



Cisco PTC Network Information Seed File

This appendix describes how to use the Cisco PTC Seed File Editor to edit the Network Information Seed File (NISF). The NISF is used to provide Cisco PTC a list of all of the network elements and their associated properties that are to be managed by the Cisco PTC application.

Cisco PTC provides a default version of the NISF. Upon *initially* installing Cisco PTC, the installation process informs you that you must edit the NISF and remove all of the default devices and then add all of your network devices. The contents of this file are subsequently read into Cisco PTC whenever a Cisco PTC Cold Start is performed or whenever a resynchronization operation is initiated from the Cisco PTC Topology Manager.



Note

The NISF must be created by invoking the Seed File Editor on the same host machine where Cisco PTC is going to be running. It is strongly recommended that once you have created the NISF, all subsequent adding, modifying, and deleting of devices, as well as password modifications, are made through the Cisco PTC Topology Manager, not through the Seed File Editor.



Note

Even though the format of the NISF file is provided in the “[Seed File Overview](#)” section of this appendix, it is *strongly recommended* that you use the Cisco PTC Seed File Editor, not a text editor, to edit the NISF.

This appendix is organized into the following sections:

- “[Seed File Editor](#)”
 - “[Starting the Seed File Editor](#)”
 - “[Network Information File Window Components](#)”
- “[Seed File Operations](#)”
 - “[Adding a Region](#)”
 - “[Deleting a Region](#)”
 - “[Adding a Cisco IE2100](#)”
 - “[Deleting a Cisco IE2100](#)”
 - “[Adding a Device to a Cisco IE2100](#)”
 - “[Bulk Addition of Devices to a Cisco IE2100](#)”
 - “[Deleting a Device from a Cisco IE2100](#)”
 - “[Modifying a Cisco IE2100](#)”

- “Modifying a Device”
- “Adding a CMNM”
- “Deleting a CMNM”
- “Adding a AAA User”
- “Deleting a AAA User”
- “Performing a Cisco PTC Cold Start”
- “Seed File Overview”
- “Seed File Elements”
 - “Network Statement”
 - “Domain Statement”
 - “Region Statements”
 - “Cisco IE2100 and Device Statements”
 - “CMNM Statements”
 - “AAA_USER and AAA_PASSWORD Statements”
- “Network Information Seed File Structure”
- “Seed File Format”
- “Sample Seed File”

Seed File Editor

This section describes how to start and use the Cisco PTC Seed File Editor to edit the Network Information Seed File (NISF). The NISF contains a list of the network elements and their properties that are to be managed by Cisco PTC.



Note

Do not use the Cisco PTC Seed File Editor to edit the Cisco PTC Network Information Seed File while Cisco PTC is running.

Using the Seed File Editor, you can perform the following operations on a Seed File:

- Edit the Seed File:
 - add and delete regions
 - add and delete Cisco IE2100s
 - add and delete devices (including bulk addition of same type devices)
 - add and delete a CMNM
 - add and delete a AAA user
 - view network information and inventory
- Register with a Cisco IE2100
- Password encryption and decryption.

Starting the Seed File Editor

This section describes how to start the Seed File Editor.

Step 1 Login as user **vnm** and enter **vnm** as the password.

Step 2 Start the Seed File Editor by invoking the following command at the command line prompt:

```
% edit_seedfile.sh <seed_file_name> <seed_file_path> [true|false]
```

where:

<seed_file_name>—name of the Seed File

<seed_file_path>—absolute path of the Seed File starting from the **root** directory

true|false—**true** specifies to open the Seed File in encrypted mode (passwords are not readable). **false** specifies to open the Seed File in clear mode (passwords are in plain text). The default value is **true**.

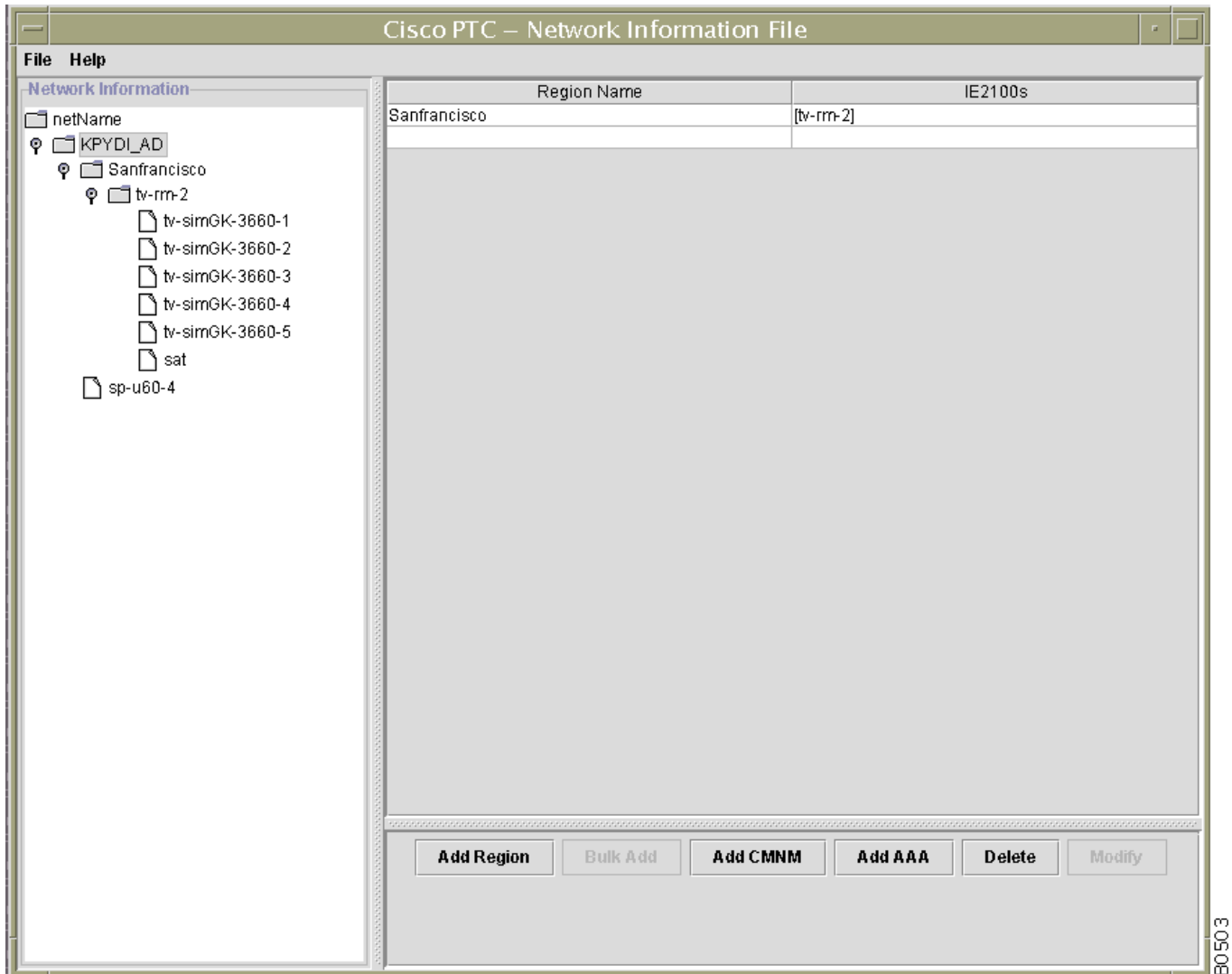
For example:

```
% edit_seedfile.sh seedfile.txt /opt/cisco/vnm/topodisc true
```

Step 3 Upon successfully starting the Seed File Editor, the Network Information File window appears. You are now ready to make your modifications to the Seed File.

The data displayed in the Network Information File window is organized in a tree-like structure in the **Network Information** pane, with the Network object being the root node in the tree. A sample Seed File is displayed in the Network Information File window shown in [Figure A-1](#).

Figure A-1 Seed File Editor Window



Step 4 If you are using the Seed File Editor as part of the Cisco PTC installation process, return to where you came from in the *Cisco Packet Telephony Center Installation and Configuration Guide* and continue with the Cisco PTC installation process.

Step 5 If, however, you are not using the Seed File Editor as part of the Cisco PTC installation process, and you have added, modified, or deleted devices, or you have made password modifications, you must perform a Cisco PTC Cold Start. Go to the `/opt/cisco/vnm` directory:

```
% cd /opt/cisco/vnm
```

- Step 6** Perform a Cisco PTC Cold Start:
- a. When the Cisco VRC application *is installed* on this machine, use the following command:
`% vnm --coldstart --INTEGRATED`
 - b. When the Cisco VRC application *is not installed* on this machine, use the following command:
`% vnm --coldstart --STANDALONE`

**Note**

Cisco PTC can be started in either Standalone (the default) or Integrated mode. In Standalone mode, only Cisco PTC Server processes are started. In Integrated mode, Cisco PTC Server and Cisco VRC processes are started.

