

55070: Microsoft Lync 2013 Depth Support Engineer

Duration: 5 Days

Course Content:

This depth support engineer training is a five-day instructor-led training to support engineers beyond design and deployment to troubleshooting. Professionals will review Lync Server architecture from a Depth Support Engineer's viewpoint to support customers with Lync Server service problems.

This Microsoft Lync 2013 training gives a toolkit for the Depth Support Engineer, including Microsoft and third-party tools available for troubleshooting. Professionals will be using various tools and resources to troubleshoot real-world situations related to conferencing, enterprise voice, application sharing, IM, and Presence.

In hands-on labs, individuals will derive, articulate, and implement solutions to trouble tickets for common Lync Server problems and practise walking a typical customer through a solution. This training can assist you in preparation for Exam 74-338: Lync 2013 Depth Support Engineer.

This training is designed based on the objectives of the course variant 55070A.

Training Exclusives

- Live instructor-led interactive sessions with Microsoft Certified Trainers (MCT).
- Access to Microsoft Official Courseware (MOC).
- Real-time Virtual Lab Environment.
- Experience 24*7 Learner Support.
- Self-paced learning and flexible schedules.

Who should attend?

- IT support consultants and telecommunication support professionals who provide support services for unified communication solutions.
- Support professionals who want to attain the troubleshooting skills required to become Depth Support Engineers.
- Helpdesk personnel and administrators who support a Lync Server 2013 environment wish to deepen their knowledge and improve their troubleshooting skills.

Prerequisites for this training

- Proficiency in Active Directory Domain Services, Windows Server, data networks, Microsoft Exchange Server, and telecommunication standards that support Lync Server 2013 configurations
- Knowledge of UC endpoints, including Lync 2013 clients and Lync Phone Edition
- Knowledge of SQL Server
- Knowledge of VoIP technologies including SIP
- Knowledge of formal troubleshooting methodology
- Knowledge of DNS, PKI and Digital Certificates
- A minimum two years experience with Microsoft Lync technologies and various deployment and configurations

What you will learn

- Effectively troubleshoot the Lync Server system with an understanding of architectural dependencies.
- Identify the most effective tool to analyze and troubleshoot a Lync Server 2013 infrastructure in various support scenarios.
- Troubleshoot Lync authentication, Persistent Chat, Presence, and Address Book issues for internal users
- Troubleshoot federation and remote connectivity issues related to firewall, reverse proxy, and Edge Server configurations
- Troubleshoot web and A/V conferencing for all users
- Troubleshoot Enterprise Voice, including configuration, call setup and teardown, and connection to external telephony systems
- Troubleshoot voice call quality and bandwidth issues
- Troubleshoot Lync Server voice applications
- Troubleshoot integration issues with Exchange and SharePoint
- Troubleshoot Lync Server HA / DR issues

Curriculum

Module 1: Reviewing Lync Server 2013 Architecture

This module explains how to analyze the Lync Server 2013 infrastructure to assist in troubleshooting configuration and installation issues. It also describes how to recognize DNS and certificate configuration issues. Additionally, it explores SQL database troubleshooting.

- Lync Server 2013 Architecture Dependencies
- Microsoft Supported Architectures
- Name Resolution and Certificates
- Database Management and SQL High Availability
- Advanced Role Based Access Control Assignment

Lab1: Introduction to Contoso's Environment

- Exercise 1: Connecting to the Labs
- Exercise 2: Reviewing Contoso's Environment
- Exercise 3: Performing Active Directory Health Checks
- Exercise 4: Verifying Lync Service Availability

Lab2: Troubleshooting Lync 2013 Dependencies

- Exercise 1: Troubleshooting Lync 2013 Dependencies
- Exercise 2: Troubleshooting SQL Back End Server Dependencies
- Exercise 3: Performing SQL Mirror Failovers
- Bonus Exercise: Performing Lync Server 2013 Updates

After completing this module, students will be able to:

- Troubleshoot the installation process
- Identify deviations from supported architectures
- Troubleshoot advanced enterprise DNS issues
- Analyze and troubleshoot certificate issues
- Troubleshoot SQL database issues
- Analyze the state of an SQL mirror and perform failover and failback

Module 2: Developing a Depth Support Toolkit

This module explains how to use the tools that Microsoft has provided to analyze and troubleshoot a Lync Server 2013 infrastructure.

