



# CHAPTER 3

## Installing, Migrating, and Uninstalling HCM Mediation

This chapter describes how to install, migrate data from HCM 1.0, and uninstall HCM Mediation. It contains the following sections:

- [HCM Mediation Server Requirements, page 3-1](#)
- [HCM Mediation Default Ports, page 3-2](#)
- [Installing and Starting HCM Mediation, page 3-3](#)
- [Modifying Database User Password in the HCM Mediation Configuration File, page 3-6](#)
- [Configuring the application.properties File, page 3-7](#)
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- [Migrating HCM Mediation Data from HCM 1.0 to HCM 1.1, page 3-11](#)
- [Uninstalling HCM Mediation, page 3-12](#)

## HCM Mediation Server Requirements

[Table 3-1](#) lists the server requirements for the HCM Mediation component.

**Table 3-1** HCM Mediation Server Requirements

Requirement	Notes
Operating System (VM on UCS)	VM on UCS: Red Hat Enterprise Linux 5.3 (64-bit). It is recommended that you read the following guides while hardening Linux: <ul style="list-style-type: none"><li>• <a href="#">Guide to the Secure Configuration of Red Hat Enterprise Linux 5</a></li><li>• <a href="#">Hardening Red Hat Enterprise Linux 5</a></li></ul>
Hardware	<ul style="list-style-type: none"><li>• 8GB RAM</li><li>• 2.33GHz</li></ul>
Database	Oracle Database 10g Express Edition. You need not install Oracle Database 10g Express Edition on the same server on which HCM Mediation is installed.
Web Server	JBoss—jboss-4.2.23.GA

**Table 3-1** HCM Mediation Server Requirements (continued)

Requirement	Notes
Domain Managers	VOSS 7.3
CPU	2 vCPU
Disk Space	200 GB hard drive.

## HCM Mediation Default Ports

This section lists the default ports used by HCM Mediation and the domain managers. You must make sure that HCM Mediation can communicate with the domain managers. It includes:

- [Default Ports of HCM Mediation, page 3-2](#)
- [Default Ports Used by Domain Managers, page 3-2](#)

### Default Ports of HCM Mediation

[Table 3-2](#) lists the default ports used by HCM Mediation. You can modify the default ports during installation.

**Table 3-2** Default HCM Mediation Ports

Protocol	Port Number
HTTP	8090
HTTPS	8443
ODBC	1521

### Default Ports Used by Domain Managers

[Table 3-3](#) lists the default ports of external components.

**Table 3-3** Default Ports of Domain Managers

Domain Managers	Protocol	Port Number
CUOM	HTTP	8080

# Installing and Starting HCM Mediation

To install and start HCM Mediation:

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**Step 1** Copy hcm.bin to the installation server.

**Step 2** Enter the following command:

```
./hcm.bin
```

The Hosted Collaboration Mediation InstallAnywhere Wizard appears.

**Step 3** In the Introduction screen, click **Next**.

**Step 4** In the License Agreement screen, select the **I accept the terms of the license agreement** radio button and click **Next**.

If a previous version of HCM Mediation has been installed on the server, you will be taken to the Detect Previous Version screen where you can view the following details:

- Version that has been installed.
- Install directory path.

You must uninstall the installed version before continuing with the new installation. To do this, complete the steps in the [Uninstalling HCM Mediation](#) section.

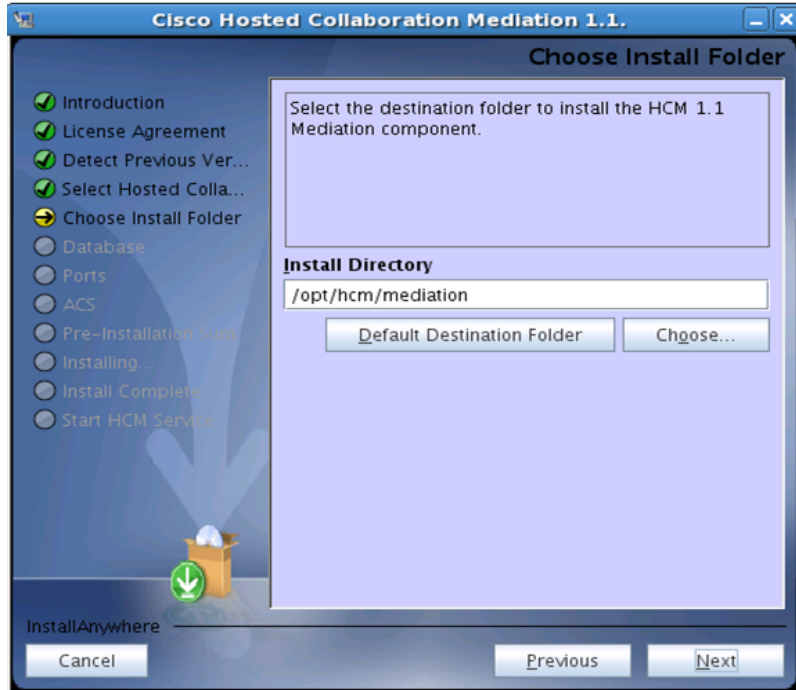
**Step 5** In the Select Cisco Hosted Collaboration Mediation Component screen, select the **Mediation** radio button and click **Next**.

