Deploying and Configuring Microsoft® Lync®
Edge Server 2013
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Lab: Deploying and Configuring Microsoft Lync Edge Server 2013

In this exercise, you will define a new Edge Server to allow remote access for your users and federated partners for conferencing, audio/video (A/V), and Session Initiation Protocol (SIP), as well as provide public instant messaging (IM) connectivity.

You will use Topology Builder to add the Edge Server, define the services, and then publish the new topology into the central management store. You will then export the new topology so that it can be used to configure and install the Edge Server.

Estimated time to complete: 90 minutes

What You Will Learn
After completing the exercises, you will be able to:

- Add the Edge Server role to the topology.
- Install the Edge Server role.
- Test external client access.

Scenario
With Lync Server 2013 deployed, management would like to extend Lync outside the corporate network by deploying External User Access. This will require deploying a Lync Edge Server. These steps will also be necessary for the organization’s plans to move some users to the Lync Online Service. In this lab, you will deploy a Lync 2013 Edge Server and then use some tools to validate correct deployment.
Exercise 1: Configuring the Topology for External Access

In this exercise, you will define a new Edge Server to allow remote access for your users and federated partners for conferencing, audio/video (A/V), and Session Initiation Protocol (SIP), as well as to provide public IM connectivity.

You will use Topology Builder to add the Edge server, and define the services, and then publish the new topology into the central management store. Then you will export the new topology so that it can be used to configure and install the Edge Server.

Tasks

1. Add the Edge Server to the Topology.
   a. On LSFE01, pause the mouse on the bottom left corner to bring up the Start button.
   b. Click Start, and then on the Start screen, click Lync Server Topology Builder.
   c. On the Topology Builder page, verify Download Topology from existing deployment is selected, and then click OK.
   d. On the Save Topology as page, browse to C:\LabFiles and save the topology as OnpremTopologyWithEdge.tbxml.
   e. In the Topology Builder, expand Lync Server, expand Onprem, expand Lync Server 2013, right-click Edge pools, and then click New Edge Pool.
   f. On the Define the New Edge Pool page, review the planning decisions that need to be made and the information needed, and then click Next.
   g. On the Define the Edge pool FQDN page, in the Pool FQDN box, type edge01.onprem.local.
   h. Select Single computer pool, and then click Next.
   i. On the Select features page, read the list of features, select the Use a single FQDN and IP address and Enable federation (port 5061) check boxes, and then click Next.
   j. On the Select IP options page, verify only Enable IPv4 on internal interface and Enable IPv4 on external interface are selected, and then click Next.
   k. On the External FQDNs page, in the Access Edge service box, type sip.onprem123.lynignite.biz and leave the Ports box as 5061.
   l. Leave the Web Conferencing Edge service and A/V Edge service Ports boxes as 444 and 443, and then click Next.
   m. On the Define the internal IP address page, in the Internal IPv4 address box, type 10.0.0.200, and then click Next.
n. On the Define the external IP address page, in the **External IPv4** address box, type 172.16.123.12 and then click **Next**.

o. On the Define the next hop page, in the **Next hop pool** menu, select **redpool.onprem.local Onprem**, and then click **Next**.

p. On the Associate Front End or Mediation pools page, select the **ls2010.onprem.local, redpool.onprem.local, and romepool.onprem.local** check boxes, and then click **Finish**.

q. In the Topology Builder, right-click **Onprem**, and then click **Edit Properties**.

r. Scroll down and, under **Site federation route assignment**, select the **Enable SIP federation** check box.

s. Click the **Enable SIP federation** menu, click **edge01.onprem.local Onprem Edge** and then click **OK**.

2. **Publish the new topology.**
   a. On LSFE01, in the Topology Builder, at the top of the navigation pane, right-click **Lync Server**, and then click **Publish Topology**.
   b. On the Publish the topology page, click **Next**.
   c. On the Publishing wizard complete page, click **Finish**.
   d. Close the Topology Builder.

3. **Export the configuration file.**
   a. On LSFE01, pause the mouse on the bottom-left corner to bring up the Start button.
   b. Click **Start** and then, on the Start screen, click **Lync Server Management Shell**.
   c. In the Lync Server Management Shell, type the following command, and then press Enter.
   ```
   Export-CsConfiguration -FileName C:\LabFiles\Config.zip
   ```
   d. Use File Explorer to copy **Config.zip** to the EDGE01 virtual machine.
Exercise 2: Deploying a Lync 2013 Edge Server

Scenario

In this exercise, you will use the Lync Server 2013 Deployment Wizard to install the Edge Server role, configure certificates, and start the Edge services. The Lync Server 2013 setup files are located on the Edge server in C:\LabFiles\Lync 2013.\

Tasks

1. Install the Local Configuration Store.
   a. On EDGE01, start File Explorer.
   b. Browse to C:\LabFiles\Lync 2013\Setup\amd64, and then double-click Setup.exe.
   e. On the Configure Local Replica of Central Management Store page, verify that Import from a file is selected, and then click Browse.
   f. Browse to where you copied the Config.zip, select Config.zip, click Open, and then click Next. This step will take approximately one to two minutes.
   g. On the Executing Commands page, when the Task Status shows as Completed, click Finish.

2. Setup the Lync Server components
   a. On EDGE01, on the Lync Server 2013 - Deployment Wizard page, next to Step 2: Setup or Remove Lync Server Components, click Run.
   b. On the Setup Lync Server components page, click Next. This step will take approximately two to four minutes.
   c. On the Executing Commands page, when the Task Status shows as Completed, click Finish.

3. Publish up-to-date Certificate Revocation List (CRL)
   a. On DC01, from the Taskbar, open Windows PowerShell.
   b. At the Windows PowerShell prompt, type certutil -crl and press ENTER.

