



Microsoft

Exam 70-384

Recertification for MCSE: Communication

Version: 6.0

[Total Questions: 217]

Topic break down

Topic	No. of Questions
Topic 1: Contoso Ltd Case A	10
Topic 2: Margie's Travel	10
Topic 3: Litware, Inc Case A	11
Topic 4: Litware, Inc Case B	12
Topic 5: Contoso Ltd. Case B	12
Topic 6: Mix Questions	54
Topic 7: Litware, Inc Case A	10
Topic 8: Wingtip Toys	10
Topic 9: Contoso, Ltd Case A	11
Topic 10: Litware, Inc Case B	10
Topic 11: Contoso Ltd	10
Topic 12: Mix Questions	57

Topic 1, Contoso Ltd Case A

Overview

General Overview

Contoso, Ltd. is an electronics parts company located in North American. The company has 4,400 employees.

Contoso recently bought a company named Litware, Inc. Litware has an office in New York. Litware has a Lync Server 2010 infrastructure and has Microsoft Lync 2010 clients deployed to all of its client computers.

Physical Locations

Contoso has a main office and a satellite office. The main office is located in Toronto. The satellite office is located in Boston. The Toronto office has 4,200 users. The Boston office has 200 users.

All offices connect to each other by using a WAN link.

Only the Toronto office connects directly to the Internet.

Existing Environment

Active Directory Environment

Contoso has an Active Directory forest named contoso.com. The forest contains a single domain. All domain controllers run Windows Server 2008 R2.

Lync Server Environment

Contoso has a Lync Server 2013 infrastructure and a Microsoft Exchange Server 2013 organization. The Lync Server 2013 infrastructure contains an Enterprise Edition Front End pool named Pool1.

The network contains five servers. The servers are configured as shown in the following table.

Server name	Role	Location
Lync1	Front End Server in Pool1	Toronto
Edge1	Edge Server	Toronto
Exchange1	Mailbox server Client Access server	Toronto
Server1	Member server	Toronto
SQL1	Back End Server	Toronto

The Lync Server infrastructure currently uses the names shown in the following table.

Name	Use
Pool1.contoso.com	Enterprise Edition Front End pool FQDN
Meet.contoso.com	Simple URL for meetings
Webext.contoso.com	External web services FQDN

All users can remotely access the Lync Server services from a client computer. The users cannot access the Lync Server services from a mobile device.

Some of the users have Lync 2010 installed. Most of the users run Lync 2013.

Problems Statements

Contoso identifies the following business issues:

- ✍ Users in the Boston office report that there are delays in the audio stream during conferences and that the audio frequently drops. Users in the other offices do not report this issue.
- ✍ Users cannot share Microsoft PowerPoint presentations during web conferences. Users can share other documents.
- ✍ All of the users in the Toronto office report that they receive the following error message from Lync 2013: "Lync can't connect to Exchange. You might experience Contact list issues".

Requirements

Planned Changes

Contoso plans to implement the following changes:

Implement the unified contact store.

- ✍ Deploy the Office Web Apps component.
- ✍ Add a second Front End Server named Lync2 in the Toronto office.
- ✍ Access Lync Server services by using mobile devices from the internal network and from the Internet.
- ✍ Implement direct federation with Litware and other business partners. All federated domains will have to be defined explicitly.

Administrative Requirements

A support technician named Tech1 must be able to perform all of the tasks currently performed by the members of the CSHelpDesk group. Additionally, Tech1 must also be able to edit conferencing policies.

Web Conferencing Requirements

Contoso identifies the following requirements for web conferencing:

- ✍ Users from Litware must be able to download the content of web conferences.
- ✍ Users must be able to share PowerPoint presentations during web conferences.
- ✍ Users from Litware must be able to record web conferences.
- ✍ A URL that points to a disclaimer must be provided.

Mobility Requirements

Contoso plans to provide all users the ability to connect by using mobile devices. When users connect from a mobile device, they must download their server settings automatically.

Question No : 1 HOTSPOT - (Topic 1)

You are planning the implementation of the unified contact store. You need to identify which clients can be used to read the contact list and which clients can be used to modify the contact lists.

Which clients should you identify?

To answer, select the correct actions for each client in the answer area.

Client	Read contact lists	Modify contact lists
Microsoft Outlook 2013	<input type="checkbox"/>	<input type="checkbox"/>
Outlook Web App	<input type="checkbox"/>	<input type="checkbox"/>
Lync 2010	<input type="checkbox"/>	<input type="checkbox"/>
Lync 2013	<input type="checkbox"/>	<input type="checkbox"/>

Answer:

Client	Read contact lists	Modify contact lists
Microsoft Outlook 2013	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Outlook Web App	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Lync 2010	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Lync 2013	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Explanation:

Client	Read contact lists	Modify contact lists
Microsoft Outlook 2013	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Outlook Web App	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Lync 2010	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Lync 2013	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

<http://support.microsoft.com/kb/2757458/en-us?fr=1>

CAUSE

This issue occurs because, when the Unified Contact Store is deployed between Microsoft Exchange 2013 and Lync Server 2013, the Lync 2010 and Lync for Mac 2011 clients do not understand where it should update or save changes. Therefore, users who are enabled for the Unified Contact Store cannot change their contacts list from Lync 2010 and Lync for Mac 2011.

[↑ Back to the top](#) | [Give Feedback](#)

SOLUTION

To resolve this issue, use [Microsoft Lync 2013](#), [Microsoft Outlook Web Access 2013](#), or [Microsoft Outlook to change your contacts](#).

[↑ Back to the top](#) | [Give Feedback](#)

MORE INFORMATION

On Windows, to confirm if a user is enabled for Unified Contact Store, check the following registry key for a value of 2165. If the key is not present or does not have a value of 2165, the user is not enabled for Unified Contact Store and should be able to change contacts from a Lync 2010 client.

HKEY_CURRENT_USER\Software\Microsoft\Office\15.0\Lync\SIP URL>\UCS

"Lync Server Environment

Contoso has a Lync Server 2013 infrastructure and a Microsoft Exchange Server 2013 organization.

The Lync Server 2013 infrastructure contains an Enterprise Edition Front End pool named Pool1.

The network contains five servers. The servers are configured as shown in the following table."

TO EDIT THE CONTACT DATA IN THE UNIFIED CONTACTS STORE USE:

Microsoft Lync 2013,

Microsoft Outlook Web Access 2013

Microsoft Outlook 2013

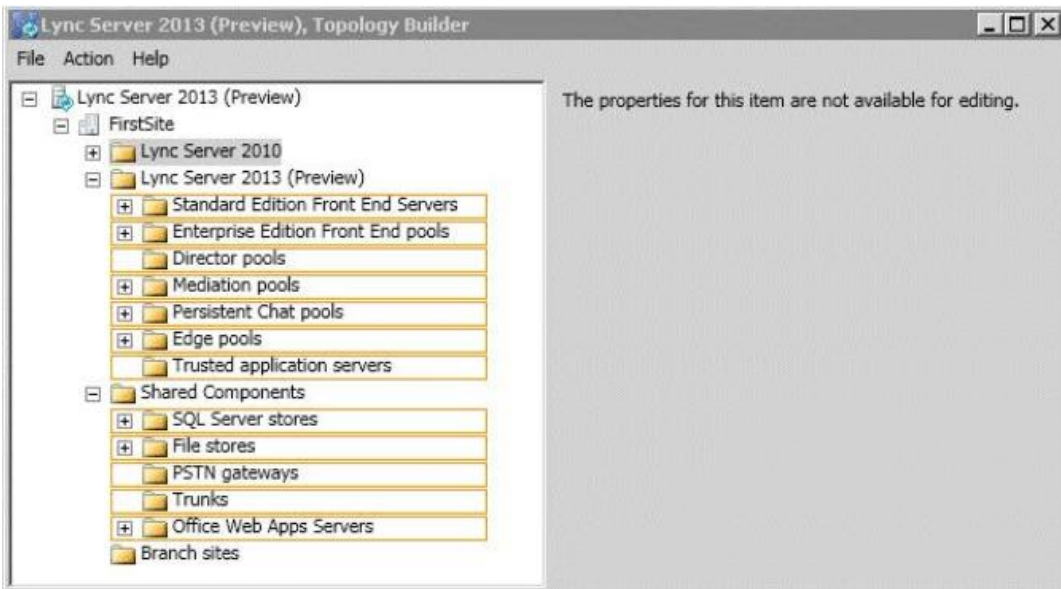
<http://support.microsoft.com/kb/2757458/en-us?fr=1>

Question No : 2 HOTSPOT - (Topic 1)

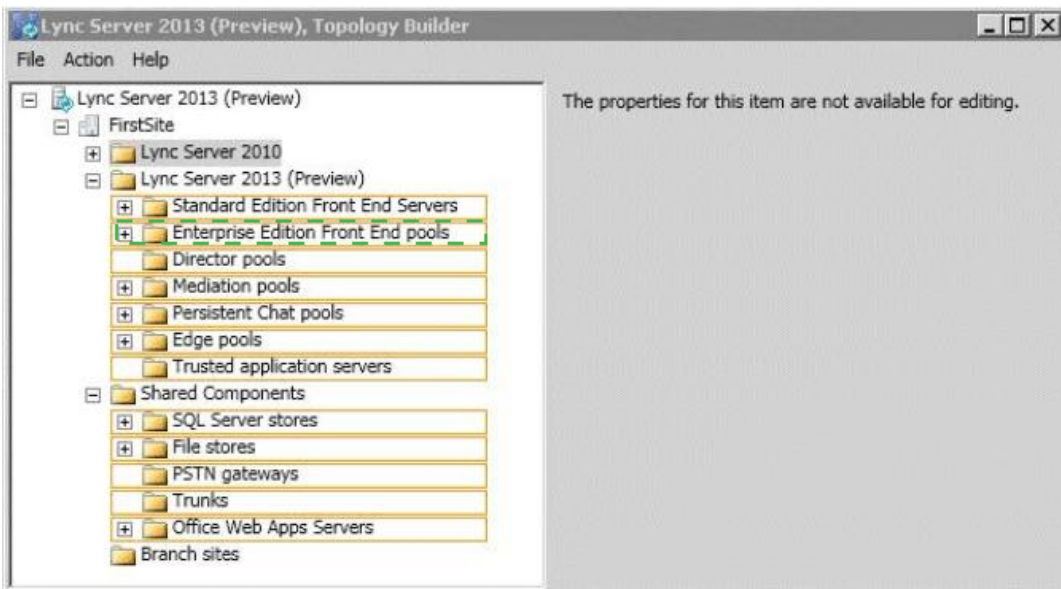
You need to modify the FQDN of the external web services.

From which node should you perform the modification?

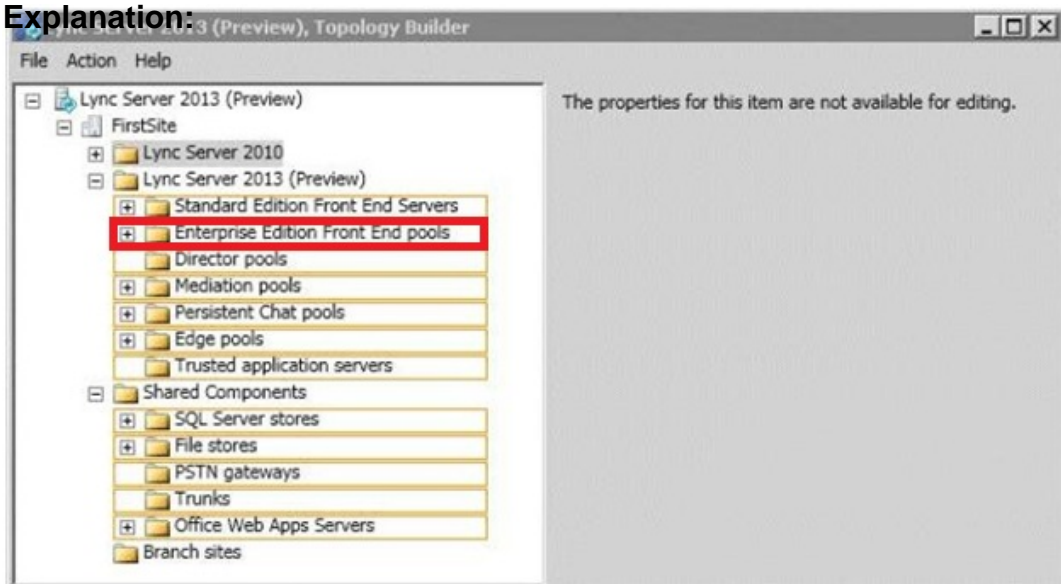
To answer, select the appropriate node in the answer area.



Answer:



Explanation:



Configure Web Services

- ✍ Log on to the computer where Topology Builder is installed as a member of the Domain Admins group and the RTCUniversalServerAdmins group.
- ✍ Start Topology Builder: Click Start, click All Programs, click Microsoft Lync Server 2013, and then click Lync Server Topology Builder.
- ✍ In Topology Builder, in the console tree under Standard Edition Front End Servers, Enterprise Edition Front End pools, and Directory pools, select the pool name. Right-click the name, click Edit Properties, and then click Web Services.
- ✍ Add or edit the External Web Services FQDN, and then click OK.

Question No : 3 - (Topic 1)

You need to identify on which server you can install the Microsoft Office Web Apps server component.

Which server should you identify?

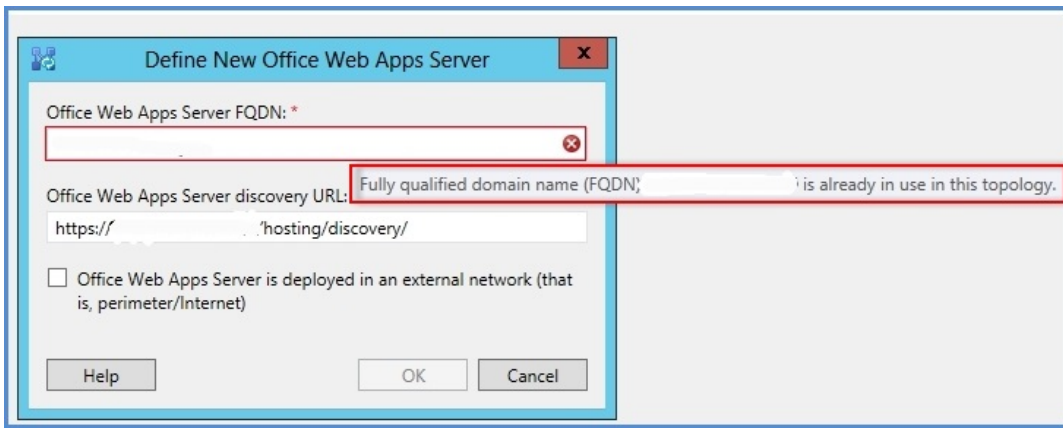
- A. Lync1.contoso.com
- B. Server1.contoso.com
- C. Exchange1.contoso.com
- D. SQL1.contoso.com

Answer: B

Explanation: It is unclear what roles are on Server1, but you cannot collocate the web apps server on any server that has been defined in the topology. I have illustrated below trying to add web apps server using the same FQDN as my Standard Edition Pool.

Server1 appears to be the only the correct answer, because in the case study Server1 is a member server with nothing installed on it.

Answer is Server1



Question No : 4 DRAG DROP - (Topic 1)

You are troubleshooting the issue reported by the Toronto users. You verify that the logging level of the centralized logging service is set to AlwaysOn.

You need to gather additional troubleshooting information immediately to resolve the issue.

Which five actions should you perform?

To answer, move the five appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Actions	Answer Area
Sign in to Lync 2013 from a client computer in the Toronto office.	
Run the clscontroller.exe -search command.	
Run the clscontroller.exe -start command.	
Run the clscontroller.exe -flush command.	
Run the clscontroller.exe -stop command.	

Answer:

Actions	Answer Area
Sign in to Lync 2013 from a client computer in the Toronto office.	Run the clscontroller.exe -start command.
Run the clscontroller.exe -search command.	Sign in to Lync 2013 from a client computer in the Toronto office.
Run the clscontroller.exe -start command.	Run the clscontroller.exe -stop command.
Run the clscontroller.exe -flush command.	Run the clscontroller.exe -flush command.
Run the clscontroller.exe -stop command.	Run the clscontroller.exe -search command.

Explanation:

Box 1:

Run the **clscontroller.exe -start** command.

Box 2:

Sign in to Lync 2013 from a client computer in the Toronto office.

Box 3:

Run the **clscontroller.exe -stop** command.

Box 4:

Run the **clscontroller.exe -flush** command.

Box 5:

Run the **clscontroller.exe -search** command.

- Start
- Reproduce issue
- Stop
- Flush
- Search

<http://masteringlync.com/2012/08/02/centralized-logging-in-lync-2013/>

<http://www.ucprimer.com/lync2013-logging-and-tracing.html>

Question No : 5 DRAG DROP - (Topic 1)

You need to identify which configurations must be used to meet the web conferencing requirements.

Which configuration should you identify for each requirement?

To answer, drag the appropriate configuration to the correct requirement in the answer area. Each configuration may be used once, more than once, or not at all. Additionally, you may need to drag the split bar between panes or scroll to view content.

Configurations	Answer Area
A client policy	Users from Litware must be able to download the content of web conferences. Configuration
A conferencing policy	Users must be able to share PowerPoint presentations during web conferences. Configuration
A meeting configuration	Users from Litware must be able to record web conferences. Configuration
	A URL that points to a disclaimer must be provided. Configuration

Answer:

Configurations	Answer Area
A client policy	Users from Litware must be able to download the content of web conferences. A conferencing policy
A conferencing policy	Users must be able to share PowerPoint presentations during web conferences. A conferencing policy
A meeting configuration	Users from Litware must be able to record web conferences. A conferencing policy
	A URL that points to a disclaimer must be provided. A meeting configuration

Explanation:

- Box 1: A conferencing policy
- Box 2: A conferencing policy
- Box 3: A conferencing policy
- Box 4: A meeting Configuration

"Users from Litware must be able to download the content of the Web Conference"

Download the content of web conferences:

Share PowerPoint presentations (Conferencing Policy) -

<http://blogs.technet.com/b/csps/archive/2011/08/11/confpoliciesenabledatacollaboration.as>

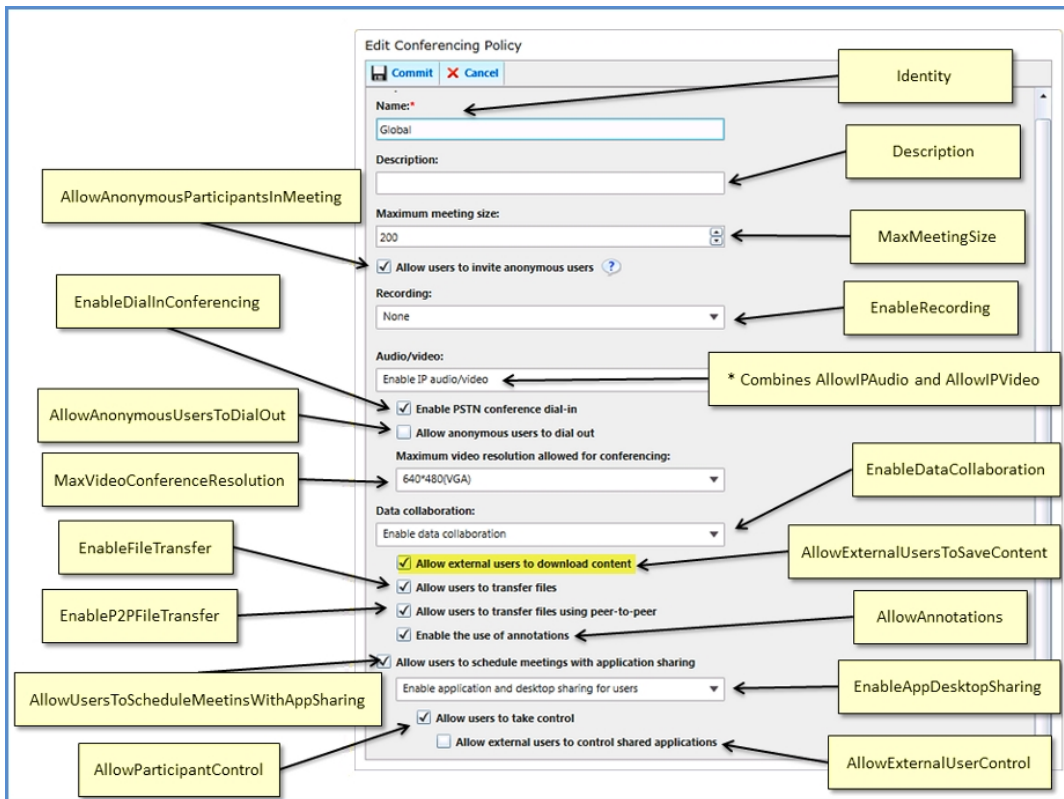
px

Record Web Conferences (Conferencing Policy) -

<http://blogs.technet.com/b/csps/archive/2011/08/11/confpoliciesallowconferencerecording.aspx>

spx

URL Disclaimer (Meeting Configuration) - <http://technet.microsoft.com/en-us/library/gg398638.aspx>



Question No : 6 - (Topic 1)

You need to recommend a solution to resolve the audio issues for the users in the Boston office.

