CHAPTER 6

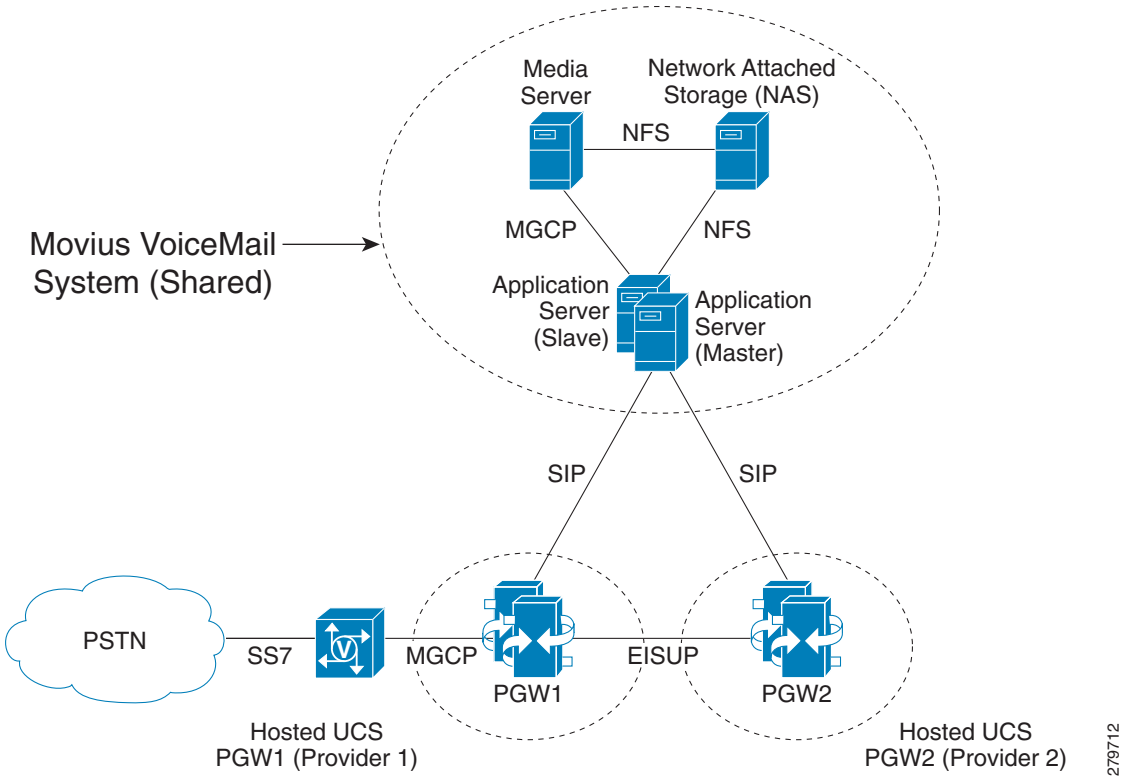
Provisioning Movius VoiceMail and Auto Attendant Services

This chapter describes the provisioning of Movius VoiceMail and Auto Attendant services and configuring SBC for the Movius Auto Attendant to work with PGW. Also, it contains the configuration details needed in PGW and Movius. This chapter includes the following sections:

Provisioning Movius IP Unity Voicemail support

This section describes the provisioning of Movius VoiceMail support for multiple Hosted UCS platforms using one Movius VoiceMail system. The figure below shows the Movius VoiceMail System Integration into Hosted UCS.

Figure 6-1 Movius VoiceMail System Integration into Hosted UCS



A typical Movius VoiceMail System comprises the following:

- Application server – The Application Server is a SUN Netra Server with a Solaris operating system where the Voice Mail State Machine is running. The State Machine is responsible for handling all phone calls coming into the system (for Hosted UCS the application server communicates with the PGW). The Application Server also hosts the database that stores all subscriber and application-related data. The Application Server also controls the Media Server. The Application Server can be run as a redundant pair (Master/Slave).
- Media Server - The Media Server is the custom hardware that terminates all media. It provides services, such as announcements, digit collection, and message recording. The Mereon Application Server controls the Media Server. The Media Server terminates the media stream.
- Network Attached Storage – The Network Attached Storage (NAS) stores all voice and fax message files. The application server, media server, and proxy server have access to the NAS using NFS.

This section describes the following topics:

Static Configuration

This topic details the initial static (manual) configuration required for Movius VoiceMail support of the following HUCS components:

CUCM Static Configuration

To enable CUCM to support voice mail Message Waiting Indication (MWI) from Movius IP Unity, the following CUCM service parameters are to be updated:

- Set “Multiple Tenant MWI Modes” to true. It enables CUCM to use translation patterns to convert voice-message mailbox numbers into directory numbers when your voice-messaging system issues a command to set a message waiting indicator
- Ensure that, “Message Waiting Indicator Inbound Calling Search Space” set to <None>.

Cisco PGW StaticConfiguration

To enable the PGW to communicate with the Movius VoiceMail System, the following SIP components need to be provisioned on the PGW:

SIP Automatic Switchover Using Dual-VLAN - The following XECfgParm.dat parameters need to be configured on both Active and Standby PGW:

```
*.Virtual_IP_Addr1 = <VirtualIPAddress1>   # Must be from *.IP_Addr1 Subnet.
*.Virtual_IP_Addr2 = <VirtualIPAddress2>   # Must be from *.IP_Addr2 Subnet.
*.sipFailover   = true     # Failover if SIP Service fails.
```

for example

```
*.Virtual_IP_Addr1 = 10.120.2.13   # Must be from *.IP_Addr1 Subnet.
*.Virtual_IP_Addr2 = 10.121.2.13   # Must be from *.IP_Addr2 Subnet.
*.sipFailover   = true     # Failover if SIP Service fails.
```

Note For further details refer to http://www.cisco.com/en/US/docs/voice_ip_comm/pgw/9/feature/module/9.4_1_/FMvlan.html

SIP Signaling Service - The SIP signaling service is the connection between the PGW and a SIP server. To add a SIP signaling service:

```
prov-add:sippath:name="<sip-sigpath>",mdo="IETF_SIP",desc="<Description>"
```

For example:

```
prov-add:sippath:name="Moviussippath",mdo="IETF_SIP",desc="SIP signaling service
Movius-PGW"
```

SIP Signaling Link. The SIP signaling link is the connection between the PGW and the SIP server. To add a SIP signaling link:

```
prov-add:siplnk:name="<sip-sipchan>",ipaddr="Virtual_IP_Addr1",svc="<sip-sigpath>",port=50
60,pri=1,desc="<Description>",
```

for example:

```
prov-add:siplnk:name="Moviussiplnk-1",port=5060,pri=1,svc="Moviussippath",ipaddr="Virtual_
IP_Addr1",desc="siplnk1 Movius-Pgw"
```

```
prov-add:siplnk:name="Moviussiplnk-2",port=5060,pri=2,svc="Moviussippath",ipaddr="Virtual_
IP_Addr2",desc="siplnk2 Movius-Pgw"
```

SIP Trunk Group for incoming SIP calls from Movius to PGW. To add a SIP trunk group:

```
prov-add:trnkgrp:name="<trnkgrp_name>", svc="<sip-sigpath>",type="SIP_IN",
```

for example:

```
prov-add:trnkgrp:name="3001",svc="Moviussippath",type="SIP_IN"
```

SIP Trunk Group Properties of the previously created SIP Trunk Group for incoming SIP calls from Movius to PGW. To configure SIP trunk group properties, the SIP profile should be added and linked to trunk group:

```
prov-add: profile:
name="<profile_name>",type="SIPPROFILE",custgrpid="<custgrpid>",mgcdomain="<MGC_Domain>",
mgcsipversion="<SIP_Version>",localport="<Local_Port>", Support183="3"
prov-add: trnkgrpprof:name="<trnkgrp_name>",profile="<profile_name>",
```

for example:

```
prov-add:
profile:name="moviusippf-3001",type="SIPPROFILE",custgrpid="ICCM",mgcdomain="pgw-ent2",mgc
sipversion="SIP/2.0",localport="5060",Support183="3"
prov-add:trnkgrpprof:name="3001",profile="moviusippf-3001"
```

Note The MGCDomain indicates the PGW domain name used in SIP messages. On Movius this value should be used in the "/etc/hosts" file to resolve the PGW IP Addresses.

