



CHAPTER 2

Hosted UCS Static Configuration

This chapter describes the static configuration required as part of the lab builds for Cisco Hosted Unified Communications Services (UCS), Release 7.1(a).

This chapter includes the following sections:

- [Cisco Unified Communication Manager Static Configuration, page 2-1](#)
- [Cisco PGW Static Configuration, page 2-8](#)
- [Cisco HSI Static Configuration, page 2-26](#)
- [Cisco Gatekeeper Static Configuration, page 2-27](#)

Cisco Unified Communication Manager Static Configuration

This section details the static (manual) configuration required for certain Unified CM configuration parameters which cannot be provisioned through AXL SOAP. The following settings need to be configured manually on the Unified CM:

- [Server Configuration, page 2-1](#)
- [Date/Time Configuration, page 2-2](#)
- [Enterprise parameters Configuration, page 2-2](#)
- [Automated Alternate Routing Group Configuration, page 2-3](#)
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Server Configuration

Use the server configuration to specify the IP address of the server where the Cisco Unified Communications Manager is installed.

Procedure:

-
- Step 1** Choose **System > Server**.
- Step 2** Enter the following:
- Host Name/IP Address—Full IP address of the server, for example **10.131.2.2**
 - Description—Description of the server, for example **e2c1p**
-

Date/Time Configuration

Date/Time Groups are used to define time zones for the various devices that are connected to Cisco Unified Communications Manager. 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 within that region, usually cities or small islands, such as “America/New_York”.

Procedure:

-
- Step 1** Choose **System > Date/Time Group**.
- Step 2** Perform the following settings:
- Group Name—for example **Europe-London**
 - Time Zone—Choose the time zone from the drop-down list box, for example: **(GMT) Etc/GMT0**
 - Separator—Choose the separator character to use between the date fields, for example **/**
 - Date Format—Choose the date format for the date that displays 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**
-

**Note**

Group name format in USM is “Area/Location”, and in Unified CM is “Area-Location”.

Enterprise parameters Configuration

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

Procedure:

-
- Step 1** Choose **System > Enterprise Parameters**.
- Step 2** In the **Enterprise Parameters Configuration** section change **Advertise G722 Codec—Disabled**

- Step 3** In the **Phone URL Parameters** section change **URL Directories**—`http://<virtual_IP_address_of_USM_server>/bvsmweb/directoryservices.cgi`, for example `http://10.100.92.33/bvsmweb/directoryservices.cgi`



Note This parameter specifies the URL that Cisco Unified IP Phone models use when the Directory button is pressed. This should point to the virtual IP address of the USM server (not Unified CM server):

- Step 4** If your network does not use DNS services, replace the Unified CM Publisher Server name with the IP address of the Unified CM Publisher Server in the following fields in the Phone URL Parameters section:
- URL Authentication—Enter `http://<IP_address_of_Publisher_server>:8080/ccmcip/authenticate.jsp`, for example `http://10.132.4.2:8080/ccmcip/authenticate.jsp`
 - URL Information—Enter `http://<IP_address_of_Publisher_server>:8080/ccmcip/GetTelecasterHelpText.jsp`, for example `http://10.132.4.2:8080/ccmcip/GetTelecasterHelpText.jsp`
 - URL Services fields—Enter `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 Configuration

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



Note This only applies to Unified CM 7.x and Unified CM 6.x.

Procedure:

- Step 1** Choose **Call Routing > AAR Group**.
- Step 2** Enter the following:
- AAR Group Name—for example, **defaultaar**
 - Prefix Digits—Leave this blank

Conference Bridge Configuration



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

The Conference Bridge for Cisco Unified Communications Manager is either 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 further details on how to configure a Conference Bridge, refer to:

- 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 Configuration

**Note**

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

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

The CUCM 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.

For further details on how to configure a Transcoder, refer to:

- 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 Configuration

Users can subscribe to the Cisco Unified IP Phone Services created by the Administrators. Depending on the deployment, the following services should be created:

- [Login/Logout Services for extension mobility, page 2-4](#)
- [Roaming Login/Logout Services for USM user roaming, page 2-5](#)
- [Cisco Unified IP Phone XML Services, page 2-6](#)

**Note**

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

Login/Logout Services for extension mobility

To enable Login/Logout Services for extension mobility for Unified CM 4.2(3) do the following:

