CHAPTER 2

# Configuring Hosted Unified Communications Services Components Before Loading Bulk Data

This chapter describes the manual configuration and static configuration scripts that must be applied to each Hosted Unified Communications Services Components (Hosted UCS) platform component before the component can be integrated into the Hosted UCS platform by using USM to load bulk data. For the supported Hosted UCS platform components and software versions, which are required for full support and functionality, refer to the *Cisco Hosted Unified Communications Services, Release 7.1(a) Software Compatibility Matrix*.

For information about configuring the components using USM to load bulk data, refer to Chapter 4, "Using Bulk Loaders for the Initial Configuration of Hosted Unified Communication Services Components."

This chapter includes the following sections:



# Manually Configuring Cisco Unified Communications Manager

This section explains how to manually configure and verify the Cisco Unified CM parameters that cannot be provisioned through AVVID XML Layer Simple Object Access Protocol (AXL SOAP).

This section includes the following topics:



## Cisco Unified Communications Manager Configuration

Some Cisco Unified CM configuration parameters cannot be provisioned through AXL SOAP. Due to this limitation, some manual configuration is required on the Cisco Unified CM servers before loading bulk data through USM.

This section describes the elements that must be configured using the Cisco Unified CM publisher. It includes the following topics:



Unless specifically mentioned, the configuration steps apply to Hosted UCS platforms based on *Cisco Unified CM 4.2(3), Cisco Unified CM 5.1(3),* Cisco Unified CM 6.1(x) and Cisco Unified CM 7.1(x).

## Server Identity

This section describes how to specify identify the Cisco Unified CM server for integrating it into a Hosted UCS Release 7.1(a) platform.

To identify the Cisco Unified CM server, complete the following steps.

**Procedure**

**Step 1** Go to **System > Server.**

**Step 2** In the **Host Name/IP Address** field, enter the full IP address of the server.

For example, *10.131.4.2*.

**Step 3** In the **Description** field, enter a description of the server.

For example, *e4c1p*

**Step 4** Repeat Step 1 through Step 3 for each Cisco Unified CM in each cluster.

## Date/Time Groups

Date/Time Groups define the time zones for the various devices that are connected to Cisco Cisco Unified CM. Each device exists as a member of only one device pool, and each device pool has only one assigned Date/Time Group. USM uses the international standard zoneinfo database, also called the tz database. In USM, the timezone names are all in the form *area/location*, where *area* is the name of a continent or ocean, and *location* is the name of a specific location (typically a city or small island) within a large region, such as “America/New_York.”

To configure Date/Time groups, complete the following steps.

**Procedure**

**Step 1** Go to **System > Date/Time Group**.

**Step 2** Choose the correct values for each of the following settings:

- **Group Name**—Enter the name that you want to assign to the new date/time group; for example, *Europe-London*

- **Time Zone**—From the drop-down list box, choose the time zone for the group that you are adding, for example, *GMT Standard/Daylight Time*
- **Separator**—Choose the separator character to use between the date fields; for example, **/**
- **Date Format**—Choose the date format for the date that appears on Cisco Unified IP Phones; for example, *D/M/Y*
- **Time Format**—Choose a 12-hour or 24-hour time format; for example, *24-hour*

**Step 3** Repeat Step 2 for all required Date/Time Groups.

**Note** Group name format in USM is "Area/Location," (using a slash as the separator) while in Cisco Unified CM the format is "Area-Location" (using a dash as the separator).

## Enterprise Parameters

Enterprise parameters define the default settings that apply to all devices and services in the same cluster.

To define the Enterprise parameters, complete the following steps.

**Procedure**

**Step 1** Go to **System > Enterprise Parameters**.

**Note** In the **Enterprise Parameters Configuration** section, note that the **Advertise G722 Codec field** is disabled; this applies to Cisco Unified CM 6.1(4) and Cisco Unified CM 7.1(3)

**Step 2** Define the correct value for the following setting in the **Phone URL Parameters** section:

**URL Directories**—This parameter specifies the URL that Cisco Unified IP Phone models use when you click the Directory button. This should point to the virtual IP address of the BVSM server (*not* the Cisco Unified CM server).

- For Cisco Unified CM 7.1(3) and Unified CM 6.1(4):

  http://virtual_IP_address_of_USM_server/bvsmweb/directoryservices.cgi?device=#DEVICENAME

  For example:
  http://10.120.3.66/bvsmweb/directoryservices.cgi?device=#DEVICENAME#

- For Cisco Unified CM 5.1(3):

  http://virtual_IP_address_of_USM_server:8080/bvsmweb/directoryservices.cgi?device=#DEVICENAME#

  For example:

  http://10.120.3.66:8080/bvsmweb/directoryservices.cgi?device=#DEVICENAME#

**Step 3** If the Hosted UCS platform network does not use DNS services, replace the host name of the Cisco Unified CM Publisher Server name with its IP address in the following fields:

- In the **URL Help field**, in the General Parameters section:

  For Cisco Unified CM 7.1(3) and Unified CM 6.1(4):

http://*IP_address_of_Publisher_server*/help

For example, *http://10.131.4.2/help*

- In the **CDR UNC Path** field, in the CDR Parameters section:

  For Cisco Unified CM 7.1(3) and Unified CM 6.1(4):

  *IP_address_of_Publisher_server*\CDR

  For example, *http:\\10.131.4.2\CDR*

- In the **URL Authentication**, **URL Directories**, and **URL Services** fields, in the Phone URL Parameters section:

  For Cisco Unified CM 7.1(3) and Unified CM 6.1(4):

  - http://*IP_address_of_Publisher_server*/CCMCIP/authenticate.asp

    For example, *http://10.131.4.2/CCMCIP/authenticate.asp*

  - http://*IP_address_of_Publisher_server*/CCMCIP/GetTelecasterHelpText.asp

    For example, *http://10.131.4.2/CCMCIP/GetTelecasterHelpText.asp*

  - http://*IP_address_of_Publisher_server*/CCMCIP/getservicesmenu.asp

    For example, *http://10.131.4.2/CCMCIP/getservicesmenu.asp*

- For Cisco Unified CM 5.1(3):

  - http://*IP_address_of_Publisher_server*:8080/ccmcip/authenticate.jsp

    For example, *http://10.132.4.2:8080/ccmcip/authenticate.jsp*

  - http://*IP_address_of_Publisher_server*:8080/ccmcip/GetTelecasterHelpText.jsp

    For example, *http://10.132.4.2:8080/ccmcip/GetTelecasterHelpText.jsp*

  - http://*IP_address_of_Publisher_server*:8080/ccmcip/getservicesmenu.jsp

    For example, *http://10.132.4.2:8080/ccmcip/getservicesmenu.jsp*

## Automated Alternate Routing Group

Automated alternate routing (AAR) provides a mechanism to reroute calls through the PSTN or other network by using an alternate number when Cisco Unified CM blocks a call due to insufficient location bandwidth.

To define the AAR parameter, complete the following steps.

**Procedure**

**Note** This procedure applies only to Cisco Unified CM 7.1.x, Cisco Unified CM 6.1.x and Cisco Unified CM 5.1(3) because in Cisco Unified CM 4.2(3) this parameter is provisioned through USM.

**Step 1** Go to **Call Routing > AAR Group**.

**Step 2** Specify the correct values for the following parameters:

**AAR Group Name**: `defaultaar`

**Prefix Digits**: Leave this blank

**Note** The `defaultaar` AAR group is not required by Cisco Unified CM 5.x. However, when the bulk data is loaded for the cluster, BVSM returns an error message and stops the bulk data loading if the parameter is missing.

## Conference Bridge

**Note** This is an optional step, and is only required if Conference Bridges are deployed in the network

Conference bridge configuration is only required if one or more conference bridges are to be integrated into the Hosted UCS platform.

Conference Bridge for Cisco Unified CM can be implemented as a software or hardware application. It allows both ad hoc and meet-me voice conferencing. Each conference bridge can host several simultaneous, multiparty conferences. For details about how to configure the conference bridge for integration into the Hosted UCS 7.1(a) platform, refer to the following websites:

- For Unified CM 6.1(x)
  http://www.cisco.com/en/US/docs/voice_ip_comm/cucm/admin/6_1_1/ccmcfg/b04cnbrg.html
- For Unified CM 7.1(x)
  http://www.cisco.com/en/US/docs/voice_ip_comm/cucm/admin/7_1_2/ccmcfg/b04cnbrg.html

## Transcoder

**Note** This is an optional step, and is only required if Transcoders are deployed in the network.

Transcoder configuration is only required if one or more transcoders are to be integrated into the Hosted UCS platform. A transcoder takes the stream of one codec and transcodes (converts) it from one compression type to another compression type.

The Cisco Unified CM invokes a transcoder on behalf of endpoint devices when the two devices are using different codecs and would normally not be able to communicate. When inserted into a call, the transcoder converts the data streams between the two disparate codecs to enable communications between them.

The Media Resource Manager (MRM) has responsibility for resource registration and resource reservation of transcoders within a Cisco Unified CM cluster. Cisco Unified CM simultaneously supports registration of both the Media Termination Point (MTP) and transcoders and concurrent MTP and transcoder functionality within a single call.

For details about how to configure a transcoder for integration into the Hosted UCS 7.1(a) platform, refer to the following websites:

- For Unified CM 6.1(x)
  http://www.cisco.com/en/US/docs/voice_ip_comm/cucm/admin/6_1_1/ccmcfg/b04trans.html
- For Unified CM 7.1(x)
  http://www.cisco.com/en/US/docs/voice_ip_comm/cucm/admin/7_1_2/ccmcfg/b04trans.html

# Cisco Unified IP Phone Services

Users can subscribe to Cisco Unified IP Phone Services at each site, which vary depending on the deployment. This section describes the manual configuration required for the following services:

- Login/Logout Services for Extension Mobility, page 2-6
- Roaming Login/Logout Services for BVSM User Roaming, page 2-6
- Cisco Unified IP Phone XML Services, page 2-7

**Note** Login/Logout Services for extension mobility are used if only one customer is to be provisioned per cluster. If this is not the case then only Roaming Login/Logout Services for USM user roaming will be used.

## Login/Logout Services for Extension Mobility

To configure Login/Logout Services for Extension Mobility, complete the following steps.

**Procedure**

**Step 1** Choose one of the following options:

- For Cisco Unified CM 4.2(3):

  Go to **Feature > Cisco Unified IP Phone Services**
- For Cisco Unified CM 7.1(x) and 6.1(x):

  Go to **Device > Device Settings > Phone Services**

**Step 2** Add the Cisco Unified IP Phone Service using the following settings:

- For Cisco Unified CM 4.2(3):

  **Service Name**: `Login/Logout`

  **Service Description**: `Extension Mobility Service`
- **Service URL**:
  http://USM_Virtual_IP_Address/bvsmweb/bvsmroaming.cgi?device=#DEVICENAME#
  For example, http://10.120.3.62/bvsmweb/bvsmroaming.cgi?device=#DEVICENAME#
- For Cisco Unified CM 5.1(3) and 6.1(2):

  **Service Name**: `Login/Logout`

  **Service Name (ASCII Format)**: `Login/Logout`

  **Service Description**: `Extension Mobility Service`

  **Service URL**:
  http://USM_Virtual_IP_Address/bvsmweb/bvsmroaming.cgi?device=#DEVICENAME#
  For example, http://10.120.3.62/bvsmweb/bvsmroaming.cgi?device=#DEVICENAME#

## Roaming Login/Logout Services for BVSM User Roaming

Roaming Login/Logout Services for USM User Roaming uses Cross Cluster Forwarding, and allows users to login or logout at remote locations.

