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# Implementing Cisco Contact Center Enterprise (CCEI) V1.0

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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.

## Implementing Cisco Contact Center Enterprise (CCEI) V1.0

### 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

## Implementing Cisco Contact Center Enterprise (CCEI) V1.0

### 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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### Course Outline

#### 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

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### Course Outline

#### 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

## Implementing Cisco Contact Center Enterprise (CCEI) V1.0

### 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