The Choose Install Folder screen (See [Figure 3-1](#)) appears. The Default Destination Folder path is set to /opt/hcm/mediation.

If you want to install HCM Mediation in a different directory:

- a. Click **Choose**.
- b. Select the install directory path.
- c. Click **Next**.

Figure 3-1 Install Folder



**Step 6** Click **Next**.

**Step 7** In the Database Configuration screen, enter:

- a. IP address in the Server Address field.
- b. Port number in the Port Number field.  
The default database port is 1521 but you can change it, if needed.
- c. SID in the SID field. For example, XE.
- d. System database username in the System User Name field.
- e. System database password in the System Password field.
- f. Click **Next**.

**Step 8** In the Cisco Hosted Collaboration Mediation Database User screen, enter the following details to create a user for the Cisco Hosted Collaboration Mediation database:

- a. User name in the User Name field.
- b. Password in the Password field.  
If you want to change the Mediation database user's password after installation, you must follow the steps in [Modifying Database User Password in the HCM Mediation Configuration File](#) section.
- c. Re-enter the password in the Re-enter Password field.
- d. Click **Next**.

**Step 9** In the HTTP Port Configuration screen, enter the HTTP port number in the HTTP Port field and click **Next**.

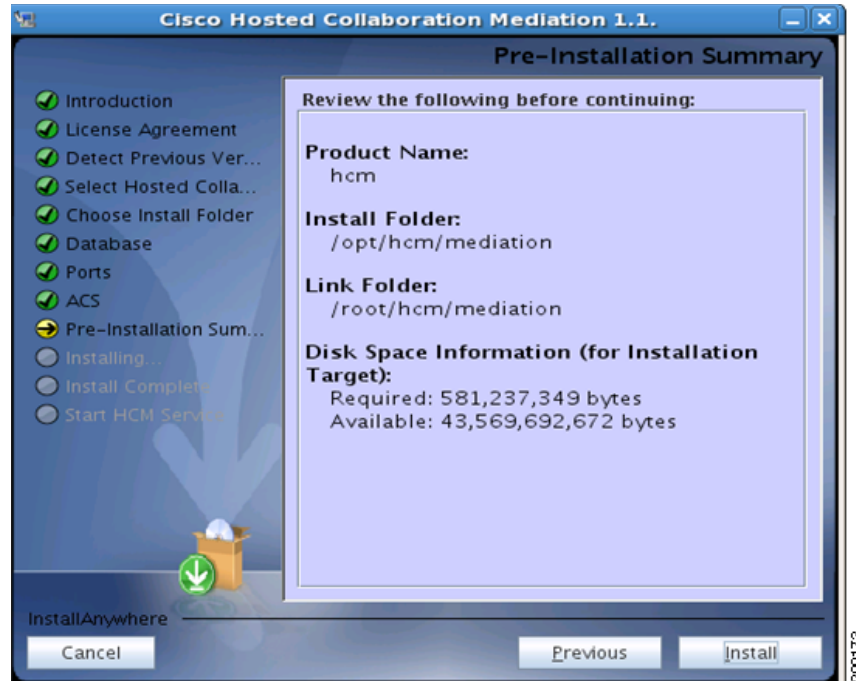
Default HTTP port is 8090, but you can change it, if needed.

**Step 10** In the HTTPS Port Configuration screen, enter the HTTPS port number in the HTTPS Port field and click **Next**.

The default HTTPS port is 8443 but you can change it, if needed.

The Pre-Installation Summary screen (See [Figure 3-2](#)) shows the items that will be installed.

**Figure 3-2** Pre-Installation Summary



**Step 11** Click **Install**.

The Installing HCM 1.1 screen appears and shows the progress of the installation.

**Step 12** In the Install Complete screen, click **Next**.

**Step 13** In the Start HCM Mediation Service screen, check the **Yes** check box and click **Done**.

Wait a few minutes for HCM Mediation to start.

