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Exam : **74-335**

Title : Lync Network Readiness Assessment

Version : Demo

1. Topic 1, Humongous Insurance

Background

Humongous Insurance currently employs 7,500 people and is based in the United States.
The company has 4,000 users in its main office in Chicago. It also has two branch offices, one in New York with 2,000 users and the other in Los Angeles with 1,500 users. The company has 30 executives located across the offices.
The company recently migrated from Lync Server 2010 to Lync Server 2013.
The company plans to increase the use of audio and video (A/V) conferencing to reduce travel costs.
Employees have been asked to use A/V, telephony, and instant messaging (IM) conferencing solutions whenever possible for communication with clients and users in the branch offices.
Humongous Insurance is federated with Trey Research Corporation, which uses a third-party IM. Users at both companies need to communicate with each other by using their respective IM client.
The company plans to continuously analyze the network to identify:
• potential network delay points and
• availability of adequate bandwidth to meet current requirements and anticipated growth.
The company plans to continuously analyze the Lync 2013 servers for performance metrics.

Planned Changes

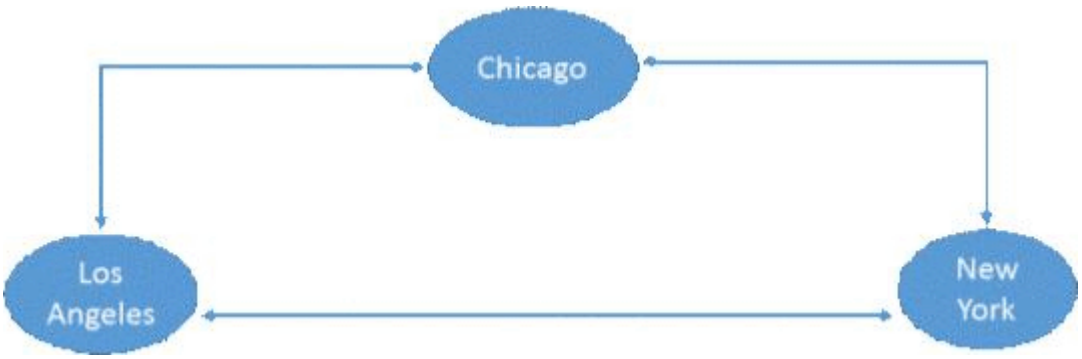
Humongous is in discussion to acquire the Southridge Video company. Southridge Video has 2,000 users in two sites.
Employees of Humongous Insurance use a variety of mobile devices, including Windows Phones and iOS phones. All iOS phone users must be notified of events, such as new or missed IM invitations and voice mail messages, even when they are using the corporate wireless network.
All public switched telephone network (PSTN) traffic will use the G.711 codec.
All voice will use the RTAudio Wideband codec.
All peer-to-peer (P2P) video sessions will support H.264 and RTVideo codecs.
Audio bandwidth between the Los Angeles and New York offices is limited.

Challenges

All users report poor audio and video quality. Calls are dropped or suffer from jitter and lag. These issues exist when users are using the Lync client or Lync Phone Edition.
Humongous Insurance users currently are unable to IM with external clients that use different IM programs.
Currently there is no network oversight for Lync communications.
The company has no plans to increase the bandwidth at any sites.
Humongous Insurance does not have a defined remote user access policy.

Existing Environment

The three offices are connected to one another as shown in the following network diagram:



Additional information about the existing environment is shown in the Supporting Information section:

• Overview of data centers

• Detail of the Chicago data center

• Overview of audio and video codec bandwidths

Employees of Humongous Insurance use various operating systems, including Windows XP, Windows Vista Enterprise, Windows 7 Enterprise, and Windows 8. All users are enabled for Enterprise Voice, and many have Lync Phone Edition.

The concurrent communication modalities usage of the three offices is shown in the following table:

Role	Concurrent usage percentage		
	Chicago office	New York office	Los Angeles office
PSTN	5%	5%	5%
Voice	10%	10%	15%
H.264/RTVideo	5%	5%	5%

Humongous Insurance expects to see the number of video users increase by as much as 10 percent. The company expects to see the number of voice users increase by as much as 15 percent.

All users at Humongous Insurance will be Lync enabled.

The company uses synthetic transactions to perform call and voice tests.