-
- Step 1** Choose **Feature > Cisco Unified IP Phone Services**.
- Step 2** Add the **Cisco Unified IP Phone Service** using the following settings:
- Service Name—**Login/Logout**
 - Service Description—**Extension Mobility Service**
 - Service URL—Enter
`http://<Publisher_IP_Address>/emapp/EMAppServlet?device=#DEVICENAME#`, for example:
`http://10.131.4.2/emapp/EMAppServlet?device=#DEVICENAME#`
- Step 3** Check the **Enable** check box.
-

To enable Login/Logout Services for extension mobility for Unified CM 7.1(3) and 6.1 (4) do the following:

-
- Step 1** Choose **Device > Device Settings > Phone Services**.
- Step 2** Add the **Cisco Unified IP Phone Service** using the following settings:
- Service Name—**Login/Logout**
 - Service Name (ASCII Format)—**Login/Logout**
 - Service Description—**Extension Mobility Service**
 - Service URL—Enter
`http://<Publisher_IP_Address>:8080/emapp/EMAppServlet?device=#DEVICENAME#`, for example: **`http://10.132.4.2:8080/emapp/EMAppServlet?device=#DEVICENAME#`**
- Step 3** Check the **Enable** check box.
-

Roaming Login/Logout Services for USM user roaming

To enable Roaming Login/Logout Services for USM user roaming for Unified CM 4.2(3) do the following:

-
- Step 1** Choose **Feature > Cisco Unified IP Phone Services**.
- Step 2** Add the **Cisco Unified IP Phone Service** using the following settings:
- Service Name—**Roaming Login/Logout**
 - Service Description—**Extension Mobility Service**
 - Service URL—Enter
`http://<USM_Virtual_IP_Address>/bvsmweb/bvsmroaming.cgi?device=#DEVICENAME#`, for example: **`http://10.100.92.33/bvsmweb/bvsmroaming.cgi?device=#DEVICENAME#`**
- Step 3** Check the **Enable** check box.
-

To enable Roaming Login/Logout Services for USM user roaming for Unified CM 6.1 (x) and 7.1 (x) do the following:

-
- Step 1** Choose **Device > Device Settings > Phone Services**.
- Step 2** Add the **Cisco Unified IP Phone Service** using the following settings:
- Service Name—**Roaming Login/Logout**
 - Service Name (ASCII Format)—**Roaming Login/Logout**
 - Service Description—**Extension Mobility Service**
 - Service URL—Enter
`http://<USM_Virtual_IP_Address>/bvsmweb/bvsmroaming.cgi?device=#DEVICENAME`, for example: `http://10.100.92.33/bvsmweb/bvsmroaming.cgi?device=#DEVICENAME#`
- Step 3** Check the **Enable** check box.
-

Cisco Unified IP Phone XML Services

To enable Cisco Unified IP Phone XML Services for Unified CM 4.2(3) do the following:

-
- Step 1** Choose **Feature > Cisco Unified IP Phone Services**.
- Step 2** Add the **Cisco Unified IP Phone Service** using the following settings:
- Service Name—**Phone Services**
 - Service Description—**Phone Services**
 - Service URL—Enter
`http://<USM_Virtual_IP_Address>/bvsmweb/bvsmsservices.cgi?device=#DEVICENAME`, for example: `http://10.100.92.33/bvsmweb/bvsmsservices.cgi?device=#DEVICENAME#`
-

To enable Cisco Unified IP Phone XML Services for Unified CM 6.1 (x) and 7.1(x) do the following:

-
- Step 1** Choose **Feature > Cisco Unified IP Phone Services**.
- Step 2** Add the **Cisco Unified IP Phone Service** using the following settings:
- Service Name—**Phone Services**
 - Service Name (ASCII Format)—**Phone Services**
 - Service Description—**Phone Services**
 - Service URL—Enter
`http://<USM_Virtual_IP_Address>/bvsmweb/bvsmsservices.cgi?device=#DEVICENAME`, for example: `http://10.100.92.33/bvsmweb/bvsmsservices.cgi?device=#DEVICENAME#`
-

Phone Button Template Configuration

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 customers want to use any non-standard phone button templates, they need to define them in USM, and also need to add them manually into Unified CM.

To add non-standard phone button templates do the following:

-
- Step 1** Choose **Device > Device Settings > Phone Button Template**.
- Step 2** Select the required **Phone Button Template**, for example **Standard 7960**
- Step 3** Use the following setting:
- Button Template Name—<unique_button_template_name>, for example **Standard 7960-2lines** and 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**
-

**Note**

Ensure that the required number of lines is set up on the template settings. Ensure 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 USM Service Setting instead of Cisco Unified CM. If a validation failure occurs, either add the missing phone button template into the Cisco Unified CM or delete unwanted phone button templates from USM. Phone button templates cannot be deleted from the USM database without first disconnecting the dial plans from the hardware sets (under Dial Plan Tools > Hardware Sets > Associated Dial plans). Remember to reconnect the required dial plans afterwards.

