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# Installing, Configuring, and Troubleshooting Cisco Webex/Collaboration Endpoints (CISCO ENDPOINTS)

## Installing, Configuring, and Troubleshooting Cisco Webex/Collaboration Endpoints (CISCO ENDPOINTS)

The Installing, Configuring, and Troubleshooting Cisco Collaboration Endpoints (CISCO ENDPOINTS) course is a comprehensive, five-day instructor-led course that covers deploying, managing, and troubleshooting Cisco Webex devices and collaboration solutions. This training focuses on Webex endpoints, collaboration devices, room design, device configuration, integration with Microsoft Teams and other platforms, as well as network and troubleshooting essentials. Participants will gain hands-on experience configuring Webex Room Systems, Desk Devices, Cisco Board Pro, Webex Calling Devices, and various collaboration tools. Additionally, learners

will explore Webex Control Hub configurations, BYOD functionalities, device APIs, digital signage, Cisco Spaces, and integrating Webex devices with Microsoft Teams, Zoom, and Google Meetings. Through a combination of theoretical lessons and extensive hands-on labs, students will develop the skills needed to design, deploy, and maintain Cisco Webex systems for hybrid work environments. This course is designed to empower participants with the knowledge and skills required to ensure seamless, efficient, and secure collaboration experiences within enterprise networks. By the end of the course, students will be able to effectively manage Webex devices and collaboration solutions, perform troubleshooting, and integrate Webex endpoints with external systems to create robust and resilient communication environments.

## Course Duration

5 day

# **Course Price**

\$4,495,00 or 45 CLCs

#### **Methods of Delivery**

- Instructor Led
- Virtual ILT
- On-Site

### Who Should Attend

The primary audience for this course is as follows:

- Installers and Field Technicians
- Collaboration Engineers
- Network Engineers and Administrators
- IT Support Technicians and Helpdesk Staff
- Unified Communications Engineers
- System Integrators and Cisco Channel Partners
- IT Managers and Project Coordinators

### **Course Objectives**

- Webex Overview
- Cisco Collaboration Devices Overview
- Room Design and Requirements
- Cisco Endpoints, Webex Room Systems, Desk Device, and Clients
- Deploying CUCM Video Endpoints
- Managing Cisco Device Settings & Options

## **Prerequisites**

Before attending the "Installing, Configuring, and Troubleshooting Cisco Collaboration Endpoints" course, participants should have a foundational understanding of Cisco networking and collaboration technologies to ensure they can effectively follow and apply the course content. While there are no strict formal prerequisites, the following background knowledge is strongly recommended:

- A basic understanding of networking concepts, including IP addressing, routing, switching, and VLANs.
- Familiarity with Cisco IOS command-line interface (CLI) operations and configuration tasks.
- General knowledge of video and audio-conferencing technologies and collaboration environments.
- Prior exposure to Cisco Webex solutions or Cisco Unified Communications environments is helpful but not required.
- Experience with Microsoft Teams, especially in a video conferencing or device integration context, is beneficial for the integration sections.

These prerequisites will help ensure that learners are prepared to engage with hands-on labs and can fully benefit from the course's focus on real-world deployment, configuration, and troubleshooting scenarios.

### **Outline**

#### Module 0: Introduction

- Module Topics
  - Module Overview
  - Course Goals
  - Webex Meetings Center Basics
  - Introductions
- Module Summary

### Module 1: Cisco Collaboration Devices Overview

- Module Topics
- Lesson 1: Collaboration Overview and Challenges
- Lesson 2: Hybrid Work Spaces
- Lesson 3: Unified Communication Overview
- Lesson 4: Endpoint Use-Cases and Integrations
- Lesson 5: Endpoint Features Overview
- Lesson 6: Collaboration Devices Overview
- Module Summary

## Module 2: Room Design and Requirements

- Module Topics
- Lesson 1: Room Design Principles
- Lesson 2: Conference Room Physical Room Layout
- Lesson 3: Conference Room Lighting Design
- Lesson 4: Conference Room Audio Design
- Lesson 5: Audio Console
- Lesson 6: Audio and Video Configuration
- Lesson 7: Conference Divisible Rooms Design
- Module Summary

## Module 3: Cisco Endpoints, Webex Room Systems, Desk Device, and Clients

- Module Topics
- Lesson 1: Webex Portfolio and Features
- Lesson 2: Webex Desk Mini
- Lesson 3: Webex Desk
- Lesson 4: Webex Desk Pro
- Lesson 5: Webex Desk Camera Series
- Lesson 6: Webex Room Kit
- Lesson 7: Webex Room Kit USB
  - Cisco Room USB
  - Cisco Room USB Feature
  - Room Kit Mini
- Lesson 8: Webex Room Kit Mini
  - Room Kit Mini Key Features
  - Room Kit Mini Features
  - Easy Integration
  - o Cisco Room Kit Mini vs Room Kit
- Lesson 9: Webex Room Kit Plus
  - o Cisco Room Kit Plus
  - Room Kit Plus Quad Camera
- Lesson 10: Webex Room Kit Pro
  - o Cisco Room Pro
  - Cisco Webex Room Kit Codec Pro Cameras
  - Comparing Codec Pro and Codec Plus
- Lesson 11: Webex Room Bar
  - Webex Room Bar (1)
  - Webex Room Bar Camera Specifications
- Lesson 12: Webex Room Bar Pro
  - Cisco Room Bar Pro (1)
  - o Room Bar Pro Dual Camera System
  - o Room Bar Pro Triple-screen Support
  - o Room Bar Pro Camera Specifications
  - Room Bar Pro and Room Kit Comparison
  - Room Bar Pro Unrivalled Inclusive Meetings
  - Room Bar Pro Deployment Scenarios
  - Room Bar Pro Audio Deployment (1)
  - Room Bar Pro Set Up
  - Room Bar Pro Motorized Lens Tilt
  - Room Bar Pro Lens Tilt Views
- Lesson 13: Webex Room Codec EQ
  - Cisco Codec EQ
  - Cisco Codec EQ And EQX
  - Room Kit EQ / Room Kit EQX
  - o Which EQ is Which?
  - o Cisco Codec EQ
  - Room Kit EQ
  - o HDMI Input/Output Capabilities
  - USB-C Capabilities