After the installation completes, see [HCM Mediation Post-Installation Tasks, page 3-7](#) for further tasks.

# Modifying Database User Password in the HCM Mediation Configuration File

You can modify the database user password by editing the configuration file. To do this:

- Step 1** From the JBoss home directory, enter the following command and change the *password* instance with the new password:

```
HCM_Root_Directory/thirdparty/jdk/bin/java -cp
lib/jboss-common.jar:lib/jboss-jmx.jar:server/default/lib/jbosssx.jar:server/default/li
b/jboss-jca.jar org.jboss.resource.security.SecureIdentityLoginModule password
```

The encoded password appears.

For example, encoded password—5dfc52b51bd35553df8592078de921bc.

- Step 2** Copy the encoded password that is generated.
- Step 3** Go to the *HCM\_Root\_Directory*/thirdparty/jboss/server/hcm/conf directory.
- Step 4** Open the login-config.xml file.
- Step 5** Paste the encoded password that you copied within the `<module-option name="password">` and `</module-option>` tags.

The following is a code example of the login-config.xml file after the encoded password is modified. The `<module-option name="password">` and `</module-option>` tags have been highlighted.

```
<!-- Security domains for HCM encrypted database password jca framework -->
    <application-policy name="HCMEncryptDBPassword">
        <authentication>
            <login-module
code="org.jboss.resource.security.SecureIdentityLoginModule" flag="required">
                <module-option name="username">username</module-option>
                <module-option name="password">5dfc52b51bd35553df8592078de921bc
</module-option>
            </login-module>
            <module-option
name="managedConnectionFactoryName">jboss.jca:name=HCSDatabaseDS,service=LocalTxCM</mod
ule-option>
        </login-module>
    </authentication>
</application-policy>
```

## Configuring the application.properties File

The application.properties file in the *HCM\_Mediation\_Install\_Directory/mediation/config/dxsi* directory. You can edit the application.properties file and configure the ProvisionAsyncResponse properties.

### ProvisionAsyncResponse Properties

You must configure the following properties only if the replyToName attribute is not added as part of the XML request:

- DefaultProvisionAsyncResponseUrl—URL used by HCM to send asynchronous notifications to the NBI client.
- DefaultProvisionAsyncResponseUserName—Username of the NBI client for notification service.
- DefaultProvisionAsyncResponsePassword—Password of the NBI client for notification service.

## HCM Mediation Post-Installation Tasks

After you install HCM Mediation, complete the following tasks:

- Register a customer manually—[Registering a Customer Manually, page 3-7](#)
- Configure a cron job to periodically delete Mediation data—[Configuring a Cron Job to Periodically Delete Mediation Data, page 3-8](#)
- Configure for asynchronous communication between domain managers and HCM Mediation—[Configuring for Asynchronous Communication Between Domain Managers and HCM Mediation, page 3-10](#)

## Registering a Customer Manually

You can register a customer manually by executing the following SQL statements against the HCM database.

Run the following sqlplus command:

```
sqlplus hcm_user_name/hcm_user_password
```

Execute the following statements to register a customer manually:

- 
- Step 1** Insert into CUSTOMER\_INSTANCE (CUSTOMERID, NAME, LOCATION, PREFIX, DESCRIPTION) values ('HCSDefaultCustomer', 'HCSDefaultCustomer', 'HCS Location', 'HCSDefaultCustomer\_', 'Default Customer');
- Step 2** Insert into CUSTOMER\_INSTANCE\_ADDRESS (CUSTOMERID, INSTANCEID, INSTANCEURL, ISACTIVE, TARGETDOMAIN) values ('HCSDefaultCustomer', 'VOSSDomainManager', 'https://VOSS\_IP\_ADDRESS:VOSS\_WEBSERVICE\_PORT/voss\_webservices/v7\_3\_api\_1/vossMs2WebService', 'Y', 'UnifiedCommunications');



### Note

- VOSS\_IP\_ADDRESS - IP address of a VOSS instance.
  - VOSS\_WEBSERVICE\_PORT - Port Number on which VOSS webservices are accessible.
-

**Step 3** Insert into `CUSTOMER_INSTANCE_SECURITY` (`CUSTOMERID, SECURITYID, USERNAME, PASSWORD`) values (`'HCSDefaultCustomer', 'VOSSDomainManager', 'VOSS_WEBSERVICE_USERNAME', 'VOSS_WEBSERVICE_PASSWORD'`);

**Note**

- `VOSS_WEBSERVICE_USERNAME` - Username used for VOSS webservice authentication.
- `VOSS_WEBSERVICE_PASSWORD` - Password used for VOSS webservice authentication.

