HP Enterprise Collaboration

For the Windows ® operating system

Software Version: 1.1

Installation and Configuration Guide

Document Release Date: August 2012

Software Release Date: August 2012

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The title page of this document contains the following identifying information:

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Chapter 1

Introduction

Enterprise Collaboration (EC) is a collaboration platform that enhances and facilitates the collaboration that takes place in almost any flow in the IT organization using HP products. It does this by connecting the structured data managed in applications in the IT workspace with the unstructured collaboration that supports it.

This guide explains how to install and configure Enterprise Collaboration.

Enterprise Collaboration is installed and configured in the following stages:

1. " Install and Configure Enterprise Collaboration" (on page 10)
2. "Configure the User Repository and User Roles" (on page 24)
3. "Set Up Integration with Office Communicator Server and MS Lync Server" (on page 29) Perform this procedure if you want to use EC with Office Communicator.
4. "Update Configuration in the Deployment Manager" (on page 55) Perform this procedure if you want to make changes to database or OCS settings that were defined during the initial installation, or to configure EC for Office Communicator Server (if you performed the OCS integration setup in stage 3).
5. "Set Up the Adapter" (on page 59) Perform this procedure if you want EC to support integrations with other applications, for example bringing context objects to conversations or showing facets on an existing context object .
6. "Perform Additional Configuration Steps" (on page 53): Depending on your system setup, you may need to perform additional configuration steps. Refer to this section if your system meets one or more of the following criteria:
   - Your mail server is accessed using a secure connection and its certificate is self-signed
   - You work with a standalone web application network configuration
   - You work in a reverse proxy network configuration
   - You want to disable redirection to https for authentication (for security reasons, this is not recommended)

HP Enterprise Collaboration Documentation Library

HP Enterprise Collaboration includes the following guides and references available in PDF format. For the latest copies of the HP Enterprise Collaboration documentation, go the HP Software Manuals website: http://h20230.www2.hp.com/selfsolve/manuals. This site requires that you register for an HP Passport and sign in.

Guide	Description
HP Enterprise Collaboration Installation and Configuration Guide	Describes how to install and configure HP Enterprise Collaboration.

Guide	Description
HP Enterprise Collaboration Concepts Guide	Provides a detailed overview of HP Enterprise Collaborationi concepts, components, and the conversation workflow.
HP Enterprise Collaboration Integration Guide	Describes how to develop adapters for adding customized application content and how to integrate Enterprise Collaboration into third-party applications.
HP Enterprise Collaboration Developers Guide	Describes how to integrate HP Enterprise Collaborationi into individual customer applications.
HP Enterprise Collaboration Release Notes	Provides last-minute news and information about HP Enterprise Collaboration.
HP Enterprise Collaboration Support Matrix	Details the HP EC system requirements and lists the HP products and versions which currently come with HP Enterprise Collaboration.
HP Enterprise Collaboration Open Sources and Third-Party Software Agreements	Lists the licenses for open source and third-party components included in HP Enterprise Collaboration.

In addition, you can access the HP Enterprise Collaboration movie from the following location on the DVD:

Documentation\Movies\HPEC_1.wmv

Prerequisites

Before installing Enterprise Collaboration, Windows UAC (User Account Control) must be disabled. If UAC is enabled, an error message will appear on the validation page during the installation process.

To disable UAC:

1. From the **Start** menu, select **Run** and type **msconfig**.
2. In the System Configuration window, select the **Tools** tab.
3. From the Tools list, select **Change UAC Settings** and click **Launch**.
4. In the User Accounts Control window, scroll the bar to **Never Notify** and click OK.

Database and Tablespace Authorizations

A regular user (with special permissions) can install and configure the Enterprise Collaboration database. There is no need for a DBA user.

When you create the installer user <username>, assign them the following permissions:

```
GRANT CREATE USER TO <username> WITH ADMIN OPTION;

GRANT CONNECT TO <username> WITH ADMIN OPTION;

GRANT UNLIMITED TABLESPACE TO <username> WITH ADMIN OPTION;

GRANT CREATE VIEW TO <username> WITH ADMIN OPTION;

GRANT RESOURCE TO <username> WITH ADMIN OPTION;

GRANT CREATE JOB TO <username> WITH ADMIN OPTION;
```

As the installation checks that the tablespace exists, the installer needs the following additional permissions:

```
GRANT SELECT ON DBA_TABLESPACES TO <username>;
```

Email Configuration

During the course of a conversation Enterprise Collaboration sends mails using the users email addresses.

Not all mail servers allow this as the **EmailGeneralFromName** parameter is set to False by default, preventing emails from being sent.

In this case, change the value of the **EmailGeneralFromName** parameter to **True** manually in the JMX Console.

Chapter 2

Install and Configure Enterprise Collaboration

This section contains detailed instructions on how to install and configure Enterprise Collaboration. Before installing check that you have the correct prerequisites and authorizations as described in Prerequisites and Database and Tablespace Authorizations.

Install Enterprise Collaboration

This section includes instructions for the initial installation of Enterprise Collaboration (EC). If you have already installed EC and want to update the configuration, see the section "Update Configuration in the Deployment Manager" (on page 55).

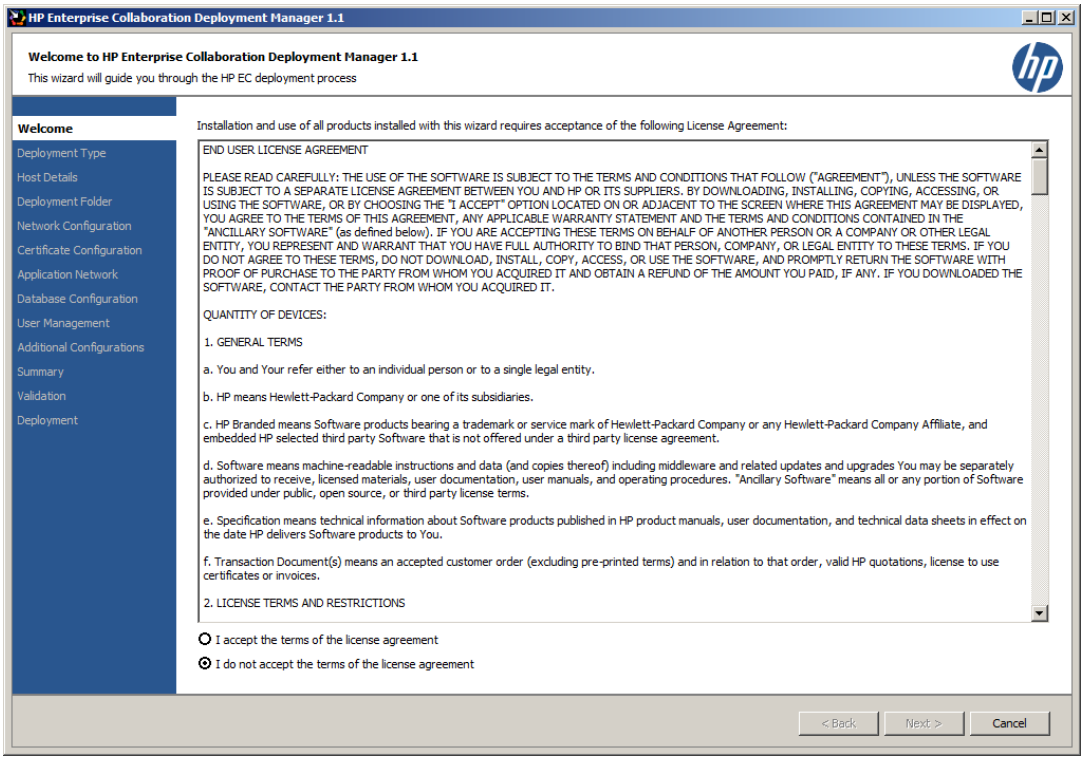
To install Enterprise Collaboration:

1. **If you are downloading the EC installation .zip file from the HP website:** Extract the contents of the EC installation **.zip** file to any location that has access to all EC topology entities (such as MSSQL or optional entities such as the mail server or OCS) that EC communicates with.

   If you are installing from a DVD: Copy the entire contents of the DVD to a directory on your hard drive.

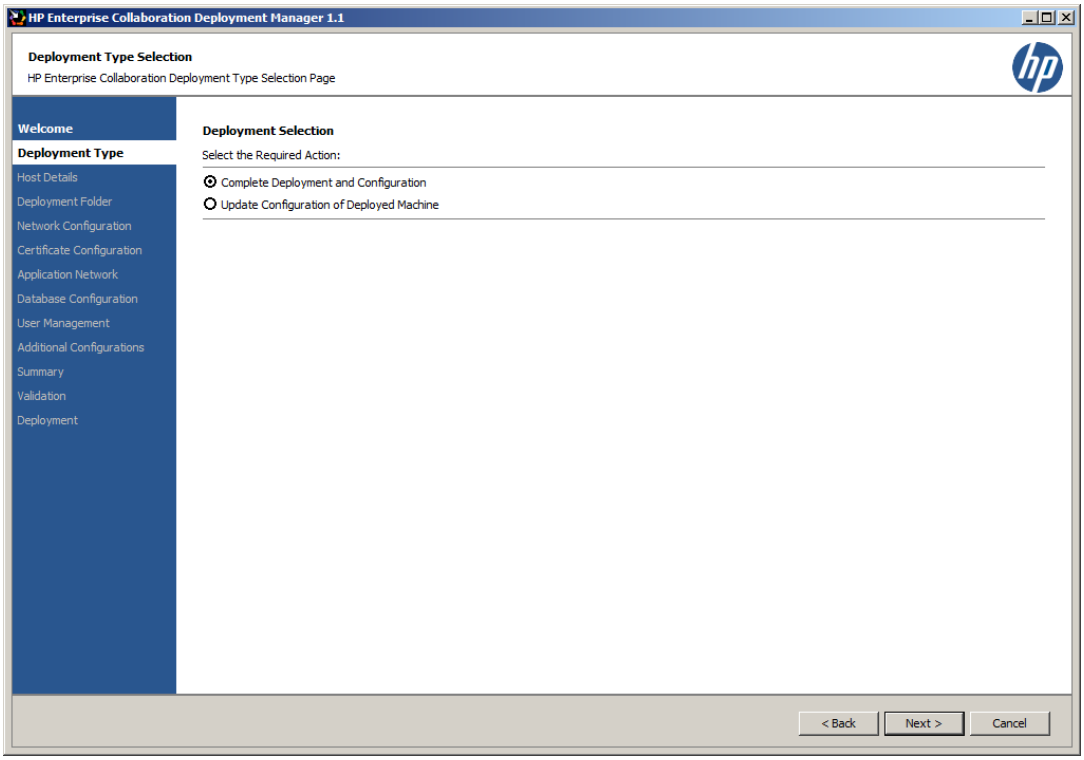
2. Open the folder **Windows_Setup** and double-click **EC.exe**.

3. The Enterprise Collaboration Deployment Manager wizard opens.



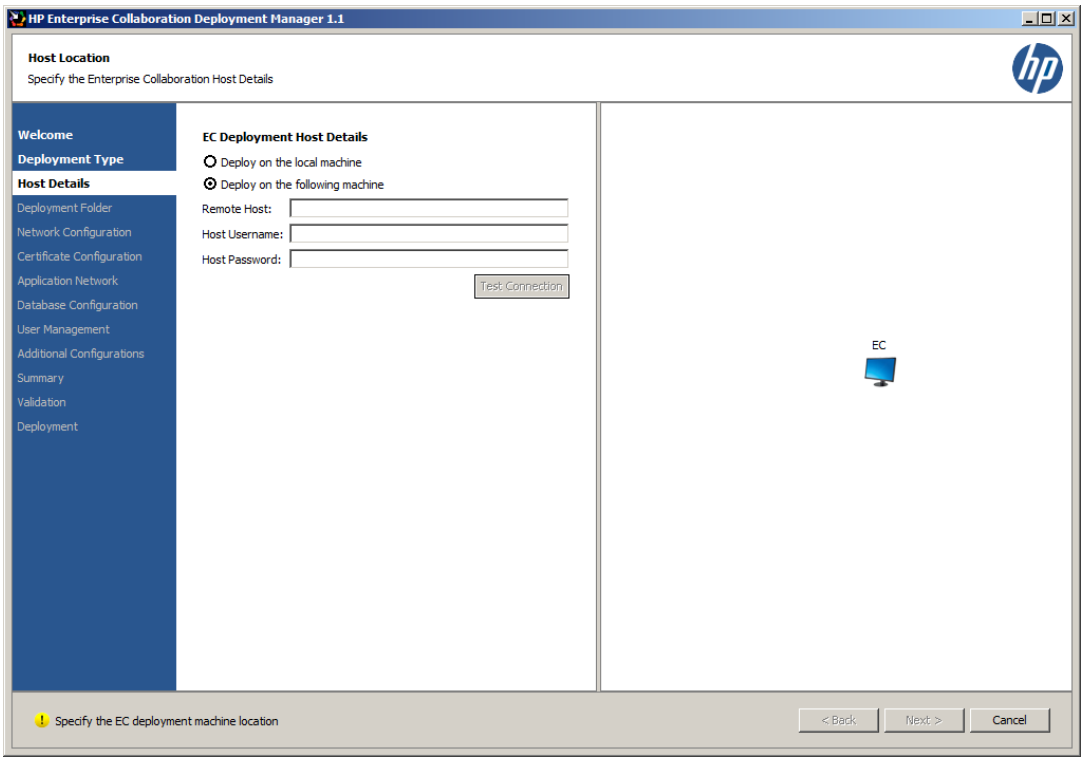
Read the license agreement. Select “I accept the terms of the license agreement”. Click **Next**.

4. The Deployment Type Selection page opens.



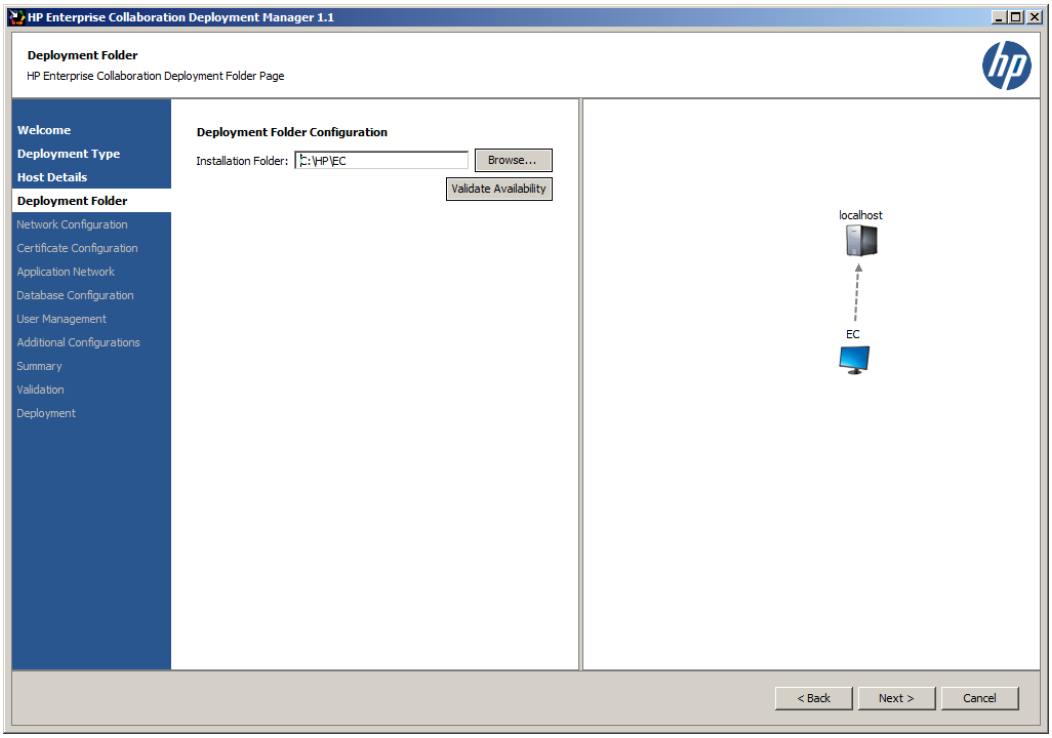
Select “Complete Deployment and Configuration”. Click **Next**.

5. The EC Deployment Host Details page opens.



Select either “Deploy on the local machine” or “Deploy on the following machine”.

- If you choose “Deploy on the local machine”, the Deployment Folder Configuration page opens.



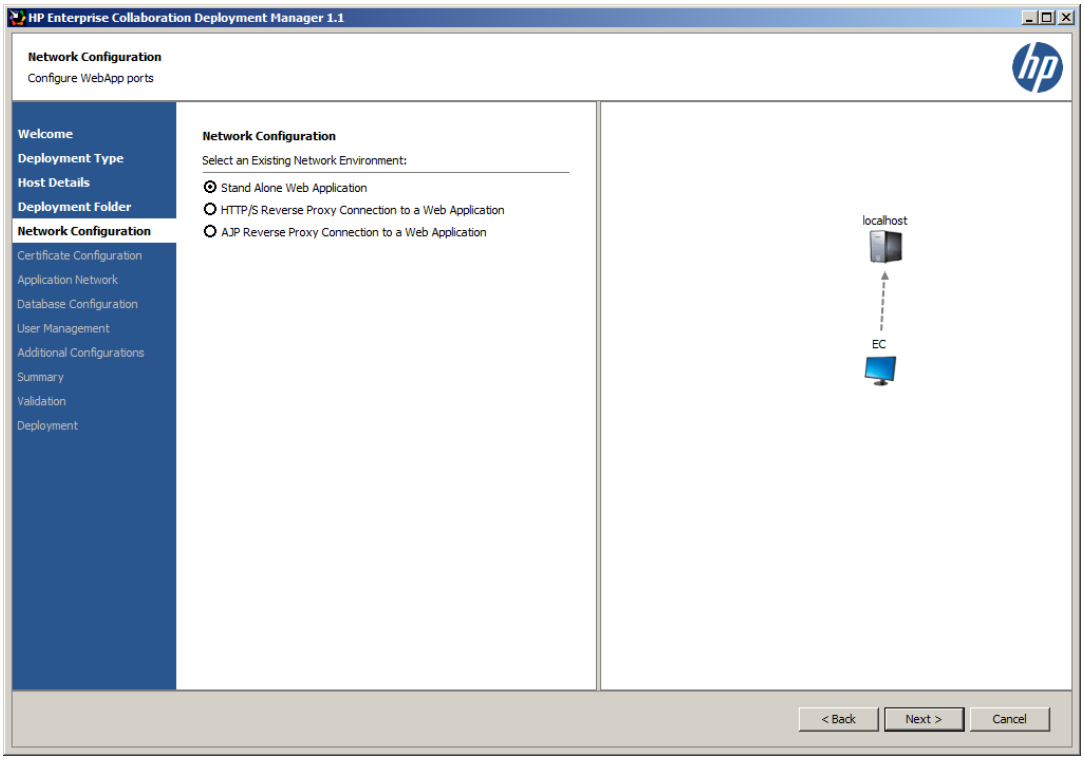
Use the **Browse** button to select an installation folder or use the default path. Click **Next**.

> **Note:** To check if the installation folder path is valid, click the **Validate Availability** button. This checks if the folder path already exists and can prevent content override. This check is optional, but recommended.

- If you choose "Deploy on the following machine", enter details for the Remote Host location, Host Username, and (optional) Host Password. Click **Next**.

> **Note:**
>
> - If you deploy on a Remote Host Location, you can click the **Test Connection** button at this point to test the connection between your PC and the Remote Host Location. This test is optional, but recommended.
> - Once you have chosen a machine for deployment, from this stage on you can hover over the server machine icon on each wizard page with the mouse arrow to display validation information (such as memory requirements, available ports, etc). If during the configuration process you enter data that affects the validation (e.g. selecting a port that is already in use on the machine), a red 'X' is displayed on the server machine, and the pop-up shows the conflicted port.

6. The Network Configuration page opens.



a. Select one of the following Network Environments:

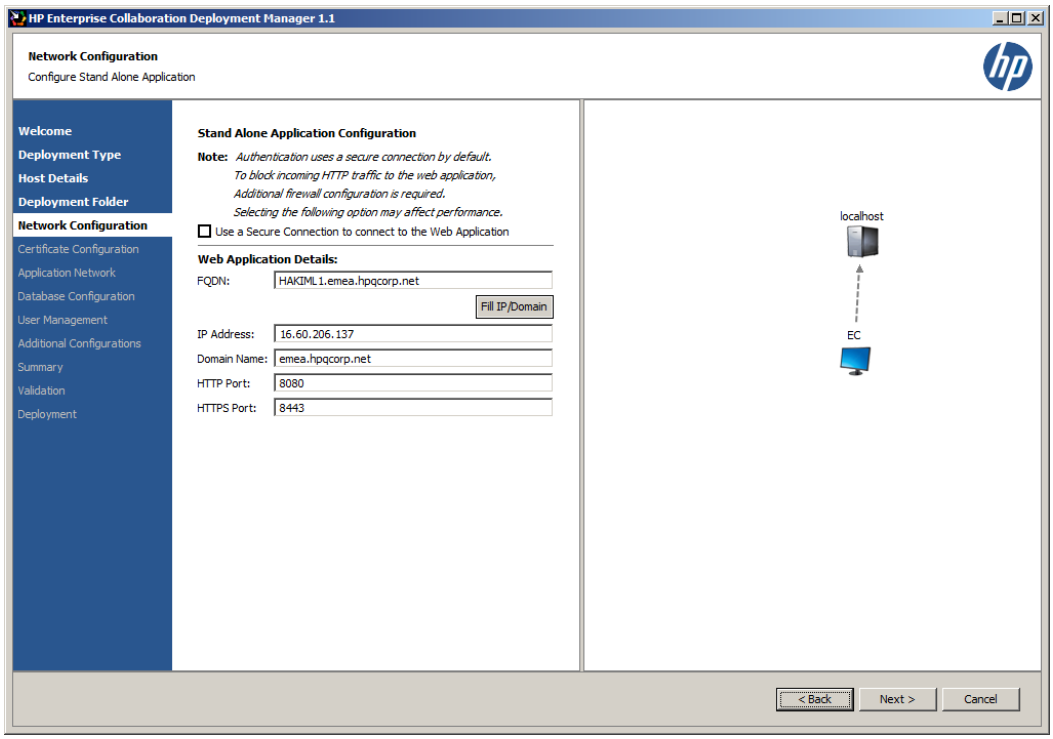
- Stand Alone Web Application
- HTTP/S Reverse Proxy Connection to a Web Application
- AJP Reverse Proxy Connection to a Web Application

> **Note:** For more information about the possible network environment configurations, see the diagrams in "Appendix A: Network Configuration Schemas for HP Enterprise Collaboration" (on page 67).

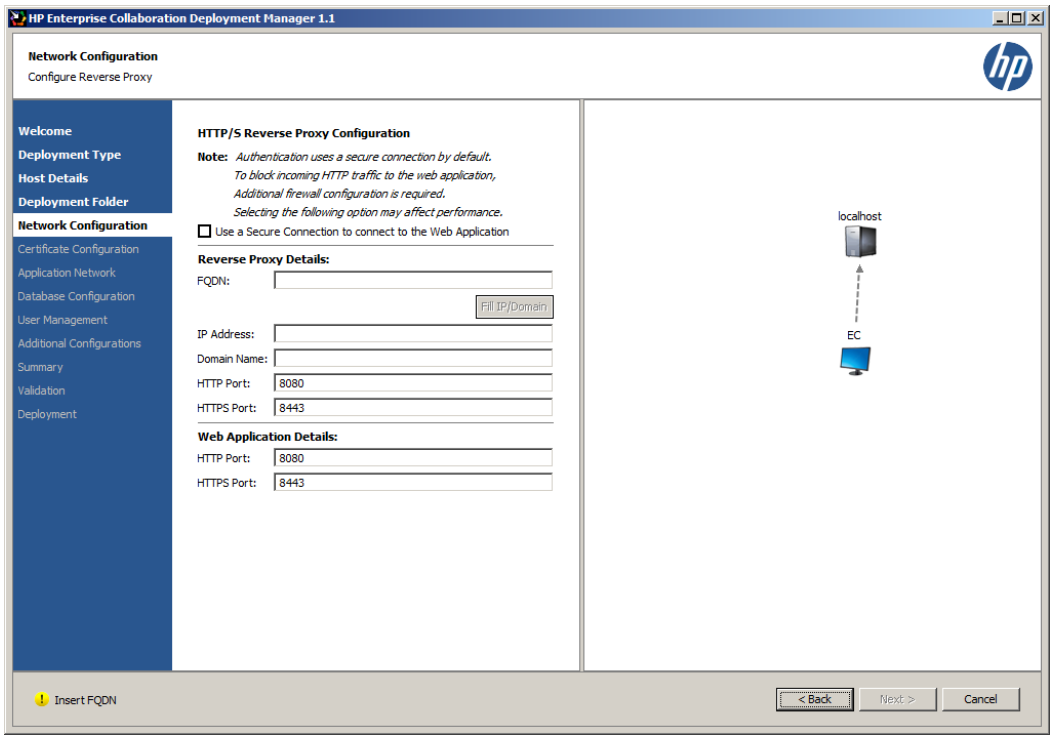
b. Click **Next**.