- Step 7** Wait until the “Start Operation is Complete” and “Cisco PTC is Up” messages appear.
- Upon seeing the above messages, the Cisco PTC server processes are started and you can now resume using the Cisco PTC application.
-

Network Information File Window Components

This sections describes the various components in the Network Information File window.

File Menu

This section describes the **File** menu options.

New

This option allows you to create a new Network node. If the Seed File in the view has been edited, you are prompted to save the Seed File. You can choose to save the file by clicking **OK** or you can discard the changes by clicking **Cancel**. When you choose the **OK** option, the data from the Seed File is overwritten by the currently edited Seed File. You are prompted for a new file name, network name, and domain name. After you enter these values and click **OK**, a new tree is created with the new network object as the root node in the current view. If you choose not to create a new Seed File, click **Cancel** in the New Network window.

Open

This option allows you to open an existing Seed File on the server/network. Upon selecting this option, a File Chooser window appears which allows you to select a Seed File from any directory.

Save

This option allows you to save the currently edited Seed File. The currently open Seed File is overwritten with the data from the tree hierarchy. This option saves the Seed File in encrypted form.

Save As

This option allows you to save the Seed File you are working on to a new file.

Exit

This option closes the Seed File Editor. When you have edited the currently displayed Seed File, you click **OK** to save your edits prior to exiting the Seed File Editor. When you click **Cancel**, the current modifications are discarded and the Seed File Editor is exited.

Help Menu

This section describes the **Help** menu options.

Help

This option displays tips on how to use the Seed File Editor.

About

This option displays the current Cisco PTC version number and Cisco copyright information.

Network Information Pane

The network element objects defined in the NISF can be displayed in a hierarchical, tree-like format in this pane. In [Figure A-1](#), the **KPYDI_AD** domain object, **Sanfrancisco** region object, and **tv-rm-2** Cisco IE2100 device object have all been expanded (click on the magnifying glass icon or double click on the object's name) to show their underlying children.

Data Pane

Information pertaining to the selected object is displayed in this pane. In [Figure A-1](#), the **KPYDI_AD** domain object is selected leading to the display of entries corresponding to the regions (in this case, only one region (**Sanfrancisco**) exists in the **KPYDI_AD** domain) and their associated Cisco IE2100 devices (in this case, only one Cisco IE2100 (**tv-rm-2**) exists in the **Sanfrancisco** region).

Action Pane

This section describes the Cisco PTC operations you can perform on a *selected object* in the **Network Information** pane, from within this pane.

Add Region Button

You click this button to add a region to a selected domain object in the Cisco PTC network. See the [“Adding a Region”](#) section for complete details on how to add a region to the Cisco PTC Seed File.

Add IE2100 Button

You click this button to add a Cisco IE2100 to a selected region object in the Cisco PTC network. See the [“Adding a Cisco IE2100”](#) section for complete details on how to add a Cisco IE2100 device to the Cisco PTC Seed File.

Bulk Add Button

You click this button to add multiple devices of the same type (gateways, gatekeepers, or directory gatekeepers) to a selected Cisco IE2100 appliance object in the Cisco PTC network. See the [“Bulk Addition of Devices to a Cisco IE2100”](#) section for complete details on how to add multiple devices under a Cisco IE2100 device to the Cisco PTC Seed File.

Add CMNM Button

You click this button to add a CMNM to the selected domain object in the Cisco PTC network. See the [“Adding a CMNM”](#) section for complete details on how to add a CMNM to the Cisco PTC Seed File.

Add User Button

You click this button to add a AAA/local user to either the selected domain or Cisco IE2100 object to the Cisco PTC network. See the [“Adding a AAA User”](#) section for complete details on how to add a AAA user to the Cisco PTC Seed File.

Delete Button

You click this button to delete the selected object from the Cisco PTC network. See the [“Deleting a Region”](#) section, the [“Deleting a Cisco IE2100”](#) section, the [“Deleting a Device from a Cisco IE2100”](#) section, the [“Deleting a CMNM”](#) section, and the [“Deleting a AAA User”](#) section for detailed information about how to delete the respective network elements from the Cisco PTC network.

Modify Button

You click this button to modify the attributes of the selected object. See the [“Modifying a Device”](#) section for complete details on how to modify the attributes of the selected device in the Cisco PTC Seed File.

Seed File Operations

This section describes how to perform various Seed File Editor operations from the Network Information File window.

Adding a Region

This section describes how to add a region to an existing domain in the Cisco PTC network.

-
- Step 1** Select the domain object in the **Network Information** pane, then click the **Add Region** button in the **Action** pane.
- The Add Region window appears, displaying the name of the selected domain.
- Step 2** Enter a region name that is unique to the domain, then click the **OK** button.
- If the region name you specified is not unique within the domain, an error message is displayed and you are prompted to specify a unique name. Otherwise, the newly created region object is added to the **Network Information** pane under the selected domain object.

- Step 3** If you are using the Seed File Editor as part of the Cisco PTC installation process and you are *finished making your modifications* to the Seed File, return to where you came from in the *Cisco Packet Telephony Center Installation and Configuration Guide* and continue with the Cisco PTC installation process.
- Step 4** If, however, you are not using the Seed File Editor as part of the Cisco PTC installation process, and you have finished adding, modifying, and/or deleting devices to/from the NISF, or you have made password modifications, you must perform a Cisco PTC Cold Start for the changes to become integrated into Cisco PTC. Go to the [“Performing a Cisco PTC Cold Start”](#) section.
-

Deleting a Region

This section describes how to delete a region from the Cisco PTC network.

- Step 1** Select the region object you want to delete in the **Network Information** pane, then click the **Delete** button in the **Action** pane.
- A Confirm Delete window appears.
- Step 2** Click the **OK** button for the delete region operation to commence.
- Upon clicking **OK**, all of the devices under the selected region object, as well as the region object itself, are deleted from the tree hierarchy and the **Network Information** pane is updated in the Seed File Editor window.
- Step 3** If you are using the Seed File Editor as part of the Cisco PTC installation process and you are *finished making your modifications* to the Seed File, return to where you came from in the *Cisco Packet Telephony Center Installation and Configuration Guide* and continue with the Cisco PTC installation process.
- Step 4** If, however, you are not using the Seed File Editor as part of the Cisco PTC installation process, and you have finished adding, modifying, and/or deleting devices to/from the NISF, or you have made password modifications, you must perform a Cisco PTC Cold Start for the changes to become integrated into Cisco PTC. Go to the [“Performing a Cisco PTC Cold Start”](#) section.
-

Adding a Cisco IE2100

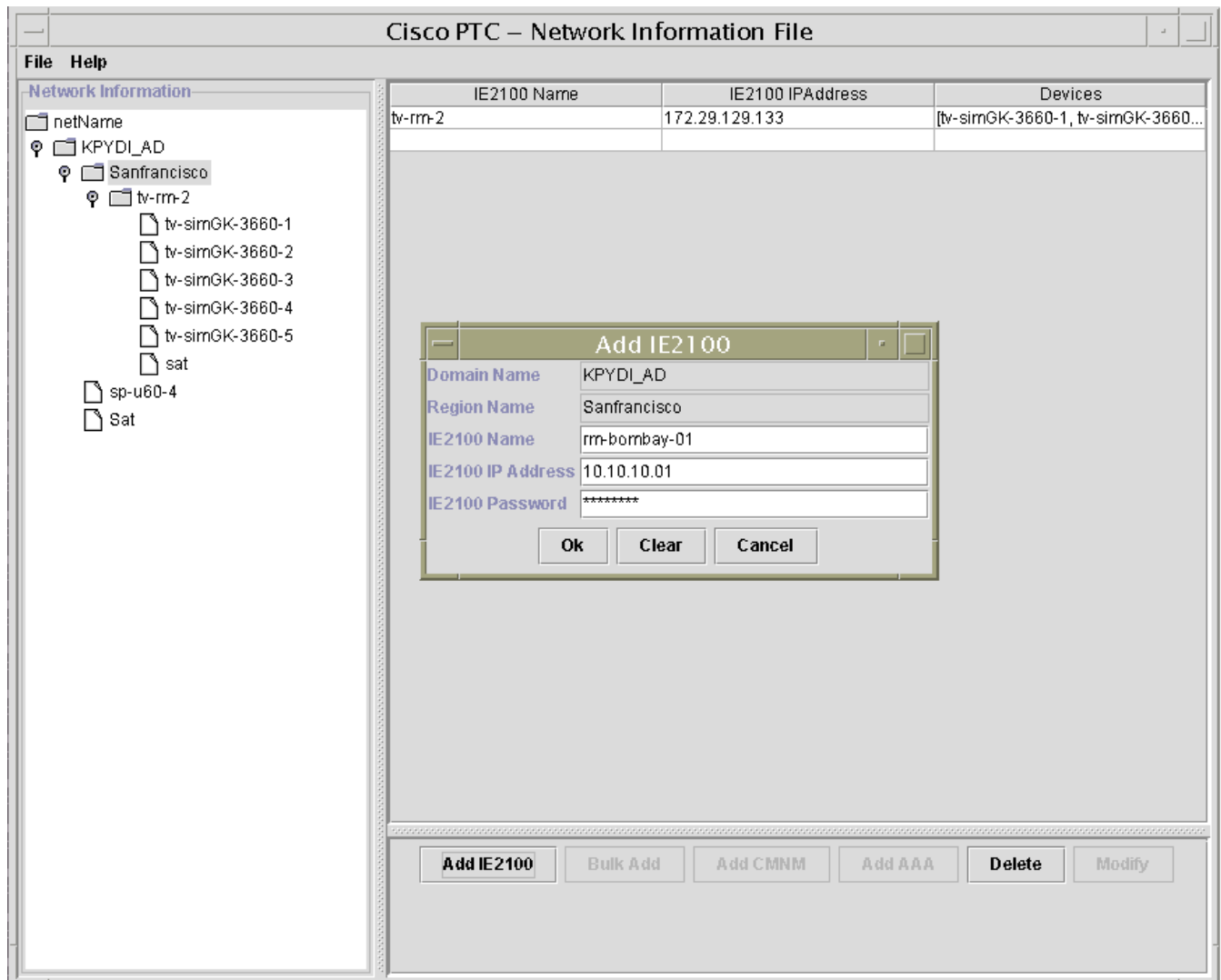
This section describes how to add a Cisco IE2100 device to an existing region in the Cisco PTC network. [Figure A-2](#) shows a sample Add IE2100 window.