- USB-A Capabilities
- Audio I/O Support Analog and Digital Mics
- Codec EQ Physical Sharing
- Codec EQ Wireless Sharing
- Wireless and Bluetooth
- Power over Ethernet
- Quad Camera
- Cisco Table Microphone
- Lesson 14: Webex Room Kit EQX
  - Room Kit EQX (1)
  - Room Kit EQX Recommended Room Size
  - Room Layout vs FOV Considerations
  - Best Overview How Close Can You Be?
  - o Room Camera Reach
  - o Camera Reach
  - Quad Camera Extended Reach
  - Screen Cable Options
  - Room Kit EQX Mounting Options (1)
  - o Room Considerations & Installation
  - o EQX Screen Choice
  - EQX Screen Alignment (1)
  - EQX Screen Depth
  - o Deep screens? What options do I have?
- Lesson 15: Webex Campfire Rooms
  - Campfire Meeting Spaces
  - o Campfire Participant Views
  - Campfire Setup
  - Campfire Layout
  - Campfire Features
  - Hardware Connections Video Outputs
  - Hardware Connections Video Inputs
  - o Hardware Connectivity Network Connections
  - Hardware Connections Audio Outputs
  - Hardware Connections Audio Inputs
  - Macro Overview User-Interface
  - Macro Overview How Does it Work? (1)
  - Macro Overview Installation Node Codecs
  - Macro Overview Installation Primary Codec (1)
- Lesson 16: Room Panorama
  - Overview
  - Performance features
  - Premium Content Experience
  - Point-to-Point Meetings
  - Multi-Point Meetings
  - Webex Call Bandwidth
  - Room Panorama Audio Specifications
  - Webex Room Panorama Series
- Lesson 17: Cisco Board Pro
  - Cisco Board Pro Overview
  - Cisco Board Pro Hardware Overview

- Cisco Board Pro New Sensors
- o Active Pen (1)
- Companion Mode
- o Touch Redirect
- Camera Angle and FoV Details
- Mounting Options
- o Cisco Board Feature Comparison
- Lesson 18: Cisco Board Pro G2
  - Meet the Cisco
  - o Board Pro G2
  - Meet the Cisco Board Pro G2
  - What's new in Board Pro G2
  - Board Pro G2 enhancements
  - o Comparing Board Pro vs Board Pro G2
  - Hardware Overview
  - Mounting options
  - Active stylus powering seamless ideation
  - Connection ports
  - Display
  - o Active Pen
  - Field of View
  - Virtual lens
  - Peripherals
  - o Presenter & Audience on Board Pro (G1 and G2)
  - HDMI out
  - o On-premises Registration
- Lesson 19: Webex Room Navigator
- Webex Room Navigator versions
- Comparison with Touch10
- Lesson 20: SX / DX Devices
  - o SX10
  - o SX80 Overview
  - SX80 Flexibility
- Lesson 21: Webex Room OS 11
  - o Room OS 11 Easy Call Control Access
  - Room OS 11 Simplify Task Switching
  - o Room OS 11 Simplify Content Share
  - Optimize for my Voice Supported in Room OS 11
  - Frames On Cisco Devices
  - Board Controls
  - Access and Adjust Selfview on Board and Desk
  - Adjust Selfview in a Call
  - Default Layouts in Meetings
  - Layout Options on Board and Desk
  - Layout Options on Room Series
  - o RoomOS 11 Touch 10 Room Series
  - Access and Adjust Selfview on Room Series
  - o Access and Adjust Selfview on Room Series in a Call
  - Manually Adjust Camera Settings on Board and Room Series
  - Auto Camera Mode on Desk Series