Note Enter the ICCM dial plan for the incoming calls from Movius to the PGW.

SIP Trunk Group for outgoing SIP calls from PGW to Movius - To add a SIP trunk group:

```
prov-add:trnkgrp:name="<trnkgrp_name>", svc="<sip-sigpath>",type="IP_SIP",
```

for example:

```
prov-add:trnkgrp:name="3002",svc="Moviussippath",type="IP_SIP"
```

SIP Trunk Group Properties of the previously created SIP Trunk Group for outgoing SIP calls from PGW to Movius - To configure SIP trunk group properties, the SIP profile should be added and linked to trunk group:

```
prov-add: profile:
name="<profile_name>",type="SIPPROFILE",custgrpid="<custgrpid>",mgcdomain="<MGC_Domain>",
mgcsipversion="<SIP_Version>",localport="<Local_Port>",
Support183="3",unsolicitednotifymethod="1”
prov-add: trnkgrpprof:name="<trnkgrp_name>",profile="<profile_name>",
```

for example:

```
prov-add:profile:name="moviussippf-3002",type="SIPPROFILE",
custgrpid="ICCM",mgcdomain="pgw-ent2",MGCsipversion="SIP/2.0",localport="5060",support183=
"3",unsolicitednotifymethod="1"
prov-add:trnkgrpprof:name="3002",profile="moviussippf-3002"
```

Note UnsolicitedNotifyMethod="1" is required in order to enable the "Unsolicited NOTIFY" method for unsolicited notification of SIP DTMF digits by PGW.

SIP Routing Trunk Group Properties of the previously created SIP Trunk Group for outgoing SIP calls from PGW to Movius - To add the SIP routing trunk group properties:

```
prov-add:siprttrnkgrp:name="<trnkgrp_name>",srvrr=0,cutthrough=2,version="2.0",extsupport=
1,sipproxyport=5060,
url="<SES _Virtual_IP>",
```

for example:

```
prov-add:siprttrnkgrp:name="3002",srvrr=0,cutthrough=2,version="2.0",extsupport=1,sipproxy
port=5060,url="10.100.91.31"
```

Note The URL is configured with the Secure Execution Server (SES) Virtual IP address of the Movius Application Servers.

Route to Movius - To add the route:

```
prov-add:rttrnk:name="<rttrnk_name>",trnkgrpnum=<rttrnkgrp_name>,weightedTG="OFF",
```

for example:

```
prov-add:rttrnk:name="rte2movius",trnkgrpnum=3002,weightedtg="OFF"
```

Route List to Movius - To add the route list:

```
prov-add:rtlist:name="<rtlist_name>",trnkgrpnum=<rttrnk_name>,weightedTG="OFF",
```

for example:

```
prov-add:rtlist:name="rtlist2ipunity",rtname="rte2movius",distrib="OFF"
```

Tip Calls from the PGW to Movius are routed from the “EGRV” dial plan using the rtlist2ipunity route list.

Repeat these PGW provisioning steps for each Hosted UCS Platform.

Below is an example extract from the config.mml for the PGW in City 2:

```
prov-add:sippath:name="Moviussippath",mdo="IETF_SIP",desc="SIP signaling service
Movius-PGW"
prov-add:siplnk:name=
"Moviussiplnk-1",port=5060,pri=1,svc="Moviussippath",ipaddr="Virtual_IP_Addr1",desc="sipln
k1 Movius-Pgw"
prov-add:siplnk:name=
"Moviussiplnk-2",port=5060,pri=2,svc="Moviussippath",ipaddr="Virtual_IP_Addr2",desc="sipln
k2 Movius-Pgw"
prov-add:trnkgrp:name="3001",svc="Moviussippath",type="SIP_IN"
prov-add:trnkgrpprop:name="3001",custgrpid="ICCM",MGCDomain="pgw-ent5",MGCSipVersion="SIP/
2.0",LocalPort="5060",Support183="3"
prov-add:trnkgrp:name="3002",svc="Moviussippath",type="IP_SIP"
prov-add:
profile:name="moviusippf-3001",type="SIPPROFILE",custgrpid="ICCM",mgcdomain="pgw-ent2",mgc
sipversion="SIP/2.0",localport="5060",Support183="3"
prov-add:trnkgrpprof:name="3001",profile="moviusippf-3001"
prov-add:profile:name="moviussippf-3002",type="SIPPROFILE",
custgrpid="ICCM",mgcdomain="pgw-ent2",MGCsipversion="SIP/2.0",localport="5060",support183=
"3",unsolicitednotifymethod="1"
prov-add:trnkgrpprof:name="3002",profile="moviussippf-3002"
prov-add:
siprttrnkgrp:name="3002",srvrr=0,cutthrough=2,version="2.0",extsupport=1,sipproxyport=5060
, url="10.100.91.31"
prov-add:rttrnk:name="rte2movius",trnkgrpnum=3002,weightedtg="OFF"
prov-add:rtlist:name="rtlist2ipunity",distrib="OFF",rtname="rte2movius"
```

Note For detailed information, refer to the Cisco Media Gateway Controller Software Release 9 Provisioning Guide.

Movius 4.2 Static Configuration

Movius Application servers also need some static (manual) configuration. This topic explains the following:

Defining PGWs on the Movius system

Log into the Movius system configuration page.

Note The system configuration page can be accessed via: http://<IP_Unity_GUI_IP_Address>/sysconfig/webconfig/login-javascript.jsp

Step 1 Enter the following in the system configuration page:

- NAT IP—**10.78.97.70** (Internal IP: 10.100.91.72)
- Username—**system**
- Password—**ipunity**

Note After logging in, the PGWs for each Hosted UCS platform that uses the Movius VoiceMail system should be configured. The PGWs are defined in Movius as SIP Call Agents.

Step 2 Go to **Call Agent > SIP Call Agent and** Click **Add.**

Step 3 In the **SIP Call Agent**, enter the following:

- Name—<pgw_name>, for example **PGW-ENT5**
- Host Name/IP Address—<MGCDomain>, for example **pgw-ent5** (This should be the same value as the PGW SIP Trunk Group property “MGCDomain”)
- Call Agent type—**Cisco BTS10200 4.4**

Step 4 Click **Save**.

The first configured SIP Call Agent (PGW) should be set as the Default MWI and Outgoing Call Agent Type. To configure this follow the following steps:

Step 1 Go to **Call Agent**.

Step 2 Enter the following in the **MWI Agent Properties**:

- Default MWI Call Agent type—<first_pgw_name>, for example **SIP**
- Default MWI Call Agent—**PGW-ENT5**

Step 3 Enter the following in the **Please Select a default Call Agent**:

- Default Outgoing Call Agent—<first_pgw_name>, for example **PGW-ENT5**

- Click **Update**.

Mapping the PGW IP Addresses to Host Names

The Host Name (PGW SIP Trunk Group property "MGCDomain") configured for the Movius Application server SIP Call Agent, should also be mapped to the SIP Virtual IP Addresses of the redundant PGWs.

For example, City 5 PGWs are configured with the following:

```
################################################################
# Improved SIP Failover Support. Setting 0.0.0.0 to both will disable
# the SIP Improved failover support Feature. Configuring only one will
# cause the switchover, if the physical interface where it present fails.
#
*.Virtual_IP_Addr1 =                10.120.5.13   # Must be from *.IP_Addr1 Subnet.
*.Virtual_IP_Addr2 =                10.121.5.13   # Must be from *.IP_Addr2 Subnet.
################################################################
```

On the Movius Application Server (active and standby), the mapping should be configured in the "/etc/hosts" file. Following is an example of the configured "hosts" file for two PGW redundant pairs:

```
IPCBU-UM3A:root@/$ cd /etc
IPCBU-UM3A:root@/etc$ more hosts
##########################################
### Virtual SIP IP Addresses of pgw-ent5 ###
##########################################
10.120.5.13     pgw-ent5
10.121.5.13     pgw-ent5
```

Enabling Centrex Support

Centrex is the name of the feature, which supports partitioning on Soft switches. Centrex allows different partitions to support their own private numbering plans so that subscribers in those partitions can dial each other using short extension numbers rather than long public numbers.