Many of the employees of Humongous Insurance work from home and sign in securely to the corporate environment in order to use Lync.

Business Requirements

Humongous Insurance would like to review the existing network topology and wants to ensure that network capacity will meet current Lync 2013 infrastructure capacity requirements for audio and video usage, as well as meet the anticipated increases.

All existing issues relating to the poor quality of Lync calls and conferencing need to be addressed.

Company policy allows for all employees to have the option to use video conferencing. Employees will be limited to VGA video quality. Company executives will not have these limitations.

Quality of Service (QoS) ports must be unique for audio and video traffic.

The company wants to confirm that the current network bandwidth allocated for the network is sufficient for all current and anticipated growth in Lync traffic and would like to guarantee high-quality Lync calls and video conferencing.

Humongous Insurance wants to ensure that the volume of Lync traffic does not exceed 50 percent of WAN bandwidth.

The recommended design solution needs to eliminate the possibility of WAN oversubscription by Lync

traffic.
Humongous Insurance wants to use only dedicated computers to monitor the network and perform synthetic transactions to limit the load on the computers.
The proposed Lync 2013 solution needs to provide scalability to accommodate the company's future acquisition of Trey Research.
The proposed Lync 2013 solution should be readily available for users in all three sites.

Technical Requirements
The company wants to allow only authorized employees to connect remotely.
All remote users will use a secure method when remotely connecting to the network and the Lync environment.
The number of open and listening ports must be kept to a minimum.
All maintenance and tests of network policies must be done outside of normal business hours.
Bandwidth between sites cannot be increased.
The quality of voice and video traffic must be increased.
The number of dropped calls must be reduced.
The corporate information technology (IT) department must be able to push updates and scan users' computers when they are connected remotely.
All push notifications must be able to be sent mobile clients on all supported cell phone manufactures.
Many users do not use Windows mobile phones.
IM users must be able to IM with users who are using other IM programs.
The Microsoft Lync 2013 Bandwidth Calculator must be used to analyze Lync traffic.
It is recommended to deploy QoS for end-to-end support.
Mobile client users are supported only with Lync 2010 Mobile clients.

Role	Chicago data center	New York data center	Los Angeles data center
Lync 2013 Front End Servers	CHI-LyncFE1 CHI-LyncFE2 CHI-LyncFE3	NYC-LyncFE1 NYC-LyncFE2	LA-LyncFE1 LA-LyncFE2
Lync 2013 Mediation Server	CHI-LyncME1 CHI-LyncME2	NYC-LyncME1 NYC-LyncME2	LA-LyncME1 LA-LyncME2

Role	Name
Active Directory Domain Controllers	CHI-DC1 CHI-DC2
Exchange 2013 Servers	CHI-EXCH1 CHI-EXCH2
Lync 2013 Back-End Server	CHI-LyncBE1
Lync 2013 Edge Servers	CHI-LyncEdge1 CHI-LyncEdge2
Windows Server 2008	CHI-Edge1
Windows Server 2012	CHI-Edge2

Audio codec	Bandwidth autio payload, IP header, UDP, RTP, and STRP (Kbps)
G.711	92.0
G.722	95.6
G.722 Stereo	159.6
Siren	47.6
RTAudio Narrowband	39.8
RTAudio Wideband	57

Video codec	Maximum bandwidth (Kbps)
H.264/RTVideo (320x240) 4:3	350
H.264/RTVideo (640x480) 4:3	800
H.264/RTVideo (1280x720) 16:9	2,500
H.264 (1920x288) 20:3	2,000
H.264 (1920x1080) 16:9	4,000

You need to identify the current average amount of bandwidth required for public switched telephone network (PSTN) calls for all three sites.
Which bandwidth should you choose?
A. 16,800 Kbps
B. 23,250 Kbps
C. 36,375 Kbps
D. 61,725 Kbps
Answer: C