Click the **Clear** button to clear all of the fields in the Add IE2100 window. Click the **Cancel** button to abort the Add IE2100 operation and to close the Add IE2100 window.

- Step 1** Select the region object under which the Cisco IE2100 device is to be created in the **Network Information** pane, then click the **Add IE2100** button in the **Action** pane.
- The Add Cisco IE2100 window appears. Information pertaining to the selected region object is displayed in this window and text fields are provided for you to enter information about the new Cisco IE2100 device.

- Step 2** Enter the hostname of the Cisco IE2100 appliance (the hostname must be unique within the selected region) in the **IE2100 Name** text field.
- If the Cisco IE2100 hostname you specified is not unique within the selected region, an error message is displayed and you are prompted to specify a unique hostname. Otherwise, the newly created Cisco IE2100 device object is added to the **Network Information** pane under the selected region object.
- Step 3** Enter the IP address of the Cisco IE2100 device in the **IE2100 IP Address** text field.
- Step 4** Enter the login password of the Cisco IE2100 device in the **IE2100 Password** text field.
- Step 5** Click the **OK** button. [Figure A-2](#) shows a sample Add Cisco IE2100 window.

Figure A-2 Add Cisco IE2100 Window



80500

- Step 6** If you are using the Seed File Editor as part of the Cisco PTC installation process and you are *finished making your modifications* to the Seed File, return to where you came from in the *Cisco Packet Telephony Center Installation and Configuration Guide* and continue with the Cisco PTC installation process.
- Step 7** If, however, you are not using the Seed File Editor as part of the Cisco PTC installation process, and you have finished adding, modifying, and/or deleting devices to/from the NISF, or you have made password modifications, you must perform a Cisco PTC Cold Start for the changes to become integrated into Cisco PTC. Go to the [“Performing a Cisco PTC Cold Start”](#) section.
-

Deleting a Cisco IE2100

This section describes how to delete a Cisco IE2100 device from the Cisco PTC network.

- Step 1** Select the Cisco IE2100 object you want to delete in the **Network Information** pane, then click the **Delete** button in the **Action** pane.
- The Confirm Delete window appears.
- Step 2** Click the **OK** button for the delete Cisco IE2100 operation to commence.
- Upon clicking **OK**, all of the devices under the selected Cisco IE2100 object, as well as the Cisco IE2100 object itself, are deleted from the tree hierarchy and the **Network Information** pane is updated in the Seed File Editor window.
- Step 3** If you are using the Seed File Editor as part of the Cisco PTC installation process and you are *finished making your modifications* to the Seed File, return to where you came from in the *Cisco Packet Telephony Center Installation and Configuration Guide* and continue with the Cisco PTC installation process.
- Step 4** If, however, you are not using the Seed File Editor as part of the Cisco PTC installation process, and you have finished adding, modifying, and/or deleting devices to/from the NISF, or you have made password modifications, you must perform a Cisco PTC Cold Start for the changes to become integrated into Cisco PTC. Go to the [“Performing a Cisco PTC Cold Start”](#) section.
-

Adding a Device to a Cisco IE2100

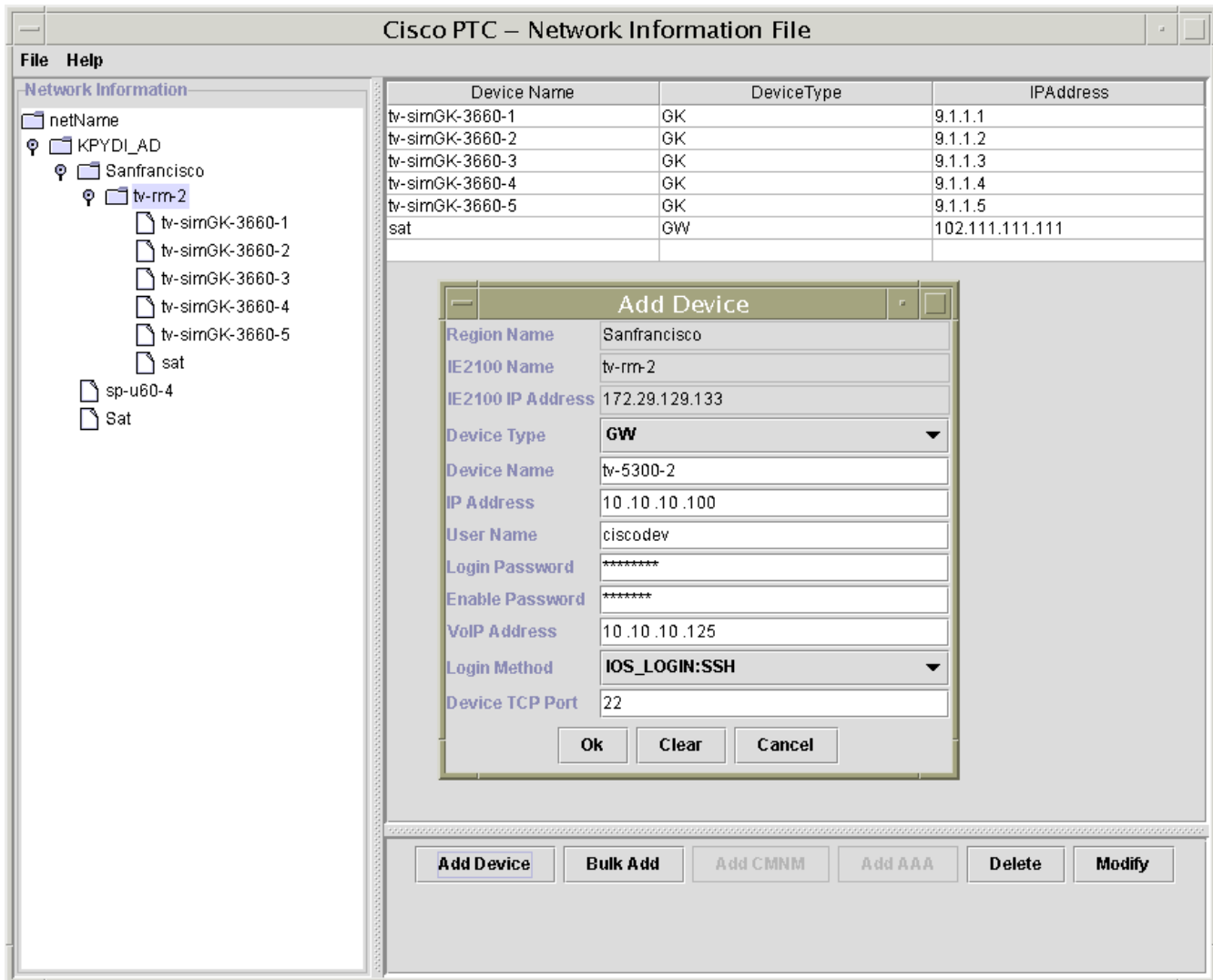
This section describes how to add a gateway, gatekeeper, or directory gatekeeper device to an existing Cisco IE2100 device in the Cisco PTC network. [Figure A-3](#) shows a sample Add Device window.

Click the **Clear** button to clear all of the fields in the Add Device window. Click the **Cancel** button to abort the Add Device operation and to close the Add Device window.