Which three possible recommendations should you include in the solution? (Each correct answer presents a complete solution. Choose three.)

- A. user services
- B. Quality of Service (QoS)
- C. Call Admission Control (CAC)
- D. a location policy
- E. a conferencing policy

Answer: B,C,E

Question No : 7 - (Topic 1)

You are evaluating the implementation the second Front End Server. You need to recommend which common name must be used for the certificate that will be installed on Lync2.

Which name should you recommend using?

- A. *.contoso.com
- B. lync2.contoso.com
- C. lyncdiscover.contoso.com
- D. pool1.contoso.com

Answer: D

Explanation: <http://social.technet.microsoft.com/Forums/en-US/ocscertificates/thread/bc2b0383-17cd-4707-8c2f-19db8dd340f0/>

The common name or SN of any Front End Server Certificate is the Pool Name.

Question No : 8 - (Topic 1)

Contoso is evaluating the implementation of push notifications for mobile devices.

You need to identify which tasks must be performed to enable the push notifications.

Which three cmdlets should you identify? (Each correct answer presents part of the solution. Choose three.)

- A. New-CsAllowedDomain
- B. Set-CsPublicProvider
- C. New-CsHostingProvider
- D. Set-CsPushNotificationConfiguration
- E. Enable-CsPublicProvider

Answer: A,C,D

Explanation: <http://technet.microsoft.com/en-us/library/hh690047.aspx>
CONFIGURING FOR PUSH NOTIFICATIONS

LYNC SERVER 2013

Push notifications, in the form of badges, icons, or alerts, can be sent to a mobile device even when the mobile application is inactive. Push notifications notify a user of events such as a new or missed IM invitation and voice mail. The Lync Server 2013 Mobility Service sends the notifications to the cloud-based Lync Server Push Notification Service, which then sends the notifications to the Apple Push Notification Service (APNS) (for an Apple device running the Lync 2010 Mobile client) or the Microsoft Push Notification Service (MPNS) (for a Windows Phone device running the Lync 2010 Mobile or the Lync 2013 Mobile client).

Important:

If you use Windows Phone with Lync 2010 Mobile or Lync 2013 Mobile client, push notification is an important consideration. If you use Lync 2010 Mobile on Apple devices, push notification is an important consideration. If you use Lync 2013 Mobile on Apple devices, you no longer need push notification.

Configure your topology to support push notifications by doing the following:

If your environment has a Lync Server 2010 or Lync Server 2013 Edge Server, you need to add a new hosting provider, Microsoft Lync Online, and then set up hosting provider federation between your organization and Lync Online.

If your environment has a Office Communications Server 2007 R2 Edge Server, you need to set up direct SIP federation with push.lync.com.

Note:

Push.lync.com is a Microsoft Office 365 domain for Push Notification Service.

To enable push notifications, you need to run the Set-CsPushNotificationConfiguration cmdlet. By default, push notifications are turned off.

Test the federation configuration and push notifications.

TO CONFIGURE FOR PUSH NOTIFICATIONS WITH LYNC SERVER 2013 OR LYNC SERVER 2010 EDGE SERVER

Log on to a computer where Lync Server Management Shell and Ocscore are installed as a member of the RtcUniversalServerAdmins group.

Start the Lync Server Management Shell: Click Start, click All Programs, click Microsoft Lync Server 2013, and then click Lync Server Management Shell.

Add a Lync Server online hosting provider. At the command line, type:

```
New-CsHostingProvider -Identity <unique identifier for Lync Online hosting provider> -
```

Enabled \$True -ProxyFqdn <FQDN for the Access Server used by the hosting provider> -
VerificationLevel UseSourceVerification

For example:

```
New-CsHostingProvider -Identity "LyncOnline" -Enabled $True -ProxyFqdn  
"sipfed.online.lync.com" -VerificationLevel UseSourceVerification
```

Note:

You cannot have more than one federation relationship with a single hosting provider. That is, if you have already set up a hosting provider that has a federation relationship with sipfed.online.lync.com, do not add another hosting provider for it, even if the identity of the hosting provider is something other than LyncOnline.

Set up hosting provider federation between your organization and the Push Notification Service at Lync Online. At the command line, type:

```
New-CsAllowedDomain -Identity "push.lync.com"
```

TO CONFIGURE FOR PUSH NOTIFICATIONS WITH OFFICE COMMUNICATIONS SERVER 2007 R2 EDGE SERVER

Log on to the Edge Server as a member of the RtcUniversalServerAdmins group. Click Start, click All Programs, click Administrative Tools, and then click Computer Management.

In the console tree, expand Services and Applications, right-click Microsoft Office Communications Server 2007 R2, and then click Properties.

On the Allow tab, click Add.

In the Add Federated Partner dialog box, do the following:

In Federated partner domain name, type push.lync.com.

In Federated partner Access Edge Server, type sipfed.online.lync.com.

Click OK.

TO ENABLE PUSH NOTIFICATIONS

Log on to a computer where Lync Server Management Shell and Ocscore are installed as a member of the CsAdministrator role.

Start the Lync Server Management Shell: Click Start, click All Programs, click Microsoft Lync Server 2013, and then click Lync Server Management Shell.

Enable push notifications. At the command line, type:

```
Set-CsPushNotificationConfiguration -EnableApplePushNotificationService $True -  
EnableMicrosoftPushNotificationService $True
```

Enable federation. At the command line, type:

```
Set-CsAccessEdgeConfiguration -AllowFederatedUsers $True
```

TO TEST FEDERATION AND PUSH NOTIFICATIONS

Log on to a computer where Lync Server Management Shell and Ocscore are installed as a member of the CsAdministrator role.

Start the Lync Server Management Shell: Click Start, click All Programs, click Microsoft Lync Server 2013, and then click Lync Server Management Shell.

Test the federation configuration. At the command line, type:

```
Test-CsFederatedPartner -TargetFqdn <FQDN of Access Edge server used for federated SIP traffic> -Domain <FQDN of federated domain> -ProxyFqdn <FQDN of the Access Edge server used by the federated organization>
```

For example:

```
Test-CsFederatedPartner -TargetFqdn accessproxy.contoso.com -Domain push.lync.com -ProxyFqdn sipfed.online.lync.com
```

Test push notifications. At the command line, type:

```
Test-CsMcxPushNotification -AccessEdgeFqdn <Access Edge service FQDN>
```

For example:

```
Test-CsMcxPushNotification -AccessEdgeFqdn accessproxy.contoso.com
```

Question No : 9 - (Topic 1)

You are evaluating the implementation of a reverse proxy for Contoso.

You plan to create a certificate for the reverse proxy.

You need to identify which names must be included in the certificate.

Which three names should you identify? (Each correct answer presents part of the solution. Choose three.)

- A. lyncdiscover.contoso.com
- B. lyncdiscoverinternal.contoso.com
- C. meet.contoso.com
- D. pool1.contoso.com
- E. edge.contoso.com
- F. webext.contoso.com

Answer: A,C,F

Explanation:

<http://technet.microsoft.com/en-us/library/jj205381.aspx>

webext is the Subject Name and the Alternative Name with meet and lyncdiscover also listed as Alternative Names

Question No : 10 - (Topic 1)

Which two tasks should be performed to meet the administrative requirements for Tech1?
(Each correct answer presents part of the solution. Choose two.)

- A. Modify the permissions of the RTCUniversalServerAdmins group.
- B. Run the New-CsAdminRole cmdlet.
- C. Run the Update-CsAdminRole cmdlet.
- D. Create a new universal security group and add Tech1 to the group.
- E. Create a new global security group and add Tech1 to the group.

Answer: B,D

Explanation:

“To create a new role, you must first create a universal security group in Active Directory Domain Services that shares a name with the role;”

<http://technet.microsoft.com/en-us/library/gg398271.aspx>

Topic 2, Margie’s Travel

Overview

General Overview

Margie's Travel is an executive travel company that has 7,000 employees. The company has a sales department and a research department.

Physical Locations

The company has a main office and two branch offices. The main office is located in Montreal. The branch offices are located in New York and Seattle.

The number of users in each office is shown in the following table.

Office location	Number of users
Montreal	5,500
New York	800
Seattle	700

All offices connect to each other by using a WAN link.

Existing Environment

Active Directory Environment

The network contains one Active Directory forest named margiestravel.com. Each office is configured as an Active Directory site.

Lync Server Environment

The company has a Lync Server 2010 infrastructure in the Montreal office. The network contains four servers. The servers are configured as shown in the following table.

Server name	Role	Software
Lync1	Front End Server in a pool named Pool1	Lync Server 2010
Edge1	Edge Server	Lync Server 2010
SQL1	Back End Server (cluster node in a cluster named Cluster1)	Microsoft SQL Server 2008 Service Pack 2 (SP2)
SQL2	Back End Server (cluster node in a cluster named Cluster2)	Microsoft SQL Server 2008 Service Pack 2 (SP2)

Lync Server 2013 Standard Edition is deployed in the Montreal office as a pilot on a separate network segment. You create several test users on the Lync Server 2013 pilot.

User Issue

An administrator modifies the global client version policy of the Lync Server 2013 pilot deployment. After the modification, Lync Server 2013 users report that they fail to sign in to Microsoft Lync 2010 and they receive the following error message.



Requirements

Planned Changes

After a successful pilot program, the company plans to deploy Lync Server 2013 on the production network for all users.

The Lync Server 2013 deployment will include the following roles:

Edge Server

- ✍ Front End Server
- ✍ Mediation Server
- ✍ Monitoring Server
- ✍ Office Web Apps Server

Lync Server 2013 and Lync Server 2010 will coexist for six months.

Monitoring Requirements

A monitoring solution must save call quality data for 180 days.

Backup Requirements

An administrator plans to perform a weekly manual backup of the Lync Server databases. The backup files will be copied to an offsite location.

Conferencing Requirements

The company plans to implement a conferencing solution to meet the following requirements:

- ✍ The company's executives must be able to create conferences that contain up to 250 participants.
- ✍ The company's managers must be able to create conferences that contain up to 50 participants.
- ✍ All other users must be prevented from creating conferences that contain more than 15 users.

Question No : 11 - (Topic 2)

The company is planning to implement help and support resources for users that use the Lync Server 2013 conferencing features.

You need to ensure that the users can access the help and support resources by clicking a URL from a meeting invitation.

What should you do?

- A. Run the Set-CsConferenceDisclaimer cmdlet.
- B. From the Microsoft Lync Server 2013 Control Panel, modify the conferencing policy settings.
- C. Run the Set-CsMeetingRoom cmdlet.
- D. From the Microsoft Lync Server 2013 Control Panel, modify the meeting configuration settings.

Answer: D

Question No : 12 - (Topic 2)

You need to configure the conferencing settings to support the conferencing requirements and the business requirements.

What should you do?

- A. Modify the global conferencing policy. Create a site-level conferencing policy for the managers and a site-level conferencing policy for the executives.
- B. Create a per-user conferencing policy for all users, a per-user conferencing policy for the managers, and a per-user conferencing policy for the executives.
- C. Modify the global conferencing policy. Create a per-user conferencing policy for the managers and a per-user conferencing policy for the executives.
- D. Create a site-level conferencing policy for all users, a site-level conferencing policy for the managers, and a per-user conferencing policy for the executives.

Answer: C

Question No : 13 - (Topic 2)

You are evaluating the implementation of SQL Server database mirroring on new SQL

Server servers for the planned Lync Server 2013 deployment.

You need to recommend which tasks must be performed to prepare SQL Server database mirroring for Lync Server 2013.

Which two actions should you recommend? (Each correct answer presents part of the solution. Choose two.)

- A. From the Topology Builder, create a new Enterprise Edition Front End pool and a new SQL Server database, SQL Server database mirroring, and a witness.
- B. From the Topology Builder, publish the topology and install the databases.
- C. On the SQL Server servers, install Failover Clustering.
- D. On the Front End Servers, install Failover Clustering.
- E. Run the Update-CsUserDatabase cmdlet.
- F. Run the Invoke-CsDatabaseFailover cmdlet.

Answer: A,B

Explanation: <http://technet.microsoft.com/en-us/library/jj204992.aspx>

DEPLOYING SQL MIRRORING FOR BACK END SERVER HIGH AVAILABILITY

To be able to deploy SQL mirroring, your servers must run a minimum of SQL Server 2008 R2. This version must run on all the involved servers: the primary, mirror, and the witness. For details, see <http://go.microsoft.com/fwlink/p/?linkid=3052&kbid=2083921>.

In general, setting up SQL mirroring between the two Back End Servers with a witness requires the following:

The primary server's version of SQL Server must support SQL mirroring.

The primary, mirror, and the witness (if deployed) must have the same version of SQL Server.

The primary and the mirror must have the same edition of SQL Server. The witness may have a different edition.

For SQL best practices in terms of what SQL versions are supported for a Witness role, see "Database Mirroring Witness" in the MSDN Library at <http://go.microsoft.com/fwlink/p/?LinkId=247345>.

You use Topology Builder to deploy SQL mirroring. You select an option in Topology Builder to mirror the databases, and Topology Builder sets up the mirroring (including setting up a witness, if you want) when you publish the topology. Note that you set up or remove the witness at the same time you set up or remove the mirror. There is no separate command to deploy or remove only a witness.

To configure server mirroring, you must first set up SQL database permissions correctly. For details, see "Set Up Login Accounts for Database Mirroring or AlwaysOn Availability Groups (SQL Server)" at <http://go.microsoft.com/fwlink/p/?LinkId=268454>.

With SQL mirroring, database recovery mode is always set to **Full**, which means you must

closely monitor transaction log size and back up transaction logs on a regular basis to avoid running out of disk space on the Back End Servers. The frequency of transaction log backups depends on the log growth rate, which in turn depends on database transactions incurred by user activities on the Front End pool. We recommend that you determine how much transaction log growth is expected for your Lync deployment workload so that you can do the planning accordingly. The following articles provide additional information on SQL backup and log management:

Database recovery models: "Recovery Models (SQL Server)" at

<http://go.microsoft.com/fwlink/p/?LinkId=268446>

Backup overview: "Backup Overview (SQL Server)" at

<http://go.microsoft.com/fwlink/p/?LinkId=268449>

Backup transaction log: "Backup a Transaction Log (SQL Server)" at

<http://go.microsoft.com/fwlink/p/?LinkId=268452>

With SQL mirroring, you can either configure the topology for mirroring when you create the pools, or after the pools are already created.

IMPORTANT:

Using Topology Builder or cmdlets to set up and remove SQL mirroring is supported only when the primary, mirror, and witness (if desired) servers all belong to the same domain. If you want to set up SQL mirroring among servers in different domains, see your SQL Server documentation.

TO CONFIGURE SQL MIRRORING WHILE CREATING A POOL IN TOPOLOGY BUILDER

On the **Define the SQL Store** page, click **New** next to the **SQL store** box.

On the **Define new SQL Store** page, specify the primary store, select **This SQL instance is in mirroring relation**, specify the SQL mirroring port number (the default is 5022), and then click **OK**.

Back on the **Define the SQL store** page, select **Enable SQL Store mirroring**.

In the **Define new SQL Store** page, specify the SQL store to be used as the mirror. Select **This SQL instance is in mirroring relation**, specify the port number (the default is 5022), and then click **OK**.

If you want a witness for this mirror, do the following:

Select **Use SQL mirroring witness to enable automatic failover**.

In the **Define the SQL Store** page, select **Use SQL mirroring witness to enable automatic failover**, and specify the SQL store to be used as the witness.

Specify the port number (the default is 7022) and click **OK**.

After you are done defining your Front End pool and all other roles in your topology, use Topology Builder to publish the topology. When the topology is published, if the Front End

pool that hosts Central Management store has SQL mirroring enabled, you will see an option to create both primary and mirror SQL store databases. Click **Settings**, and type the path to use as the file share for the mirroring backup. Click **OK** and then **Next** to create the databases and publish the topology. The mirroring and the witness (if specified) will be deployed.

You can use Topology Builder to edit the properties of an already existing pool to enable SQL mirroring.

TO ADD SQL MIRRORING TO AN EXISTING FRONT END POOL IN TOPOLOGY BUILDER

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

Select **Enable SQL Store Mirroring**, and then click **New** next to **Mirroring SQL Store**.

Specify the SQL store that you want to use as the mirror.

Select **This SQL instance is in mirroring relation**, specify the SQL mirroring port number (the default port is 5022), and then click **OK**.

If you want to configure a witness, select **Use SQL mirroring witness to enable automatic failover**, and click **New**.

Specify the SQL store that you want to use as the witness.

Select **This SQL instance is in mirroring relation**, specify the SQL mirroring port number (the default port is 7022), and then click **OK**.

Click **OK**.

Publish the topology. When you do so, you will be prompted to install the database.

You must then install the database before going on to the next procedure.

You should keep the following in mind when setting up SQL mirroring:

If a mirroring endpoint already exists, it will be reused using the ports defined there, and will ignore the ones you specify in the topology.

Any port already allocated for other applications on the same server, including those for other SQL instances, should not be used for the installed SQL instances at hand. This implies that if you have more than one SQL instance installed on the same server, they must not use the same port for mirroring. For details, see the following articles:

"Specify a Server Network Address (Database Mirroring)" in the MSDN Library at <http://go.microsoft.com/fwlink/p/?LinkId=247346>

"The Database Mirroring Endpoint (SQL Server)" at <http://go.microsoft.com/fwlink/p/?LinkId=247347>

USING LYNC SERVER MANAGEMENT SHELL CMDLETS TO SET UP SQL MIRRORING

The easiest way to set up mirroring is by using Topology Builder, but you can also do so

using cmdlets.

Open a Lync Server Management Shell window and run the following cmdlet:

```
Install-CsMirrorDatabase [-ConfiguredDatabases] [-ForInstance] [-ForDefaultInstance] [-DatabaseType <Application | Archiving | CentralMgmt | Monitoring | User | BIStaging | PersistentChat | PersistentChatCompliance >] -FileShare <fileshare> -SqlServerFqdn <primarySqlServerFqdn> [-SqlInstanceName] [-DatabasePathMap] [-ExcludeDatabaseList] [-DropExistingDatabasesOnMirror] -Verbose
```

For example:

```
Install-CsMirrorDatabase -ConfiguredDatabases -FileShare \\PRIMARYBE\csdatabackup -SqlServerFqdn primaryBE.contoso.com -DropExistingDatabasesOnMirror -Verbose
```

You will see the following:

```
Database Name:rtcxdx
Data File:D:\CsData\BackendStore\rtc\DbPath\rtcxdx.mdf
Log File:D:\CsData\BackendStore\rtc\LogPath\rtcxdx.ldf
Primary SQL: e04-ocs.los_a.lsipt.local\rtc
Account: LOS_A\e04-ocs$
Mirror SQL: K16-ocs.los_a.lsipt.local\rtc
Account: LOS_A\K16-ocs$
Witness SQL : AB14-lct.los_a.lsipt.local\rtc
Account: LOS_A\AB14-lct$
Database Name:rtcshared
Data File:D:\CsData\BackendStore\rtc\DbPath\rtcshared.mdf
Log File:D:\CsData\BackendStore\rtc\LogPath\rtcshared.ldf
Primary SQL: e04-ocs.los_a.lsipt.local\rtc
Account: LOS_A\e04-ocs$
Mirror SQL: K16-ocs.los_a.lsipt.local\rtc
Account: LOS_A\K16-ocs$
Witness SQL : AB14-lct.los_a.lsipt.local\rtc
Account: LOS_A\AB14-lct$
Database Name:rtcab
Data File:D:\CsData\ABSStore\rtc\DbPath\rtcab.mdf
Log File:D:\CsData\ABSStore\rtc\LogPath\rtcab.ldf
Primary SQL: e04-ocs.los_a.lsipt.local\rtc
Account: LOS_A\e04-ocs$
Mirror SQL: K16-ocs.los_a.lsipt.local\rtc
Account: LOS_A\K16-ocs$
Witness SQL : AB14-lct.los_a.lsipt.local\rtc
Account: LOS_A\AB14-lct$
```

Database Name:rgsconfig
Data File:D:\CsData\ApplicationStore\rtc\DbPath\rgsconfig.mdf
Log File:D:\CsData\ApplicationStore\rtc\LogPath\rgsconfig.ldf
Primary SQL: e04-ocs.los_a.lsipt.local\rtc
Account: LOS_A\e04-ocs\$
Mirror SQL: K16-ocs.los_a.lsipt.local\rtc
Account: LOS_A\K16-ocs\$
Witness SQL : AB14-lct.los_a.lsipt.local\rtc
Account: LOS_A\AB14-lct\$
Database Name:rgsdyn
Data File:D:\CsData\ApplicationStore\rtc\DbPath\rgsdyn.mdf
Log File:D:\CsData\ApplicationStore\rtc\LogPath\rgsdyn.ldf
Primary SQL: e04-ocs.los_a.lsipt.local\rtc
Account: LOS_A\e04-ocs\$
Mirror SQL: K16-ocs.los_a.lsipt.local\rtc
Account: LOS_A\K16-ocs\$
Witness SQL : AB14-lct.los_a.lsipt.local\rtc
Account: LOS_A\AB14-lct\$
Database Name:cpsdyn
Data File:D:\CsData\ApplicationStore\rtc\DbPath\cpsdyn.mdf
Log File:D:\CsData\ApplicationStore\rtc\LogPath\cpsdyn.ldf
Primary SQL: e04-ocs.los_a.lsipt.local\rtc
Account: LOS_A\e04-ocs\$
Mirror SQL: K16-ocs.los_a.lsipt.local\rtc
Account: LOS_A\K16-ocs\$
Witness SQL : AB14-lct.los_a.lsipt.local\rtc
Account: LOS_A\AB14-lct\$
Database Name:xds
Data File:D:\CsData\CentralMgmtStore\rtc\DbPath\xds.mdf
Log File:D:\CsData\CentralMgmtStore\rtc\LogPath\xds.ldf
Primary SQL: e04-ocs.los_a.lsipt.local\rtc
Account: LOS_A\e04-ocs\$
Mirror SQL: K16-ocs.los_a.lsipt.local\rtc
Account: LOS_A\K16-ocs\$
Witness SQL : AB14-lct.los_a.lsipt.local\rtc
Account: LOS_A\AB14-lct\$
Database Name:lis
Data File:D:\CsData\CentralMgmtStore\rtc\DbPath\lis.mdf
Log File:D:\CsData\CentralMgmtStore\rtc\LogPath\lis.ldf
Primary SQL: e04-ocs.los_a.lsipt.local\rtc

Account: LOS_A\e04-ocs\$

Mirror SQL: K16-ocs.los_a.lsipt.local\rtc

Account: LOS_A\K16-ocs\$

Witness SQL : AB14-lct.los_a.lsipt.local\rtc

Account: LOS_A\AB14-lct\$

[Y] Yes [A] Yes to All [N] No [L] No to All [S] Suspend [?] Help (default is "Y"):

Verify the following:

Port 5022 is accessible through the firewall if Windows Firewall is enabled in the primary SQL Server e04-ocs.los_a.lsipt.local\rtc.