Softkey Template Configuration

Softkey template configuration allows the administrator to manage softkeys that the Cisco Unified IP Phones (such as model 7960) support. To add Softkey templates to Unified CM clusters do the following:

-
- Step 1** Choose **Device > Device Settings > Softkey Template**.
- Step 2** Use the following settings:
- Create a softkey template based on—<available_softkey_template>, for example **Standard User**
 - Softkey Template Name—<unique_softkey_template_name>, for example **Softkey_Advanced**
-

These softkey templates can later be imported into USM for each Unified CM cluster, and assigned to a phone when the phone is registered via USM.

**Note**

Once the new softkey template has been created, you can add additional application softkeys, and configure softkey positions. For detailed instructions refer to the relevant Cisco Unified CM Administration Guides.

Cisco PGW Static Configuration

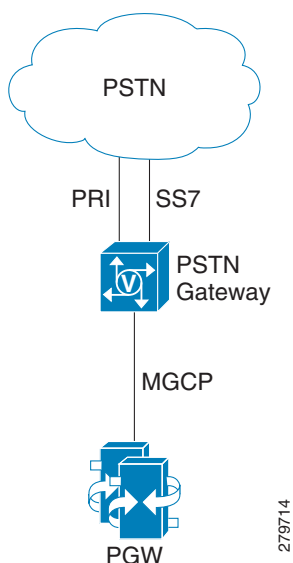
This section describes the required setup on the Cisco PGW before loading the USM platform. This section includes the following topics:

- [Central Gateway PGW Breakout Configuration, page 2-8](#)
- [PGW/HSI/Unified CM Interface Configuration, page 2-9](#)
- [ILGW Dial Plan, page 2-11](#)
- [Example Cisco PGW Static Configuration, page 2-11](#)
- [PGW/HSI/Unified CM Interface Configuration, page 2-9](#)
- [Full Number Translation with TimesTen Database, page 2-17](#)

Central Gateway PGW Breakout Configuration

One of the main features of the PGW in Hosted UCS 7.1(a) is to route calls to/from the PSTN. The "Central Gateway PGW" PSTN breakout can be achieved using the SS7 or PRI (MGCP controlled) signaling, as shown in [Figure 2-1](#)

Figure 2-1 Central Gateway PGW PSTN breakout



Depending on the deployment, a number of settings needs to be provisioned on the PGW, for example: External Nodes, Session Sets, MGCP Paths, IPFAS Paths, D-Channels, IP Links, DPCs, OPCs, APCs, Linksets, SS7 Routes, SS7 Paths and IP Routes.

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

Depending on the number of supported countries, a route list is to be provisioned on the PGW. To add a route list to PSTN for each country, for example U.K., do the following:

```
prov-add:rtlist:name="rtlist2pstn<Country_code>",rtname="route2pstn",distrib="OFF"
```

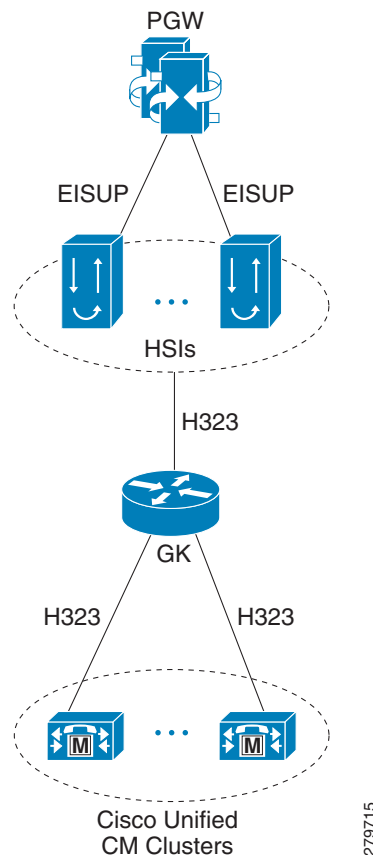
For example:

```
prov-add:rtlist:name="rtlist2pstn44",rtname="route2pstn",distrib="OFF"
```

PGW/HSI/Unified CM Interface Configuration

In Hosted UCS 7.1(a), the interface between the PGW/HSI and Unified CM clusters is an H.323 trunk (provisioned as a 'H.225 Gatekeeper controlled trunk' on Unified CM). The interface between the PGW and HSI is EISUP, as shown in [Figure 2-2](#)