To configure Roaming Login/Logout Services for USM user roaming, complete the following steps.

**Procedure**

**Step 1** Choose one of the following options:

- For Cisco Unified CM 4.2(3):

  Go to **Feature > Cisco Unified IP Phone Services**
- For Cisco Unified CM 7.1(x) and 6.1(x):

  Go to **Device > Device Settings > Phone Services**

**Step 2** Specify the appropriate values for the following settings:

- For Cisco Unified CM 4.2(3):

  **Service Name**: `Roaming Login/Logout`

  **Service Description**: `Extension Mobility Service`

  **Service URL**:
  http://*USM_Virtual_IP_Address*/bvsmweb/bvsmroaming.cgi?device=#DEVICENAME

  For example, *http://10.120.3.62/bvsmweb/bvsmroaming.cgi?device=#DEVICENAME#*
- For Cisco Unified CM 7.1x3) and 6.1(x):

  **Service Name**: `Roaming Login/Logout`

  **Service Name (ASCII Format)**: `Roaming Login/Logout`

  **Service Description**: `Extension Mobility Service`

  **Service URL**:
  http://*USM_Virtual_IP_Address*/bvsmweb/bvsmroaming.cgi?device=#DEVICENAME

  For example, *http://10.120.3.62/bvsmweb/bvsmroaming.cgi?device=#DEVICENAME#*

**Step 3** Check the **Enable** Check box.

## Cisco Unified IP Phone XML Services

This section describes the configuration required to enable Cisco Unified IP Phone XML Services.

To configure Cisco Unified IP Phone XML Services, complete the following steps.

**Procedure**

**Step 1** Choose one of the following options:

- For Cisco Unified CM 4.2(3):

  Go to **Feature > Cisco Unified IP Phone Services**
- For Cisco Unified CM 7.1(x) and 6.1(x):

  Go to **Device > Device Settings > Phone Services**

**Step 2** Specify the appropriate values for the following settings:

- For Cisco Unified CM 4.2(3):

**Service Name**: `Phone Services`

**Service Description**: `Phone Services`

**Service URL**:
http://*USM_Virtual_IP_Address*/bvsmweb/bvsmservices.cgi?device=#DEVICENAME

For example, *http://10.120.3.62/bvsmweb/bvsmservices.cgi?device=#DEVICENAME#*

- For Cisco Unified CM 7.1(x) and 6.1(x):

  **Service Name**: `Phone Services`

  **Service Name (ASCII Format)**: `Phone Services`

  **Service Description**: `Phone Services`

  **Service URL**:
  http://*USM_Virtual_IP_Address*/bvsmweb/bvsmservices.cgi?device=#DEVICENAME

  For example, *http://10.120.3.62/bvsmweb/bvsmservices.cgi?device=#DEVICENAME#*

# Template Configuration

This section describes the manual configuration required to enable the following templates that are provided by Cisco Unified CM:

- Phone Button Template, page 2-8
- Softkey Template, page 2-9

## Phone Button Template

Cisco Unified CM includes several default phone button templates. When adding phones, you can assign one of these templates to the phones or create a new template. Creating and using templates provides a fast way to assign a common button configuration to a large number of phones. A number of default phone button templates are loaded into USM during initial setup.

If you want to use any non-standard phone button templates, you need to define them in USM, and also need to add them manually into Cisco Unified CM. This section describes how to add non-standard phone button templates.

Ensure that the required number of lines are set up on the template settings and that each phone button template is cloned from the standard phone type for each variant. For example, confirm that the Standard 7960-2line is based on the standard 7960 template, and set the number of lines to 2.

**Note** The USM InitPBX Load fails if Phone Button Templates exists as a BVSM Service Setting but does not exist in the Cisco Unified CM. If a validation failure occurs, either add the missing phone button template into the Cisco Unified CM, or delete unnecessary phone button templates from USM. In USM 7.x, phone button templates can not be deleted from USM database without disconnecting the dial plans from the harware sets (In USM, Dial Plan Tools > Hardware Sets > Associated Dial plans). Remember to reconnect the required dial plans afterwards.

USM does not distinguish between different Cisco Unified CM versions, and therefore during USM InitPBX Load it verifies that all phone button templates configured in BVSM also exist in Cisco Unified CM. The USM BaseData worksheet for the 7.1(a) model loader lists all the phone button templates that need to be added to Cisco Unified CM clusters.

To configure non-standard phone button templates, complete the following steps.

**Procedure**

**Step 1** Go to **Device > Device Settings > Phone Button Template**.

**Step 2** Specify the appropriate values for the following parameters:

- **Phone Button Template**: *required_phone_button_template*

  For example, *Standard 7960*

  Use the following setting:

- **Button Template Name**: *unique_button_template_name*

  For example, *Standard 7960-2lines*

**Step 3** Configure the required number of buttons:

- **Feature**: Choose the function of the phone button that you want to specify in the template

  For example, *Line*

- **Label**: Enter a description of the button

  For example, *Line 1*

## Softkey Template

Softkey template configuration allows the administrator to manage softkeys that the Cisco Unified IP Phones (such as model 7960) support.

By default two softkey templates are configured in USM: Softkey_Basic and Softkey_Advanced. If these templates are not required, they can be deleted from the USM (in **Setup Tools > Service Types**). The list of Softkey templates in USM has to correspond with the list of Softkey Templates in all Cisco Unified CM clusters.

To configure a softkey template, complete the following steps.

**Procedure**

**Step 1** To add a softkey template to USM, go to **Setup Tools > Service Types**.

**Step 2** To add Softkey templates to Cisco Unified CM clusters, go to **Device > Device Settings > Softkey Template**.

**Step 3** Create a softkey template based on: *available_softkey_template*.

For example, *Standard User*

**Step 4** Configure the following setting:

**Softkey Template Name**: *unique_softkey_template_name*

For example, *Softkey_Advanced*

**Step 5** After creating the new softkey template, add additional application softkeys, and configure softkey positions.

For detailed instructions refer to the appropriate Cisco Unified CM administration guide.

**Note** If different softkey templates are required on different clusters, load the softkey templates after loading the Cisco Unified CM.

# Verifying Cisco Unified Communications Manager Configuration

This section describes how to verify that the Cisco Unified CM cluster configuration, required before loading the base data using USM, is complete.

**Note** Confirm that the settings are correct.

To verify the Cisco Unified CM configuration, complete the following steps.

**Procedure**

**Step 1** Go to **Publisher – Tools > Service Activation** and turn on the following services:

- Cisco RIS Data Collector
- Cisco Database Layer Monitor
- Cisco Serviceability Reporter
- Cisco Extension Mobility
- Cisco Unified CM (if Publisher used as a back-up subscriber)
- Cisco TFTP (if required on Publisher server)
- Cisco IP Voice Streaming (if required for MoH and announcements)
- Cisco CTIManager (if used as a backup subscriber)

**Step 2** Go to **Subscriber/TFTP/MOH Server – Tools > Service Activation** and turn on the following services:

- Cisco RIS Data Collector
- Cisco Database Layer Monitor
- Cisco Serviceability Reporter
- Cisco Telephony Call Dispatcher
- Cisco Unified CM (if used as a subscriber)
- Cisco TFTP (if required)
- Cisco IP Voice Streaming (if required for MoH and announcements)
- Cisco CTIManager (if used as a subscriber)
- Cisco Extended Functions (on multi-tenant clusters, not large enterprise)

**Step 3** Verify the following from the Cisco Unified CM Publisher Administration **System** menu:

- Cisco Servers—Must be IP addresses (not hostnames).
- Cisco Unified CM(s)—Should be IP addresses or hostnames.
- Cisco Unified CM Groups—Should show default.
- Date/Time Group—Should include DTG required by USM (set within Cisco Unified CM model loader under global settings). For example, CMLocal, Europe-London, Europe-Copenhagen, America-New_York, or as defined by the project team.
- Region—Should show default.
- Device Pools—Should show default.
- Enterprise Parameters—Set "Enable Dependency Records" to "True" to support dependency record function (on test platforms).
- Confirm that IP addresses rather than hostnames are used in the Phone URL Parameters.
- Also confirm that the Directories URL points to the bvsmweb service at the virtual IP address of the USM cluster (not the Publisher).

Note the following example, where Publisher = 10.10.1.3 and USM-VIP = 10.10.6.16:

- URL Authentication—*http://10.10.1.3/CCMCIP/authenticate.asp*
- URL Directories— *http://10.10.6.16/bvsmweb/directoryservices.cgi?device=#DEVICENAME#*
- URL Information—*http://10.10.1.3/CCMCIP/GetTelecasterHelpText.asp*
- URL Services—*http://10.10.1.3/CCMCIP/getservicesmenu.asp*

**Step 4** Verify the following from the Cisco Unified CM Publisher Administration **Route Plan** menu:

**a.** AAR Group—Should include "defaultaar" (supports alternative routing). Add if necessary.

**b.** Check that there are no unneeded partitions.

**c.** Check that there are no unneeded calling search spaces.

**d.** Check that Route Plan Report is clear.

**Step 5** Verify the following from the Cisco Unified CM Publisher Administration **Services** menu:

**a.** Check that the MOH Server name is MOH_*winshostname*.

For example, MOH_2; that is, not MOH_10.10.1.3.



**Note** Note that there is a maximum of 15 characters in this name, so *winshostname* must be 11 characters or less on Cisco Unified CM 4.x clusters. This restriction is relaxed on Unified 7.x, 6.x and 5.x clusters.

**b.** Check that at least one conference bridge has been set up on each cluster and that the name(s) of the conference bridge are the same as that entered into BVSM. For example,

- Host Server—10.10.1.3
- Conference Bridge Type—Cisco Conference Bridge Software
- Conference Bridge Name—e2c2p
- Device Pool—Default

**Step 6** Verify the following from the Cisco Unified CM Publisher Administration **Features** menu:

In IP Phone Services, verify that the following service has been added:

- For Single Enterprise User Mobility:
  - IP Phone Service—Login/Logout

- Description—Text description
  - Service URL— *http://10.11.226.73/emapp/EMAppServlet?device=#DEVICENAME#* (where the IP address is the IP address of the Cisco Unified CM cluster publisher)
- For Multi-Tenant User Mobility:
  - IP Phone Service—Roaming Login/Logout
  - Description—User Mobility Service provided by USM
  - Service URL— *http://xxxxx/bvsmweb/bvsmroaming.cgi?device=#DEVICENAME#* (where xxxxxx is the virtual IP address, or DNS name if used, of the USM cluster)
- For IP Phone Service:
  - Phone Services (or as defined in the USM Cisco Unified CM model loader "global settings" line)
  - Description—XML Applications provided by USM
  - Service URL— *http://xxxxx/bvsmweb/bvsmservices.cgi?device=#DEVICENAME#* (where xxxxxx is the virtual IP address, or DNS name if used, of the USM cluster providing the corporate directory service providing the corporate directory service).