Port 5022 is accessible through the firewall if Windows Firewall is enabled in the mirror SQL Server K16-ocs.los_a.lsipt.local\rtc.

Port 7022 is accessible through the firewall if Windows Firewall is enabled in the witness SQL Server AB14-lct.los_a.lsipt.local\rtc.

Accounts running the SQL Servers on all primary and mirror SQL servers have read/write permission to the file share \\E04-OCS\csdatabackup

Verify that the Windows Management Instrumentation (WMI) provider is running on all these servers. The cmdlet uses this provider to find the account information for SQL Server services running on all primary, mirror and witness servers.

Verify that the account running this cmdlet has permission to create the folders for the data and log files for all the mirror servers.

Note that the user account that the SQL instance uses to run must have read/write permission to the file share. If the file share is on a different server, and the SQL instance runs a local system account, you must grant file share permissions to the server that hosts the SQL instance.

Type A and press ENTER. The mirroring will be configured.

Install-CsMirrorDatabase installs the mirror and configures mirroring for all the databases that are present on the primary SQL store. If you want to configure mirroring for only specific databases, you can use the `-DatabaseType` option, or if you want to configure mirroring for all databases except for a few, you can use the `-ExcludeDatabaseList` option, along with a comma-separated list of database names to exclude.

For example, if you add the following option to **Install-CsMirrorDatabase**, all databases except `rtcab` and `rtcxds` will be mirrored.

```
-ExcludeDatabaseList rtcab,rtcxds
```

For example, if you add the following option to **Install-CsMirrorDatabase**, only the `rtcab`, `rtcshared`, and `rtcxds` databases will be mirrored.

```
-DatabaseType User
```

REMOVING OR CHANGING SQL MIRRORING

To remove the SQL mirroring of a pool in Topology Builder, you must first use a cmdlet to remove the mirror in SQL Server. You can then use Topology Builder to remove the mirror from the topology. To remove the mirror in SQL Server, use the following cmdlet:

```
Uninstall-CsMirrorDatabase -SqlServerFqdn <SQLServer FQDN> [-SqlInstanceName <SQLServer instance name>] -DatabaseType <Application | Archiving | CentralMgmt | Monitoring | User | BIStaging | PersistentChat | PersistentChatCompliance> [-DropExistingDatabasesOnMirror] [-Verbose]
```

For example, to remove mirroring and drop the databases for the User databases, type the following:

```
Uninstall-CsMirrorDatabase -SqlServerFqdn primaryBE.contoso.com -SqlInstanceName rtc -Verbose -DatabaseType User -DropExistingDatabasesOnMirror
```

The `-DropExistingDatabasesOnMirror` option causes the affected databases to be deleted from the mirror.

Then, to remove the mirror from the topology, do the following:

In Topology Builder, right-click the pool and click **Edit Properties**.

Uncheck **Enable SQL Store Mirroring** and click **OK**.

Publish the topology.

IMPORTANT:

Whenever you make a change to a Back End Database mirroring relationship, you must restart all the Front End Servers in the pool. For a change in mirroring, (such as changing the location of a mirror), you must use Topology Builder to perform these three steps:

Remove mirroring from the old mirror server.

Add mirroring to the new mirror server.

Publish the topology.

REMOVING A MIRRORING WITNESS

Use this procedure if you need to remove the witness from a Back End Server mirroring configuration.

In Topology Builder, right-click the pool and click **Edit Properties**.

Uncheck **Use SQL Server mirroring witness to enable automatic failover** and click **OK**.

Publish the topology. After publishing the topology, Topology Builder you will see a message that includes the following

Run the `Uninstall-CsMirrorDatabase` cmdlet to remove databases that are paired with following primary databases.

However, do not follow that step, and do not type `Uninstall-CsMirrorDatabase` as that would

uninstall the entire mirroring configuration.

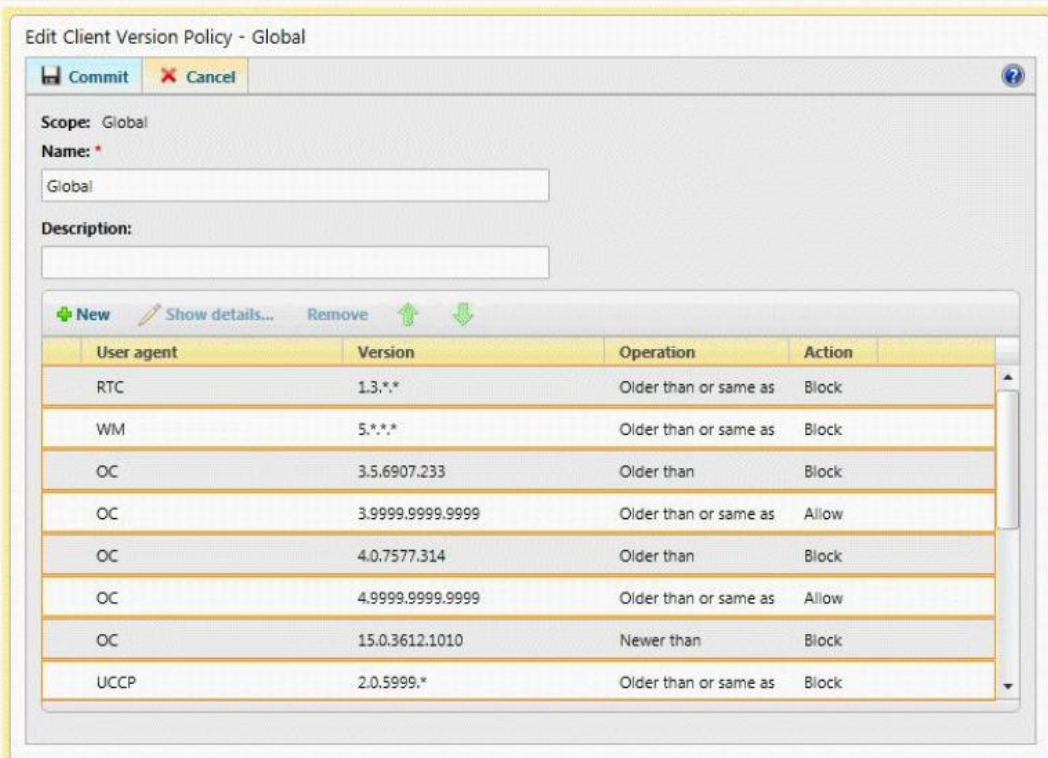
To remove just the witness from the SQL Server configuration, follow the instructions in "Remove the Witness from a Database Mirroring Session (SQL Server)" at <http://go.microsoft.com/fwlink/p/?LinkId=268456>.

Question No : 14 HOTSPOT - (Topic 2)

You need to resolve the user issue.

Which rule should you modify in the client version policy?

To answer, select the appropriate rule in the answer area.



Commit Cancel

Scope: Global

Name: *

Global

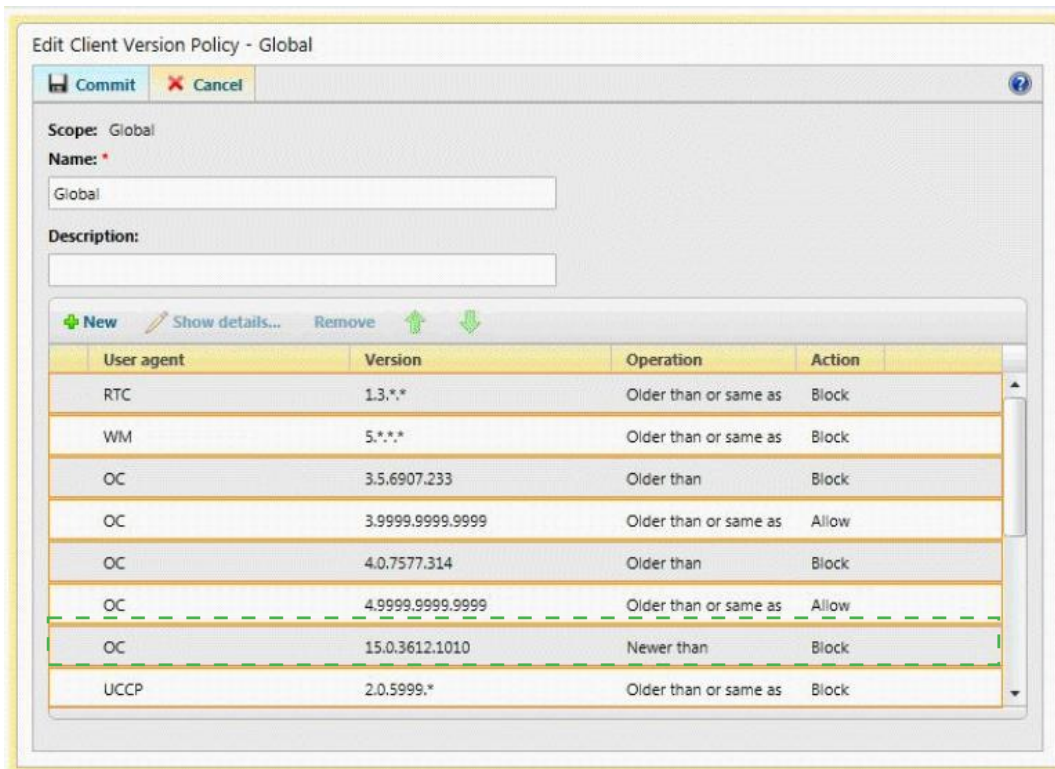
Description:

New Show details... Remove ↑ ↓

User agent	Version	Operation	Action
RTC	1.3.*,*	Older than or same as	Block
WM	5.*,*	Older than or same as	Block
OC	3.5.6907.233	Older than	Block
OC	3.9999.9999.9999	Older than or same as	Allow
OC	4.0.7577.314	Older than	Block
OC	4.9999.9999.9999	Older than or same as	Allow
OC	15.0.3612.1010	Newer than	Block
UCCP	2.0.5999.*	Older than or same as	Block

Answer:

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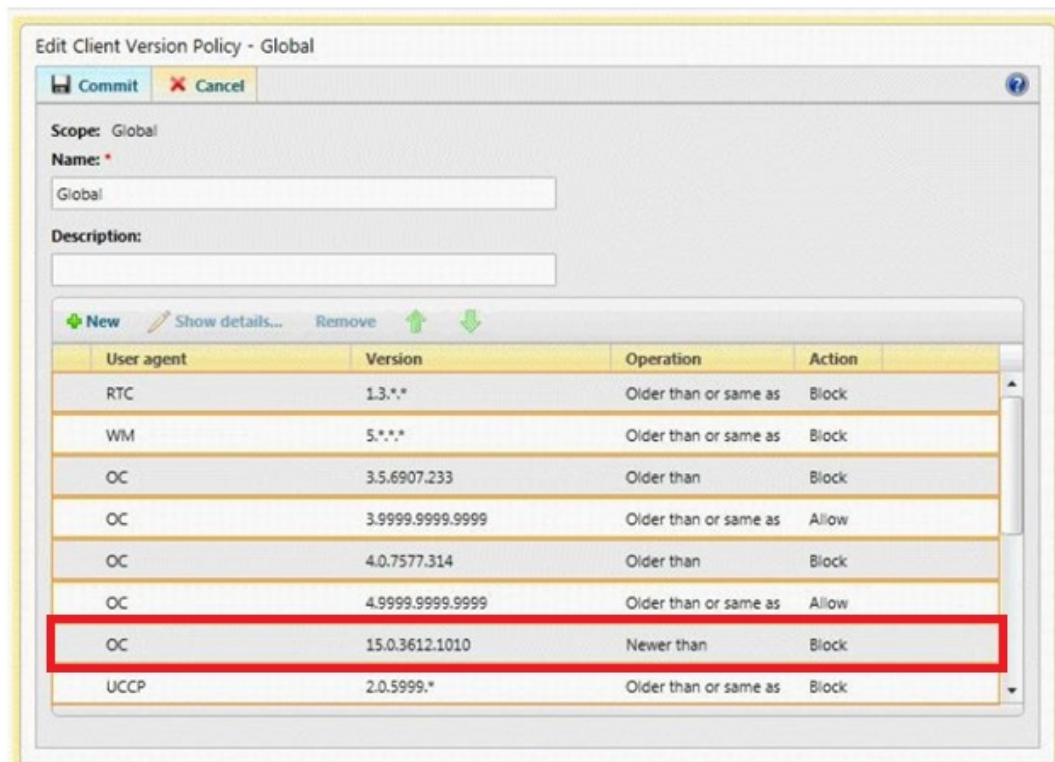
Scope: Global
Name: *
Global

Description:

New Show details... Remove ↑ ↓

User agent	Version	Operation	Action
RTC	1.3.*.*	Older than or same as	Block
WM	5.*.*	Older than or same as	Block
OC	3.5.6907.233	Older than	Block
OC	3.9999.9999.9999	Older than or same as	Allow
OC	4.0.7577.314	Older than	Block
OC	4.9999.9999.9999	Older than or same as	Allow
OC	15.0.3612.1010	Newer than	Block
UCCP	2.0.5999.*	Older than or same as	Block

Explanation:



Scope: Global
Name: *
Global

Description:

New Show details... Remove ↑ ↓

User agent	Version	Operation	Action
RTC	1.3.*.*	Older than or same as	Block
WM	5.*.*	Older than or same as	Block
OC	3.5.6907.233	Older than	Block
OC	3.9999.9999.9999	Older than or same as	Allow
OC	4.0.7577.314	Older than	Block
OC	4.9999.9999.9999	Older than or same as	Allow
OC	15.0.3612.1010	Newer than	Block
UCCP	2.0.5999.*	Older than or same as	Block

Note: Lync has a Client Version Policy that allows you to allow or reject registrations from certain client versions.

Here the Lync server 2013 clients are blocked because they have too new version number.

Question No : 15 - (Topic 2)

You need to recommend changes to the existing SQL Server environment to support Lync Server 2013 during the coexistence period.

What should you recommend?

- A. Upgrade to SQL Server 2008 R2 on the existing servers that have SQL Server deployed.
- B. Upgrade to SQL Server 2012 on the existing servers that have SQL Server deployed.
- C. Create a new SQL Server instance on the existing servers that have SQL Server deployed.
- D. Implement a new server that has SQL Server 2012 deployed.

Answer: D

Explanation: <http://technet.microsoft.com/en-us/library/gg425764.aspx>

You must use separate and distinct computers running Microsoft SQL Server 2008 R2 or Microsoft SQL Server 2012 for your Lync Server 2013 database instances. You cannot use the same instance of SQL Server for a Lync Server 2013 Front End pool that you use for a Lync Server 2010 or Office Communications Server 2007 R2 Front End pool. If you define and configure Lync Server 2013 in Topology Builder for a deployment that already has Lync Server 2010 or Office Communications Server 2007 R2 deployed, Topology Builder will not allow you to define an instance of a Lync Server 2013 that is already in use in the topology.

Topology Builder will display the following message to inform you of this issue: "The SQL server [FQDN of the server] already contains a SQL instance hosting role 'User Store'."

Coexistence Scenarios

Lync Server 2013 can coexist with components of either a Lync Server 2010 deployment or an Office Communications Server 2007 R2 deployment. Concurrent deployment of Lync Server 2013 with both Lync Server 2010 and Office Communications Server 2007 R2 (concurrent deployment of all three versions) is not supported.

During a phased migration in which a previous Lync Server 2010 or Office Communications Server 2007 R2 deployment coexists temporarily with the new Lync Server 2013 deployment, support for mixed version routing is limited. For details, see the Migration documentation.

You must use separate and distinct computers running Microsoft SQL Server 2008 R2 or Microsoft SQL Server 2012 for your Lync Server 2013 database instances. You cannot use the same instance of SQL Server for a Lync Server 2013 Front End pool that you use for a Lync Server 2010 or Office Communications Server 2007 R2 Front End pool. If you define and configure Lync Server 2013 in Topology Builder for a deployment that already has Lync Server 2010 or Office Communications Server 2007 R2 deployed, Topology Builder will not allow you to define an instance of a Lync Server 2013 that is already in use in the topology.

Topology Builder will display the following message to inform you of this issue: "The SQL server [FQDN of the server] already contains a SQL instance hosting role 'User Store'."

Note:

If you intend to deploy server roles that are new to your Lync Server 2013 deployment, you should first upgrade your existing deployment as described in the Migration documentation and the Deployment documentation, and then deploy the new server roles as described in the Planning documentation and Deployment documentation. If you are migrating a previous version of Group Chat, migrate it last, after completing the process for migrating all other components from Lync Server 2010 or Office Communications Server 2007 R2.

For specific coexistence requirements and other details about coexistence and migration of Lync Server 2010 or Office Communications Server 2007 R2 and Lync Server 2013 components, see [Migration from Lync Server 2010 to Lync Server 2013](#) and [Migration from Office Communications Server 2007 R2 to Lync Server 2013](#) in the Migration documentation. For details about mixed version support for clients, see [Supported Clients from Previous Deployments](#).

Untitled

Question No : 16 - (Topic 2)

Which cmdlet should you run to move the users to the planned Lync Server 2013 infrastructure?

- A. Move-CsManagementServer
- B. Move-CsLegacyUser
- C. Move-ADObject
- D. Move-CsUser

Answer: D

Explanation: <http://technet.microsoft.com/en-us/library/gg398528.aspx>

Move-CsLegacyUser is to **move users from Office Communication Server 2007 to Lync Server** only, otherwise use **Move-CsUser**

Question No : 17 - (Topic 2)

You are evaluating the implementation of the planned monitoring solution.

You need to recommend which tasks must be performed to meet the monitoring requirements.

Which cmdlet should you include in the recommendation?

- A. Set-CsArchivingConfiguration
- B. Set-CsQoEConfiguration
- C. Set-CsCDRConfiguration
- D. Set-CsHealthMonitoringConfiguration

Answer: B

Explanation: "A monitoring solution must save call quality data for 180 days". The default

is 60 days. The Set-CsQoEConfiguration cmdlet with the –KeepQoEDataForDays option can be used to change the value to 180 days.

Question No : 18 - (Topic 2)

You need to recommend which task must be performed to meet the backup requirements.

Which cmdlet should you recommend using?

- A. Export-CsConfiguration
- B. Backup-CsPool
- C. Restore-CsDatabase
- D. Export-CsUserData

Answer: A

Explanation: Export-CsConfiguration, Exports your Lync Server topology, policies, and configuration settings to a file. Among other things, this file can then be used to restore this information to the Central Management store after an upgrade, a hardware failure, or some other issue has resulted in data loss.