Figure 2-2 PGW/HSI/Unified CM Interfaces



Depending on the deployment and the number of HSIs needed, for the interface between the PGW and HSIs, a number of settings need to be provisioned on the PGW, for example:

```
prov-add:EXTNODE:NAME="hsi-ent4a",DESC="hsi-ent4a",TYPE="H323",ISDNSIGTYPE="N/A",GROUP=0
```

```

prov-add:EISUPPATH:NAME="eisup-hsi-ent4a",DESC="eisup-hsi-ent4a",EXTNODE="hsi-ent2a",MDO="
EISUP",CUSTGRPID="ICCM",ORIGLABEL="",TERMLABEL=""
prov-add:iproute:name="iproute-1",desc="IPRoute to 10.120.4.0 network",dest="10.120.4.0",
netmask="255.255.255.0",nexthop="IP_NextHop1",ipaddr="IP_Addr1",pri=1
prov-add:iproute:name="iproute-2",desc="IPRoute to 10.121.4.0 network",dest="10.121.4.0",
netmask="255.255.255.0",nexthop="IP_NextHop2",ipaddr="IP_Addr2",pri=1
prov-add:IPLNK:NAME="hsi-ent4a-iplnk-1",DESC="hsi-ent4a_IP_link_1",SVC="eisup-hsi-ent2a",I
PADDR="IP_Addr1",PORT=8003,PEERADDR="10.120.2.31",PEERPORT=8003,PRI=1,IROUTE="iproute-1"
prov-add:IPLNK:NAME="hsi-ent4a-iplnk-2",DESC="hsi-ent4a_IP_link_2",SVC="eisup-hsi-ent2a",I
PADDR="IP_Addr2",PORT=8003,PEERADDR="10.121.2.31",PEERPORT=8003,PRI=2,IROUTE="iproute-2"

```

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

The following needs to be provisioned on the PGW for PGW/HSI/Unified CM Interface Configuration:

- 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 do the following:

```
numan-add:dialplan:custgrpID="ICCM", OVERDEC="YES"
```

- Trunk Group for each HSI. To add a trunk group do the following:

```

prov-add:trngrp:name="<trngrp_name>",clli="<clli_name>",svc="<signaling_svc>",type="
<type>",qable="<qable>", for example:
prov-add:trngrp:name="1001",clli="hsi", svc=" eisup-hsi-ent4a",type="IP", qable="n"

```

- Routing Trunk Group for each HSI. To add the routing trunk group do the following:

```

prov-add:rttrngrp:name="<rttrngrp_name>",type=4,reattempts=0,queuing=0,cutthrough=3,
resincperc=0, for example:
prov-add:
rttrngrp:name="1001",type=4,reattempts=0,queuing=0,cutthrough=3,resincperc=0

```

- Route to the HSI. To add the route trunk do the following:

```

prov-add:rttrnk:weightedTG="OFF",name="route2hsi",trngrpnum=<rttrngrp_name>, for
example:
prov-add: rttrnk:weightedTG="OFF",name="route2hsi",trngrpnum=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",trngrpnum=<rttrngrp_name>, for example:
prov-ed:rttrnk:name="route2hsi",trngrpnum=1002

```

- Route List to the HSI. To add the route list do the following:

```
prov-add:rtlist:name="rtlist2hsi",rtname="route2hsi",distrib="OFF"
```

- A minimum following HSI Trunk Group Properties should be provisioned: "CustGrpId", "AllowH323Hairpin" and "GatewayRBToneSupport". 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: trngrpprof:name="<trngrp_name>",profile="<profile_name>",
for example:

```

