C H A P T E R 7

Installing Prime Network Unit

This chapter covers the installation and post installation tasks for Prime Network unit.

Installing the Unit

Complete the following steps to install the Prime Network unit and the tools that are required for unit functionality, including JDK 1.6.0 and Active Perl 5.8.6.

Note Make sure that the home directory of the unit or the redundant unit is the same as the home directory of the gateway.

Step 1 Before starting with the installation, make sure you have completed all the preinstallation tasks for setting up unit as described in Unit Preinstallation Tasks, page 3-5.

Step 2 Insert "Disk 1: New Install" in the DVD drive. (See Installation DVDs, page 1-1.)

Step 3 Open a Telnet or SSH session to the unit and log in as the user root.

Step 4 Check the unit prerequisites, such as the required disk space. See Recommended Hardware Matrix for Prime Network Gateway, page 2-5.

Step 5 Back up and remove the old version of the unit (if an older version exists). For backup procedures, see the *Cisco Prime Network 3.10 Administrator Guide.*

Step 6 To change directories to the CD directory, enter:

```
cd /cdrom/cdrom0/Server
```

Step 7 To install the Cisco Prime Network unit, complete one of the following substeps:

   a. For a new Prime Network 3.10 installation, enter the following command:

   ```
   perl ./install.pl -user pn user
   ```

   You must enter the same *pn user* that you used when you installed the gateway. (If the gateway and unit have different usernames, the unit will not start.)

   For example, if the name of the user is pn310, enter:

   ```
   perl ./install.pl -user pn310
   ```

   b. If you are installing a new Prime Network 3.10 unit for a migrated Prime Network gateway, enter the following command:

```
perl ./install.pl -user -dir [Prime pn user home directory]
```

The installation of the unit starts.

> ✎ **Note** This process might take a while. For information on the Cisco Prime Network environment created during installation, see Table 5-5.

Step 8   After the installation is complete, you will be prompted to configure Prime Network. Enter **yes** to continue to Step 11 or **no** to continue to the next step and configure later using the **network-conf** command.

Step 9   Open a Telnet or SSH session to the unit and log in as *pn user* (where *pn user* is the operating system user account for the Prime Network application, created when Prime Network is installed).

Step 10   After logging in as the new user (*pn user*), enter the following command:

```
network-conf
```

Step 11   Select **Set machine as Prime Network unit**, then press **Enter**. The Prime Network configuration utility configures the system by running a number of procedures.

Step 12   Enter the required information at the prompts. The following table lists the prompts that appears at various stages of the unit configuration and their required settings.

Table 7-1   Unit Installation Prompts and Required Input

Prompt for...	Enter...	Notes
Checking NTP configuration on machine.	yes	Default is **yes**.
Gateway IP address	IP address of the gateway	Make sure the gateway is up and running before proceeding. Enter the floating IP address for the gateway, not the physical one.
OS root user password	The Unix root password.	Prime Network uses the root password to set machine-level settings and to execute scripts as "root".
Selecting a single interface for Prime Network backend services. **Note** This prompt appears only if more than one interface is detected during the network-conf process.	The number corresponding with the IP address of the back-end interface to be used for gateway-to-unit communication.	This prompt appears if more than one interface is detected during the network-conf.
Proceeding with installation for unit behind NAT. **Note** This prompt appears , if the unit does not have connectivity to the gateway.	yes	If the unit is connected to a gateway with IPv4 and IPv6 interfaces (dual stack), a second listener must be added to the unit. See Configuring Dual Listeners, page 7-3.
Prime Network administrator username and password	username and password	Prime Network internal admin user, used for secure communication with the gateway.

Table 7-1   Unit Installation Prompts and Required Input

Prompt for...	Enter...	Notes
Selecting the unit protection group name	Choose from the listed options.	
Checking if the unit is a standby unit.	no	Default is **no**.
Unique name for the unit	*username*	
Enabling unit protection.	yes	Default is **yes**. When this option is enabled, high availability is enabled on the unit.
Entering the database interface accessible from the unit.	Oracle listener IP	This appears when the unit's IP version is different than Oracle listener ip version.

Note   After you run the **network-conf** command on the unit, if the SSH keys are not retrieved automatically within 60 seconds, the following message is displayed: "Connection to *gateway-IP-address* failed. 60 seconds timeout exceeded." To resolve this issue, verify that the unit can reach port 6081 on the gateway.

Step 13   If required, you can change the NIC; use the **choose_nic.pl** tool to choose any IP address defined in the operating system.

Figure 7-1   Change the Default Route to the Gateway

Configuring Dual Listeners

If the unit connects to a gateway with multiple interfaces (dual stack), the installer asks you to specify the interface that should be used. (See Table 7-1 on page 7-2.)

