

Administering Unified Contact Center Enterprise Part 2 (AUCCE 2)

COURSE OVERVIEW:

Administering Cisco Unified Contact Center Enterprise Part 2 (AUCCE Part 2) is an Advanced 5-day instructor-led course developed by Sunset Learning Institute for system engineers and customers who will be involved with day 2 support of a UCCE solution deployed in a CVP comprehensive environment. This course gives the learner an understanding of the requirements, resources and tools required to perform complex adds, moves and changes in the inbound/outbound UCCE environment.

This course is intended for those performing advanced administration of the solution, or who may be responsible for Level 2-3 support of the solution. The AUCCE Part 1 course or equivalent prior experience is a prerequisite for attending this course. This course is also a good companion course to the DUCCE course which covers more detail on the installation/maintenance of the solution. The overall goal of this course is advanced administration of the solution by a deeper exposure into the technical operational requirements and the tools used to configure and ensure functionality. Do Not take this course if you are new to CCE, you will not have a good time. If you are already working with CCE, or if you've taken the Part 1 course, you'll love this course!

WHO WILL BENEFIT FROM THIS COURSE?

The primary audience for this course is as follows:

- Cisco Unified Communications system channel partners and resellers
- Day 2 support personnel responsible advanced administration and support of the UCCE environment

PREREQUISITES:

To fully benefit from this course, students should have the following prerequisite skills and knowledge:

- Attendance of AUCCE Part 1 or equivalent real world experience is a requirement to attend this course.
- DO NOT take this course if you are new to UCCE!
- You need some experience with UCCE before attending this course!! If you don't know what ICM object binds a Dialed Number to a Script, you need to take the Part 1 course, not this one! If you don't know the 2 main uses for Call Types, you should not take this course!!
- Working knowledge of Unified Communications Manager and Voice Gateways would be really helpful. The VFCC is a perfect foundational course.

COURSE OBJECTIVES:

After completion of this course, students will be able to...

- Demonstrate advanced proficiency with add/move/change of the ACD/PBX (agent/skill) environment of UCCE
- Demonstrate advanced proficiency with add/move/change of the IVR (prompt/collect) environment of UCCE including both MicroApp and VXML solution scripting (ICM Scripting and Call Studio scripting).
- Demonstrate effective use of system tools to track and troubleshoot a call within a call flow.

COURSE OUTLINE:

Module 1: Cisco Unified Contact Center Enterprise Foundations

Lesson 1: Introducing UCCE

- Unified CCE Overview
- Attributes of Cisco Unified CCE
- Cisco Unified CCE Components
- Unified CCE Naming Conventions
- Cisco Unified CCE Options
- Agent Desktop Options
- What's New

Lesson 2: Unified CCE Architecture and Components

- Overview
- Voice Gateways (VG)
- Unified Communications Manager (UCM)
- Agent Phones and Features
- Intelligent Contact Manager (ICM)
- Customer Voice Portal (CVP)
- VXML
- Features of Unified CVP

Lesson 3: UCCE Terms, Routing and Additional Components

- Unified CCE Terms
- Unified CCE Call Flow Types
- Additional Unified CCE Components
- Contact Center Management Portal (CCMP)
- Cisco Unified Intelligence Center (CUIC)
- Geographic Dependencies/CCE Networks
- Packaged Contact Center Enterprise (PCCE)

Lesson 4: Accessing UCCE Tools

- Accessing UCM
- Accessing ICM
- Accessing CVP
- Accessing Voice Gateways
- Accessing CCMP

Module 2: CCE Configuration and Scripting Review

Lesson 1: Configuration Manager and Script Editor Review

- Configuration Manager
- Script Editor

Lesson 2: CTI Review

- CTI Server Review
- Finesse
- CTI OS Server
- CTI OS Client
- Cisco Agent Desktop
- Agent States

Lesson 3: Agent Skill Review

- Agent Functionality: ICM Configuration Steps
- Agent Login
- Agent Functionality: UCM Configuration Steps
- UCM Application User
- Configuring Agent IP phones for Unified CCE
- Agent phone / JTAPI User association

Lesson 4: Microapps and Media File Review

- Microapps
- Understanding Media Server and Audio Files
- Audio Prompt Gateway Considerations
- Implementing Microapps in an ICM Script

Lesson 5: Precision Routing Review

- Precision Routing Overview
- Implementing Precision Routing
- Agents and Attributes
- Precision Queues
- CCE Scripting for Precision Routing
- Precision Routing Limitations and Reporting

Lesson 6: Transfers and RONA Review

- Transfer Types Overview
- Subsequent Transfer Considerations
- ICM Configuration Steps
- UCM Configuration Steps RONA

