

Implementing Cisco Telepresence Video Solutions Part 2 (VTVS2)

Course Summary

Description

Implementing Cisco TelePresence Video Solutions, Part 2 (VTVS2) v1.0 is a 5-day instructor-led course that is designed to teach technicians who install and support Cisco TelePresence solutions to install and configure, operate, and maintain core visual communication components, including telepresence endpoints, gatekeepers, multipoint control units (MCUs), and management software. In this course, students will add Cisco TelePresence products to existing Cisco Unified Communications Manager (Unified CM) environments. This training is also appropriate for end-user technical staff, such as video system administrators and first-line support personnel.

Objectives

At the end of this course, students will be able to:

- Define Cisco Business TelePresence Solutions components and architectures
- Describe SIP and H.323 basic configuration
- Implement advanced features of Cisco VCS
- Implement Cisco TelePresence MCU, Cisco TelePresence Server, and the MSE 8000 Server as they interoperate with both the Cisco VCS and the Cisco Unified CM
- Utilize Cisco Conductor for multiple multipoint control units or TelePresence Server management
- Implement Cisco TelePresence Management Suite
- Provision devices using TMS Provisioning Extension
- Demonstrate how Cisco TelePresence Content Server interacts with other products within the Cisco Business TelePresence Solution

Topics

- Cisco TelePresence Endpoints Overview
- SIP and H.323 Basic Configuration
- Advanced Cisco VCS Features
- Video Conference Bridges
- Cisco TelePresence Conductor
- Cisco TelePresence Management Suite
- Cisco TMSPE
- Cisco TelePresence Content Server

Audience

- Field engineers and first-line support personnel who implement and support Cisco TelePresence products and applications
- End-user technical staff such as video systems engineers and administrators
- Also appropriate for sales engineers

Prerequisites

The knowledge and skills that a learner must have before attending this course are as follows:

- Working knowledge of basic IP networking
- Knowledge of video conferencing and streaming fundamentals

Additional knowledge and skills that will help the learner benefit fully from the course are as follows:

- Cisco Basic IP Networking E-learning or Interconnecting Cisco Devices, Part 1 and 2 (ICND1 and ICND2)
- VTVS1 - Implementing Cisco TelePresence Video Solutions, Part 1

Duration

Five days

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Course Outline

I. Cisco TelePresence Endpoints Overview

- A. Lesson 1: Understanding Cisco TelePresence Endpoints
- B. Cisco TelePresence Endpoint Solutions
- C. Cisco Jabber and Jabber Video
- D. Locating Documentation

II. SIP and H.323 Basic Configuration

- A. Lesson 1: Understanding the Cisco Video Network
 - 1. Cisco VCS Video Network
 - 2. Cisco Unified CM Video Network
 - 3. Fully Enabled Video Network Solution
- B. Lesson 2: Understanding SIP, H.323, and the Cisco VCS
 - 1. Session Initiation Protocol
 - 2. H.323
 - 3. Interworking
- C. Lesson 3: Backing Up, Restoring, and Upgrading the Cisco VCS
 - 1. Backing Up and Restoring the Cisco VCS
 - 2. Upgrading the Cisco VCS
- D. Lesson 4: Configuring SIP with Cisco Unified CM
 - 1. SIP for Cisco Unified CM
- E. Lesson 5: Exploring the Cisco Unified CM and Cisco VCS Dial Plans
 - 1. Cisco Unified CM and Cisco VCS Dial Plans

III. Advanced Cisco VCS Features

- A. Lesson 1: Demonstrating Cisco VCS Security Policies and Authentication
 - 1. Connection Security
 - 2. Local Authentication
 - 3. Remote Authentication
 - 4. Registration Conflict Policy
 - 5. Registration Restriction Policy
- B. Lesson 2: Describing the Fundamentals of Subzones
 - 1. Local Zone Components
 - 2. Membership Rules
- C. Lesson 3: Describing Transforms and Admin Policy
 - 1. Transforms
 - 2. Admin Policy
- D. Lesson 4: Implementing the FindMe Application on the Cisco VCS
 - 1. FindMe Functionality
 - 2. FindMe Configuration
- E. Lesson 5: Describing the Purpose of Zones on the Cisco VCS
 - 1. Purpose of Zones
 - 2. Search Priority
- F. Lesson 6: Configuring Neighbor Relationships

- 1. Neighbor Zones

- 2. Creating Neighbor Zones
- 3. Integration

G. Lesson 7: Configuring Traversal Zones

- 1. Need for Traversal Zones
- 2. H.460 and Assent Protocols
- 3. Traversal Zone Configuration

H. Lesson 8: Describing and Formatting DNS and ENUM Zones

- 1. Domain Name System Dialing
- 2. E.164 Number Mapping

I. Lesson 9: Configuring Subzone Bandwidth Management

- 1. Explain bandwidth management
- 2. Implement bandwidth restrictions on a Cisco VCS using subzones
- 3. Implement bandwidth restrictions on a Cisco VCS using pipes