<http://technet.microsoft.com/en-us/library/hh202170.aspx>

Question No : 19 HOTSPOT - (Topic 2)

You are evaluating how many servers are required for the planned Lync Server 2013 deployment.

You need to identify which components can be collocated on the Front End Servers and which components must be installed on a new server.

Which components should you identify for which servers?

To answer, configure the appropriate components in the answer area.

Answer Area

Edge Server

Mediation Server

Monitoring Server

Office Web Apps server

Answer Area

Edge Server

Can be collocated on Front End Server
Must be installed on a separate server

Mediation Server

Can be collocated on Front End Server
Must be installed on a separate server

Monitoring Server

Can be collocated on Front End Server
Must be installed on a separate server

Office Web Apps server

Can be collocated on Front End Server
Must be installed on a separate server

Answer:

Answer Area

Edge Server	<input type="text"/>
	<input type="checkbox"/> Can be collocated on Front End Server
	<input type="checkbox"/> Must be installed on a separate server
Mediation Server	<input type="text"/>
	<input type="checkbox"/> Can be collocated on Front End Server
	<input type="checkbox"/> Must be installed on a separate server
Monitoring Server	<input type="text"/>
	<input type="checkbox"/> Can be collocated on Front End Server
	<input type="checkbox"/> Must be installed on a separate server
Office Web Apps server	<input type="text"/>
	<input type="checkbox"/> Can be collocated on Front End Server
	<input type="checkbox"/> Must be installed on a separate server

Question No : 20 DRAG DROP - (Topic 2)

You need to design the deployment of the planned Edge Server.

Which four actions should you include in the design?

To answer, move the four appropriate actions from the list of actions the correct order.

Actions	Answer Area
From the Topology Builder, save a copy of the topology.	
On the new Edge Server, run the Lync Server Deployment Wizard and select the .tbxml file as the source file.	
Run the Export-CsConfiguration cmdlet.	
From the Topology Builder, configure the new Edge pool.	
On the new Edge Server run the Lync Server Deployment Wizard and select the .zip file as the source file.	
From the Topology Builder, publish the topology.	

Answer:

Actions	Answer Area
From the Topology Builder, save a copy of the topology.	From the Topology Builder, configure the new Edge pool.
On the new Edge Server, run the Lync Server Deployment Wizard and select the .tbxml file as the source file.	From the Topology Builder, publish the topology.
Run the Export-CsConfiguration cmdlet.	Run the Export-CsConfiguration cmdlet.
From the Topology Builder, configure the new Edge pool.	
On the new Edge Server run the Lync Server Deployment Wizard and select the .zip file as the source file.	On the new Edge Server run the Lync Server Deployment Wizard and select the .zip file as the source file.
From the Topology Builder, publish the topology.	

Explanation:

Box 1:

From the Topology Builder, configure the new Edge pool.

Box 2:

From the Topology Builder, publish the topology.

Box 3:

Run the **Export-CsConfiguration** cmdlet.

Box 4:

On the new Edge Server run the Lync Server Deployment Wizard and select the .zip file as the source file.

Note:

You install Lync Server 2013 on Edge Servers by using Lync Server Deployment Wizard. By running the Deployment Wizard on each Edge Server, you can complete most of the tasks required to set up the Edge Server. In order to deploy Lync Server 2013 on an Edge Server, you must have already run Topology Builder (see note 2 below) to define and publish your Edge Server topology, and exported it to media that is available from the Edge Server.

To install an Edge Server

- ✍ Log on to the computer on which you want to install your Edge Server as a member of the local Administrators group or an account with equivalent user rights and permissions.
- ✍ Ensure that the topology configuration file you created using Topology Builder, and then exported and copied to external media, is available on the Edge Server (for example, access to the USB drive onto which you copied the topology configuration file, or verify access to the network share where you copied the file).
- ✍ Start the Deployment Wizard.

- ✍ In the Deployment Wizard, click Install or Update Lync Server System.
- ✍ After the wizard determines the deployment state, for Step 1. Install Local Configuration Store, click Run and then do the following:

* In the **Configure Local Replica of Central Management Store** dialog box, click **Import from a file (Recommended for Edge Servers)**, go to the location of the exported topology configuration file, select the .zip file, click **Open**, and then click **Next**.

* The Deployment Wizard reads the configuration information from the configuration file and writes the XML configuration file to the local computer.

* After the **Executing Commands** process is finished, click **Finish**.

Etc.

Note 2: To define the topology for a single Edge Server

- ✍ Start Topology Builder: Click Start, click All Programs, click Microsoft Lync Server 2013, and then click Lync Server Topology Builder.
- ✍ In the console tree, expand the site in which you want to deploy an Edge Server.
- ✍ Right-click Edge pools, and then click New Edge Pool.
- ✍ In Define the New Edge Pool, click Next.
- ✍ In Define the Edge pool FQDN,

Note 3: Export-CsConfiguration

Exports your Lync Server topology, policies, and configuration settings to a file. Among other things, this file can then be used to restore this information to the Central Management store after an upgrade, a hardware failure, or some other issue has resulted in data loss. This cmdlet was introduced in Lync Server 2010.

Topic 3, Litware, Inc Case A

Overview

General Overview

Litware, Inc., is an international manufacturing company that has 4,000 employees. The company has a sales department, a marketing department, a research department, and a human resources department.

Litware has a partner company named Fabrikam, Inc. Fabrikam has an office in Paris. Fabrikam uses a XMPP-based instant messaging (IM) solution.

Physical Locations

Litware has seven offices located throughout North America and Europe.

Litware has two data centers. The data centers are located in New York and London. All communications for the North American offices are routed through the New York data center.

All communications for the European offices are routed through the London data center. The number of users in each office is shown in the following table.

Office location	Number of users
New York	1,500
Miami	50
Los Angeles	60
London	1,500
Frankfurt	50
Barcelona	75
Amsterdam	80

Existing Environment

Active Directory Environment

Litware has an Active Directory forest named litwareinc.com. The forest contains a single domain. All domain controllers run Windows Server 2008 R2.

Each office contains five domain controllers. Each office is configured as an Active Directory site.

Lync Server Environment

Litware has a Lync Server 2010 infrastructure that contains two servers in the New York office. The servers are configured as shown in the following table.

Server name	Role
Lync1	Standard Edition Front End Server
Lync2	Edge Server

The SIP domain is litwareinc.com.

Litware has a Microsoft Exchange Server 2013 organization.

Problem Statements

Users in the London office report poor video quality during conferences.

Requirements

Business Goals

Litware wants to minimize the costs associated with purchasing hardware and software.

Planned Changes

Litware plans to migrate the Lync Server 2010 infrastructure to Lync Server 2013. The

migration will have a coexistence period of six months.

Litware plans to implement the following components as part of the planned migration:

- ✍ Persistent Group Chat
- ✍ The unified contact store
- ✍ Enterprise Voice for all users
- ✍ A central site in each data center
- ✍ A branch site in each branch office
- ✍ A Front End pool in each central site
- ✍ Microsoft Lync Phone Edition devices
- ✍ Pool pairing

Litware plans to create a federation relationship with Fabrikam.

Technical Requirements

Litware identifies the following technical requirements for the planned migration:

- ✍ Users must be able to use all Lync Server features if a single server fails.
- ✍ Users must be able to connect to the Lync Server infrastructure if a single central site fails.
- ✍ Members of a group named Temp_Contractors must be prevented from using Microsoft Lync 2013 when they connect remotely.
- ✍ Only users in the human resources department must be able to access and discover a persistent chat room named HRConfidential.

Security Requirements

Litware plans to deploy remote access. Some users work remotely from their customers' offices, which have firewall restrictions. All of the remote users must be able to connect to the Lync Server infrastructure by using TCP port 443.

Question No : 21 DRAG DROP - (Topic 3)

You need to recommend which Lync Server 2013 components must be deployed to support the planned changes. The solution must meet the technical requirements.

Which components should you recommend?

To answer, drag the appropriate components to the correct site in the answer area. Each component may be used once, more than once, or not at all. Additionally, you may need to drag the split bar between panes or scroll to view content.

Components	Answer Area
Director server	Each central site <input type="text" value="Component"/>
Edge Server	<input type="text" value="Component"/>
Enterprise Edition Front End Server	<input type="text" value="Component"/>
Mediation Server	<input type="text" value="Component"/>
Persistent Chat Server	<hr/>
Standard Edition Front End Server	Each branch site <input type="text" value="Component"/>
Survivable Branch Appliance	

Answer:

Components	Answer Area
Director server	Each central site <input type="text" value="Enterprise Edition Front End Server"/>
Edge Server	<input type="text" value="Edge Server"/>
Enterprise Edition Front End Server	<input type="text" value="Mediation Server"/>
Mediation Server	<input type="text" value="Persistent Chat Server"/>
Persistent Chat Server	<hr/>
Standard Edition Front End Server	Each branch site <input type="text" value="Survivable Branch Appliance"/>
Survivable Branch Appliance	

Explanation:

*Each central site

- Edge Server
- Enterprise Edition Front End Server
- Mediation Server
- Persistent Chat Server

*Each branch site

- Survivable Branch Appliance

Question No : 22 HOTSPOT - (Topic 3)

You are evaluating the implementation of an Edge Server.

You need to identify which ports must be open on the firewall to support the planned federation relationship.

Which port should you open between the Internet and the planned Edge Server?

To answer, configure the appropriate protocol and port in the answer area.

Answer Area

Protocol

Port

Answer Area

Protocol

TCP
UDP

Port

5060
5061
5066
5269

Answer:

Answer Area

Protocol

TCP
UDP

Port

5060
5061
5066
5269

Explanation:

Answer Area

Protocol

TCP
UDP

Port

5060
5061
5066
5269

Note:

Protocol/TCP or UDP/Port,Source (IP address), Destination (IP address), Comments

*XMPP/TCP/5269

IP address or addresses of XMPP federated partners

Access Edge External Standard server-to-server communication port for XMPP.

Allows communication to the Edge-deployed XMPP proxy from federated XMPP partners

*XMPP/TCP/5269

Access Edge External IP address or addresses of XMPP federated partners

Standard server-to-server communication port for XMPP.

Allows communication from the Edge-deployed XMPP proxy to federated XMPP partners

Question No : 23 DRAG DROP - (Topic 3)

You need to identify which tasks must be performed to configure pool pairing between the Front End pools.

Which four actions should you identify?

To answer, move the four appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Actions	Answer Area
Run the Export-CsConfiguration cmdlet.	
Run the Invoke-CsBackupServiceSync cmdlet.	
From Topology Builder, publish the topology.	
From Topology Builder, associate a backup pool.	
Run the bootstrapper, and then start the Lync Server Backup service.	
Implement Microsoft SQL Server database mirroring.	

Answer:

Actions	Answer Area
Run the Export-CsConfiguration cmdlet.	From Topology Builder, associate a backup pool.
Run the Invoke-CsBackupServiceSync cmdlet.	From Topology Builder, publish the topology.
From Topology Builder, publish the topology.	Run the bootstrapper, and then start the Lync Server Backup service.
From Topology Builder, associate a backup pool.	Run the Invoke-CsBackupServiceSync cmdlet.
Run the bootstrapper, and then start the Lync Server Backup service.	
Implement Microsoft SQL Server database mirroring.	

Explanation:

Answer Area
From Topology Builder, associate a backup pool.
From Topology Builder, publish the topology.
Run the bootstrapper, and then start the Lync Server Backup service.
Run the Invoke-CsBackupServiceSync cmdlet.

Untitled

Deploying Paired Front End Pools for Disaster Recovery

<http://technet.microsoft.com/en-us/library/jj204773.aspx>

Deploying Paired Front End Pools for Disaster Recovery

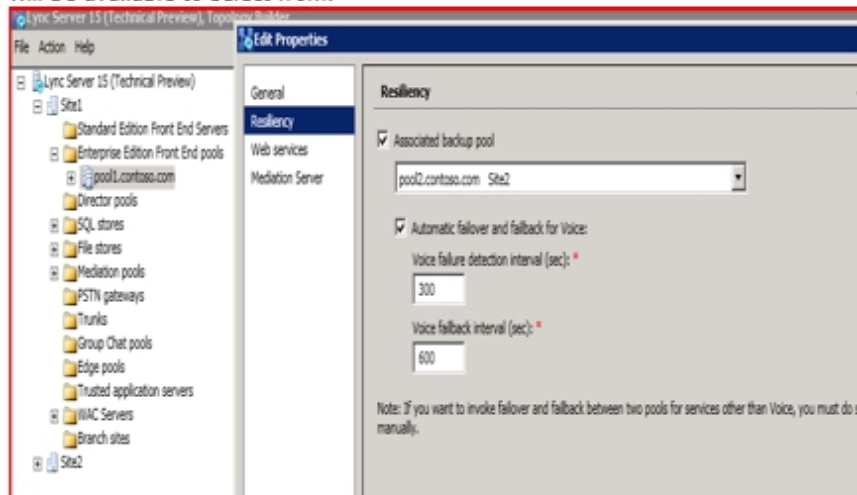
Lync Server 2013

Topic Last Modified 2013-02-21

You can easily deploy the disaster recovery topology of paired Front End pools using Topology Builder.

To deploy a pair of Front End pools

1. If the pools are new and not yet defined, use Topology Builder to create the pools.
2. In Topology Builder, right-click one of the two pools, and then click **Edit Properties**.
3. Click **Resiliency** in the left pane, and then select **Associated Backup Pool** in the right pane.
4. In the box below **Associated Backup Pool**, select the pool that you want to pair with this pool. Only existing pools that are not already paired with another pool will be available to select from.



5. Select **Automatic failover and fallback for Voice**, and then click **OK**. When you view the details about this pool, the associated pool now appears in the right pane under **Resiliency**.
6. Use Topology Builder to publish the topology.

Untitled

7. If the two pools were not yet deployed, deploy them now and the configuration will be complete. You can skip the final two steps in this procedure. However, if the pools were already deployed before you defined the paired relationship, you must complete the following two final steps.
8. On every Front End Server in both pools, run the following:
9. `<system drive>\Program Files\Microsoft Lync Server 2013\Deployment\Bootstrapper.exe`

This configures other services required for backup pairing to work correctly.

10. From a Lync Server Management Shell command prompt, run the following:
11. `Start-CsWindowsService -Name LYNCKBACKUP`
12. Force the user and conference data of both pools to be synchronized with each other, with the following cmdlets:
13. `Invoke-CsBackupServiceSync -PoolFqdn <Pool1 FQDN>`
14. `Invoke-CsBackupServiceSync -PoolFqdn <Pool2 FQDN>`

Synchronizing the data may take some time. You can use the following cmdlets to check the status. Make sure that the status in both directions is in steady state.

```
Get-CsBackupServiceStatus -PoolFqdn <Pool1 FQDN>
Get-CsBackupServiceStatus -PoolFqdn <Pool2 FQDN>
```

NOTE:

The **Automatic failover and failback for Voice** option and the associated time intervals in Topology Builder apply only to the voice resiliency features that were introduced in Lync Server 2010. Selecting this option does not imply that the pool failover discussed in this document is automatic. Pool failover and failback always require an administrator to manually invoke the failover and failback cmdlets, respectively.

Untitled

Question No : 24 DRAG DROP - (Topic 3)

You are evaluating the deployment of the Persistent Chat feature.

You need to recommend which tasks must be performed to create HRConfidential.

Which three actions should you recommend?

To answer, move the three appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Actions	Answer Area
Set the privacy of the chat room to Secret .	
Set the privacy of the chat room to Closed .	
Create a category and set the scope of the category.	
Run the New-CsPersistentChatPolicy cmdlet.	
Run the New-CsPersistentChatRoom cmdlet.	

Answer:

Actions	Answer Area
Set the privacy of the chat room to Secret .	Create a category and set the scope of the category.
Set the privacy of the chat room to Closed .	Run the New-CsPersistentChatRoom cmdlet.
Create a category and set the scope of the category.	Set the privacy of the chat room to Secret .
Run the New-CsPersistentChatPolicy cmdlet.	
Run the New-CsPersistentChatRoom cmdlet.	

Explanation:

A) Create a category and set the scope of the category. B) Run the New-CsPersistentChatRoom cmdlet. C) Set the privacy of the chat room to Secret.

Note:

* From the scenario we have: Only users in the human resources department must be able to access and discover a persistent chat room named HRConfidential

* Select a privacy setting for your room from the three options:

Open – Anyone will be able to find this room (via search), open it, and read and write in (“post to”) it. Open rooms have no “membership” per se.

Closed – Non-members will be able to find this room and see who is a member, but only members will be able to open the room, read or post to it. (This is the default setting.)

Secret – on-members won't be able to find this room, learn who has membership in it, or read or post to it.

* New-CsPersistentChatRoom

Creates a new Persistent Chat chat room. A chat room is a discussion forum that typically revolves around a specific topic.

* New-CsPersistentChatPolicy

Creates a new Persistent Chat policy at the site or the per-user scope. Persistent Chat policies determine whether or not users are allowed access to Persistent Chat chat rooms.

Question No : 25 DRAG DROP - (Topic 3)

You are planning the Lync Server 2013 migration.

You need to identify which management tools must be used to achieve the following migration tasks during the coexistence period:

- ✎ Move users from Lync Server 2010 to Lync Server 2013.
- ✎ Add a server that has Lync Server 2013 deployed to the topology.
- ✎ Remove a server that has Lync Server 2010 deployed from the topology.

Which tools should you identify?

To answer, drag the appropriate management tools to the correct migration task in the answer area. Each tool may be used once, more than once, or not at all. Additionally, you may need to drag the split bar between panes or scroll to view content.

The screenshot shows a management console interface with two main panes. On the left, titled 'Management Tools', there is a list of four tools: 'Lync Server 2010 Topology Builder', 'Lync Server 2013 Topology Builder', 'Microsoft Lync Server 2010 Control Panel', and 'Microsoft Lync Server 2013 Control Panel'. On the right, titled 'Answer Area', there are three migration tasks, each with a corresponding 'Management tool' box to its right. The tasks are: 'Move users from Lync Server 2010 to Lync Server 2013.', 'Add a server that has Lync Server 2013 deployed to the topology.', and 'Remove a server that has Lync Server 2010 deployed from the topology.' A vertical split bar is visible between the two panes.

Answer:

The screenshot shows a management tool interface with two main sections: 'Management Tools' on the left and 'Answer Area' on the right. The 'Management Tools' section contains a list of tasks: 'Lync Server 2010 Topology Builder', 'Lync Server 2013 Topology Builder', 'Microsoft Lync Server 2010 Control Panel', and 'Microsoft Lync Server 2013 Control Panel'. The 'Answer Area' section contains three tasks with their corresponding answers: 'Move users from Lync Server 2010 to Lync Server 2013.' with the answer 'Microsoft Lync Server 2013 Control Panel'; 'Add a server that has Lync Server 2013 deployed to the topology.' with the answer 'Lync Server 2013 Topology Builder'; and 'Remove a server that has Lync Server 2010 deployed from the topology.' with the answer 'Lync Server 2013 Topology Builder'.

Explanation:

Box 1:

Microsoft Lync Server 2013 Control Panel

Box 2:

Lync Server 2013 Topology Builder

Box 3:

Lync Server 2013 Topology Builder

<http://technet.microsoft.com/en-us/library/jj205369.aspx>

Question No : 26 - (Topic 3)

You need to recommend which tasks must be performed to implement the planned unified contact store.

Which three actions should you recommend? (Each correct answer presents part of the solution. Choose three.)

- A. From a server that has Lync Server 2013 deployed, run the Set-CsUserServicesPolicy cmdlet.
- B. From a server that has Lync Server 2013 deployed, run the Set-CsClientPolicy cmdlet.
- C. From a server that has Lync Server 2013 deployed, run the New-CsPartnerApplication cmdlet.

- D. From a server that has Exchange Server 2013 deployed, run the Configure-EnterprisePartnerApplication.ps1 script.
- E. From a server that has Exchange Server 2013 deployed, run the ExchUCUtil.ps1 script.

Answer: A,C,D

Explanation: <http://blog.insidelync.com/2012/08/the-lync-2013-preview-unified-contact-store-ucs/>

Question No : 27 HOTSPOT - (Topic 3)

You need to identify which DNS record must be implemented for the planned federation relationship.

Which DNS record should you identify?

To answer, select the appropriate configurations for the DNS record in the answer area.

Answer Area

Type of DNS record

Name of DNS record

Location

Answer Area

Type of DNS record
Service Location (SRV)
Test (TXT)

Name of DNS record
_xmpp-server._tcp.litwareinc.com
_sipfederationtls._tcp.litwareinc.com

Location
External DNS zone
Internal DNS zone

Answer:

Answer Area

Type of DNS record
Service Location (SRV)
Test (TXT)

Name of DNS record
_xmpp-server._tcp.litwareinc.com
_sipfederationtls._tcp.litwareinc.com

Location
External DNS zone
Internal DNS zone

Explanation:

Answer Area

Type of DNS record

Name of DNS record

Location

Note:

Protocol/TCP or UDP/Port,Source (IP address), Destination (IP address), Comments

*XMPP/TCP/5269

IP address or addresses of XMPP federated partners

Access Edge External Standard server-to-server communication port for XMPP.