3.4 Request and Assign the Edge internal certificate.
   a. On EDGE01, on the Lync Server 2013 - Deployment Wizard page, next to Step 3: Request, Install or Assign Certificates, click Run.
In the Certificate Wizard window, select **Edge internal**, and then click **Request**.

On the Certificate Request page, click **Next**.

On the Delayed or Immediate Requests page, verify that **Send the request immediately to an online certification authority** is selected, and then click **Next**.

On the Choose a Certification Authority (CA) page, in the **Specify another certification authority** box, type **DC01.onprem.local\OnPrem-DC01-CA**, and then click **Next**.

On the Certification Authority Account page, clear the **Specify alternate credentials for the certification authority** check box, and then click **Next**.

On the Specify Alternate Certificate Template page, leave the check box clear, and then click **Next**.

On the Name and Security Settings page, in the **Friendly Name** box, type **EDGE01 Internal Cert**, verify that the **Bit Length** is **2048**, and then click **Next**.

On the Organization Information page, in the **Organization** box, type **OnPrem**.

In the **Organizational Unit** box, type **IT** and then click **Next**.

On the Geographical Information page, click the **Country/Region** menu, scroll down, and then click **United States**.

In the **State/Province** box, type **Washington**.

In the **City/Locality** box, type **Redmond** and then click **Next**.

On the Subject Name/Subject Alternate Names page, click **Next**.

On the Executing Commands page, when the **Task Status** shows as **Completed**, click **Finish**.

If the certificate request fails, restart the Active Directory Certificate Services service on DC01 and try it again.

On the Online Certificate Request Status page, verify that the **Assign this certificate to Lync Server certificate usages** check box is selected, and then click **Finish**.

On the Certificate Assignment page, click **Next**.

On the Certificate Assignment Summary page, click **Next**.

On the Executing Commands page, when the Task Status shows as **Completed**, click **Finish**.
4.5 Request and Assign the Edge External certificate.

Some of the boxes may be pre-populated from when you previously ran the Certificate Wizard.

a. On EDGE01, back on the Certificate Wizard, under Certificate, click External Edge certificate (public internet), and then click Request.


c. On the Delayed or Immediate Requests page, select Send the request immediately to an online certification authority, and then click Next.

d. On the Choose a Certification Authority (CA) page, in the Specify another certification authority box, type DC01.onprem.local\OnPrem-DC01-CA, and then click Next.

e. On the Certification Authority Account page, clear the Specify alternate credentials for the certification authority check box if necessary, and then click Next.

f. On the Specify Alternate Certificate Template page, leave the check box clear, and then click Next.

g. On the Name and Security Settings page, in the Friendly Name box, type EDGE01 External Cert, verify that the Bit Length is 2048, and then click Next.

h. On the Organization Information page, in the Organization box, type OnPrem

i. In the Organizational Unit box, type IT and then click Next.

j. On the Geographical Information page, verify the Country/Region selected is United States.

k. In the State/Province box, verify that Washington is entered.

l. In the City/Locality box, verify that Redmond is entered, and then click Next.

m. On the Subject Name/Subject Alternate Names page, click Next.

n. On the Subject Name/Subject Alternate Names page, leave the box clear and then click Next.

o. On the Configure Additional Subject Alternate Names page, leave the boxes blank, and then click Next.


q. On the Executing Commands page, when the Task Status shows as Completed, click Next.

**Note:** If the certificate request fails, restart the Active Directory Certificate Services service on DC01 and try it again.
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r. On the Online Certificate Request Status page, verify that the **Assign this certificate to Lync Server certificate usages** check box is selected, and then click **Finish**.
s. On the Certificate Assignment page, click **Next**.
t. On the Certificate Assignment Summary page, click **Next**.
u. On the Executing Commands page, when the Task Status shows as **Completed**, click **Finish**.

v. Close the Certificate Wizard.

5.6. **Start the Edge Services.**

a. On EDGE01, on the Lync Server 2013 – Deployment Wizard page, next to **Step 4: Start Services**, click **Run**.
b. On the Start Services page, click **Next**.
c. On the Executing Commands page, when the **Task Status** shows as **Completed**, click **Finish**.
d. Exit the Deployment Wizard.

6.7. **Configure the Access Policy and Edge Configuration.**

a. On LSFE01, in the Lync Server Management Shell, type the following command and then press Enter:

```powershell
Set-CsExternalAccessPolicy -Identity Global -EnableFederationAccess 1 -EnablePublicCloudAccess 1 -EnableOutsideAccess 1
```

b. In the Lync Server Management Shell, type the following command and then press Enter:

```powershell
Set-CsAccessEdgeConfiguration -AllowAnonymousUsers 1 -AllowOutsideUsers 1 -AllowFederatedUsers 1 -EnablePartnerDiscovery 1 -UseDnsSrvRouting
```
Exercise 3: Testing External Access and Federation

Scenario
In this exercise, you will test correct deployment and configuration of your Edge Server by signing into Lync 2013 on your client VMs.

The Client03 VM is on a subnet that is external to the Lab environment, and thus will use the Edge deployment to access the Lync pool.

Tasks
1. Log into Lync 2013 on CLIENT03.
   a. On CLIENT03, click the Desktop tile, then on the taskbar, click Lync 2013.
   b. Close the Activate Office dialog box.
   c. In the Sign-in address box, type holly@onprem123.lyncignite.biz and then click Sign In.
   d. In the User name box, if prompted, type OnPrem\Holly.
   e. In the Password box, type Password1 and then click Sign In.
   f. At the Do you want us to save your Lync sign-in info? prompt, click Yes.

   This shows a Lync user logging in through the Lync 2013 Edge Server you just deployed. You will perform more testing of the Lync deployment during the next labs. The Client03 VM is external to the rest of the lab environment.