

MS 721- Microsoft Teams Collaboration Communications Systems Engineer Associate

In this course you're responsible for planning, deploying, configuring, maintaining, and troubleshooting collaboration communication systems that include:

- Microsoft Teams Phone
- Microsoft Teams meetings
- Microsoft Teams Premium
- Microsoft Copilot in Teams
- Microsoft Teams Rooms
- Other certified and supported devices

As a collaboration communications systems engineer, you have a fundamental understanding of networking, telecommunications, audio/visual and meeting room technologies, and identity and access management. You're proficient in managing collaboration and communications solutions by using:

- Microsoft Teams admin center
- Microsoft Teams Rooms Pro Management portal
- PowerShell
- Microsoft Call Quality Dashboard

You work with:

- Microsoft Teams administrators
- Microsoft identity and access administrators
- Microsoft 365 administrators
- Owners of other workloads, including facilities managers, network engineers, security engineers, device manufacturers, telephony providers, and Microsoft Certified solution providers

Skills measured

- Plan and design collaboration communications systems
- Configure and manage Teams meetings, webinars, and town halls
- Configure and manage Teams Phone
- Configure and manage Teams Rooms and devices

Prerequisites

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

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Module 1: Introduction to Teams Meetings and Calling

- Understanding Meeting types
- Overview of Teams Phone
- Overview of Auto Attendant and Call Queues
- Overview of Teams devices

Module 2: Plan for Teams Phone

- Plan Usage Scenarios for services and users
- Plan to deploy Teams Phone
- Determine licensing requirements
- Plan for Teams Phone Devices
- Plan and design Teams Phone Features
- Plan for Voice Mail

Module 3: Plan Microsoft Teams Rooms and Surface Hub

- Determine license requirements
- Understand Microsoft Teams Rooms for Android and Microsoft Teams Rooms for Windows
- Understand Microsoft Surface Hub
- Understand and Plan Teams Room Accessories, Components and Peripherals
- Understand Microsoft Teams Rooms Management

Module 4: Plan and optimize network performance for Teams Phone

- Understand Teams network requirements
- Design network for media optimization
- Design and implement QoS

Module 5: Configure Teams Phone

- Configure Emergency Calling for Calling Plans
- Manage and configure Microsoft PSTN numbers
- Configure Operator Connect
- Configure Teams Phone policies

- Configure Audio Conferencing

Module 6: Configure and deploy Teams Phone Direct Routing

- Design Direct Routing call flows
- Implement SIP Trunking with Direct Routing
- Configure Emergency Calling for Direct Routing
- Extend Teams DR Infrastructure
- Deploy and Maintain an SBA

Module 7: Extend Teams Phone with additional services

- Understand how Teams Phone interacts with other Microsoft services
- Configure and integrate third-party policy-based compliance recording solutions
- Configure and integrate third-party contact center solutions
- Design and register Voice Bots for custom solutions

Labs

Lab 01 – Prepare the lab environment

Exercise 1: Assign permissions and licenses

- Task 1 – Assign Katie Jordan to the Teams Administrator role
- Task 2 – Validate licenses in the admin portal
- Task 3 – Add the Domestic Calling Plan trial license to your tenant
- Task 4 – Assign the Domestic Calling Plan license to Isaiah Langer

Exercise 2: Setup PowerShell for Microsoft Teams administration

Task 1 – Install the latest Teams PowerShell module

Lab 02 – Configure your environment for Teams Voice Usage

- Exercise 1: Evaluate your network with the Network Planner
- Exercise 2: Use the Teams Network Assessment Tool
- Exercise 3: Configure a basic network topology for Dynamic Emergency Calling
- Exercise 4: Configure voice policies
- Exercise 5: Prepare users for calling
- Exercise 6: Configure audio conferencing settings

Exercise 1 : Evaluate your network with the Network Planner

Task 1 - Create Personas

Task 2 - Create Network and Network Sites

Task 3 - Run Reports

Exercise 2: Use the Teams Network Assessment Tool

- Task 1 - Install the Tool
- Task 2 - Run the Network Connectivity Check
- Task 3 - Interpret Results of the Network Connectivity Check
- Task 4 - Run the Network Quality Check
- Task 5 - Interpret Results of the Network Quality Check

Exercise 3: Configure a basic network topology for Dynamic Emergency Calling

Task 1 - Add Network Region and sites to Network Topology

Task 2 - Add a trusted IP address

Task 3 - Add an emergency address

Task 4 - Mapping a network to a physical location (emergency address)

