CIPTV2 - IMPLEMENTING CISCO IP TELEPHONY AND VIDEO PART 2 V1.0

Course Code: 1877

Learn to implement a Cisco Collaboration Solution in a multisite environment.

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Learn more

This hands-on course prepares you for implementing a Cisco collaboration solution in a multisite environment.

Focusing on Cisco Unified Communications Manager v10.x, Cisco VCS-C, and Cisco Expressway series, you will implement voice and video in a multisite network. You will learn the concepts and configuration elements of globalized call routing, URI dialing and call routing, Global Dial Plan Replication (GDPR) based on Cisco Inter-cluster Lookup Service (ILS), Cisco Unified Survivable Remote Site Telephony (SRST), mobility features, and Call Admission Control (CAC).

In consideration of mobile users connected to the public Internet, as well as Cisco TelePresence devices, you will also learn the concepts and configuration elements of Cisco VCS and its integration with Cisco Unified Communications Manager and Cisco Mobile Remote Access (MRA) on Cisco Expressway Series.

This course includes 30 Cisco e-lab credits. Your e-Lab credits are good for 90 days after your course ends and can be used for additional practice on the course you just completed or to explore technologies from other courses in the Global Knowledge e-Lab portfolio. Learn more.

Why Take CIPTV2 from Global Knowledge?

Our lab environment has been customized to ensure that you gain the skills you
need for multisite deployment and globalization in North America. Other training partners provide a simplistic topology with a generic HQ site and minimal implementation of the North American Numbering Plan (NANP). Our enhanced labs include:

- A focus on the NANP
- HQ in North America with multiple branches in North America with overlapping extensions
- Branch offices featuring international dialing
- Globalization of dial plans
- Global dial plan replication
- Intercluster Lookup Service (ILS)
- Implementing a real-life variable-length on-net dial plan including:
  - Emergency dialing such as 911
  - Services dialing such as 411, 511, and 611
  - Local 7-digit and 10-digit dialing
  - NANP long distance dialing
  - Variable-length international dialing
- URI dialing of endpoints
- Cisco Expressway call routing
- Cisco TelePresence management suite
- Each student pod contains the following, independent of other pods:
  - Two Cisco 9951 SIP phones
  - Branch and PSTN phones
  - IP Communicator phones
  - Communications Manager Cluster
  - Unity Connection server
  - TelePresence server
  - TelePresence Conductor
  - Domain controller
  - MediaSense server
  - Cisco Expressway server(s)
  - 2911 and 2811 gateways and CUBEs
  - Fully simulated PSTN

Our next-generation Cisco Collaboration platform combines the Cisco Unified Computing System (UCS) with a VMware DRS cluster, distributing the load for individual classrooms across 16 UCS B-Series blades provisioned with 1.6 TB of RAM. Taking advantage of the improved performance of the UCS environment, we can deploy additional capabilities while improving classroom performance. Our Collaboration Lab environment provides valuable labs that generate high interest by Cisco Collaboration users:

- Learn the basics of managing your virtual apps with our optional VMware exploration lab
- Deploy a CUCM VM from an OVA template and install the app in a virtual environment
- 10 extra e-Lab credits, good for 30 days, so you can practice and refine your
skills

What You’ll Learn

- Issues in multisite deployments and their solutions
- Implement a variable-length on-net dial plan without globalization supporting multiple sites with overlapping extensions
- Use v7, 8, and 9.1 features, including local route groups and global transformations
- Transition to a globalized E.164 dial plan
- Issues with globalization in the NANP
- Implement a URI-based dial plan for multisite deployments
- Implement call-processing resiliency in remote sites using SRST, MGCP fallback, and CUCM Express
- Implement CAC to manage calling and prevent oversubscription of the IP WAN
- Implement enhanced locations call admission control
- Implement mobility features such as CUCM device mobility and CUCM extension mobility
- Explore the use of gatekeepers
- Configure and implement solutions to reduce bandwidth requirements in the IP WAN
- Implement Cisco VCS
- Implement Cisco Expressway series
- Implement users and endpoints in Cisco VCS Control
- Interconnecting and integrating Cisco Unified Communications Manager and Cisco VCS
- Implement a dial plan on Cisco VCS
- Implement Unified Communications and Mobile Remote Access (MRA)
- Implementing ILS
- Implement Global Dial Plan Replication (GDPR)
- Implementing Call Control Discovery and SAF

Who Needs to Attend

Network professionals who install, configure, and manage Cisco Collaboration solutions in multisite enterprises

Prerequisites

- Active CCNP Voice or CCNP Collaboration
- One to three years of active Call Manager/Unified Communications Manager experience
- Experience with SIP, H.323, and MGCP protocols
- Basic understanding of video concepts inside unified communications
Classroom Live Outline

1. Multisite Deployment Implementation
   - Identifying Issues in a Multisite Deployment
   - Identifying Multisite Deployment Solutions
   - Implementing a +E.164 Based Dial Plan for International Multisite Deployments
   - Implementing a URI Based Dial Plan for Multisite Deployments

2. Centralized Call-Processing Redundancy Implementation
   - Implementing SRTS and MGCP Fallback

3. Bandwidth Management and CAC Implementation
   - Managing Bandwidth
   - Implementing CAC

4. Implementation of Features and Applications for Multisite Deployments
   - Implementing Device Mobility
   - Implementing Cisco Extension Mobility
   - Implementing Cisco Unified Mobility

5. Cisco VCS and Cisco Expressway
   - Describing Cisco VCS and Cisco Expressway Series Deployment Options
   - Deploying Users and Local Endpoints in Cisco VCS control
   - Interconnecting Cisco Unified Communications Manager and Cisco VCS
   - Implementing Unified Communications Mobile and Remote Access

6. GDPR and CCD
   - Implementing ILS and GDPR
   - Implementing CCD
   - Implementing Policing and Shaping
Classroom Live Labs

Lab 1: Remote Labs Access
Lab 2: Disaster Recovery
Lab 3: Cisco Unified Border Element
Lab 4: SIP Trunk Configuration
Lab 5: MGCP Gateway Configuration
Lab 6: Inter-Cluster Trunk Configuration
Lab 7: Route Groups
Lab 8: Route Lists
Lab 9: IP Communicator Phone Registration
Lab 10: 9951 IP Phone Registration
Lab 11: UnifiedFX Configuration
Lab 12: Traditional Route Patterns
Lab 13: Traditional Dial Plan Testing
Lab 14: User Management
Lab 15: Global Dial Plan and +E.164 Dialing
Lab 16: Multi-cluster Call Routing using Inter-cluster Trunking
Lab 17: URI Dialing
Lab 18: Survivable Remote Site Telephony
Lab 19: Bandwidth Management Techniques
Lab 20: Locations and Enhanced Locations CAC
Lab 21: Device Mobility
Lab 22: Extension Mobility
Lab 23: Unified Mobility
Lab 24: VCS Provisioning and Administration
Lab 25: VCS Dial Plan and CUCM integration
Lab 26: Mobile Remote Access using Cisco Expressway Core and Edge (includes Cisco Jabber)
Lab 27: Global Dial Plan Replication

Nov 11 - 15, 2019 | 8:30 AM - 4:30 PM | RESEARCH TRIANGLE PARK, NC
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Mar 23 - 27, 2020 | 8:30 AM - 4:30 PM | SAN JOSE, CA
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PRIVATE GROUP TRAINING

5 days

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