J. Lesson 10: Describing Call Processing

- 1. Subzones and Zones
- 2. Subzone Call Failure
- 3. Call Processing Order
- 4. Cisco VCS Call Routing
- 5. Zone Call Failure

K. Lesson 11: Describing Regular Expressions

- 1. Regular Expressions
- 2. Interworking and Transforms

L. Lesson 12: Describing and Installing Security Certificates

- 1. Certificates
- 2. Certificate Installation

M. Lesson 13: Describing Cisco Unified Presence on the Cisco VCS

- 1. Presence
- 2. Cisco Unified Presence and PUA
- 3. Presence Deployments

N. Lesson 14: Describing the Conference Factory

- 1. Conference Factory
- 2. Cisco VCS Settings for Conference Factory

O. Lesson 15: Using Redundancy

- 1. Clustering and the Cisco VCS
- 2. Replication Components
- 3. Clustering Configuration

P. Lesson 16: Troubleshooting the Cisco VCS

- 1. Collecting Information
- 2. Log Files
- 3. Search History
- 4. Warnings
- 5. Cisco TAC Information

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Course Outline (cont'd)

IV. Video Conference Bridges

- A. Lesson 1: Understanding the Cisco TelePresence MCU
 - 1. Cisco TelePresence MCU Purpose and Placement
 - 2. Cisco TelePresence MCU Product Line
- B. Lesson 2: Setting Up the Cisco TelePresence MCU
 - 1. Cisco TelePresence MCU Installation
 - 2. Cisco TelePresence MCU Indicator Lights
 - 3. Locating Documentation
- C. Lesson 3: Configuring the Cisco TelePresence MCU
 - 1. Network Settings
 - 2. H.323 and SIP Settings
 - 3. Types of Prefixes
 - 4. Prefixes and Dial Plans
 - 5. Media Port Reservation
 - 6. Cisco TelePresence MCU as an Ad Hoc Bridge
 - 7. Locating the Help Function
- D. Lesson 4: Operating the Cisco TelePresence MCU
 - 1. Cisco TelePresence MCU Conference Configuration
 - 2. Cisco TelePresence MCU Conference Monitoring
- E. Lesson 5: Customizing the Cisco TelePresence MCU
 - 1. Auto-Attendants
 - 2. Endpoints
 - 3. User Access
 - 4. Auto-Attendant Customization
- F. Lesson 6: Understanding Global Conference Settings
 - 1. Global Conference Settings
 - 2. Templates
 - 3. Minimum Outgoing Bit Rate
- G. Lesson 7: Upgrading the Cisco TelePresence MCU
 - 1. Web Interface Upgrade, Backup, and Restore
 - 2. FTP Backup and Restore
- H. Lesson 8: Understanding the Cisco TelePresence MSE 8000
 - 1. Basic Components
 - 2. Indicators
 - 3. Supervisor Blade Settings
 - 4. Power Consumption Calculation
 - 5. Blade Options

- I. Lesson 9: Understanding the Cisco TelePresence Server
 - 1. Cisco TelePresence Server Role
 - 2. Hardware Options
 - 3. Server Features
 - 4. Lesson 10: Understanding TIP
- J. What Is TIP?
 - 1. TIP Call Setup
 - 2. TIP Deployment Scenario
- K. Lesson 11: Troubleshooting the Cisco TelePresence MCU
 - 1. Diagnostic Tools
 - 2. Endpoint and Conference Diagnostics
 - 3. Event Logs

V. Cisco TelePresence Conductor

- 1. Lesson 1: Understanding the Cisco TelePresence Conductor
 - 2. Cisco TelePresence Conductor Overview
 - 3. Network Placement
 - 4. Call Flow on Unified CM: Ad Hoc Conference
 - 5. Call Flow on Unified CM: Rendezvous Conference
 - 6. Call Flow on the Cisco VCS
- B. Lesson 2: Configuring the Cisco MCU with VCS and Conductor
 - 1. Configuring Cisco TelePresence MCU with the Conductor
 - 2. SIP and H.323 Configuration
 - 3. Conference and Gatekeeper Configuration
- C. Lesson 3: Configuring the Cisco MCU with Unified CM and Conductor
 - 1. Configuring Cisco TelePresence MCU with the Unified CM and Conductor
 - 2. SIP and H.323 Configuration with Unified CM
 - 3. Conference and Gatekeeper Configuration with Unified CM
- D. Lesson 4: Configuring the TelePresence Server with the Conductor
 - 1. Port Optimization with the Conductor
 - 2. TelePresence Server Configuration for Communication with the Conductor
 - 3. SIP and H.323 Configuration
- E. Lesson 5: Configuring the Cisco VCS with TelePresence Conductor
 - 1. Policy Service
 - 2. Neighbor Zones
 - 3. Search Rules

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Course Outline (cont'd)