Movius UM server supports Centrex by way of organizations and public and private telephone numbers. Organizations are analogous to partitions on the soft switch while private telephone numbers are analogous to the extensions on the soft-switch.

In Movius UM server organizations are identified with orgId which has one-to-one mapping with "centrex-id" or "bgid" on the soft-switch. To map organization created on the Movius UM server to a business (or Centrex) group on the soft-switch, each organization can be provisioned with "Centrex-Id" or "bgid"

Note This field will be visible on the configuration page for organization only if system is enabled for Centrex.

Once Centrex is enabled on the Movius UM server, whenever any telephone number is added in the system (either pilot number or subscriber phone number), administrator will have a choice of specifying that number as public or private. Public telephone numbers are unique in the system. Private telephone numbers on the other hand are unique only within the same organization (or partition). So for example, two organizations A and B can have the same private telephone number 1000 without any conflict. Private telephone numbers are always resolved with the help of accompanying Centrex-Id (or bgid).

Note Any telephone number added before enabling Centrex, is provisioned as public telephone number.

To enable Centrex support do the following:

Step 1 Go to **System > Voice Mail >Voice mail from Web Settings**.

Step 2 Click **Edit**.

Step 3 Check the Centrex Enabled box.

Step 4 Click **Update.**

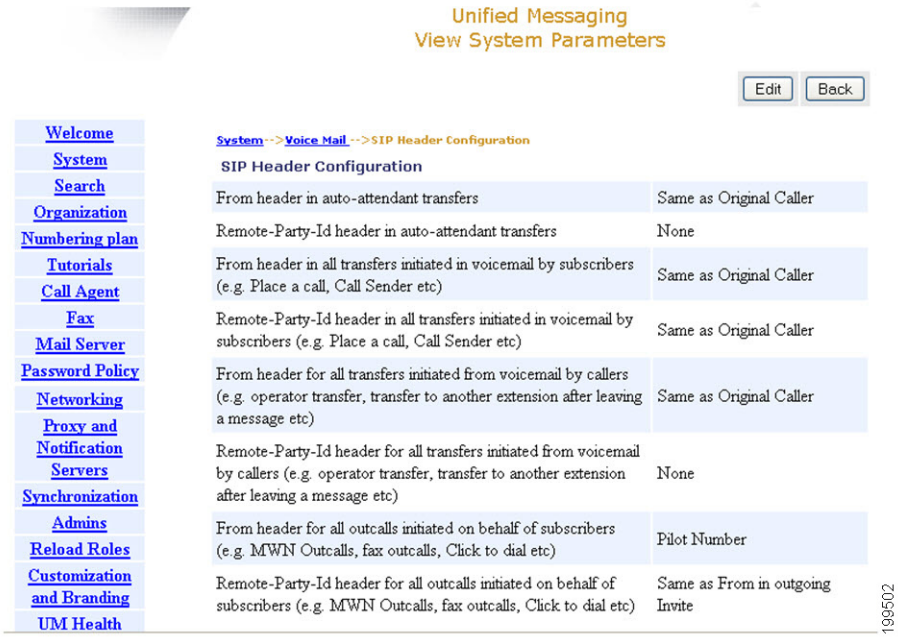
Changing SIP Header on Movius

Following changes need to be made on IP Unity system , so that it sends the A number of calling party instead of AA pilot number.

Step 1 Navigate to **System >Voicemail > SIP Header Configuration**.

Step 2 Set the parameters for SIP Header as shown in the figure 6-2.

Figure 6-2 Movius UM Configuration - SIP Header Configuration



Changing SIP Mandatory Headers on the database

In HUCS7.1a, the PGW makes a delayed offer call to the Movius on the SIP trunk, whereas Movius expected early offer (expecting SDP in the invite message). To change the behavior of Movius to accept the delayed offer, following commands are to be executed on the Movius4.2 system.

Logon to Movius UM application server using SSH and enter the following commands:

```
movius-um1-app-2:root@/$ sesdb
SQL*Plus: Release 10.1.0.2.0 - Production on Wed Jun 9 16:04:01 2010
```

```
Copyright (c) 1982, 2004, Oracle.  All rights reserved.
Connected to:
Oracle Database 10g Enterprise Edition Release 10.1.0.2.0 - 64bit Production
With the Partitioning, OLAP and Data Mining options
SQL> update MANDATORY_HEADER_CHECK set MANDATORYHEADERS='Call-Id,Startline,From,
To,Via,Contact,CSeq'  where MESSAGE='REQ:INVITE' and DIRECTION='INCOMING';
SQL> update frameconfig set value='false' where property = 'sendInitialRemoteSdp';
SQL> commit;
```

Restart framework process on all application nodes using the following command:

```
ipunityctl restart fw
```

Disabling Numbering Dial Plan on Movius

In order to make calls from the Auto Attendant, we need to disable the Numbering Dial Plan.

Procdeure

Step 1 Log to each node of the Movius cluster by SSH.

Step 2 Go to Tools folder— **/opt/ipunity/tools** and run the script **setSysParamInDB.ksh.** and give the argument **"bypassNumPlanCheck true"**.
root@/opt/ipunity/tools$ ./setSysParamInDB.ksh bypassNumPlanCheck true

```
SQL*Plus: Release 10.1.0.2.0 - Production on Fri Aug 22 04:36:16 2008
Copyright (c) 1982, 2004, Oracle.  All rights reserved.
Connected to:
Oracle Database 10g Enterprise Edition Release 10.1.0.2.0 - 64bit Production
With the Partitioning, OLAP and Data Mining options
SQL>
1 row deleted.
SQL>
1 row created.

SQL>
Commit complete.

SQL> Disconnected from Oracle Database 10g Enterprise Edition Release 10.1.0.2.0 - 64bit
Production
With the Partitioning, OLAP and Data Mining options
Trying 127.0.0.1...
Connected to localhost.
Escape character is '^]'.
crane >> System parameters reloaded.
crane >> Connection to localhost closed by foreign host.
```

Loading the Movius Model

In Movius UM version 4.2.1.3, the values in the "webPasswordPolicyName" and the "tuiPasswordPolicyName" fields in the IPUnity worksheet of the model have to match the configured Password Policy names on the Movius UM system configuration. To verify the configured names, log into Movius UM system configuration and click Password Policy. By default, the "webPasswordPolicyName" is def_web_passwdpol2, and the "tuiPasswordPolicyName" is def_tui_passwd_pol2. If you do not want to configure different Email and TUI Password Policies, change the following lines in the IPUnity_Any worksheet:

```
HUCS AddVMServicePilot <webPasswordPolicyName>def_web_passwdpol2</webPasswordPolicyName>
HUCS AddVMServicePilot <tuiPasswordPolicyName>def_tui_passwd_pol2</tuiPasswordPolicyName>
```

Also ensure that the column where the centrexId is configured in not commented out:

```
HUCS AddVMServicePilot <centrixId>#CENTREXID#</centrixId>
```

Prepare USM by loading the Movius Model.

Procedure

Step 1 Go to **Dialplan Tools > Configuration Models**.

Step 2 Browse for the model loader being used and click **Submit**.

Note NOTE: Check for any errors or warnings at the completion of loading.

Defining and Configuring Movius VoiceMail Network Elements

This section describes required steps to define and configure Movius VoiceMail network elements. It also shows how the components are associated to each other and describes how the PGWs and Cisco Unified CMs are configured for Movius VoiceMail support.

Defining Movius VoiceMail Server

Movius VoiceMail server is defined in USM as an 'Movius Server'.

Procedure:

Step 1 Go to **Network > VoiceMail Servers** and click **Add**.

Or
Go to **Network > IVR** and click **Add.**

Step 2 Click **Add** coresponding to IP Unity Voice Mail Server.