**Step 7** Verify the following Service Parameters from Cisco Unified CM Publisher Administration:

- Check the following Cisco Extension Mobility Settings and adjust as required:
  - Enforce Max Log in Time—False
  - Multiple Login Behavior—Auto Logout
  - Alphanumeric User ID—True
  - Remember last login—True (on reference platforms)

**Step 8** Verify the following from the Cisco Unified CM Publisher Administration **Device** menu:

**a.** Ensure that all the Device Profiles have been deleted.

**Note** These are added automatically by USM.

**b.** Ensure that the required phone button templates have been added. For e*xample:*

- *USM 7940*
- *USM 7970*
- *USM 7971*
- *USM 7960-14*
- *USM 7960-28*
- *USM 7961-14*
- *USM 7961-28*
- *USM 7970-14*
- *USM 7970-28*
- *USM 7971-14*
- *USM 7971-28*

**Note** Additional phone button templates may be required on CCM7.x clusters; for example, Standard 7941, Standard 7961 in addition to Standard 7941 SCCP and Standard 7961 SCCP.

c. Ensure that additional softkey templates have been added as required by USM. The following softkey templates are typically added as examples:

   – *Softkey_Basic*

   – *Softkey_Advanced*

   You can add them by copying the "Standard User" template and then change the settings. In the short term, these can have the same configuration as the "Standard User" softkey template.

**Note** If the default Softkey_Basic and Softkey_Advanced templates are not required, delete them from the USM "Service Types" within USM Setup Tools (accessible as a USM super user only).

# Applying Static Configuration to the Cisco PGW

This section explains how to apply the static configuration to the Cisco PGW. This is required before using USM to load the base data and bulk data that integrates the Cisco PGW into the Hosted UCS platform.

This section contains the following topics:



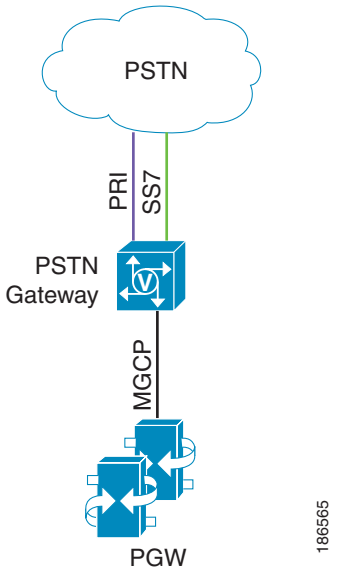
## Central Gateway Cisco PGW Breakout

One of the main features of the Cisco PGW in Hosted UCS 7.1(a) is routing calls to and from the PSTN. The Central Gateway Cisco PGW PSTN breakout is achieved using the following signalling:

- SS7
- PRI (MGCP controlled)

This is shown in Figure 2-1:

*Figure 2-1 Central Gateway Cisco PGW PSTN*




Depending on the deployment, you must provision a number of settings on the Cisco PGW, including the following:

- External Nodes
- Session Sets
- MGCP Paths
- IPFAS Paths
- D-Channels
- IP Links
- DPCs
- OPCs
- APCs
- Linksets
- SS7 Routes
- SS7 Paths
- IP Routes

For detailed information, refer to the Cisco PGW 2200 Softswitch Release 9.8 Provisioning Guide.

The Route List to PSTN for each country must be provisioned on the interface between the Cisco PGW and the PSTN, using the following parameters:

**prov-add:rtlist:name="rtlist2pstn***Country_code***",rtname="route2pstn",distrib="OFF"**,

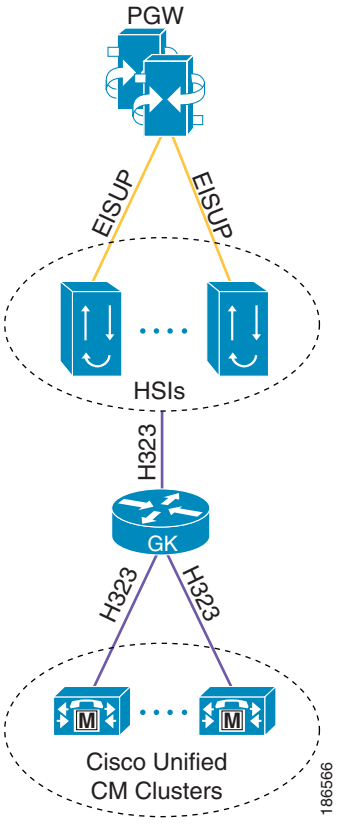
For example: **(for UK)**
prov-add:rtlist:name="rtlist2pstn44",rtname="route2pstn",distrib="OFF"

This configuration is required for each supported country.

# Cisco PGW, HSI and Cisco Unified Communications Manager Interface Configuration

In Hosted UCS Release 7.1(a), the interface between the Cisco PGW/HSI and the Cisco Unified CM clusters is an H323 trunk (provisioned as an H.225 gatekeeper controlled trunk on Cisco Unified CM. The interface between the Cisco PGW and HSI is an EISUP trunk, as shown in Figure 2-2.

*Figure 2-2 Cisco PGW/HSI/Cisco Unified Communications Manager Interfaces*




A number of settings must be provisioned on the Cisco PGW for the interface between the Cisco PGW and HSIs, such as the following:

- External nodes
- EISUP paths
- IP links

For detailed information, refer to the Cisco PGW 2200 Softswitch Release 9.8 Provisioning Guide.

To perform the provisioning required on the Cisco PGW, complete the following steps.

**Procedure**

**Step 1** Configure the ICCM dial plan.

ICCM is the dial plan which needs to be attached to the HSI trunk groups. This dial plan will be accessed when calls are passed from the HSIs to the PGW.

To add the ICCM dial plan, use the following parameter:

```
numan-add:dialplan:custgrpid=”ICCM”, OVERDEC=”YES”
```

**Step 2** Configure the Trunk Group for each HSI.

To add the trunk group, enter the following command:

**prov-add:trnkgrp:name="***trnkgrp_name***",clli="***clli_name***",svc="***signaling_svc***",type="***type***",qable=n**

For example:

```
prov-add:trnkgrp:name="1001",clli="hsi",svc="eisup-hsi-ent4a",type="IP",qable="n"
```

**Step 3** Configure the Routing Trunk Group for each HSI.

To add the routing trunk group, enter the following command:

**prov-add:rttrnkgrp:name=”***rttrnkgrp_name***”,type=4,reattempts=0,queuing=0,cutthrough=3,resincperc=0**

For example:

```
prov-add:rttrnkgrp:name=”1001”,type=4,reattempts=0,queuing=0,cutthrough=3,resincperc=0
```

This configuration is required for each HSI.

**Step 4** Configure the route to the HSI.

To add the route, enter the following command:

**prov-add:rttrnk:weightedTG=”OFF”,name=”route2hsi”,trnkgrpnum=***rttrnkgrp_name*

For example:

```
prov-add:rttrnk:weightedTG=”OFF”,name=”route2hsi”,trnkgrpnum=1001
```

To associate routing trunk groups for the remaining HSIs to the “route2hsi” route, add the following for each remaining HSI:

**prov-ed:rttrnk:name=”route2hsi”,trnkgrpnum=***rttrnkgrp_name*

For example:

```
prov-ed:rttrnk:name=”route2hsi”,trnkgrpnum=1002
```

**Step 5** Configure the route list to the HSI.

To add the route list, enter the following command:

**prov-add:rtlist:name=”rtlist2hsi”,rtname=”route2hsi”,distrib=”OFF”**

**Step 6** Configure the following HSI Trunk Group Properties:

- CustGrpId
- AllowH323Hairpin
- GatewayRBToneSupport

Other parameters may be necessary depending on the deployment.

From HUCS 7.1(a) onwards, the trunk group properties should be added on a profile and the profile should be attached with trunk group for PGW 9.8(1).

Follow the steps below if the profile is not available on PGW:

```
prov-add: profile:
name="<profile_name>",type="EISUPPROFILE",custgrpid="<custgrpid>",allowh323hairpin =
"1",gatewayrbtonesupport="1"
prov-add: trnkgrpprof:name="<trnkgrp_name>",profile="<profile_name>",
```

For example:

```
prov-add: profile:name="lvl1eisupf-1001",type="EISUPPROFILE",custgrpid="ICCM",
allowh323hairpin="1",gatewayrbtonesupport="1"
prov-add:trnkgrpprof:name="1001",profile=" lvl1eisupf-1001"
```

**Step 7** Repeat this step for each HSI.

# ILGW Dial Plan

The ILGW Dial Plan is used to route calls from Local Gateways. Because this dial plan is provisioned every time a country is added using USM, it must be manually created. To add the ILGW dial plan, enter the following command:

```
numan-add:dialplan:custgrpid="ILGW", OVERDEC="Yes"
```

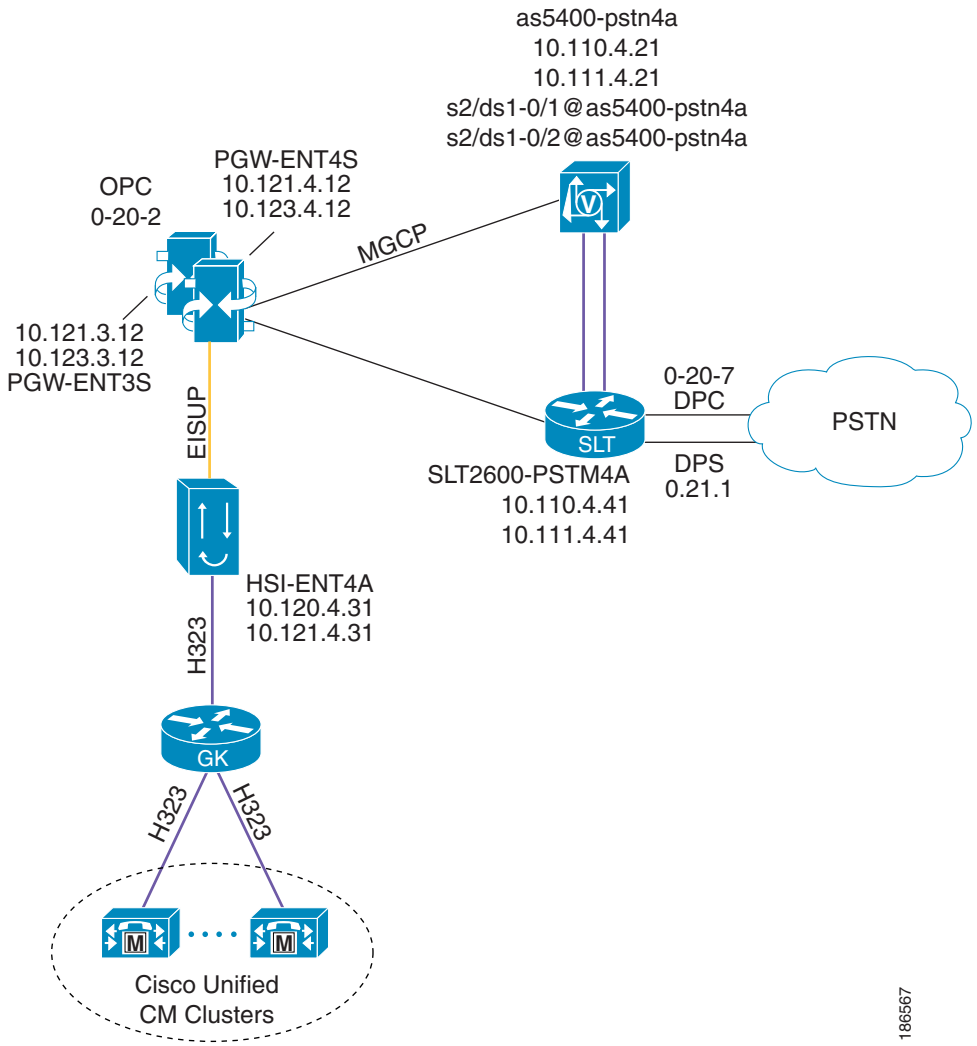
# Example Cisco PGW Static Configuration

This section provides the following sample static configurations for the Cisco PGW within a Hosted UCS 7.1(a) platform:



These example configurations are based on the network illustrated in Figure 2-3.

