



Advanced Cisco Collaboration Syllabus

(On-Prem, Edge & Cloud Collaboration Solutions)

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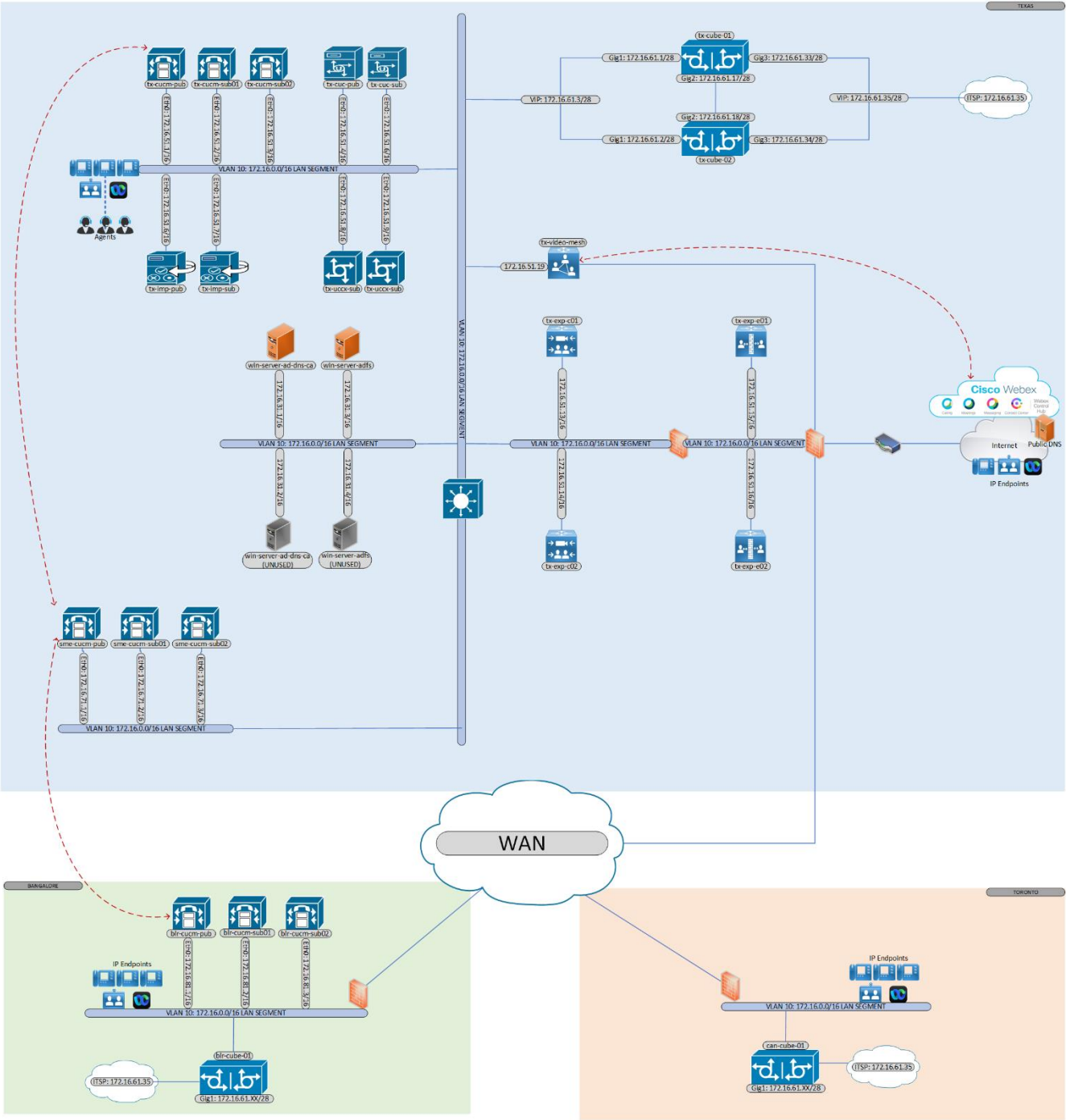
CCNP DC, CCNP DevNet, CCNP Ent.,