Step 3 Enter the following details in the **Manage IPUnity page**:

- Host Name—<uniquename>, for example **MoviusforCity5**
- IP Addres—<VirtualATJIP>, for example **10.100.91.72**
- Description—<Moviusdescription>, for example **Movius Server for City** 5
- Config User Name—for example, **system**
- Config Password—<configpassword>, for example **ipunity**
- Software Version—for example, **IPUnity : Any**
- Maximum Lines Supported—<maxlinesup>, for example:**80000**
- CPID—**<**VoiceMailCPID**>,** for example **AUTO**
- Roles—Check both IVR Server check box and VoiceMail Server check box if both Movius Auto Attendant and Voicemail are required. If not, check just the VoiceMail Server check box.

Step 4 Click **Add**.

Note USM doesn't allow provisioning the same Movius Server with the same IP Address under different providers. As a workaround, an additional Virtual IP address for Apache on the Movius UM servers is created for the additional provider.

Note To avoid possible conflicts when creating Movius Organizations, the Movius CPID should be unique across all providers.

Following steps are required to create an additional Virtual IP Address for Apache:

Step 1 Log into the master UM server, for example: **IPCBU-UM3A**

Step 2 Go to **/etc/upsuite: cd /etc/upsuite**

Step 3 Edit the upsuite.conf file, to add an additional Virtual IP Address for Apache. For the new IP Address, following new parameters are required:

- New Service Name—for example, **PRISSCAP31_1 (**should be unique),
- New Service ID—for example, **3111**
- New Service IP—for example, **10.100.91.132** (additional Virtual IP Address)
- New Interface—for example, **eri0:62** (same network – ERI0)

Following is an example of the upsuite.conf file (the configuration for the old and new Virtual ATJ IP Address is only shown):

```
<SERVICE NAME="PRISSCAP31" SERVICE_ID="3101" TYPE="BASIC">
<SERVICE_IP IP="10.100.91.32" IF="eri0:61" ROUTE_ADD="FALSE"/>
<NODE_REF NODE_ID="1"/>
<NODE_REF NODE_ID="2"/>
<SPLIT_RES STRATEGY="LOWEST_NODE_ID"/>
<LINK NETWORK="Heartbeat_Network" ROUTE="ROUTE"/>
</SERVICE>
<SERVICE NAME="PRISSCAP31_1" SERVICE_ID="3111" TYPE="BASIC">
<SERVICE_IP IP="10.100.91.132" IF="eri0:62" ROUTE_ADD="FALSE"/>
<NODE_REF NODE_ID="1"/>
<NODE_REF NODE_ID="2"/>
<SPLIT_RES STRATEGY="LOWEST_NODE_ID"/>
<LINK NETWORK="Heartbeat_Network" ROUTE="ROUTE"/>
</SERVICE>
```

Step 4 Once this is done, restart the Movius application, Oracle, and Upbeat:

```
/etc/rc3.d/S98ipunity stop
/etc/rc3.d/S45oracle stop
/etc/rc3.d/S91upbeat stop
/etc/rc3.d/S91upbeat start
/etc/rc3.d/S45oracle start
/etc/rc3.d/S98ipunity start
```

Step 5 Repeat steps 1-4 on the slave UM server, for example: **IPCBU-UM3B**.
The Movius VoiceMail Server can be defined on the second provider using the second Virtual ATJ IP Address.

Creating PGW-Movius VoiceMail Server Hardware Group

USM uses Hardware Groups to determine which Network Components should be provisioned when a customer or location is added. For example, to add the PGW-Movius VoiceMail Server Hardware Group do the following:

Step 1 Go to **Network > Hardware Groups**, and Click **Add**.

Step 2 Enter the following in the **Hardware Group Details**:

- Name—<uniquename>, for example **e3pgwipuhwrgrpclu2**
- Description—<hwgrpdesc>, for example **City 2 PGW-Movius Hardware Group Cluster1**
- Limit usage of this Hardware Group to—**Any Action**

Step 3 In the **Available Transit Switches**, choose the PGW Movius VoiceMail System will connect to, for example **PGW-ENT2**.

Step 4 In the **Available PBX Systems**, choose the Unified CM Cluster used by the Customer, for example **e2c1**.

Step 5 In the **Available VoiceMail Systems**, choose the previously defined Movius server, for example: **MoviusforCity2**.

Step 6 In the **Available IVR Servers**, choose the previously defined Movius server, for example: **MoviusforCity2**.

Step 7 Click **Add**

Note The IVR Server must be selected as part of hardware group, if you plan to have the same Voicemail system to support Auto Attendant.

Associating Movius IVR Server with PGW

This is only required if you are using Movius AA. To associate the Movius IVR System with the PGW do the following:

Step 1 Go to **Network > IVR**.

Step 2 Click **IVR Server > Transit** in the Manage IVR Server page.

Step 3 Click **Connect** to connect the PGW to the Movius VoiceMail system, for example: for connecting **PGW-ENT2** to **MoviusforCity2.**

Associating Movius VM Server with PGW

The PGW will be configured to route the calls to the selected Movius VoiceMail System. To associate the Movius VoiceMail System with the PGW do the following:

Step 1 Go to **Network >Voicemail Server.**

Step 2 Click **VoiceMail Server > Transit** in the Manage VoiceMail Servers page.

Step 3 Click **Connect** to connect the PGW to the Movius VoiceMail system, for example for connecting **PGW-ENT2** to **MoviusforCity2**.

Associating Unified CM Cluster with PGW for MWI Support

This is required in order to send the MWI signals to the Unified CM cluster. To associate the Movius VoiceMail System with the PGW do the following:

Step 1 Go to **Network > PBX Devices**.

Step 2 Click **Connectivity** corresponding to the Unified CM cluster name, for example: **e5c2.**

Step 3 Click **PBX > Transit.**

Step 4 Click **Connect** to associate the PGW with the Unified CM cluster, for example: for connecting **PGW-ENT5** to **e5c2.**

Note To enable Voicemail MWI support for a customer, the PBX system should be connected with Transit Switch by executing "ConnectIPPBXTransit" transaction so that bdigittree required routing MWI calls are configured on PGW. If the PBX (CUCM cluster) is already associated with PGW, then it has to be disconnected and connected again. While disconnecting the PBX->Transit association, if MML transaction on PGW fails stating “MWI related digittree configurations are missing in PGW”, then do the following,

- Change the PGW (Transit-switch) to manual mode and then disconnect PBX->Transit association.
- Before associating PGW with CUCM again, remove PGW manual config mode and then Connect PGW with CUCM.
  This should resolve the issue and relevant digittrees for MWI should have been provisioned properly on PGW.

Associating Unified CM Cluster with other Unified CM clustes

This is required if a custoimer VM Service is used on different locations in different clusters.

Procedure:

Step 1 Go to **Network > PBX Devices**.

Step 2 Click **Associated Devices button** corresponding to the CCM cluster that is used while creating the Hardware Group.

Step 3 Click **Add** in the Manage Device Set page.

Step 4 Enter the following details in the Add Device Set page.

- Set Name—<CCM-AssociatedSetVM>
- Description—<CCM-AssociatedSetVM>
- Transaction Type—<Add Voice Mail Service Pilot>

Step 5 Check the remaining **CCM Cluster** boxes.

Movius VoiceMail Customer Administration

This section describes required steps to define and configure a per-Customer VoiceMail service. In the Movius Voicemail system, a per-customer organization is created. The PGW is configured to handle per-customer Movius VoiceMail related calls.

Adding VoiceMail Service

For each customer that requires VoiceMail support, a VoiceMail service is created. To define a VoiceMail Service:

Step 1 Go to **Resources >VoiceMail Services**.

Step 2 Click **Add.**

Step 3 Enter the following details:

- Name—<uniquename>, for example **e3VMServiceCus1**
- Description—<VMServicedescription>, for example **VoiceMail Service City 3 Customer 1**
- Country—<country>, for example **United Kingdom**
- Site Code—<all9stolenghtofSLC>, for example **999**
- VoiceMail Server Hardware Group—<VMServerHwGrp>, for example **e5pgwipuhwrgrpclu2**
- Extension Length—<ExtLenght>, for example **3**
- VoiceMail PSTN Dial Prefix—<VMPSTNDialPrexif>, for example **9**

Step 4 Click **Next>>**

Step 5 Enter the following details:

- VoiceMail Server—<VMServer>, for example **MoviusforCity2**
- Click **Next >>**

Step 6 Click **Add**

Allocating Internal Number for VoiceMail Pilot Number

For each customer that requires Movius VoiceMail support, an internal number should be available so that it can be used for the VoiceMail Pilot number. To allocate an internal number:

Step 1 Go to **Resources >VoiceMail Services**.

