
Implementing Cisco Contact Center Enterprise (CCEI) V1.0

***WHERE GREAT TRAINING
HAPPENS EVERYDAY!***



Implementing Cisco Contact Center Enterprise (CCEI) V1.0

Course Duration

3 Days

Course Price

\$2,695.00

27 CLCs

Methods of Delivery

In-Person ILT

Virtual ILT

Onsite ILT

About this Class

The Implementing Cisco Contact Center Enterprise (CCEI) v1.0 course teaches you how to build and implement a Cisco® Packaged Contact Center Enterprise (PCCE) solution, including advanced integration of external data, Single Sign-On (SSO), and process detail for the Contact Center Enterprise (CCE) solution with examples of the various deployment models. This integration process enables businesses and organizations to deliver a connected digital experience of continuous and capability-rich journeys for your customers, across time and channels. This course teaches you to install the CCE solution and provide Tier 2–3 solution support. The focus is on Day 1 support for a new CCE deployment.

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How you will benefit

This class will help you:

- Learn how to optimize management of CCE solutions for smooth, connected, and efficient digital experiences across multiple channels
- Manage the effects of using CCE solutions for scalability, flexibility, and growth to support larger contact center enterprises

Why Attend with Current Technologies CLC

- Our Instructors are the top 10% rated by Cisco
- Our Lab has a dedicated 1 Gig Fiber Connection for our Labs
- Our Labs run up to Date Code for all our courses

Who Should Attend

The job roles best suited to the material in this course are:

- Deployment Engineers
- Sales Engineers

Prerequisites

To fully benefit from this course, you should have the following knowledge:

- Advanced knowledge of computer networking components: Windows A/D, SQL Server, and components
- Understanding of IP networks
- Strong understanding of Cisco Packaged Contact Center Enterprise functionality
- Advanced experience administering of Cisco Packaged Contact Center Enterprise
- Working knowledge of Unified Communications Manager and Voice Gateways

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Objectives

After taking this course, you should be able to:

- Examine components, protocols, and variables that influence selection of the design and sizing of a PCCE deployment
- Identify concepts necessary to create CCE system design specifications and deployment plans
- Configure an advanced VXML application implementing DB lookup functionality and digit collection; use Call Studio and CCE Scripting tools to present call data collected from the caller to the agent desktop
- Discover how to install CCE software
- Administer CA signed security certificates to support the successful addition of a PCCE site
- Identify the tasks associated with adding Remote Site functionality to the PCCE environment
- Discuss integration of the CUIC, LiveData, and Finesse reporting environments
- Configure the PCCE Dial Plan end-to-end, incorporating the use of Cisco Unified Border Element (CUBE), Cisco Unified SIP Proxy (CUSP), Cisco Virtualized Voice Browsers (VVBs), Voice XML (VXML) Gateways (GW), and Significant Digits
- Examine concepts necessary to create CCE system design specifications and deployment plans
- Create a series of routing scripts using PCCE
- Configure Single sign-on for Unified CCE

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Course Outline

Module 1: Planning a Cisco Packaged Contact Center Enterprise Deployment

• Packaged CCE Component Overview

- Overview of core system elements including ICM, CVP, CUCM, PGs, AW/HDS/DDS, and Finesse
- Explanation of how these components function together to create a complete PCCE solution
- Differentiation between Packaged and traditional UCCE architectures

• Call Flows Review

- Detailed review of typical call flow scenarios from ingress to agent delivery
- Identification of media versus signaling paths and where key decisions are made
- Emphasis on how ICM routing logic and CVP call treatments are applied during flow

Module 2: Staging a Packaged CCE Deployment

• PCCE Deployment Planning and System Design Specification

- Guidelines for determining required server roles and node types
- Sizing rules based on concurrent agents and call volumes
- Considerations for network topology, clustering, and geographic distribution

• Software Compatibility and OS Requirements

- Review of supported Windows Server and SQL versions
- Required patches and platform alignment per the Compatibility Matrix
- Tools and resources for verifying version compliance before installation

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Module 3: Preparing CCE Software for Installation

- **General Considerations and System Requirements**

- Verification of VM requirements, NIC settings, and CPU/memory allocations
- Review of common installation pitfalls and how to avoid them
- Checklist of components that must be pre-installed (e.g., .NET, Java, IIS)