7. Depending on the network environment selected, one of the following pages opens:

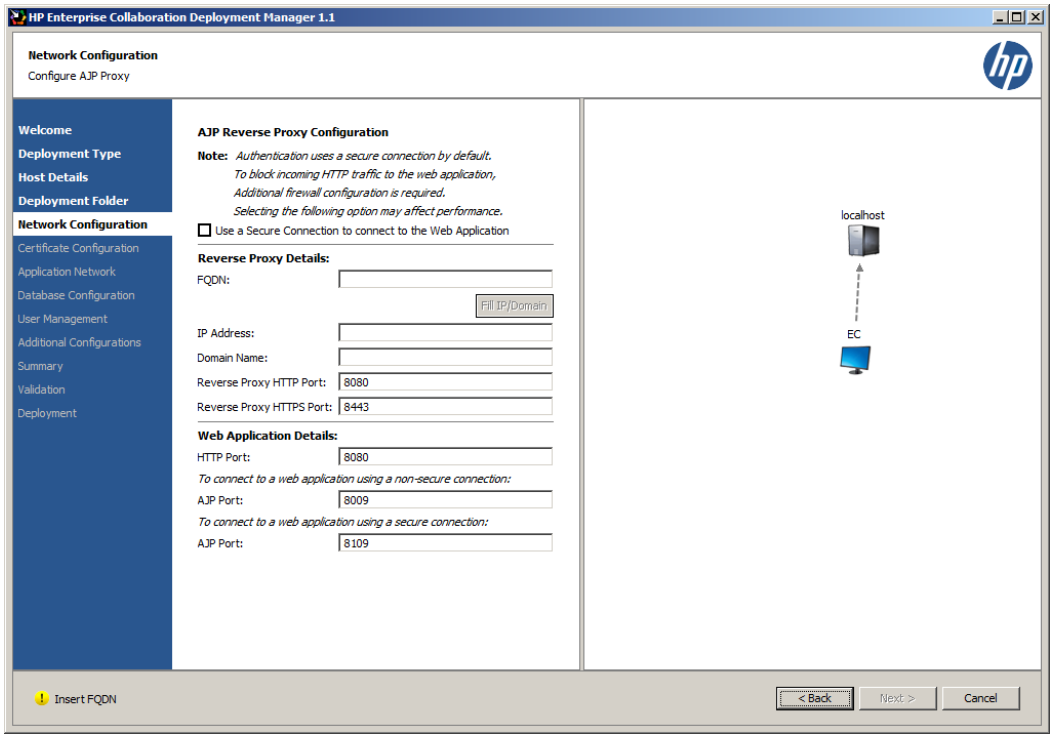
- Stand Alone Application Configuration



- HTTP/S Reverse Proxy Configuration



- AJP Reverse Proxy Configuration



a. If you want to allow only a secure connection to the web application even after the login authentication stage, select **Use a Secure Connection to connect to the Web Application.** By default, a secure connection is used for login authentication. After login authentication, the client will continue with the same level of security it uses to access the

web application.

To block incoming HTTP traffic to the web application additional firewall configuration is required.

> **Note:** Using a secure connection to connect to the web application may affect performance due to use of SSL for all connections.

b. Enter the following information in the relevant network configuration page:

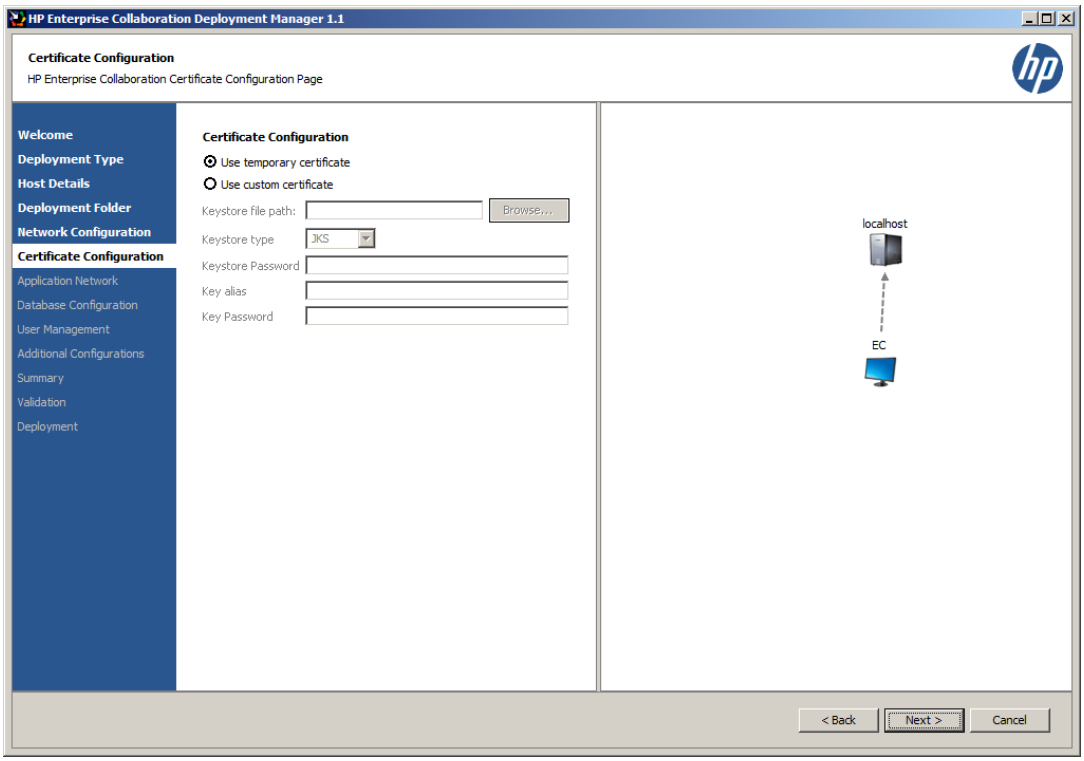
- **FQDN:** Enter the FQDN of the web application or reverse proxy. If you are performing the Stand Alone Application configuration, the default value is the FQDN of the deployed machine.

  > **Note:** After entering the FQDN, click **Fill IP/Domain** to make the wizard automatically enter the IP Address and Domain Name.

- **IP Address:** Enter the IP address of the web application or reverse proxy. If you are performing the Stand Alone Application configuration, the default value is the IP address of the deployed machine.
- **Domain Name:** Enter the Domain name of the web application or reverse proxy. If you are performing the Stand Alone Application configuration, the default value is the Domain name of the deployed machine.
- **HTTP Port (for Web Application):** The default value is 8080.
- **HTTPS Port (for Web Application):** The default value is 8443 (this port is not relevant for the AJP Reverse Proxy).
- **HTTP Port (for Reverse Proxy):** The default value is 8080.
- **HTTPS Port (for Reverse Proxy):** The default value is 8443.
- **AJP Port (non-secure connection):** For AJP Reverse Proxy only. The default value is 8009.
- **AJP Port (secure connection):** For AJP Reverse Proxy only. The default value is 8109.

c. Click **Next**.

8. The Certificate page opens:



The certificate page is used to add a server certificate to EC in order to work with a secure connection to the web application. If the customer wants to import their own certificate from an existing keystore, they must enter the keystore path, keystore type, keystore password.

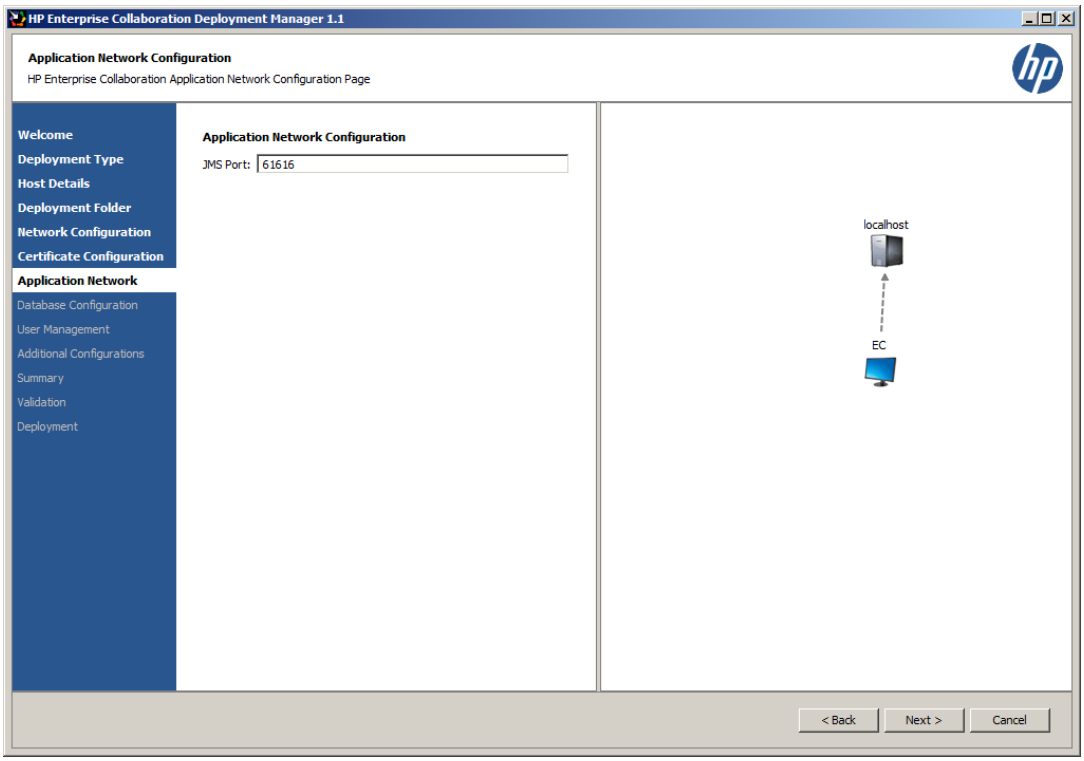
In the key alias field, they should enter the alias of the certificate they want to add to EC as it appears in their own keystore.

In the key password field, they should enter the password of the certificate in the keystore. If the certificate does not have a different password, the keystore password should be entered.

By default, EC generates a temporary self-signed certificate.

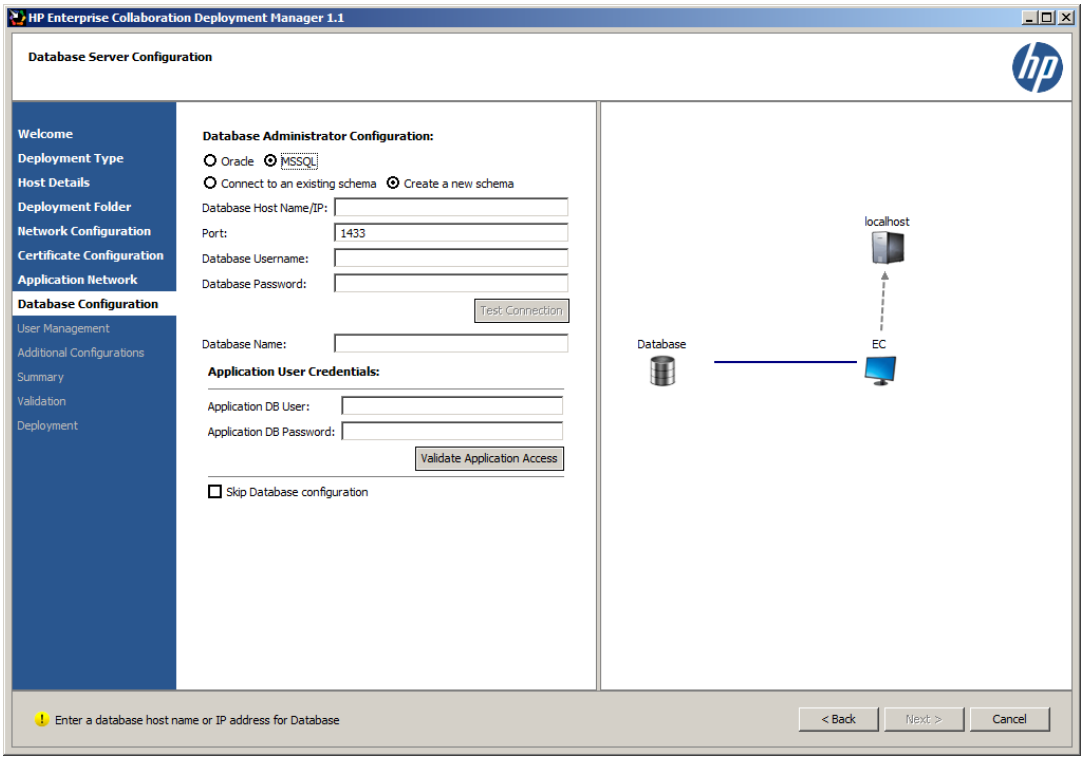
9. Click **Next**.

   The Application Network Configuration page opens.



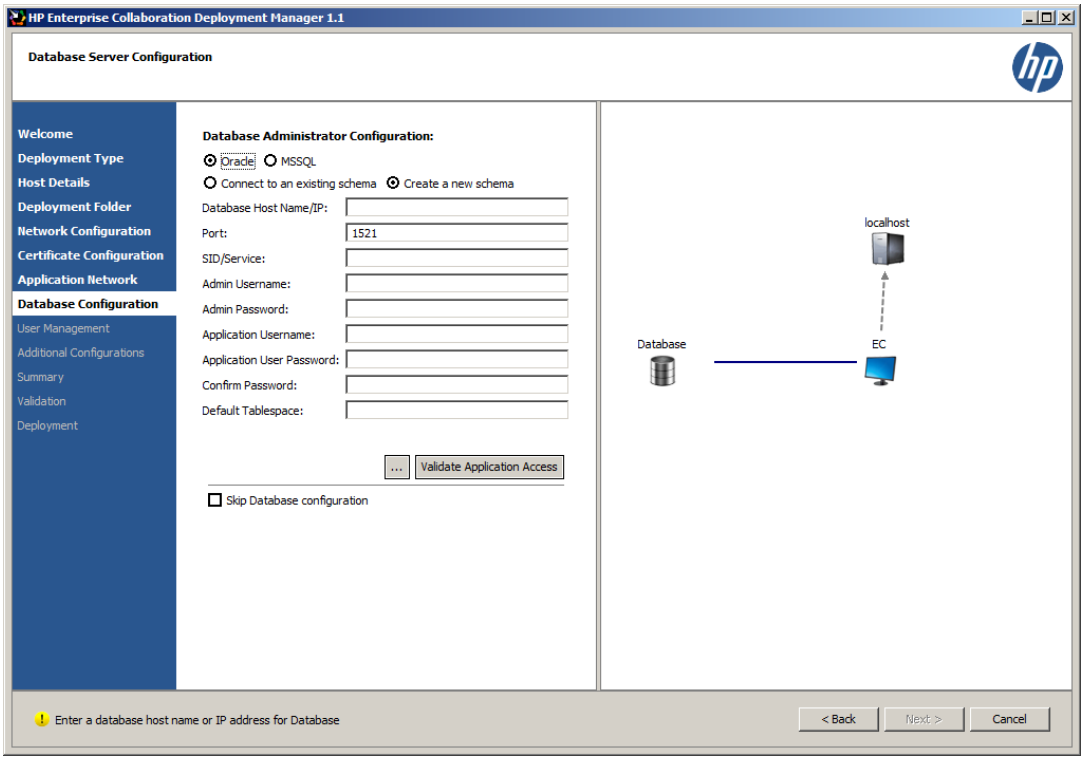
Enter a value for JMS Port or use the default value of 61616. Click **Next**.

10. The Database Server Configuration page opens.



11. Select Oracle or MSSQL.

Configure the Oracle Database Administrator:

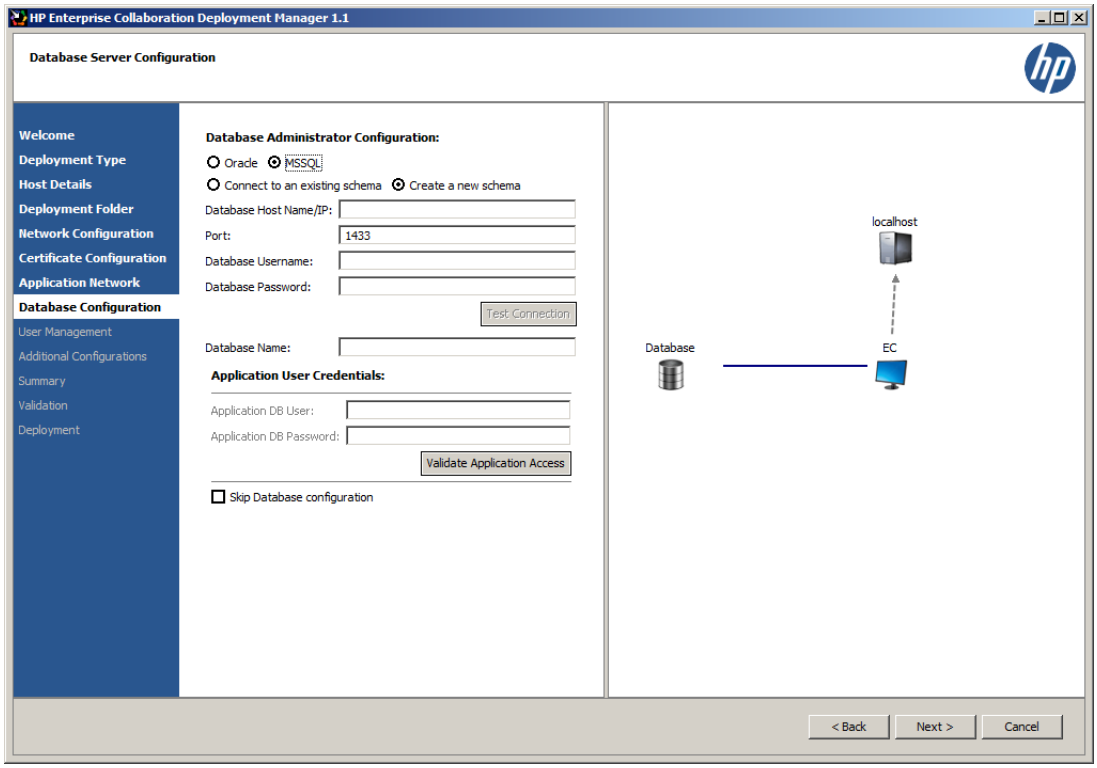


- **Schema**:

  Select either **Connect to an existing schema** or **Create a new schema**.

12. Enter the following information:
    - **Database Host Name/IP**
    - **Port:** A default value of 1521 is shown.
    - **SID/Service:** System ID.
    - **Admin Username**
    - **Admin Password**
    - **Application Username:**The name of the schema that the application uses to connect to the database.
    - **Application User Password**
    - **Confirm Password**
    - **Default Tablespace:** The tablespace of the schema. If the schema does not have a tablespace, enter **System** in this field.

13. **Configure the MSSQL Database Administrator:**



- Select either **Connect to an existing schema** or **Create a new schema**.
- Enter the following information:
  - **Database Host Name/IP**
  - **Port:** A default value of 1433 appears.

    Note: Supported database credentials are in SQL Authentication format.

  - **Database Username:** Select a user name with administrator permissions, including create permission.
  - **Database Password**
- Click the **Test Connection** button after entering the information above.

  Note: If the test fails, you must modify the information you entered on this page, or select 'Skip Database configuration'.

- **Database Name**: If you selected **Connect to an existing schema**, enter the name of the database to connect to. If you selected **Create a new schema**, enter the name of the new database.

14. Enter Application User Credentials:

Application DB User: The name of the user used by the application to communicate with the database.

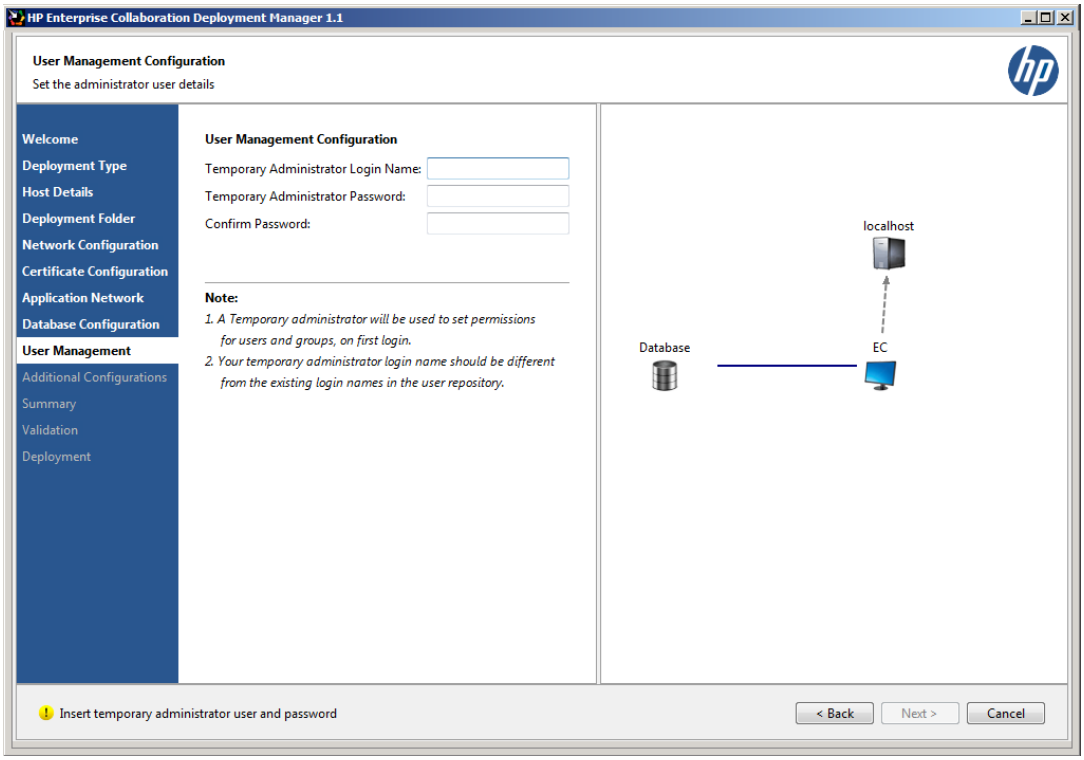
Application DB Password: The password used by the application to communicate with the database.

15. Click the **Validate Application Access** button.

> **Note:** If this validation fails, you must validate your user credentials.

16. Click **Next.**
17. The User Management Configuration page opens.

> **Note:** If you skip database configuration, the User Management Configuration page is automatically skipped.