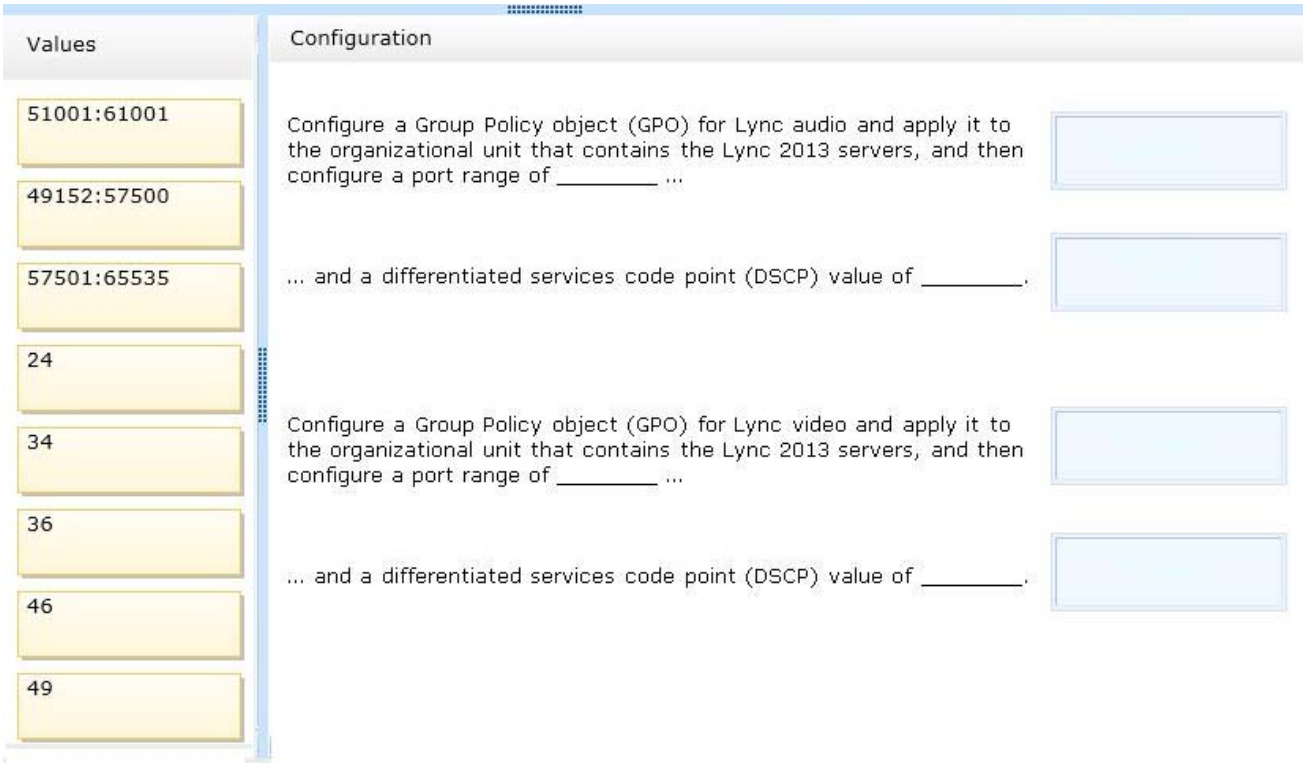
2.You need to recommend a solution to test instant messaging (IM) communications with the federated company.
Which synthetic transaction should you configure?
A. Test-CsMcxPushNotification
B. Test-CsMCXP2PIM
C. Test-CsASConference
D. Test-CsXmppIM
Answer: D
Explanation:
Humongous Insurance is federated with Trey Research Corporation, which uses a third-party IM. Users at both companies need to communicate with each other by using their respective IM client.
A third party IM provider will use XMPP.

3.You need to recommend a course of action to improve the performance of Lync audio and video sessions.
What should you do?
A. Enable Quality of Service (QoS).