- Camera Modes on Room Series
- Add and Edit Camera Presets
- Edit Camera Presets
- Add a New Camera Preset
- Use the Whiteboard on Board and Desk Series
- RoomOS 11 Desktop Tips Feature
- o Enable the Web Engine
- Add Web Apps on Board and Desk Series
- Launch a Web App on Board and Desk Series
- o Share Web App in a Call
- Local Preview
- o People Focus on Board, Desk, and Room Series
- Enable People Focus
- o Room OS 11 March 2023 Update
- Lesson 22: Webex Device States
- Lesson 23: Webex Calling Devices
  - Typical Phone Range
  - o Professional Value Phone + Headset
  - Webex Wireless Phones
  - o Key Conference Phones
  - The ALL-NEW Cisco Desk Phone 9800 Series
  - Hardware Lineup
  - o Desk Phone 9800 Series
  - Cisco Desk Phone 9841 (1)
  - o Cisco Desk Phone 9841 back view
  - o Cisco Desk Phone 9851 (1)
  - Cisco Desk Phone 9851 back view
  - Cisco Desk Phone 9861 (1)
  - Cisco Desk Phone 9861 back view
  - Cisco Desk Phone 9871 (1)
  - Cisco Desk Phone 9871 back view
  - Front Arc LED States
  - Favorite Button
  - Power Adaptor 3 for 9841/51/61/71
  - Two color options
  - Phone-OS
  - Desk Phone 9800 Platform Support
  - Front Arc LED and Top 360
  - Power over Ethernet (1)
  - KEM Overview
  - Comparison
  - Action Button all 9800s
  - o Silent Emergency Call Configuration
  - o Webex Calling Action Button Configuration Example
  - Action Button default behavior
  - CUCM Action Button Configuration Example
  - Silent Emergency Call Configuration
  - Action at your fingertips
  - Check-in to your desk for the day
  - CUCM Adding the 9800 Series

- Enhanced Configuration in Webex Calling
- Enhanced Configuration
- Enhanced Configuration Details
- Lesson 24: Headsets
  - o Bang & Olufsen Cisco 950
  - o NEW Bang & Olufsen Cisco 980
  - Cisco 320 Series WIRED
  - Cisco Headsets model comparison
- Lesson 25: Table Mic Pro
  - MIC-ARRAY-T
  - Installation Methods
  - o Why is Flush Mounting preferred?
  - o Management with Webex Control Hub
- Lesson 26: Ceiling Mic Pro
  - o Ceiling Mic Pro Mounting Options
  - Microphone Placement Guidelines
  - Ceiling Mic Pro Wiring Guide (1)
- Module Summary

# Module 4: Physical Installation and Device Setup

- Module Topics
- Lesson 1: Connecting Screens and Video Outputs
  - o Connecting Room Device Equipment
  - Internal and External Screen Connections
  - Setting Up Screens and Other Output Devices (1)
  - Cisco Board Series Video Outputs
  - Cisco Board Pro Series Video Outputs
  - Cisco Board Pro G2Series Video Outputs
  - Codec Series Video Outputs (1)
  - Room Series Video Outputs (1)
- Lesson 2: Manual and Automatic Screen Setup
  - Automatic Setup
  - Example Setup for Three Screens (Auto):
  - Example Setup for Two Screens (Auto):
  - When to Use Manual Setup
  - Manual Setup: Overview
  - Set a Role for Each Screen
  - Set the Number of Screens
  - Choose Screen for Messages and Indicators
  - Set Screen Resolution and Refresh Rate
  - Examples of Manual Setup (1)
  - Best Practices for Connecting Output Devices
  - o Room Bar
  - o Room Bar Pro
  - Room Kit
  - o Room Kit Mini
  - o Codec Pro: HDMI Output Connectors
  - Codec EQ: HDMI Output Connectors
  - o Room Kit EQX: HDMI Output Connectors
  - Codec Plus: HDMI Output Connectors
  - Board Pro: HDMI Output Connector

- Board Pro G2: HDMI Output Connectors
- Desk Pro: HDMI Output Connector
- Lesson 3: Connecting Recorders and External Devices
  - Connecting Input Sources
  - HDCP Support
  - o Connecting the Quad Camera
  - Connecting a Computer or Other Content Source
  - External Analog Microphones
  - o Best Practices for Input Connectors: Board Series
  - Best Practices for Input Connectors: Codec Series (1)
  - Connecting Input Sources: Codec and Room Series
  - Codec Plus Input
  - o Codec Pro & Room Panorama
  - Room Kit EQX
  - o Room Bar
  - o Room Kit
  - o Room Bar Pro
  - o Room Kit Mini
  - Desk and Desk Pro
  - Desk Mini
  - Board Pro
  - Board Pro G2
  - Extending Input Sources for Collaboration Devices
  - Architecture
  - Connecting a Computer
  - Connecting an External Display
  - Checklist for Optimizing Resolution
- Lesson 4: Presenter Track Configuration
  - Presenter-Track Feature Overview (1)
  - Considerations for Camera Placement (1)
  - Best Practices for Setting Up Presenter Track
  - Accessing the Web Interface
  - Opening Settings
  - Defining Tracking Areas
  - Fine-Tuning the Camera Control
  - Setting Up the Trigger Zone
  - Setting Up a Polygonal Trigger Zone
  - Testing and Final Adjustments
  - Saving Settings
  - Audience Camera
  - Presenter Camera
  - Screen Setup
  - Microphones
  - Loudspeakers
- Lesson 5: Presenter and Audience Room Mode Setup
  - Presenter and Audience Setup Overview
  - o Presenter and Audience Required Equipment
  - Definitions and Room Recommendations
  - o Presenter and Audience Screens
  - Presenter and Audience Microphones and Loudspeakers
  - Presenter and Audience Local Presenter Mode
  - o Presenter and Audience Remote Presenter Mode
  - o Presenter and Audience Hybrid Presenter Mode
  - Switching Between Room Modes