- Step 1** Select the Cisco IE2100 object under which the gateway, gatekeeper, or directory gatekeeper device is to be created in the **Network Information** pane, then click the **Add Device** button in the **Action** pane.
- The Add Device window appears. Information pertaining to the selected Cisco IE2100 and region objects is displayed in this window and text fields are provided for you to enter information about the new device.

- Step 2** Choose the type of device from the **Device Type** menu.
Valid types are **DGK** (directory gatekeeper), **GK** (gatekeeper), or **GW** (gateway).
- Step 3** Enter the hostname of the new device in the **Device Name** text field.
If the hostname you specified is not unique within the selected Cisco IE2100, an error message is displayed and you are prompted to specify a unique name. Otherwise, the newly created device object is added to the **Network Information** pane under the selected Cisco IE2100 object.
- Step 4** Enter the IP address of the new device in the **IP Address** text field.
- Step 5** You only have to provide a username in the **User Name** text field when the login method between the Cisco IE2100's Intelligent Modular Gateway (IMGW) and this IOS device uses a secure shell (**IOS_LOGIN:SSH**) and a valid AAA username doesn't exist. Otherwise, leave this field blank.
- Step 6** Enter the AAA/local login password in the **Login Password** text field.
- Step 7** Enter the AAA/local login enable password in the **Enable Password** text field.
- Step 8** Optionally, enter the H323 IP address where RAS protocol messages should be sent to, for this device, in the **VoIP Address** text field.
- Step 9** Choose the login method to be used between the Cisco IE2100's IMGW and this IOS device from the **Login Method** menu.
Valid types are:
- **Not Applicable** (login is not applicable for this Cisco Networking Services (CNS) supported device)
 - **IOS_LOGIN** (uses Telnet to login to this IOS device)
 - **IOS_LOGIN:SSH** (uses a secure shell to login to this IOS device).
- Step 10** Enter the device's TCP port number (**22** or **23**) to be used by the Cisco IE2100's IMGW when connecting to this device in the **Device TCP Port** text field.
When you choose to use the **IOS_LOGIN:SSH** login method, you must set this parameter value to **22**. When you choose to use the **Not Applicable** or **IOS_LOGIN** login method, you should set this parameter value to **23**.
- Step 11** Click the **OK** button.
The Add Device operation is invoked.

Figure A-3 Add Device Window



- Step 12** If you are using the Seed File Editor as part of the Cisco PTC installation process and you are *finished making your modifications* to the Seed File, return to where you came from in the *Cisco Packet Telephony Center Installation and Configuration Guide* and continue with the Cisco PTC installation process.
- Step 13** If, however, you are not using the Seed File Editor as part of the Cisco PTC installation process, and you have finished adding, modifying, and/or deleting devices to/from the NISF, or you have made password modifications, you must perform a Cisco PTC Cold Start for the changes to become integrated into Cisco PTC. Go to the [“Performing a Cisco PTC Cold Start”](#) section.

Bulk Addition of Devices to a Cisco IE2100

This section describes how to add devices of the same type (gateways, gatekeepers, or directory gatekeepers) to a Cisco IE2100 appliance in the Cisco PTC network. [Figure A-6](#) shows a sample Bulk Add window.

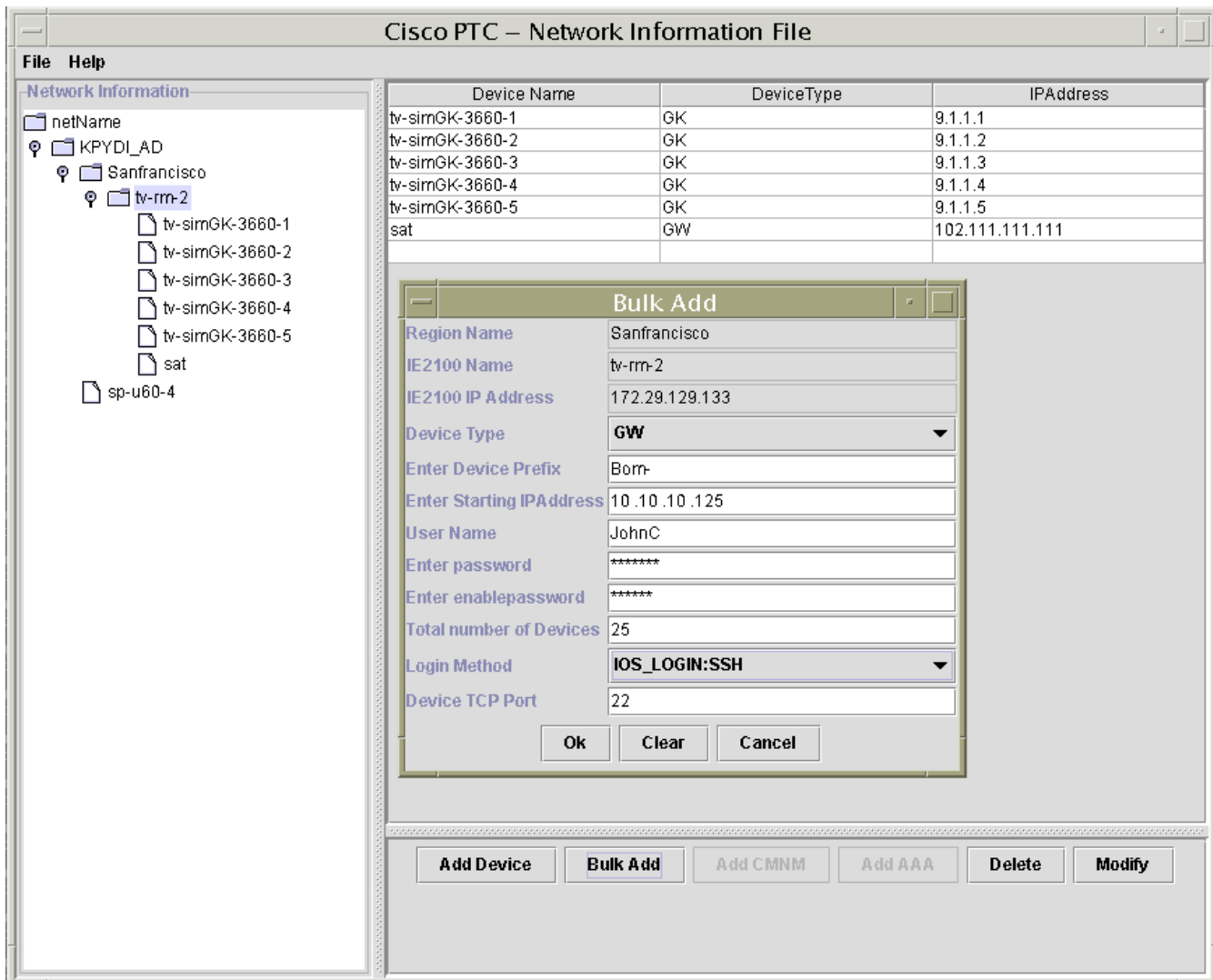
Click the **Clear** button to clear all of the fields in the Bulk Add window. Click the **Cancel** button to abort the Bulk Add operation and to close the Bulk Add window.

**Note**

To register the devices with a Cisco IE2100, you must ensure that all of the devices have the same Telnet username, AAA/local login password, and AAA/local login enable password. When successful, each device is registered with the Cisco IE2100, as is done for the Add Device operation. If any device fails to register with the Cisco IE2100 or the device already exists, that device is not added to the Seed File.

-
- Step 1** Select the Cisco IE2100 object under which the gateway, gatekeeper, or directory gatekeeper devices are to be created in the **Network Information** pane, then click the **Bulk Add** button in the **Action** pane.
- The Bulk Add window appears. Information pertaining to the selected Cisco IE2100 and region objects is displayed in this window and text fields are provided for you to enter information about the new device.
- Step 2** Choose the type of devices from the **Device Type** menu.
- Valid types are **DGK** (directory gatekeeper), **GK** (gatekeeper), or **GW** (gateway).
- Step 3** Enter a device name prefix that will be used for each device, in the **Enter Device Prefix** text field.
- Step 4** Enter the starting IP address of the new device in the **Enter Starting IP Address** text field.
- Step 5** You only have to provide a username in the **User Name** text field when the login method between the Cisco IE2100's Intelligent Modular Gateway (IMGW) and this IOS device uses a secure shell (**IOS_LOGIN:SSH**) and a valid AAA username doesn't exist. Otherwise, leave this field blank.
- Step 6** Enter the AAA/local login password in the **Enter Password** text field.
- Step 7** Enter the AAA/local login enable password in the **Enter Enable Password** text field.
- Step 8** Enter the number of devices to be added in this bulk operation, in the **Total Number of Devices** text field.
- Step 9** Choose the login method to be used between the Cisco IE2100's IMGW and this IOS device from the **Login Method** menu.
- Valid types are:
- **Not Applicable** (login is not applicable for this Cisco Networking Services (CNS) supported device)
 - **IOS_LOGIN** (uses Telnet to login to this IOS device)
 - **IOS_LOGIN:SSH** (uses a secure shell to login to this IOS device).
- Step 10** Enter the device's TCP port number (**22** or **23**) to be used by the Cisco IE2100's IMGW when connecting to this device in the **Device TCP Port** text field.
- When you choose to use the **IOS_LOGIN:SSH** login method, you must set this parameter value to **22**. When you choose to use the **Not Applicable** or **IOS_LOGIN** login method, you should set this parameter value to **23**.
- Step 11** Click the **OK** button.
- The Bulk Add operation is invoked.

