Microsoft - Lync Network Readiness Assessment

Code:	20335
Length:	3 days
URL:	View Online

This is a 3-day instructor Led Training (ILT) Course that targets the needs of professionals with data networking experience who take part in the planning, design, and deployment of the Lync Unified Communications solution in the enterprise. This course focuses on four key areas: 1) implementation methodology, including defining methodology phases, identifying phase deliverables, and preparing for traffic simulation; 2) analyzing the network environment, including review of WAN topology, Wi-Fi infrastructure, Quality of Server approaches, and media flow scenarios, analyzing the network for optimal performance, and monitoring and managing networks; 3) performing usage modeling, including modeling RTC traffic media flows and Lync traffic per location, calculating traffic volume by using the Lync bandwidth calculator, and analyzing how predicted traffic impacts a network; and 4) analyzing customer data and measurements, including policies collected from the Discovery phase and historical data usage, planning simulation traffic, analyzing results from traffic simulation, and formulating recommendations.

Skills Gained

After completing this course, students will be able to:

- Understand network assessments.
- Understand common network concepts, terms and processes.
- Use recommended practices for network readiness assessments that pertain to Lync Server and UC solutions in general.
- Understand the Microsoft Lync Network Readiness Assessment Methodology.

Who Can Benefit

This course targets the needs of network analysts, networking engineers and system integrators who plan, design, and deploy unified communications (UC) solutions using Lync Server 2013 in the enterprise. Students should have strong knowledge of data networking, an industry or vendor qualification (CompTIA Network+ or similar), and be able to translate business requirements into technical and networking requirements for a UC solution.Students should be familiar with Network Readiness Assessment methodology and related tools, such as the Lync bandwidth calculator.
This course is also aimed at professionals who may have focused on third-party UC solutions, which perform network assessments and readiness evaluations. They will use this course to update their skills and knowledge to apply to Lync UC solutions in their enterprise.

Prerequisites

Before attending this course, students must have an understanding of:

- LAN/WAN (COMPTIA Network+ certification or equivalent experience)
- Lync Server 2013 and Lync Online
- Enterprise voice and VOIP

Students attending this course should haveexperience with network assessments. They should also have sufficient knowledge of Lync Server 2013 and Lync Online to understand the features that impact LAN/WAN traffic. It is not necessary for students to have a MCSE: Communication, although many students will have attained this certification. Completion of MOC courses 20336 and 20337 far exceed the level of knowledge of Lync required for this class.

Course Details

Outline

Module 1: Overview of Network Assessments

This module will introduce you to the goals and considerations that a proactive network readiness assessment takes into account, as well as provide you with the key concepts of networking and telephony that relate to a Lync network readiness assessment.

Before starting a network readiness assessment, it is important to understand basic networking concepts, but it is even more important to identify the reasons to assess your network. The information that you gain from the assessment will inform decisions related to implementing a new product, such as Lync 2013.

A network readiness assessment is an important proactive step toward implementing and deploying new technology in your network. Conducting such an assessment using reliable tools and techniques can help identify issues that your organization might not even be aware of, ranging from possible bottlenecks, to latency problems, to assessing the current level of your networks readiness, and serving the future needs of your organization.

Lessons

- Network Assessment Overview
- Key Concepts for Network Assessment

After completing this module, students should have the knowledge and skills to:

- Explain network readiness assessment goals and activities.
- Apply key concept of networking to a network assessment.

Module 2: Introducing the Microsoft Lync Network Readiness Assessment Methodology

The Microsoft Lync Network Readiness Assessment methodology (MLNRAM) is comprised of four different phases: discovery, modeling, traffic simulation, and recommendations. This module provides an overview on each phase in this methodology.

The objective of the network assessment is to provide insight into the readiness of the network infrastructure for supporting an excellent user experience, while using Lync Server for Real-time Communications (RTC). The network assessment helps to answer the critical pre-deployment question, "Is my network infrastructure ready to support Lync Server?
Lessons

- Microsoft Lync Network Readiness Assessment Methodology Overview
- Discovery Phase
- Modeling Phase
- Traffic Simulation Phase
- Recommendations Phase

Lab : Discussion

After completing this module, students will be able to:

- Explain the four major phases of the Microsoft Lync Readiness Assessment methodology.
- Identify the objectives and goals of each phase of the network assessment.

- Discuss real-world experiences with network assessments, processes, and methodologies.

Module 3: Network Discovery

The objective of the Discovery phase is to gain a full understanding of all aspects of the network infrastructure, the existing telephony infrastructure, the conferencing infrastructure, and details of the planned deployment. You should understand the physical topology of the customers network, the size and type of their most common WAN connections, and the current levels of data traffic for each site. It is important to remember that all discovery sessions are unique.