```

prov-add: profile:name="lv11eisupf-1001",type="EISUPPROFILE",custgrpID="ICCM",
allowh323hairpin="1",gatewayrbtonesupport="1"
prov-add:trngrpprof:name="1001",profile=" lv11eisupf-1001"

```

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 via USM, it need to be manually created. To add the ILGW dial plan:

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

Example Cisco PGW Static Configuration

For the network shown in [Figure 2-3](#), a sample Cisco PGW static configuration has been exported for the following files:

Config.mml

Routing.mml

ICCM.mml

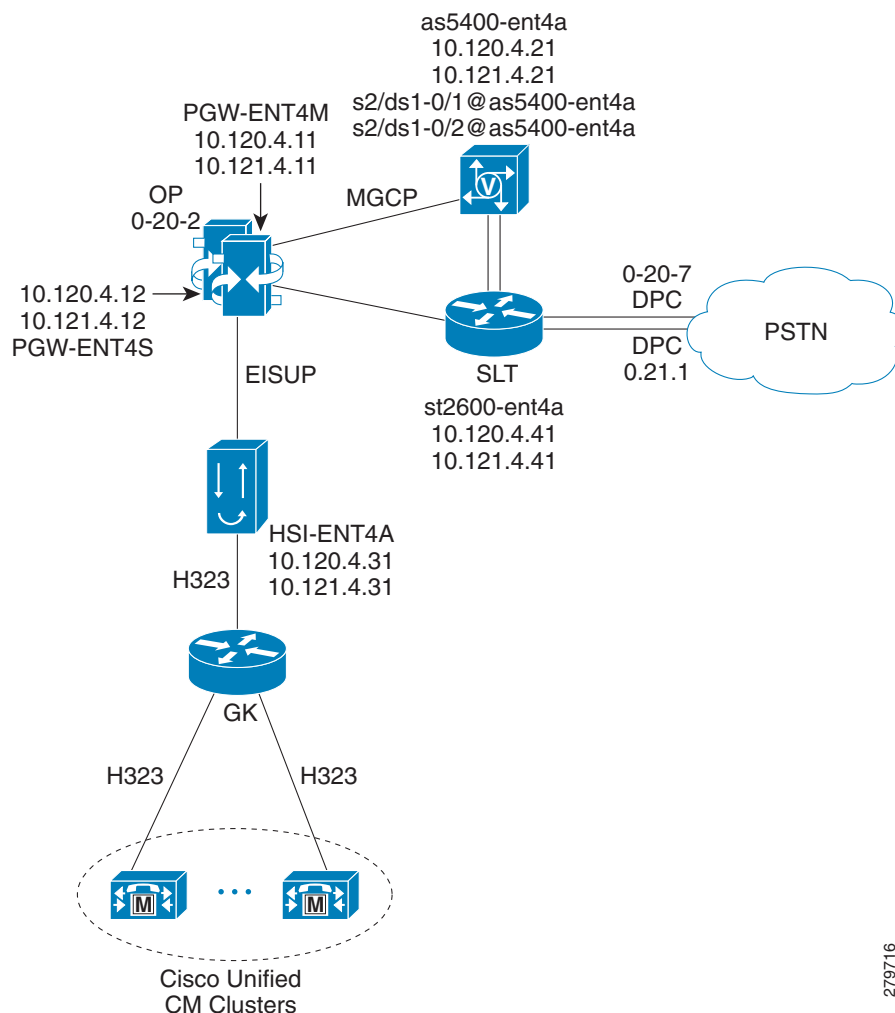
ILGW.mml

Properties.dat

Export_trkgrp.dat

Export_trunk.dat

XECfgParm.dat

Figure 2-3 Sample Network

279716

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-ent2a",DESC="hsi-ent2a",TYPE="H323",ISDNSIGTYPE="N/A",GROUP=0
prov-add:EXTNODE:NAME="slt2600-ent2a",DESC="slt2600-ent2a",TYPE="SLT",ISDNSIGTYPE="N/A",GR
OUP=0
prov-add:EXTNODE:NAME="slt2600-ent2b",DESC="slt2600-ent2b",TYPE="SLT",ISDNSIGTYPE="N/A",GR
OUP=0
prov-add:EXTNODE:NAME="as5400-ent2a",DESC="as5400-ent2a",TYPE="AS5400",ISDNSIGTYPE="N/A",G
ROUP=0

