Applicable to Unified Communications System Release 8.6(1)

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Introduction

This page provides configuration information for a Cisco Unified Customer Voice Portal (Unified CVP) Post-Routed comprehensive call model using H.323 signaling 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, Unified IP IVR treatment and queuing, and VoIP switching among Cisco Unified Contact Center Enterprise (Unified CCE) and TDM agents.

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: 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.

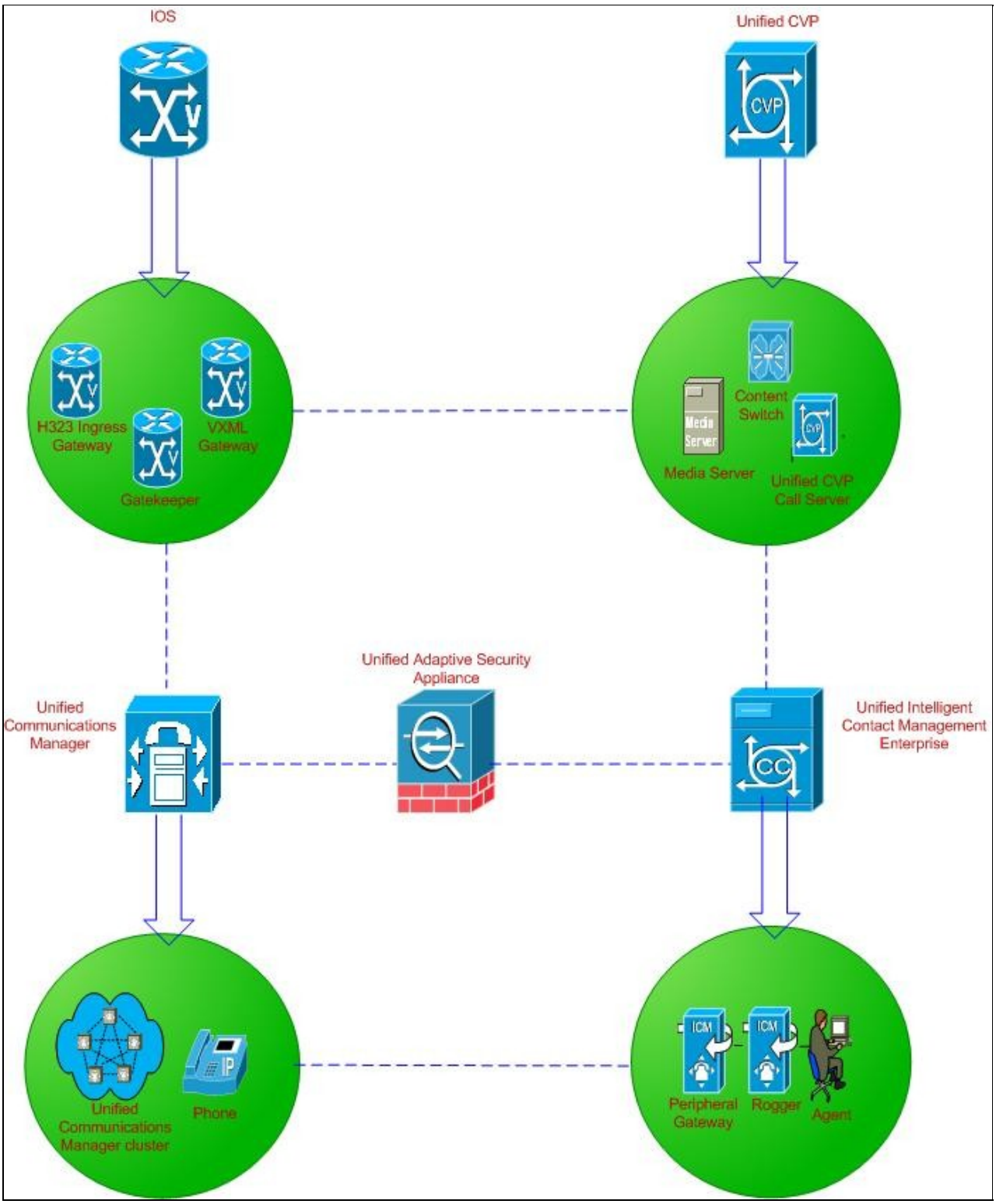
Topologies

This section provides information about the Unified CVP comprehensive call flow. During Cisco Unified Communications system testing, various Unified CVP system components including Unified CVP Call Server, Unified Intelligent Contact Management Enterprise (Unified ICME) system, H.323 Ingress Gateway

and Gatekeeper, Unified CVP VXML Gateway, and CAD and CTI OS server and desktop software were installed and tested in several sites in the Unified CVP Post-Routed call flow test bed.