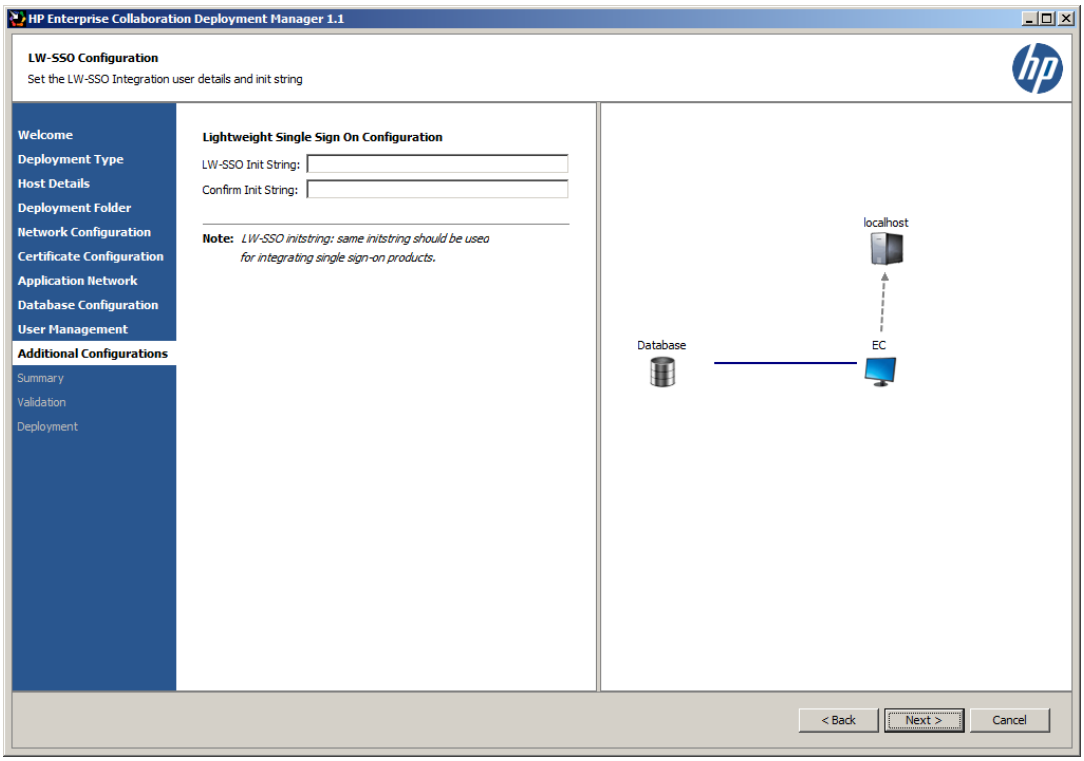


a. Enter the following information:

- **Temporary Administrator Login Name:** This login name should not exist in your existing user repository and must not have been used in previous installations when selecting "Connect to existing schema" in "Schema:" (on page 19).
- **Temporary Administrator Password**
- **Confirm Password**

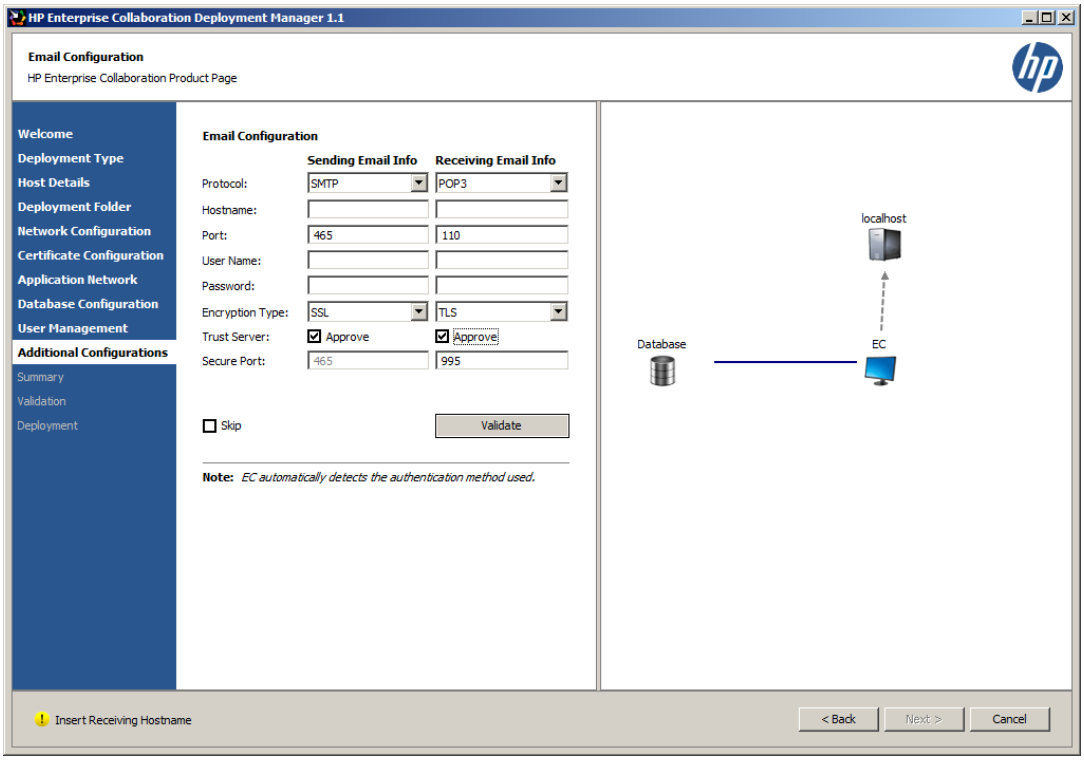
b. Click **Next**.

18. The Lightweight Single Sign-On (LW-SSO) configuration page appears.



Enter the **LW-SSO Init String**, confirm the string and click **Next**.

19. The Email Configuration page opens.



The information on this page is divided into Sending Email and Receiving Email information. For each type of email, fill in the following:

a. **Protocol:** Select a protocol to use to send/receive data. For sending data, use SMTP. For receiving data, select either POP3 or IMAP4.

b. **Hostname:** The hostname of the incoming/outgoing mail server.

c. **Port:** The port number of the incoming/outgoing data.

d. **Username:** The EC mailbox username for receiving/sending emails.

e. **Password:** The password for the EC mailbox.

f. **Encryption Type** - Select the encryption to be used for the email server. If your protocol is secured, select SSL or TLS according to the email server configuration:

   - SSL: For SSL encryption, the **Secure Port** field is filled in automatically with the port number and cannot be changed
   - TLS - Trust Server. Enter the port number manually in the **Secure Port** field.

   For each encryption type, select **Approve** to add the secure port.

These definitions are used for validating and installing certificates for EC to work against.

Optional: Test the Email configuration by clicking the "Validate" button after entering all the configuration settings. After clicking this button, the EC installer checks if the Email server uses a server certificate and if necessary automatically adds it to the EC keystore.

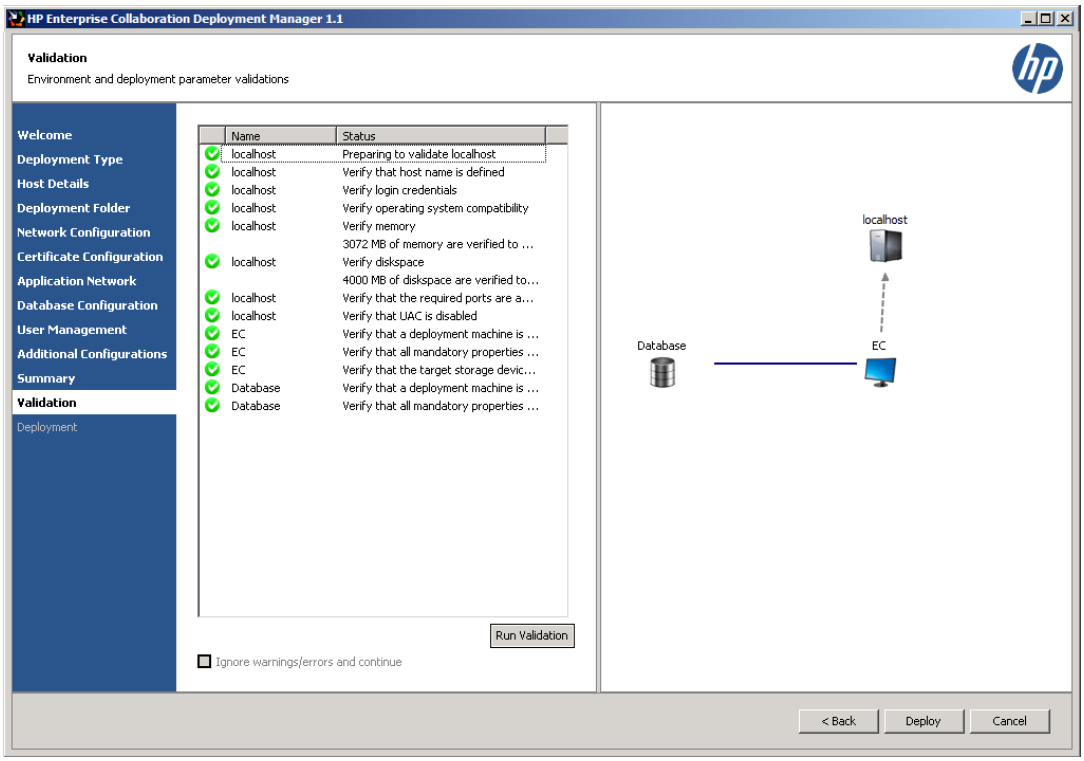
Click **Next**.

> **Note:** All the information you enter in the Email Configuration page is optional. You can skip this page by selecting "Skip".

20. The Summary page opens.

    In the Summary page, review all the information that you entered. If you want to change anything, click the **Back** button to return to the page where you want to make the change. If all the information is correct, click **Next**.

21. The Validation page opens.



Validation occurs automatically when clicking **Next** in the Summary page.

- If all icons are green, validation is successful.
- If one or more icons are red, there is a problem with the configuration or you skipped the database setup. You can choose to ignore the warning by selecting “Ignore warnings/errors and continue”, or fix the problem and then click the **Run Validation** button in order to test if the configuration problem has been fixed.

22. Click **Deploy**.
23. Wait for deployment to finish and click **Finish**.

    After successful deployment, the following shortcuts appear in the Programs menu, under the HP EC folder:

    - Start HP EC
    - Stop HP EC
    - Uninstall HP EC

Configure the User Repository and User Roles

After completing the installation, you must configure the user repository and user roles. Without completing these steps, you will not be able to login to EC.

To configure the user repository and user roles:

1. Update the external-ldap.properties file located in the /conf directory, according to the instructions in "Appendix B: Updating the external-ldap.properties File" (on page 68).

2. **Optional:** If you are using LDAP over SSL, import your LDAP server certificate to the keystore by executing the following batch file:

   C:\HP\EC\diamond-deploy\set-ldap-certificate.bat <path_of_certificate_file>

3. In the **bsf.properties** file located in the **\conf** folder, set the following properties with the values listed below and save the changes:

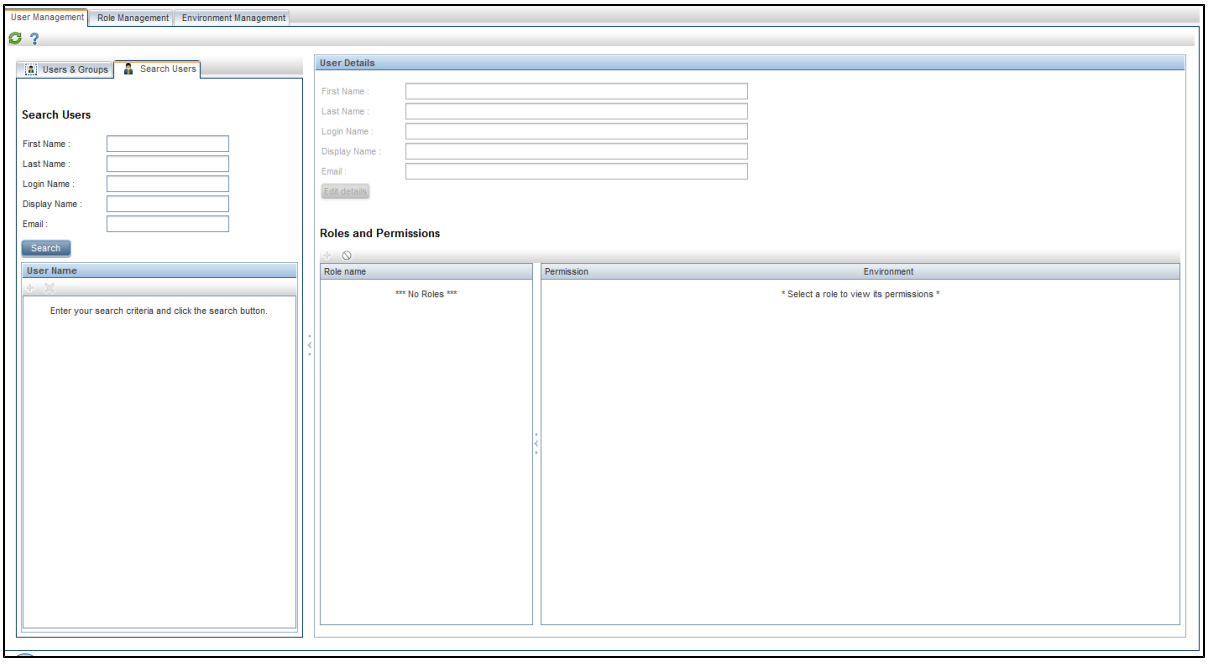
   - authentication.provider=SHARED
   - personalization.provider=SHARED
   - users.provider=EXTERNAL
   - groups.provider=EXTERNAL
   - roles.provider=SHARED
   - roles.relations.provider=SHARED

4. Start EC by going to **Start > All Programs > HP EC > Start HP EC icon**.

5. Open the User Management UI located at: **http://<Server FQDN>:<port>/bsf**

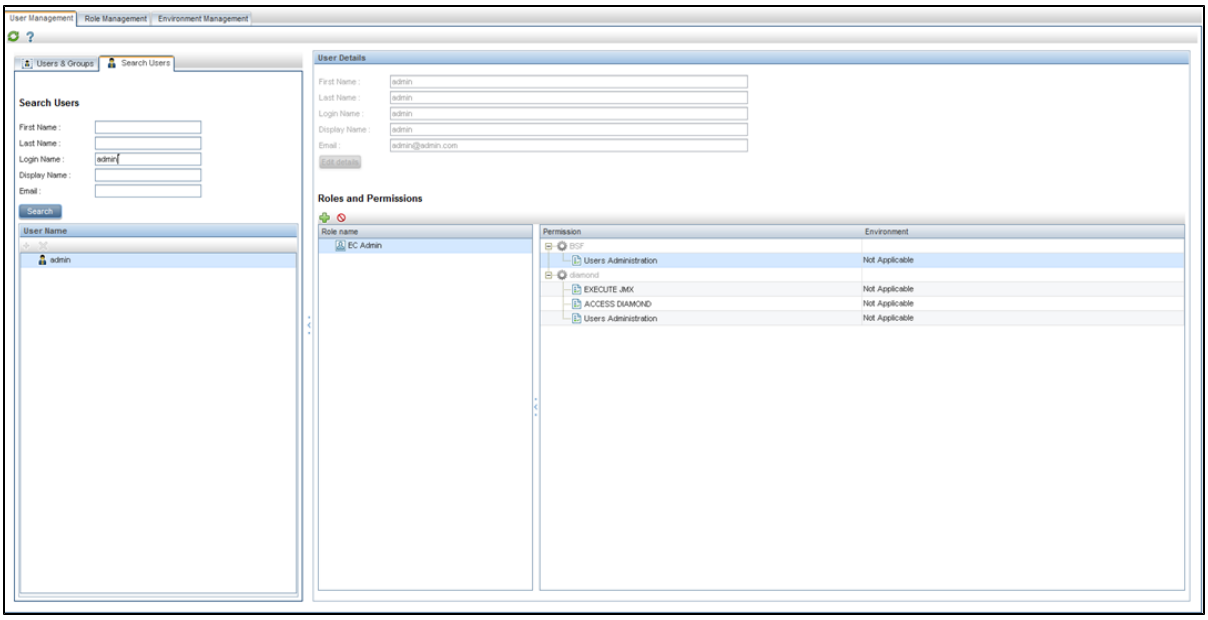
6. Log in using your temporary administrator user credentials as defined during the installation process.

7. The User Management UI opens.



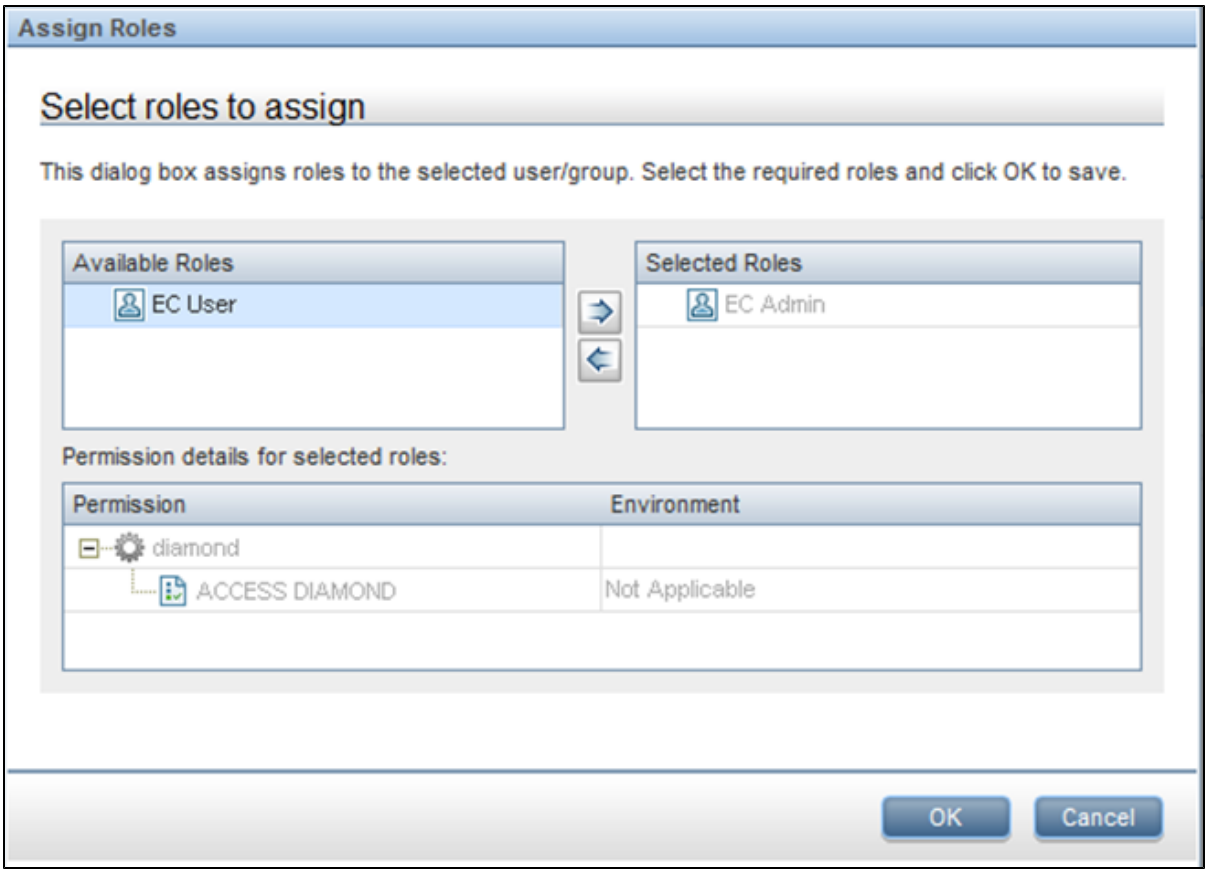
   In the User Management section, find the relevant users and/or groups. For example, to find a user click on the Search Users tab, enter the search details. Click the **Search** button.

8. A list of users and/or groups matching the search details appears in the Roles and Permissions section.



Select the relevant user. Click on the Add Role icon ( ).

9. The Assign Roles dialog box opens.



Add the following roles to the user:

- EC Admin: For permission to access EC, JMX, and User Management
- EC User: For permission to access EC

> **Note:** It is important to give at least one EC Admin user access to the User Management UI and the JMX.

10. Stop EC by going to **Program Menu > HP EC > Stop HP EC icon**.
11. Update the **bsf.properties** file as follows:
    - authentication.provider=EXTERNAL
    - personalization.provider=SHARED
    - users.provider=EXTERNAL
    - groups.provider=EXTERNAL
    - roles.provider=SHARED
    - roles.relations.provider=SHARED
12. Restart EC by going to **Program Menu > HP EC > Start HP EC icon**.

Configuration for Secure Login when Using Reverse Proxy

When using Secure Login (HTTPS) with Reverse Proxy, perform the following steps after the installation has completed and before starting the server:

1. Open the bsf.war package using 7zip, WinRAR or any suitable extraction program to edit its internal content.
2. Open the file **C:\HP\EC\servers\server-0\webapps\bsf.war\WEB-INF\applicationContext-security.xml**.
3. Update the **forceHttps** value to true as follows (marked in bold):

```
<bean id="authenticationProcessingFilterEntryPoint"
      class="com.hp.sw.bto.security.springsecurity.
      BSFAuthenticationProcessingFilterEntryPoint">

<property name="loginFormUrl">
   <value>/login.form</value>
 </property>

<property name="forceHttps">

<value>true</value>

</property>

</bean>
```

4. Update the file **C:\HP\EC\servers\server-0\webapps\diamond\WEB-INF\classes\diamondlwssofmconf.xml** by adding the lines in **bold** to the webui section:

```
<nonsecureURLs>
  <url>.*/images/.*</url>
  <url>.*/desktopClient/.*</url>
</nonsecureURLs>

<reverseProxy enabled="true">

<full-
ServerURL>https://your.reverse.proxy.fqdn:8443/</fullServerURL>
</reverseProxy>
```

5. Validate that the authentication point is pointing at the reverseProxy. To do so, edit the file **C:\HP\EC\conf\client-config.properties** and check the marked value (it should have the reverseProxy FQDN).

   bsf.server.url=https://**your.reverse.proxy.fqdn:8443**/bsf

Chapter 3

Set Up Integration with Office Communicator Server and MS Lync Server

Enterprise Collaboration can integrate with the following versions of MS Communicator Servers:

- Office Communicator Server 2007 (OCS)
- MS Lync 2010 Server

Install the Root Certificate Authority (CA) Certificate

Note: The instructions in this section are written for the Microsoft CA Issuer. If you are using a different issuing system, these instructions can serve as a basis for installing the Root CA Certificate, but are not exact.

There are two stages in installing the Root CA Certificate, which are:

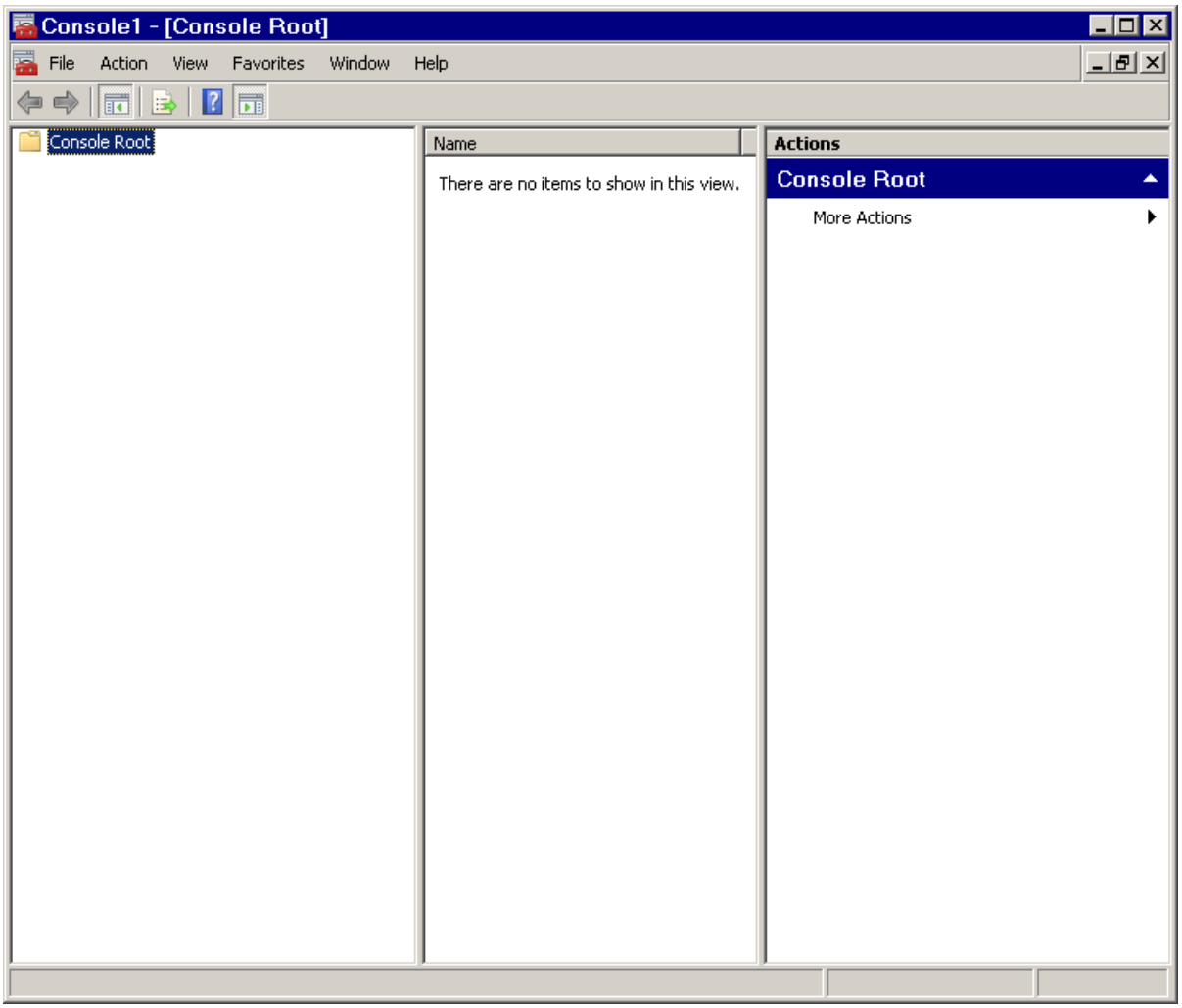
- "Check Which CA Is Used by the OCS" (on page 29)
- "Download and Install the Root CA Certificate" (on page 34)

If you already know the URL of the CA, you can skip the first stage and go directly to the second stage.

