Applicable to Unified Communications System Release 8.0(2)

Contents

Introduction

This page provides configuration information for a Cisco Unified Customer Voice Portal (Unified CVP) Post-Routed comprehensive call model with Unified Expert Advisor functionality within a Cisco Unified Communications deployment. The Unified CVP comprehensive call flow model combines the Call Director and the VRU-only call flow models. It provides initial prompt and collect, self service IVR, queuing, and VoIP switching among Cisco Unified Contact Center Enterprise (Unified CCE) and TDM agents.

Cisco Unified Expert Advisor (Unified Expert Advisor) is an optional feature for Unified CCE. It extends the contact center so that expert advisors can handle certain incoming calls. An expert advisor is a specialist who is not employed by the contact center?but who agrees to be ?on call? to provide services as a consultant.

The intended audience should be able to perform system-level configuration of Cisco Unified Communications components and deployments and be familiar with the Cisco Unified Communications family of products.
TIP: Use Unified CVP Post-Routed Call Flow (Project Features Tested label) as a keyword to search for related test cases in System Test Results for Contact Center.

The configuration information is based primarily on testing performed in the Unified CVP Post-Routed Call Flow test bed (Test Bed 3) during Cisco Unified Communications system releases. This topic does not contain detailed step-by-step procedures; for detailed information about installing, configuring, and administering Unified CVP, refer to Unified CVP documentation (see Related Documentation).

Design

For information on design considerations and guidelines for deploying Unified CVP 8.x releases, see the *Cisco Unified Customer Voice Portal (CVP) 8.x Solution Reference Network Design (SRND)*.

For information on specific deployments and sites where Unified CVP system testing was performed, see Unified CVP Post-Routed Call Flow test bed (Test Bed 3) in Tested Deployments and Site Models.

Topologies

This section provides information about the Unified CVP comprehensive call flow with Unified Expert Advisor functionality. During Cisco Unified Communications system testing, various Unified CVP system components including Unified CVP Call Server, Cisco Unified Intelligent Contact Management Enterprise (Unified ICME) system, Unified Expert Advisor Runtime and Reporting Servers, Cisco Unified Personal Communicator, SIP Ingress Gateway, and Unified CVP VXML Gateway were installed and tested in several sites in the Unified CVP Post-Routed call flow test bed.

Component Deployment

The following provides a non-site specific overview of the components deployed in Test Bed 3 that participated in the Unified CVP comprehensive call flow with Unified Expert Advisor functionality. Security is implemented using Unified 5500 Series Adaptive Security Appliance to provide firewall and policy enforcement services and intrusion protection systems. Cisco Security Agent is implemented as core endpoint security on all the servers. Infrastructure components include routers, switches, and gateways.
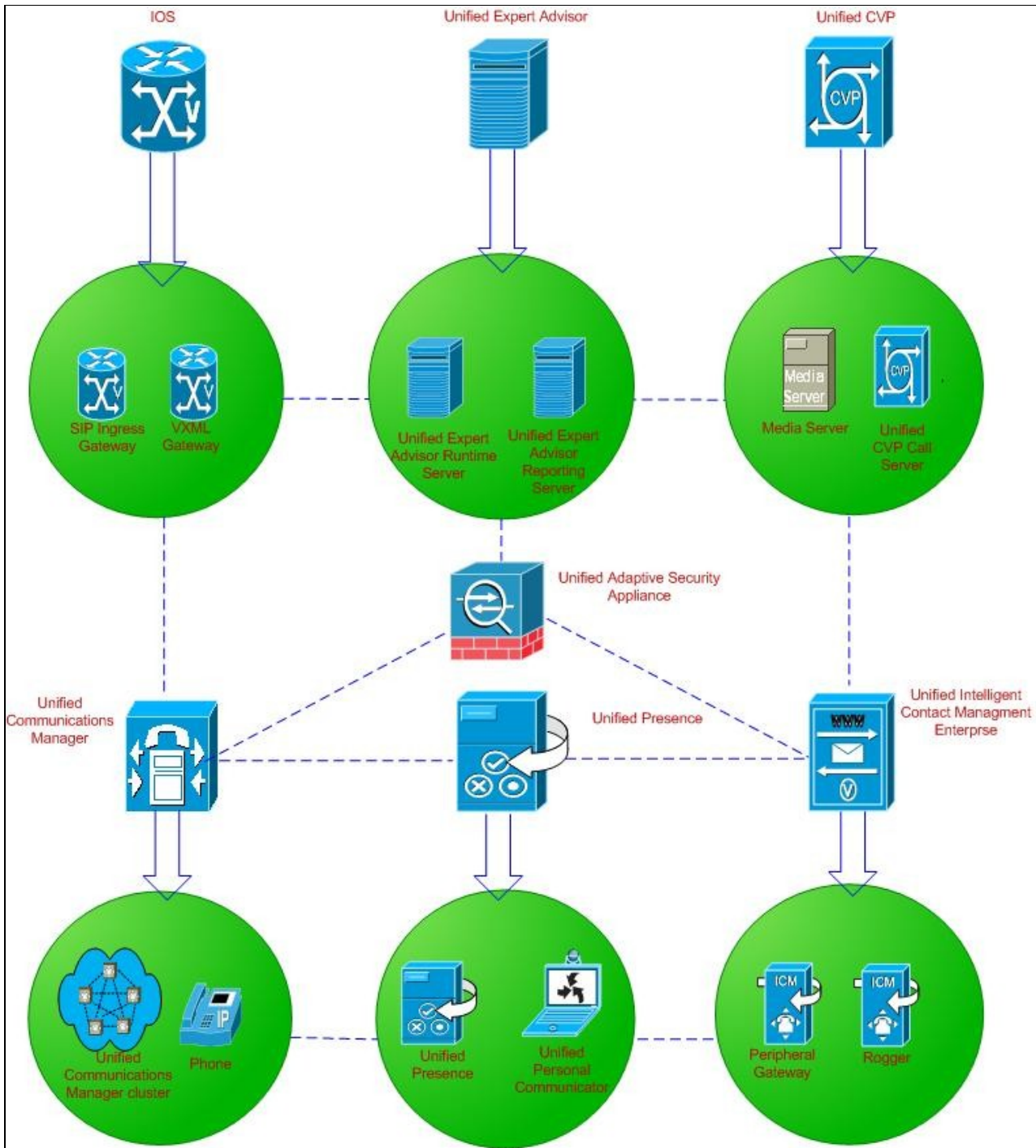
Call Flow Diagram