VCP DCV, AWS SAA, AZ-104, CKA, ACE MCNA

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Lab Topology





Advanced Cisco Collaboration

by AJ Classroom



**On-Premise
Collaboration**

- vmware Infrastructure, ESXi
- Windows AD, DNS, CA
- CUCM, CUC, IMP
- ILS, SSO, DB Replication
- CUBE HA
- License Manager
- Security & Certificates
- Troubleshooting
- CCM Logs & PCAPs
- Upgrades
- Advanced configurations



**Edge
Collaboration**

- Expressway C & E
- Licensing & Option Keys
- Mobile Remote Access
- B2B Call
- Video Endpoints
- Troubleshooting



**Cloud
Collaboration**

- Webex Meetings
- Webex Teams Suit
- Control Hub
- SSO
- Licensing
- Directory Connect
- Webex UCM Call
- Hybrid Call Services
- Cloud Registered TP

Features:

- Labs are designed with enterprise-grade solution and Remote lab access from anywhere
- More focus on real-time and hands-on configuration and troubleshooting
- Certification oriented (CLCOR - Implementing and Operating Cisco Collaboration Core Technologies and CLCEI - Implementing Cisco Collaboration Cloud and Edge Solutions)

Training Details:

- Language: English
- Mode : Video Class
- Duration : 88 Hours

Chapter 1 Module 1 - Windows, vmware

1. Basics of hardware and Virtualization Technology
2. vmware Infrastructure
3. Windows Active Directory (AD)
4. Domain Name System (DNS)
5. [Lab] Configure AD & DNS in Windows Server 2019
6. [Lab] Configure Reverse Lookup Zone in Windows DNS Server
7. [Lab] Add UC Servers DNS Entries
8. [Lab] Disable Windows Password Auto Expiry Group Policy
9. [Lab] Deploying CSR 1000v as NTP Server

Chapter 1 Module 2 - Cisco On-Premise Collaboration Solution (CUCM)

1. Cisco Unified Communications Manager (CUCM)
2. CUCM Installation
3. [Lab] Installing CUCM on vmware ESXi
4. [Lab] Some Useful CLI Commands
5. [Lab] CUCM Licensing
6. [Lab] Disaster Recovery System (DRS) Backup of CUCM Cluster
7. [Lab] Basic Health Check of UC Infrastructure & Understand the Cluster
8. Web GUI and Six Consoles in CUCM Cluster
9. Network Services in CUCM
10. Feature Services in CUCM
11. [Lab] Service Activation in CUCM Cluster
12. Understanding Cisco IP Phone 88XX
13. Understanding Cisco Telepresence Endpoint DX70
14. Protocols and Services Used by Cisco IP Phones / Telepresence Endpoints
15. Device Pool in CUCM
16. DHCP Configuration for Cisco IP Phones and Telepresence Endpoints
17. Default Phone Configuration File - xmldefault.cnf.xml
18. Auto Phone Firmware Upgrade Situations
19. [Lab] Auto Cisco Endpoint Registration in CUCM
20. [Lab] Create a Device Pool
21. [Lab] Manual Cisco Endpoint Registration in CUCM
22. User Management in CUCM
23. [Lab] Configure Local End User
24. [Lab] Configure CUCM Read Only Administrator
25. [Lab] Configure CUCM MACD Administrator
26. [Lab] LDAP (Light Weight Directory Access Protocol)
27. [Lab] Third Party SIP Phone Registration
28. IP Phone Packet Capture Procedure
29. RTMT To Collect Logs and PCAPs from CUCM Cluster
30. IP Phone Bootstrap Process and Registration with PCAPs and CCM Logs

31. CSS and Partition
32. Dialed Number Analyzer - DNA
33. Call Detailed Record - CDR
34. IP Phone to IP Phone Call Flow with SIP Logs
35. DX70 Web Management Console
36. SSL Certificates
37. SSL /TLS Handshake and PKI Infrastructure
38. Understanding Public CA Signed Certificate
39. Understanding Self Signed Certificate
40. Internal or Enterprise CA Signed Certificate
41. Understanding Components of Certificates
42. CUCM SSL Certificates
43. Tomcat and Tomcat Trust
44. IPsec
45. CallManager
46. Trust Verification
47. CAPF Certificate (Basics)
48. CSR - Certificate Signing Request
49. CUCM SAN (Multi-Server Subject Alternate Name) Certificate
50. [Lab] Setting up Internal / Enterprise CA in Windows Server
51. [Lab] Create UC Certificate Templates in Windows Server Enterprise CA
52. [Lab] Install Multi SAN Certificate for CUCM Cluster Tomcat Service
53. Cisco IP Phone Services
54. [Lab] Extension Mobility
55. Troubleshooting Extension Mobility and Common Error Codes
56. DNS Based Redundancy in Extension Mobility
57. Single sign-on (SSO)
58. [Lab] Configure Active Directory Federation Services (ADFS)
59. [Lab] Configure SSO in CUCM
60. CUCM DB Replication