Check Which CA Is Used by the OCS

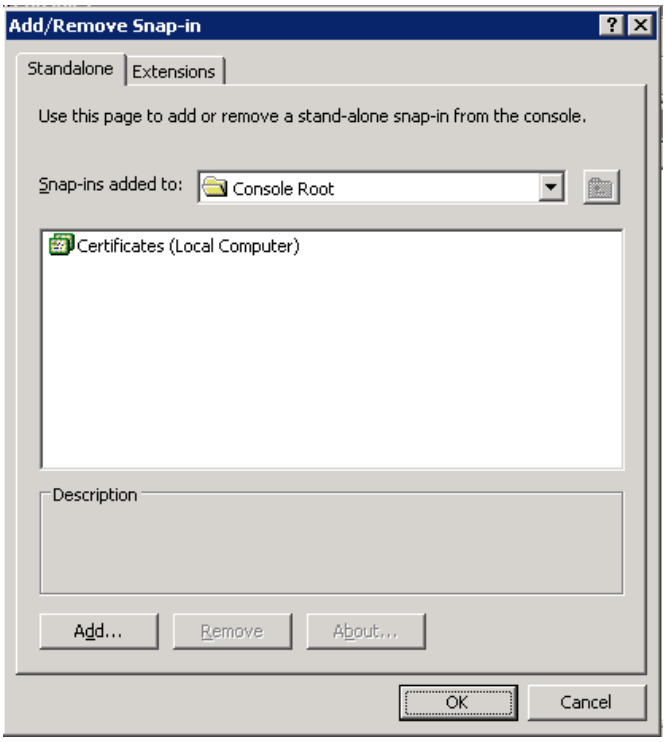
To check which CA is used by the OCS:

1. Login to the OCS server and run **mmc.exe**.
2. The Console Root opens.



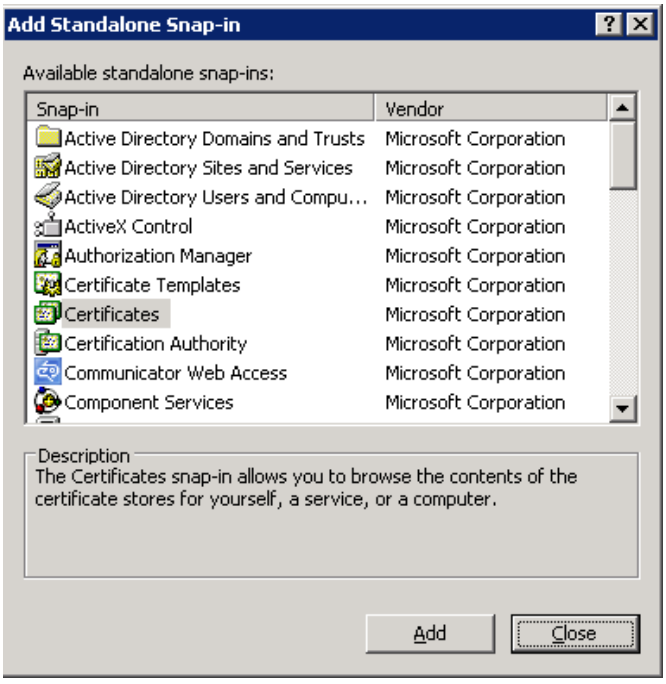
In the **Console Root**, go to **File>Add/Remove Snap-in**.

3. The **Add/Remove Snap-In** dialog opens.

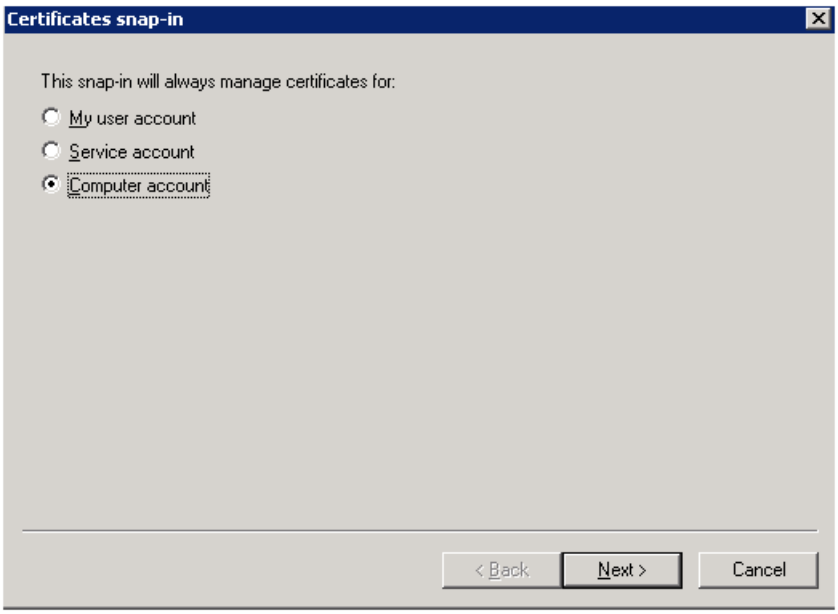


Select **Certificates**. Click **Add**.

4. The **Add Standalone Snap-In** dialog opens. Click **Add**.

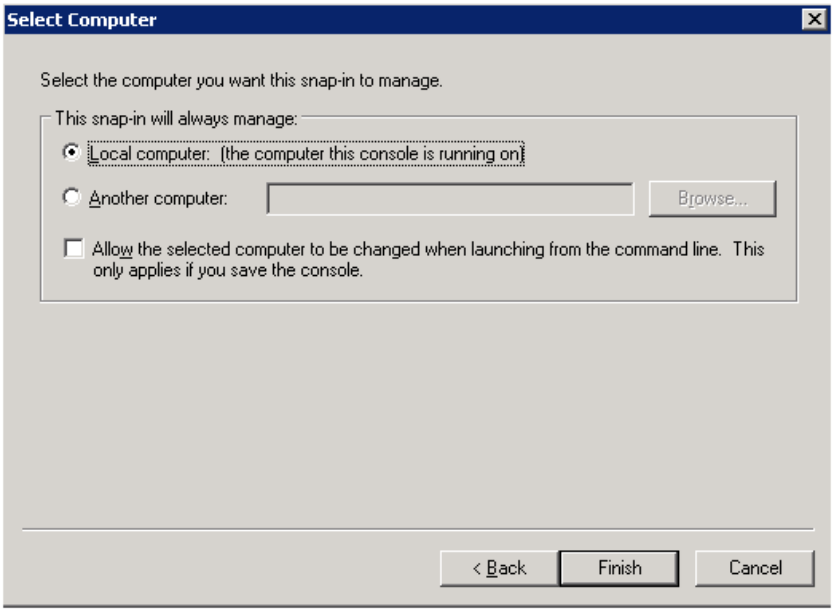


5. The **Certificates snap-in** dialog opens.



Select **Computer Account**. Click **Next**

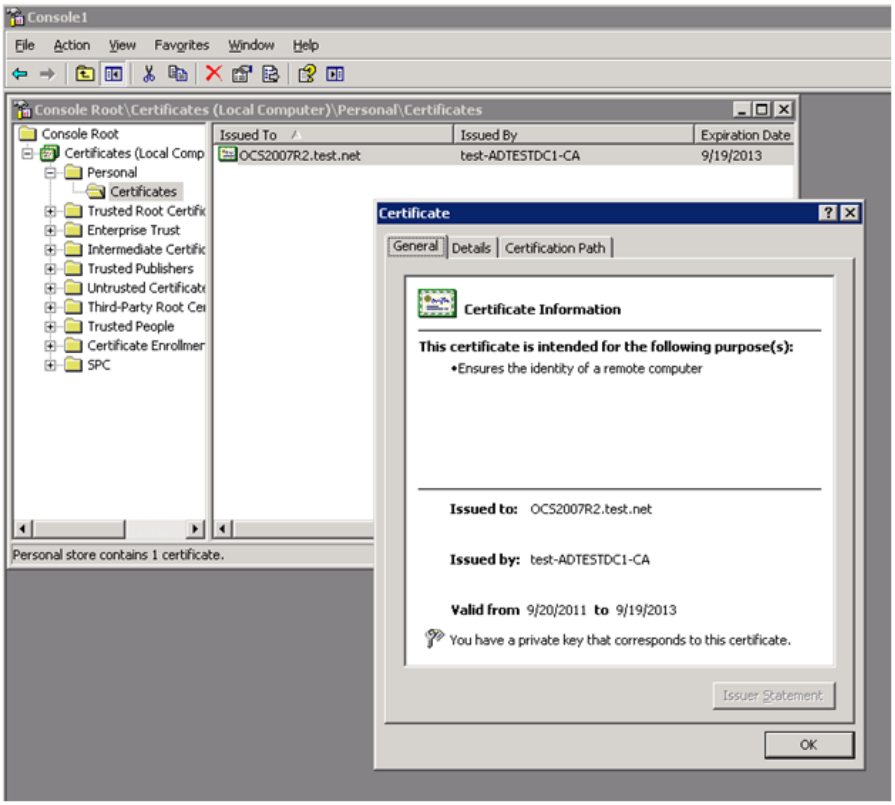
6. The **Select Computer** dialog opens.



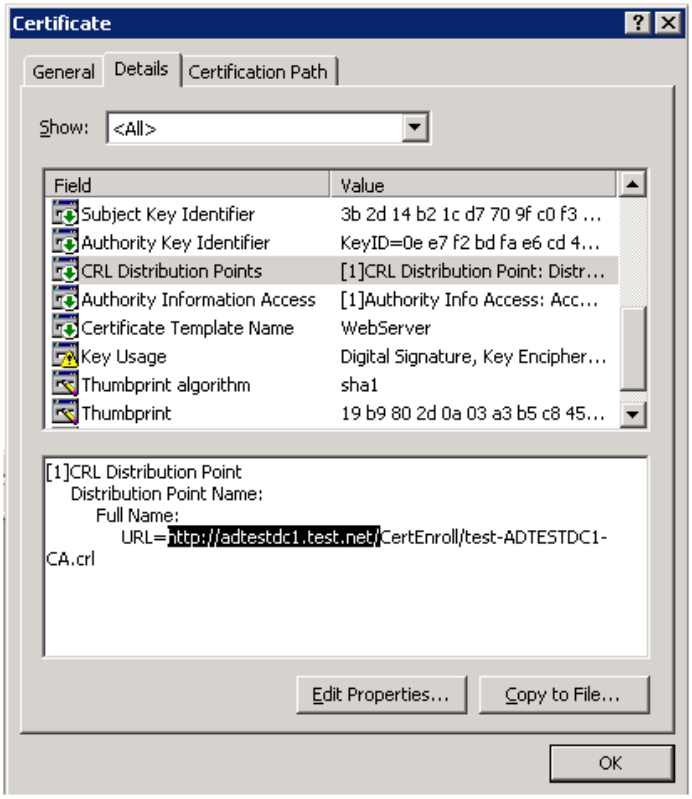
Select **Local Computer**. Click **Finish**.

7. The **Add Standalone Snap-In** dialog opens again. Click **Close**.
8. The **Add/Remove Snap-In** dialog opens again. Click **OK**.
9. The **Console Root** opens again.

   Go to **Personal>Certificates** (see below) to see the Root CA certificate and the CA that issued it.



10. Go to the **Details** tab.

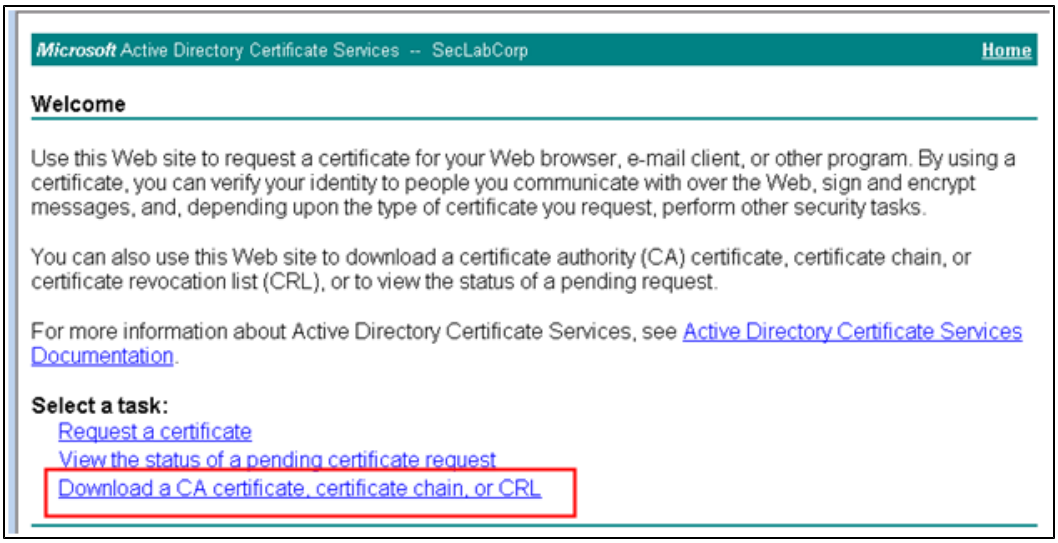


11. Use the Authority Name in the URL line to download the Root CA certificate in the next step. The Authority Name appears in the URL from the '=' to the first single '/'. For example, in the image above the Authority name is **http://adtestdc1.test.net.**

Download and Install the Root CA Certificate

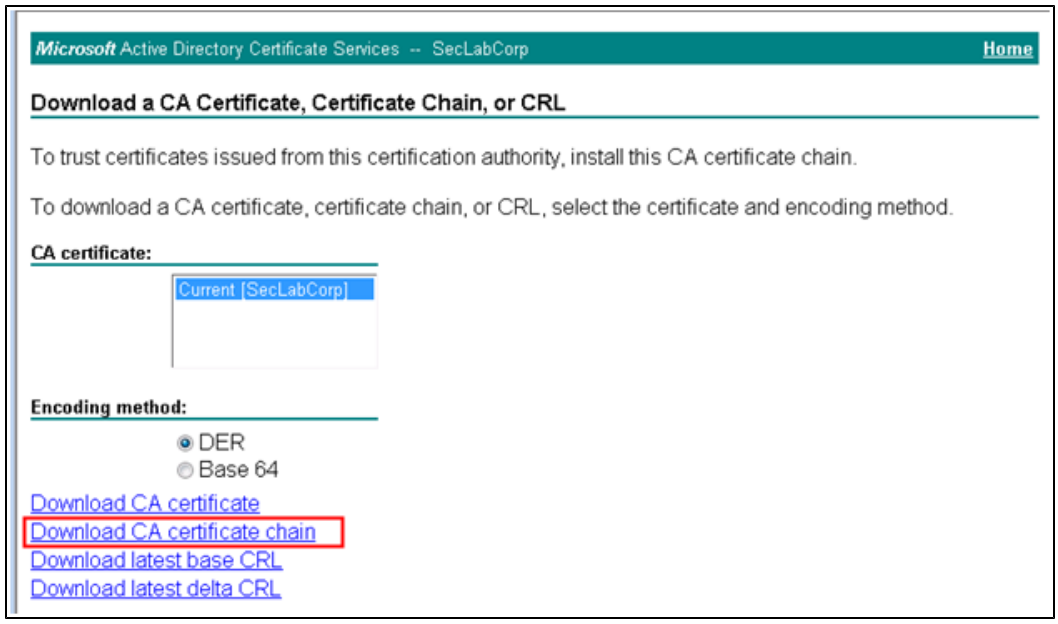
To download and install the Root CA certificate:

1. Login to the OCS agent machine.
2. Browse to the Certificate Authority web server with the Certificate's Authority Name from the URL you received above in the **Details** tab. You must use the Authority Name and append to it **/certsrv**. For example, in the Details tab above, the Authority Name is **http://adtestdc1.test.net.**. Therefore, you would browse to the Certificate Authority web server with the URL **http://adtestdc1.test.net/certsrv**.
3. The Welcome page opens.



In the Welcome page, click **Download a CA certificate, certificate chain, or CRL**.

4. The following page opens.



Click **Download CA certificate chain**.

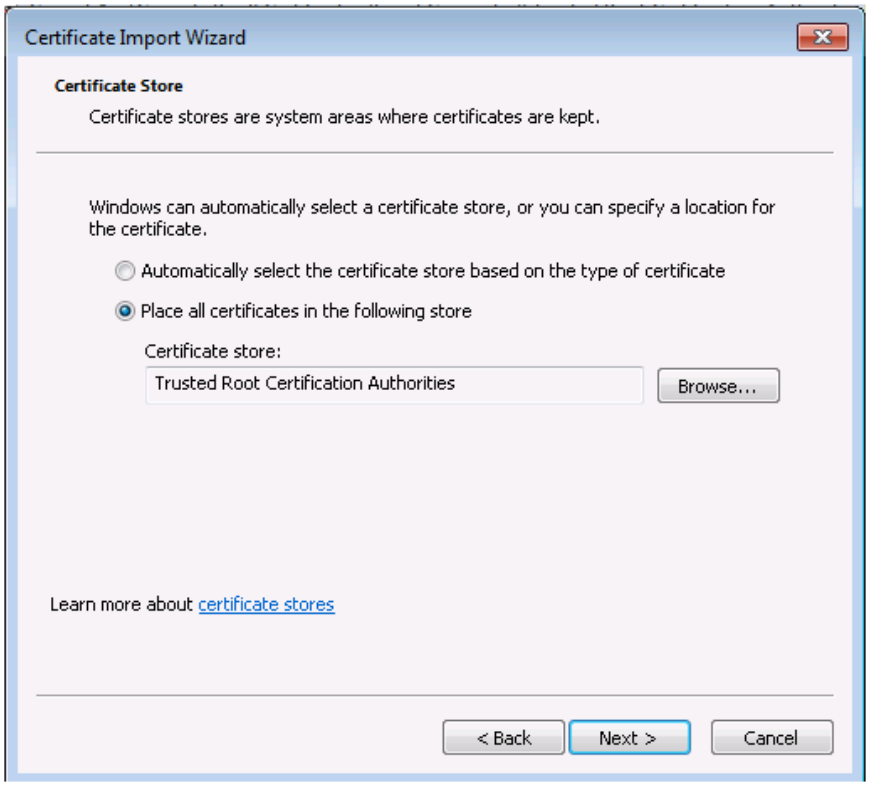
5. A File Download prompt opens, asking if you want to save the Root CA Certificate (***.p7b** file).

   Save the Root CA certificate anywhere on the file system.

6. Run **mmc.exe**.
7. In the **Console Root**, go to **File>Add/Remove Snap-in**.
8. In the **Add/Remove Snap-In** window, click **Add**.
9. In the **Add Standalone Snap-In** window, select **Certificates** from the list. Click **Add**.
10. In the **Certificates snap-in** window, select **Computer Account**. Click **Next**.
11. In the **Select Computer** window, select **Local Computer**. Click **Finish**.
12. In the **Add Standalone Snap-In** window, click **Close**.
13. In the **Add/Remove Snap-In** window, click **OK**.

    The Certificate Import Wizard is launched.

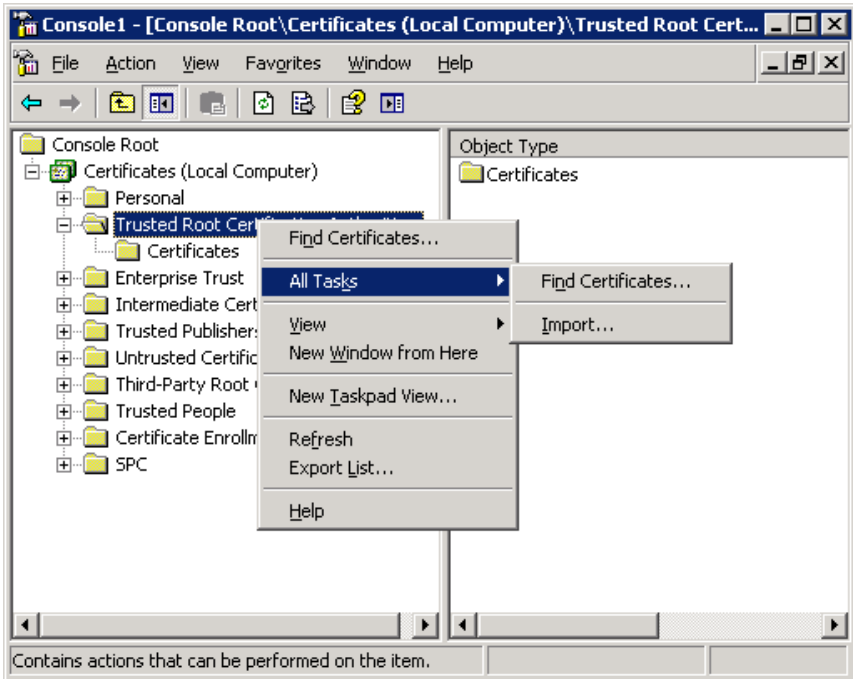
14. Click **Next** in the wizard.
15. In the **Certificate Store** window, select **Place all certificates in the following store** (see below). Click **Next**.



16. When the wizard finishes, go to the **Console Root** and right-click on the **Trusted Root Certification Authorities** folder.

17. A pop-up menu opens.

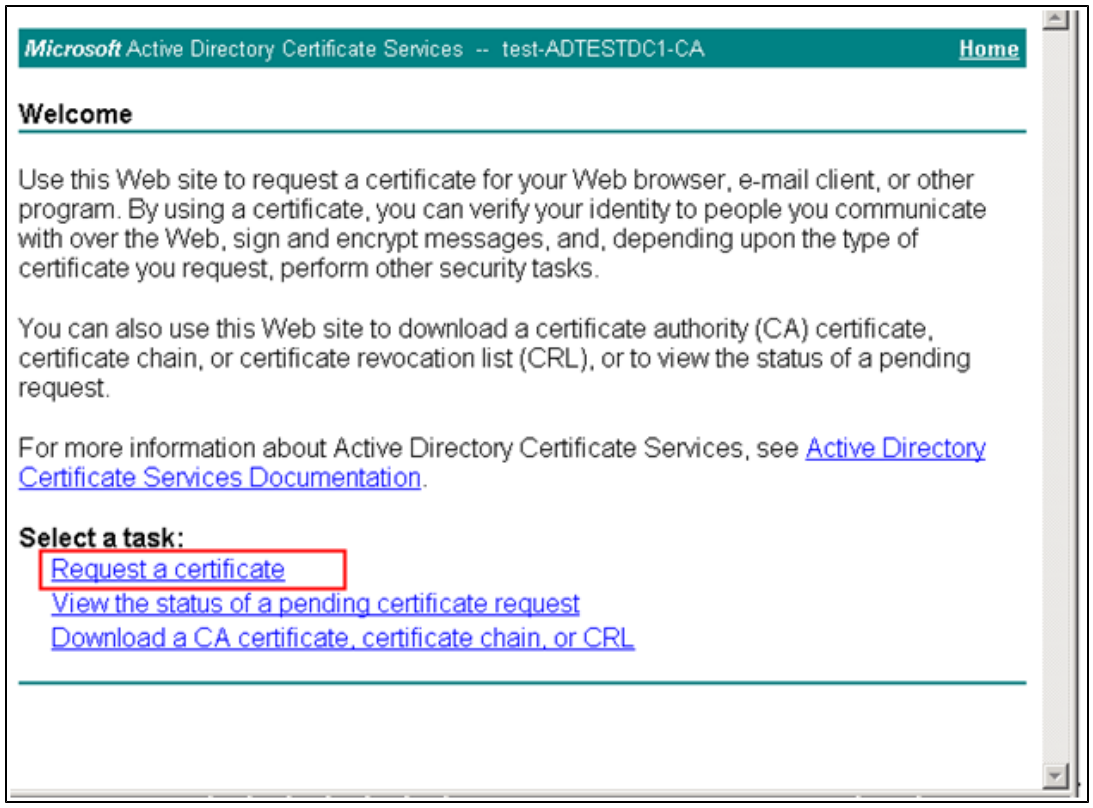
    Go to **All Tasks > Import** to import the Root CA certificate.



