesystems..." and select "Reinstall filesets even...". Click the *OK* button to close the window.
9. From the *SD Install - Software Selection(host)* window, select *Change Source...* from the *Action* menu to bring up the *Specified Source* window.
10. From the *Specified Source* window, click on the *Source Depot Type* drop-down menu and select "Local Tape". Again, from the *Specified Source* window, click on the *Source Depot Type* drop-down menu and select "Local Directory". Verify the *Source Host Name* field contains the name or the IP address of the node. Fill in the *Source Depot Path...* field with **/tmp/jre11800wjpi_os10.depot**. Click the *OK* button to close the window.
11. From the *SD Install - Software Selection(host)* window, verify that an entry labeled as, "B5458DA -> C.01.18.00 HP-UX Java* Runtime..." appears. Click on the entry to hi-light it. From the *Action* menu, select *Mark For Install*. The word, "Yes" appears under the *Marked* column and the entry is no longer hi-lighted. From the *Action* menu, select *Install(analysis)* to bring up the *Install* window.
12. From the *Install* window, verify the source and destination information is correct then click *OK* to begin the installation. When the installation stops, click on the *Product Summary* and *Logfile* buttons. Under *Logfile*, there should not be any errors. Warnings are *OKAY*. Under *Product Summary*, you should see:

Java-Jre1-1	C.01.18.00	Installed	Ready
Java-PlugIn1-1	C.01.13.00	Installed	Ready
13. From the *Install* window, click on the "Done" button to close the window.
14. From the *SD Install - Software Selection* window, select *exit* from the *File* menu to exit the *swinstall* application
15. Change the directory to `/opt/java/jre`
16. Read the `jre.release.notes` for important license and setup information
17. Move the **jre.tar.Z** to under the `/opt/java` directory
18. Execute **zcat jre.tar.Z|tar xvf** - to uncompress and extract files.
19. Locate and verify that the `bin` and `lib` directories/files exist under `/opt/java/jre`.

4.0 Shutting Down

1. Type in the following command: **cd /**
2. Shutdown the machine using the **/etc/shutdown -h 0** command
3. Power off the SPU
4. Disassemble and repack the machine.