

## Implementing Cisco IP Telephony and Video Part 1

Varighed: 5 Days    Kursus Kode: CIPTV1

### Beskrivelse:

This five-day course provides students with the knowledge and skills required for implementing a Cisco Collaboration solution at a single-site environment. The course focuses primarily on Cisco Unified Communications Manager Version 10.x, which is the call-routing and signaling component for the Cisco Collaboration solution.

Lab exercises included in the course help students practice post installation tasks, configure Cisco Unified Communications Manager, implement MGCP and H.323 and, SIP trunks, and build dial plans to place single site on-cluster and off-cluster calling for voice and video. The implementation of media resources, audio and video conferencing are also included in this course. This course is worth 40 Credits in the Continuing Education Program.

### Målgruppe:

Network engineers deploying Cisco IP Telephony and Video solutions. Individuals looking to achieve the CCNP Collaboration Certification.

### Agenda:

- **After you complete this course you will be able to:**
- Describe the role of Cisco Unified Communications Manager in a Cisco Collaboration Solution, including its functions, architecture, deployment and redundancy options, and how to deploy endpoints, users and Cisco IP Phone Services.
- Describe the functions and the purpose of a dial plan and how to implement on-cluster calling.
- Provide an introduction to QoS with emphasis on the QoS components often referred to as the QoS toolkit, that are used to provide services for various business applications. Describe how to configure MGCP, H.323 and SIP gateways.
- Describe the types of media resources that Cisco Unified Communications Manager supports, how to configure Cisco Unified Communications Manager server software-based media resources and how to implement Cisco hardware-based media resources.
- Create a Dial Plan that supports inbound and outbound off-cluster calling for numbers and URIs.
- Describe how to implement audio and video conferencing devices that can be used with Cisco Unified Communications Manager, built-in Cisco Unified Communications Manager software audio bridge, Cisco IOS-based audio and video conference bridges and Cisco TelePresence conferencing products including Cisco TelePresence MSE 8000, Cisco TelePresence Server, Cisco TelePresence MCU and Cisco TelePresence Conductor.

### Forudsætninger:

#### Attendees should meet the following prerequisites:

- Working knowledge of fundamental terms and concepts of computer networking, including LANs, WANs, and IP switching and routing
- Ability to configure and operate Cisco routers and switches and to enable VLANs and DHCP
- Basics of digital interfaces, PSTN, and VoIP
- Fundamental knowledge of converged voice and data networks
- Prior attendance of the following is recommended: ICND1 and ICND2 or CCNABC, CICA and CIVND2.

### Test og certificering

#### Recommended preparation for exam(s):

- 300-070 - Implementing Cisco IP Telephony and Video Part 1  
*CIPTV1 is one of four courses required for the Cisco Certified Network Professional for Collaboration Career Certification*

## Yderligere Kurser:

The following courses are recommended for students looking to achieve their CCNP in collaboration.

- CIPTV2 – Cisco IP Telephony and Video Part 2
- CAPPs – Implementing Cisco Collaboration Applications
- CTCOLLAB – Troubleshooting Cisco IP Telephony and Video

### Indhold:

#### Cisco Unified Communications Manager Introduction

- Describing the role of Cisco Unified Communications Manager, its architecture and its deployment and redundancy options.
- Performing Initial Cisco Unified Communications Manager Configuration
- Deploying Endpoints and Users
- Deploying IP Phone Services

#### Dial Plan Introduction and Implementation of Single-Site On-Cluster Calling

- Describing Dial Plan Components
- Implementing Endpoint Addressing and Call Routing
- Implementing Calling Privileges
- Implementing Call Coverage in Cisco Unified Communications Manager

#### Implementation of Single-Site Off-Cluster Calling

- Analysing Single-Site Off-Cluster Calling Requirements
- Implementing PSTN Access Using MGCP Gateways
- Describing Cisco IOS H.323 and SIP Gateways
- Implementing PSTN Access Using H.323 Gateways
- Describing the Cisco Unified Border Element
- Using the Cisco Unified Border Element to Access the PSTN via a SIP Trunk
- Using the Cisco Unified Border Element for URI Dialing
- Describing Dial Plan Interworking

#### Media Resources

- Describing Media Resources in Cisco Unified Communications Manager
- Implementing Annunciators and MOH
- Implementing MTPs

#### Audio and Video Conferencing

- Describing Conferencing Devices and their Functions
- Implementing Conference Bridges
- Describing Cisco TelePresence MSE 8000
- Implementing Cisco TelePresence Server
- Implementing Cisco TelePresence Conductor

#### Quality of Service

- Analysing Quality of Service Requirements
- Describing QoS Components and their Functions
- Implementing Marking
- Implementing Policing and Shaping

#### Labs

- Lab 1: Configuring Cisco Unified Communications Manager Initial Settings
- Lab 2: Deploying Endpoints and Users
- Lab 3: Implementing Endpoint Addressing and Call Routing
- Lab 4: Implementing Calling Privileges
- Lab 5: Implementing Call Coverage
- Lab 6: Implementing PSTN Calling Using MGCP Gateways
- Lab 7: Implementing PSTN Calling Using H.323 Gateways
- Lab 8: Implementing PSTN Calling Using SIP Trunks Through Cisco Unified Border Element
- Lab 9: Using Cisco Unified Border Element for URI Dialing
- Lab 10: Implementing Annunciators and MOH
- Lab 11: Implementing Conference Bridges
- Lab 12: Implementing Cisco TelePresence Conductor

### Additional Information:

#### Recertification:

Cisco Professional-level certifications (CCNP, CCNP Wireless, CCDP, CCSP, CCNP Security, CCNP Collaboration, CCNP Service Provider, and CCNP Data Center) are valid for three years. To recertify, pass ONE of the following before the certification expiration date: Pass any current 642-XXX Professional-level or any 300-XXX Professional-level exam, or Pass any current CCIE Written Exam, or Pass the current CCDE Written Exam OR current CCDE Practical Exam, or Pass the Cisco Certified Architect (CCAr) interview AND the CCAr board review to extend lower certifications

## Flere Informationer:

For yderligere informationer eller booking af kursus, kontakt os på tlf.nr.: 44 88 18 00

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