- F. Lesson 6: Configuring Cisco TelePresence Conductor Settings
 - 1. User Creation and System Settings
 - 2. Conference Bridge Pools
 - 3. Service Preference
 - 4. Conference Templates
 - 5. Conference Alias
 - 6. Ad Hoc and Rendezvous Locations
 - 7. Cisco Unified CM Locations in the Conductor
- G. Lesson 7: Configuring the Cisco Unified CM and Conductor
 - 1. Communication with the TelePresence Conductor
 - 2. Ad Hoc and Rendezvous Conferences
- H. Lesson 8: Troubleshooting the TelePresence Conductor
 - 1. Event Log
 - 2. Diagnostic Logging and System Snapshot

VI. Cisco TelePresence Management Suite

- A. Lesson 1: Understanding the Cisco TMS
 - 1. Cisco TMS Overview
 - 2. Documentation
- B. Lesson 2: Operating the Cisco TMS
 - 1. Cisco TMS Navigator
 - 2. Templates and Dial Plans
 - 3. Backup and Restore
 - 4. Upgrades
 - 5. Phone Books
- C. Lesson 3: Creating Conferences in the Cisco TMS
 - 1. Scheduling a Conference
 - 2. Cisco TMS Smart Scheduler
 - 3. Conference Monitoring
- D. Lesson 4: Understanding ISDN and IP Zones
 - 1. ISDN and IP Zones
 - 2. ISDN Zone Configuration
 - 3. IP Zone Configuration
- E. Lesson 5: Managing Permissions in the Cisco TMS
 - 1. Understand user administration in the Cisco TMS
 - 2. Understand the roles of various groups and types of permissions
 - 3. Understand how to create a user locally and remotely
 - 4. User Administration
 - 5. Cisco TMS Roles
 - 6. Creating Users
- F. Lesson 6: Troubleshooting the Cisco TMS
 - 1. Cisco TMS Services
 - 2. SQL Database

- 3. Cisco TMS Web Server

VII. Cisco TMSPE

- A. Lesson 1: Understanding Cisco TMSPE
 - 1. What Is TMSPE?
 - 2. Documentation
- B. Lesson 2: Configuring Cisco TMSPE Components
 - 1. Provisioning Components
 - 2. Configuring the Cisco VCS for Provisioning
 - 3. Configuring the Cisco TMS for Provisioning
 - 4. DNS for Provisioning
- C. Lesson 3: Deploying Cisco TMSPE for Provisioning
 - 1. Groups and Users
 - 2. Address Patterns
 - 3. Template Schemas
- D. Lesson 4: Provisioning Phone Books and Sending Account Information
 - 1. Provisioning Phone Book Sources
 - 2. Provisioning a Phone Book
 - 3. Sending Account Information
- E. Lesson 5: Troubleshooting Provisioning Components
 - 1. TMSPE Diagnostics
 - 2. TMSPE Services
 - 3. Log Files

VIII. Cisco TelePresence Content Server

- A. Lesson 1: Understanding the Cisco TCS
 - 1. Cisco TCS Purpose Documentation
 - 2. Cisco TCS Basic Features
 - 3. Cisco TCS with Cisco Show and Share and the Cisco Media experience Engine
- B. Lesson 2: Configuring the Cisco TCS
 - 1. H.323 and SIP Settings
 - 2. Adding Users
 - 3. Conference Templates, Categories, and Call Configuration
 - 4. Recording Alias
 - 5. Playback Alias
 - 6. Export and Import Recordings

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Course Outline (cont'd)

IX. Labs

- Lab 1-1: Endpoint Configuration
- Lab 2-1: Basic Call Control Settings for the Cisco VCS
- Lab 2-2: Basic Call Control Settings for the Unified CM
- Lab 3-1: Components of Cisco VCS Security
- Lab 3-2: Exploring the Fundamentals of Subzones
- Lab 3-3: Presearch, Transforms, Admin Policy, and User Policy
- Lab 3-4: Neighbor Relationships and SIP Trunks
- Lab 3-5: Calling Outside: Traversal Zones and DNS Zones
- Lab 3-6: Bandwidth Management
- Lab 3-7: Call Processing
- Lab 3-8: Interworked Dialing: Transforms, Search Rules, and Regular Expressions
- Lab 3-9: Conference Factory and Cisco TelePresence Multiway
- Lab 3-10: Logs and History
- Lab 4-1: Verify H.323 and SIP Settings for the Cisco TelePresence MCU
- Lab 4-2: Configuring Conferences
- Lab 4-3: Cisco MCU Customization
- Lab 4-4: Cisco TelePresence MCU Backup and MSE 8000 Options
- Lab 4-5: Diagnostics and Call Logs for the Cisco TelePresence MCU
- Lab 5-1: Cisco TelePresence Conductor
- Lab 6-1: Operating the Cisco TMS
- Lab 6-2: Conference Creation
- Lab 6-3: ISDN and IP Zones
- Lab 6-4: User Permissions
- Lab 6-5: Cisco TMS Troubleshooting
- Lab 7-1: Configuring the Cisco VCS for Provisioning
- Lab 7-2: Troubleshooting the Cisco TMSPE
- Lab 8-1: Cisco TCS Configurations and Recordings