Lesson 7: Mobile Agents

- Mobile Agent Review
- Mobile Agent Configuration to support CCE

Module 3: Implementing Business Rules

Lesson 1: Advanced Scripting and Routing

- Script Editor Advanced Features and Tools
- Best Practice ICM Scripting for Reporting
- Region /Area Code Routing
- Call Types vs Requalify
- Route Select
- Congestion Control
- Multiline
- Dealing with IVR Node Failures
- Supervisor Assistance Scripts
- Emergency Assistance Scripts
- Reason Codes

Lesson 2: ICM Scripting Variables, Expressions, Formulae and Functions

- Variables
- Formula Editor
- Using Built in Functions
- Custom Function

Lesson 3: Creating and Admin Script for Time of Day Routing

- Administrative Scripts Overview
- Building an Admin Script
- Scheduling an Admin Script
- Testing an Admin Script

Lesson 4: Creating Feature Control Sets and Users

- Feature Control Sets
- ICM Users
- Internet Script Editor

Module 4: CCE VXML Solution

Lesson 1: Basic VXML Functionality

- What is VXML?
- Cisco Unified CVP VXML Solution

Lesson 2: Installing and Configuring VXML solution

- Cisco Unified CVP VXML Server Configuration
- Cisco Unified Call Studio Project Configuration
- Project Deployment and VXML Server Maintenance Tasks
- ICM Considerations for VXML Application Support

Lesson 3: Basic VXML - SQL Database Lookup

- Overview
- SQL/JDBC/JNDI Configuration
- Call Studio Configuration
- ICM Scripting and Testing

Lesson 4: Exploring Courtesy Callback

- What is Courtesy Callback?
- Courtesy Callback Call Flow
- Courtesy Callback Considerations
- Configuring Courtesy Callback

Lesson 5: Agent Greeting

- Agent Greeting Overview
- Deployment Considerations
- ICM Configuration
- Verification

Module 5: CCE Outbound**Lesson 1: Introduction to Outbound Option**

- Outbound Option Overview
- Outbound Option Components
- Dialer Types
- Dialing Modes
- Outbound Campaign Features
- SIP Call Flows
- SIP Dialer Design Considerations
- Voice Gateway Design Considerations

Lesson 2: Configuring Outbound Option for Agent and IVR Campaigns

- Campaign Types Overview
- Prerequisite Configurations for Outbound Campaigns
- Agent-Based Campaign
- Agent-Based Campaign Scripting
- Callbacks
- IVR-Based Campaign Configuration
- IVR-Based Campaign Scripting

Module 6: CCE Support considerations

Lesson 1: Supporting UCCE

- Troubleshooting Methodology for UCCE
- Importance of Accurate Troubleshooting Information
- Contacting Cisco TAC

Lesson 2: Diagnostic Framework Suite

- Diagnostic Framework Suite Review
- Analysis Manager
- Unified System CLI
- Diagnostic Framework Portico

Lesson 3: UCCE Support

- ICM Support
- CVP Support
- Gateway Support
- UCM Support

Lesson 4: Tracking an Agent call through the Database

- TOD and RCD Review
- Querying RCD and TCD Records

Labs:

Lab 1-1: Review Labs

- Identify UCCE Components
- Identify the Communications Protocols Between UCCE Components
- Review the CVP Call Flow, Part 1
- Review the CVP Call Flow, Part 2

Lab 1-2: Verify and Prepare the Lab Environment:

- Verify Phone Calls: Agent IP Phone to Agent IP Phone.
- Verify Phone Calls: Agent IP Phone to PSTN IP Phone
- Change Agent Phone Directory Numbers

Lab 1-3: Explore and Verify Your Voice Gateway:

- Verify the Voice Gateway Router Configuration
- Show the Router Flash
- Show Voice Port Summary
- Show and Debug Calls

Lab 1-4: Explore and Verify CVP and ICM Servers

- Use RDP to connect to CVP Call Server/VXML Server.
- Use RDP to connect to ICM PG and Admin Data Client
- Browse and Examine CVP Ops Console (OAMP Server) Configuration
- Explore CCE Administration Tools Program Group
- Explore the Diagnostic Framework Portico to Observe the PG Status
- Map Drives to Student Shares for Lab Activities

Lab 2-1: Administering ICM Dialed Numbers and Call Types:

- Add DN's and Call Types and Map DN's to Call Types
- Deleted Objects Tool

Lab 2-2: Media Files and Variables in ICM Scripts:

- Media Server Configuration
- ECC Variables
- Create PodXY_mApp_Variable ICM script
- Script Reference Tool

Lab 2-3: Basic IVR Scripting with MicroApps:

- Create Network VRU Scripts (MicroApps)
- Build PodXY_mApp Script to Execute microApps for Prompt/Collect
- Use Go-To nodes in Scripting – PodXY_mApp_Variable script goes to PodXY_mApp script
- Schedule/Test/Troubleshoot call flow thus far – transfer to Label fails
- UCM SIP Trunks for Transfers – transfer to Label now works