*Figure 2-3 Sample Network*




The following examples illustrate the static configuration for each of the following files:

***Example 2-1 config.mml***

```
prov-add:IPROUTE:NAME="iproute-2",DESC="IPRoute",DEST="10.121.2.0",NETMASK="255.255.255.0"
,NEXTHOP="IP_NextHop2",IPADDR="IP_Addr2",PRI=1
prov-add:IPROUTE:NAME="iproute-1",DESC="IPRoute",DEST="10.120.2.0",NETMASK="255.255.255.0"
,NEXTHOP="IP_NextHop1",IPADDR="IP_Addr1",PRI=1
prov-add:OPC:NAME="opc",DESC="opc",NETADDR="0.20.1",NETIND=2,TYPE="TRUEOPC"
prov-add:DPC:NAME="pstn1",DESC="pstn1 dpc",NETADDR="0.20.7",NETIND=2
prov-add:DPC:NAME="pstn2",DESC="pstn2 dpc",NETADDR="0.21.1",NETIND=2
prov-add:SS7PATH:NAME="ss7p-pstn1",DESC="SS7 path to
pstn1",MDO="ISUPV3_UK",CUSTGRPID="0000",SIDE="network",DPC="pstn1",OPC="opc",M3UAKEY="",O
RIGLABEL="",TERMLABEL=""
prov-add:EXTNODE:NAME="hsi-ent4a",DESC="hsi-ent2a",TYPE="H323",ISDNSIGTYPE="N/A",GROUP=0
prov-add:EXTNODE:NAME="slt2600-ent4a",DESC="slt2600-ent4a",TYPE="SLT",ISDNSIGTYPE="N/A",GR
OUP=0
```

```
prov-add:EXTNODE:NAME="slt2600-ent4b",DESC="slt2600-ent4b",TYPE="SLT",ISDNSIGTYPE="N/A",GR
OUP=0
prov-add:EXTNODE:NAME="as5400-ent4a",DESC="as5400-ent4a",TYPE="AS5400",ISDNSIGTYPE="N/A",G
ROUP=0
prov-add:EXTNODE:NAME="as5400-ent4b",DESC="as5400-ent4b",TYPE="AS5400",ISDNSIGTYPE="N/A",G
ROUP=0
prov-add:SESSIONSET:NAME="sset-slt-ent4a",EXTNODE="slt2600-ent4a",IPADDR1="IP_Addr1",PEERA
DDR1="10.120.4.41",PORT=7001,PEERPORT=7001,TYPE="BSM
V0",IPROUTE1="iproute-1",IPROUTE2="iproute-2",IPADDR2="IP_Addr2",PEERADDR2="10.121.4.41"
prov-add:SESSIONSET:NAME="sset-slt-ent4b",EXTNODE="slt2600-ent4b",IPADDR1="IP_Addr1",PEERA
DDR1="10.120.4.42",PORT=7001,PEERPORT=7001,TYPE="BSM
V0",IPROUTE1="iproute-1",IPROUTE2="iproute-2",IPADDR2="IP_Addr2",PEERADDR2="10.121.4.42"
prov-add:EISUPPATH:NAME="eisup-hsi-ent4a",DESC="eisup-hsi-ent4a",EXTNODE="hsi-ent4a",MDO="
EISUP",CUSTGRPID="ICCM",ORIGLABEL="",TERMLABEL=""
prov-add:MGCPPATH:NAME="mgcp-as5400-ent4a",DESC="MGCP path for
as5400-ent4a",EXTNODE="as5400-ent4a"
prov-add:MGCPPATH:NAME="mgcp-as5400-ent4b",DESC="MGCP path for
as5400-ent4b",EXTNODE="as5400-ent4b"
prov-add:LNKSET:NAME="lnkset-pstn1",DESC="pstn1
lnkset",APC="pstn1",PROTO="SS7-UK",TYPE="IP"
prov-add:IPLNK:NAME="hsi-ent4a-iplnk-1",DESC="hsi-ent4a-iplnk-1",SVC="eisup-hsi-ent4a",IPA
DDR="IP_Addr1",PORT=8003,PEERADDR="10.120.4.31",PEER
PORT=8003,PRI=1,IPROUTE="iproute-1"
prov-add:IPLNK:NAME="hsi-ent4a-iplnk-2",DESC="hsi-ent4a-iplnk-2",SVC="eisup-hsi-ent4a",IPA
DDR="IP_Addr2",PORT=8003,PEERADDR="10.121.4.31",PEER
PORT=8003,PRI=2,IPROUTE="iproute-2"
prov-add:IPLNK:NAME="as5400-ent4a-iplnk1",DESC="IP link 1 to
as5400-ent4a",SVC="mgcp-as5400-ent4a",IPADDR="IP_Addr1",PORT=2427,PEERADDR="10.12
0.4.21",PEERPORT=2427,PRI=1,IPROUTE="iproute-1"
prov-add:IPLNK:NAME="as5400-ent4a-iplnk2",DESC="IP link 2 to
as5400-ent4a",SVC="mgcp-as5400-ent2a",IPADDR="IP_Addr2",PORT=2427,PEERADDR="10.12
1.4.21",PEERPORT=2427,PRI=2,IPROUTE="iproute-2"
prov-add:IPLNK:NAME="as5400-ent4b-iplnk1",DESC="IP link 1 to
as5400-ent4b",SVC="mgcp-as5400-ent4b",IPADDR="IP_Addr1",PORT=2427,PEERADDR="10.12
0.4.22",PEERPORT=2427,PRI=1,IPROUTE="iproute-1"
prov-add:IPLNK:NAME="as5400-ent4b-iplnk2",DESC="IP link 2 to
as5400-ent4b",SVC="mgcp-as5400-ent4b",IPADDR="IP_Addr2",PORT=2427,PEERADDR="10.12
1.4.22",PEERPORT=2427,PRI=2,IPROUTE="iproute-2"
prov-add:SS7ROUTE:NAME="ss7r-pstn1",DESC="SS7 Route to
pstn1",OPC="opc",DPC="pstn1",LNKSET="lnkset-pstn1",PRI=1
prov-add:C7IPLNK:NAME="pstn1-c7lnk-1",DESC="C7 IP link 1 to
pstn1",LNKSET="lnkset-pstn1",SLC=0,PRI=1,TIMESLOT=0,SESSIONSET="sset-slt-ent2a"
prov-add:C7IPLNK:NAME="pstn1-c7lnk-2",DESC="C7 IP link 2 to
pstn1",LNKSET="lnkset-pstn1",SLC=1,PRI=1,TIMESLOT=0,SESSIONSET="sset-slt-ent4b"
prov-add:PROFILE:NAME="lvl2cmpf-1001",TYPE="commonprofile",clli="HSI"
prov-add:PROFILE:NAME="lvl1eisupf-1001",TYPE="eisupprofile",commonprofile="lvl2cmpf-1001",
custgrpid="ICCM"
prov-add:DNSPARAM:CacheSize="500",DnsServer1="0.0.0.0",DnsServer2="0.0.0.0",KeepAlive="30"
,Policy="HIERARCHY",QueryTimeout="1000",TTL="3600"
prov-add:TOS:DSCP = "CS3"
prov-ed:accrespcat:name="default",acl1drcant=50,acl1drskip=20,acl1arcant=50,acl1arskip=20,
acl2drcant=90,acl2drskip=10,acl2arcant=90,acl2arskip
=10,acl3drcant=100,acl3drskip=0,acl3arcant=100,acl3arskip=0
prov-ed:mclcallreject:name="mcl1",callreject=25
prov-ed:mclcallreject:name="mcl2",callreject=50
prov-ed:mclcallreject:name="mcl3",callreject=100
prov-ed:mclthreshold:name="callrate",mcl1onset=0,mcl1abate=0,mcl2onset=0,mcl2abate=0,mcl3o
nset=0,mcl3abate=0
prov-ed:mclthreshold:name="cpu",mcl1onset=82,mcl1abate=75,mcl2onset=90,mcl2abate=77,mcl3on
set=95,mcl3abate=85
prov-ed:mclthreshold:name="memoryaddress",mcl1onset=84,mcl1abate=80,mcl2onset=88,mcl2abate
=82,mcl3onset=93,mcl3abate=85
prov-ed:mclthreshold:name="queuelen",mcl1onset=75,mcl1abate=60,mcl2onset=80,mcl2abate=70,m
cl3onset=85,mcl3abate=75
```

```
prov-ed:mclthreshold:name="virtualmemory",mcl1onset=80,mcl1abate=75,mcl2onset=85,mcl2abate
=80,mcl3onset=90,mcl3abate=80
prov-dlt:inservice:name="ansi-ain-800-npa"
prov-dlt:inservice:name="ansi-ain-800-npa-nxx"
prov-dlt:inservice:name="ansi-ain-800-npanxxx"
prov-dlt:inservice:name="ansi-ain-800-ti"
prov-dlt:inservice:name="ansi-pre-ain-800"
prov-dlt:inservice:name="ansi-pre-ain-800-ssn"
prov-dlt:inservice:name="ansi-pre-ain-800-ti"
prov-dlt:inservice:name="ansi-pre-ain-800-ts"
prov-dlt:inservice:name="c1-lnp"
prov-dlt:inservice:name="cs1-inap-cli-initdp"
prov-dlt:inservice:name="cs1i-nap-cli-srr"
prov-dlt:inservice:name="generic-lnp"
prov-dlt:inservice:name="genesys-800"
prov-dlt:inservice:name="inap-freephon-initdp"
prov-dlt:inservice:name="inap-lnp-initdp"
prov-dlt:inservice:name="inap-lnp-norway"
prov-dlt:inservice:name="inap-lnp-portugal"
prov-dlt:inservice:name="inap-pp-bcsm"
prov-dlt:inservice:name="inap-pp-charge-atexp"
prov-dlt:inservice:name="inap-pp-charge-final"
prov-dlt:inservice:name="inap-pp-charge-texp"
prov-dlt:inservice:name="inap-pp-initdp"
prov-dlt:inservice:name="inap-precarr-initdp"
prov-dlt:inservice:name="inap-cs1-initdp"
prov-dlt:inservice:name="inap-cs1-dummy-25"
prov-dlt:inservice:name="inap-cs1-dummy-26"
prov-dlt:inservice:name="inap-cs1-dummy-27"
prov-dlt:inservice:name="inap-cs1-dummy-28"
prov-dlt:inservice:name="inap-cs2-initdp"
prov-dlt:inservice:name="ansi-pre-ain-cnam"
prov-add:inservice:name="ansi-ain-800-npa",skortcv=4,gtorssn="ROUTEBYGT",gtformat="GTTT",m
sname="ansi-ain-800-npa"
prov-add:inservice:name="ansi-ain-800-npa-nxx",skortcv=5,gtorssn="ROUTEBYGT",gtformat="GTT
T",msname="ansi-ain-800-npa-nxx"
prov-add:inservice:name="ansi-ain-800-npanxxx",skortcv=8,gtorssn="ROUTEBYGT",gtformat="GTT
T",msname="ansi-ain-800-npanxxx"
prov-add:inservice:name="ansi-ain-800-ti",skortcv=0,gtorssn="ROUTEBYGT",gtformat="GTTT",ms
name="ansi-ain-800-ti"
prov-add:inservice:name="ansi-pre-ain-800",skortcv=0,gtorssn="ROUTEBYGT",gtformat="GTTT",m
sname="ansi-pre-ain-800"
prov-add:inservice:name="ansi-pre-ain-800-ssn",skortcv=0,gtorssn="ROUTEBYSSN",gtformat="NO
GT",msname="ansi-pre-ain-800-ssn"
prov-add:inservice:name="ansi-pre-ain-800-ti",skortcv=0,gtorssn="ROUTEBYGT",gtformat="GTTT
",msname="ansi-pre-ain-800-ti"
prov-add:inservice:name="ansi-pre-ain-800-ts",skortcv=0,gtorssn="ROUTEBYSSN",gtformat="NOG
T",msname="ansi-pre-ain-800-ts"
prov-add:inservice:name="ansi-pre-ain-cnam",skortcv=0,gtorssn="ROUTEBYGT",gtformat="GTTT",
msname="ansi-pre-ain-cnam"
prov-add:inservice:name="c1-lnp",skortcv=0,gtorssn="ROUTEBYGT",gtformat="GTTT",msname="c1-
lnp"
prov-add:inservice:name="cs1-inap-cli-initdp",skortcv=1,gtorssn="ROUTEBYSSN",gtformat="NOG
T",msname="cs1-inap-cli-initdp"
prov-add:inservice:name="cs1i-nap-cli-srr",skortcv=1,gtorssn="ROUTEBYSSN",gtformat="NOGT",
msname="cs1i-nap-cli-srr"
prov-add:inservice:name="generic-lnp",skortcv=37,gtorssn="ROUTEBYGT",gtformat="GTTT",msnam
e="generic-lnp"
prov-add:inservice:name="genesys-800",skortcv=0,gtorssn="ROUTEBYGT",gtformat="GTTT",msname
="genesys-800"
prov-add:inservice:name="inap-cs1-dummy-25",skortcv=0,gtorssn="ROUTEBYSSN",gtformat="NOGT"
,msname="inap-cs1-dummy-25"
prov-add:inservice:name="inap-cs1-dummy-26",skortcv=0,gtorssn="ROUTEBYSSN",gtformat="NOGT"
,msname="inap-cs1-dummy-26"
```

```
prov-add:inservice:name="inap-cs1-dummy-27",skortcv=0,gtorssn="ROUTEBYSSN",gtformat="NOGT"
,msname="inap-cs1-dummy-27"
prov-add:inservice:name="inap-cs1-dummy-28",skortcv=0,gtorssn="ROUTEBYSSN",gtformat="NOGT"
,msname="inap-cs1-dummy-28"
prov-add:inservice:name="inap-cs1-initdp",skortcv=90001,gtorssn="ROUTEBYSSN",gtformat="NOG
T",msname="inap-cs1-initdp"
prov-add:inservice:name="inap-cs2-initdp",skortcv=90001,gtorssn="ROUTEBYSSN",gtformat="NOG
T",msname="inap-cs2-initdp"
prov-add:inservice:name="inap-freephon-initdp",skortcv=0,gtorssn="ROUTEBYSSN",gtformat="NO
GT",msname="inap-freephon-initdp"
prov-add:inservice:name="inap-lnp-initdp",skortcv=1,gtorssn="ROUTEBYSSN",gtformat="NOGT",m
sname="inap-lnp-initdp"
prov-add:inservice:name="inap-lnp-norway",skortcv=0,gtorssn="ROUTEBYSSN",gtformat="NOGT",m
sname="inap-lnp-norway"
prov-add:inservice:name="inap-lnp-portugal",skortcv=0,gtorssn="ROUTEBYSSN",gtformat="NOGT"
,msname="inap-lnp-portugal"
prov-add:inservice:name="inap-pp-bcsm",skortcv=0,gtorssn="ROUTEBYSSN",gtformat="NOGT",msna
me="inap-pp-bcsm"
prov-add:inservice:name="inap-pp-charge-atexp",skortcv=0,gtorssn="ROUTEBYSSN",gtformat="NO
GT",msname="inap-pp-charge-atexp"
prov-add:inservice:name="inap-pp-charge-final",skortcv=0,gtorssn="ROUTEBYSSN",gtformat="NO
GT",msname="inap-pp-charge-final"
prov-add:inservice:name="inap-pp-charge-texp",skortcv=0,gtorssn="ROUTEBYSSN",gtformat="NOG
T",msname="inap-pp-charge-texp"
prov-add:inservice:name="inap-pp-initdp",skortcv=1,gtorssn="ROUTEBYSSN",gtformat="NOGT",ms
name="inap-pp-initdp"
prov-add:inservice:name="inap-precarr-initdp",skortcv=2,gtorssn="ROUTEBYSSN",gtformat="NOG
T",msname="inap-precarr-initdp"
prov-add:sigsvcprop:NAME="eisup-hsi-ent4a",H323AdjunctLink="1"
prov-add:sigsvcprop:NAME="mgcp-as5400-ent4a",mgcpDomainNameRemote="s2/ds1-0/1@AS5400-ENT4A
"
prov-add:sigsvcprop:NAME="mgcp-as5400-ent2b",mgcpDomainNameRemote="s2/ds1-0/1@AS5400-ENT4B
"
prov-add:files:name="tkgfile",file="Static_12_05/export_trkgrp.dat",action="IMPORT"
prov-add:TRNKGRPPROF:name="1001",profile="lvl1eisupf-1001"
prov-add:files:name="bcfile",file="Static_12_05/export_trunk.dat",action="IMPORT"
```

