

COURSE OUTLINE



Course Name: Collaboration Communications Systems Engineer

Course Code: MS-MS721T00

DURATION	SKILL LEVEL	DELIVERY METHOD	TRAINING CREDITS	TECHNOLOGY
4 Day	Intermediate	VIL/TILT	N/A	Agile

Course Overview

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.

Pre-requisites

Before attending this course, students should have intermediate knowledge of the following

- Microsoft 365 and Microsoft Teams
- Networking, telecommunications and audio/visual basics
- Identity and access management

Course Objectives

- Plan and Configure Microsoft Teams Phone
- Plan and optimize network performance for Teams Phone
- Configure and deploy Direct Routing
- Configure, deploy, and manage Teams devices
- Monitor and Troubleshoot Teams Phone

Course content

Module 1: Introduction to Teams meetings and calling

This module provides an overview of Microsoft Teams communication and collaboration options: Teams phones, auto attendants, call queues, meeting room devices, and different meetings types. It covers the benefits and limitations of Teams Phone, while also highlighting the importance of Teams devices in modern workplaces.

Lesson

- Describe Teams meetings and events
 - Describe Teams Phone
 - Describe auto attendants and call queues
 - Describe Microsoft Teams Rooms, Teams meeting room devices, and Teams phones
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Module 2: Plan for Team Phone

Learn about Microsoft Teams Phone and what is needed to make and receive phone calls, plan for Teams Phone devices, features, and cloud voicemail.

Lesson

- Plan for a basic Teams Phone deployment
- Plan for advanced Teams Phone calling options
- Plan for Teams phones and devices

Module 3: Plan for Microsoft Teams Rooms and Surfaces Hub

Teams Meeting Rooms and Surface Hubs are a great way to collaborate with your coworkers in and outside your organization. It lets you join scheduled meetings in a comfortable way without logging in into to compute unit of the room device. To get started with Microsoft Teams Rooms, you need to understand the differences and potential use cases of the different Teams Room devices, the way how these devices are technically managed, which licenses are needed and what it important for a user-friendly physical room installation.

Lesson

- Understand the main differences of Microsoft Teams Room for Android and Microsoft Teams Rooms for Windows
- Explain which accessories, components and peripherals are mandatory
- Understand the advantage of Surface Hub
- Understand the difference between the licensing options
- Plan and review a physical room layout

Module 4: Plan and optimize network performance for Teams media

For real-time media in Microsoft Teams, network performance is key to a good user experience. In this module, we cover Teams real-time network requirements and how to optimize your network for Teams real-time media.

Lesson

- Describe Teams network requirements
 - Evaluate organizational bandwidth requirements with the Teams Network planner
 - Assess network using the Teams Network Assessment Tool
 - Optimize network and WiFi for media flow
 - Optimize media flow with QoS
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Module 5: Configure and deploy Teams Phone

Before Microsoft Teams Phone users can make or receive calls and use advanced features, phone numbers must be assigned and Microsoft Calling plans or Operator Connect must be configured.

Lesson

- Configure emergency calling addresses
- Manage Microsoft Calling Plan numbers
- Setup and manage Operator Connect and Teams Phone Mobile
- Understand Teams Phone policies and configuration options
- Configure Audio Conferencing and Communication Credits

Module 6: Configure and deploy Teams Phone with Direct Routing

In this module, you'll learn how administrators configure Teams Phone with Direct Routing to meet user needs for telephony through a PSTN.

Lesson

- Explain how to configure and connect a Session Border Controller (SBC).
- Describe the process for configuring simple and advanced voice routing.
- Describe how to provision users, implement number translation, create, and assign dial plans.
- Explain how to configure and connect a Survivable Branch Appliance (SBA).

Module 7: Extend Teams Phone with additional services

Teams Phone leverages other Microsoft services and can be extended with third-party solutions for policy-based compliance recording, contact center integration, and custom bots.

Lesson

- Describe how Teams Phone interacts with other Microsoft services.
 - Configure and integrate third-party policy-based compliance recording.
 - Configure and integrate third-party contact center solutions.
 - Design and register Voice Bots for custom developed solutions.
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Module 8: Manage meetings and events experiences

Learn about different meeting solutions in Microsoft Teams, various settings and policies for Teams meetings and live events, and configuration for Audio Conferencing.

Lesson

- Understand meetings and events in Microsoft Teams
- Set up conference bridges
- Manage meeting policies
- Configure meeting settings
- Manage Live events policies
- Configure Live events settings
- Explain Live events in Microsoft 365

Module 9: Guided project – Create and assign Teams policies to meet business requirements in Microsoft Teams

In this module, you'll prepare your Microsoft 365 developer tenant to be ready for the usage of Microsoft Teams Rooms. You'll create the tenant from scratch, change security related settings, and prepare Microsoft Teams Rooms specific tasks.

Lesson

- Create a security group
- Create and assign a messaging policy in the Teams admin center
- Create a meeting policy in Teams admin center and assign it with PowerShell

Module 10: Configure and manage voice users

Ongoing management is required as new employees start, or if their needs change. Learn how to manage voice user configuration, including enabling voice services and adjusting voice configuration.

Lesson

- Enable users for Teams Phone using Calling Plans, and Teams Phone Mobile or Operator Connect if it's configured for your tenant.
 - Enable users for Direct Routing.
 - Manage per-user options for Teams Phone.
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Module 11: Configure auto attendants and call queues

Understand how auto attendants and call queues in Microsoft Teams can interact with callers to ensure they're connected your agents as quickly as possible. You'll also learn how to set up auto attendants and call queues.

Lesson

- Describe the differences between auto attendants and call queues.
- Design an auto attendant to gather information from callers.
- Explain how to set up auto attendants to implement your plan.
- Demonstrate how to plan call queues to manage many callers.
- Describe how to configure call queues to alert agents and route calls.
- Explain how to plan licensing for auto attendants and call queues.

Module 12: Configure, deploy, and manage Teams devices

Teams devices provide a familiar experience and are essential for a hybrid workspace. Learn how to provision and manage devices, and associated device accounts.

Lesson

- Understand scenarios for using Teams phones, Teams displays, and Microsoft Teams Rooms with voice services.
- Differentiate between the different options for deployment and management of devices.
- Deploy Teams phones and Teams displays.
- Configure Teams Phone for Microsoft Teams Rooms.
- Manage Teams devices in the Teams admin center and Teams Rooms Pro Management Portal.

Module 13: Guided project – Prepare meeting room experiences

In this module, you'll prepare your Microsoft 365 developer tenant to be ready for the usage of Microsoft Teams Rooms. You'll create the tenant from scratch, change security related settings, and prepare Microsoft Teams Rooms specific tasks.

Lesson

- Prepare the Microsoft 365 tenant for Microsoft Teams Rooms deployment
 - Create dynamic groups following best practice
 - Disable multi-factor authentication for Microsoft Teams Rooms resource accounts
 - Configure room mailbox properties
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Module 14: Monitor and troubleshoot Teams collaboration communications systems

Troubleshooting is an important task that includes troubleshooting of phone number assignment, call failure and quality issues, client issues, and device issues. Call Analytics, Call Quality Dashboard, and the Teams Rooms Pro portal are also covered for monitoring, reporting, and troubleshooting.

Lesson

- Diagnose and troubleshoot phone number assignment
- Diagnose and troubleshoot Microsoft Teams client issues
- Diagnose and troubleshoot call failures and quality issues
- Report on and troubleshoot Teams calls with the Call Quality Dashboard (CQD)
- Diagnose and troubleshoot Direct Routing issues
- Troubleshoot and monitor Teams devices using the Teams Rooms Pro portal

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