- Logging
- Network and Media Traffic Analysis
- Lync Server Control Panel
- Lync Server 2013 Resource Kit and Debugging Tools
- Built-in Server Tools
- SIP Primer

Lab1: Using Depth Support Tools

- Exercise 1: Tool Tutorial
- Exercise 2: Provisioning User Accounts
- Exercise 3: Tracing Fundamentals
- Exercise 4: Event Logs and Synthetic Transactions
- Bonus Exercise: Exploring Depth Support Tools

After completing this module, students will be able to:

- Use the built-in logging tools for Lync Server 2013, including Centralized Logging Service
- Identify the correct CLS scenario related to a problem
- Analyze logging data using Snooper
- Analyze and evaluate network traffic using Microsoft Network Monitor
- Troubleshoot failing media establishment between endpoints
- Identify tools included with Lync Server 2013 Resource Kit and Lync 2013 Debugging Tools
- Analyze Lync Server 2013 and Lync 2013 event logs
- Identify problems using Event Viewer

Module 3: Troubleshooting Client Authentication, Persistent Chat, and Presence

This module explains how to troubleshoot Lync authentication. It also describes how to analyze and resolve issues with Persistent Chat, Presence, and Address Book related issues.

- Client Issues
- Persistent Chat
- Presence and Address Book Issues
- Archiving Issues
- VDI Issues

Lab1: Troubleshooting Lync Client Access

- Exercise 1: Troubleshooting and Resolving Sign-in Issues
- Exercise 2: Troubleshooting Presence Issues
- Bonus Exercise 1: Extending the Lync 2013 Namespace
- Bonus Exercise 2: Deploying Persistent Chat

Lab2: Troubleshooting Client-Related Issues

- Exercise 1: Resolving Address Book Issues
- Exercise 2: Resolving Persistent Chat Issues
- Exercise 3: Troubleshooting Client Version Policy
- Bonus Exercise 2: Deploying Edge Server Role

After completing this module, students will be able to:

- Troubleshoot sign in and client authentication

- Troubleshoot client policy
- Troubleshoot Persistent Chat clients and services
- Resolve unexpected presence states and Address Book issues
- Understand and troubleshoot the VDI plugin

Module 4: Troubleshooting Remote Connectivity

This module explains how to troubleshoot federation, including XMPP, Skype, and Public IM Connectivity. It also describes appropriate external port configurations and how to analyze and troubleshoot external connection issues, as well as common Edge and reverse proxy misconfigurations.

- Edge Remote Connectivity
- Federation
- Reverse Proxy
- Mobile Devices
- Port Configuration
- Remote Connectivity Testing

Lab1: Troubleshooting Edge Connectivity

- Exercises 1A & 1B: Troubleshooting Edge Configuration
- Exercise 2: Using PortQry to Troubleshoot Connectivity Issues
- Exercise 3: Troubleshooting Remote Connectivity
- Bonus Exercise: Configuring Federation

Lab2: Troubleshooting Reverse Proxy

- Exercise 1: Deploying ARR as a Reverse Proxy for Lync and Exchange
- Exercise 2: Troubleshooting Remote Connectivity
- Exercise 3: Validating Mobile Client Connectivity with Lync Connectivity Analyzer

After completing this module, students will be able to:

- Troubleshoot Edge configuration and remote connectivity problems
- Troubleshoot open, direct, and enhanced federation
- Troubleshoot reverse proxy
- Troubleshoot mobile device settings
- Configure and troubleshoot firewall port issues
- Describe and use remote connectivity tools

Module 5: Troubleshooting Conferencing

This module explains how to troubleshoot the conferencing life cycle, including MCU health, the join launcher, and Lync Web App. It also describes troubleshooting external conferencing data problems.

- Core Conferencing Modalities
- Configuration of Office Web Apps Server
- Conferencing Life Cycle
- Conferencing Data
- Lync Room System

Lab1: Troubleshooting Conferencing

- Exercise 1: Troubleshooting Internal Conference Issues
- Exercise 2: Identifying Root Causes of Conferencing Issues with Performance Monitor
- Exercise 3: Using Lync Monitoring Reports to Troubleshoot Conferencing Problems
- Exercise 4: Testing Conferencing Call Flow
- Bonus Exercise: Analyzing Bandwidth Requirements

After completing this module, students will be able to:

- Describe core conferencing modalities
- Troubleshoot Office Web Apps issues
- Troubleshoot application sharing issues
- Analyze bandwidth requirements
- Describe Lync Room System and potential issues

Module 6: Troubleshooting Enterprise Voice Configuration Issues

This module explains how to analyze dial plans, routes, PSTN usages, session management, and media bypass in order to resolve call issues. Additionally, problems with call setup and teardown will be analyzed and resolved.