- Automatic Switching
- Manual Switching
- Lesson 6: Connecting Cables and Peripherals:
  - Connecting Cables for Codec EQ (1)
  - Codec Plus: Connecting Cables (1)
  - Codec Pro: Additional Connections for Presenter and Audience Setup
  - o Room Kit EQX: Additional Presenter and Audience Setup Connections
  - Room Bar Pro: Setup Connections
  - Configuring the Device for Presenter and Audience Setup
  - Access the Web Interface
  - Testing Presenter Track
  - Configuring Microphone Orientation
  - Diagnostics Available on the User Interface
  - Sound Diagnostics
  - Presenter Diagnostics
  - Briefing Room Setup Overview
  - o Room Modes
  - Briefing Room Modes Overview
  - Local Presenter Mode
  - Remote Presenter Mode
  - Discussion Mode
  - Optimized Room Arrangement for Briefing Setup
  - Briefing Room Setup for Codec Pro (1)
  - Briefing Room Setup for Codec EQ (1)
  - Briefing Room Setup for Room Bar Pro (1)
  - o Briefing Room Setup: Specific Configuration Instructions
  - o Briefing Room Setup: Limitations
  - Classroom Setup Overview
  - Classroom Setup Overview: Room Modes
  - Classroom Setup Overview: Limitations
  - Classroom Setup Overview: Comparing Room Types
  - Classroom Setup Room Arrangement Recommendations (1)
  - Codec EQ and Room Kit EQX: Cable Connections
  - Codec Plus: Connect Cables
  - Codec Pro: Connect Cables
  - Room Kit Pro: Connect Cables
- Lesson 7: Testing and Troubleshooting Connections
  - Testing Loudspeaker Connections
  - Running the Loudspeaker Check
  - Using Room Panorama
  - How to Reconnect Loudspeaker Cables (1)
  - Connection Methods
  - Connecting Directly (Product Specific) (1)
  - Touch Controller Setup
  - Touch Controller to Room Series Devices (1)
  - Software Updates:
  - o Connect via Network (LAN) (1)
  - LAN Connection for Touch Controller
  - Touch Controller
  - LAN Connection for Touch Controller (Codec Devices) (1)
  - o LAN Connection for Touch Controller (Room Kit Devices) (1)
  - Touch Controller via LAN (Board and Room Devices) (1)
- Lesson 8: Software Installation and Updates
  - Installing New Software

- Format of File Name
- Software Upgrade and Downgrade
- Cloud-Managed Software Upgrade
- o Install Software via Web Interface
- Add Option Keys (1)
- Lesson 9: Reset Procedures for Cisco Devices
  - Factory Reset Using Web Interface
  - o Factory Reset from User Interface
  - Factory Reset Using the Reset Button
  - Factory Reset Implications
  - Back Up Log Files
  - Device Access for Reset (1)
  - Factory Reset Cisco Webex Room Navigator
  - Factory Reset Touch 10 (1)
  - o Factory Reset Table Microphone Pro
- Module Summary

## **Module 5: Deploying CUCM Video Endpoints**

- Lesson 1: CUCM Video Endpoint Architecture
  - Cisco Unified Communications Manager (CUCM)
  - Unified Communications Manager Network Components
  - Unified Communications Manager (UCM) Architecture
  - UCM Components
  - UCM External Device Registration Flow
- Lesson 2: CUCM Endpoint Registration
  - Unified Communications Manager Registration
  - Device Registration Prerequisites
  - Endpoint Configuration Elements
  - Device Configuration Requirements for CUCM
  - Cisco Unified Communications Manager Group
  - Device Pools
  - o Register Devices to CUCM
  - Service Parameters
  - Creating a SIP Profile
  - o UCM Regions
  - UCM Locations
  - UCM Date/Time Group
  - Manual Cisco IP Phone Configuration
  - Save and Apply the Configuration
  - Add a Directory Number
  - Configure Directory Number (1)
- Lesson 3: Video Endpoint Settings for Cisco Unified Communications Manager Registration
  - Video Endpoint Registration
  - Using the Wizard on the Video Endpoint (1)
  - Devices Web Interface Configuration (1)
- Lesson 4: Mobile and Remote Access Device Registration
  - Architecture Deployment Scenarios for Cisco MRA
  - Cisco MRA Encryption and Authentication
  - Service Discovery (1)
  - Cisco Device Registration Procedure (1)
- Lesson 5: UCM B2B Video Endpoint Call Flows
  - CUCM Initiated B2B call
  - o Call Flow from the Customer Site to a UCM Endpoint

- Lesson 6: Troubleshooting UCM B2B Video Endpoint Call Flows
  - Troubleshoot Business-to-Business Calls (1)
- Lesson 7: Cisco Unified Communications Manager Device Troubleshooting Tools
  - Dialed Number Analyzer
  - Cisco UCM Dialed Number Analyzer Output
  - o Route Plan Report
- Module Summary