Allows communication to the Edge-deployed XMPP proxy from federated XMPP partners

*XMPP/TCP/5269

Access Edge External IP address or addresses of XMPP federated partners

Standard server-to-server communication port for XMPP.

Allows communication from the Edge-deployed XMPP proxy to federated XMPP partners

General Overview

From the case....

Litware, Inc., is an international manufacturing company that has 4,000 employees. The company has a sales department, a marketing department, a research department, and a human resources department.

Litware has a partner company named **Fabrikam, Inc.** Fabrikam has an office in Paris.

Fabrikam uses a XMPP-based instant messaging (IM) solution.

Extensible Messaging and Presence Protocol (XMPP) TCP PORT 5269

Planned Federation Relationship in Litware-Case A is XMPP Federation
The Partner Company uses XMPP for IM

Answer is: Use Port TCP/5269 which is for XMPP Federation

Port Summary - Single Consolidated Edge with Public IP Addresses

The Lync Server 2013, Edge Server functionality described in this scenario architecture is very similar to what was implemented in Lync Server 2010. The most noticeable addition is the port 5269 over TCP entry for the extensible messaging and presence protocol (XMPP). Lync Server 2013 optionally deploys an XMPP proxy on the Edge Server or Edge pool and the XMPP gateway server on the Front End Server or Front End pool. Planning information for the reverse proxy and federation are found in Scenarios for Reverse Proxy and Planning for SIP, XMPP Federation and Public Instant Messaging sections, respectively.

Port and Protocol Details

We recommend that you open only the ports required to support the functionality for which you are providing external access.

For remote access to work for any edge service, it is mandatory that SIP traffic is allowed to flow bidirectionally as shown in the Inbound/Outbound edge traffic figure. Stated another way, the SIP messaging to and from the Access Edge service is involved in instant messaging (IM), presence, web conferencing, audio/video (A/V) and federation.

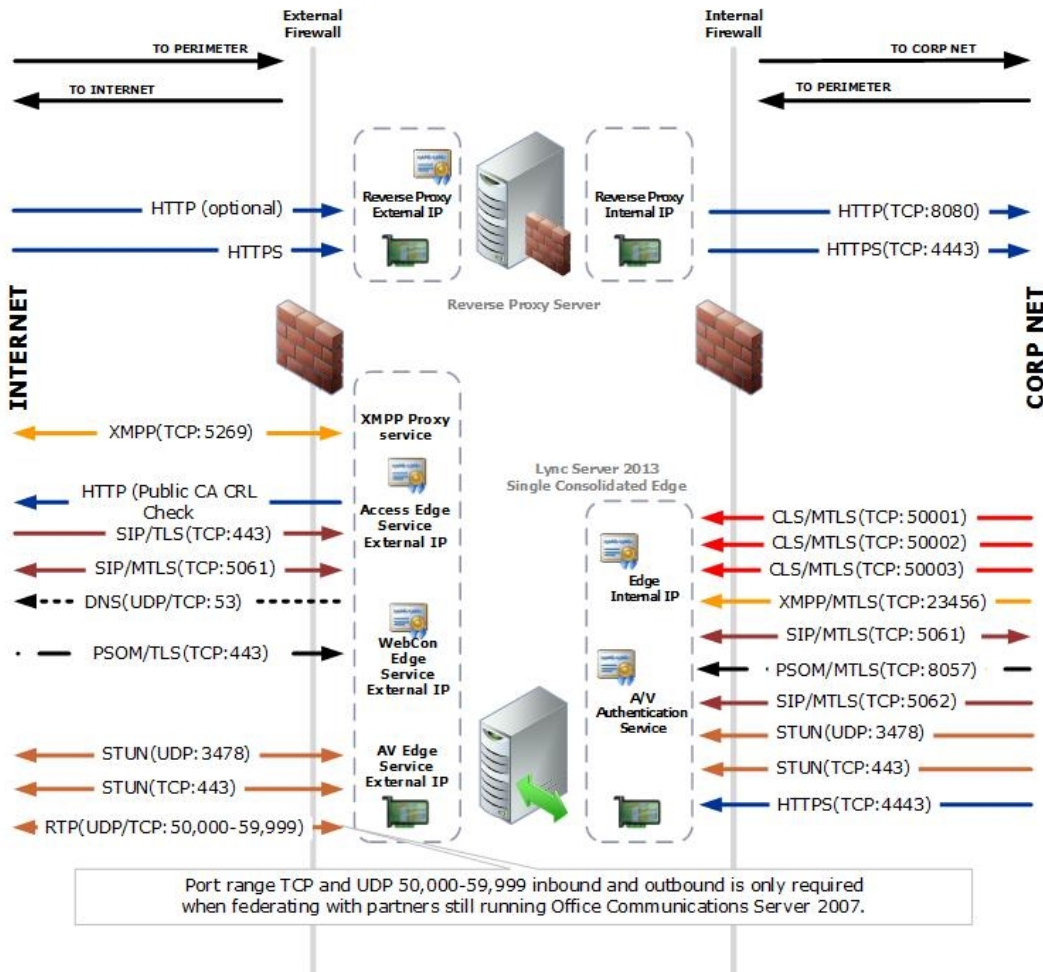
Firewall Summary for Single Consolidated Edge with Public IP Addresses: External Interface

Dumps with VCE and PDF (+Free VCE Software)

Firewall Summary for Single Consolidated Edge with Public IP Addresses: External Interface			
Role/Protocol/TCP or UDP/Port	Source IP address	Destination IP address	Notes
XMPP/TCP/5269	Any	XMPP Proxy service (shares IP address with Access Edge service)	XMPP Proxy service accepts traffic from XMPP contacts in defined XMPP federations
Access/HTTP/TCP/80	Edge Server Access Edge service public IP address	Any	Certificate revocation/CRL check and retrieval
Access/DNS/TCP/53	Edge Server Access Edge service public IP address	Any	DNS query over TCP
Access/DNS/UDP/53	Edge Server Access Edge service public IP address	Any	DNS query over UDP
Access/SIP(TLS)/TCP/443	Any	Edge Server Access Edge service public IP address	Client-to-server SIP traffic for external user access
Access/SIP(MTLS)/TCP/5061	Any	Edge Server Access Edge service public IP address	For federated and public IM connectivity using SIP
Access/SIP(MTLS)/TCP/5061	Edge Server Access Edge service public IP address	Any	For federated and public IM connectivity using SIP
Web Conferencing/PSOM(TLS)/TCP/443	Any	Edge Server Web Conferencing Edge service public IP address	Web Conferencing media
A/V/RTP/TCP/50,000-59,999	Edge Server Access Edge service public IP address	Any	Required for federating with partners running Office Communications Server 2007, Office Communications Server 2007 R2, Lync Server 2010 and Lync Server 2013.
A/V/RTP/UDP/50,000-59,999	Edge Server A/V Edge service public IP address	Any	Required only for federation with partners running Office Communications Server 2007
A/V/RTP/TCP/50,000-59,999	Any	Edge Server A/V Edge service public IP address	Required only for federation with partners running Office Communications Server 2007.
A/V/RTP/UDP/50,000-59,999	Any	Edge Server A/V Edge service public IP address	Required only for federation with partners running Office Communications Server 2007.
A/V/STUN,MSTURN/UDP/3478	Edge Server A/V Edge service public IP address	Any	3478 outbound is used to determine the version of Edge Server that Lync Server is communicating with and also for media traffic from Edge Server-to-Edge Server. Required for federation with Lync Server 2010, Windows Live Messenger, and Office Communications Server 2007 R2, and also if multiple Edge pools are deployed within a company.
A/V/STUN,MSTURN/UDP/3478	Any	Edge Server A/V Edge service public IP address	STUN/TURN negotiation of candidates over UDP/3478
A/V/STUN,MSTURN/TCP/443	Any	Edge Server A/V Edge service public IP address	STUN/TURN negotiation of candidates over TCP/443
A/V/STUN,MSTURN/TCP/443	Edge Server A/V Edge service public IP address	Any	STUN/TURN negotiation of candidates over TCP/443

In addition to IPv4, the Edge Server now supports IPv6. For clarity, only IPv4 is used in the scenarios.

Enterprise Perimeter Network



Untitled

Firewall Summary for Federation

Role/Protocol/TCP or UDP/Port	Source IP address	Destination IP address	Notes
Access/SIP/MTLS/TCP/5061	Access Edge service public IP address	Any	For federated and public IM connectivity using SIP

Firewall Summary – Public Instant Messaging Connectivity

Role/Protocol/TCP or UDP/Port	Source IP address	Destination IP address	Notes
Access/SIP/MTLS/TCP/5061	Public IM connectivity partners	Edge Server Access Edge service	For federated and public IM connectivity using SIP
Access/SIP/MTLS/TCP/5061	Edge Server Access Edge service	Public IM connectivity partners	For federated and public IM connectivity using SIP
Access/SIP/TLS/TCP/443	Clients	Edge Server Access Edge service	Client-to-server SIP traffic for external user access
A/V/RTP/TCP/50,000-59,999	Edge Server A/V Edge service	Live Messenger clients	Used for A/V sessions with Windows Live Messenger if public IM connectivity is configured.
A/V/STUN.MSTURN/UDP/3478	Edge Server A/V Edge service	Live Messenger clients	Required for public IM connectivity with Windows Live Messenger
A/V/STUN.MSTURN/UDP/3478	Live Messenger clients	Edge Server A/V Edge service	Required for public IM connectivity with Windows Live Messenger

Firewall Summary for Extensible Messaging and Presence Protocol

Protocol/TCP or UDP/Port	Source (IP address)	Destination (IP address)	Comments
XMPP/TCP/5269	Any	Edge Server Access Edge service interface IP address	Standard server-to-server communication port for XMPP. Allows communication to the Edge Server XMPP proxy from federated XMPP partners
XMPP/TCP/5269	Edge Server Access Edge service interface IP address	Any	Standard server-to-server communication port for XMPP. Allows communication from the Edge Server XMPP proxy to federated XMPP partners
XMPP/MTLS/TCP/23456	Any	Each internal Edge Server Interface IP	Internal XMPP traffic from the XMPP Gateway on the Front End Server or Front End pool to the Edge Server internal IP address or each Edge pool member's internal IP address

Untitled

Question No : 28 - (Topic 3)

You need to plan for the implementation of the DHCP configurations for the Lync Phone Edition devices.

Which three configurations should be applied to the Lync Phone Edition devices from DHCP? (Each correct answer presents part of the solution. Choose three.)

- A. The FQDN of the Lync Server pool registrar
- B. The IP address of a time server
- C. The URL of the certificate provisioning service of the Lync Server pool
- D. The IP address of a Mediation Server
- E. The SIP domain

Answer: A,B,C

Explanation: [http://technet.microsoft.com/en-us/library/gg425854\(OCS.14\).aspx](http://technet.microsoft.com/en-us/library/gg425854(OCS.14).aspx)

Question No : 29 DRAG DROP - (Topic 3)

You need to identify which tasks must be performed to move the Central Management store during the planned migration.

Which three actions should you identify?

To answer, move the three appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Actions	Answer Area
From a server that has Lync Server 2013 deployed, run the Enable-CsTopology cmdlet.	
From a server that has Lync Server 2013 deployed, run the Install-CsDatabase cmdlet.	
From Lync1, run the Move-CsManagementServer cmdlet.	
From a server that has Lync Server 2013 deployed, run the Move-CsManagementServer cmdlet.	
From Lync1, run the Export-CsConfiguration cmdlet.	

Answer:

Actions	Answer Area
From a server that has Lync Server 2013 deployed, run the Enable-CsTopology cmdlet.	From a server that has Lync Server 2013 deployed, run the Install-CsDatabase cmdlet.
From a server that has Lync Server 2013 deployed, run the Install-CsDatabase cmdlet.	From a server that has Lync Server 2013 deployed, run the Enable-CsTopology cmdlet.
From Lync1, run the Move-CsManagementServer cmdlet.	
From a server that has Lync Server 2013 deployed, run the Move-CsManagementServer cmdlet.	From a server that has Lync Server 2013 deployed, run the Move-CsManagementServer cmdlet.
From Lync1, run the Export-CsConfiguration cmdlet.	

Explanation:

Box 1:

From a server that has Lync Server 2013 deployed, run the **Install-CsDatabase** cmdlet.

Box 2:

From a server that has Lync Server 2013 deployed, run the **Enable-CsTopology** cmdlet.

Box 3:

From a server that has Lync Server 2013 deployed, run the **Move-CsManagementServer** cmdlet.

Lync1 is a Lync 2010 Server - so we DO NOT RUN any commands on Lync1 to move the Central Management Store

Run **Install-CsDatabase** from one of the 2013 Front-Ends

Enable-CsTopology - commonly done on the same Front-End server

Move-CsManagementServer - again, target **Front-End Pool**, commonly done on the same **FE**.

Question No : 30 - (Topic 3)

You need to recommend a remote access solution for each central site. The solution must meet the security requirements and the technical requirements.

What are two possible recommendations that achieve the goal? (Each correct answer presents a complete solution. Choose two.)

A.

- Deploy two Edge Servers that are load balanced by using DNS load balancing.
- Deploy a network address translation (NAT) solution.
- Assign one public IP address to each Edge Server service on each Edge Server.

B.

- Deploy two Edge Servers that are load balanced by using a hardware load balancer.
- Assign one public IP address to each Edge Server service on each Edge Server.
- Assign three public IP addresses to the hardware load balancer.

C.

- Deploy two Edge Servers that are load balanced by using a hardware load balancer.
- Deploy a network address translation (NAT) solution.
- Assign one public IP address to each Edge Server.

D.

- Deploy two Edge Servers that are load balanced by using a hardware load balancer.
- Assign one public IP address to each Edge Server.
- Assign two public IP addresses to the hardware load balancer.

Answer: A,B

Explanation: <http://technet.microsoft.com/en-us/library/gg425716.aspx>

Question No : 31 - (Topic 3)

You are evaluating a disaster recovery solution for the planned Front End pools.

You need to recommend a solution for restoring access to the Central Management store if the Front End pool fails.

Which cmdlet should you include in the recommendation?

- A.** Invoke-CsManagementServerFailover
- B.** Import-CsConfiguration
- C.** Invoke-CsPoolFailover
- D.** Move-CsManagementServer

Answer: A

Explanation: <http://technet.microsoft.com/en-us/library/jj204647.aspx>

Topic 4, Litware, Inc Case B

Overview

General Overview

Litware, Inc. is an international manufacturing company that has 10,000 users.

Physical Locations

Litware has two offices. The offices are located in New York and Denver.

The offices connect to each other by using a WAN link. Each office connects directly to the Internet.

Existing Environment

Active Directory Infrastructure

The network contains an Active Directory forest named litware.com. The forest contains a single domain. All domain controllers run Windows Server 2008 R2.

Each office contains two domain controllers. Each office is configured as an Active Directory site.

Lync Server 2010 Infrastructure

Litware has a Lync Server 2010 infrastructure in the New York office. The infrastructure contains servers and appliances. The servers and appliances are configured as shown in the following table.

Server name	Role	Pool name
Lync01	Front End Server	pool1
Lync02	Edge Server	pool2
Lync03	Mediation Server	pool3
Lync04	Group Chat Server	<i>Not applicable</i>

All of the servers that have Lync Server 2010 deployed are monitored by using Microsoft System Center Operations Manager.

All client computers have either Microsoft Lync 2010 or Microsoft Office Communicator 2007 R2 installed.

Administrators configure the following Lync Server 2010 features:

- ✍ IM and presence for all sites
- ✍ External user access for IM and conferencing
- ✍ Conferencing for all sites
- ✍ Response groups
- ✍ Group Chat

Problem Statements

Litware identifies the following issues:

- ✍ Users report that other users who are not listed on their contact list can see their presence information. This also occurs when the users set their privacy mode to allow only the users on their contact list to see their presence information.
- ✍ The users report that when they connect to meetings remotely, they cannot use presenter controls.

Requirements

Business Goals

Litware plans to minimize hardware and software purchasing costs.

Planned Changes

Litware plans to upgrade to Lync Server 2013 during the next six months and plans to implement the following changes during the upgrade:

- ✍ Migrate the current Front End pool to an Enterprise Edition Front End pool named fepool that will contain two servers named Lyncl3_01 and Lyncl3_02.
- ✍ Migrate Group Chat to Persistent Chat.

Technical Requirements

Litware identifies the following technical requirements for the planned changes:

- ✍ Users running previous client versions must be able to use chat features after the server is migrated to Persistent Chat.
- ✍ Users who have mobile devices must be able to receive notifications if the Lync mobile application is inactive.
- ✍ A client computer named Monitor01 must be used to monitor client connectivity by using synthetic transactions.
- ✍ All response groups must be migrated to Lync Server 2013.
- ✍ External users must be able to expand distribution groups.
- ✍ External users must be able to download meeting content.
- ✍ The Lync 2013 Windows Store app must be supported.

High Availability Requirements

The new Lync Server 2013 infrastructure in the New York office must be available if a single server fails.

Question No : 32 - (Topic 4)

You are evaluating the migration of the response groups.

You need to identify which statement correctly describes the migration of the response groups to Lync Server 2013.

Which statement should you identify?

- A. All of the response groups must be recreated after the users are moved to Lync Server 2013.
- B. All of the response groups must be migrated in a single migration operation.
- C. An administrator must modify the topology after the response groups are migrated to Lync Server 2013.
- D. An administrator must re-enable all users for Enterprise Voice after the response groups are migrated to Lync Server 2013.

Answer: B

Question No : 33 HOTSPOT - (Topic 4)

You need to recommend which names must be included in the certificate installed on Lync13_02.

Which names should you recommend? (To answer, select the appropriate names in the answer area.)

Name	Required	Not required
SN=fepool1.litware.com	<input type="radio"/>	<input type="radio"/>
SN=lync13_02.litware.com	<input type="radio"/>	<input type="radio"/>
SAN=*.litware.com	<input type="radio"/>	<input type="radio"/>
SAN=fepool1.litware.com	<input type="radio"/>	<input type="radio"/>
SAN=lync13_01.litware.com	<input type="radio"/>	<input type="radio"/>
SAN=lync13_02.litware.com	<input type="radio"/>	<input type="radio"/>

Answer:

Name	Required	Not required
SN=fepool1.litware.com	<input checked="" type="radio"/>	<input type="radio"/>
SN=lync13_02.litware.com	<input type="radio"/>	<input checked="" type="radio"/>
SAN=*.litware.com	<input type="radio"/>	<input checked="" type="radio"/>
SAN=fepool1.litware.com	<input checked="" type="radio"/>	<input type="radio"/>
SAN=lync13_01.litware.com	<input type="radio"/>	<input checked="" type="radio"/>
SAN=lync13_02.litware.com	<input checked="" type="radio"/>	<input type="radio"/>

Explanation:

<http://technet.microsoft.com/en-us/library/gg398094.aspx>

Certificate **MUST** have the **Pool Name** as the **Subject Name (SN)** and **SAN** Name and the **Server Name** in the **SAN**.

Name	Required	Not required
SN=fepool1.litware.com	<input checked="" type="radio"/>	<input type="radio"/>
SN=lync13_02.litware.com	<input type="radio"/>	<input checked="" type="radio"/>
SAN=*.litware.com	<input type="radio"/>	<input checked="" type="radio"/>
SAN=fepool1.litware.com	<input checked="" type="radio"/>	<input type="radio"/>
SAN=lync13_01.litware.com	<input type="radio"/>	<input checked="" type="radio"/>
SAN=lync13_02.litware.com	<input checked="" type="radio"/>	<input type="radio"/>

Untitled

Question No : 34 - (Topic 4)

You install System Center 2012 Operations Manager on a server named SCOM01. You import the Lync 2013 Server Management Pack to SCOM01.

You need to configure monitoring to meet the technical requirements.

Which three actions should you perform before you configure the synthetic transactions? (Each correct answer presents part of the solution. Choose three.)

- A. Install the Lync Server 2013 core components on SCOM1.
- B. Install the SCOM agent on Monitor01.
- C. Run watchernode.msi on Monitor01.
- D. Install the Lync Server 2013 core components on Monitor01.
- E. Run watchernode.msi on SCOM01.

Answer: B,C,D

Explanation: * From Scenario:

A client computer named Monitor01 must be used to monitor client connectivity by using synthetic transactions.

* You must run Watchernode.msi on a computer where both the Operations Manager (SCOM) agent files and the Lync Server 2013 core components are installed.

Note:

* Watcher nodes are computers that periodically run Lync Server synthetic transactions. Synthetic transactions are Windows PowerShell cmdlets that verify that key end user scenarios—such as the ability to sign in to the system, or the ability to exchange instant messages—are working as expected.