The question is asked when the gateway has multiple interfaces (dual stack) and the unit is installed with interface type that differs from the interface on which the database is installed. For example, the gateway and database are installed on an IPv4 interface. The gateway also has an IPv6 interface, and the unit only has an IPv6 interface. To add the unit, the database must be configured with dual listeners and an interface that allows the unit to communicate with the database.

For Embedded Database

To add a listener to an Oracle Embedded database installation:

Step 1   As the *pn user*, log into the Cisco Prime Network gateway.

Step 2   Change to the embedded database directory:

`cd Main/scripts/embedded_db`

Step 3   Run the following perl script:

`add_oracle_listener.pl`

Step 4   Answer the script's questions.

```
Is the database installed on a remote server? (yes,no)
```

If you enter **yes**, the following response appears:

```
Provide the new IP Address to be supported by the listener.
```

Enter the database IP address that the new listener should use.

If you enter **no**, the following response appears:

```
The following network interfaces were detected on this host. Please select a single
interface to be used by the new listener:
```

Select the address to be added to the listener.

For External Database

To add a listener to an Oracle external database installation:

Step 1   As the Oracle user, log into the Oracle database.

Step 2   Change to the Oracle home directory:

`cd ORACLEHOME/network/admin`

Step 3   Add the new address to the listener.ora file.

For example:

```
LISTENER =
(DESCRIPTION_LIST =
(DESCRIPTION =
(ADDRESS = (PROTOCOL = TCP)(HOST = 10.56.22.55)(PORT = 1521))
(ADDRESS = (PROTOCOL = TCP)(HOST = 2001:420:44ff:b8:221:28ff:fe04:bba7)(PORT = 1521))
)
)
ADR_BASE_LISTENER = /export/home/oracle
```

Step 4   Stop and then start the listener by executing the following command:

`lsnrctl stop`

```
lsnrctl start
```

> **Note**   In dual-stack gateway installation, redundant units must be of same IP type as the unit. In other words, an IPv4 redundant unit cannot replace an IPv6 unit.

Post Installation Tasks For Unit

The following sections describe post installation tasks to verify the Prime Network unit installation:

Verifying the Unit Processes

The **status** command verifies that the following unit processes are up and running:

- AVM 0—High availability/switch process
- AVM 25—Event persistence
- AVM 83—Internal use; used as a TFTP server by Change and Configuration Management
- AVM 99—Management process
- AVM 100—Prime Network Event Collector (AEC) process
- secured connectivity daemon

At this point in the installation, no AVMs have been added. When you add AVMs and assign VNEs to them, they appear as AVM *XXX*, where *XXX* is the number assigned to the AVM.

To check the status of all processes and daemons, enter:

```
status
```

The output lists all processes. For each AVM process that is checked, the **status** command displays, in brackets, the number of exceptions found in the total number of log file lines for that process. For example, the information for AVM 0 is [OK 0/32]; that is, 0 exceptions in the 32 log file lines that were checked:

```
-----------------------------------------------------------------------------
.-= Welcome to server-name, running Prime Network unit (v3.10 (build number)) =-.
-----------------------------------------------------------------------------

+ Checking for services integrity:
  - Checking if host's time server is up and running            [OK]
  - Checking if secured connectivity daemon is up and running   [OK]
+ Detected AVM99 is up, checking AVMs
  - Checking for AVM83's status                                 [OK 0/19]
  - Checking for AVM0's status                                  [OK 0/32]
  - Checking for AVM100's status                                [OK]
  - Checking for AVM25's status                                 [OK 0/25]
```

Verifying Prime Network Version

Use this procedure to view the version of Prime Network installed on the unit and to verify that the major components of the Prime Network system are located correctly and are running.

Note This test also checks additional characteristics of the installation, such as directories and classes.

If there are any files missing or problems with the configuration, this check fails.

Step 1 On the unit, enter:

```
status
```

Step 2 Confirm that the correct version of Prime Network has been installed.

The following is an example of the message that should be displayed:

```
-------------------------------------------------------------------------------
.-= Welcome to server-name, running Prime Network unit (v3.10 (build number)) =-.
-------------------------------------------------------------------------------
```

Verifying Configuration on a Unit

Use this procedure to verify that the Golden Source was configured correctly on the unit.

Step 1 On the server, locate and open the ~/Main/registry/avm99.xml file.

Step 2 Confirm that the file contains an entry for the key *parent*, which is the value of the IP address of the gateway.

Successful Result

The file contains an entry for the key *parent*, which is the value of the IP address of the gateway.

If Failure Occurs

Rerun the installation.