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Installing the Cisco Voice CORBA Gateway

This chapter describes how to install Cisco Voice CORBA Gateway (Cisco Voice CORBA Gateway) and contains the following sections:

Requirements

Requirements exist in the following areas:

- Platform Requirements
- Software Requirements
- Development Tools

These requirements are described in the following paragraphs.

Platform Requirements

The platform resources for Cisco Voice CORBA Gateway are the same as those of the EM. For specific requirements, refer to the appropriate user guide.

Software Requirements

The Cisco Voice CORBA Gateway is compatible with the following software:

- Cisco EMF, Version 3.2 Service Pack 4
- Cisco Media Gateway Manager, Version 3.0 or 3.0.1

The only software required for this installation is the Cisco Voice CORBA Gateway, Version 2.0.

Development Tools

The following tools are required to develop an application for Cisco Voice CORBA Gateway:

- Orbix2000 for SunPro SPARCompliler C++
- Orbix web for Java compiler

Installation Tasks

To install Cisco Voice CORBA Gateway, perform the following tasks:

These tasks are described in the following sections.

Installing Prerequisite Software

Before installing Cisco Voice CORBA Gateway, install and start the following software:

- Cisco EMF, Version 3.2
- Cisco Media Gateway Manager, Version 3.0 or 3.0.1

Installing the Cisco Voice CORBA Gateway Server

Perform the following steps to install Cisco Voice CORBA Gateway:

Step 1 Log in as the root user.

Step 2 Change to the install directory on the CD ROM.

```
cd <CDROM>/CSCOvcg/install
```

Step 3 Start the installation script and follow the onscreen instructions. To start the script, enter the following command:

```
./vcginstall
```

Tip For help, enter **./vcginstall -h**

A listing of available installation options displays.

Step 4 At the prompt, enter the appropriate installation option. Enter 1 to install the Cisco Voice CORBA Gateway server and client.

Following the completion of installation, the Cisco Voice CORBA Gateway server starts.

Restarting the Servers

To restart both of the Cisco Voice CORBA Gateway servers (ObjectAccess and McgNotifyServer), follow these steps:

Step 1   Log in as the root user.

Step 2   Stop the servers as follows:

a.   Change to the `<CEMFROOT>/VCG/install` directory. For example:

```
cd /opt/cemf/VCG/install
```

b.   Run the following command:

```
./vcginstall -d
```

Step 3   Start the servers as follows:

a.   Change to the `<CEMFROOT>/install` directory. For example:

```
cd /opt/cemf/install
```

b.   Run the following command:

```
./vcginstall -u
```

To restart Cisco Voice CORBA Gateway servers (ObjectAccess and McgNotifyServer) individually, follow these steps:

Step 1   Log in as the root user.

Step 2   Change to the `<CEMFROOT>/bin` directory. For example:

```
cd /opt/cemf/VCG/bin
```

Step 3   Run the following command:

```
./cemf shell
```

Step 4   Restart the ObjectAccess processes individually:

a.   Stop the ObjectAccess by entering the following command:

```
./sysmgrClient -k ObjectAccess
```

b.   Start the ObjectAccess by entering the following command:

```
./sysmgrClient -x ObjectAccess
```

Step 5   Restart the McgNotifyServer processes individually:

a.   Stop the McgNotifyServer by entering the following command:

```
./sysmgrClient -k McgNotifyServer
```

b.   Start the McgNotifyServer by entering the following command:

```
./sysmgrClient -x McgNotifyServer
```

Removing the Cisco Voice CORBA Gateway Server

To remove Cisco Voice CORBA Gateway, follow these steps:

Step 1   Log in as the root user.

Step 2   Change to the `<CEMFROOT>/VCG/install` directory. For example:

`cd /opt/cemf/VCG/install`

Step 3   Run the deinstallation script.

`./vcginstall -r`

Testing the Installation

The Cisco Voice CORBA Gateway distribution contains client and event consumer binaries for testing the installation. These binaries are present in the /<CEMF_ROOT>/VCG/bin directory.

Using the Client Test Program

The client program reads the specified XML file (by default ../XMLinput/inputfile.txt), and invokes, CORBA calls to the Cisco Voice CORBA Gateway interface. The first two lines of the input file specify the operation to be performed, the containment path, and the EMS object. Remember that the containment path and the EMS object identifiers will have values specific to the deployed network. The XML file can be saved in the XMLinput directory with the file name sample.txt. An example XML file contents are shown below for ACTION operation on a VISM card.

```
ACTION
cmgm:/CMGM_Site_Saratoga/172.16.38.111/VISM_Slot_2
<ACTIONREQUEST>
<ACTIONNAME>AddDS1LineAction</ACTIONNAME>
<OBJECTATTRIBUTE name="SNMP:RFC1406-MIB.dsx1LineIndex">1</OBJECTATTRIBUTE>
<OBJECTATTRIBUTE name="SNMP:RFC1406-MIB.dsx1LinesNumRepetition">2</OBJECTATTRIBUTE>
</ACTIONREQUEST>
```

To test the installation using the client program, follow these steps:

Step 1   Change to the `<CEMF_ROOT>/VCG/bin` directory. For example:

`cd /opt/cemf/VCG/bin`

Step 2   Start the client by entering the following command:

`./client [-host localhost] [-useNS true] [-file filename]`

For example:

`./client -file ../XMLinput/samplefile.txt`

Note   The -useNS option specifies use of a naming service.

