Collaboration Communications System Engineer (MS-721T00)

Duration: 4 days
Audience: Professionnel TI

Who is this training for?

Collaborative 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.

Training objectives

- Understand collaboration systems
- Manage communication systems and optimize performance
- Analyze network performance
- Plan and configure systems
- Manage network components and troubleshoot virtual and physical systems
- Use products such as voice and video systems
- Collaborate with third-party vendors
- Identify, configure, and troubleshoot IP telephony elements
- Design routing protocols and private network
- Use secure collaboration methods

Summary

This training course is designed to give participants the knowledge and skills to become a collaborative communication 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 benefit from hands-on experience setting up and deploying Microsoft Teams Phone, meetings, and certified devices, including Microsoft Teams Rooms and Surface Hub. The course also explains 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 covers the setup and deployment of Microsoft Teams Phone with PSTN connectivity through Microsoft Calling Plans, Operator Connect, Teams Phone Mobile, and Direct Routing.

Course outline

Learning Path 1: Explore End-to-End Analytics with Microsoft Fabric

Describe End-to-End Analytics in Microsoft Fabric

- Understand Data Teams and Roles Using Fabric
- Describe how to enable and use Fabric

Learning Path 2: Get started with lakehouses in Microsoft Fabric

- Describe end-to-end analytics in Microsoft Fabric
- Understand data teams and roles using Fabric
- Describe how to enable and use Fabric

Learning path 3: Use Apache Spark in Microsoft Fabric

- Describe end-to-end analytics in Microsoft Fabric
- Understand data teams and roles using Fabric
- Describe how to enable and use Fabric

Learning path 4: Work with Delta Lake tables in Microsoft Fabric

- Understand Delta Lake and delta tables in Microsoft Fabric
- Create and manage delta tables with Spark
- Optimize delta tables
- Use delta tables with Spark structured streaming

Learning path 5: Ingestion of data with Dataflows (Gen2) in Microsoft Fabric

- Describe the capabilities of Dataflow Gen2 in Microsoft Fabric
- Create Dataflow solutions to ingest and transform data

- Include a Dataflow in a pipeline

Learning path 6: Orchestrate processes and data movement

- Describe the capabilities of pipelines in Microsoft Fabric
- Use the Copy Data to a Pipeline activity
- Create pipelines based on predefined templates
- Run and monitor pipelines

Learning path 7: Organize a Fabric lakehouse with the medallion architecture

- Describe the principles of using the medallion architecture in data management
- Apply the medallion architecture framework
- Analyze the data stored in the lakehouse using DirectLake in Power BI

Learning path 8 : Get started with real-time intelligence in Microsoft Fabric

- Understand real-time data analytics concepts
- Explore the core components of real-time intelligence in Microsoft Fabric

Learning path 9: Use real-time eventstreams in Microsoft Fabric

- Configure sources and destinations in Microsoft Fabric eventstreams
- Capture, transform, and route data using Microsoft Fabric eventstreams

Learning Path 10: Work with real-time data in a Microsoft Fabric event house

- Create an event house in Microsoft Fabric
- Query data in real time with Kusto Query Language (KQL)
- Create materialized views and functions stored in a KQL database

Learning path 11: Get started with data warehouses in Microsoft Fabric

- Describe data warehouses in Fabric
- Understand the difference between a data warehouse and data warehouse. Data and a Data Lakehouse

- Work with Data Warehouses in Fabric
- Create and Manage Fact Tables and Dimensions in a Data Warehouse

Learning Path 12: Load Data into a Microsoft Fabric Data Warehouse

- Strategies for Loading Data into a Data Warehouse in Microsoft Fabric
- Build a Data Pipeline to Load a Data Warehouse into Microsoft Fabric
- Load Data into a Data Warehouse with T-SQL
- Load and transform data with Dataflow (Gen2)
- Learning Path 13: Monitor a Microsoft Fabric data warehouse
- Monitor capacity unit utilization with the Microsoft Fabric Capacity Metrics app
- Monitor current activity in the data warehouse with dynamic management views
- Monitor query trends with query insights views

Learning path 14: Secure a Microsoft Fabric data warehouse

- Understand the concepts of securing a data warehouse in Microsoft Fabric
- Implement dynamic data masking, row-level security, and column-level security
- Configure granular permissions with T-SQL

Learning path 15: Implement continuous integration and continuous deployment (CI/CD)

- Define CI/CD and describe how it is implemented in Fabric
- Implement control version and Git integration
- Use deployment pipelines to automate the deployment process
- Automate CI/CD using Fabric APIs
- Learning path 16: Monitor activities in Microsoft Fabric
- Apply monitoring concepts to Microsoft Fabric
- Use Monitoring Hub in Microsoft Fabric
- Trigger actions with Activator in Microsoft Fabric

Learning path 17: Secure data access in Microsoft Fabric

- Understand the Fabric security model
- Configure permissions for workspaces and items
- Apply granular permissions

Learning path 18: Administer Microsoft Fabric

- Describe Fabric administration tasks
- Navigate the admin center
- Manage user access

Approach and methodology

Practical and structured approach combining focused theory and guided workshops. Participants gradually develop an expertise as an engineer of collaborative communication systems through concrete exercises inspired by professional scenarios, promoting an immediate application of the learnings. They learn how to plan, design, configure, and manage Microsoft Teams communication solutions, including voice, meetings, and advanced collaboration. Led by a Microsoft certified trainer, the training focuses on interactivity and the development of directly transferable technical skills to deploy and optimize communication environments in a professional context.

Prerequisites

General knowledge of Microsoft 365 and Microsoft Teams, networking and telecom and audio/visual basics, identity and access management basics.

Recommendations

Solid foundation in Microsoft Teams and Microsoft 365 Understanding of telephony, voice over IP (VoIP) and collaboration concepts Knowledge of network environments (bandwidth, latency, QoS) Notions of security and identity management (Entra ID) Experience in communication services administration (asset)