Cisco Unified Contact Center Express Test Bed for Collaboration Systems Release 12.5(1)

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Overview

Cisco Unified Contact Center Express (Unified CCX) 12.0 was used to complete testing for Cisco Collaboration Systems Release 12.5(1). The test bed is designed to simulate a medium-sized inbound and outbound contact center with local and remote agents. It uses Unified CCX for call treatment and queuing and Cisco Unified Communications Manager (Unified Communications Manager) for call control.

This test bed is designed to implement and test some of the design considerations and guidelines of the Cisco Collaboration System Solution Reference Network Designs (SRND) and Cisco Unified Contact Center Express SRND.

For information about how to install and configure these and other Contact Center components, see the product Support links in the Component Resources Documentation table in the: System Release Notes for Contact Center: Cisco Collaboration Systems Release 12.5(1).

More configuration information for contact center components is available at: Configuration Examples and TechNotes.

Unified CCX Test Bed and Deployment Architecture

This Unified CCX test bed is designed to replicate a 400 agent inbound and outbound contact center in multiple sites with agents located locally and in remote sites. The test bed design has two data centers separated across a WAN.

The Unified CCX test bed also includes the Cisco Jabber Guest solution, which allows customers to call the contact center using a browser. The call is routed through the Cisco VCS Expressway and Cisco VCS Control to the Cisco Jabber Guest server. Cisco Jabber Guest converts the call to SIP and sends it to Unified CCX for further processing.

The entire deployment uses two data centers connected through a high-speed WAN for redundancy. All solution components are designed for high availability (HA) wherever possible. The figure provides an overview of the Unified CCX Test Bed and Deployment Architecture.

For a Visio version of the test bed topology diagram, see Network Topology Diagrams for Contact Center.

Figure 1: Collaboration Systems Release 12.5(1): Unified CCX Test Architecture

Unified Contact Center Express Test Architecture
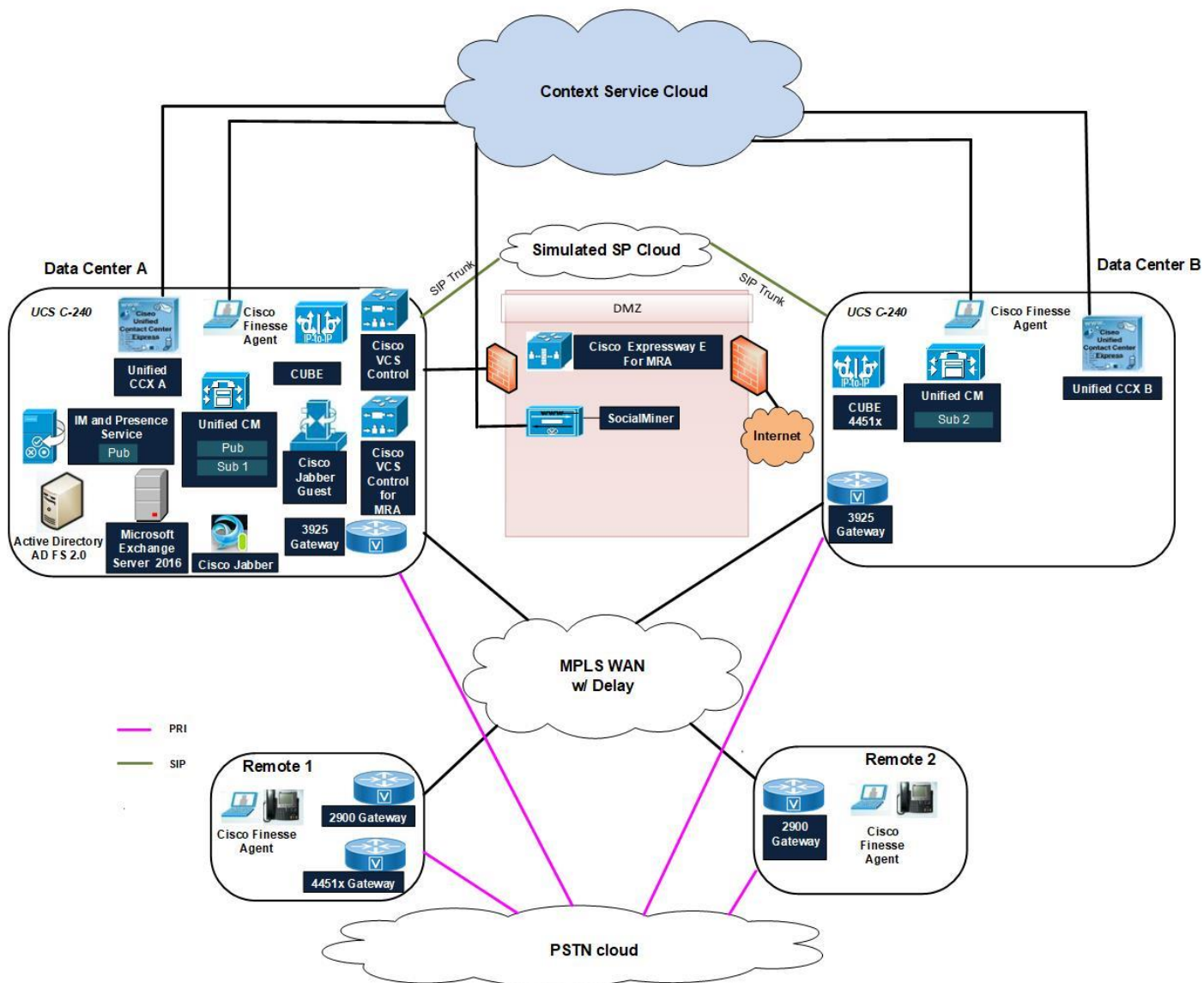
General Deployment Options