Chapter 1 Module 3 - Cisco On-Premise Collaboration Solution (CUC)

1. Cisco Unity Connection (CUC)
2. [Lab] Installation PUB and SUB
3. [Lab] CUC Licensing
4. [Lab] Basic Health check in CUC
5. Web GUI and Five Consoles in CUC
6. [Lab] Cisco Unity Connection SIP Integration with CUCM
7. Understanding Call Routing Rules in Cisco Unity Connection
8. [Lab] Changing Authentication Rule
9. [Lab] Voicemail Template
10. [Lab] Creating Voicemailbox User
11. [Lab] Call Handler with Auto Attendant IVR

Chapter 1 Module 4 - Cisco On-Premise Collaboration Solution (IMP)

1. Cisco Unified IM and Presence (IMP)
2. [Lab] IMP Installation
3. [Lab] IMP Integration with CUCM
4. [Lab] DNS SRV Records for Jabber On-premise
5. Cisco Jabber Diagnostics, Problem Report and Troubleshooting

Chapter 1 Module 5 - Cisco On-Premise Collaboration Solution (Advanced Call Routing)

1. Session Initiation Protocol (SIP)
2. CUBE - Cisco Unified Border Element
3. [Lab] CUBE Configuration
4. CUBE Call Flow (with CUBE Debugs)
5. CUBE Call Flow (with CallManager Logs)
6. CUBE High Availability (HA)
7. CUCM Digit Manipulation
8. Translation Pattern
9. Calling and Called Party Transformations
10. CUBE Digit Manipulation
11. Voice Translation Profile
12. SIP Profile
13. Inbound Dial Peer Match
14. CUCM Deployment Models
15. Advanced Inter Cluster Call Routing via Session Management Edition (SME)
16. Inter Cluster Lookup Service (ILS)
17. SIP Normalization (Lua) Script
18. Media Resources
19. Hunt

Chapter 1 Module 7 - Cisco On-Premise Collaboration Solution (Upgrade)

1. CUCM Upgrade 11.5 to 12.5
2. Smart Licensing
3. Firmware Upgrade
4. Device Pack

Chapter 2 - Cisco Edge Collaboration Solution (Expressway)

1. Cisco Expressway Series
2. [Lab] DNS Entries for Expressway Series Servers
3. [Lab] Deploy Expressway
4. Different Types of License Expressway - C
5. Different Types of License Expressway - E
6. [Lab] Initializing and Licensing Expressway - C
7. [Lab] Installing Additional License on Expressway - C
8. [Lab] Initializing and Licensing Expressway - E
9. Expressway - E Single NIC vs Dual NIC
10. Clustering of Expressway
11. Clustering Prerequisites
12. [Lab] Expressway - C Clustering
13. [Lab] Expressway - E Clustering
14. [Lab] Expressway - C Certificate Requirement for MRA
15. [Lab] Expressway - C Cluster to TLS Enforce
16. [Lab] Expressway - E Certificate Requirement for MRA
17. [Lab] Expressway - E Cluster to TLS Enforce
18. [Lab] Configure MRA (Mobile Remote Access)

Chapter 3 - Cloud Collaboration

1. Overview of Webex Solutions
2. Webex Teams Overview
3. Webex Teams Infrastructure
4. WebEx Control Hub
5. Control Hub Deployment Life Cycle
6. Webex Teams Client
7. [Lab] User Management in Webex Control Hub
8. [Lab] Domain Verification
9. Claim the Domain
10. [Lab] Cisco Directory Connector
11. [Lab] Troubleshooting Directory Connector
12. Webex Teams SSO
13. Metadata File
14. [Lab] Webex Control Hub SSO Configuration
15. Classic Webex Meeting Site Administration
16. Webex Monitoring Hybrid Service
17. Policies and Features
18. [Lab] Workspaces
19. Register Cisco 8865 Phone in Cloud
20. Register Cisco DX70 in Cloud
21. Webex UCM