

## دوره جامع CCNA & CCNP Collaboration

شرح مختصر

دوره جامع متشکل از تمامی دوره های مربوط به CCNA & CCNP Collaboration

### مروری بر دوره

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این دوره یکی از کاملترین دوره های سیسکو در زمینه IP Telephony می باشد افرادی که در این دوره شرکت می کنند می توانند بعد از پایان دوره یک شبکه کامل IP Telephony را راه اندازی و پشتیبانی کنند .

### آنچه در این دوره خواهید آموخت

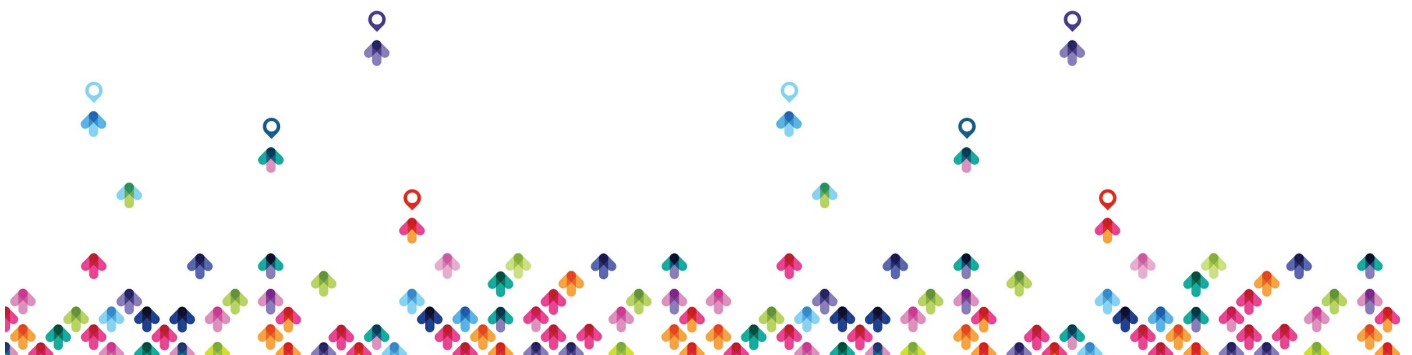
آنچه خواهید آموخت

- آشنایی و پیاده سازی انواع مدل های پیاده سازی IP Telephony از طریق CME و CUCM
- آشنایی و پیاده سازی با انواع Gateway
- آشنایی و پیاده سازی CUC جهت راه اندازی Voice Mail و Call Handler و ...
- آشنایی و پیاده سازی CUPS جهت راه اندازی IM بر روی شبکه IP Telephony
- آشنایی با انواع روش ها و ابزار های لازم جهت عیب یابی شبکه های IP Telephony
- آشنایی با مفاهیم Video

### سرفصل ها (حضور)

سرفصل ها

### Course Outline



**Exam Number: ۲۱۰-۰۶۵ CIVND (CCNA Collaboration)**

**۲۱٪ ۱.۰ Video Concepts**

۱.۱ Describe the functional components of video solutions

۱.۱.a Provisioning and scheduling Management

۱.۱.b Video compositing

۱.۱.c Streaming video

۱.۱.d Recording and storage

۱.۱.e Media players

۱.۱.f Media convergence

۱.۱.g Media managements

۱.۱.h Video convergence

**۳۲٪ ۲.۰ Endpoint Configuration**



## ۲.۱ Describe video product models

۲.۱.a Mobile devices

۲.۱.b Desktop systems

۲.۱.c Multi-purpose systems

۲.۱.d Surveillance cameras and encoders

۲.۱.e Immersive systems

۲.۱.f Peripherals and add-ons

۲.۱.g Cabling connections

۲.۱.h Digital media players

## ۲.۲ Describe environment recommendations

۲.۲.a Room lighting recommendations

۲.۲.b Room acoustics recommendations

۲.۲.c Room power recommendations

۲.۲.d Room HVAC recommendations

۲.۲.e Room materials (windows, floor material, wall material, etc.)



