CSR12 Update: CSR12 New Features and Updates for Security, Conferencing and Collaboration Edge (CSR12U)

Course Duration: 5 days (40 hours)

Course Content:

Course Introduction

- Overview

- Course Goal and Objectives

- Course Flow Lab 0: Understanding the Fast Lane Remote Lab Interface

Unit 1: Cisco Collaboration Solution Release 12 Update

Lesson 1: Cisco Collaboration Architecture Evolution Overview

- Collaboration Infrastructure Evolution

- Cisco Cloud Solutions

- Cisco CSR 12 Conferencing and Recording Solutions

- Cisco CSR 12 Collaboration Edge Implementation

- Cisco CSR 12 IM & Presence and Jabber 12

- Cisco CSR 12 Hybrid Services

- Cisco CSR 12 Compliance and Security

Lesson 2: Cisco Collaboration Release 12 Deployment Considerations

- Upgrade to Cisco CSR 12 Preferred Architecture Simplified Sizing

- DNS Considerations

- Collaboration Edge Multiservice Deployment

- Apple Push Notifications

- Upgrading to CSR 12

- Deprecated Endpoints

- EM Login with Directory Numbers

- IPv6

- Licensing Enhancements: Smart Licensing

Lesson 3: Internal and External DNS Configuration for CSR1

- Server Naming Considerations

- DNS SRV Records

- DNS for Collaboration Edge Considerations

- Cisco SRV Records for Business to Business

- Cisco Jabber and Mobile and Remote Access Service Discovery

- Cisco SRV Records for the Cisco Cloud

- Troubleshoot DNS SRV Entries

Lab 1: Server Naming and DNS Configuration

Lesson 4: Cisco IM&P and Jabber 12 New Features

- Centralized IM&P Cluster

- Jabber Fast Login/ Offline Login and OAuth

- Jabber Multi-Line

- Blocking feature for External DB

- Jabber Phone only mode with contacts

Lab 2: Jabber 12 Multiline Configuration and Jabber Phone Only with Contacts

Unit 2: Certificates and Security

Lesson 1: Cryptographic Essentials

- Cryptographic Services

- Symmetric and Asymmetric Encryption

- Shared Key Exchange

- Message Integrity

- Hash-Based Message Authentication Codes

- Digital Signatures

- Certificates

- CSR 12: Compliance and Security Requirements

Lesson 2: PKI and Cisco Collaboration

- Public Key Infrastructure and Key Exchange

- Public/Private Keys

- Certificates and Certificate Authorities

- Kinds of Certificate Authorities

- Public CA Certificate Options

Lesson 3: Working with Certificates in a Cisco Collaboration Environment

- Certificate Encodings and Extensions

- Certificate Chains and Bundles

- Trust Stores

- Cisco UC Manager, Cisco Unity Connection and IM&Presence

- Inventory Certificates

- Regenerate Self-Signed Certificates

- Generate Certificate Signing Requests

- Multiserver Certificate Signing Requests

- Cisco Expressway

- Inventory Certificates

- Generate Certificate Signing Requests

- Upload Certificates

- Cisco Meeting Server

- Certificate Requirements

- Generate Certificate Signing Requests

- Deploy Certificates

Lab 3: Certificate Deployment

Lesson 4: Securing a Cisco Collaboration Environment

- Modes for Endpoint Security

- ITLs and CTLs in CUCM 12.0

- Security by Default

- Authenticating Endpoint Images and Configuration Files

- Trust Verification Service

- Mixed-Mode and CAPF Enrollment

- Secure SIP Trunks

- TLS and MTSL

- Phone Security Profiles

- TLS 1.2 Only

Lab 4: Security – Securing On-Premises Communications

Unit 3: Cisco Conferencing Solutions for CSR 12

Lesson 1: Cisco Meeting Server Overview

- Cisco Meeting Server

- Conferencing in Cisco Collaboration

- Cisco Meeting Server Solution

Lesson 2: Cisco Meeting Server Architecture

- Cisco Meeting Server Components

- Cisco Meeting Server Deployment Models

- Scalable and Resilient Deployments

- Certificate and DNS Requirements