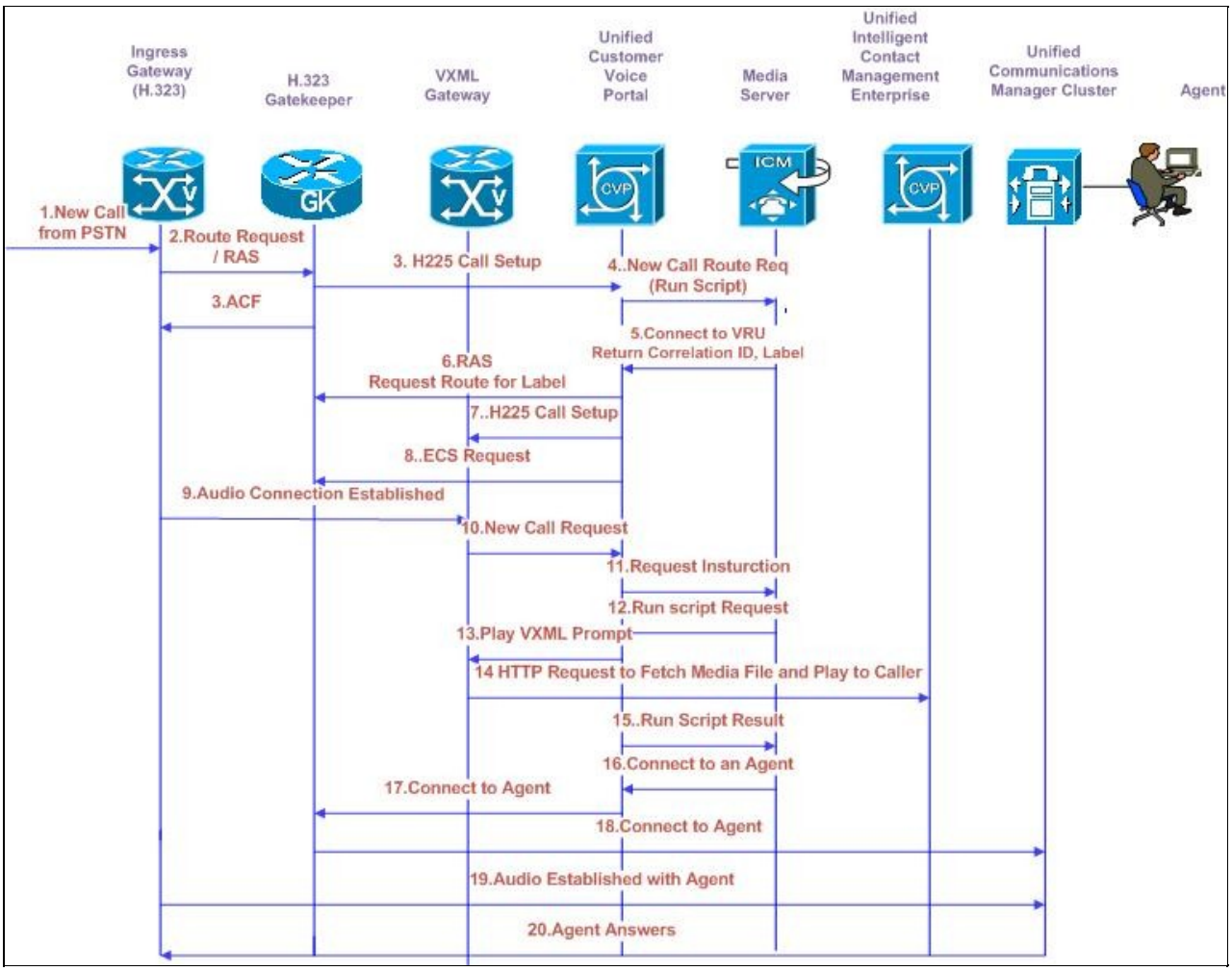
Component Deployment

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 using H.323. 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, gateways and gatekeepers.



Call Flow Diagram

The following is a graphical representation of the Unified CVP Post-Routed comprehensive call flow using H.323.