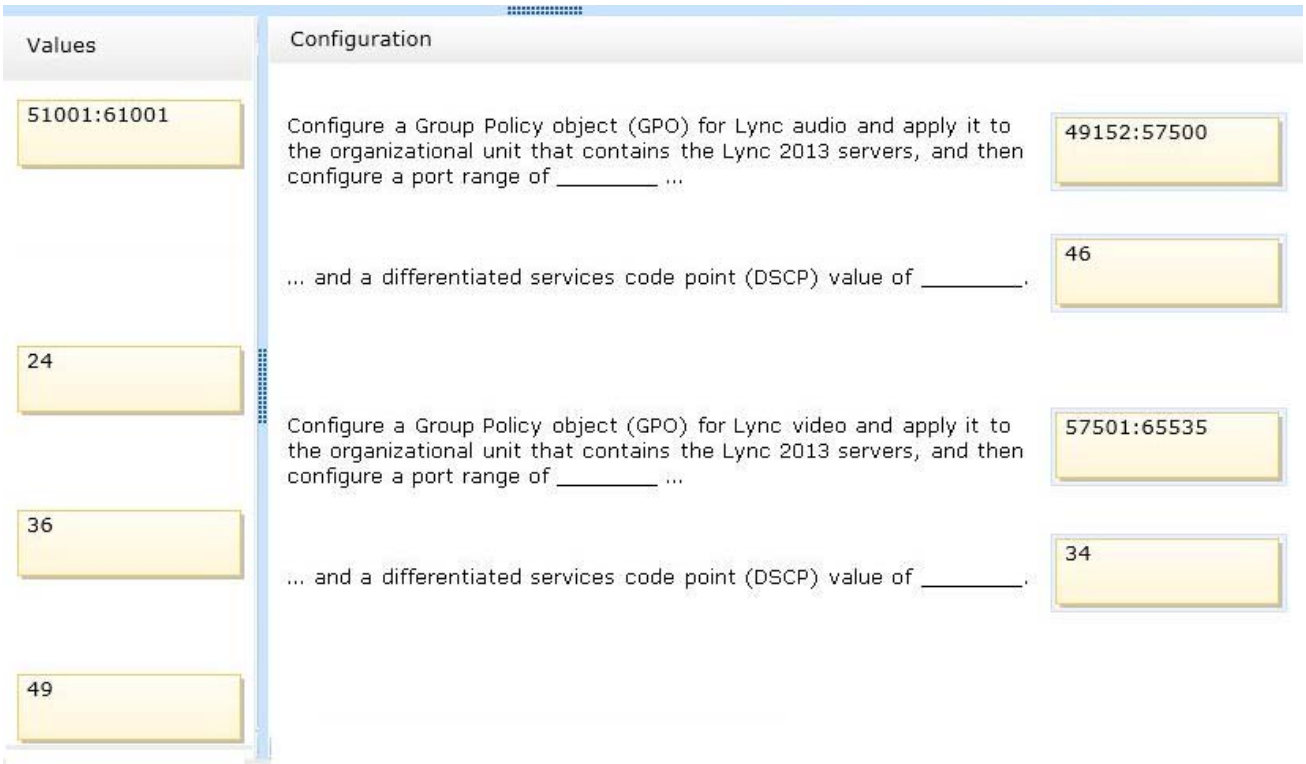
B. Deploy new wide area network (WAN) links between the Central Sites.
C. Enable Media Bypass.
D. Change the Differentiated Services Code Point (DSCP) values.
Answer: A
Explanation:
Bandwidth between sites cannot be increased.
The company wants to confirm that the current network bandwidth allocated for the network is sufficient for all current and anticipated growth in Lync traffic and would like to guarantee high-quality Lync calls and video conferencing.

4.You need to configure the monitoring computers to support the deployment of watcher nodes to meet the technical requirements.
What should you do?
A. Deploy the Lync 2013 watcher nodes on the same computers as the Lync 2010 watcher nodes.
B. Deploy Lync 2013 watcher nodes and remove the Lync 2010 watcher nodes.
C. Run the Install-CsWatcherCollocate cmdlet on each computer that is running the Lync 2010 watcher nodes.
D. Run the Install-CsLegacyWatcherNode cmdlet on each computer that is running the Lync 2010 watcher nodes.
Answer: B
Explanation:
A legacy Microsoft Lync Server 2010 watcher node cannot be collocated on the same machine with a Lync Server 2013 watcher node. This is because the core system files for Lync Server 2010 and Lync Server 2013 cannot be installed on the same computer.
However, Lync Server 2013 watcher nodes can simultaneously monitor both Lync Server 2013 and Lync Server 2010. The Default synthetic transactions are supported on both product versions.

5.DRAG DROP
You need to prepare the Quality of Service (QoS) policy for the audio/video (A/V) Edge Servers in order to meet the technical requirements of Humongous Insurance.
Which values should you use for each configuration? (To answer, drag the appropriate value or values to the correct configuration or configurations in the answer area. Each value may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)



Answer:



Explanation:

Ref: http://technet.microsoft.com/en-gb/library/jj205076.aspx