### *Example 2-2 routing.mml*

```
prov-add:rttrnkgrp:name="1001",type=4,reattempts=0,queuing=0,cutthrough=2,resincperc=0
prov-add:rttrnkgrp:name="2001",type=1,reattempts=1,queuing=0,cutthrough=2,resincperc=0
prov-add:rttrnk:weightedTG="OFF",name="route2hsi",trnkgrpnum=1001
prov-add:rttrnk:weightedTG="OFF",name="route2pstn",trnkgrpnum=2001
prov-add:rtlist:name="rtlist2hsi",rtname="route2hsi",distrib="OFF"
prov-add:rtlist:name="rtlist2pstn1",rtname="route2pstn",distrib="OFF"
```

### *Example 2-3 iccm.mml*

```
numan-add:dialplan:custgrpid="ICCM", OVERDEC="YES"
numan-ed: resulttable: custgrpid="ICCM", name="CSCOADRST1",
resulttype="RETRY_ACTION", dw1="Reattempt", dw2="0",setname="CSCOADRST1"
numan-ed: resulttable: custgrpid="ICCM", name="CSCOADRST2", resulttype="RETRY_ACTION",
dw1="Redirect",dw2="0",setname="CSCOADRST2
numan-ed:cause:custgrpid="ICCM",causevalue=1,setname="CSCOADRST1"
numan-ed:cause:custgrpid="ICCM",causevalue=11,setname="CSCOADRST1"
numan-ed:cause:custgrpid="ICCM",causevalue=26,setname="CSCOADRST1"
numan-ed:cause:custgrpid="ICCM",causevalue=29,setname="CSCOADRST1"
numan-ed:cause:custgrpid="ICCM",causevalue=38,setname="CSCOADRST1"
numan-ed:cause:custgrpid="ICCM",causevalue=41,setname="CSCOADRST1"
numan-ed:cause:custgrpid="ICCM",causevalue=44,setname="CSCOADRST1"
numan-ed:cause:custgrpid="ICCM",causevalue=49,setname="CSCOADRST1"
numan-ed:cause:custgrpid="ICCM",causevalue=50,setname="CSCOADRST1"
```

```
numan-ed:cause:custgrpid="ICCM",causevalue=58,setname="CSCOADRST1"
numan-ed:cause:custgrpid="ICCM",causevalue=69,setname="CSCOADRST1"
numan-ed:cause:custgrpid="ICCM",causevalue=87,setname="CSCOADRST1"
numan-ed:cause:custgrpid="ICCM",causevalue=94,setname="CSCOADRST1"
numan-ed:cause:custgrpid="ICCM",causevalue=107,setname="CSCOADRST1"
numan-ed:cause:custgrpid="ICCM",causevalue=118,setname="CSCOADRST1"
numan-ed:cause:custgrpid="ICCM",causevalue=145,setname="CSCOADRST2"
```

### *Example 2-4 ilgw.mml*

```
numan-add:dialplan:custgrpid="ILGW", OVERDEC="NO"
numan-ed: resulttable: custgrpid="ILGW", name="CSCOADRST1", resulttype="RETRY_ACTION",
dw1="Reattempt",dw2="0",setname="CSCOADRST1"
numan-ed: resulttable: custgrpid="ILGW", name="CSCOADRST2", resulttype="RETRY_ACTION",
dw1="Redirect",dw2="0",setname="CSCOADRST2"
numan-ed:cause:custgrpid="ILGW",causevalue=1,setname="CSCOADRST1"
numan-ed:cause:custgrpid="ILGW",causevalue=11,setname="CSCOADRST1"
numan-ed:cause:custgrpid="ILGW",causevalue=26,setname="CSCOADRST1"
numan-ed:cause:custgrpid="ILGW",causevalue=29,setname="CSCOADRST1"
numan-ed:cause:custgrpid="ILGW",causevalue=38,setname="CSCOADRST1"
numan-ed:cause:custgrpid="ILGW",causevalue=41,setname="CSCOADRST1"
numan-ed:cause:custgrpid="ILGW",causevalue=44,setname="CSCOADRST1"
numan-ed:cause:custgrpid="ILGW",causevalue=49,setname="CSCOADRST1"
numan-ed:cause:custgrpid="ILGW",causevalue=50,setname="CSCOADRST1"
numan-ed:cause:custgrpid="ILGW",causevalue=58,setname="CSCOADRST1"
numan-ed:cause:custgrpid="ILGW",causevalue=69,setname="CSCOADRST1"
numan-ed:cause:custgrpid="ILGW",causevalue=87,setname="CSCOADRST1"
numan-ed:cause:custgrpid="ILGW",causevalue=94,setname="CSCOADRST1"
numan-ed:cause:custgrpid="ILGW",causevalue=107,setname="CSCOADRST1"
numan-ed:cause:custgrpid="ILGW",causevalue=118,setname="CSCOADRST1"
numan-ed:cause:custgrpid="ILGW",causevalue=145,setname="CSCOADRST2"
```

### *Example 2-5 properties.dat*

```
sigmgcp-5400.mgcpHeartbeatInterval = 10
ss7-i-1.chkPtPort = 2001
tg-1001.AllowH323Hairpin = 1
tg-1001.CLLI = HSI
tg-1001.CustGrpId = ICCM
tg-1001.GatewayRBToneSupport = 1
tg-1001.commonProfile = lvl2cmpf-1001
tg-2001.CLLI = PSTN1
tg-2001.FAXsupport = 1
tg-2001.GatewayRBToneSupport = 1
001.GatewayRBToneSupport = 1
```

**Note** Default properties prefixed by an "*", SS7-<ver>.<property_name> properties, and TALI-IOCC.<property_name> properties, are not shown.

