

Cisco 6590050406

Cisco Call Manager (CUCM) Guide

How to Install, Configure, and Maintain the Cisco IP Telephony System

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1. INTRODUCTION

This guide provides comprehensive instructions for understanding, installing, configuring, and maintaining a Cisco Unified Communications Manager (CUCM) system. It is designed to assist administrators and network professionals in managing Cisco IP Telephony environments effectively.

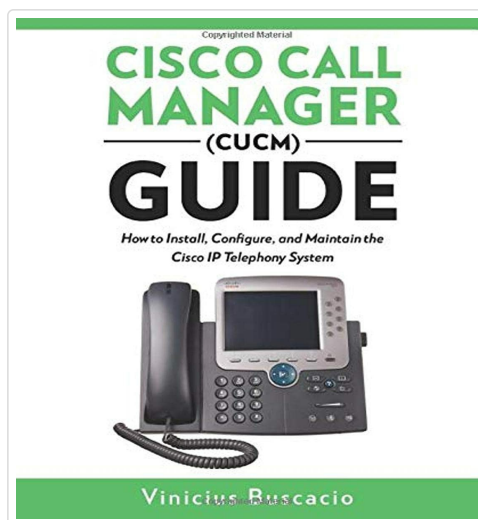


Figure 1: Front cover of the Cisco Call Manager (CUCM) Guide.

2. Cisco CUCM SYSTEM OVERVIEW

This section introduces the foundational aspects of Cisco CUCM, providing context for its operation and architecture.

2.1. Call Manager History

An overview of the evolution and development of Cisco Call Manager, tracing its progression to the current CUCM system.

2.2. Topology

Details on the typical network topology and architectural components involved in a Cisco CUCM deployment, including server roles and interconnections.

3. INSTALLATION PROCEDURES

This section outlines the steps required to install a Cisco CUCM system.

1. **System Requirements:** Verify hardware and software prerequisites for installation.
2. **Media Preparation:** Prepare installation media, such as ISO images or physical discs.
3. **Initial Boot and Setup:** Guide through the initial boot process and basic system setup prompts.
4. **Network Configuration:** Configure essential network parameters during installation.

4. INITIAL CONFIGURATION AND SYSTEM COMPONENTS

This section details the initial configuration steps and the setup of core CUCM components.

4.1. Initial Configurations

Instructions for performing the essential post-installation configurations to bring the CUCM system online and functional.

4.2. Service Parameters

Guidance on understanding and adjusting various service parameters that control the behavior of CUCM services.

4.3. Partitions and Calling Search Spaces

Explanation and configuration steps for creating and managing partitions and calling search spaces to control call routing logic.

4.4. Phones Registration

Procedures for registering IP phones with the CUCM system, including device configuration and authentication.

4.5. Voice Gateways and Trunks

Configuration of voice gateways and trunks to connect CUCM to the Public Switched Telephone Network (PSTN) or other IP telephony systems.

5. CALL MANAGEMENT

This section covers the mechanisms for controlling and manipulating call flow within the CUCM environment.

5.1. Call Routing

Detailed information on how CUCM routes calls, including route patterns, route lists, and gateways.

5.2. Digit Manipulation

Techniques for manipulating dialed digits using translation patterns and other CUCM features to ensure proper call routing and presentation.

6. ADVANCED FEATURES

This section explores advanced functionalities available within Cisco CUCM.

6.1. Survivable Remote Site Telephony (SRST)

Configuration and operation of SRST to provide call processing redundancy for remote sites in the event of a WAN link failure.

6.2. Conferences and Features

Implementation of conferencing services and other features such as Extension Mobility and Hunt Groups to enhance user productivity and call handling.

7. MONITORING AND MAINTENANCE

This section provides guidance on monitoring system health and performing routine maintenance tasks.

7.1. Cisco Unified Real-Time Monitoring Tool (RTMT)

Usage of RTMT for real-time monitoring of CUCM performance, call activity, and system alerts.

7.2. Backup and Restore

Procedures for backing up CUCM configurations and data, and restoring the system in case of data loss or system failure.

8. TROUBLESHOOTING AND BEST PRACTICES

This section offers common tips and strategies for diagnosing and resolving issues within a CUCM environment, along with recommended best practices for optimal system performance and stability.



Figure 2: Back cover of the guide, listing key topics.







9. PRODUCT SPECIFICATIONS

Guide Details

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10. SUPPORT INFORMATION

This document is an instructional guide for the Cisco Call Manager (CUCM) system. For technical support, warranty information, or service related to the Cisco CUCM software or hardware, please refer to the official Cisco documentation and support channels. This guide does not provide direct support for the Cisco CUCM system itself.

 <p>Cisco Unified Communications Manager 14 SU</p> <p>Release 14.0(1) SR1 February 2014</p> <p>Service Pack 1 February 2014</p>	<p>Cisco Unified Communications Manager 14 SU</p> <p>Cisco Unified Communications Manager 14 SU</p>
 <p>Security Guide for Cisco Unified Communications Manager, Release 11.5(1)</p> <p>February 2013</p>	<p>Cisco Unified Communications Manager Release 11.5(1) Security Guide</p> <p>Comprehensive security guide for Cisco Unified Communications Manager Release 11.5(1), covering authentication, encryption, certificates, TLS, IPSec, HTTPS, and best practices for securing your Cisco IP telephony network.</p>
 <p>Feature Configuration Guide for Cisco Unified Communications Manager, Release 12.5(1)</p> <p>February 2013</p>	<p>Feature Configuration Guide for Cisco Unified Communications Manager, Release 12.5(1)</p> <p>A comprehensive guide detailing the configuration of features for Cisco Unified Communications Manager, Release 12.5(1), covering remote worker functionalities, network access, voice messaging, and more.</p>
 <p>Cisco Unified Communications Manager Documentation Guide for Release 7.1(4)</p> <p>February 2013</p>	<p>Cisco Unified Communications Manager Documentation Guide Release 7.1(4)</p> <p>This guide provides an overview and links to documentation for Cisco Unified Communications Manager Release 7.1(4), covering general information, design, installation, configuration, maintenance, troubleshooting, and IP phone documentation.</p>
 <p>Managed Services Guide for Cisco Unified Communications Manager and IM and Presence Service</p> <p>February 2013</p>	<p>Managed Services Guide for Cisco Unified Communications Manager and IM and Presence Service</p> <p>Explore the Cisco Managed Services Guide for Unified Communications Manager and IM and Presence Service. This guide details system monitoring, performance tuning, troubleshooting, SNMP, RTMT, alarms, and syslog for Cisco's UC solutions.</p>
 <p>Cisco UCCE Agent Login Flow: A Detailed Technical Overview</p> <p>February 2013</p>	<p>Cisco UCCE Agent Login Flow: A Detailed Technical Overview</p> <p>Explore the intricate Cisco Unified Contact Center Enterprise (UCCE) agent login process. This document details the roles of CTI Server, PIM, JGW, OPC, and Finesse in enabling agent authentication and call routing.</p>