

Collaboration Communications Systems Engineer

Duration: 4 Days

Course Description:

This training course is designed to give participants the knowledge and skills to become a Collaboration Communications Systems Engineer. Participants should understand the fundamentals of networking, telecommunications, audio/visual and meeting room technologies, identity and access management, and Microsoft Teams.

They will gain hands-on experience configuring and deploying Microsoft Teams Phone, meetings and certified devices including Microsoft Teams Rooms and Surface Hub. The course will also cover how to manage and monitor Teams Phone, meetings, and certified devices using the Microsoft Teams admin center, PowerShell, the Microsoft Teams Rooms Pro Portal, and the Call Quality Dashboard.

In addition, the course will cover configuring and deploying Microsoft Teams Phone with PSTN connectivity through Microsoft Calling Plans, Operator Connect, Teams Phone Mobile, and Direct Routing.

Target Audience:

Collaboration Communications Systems Engineers are responsible for planning, deploying, configuring, maintaining, and troubleshooting Microsoft Teams Phone, meetings, and personal and shared space devices, including Microsoft Teams Rooms and Surface Hub.

Collaboration Communications Systems Engineers have a fundamental understanding of networking, telecommunications, audio/visual and meeting room technologies, identity and access management.

They are proficient in managing and monitoring Teams Phone, meetings, and certified devices using the Microsoft Teams admin center, PowerShell, the Microsoft Teams Rooms Pro Portal, and the Call Quality Dashboard. They deploy and configure Microsoft Teams Phone with PSTN connectivity through Microsoft Calling Plans, Operator Connect, Teams Phone Mobile, and Direct Routing. Collaboration Communications Systems Engineers work with Teams Administrators, Microsoft Identity and Access Administrators, and Microsoft 365 Administrators. In addition, they may work with owners of other workloads, including facilities managers, network engineers, security engineers, device manufacturers, telephony providers, and Microsoft Certified solutions providers.

Course Outline:

Introduction to Teams meetings and calling

- Introduction
- Overview of Teams meetings and events
- Overview of Teams Phone
- Overview of auto attendants and call queues
- Överview of Teams devices
- Overview of Microsoft 365 Copilot in Teams calling, meetings, and devices
- Exercise Create room resource accounts
- > Exercise Configure mailbox properties

Plan for Teams Phone

- Introduction
- Plan to deploy Teams Phone
- Plan for Teams Phone PSTN connectivity
- Determine license requirements
- Plan for Teams Phone devices
- Plan and design Teams Phone features
- Plan for voicemail

Plan for Microsoft Teams Rooms and Surface Hub

- Introduction
- Determine license requirements for Microsoft Teams Rooms and shared devices
- Understand differences between Microsoft Teams Rooms on Android and Windows
- Understand Microsoft Teams Rooms on Surface Hub 2S
- Understand and plan Teams Room accessories, components, and peripherals
- Understand Teams Rooms management options

Plan and optimize network performance for Teams media

- Introduction
- Understand Teams network requirements
- Evaluate network specifications
- Design network for media optimization
- Design and validate VPN split tunneling
- Configure media bit rate for Teams
- Design and implement QoS

Configure and deploy Teams Phone

- > Introduction
- Configure emergency calling for Teams Calling Plans
- Manage and configure Microsoft PSTN numbers
- Configure Operator Connect and Teams Phone Mobile
- Configure Teams Phone policies
- Create and manage Teams policies

Configure and deploy Teams Phone with Direct Routing

- > Introduction
- Design Direct Routing call flows
- > Implement SIP trunking with Direct Routing
- Configure Emergency Calling for Direct Routing
- Extend Teams Direct Routing infrastructure
- > Deploy and maintain a survivable branch appliance

Extend Teams Phone with additional services

- Introduction
- Understand how Teams interacts with additional services
- Configure compliance recording in Teams
- Configure and integrate a certified contact center in Teams
- Design and deploy voice bots in Teams

Guided project - Create and assign Teams policies to meet business requirements in Microsoft Teams

- Introduction
- Prepare
- Exercise Create a security group
- Exercise Create and assign a messaging policy in Teams admin center
- > Exercise Create a meeting policy and assign with PowerShell

Configure and manage voice users

- Introduction
- Enable users for Teams Phone
- Enable users for Direct Routing with Teams Phone
- Enable additional calling features for Teams Phone
- Enable users for Teams Phone Mobile

Configure auto attendants and call queues

- Introduction
- Design call flows for auto attendants and call queues
- Configure auto attendants and call gueues
- Deploy a channel-based call queue
- Configure resource accounts
- Configure Microsoft 365 groups for voicemail
- Interpret call queue conference modes
- Interpret call gueue routing methods
- Configure holidays for auto attendants and call queues
- Configure custom music on hold

Configure, deploy, and manage Teams devices

- Introduction
- Manage Microsoft Teams Phones
- Manage Microsoft Teams Room Systems
- Microsoft Teams Rooms management options
- Manage Surface Hub 2S devices
- Configure Microsoft Teams SIP gateway
- Manage Microsoft Teams displays
 Remote provisioning and sign in for Teams Phones
- Update Microsoft Teams devices remotely
- Manage Microsoft Teams device tags

Guided project - Prepare meeting room experiences

- Introduction
- Prepare
- Exercise Create dynamic security group
- Exercise Configure security settings

Monitor and troubleshoot Teams collaboration communications systems

- > Introduction
- Diagnose and troubleshoot phone number assignment
- Diagnose and troubleshoot Teams client issues
- Diagnose and troubleshoot call failure and call quality issues
- Report on and troubleshoot Teams calls with Call Quality Dashboard
- Diagnose and troubleshoot Direct Routing issues
 Troubleshoot and monitor Teams devices
- Troubleshoot Teams meetings and calling
- Troubleshoot Teams Rooms devices