Install the Server Certificate on the OCS Agent Machine

To issue the Server Certificate and install it on the OCS agent machine:

1. From the OCS agent machine (important), browse to the CA web site with the Certificate's Authority Name. You must use the Authority Name and append to it **/certsrv**. For example, if the Authority Name is **http://adtestdc1.test.net.**, you would browse to the Certificate Authority web server with the URL **http://adtestdc1.test.net/certsrv**.
2. A Welcome screen opens. Select **Request a certificate**.



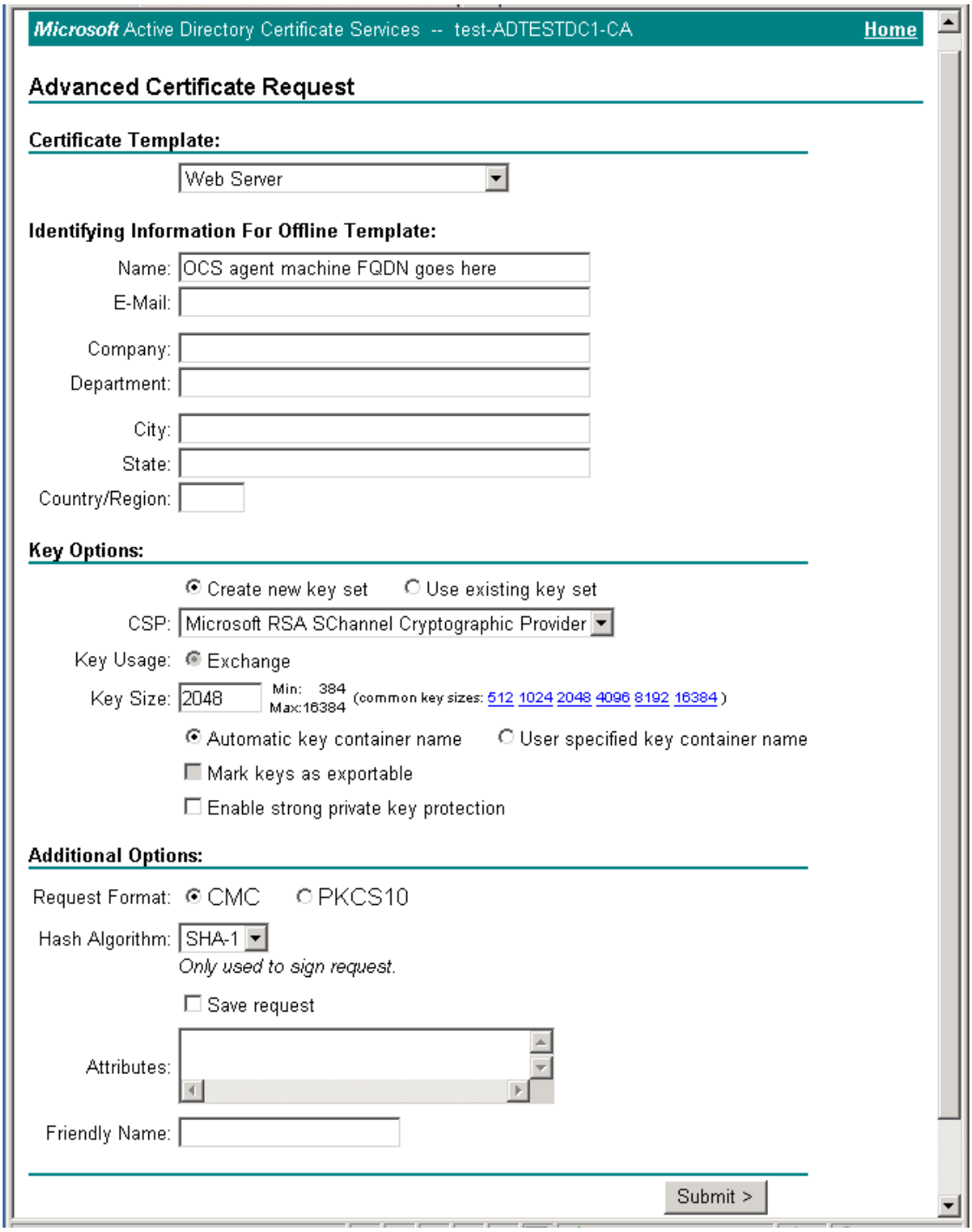
3. The **Request a Certificate** screen opens.

Select **advanced certificate request.**

4. The **Advanced Certificate Request** screen opens.

Select **Create and submit a request to this CA**.

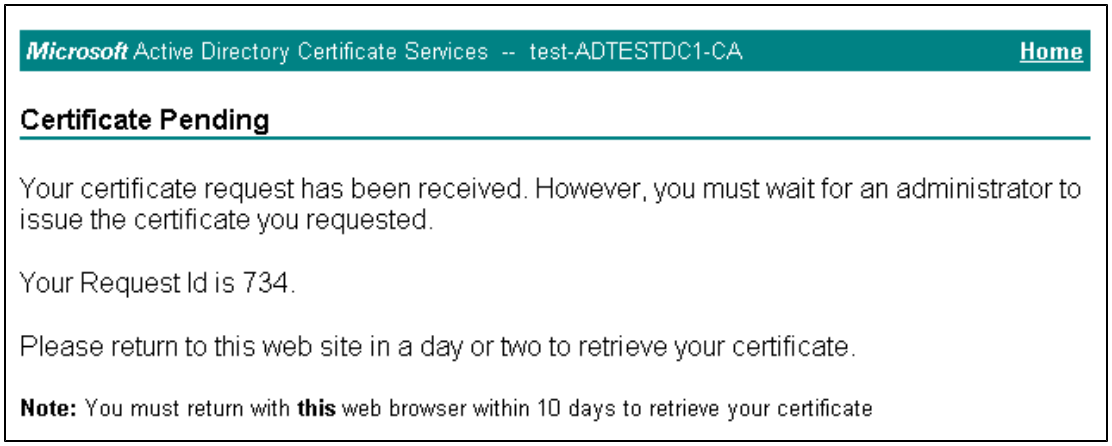
5. The **Advanced Certificate Request** form opens.



Fill in the form. Note that the "Mark keys as exportable" check box may appear disabled. If you browsed from the OCS agent machine this check box does not need to be enabled.

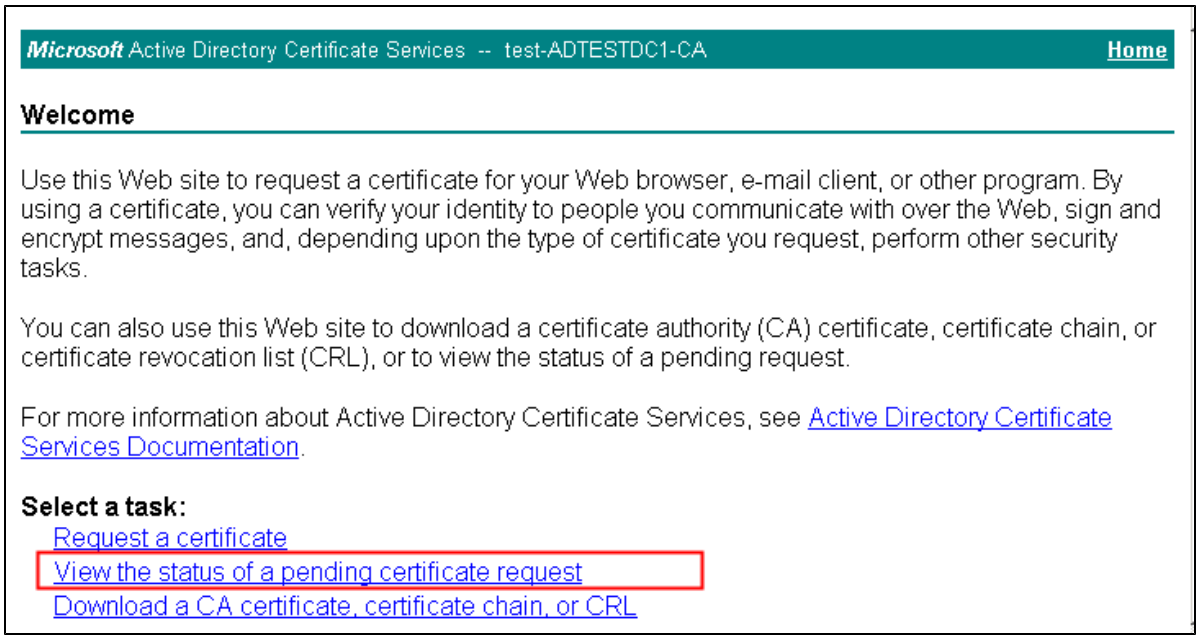
6. Click the **Submit** button when you are finished filling out the form.
   - If your Certificate Authority Service is configured to automatically issue the certificate, the **Certificate Issued** screen appears (see below). Click **Install this certificate** and continue to the next step.

- If your Certificate Authority Service is not configured to automatically issue the certificate, you must ask your CA Administrator to issue the specific certificate request. In this case, instead of the **Certificate Issued** screen above, a **Certificate Pending** screen appears.



  i. After you get a message that the certificate was issued, browse to the CA web site with the Certificate's Authority Name from the OCS agent machine (important) as you did in Step 1.

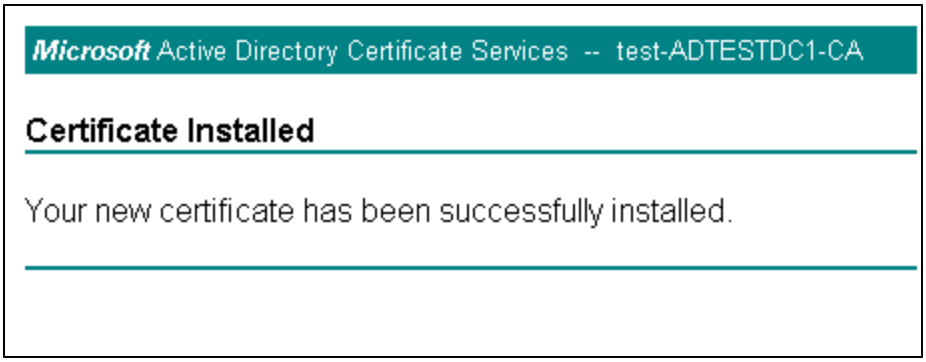
  ii. In the Welcome screen that appears, click **View the status of a pending certificate request**.



iii. The following screen opens. Select the issued certificate.

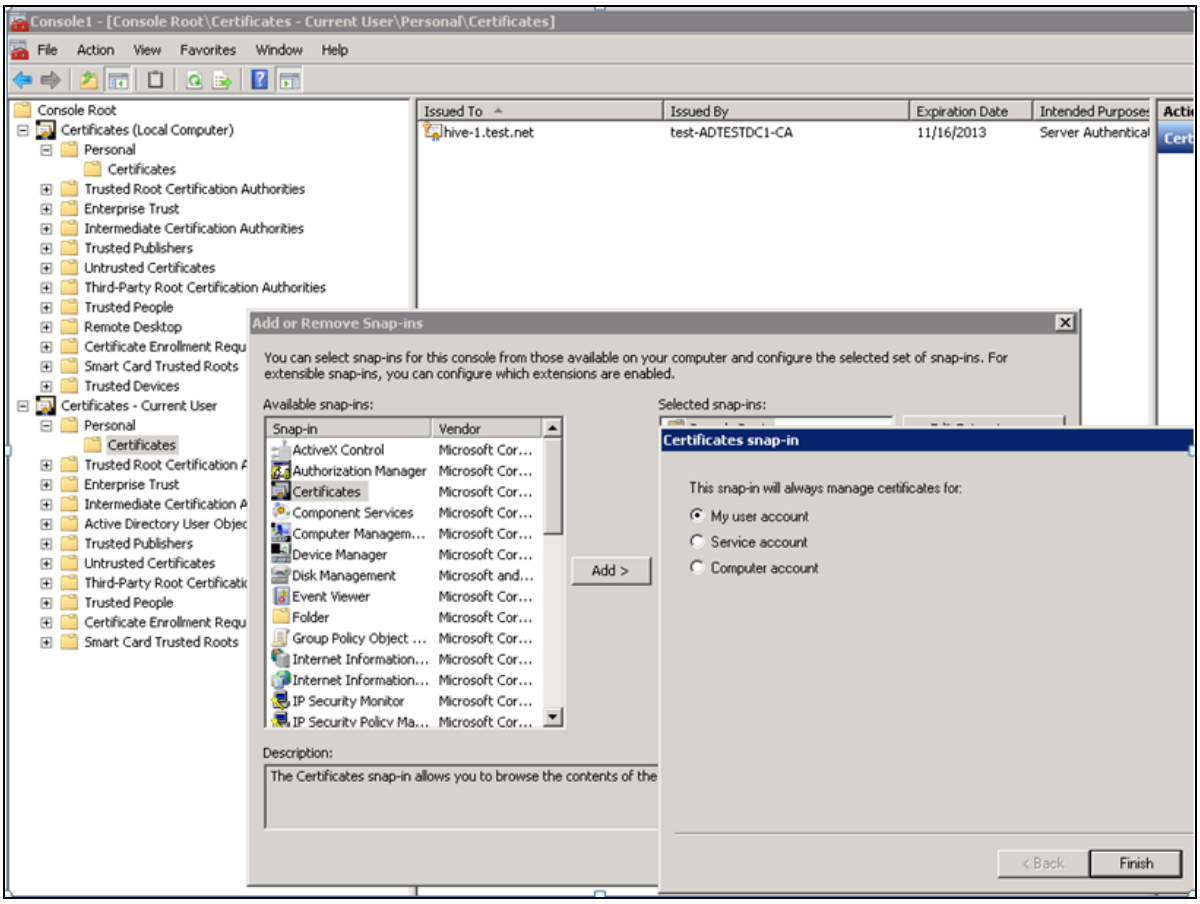
iv. The **Certificate Issued** screen appears. Select **Install this certificate**.

7. Verify that you get the following message.

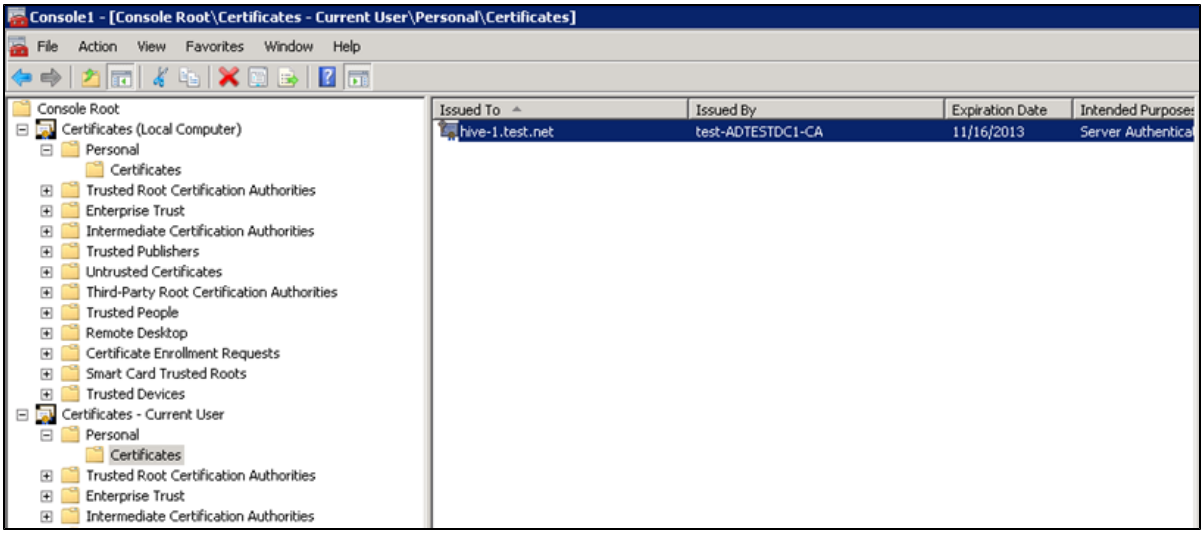


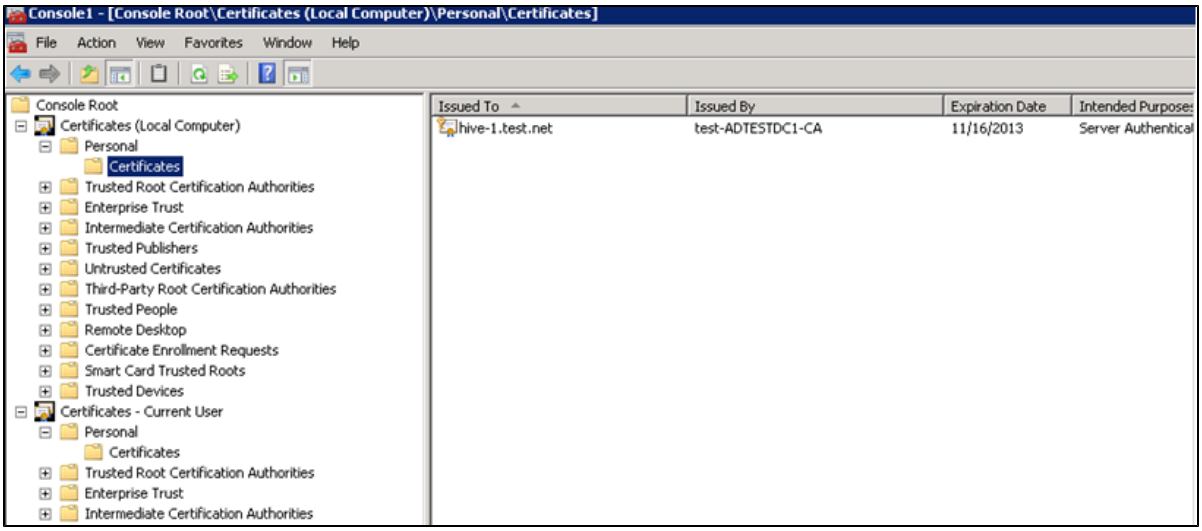
8. Login to the OCS server and run **mmc.exe**.
9. The Console Root opens. Go to **File>Add/Remove Snap-in**.
10. The **Add/Remove Snap-In** dialog opens. Select **Certificates**. Click **Add**.

11. The **Add Standalone Snap-In** dialog opens. Click **Add**.
12. The **Certificates snap-in** dialog opens. Select **My user account** (see below) to add the **User account Certificates Snap-In**. Click **Finish**.



13. If you need to run the OCS agent process from different user accounts, drag the issued certificate from
Certificates - Current User>Personal>Certificates (shown in the first image below) to the **Certificates (Local Computer)/Personal/Certificates** (shown in the second image below).





Agent Provisioning

This section describes how to set up Agent Provisioning for Office Communicator Server 2007 and Lync Server 2010.

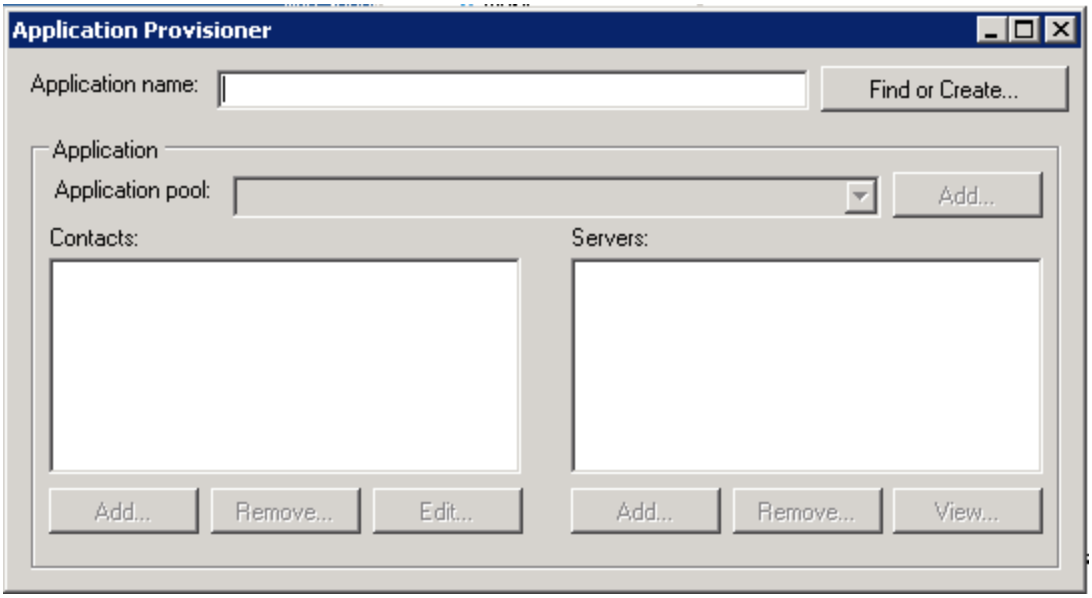
Agent Provisioning for OCS 2007

Prerequisites

- The OCS Server port should be open for communication from OCS agent machine.
- The domain user performing OCS agent setup should be a member of the RTCUniversalServerAdmins group and a member of the Local/Administrators group on the OCS agent machine.

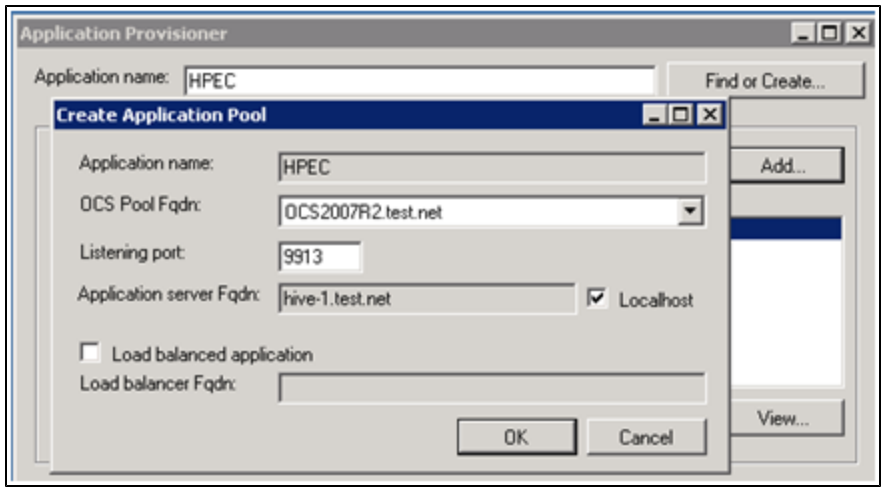
To set up agent provisioning for Office Communicator Server 2007:

1. Login to the OCS agent machine as a user who is a member of the RTCUniversalServerAdmins group.
2. Double-click the Microsoft utility **ApplicationProvisioner.exe** in the folder **ocs-agent** (deployed as part of Enterprise Collaboration).
3. The **Application Provisioner** dialog box opens.