Lab 2-4: Configure ICM for Agent and Skill Group Functionality:

- Add Skill Groups, Routes
- Add Agents, map to Skill Group(s)
- Agent Target Rules
- More Call Types

Lab 2-5: Configure UCM for Agent Functionality:

- Failed Login via Finesse
- Associate Agent Phone with JTAPI user
- Successful Login with Finesse

Lab 2-6: Install CTIOS Agent Desktop (optional)

- Install Desktop
- Test Login

Lab 2-7: Scripting for Skill Groups and Queuing:

- Create PodXY_QtoSG script with Queue to Skill Groups and Queue logic
- Configure PodXY_mApp script to GO TO PodXY_QtoSG script and test

Lab 2-8: Configuring Precision Routing:

- Web Admin Overview
- Configure Attributes
- Add Attributes to Agents
- Build PQ's (SalesXY and SupportXY)
- Step Configuration
- Build PodXY_PQ script and test with mApp script output (modify Go To)

Lab 2-9: RONA

- RONA Timeout and Configuration Considerations
- RONA Script Logic
- Testing RONA

Lab 2-10: Configure CTI Route Point for CCE Calls and Agent-Initiated Transfers (Optional)

- CTI Route Point (3XY6), JTAPI Association, ICM DN configuration
- Network VRU Label for UCM
- Route Pattern configure for Label
- Build/test basic PodXY_Transfer Script

Lab 2-11: Configure Agent Transfers via Dialed Number Plan (Optional):

- Configure DN 3XY5,
- Configure "Alias" pattern of 3XY4 in Dialed Number Plan
- Dialed Number Type plan considerations
- Test Transfer

Lab 2-12: Configure Calls Using SIP with Proxy (3XY2): (Optional)

- CUSP Configure
- UCM Trunks, Route Patterns
- Ops Console and GW configure for SIP Proxy
- Test calls thru SIP Proxy

Lab 3-1: Administrative Scripts

- Time of Day Admin Scripts
- Referencing Admin Script Variables in a Routing Script
- Challenge Lab – other Admin Scripts

Lab 3-2: Feature Control Sets and Users:

- Configure a Feature Control Set with limited access
- Configure ICM User and associate FCS
- Configure User group in A/D
- Test Login with limited permissions

Lab 4-1: VXML Server Configuration and Call Studio Installation:

- Observe VXML Server Configuration in Ops Console
- Install Call Studio

Lab 4-2: Create and Deploy a Cisco Unified Call Studio Project:

- Create Basic Call Studio Project to Exchange information between ICM and VXML Application
- Play Callers ANI
- Play Media_ID
- Menu for Sales/Support
- Collect SalesXY and SupportXY to return to ICM in Caller_Input
- Deploy .zip Project to VXML Server via Ops Console
- Check Status.bat on VXML Server

Lab 4-3: Integrate VXML Applications with ICM Script:

- Build ICM Script to “call” VXML Application deployed.
- Caller_Input variable is used to pick Dynamic Call Type and Dynamic PQ!

Lab 4-4: SQL DB Lookup Functionality for VXML:

- Create SQL Customer Database and create SQL User with permissions
- Install JDBC Driver and add JNDI Context
- Add/Configure DB Lookup element in Studio Project and deploy
- ICM Scripting and testing
- Challenge Lab: Using Complex ICM formulas

Lab 4-5: Courtesy Callback (CCB):

- CVP Reporting Server Configuration
- Ingress/VXML Gateway considerations
- Ops Console and Media Files for CCB
- Customize VXML applications for CCB
- Build/test ICM script for CCB operations

Lab 4-6: Agent Greeting:

- Built-In Bridge and VXML Gateway configuration considerations
- Configure FTP for Agent Greeting
- Configure Media Server for Agent Greeting
- CVP OAMP configuration for Agent Greeting

- Configure DN's, Call Types, Microapps for Agent Greeting
- Import/configure/test ICM and VXML Agent Greeting apps
- Use Agent Greeting in ICM scripts

Lab 5-1: Basic Outbound Agent Campaign:

- Verify configuration of Outbound Option Components (optional, long)
- Agent Campaign Configuration
- Import Rules
- Contact/Do Not Call Lists
- Query Rules
- Call Types and DN's
- Campaigns
- Agent Campaign Routing and Admin Scripts
- Test Outbound Agent Campaigns

Lab 5-2: IVR Campaign (Challenge Lab):

- Configure IVR Campaign with minimal guidance

Lab 6-1: Using Troubleshooting Tools:

- Using System CLI to set trace levels
- Gather Log Files
- Analyze Log Files

Lab 6-2: Track a call thru RCD/TCD Records:

- RCD Query and Analysis
- TCD Query and Analysis

Lab 6-3: Instructor Break/Fix

- We Break It
- You Fix It in ½ hour or less.

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