Reference: Installing and Configuring Watcher Nodes

Question No : 35 - (Topic 4)

You need to recommend which type of client connection the remote users must use to prevent the connection issue.

Which Lync client or clients should you recommend? (Choose all that apply.)

- A. Lync 2013

- B. Lync Web App
- C. Lync Windows Store app
- D. Lync Attendee

Answer: A,B

Explanation: A: Lync 2013 is the full-featured client for Lync Server. The Lync 2013 user interface has been fully redesigned and includes newly integrated features, such as Persistent Chat (Lync 2010 had a separate client for chat functionality), tabbed conversations, video preview, and multiparty video

B:

* Lync Web App is the client of choice for participants outside your organization. With Lync Web App, no local client installation is required, although audio, video, and sharing features require installation of a plug-in during first use.

* Lync Web App is the web-based conferencing client for Lync Server 2013 meetings. In this release, the addition of computer audio and video to Lync Web App provides a complete in-meeting experience for anyone who does not have a Lync client installed locally. Meeting participants have access to all collaboration and sharing features and presenter meeting controls.

Note:

* From scenario:

/ Migrate Group Chat to Persistent Chat

/ Users running previous client versions must be able to use chat features after the server is migrated to Persistent Chat.

Incorrect:

Not C:

* Lync Windows Store app supports most of the commonly-used features for contact management, conversations, and calls. For advanced features such as delegate set up, team calls, response groups, and persistent chat, use Lync 2013 for the desktop instead.

Not D:

* Because of the enhancements to Lync Web App, an updated version of Microsoft Lync 2010 Attendee is not available for Lync Server 2013.

* Lync 2010 Attendant The Microsoft Lync 2010 Attendant integrated call-management program enables a receptionist to manage multiple conversations at the same time through rapid call handling, IM, and onscreen routing.

Reference: Clients for Lync Server 2013

Question No : 36 - (Topic 4)

You need to recommend the minimum number of Lync servers required to support the Lync Server 2013 infrastructure in the New York office. The solution must meet the high availability requirements.

How many servers should you recommend deploying to each network? (To answer, select the appropriate number of servers for each network in the answer area.)

Lync servers on the external network:

Lync servers on the internal network:

Reverse proxy servers on the external network:

Reverse proxy servers on the internal network:

Select four.

- A. Lync servers on the external network: 0
- B. Lync servers on the external network: 1
- C. Lync servers on the external network: 2
- D. Lync servers on the external network: 3
- E. Lync servers on the external network: 4
- F. Lync servers on the internal network: 0
- G. Lync servers on the internal network: 1
- H. Lync servers on the internal network: 2
- I. Lync servers on the internal network: 3
- J. Lync servers on the internal network: 4
- K. Reverse proxy servers on the external network: 0
- L. Reverse proxy servers on the external network: 1
- M. Reverse proxy servers on the external network: 2
- N. Reverse proxy servers on the internal network: 0
- O. Reverse proxy servers on the internal network: 1
- P. Reverse proxy servers on the internal network: 2

Answer: C,J,M,N

Question No : 37 DRAG DROP - (Topic 4)

You need to recommend which actions must be performed to add the planned Lync Server 2013 servers.

Which three actions should you recommend in sequence? (To answer, move the appropriate three actions from the list of actions to the answer area and arrange them in the correct order.)

The screenshot shows a drag-and-drop interface. On the left, there is a list of six actions, each in a yellow box:

- From Lync Server 2013 Topology Builder, save a copy of the topology.
- From Lync Server 2010 Topology Builder, publish the topology.
- From Lync Server 2013 Topology Builder, publish the topology.
- From Lync Server 2013 Topology Builder, configure the topology.
- From Lync Server 2010 Topology Builder, save a copy of the topology.
- From Lync Server 2010 Topology Builder, configure the topology.

On the right, there is a grey box labeled "Answer Area" which is currently empty.

Answer:

	Answer Area
From Lync Server 2013 Topology Builder, save a copy of the topology.	From Lync Server 2010 Topology Builder, save a copy of the topology.
From Lync Server 2010 Topology Builder, publish the topology.	From Lync Server 2013 Topology Builder, configure the topology.
From Lync Server 2013 Topology Builder, publish the topology.	From Lync Server 2013 Topology Builder, publish the topology.
From Lync Server 2013 Topology Builder, configure the topology.	
From Lync Server 2010 Topology Builder, save a copy of the topology.	
From Lync Server 2010 Topology Builder, configure the topology.	

Explanation:

Box 1: From the Lync Server 2010 Topology Builder, save a copy of the topology.

Box 2: From the Lync Server 2013 Topology Builder, configure the topology.

Box 3: From the Lync Server 2013 Topology Builder, publish the topology.

Note:

* From scenario:

/ Litware plans to upgrade to Lync Server 2013

Question No : 38 - (Topic 4)

You need to ensure that the Client Computers that have Office Communicator 2007 R2 installed can use IM and Presence and can join Web Conferences Hosted on Lync Server 2013.

The solution must minimize Administrative effort.

What should you do?

- A. Modify the Client Version Policy allow all versions of office Communicator 2007 R2 to connect
- B. Implement Communicator Web Access Server
- C. Apply the latest hot fixes to Office Communicator 2007 R2.
- D. Update the computers to Lync 2010

Answer: A

Explanation:

The presence and IM features in Office Communicator 2007 R2 are compatible with Lync Server 2013, but conferencing features are not. During migration from Office Communications Server 2007 R2, Office Communicator 2007 R2 is suitable for presence and IM interoperability, but users should use Lync Web App 2013 to join Lync Server 2013 meetings.

Ref: <http://technet.microsoft.com/en-us/library/jj204672.aspx>

Question No : 39 HOTSPOT - (Topic 4)

After the migration, users report that when they connect remotely, they fail to sign in by using the Lync 2013 Windows Store app.

You verify the external DNS records for Lync and locate the records shown in the following table.

Record type	FQDN
Service location (SRV)	_sipfederationtls._tcp.litware.com
Service location (SRV)	_sip._tls.litware.com
Host (A)	Sip.litware.com

You need to ensure that the users can sign in by using the Lync 2013 Windows Store app.

What DNS record should you create? (To answer, select the appropriate configuration in the answer area.)

Record type:
Host (A)
Service location (SRV)
Text (TXT)

FQDN:
Lyncdiscover.litware.com
Lyncdiscoverinternal.litware.com
_sipinternaltls.litware.com
_sipinternaltls._tcp.litware.com
_sptls._tcp.litware.com

Answer:

Record type:
Host (A)
Service location (SRV)
Text (TXT)

FQDN:
Lyncdiscover.litware.com
Lyncdiscoverinternal.litware.com
_sipinternaltls.litware.com
_sipinternaltls._tcp.litware.com
_sptls._tcp.litware.com

Question No : 40 - (Topic 4)

You are evaluating the migration of the response groups.

You need to identify which statement correctly describes the migration of the response groups to Lync Server 2013.

Which statement should you identify?

A. An administrator must modify the topology after the response groups are migrated to

Lync Server 2013.

- B. An administrator must re-enable all users for Enterprise Voice after the response groups are migrated to Lync Server 2013.
- C. All of the response groups must be recreated after the users are moved to Lync Server 2013
- D. All of the response groups must be migrated in a single migration operation.

Answer: D

Question No : 41 - (Topic 4)

You need to recommend a solution to resolve the presence information issue.

You verify that enhanced presence privacy mode is enabled for all users.

What should you recommend including in the solution?

- A. A client version policy
- B. A conferencing policy
- C. A presence policy
- D. A client policy

Answer: A

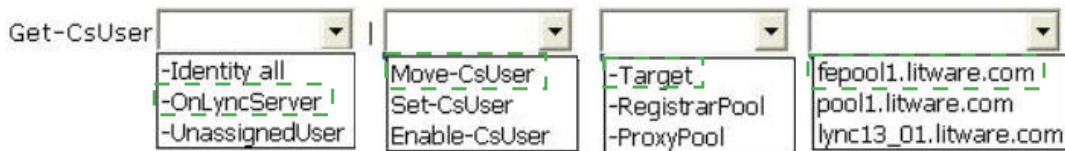
Question No : 42 HOTSPOT - (Topic 4)

You need to move all users to the new Lync Server 2013 infrastructure.

What command should you run? (To answer, configure the appropriate command in the answer area.)

Get-CsUser	<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>
	-Identity all -OnLyncServer -UnassignedUser		Move-CsUser Set-CsUser Enable-CsUser	-Target -RegistrarPool -ProxyPool	fepool1.litware.com pool1.litware.com lync13_01.litware.com

Answer:



Question No : 43 - (Topic 4)

You need to implement a solution to meet the notification requirements for the mobile devices. The solution must meet the technical requirements.

Which three actions should you perform before you enable push notification? (Each correct answer presents part of the solution. Choose three.)

- A. Configure a reverse proxy.
- B. Add a hosting provider.
- C. Modify the client policy.
- D. Configure accepted domains.
- E. Enable federation.

Answer: B,D,E

Reference: **How to Enable Push Notifications for Lync Mobile iPhone & Windows 7 Phone**

<http://msexchangeanywhere.wordpress.com/2012/01/13/how-to-enable-push-notifications-for-lync-mobile-iphone-windows-phone-7-2/>

Untitled

Topic 5, Contoso Ltd. Case B

Overview

General Overview

Contoso, Ltd. is an international manufacturing company that has 30,000 users.

Contoso has the following departments: sales, research, marketing, human resources, executive, manufacturing, and legal. The sales department has 2,000 users. All of the users in the sales department are located in the United States. The research department has 3,000 users. All of the users in the research department are located in Europe.

Physical Locations

Contoso has two main offices. The offices are located in Houston and Frankfurt. Each office has 15,000 users.

The offices connect to each other by using an MPLS network. Each office connects directly to the Internet.

Existing Environment

Lync Server Infrastructure

Contoso has a Lync Server 2010 infrastructure that only uses internal instant messaging (IM) and presence. The infrastructure contains a single Enterprise Edition Front End pool that services all of the users.

Contoso uses a SIP domain of contoso.com for all of the users.

Client computers have either Microsoft Office Communicator 2007 R2 installed or Microsoft Lync 2010 installed.

Before deploying Lync Server 2013 and migrating the users to Lync Server 2013, you implement a small pilot project to test the functionality of Lync Server 2013.

Problem Statements

The users in the pilot report that occasionally, they cannot sign in to Lync 2013.

Requirements

Business Goals

Contoso plans to upgrade to Lync Server 2013 during the next six months. Contoso must deploy all of the Lync Server conferencing and edge services. Contoso must also configure federation with its parent company, which is named Proseware, Inc. Proseware is located in Europe and has an Office Communication Server 2007 R2 infrastructure.

Contoso must minimize hardware and software purchasing costs, while guaranteeing performance levels for all Lync Server 2013 workloads.

Planned Changes

Contoso plans to implement the following workloads in the Lync Server 2013 deployment:

- ✍ Federation
- ✍ Dial-in conferencing
- ✍ External user access
- ✍ Audio, video, and web conferencing
- ✍ The ability to host Lync meetings that have external participants

The FQDNs of the edge services will be configured as shown in the following table.

Service	United States region	Europe region
Access Edge	us-ae.contoso.com	Eu-ae.contoso.com
Web Conferencing Edge	us-wc.contoso.com	Eu-wc.contoso.com
A/V Edge	us-av.contoso.com	Eu-av.contoso.com

Technical Requirements

Contoso identifies the following technical requirements for the planned deployment:

- ✍ Only federation to Proseware must be allowed.
- ✍ All of the edge services must use default ports.
- ✍ WAN traffic and Internet traffic must be minimized.
- ✍ All of the user contacts stored in Lync Server 2013 must be backed up.
- ✍ The sales department must have a dedicated dial-in conferencing number. All other users in both the United States and Europe must use a pool of regional dial-in conferencing numbers.
- ✍ If a single component fails, all Lync services must remain available without the need for manual intervention. Performance degradation is acceptable during a component failure state.
- ✍ The conversations of all the sales department users must be archived for 30 days. The conversations of all the research department users must be archived for 90 days. No other conversations must be archived.
- ✍ After the migration to Lync Server 2013, all client computers will have three months to upgrade to Lync 2013. After three months, legacy clients must be blocked from accessing the Lync Server 2013 infrastructure.

Security Requirements

Contoso identifies the following security requirements for the planned deployment:

- ✍ All Lync Server conferences must use a unique URL.
- ✍ Each Internet-facing service must have one or more dedicated public IP addresses.
- ✍ Only the users in the human resources department must be prevented from connecting to Lync Server remotely.

Question No : 44 - (Topic 5)

You need to recommend an archiving solution that meets the business goals and the technical requirements.

Which two actions should you recommend? (Each correct answer presents part of the solution. Choose two.)

A. Create a new Front End pool. Home the sales department users and the research

department users on the new pool. Configure archiving for the new pool.

B. Create a new Front End pool for the sales department and a new Front End pool for the research department. Configure archiving for the new pools.

C. Configure the global archiving policy.

D. Move the sales department users on the Front End pool in the United States. Move the research department users on the Front End pool in Europe. Configure archiving for each pool.

E. Create a new user-level archiving policy.

Answer: B,C

Explanation:

* From scenario

The conversations of all the sales department users must be archived for 30 days. The conversations of all the research department users must be archived for 90 days. No other conversations must be archived.

Question No : 45 - (Topic 5)

You need to recommend a backup solution to meet the technical requirements. Which tool should you include in the recommendation?

A. Export-CsUserData

B. Ocslogger

C. Snooper

D. Get-CsAdContact

E. Dbimpexp

Answer: A

Reference: Export-CsUserData

<http://technet.microsoft.com/en-us/library/jj204897.aspx>

Export-CsUserData

Detailed Description

The Export-CsUserData cmdlet provides a way for administrators to Export User Data

and/or Conference Directory for a Lync Server Pool.

That data, which can be saved in the User Data format used by either Lync Server 2013 or Microsoft Lync Server 2010 can then be imported by using the Import-CsUserData cmdlet.

To return a list of all the role-based access control (RBAC) roles this cmdlet has been assigned to

(including any custom RBAC roles you have created yourself), run the following command from the

Windows PowerShell command-line interface prompt:

```
Get-CsAdminRole | Where-Object {$_.Cmdlets -match "Export-CsUserData"}
```

Lync Server Control Panel: The functions carried out by the Export-CsUserData cmdlet are not available in the Lync Server Control Panel.

Question No : 46 - (Topic 5)

You need to configure the Lync Server 2013 infrastructure to meet the security requirements for the human resources department. The solution must minimize administrative effort.

What should you do?

- A. Create a new user-level external access policy.
- B. Modify the Access Edge Configuration settings.
- C. Create a new user-level client policy.
- D. Modify the global external access policy.

Answer: A

Question No : 47 - (Topic 5)

The Lync Server 2013 infrastructure was implemented successfully three months ago.

You need to recommend a solution to meet the technical requirements.

Which cmdlet should you run?

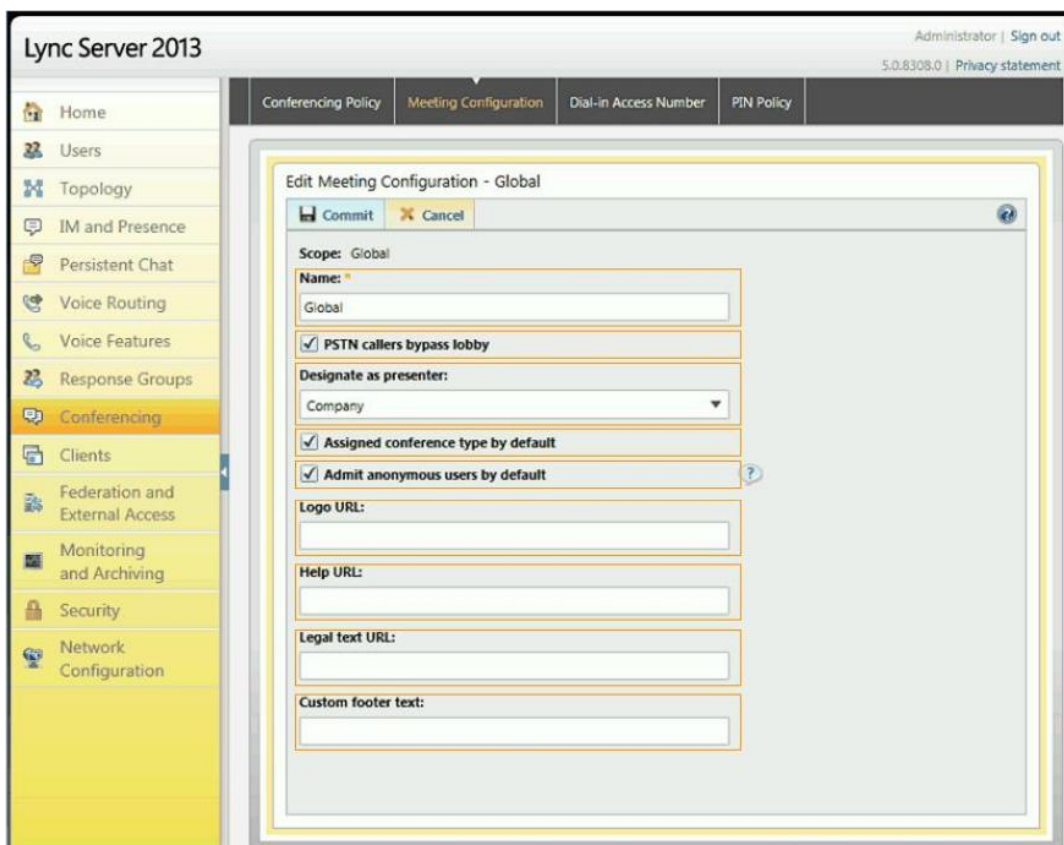
- A. Set-CsClientVersionConfiguration
- B. Set-CsClientVersionPolicy
- C. Set-CsMobilityPolicy
- D. Set-CsDeviceUpdateConfiguration
- E. Set-CsClientPolicy

Answer: B

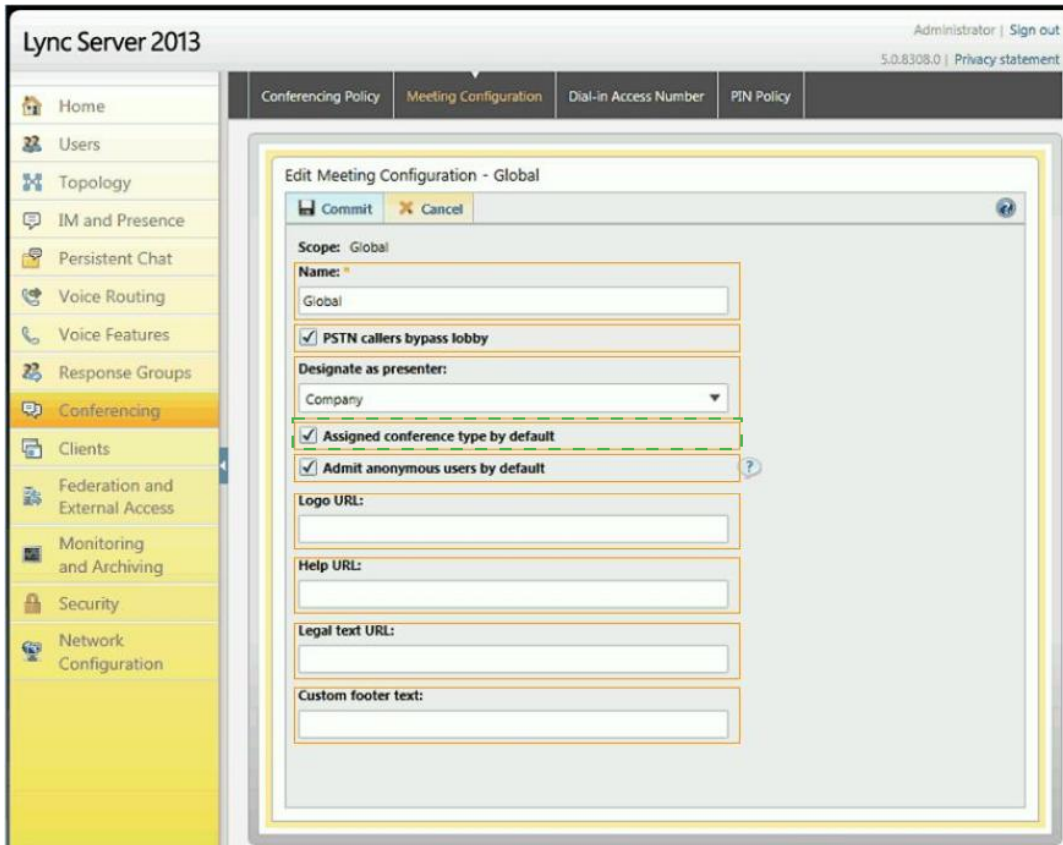
Question No : 48 HOTSPOT - (Topic 5)

You need to ensure that the Lync Server 2013 infrastructure meets the security requirement for conferences.