Figure A-4 Bulk Add Window



If the device name prefix you specified is not unique within the selected Cisco IE2100, an error message is displayed and you are prompted to specify a unique device name prefix. Otherwise, the newly created device objects are added to the **Network Information** pane under the selected Cisco IE2100 object.

- Step 12** If you are using the Seed File Editor as part of the Cisco PTC installation process and you are *finished making your modifications* to the Seed File, return to where you came from in the *Cisco Packet Telephony Center Installation and Configuration Guide* and continue with the Cisco PTC installation process.
- Step 13** If, however, you are not using the Seed File Editor as part of the Cisco PTC installation process, and you have finished adding, modifying, and/or deleting devices to/from the NISF, or you have made password modifications, you must perform a Cisco PTC Cold Start for the changes to become integrated into Cisco PTC. Go to the [“Performing a Cisco PTC Cold Start”](#) section.

Deleting a Device from a Cisco IE2100

This section describes how to delete an existing gateway, gatekeeper, or directory gatekeeper device from a Cisco IE2100 device in the Cisco PTC network.

-
- Step 1** Select the gateway, gatekeeper, or directory gatekeeper object you want to delete in the **Network Information** pane, then click the **Delete** button in the **Action** pane.
- The Confirm Delete window appears.
- Step 2** Click the **OK** button for the delete device operation to commence.
- Upon clicking **OK**, the selected device is deleted from the tree hierarchy and the **Network Information** pane is updated in the Seed File Editor window.
- Step 3** If you are using the Seed File Editor as part of the Cisco PTC installation process and you are *finished making your modifications* to the Seed File, return to where you came from in the *Cisco Packet Telephony Center Installation and Configuration Guide* and continue with the Cisco PTC installation process.
- Step 4** If, however, you are not using the Seed File Editor as part of the Cisco PTC installation process, and you have finished adding, modifying, and/or deleting devices to/from the NISF, or you have made password modifications, you must perform a Cisco PTC Cold Start for the changes to become integrated into Cisco PTC. Go to the [“Performing a Cisco PTC Cold Start”](#) section.
-

Modifying a Cisco IE2100

This section describes how to modify an existing Cisco IE2100 device’s attributes in the Seed File. This feature is mainly used when the Cisco Voice Routing Center (VRC) application is installed prior to Cisco PTC being installed on the same machine. When Cisco VRC is installed, it also creates a Seed File. Some of the Cisco IE2100 related parameters in this Seed File may be either blank or set to default values by the Cisco VRC installation process. To ensure that the Cisco IE2100 parameter values are set properly to work with Cisco PTC, you should set the parameters using this modification feature.

-
- Step 1** Select the Cisco IE2100 object you wish to modify in the **Network Information** pane, then click the **Modify** button in the **Action** pane.
- The Modify IE2100 window appears. Information pertaining to the selected Cisco IE2100 object, as well as the region and domain names is displayed.
- Step 2** Modify the parameter values you wish to change (for example, the hostname of the Cisco IE2100 appliance, the IP address of the Cisco IE2100 appliance, and/or the login password of the Cisco IE2100 appliance), then click the **OK** button.
- If the device name you specified is not unique within the selected region, an error message is displayed and you are prompted to specify a unique name. Otherwise, the modified parameter values of the selected Cisco IE2100 device are put into effect.

- Step 3** If you are using the Seed File Editor as part of the Cisco PTC installation process and you are *finished making your modifications* to the Seed File, return to where you came from in the *Cisco Packet Telephony Center Installation and Configuration Guide* and continue with the Cisco PTC installation process.
- Step 4** If, however, you are not using the Seed File Editor as part of the Cisco PTC installation process, and you have finished adding, modifying, and/or deleting devices to/from the NISF, or you have made password modifications, you must perform a Cisco PTC Cold Start for the changes to become integrated into Cisco PTC. Go to the [“Performing a Cisco PTC Cold Start”](#) section.
-

Modifying a Device

This section describes how to modify a device’s attributes in the Seed File. This feature is mainly used when the Cisco VRC application is installed prior to Cisco PTC being installed on the same machine. When Cisco VRC is installed, it also creates a Seed File. Some of a device’s parameters in this Seed File may be either blank or set to default values by the Cisco VRC installation process. To ensure that the device’s parameter values are set properly to work with Cisco PTC, you should set the parameters using this modification feature.

- Step 1** Select the gateway, gatekeeper, or directory gatekeeper object you wish to modify in the **Network Information** pane, then click the **Modify** button in the **Action** pane.

The Modify Device window appears, as shown in [Figure A-5](#). Information pertaining to the selected device object, as well as the names of the region and Cisco IE2100 objects this device belongs to are displayed in this window.

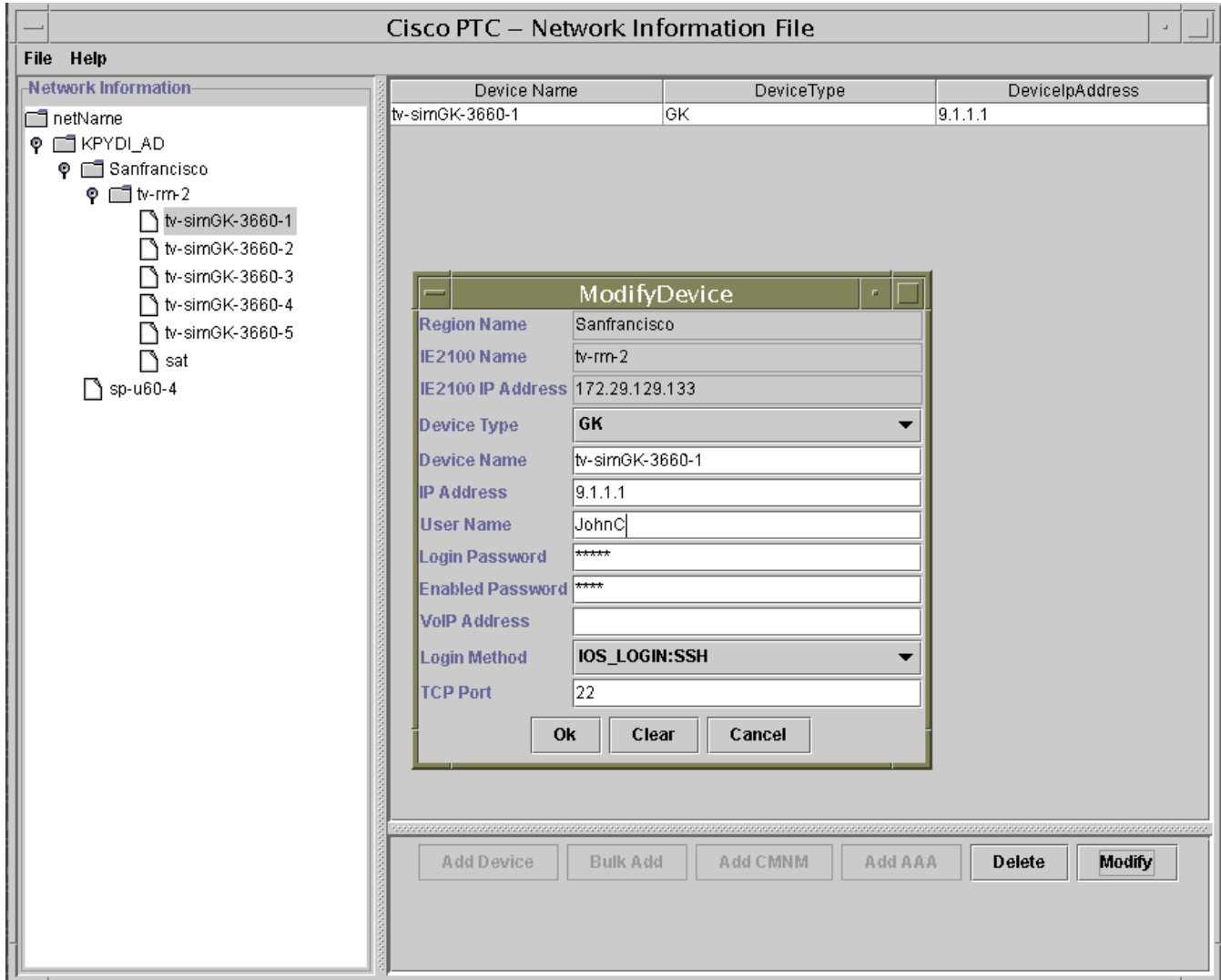
- Step 2** Modify the parameter values you wish to change (for example, the hostname of the device, the IP address of the device, a username when the login method between the Cisco IE2100’s IMGW and this IOS device uses a secure shell (**IOS_LOGIN:SSH**) and a valid AAA username doesn’t exist, the AAA/local login and AAA/local login enable passwords of the device, the H323 IP address where RAS protocol messages should be sent for this device, the login method to be used (**Not Applicable**, **IOS_LOGIN**, or **IOS_LOGIN:SSH**), and/or the device’s TCP port (**22** or **23**)), then click the **OK** button.