- Enterprise Voice Configuration
- Call Setup and Teardown
- Connection to External Telephony Systems

Lab1: Troubleshooting Dial Plans, Routing and Trunks

- Exercise 1A & 1B: Identifying Dial Plan Misconfiguration
- Exercise 2: Troubleshooting Voice Routing Issues
- Exercise 3: Troubleshooting Lync 2013 Trunk Settings for Media Gateways or IP PBXs
- Exercise 4: Troubleshooting Inbound/Outbound Call Flow Issues from PSTN

After completing this module, students will be able to:

- Troubleshoot Voice configuration
- Troubleshoot call setup and teardown
- Troubleshoot gateway and trunk configurations, including PBX integration and PSTN

Module 7: Analyzing and Troubleshooting Enterprise Voice Call Quality

This module explains how to review quality of experience logs and analyze call flow and network bandwidth to evaluate and resolve call quality issues. Additionally this module will provide detail on troubleshooting the Lync Features that facilitate bandwidth management such as CAC and QoE.

- Voice Quality Issues
- UC Devices and Peripherals

Lab1: Troubleshooting Voice Quality and Network Traffic Issues

- Exercise 1: Configuring SCOM to Monitor Lync
- Exercise 2: Troubleshooting Call Quality Issues
- Exercise 3: Analyzing DSCP Values and Port Ranges for Prioritizing Network Traffic
- Exercise 4: Configuring GPOs and Lync Policy for QoS

After completing this module, students will be able to:

- Troubleshoot Voice quality issues
- Identify key thresholds for call quality
- Troubleshoot CAC policy misconfigurations
- Troubleshoot QoS misconfigurations
- Troubleshoot UC devices and peripherals
- Configure SCOM to work with Lync Server

Module 8: Analyzing and Troubleshooting Enterprise Voice Applications

This module explains how to troubleshoot each of the Voice applications used with Lync Server 2013.

- Call Park Service

- Troubleshooting Response Groups
- Announcement Service

Lab1: Troubleshooting Enterprise Voice Applications

- Exercise 1A & 1B: Troubleshooting Response Groups
- Exercise 2: Troubleshooting Dial-in Conferencing
- Bonus Exercise: Advanced Unassigned Numbers Configuration

After completing this module, students will be able to:

- Describe supported configurations for Call Park Service
- Troubleshoot Response Group issues
- Configure Announcement Service and unassigned numbers

Module 9: Troubleshooting High Availability, Disaster Recovery, and Voice Resiliency

This module explains how to troubleshoot High Availability, Disaster Recovery and Voice Resiliency features in Lync Server 2013.

- Supported Lync Server 2013 High Availability Configurations
- Load Balancing Web Services
- Setting Appropriate Disaster Recovery Expectations

Lab1: Deploying HA and DR and Troubleshooting Voice Resiliency

- Exercise 1: Configuring Lync HA and DR
- Exercise 2: Troubleshooting Load Balanced Configurations
- Exercise 3: Troubleshooting Voice Resiliency
- Bonus Exercise: Using Bandwidth Management for Voice Resiliency

After completing this module, students will be able to:

- Identify supported HA and DR topologies
- Describe supported topology for HLB
- Troubleshoot HLB configurations

Module 10: Troubleshooting Exchange and SharePoint Integration

This module explains how to troubleshoot Lync Server 2013 integration with Exchange Server 2013. Additionally, it describes how to troubleshoot integration with SharePoint Server 2013.

- Exchange 2013 Unified Messaging
- Unified Contacts Store
- Archiving and Compliance
- SharePoint 2013 Site Mailboxes
- SharePoint 2013 eDiscovery

Lab1: Troubleshoot Lync Server Integration Issues

- Exercise 1A, 1B, and 1C: Troubleshooting Voice Mail
- Exercise 2: Troubleshooting Auto Attendant
- Exercise 3: Implementing an Integrated Lync and Exchange Solution
- Bonus Exercise: Extending Contoso's eDiscovery Solution with SharePoint 2013 Integration

After completing this module, students will be able to:

- Identify Exchange UM problems
- Troubleshoot integration issues with Exchange
- Troubleshoot integration issues with SharePoint