Step 2 Select the configured VoiceMail service—**e3VMServiceCus1**.

Step 3 Click **Internal Number Mgt**.

Step 4 Verify that the desired Internal Number is available. If it is not available, click **Allow**.

Adding VoiceMail Pilot Number

For each customer that requires Movius VoiceMail support, an Organization is created in Movius to uniquely identify each customer. The Movius Organization is created when the VoiceMail Pilot Number is added. To add a VoiceMail pilot number:

Step 1 Go to **Resources >VoiceMail Services.**

Step 2 Select the configured VoiceMail service, for example **e3VMServiceCus1**

Step 3 Click **Pilot Number.**

Step 4 Click **Add**

Step 5 Enter the following details:

- Select Pilot Number—<PilotNumber>, for example **Extension Number 000**
- Domain Name—<DomainName>, for example **e5cus1.com**
- Time Zone—<TimeZone>, for example **Europe/London**

Step 6 Click **Add**

Note When the Movius VoiceMail Pilot Number is added, a Movius Organization is created in Movius. For handling MWI and Outgoing Calling the organization is associated to a Call Agent (PGW) based on the values specified through the model in the following fields:

```
<mwiCAID>101</mwiCAID>
<outgoingCAID>101</outgoingCAID>
```

where "101" represents the Call Agent ID.

Ensure that the Call Agent for MWI and Outgoing Calls are updated with proper Call Agents. If not updated properly, do the following for the newly created Organization under second CA whose ID is 102.

Step 1 Go to **Organization.**

Step 2 Select the newly created organization, for example **e3VMServiceCus1.**

Step 3 Click **Edit**

Step 4 In the Out Call, set the **Outgoing call Agent**, for example: **PGW-ENT3**

Step 5 In the Message Waiting Indication, set the **Default MWI Call Agent**, for example: **PGW-ENT3**

Step 6 Click **Update.**

Note Due to AXL API limitations, The USM cannot create the MWI On and MWI Off devices in Unified CM. Furthermore it provides no indication to the end user how to configure this, and MWI will not work without it. Currently, the only reliable method to determine these numbers is to log in to PGW as mgcusr, change directory to /opt/CiscoMGC/etc/cust_specific and to execute the following command to

determine the MWI On and MWI Off numbers per cluster: grep “MWI O” *. For each CCM Cluster, it will be necessary to manually create an MWI ON & MWI OFF Device with these numbers. These numbers should be configured in the “AllowMWI” partition and the Output CSS should be set to “IncomingToCluster” as this will allow the devices to turn any IP Phone MWI light on or off. For example:

On the PGW:

```
pgw-ent8m% cd ../etc/cust*
pgw-ent8m% pwd
/opt/CiscoMGC/etc/cust_specific
pgw-ent8m% grep "MWI Os" *
10519aaaaaa:;
```

001 Constant Digit string used within the "MWI On" number. The MWI On number on each cluster will be 109999666001 where the first 2 digits (i.e.10) is CPID of the CUCM cluster.

```
10519aaaaaa:;
```

002 Constant Digit string used within the "MWI Off" number. The MWI Off number on each cluster will be 109999666002 where the first 2 digits (i.e.10) is CPID of the CUCM cluster.

Adding and Moving E.164 Number for VoiceMail Pilot Number

To enable users to access VoiceMail from PSTN, an E164 number has to be associated with the VoiceMail Pilot Number.

Procedure:

Step 1 Go to **Resources > E.164 Inventory**.

Step 2 Select a Country from the drop down list.

Step 3 Click **Next**.

Step 4 Select National Area Code—<areacode>, for example **1402**.

Step 5 Click **Next**.

Step 6 Click **Add Number**.

Step 7 Enter the following details in the E164 Telephone Number page:

- National Area Code— Leave the previously selected area code
- Local Number (in this Area)—<LocalNumber>, for example **610000**

Step 8 Click **Add**.

To make the E164 Number available to the Customer VoiceMail Service, do the following:

Step 1 Go to **Resources > E.164 Inventory**.

Step 2 Select a Country in the E164 Telephone Numbers page.

Step 3 Click **Next**

Step 4 Select National Area Code from the drop down list, for example **1630**.

Step 5 Click **Next**.

Step 6 Click **Move Number Range**.

Step 7 Enter the following details in the E164 Telephone Numbers page:

- Selected Location—Select the required customer VoiceMail service, for example **UKReseller1 : UK-Cust1 : e3VMSCust1 : e3VMSCust1**
- Start of Number Range—Select the previously created E164 number, for example **1402610000**
- End of Number Range—Select the same number, for example **1402610000**

Step 8 Click **Move.**

Associating E.164 Number to VoiceMail Pilot Number

The E.164 number created in the previous step can now be associated with the VoiceMail Pilot Number. To associate the E164 number with the VoiceMail pilot number to the following:

Step 1 Go to **Resources >VoiceMail Services**.

Step 2 Select the configured VoiceMail service, for example: **e5VMServiceCus1**

Step 3 Click **PSTN Number Mgt.**

Step 4 Click **Range Assoc.**

Step 5 Select the National Code, for example **1402**.

Step 6 Click **Next >>**

Step 7 Enter the following details:

For the Range Start and Range End select:

- Previously configured PSTN Number: <PSTNNumber>, for example **1402610000**
- Extension Number used for the VoiceMail Pilot Number <VMPilotEx>, for example **000**

Step 8 Click **Select**

Adding Default VoiceMail Class of Service

To add support for the Default Movius VoiceMail Class of service (CoS):

Step 1 Go to **Resources >VoiceMail Services**.

Step 2 Select the configured VoiceMail service, for example: **e5VMServiceCus1**

Step 3 Click **VoiceMail Profile Mgt**

Step 4 Check the **Standard VoiceMail** check box

Step 5 Click **Update**

Note Basic VoiceMail is not configured on Hosted UCS 7.1 (a) Model.

Movius VoiceMail Location Administration

This section describes required steps to define and configure a per-Location VoiceMail service. It also details how VoiceMail support is added to users.

Adding Location VoiceMail Service

For each location that requires VoiceMail support, the VoiceMail service created at the customer level is enabled. To add VoiceMail Service to a location:

Step 1 Go to **General Administration > Locations.**

Step 2 Select a VoiceMail support Location.

Step 3 Click **Advanced Mgt.**

Step 4 Click **VoiceMail Mgt.**

Step 5 Click **Add**

Step 6 Enter the following details:

- Name: <LocVMService>, for example **e3VMS1loc**1
- Select a VoiceMail Service: <CusVMService>, for example **e3VMSCus1**

Step 7 Click **Next**

Step 8 Select VoiceMail Pilot Number: <VMPilot>, for example **Extension Number 099**

Step 9 Click **Add and Enable.**

Note This action will cause disruption to end users

Adding VoiceMail Account to User

For each user that requires VoiceMail support, a VoiceMail account is created.

Caution Before a VoiceMail Account can be added to a user, the user should either be associated with a phone or have extension mobility.

To add a VoiceMail Account for a User do the following:

Step 1 Go to **Location Administration > Users**.

Step 2 Click **Add** corresponding to **Has VoiceMail** for the user you want to add a VoiceMail account (for example user1)

Step 3 Enter the following details:

- Password—<VMPassword>, for example **12345**
- Line Number—<LineNumber>, for example **004**
- Service Type—<ServiceType>, for example **StandardVoiceMail**

- Click **Add**

Note After provisioning VoiceMail for a phone user, the SIP lP links created on the PGW should be made In Service (IS), so that VoiceMail calls of phone user are routed to IP Unity Server. Execute the following MML command on the PGW. PGW-ENT2M mml> set-iplnk:moviussiplnk-*:IS

Sometimes, IP links does not come to "In Service" state. In such cases, restart the PGW MGC service.