```

```

prov-add:EXTNODE:NAME="as5400-ent2b",DESC="as5400-ent2b",TYPE="AS5400",ISDNSIGTYPE="N/A",G
ROUP=0
prov-add:SESSIONSET:NAME="sset-slt-ent2a",EXTNODE="slt2600-ent2a",IPADDR1="IP_Addr1",PEER
ADDR1="10.120.2.41",PORT=7001,PEERPORT=7001,TYPE="BSM
V0",IPROUTE1="iproute-1",IPROUTE2="iproute-2",IPADDR2="IP_Addr2",PEERADDR2="10.121.2.41"
prov-add:SESSIONSET:NAME="sset-slt-ent2b",EXTNODE="slt2600-ent2b",IPADDR1="IP_Addr1",PEER
ADDR1="10.120.2.42",PORT=7001,PEERPORT=7001,TYPE="BSM
V0",IPROUTE1="iproute-1",IPROUTE2="iproute-2",IPADDR2="IP_Addr2",PEERADDR2="10.121.2.42"
prov-add:EISUPPATH:NAME="eisup-hsi-ent2a",DESC="eisup-hsi-ent2a",EXTNODE="hsi-ent2a",MDO="
EISUP",CUSTGRPID="ICCM",ORIGLABEL="",TERMLABEL=""
prov-add:MGCPPATH:NAME="mgcp-as5400-ent2a",DESC="MGCP path for
as5400-ent2a",EXTNODE="as5400-ent2a"
prov-add:MGCPPATH:NAME="mgcp-as5400-ent2b",DESC="MGCP path for
as5400-ent2b",EXTNODE="as5400-ent2b"
prov-add:LNKSET:NAME="lnkset-pstn1",DESC="pstn1
lnkset",APC="pstn1",PROTO="SS7-UK",TYPE="IP"
prov-add:IPLNK:NAME="hsi-ent2a-iplnk-1",DESC="hsi-ent2a-iplnk-1",SVC="eisup-hsi-ent2a",IPA
DDR="IP_Addr1",PORT=8003,PEERADDR="10.120.2.31",PEER
PORT=8003,PRI=1,IPROUTE="iproute-1"
prov-add:IPLNK:NAME="hsi-ent2a-iplnk-2",DESC="hsi-ent2a-iplnk-2",SVC="eisup-hsi-ent2a",IPA
DDR="IP_Addr2",PORT=8003,PEERADDR="10.121.2.31",PEER
PORT=8003,PRI=2,IPROUTE="iproute-2"
prov-add:IPLNK:NAME="as5400-ent2a-iplnk1",DESC="IP link 1 to
as5400-ent2a",SVC="mgcp-as5400-ent2a",IPADDR="IP_Addr1",PORT=2427,PEERADDR="10.12
0.2.21",PEERPORT=2427,PRI=1,IPROUTE="iproute-1"
prov-add:IPLNK:NAME="as5400-ent2a-iplnk2",DESC="IP link 2 to
as5400-ent2a",SVC="mgcp-as5400-ent2a",IPADDR="IP_Addr2",PORT=2427,PEERADDR="10.12
1.2.21",PEERPORT=2427,PRI=2,IPROUTE="iproute-2"
prov-add:IPLNK:NAME="as5400-ent2b-iplnk1",DESC="IP link 1 to
as5400-ent2b",SVC="mgcp-as5400-ent2b",IPADDR="IP_Addr1",PORT=2427,PEERADDR="10.12
0.2.22",PEERPORT=2427,PRI=1,IPROUTE="iproute-1"
prov-add:IPLNK:NAME="as5400-ent2b-iplnk2",DESC="IP link 2 to
as5400-ent2b",SVC="mgcp-as5400-ent2b",IPADDR="IP_Addr2",PORT=2427,PEERADDR="10.12
1.2.22",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-ent2b"
prov-add:PROFILE:NAME="lvl2cmpf-1001",TYPE="commonprofile",cli="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="queueelen",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-npxx"

```

```

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="NOGT",msname="inap-cs1-initdp"
prov-add:inservice:name="inap-cs2-initdp",skortcv=90001,gtorssn="ROUTEBYSSN",gtformat="NOGT",msname="inap-cs2-initdp"
prov-add:inservice:name="inap-freephon-initdp",skortcv=0,gtorssn="ROUTEBYSSN",gtformat="NOGT",msname="inap-freephon-initdp"
prov-add:inservice:name="inap-lnp-initdp",skortcv=1,gtorssn="ROUTEBYSSN",gtformat="NOGT",msname="inap-lnp-initdp"
prov-add:inservice:name="inap-lnp-norway",skortcv=0,gtorssn="ROUTEBYSSN",gtformat="NOGT",msname="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",msname="inap-pp-bcsm"
prov-add:inservice:name="inap-pp-charge-atexp",skortcv=0,gtorssn="ROUTEBYSSN",gtformat="NOGT",msname="inap-pp-charge-atexp"
prov-add:inservice:name="inap-pp-charge-final",skortcv=0,gtorssn="ROUTEBYSSN",gtformat="NOGT",msname="inap-pp-charge-final"
prov-add:inservice:name="inap-pp-charge-texp",skortcv=0,gtorssn="ROUTEBYSSN",gtformat="NOGT",msname="inap-pp-charge-texp"
prov-add:inservice:name="inap-pp-initdp",skortcv=1,gtorssn="ROUTEBYSSN",gtformat="NOGT",msname="inap-pp-initdp"
prov-add:inservice:name="inap-precarr-initdp",skortcv=2,gtorssn="ROUTEBYSSN",gtformat="NOGT",msname="inap-precarr-initdp"
prov-add:sigsvcp:NAME="eisup-hsi-ent2a",H323AdjunctLink="1"
prov-add:sigsvcp:NAME="mgcp-as5400-ent2a",mgcpDomainNameRemote="s2/ds1-0/1@AS5400-ENT2A"
"
prov-add:sigsvcp:NAME="mgcp-as5400-ent2b",mgcpDomainNameRemote="s2/ds1-0/1@AS5400-ENT2B"
"
prov-add:files:name="tkgfile",file="Static_12_05/export_trkgrp.dat",action="IMPORT"
prov-add:TRNKGRPPROF:name="1001",profile="lv1leisupf-1001"
prov-add:files:name="bcfile",file="Static_12_05/export_trunk.dat",action="IMPORT"