۲.۲.f Room size and background wall

۲.۲.g Viewing distance

۲.۲.h Physical security recommendations

۲.۳ Implement desktop endpoints and surveillance cameras

۲.۳.a Network settings

۲.۳.b GUI interface and CLI

۲.۳.c Control plane

۲.۳.d Cables

۲.۳.e Test call

۲.۳.f User acceptance test

۲.۳.g Microphone calibration

۲.۳.h Camera calibration

۲.۳.i Media playback on PCs

۲.۴ Describe features and functions



۲.۴.a Auto collaboration

۲.۴.b MCU capabilities versus TelePresence Server

۲.۴.c Audio add in

۲.۴.d PIP

۲.۴.e FECC

۲.۴.f Resolution setting

۲.۴.g Multi way vs multi-site

## ۳۱٪ ۳.۰ Troubleshooting and Support

۳.۱ Describe troubleshooting methodologies

۳.۲ Identify endpoint issues

۳.۲.a Cabling

۳.۲.b Peripherals

۳.۲.c Network connectivity

۳.۲.d Registration



۳.۲.e Call setup

۳.۲.f Media quality

۳.۲.g Mid call feature issues

۳.۳ Collecting system information

۳.۳.a Logs

۳.۳.b Status

۳.۴ Manage configuration

۳.۴.a Backups

۳.۴.b Restore

۳.۴.c Reset to defaults

۳.۴.d Password recovery

۳.۵ Implement key CLI commands

۳.۶ Monitor events and alerts

**Implementing Cisco IP Telephony and Video, Part ۱ ( ۳۰۰-۰۷۰ CIPTV ۱ )**



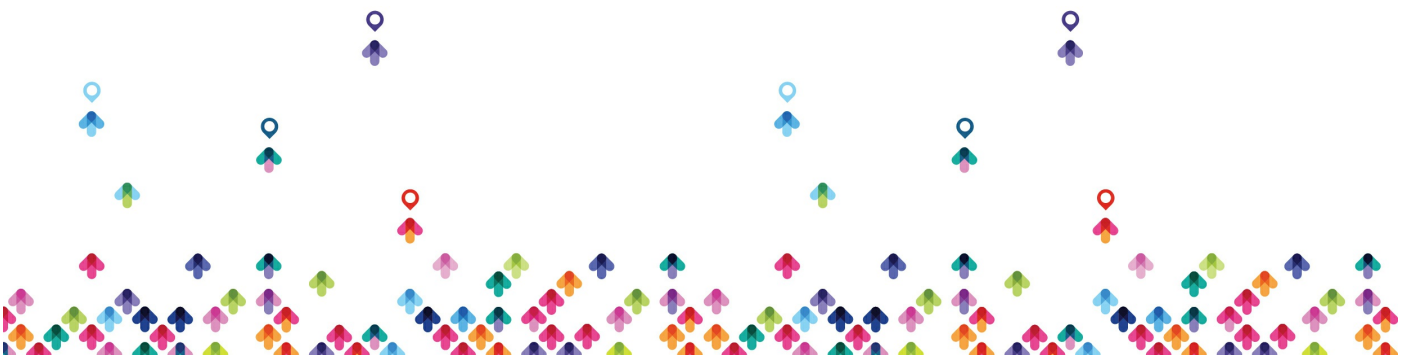
## ۱. Perform Initial Setup of a Cisco Unified Communications Manager Cluster

- ۱.۱ Describe Cisco unified communications manager cluster architecture
- ۱.۲ Describe Cisco unified communications manager redundancy designs
- ۱.۳ Describe the requirements for Cisco unified communications manager use of DHCP, TFTP, DNS, and NTP
- ۱.۴ Determine the services necessary to support a Cisco unified communications manager deployment and activate the appropriate services

## ۲. Describe and Configure Cisco Unified Communications Manager to Support On-Cluster Calling

### Calling

- ۲.۱ Configure a Cisco unified communications manager group
- ۲.۲ Configure Cisco unified communications manager profiles and device pools
- ۲.۳ Configure Cisco unified communications manager templates
- ۲.۴ Manage phones and users using Cisco unified communications manager bulk administration tool
- ۲.۵ Describe the tool for auto-registered phones support functionality



