

Implementing Cisco Contact Center Enterprise (CCEI)

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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.

How you'll 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 in 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 primary audience for this course is as follows:

- 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

Course Duration

3 days

Course Price

\$2,695.00 or 27 CLCs

Methods of Delivery

- Instructor Led
- Virtual ILT
- On-Site

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

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

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 CUIC 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

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

LAB OUTLINE

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