### *Example 2-6 export_trkgrp.dat*

```
<!--#xml - 9.8001-->
<trunk-groups>
<version base="9.8001" revision="0"/>
<trunkgroup name="1001" type="IP" svc="eisup-hsi-ent2a" clli="HSI" selseq="LIDL" qable="N"
origlabel="0" termlabel="0">
<property name="CustGrpId">ICCM</property>
<property name="default">0</property>
</trunkgroup>
```

```
<trunkgroup name="2001" type="TDM_ISUP" svc="ss7p-pstn1" clli="PSTN1" selseq="LIDL"
qable="N" origlabel="0" termlabel="0">
<property name="GatewayRBToneSupport">1</property>
<property name="FAXsupport">1</property>
<property name="default">0</property>
</trunkgroup>
</trunk-groups>
```

***Example 2-7 export_trunk.dat***

```
#format3 - 0.0
2001 1 ffff 1 as5400-pstn4a s2/ds1-0/1@as5400-pstn4a
2001 2 ffff 2 as5400-pstn4a s2/ds1-0/2@as5400-pstn4a
2001 3 ffff 3 as5400-pstn4a s2/ds1-0/3@as5400-pstn4a
2001 4 ffff 4 as5400-pstn4a s2/ds1-0/4@as5400-pstn4a
2001 6 ffff 6 as5400-pstn4a s2/ds1-0/6@as5400-pstn4a
2001 7 ffff 7 as5400-pstn4a s2/ds1-0/7@as5400-pstn4a
2001 8 ffff 8 as5400-pstn4a s2/ds1-0/8@as5400-pstn4a
2001 9 ffff 9 as5400-pstn4a s2/ds1-0/9@as5400-pstn4a
2001 10 ffff 10 as5400-pstn4a s2/ds1-0/10@as5400-pstn4a
2001 11 ffff 11 as5400-pstn4a s2/ds1-0/11@as5400-pstn4a
2001 12 ffff 12 as5400-pstn4a s2/ds1-0/12@as5400-pstn4a
2001 13 ffff 13 as5400-pstn4a s2/ds1-0/13@as5400-pstn4a
2001 14 ffff 14 as5400-pstn4a s2/ds1-0/14@as5400-pstn4a
2001 15 ffff 15 as5400-pstn4a s2/ds1-0/15@as5400-pstn4a
2001 16 ffff 16 as5400-pstn4a s2/ds1-0/16@as5400-pstn4a
2001 17 ffff 17 as5400-pstn4a s2/ds1-0/17@as5400-pstn4a
2001 18 ffff 18 as5400-pstn4a s2/ds1-0/18@as5400-pstn4a
2001 19 ffff 19 as5400-pstn4a s2/ds1-0/19@as5400-pstn4a
2001 20 ffff 20 as5400-pstn4a s2/ds1-0/20@as5400-pstn4a
2001 21 ffff 21 as5400-pstn4a s2/ds1-0/21@as5400-pstn4a
2001 22 ffff 22 as5400-pstn4a s2/ds1-0/22@as5400-pstn4a
2001 23 ffff 23 as5400-pstn4a s2/ds1-0/23@as5400-pstn4a
2001 24 ffff 24 as5400-pstn4a s2/ds1-0/24@as5400-pstn4a
2001 25 ffff 25 as5400-pstn4a s2/ds1-0/25@as5400-pstn4a
2001 26 ffff 26 as5400-pstn4a s2/ds1-0/26@as5400-pstn4a
2001 27 ffff 27 as5400-pstn4a s2/ds1-0/27@as5400-pstn4a
2001 28 ffff 28 as5400-pstn4a s2/ds1-0/28@as5400-pstn4a
2001 29 ffff 29 as5400-pstn4a s2/ds1-0/29@as5400-pstn4a
2001 30 ffff 30 as5400-pstn4a s2/ds1-0/30@as5400-pstn4a
2001 31 ffff 31 as5400-pstn4a s2/ds1-0/31@as5400-pstn4a
```

***Example 2-8 XECfgParm.dat***

This update to XECfgParm.dat is required for overlap support of PBX gateways (definitely required for the support of DPNSS):

```
*.analysisCapabilityLevel = 1
```

# Number Translation with TimesTen Database

The Full Number Translation feature provides a large-scale number translation function on the Cisco PGW. This feature enhances the current PGW database query mode, which is used for local number portability (LNP) and CLI screening, by handling continuous ranges of numbers with analysis and modification capabilities.

The Full Number Translation feature supports large-scale changes of individual numbers. This feature adds the NUM_TRANS result type that is implemented in analysis where the existing Times Ten database is used to store the dial plan numbers.

The full number replacement mechanism adds a general number replacement result type, NUM_TRANS, available for A-number and B-number analysis. In addition, it includes a Times Ten query and full number translation table.

Hosted UCS 7.1(a) introduces the Full Number Translation with TimesTen Database feature. This means that the association of E.164 numbers to Internal numbers will use this feature instead of configuring via mml.

This section contains the following:



## Sparc Based Platform Configuration

You must upload the HUCSprovx10 script on the PGW in order to use this feature.

**Note** If you have an Active/Standby system, ensure that you perform the steps described here on both platforms.

To configure the Sparc based platform on the Cisco PGW, complete the following steps.

**Procedure**

**Step 1** Upload the HUCS_x10_package.gz package onto an FTP server reachable by the PGW.

**Step 2** Login to the PGW as the PGW application user (default is mgcusr).

**Step 3** Download HUCS_x10_package.gz from the FTP server into /opt/CiscoMGC/local.

**Step 4** Unzip HUCS_x10_package.gz. Enter:

```
gunzip HUCS_x10_package.gz
```

**Step 5** Untar HUCS_x10_package. Enter:

```
tar -xvf HUCS_x10_package
```

**Step 6** The following output appears:

```
x ./HUCS_x10, 0 bytes, 0 tape blocks
x ./HUCS_x10/java_vm64, 0 bytes, 0 tape blocks
x ./HUCS_x10/java_vm64/jdk64-sparc-1_5_0_06.gz, 9424713 bytes, 18408 tape blocks
x ./HUCS_x10/java_vm64/jdk64-amd64-1_5_0_06.gz, 5439360 bytes, 10624 tape blocks
x ./HUCS_x10/java_appl, 0 bytes, 0 tape blocks
x ./HUCS_x10/java_appl/data, 0 bytes, 0 tape blocks
x ./HUCS_x10/java_appl/data/fnt_sample_data, 180 bytes, 1 tape blocks
x ./HUCS_x10/java_appl/data/lnp_fnt_sample_data, 246 bytes, 1 tape blocks
x ./HUCS_x10/java_appl/data/lnp_sample_data, 67 bytes, 1 tape blocks
x ./HUCS_x10/java_appl/bin, 0 bytes, 0 tape blocks
x ./HUCS_x10/java_appl/bin/HUCSprovx10, 246 bytes, 1 tape blocks
x ./HUCS_x10/java_appl/bin/HUCSprovx10.jar, 8143 bytes, 16 tape blocks
```

**Step 7** Go to the **java_vm64** folder. Enter:

```
cd HUCS_x10/java_vm64
```

**Step 8** Unzip jdk64-sparc-1_5_0_06.gz. Enter:

```
gunzip jdk64-sparc-1_5_0_06.gz
```

**Step 9** Untar jdk64-sparc-1_5_0_06. Enter:

```
tar -xvf jdk64-sparc-1_5_0_06
```

The following output appears:

```
x ./SUNWj5rtx, 0 bytes, 0 tape blocks
x ./SUNWj5rtx/pkgmap, 7335 bytes, 15 tape blocks
x ./SUNWj5rtx/pkginfo, 571 bytes, 2 tape blocks
x ./SUNWj5rtx/install, 0 bytes, 0 tape blocks
x ./SUNWj5rtx/install/copyright, 93 bytes, 1 tape blocks
x ./SUNWj5rtx/install/depend, 1063 bytes, 3 tape blocks
x ./SUNWj5rtx/reloc, 0 bytes, 0 tape blocks
x ./SUNWj5rtx/reloc/jdk, 0 bytes, 0 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances, 0 bytes, 0 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0, 0 bytes, 0 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/bin, 0 bytes, 0 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/bin/sparcv9, 0 bytes, 0 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/bin/sparcv9/java, 81440 bytes, 160 tape
blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/bin/sparcv9/keytool, 74520 bytes, 146 tape
blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/bin/sparcv9/orbd, 74664 bytes, 146 tape
blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/bin/sparcv9/pack200, 74552 bytes, 146 tape
blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/bin/sparcv9/policytool, 74536 bytes, 146 tape
blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/bin/sparcv9/rmid, 74520 bytes, 146 tape
blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/bin/sparcv9/rmiregistry, 74520 bytes, 146
tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/bin/sparcv9/servertool, 74520 bytes, 146 tape
blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/bin/sparcv9/tnameserv, 74696 bytes, 146 tape
blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/bin/sparcv9/unpack200, 205960 bytes, 403 tape
blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre, 0 bytes, 0 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/bin, 0 bytes, 0 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/bin/sparcv9, 0 bytes, 0 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/bin/sparcv9/java, 81440 bytes, 160 tape
blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/bin/sparcv9/keytool, 74520 bytes, 146
tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/bin/sparcv9/orbd, 74664 bytes, 146 tape
blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/bin/sparcv9/pack200, 74552 bytes, 146
tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/bin/sparcv9/policytool, 74536 bytes, 146
tape blocks
```

```
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/bin/sparcv9/rmid, 74520 bytes, 146 tape
blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/bin/sparcv9/rmiregistry, 74520 bytes, 146
tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/bin/sparcv9/servertool, 74520 bytes, 146
tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/bin/sparcv9/tnameserv, 74696 bytes, 146
tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/bin/sparcv9/unpack200, 205960 bytes, 403
tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib, 0 bytes, 0 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9, 0 bytes, 0 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/awt_robot, 26432 bytes, 52
tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/gtkhelper, 7760 bytes, 16
tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/headless, 0 bytes, 0 tape
blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/headless/libmawt.so, 40400
bytes, 79 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/jvm.cfg, 659 bytes, 2 tape
blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libJdbcOdbc.so, 56552 bytes,
111 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libawt.so, 1057000 bytes,
2065 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libcmm.so, 388400 bytes, 759
tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libdcpr.so, 187368 bytes, 366
tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libdt_socket.so, 19560
bytes, 39 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libfontmanager.so, 479320
bytes, 937 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libhprof.so, 292680 bytes,
572 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libinstrument.so, 86784
bytes, 170 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libioser12.so, 14568 bytes,
29 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libj2pkcs11.so, 66144 bytes,
130 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libjaas_unix.so, 7344 bytes,
15 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libjava.so, 179264 bytes, 351
tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libjava_crw_demo.so, 46616
bytes, 92 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libjawt.so, 3160 bytes, 7
tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libjdgaSUNWcg6.so, 11224
bytes, 22 tape blocks
```

```
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libjdgaSUNWffb.so, 11632
bytes, 23 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libjdgaSUNWm64.so, 7912
bytes, 16 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libjdwp.so, 336848 bytes, 658
tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libjpeg.so, 204264 bytes, 399
tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libjsig.so, 14264 bytes, 28
tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libjsound.so, 329360 bytes,
644 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libjsoundsolmidi.so, 20872
bytes, 41 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libmanagement.so, 29040
bytes, 57 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libmlib_image.so, 1370616
bytes, 2677 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libmlib_image_v.so, 1870136
bytes, 3653 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libnet.so, 84240 bytes, 165
tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libnio.so, 34024 bytes, 67
tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/librmi.so, 2840 bytes, 6 tape
blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libsaproc.so, 49280 bytes, 97
tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libsunwjdga.so, 10304 bytes,
21 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libunpack.so, 95064 bytes,
186 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libverify.so, 82200 bytes,
161 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libxinerama.so, 9832 bytes,
20 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libzip.so, 83568 bytes, 164
tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/motif21, 0 bytes, 0 tape
blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/motif21/libmawt.so, 607480
bytes, 1187 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/native_threads, 0 bytes, 0
tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/native_threads/libhpi.so,
47832 bytes, 94 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/server, 0 bytes, 0 tape
blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/server/Xusage.txt, 1423
bytes, 3 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/server/libjvm.so, 12163008
bytes, 23756 tape blocks
```

```
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/server/libjvm_db.so, 46656
bytes, 92 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/xawt, 0 bytes, 0 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/xawt/libmawt.so, 257176
bytes, 503 tape blocks
```