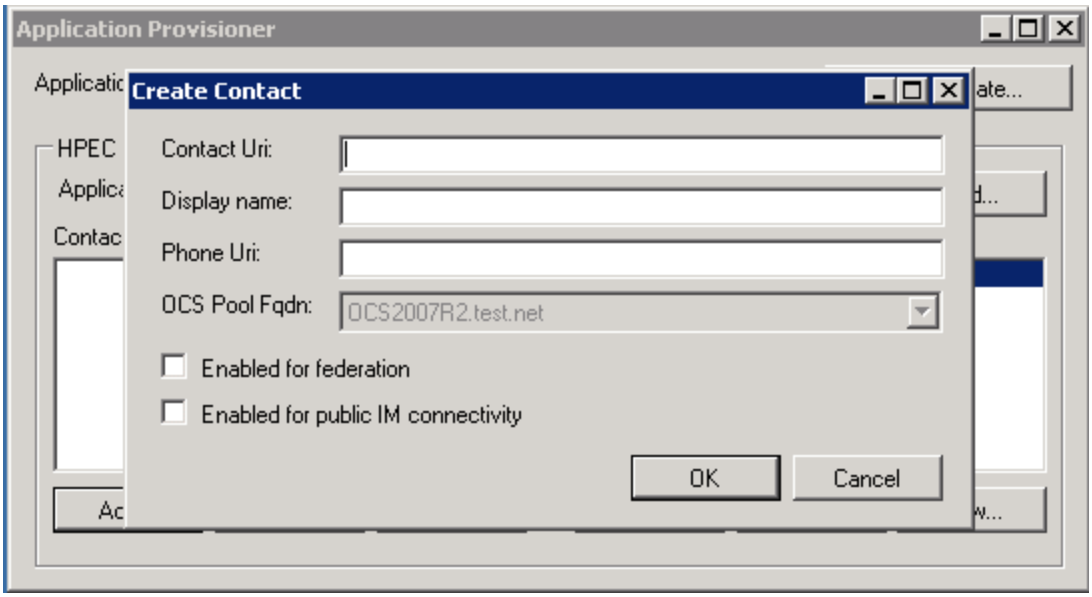
For **Application Name**, enter **HPEC**. Click **Find or Create...**

4. The **Create Application Pool** dialog box opens.



   a. Enter the following information:
      - Choose the **FQDN** of your OCS server from the **OCS Pool Fqdn:** drop-down list.
      - Enter a value for the Listening port, or use the default value.
      - Select the **Localhost** check box.
   b. Click **OK**.
5. The **Application Provisioner** dialog box opens.

   Create a Contact object by clicking **Add...** under the Contacts section.
6. The **Create Contact** dialog box opens.



a. Enter the following Contact information:

- **Contact Uri:** Enter here the SIP address of the HPEC OCS agent. The format is **sip:<name>@<domain name>**. For example, **sip:HPEC@hp.com**.

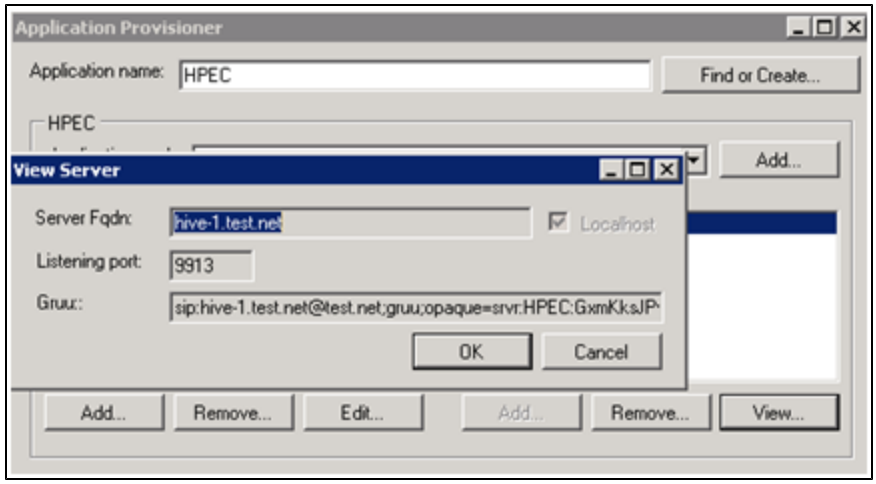
  Note: The <name> in the Contact Uri should be a user that exists in the active directory, with email and OCS permissions.

- **Display name:** The name you enter here will be the name that OC users see as the sender display name when receiving OC messages from EC. For example, **HPEC**.

  Note: Phone Uri should remain empty, and the two checkboxes in the dialog box should be unchecked.

b. Click **OK**.

7. In the **Application Provisioner**, select the Contact. Click **View…** under the Servers section.
8. The **View Server** dialog box opens.



In the **View Server** dialog box, save the GRUU for further configuration of the OCS agent.

Agent Provisioning for Lync 2010

1. On the Lync Server machine, run:

   ```
   Start > Microsoft Lync Server 2010 > Lync Server Management Shell
   ```

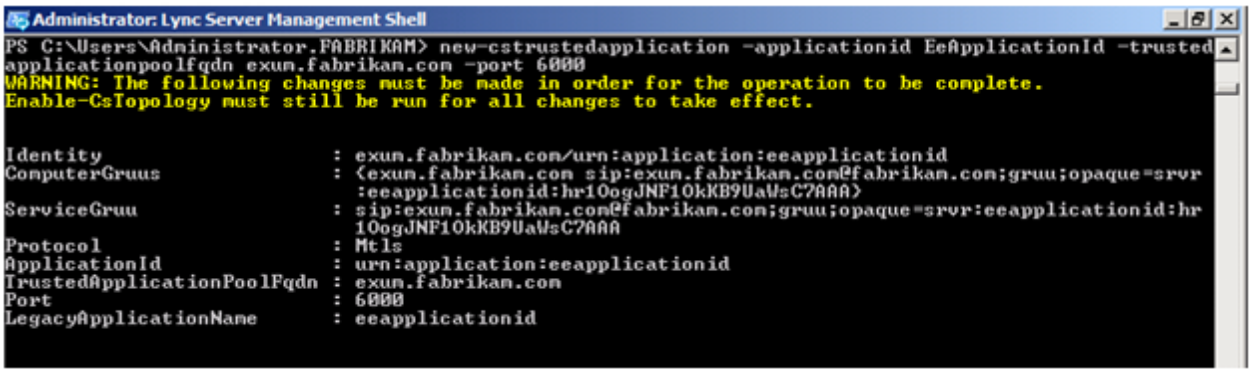
2. Create a trusted application by running the following command:

   ```
   New-CsTrustedApplication -ApplicationId <application-id> -Port <application-port> -TrustedApplicationPoolFqdn <ocs-agent-fqdn>
   ```

   For example:

   ```
   New-CsTrustedApplication -ApplicationId EeApplicationId -Port 6000 -TrustedApplicationPoolFqdn exum.fabrikam.com
   ```

   No errors should occur:

3. Save the ServiceGruu value for further configuration of the OCS agent.
4. Enable topology by running the following command:

   ```
   Enable-CsTopology
   ```

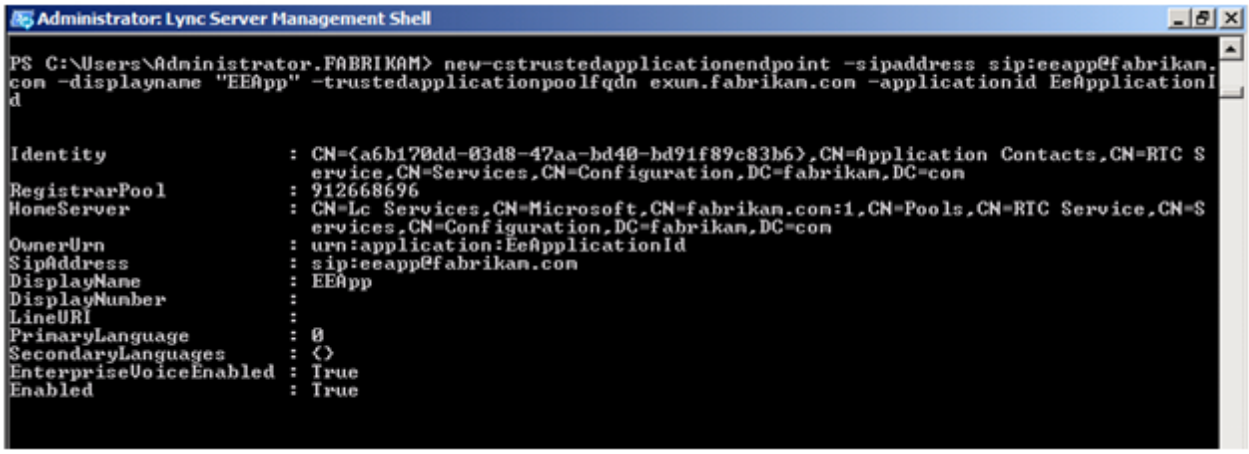
5. Create trusted application endpoint by running the following command:

   ```
   New-CsTrustedApplicationEndpoint -SipAddress <app-sip> -DisplayName <app-display-name> -TrustedApplicationPoolFqdn <ocs-agent-fqdn> -ApplicationId <app-id>
   ```

   For example:

   ```
   New-CsTrustedApplicationEndpoint -SipAddress sip:ee@fabrikam.com -DisplayName EE
   -TrustedApplicationPoolFqdn exum.fabrikam.com -ApplicationId
   ```

```
EeApplicationId
```



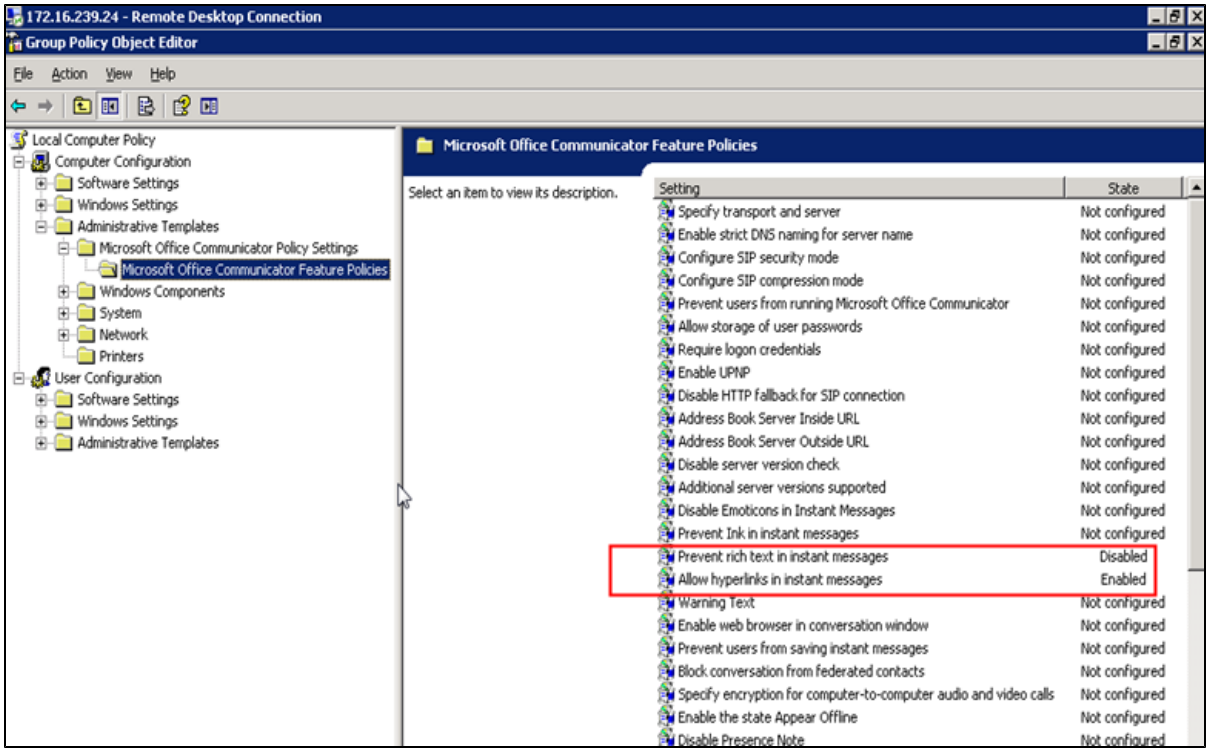
OCS Setup to Support Rich Content

Note: OCS setup to support Rich Content is optional. If you have already setup the OCS to support Rich Content, or you do not need Rich Content support, you can skip this section.

To setup OCS to support Rich Content:

1. Copy the file **Communicator.adm** that is located in the folder where you installed Enterprise Collaboration to the OCS machine.
2. Run **gpedit.msc** as follows:
   a. Go to **Computer Configuration**. Right-click **Administrative Templates** and choose **Add/Remove Templates…**
   b. In the dialog, click **Add…** and specify the path where the Communicator **.adm** file is located.
   c. Go to **Computer Configuration>Administrative Templates>Microsoft Office Communicator Policy Settings>Microsoft Office Communicator Feature Policies**.
   d. Change the setting of **Prevent rich text in instant messages** to **Disabled**, and the setting

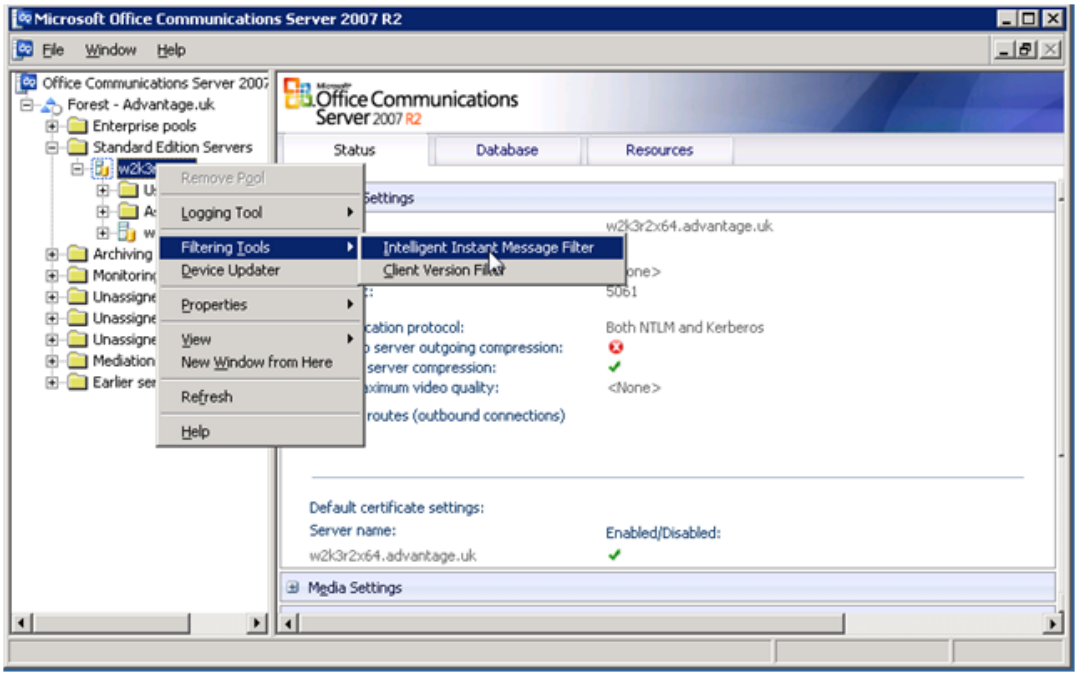
of **Allow hyperlinks in instant messages** to **Enabled**, as shown below.



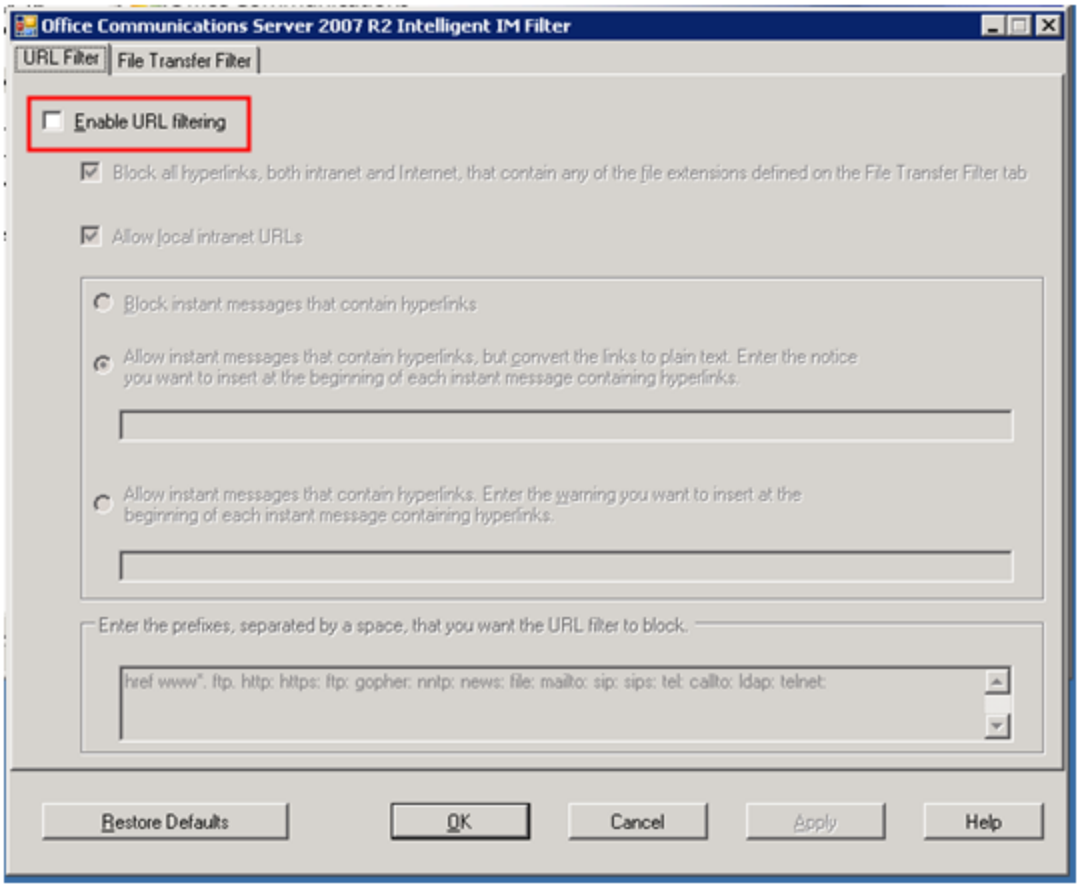
3. Run the Microsoft Management Console by running **C:\Program Files\Common Files\Microsoft Office Communications Server 2007 R2\WRTCSnap2.msc**.

   a. Go to **Forest - …>Standard Edition Servers** and right-click the poll with the OCS server host name.

   b. From the pop-up menu, choose **Filtering Tools>Intelligent Instant Message Filter**, as shown below.

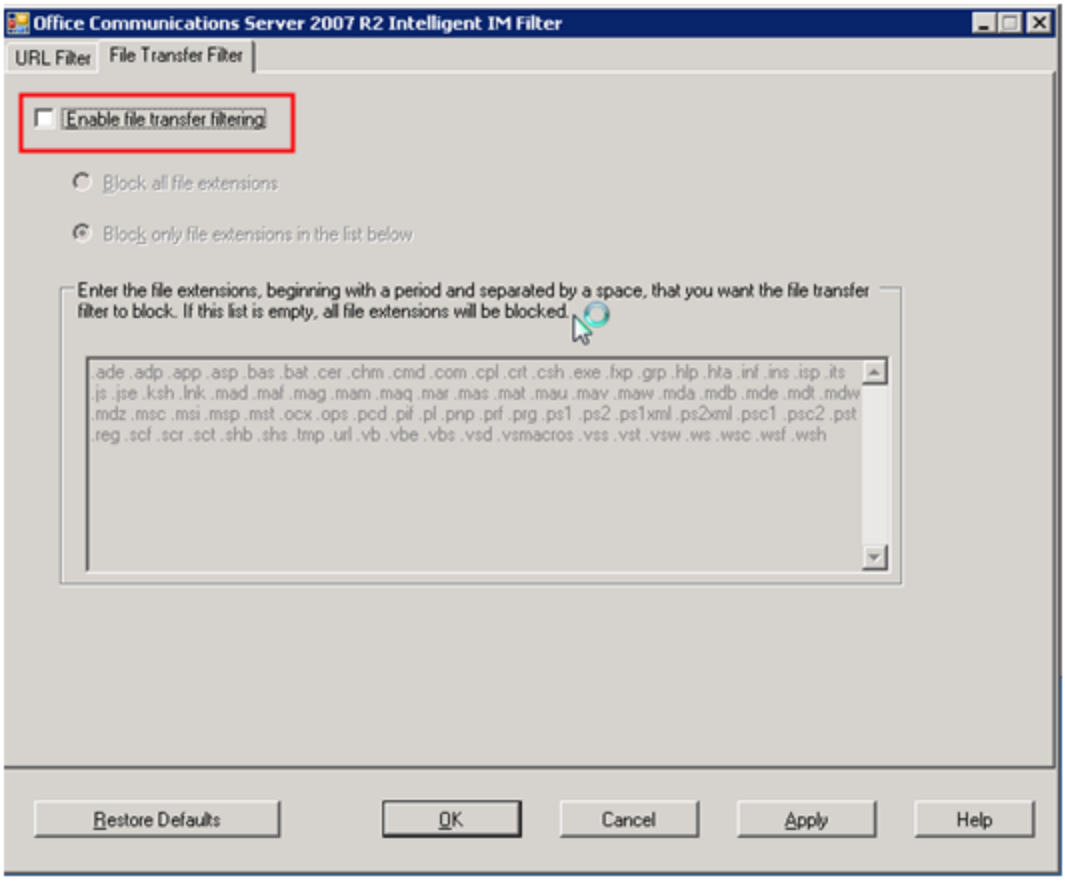


c. In the **URL Filter** tab, clear the **Enable URL filtering** check box, as shown below.



d. In the **File Transfer Filter** tab, clear the **Enable file transfer filtering** check box, as

shown below.



4. Restart the OCS server machine.

OC Client Setup to Support Rich Content

Note: OC client setup to support Rich Content is optional. If you have already setup the OC client to support Rich Content, or you do not need Rich Content support, you can skip this section.

1. Copy the file **OCSClient.reg** that is located in the folder where you installed Enterprise Collaboration to the machine where the OC client is installed.
2. On the client machine (where the OC client is installed), run the file **OCSClient.reg** and restart the OC client application.

Sanity Testing of EC and OCS Integration

1. Start the HP EC server on the server machine.
2. Start the OCS agent on the server machine.
3. Start the OC client on the client machine. Login as user2.
4. Start the browser, go to the HP EC site. Login as user1.

5. Create a new conversation. Add user2 to the conversation.
6. Mark user2 as required (urgent) in the conversation. User2 should receive notification in the OC client.
7. Send a reply from OC client. The reply from user2 should be added to the conversation.

Chapter 4

Perform Additional Configuration Steps

This section presents two manual processes that should be used if the automatic process during the installation has failed.

Install a Certificate for the Mail Client

There are two ways to install a certificate for the mail client. This installation is required if the mail server is accessed using a secure connection and its certificate is self-signed.

Method 1

1. Complete the EC installation providing Email configuration data, but without running Email configuration validation.
2. Discover with IT which ports of the email server are secure.
3. On the EC server, run **diamond-deploy/add-email-certificates.bat** with the following parameters:
   add-email-certificates.bat <email-sending-host>:<email-sending-secure-port> <email-receiving-host>:<email-receiving-secure-port>

   For example:

   add-email-certificates.bat exch14.net:466 exch14.net:996
4. Restart the EC server.

Method 2

1. Verify that EC is not running.
2. Open CMD.
3. Run the following command to import your certificate:

   <EC FOLDER>\java\windows\x86_64\bin\keytool.exe -import -alias <YOUR CERTIFICATE ALIAS> -file <ROOT CA CERTIFICATE PATH> -keystore <EC FOLDER>\java\windows\x86_64\lib\security\cacerts

Install Customer Certificates

At the end of the installation process, the Tomcat server is set with a self-signed temporary certificate.

If you work with a standalone web application network configuration, you can work with the self-signed certificate generated during the EC installation without performing the steps below. However, it is recommended to import your Server Certificate to the keystore as described below.

If you work in a reverse proxy network configuration, you should import your Root CA certificate and Server Certificate to the EC server keystore by performing the steps below.

To install a certificate for Tomcat:

1. Verify that EC is not running.
2. Open CMD.
3. Run the following command to delete the temp certificate from keystore:

   <EC FOLDER>\java\windows\x86_64\bin\keytool.exe -delete -alias tomcat -keystore <EC FOLDER>\servers\server-0\ec-keystore.jks
4. Perform one of the following commands:
   - To import your keystore to the EC keystore:

     <EC FOLDER>\java\windows\x86_64\bin\keytool.exe -importkeystore -srckeystore <YOUR KEYSTORE PATH> -destkeystore <EC FOLDER>\servers\server-0\ec-keystore.jks -srcstoretype <YOUR KEYSTORE TYPE>
   - To import your certificate to the EC keystore:

     <EC FOLDER>\java\windows\x86_64\bin\keytool.exe -import -alias <YOUR CERTIFICATE ALIAS> -file <YOUR CERTIFICATE PATH> -keystore <EC FOLDER>\servers\server-0\ec-keystore.jks

     Note: For reverse proxy certificates, this command should be performed for both Root CA and Server Certificates.