The client program returns connection information, followed by this string:

```
operation:ACTION
oid:cmgm:/CMGM_Site_Saratoga/172.16.38.111/VISM_Slot_2
inXML is:<ACTIONREQUEST><ACTIONNAME>AddDS1LineAction</ACTIONNAME><OBJECTATTRIBUTE name=
"SNMP:RFC1406-MIB.dsx1LineIndex">11</OBJECTATTRIBUTE></OBJECTATTRIBUTE><OBJECTATTRIBUTE
name= "SNMP:RFC1406-MIB.dsx1LinesNumRepetition">1</OBJECTATTRIBUTE></ACTIONREQUEST>
        START TIME: Sun Dec 10 17:26:24 2000
        END TIME: Sun Dec 10 17:26:26 2000
        TIME LAPSED: 2 sec
result:1
outargs:<OPERATIONRESULTS><RESULTUNIT><ACTIONRESULTS> DS1 Add SUCCEEDED with
status=1</ACTIONRESULTS></RESULTUNIT></OPERATIONRESULTS>
```

Using the Consumer Test Program

Using the consumer program provided with Cisco Voice CORBA Gateway, test event notification from Cisco Voice CORBA Gateway. Upon receiving events, the program displays the event messages.

To use the consumer program follow these steps:

Step 1   Go to the /<CEMF_ROOT>/cemf/bin directory. For example:

cd /opt/cemf/bin

Step 2   Open a CEMF shell.

./cemf shell

Step 3   Change to the /<CEMF_ROOT>/VCG/bin directory. For example:

cd /opt/cemf/VCG/bin

Step 4   Run the Consumer program as follows:

- Run the Consumer program for ObjectEvents by entering the following command:

    ./OBJEVConsumer

- Run the Consumer program for AlarmEvents by entering the following command:

    ./ALMEVConsumer

The consumer program returns connection information, followed by events, as they occur. The following example shows two events:

```
Attribute value change Event:
-----------------------------

 consumer: Received Event Batch # 0

 FIXED HEADER
 Domain_Type: MCG
 Event_Type: GenericObjectEvent
 Event_Name:

 VARIABLE HEADER
 Variable header length is 0

 FILTERABLE BODY FIELDS
 Filterable body length is 6
 Filterable Fields:0: CLASS = CMGMMGX8850
 Filterable Fields:1: PATH = cmgm:/CMGM_Site_Saratoga/172.17.38.111
 Filterable Fields:2: PARENT = cmgm:/CMGM_Site_Saratoga
 Filterable Fields:3: OID = 0x00000101:0x0000100f
 Filterable Fields:4: EVENTTYPE = AttributeValue-Change
 Filterable Fields:5: TIMESTAMP = Wed Dec 06 13:00:42 2000

 REMAINING BODY: with len= 1
 Attr-0-Name: SYSTEM-SCALARS-MIB.systemNodeName Value: MMS

Alarm Creation Event:
---------------------
consumer: Received Event Batch # 3

 FIXED HEADER
 Domain_Type: MCG
 Event_Type: AlarmEvent
 Event_Name:

 VARIABLE HEADER
 Variable header length is 0

 FILTERABLE BODY FIELDS
 Filterable body length is 11
 Filterable Fields:0: CLASS = CMGMSCC
 Filterable Fields:1: PATH = cmgm:/CMGM_Site_Saratoga/172.17.38.111/SCC_Slot_9
 Filterable Fields:2: OID = 0x00000101:0x0000103a
 Filterable Fields:3: TIMESTAMP = Wed Dec 06 13:05:02 2000
 Filterable Fields:4: EVENTTYPE = Alarm-Creation
 Filterable Fields:5: STATUSINFO = ACTIVE
 Filterable Fields:6: ACKSTATUSINFO = UNACK
 Filterable Fields:7: SEQUENCENUMBER = 2295
 Filterable Fields:8: SEVERITY = minor
 Filterable Fields:9: PROBABLECAUSE = cardMinorAlarm
 Filterable Fields:10: ADDITIONALINFO = MGX8850 Card Minor Alarm
```

Setting Up Cisco Voice CORBA Gateway to Upload Using SFTP

To use the Secure Transfer Mode (i.e., SFTP) as the transport for the UPLOAD action, follow the steps below:

Step 1 Install the SSH package.

✎
Note   OpenSSH v3.4p1 is tested with Cisco Voice CORBA Gateway.

Step 2 Create a soft link for $SSH_INSTALL_BIN/sftp under $VCG_INSTALL/bin/sftp by entering the following:

```
ln -s /usr/local/bin/sftp /opt/cemf/VCG/bin/sftp
```

Step 3 Set the TransferMode variable value to SFTP in $CEMF_INSTALL/config/init/ObjectAccess.ini by entering the following:

```
TransferMode = SFTP
```

Step 4 Restart ObjectAccess Server.

Step 5 Ensure that sshd is running on the client and server machines.

Step 6 Enter the following commands:

```
cd $VCG_INSTALL/bin
./sftp <username>@<client's hostname>
```

The following message displays:

```
The authenticity of host '<hostname> (IP Address of the client host)' can't be
established.
RSA key fingerprint is ea:92:2b:bc:8e:dc:ae:f6:60:c9:ef:fb:57:5c:aa:d4.
Are you sure you want to continue connecting (yes/no)?"
```

Step 7 Enter the following at the prompt:

```
yes
```

If on a Client machine where sshd is not running, the following message displays:

```
connect to address (IP Address of the client host) port 22: Connection refused"
```

✎
Note   To use the default FTP again, set the TransferMode to FTP.