# **Module 6: Managing Cisco Device Settings & Options**

- Module Topics
- Lesson 1: Navigating the Local Device Web Interface
  - Local Device Web Interface
  - Connect To the Device
  - Device Sign in
  - How the Device Web Interface is Organized
  - o The Main Menu
  - The Default User Account
  - Create a New User Account (1)
  - Edit an Existing User Account (1)
- Lesson 2: Accessing and Understanding System Information
  - General Information (1)
  - o Issues
  - Software
  - Provisioning
  - Calendar
  - Utilization and Environment
  - Call Section Overview
  - Presentation Input Overview
  - Contacts Overview
  - Call Function Overview
  - Call Details Overview
  - Call Statistics Summary
- Lesson 3: Managing Device Configurations
  - Configuration / Apps Overview
- Lesson 4: Configuring and Optimizing Audio Settings
  - Audio Default Volume (1)
  - Audio Connector Setup
  - Audio Ethernet Encryption
  - o Audio Ethernet SAP Discovery Address
  - Audio Ethernet SAP Discovery Mode
  - Audio Input Ethernet [n] Channel [1..8] Gain
  - o Audio Input Ethernet [n] Channel [1..8] Level
  - o Audio Input Ethernet [n] Channel [1..8] Mode
  - o Audio Input Ethernet [n] Channel [1..8] Pan (1)
  - Audio Input Ethernet [n] Echo Control Noise Reduction (1)
  - Audio Input Ethernet [n] Equalizer ID (1)
  - Audio Input Ethernet [n] Equalizer Mode (1)
  - Audio Input Ethernet [n] Mode (1)
  - Microphone 1 Mode Configuration
  - Microphone Mode Focused
  - o Microphone Mode Wide
  - Video Association Mute on Inactive Video
  - Configuring USB-C Input Settings

- Echo Control Mode (1)
- Configuring USB Microphone Settings
- Microphone Configuration Options
- Audio Microphones Mute Enabled
- o Audio Microphones Noise Removal Mode
- Audio Microphones USB Passthrough Mute Button
- Voice Activity Detector Mode
- Audio Panning Mode
- Audio Panning Headset Analog Binaural Processing
- Audio Panning Headset Analog Mode
- Audio Panning Headset-USB Binaural Processing
- Output Internal Speaker Mode
- Ultrasound Max Volume
- o Audio Sounds-And-Alerts Ring-Tone
- o Audio Sounds-And-Alerts Ring Volume
- Audio USB Mode
- Audio USB Volume Control Capture Mode
- o Audio USB Volume Control Capture Value
- o Audio USB Volume Control Playback Mode
- Audio USB Volume Control Playback Value
- Lesson 5: Setting Up Bluetooth Connectivity
  - Bluetooth Allowed
  - Bluetooth Enabled
- Lesson 6: Room Booking and Scheduling
  - Bookings Allow Decline
  - Bookings Max Duration
  - Bookings Protocol Priority
  - Adhoc Booking Book Ahead Enabled
  - Adhoc Booking Booking Timeout
  - Adhoc Booking Enabled
  - o Check In Enabled
  - Check In Window Duration
- Lesson 7: Enabling Bring Your Own Device (BYOD) Functionality
  - BYOD Hid Forwarding Enabled
  - BYOD QR Code Pairing
  - BYOD Touch Forwarding Enabled
  - BYOD USBC Xapi
- Lesson 8: Reviewing and Managing Call History
  - Call History Mode
  - Call History Recents DisplayName
- Lesson 9: Configuring and Adjusting Camera Settings
  - Cameras Power Line Frequency (1)
  - o Cameras Background Enabled
  - Cameras Background User Images Allowed
  - Cameras Camera Color Saturation Level
  - Camera Excluded Area
  - Cameras Camera Exposure Compensation Level
  - Cameras Camera [n] Brightness Default Level
  - Cameras Camera [n] Backlight Default Mode
  - Cameras Camera [n] Brightness Algorithm (1)
  - o Cameras Camera [n] Brightness Default Level
  - Cameras Camera [n] Brightness Mode
  - o Cameras Camera [n] IR Cut Filter Mode
  - IR Cut Filter Threshold

- Camera Flip
- Camera Focus Mode
- Gamma Level
- Camera Mirror Mode
- o Cameras Camera [n] Video Format
- Cameras Camera [n] White Balance Mode
- o Cameras Camera [n] White Balance Level
- o Cameras Power Line Frequency
- o Cameras Presenter Track Camera Position Pan
- o Cameras Presenter Track Camera Position Tilt
- Cameras Presenter Track Camera Position Zoom
- o Cameras Presenter Track Connector
- Cameras Presenter Track Enabled
- o Cameras Presenter Track Presenter Detected Status
- o Cameras Presenter Track Trigger Zone
- Cameras Speaker Track Default Behavior
- Cameras Speaker Track Frames Mode
- Cameras Speaker Track Head Detector Range
- Cameras Speaker Track Meeting Zone Area
- o Cameras Speaker Track Meeting Zone Mode
- Cameras Speaker Track Zoom Range
- Cameras Speaker Track Mode
- Cameras Speaker Track Closeup
- Cameras Speaker Track Tracking Mode
- o Cameras Speaker Track Connector Detection Mode
- Cameras Speaker Track Connector Detection Camera Left
- o Cameras Speaker Track Connector Detection Camera Right
- Cameras Speaker Track Whiteboard Mode
- Lesson 10: Customizing Conference Settings
  - Conference Active Control Mode
  - Conference Auto Answer Mode (1)
  - Conference Auto Answer Delay
  - Conference Call Protocol IP Stack
  - Conference Default Call Protocol
  - Conference Default Call Rate
  - Conference Default Call Webex Rate
  - Conference Do Not Disturb Default Timeout
  - Conference Diagnostics Stream Status Overlay
  - Conference Embedded App Notifications Only
  - Conference End To End Encryption Mode
  - Conference End To End Encryption Identity Preferred Domain
  - o Conference Far End Control Mode
  - o Conference Hide Non-Video On Call Mode
  - Conference Join Leave Notifications
  - Conference Max Receive Call Rate
    Conference Max Transmit Call Rate
  - O ( MA MA III D : D (
  - Conference Max Multi Receive Rate
  - Conference Max Multi Site Transmit Rate
  - Conference Mic Unmute On Disconnect Mode
  - Conference Multipoint Mode
  - o Conference Multi Stream Mode
  - Conference Incoming Multi Site Call Mode
  - Conference People Focus On Call Mode
  - Conference Presentation On Place On Hold