```

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=2,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="rtlist2pstn44",rtname="route2pstn",distrib="OFF"
prov-add:rtlist:name="rtlist2hsi",rtname="route2hsi",distrib="OFF"
3.4.3 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"
```

ILGW.mml

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

Properties.dat

```
eisup-hsi-ent2a.H323AdjunctLink = 1
mgcp-as5400-ent2a.mgcpDomainNameRemote = s2/ds1-0/1@AS5400-ENT2A
mgcp-as5400-ent2b.mgcpDomainNameRemote = s2/ds1-0/1@AS5400-ENT2B
ss7-u-1.chkPtPort = 2001
tg-1001.AllowH323Hairpin = 1
tg-1001.CLLI = HSI
tg-1001.CustGrpId = ICCM
tg-1001.commonProfile = lv12cmpf-1001
tg-2001.CLLI = PSTN1
tg-2001.FAXsupport = 1
tg-2001.GatewayRBToneSupport = 1
```

Note: Default properties prefixed by an "*", SS7-<ver>.<property_name> properties, and TAL1-I0CC.<property_name> properties, are not shown

Export_trkgrp.dat

```
<!--#xml - 9.8001-->
<trunk-groups>
<version base="9.8001" revision="0"/>
<trunkgroup name="1001" type="IP" svc="eisup-hsi-ent2a" clii="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" clii="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>
```


Export_trunk.dat

```
#format3 - 0.0
2001 1 ffff 1 as5400-ent2a s2/ds1-0/1@as5400-ent2a
2001 2 ffff 2 as5400-ent2a s2/ds1-0/2@as5400-ent2a
2001 3 ffff 3 as5400-ent2a s2/ds1-0/3@as5400-ent2a
2001 4 ffff 4 as5400-ent2a s2/ds1-0/4@as5400-ent2a
2001 6 ffff 6 as5400-ent2a s2/ds1-0/6@as5400-ent2a
2001 7 ffff 7 as5400-ent2a s2/ds1-0/7@as5400-ent2a
2001 8 ffff 8 as5400-ent2a s2/ds1-0/8@as5400-ent2a
2001 9 ffff 9 as5400-ent2a s2/ds1-0/9@as5400-ent2a
2001 10 ffff 10 as5400-ent2a s2/ds1-0/10@as5400-ent2a
2001 11 ffff 11 as5400-ent2a s2/ds1-0/11@as5400-ent2a
2001 12 ffff 12 as5400-ent2a s2/ds1-0/12@as5400-ent2a
2001 13 ffff 13 as5400-ent2a s2/ds1-0/13@as5400-ent2a
2001 14 ffff 14 as5400-ent2a s2/ds1-0/14@as5400-ent2a
2001 15 ffff 15 as5400-ent2a s2/ds1-0/15@as5400-ent2a
2001 16 ffff 16 as5400-ent2a s2/ds1-0/16@as5400-ent2a
2001 17 ffff 17 as5400-ent2a s2/ds1-0/17@as5400-ent2a
2001 18 ffff 18 as5400-ent2a s2/ds1-0/18@as5400-ent2a
2001 19 ffff 19 as5400-ent2a s2/ds1-0/19@as5400-ent2a
2001 20 ffff 20 as5400-ent2a s2/ds1-0/20@as5400-ent2a
2001 21 ffff 21 as5400-ent2a s2/ds1-0/21@as5400-ent2a
2001 22 ffff 22 as5400-ent2a s2/ds1-0/22@as5400-ent2a
2001 23 ffff 23 as5400-ent2a s2/ds1-0/23@as5400-ent2a
2001 24 ffff 24 as5400-ent2a s2/ds1-0/24@as5400-ent2a
2001 25 ffff 25 as5400-ent2a s2/ds1-0/25@as5400-ent2a
2001 26 ffff 26 as5400-ent2a s2/ds1-0/26@as5400-ent2a
2001 27 ffff 27 as5400-ent2a s2/ds1-0/27@as5400-ent2a
2001 28 ffff 28 as5400-ent2a s2/ds1-0/28@as5400-ent2a
2001 29 ffff 29 as5400-ent2a s2/ds1-0/29@as5400-ent2a
2001 30 ffff 30 as5400-ent2a s2/ds1-0/30@as5400-ent2a
```

XECfgParm.dat

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