Disabling Default Secure Authentication (optional)

Perform this step only if you want to disable redirection to https for authentication.

Note: For security reasons, this is not recommended.

1. Verify that EC is not running.
2. Open CMD.
3. Run **C:\HP\EC\diamond-deploy\disable-secure-authentication.bat**.
4. Start EC.

Chapter 5

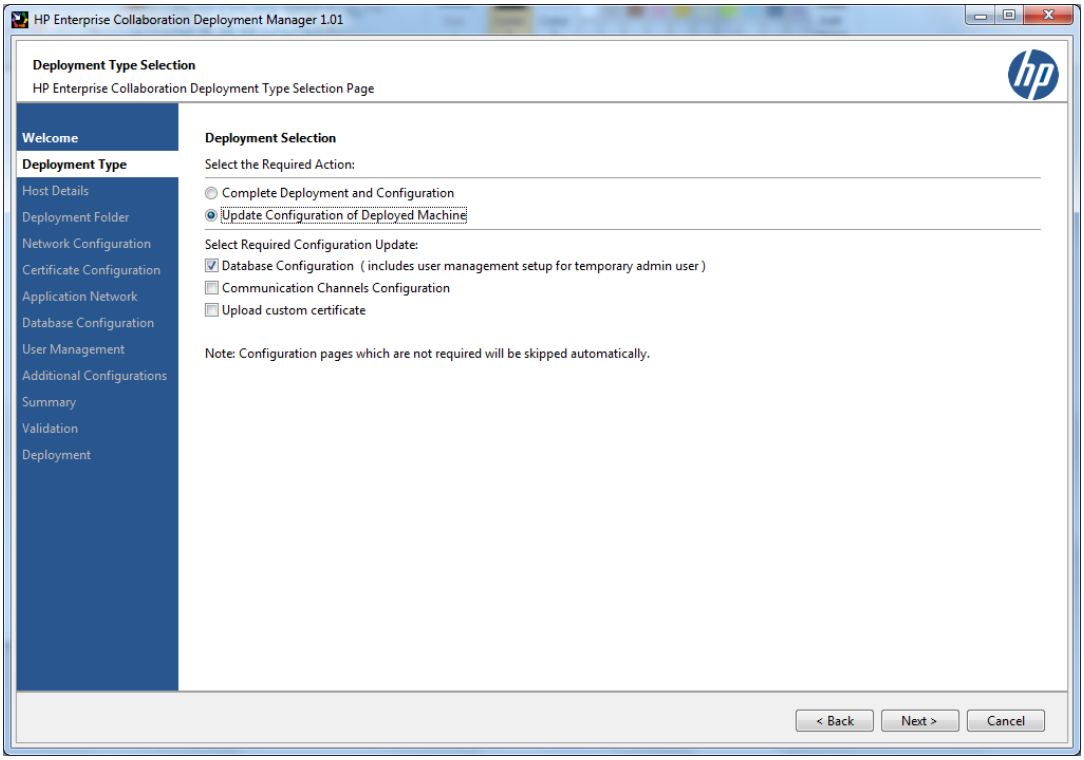
Update Configuration in the Deployment Manager

You can update the configuration from the **Deployment Type** tab of the Deployment Manager.

1. In the EC-Deployment Manager folder, double-click **EC.exe**.
2. The Enterprise Collaboration Deployment Manager wizard opens.

   In the Welcome page, check “I accept the terms of the license agreement”. Click **Next**.
3. The Deployment Selection page opens.

   Select **Update Configuration of Deployed Machine**.
4. Additional options appear for selecting the type of configuration update.



The configuration options are:

- **Database Configuration:** If you choose this configuration, the update wizard takes you through the following pages:
  - EC Deployment Host Details
  - Deployment Folder Configuration
  - MSSQL Database Server Configuration
  - User Management Configuration

- Summary
- Validation

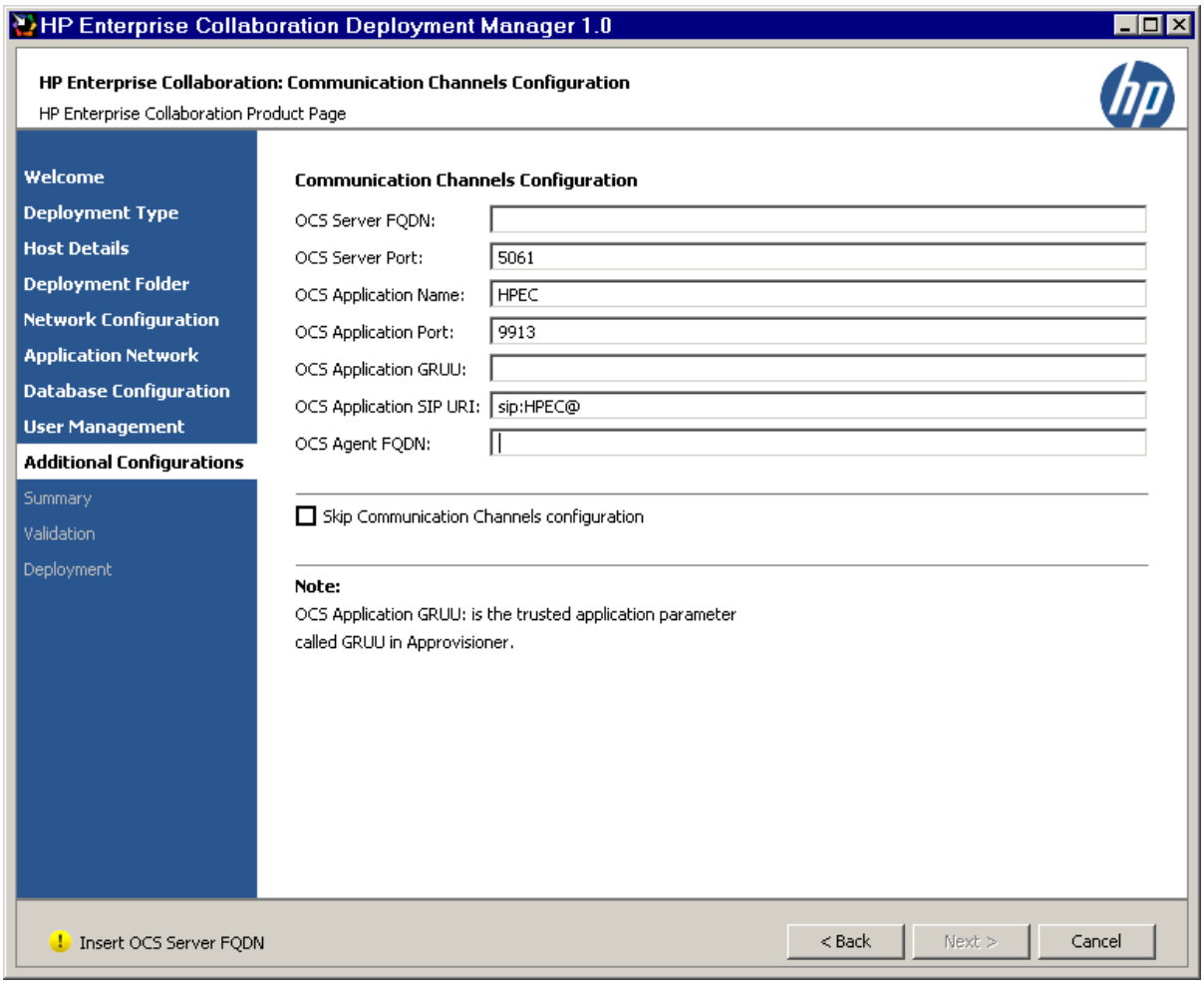
- **Communication Channels Configuration:** This configuration should be performed only if you intend to use Enterprise Collaboration with Office Communicator and only after you have performed the Office Communicator Setup as described in "Set Up Integration with Office Communicator Server and MS Lync Server" (on page 29).
- **Upload Custom Certificate:** Select this configuration to upload a customized security certificate at the end of the installation. See Step 8 for details.

It is possible to select all configuration options.

5. Choose the type of configuration update you want to perform. Click **Next**.
6. If you chose **Database Configuration** in the previous step, the configuration wizard takes you through the pages mentioned in step 4 and you can modify settings in these pages according to your needs.

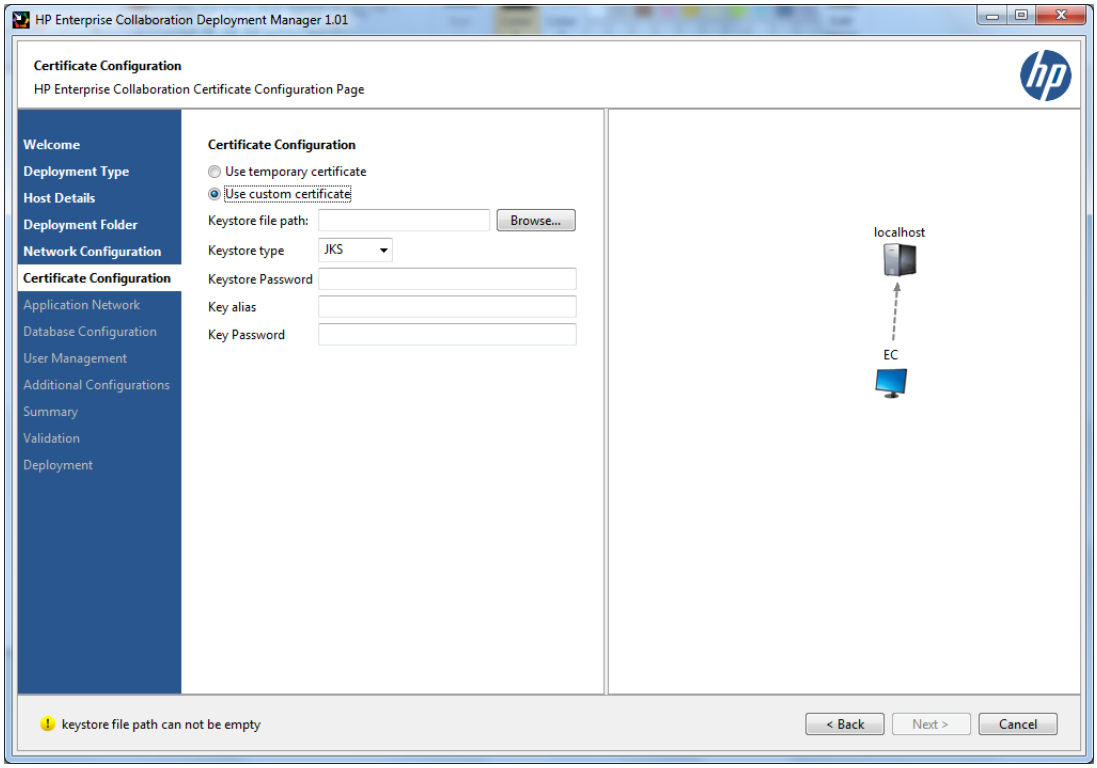
   If you chose **Communication Channels Configuration** in the previous step, the configuration wizard takes you through the pages EC Deployment Host Details, Deployment Folder Configuration, and Communication Channels Configuration. EC Deployment Host Details and Deployment Folder Configuration were already presented during installation and you can modify settings in these pages according to your needs.

   The Communication Channels Configuration page is shown below.



7. In the Communication Channels Configuration page, enter the following information:
   - **OCS Server FQDN**: Enter here the **OCS Pool Fqdn** that you entered during the "Set Up Integration with Office Communicator Server and MS Lync Server" (on page 29) process.
   - **OCS Server Port:** The default value is 5061. Consult your system administrator for this port number.
   - **OCS Application Name:** The default name is **EE**. Enter here the **Display Name** that you entered during the "Set Up Integration with Office Communicator Server and MS Lync Server" (on page 29) process.
   - **OCS Application Port:** The default value is 6000. Enter here the Listening Port number that you entered during the "Set Up Integration with Office Communicator Server and MS Lync Server" (on page 29) process.
   - **OCS Application GRUU:** Enter here the string that you obtained during the "Set Up Integration with Office Communicator Server and MS Lync Server" (on page 29) process.
   - **OCS Application SIP URI:** The default value is **sip:EE@**. Enter here the **Contact Uri** that you entered during the "Set Up Integration with Office Communicator Server and MS Lync Server" (on page 29) process.
   - **OCS Agent FQDN:** This value should be the FQDN of the EE server.

8. If you choose **Upload Custom Certificate**, select to **Use temporary certificate** or to use a customized certificate **Use custom certificate**.
9. If you select **Use custom certificate**, enter the keystore details in the relevant fields.



Two types of keystores supported.- **JKS** and **PKC**.

The certificate is imported according to the Key alias entered.

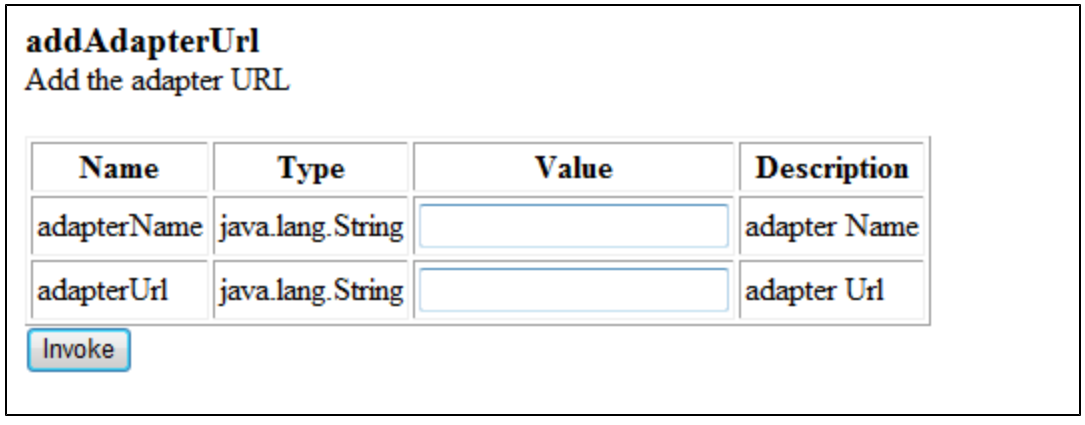
Chapter 6

Set Up the Adapter

1. Download the adapter **.war** file from: www.hp.com/go/livenetwork
2. Put the adapter **.war** file in the directory **<EC_Installation_Folder>/servers/server-0/webapps**. The name of the adapter **.war** file should be the same as the adapter name.

   If you want to deploy the adapter remotely, you can use the Tomcat manager application to do this, according to the following instructions:
   http://tomcat.apache.org/tomcat-7.0-doc/manager-howto.html

   Note: In order to prevent network speed issues, copy the adapter **war** file to the temporary directory in the target server. Then after the deployment, move it from the temporary directory to the directory **<EC_Installation_Folder>/servers/server-0/webapps**.
3. Add the basic adapter URL using JMX as follows:
   a. Go to **<EC_application_url>/diamond/jmx-console** (for example, **http://my_host:8080/diamond/jmx-console**).
   b. Select **Diamond > Diamond adapter config jmx service**.
   c. In the method **addAdapterUrl** (see the figure below) add the following parameters:
      - **adapterName:** This name should be identical to the **adapter.war** filename. For example, if the filename is **sm.war**, enter **sm** here.
      - **adapterUrl:** For local deployment, the adapter URL should be **{local}/adapter_name**.



   d. Click **Invoke**.
4. If your adapter uses LWSSO, check that the **initString** defined in the LWSSO configuration file in adapter **.war** is the same value that you defined for **initString** in the Lightweight Single Sign On configuration page during the EC installation.

Chapter 7

Upgrade EC Configuration from 1.0 to 1.1

This section describes how to upgrade Enterprise Collaboration from version 1.0 to version 1.1.

If you have a previous version of Enterprise Collaboration installed and need to use the same data in the EC 1.1 installation, before upgrading, perform the following steps:

> **Note:** EC 1.1 must be installed on the machine on which the previous EC version was installed.

1. Backup the external-ldap.properties and ldap certificate file (if they exist) from the previous installation to a temporary directory.
2. Backup all existing adapters from C:\HP\EC\servers\server-0\webapps to temp directory.
3. Backup the database schema.
4. Uninstall EC (1.00 or 1.01), so the EC service and all shortcuts will be removed.

Next, install Enterprise Collaboration 1.1:

1. Install EC 1.1 as described in Install Enterprise Collaboration using the **Connect to Existing Schema** option (See "Configure the MSSQL Database Administrator:" (on page 20)).
2. During installation, enter all the configuration details as in the previous installation (init-string, email, OCS).

   > **Note:** The temporary administrator that you add at this stage must be different from the previous temporary administrator and must not exist in the user repository.

3. After the installation has completed successfully, copy the **external-ldap.properties** file from the **C:\temp** directory to **C:\HP\EC\conf** (overwriting the existing file).
4. Place the backup ldap certificate (if one exists) in **diamond-deploy** and then run:

   ```
   set-ldap-certificate.bat certificate-file-name
   ```

5. Update bsf.properties to:

   ```
   authentication.provider=EXTERNAL
   personalization.provider=SHARED
   users.provider=EXTERNAL
   groups.provider=EXTERNAL
   roles.provider=SHARED
   roles.relations.provider=SHARED
   ```

6. Move the backup adapters from the temp directory into C:\HP\EC\servers\server-0\webapps
7. Start the EC server.

8. To allow all existing conversations to be reindexed for searches, reset the elastic search as follows:
   a. Go to `http://diamond_host:<http_port>/diamond/jmx-console`.
   b. Login with the administrator user (temporary administrator user created in the User Management Configuration page during the installation of version 1.1).
   c. Select `Diamond > Diamond search JMX service`.
   d. Invoke the `resetExperienceLastIndexRunTime` method.

Note: After completing the Upgrade procedure, there is *no need* to enter BSF user management as all the role definitions already exist in the database.

Chapter 8

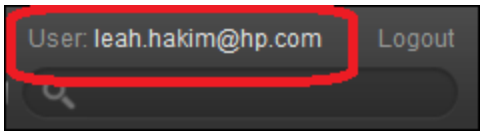
Desktop Client Installation

The Desktop Client application is an additional tool for viewing notifications about changes made in EC conversations. It provides information about current conversations in Enterprise Collaboration in which you are a participant.

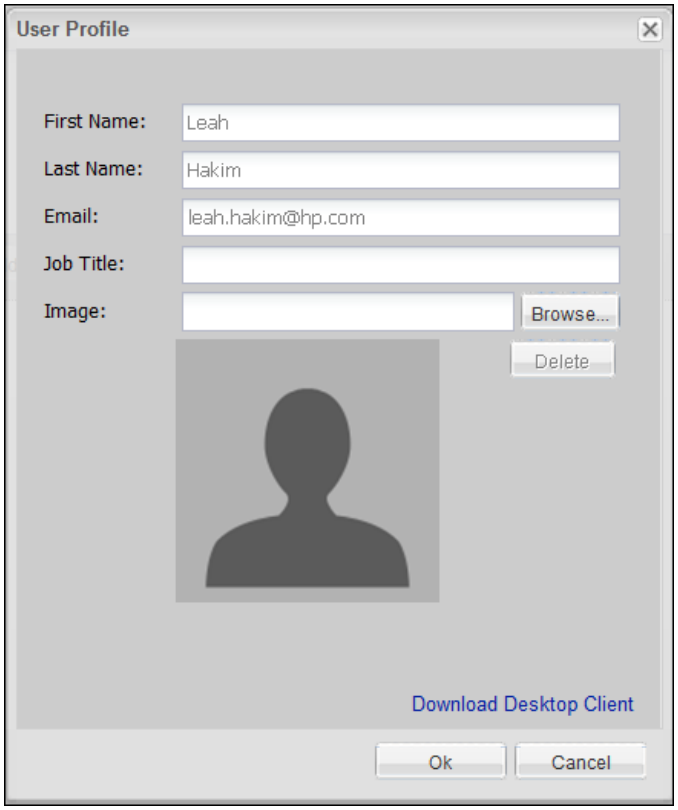
This task explains how to install the Desktop Client on your system and provides a detailed description of the Installation wizard steps.

To install the Enterprise Collaboration Desktop Client from within Enterprise Collaboration:

1. Click on the user name in the upper right corner of the EC window:

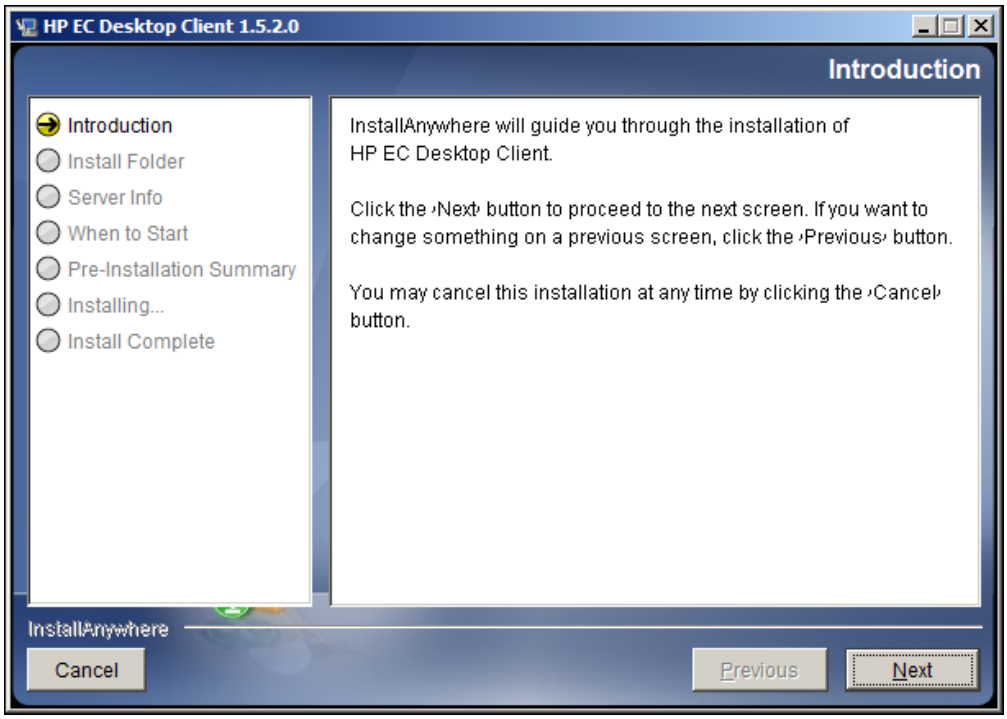


2. The User Profile window opens:

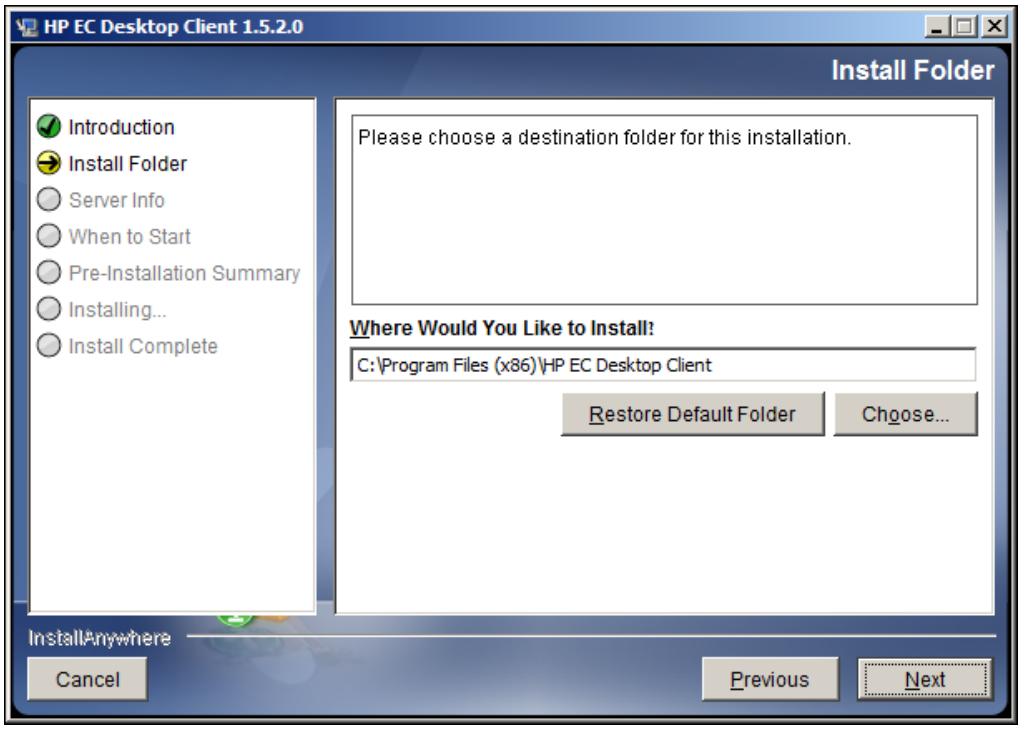


3. Click on the **Download Desktop Client** link at the bottom of the window.
4. If the Open File warning window opens, click **Run** in this window.
5. Select Save or Open to download and extract the Desktop Client zip file.