- Conference Presentation Relay Quality
- Conference Webex Call Protocol IP Stack
- Lesson 11: Network Configuration and Connectivity
  - Network DNS DNSSEC Mode
  - Network DNS Domain Name
  - Network DNS Server Address
  - Network IEEE8021X Mode
  - Network IEEE8021X TLS Verify
  - Network IEEE802.1X Use Client Certificate
  - Network IEEE802.1X Identity
  - Network IEEE802.1X Password
  - Network IEEE802.1X Anonymous Identity
  - Network IEEE802.1X EAP Md5
  - Network IEEE802.1X Eap Ttls (1)
  - Network IEEE8021X Eap Peap
  - Network IP Stack
  - Network IPv4 Assignment
  - Network IPv4 Address
  - Network IPv4 Gateway
  - Network IPv4 Subnet Mask
  - Network IPv4 Interface Identifier
  - Network IPv6 Assignment
  - Network IPv6 Address
  - Network IPv6 Gateway
  - Network IPv6 DHCP Options
  - Network IPv6 Interface Identifier
  - Network MTU
  - Network QoS Mode
  - Network QoS Diffserv Audio
  - Network QoS Diffserv Video
  - Network QoS Diffserv Data
  - Network QoS Diffserv Signaling
  - Network Remote Access Allow
  - Network Speed
  - Network Traffic Control Mode
  - Network VLAN Voice Mode
  - Network VLAN Voice Vlan Id
  - Network Services CDP Mode
  - Network Services Common Proxy
  - Network Services HTTP Mode
  - Network Services HTTP Proxy Authentication Method
  - Network Services HTTP Proxy Login Name
  - Network Services HTTP Proxy Mode
  - Network Services NTP Mode
  - Network Services NTP Server [n] Address
  - Network Services NTP Server [n] Key
  - Network Services NTP Server [n] Keyld
  - Network Services NTP Server [n] KeyAlgorithm
  - Network Services SIP Mode
  - Network Services SMTP Mode
  - Network Services SMTP Server
  - Network Services SMTP Port
  - Network Services SIP Mode
  - Network Services SMTP Mode

- Network Services SMTP Server
- Network Services SMTP Port
- Network Services SMTP Username
- Network Services SMTP Password
- Network Services SMTP From
- Network Services SMTP Security
- Network Services SNMP Community Name
- Network Services SNMP Mode
- Network Services SNMP System Contact
- Network Services SNMP System Location
- Network Services SSH Mode
- o Network Services SSH Host Key Algorithm
- Network Services SNMP Mode
- Network Services Wifi Allowed
- Network Services Wifi Settings A\_MPDU
- Network Services XMLAPI Mode
- Lesson 12: Provisioning Devices for Use
  - Provisioning Connectivity
  - Provisioning CUCM Call Management Records Call Diagnostics
  - Provisioning External Manager Address
  - Provisioning External Manager Alternate Address
  - Provisioning External Manager Protocol
  - o Provisioning External Manager Path
  - Provisioning External Manager Domain
  - Provisioning Mode
  - Provisioning Login Name
  - Provisioning Password
  - Provisioning Tls Verify
  - Provisioning Webex Edge
- Lesson 13: Configuring Standby and Scheduling Modes
  - Room Scheduler Booking Timeout
  - Room Scheduler Enabled
  - User Interface Room Scheduler State Available Color
  - User Interface Room Scheduler State Busy Color
  - User Interface Room Scheduler State Pending Color
  - Standby Boot Action
  - Standby Brightness Delay
  - Standby Control
  - Standby Delay
  - Standby Halfwake Screensaver
  - Standby Level Networked Delay
  - Standby Level Networked Mode
  - Standby Halfwake Mode
  - Standby Signage Audio
  - Standby Signage Interaction Mode
  - Standby Signage Mode
  - Standby Signage Refresh Interval
  - Standby Signage Url
  - Standby Standby Action
  - Standby Wakeup Action
  - Standby Wakeup At Meeting Start
  - Standby Wakeup On Motion Detection
  - SystemUnit Name
  - System Unit Broadcast Name