For example,

```
PGW-ENT2M% su - root
Password:
Sun Microsystems Inc.   SunOS 5.10      Generic January 2005
# /etc/init.d/CiscoMGC stop
# /etc/init.d/CiscoMGC start
```

Provisioning Movius Auto Attendant

The Auto Attendant feature automatically answers all incoming calls to its pilot number and routes such calls to appropriate destinations based on the configured menu.

Hosted UCS Auto Attendant (AA) uses the same Voicemail Hardware [Movius (IP Unity) platform] to provide the Auto Attendant functionality. Licenses are required for Auto Attendant functionality.

USM performs the provisioning of the telephony part for Auto Attendant, for example, creating an Auto Attendant service and associating a pilot number for it. All Auto Attendant related configurations including setting Auto Attendant menus, uploading audio files, and defining actions based on DTMF input, are permormed through Movius web interface.

Be aware of the following important characteristics of Auto Attendant:

- Auto Attendant in Hosted UCS is based on Location and is dependent on Voicemail. For a location to have Auto Attendant, it must have Voicemail.
- Auto Attendant uses the same Voicemail SLC (Site Location Code)
- Multiple Pilot numbers can be assigned per Auto Attendant.
- Auto Attendant can have multiple menus.

Following Menu Features can be Configured in HUCS:

- Dial Configured Phone Number
- Play Announcement
- Announce and Disconnect
- Jump to Menu
- Jump to a different Auto Attendant
- Go Back to previous Menu
- Do Nothing
- Invalid Option

Auto Attendant Provisioning is carried out in the following phases:

Movius Auto Attendant configuration on USM

This section describes required steps to define and configure a per-Customer Auto Attendant service. Configure the VoiceMail services in a location before creating an Auto Attendant Service Pilot for a location. This section covers the following topics:

Adding Auto Attendant Service

For each customer requiring AA support, an AA service is created.

Procedure:

Step 1 Go to **Resources > Auto Attendant Services**.

Step 2 Click **Add**

Step 3 Enter the following details:

- Name—<uniquename>, for example **e3AAServiceCus1**
- Description—<AAservicedescription>, for example **AuttoAttendant Service City 3 Customer 1**
- Country—<country>, for example **United Kingdom**
- IVR Server Hardware Group—<VMServerHwGrp>, for example **pgw3-e3c4-hwgrp-ipunity**
- Click **Next >>**
- Select the IVR Server fom the drop-down list, for example: **MoviusforCity3**
- Click **Next >>**

Step 4 Click **Add.**

Allocating Internal Number for Auto Attendant Pilot Number

For each customer requiring Movius Auto Attendant support, an internal number should be available so that it can be used for the Auto Attendant Pilot number. The Auto Attendant pilots are extensions associated to a Voicemail Service. The Auto Attendant pilot that is created for a location is selected from the enabled extension from the Voicemail Service associated to the location.

Procedure:

Step 1 Go to **Resources > VoiceMail Services**.

Step 2 Select the VoiceMail service associated to the location, for example: **e3VMServiceCus1.**

Step 3 Click **Internal Number Mgt**.

Step 4 Verify that the desired Internal Number is available. If it is not available, click **Allow**.

Adding Auto Attendant Service Pilot Number

To create a pilot for an Auto Attendant Service on a customer, it is required to select a location. The location should have a VM Service associated to it, otherwise USM would not show any available extensions to select. The pilot number will be one of the extensions of that VM Service. If the extension that we want to use is not available then allow the internal number as explained in the topic Allocating Internal Number for Auto Attendant Pilot Number, page 6-20

Procedure:

Step 1 Select the configured Auto Attendant service, for example: **e3AAServiceCus1**

Step 2 Click **Pilot Numbers**

Step 3 Click **Add**

Step 4 Select a division and the location where we want to create that AA Service Pilot Number.

Note The location needs to have a VM Service allocated.

Step 5 Enter the following details:

- Select Pilot Number—<PilotNumber>, for example **Extension Number 098**
- Enter a Name—for example, **AACust1Div1Loc1**

Step 6 Click **Add.**

Figure 6-3 USM – Output of adding AA pilot for a location

Note The AA pilot FINT number **150100401099** is shown at the end in the above figure. Write down that number as it is required in the later steps.

Adding and Moving E164 Number for Auto Attendant Pilot Number

To enable users to access Auto Attendant from PSTN, an E164 number has to be associated with the Auto Attendant Service Pilot Number.

To add an E164 Number do the following:

Step 1 Go to **Resources > E.164 Inventory.**

Step 2 Select a Country from the drop-down list.

Step 3 Click **Next**

Step 4 Select National Area Code—<areacode>, for example **1630.**

Step 5 Click **Next**.

Step 6 Click **Add Number**.

Step 7 Enter the following details:

- National Area Code—Enter the previously selected area code
- Local Number (in this Area):<LocalNumber> for example, **610000**

Step 8 Click **Add**.

To make the E164 Number available for the AA, it needs to be made available to the Customer VoiceMail Service associated to the location.

Procedure

Step 1 Go to **Resources > E.164 Inventory.**

Step 2 Select a Country from the drop down list.

Step 3 Click **Next.**

Step 4 Select National Area Code—<areacode> for example, **1630**.

Step 5 Click **Next**.

Step 6 Click **Move Number Range**.

Step 7 Enter the following details:

- Selected Location—Select the required Customer VoiceMail Service, for example **UKReseller1 : UK-Cust1 : e3VMSCust1 : e3VMSCust1**
- Start of Number Range—Select the Previously created E164 number, for example **1630610000**
- End of Number Range—Select the same Select the same number, for example **1630610000**

Step 8 Click **Move.**

Associating E.164 Number to Auto Attendant Pilot Number

The E.164 number created in the previous step can now be associated with the Auto Attendant Pilot Number.

Procedure:

Step 1 Go to **Resources >VoiceMail Services.**

Note Ensure that you are associating the E.164 number to the VoiceMail Pilot Number for the correct Customer.

Step 2 Select the configured VoiceMail service; for example, **e5VMServiceCus1**

Step 3 Click **PSTN Number Mgt.**

Step 4 Click **Associate Range.**

Step 5 Select the National Code, for example **1402**

Step 6 Click **Next >>**

Step 7 Enter the following details:

- Range Start—Select Previously configured PSTN Number: <PSTNNumber>, for example **1630610000**
- Range End—select the same PSTN Number if you want to associate a single PSTN number to an extension otherwise select the PSTN range end. In this case, **1630610000**
- Extension Number used for the AutoAttendant Pilot Number <AAPilotEx>, for example **000** for both Range start and Range end
- Click **Submit**

Repeat this step for all Customers using the Movius VoiceMail system on all Hosted UCS platforms (Providers).

Auto Attendant configuration on Movius server

This section explains how to configure the Auto Attendant on the Movius server. The following topics are explained in this section.

Creation of Auto Attendant on Movius organization.

We should know the organization where we have to create the AA. On non-shared building locations, the organization name is same as the Voicemail Service. We have to know the name of this Voicemail service in order to find the organization on the Movius Server. To know the Location where a pilot is created do the following:

Step 1 Go to **Resources > Auto Attendant Services**

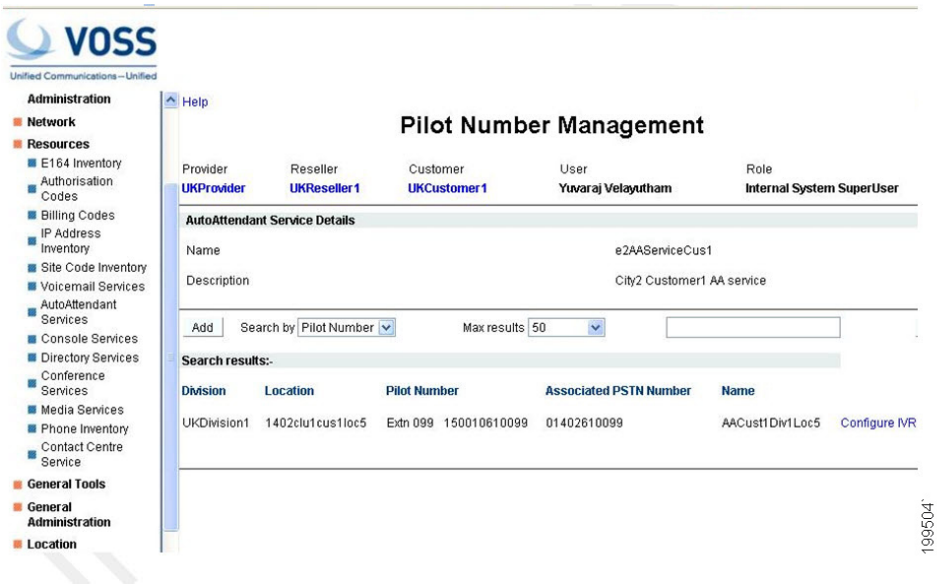
Step 2 Select the customer of the AA Service.