**Step 10** As a root user, add the SUNWj5rtx package. Enter:

```
pkgadd -d . SUNWj5rtx
```

**Step 11** The following output appears:

```
Processing package instance <SUNWj5rtx> from </opt/CiscoMGC/local/HUCS_x10/java_vm64>
JDK 5.0 64-bit Runtime Env. (1.5.0_06)(sparc) 1.5.0,REV=2004.12.06.22.09
Copyright 2004 Sun Microsystems, Inc.  All rights reserved.
Use is subject to license terms.
Using </usr> as the package base directory.
## Processing package information.
## Processing system information.
   7 package pathnames are already properly installed.
## Verifying package dependencies.
## Verifying disk space requirements.
## Checking for conflicts with packages already installed.
## Checking for setuid/setgid programs.
Installing JDK 5.0 64-bit Runtime Env. (1.5.0_06) as <SUNWj5rtx>
## Installing part 1 of 1.
/usr/jdk/instances/jdk1.5.0/bin/sparcv9/java
/usr/jdk/instances/jdk1.5.0/bin/sparcv9/keytool
/usr/jdk/instances/jdk1.5.0/bin/sparcv9/orbd
/usr/jdk/instances/jdk1.5.0/bin/sparcv9/pack200
/usr/jdk/instances/jdk1.5.0/bin/sparcv9/policytool
/usr/jdk/instances/jdk1.5.0/bin/sparcv9/rmid
/usr/jdk/instances/jdk1.5.0/bin/sparcv9/rmiregistry
/usr/jdk/instances/jdk1.5.0/bin/sparcv9/servertool
/usr/jdk/instances/jdk1.5.0/bin/sparcv9/tnameserv
/usr/jdk/instances/jdk1.5.0/bin/sparcv9/unpack200
/usr/jdk/instances/jdk1.5.0/jre/bin/sparcv9/java
/usr/jdk/instances/jdk1.5.0/jre/bin/sparcv9/keytool
/usr/jdk/instances/jdk1.5.0/jre/bin/sparcv9/orbd
/usr/jdk/instances/jdk1.5.0/jre/bin/sparcv9/pack200
/usr/jdk/instances/jdk1.5.0/jre/bin/sparcv9/policytool
/usr/jdk/instances/jdk1.5.0/jre/bin/sparcv9/rmid
/usr/jdk/instances/jdk1.5.0/jre/bin/sparcv9/rmiregistry
/usr/jdk/instances/jdk1.5.0/jre/bin/sparcv9/servertool
/usr/jdk/instances/jdk1.5.0/jre/bin/sparcv9/tnameserv
/usr/jdk/instances/jdk1.5.0/jre/bin/sparcv9/unpack200
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/awt_robot
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/gtkhelper
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/headless/libmawt.so
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/jvm.cfg
```

```
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libJdbcOdbc.so
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libawt.so
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libcmm.so
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libdcpr.so
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libdt_socket.so
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libfontmanager.so
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libhprof.so
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libinstrument.so
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libioser12.so
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libj2pkcs11.so
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libjaas_unix.so
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libjava.so
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libjava_crw_demo.so
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libjawt.so
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libjdgaSUNWafb.so <symbolic link>
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libjdgaSUNWcg6.so
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libjdgaSUNWffb.so
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libjdgaSUNWm64.so
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libjdwp.so
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libjpeg.so
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libjsig.so
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libjsound.so
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libjsoundsolmidi.so
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libmanagement.so
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libmlib_image.so
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libmlib_image_v.so
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libnet.so
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libnio.so
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/librmi.so
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libsaproc.so
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libsunwjdga.so
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libunpack.so
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libverify.so
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libxinerama.so
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libzip.so
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/motif21/libmawt.so
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/native_threads/libhpi.so
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/server/Xusage.txt
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/server/libjsig.so <symbolic link>
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/server/libjvm.so
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/server/libjvm_db.so
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/xawt/libmawt.so
[ verifying class <none> ]
Installation of <SUNWj5rtx> was successful.
```

**Step 12** Go to /opt/CiscoMGC/local/HUCS_x10/java_appl/bin.

**Step 13** Move HUCSprovx10 and HUCSprovx10.jar to /opt/CiscoMGC/local/. For example, *mv HUCS* /opt/CiscoMGC/local*

**Step 14** Repeat these steps on the Standby platform (if applicable).

This completes the requred steps for uploading the HUCSprovx10 script on the PGW(s).

## Opteron Based Platform Configuration

Note: If you have an Active/Standby system ensure that you perform the steps described below on both platforms.

To use this feature, you must upload the HUCSprovx10 script on the PGW. To do this, complete the following steps.

**Procedure**

**Step 1** Upload the HUCS_x10_package.gz package onto an FTP server reachable by the PGW.

**Step 2** Login to the PGW as the PGW application user (default is mgcusr).

**Step 3** Download HUCS_x10_package.gz from the FTP server into /opt/CiscoMGC/local.

**Step 4** Unzip HUCS_x10_package.gz. Enter:

```
gunzip HUCS_x10_package.gz
```

**Step 5** Untar HUCS_x10_package. Enter:

```
tar -xvf HUCS_x10_package
```

**Step 6** The following output appears:

```
x ./HUCS_x10, 0 bytes, 0 tape blocks
x ./HUCS_x10/java_vm64, 0 bytes, 0 tape blocks
x ./HUCS_x10/java_vm64/jdk64-sparc-1_5_0_06.gz, 9424713 bytes, 18408 tape blocks
x ./HUCS_x10/java_vm64/jdk64-amd-1_5_0_06.gz, 5439360 bytes, 10624 tape blocks
x ./HUCS_x10/java_appl, 0 bytes, 0 tape blocks
x ./HUCS_x10/java_appl/data, 0 bytes, 0 tape blocks
x ./HUCS_x10/java_appl/data/fnt_sample_data, 180 bytes, 1 tape blocks
x ./HUCS_x10/java_appl/data/lnp_fnt_sample_data, 246 bytes, 1 tape blocks
x ./HUCS_x10/java_appl/data/lnp_sample_data, 67 bytes, 1 tape blocks
x ./HUCS_x10/java_appl/bin, 0 bytes, 0 tape blocks
x ./HUCS_x10/java_appl/bin/HUCSprovx10, 246 bytes, 1 tape blocks
x ./HUCS_x10/java_appl/bin/HUCSprovx10.jar, 8118 bytes, 16 tape blocks
```

**Step 7** Go to the java_vm64 folder. Enter:

```
cd HUCS_x10/java_vm64
```

**Step 8** Unzip jdk64-amd-1_5_0_06.gz. Enter:

```
gunzip jdk64-amd-1_5_0_06.gz
```

**Step 9** Untar jdk64-amd-1_5_0_06. Enter:

```
tar -xvf jdk64-amd-1_5_0_06
```

**Step 10** The following output appears:

```
x ./SUNWj5rtx, 0 bytes, 0 tape blocks
```

```
x ./SUNWj5rtx/pkgmap, 6599 bytes, 13 tape blocks
x ./SUNWj5rtx/pkginfo, 573 bytes, 2 tape blocks
x ./SUNWj5rtx/install, 0 bytes, 0 tape blocks
x ./SUNWj5rtx/install/copyright, 93 bytes, 1 tape blocks
x ./SUNWj5rtx/install/depend, 1063 bytes, 3 tape blocks
x ./SUNWj5rtx/reloc, 0 bytes, 0 tape blocks
x ./SUNWj5rtx/reloc/jdk, 0 bytes, 0 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances, 0 bytes, 0 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0, 0 bytes, 0 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/bin, 0 bytes, 0 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/bin/amd64, 0 bytes, 0 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/bin/amd64/java, 68016 bytes, 133 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/bin/amd64/keytool, 71424 bytes, 140 tape
blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/bin/amd64/orbd, 71568 bytes, 140 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/bin/amd64/pack200, 71456 bytes, 140 tape
blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/bin/amd64/policytool, 71456 bytes, 140 tape
blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/bin/amd64/rmid, 71424 bytes, 140 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/bin/amd64/rmiregistry, 71424 bytes, 140 tape
blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/bin/amd64/servertool, 71424 bytes, 140 tape
blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/bin/amd64/tnameserv, 71600 bytes, 140 tape
blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/bin/amd64/unpack200, 200368 bytes, 392 tape
blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre, 0 bytes, 0 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/bin, 0 bytes, 0 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/bin/amd64, 0 bytes, 0 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/bin/amd64/java, 68016 bytes, 133 tape
blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/bin/amd64/keytool, 71424 bytes, 140 tape
blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/bin/amd64/orbd, 71568 bytes, 140 tape
blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/bin/amd64/pack200, 71456 bytes, 140 tape
blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/bin/amd64/policytool, 71456 bytes, 140
tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/bin/amd64/rmid, 71424 bytes, 140 tape
blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/bin/amd64/rmiregistry, 71424 bytes, 140
tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/bin/amd64/servertool, 71424 bytes, 140
tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/bin/amd64/tnameserv, 71600 bytes, 140
tape blocks
```

```
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/bin/amd64/unpack200, 200368 bytes, 392
tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib, 0 bytes, 0 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/amd64, 0 bytes, 0 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/amd64/awt_robot, 24768 bytes, 49 tape
blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/amd64/gtkhelper, 7120 bytes, 14 tape
blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/amd64/headless, 0 bytes, 0 tape
blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/amd64/headless/libmawt.so, 33024
bytes, 65 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/amd64/j2pkcs11.dll, 65666 bytes, 129
tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/amd64/j2pkcs11_g.dll, 82054 bytes,
161 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/amd64/jvm.cfg, 652 bytes, 2 tape
blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/amd64/libJdbcOdbc.so, 64768 bytes,
127 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/amd64/libawt.so, 481776 bytes, 941
tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/amd64/libcmm.so, 383216 bytes, 749
tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/amd64/libdcpr.so, 190656 bytes, 373
tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/amd64/libdt_socket.so, 18072 bytes,
36 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/amd64/libfontmanager.so, 457896
bytes, 895 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/amd64/libhprof.so, 179616 bytes, 351
tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/amd64/libinstrument.so, 74152 bytes,
145 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/amd64/libioser12.so, 16824 bytes, 33
tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/amd64/libj2pkcs11.so, 61192 bytes,
120 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/amd64/libjaas_unix.so, 6232 bytes, 13
tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/amd64/libjava.so, 163928 bytes, 321
tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/amd64/libjava_crw_demo.so, 26160
bytes, 52 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/amd64/libjawt.so, 3432 bytes, 7 tape
blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/amd64/libjdwp.so, 278624 bytes, 545
tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/amd64/libjpeg.so, 187080 bytes, 366
tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/amd64/libjsig.so, 14824 bytes, 29
tape blocks
```

```
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/amd64/libjsound.so, 294688 bytes, 576
tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/amd64/libmanagement.so, 27448 bytes,
54 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/amd64/libmlib_image.so, 807296
bytes, 1577 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/amd64/libnet.so, 71744 bytes, 141
tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/amd64/libnio.so, 30816 bytes, 61 tape
blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/amd64/librmi.so, 3056 bytes, 6 tape
blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/amd64/libsaproc.so, 62024 bytes, 122
tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/amd64/libunpack.so, 95712 bytes, 187
tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/amd64/libverify.so, 63232 bytes, 124
tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/amd64/libzip.so, 75200 bytes, 147
tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/amd64/motif21, 0 bytes, 0 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/amd64/motif21/libmawt.so, 528728
bytes, 1033 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/amd64/native_threads, 0 bytes, 0 tape
blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/amd64/native_threads/libhpi.so,
41312 bytes, 81 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/amd64/server, 0 bytes, 0 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/amd64/server/Xusage.txt, 1423 bytes,
3 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/amd64/server/libjvm.so, 12230144
bytes, 23887 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/amd64/server/libjvm_db.so, 54776
bytes, 107 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/amd64/xawt, 0 bytes, 0 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/amd64/xawt/libmawt.so, 226704 bytes,
443 tape blocks
```