## ۳.۰ Describe and Configure a Route plan for Cisco Unified Communications Manager to Support Off-Net Calling

۳.۱ Describe Cisco unified communications manager digit analysis

۳.۲ Implement gateways

۳.۳ Configure route patterns

۳.۴ Configure route lists and route groups

۳.۵ Implement toll-fraud prevention

۳.۶ Configure digit manipulation

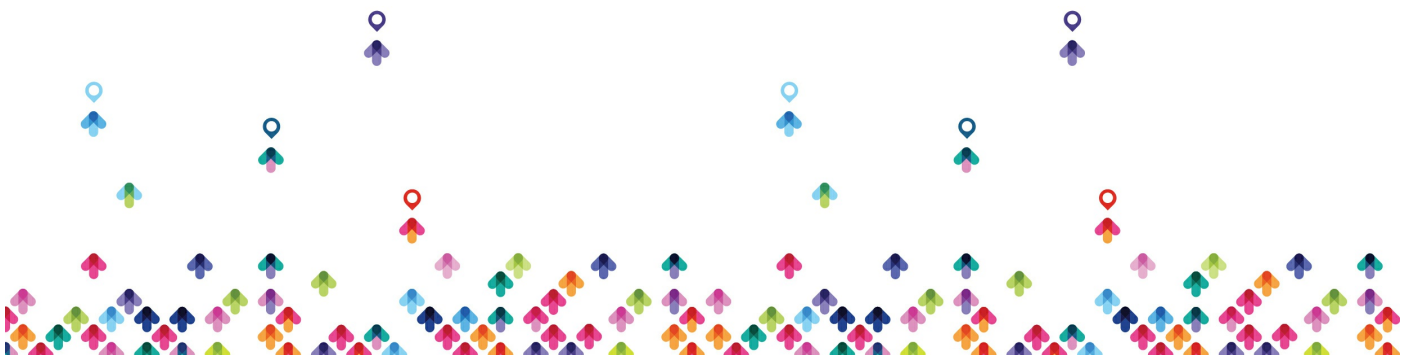
۳.۷ Describe the functions and usage of calling search spaces and partitions

۳.۸ Implement calling privileges

## ۴.۰ Describe and Configure Cisco Unified Communications Manager Media Resources

۴.۱ Describe media resources

۴.۲ Configure meet me conferencing and software conferencing resources





۴.۳ Configure music on hold

۴.۴ Configure media resource groups and media resource group lists

## ۵.۰ Describe and Configure the Cisco Unified Communications Manager to Support

### Features and Applications

۵.۱ Configure IP phone services

۵.۲ Configure Cisco unified communications manager native presence features

## Implementing Cisco IP Telephony and Video, Part ۲ ( ۳۰۰-۰۷۵ CIPTV۲ )

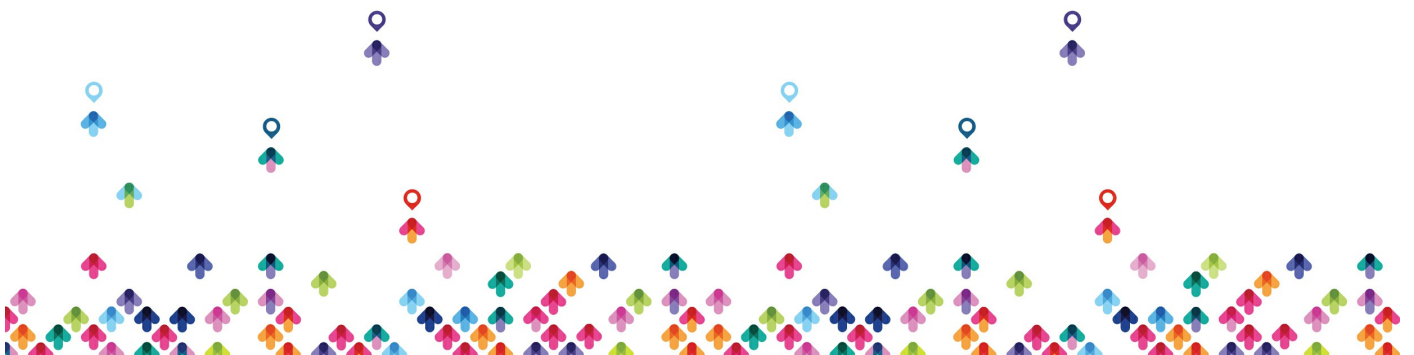
### ۱.۰ Describe and Implement Centralized Call Processing Redundancy