- Cisco Meeting Server Integration with CUCM

- Cisco Meeting Server Licensing

Lesson 3: Cisco Meeting Server Deployment and Configuration

- APIs on the Cisco Meeting Server

- VM Deployment

- Initial Configuration and Certificate Deployment using the CLI

- Database and XMPPP Cluster configuration using the CLI

- Call Bridge Cluster Configuration using the Web Admin GUI

- Configuring Multiple Web Bridges

- Configure Load Balancing with Call Bridge Group using the API

Lab 5: CMS Initial Configuration

Lesson 4: Users and Spaces and Conferences

- Configure Cisco Meeting Server Spaces

- Active Directory Integration

- User Configuration on Cisco Meeting Server

- Unified CM Ad-hoc Escalation with CUCM

- CMS Cluster and Unified CM Dial Plan for Distributed Conferencing

Lab 6: Exploring Meeting Server Resilient and Scalable Deployments

Lesson 5: Cisco Meeting Server Advanced Features

- Scheduling with TMS

- CMS as a Recording Server

- CMS as a Streaming Server

- Active Control

- Cisco Meeting Management

- Expressway Unified Edge

Unit 4: Collaboration Edge Deployment

Lesson 1: Describing Cisco Expressway Series Deployment Options

- Cisco VCS and Expressway Series Overview

- Cisco VCS and Expressway Series Deployment Options

- Cisco Expressway Series Platforms, Licenses, and Features

- Cisco VCS and Cisco Expressway Feature Comparison

- Unsupported Expressway Features and Limitations

- Cisco Expressway Clustering

- Cisco Expressway Series Initial Configuration

Lesson 2: Cisco Expressway Call Handling Review

- Cisco Expressway Call Handling Basic Concepts

- Cisco Expressway Zones

- Cisco Expressway Connectivity

- Links, Pipes and Bandwidth Management

- Call Routing

- Pattern Matching

- Transforms and Search Rules

- TLS and Certificate Checking

- Media Encryption and B2BUAs

- Configuration of Secure Expressway Zones and Trunks to CUCM

Lesson 3: Business to Business Communications in a Multiservice Deployment

- Open vs. Closed Video Federations

- Cisco Unified Communications Manager and Cisco Expressway Interconnection

- Multiservice Expressway Deployment

- Traversal Zones for Business to Business Communication

- DNS and Default Zones for Business to Business Communication

- Dial Plan for Closed Video Federations

- Security for Closed Video Federations

- Dial Plan for Open Video Federations

- Security for Open Video Federations

Lab 7: Deploy Nonsecure Open Video Federation Lab 8: Deploy Secure Closed Video Federation

Lesson 4: Implementing Unified Communications Mobile and Remote Access with Multiple Domains in a Multiservice Deployment

- Unified Communications Mobile and Remote Access Overview

- Unified Communications Mobile and Remote Access Components

- Unified Communications Mobile and Remote Access Operations

- Unified Communications Mobile and Remote Access Configuration Procedure

Lab 9: Implementing Mobile and Remote Access via Cisco Expressway with Single Domain and with Multiple Domains

Lesson 5: CMS with Unified Edge

- CMS with Unified Edge

Lab 10: CMS with Unified Edge

Unit 5: Spark Hybrid Services

Lesson 1: Cisco Spark Hybrid Services

- Cisco Spark Overview

- Cisco Spark Hybrid Services

- Cisco Spark Hybrid Services Connectors

- CSR 12: Hybrid Connector Co-residency on Expressway

Lesson 2: Cisco Spark Hybrid Services

- CSR 12: Spark RD

- CSR 12: Spark CTI to UCM (Spark Control of CUCM Registered Endpoints)

- CSR 12: Hybrid Media Services Phase 2 (Hybrid Media Services for SIP Calls into Cloud Meetings)

- CSR 12: Jabber-Spark IM&P Interop

- Deploying Cisco Spark Hybrid Services

Lab 11: Spark Hybrid Services