**Step 11** As a root user, add the SUNWj5rtx package. Enter:

```
pkgadd -d . SUNWj5rtx
```

**Step 12** The following output appears:

```
Processing package instance <SUNWj5rtx> from </opt/CiscoMGC/local/HUCS_x10/java_vm64>
JDK 5.0 64-bit Runtime Env. (1.5.0_06)(i386) 1.5.0,REV=2005.03.04.02.15
Copyright 2004 Sun Microsystems, Inc.  All rights reserved.
Use is subject to license terms.
Using </usr> as the package base directory.
## Processing package information.
## Processing system information.
   7 package pathnames are already properly installed.
## Verifying package dependencies.
## Verifying disk space requirements.
```

```
## Checking for conflicts with packages already installed.
## Checking for setuid/setgid programs.
Installing JDK 5.0 64-bit Runtime Env. (1.5.0_06) as <SUNWj5rtx>
## Installing part 1 of 1.
/usr/jdk/instances/jdk1.5.0/bin/amd64/java
/usr/jdk/instances/jdk1.5.0/bin/amd64/keytool
/usr/jdk/instances/jdk1.5.0/bin/amd64/orbd
/usr/jdk/instances/jdk1.5.0/bin/amd64/pack200
/usr/jdk/instances/jdk1.5.0/bin/amd64/policytool
/usr/jdk/instances/jdk1.5.0/bin/amd64/rmid
/usr/jdk/instances/jdk1.5.0/bin/amd64/rmiregistry
/usr/jdk/instances/jdk1.5.0/bin/amd64/servertool
/usr/jdk/instances/jdk1.5.0/bin/amd64/tnameserv
/usr/jdk/instances/jdk1.5.0/bin/amd64/unpack200
/usr/jdk/instances/jdk1.5.0/jre/bin/amd64/java
/usr/jdk/instances/jdk1.5.0/jre/bin/amd64/keytool
/usr/jdk/instances/jdk1.5.0/jre/bin/amd64/orbd
/usr/jdk/instances/jdk1.5.0/jre/bin/amd64/pack200
/usr/jdk/instances/jdk1.5.0/jre/bin/amd64/policytool
/usr/jdk/instances/jdk1.5.0/jre/bin/amd64/rmid
/usr/jdk/instances/jdk1.5.0/jre/bin/amd64/rmiregistry
/usr/jdk/instances/jdk1.5.0/jre/bin/amd64/servertool
/usr/jdk/instances/jdk1.5.0/jre/bin/amd64/tnameserv
/usr/jdk/instances/jdk1.5.0/jre/bin/amd64/unpack200
/usr/jdk/instances/jdk1.5.0/jre/lib/amd64/awt_robot
/usr/jdk/instances/jdk1.5.0/jre/lib/amd64/gtkhelper
/usr/jdk/instances/jdk1.5.0/jre/lib/amd64/headless/libmawt.so
/usr/jdk/instances/jdk1.5.0/jre/lib/amd64/j2pkcs11.dll
/usr/jdk/instances/jdk1.5.0/jre/lib/amd64/j2pkcs11_g.dll
/usr/jdk/instances/jdk1.5.0/jre/lib/amd64/jvm.cfg
/usr/jdk/instances/jdk1.5.0/jre/lib/amd64/libJdbcOdbc.so
/usr/jdk/instances/jdk1.5.0/jre/lib/amd64/libawt.so
/usr/jdk/instances/jdk1.5.0/jre/lib/amd64/libcmm.so
/usr/jdk/instances/jdk1.5.0/jre/lib/amd64/libdcpr.so
/usr/jdk/instances/jdk1.5.0/jre/lib/amd64/libdt_socket.so
/usr/jdk/instances/jdk1.5.0/jre/lib/amd64/libfontmanager.so
/usr/jdk/instances/jdk1.5.0/jre/lib/amd64/libhprof.so
/usr/jdk/instances/jdk1.5.0/jre/lib/amd64/libinstrument.so
/usr/jdk/instances/jdk1.5.0/jre/lib/amd64/libioser12.so
/usr/jdk/instances/jdk1.5.0/jre/lib/amd64/libj2pkcs11.so
/usr/jdk/instances/jdk1.5.0/jre/lib/amd64/libjaas_unix.so
/usr/jdk/instances/jdk1.5.0/jre/lib/amd64/libjava.so
/usr/jdk/instances/jdk1.5.0/jre/lib/amd64/libjava_crw_demo.so
/usr/jdk/instances/jdk1.5.0/jre/lib/amd64/libjawt.so
/usr/jdk/instances/jdk1.5.0/jre/lib/amd64/libjdwp.so
/usr/jdk/instances/jdk1.5.0/jre/lib/amd64/libjpeg.so
```

```
/usr/jdk/instances/jdk1.5.0/jre/lib/amd64/libjsig.so
/usr/jdk/instances/jdk1.5.0/jre/lib/amd64/libjsound.so
/usr/jdk/instances/jdk1.5.0/jre/lib/amd64/libmanagement.so
/usr/jdk/instances/jdk1.5.0/jre/lib/amd64/libmlib_image.so
/usr/jdk/instances/jdk1.5.0/jre/lib/amd64/libnet.so
/usr/jdk/instances/jdk1.5.0/jre/lib/amd64/libnio.so
/usr/jdk/instances/jdk1.5.0/jre/lib/amd64/librmi.so
/usr/jdk/instances/jdk1.5.0/jre/lib/amd64/libsaproc.so
/usr/jdk/instances/jdk1.5.0/jre/lib/amd64/libunpack.so
/usr/jdk/instances/jdk1.5.0/jre/lib/amd64/libverify.so
/usr/jdk/instances/jdk1.5.0/jre/lib/amd64/libzip.so
/usr/jdk/instances/jdk1.5.0/jre/lib/amd64/motif21/libmawt.so
/usr/jdk/instances/jdk1.5.0/jre/lib/amd64/native_threads/libhpi.so
/usr/jdk/instances/jdk1.5.0/jre/lib/amd64/server/Xusage.txt
/usr/jdk/instances/jdk1.5.0/jre/lib/amd64/server/libjsig.so <symbolic link>
/usr/jdk/instances/jdk1.5.0/jre/lib/amd64/server/libjvm.so
/usr/jdk/instances/jdk1.5.0/jre/lib/amd64/server/libjvm_db.so
/usr/jdk/instances/jdk1.5.0/jre/lib/amd64/xawt/libmawt.so
[ verifying class <none> ]
Installation of <SUNWj5rtx> was successful.
```

**Step 13** Go to /opt/CiscoMGC/local/HUCS_x10/java_appl/bin.

**Step 14** Move HUCSprovx10 and HUCSprovx10.jar to /opt/CiscoMGC/local/

For example,

*mv HUCS* /opt/CiscoMGC/local*

**Step 15** Repeat these steps on the Standby platform (if applicable).

This completes the requred steps for uploading the HUCSprovx10 script on the PGW.

# Applying Static Configuration to the Cisco HSI

This section explains how to apply the static configuration to the Cisco HSI. This is required before using USM to load the base data and bulk data that integrates the Cisco HSI into the Hosted UCS platform.

Cisco HSI enables the Cisco PGW to talk to the Cisco Unified CM using H.323 over the H.323 gatekeeper. The HSI is an adjunct to the Cisco PGW and simply provides an H.323 interface.

Apart from the configuration described in this section, Cisco HSI has mandatory parameters that must be provisioned; for example:

- IP addresses of the HSI
- IP addresses the Cisco PGWs
- Ports used to communicate with the PGW

For further information, refer to the *Cisco H.323 Signaling Interface User Guide, Release 4.2*.

Example 2-9 illustrates the Hosted UCS- specific static configuration settings required on all HSIs.

*Example 2-9 RAS Parameters*

```
prov-add:name=ras,gatekeeperId=HUCS_ZONE
prov-add:name=ras,gateway.prefix[1]=999#
prov-add:name=ras,manualDiscovery.ipAddress=<gatekeeper_ip_address>, for example:
prov-add:name=ras,manualDiscovery.ipAddress=10.120.4.51
prov-add:name=ras,manualDiscovery.port=1719
prov-add:name=ras,terminalAlias[1].h323ID=<hsi_name>, for example:
prov-add:name=ras,terminalAlias[1].h323ID=hsi-ent4a@cisco.com
```

Example 2-10 illustrates the Hosted UCS- specific static configuration settings required to support T.38 fax:

*Example 2-10 T.38 fax support*

Example 2-9 illustrates the Hosted UCS- specific static configuration settings required on all HSIs.

```
prov-add:name=sys_config_static,t38maxval=”MaxBit 0x90, FxMaxBuf 0xc8, FxMaxData 0x48"
prov-add:name=sys_config_static,t38options="FxFillBit 0, FxTransMMR 0, FxTransJBIG 0,
FxRate Trans, FxUdpEC Red"
```

Example 2-11 illustrates the Hosted UCS- specific static configuration settings required to support DTMF.

*Example 2-11 DTMF support*

```
prov-add:name=sys_config_static, dtmfsupporteddirection=both
prov-add:name=sys_config_static, dtmfsupportedtype=dtmf
```

Example 2-12 illustrates the static configuration settings required to support transit of the redirecting number parameter.

*Example 2-12 Transit of the redirecting number parameter*

This is contained in Cisco Unified CM H.225 setup messages—nonStandardControl field)

```
pov-add:name=sys_config_static, h225pavosupported=enabled
```

Example 2-13 illustrates the static configuration settings required to support CLIP and CLIR.

*Example 2-13 CLIP/CLIR support*

```
prov-add:name=SYS_CONFIG_STATIC,ClipClirSupported=enabled
prov-add:name=CCPackage,A_CC_AnumDataSI=1
prov-add:name=CCPackage,A_CC_Clir=1
```

# Applying Static Configuration to the Cisco H.323 Gatekeeper

This section explains how to apply the static configuration to the Cisco H.323 gatekeeper. This is required before using USM to load the bulk data that integrates the Cisco H.323 Gatekeeper into the Hosted UCS platform.

An H.323 gatekeeper is included in the Hosted UCS platform to provide basic infrastructure capabilities. It provides registration capability for the Cisco PGW (through the Cisco HSI), Cisco Unified CM, and any H.323 customer devices. The gatekeeper forces all routing to use the Cisco PGW rather than to operate between Cisco Unified CM clusters.

Configure the following static configuration settings on the gatekeepers in global configuration mode:

### *Example 2-14 Gatekeeper Static Configuration*

```
gatekeeper
zone local HUCS_ZONE cisco.com
gw-type-prefix 999#* default-technology
no shutdown
```