The following is a graphical representation of the Unified CVP Post-Routed comprehensive call flow with Unified Expert Advisor functionality.
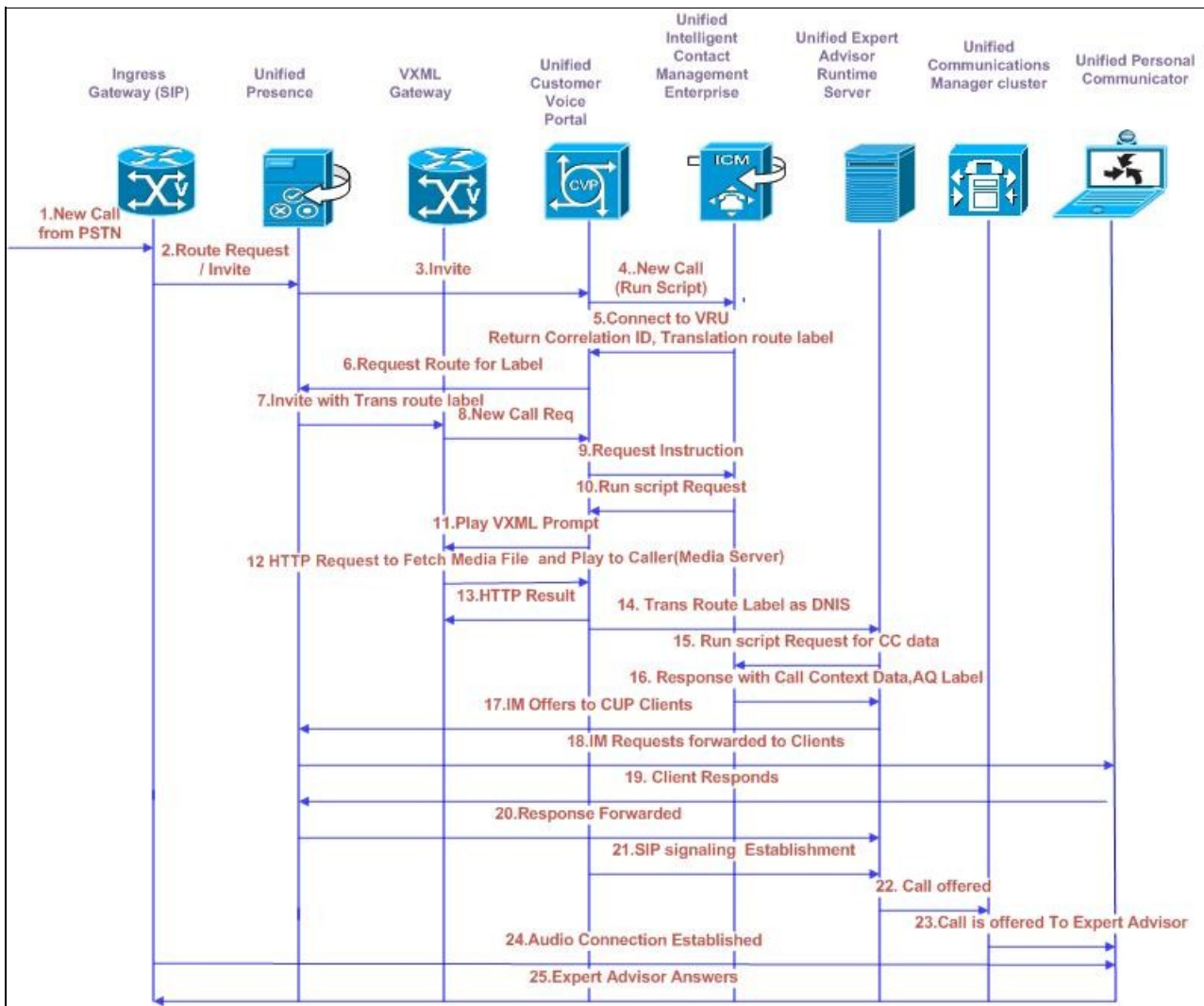
Configuration