**Step 4** Insert into `CUSTOMER_ASYNC_ADDRESS` (`CUSTOMERID, RESULTID, LISTENERURL, ISACTIVE`) values (`'HCSDefaultCustomer', 'VOSSDomainManager', 'http://HCM_IP_ADDRESS:HCM_PORT/services/VossNotificationWebService', 'Y'`);

**Note**

- `HCM_IP_ADDRESS` - IP address on which HCM is installed.
- `HCM_PORT` - Port number on which HCM is installed.

**Step 5** Commit.

## Configuring a Cron Job to Periodically Delete Mediation Data

After you install HCM Mediation, you must create a cron job to call the `hcm_execute_cleanup.sql` script periodically on a given schedule. Before creating the cron job, you must make sure that you are able to access the database through SQL\*Plus. You can decide the frequency and create the cron job accordingly.

The `hcm_execute_cleanup.sql` script is available in the `HCM_Root_Directory/scripts` directory. You should run the `hcm_execute_cleanup.sql` script on the server on which the database is installed.

The `hcm_execute_cleanup.sql` script deletes the asynchronous notifications that cannot be delivered within the configured time (`NO_OF_DAYS`) from the `REPLYTO_MESSAGE` table.

You can configure the script and modify the number of days for which you want to delete the data. This script does not modify any other tables.

For example, to delete data for the past five days, modify the `NO_OF_DAYS` parameter to 5.

You must make sure that the `ORACLE_HOME`, `ORACLE_SID`, and `PATH` is set.

If `ORACLE_HOME`, `PATH`, and `ORACLE_SID` is not set, you can set it as follows. The following paths will vary according to the Oracle installation directory, so you must make the necessary changes.

- `export ORACLE_HOME=/usr/lib/oracle/xe/app/oracle/product/10.2.0/server`
- `export PATH=$PATH:/usr/lib/oracle/xe/app/oracle/product/10.2.0/server/bin`
- `export ORACLE_SID=XE`

To run the `hcm_execute_cleanup.sql` script:

**Step 1** Copy the `hcm_execute_cleanup.sql` script to the database server on which HCM Mediation is installed.

**Step 2** Enter the following command to run `hcm_execute_cleanup.sql`:

```
sqlplus hcm_user_name/hcm_user_password @hcm_execute_cleanup.sql
```



You must replace *hcm\_user\_name* with the actual username and *hcm\_user\_password* with the actual password.

---

## Configuring for Asynchronous Communication Between Domain Managers and HCM Mediation

Sometimes service requests to the domain managers may result in long-running transactions. Domain managers support asynchronous behavior. This helps clients such as HCM Mediation to subscribe for asynchronous notifications and get notified by the domain manager when the operation is completed. In such a scenario, HCM Mediation need not wait for a synchronous response.

You must perform the following configuration to ensure asynchronous communication among the domain managers and HCM Mediation. Before proceeding with the configuration, you must make sure that the IP address, hostname, and the port used by HCM Mediation are accessible from the domain managers.

To configure for asynchronous communication between domain managers and HCM Mediation:

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**Step 1** Go to the *HCM\_Mediation\_Root\_Directory*.

For example, /opt/hcm/bin.

**Step 2** Run **stop-hcm.sh** and stop HCM Mediation server.

**Step 3** Go to the *HCM\_Mediation\_Root\_Directory/config* directory.

**Step 4** Open registryContext.xml.

**Step 5** Modify the hostname/IP address on which HCM Mediation is installed.

The following is a code example of the property name tag before modifying:

```
<!-- HOST or IP Address of HCM Server -->
<property name="hcmHost" value="$HCM_IP$"/>
```

The following is a code example of the property name tag after modifying. This example assumes that the IP address of the server on which HCM Mediation is installed is 192.168.0.1,

```
<!-- HOST or IP Address of HCM Server -->
<property name="hcmHost" value="192.168.0.1"/>
```

**Step 6** Go to the *HCM\_Mediation\_Root\_Directory*.

For example, /opt/hcm/bin.

**Step 7** Run **start-hcm.sh** and start HCM Mediation server.

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# Migrating HCM Mediation Data from HCM 1.0 to HCM 1.1

You can migrate HCM Mediation data from HCM 1.0 to HCM 1.1 using Oracle Export/Import utility. You must make sure that the ORACLE\_HOME, ORACLE\_SID, and PATH is set.

If ORACLE\_HOME, PATH, and ORACLE\_SID is not set, you can set it as follows. The following paths will change according to the Oracle installation directory, so you must make the necessary changes.