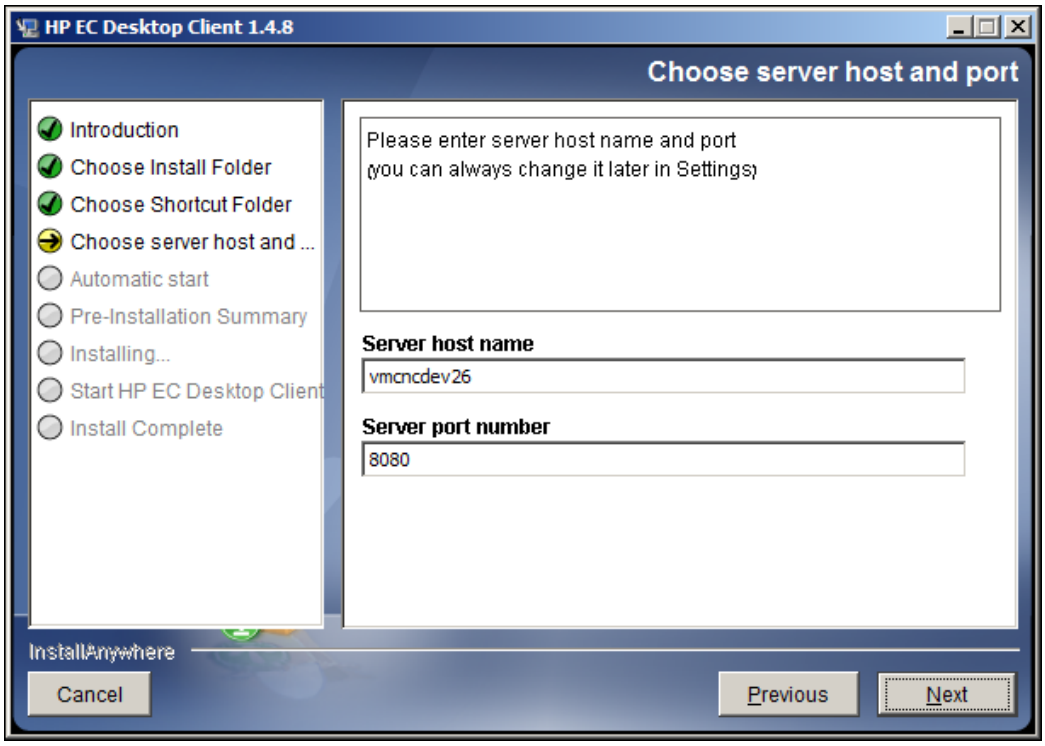
6. Then run **hpec_dc.exe**.
7. The HP EC Desktop Client Installation begins.



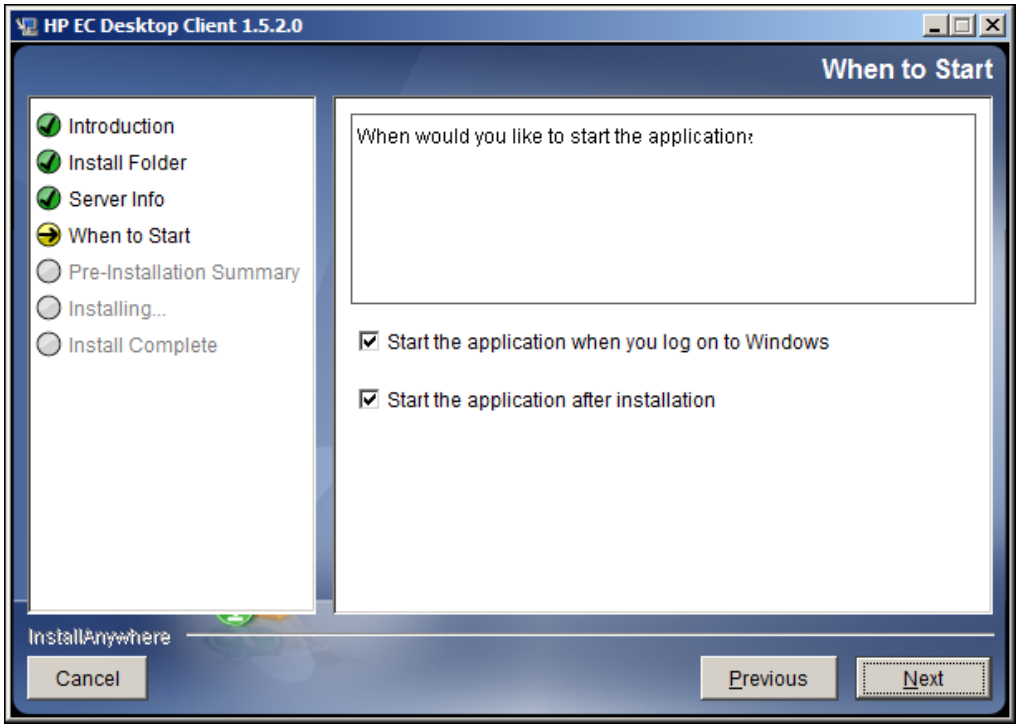
8. In the Introduction dialog box, click **Next**.



9. In the **Choose Install Folder** dialog box, click **Choose** to browse to the installation folder and then click **Next**.

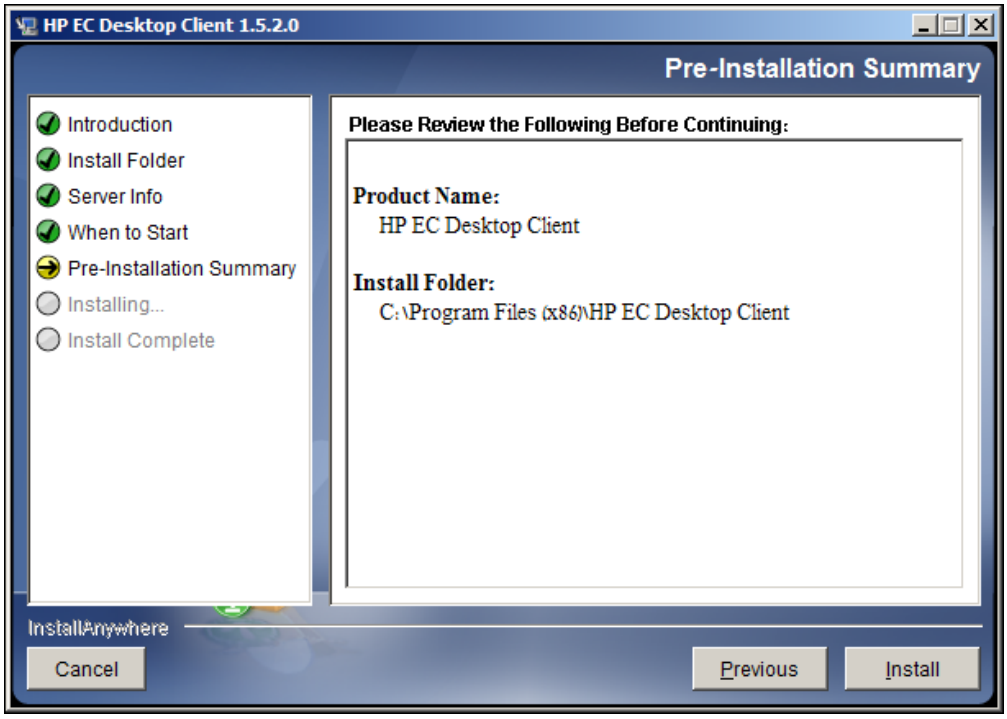


10. In the **Choose server host and port** dialog box, enter the EC Server host name and port number and click **Next**.

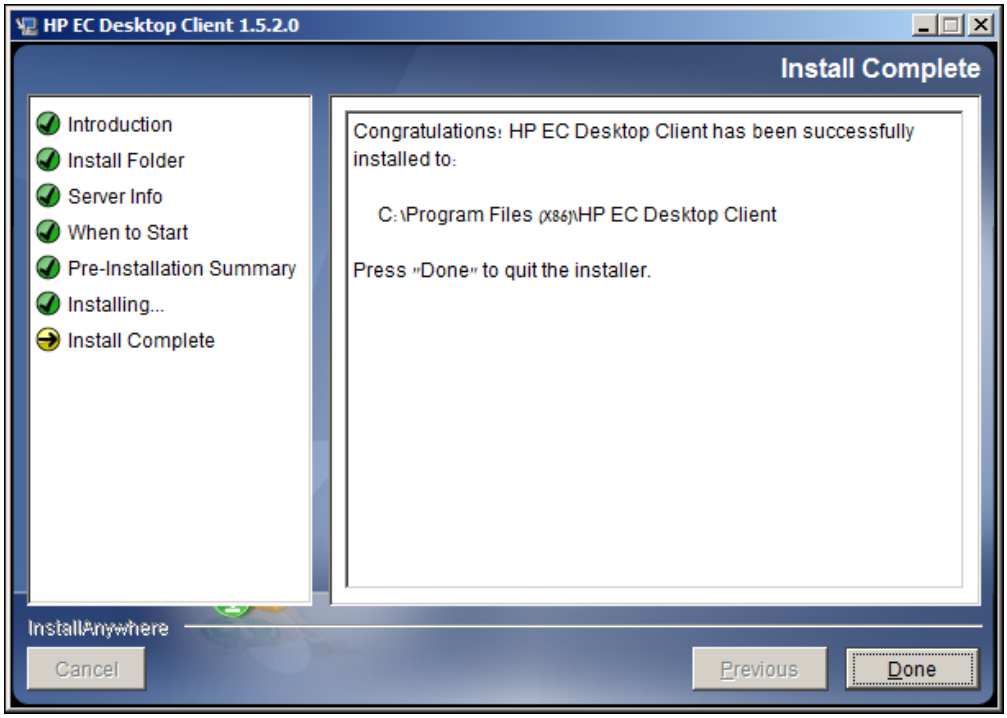


11. In the **When to Start** dialog box, select **Start the application when you log on to Windows** to automatically run the EC Desktop Client each time you log in to Windows. Select **Start the**

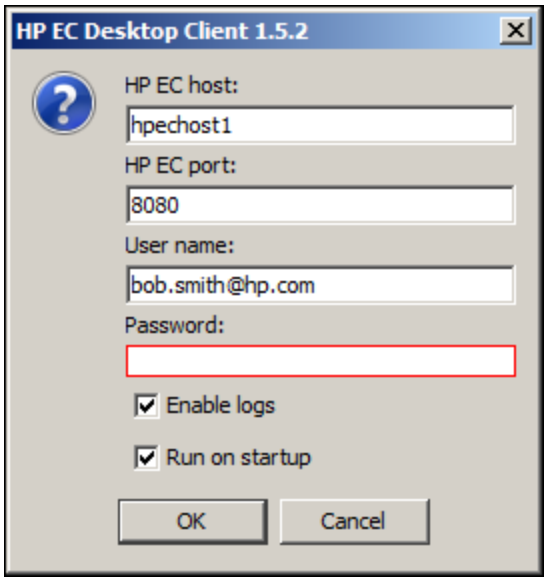
application after installation to run the EC Desktop Client immediately after the installation procedure.



12. A summary of the installation details is presented. Review the summary and then click **Install**.



13. Click Done. The HP EC Desktop Client Settings window opens.

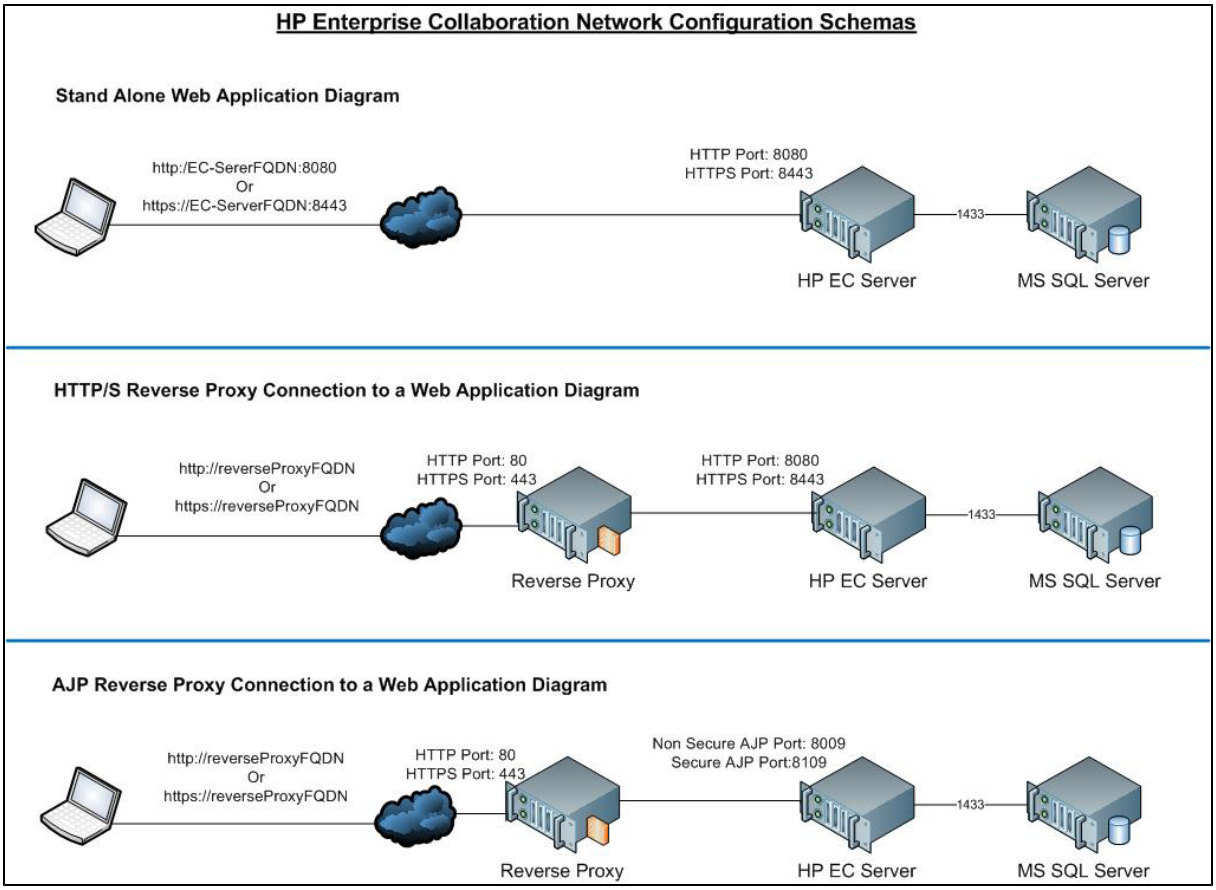


14. In the Password field, type in the user's password and then click OK.
15. The Desktop Client begins running and is shown minimized on the status bar.
16. If you did not select **Start the application after installation** in the When to Start dialog box you can run the Desktop Client at any time by selecting **Start > All Programs > HP EC Desktop Client**.

For details on using the EC Desktop Client, see the Enterprise Collaboration Concepts Guide.

Appendix A: Network Configuration Schemas for HP Enterprise Collaboration

The following diagrams show the possible network configuration schemas for HP Enterprise Collaboration.



Appendix B: Updating the external-ldap.properties File

Before making changes in the **external-ldap.properties** file, you should be familiar with the relevant LDAP properties required for your User Repository. If you are unfamiliar with the LDAP configuration, you can use tools such as the Apache Directory Studio LDAP browser in order to detect the relevant LDAP properties required for your User Repository. For instructions on how to login to LDAP using the Apache Directory Studio LDAP Browser, see "Logging into LDAP using the Apache Directory Studio LDAP Browser" (on page 73) .

Basic LDAP Properties

The following table lists the basic LDAP properties that you need to configure in **external-ldap.properties** in order for EC to logon to LDAP.

Attribute	Description
ldapHost	LDAP host name
ldapPort	LDAP port number
enableSSL	True/False—use SSL connection to LDAP
useAdministrator	True/False—use this user to connect to LDAP
ldapAdministrator	LDAP user DN (defined if useAdministrator=True)
ldapAdministratorPassword	LDAP user password (defined if useAdministrator=True) **Note:** The password for the LDAP user is not encrypted in the external-ldap.properties file.

Configure the User Providers

Update the **external-ldap.properties** file with the following attributes according to the customer's organizational LDAP properties.

Attribute	Description
usersBase	LDAP Base Distinguished Name (DN) for the users search. Only users under this DN in the LDAP hierarchy are returned from the search.
usersScope	LDAP search scope for users search. Defines how exactly the search under the

Attribute	Description
	usersBase location should be performed. SCOPE_BASE search space contains a single entry pointed by the userBase; SCOPE_ONE - search space contains the userBase and its direct children only; SCOPE_SUB - search space contains the userBase and its whole sub tree.
usersFilter	LDAP filter for users search

Configuring Users Object Class

The following properties are used to define the LDAP vendor or customized implementation-specific objects that represent the user objects.

To map the user configuration properties to the LDAP server configuration properties of the organization, update the **external-ldap.properties** file with following attributes according to the organization's LDAP properties.

Attribute	Description
usersObjectClass	LDAP object class representing the user's object.
usersUniqueIDAttribute	The user's unique ID LDAP attribute name.
usersLoginNameAttribute	The user's login name LDAP attribute name.

The following attributes are optional:

Attribute	Description
usersDisplayNameAttribute	Users display name LDAP attribute name.
usersFirstNameAttribute	Users first name LDAP attribute name.
usersLastNameAttribute	Users last name LDAP attribute name.
usersEmailAttribute	Users email LDAP attribute name.
usersSipAttribute	Users SIP LDAP attribute name.
usersPreferredLanguageAttribute	Users preferred language LDAP attribute name.
usersPreferredLocationAttribute	Users preferred location LDAP attribute name.
usersTimeZoneAttribute	Users time zone LDAP attribute name.
usersDateFormatAttribute	Users date format LDAP attribute name.
usersNumberFormatAttribute	Users number format LDAP attribute name.
usersWorkWeekAttribute	Users work week LDAP attribute name.
usersTenantIDAttribute	Users tenant ID LDAP attribute name.
usersPasswordAttribute	Users password LDAP attribute name.

Groups Search

The following properties define the search mechanism that is implemented on LDAP groups. There are two sets of properties, one for regular groups and one for root groups.

In order to display only a limited number of groups, restrict the root groups search criteria appropriately. The same search criteria for both root and non-root groups can be used. This configuration is recommended when the overall number of groups is small.

To map the groups configuration properties to the LDAP server configuration properties, update the **external-ldap.properties** file with the following attributes according to the organization's LDAP.

Attribute	Description
groupsBase	LDAP Base Distinguished Name (DN) for groups search. Only groups under this DN in the LDAP hierarchy are returned from the search.
groupsScope	LDAP scope for groups search. • SCOPE_BASE search space contains a single entry pointed to the groupsBase; • SCOPE_ONE - search space contains the groupsBase and its direct children; • SCOPE_SUB - search space contains the groupsBase and its whole sub tree

Attribute	Description
groupsFilter	LDAP filter for groups search. The only valid values are rootGroupsBase, rootGroupsScope, or rootGroupsFilter.
rootGroupsBase	LDAP Base Distinguished Name (DN) for groups search. Only groups under this DN in LDAP hierarchy are returned from the search.
rootGroupsScope	LDAP search scope for groups search. Specifies how the search under the gropusBase location should be performed. • SCOPE_BASE - search space contains a single entry pointed to the rootGroupsBase; • SCOPE_ONE - search space contains the rootGroupsBase and its direct children only; • SCOPE_SUB - search space contains the rootGroupsBase and its whole sub tree
rootGroupsFilter	LDAP filter for groups search

Groups Object Class (LDAP Vendor Dependent)

The following properties are used to define the LDAP vendor or custom implementation-specific objects representing static groups. More than one comma-separated object class is supported. In this scenario, the user can define the appropriate corresponding comma-separated attribute names.

To map the groups configuration properties to the LDAP server configuration properties, update the **external-ldap.properties** file with the following attributes according to the organization's LDAP properties.

Attribute	Description
groupsObjectClass	LDAP object class representing group object.
groupsMembersAttribute	Groups members LDAP attribute name. This multi-value attribute contains the full distinguished names (DNs) of static group members.

The following attributes are optional:

Attribute	Description
groupsNameAttribute	Groups unique name LDAP attribute name. In most default LDAP implementations, this attribute is usually the same as groupsDisplayNameAttribute.
groupsDisplayNameAttribute	Groups display name LDAP attribute name. In most default LDAP implementations, this attribute is usually the same as groupsNameAttribute.
groupsDescriptionAttribute	Groups description LDAP attribute name. The attribute contains the groups' description.

Attribute	Description
enableDynamicGroups	Boolean attribute for enabling dynamic groups. If the value of this attribute is true, dynamic groups are searched. Note that enumerating members of very large dynamic groups may be time consuming.
dynamicGroupsClass	LDAP object class representing dynamic group object.
dynamicGroupsMemberAttribute	Dynamic groups members LDAP attribute name. This attribute contains the LDAP search URL. The values returned by this LDAP search URL are considered dynamic group members.
dynamicGroupsNameAttribute	Dynamic groups unique name LDAP attribute name. In most default LDAP implementations, this attribute is usually the same as dynamicGroupsDisplayNameAttribute.
dynamicGroupsDisplayNameAttribute	Dynamic groups display name LDAP attribute name. In most default LDAP implementations, this attribute is usually the same as dynamicGroupsNameAttribute.
dynamicGroupsDescriptionAttribute	Dynamic groups description LDAP attribute name. This attribute contains the groups description.

Groups Hierarchy

The Groups Hierarchy attributes defines whether HP Enterprise Collaboration relates to LDAP server groups hierarchy information.

Attribute	Description
enableNestedGroups	Enable support of nested groups. If support of nested groups is disabled, subgroups of a group are not searched.
maximalAllowedGroupsHierarchyDepth	Maximal allowed depth of groups hierarchy. No groups are searched beneath this level.

Advanced Configuration

The advanced configuration attributes are used for fine-tuning the LDAP connection.

Attribute	Description
ldapVersion	LDAP protocol version. Possible values are: • 3 (default) • 2 (for old versions of LDAP)
baseDistinguishNameDelimiter	Base DN delimiter. Symbol used in configuration when putting

Attribute	Description
	multiple base DNs for users or groups or users search. Note that this symbol must not appear as part of the base DN used in this configuration. If it appears in the base DNs, change the default value to some other symbol.
scopeDelimiter	Scope delimiter. Symbol used in configuration when putting multiple scopes for users or groups search. This symbol must not appear as part of the scope name used in this configuration. If it appears in the scope name, change the default value to some other symbol.
attributeValuesDelimiter	Symbol used in configuration when putting in multiple attribute names of users or group. Pay attention that this symbol must not appear as part of attributes used in this configuration. If it appears in attribute names, then change the default value to some other symbol.

Logging into LDAP using the Apache Directory Studio LDAP Browser

This section explains how to log into LDAP using the Apache Directory Studio LDAP Browser.

To connect to the LDAP server, perform the following steps:

1. Download and Install the Apache Directory Studio LDAP browser from:

   http://directory.apache.org/studio/

2. Open the LDAP browser and select the New Connection button from the Connections tab located in the bottom left side of the application window.
3. Enter the LDAP Host name (ldapHost) and Port number (ldapPort).
4. Select the appropriate encryption level (enableSSL).
5. Click the **Check Network Parameters** button.
6. Click the **Next** button.
7. Select one of the following Authentication methods:
   - No Authentication: useAdministrator=false
   - Simple Authentication: useAdministrator=true
8. Click the **Finish** button (this automatically tests the connection).