```
*.analysisCapabilityLevel = 1
```

Full Number Translation with TimesTen Database

The Full Number Translations 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 contiguous ranges of numbers with analysis and modification capabilities. The Full Number Translations 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, a Times Ten query and full number translation table are also added.

The Full Number Translation with TimesTen Database feature is introduced from Hosted UCS 6.1(a) onwards. This means that the association of E.164 numbers to Internal numbers will use this feature instead of configuring via mml.

This section includes the following topics:

Sparc Based Platform Configuration

Opteron Based Platform Configuration

Sparc Based Platform Configuration

In order to use this feature, HUCSprovx10 script need to be uploaded on the PGW.

Procedure:

-
- Step 1** Upload the HUCS_x10_package.gz package onto a FTP server reachable by the PGW.
 - Step 2** Log into 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, for example **gunzip HUCS_x10_package.gz**.
 - Step 5** Untar HUCS_x10_package, for example **tar -xvf HUCS_x10_package**.

The following output is displayed:

```
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 6** Go to the java_vm64 folder, for example **cd HUCS_x10/java_vm64**.
- Step 7** Unzip jdk64-sparc-1_5_0_06.gz, for example **gunzip jdk64-sparc-1_5_0_06.gz**.
- Step 8** Untar jdk64-sparc-1_5_0_06, for example **tar -xvf jdk64-sparc-1_5_0_06**.

The following output is displayed:

```
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/libjddwp.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/libmllib_image.so, 1370616
bytes, 2677 tape blocks
x ./SUNWj5rtx/reloc/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libmllib_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/libsunwdga.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 9 Add the **SUNWj5rtx** package, for example **pkgadd -d . SUNWj5rtx**.

The following output is displayed:

```
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/libjdpw.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/libmllib_image.so
/usr/jdk/instances/jdk1.5.0/jre/lib/sparcv9/libmllib_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/libsunwdga.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 10 Go to **/opt/CiscoMGC/local/HUCS_x10/java_appl/bin**.

Step 11 Move HUCSprovx10 and HUCSprovx10.jar to **/opt/CiscoMGC/local/**, for example: **mv HUCS* /opt/CiscoMGC/local**

Opteron Based Platform Configuration

In order to use this feature, HUCSprovx10 script need to be uploaded on the PGW.

Procedure:

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

Step 2 Log into 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, for example **gunzip HUCS_x10_package.gz**.

Step 5 Untar HUCS_x10_package, for example **tar -xvf HUCS_x10_package**.

The following output is displayed:

```

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 6 Go to the java_vm64 folder, for example **cd HUCS_x10/java_vm64**.

Step 7 Unzip jdk64-amd-1_5_0_06.gz, for example **gunzip jdk64-amd-1_5_0_06.gz**.

Step 8 Untar jdk64-amd-1_5_0_06, for example **tar -xvf jdk64-amd-1_5_0_06**.

The following output is displayed:

```
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/libjdpw.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/libmllib_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

```

Add the SUNWj5rtx package, for example **pkgadd -d . SUNWj5rtx**

The following output is displayed:

```
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/libjdpw.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 9 Go to **/opt/CiscoMGC/local/HUCS_x10/java_appl/bin**.

Step 10 Move HUCSprovx10 and HUCSprovx10.jar to /opt/CiscoMGC/local/, for example **mv HUCS* /opt/CiscoMGC/local**.

Cisco HSI Static Configuration

This section describes the required setup on the Cisco HSI before loading the USM platform.

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

For further information, refer to the Cisco H.323 Signaling Interface User Guide, Release 4.3.

Use the following HUCS specific static configuration settings on all HSIs:

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@ipcbuemea.cisco.com**

T.38 fax support

- 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**"

DTMF support

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

Support for the transit of the redirecting number parameter (contained in Cisco Unified CM H.225 setup messages-nonStandardControl field)

- prov-add:name=sys_config_static, h225pavosupported=**enabled**

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_Clr=**1**

Cisco Gatekeeper Static Configuration

This section describes the required setup on the Cisco Gatekeepers before loading the USM platform.

An H.323 gatekeeper is included in the HUCS platform to provide basic infrastructure capabilities. It provides registration capability for the Cisco PGW (via 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 Unified CM clusters.

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

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