- export ORACLE\_HOME=/usr/lib/oracle/x64/app/oracle/product/10.2.0/server
- export PATH=\$PATH:/usr/lib/oracle/x64/app/oracle/product/10.2.0/server/bin
- export ORACLE\_SID=XE

The following sections assume that the same user is performing the import and export operations.

## Exporting Data from Existing Schema

To export data from existing schema, enter the following command:

```
exp hcm_db_user/hcm_db_pwd FILE=hcm-mediation.dmp LOG=hcm-export.log CONSTRAINTS=n
```

You must replace *hcm\_db\_user* with the actual username and *hcm\_db\_pwd* with the actual password.

After you execute the export command, the hcm-mediation.dmp file will be generated. This file is stored in the same directory from which you executed the export command.

## Importing Data to New Schema

To import data to new schema, enter the following commands sequentially:

1. 

```
imp hcm_db_user/hcm_db_pwd FILE=hcm-mediation.dmp  
TABLES=(CUSTOMER_INSTANCE,CUSTOMER_INSTANCE_ADDRESS, CUSTOMER_INSTANCE_SECURITY)  
IGNORE=y LOG=hcm-import-core.log CONSTRAINTS=n
```
2. 

```
imp hcm_db_user/hcm_db_pwd FILE=hcm-mediation.dmp TABLES=(CUSTOMER_ASYNC_ADDRESS)  
IGNORE=y LOG=hcm-import-async.log CONSTRAINTS=n
```

You must replace *hcm\_db\_user* with the actual username and *hcm\_db\_pwd* with the actual password.

You must use the hcm-mediation.dmp file that was generated after you executed the export command to import data to the new schema.

# Uninstalling HCM Mediation

To uninstall HCM Mediation:

**Step 1** Navigate to the *HCM\_Root\_Directory*. This is the directory that you selected during installation.

The default directory is `/opt/hcm/mediation`.

**Step 2** Enter the following command to change the directory to `uninstall_hcm`:

```
cd uninstall_hcm
```

**Step 3** Enter the following command to open the Uninstall HCM InstallAnywhere wizard:

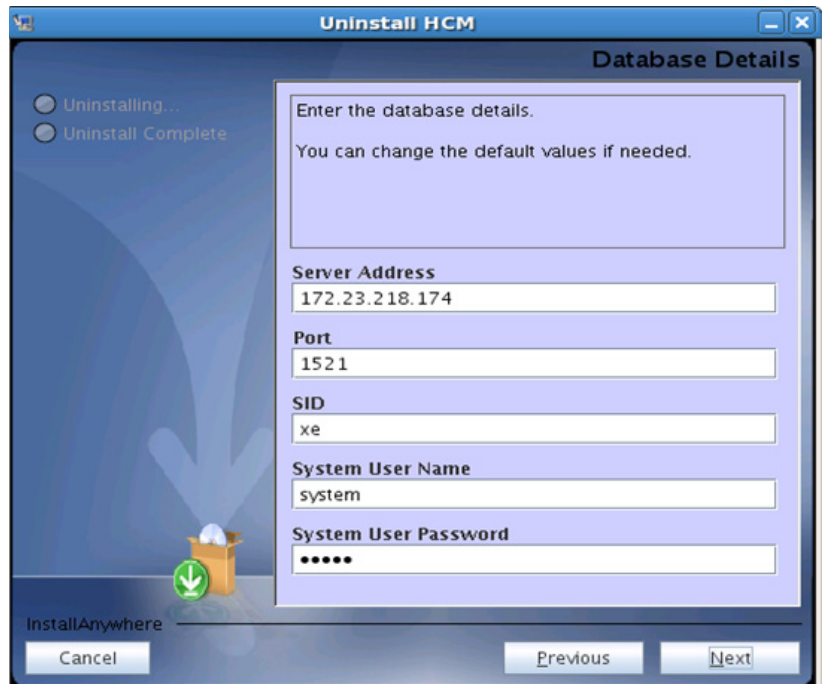
```
./uninstall
```

**Step 4** In the Uninstall Mediation screen, click **Next**.

In the Database Details screen (See [Figure 3-3](#)), the values that you entered in the following fields during installation, populate automatically:

- Server Address
- Port
- SID
- System User Name
- System User Password

**Figure 3-3 Database Details Screen**



If you have changed the value in any of the above-mentioned fields after installation, modify the details and enter the updated values.

**Step 5** After the details appear, click **Next**.

- Step 6** In the Uninstall Confirmation screen, click the **Uninstall** check box.
- Step 7** Click **Uninstall**.  
The uninstall process starts.
- Step 8** In the Uninstall Complete screen, click **Done** to exit.
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