Note

If the device name you specified is not unique within the selected Cisco IE2100, an error message is displayed and you are prompted to specify a unique name. Otherwise, the modified parameter values of the selected device are put into effect.

Figure A-5 Modify Device Window



- Step 3** If you are using the Seed File Editor as part of the Cisco PTC installation process and you are *finished making your modifications* to the Seed File, return to where you came from in the *Cisco Packet Telephony Center Installation and Configuration Guide* and continue with the Cisco PTC installation process.
- Step 4** If, however, you are not using the Seed File Editor as part of the Cisco PTC installation process, and you have finished adding, modifying, and/or deleting devices to/from the NISF, or you have made password modifications, you must perform a Cisco PTC Cold Start for the changes to become integrated into Cisco PTC. Go to the [“Performing a Cisco PTC Cold Start”](#) section.

Adding a CMNM

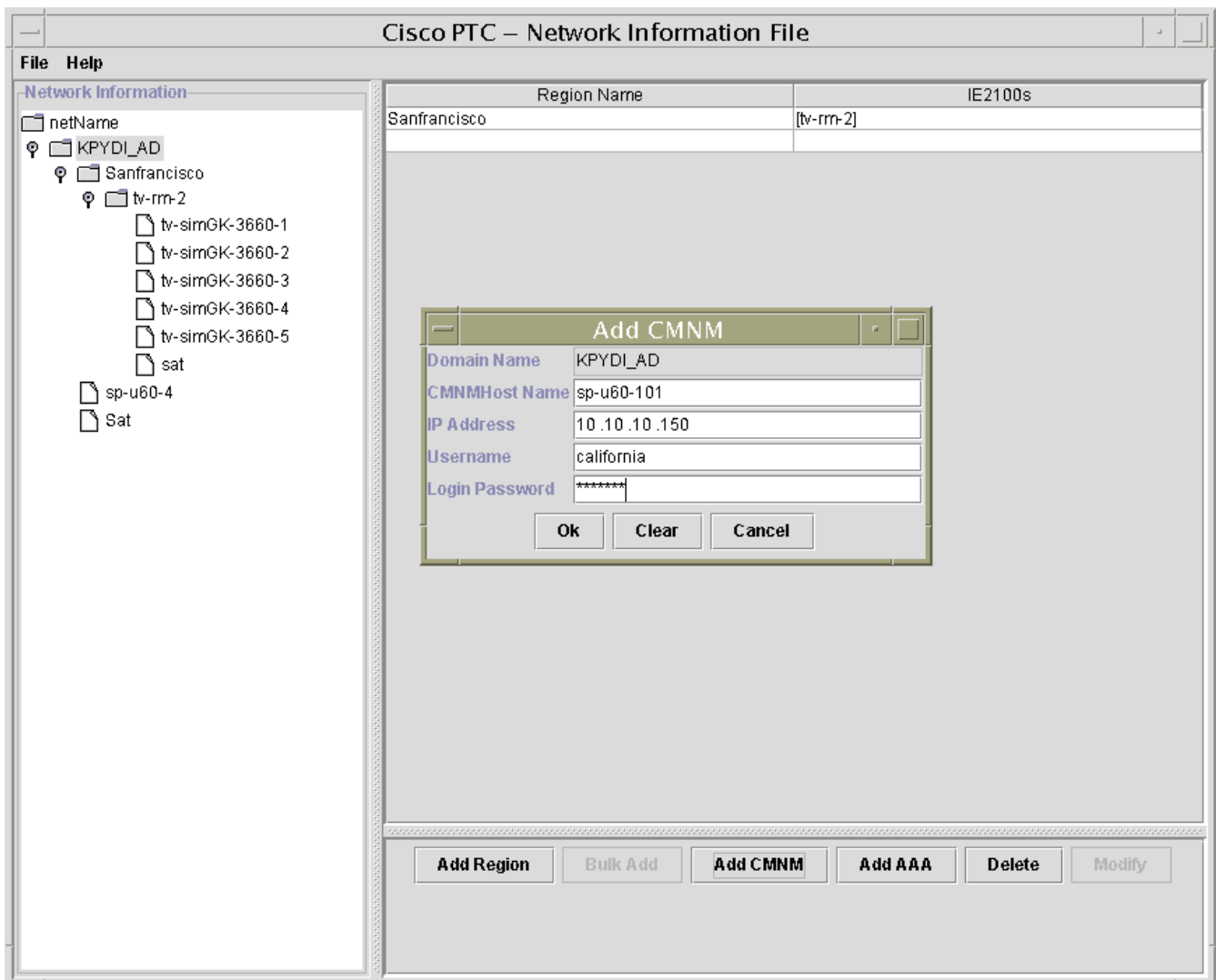
This section describes how to add a Cisco MGC Node Manager (CMNM) device to an existing domain in the Cisco PTC network.

- Step 1** Select the domain object under which the CMNM device is to be created in the **Network Information** pane, then click the **Add CMNM** button in the **Action** pane.

The Add CMNM window appears. The name of the selected domain object is displayed in this window and text fields are provided for you to enter the new CMNM device related information.

- Step 2** Enter the hostname of the CMNM device, the IP address of the CMNM device, the CMNM username, and the login password of the CMNM device, then click the **OK** button. [Figure A-6](#) shows a sample Add CMNM window.

Figure A-6 Add CMNM Window



The newly created CMNM device object is added to the **Network Information** pane under the selected domain object.

- Step 3** If you are using the Seed File Editor as part of the Cisco PTC installation process and you are *finished making your modifications* to the Seed File, return to where you came from in the *Cisco Packet Telephony Center Installation and Configuration Guide* and continue with the Cisco PTC installation process.
- Step 4** If, however, you are not using the Seed File Editor as part of the Cisco PTC installation process, and you have finished adding, modifying, and/or deleting devices to/from the NISF, or you have made password modifications, you must perform a Cisco PTC Cold Start for the changes to become integrated into Cisco PTC. Go to the [“Performing a Cisco PTC Cold Start”](#) section.
-

Deleting a CMNM

This section describes how to delete a Cisco MGC Node Manager (CMNM) device from the Cisco PTC network.

- Step 1** Select the CMNM device object you want to delete in the **Network Information** pane, then click the **Delete** button in the **Action** pane.
- The Confirm Delete window appears.
- Step 2** Click the **OK** button for the delete CMNM device operation to commence.
- Upon clicking **OK**, the CMNM device object is deleted from the tree hierarchy and the **Network Information** pane is updated in the Seed File Editor window.
- Step 3** Modify the parameter values you wish to change (for example, the hostname of the device, the IP address of the device, a username when the login method between the Cisco IE2100's IMGW and this IOS device uses a secure shell (**IOS_LOGIN:SSH**) and a valid AAA username doesn't exist, the AAA/local login and AAA/local login enable passwords of the device, the H323 IP address where RAS protocol messages should be sent for this device, the login method to be used (**Not Applicable**, **IOS_LOGIN**, or **IOS_LOGIN:SSH**), and/or the device's TCP port (**22** or **23**)), then click the **OK** button.



- Note** If the device name you specified is not unique within the selected Cisco IE2100, an error message is displayed and you are prompted to specify a unique name. Otherwise, the modified parameter values of the selected device are put into effect.
-

- Step 4** If you are using the Seed File Editor as part of the Cisco PTC installation process and you are *finished making your modifications* to the Seed File, return to where you came from in the *Cisco Packet Telephony Center Installation and Configuration Guide* and continue with the Cisco PTC installation process.
- Step 5** If, however, you are not using the Seed File Editor as part of the Cisco PTC installation process, and you have finished adding, modifying, and/or deleting devices to/from the NISF, or you have made password modifications, you must perform a Cisco PTC Cold Start for the changes to become integrated into Cisco PTC. Go to the [“Performing a Cisco PTC Cold Start”](#) section.
-

Adding a AAA User

This section describes how to add a Authentication, Authorization, and Accounting (AAA) login user name and password to either an existing domain or device, in the Cisco PTC network. When adding a AAA login username and password to a domain, these values pertain to all devices within the domain. When adding a AAA login username and password to a device, these values pertain only to that device.