This section provides the high-level tasks and related information for configuring a Unified CVP
Post-Routed comprehensive call flow model with Unified Expert Advisor functionality. The following tables
provide this information:

- **Configuration Tasks**: List of high-level configuration tasks
- **System Test Specifics**: System test variations from default values documented in the product
  documentation.
- **More Information**: Links to product documentation for detailed configuration information related to
  the high-level tasks.

NOTE: Default and recommended values specified in the product documentation were used during system
testing, unless otherwise noted in the **System Test Specifics** column.

Table 1: Unified CVP Call Server, Unified SIP Proxy Server and SIP Gateway Configuration

Configuration Tasks	System Test Specifics	For More Information, see: *Configuration and Administration Guide for Cisco Unified Customer Voice Portal Release*

1. Configure the SIP Proxy on the Unified CVP Call Server.		Chapter: High-level Configuration Instructions for Call Flow Models Section: Unified CVP Comprehensive (SIP/H.323) Call Flow Models > Configuration Instructions for the Unified CVP Comprehensive Call Flow Model Using SIP
2. Configure the Ingress (SIP) and Unified CVP VXML Gateways.		Chapter: High-level Configuration Instructions for Call Flow Models Section: Unified CVP Comprehensive (SIP/H.323) Call Flow Models > Configuration Instructions for the Unified CVP Comprehensive Call Flow Model Using SIP Section: Ingress Gateway Configuration: Example Gateway Settings, Section: VoiceXML Gateway Configuration: Example Gateway Settings
3. Configure the ECC variables on the Unified ICME system.		Chapter: High-level Configuration Instructions for Call Flow Models Section: Common Unified ICMH Configuration > Define Unified CVP ECC Variables
4. Configure the Speech Server.		Chapter: Configuring the Media Servers Section: Configuring a Speech Server.
5. Configure the Media Server.		Chapter: Configuring the Media Servers Section: Configuring a Media Server

Table 2: Unified Communications Manager, Unified Presence, Unified Expert Advisor and Unified Personal Communicator Configuration

Configuration Tasks	System Test Specifics	For More Information, see: *Administration and Configuration Guide for Cisco Unified Expert Advisor*
1. Configure SIP Proxy on Unified Communications Manager.		**For More Information, see:** Chapter: Component Configuration Section: Configuration Overview > Unified CM Server-Level Configuration
2. Add end users on Unified Communications Manager for Unified Presence.		Chapter: Component Configuration Section: Configuration Overview > Unified CM User-Level Configuration > Adding End Users on the Unified CM
3. Configure Unified IP Phones and Unified Personal Communicator on Unified Communications Manager.		Chapter: Component Configuration Section: Configuration Overview > Unified CM User-Level Configuration > Configuring Phones on the Unified CM *and* Configuring Cisco Unified Personal Communicator Devices on the Unified CM
4. Enable user capabilities on Unified Communications Manager.		Chapter: Component Configuration Section: Configuration Overview > Unified CM User-Level Configuration > Enabling Presence and Cisco Unified Personal Communicator Capabilities for Users