- System Unit Custom Device Id
- Lesson 14: Managing Time and Date Settings
  - System Unit Extension Mouse Support
  - Time Date Format
  - Time Time Format
  - o Time Zone
  - o Time Office Hours Enabled
  - Time Office Hours Outside (1)
  - Time Office Hours (1)
- Lesson 15: User Management and Access Control
  - User Management (1)
- Lesson 16: Video Input Configuration
  - Video Active Speaker Default PiP Position
  - Video Default Layout Family Local
  - Video Default Layout Family Local Content
  - Video Default Layout Family Remote
  - Video Default Main Source
  - Video Input Camera Config Mode
  - Video Input Connector [n] Camera Control Camera Id
  - Video Input Connector [n] Camera Control Mode
  - o Video Input Connector [n] CEC Mode
  - Video Input Connector [n] HDCP Mode
  - Video Input Connector [n] Input Source Type
  - Video Input Connector [n] Name
  - Video Input Connector [n] Optimal Definition Profile
  - Video Input Connector [n] Optimal Definition Threshold60fps
  - Video Input Connector [n] Preferred Resolution
  - Video Input Connector [n] Presentation Selection
  - Video Input Connector [n] Quality
  - Video Input Connector [n] RGB Quantization Range
  - Video Input Connector [n] Visibility
  - Video Monitors
  - Video Output Connector [n] Brightness
  - Video Output Connector [n] Brightness Mode
  - Video Output Connector [n] CEC Mode
  - Video Output Connector [n] Content Type
  - Video Output Connector [n] HDCP Policy
  - Video Output Connector [n] Location Horizontal Offset
  - Video Output Connector [n] Monitor Role
  - Video Output Connector [n] Resolution
  - Video Output Connector [n] TouchInput Mode
  - Video Output HDMI Passthrough Allowed
  - Video Output HDMI Passthrough HDMI Usb Converter Mode
  - Video Output HDMI Passthrough Output Connector
  - Video Output HDMI Passthrough Automatic Disconnect
  - Video Output HDMI Passthrough Auto Disconnect Delay
  - Video Output Mirroring Type
  - Video Output Webcam USB Mode
  - Video Output Connector [n] White balance Level
  - Video Presentation DefaultPiPPosition
  - Video Presentation Default Source
  - Video Presentation Priority
  - Video Selfview Default Fullscreen Mode
  - Video Selfview Default Mode

- Video Selfview Default On Monitor Role
- Video Selfview Default PiP Position
- Lesson 17: Exploring the Status Page
  - Audio Status Overview
  - o Audio Device Status
  - Understanding Device Connection Status
  - Connectors
  - Local Input
  - Microphone Status
  - HDMI Output Delay
  - Local Output 2
  - o USB Status
  - Booking Status
  - o Camera Status
  - o Camera 1 Details
  - Speaker Track:
  - Conference Capabilities
  - o Conference Status
  - End-to-End Encryption Status
  - o Certificate Details
  - People Focus
  - o Presentation
  - Speaker Lock
  - Remote Access Availability
  - SystemUnit Status
  - Hardware and Main Board Details
  - Software
- Lesson 18: Audio and Video Status
  - Camera Settings
  - Video Inputs
  - Video Outputs
  - Microphone Settings
- Lesson 19: Managing Software Updates and Versions
  - Software
  - o Option Kevs
  - Installed Option Keys
  - Product Keys
- Module Summary

## **Module 6: Managing Cisco Device Settings & Options**

- Module Topics
- Lesson 1: Navigating the Local Device Web Interface
- Lesson 2: Accessing and Understanding System Information
- Lesson 3: Managing Device Configurations
- Lesson 4: Configuring and Optimizing Audio Settings
- Lesson 5: Setting Up Bluetooth Connectivity
- Lesson 6: Room Booking and Scheduling
- Lesson 7: Enabling Bring Your Own Device (BYOD) Functionality
- Lesson 8: Reviewing and Managing Call History
- Lesson 9: Configuring and Adjusting Camera Settings

- Lesson 10: Customizing Conference Settings
- Lesson 11: Network Configuration and Connectivity
- Lesson 12: Provisioning Devices for Use
- Lesson 13: Configuring Standby and Scheduling Modes
- Lesson 14: Managing Time and Date Settings
- Lesson 15: User Management and Access Control
- Lesson 16: Video Input Configuration
- Lesson 17: Exploring the Status Page
- Lesson 18: Audio and Video Status
- Lesson 19: Managing Software Updates and Versions
- Module Summary

# Module 7: Network Requirements and Config For Devices

- Module Topics
- Lesson 1: Device Network Requirements
- Lesson 2: Network Infrastructure for Device Registration
- Lesson 3: Preparing Network Infrastructure
- Lesson 4: Network Assessment
- Lesson 5: Switch Configuration for Video Devices
- Lesson 6: Webex Calling Ports and Protocols
- Lesson 7: Diagnosing Switch Issues
- Lesson 8: WIFI Troubleshooting
- Module Summary

## **Module 8: Webex Device Registrations**

- Module Topics
- Lesson 1: Adding a Personal Collaboration Phone
- Lesson 2: Adding a Personal Collaboration Device
- Lesson 3: Common Area Phones
- Lesson 4: Deploying a Shared Collaboration Device
- Lesson 5: Device Templates And Backups
- Lesson 6: Webex Device Registration
- Lesson 7: Device Navigation
- Lesson 8: Webex Device States
- Module Summary

### **Module 9: Device and Meeting Features**

- Module Topics
- Lesson 1: Webex Workspace Overview
- Lesson 2: Workspaces Room Peripherals
- Lesson 3: Device / Workspace Features
- Lesson 4: Navigator Features
- Lesson 5: Companion Mode