Note When you select the domain object and a AAA user already exists under the domain, the **Add AAA** button is disabled.

Step 1 Select the domain or device object, under which the AAA login user and password are to be created, in the **Network Information** pane, then click the **Add AAA** button in the **Action** pane.

The Add AAA Login window appears, displaying information pertaining to the selected domain or device object.

Step 2 Enter the AAA username and password, then click the **OK** button.

The newly created AAA user object is added to the **Network Information** pane under the selected domain or device object.

Step 3 If you are using the Seed File Editor as part of the Cisco PTC installation process and you are *finished making your modifications* to the Seed File, return to where you came from in the *Cisco Packet Telephony Center Installation and Configuration Guide* and continue with the Cisco PTC installation process.

Step 4 If, however, you are not using the Seed File Editor as part of the Cisco PTC installation process, and you have finished adding, modifying, and/or deleting devices to/from the NISF, or you have made password modifications, you must perform a Cisco PTC Cold Start for the changes to become integrated into Cisco PTC. Go to the [“Performing a Cisco PTC Cold Start”](#) section.

Deleting a AAA User

This section describes how to delete a AAA login user name and password from the entire domain or from a single device in the Cisco PTC network.

-
- Step 1** Select the AAA user object you want to delete in the **Network Information** pane, then click the **Delete** button in the **Action** pane.
- The Confirm Delete window appears.
- Step 2** Click the **OK** button for the delete AAA user operation to commence.
- Upon clicking **OK**, the AAA user object is deleted from the tree hierarchy and the **Network Information** pane is updated in the Seed File Editor window.
- Step 3** If you are using the Seed File Editor as part of the Cisco PTC installation process and you are *finished making your modifications* to the Seed File, return to where you came from in the *Cisco Packet Telephony Center Installation and Configuration Guide* and continue with the Cisco PTC installation process.
- Step 4** If, however, you are not using the Seed File Editor as part of the Cisco PTC installation process, and you have finished adding, modifying, and/or deleting devices to/from the NISF, or you have made password modifications, you must perform a Cisco PTC Cold Start for the changes to become integrated into Cisco PTC. Go to the [“Performing a Cisco PTC Cold Start”](#) section.
-

Performing a Cisco PTC Cold Start

This section describes how to perform a Cisco PTC Cold Start upon having added, modified, or deleted devices, or having made password modifications through the Seed File Editor.

-
- Step 1** Go to the `/opt/cisco/vnm` directory:
- ```
% cd /opt/cisco/vnm
```
- Step 2** Perform a Cisco PTC Cold Start:
- When the Cisco VRC application *is installed* on this machine, use the following command:  

```
% vnm --coldstart --INTEGRATED
```
  - When the Cisco VRC application *is not installed* on this machine, use the following command:  

```
% vnm --coldstart --STANDALONE
```

**Note**

Cisco PTC can be started in either Standalone (the default) or Integrated mode. In Standalone mode, only Cisco PTC Server processes are started. In Integrated mode, Cisco PTC Server and Cisco VRC processes are started.

---

- Step 3** Wait until the “Start Operation is Complete” and “Cisco PTC is Up” messages appear.
- Upon seeing the above messages, the Cisco PTC server processes are started and you can now resume using the Cisco PTC application.
-

# Seed File Overview



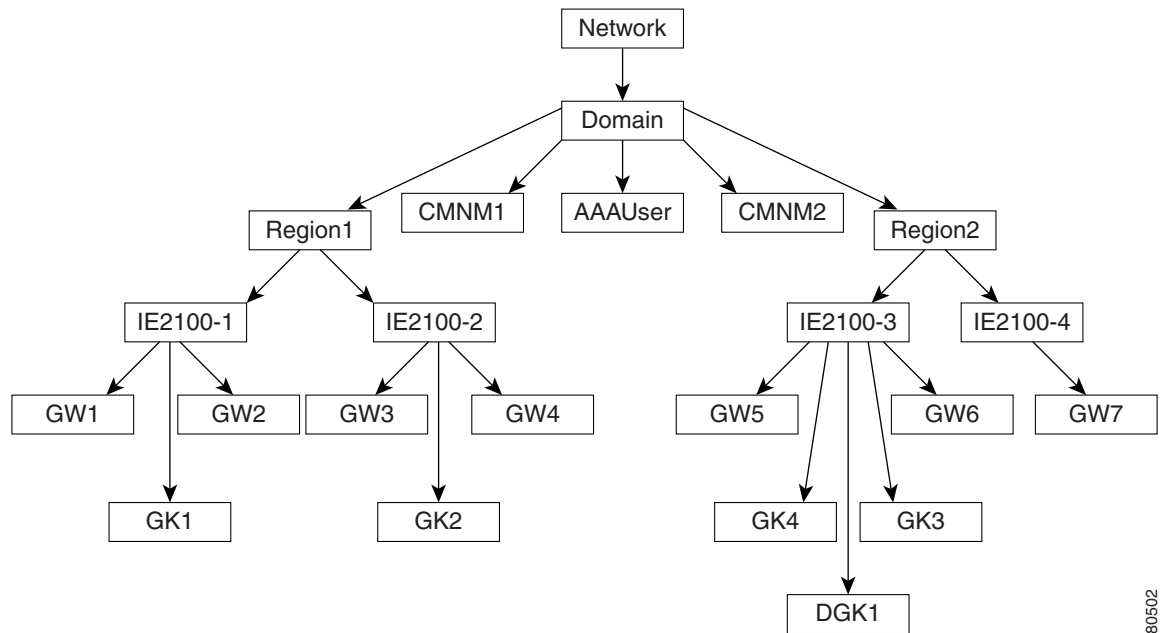
## Note

It is *strongly recommended* that you do not manually edit the Cisco PTC Network Information Seed File (NISF) and instead use the Seed File Editor for this purpose.

The Cisco PTC NISF (`/opt/cisco/vnm/topodisc/seedfile.txt`) contains hierarchical information, as shown in [Figure A-7](#), of the entire Cisco PTC network, with the network object at the top of the hierarchy tree. Under the network object is the domain object, which can contain multiple region and Cisco MGC Node Manager (CMNM) objects, as well as a single AAA user.

A region object can contain one or more Cisco IE2100 objects, with each Cisco IE2100 object associated with one or more device objects. When devices are added and deleted through the Cisco PTC Topology Manager, the NISF is updated accordingly.

**Figure A-7 Seed File Hierarchy**



80502

## Seed File Elements

This section describes the Cisco PTC network elements that are defined through the NISF.

### Network Object

The network object is a virtual entity that is the root node in the Seed File. The name you assign to the network object is used to represent the Cisco PTC network.

## Domain Object

The domain object is also a virtual entity that contains one or more regions. The domain object is represented by a unique domain name.

## Region Objects

Region objects are also virtual entities that represent the next lower level in the tree-view hierarchy. Region objects usually represent a managed geographical location. Each region object is represented by a unique region name.

## Cisco IE2100 Appliance Objects

Cisco IE2100 appliances are devices that are used to configure other Cisco IOS devices. A single Cisco IE2100 appliance can be used to configure multiple Cisco IOS devices within a given region. Multiple Cisco IE2100 appliances can exist within a region. Each Cisco IE2100 object is represented by a unique Cisco IE2100 name.

## Device Objects

Devices are network elements. Devices represent the lowest level entities in the tree-view hierarchy. The device role specified in the Seed File indicates the type of device. A device can be either a gateway, gatekeeper, or directory gatekeeper.

The [“Sample Seed File”](#) section shows a sample Cisco PTC Seed File.

## Cisco MGC Node Manager Object

A Cisco MGC Node Manager (CMNM) is an Element Management System that manages the SC2200 Complex. Cisco PTC utilizes the CMNM Northbound API to upload device configurations during network discovery and synchronization, and for flow through provisioning of NAS paths, IP links, and nailed trunks.

## Network Information Seed File Structure

This section describes the Cisco PTC Seed File structure and the statements used within the Seed File to identify the various network elements. Section [“Seed File Format”](#) shows the format of the Cisco PTC Seed File. The following tags are used in the Seed File to identify the network subdivisions:

- **NW**—network
- **DM\_BEGIN**—start of a domain
- **DM\_END**—end of a domain
- **RG\_BEGIN**—start of a region
- **RG\_END**—end of a region
- **RM\_BEGIN**—start of a Cisco IE2100

- **GW**—gateway statement
- **GK**—gatekeeper statement
- **DGK**—directory gatekeeper statement
- **RM\_END**—end of a Cisco IE2100
- **CMNM**—CMNM statement
- **AAA\_USER**—AAA user statement
- **AAA\_PASSWORD**—AAA user password statement.