Step 3 Select the AA Service where we created a pilot , for example **e3AAS2Cust1**

Step 4 Click **Pilot Numbers**

All pilots created for an AA Service with the location where they were created and the FINT of the pilot Number are shown in the figure below:

Figure 6-4 USM Server – List of pilots for an AA Service. FINT number of Pilot highlighted.



To know the name of the organization do the following:

Step 1 Go to **General Administration > Locations**.

Step 2 Select location where the AA Service Pilot is created

Step 3 Click **Advanced Mgt.**

Step 4 Click **VoiceMail Mgt.**

On right column we can see the VoiceMail Service Name associated to that location. This is the name of the organization created on Movius.

Once we gathered all these information, we can log into Movius Mereon UM Configuration page. The system configuration page can be accessed via:

http://<IP_Unity_GUI_IP_Address>/sysconfig/webconfig/login-javascript.jsp

Note For the HUCS Solution test Movius VoiceMail System 4.2, the following IP address, Username, and password can be used:

- NAT IP—**10.78.97.70** (Internal IP: 10.100.91.72)
- Username—**system**
- Password—**ipunity**

To create an Auto Attendant on the organization do the following:

Step 1 Go to **Organizations** on the left side menu and search for the organization with the same name as the VM Service (i.e e3VMS2).

Step 2 Click **Login.**

Step 3 When prompted <Organization>, click **OK.**

Step 4 Select **Auto Attendant** on left side menu.

Step 5 Click **Add**.

Step 6 Enter the following:

- Auto Attendant name—for example, **e3AAServiceCust1**
- Auto Attendant Phone Number—for example, **150100401099** (Enter the FINT number of the pilot)
- Phone Type—**Public**
- Transfer Type—Monitoring

Step 7 Click **Save.**

Figure 6-5 Mereon UM Configuration – Adding an Auto Attendant in an organization.

Adding AA Announcement File

Note Auto Attendant announcement can be an administrator recorded audio file based on requirements or the administrator can use the default announcement file supplied by Movius.

The following steps show how to add an announcement file to an Auto Attendant service.

Step 1 Click **Auto attendant** on the left side menu.

Step 2 Click **Announcement Management**.

Step 3 Click **Add,** to add a single announcement file.

Step 4 Enter the name of the announcement file ending with ".wav" and click **OK**.

Step 5 Click **Upload**.

Step 6 Browse the file from the local machine and click **Upload Announcement.**

Configuring a Menu for the AA

Once created the Auto Attendant, we can configure the menu for this Auto Attendant. The menu should be configured depending on the requirements of the client.

For the announcement prompted when the AA is dialled, click on Announcement Management to import the different wave files.

If you want the announcement to be played when the user dials AA pilot number, configure the menu:

Procedure:

Step 1 Click **Menu Configuration** on the respective Auto attendant service

Step 2 Click **Menu** which is already added. If not, add a new menu.

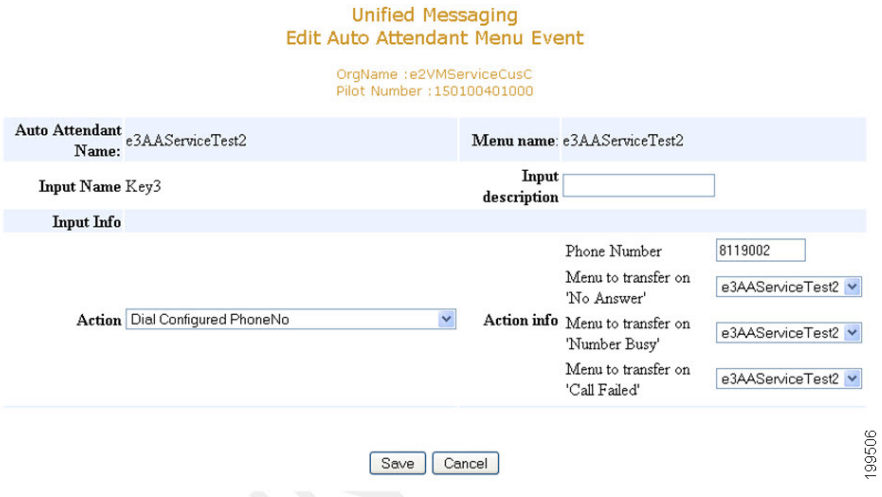
Step 3 Click **Edit Configuration Parameters** in the Menu Configuration page.

Step 4 Click **Configure Initial Action**

Step 5 On the pop-up GUI, select the action **Play Announcement** and Add announcement file name.

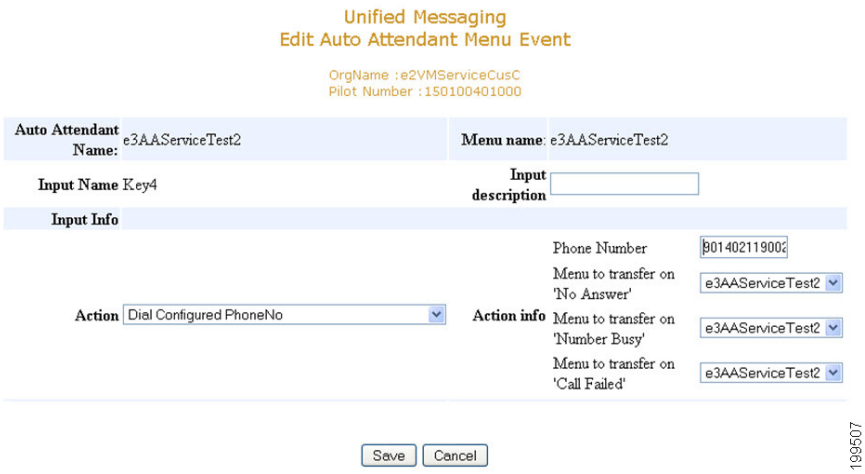
The figure 6-6 below illustrates configuring AA to dial 8119002 by pressing 3, for example, when the intersite prefix is 8 and the extension number is 002 in the location 119.

Figure 6-6 Movius UM Configuration - Configuring AA to dial 8119002 when presssing 3



The figure 6-7, below illustrates configuring AA to dial 901402119001 by pressing 4, for example, when the PSTN breakout code is 9 and the PSTN Number is 01402119002.

Figure 6-7 Movius UM Configuration - AA to dial 901402119002 when pressing 4



Adding FSM Keys.

Log into Movius OAM Configuration page. The system configuration page can be accessed via: http://<IP_Unity_GUI_IP_Address>/oam

Note For the HUCS Solution Test Movius VoiceMail System 4.2, the following IP address, Username, and password can be used:

- NAT IP—**10.78.97.70** (Internal IP: 10.100.91.72)
- Username— **ipunity**
- Password—**ipunity**

To create an Auto Attendant on the organization do the following:

Step 1 Go to **Configuration > Framework Configuration > Framework Application Parameters > ipunity.apps.vm.UMApp > ipunity.apps.vm.AutoAttendantCall > FSM Keys**

Step 2 Click **Add**

Step 3 Enter the following:

- App Key—Enter FINT number of the AA Pilot number
- Node—**Virtual IP**

Step 4 Click **Update.**

Provisioning Movius Auto Attendant with SBC

This section describes the provisioning steps required to configure SBC, PGW and Movius. The following topics are covered in this section:

SBC Configuration in ASR 1002

This topic describes the steps required to configure ASR 1002 as Session Boarder Controller.