- Lesson 6: Creating Workspaces
- Lesson 7: Managing Workspaces
- Lesson 8: Hotdesking
- Lesson 9: Presenter & Audience
- Lesson 10: Cinematic Views
- Lesson 11: People Focus
- Lesson 12: Webex Meeting Frames
- Lesson 13: Webex Meeting Cross-View
- Lesson 14: Multi-Camera Speaker View
- Lesson 15: Meeting Zone
- Lesson 16: Speaker Track
- Lesson 17: Multiples SpeakerTrack Cameras in one Room

## **Module 10: Webex App Overview**

- Module Topics
- Lesson 1: Download Webex App
- Lesson 2: Install and Login to Webex App for Windows
- Lesson 3: Test Connectivity and Bandwidth To Webex
- Lesson 4: Configuring Webex App Settings
- Lesson 5: Using Webex Calling
- Lesson 6: Webex Calling Voicemail
- Lesson 7: Using Webex Messaging
- Lesson 8: Space Sections
- Lesson 9: Webex App Spaces
- Lesson 10: Team Spaces
- Lesson 11: Webex Meetings
- Lesson 12: Joining a Meeting
- Lesson 13: Schedule a Meeting
- Lesson 14: Webex In-Meetings Features
- Lesson 15: Ai Features
- Module Summary

# Module 11: Webex User Hub

- Module Topics
- Lesson 1: Webex User Hub
- Lesson 2: Settings
- Lesson 3: Calendar
- Lesson 4: Webinar
- Lesson 5: Recordings
- Module Summary

## Module 12: Microsoft Integrations / Microsoft Teams Rooms / Google Meeting / Zoom

- Module Topics
- Lesson 1: Webex Devices Microsoft Integration Overview
- Lesson 2: Video Integration with Microsoft Teams (VIMT)Configuring Webex Devices for Integration
- Lesson 3: Direct Guest Join (WebRTC)
- Lesson 4: Cisco Devices for Microsoft Teams Rooms

- Lesson 5: MTR Supported Features
- Lesson 6: Microsoft 365 Admin Center Provision
- Lesson 7: Microsoft Teams Room Onboarding
- Lesson 8: Microsoft Entra and Intune
- Lesson 9: Joining a Zoom Meeting
- Lesson 10: Joining a Google Meeting
- Module Summary

## Module 13: Webex APIs, Integrations, and Macros

- Module Topics
- Lesson 1: Device Automation Overview
- Lesson 2: Device APIs
- Lesson 3: Device Integrations
- Lesson 4: Device Programmability Overview
- Lesson 5: Device Macros and UI Extension
- Lesson 6: User Interface (UI) Extension
- Lesson 7: MTR Programmability and Device xAPI
- Lesson 8: Device Macro and Configuration Deployment Options
- Lesson 9: Device Macro and UI Extension Control Hub Configuration
- Lesson 10: Device Backups
- Lesson 11: CE-Deploy
- Lesson 12: WebView Web-Sockets
- Lesson 13: Kiosk Web Apps
- Module Summary

## Module 14: Cisco Spaces

- Module Topics
- Lesson 1: Cisco Spaces Overview
- Lesson 2: Cisco Smart Workspaces
- Lesson 3: Cisco Spaces Control Hub Activation
- Lesson 4: Cisco Spaces Initial Configuration
- Lesson 5: Control Hub Configuration
- Lesson 6 Enable CH Workspace for Smart Workspaces
- Lesson 7: Enable Cisco Spaces on the Navigator
- Lesson 8: Add Rich Maps to Cisco Spaces
- Lesson 9: Spaces Manager
- Lesson 10: Cisco Spaces Digital Signage
- Lesson 11: Digital Signage Views on the Device
- Module Summary

## Module 15: Digital Signage

- Module Topics
- Lesson 1: Webex Digital Signage
- Lesson 2: Digital Signage Configuration using Cisco Webex Control Hub
- Lesson 3: Appspace
- Module Summary

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## **Module 16: Device Troubleshooting**

- Module Topics
- Lesson 1: Troubleshooting Methodology
- Lesson 2: OSI Model Troubleshooting
- Lesson 3: Understanding SIP Protocol
- Lesson 4: Network Switch Issues
- Lesson 5: Troubleshooting Device Registration
- Lesson 6: Troubleshooting Media Quality
- Lesson 7: Utilizing TAC
- Lesson 8: Traffic Flow Examples
- Lesson 9: Thousand Eyes
- Module Summary

### **Module 17: Webex IP Phone Basics**

- Module Topics
- Lesson 1: IP-Phone Setup Overview
- Module Summary

#### LAB OUTLINE

- Lab 0: Establishing Your Lab Connection
- Lab 1: Getting Started with Workstation 1
- Lab 2: Laying the Foundation with Network Prerequisites
- Lab 3: Webex Control Hub Configurations
- Lab 4: Hybrid Calendar and VIMT Setup
- Lab 5: Designing & Optimizing Collaborative Workspaces
- Lab 6: Seamlessly Registering Cisco Devices
- Lab 7: Cloud Device Configuration Management
- Lab 8: Taking Control with Local Device Settings
- Lab 9: Elevating Meetings with Cinematic Features
- Lab 10: Managing Physical Device Controls
- Lab 11: Using the Webex User Hub
- Lab 12: Automating with Macros, APIs, and Integrations
- Lab 13: Deploying Digital Signage
- Lab 14: Webex App Client Features (Optional)
- Lab 15: Cisco Smart Workspaces Lab Overview
- Lab 16 Webex Device Thousand Eyes Integration
- Lab 17 Cisco Spaces PART 2