Cisco Unified Contact Center Express (Unified CCX) provides a secure, highly available, and easy to deploy customer interaction management solution for up to 400 agents. This integrated solution is intended for both formal and informal contact centers.

Unified CCX provides options to address multiple functional areas such as:

- Inbound voice

- Outbound campaign

- Agent email

- Inbound web chat

- Cisco Jabber Guest

- Cisco MediaSense recording

- Mobile and Remote Access

- Cisco Context Service

Other components included are:

- Web-based reports

- Cisco SocialMiner user licenses for social forum activity monitoring and follow-up

- Web-based Cisco Finesse desktops

You can deploy these options on Cisco Unified Communications on Cisco Unified Computing System (Cisco Unified Communications on Cisco UCS) or any other equivalent specification-based third-party virtual servers with the supported deployment models.

The following features were tested as part of the Unified CCX deployment.

Cisco Finesse

Cisco Finesse is the next generation browser-based agent and supervisor desktop for Unified CCX. Cisco Finesse is an alternative to Cisco Agent Desktop, Cisco Supervisor Desktop, and Cisco Desktop Administrator. Cisco Finesse is available with enhanced and premium license packages and provides typical inbound voice functionality. It supports Unified Communications Manager-based silent monitoring and workflow-based recording with Cisco MediaSense (MediaSense) and Work Force Optimization (WFO).

Unified CCX Home Agent

Extend and Connect allows Unified CCX agents to work from remote locations using devices such as public switched telephone network (PSTN) phones and private branch exchange (PBX) devices. Agents are configured with a Computer **Telephony Interface (CTI) remote device (instead of a physical phone). Agents' PCs have Cisco Jabber (Jabber) installed** in Extend mode. The agents can set their phone devices as the agent phone through the Jabber interface.

To reduce media setup time and enhance caller experience, a persistent connection call is placed to the agent's phone device, which the agent should not disconnect. Routed calls are delivered to the agent seamlessly over the persistent call. You can configure it so the agent hears a notification when the persistent connection call is established and a separate notification when each customer care call is delivered.

Unified CCX Multisession Web Chat

Unified CCX Premium provides the facility for users to start a chat session with the agent from a website, typically the public website of the organization. Unified CCX provides separate agent and supervisor web applications.

Unified CCX Multisession Web Chat allows a Cisco Finesse Agent to take voice calls and up to five customer chat requests.

Unified CCX Agent Email

Unified CCX allows email contacts to be routed to agents based on the email addresses to which they are sent by the customers. Cisco Finesse Agent Email feature uses skill-based routing and last-agent email routing. Cisco Finesse provides a common chat and email state, separate from voice state. Blending ensures that agents can handle voice, email, and chat contacts from the same desktop. Emails are routed only to agents that are assigned to at least one Email CSQ.

Unified CCX Predictive and Progressive Agent Outbound

The outbound feature provides outbound dialing functionality in addition to existing Unified CCX inbound capabilities. This feature allows agents who are not busy with inbound calls to handle outbound calls.

With the Outbound feature, Unified CCX places customer calls using the Unified Communications Manager.

The Agent Predictive and Progressive Dialer leverages the call control and Call Progress Analysis (CPA) from SIP gateway. The SIP gateway performs call progressive analysis of the call and informs the outcome of the call to Unified CCX. All the dialed contacts, which are live voice, are connected to an agent and the remaining calls are disconnected.

Cisco Unified Communications Mobile and Remote Access

Cisco Unified Communications Mobile and Remote Access (MRA) is a core part of the Cisco Collaboration Edge Architecture. It allows endpoints such as the Cisco IP Phone 7800 and 8800 Series and the Cisco DX Series to have their registration, call control, provisioning, messaging, and presence services provided by Unified Communications Manager when the endpoint is not within the enterprise network. Cisco Expressway provides secure firewall traversal and line-side support for Unified Communications Manager registrations.

For more deployment information about Mobile and Remote Access through Cisco Expressway, see https://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/expressway/config_guide/X8-10/Mobile-Remote-Access-via-Expressway-Deployment-Guide-X8-10.pdf.

Cisco Context Service

Context Service is a cloud-based omnichannel service that provides storage, tagging, and management of the data from interactions between businesses or organizations and their customers. This service helps customer care agents better understand and respond to customer needs. For more information, see, https://developer.cisco.com/site/context-service/discover/overview/.

44XX Gateway Support

The Cisco 4451x Router runs on IOS-XE Software. The Cisco IOS-XE Software is designed to provide modular packaging, feature velocity, and powerful resiliency.