- **Active Directory Considerations**

- Domain membership guidelines and OU structure
- Creation of organizationally named service accounts with appropriate privileges
- Group policy recommendations for optimal security and performance

Module 4: Administering Security Certificates

- **Security Certificate Overview**

- Importance of certificates for secure inter-component communication
- Roles of root, intermediate, and server certificates in the PCCE ecosystem

- **Install and Configure Certificate Authority**

- Steps to install a Microsoft CA or integrate with an existing one
- Generation of certificate templates for use with CVP, ICM, CUIC, and Finesse
- Enrollment and distribution strategies, including automation with GPO

Module 5: Introducing the Packaged CCE Integration Wizard

- **PCCE Inventory and Service Accounts**

- Cataloging all server names, roles, and assigned IPs before deployment
- Mapping of each PCCE component to its corresponding Windows account

- **Run the PCCE Wizard**

- Guided walkthrough of the wizard's steps: inventory import, credentials, services
- How the wizard automates database creation, component registration, and configurations
- Logging and recovery options if the wizard encounters errors

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Module 6: Adding a Site to Packaged CCE

- **PCCE Remote Site Overview**

- Review of use cases for multi-site environments and geographic distribution
- Overview of local survivability and inter-site call handling

- **Remote Site Security Certificate Considerations**

- Approaches for managing certificates across WAN-connected environments
- Trust strategies: centralized CA vs. site-specific CAs
- Troubleshooting tools for diagnosing certificate errors at remote sites

Module 7: Integrating Cisco Unified Intelligence Center, Live Data, and Cisco Finesse

- **Compare Real Time vs. Live Data**

- Understanding the differences in architecture, latency, and data structure
- Use case alignment for reporting requirements: wallboards vs. historical analytics

- **Complete Cisco Unified Intelligence Center Integration**

- Steps for integrating CUIIC with the HDS/DDS database
- Role and configuration of Data Sources and Reporting Users
- Permissions for access control and custom report creation

Module 8: Personalizing the Packaged CCE Dial Plan

- **CCE Dial Plan Components**

- Role of Call Types, Dialed Numbers, and Labels in routing logic
- How these elements relate to business requirements and reporting segmentation

- **Ingress Gateway and Cisco Unified Border Element Dial Plans**

- Configuration of dial peers, SIP trunking, and call classification
- Handling of translations and significant digits for seamless call routing
- Integration with CUSP for SIP message handling and policy enforcement

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Module 9: Configuring to Validate Deployment

- **Confirm Configuration Readiness**

- Checklist for verifying service states, database replication, and network reachability
- Common post-installation validations for each component (e.g., PG status, CVP Ops Console, CUCM registration)

- **Unified Communication Manager Administration**

- Creating and associating CTI Route Points and CTI Ports
- Registering agent phones and configuring device profiles for Extension Mobility
- Troubleshooting JTAPI registration and CTI control

Module 10: Scripting for Packaged Contact Center Enterprise

- **Configure Script Editor**

- Use of Nodes: Start, Label, Queue to Skill Group, Set, and Run External Script
- How to build functional call routing flows that respond to DNIS, ANI, or time of day

- **Use Microapps**

- Introduction to Microapp types: Menu, Audio, Get Digit String, and Call Redirect
- How Microapps integrate with CVP for IVR-based self-service
- Combining Microapps with data dips for dynamic call handling

Module 11: Configuring Single Sign-On

- **SSO Overview**

- Federated authentication model and role of Identity Providers
- Differences between SP-initiated and IdP-initiated logins

- **Configure SSO Prerequisites**

- Importing metadata and configuring SAML on Finesse and CUIC
- Trust establishment with external IdPs like Azure AD or Ping
- Testing login workflows and validating user attribute mapping

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Lab Outline

- **Lab 1:** Navigate CCE Discovery Architecture and Components
- **Lab 2:** Explore ICM Configuration Tools
- **Lab 3:** Observe Installed CCE Software
- **Lab 4:** Certificate Store Navigation
- **Lab 5:** Add a Remote Site to PCCE
- **Lab 6:** Personalize Cisco Finesse Server
- **Lab 7:** Configure Site Dial Plan
- **Lab 8:** Verify Configuration Details to Facilitate Final Testing
- **Lab 9:** Configure Deployment of VXML Functionality
- **Lab 10:** Build a Series of Test Scripts
- **Lab 11:** Enable Single Sign-On