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Implementing Cisco Contact Center Enterprise (CCEI) V1.0

Implementing Cisco Contact Center Enterprise (CCEI) V1.0

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

- o   Overview of local survivability and inter-site call handling
- **Remote Site Security Certificate Considerations**
  - o   Approaches for managing certificates across WAN-connected environments
  - o   Trust strategies: centralized CA vs. site-specific CAs
  - o   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**
  - o   Understanding the differences in architecture, latency, and data structure
  - o   Use case alignment for reporting requirements: wallboards vs. historical analytics
- **Complete Cisco Unified Intelligence Center Integration**
  - o   Steps for integrating CUIC with the HDS/DDS database
  - o   Role and configuration of Data Sources and Reporting Users
  - o   Permissions for access control and custom report creation

Module 8: Personalizing the Packaged CCE Dial Plan
- **CCE Dial Plan Components**
  - o   Role of Call Types, Dialed Numbers, and Labels in routing logic
  - o   How these elements relate to business requirements and reporting segmentation
- **Ingress Gateway and Cisco Unified Border Element Dial Plans**
  - o   Configuration of dial peers, SIP trunking, and call classification
  - o   Handling of translations and significant digits for seamless call routing
  - o   Integration with CUSP for SIP message handling and policy enforcement

Module 9: Configuring to Validate Deployment
- **Confirm Configuration Readiness**
  - o   Checklist for verifying service states, database replication, and network reachability
  - o   Common post-installation validations for each component (e.g., PG status, CVP Ops Console, CUCM registration)
- **Unified Communication Manager Administration**
  - o   Creating and associating CTI Route Points and CTI Ports
  - o   Registering agent phones and configuring device profiles for Extension Mobility
  - o   Troubleshooting JTAPI registration and CTI control

Module 10: Scripting for Packaged Contact Center Enterprise
- **Configure Script Editor**
  - o   Use of Nodes: Start, Label, Queue to Skill Group, Set, and Run External Script
  - o   How to build functional call routing flows that respond to DNIS, ANI, or time of day
- **Use Microapps**
  - o   Introduction to Microapp types: Menu, Audio, Get Digit String, and Call Redirect
  - o   How Microapps integrate with CVP for IVR-based self-service
  - o   Combining Microapps with data dips for dynamic call handling

Module 11: Configuring Single Sign-On
- **SSO Overview**
  - o   Federated authentication model and role of Identity Providers
  - o   Differences between SP-initiated and IdP-initiated logins
- **Configure SSO Prerequisites**
  - o   Importing metadata and configuring SAML on Finesse and CUIC
  - o   Trust establishment with external IdPs like Azure AD or Ping
  - o   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: 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**