This module examines several of the key goals of the Discovery phase, such asrevealing potential sources of network impairments, raising awareness of Lync Server traffic flows, confirming the simulation probe placement choice for the traffic simulation, and offering guidelines for network devices.
Lessons

- Documenting Current Network Infrastructure
- Documenting Current Client Devices
- Locating Network Impairments and Roadblocks
- Overview of Transport Reliability IP Probe Tools

Lab : Using Network Assessment Discovery Tools

After completing this module, students will be able to:

- Discover current network infrastructure and utilization.
- Identify client and Lync devices.
- Locate network impairments and roadblocks.
- Use common network assessment tools.

Module 4: Analyzing Server, Network, and Client Health

The deployment and monitoring portion of the Lync Server lifecycle is where you keep the Lync Server infrastructure running in optimal condition. If planning was properly handled, you will not be expected to fix a backlog of infrastructure issues. Instead, you will be watching for new signs of service degradation and usage trends.

During the Discovery phase of your network assessment, you will use monitoring and managing methods to determine server, network, and client health. This information will help you pose your recommendations to the customer, as well as supply valuable information for the next phases of your network assessment.
Lessons

- Determining Server, Network and Client Health Indicators
- Monitoring and Managing Methods

Lab : Analyzing Monitoring Data

After completing this module, students will be able to:

- Determine server, network, and client health.
- Use monitoring and managing methods to analyze network data.

Module 5: Usage and Traffic Modeling

Usage and traffic modeling is a key part of a network readiness assessment because you need to know the usage patterns and the actual traffic on the network in order to properly estimate the bandwidth Lync or Unified Communications (UC) might consume on the network. This moduleintroduces the different usage scenarios, usage models, and personas needed for usage modeling. It covers the process of calculating expected data usage for traffic modeling. Modeling tools, such as the Lync Bandwidth Calculator and Microsoft Lync Server 2013 Planning Tool, will also be covered.
Lessons

- Performing Usage Modeling
- Performing Traffic Modeling
- Lync Bandwidth Calculator

Lab : Using Modeling Tools

After completing this module, students will be able to:

- Perform usage modeling and traffic modeling.
- Use the Microsoft Lync Server 2013 Planning Tool.
- Use the Lync Bandwidth Calculator.

Module 6: Performing Traffic Simulations

Traffic simulation is an important step in a network readiness assessment because it provides a way of predicting how a network will perform. This module covers how to perform traffic simulations to understand traffic patterns on a network. By sending representative real-time communication (RTC) traffic through a network, a full readiness picture can be determined.
Lessons

- Overview of Traffic Simulations
- Lync Server 2013 Stress and Performance Tool

Lab : Using Network Readiness Tools to Validate the Network

After completing this module, students will be able to:

- Perform a traffic simulation as part of a network readiness assessment.
- Use traffic simulation best practices.
- Use the Lync Server Stress and Performance Tool to perform stress and performance tests.

Module 7: Understanding Network Controls and Solutions

Customers are often not equipped to manage the complexity of Lync. In addition to completing a network assessment, you can take many proactive steps to prevent the most common scenarios that generate support calls, and potentially leave Lync functionality compromised and unreliable. This module covers the various solutions that might be recommended to meet business and technical requirements to achieve network readiness.
Lessons

- Quality of Service
- Bandwidth Management with Call Admission Control
- Troubleshooting and Diagnostics Tools

Lab : Understanding and Verifying Quality of Service (QoS)
Lab : Using Call Admission Control to Manage Bandwidth Usage
Lab : Troubleshooting

After completing this module, students will be able to:

- Describe Quality of Service.
- Implement bandwidth management with Call Admission Control.
- Use troubleshooting and diagnostic tools.

Module 8: Making Recommendations for Network Readiness

After completing the previous phases of a network readiness assessment, it is now time for recommending areas to be investigated. This could

include implementing different software based strategies, such as Quality of Service (QoS) or call admission control (CAC). It could also include networking and topology changes or hardware and device changes. Sometimes it may just be troubleshooting and fixing problems with the current network or configuration. This module examines how to analyze the data that you compile, how to make recommendations based on that data, and how to create reports based on those recommendations.
Lessons

- Forming and Documenting Recommendations

Lab : Making Network Readiness Assessment Recommendations

After completing this module, students will be able to:

- Form recommendations based on network assessment analysis.
- Document and summarize their recommendations for network preparedness.