۱.۱ Describe device fail over

۱.۲ Configure call survivability

۱.۳ Configure Cisco unified survivable remote site telephony operation

۱.۴ Configure Cisco unified communications manager express to provide redundancy



۱.۵ Configure MGCP fallback operation

۱.۶ Verify redundancy operations

## ۲. Describe and Configure a Multi-Site Dial Plan for Cisco Unified Communication Manager

۲.۱ Describe the issues with multi-site dial plans

۲.۲ Describe the differences between the various gateways and trunk types supported by Cisco unified communication manager

۲.۳ Implement trunks

۲.۴ Describe globalized call routing

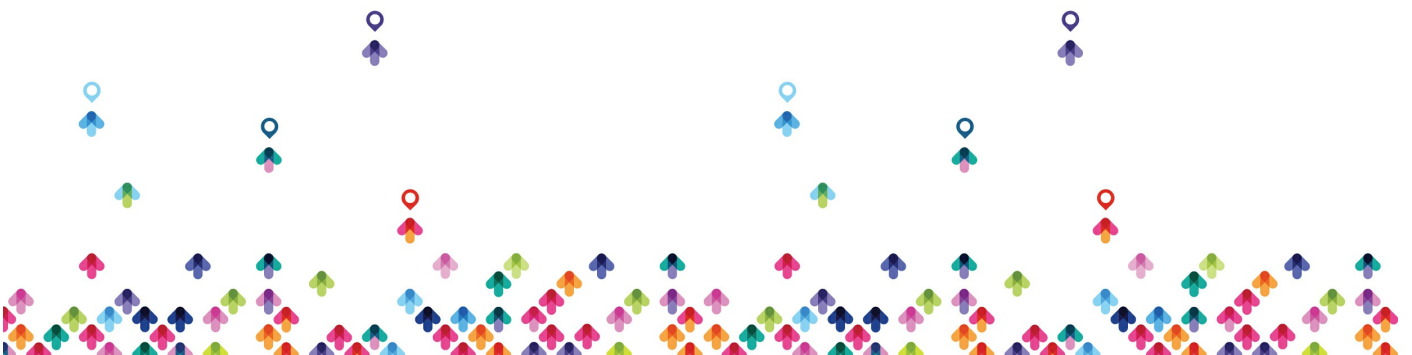
۲.۵ Implement a numbering plan for multisite topologies

۲.۶ Configure tail end hop off

## ۳. Implement Call Control Discovery and Cisco Inter Company Media Exchange

۳.۱ Configure service advertisement framework forwarder

۳.۲ Configure service advertisement framework client control



## ۳.۳ Configure service advertisement framework call control discovery

## ۴.۰ Implement Bandwidth Management and Call Admission Control

### ۴.۱ Configure regions

### ۴.۲ Implement transcoders and MTPs

### ۴.۳ Configure locations

### ۴.۴ Implement RSVP agents

### ۴.۵ Implement SIP precondition

### ۴.۶ Describe functionality of a gatekeeper

### ۴.۷ Implement gatekeeper-based call admission control

### ۴.۸ Configure automated alternate routing

### ۴.۹ Configure multisite music on Hold

## ۵.۰ Implement Mobility Features

### ۵.۱ Configure Cisco unified communications manager device mobility

### ۵.۲ Configure Cisco extension mobility



## Implementing Cisco Collaboration Applications ) ۳۰۰-۰۸۵ CAPPS(

### ۱.۰ Configure Cisco Unity Connection

- ۱.۱ Choose the appropriate desktop messaging interface for client machines
- ۱.۲ Integrate Cisco unity connection and Cisco unified communications manager
- ۱.۳ Configure Cisco unity connection system settings
- ۱.۴ Describe call management options
- ۱.۵ Configure call routing options
- ۱.۶ Configure audio text applications
- ۱.۷ Configure Cisco unity connection partitions and search spaces
- ۱.۸ Configure account policies, subscriber classes of service, and subscriber templates
- ۱.۹ Import user accounts into Cisco unity connection
- ۱.۱۰ Troubleshoot Cisco unity connection