5. Configure Unified Presence with SIP functionality.		Chapter: Component Configuration Section: Configuration Overview > Cisco Unified Presence Server Server-Level Configuration
6. Verify users are available to Unified Presence.		Chapter: Component Configuration Section: Configuration Overview > Verify Communication Manager End Users are Available to Cisco Unified Presence Server
7. Perform initial configuration of Unified Expert Advisor system, including uploading licenses, configuring the Runtime and Reporting Servers, etc.		Chapter: System Management Section: Initial Configuration Wizard
8. Add Unified Presence users on Unified Expert Advisor Runtime Server.		Chapter: Daily Management Section: Presence Server Users
9. Synchronize Unified Presence users on Unified Expert Advisor Runtime Server.		Chapter: System Management Section: Initial Configuration Wizard
10. Add expert advisors to Unified Expert Advisor Runtime Server.		Chapter: Daily Management Section: Expert Advisors
11. Configure skills and assign expert advisors to skills.		Chapter: Daily Management Section: Skills
12. Configure Assignment Queues on Unified Expert Advisor Runtime Server.		Chapter: Daily Management Section: Assignment Queues
13. Assign skills and attributes to the Assignment Queues.		Chapter: Daily Management Section: Assignment Queues

Table 3: Unified CVP and Unified Communications Manager Configuration in Unified Intelligent Contact Management Enterprise System

Configuration Tasks	System Test Specifics	For More Information, see: *Configuration Guide for Cisco Unified ICM/Contact Center Enterprise and Hosted*
1. Configure the Network VRUs.		Chapter: Network IVRs/VRUs Section: Configuring Network VRUs and VRU Scripts > Configuring Network VRUs
2. Configure the appropriate Agent Desk Settings (for each Skill Group) and associate with the PG.		Chapter: Configuring Peripherals and Trunk Groups Section: Configuring a PG > PG Explorer Tab Descriptions > Peripheral Tab
3. Configure the Unified CVP VRU and Unified Communications Manager PGs with the appropriate number of routing clients for each Unified CVP Call Server and Unified Communications Manager		Chapter: Configuring Peripherals and Trunk Groups Section: Configuring a PG

Table 2: Unified Communications Manager, Unified Presence, Unified Expert Advisor and Unified Personal Com

Note: Use the VRU configured in step 1 as the Network VRU in the routing client configured under PG configuration.		

Table 4: Unified Expert Advisor Runtime Server Configuration in Unified Intelligent Contact Management Enterprise System

Configuration Tasks	System Test Specifics	For More Information, see: *Administration and Configuration Guide for Cisco Unified Expert Advisor*
1. Configure Unified Gateway for Unified Expert Advisor with auto configuration enabled.		Chapter: Component Configuration Section: Unified ICM Server-Level Configuration
2. Configure the Network Trunk Groups and Trunks for Unified Gateway.		Chapter: Component Configuration Section: Unified ICM Server-Level Configuration
3. Configure Skill Group Routes with Labels and Peripheral Targets. NOTE: These Labels are incoming labels configured in Assignment Queue on Unified Expert Advisor Runtime Server.		Chapter: Daily Management Section: Tasks in Unified ICM Configuration Manager after Creating an Assignment Queue > Add Skill Group Route, Peripheral Target and Label
4. Configure Translation Routes and Labels NOTE: These Labels are translation route targets configured on Unified Expert Advisor Runtime Server.		Chapter: Daily Management Section: Tasks in Unified ICM Configuration Manager after Creating an Assignment Queue > Configuring Translation Routes
5. Create a Call Type.		Chapter: Daily Management Section: Tasks in Unified ICM Configuration Manager after Creating an Assignment Queue > Configuring Call Types
6. Create a Dialed Number Script Selector.		Chapter: Daily Management Section: Tasks in Unified ICM Configuration Manager after Creating an Assignment Queue > Creating the Dialed Number/Script Selector
7. Configure the Network VRU Scripts.		Chapter: Network IVRs/VRUs Section: Accessing VRUs in Cisco Unified Intelligent Contact Management Scripts > Network VRU Script Configuration
8. Create Unified ICME script.		Chapter: Daily Management Section: Tasks in Unified ICM Configuration Manager after Creating an Assignment Queue > Creating the Unified ICM Script

Table 3: Unified CVP and Unified Communications Manager Configuration in Unified IntelligentContact Manage

9. Configure Queue to Expert.		Chapter: Daily Management Section: Assignment Queues > Configuring Queue to Expert
10. Invoking the Queue to Expert in Unified ICME.		Chapter: Daily Management Section: Assignment Queues > Invoking the Queue to Expert in Unified ICM

Related Documentation

- For configuration checklists and component installation and configuration documents, see Component Installation and Configuration Guides.

- For information on the results obtained from the system testing, see System Test Results for Contact Center.

- For information on configuring the security components, see Security System Configurations.

- For information on the IOS commands used to configure infrastructure components, see Configuration Command Files for Contact Center.

Table 4: Unified Expert Advisor Runtime Server Configuration in Unified Intelligent ContactManagement Enterp