**Note**


---

All tags containing “**\_BEGIN**” must have a corresponding “**\_End**” tag and the tags must not overlap.

---

## Network Statement

The network object is the root node in the Seed File and is identified by a **NW** statement. The name you assign to the network object with the **NW** statement is used to represent the network object throughout the Cisco PTC application (for example, the Topology and Provisioning Managers). The syntax for the **NW** statement is:

```
NW | <network-name>
```

**Note**


---

You can only define one network object in the Seed File and the network object can only contain one domain object.

---

## Domain Statement

The domain object contains one or more region objects and is identified by the **DM\_BEGIN** and **DM\_END** statements. You can only define one domain object in the Seed File and you must assign a unique name to it. The syntax for the **DM\_BEGIN** statement is:

```
DM_BEGIN | <domain-name> | <discovery-server-hostname>
```

where:

*<domain-name>* is the unique name of the domain object. This value must be set to **AD0**.

*<discovery-server-hostname>* is the name of the host where the Cisco PTC Discovery Server process is located. This value must be set to **localhost**.

## Region Statements

A region object contains one or more Cisco IE2100 device objects and is identified by **RG\_BEGIN** and **RG\_END** statements. Multiple region objects can exist under the domain object. You must assign a unique name to each region object. The syntax for the **RG\_BEGIN** statement is:

```
RG_BEGIN | <region-name>
```

where *<region-name>* is the unique name you want to assign to this region object.

## Cisco IE2100 and Device Statements

A Cisco IE2100 object contains one or more device objects (each of which represents a Cisco IOS device that is configured by the Cisco IE2100). Each Cisco IE2100 and its associated devices are specified between **RM\_BEGIN** and **RM\_END** statements. The syntax for the Cisco IE2100 statement is:

```
<IE2100_hostname> | <IE2100_IPaddr> | <EI 2100_root_password>
```

where:

<IE2100\_hostname> is the host name of the Cisco IE2100 appliance.

<IE2100\_IPaddr> is the IP address of the Cisco IE2100 appliance.

<EI 2100\_root\_password> is the root password of the Cisco IE2100 appliance.

### Device Statement

Immediately following the Cisco IE2100 statement are Device statements, one line per device, for each device that is associated with the Cisco IE2100. The syntax of the Device statement is:

```
<role> | <host_IPaddr> | <hostname> | <host_password> | <enable_password> | <login_method> | <VoIP_IPaddr> | <username> | <TCP_port>
```

where:

<role> is the type of device. Valid types are: **DGK** (directory gatekeeper), **GK** (gatekeeper), or **GW** (gateway).

<host\_IPaddr> is the IP address of this device.

<hostname> is the hostname of this device.

<host\_password> is the AAA/local password for this device.

<enable\_password> is the AAA/local enable password for this device.

<login\_method> is the login method between the Cisco IE2100's Intelligent Modular Gateway (IMGW) and this IOS device. Valid types are:

- **Not Applicable** (login is not applicable for this Cisco Networking Services supported device)
- **IOS\_LOGIN** (uses Telnet to login to this IOS device)
- **IOS\_LOGIN:SSH** (uses a secure shell to login to this IOS device).

<VoIP\_IPaddr> is an *optional* parameter that specifies the gateway or gatekeeper device for H.225 Registration, Admission, and Status (RAS) protocol messages.

<username> is an *optional* parameter that is only used when the <login\_method> parameter is set to **IOS\_LOGIN:SSH** and a valid AAA username isn't specified with a **AAA\_USER** statement.

<TCP\_port> is the TCP port to be used by the Cisco IE2100's IMGW when connecting to this device. When you set the <login\_method> parameter value to **IOS\_LOGIN:SSH**, set this parameter value to **22**. When you set the <login\_method> parameter value to **Not Applicable** or **IOS\_LOGIN**, set this parameter value to **23**.



#### Note

If any of the optional parameters are not included in a Device statement and a subsequent parameter is necessary, you must enter a space character in place of each non-specified optional parameters. For example, if you do not specify the <VoIP\_IPaddr> parameter in a Device statement but you do specify a value for the <TCP\_port> parameter, you must add a space in both positions for the <VoIP\_IPaddr> and <username> parameters in the Device statement.

## CMNM Statements

The CMNM object represents a Cisco MGC Node Manager device, which is used to manage signaling controllers. The syntax for a **CMNM** statement is:

```
CMNM | <CMNM_hostname> | <CMNM_IPaddr> | <CMNM_username> | <CMNM_user_password>
```

where:

<CMNM\_hostname> is the hostname of the CMNM device.

<CMNM\_IPaddr> is the IP address of the CMNM device.

<CMNM\_username> is the login username to be used when logging into the CMNM device. This value must be set to **vnmm**.

<CMNM\_user\_password> is the login username password to be used when logging into the CMNM device. This value must be set to **vnmm**.

## AAA\_USER and AAA\_PASSWORD Statements

The <host\_password> and <enable\_password> parameters of the Device statement are used to enable the uploading of a running configuration file and version information from a particular device to a Cisco IE21000. However, for some devices, the AAA (Authentication, Authorization, Accounting) feature might be enabled, therefore, usage of the <host\_password> and <enable\_password> parameters for uploading the device information fails. In this case, a AAA username and password are necessary and their values are specified by using the **AAA\_USER** and **AAA\_PASSWORD** statements. The syntax for the **AAA\_USER** and **AAA\_PASSWORD** statements is:

```
AAA_USER | <AAA_username>
AAA_PASSWORD | <AAA_passwd>
```



### Note

You can define one **AAA\_USER** and **AAA\_PASSWORD** combination for all devices within the domain managed by Cisco PTC and you can also define one **AAA\_USER** and **AAA\_PASSWORD** combination on a per device basis.

# Seed File Format

The following example shows the format of a Cisco PTC Seed File. See the “[Sample Seed File](#)” section for a sample Seed File.

```

NW | <network_name>
DM_BEGIN | <domain_name> | <domain_hostname>
RG_BEGIN | <region1_name>
 RM_BEGIN
 <IE2100_hostname1> | <IE2100_IPAddr> | <IE2100_root_password>
 GW | <host_IPAddr> | <hostname> | <host_password> | <enable_password> | <login_method> | <VoIP
 _IPAddr> | <username> | <TCP_port>
 GK | <host_IPAddr> | <hostname> | <host_password> | <enable_password> | <login_method> | <VoIP
 _IPAddr> | <username> | <TCP_port>
 DGK | <host_IPAddr> | <hostname> | <host_password> | <enable_password> | <login_method> | | |
 <TCP_port>
 RM_END
RG_END
RG_BEGIN | <region2_name>
 <IE2100_hostname2> | <IE2100_IPAddr> | <IE2100_root_password>
 GW | <host_IPAddr> | <hostname> | <host_password> | <enable_password> | <login_method> | <VoIP
 _IPAddr> | <username> | <TCP_port>
RG_END
 CMNM | <CMNM_hostname> | <CMNM_IPAddr> | <CMNM_username> | <CMNM_user_password>
 AAA_USER | <AAA_username>
 AAA_PASSWORD | <AAA_password>
DM_END

```

# Sample Seed File

The following is an encrypted example of a Cisco PTC NISF:

```
NW|Network
DM_BEGIN|AD0|localhost
RG_BEGIN|SanJose
 RM_BEGIN
 cem-rm5|172.29.145.160|1a156toob7vqih7lgu2as11sfpqgvbuarlc0rkb204svklnamd18hsafdvie5tg
tui
 GW|172.29.129.126|tv-5350-1|1aq|plv0srvhu0vroo69g34hodcde60nv11k1ch5u5rmvf40j9ji9vc2n
4jnevqu8v1aohhvbm083dbttikf1heblbmcqkd181j4bji9hrv9c0ukc6n p77th1p4lgh2peigq|Not
Applicable|lmruth|23
 RM_END
RG_END
RG_BEGIN|NewYork
 RM_BEGIN
 tv-rm1|172.29.129.19|1ag72skbpthj94faiq4e4fu40vfln5honjf81htuqgu1maclcjd8h97lpjgmutotu3
 GW|172.29.150.43|las5300-2|1asgci4lb5b7r8bgnh00lrvi1nv5fh435p7127aq|3tg3of27tkvvr4cp5k
oe61hon|1ardd6plqphaulgm2lklcadlame44afsm6o79dahaekem3ccsoh9knik67isq5d8p|IOS_LOGIN:SS
H|lmruthyul22
 RM_END
RG_END
 CMNM|sp-u60-4|172.29.147.28|vnml1aseke4elt31lhnhnohnjjh5eaog9pkrtos3aqmuqbvu7db8is114
k5bimb4sqje
 AAA_USER|sudhir
 AAA_PASSWORD|1ae625fvm5lgbvr58setr6oalldhrnmg853166k56je6ma1a5nn04il6vrfapd07bim
DM_END
```