### ۲.۰ Configure Cisco Unity Express using the GUI



۲.۱ Choose the appropriate desktop messaging interface for endpoints

۲.۲ Integrate Cisco unity express and Cisco unified communications manager express

۲.۳ Configure Cisco unity express system settings

۲.۴ Configure auto attendant

۲.۵ Configure account policies, subscriber classes of service, and subscriber templates

۲.۶ Import user accounts into Cisco unity express from Cisco unified communications manager express

۲.۷ Troubleshoot Cisco unity express

## ۳.۰ **Configure VPIM to network Cisco Unity Connection and Cisco Unity Express**

۳.۱ Describe VPIM

۳.۲ Configure VPIM on Cisco unity connection

۳.۳ Configure VPIM on Cisco unity express



## ۴.۰ Implement Cisco Unified Presence solution

۴.۱ Describe the function and operation of Cisco unified presence

۴.۲ Describe Cisco unified presence solution components

۴.۳ Describe the Cisco unified presence solution communication flows

۴.۴ Configure Cisco unified communications manager for integration with Cisco unified presence

۴.۵ Integrate Cisco unified presence with Cisco unified communications manager

۴.۶ Integrate Cisco unified presence with Cisco unified communications applications

۴.۷ Troubleshoot Cisco unified presence

## Troubleshooting Cisco IP Telephony and Video ) ۳۰۰-۰۸۰ CTCOLLAB(

### ۱.۰ Apply the Cisco Recommended Methodology used to Determine General Unified

### Communications System Problems and Issues

۱.۱ Describe the steps that can be used to identify a problem with a given unified communication system



۱.۲ Identify tools available for troubleshooting

۱.۳ Identify tools available for monitoring

## ۲.۰ Identify Available Tools to Operate and Troubleshoot a Unified Communications System

۲.۱ Describe troubleshooting and monitoring tools

۲.۲ Determine appropriate tools to use for troubleshooting and monitoring system

۲.۳ Correlate events based on traces, logs, debugs and output of monitoring tools

۲.۴ Parse and interpret traces, logs, debugs and output of monitoring tools

## ۳.۰ Troubleshoot Registration Issues

۳.۱ Troubleshoot issues with endpoint registration

۳.۲ Troubleshoot issues with gateway registration

## ۴.۰ Troubleshoot Call Setup Issues

۴.۱ Troubleshoot inter-site call setup issues

۴.۲ Troubleshoot intra-site call setup issues



## ۴.۳ Troubleshoot off-net call setup issues

### ۵.۰ Troubleshoot Database Issues

#### ۵.۱ Troubleshoot database replication issues in Cisco Unified Communications Manager

### ۶.۰ Troubleshoot Call Control Discovery and Cisco Inter Company Media Exchange

#### ۶.۱ Troubleshoot service advertisement framework forwarder issues

#### ۶.۲ Troubleshoot service advertisement framework client control issues

#### ۶.۳ Troubleshoot service advertisement framework call control discovery issues

### ۷.۰ Troubleshoot Application Issues

#### ۷.۱ Troubleshoot Cisco extension mobility issues

#### ۷.۲ Troubleshoot Cisco unified communications manager device mobility issues

#### ۷.۳ Troubleshoot Cisco unified mobility issues





## ۸. Troubleshoot Media Resources

۸.۱ Troubleshoot music on Hold

۸.۲ Troubleshoot conference bridges

۸.۳ Troubleshoot transcoders

۸.۴ Troubleshoot MTP

## ۹. Troubleshoot Voice Quality Issues

۹.۱ Troubleshoot echo

۹.۲ Troubleshoot dropped calls

۹.۳ Troubleshoot audio quality issues

## مخاطبان دوره

مخاطبان دوره

- مدیران شبکه سازمان ها و شرکت های دولتی و خصوصی
- کارشناسان شبکه
- کارشناسان مخابرات

## پیش نیازها

پیش نیازها



دانش و مهارتی که یک دانشجو پیش از ورود به این دوره نیاز دارد، شامل موارد زیر می شود:

• دوره **CCNAX v۳.۰ سسکو | CCNA Routing and Switching**