Create a SBC Interface

Access ASR 1002 through telnet session and use the following command to create SBC interface which will be used for signalling and media by SBC.

```
interface SBC0
    ip address 100.1.1.20 255.255.255.0 secondary //IP Address to be used for media
    ip address 100.1.1.10 255.255.255.0
!
interface GigabitEthernet0/0/0
    description to city2sbc
    ip address 10.190.1.50 255.255.255.0 secondary //IP Address to be used for signalling
    ip address 10.190.1.46 255.255.255.0 //Primary Interface address
    negotiation auto
    no mop enabled
!
```

Create SIP Profiles and Headers

Use the following commands to create SIP Profiles and Headers.

```
sbc city2sbc //city2sbc is the SBC name
 sbe
   sip header-profile headerprofile1
    description pass session-expiry header
    header Allow entry 1
     action as-profile
    header Reason entry 1
     action as-profile
    header SERVER entry 1
     action as-profile
    header DIVERSION entry 1
     action as-profile
    header Allow-Events entry 1
     action as-profile
```

```
 header session-expiry entry 1
  action as-profile
 header Remote-Party-ID entry 1
  action as-profile
 header Session-Expires entry 1
  action as-profile
 header RESOURCE-PRIORITY entry 1
  action as-profile
 header P-Asserted-Identity entry 1
  action as-profile
sip method-profile method1
 description pass default methods
 pass-body
 method INFO
  action as-profile
 method PRACK
  action pass
 method REFER
  action as-profile
 method NOTIFY
  action as-profile
 method UPDATE
  action as-profile
 method SUBSCRIBE
  action as-profile
sip option-profile option1
 description pass default options plus timer
 option TIMER
 option REPLACES
```

Create SIP adjacency for PGW and Movius

Two SIP adjacencies are needed to interact with PGW and Movius. Following commands are used to create the adjacencies. The SIP headers and profiles created in the previous section are attached in both the adjacencies.

```
sbc city2sbc
 sbe
    adjacency sip pgw //pgw – adjacency name to interact with PGW
        force-signaling-peer
        nat force-on
        preferred-transport udp
        signaling-address ipv4 10.190.1.50//Ip address created in sec 2.1 for signalling
        statistics method summary
        signaling-port 5060
        remote-address ipv4 10.120.2.0 255.255.255.0 //Ip address for PGW
        signaling-peer 10.120.2.13 //Ip address of PGW
        account pgw
        sipi passthrough
        media-late-to-early-iw outgoing
        attach
    adjacency sip movius //movius – adjacency name to interact with Movius
        force-signaling-peer
        nat force-on
        header-profile inbound headerprofile1
        header-profile outbound headerprofile1
        method-profile inbound method1
        method-profile outbound method1
        option-profile ua inbound option1
        option-profile ua outbound option1
        preferred-transport udp
```

```
        signaling-address ipv4 10.190.1.50 //Ip address created in sec 2.1 for signalling
        statistics method summary
        signaling-port 5060
        remote-address ipv4 10.100.91.0 255.255.255.0 //Ip address for Movius
        signaling-peer 10.100.91.72 //Ip address of Movius
        account movius
        sipi passthrough
        media-late-to-early-iw incoming
        media-late-to-early-iw outgoing
        attach
```

Create Codec List, Cac policy and Call policy

Following commands are used to create the codec list, active call policy and the cac policy.

```
cac-policy-set 1
    first-cac-table table
    first-cac-scope call
    cac-table table
    table-type limit account
    entry 1
        match-value movius
        max-bandwidth-per-scope 64009 Gbps
        max-updates-per-call 429496729
        max-channels-per-scope 429496729
        caller-codec-list allowcodec
        callee-codec-list allowcodec
        callee-hold-setting hold-c0
        caller-hold-setting hold-c0
        action cac-complete
    entry 2
        match-value pgw
        max-bandwidth-per-scope 64009 Gbps
        max-updates-per-call 429496729
        max-channels-per-scope 429496729
        caller-codec-list allowcodec
        callee-codec-list allowcodec
        callee-hold-setting hold-c0
        caller-hold-setting hold-c0
        action cac-complete
    complete
    active-cac-policy-set 1
    call-policy-set 1
    first-call-routing-table start-table
    rtg-src-adjacency-table start-table
    entry 1
        action complete
        dst-adjacency pgw
        match-adjacency movius
    entry 2
        action complete
        dst-adjacency movius
        match-adjacency pgw
        complete
    active-call-policy-set 1
    sip timer
    udp-response-linger-period 5000
!
!
    codec list allowcodec
        codec telephone-event
        codec PCMU
!
```

Create Media Address for SBC

Following commands are used to create the media address.

```
sbc city2sbc
    media-address ipv4 100.1.1.20
    activate
```

Movius AA Configuration

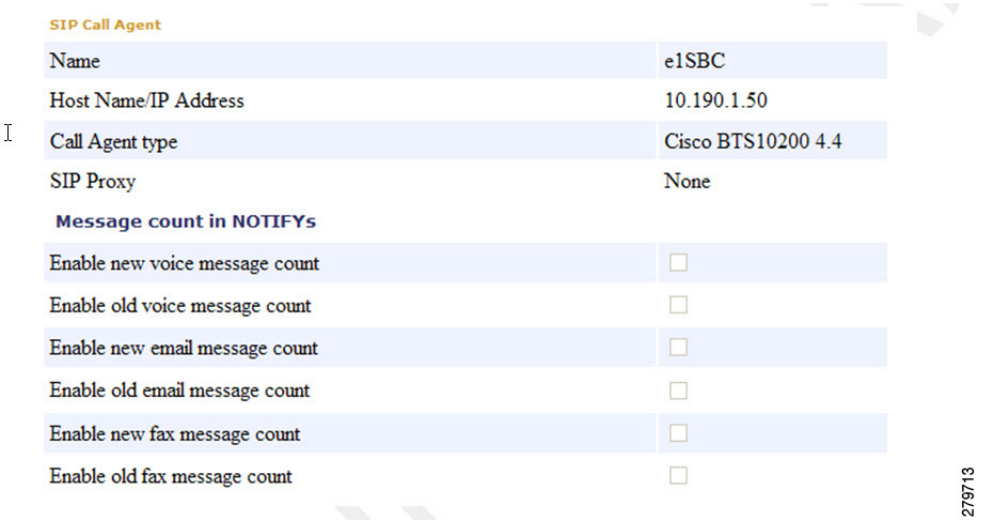
This topic describes the required steps to edit the configuration in Movius Auto Attendant to work with SBC. Before editing any configuration, configure the movius auto attendant and voice mail using the document “HUCS_7_1_A-Movius_VM_and_AA_Provisioning_Guide.doc”. Make sure the auto attendant and voice mail calls are working successfully with Cisco PGW as call agent in movius (Without SBC).

If the AA and Voice mail calls are working successfully, use following steps to edit the configuration to work with SBC.

Step 1 Click on “Call Agent” on the left hand side menu and then click “SIP Call Agent”.

Step 2 Add one SIP Call Agent for SBC as shown below and click on “Save” button.

Figure 6-8 Add SIP call Agent for SBC



Step 3 Click on “Organization” and select the previously created Organization.

Step 4 Click on “Edit” to modify the “Outgoing Call Agent” to “e1SBC”. To save the changes, click on “Update”.

PGW Configuration

This topic describes the required steps to modify the configuration in Cisco PGW to integrate Movius Auto Attendant and SBC. Before making any changes, make sure the Auto Attendant and voice mail calls are working fine without SBC.

- Log on to Cisco PGW as mgcusr and type “mml” and press “Enter”.
- Check the configured SIP profiles using the following command and use the same sip profile name in the next step.
  mml> prov-rtrv:profile:"all"
- Use the following commands to disable 183 Support and enable 100rel support in the sip profiles.

```
mml> prov-sta::srcver="active",dstver="AASbc_config1"
mml>prov-ed:profile:name="moviusippf3001",type="SIPPROFILE",support183="0",supportreliable
100="SUPPORTED"
mml>prov-ed:profile:name="moviusippf3002",type="SIPPROFILE",support183="0"
mml> prov-cpy
mml> quit
```