Which setting should you modify in Meeting Configuration? (To answer, select the appropriate setting in the answer area.)



Answer:



Question No : 49 HOTSPOT - (Topic 5)

You are evaluating how many Servers are required for the planned Lync Server 2013 deployment.

You need to identify which components can be collocate on the Front End Servers and which components must be installed on a new Server.

Which components should you identify for which servers?

To answer, configure the appropriate components in the answer area.

Edge Server	<input type="text"/>
	<input type="checkbox"/> Can be collocated on Front End Server
	<input type="checkbox"/> Must be installed on a separate server
Mediation Server	<input type="text"/>
	<input type="checkbox"/> Can be collocated on Front End Server
	<input type="checkbox"/> Must be installed on a separate server
Monitoring Server	<input type="text"/>
	<input type="checkbox"/> Can be collocated on Front End Server
	<input type="checkbox"/> Must be installed on a separate server
Office Web Apps server	<input type="text"/>
	<input type="checkbox"/> Can be collocated on Front End Server
	<input type="checkbox"/> Must be installed on a separate server

Answer:

Edge Server	<input type="text"/>
	<input type="checkbox"/> Can be collocated on Front End Server
	<input type="checkbox"/> Must be installed on a separate server
Mediation Server	<input type="text"/>
	<input type="checkbox"/> Can be collocated on Front End Server
	<input type="checkbox"/> Must be installed on a separate server
Monitoring Server	<input type="text"/>
	<input type="checkbox"/> Can be collocated on Front End Server
	<input type="checkbox"/> Must be installed on a separate server
Office Web Apps server	<input type="text"/>
	<input type="checkbox"/> Can be collocated on Front End Server
	<input type="checkbox"/> Must be installed on a separate server

Question No : 50 - (Topic 5)

You need to ensure that the client computers that have Office Communicator 2007 R2 installed can use IM and presence and can join web conferences hosted on Lync Server 2013. The solution must minimize administrative effort.

What should you do?

- A. Implement Communicator Web Access Server.
- B. Modify the client version policy to allow all versions of Office Communicator 2007 R2 to connect,
- C. Upgrade the computers to Lync 2010.
- D. Apply the latest hotfixes to Office Communicator 2007 R2

Answer: B

Question No : 51 - (Topic 5)

You need to identify the dial-in conferencing configurations required to meet the technical requirements for the sales department.

Which two configurations should you identify? (Each correct answer presents part of the solution. Choose two.)

- A. Create a user-level conferencing policy. Assign the conferencing policy to the sales department users.
- B. Create a user-level dial plan. Assign the dial plan to the sales department users.
- C. Create a new dial-in access number. Assign the dial-in access number to a dial-in conferencing region.
- D. Create a user-level voice policy. Assign the voice policy to the sales department users.
- E. Create a new meeting configuration. Assign the meeting to a site.

Answer: B,C

Explanation:

Note:

* The sales department must have a dedicated dial-in conferencing number. All other users in both the United States and Europe must use a pool of regional dial-in conferencing numbers.

Question No : 52 DRAG DROP - (Topic 5)

You need to identify the cause of the authentication issue for the pilot users.

Which four actions should you perform in sequence? (To answer, move the appropriate four actions from the list of actions to the answer area and arrange them in the correct order.)

The screenshot shows a drag-and-drop interface. On the left, there is a list of six actions in yellow boxes:

- Run **Start-CsClsLogging**.
- Run **Stop-CsClsLogging**.
- Open the log file by running **snooper.exe**.
- Run **Set-CsClsRegion**.
- Run **Update-CsClsLogging**.
- Run **Search-CsClsLogging**.

On the right, there is an empty box labeled "Answer Area".

Answer:

Answer Area

Run **Start-CsClsLogging.**

Run **Stop-CsClsLogging.**

Open the log file by running **snooper.exe.**

Run **Set-CsClsRegion.**

Run **Update-CsClsLogging.**

Run **Search-CsClsLogging.**

Run **Update-CsClsLogging.**

Run **Start-CsClsLogging.**

Run **Stop-CsClsLogging.**

Open the log file by running **snooper.exe.**

Explanation:

Box 1: Update-CsClsLogging

Box 2: Run Start-CsClsLogging

Box 3: Run Stop-CsClsLogging

Box 4: Open the log file by running snooper.exe.

Note:

* From scenario:

/ Before deploying Lync Server 2013 and migrating the users to Lync Server 2013, you implement a small pilot project to test the functionality of Lync Server 2013.

/ Problem Statements

The users in the pilot report that occasionally, they cannot sign in to Lync 2013.

* Start-CsClsLogging

Starts the specified scenario centralized logging service scenario. Centralized logging provides a way for administrators to simultaneously enable or disable Lync Server 2013 tracing on multiple computers.

* set-CsClsRegion

Modifies an existing centralized logging configuration region. Centralized logging provides a way for administrators to simultaneously enable or disable event tracing on multiple computers.

* Update-CsClsLogging

Updates the duration time for all active centralized logging scenarios.

* (incorrect) Search-CsClsLogging

Provides a command-line option for searching the centralized logging service log files.

* The centralized logging service (which replaces the OCSLogger and OCSTracer tools used in Microsoft Lync Server 2010) provides a way for administrators to manage logging and tracing for all computers and pools running Lync Server 2013. Centralized logging enables administrators to stop, start, and configure logging for one or more pools and computers by using a single command;

Question No : 53 - (Topic 5)

You need to identify the minimum number of Lync Server 2013 servers and supporting server roles required in each Lync site to meet the business goals and the technical requirements.

How many servers should you identify? (To answer, select the appropriate number servers in the answer area.)

Edge Servers per site:

Front End Servers per site:

Office Web Apps servers per site:

Microsoft SQL Servers per site:

- A. Edge Servers per site: 0
- B. Edge Servers per site: 1
- C. Edge Servers per site: 2

- D. Edge Servers per site: 3
- E. Front End Servers per site: 0
- F. Front End Servers per site: 1
- G. Front End Servers per site: 2
- H. Front End Servers per site: 3
- I. Office Web Apps servers per site: 0
- J. Office Web Apps servers per site: 1
- K. Office Web Apps servers per site: 2
- L. Office Web Apps servers per site: 3
- M. Microsoft SQL Servers per site: 0
- N. Microsoft SQL Servers per site: 1
- O. Microsoft SQL Servers per site: 2
- P. Microsoft SQL Servers per site: 3

Answer: C,H,K,P

Explanation:

- ✍ Contoso must minimize hardware and software purchasing costs, while guaranteeing performance levels for all Lync Server 2013 workloads.
- ✍ If a single component fails, all Lync services must remain available without the need for manual intervention. Performance degradation is acceptable during a component failure state.

For the number of users, 3 FE servers are required. In the event of a failure, one server could not handle 15,000 users.

SQL mirroring is the recommended database HA solution in Lync 2013. To avoid manual intervention, you need a third server to act as a witness server. You could use a failover cluster using two servers but this tends to be more expensive in terms of hardware cost.

Question No : 54 - (Topic 5)

You need to identify the minimum number of required public IP addresses for each Lync Server 2013 component. The solution must meet the business goals and the technical requirements.

How many public IP addresses should you identify for each component? (To answer, select the appropriate number of public IP addresses for each component in the answer area.)

Edge server:

Hardware load balancer:

Web component:

Office Web Apps server:

Select four.

- A. Edge server: 0
- B. Edge server: 1
- C. Edge server: 2
- D. Edge server: 3
- E. Hardware load balancer: 0
- F. Hardware load balancer: 1
- G. Hardware load balancer: 2
- H. Hardware load balancer: 3
- I. Web component: 0
- J. Web component: 1
- K. Web component: 2
- L. Web component: 3
- M. Office Web Apps: 0
- N. Office Web Apps: 1
- O. Office Web Apps: 2
- P. Office Web Apps: 3

Answer: D,H,J,N

Explanation:

✍ Each Internet-facing service must have one or more dedicated public IP addresses

Question No : 55 HOTSPOT - (Topic 5)

You need to configure the required external DNS record to support federation. The solution must meet the business goals and the technical requirements.

How should you configure the DNS record? (To answer, select the appropriate options for the DNS record in the answer area.)

Record type:
Host (A)
Service location (SRV)

Service:
_sip._tls.contoso.com
_sipfederationtls._tcp.contoso.com

Port number:
443
5061

Host offering service:
Eu-ae.contoso.com
Us-ae.contoso.com

Answer:

Record type:
Host (A)
Service location (SRV)

Service:
_sip._tls.contoso.com
_sipfederationtls._tcp.contoso.com

Port number:
443
5061

Host offering service:
Eu-ae.contoso.com
Us-ae.contoso.com

Topic 6, Mix Questions

Question No : 56 HOTSPOT - (Topic 6)

You plan to deploy a Lync Server 2013 infrastructure that will contain the components shown in the following table.

Component name	Description	IP address
Server1	Enterprise Edition Front End Server	10.0.0.1
Server2	Enterprise Edition Front End Server	10.0.0.2
HLB VIP	Virtual IP address of a hardware load balancer	10.0.0.10

The fully qualified domain name (FQDN) of the Enterprise Edition pool will be Lyncpool01.contoso.com. Lync web services will be accessed at a URL of https://lyncweb01.contoso.com.

You plan to use DNS load balancing for the Enterprise Edition pool.

You need to identify which host (A) records must be created on the internal DNS servers to support the planned Lync Server 2013 deployment.

Which A record entries should you identify?

To answer, select the appropriate records in the answer area.

Dumps with VCE and PDF (+Free VCE Software)

The image displays four screenshots of the DNS Manager application, arranged in a 2x2 grid. Each screenshot shows a table of DNS records with columns for Name, Type, Data, and Timestamp.

Name	Type	Data	Timestamp
Lyncweb01	Host (A)	10.0.0.1	
Lyncweb01	Host (A)	10.0.0.2	
Server1	Host (A)	10.0.0.1	
Server2	Host (A)	10.0.0.2	

Name	Type	Data	Timestamp
Lyncpool01	Host (A)	10.0.0.10	
Lyncweb01	Host (A)	10.0.0.10	
Server1	Host (A)	10.0.0.1	
Server2	Host (A)	10.0.0.2	

Name	Type	Data	Timestamp
Lyncpool01	Host (A)	10.0.0.1	
Lyncpool01	Host (A)	10.0.0.2	
Lyncweb01	Host (A)	10.0.0.10	
Server1	Host (A)	10.0.0.1	
Server2	Host (A)	10.0.0.2	

Name	Type	Data	Timestamp
Lyncpool01	Host (A)	10.0.0.10	
Lyncweb01	Host (A)	10.0.0.1	
Lyncweb01	Host (A)	10.0.0.2	
Server1	Host (A)	10.0.0.1	
Server2	Host (A)	10.0.0.2	

Answer:

The image displays four screenshots of the DNS Manager application, arranged in a 2x2 grid. Each screenshot shows a table of DNS records with columns for Name, Type, Data, and Timestamp.

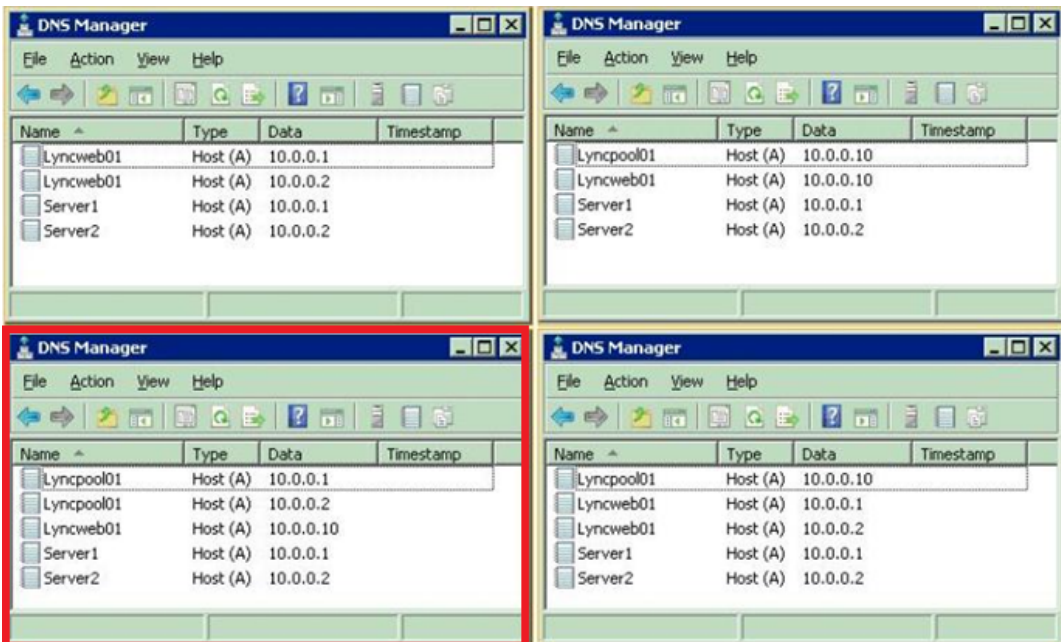
Name	Type	Data	Timestamp
Lyncweb01	Host (A)	10.0.0.1	
Lyncweb01	Host (A)	10.0.0.2	
Server1	Host (A)	10.0.0.1	
Server2	Host (A)	10.0.0.2	

Name	Type	Data	Timestamp
Lyncpool01	Host (A)	10.0.0.10	
Lyncweb01	Host (A)	10.0.0.10	
Server1	Host (A)	10.0.0.1	
Server2	Host (A)	10.0.0.2	

Name	Type	Data	Timestamp
Lyncpool01	Host (A)	10.0.0.1	
Lyncpool01	Host (A)	10.0.0.2	
Lyncweb01	Host (A)	10.0.0.10	
Server1	Host (A)	10.0.0.1	
Server2	Host (A)	10.0.0.2	

Name	Type	Data	Timestamp
Lyncpool01	Host (A)	10.0.0.10	
Lyncweb01	Host (A)	10.0.0.1	
Lyncweb01	Host (A)	10.0.0.2	
Server1	Host (A)	10.0.0.1	
Server2	Host (A)	10.0.0.2	

Explanation:



Note: Before you can use DNS load balancing, you must do the following:
[✉ uk.co.certification.simulator.questionpool.PList@2780c510](mailto:uk.co.certification.simulator.questionpool.PList@2780c510)

Question No : 57 HOTSPOT - (Topic 6)

Your company has two main offices. The main offices are located in Tokyo and Athens.

The network contains an Active Directory forest named contoso.com.

The offices connect to each other by using a WAN link. Each office connects directly to the Internet.

You plan to deploy a Lync Server 2013 infrastructure that has federation enabled.

You need to recommend a Lync Server 2013 topology for the planned deployment. The solution must ensure that each office uses its local Internet connection for federated communications with the company's external partners.

What is the minimum number of Edge Servers, Federation routes, SIP domains, and Sites that you should you recommend?

To answer, select the appropriate number of Edge Servers, Federation routes, SIP domains, and Sites in the answer area.

Answer Area

Edge Servers:

Federation routes:

SIP Domains:

Sites:

Answer Area

Edge Servers:

0
1
2
3
4

Federation routes:

0
1
2
3
4

SIP Domains:

0
1
2
3
4

Sites:

0
1
2
3
4

Answer:

Answer Area

Edge Servers:

0
1
2
3
4

Federation routes:

0
1
2
3
4

SIP Domains:

0
1
2
3
4

Sites:

0
1
2
3
4

Explanation:

Edge servers: 2

Federation Routes: 2

SIP Domains: 1

Sites: 2

Question No : 58 DRAG DROP - (Topic 6)

You have a Lync Server 2013 infrastructure that contains two servers. The servers are configured as shown in the following table.

Server name	Role
Lync1.contoso.com	Front End Server
Lync2.contoso.com	Mediation Server

You deploy a new server named lync3.contoso.com.

You plan to install the Edge Server role on Lync3.

You need to identify which tasks must be performed to install the Edge Server role on Lync3.

Which four actions should you identify?

To answer, move the four appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Actions	Answer Area
On Lync3, install Lync Server 2013.	
From Lync1, modify the topology by using the Topology Builder.	
From Lync3, run the Import-CsConfiguration cmdlet.	
From Lync1, publish the topology by using the Topology Builder.	
From Lync1, run the Export-CsConfiguration cmdlet.	

Answer:

Actions	Answer Area
On Lync3, install Lync Server 2013.	From Lync1, modify the topology by using the Topology Builder.
From Lync1, modify the topology by using the Topology Builder.	From Lync1, publish the topology by using the Topology Builder.
From Lync3, run the Import-CsConfiguration cmdlet.	From Lync1, run the Export-CsConfiguration cmdlet.
From Lync1, publish the topology by using the Topology Builder.	
From Lync1, run the Export-CsConfiguration cmdlet.	On Lync3, install Lync Server 2013.

Explanation: Box 1:

From Lync1, modify the topology by using the Topology Builder.

Box 2:

From Lync1, publish the topology by using the Topology Builder.

Box 3:

From Lync1, run the **Export-CsConfiguration** cmdlet.

Box 4:

On Lync3, install Lync Server 2013.

Note:

You install Lync Server 2013 on Edge Servers by using Lync Server Deployment Wizard. By running the Deployment Wizard on each Edge Server, you can complete most of the tasks required to set up the Edge Server. In order to deploy Lync Server 2013 on an Edge Server, you must have already run Topology Builder (see note 2 below) to define and publish your Edge Server topology, and exported it to media that is available from the Edge Server.

To install an Edge Server

- ✍ Log on to the computer on which you want to install your Edge Server as a member of the local Administrators group or an account with equivalent user rights and permissions.
- ✍ Ensure that the topology configuration file you created using Topology Builder, and then exported and copied to external media, is available on the Edge Server (for example, access to the USB drive onto which you copied the topology configuration file, or verify access to the network share where you copied the file).
- ✍ Start the Deployment Wizard.
- ✍ In the Deployment Wizard, click Install or Update Lync Server System.
- ✍ After the wizard determines the deployment state, for Step 1. Install Local Configuration Store, click Run and then do the following:

* In the **Configure Local Replica of Central Management Store** dialog box, click **Import from a file (Recommended for Edge Servers)**, go to the location of the exported topology configuration file, select the .zip file, click **Open**, and then click **Next**.

* The Deployment Wizard reads the configuration information from the configuration file and writes the XML configuration file to the local computer.

* After the **Executing Commands** process is finished, click **Finish**.

Etc.

Note 2: To define the topology for a single Edge Server

- ✍ Start Topology Builder: Click Start, click All Programs, click Microsoft Lync Server 2013, and then click Lync Server Topology Builder.
- ✍ In the console tree, expand the site in which you want to deploy an Edge Server.
- ✍ Right-click Edge pools, and then click New Edge Pool.
- ✍ In Define the New Edge Pool, click Next.
- ✍ In Define the Edge pool FQDN,

Note 3: Export-CsConfiguration

Exports your Lync Server topology, policies, and configuration settings to a file. Among other things, this file can then be used to restore this information to the Central Management store after an upgrade, a hardware failure, or some other issue has resulted in data loss. This cmdlet was introduced in Lync Server 2010.

Question No : 59 - (Topic 6)

You have two servers named Lync1 and Lync2 that have Lync Server 2013 Standard Edition deployed. The servers are located in different buildings. Lync1 hosts response groups.

You need to ensure that Lync2 can host the response groups if Lync1 fails.

Which cmdlet should you run first?

- A. Export-CsConfiguration
- B. Export-CsRgsConfiguration
- C. Backup-CsPool
- D. Move-CsRgsConfiguration

Answer: B

Explanation: <http://technet.microsoft.com/en-us/library/jj205011.aspx>

Reference: **Export-CsRgsConfiguration**

Untitled

Export-CsRgsConfiguration

Detailed Description

The **Export-CsRgsConfiguration** cmdlet and the **Import-CsRgsConfiguration** cmdlet enable you to export data about your current implementation of the Response Group application (including such things as workflows, queues, agent groups, holiday sets and business hours, as well as audio files and service configuration settings) and then later import (or re-import) that information. This can be extremely useful in a disaster recovery scenario (for example, in a case where the server hosting the Response Group application has failed) or if you simply need to transfer the Response Group application to a different pool.

Note that the **Export-CsRgsConfiguration** cmdlet and the **Import-CsRgsConfiguration** cmdlet are designed to work only with Lync Server 2013.

If you want to migrate **Response Group data from Microsoft Lync Server 2010 to Lync Server 2013**, you should use the **Move-CsRgsConfiguration** cmdlet instead.

Export-CsRgsConfiguration -Source "ApplicationServer:atl-rgs-001.litwareinc.com" -FileName "C:\Exports\Rgs.zip"

To return a list of all the role-based access control (RBAC) roles this cmdlet has been assigned to (including any custom RBAC roles you have created yourself), run the following command from the Windows PowerShell command-line interface prompt:

```
Get-CsAdminRole | Where-Object {$_.Cmdlets -match "Export-CsRgsConfiguration"}
```

Lync Server Control Panel: The functions carried out by the Export-CsRgsConfiguration

cmdlet are not available in the Lync Server Control Panel.