Task 5 - Configure Emergency Calling Policies

Exercise 4: Configure Voice Policies

Task 1 - Create a Dial Plan for extension dialing

Task 2 - Configure Calling policies

Task 3 - Configure Call Park policies

Task 4 - Configure Caller ID policies

Task 5 - Configure Inbound call blocking

Exercise 5: Prepare users for calling

Task 1 - Order a phone number

Task 2 - Assign a phone number to Isaiah Langer

Task 3 - Test phone calls

Exercise 6: Configure Audio Conferencing Settings

Task 1 - Set a default Audio Conferencing Bridge

Task 2 - Order a new Conference Bridge Number

Task 3 - Configure a New Conference Bridge Number

Lab 03 – Expand your Teams Voice Environment to use Direct Routing

Exercise 1: Configure lab for Direct Routing

Task 1 – Identify your lab's public IP address

Task 2 – Retrieve your lab number

Task 3 – Run the CallsandMeetLabs.exe script

Task 4 – Request your public certificate from DigiCert

Task 5 – Verify the custom domain has been added to your Microsoft 365 tenant

Task 6 – Assign the custom lab domain to Megan Bowen

Exercise 2: Deploy the session border controller

1. Add the SBC to the tenant
2. Retrieve your public certificate file
3. Run the ImportLabCert script located in C:\Scripts
4. Setting up Session Border Controller (SBC) Virtual Machine resources
5. Retrieve SBC Public IP and configure DNS routing
6. Sign into the SBC
7. Upload root certificates to the SBC
8. Upload the lab certificate to the SBC

Exercise 3: Configure the session border controller

1. Configure SIP Interfaces on SBC
2. Configure Proxy Sets on SBC
3. Configure Proxy Addresses Interface on SBC
4. Configure Codec Groups on SBC
5. Configure IP Profiles on the SBC
6. Configure IP Groups on SBC
7. Configure SRTP on SBC
8. Configure Message Manipulation on SBC
9. Configure IP to IP Calling rules on SBC
10. Verify the SBC Connections to Teams

Exercise 4: Configure Teams for Direct Routing

1. Create a voice routing policy with one PSTN usage

2. Create a new voice routing policy named North America and assign it to Megan Bowen
3. Enable users for Direct Routing, voice, and voicemail
4. Configure voice routing
5. Translate numbers to an alternate format
6. Configure Emergency Location Identification Number (ELIN)
7. Deploy Location-Based Routing based on subnets

Module 8: Manage meetings and events experiences

- 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: Configure and manage voice users

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

Module 10: Configure auto attendants and call queues

- Design call flows for AA/CQ
- Configure AA/CQ
- Deploy a channel-based CQ
- Configure Resource Accounts
- Configure O365 Groups for VM
- Interpret CQ Conference Mode
- Interpret CQ Routing Methods
- Configure Holidays for AA/CQ
- Configure custom Music on Hold for CQ/AA/VM

Module 11: Configure, deploy and manage Teams devices

- Managing Microsoft Teams Phones
- Managing Microsoft Teams Room Systems
- Managing MTR devices
- Manage Microsoft Teams settings for Surface Hub
- Configure SIP Gateway

- Remote provisioning and sign in for Teams Phones
- Update Microsoft Teams devices remotely
- Manage Microsoft Teams device tags

Module 12: Guided project – Prepare meeting room experiences

Task 1

Create dynamic security group for room resource accounts

Task 2

Configure security settings to exclude room resources accounts from MFA requirement

Task 3

Create room resource accounts

Task 4

Configure mailbox properties for the room resource accounts

- 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 Call Quality Dashboard (CQD)
- Diagnose and Troubleshoot Direct Routing Issues
- Troubleshoot and monitor Teams devices
- Troubleshoot Teams meeting and calling
- Troubleshoot Teams Room devices

Lab 04 - Manage your Teams Voice Environment

Exercise 1: Manage Voice Users

Task 1 - Change user call pickup settings

Task 2 - Enable user for Teams Direct Routing

Task 3 - Configure call delegation

Task 4 - Enable audio conferencing

Task 5 - Assign a dial out policy

Exercise 2: Configure Call Queues and Auto Attendants

Task 1 - Create a call queue in the Teams Admin Center

Task 2 - Create an auto attendant for the Sales call queue

Task 3 - Configure a Call Queue to use a channel

Task 4 - Configure a Call Queue to forward to voicemail if busy

Task 5 - Explore conference mode toggle

Task 6 - Set holiday modes within AA

Task 7 - Import MP4 file for custom music on hold

Exercise 3: Manage Teams Devices

Task 1 - [Demo] Perform remote provisioning of Teams Phones

Task 2 – Create, license, and enable Enterprise Voice for a Microsoft Teams Room account

Task 3 – Create a resource account and Exchange Online mailbox

Task 4 - Prepare to manage devices by creating tags in the Teams Admin Center

Exercise 4: Monitor and Troubleshoot Teams Phone

Task 1 - Run self-help diagnostics tool in Microsoft 365 admin center

Task 2 - Break a dial plan and check the issue

Task 3 - Review Call Health Real Time Stats on a live call

Task 4 - Use the Microsoft 365 connectivity test tool

Task 5 - Inspect PSTN Usage Reports

Task 6 - Review Calls in Call Analytics

Task 7 - Review Calls in Call Quality Dashboard