Question No : 60 HOTSPOT - (Topic 6)

Your network contains an Active Directory domain named contoso.com. The domain contains a Lync Server 2013 infrastructure that has the Persistent Chat feature configured.

Persistent Chat is hosted by a Front End pool named pcpool.

You need to configure a chat room named Announcements to meet the following requirements:

- ✎ Only a user named user1@contoso.com can post messages to Announcements.
- ✎ Users from a group named group1 can view the messages in Announcements.

What should you run? (To answer, configure the appropriate parameters for the PowerShell command in the answer area.)

```
Set-CsPersistentChatRoom -Identity pcpool.contoso.com\Announcements
```

```
@{Add="sip:user1@contoso.com"} -Members @{{Add="CN=group1,DC=contoso,DC=com"}}
```

Answer:

```
Set-CsPersistentChatRoom -Identity pcpool.contoso.com\Announcements
```

```
@{Add="sip:user1@contoso.com"} -Members @{{Add="CN=group1,DC=contoso,DC=com"}}
```

Explanation:




Box 1: -Presenters

Box 2: -Type Auditorium

Question No : 61 HOTSPOT - (Topic 6)

You have a Lync Server 2013 infrastructure.

You plan to deploy Persistent Chat features to meet the following requirements:

-  Support up to 50,000 concurrent users.
-  Enable the Persistent Chat Server Compliance service.
-  Ensure that all of the features are automatically available if a single server fails.

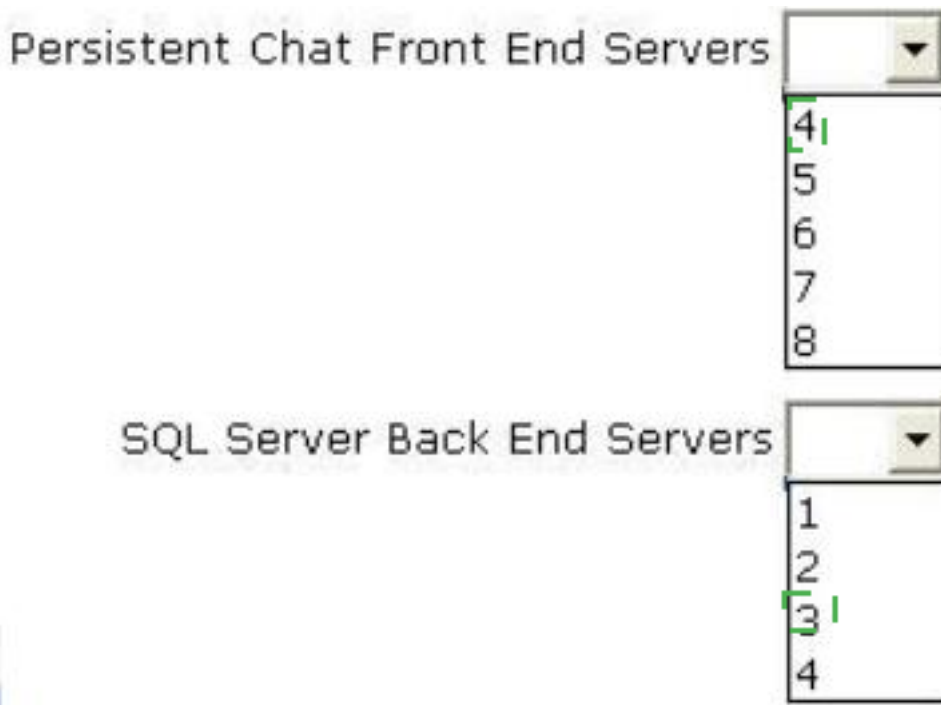
You need to identify the minimum number of Front End Servers and Microsoft SQL Server Back End Servers that are required for the planned deployment.

How many servers should you identify? (To answer, select the appropriate number of servers for each component in the answer area.)

Persistent Chat Front End Servers

SQL Server Back End Servers

Answer:



Question No : 62 DRAG DROP - (Topic 6)

Your company has several offices. The offices are located in one office building. The building is located in Seattle. The company has employees from Europe and North America.

The company has a phone at a security desk.

You implement Lync Server 2013 Enterprise Voice.

You need to implement call routing for emergency calls.

The solution must meet the following requirements:

- ✎* If a user dials 112, the call must be routed to a phone extension of 0911.
- ✎* If a user dials 0911, the call must be routed to the phone at the security desk.
- ✎* The phone at the security desk must be used to forward calls to the emergency number in the Seattle offices only.

What should you use?

To answer, drag the appropriate technology to the correct requirement in the answer area. Each technology may be used once, more than once, or not at all. Additionally, you may need to drag the split bar between panes or scroll to view content.

Technologies	Answer Area
a conferencing policy	If a user dials 112, the call must be routed to a phone extension of 0911. <input type="text" value="Technology"/> <hr/> If a user dials 0911, the call must be routed to the phone at the security desk. <input type="text" value="Technology"/> <hr/> The phone at the security desk must be used to forward calls to the emergency number in the Seattle offices only. <input type="text" value="Technology"/>
a Contact object	
Enterprise Voice-enabled users	
an external user access Policy	
a normalization rule	
a voice policy	
An unassigned number	

Answer:

Technologies	Answer Area
a conferencing policy	If a user dials 112, the call must be routed to a phone extension of 0911. <input type="text" value="a normalization rule"/> <hr/> If a user dials 0911, the call must be routed to the phone at the security desk. <input type="text" value="a normalization rule"/> <hr/> The phone at the security desk must be used to forward calls to the emergency number in the Seattle offices only. <input type="text" value="a voice policy"/>
a Contact object	
Enterprise Voice-enabled users	
an external user access Policy	
a normalization rule	
a voice policy	
An unassigned number	

Explanation:

Box 1: a normalization rule

Box 2: a normalization rule

Box 3: a voice policy

Note:

* Normalization rules define how phone numbers expressed in various formats are to be routed for the named location. The same number string may be interpreted and translated differently, depending on the locale from which it is dialed. Normalization rules are necessary for call routing because users can, and do, use various formats when entering phone numbers in their Contacts lists.

Normalizing user-supplied phone numbers provides a consistent format that facilitates the following tasks:

* You can enable or disable the following call features for each voice policy:

/ Call forwarding enables users to forward calls to other phones and client devices. Enabled by default.

Etc.

Question No : 63 - (Topic 6)

You have a Lync Server 2010 infrastructure.

You plan to migrate to Lync Server 2013.

You have four client computers. The client computers are configured as shown in the following table.

Client computer type	Operating system	Installed client
A	Windows 7	Microsoft Office Communicator 2007
B	Windows XP	Microsoft Office Communicator 2007 R2
C	Windows 7	Microsoft Office Communicator 2007 R2
D	Windows XP	Microsoft Lync 2010

You need to identify which client computer types can use audio conferencing hosted on Lync Server 2013 without installing any additional software on the client computers.

Which client computer types should you identify?

- A. A
- B. B
- C. C
- D. D

Answer: D

Explanation:

<http://technet.microsoft.com/en-us/library/jj204672.aspx>

Supported Clients from Previous Releases

Lync Server 2013 supports the following clients from previous server releases. You can make certain previous clients available to users when they join meetings. For details, see [Configuring the Meeting Join Page](#) in the Deployment documentation.

- **Lync 2010** Lync 2010 provides a full desktop experience, including IM, enhanced presence, voice, video, sharing, and telephony. However, none of the new features introduced in Lync Server 2013 will be available until the user's client is upgraded to Lync 2013.
- **Lync 2010 Mobile** Lync Server 2013 supports all of the Microsoft Lync 2010 Mobile mobile apps. Microsoft Lync 2010 Mobile provides IM, enhanced presence, and telephony for users in your organization who are connecting from a smartphone or a phone running a Professional edition of Windows Mobile. You can instruct your users to install Microsoft Lync 2010 Mobile by directing them to the app marketplace for their mobile phone. For details, see "Planning for Mobile Clients" in the Lync Server 2010 documentation at <http://go.microsoft.com/fwlink/p/?LinkID=235955>.
- **Lync Phone Edition** Lync Phone Edition software for intelligent IP phones (for example, USB-attached phones) has not been updated for Lync Server 2013. Lync Phone Edition continues to be supported in for placing and receiving calls, enhanced presence, and client audio capabilities for conferences.
- **Lync 2010 Attendant** The Microsoft Lync 2010 Attendant integrated call-management program enables a receptionist to manage multiple conversations at the same time through rapid call handling, IM, and onscreen routing.

Client Interoperability in Lync 2013

This topic discusses the ability of Microsoft Lync Server 2013 clients to coexist and interact with clients from earlier versions of Lync Server and Office Communications Server. Server and Client Compatibility.

The following table shows the supported combinations of client versions and server versions. This table indicates whether sign-in is supported when the client attempts to connect to the server indicated. Lync Server 2013 supports the previous client version. Also, unlike previous releases, Lync Server 2010 supports the new Lync 2013 clients. This allows organizations who are upgrading from Lync Server 2010 to roll out new clients independent of Lync Server upgrades.

⁴The presence and IM features in Office Communicator 2007 R2 are compatible with Lync Server 2013, but conferencing features are not. During migration from Office Communications Server 2007 R2, Office Communicator 2007 R2 is suitable for presence and IM interoperability, but users should use Lync Web App 2013 to join Lync Server 2013 meetings.

Client	Lync Server 2013	Lync Server 2010	Office Communications Server 2007 R2
Lync 2013	Supported	Supported	Not Supported
Lync 2013 Basic	Supported	Supported	Not Supported
Lync Web App 2013	Supported	Not Supported	Not Supported
Lync 2010	Supported	Supported	Not Supported
Lync 2010 Attendant	Supported	Supported	Not Supported
Lync 2010 Group Chat	Supported ¹	Supported ²	Not Applicable
Lync Web App 2010	Not Supported	Supported	Not Supported
Lync 2010 Attendee	Not Supported ³	Supported	Not Supported
Office Communicator 2007 R2	Interoperable ⁴	Supported	Supported
Microsoft Office Communications Server 2007 R2 Attendant	Not Supported	Supported	Supported
Office Communicator 2007	Not Supported	Supported	Supported
Office Live Meeting 2007	Not Supported	Supported	Supported

¹For details, see Migration from Lync Server 2010, Group Chat or Office Communications Server 2007 R2 Group Chat to Lync Server 2013, Persistent Chat Server.

²In Microsoft Lync Server 2010, group chat functionality was available with Group Chat Server, a third-party trusted application for Lync Server 2010. Lync 2013 clients are not compatible with Lync Server 2010, Group Chat.

³Lync Web App 2013 now provides a full in-meeting experience, including computer audio and video, and is considered the replacement for Lync 2010 Attendee. Lync 2010 Attendee will connect to Lync Server 2013 only when you are using an unsupported browser (Internet Explorer 6 or Internet Explorer 7) and Windows XP.

⁴The presence and IM features in Office Communicator 2007 R2 are compatible with Lync Server 2013, but conferencing features are not. During migration from Office Communications Server 2007 R2, Office Communicator 2007 R2 is suitable for presence and IM interoperability, but users should use Lync Web App 2013 to join Lync Server 2013 meetings.

Interoperability among Clients

With the Lync Server 2013 release, various client versions can interact seamlessly in both peer-to-peer and conferencing scenarios. This section discusses feature availability when users interact with other users who are using different versions of clients and servers.

Peer-to-Peer Feature Support

Peer-to-peer features are supported for users who are homed on different versions of the server and who are using different client versions. The end-user experience and available features are consistent with the capabilities of the user's client and the version of the server the user is signed in to. In other words:

If a user is signed in to Lync Server 2013 with an older client, the user will have the same experience he or she is used to. None of the new features introduced in Lync Server 2013 will be available until the user's client is upgraded.

If a user is signed in to Lync Server 2010 with a Lync 2013 client, any new features not supported by Lync Server 2010 will be unavailable until the user is moved to Lync Server 2013.

The following table compares feature availability in peer-to-peer sessions where the client is signed in to either Lync Server 2013 or Lync Server 2010.

Note:

Lync Web App and Lync 2010 Attendee are meeting-only clients and aren't included in this table.

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Client	Instant Messaging	Presence	Voice	Video	Application Sharing	File Transfer
Lync 2013	Yes	Yes	Yes	Yes	Yes	Yes
Lync 2013 Basic	Yes	Yes	Yes	Yes	Yes	Yes
Lync 2010	Yes	Yes	Yes	Yes	Yes	Yes
Lync 2010 Attendant	Yes	Yes	Yes			
Lync 2010 Mobile	Yes	Yes				
Lync Phone Edition	Yes	Yes	Yes			
Office Communicator 2007 R2	Yes	Yes	Yes	Yes	Yes ¹	Yes
Public IM (AOL, Yahoo!)	Yes	Yes				
Public IM (MSN, Windows Live Messenger)	Yes	Yes	Yes	Yes		

Important:

- As of September 1st, 2012, the Microsoft Lync Public IM Connectivity User Subscription License (PIC USL) is no longer available for the purchase for new or renewing agreements. Customers with active licenses will be able to continue to federate with Yahoo! Messenger until the service shutdown date (exact date is still to be decided, but no sooner than June 2013).
- The PIC USL is a per-user, per-month subscription license that is required for Lync Server or Office Communications Server to federate with Yahoo! Messenger. Microsoft's ability to provide this service has been contingent upon support from Yahoo!, the underlying agreement for which will not be renewed.
- More than ever, Lync is a powerful tool for connecting across organizations and with individuals around the world. Federation with Windows Live Messenger requires no additional user/device licenses beyond the Lync Standard CAL. Skype federation will be added to this list, enabling Lync users to reach hundreds of millions of people through IM and voice.

¹ In Office Communicator 2007 R2, only desktop sharing (and not program sharing) is available.

Conferencing Feature Support

In Lync Server 2013 meetings, conferencing features are supported for users who are homed on different versions of the server and who are using different clients and client versions. When clients join a Lync Server 2013 meeting, users have access to the features and capabilities shown in this table.

Client	Peer-to-peer IM	Voice	Video	Application Sharing	PowerPoint	File Transfer	Whiteboard	Polling
Lync 2013	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lync 2013 Basic	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lync Web App	Yes	Yes	Yes	Yes	Yes ²	Yes	Yes	Yes
Lync 2010	Yes	Yes	Yes	Yes	Yes ³	Yes	Yes	Yes
Office Communicator 2007 R2 ⁴	Yes							

1. In Office Communicator 2007 R2, only desktop sharing (and not program sharing) is available.

2. Lync Server 2013 uses an updated mechanism for uploading PowerPoint files. Lync Web App users who join a meeting that was originally scheduled on Lync Server 2010 can view and navigate PowerPoint presentations, but cannot upload PowerPoint files.

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70-331 Dump PDF VCE	70-487 Dump PDF VCE	70-744 Dump PDF VCE	98-368 Dump PDF VCE
70-332 Dump PDF VCE	70-488 Dump PDF VCE	70-761 Dump PDF VCE	98-369 Dump PDF VCE
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70-348 Dump PDF VCE	70-499 Dump PDF VCE	74-409 Dump PDF VCE	MB2-703 Dump PDF VCE
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70-383 Dump PDF VCE	70-532 Dump PDF VCE	74-697 Dump PDF VCE	MB2-707 Dump PDF VCE
70-384 Dump PDF VCE	70-533 Dump PDF VCE	77-420 Dump PDF VCE	MB2-710 Dump PDF VCE
70-385 Dump PDF VCE	70-534 Dump PDF VCE	77-427 Dump PDF VCE	MB2-711 Dump PDF VCE
70-410 Dump PDF VCE	70-640 Dump PDF VCE	77-600 Dump PDF VCE	MB2-712 Dump PDF VCE
70-411 Dump PDF VCE	70-642 Dump PDF VCE	77-601 Dump PDF VCE	MB2-713 Dump PDF VCE
70-412 Dump PDF VCE	70-646 Dump PDF VCE	77-602 Dump PDF VCE	MB2-714 Dump PDF VCE
70-413 Dump PDF VCE	70-673 Dump PDF VCE	77-603 Dump PDF VCE	MB2-715 Dump PDF VCE
70-414 Dump PDF VCE	70-680 Dump PDF VCE	77-604 Dump PDF VCE	MB2-716 Dump PDF VCE
70-417 Dump PDF VCE	70-681 Dump PDF VCE	77-605 Dump PDF VCE	MB2-717 Dump PDF VCE
70-461 Dump PDF VCE	70-682 Dump PDF VCE	77-881 Dump PDF VCE	MB2-718 Dump PDF VCE
70-462 Dump PDF VCE	70-684 Dump PDF VCE	77-882 Dump PDF VCE	MB5-705 Dump PDF VCE
70-463 Dump PDF VCE	70-685 Dump PDF VCE	77-883 Dump PDF VCE	MB6-700 Dump PDF VCE
70-464 Dump PDF VCE	70-686 Dump PDF VCE	77-884 Dump PDF VCE	MB6-701 Dump PDF VCE
70-465 Dump PDF VCE	70-687 Dump PDF VCE	77-885 Dump PDF VCE	MB6-702 Dump PDF VCE
70-466 Dump PDF VCE	70-688 Dump PDF VCE	77-886 Dump PDF VCE	MB6-703 Dump PDF VCE
70-467 Dump PDF VCE	70-689 Dump PDF VCE	77-887 Dump PDF VCE	MB6-704 Dump PDF VCE
70-469 Dump PDF VCE	70-692 Dump PDF VCE	77-888 Dump PDF VCE	MB6-705 Dump PDF VCE
70-470 Dump PDF VCE	70-695 Dump PDF VCE	77-891 Dump PDF VCE	MB6-884 Dump PDF VCE
70-473 Dump PDF VCE	70-696 Dump PDF VCE	98-349 Dump PDF VCE	MB6-885 Dump PDF VCE
70-480 Dump PDF VCE	70-697 Dump PDF VCE	98-361 Dump PDF VCE	MB6-886 Dump PDF VCE
70-481 Dump PDF VCE	70-698 Dump PDF VCE	98-362 Dump PDF VCE	MB6-889 Dump PDF VCE
70-482 Dump PDF VCE	70-734 Dump PDF VCE	98-363 Dump PDF VCE	MB6-890 Dump PDF VCE
70-483 Dump PDF VCE	70-740 Dump PDF VCE	98-364 Dump PDF VCE	MB6-892 Dump PDF VCE
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200-001 Dump PDF VCE	400-051 Dump PDF VCE	642-883 Dump PDF VCE	650-752 Dump PDF VCE
200-105 Dump PDF VCE	400-101 Dump PDF VCE	642-885 Dump PDF VCE	650-756 Dump PDF VCE
200-120 Dump PDF VCE	400-151 Dump PDF VCE	642-887 Dump PDF VCE	650-968 Dump PDF VCE
200-125 Dump PDF VCE	400-201 Dump PDF VCE	642-889 Dump PDF VCE	700-001 Dump PDF VCE
200-150 Dump PDF VCE	400-251 Dump PDF VCE	642-980 Dump PDF VCE	700-037 Dump PDF VCE
200-155 Dump PDF VCE	400-351 Dump PDF VCE	642-996 Dump PDF VCE	700-038 Dump PDF VCE
200-310 Dump PDF VCE	500-006 Dump PDF VCE	642-997 Dump PDF VCE	700-039 Dump PDF VCE
200-355 Dump PDF VCE	500-007 Dump PDF VCE	642-998 Dump PDF VCE	700-101 Dump PDF VCE
200-401 Dump PDF VCE	500-051 Dump PDF VCE	642-999 Dump PDF VCE	700-104 Dump PDF VCE
200-601 Dump PDF VCE	500-052 Dump PDF VCE	644-066 Dump PDF VCE	700-201 Dump PDF VCE
210-060 Dump PDF VCE	500-170 Dump PDF VCE	644-068 Dump PDF VCE	700-205 Dump PDF VCE
210-065 Dump PDF VCE	500-201 Dump PDF VCE	644-906 Dump PDF VCE	700-260 Dump PDF VCE
210-250 Dump PDF VCE	500-202 Dump PDF VCE	646-048 Dump PDF VCE	700-270 Dump PDF VCE
210-255 Dump PDF VCE	500-254 Dump PDF VCE	646-365 Dump PDF VCE	700-280 Dump PDF VCE
210-260 Dump PDF VCE	500-258 Dump PDF VCE	646-580 Dump PDF VCE	700-281 Dump PDF VCE
210-451 Dump PDF VCE	500-260 Dump PDF VCE	646-671 Dump PDF VCE	700-295 Dump PDF VCE
210-455 Dump PDF VCE	500-265 Dump PDF VCE	646-985 Dump PDF VCE	700-501 Dump PDF VCE
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