Configuration

This section provides the high-level tasks and related information for configuring a Unified CVP Post-Routed comprehensive call flow model using H.323. 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 System, H.323 Service, H.323 Gateway and Gatekeeper Configuration

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

1. Configure the Unified CVP Call Server with H.323 Service.		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 H.323
2. Configure the Unified CVP H.323 Service (formerly known as the Unified CVP Voice Browser) in the VBAdmin Tool.	In the VBAdmin tool, select Cisco Unified Customer Voice Portal H.323 Service and set the IP address of the Gatekeeper as follows: SetGateKeeper <NewValue>, where <NewValue> is the IP address for the Gatekeeper serving the H.323 Service.	Chapter: Administering the Unified CVP H.323 Service Section: Unified CVP H.323 Service Overview Section: Using VBAdmin Chapter: Configuration Overview Section: Unified CVP Call Director Call Flow Models > Configuration Instructions for the Unified CVP Call Director Call Flow Model Using H.323
3. Configure the Ingress (H.323) 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

Table 1: Unified CVP System, H.323 Service, H.323 Gateway and Gatekeeper Configuration

		H.323 Chapter 14: Configuring the H.323 Devices and VoIP Section: About Call Routing > Ingress Gateway Configuration for Call Routing
4. Configure the H.323 Gatekeeper.		Chapter: Configuration Overview Section: Unified CVP Comprehensive (SIP/H.323) Call Flow Models > Configuration Instructions for the Unified CVP Comprehensive Call Flow Model Using H.323 Chapter 14: Configuring the H.323 Devices and VoIP Section: Configuring a Gateway Section: Configuring a Gatekeeper
5. Configure the ECC variables.		Chapter: High-level Configuration Instructions for Call Flow Models Section: Common Unified ICMH Configuration > Define Unified CVP ECC Variables
6. Configure the Speech Server.		Chapter: Configuring the Media Servers Section: Configuring a Speech Server
7. Configure the Media Server.		Chapter: Configuring the Media Servers Section: Configuring a Media Server

Table 1: Unified CVP System, H.323 Service, H.323 Gateway and Gatekeeper Configuration

Table 2: Unified CVP Components in Unified Intelligent Contact Management Enterprise System: VRU PG, Agents, Skill Groups, and Unified ICME Scripting Configuration

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 and the Network VRU Labels.		Chapter: Network IVRs/VRUs Section: Configuring Network VRUs and VRU Scripts > Configuring Network VRUs
2. Set the adequate number of Correlation IDs (minimum/ maximum).		Chapter: Network IVRs/VRUs Section: Configuring Network VRUs and VRU Scripts > How to Set the Default Network VRU and Range of Correlation Numbers
3. 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
4. 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 NOTE: Use the VRU configured in step 1 as the Network VRU in the routing client configured under PG configuration.		Chapter: Configuring Peripherals and Trunk Groups Section: Configuring a PG
5. Configure the Network Trunk Groups and Trunks for the Unified CVP VRU PG.		Chapter: Configuring Peripherals and Trunk Groups Section: Configuring Trunk Groups and Trunks
6. Configure Call Types. NOTE: Specify unique call type Name and Customer associated with the call type in List Tools > Call Type List in the ICM Configuration Manager.		Chapter: How Routing Works Section: Targets > Determine Call Type
7. Configure inbound Dialed Numbers for each Unified CVP routing client. Associate the Dialed Numbers with their respective Call Types.		Chapter: Configuring Routing Clients Section: Configuring Dialed Numbers and Script Selectors > Dialed Number/Script Selector List Tab Descriptions
8. Configure the Network VRU Scripts.		

		Chapter: Network IVRs/VRUs Section: Accessing VRUs in Cisco Unified Intelligent Contact Management Scripts > Network VRU Script Configuration
9. Develop routing scripts for the Unified CVP Call Types.		Chapter: Configuring Routing Clients Section: Configuring Dialed Numbers and Script Selectors > Dialed Number/Script Selector List Tab Descriptions
10. Configure Agents and Supervisors.		Chapter: Configuring Skill Targets Section: Agents > How to Create an Agent Section: Agents > Agent Explorer Tab Descriptions
11. Configure the Skill Groups and associate Agent IDs with them.		Chapter: Configuring Skill Targets Section: Skill Groups > Skill Group Explorer
12. Add a Route to each Skill Group.		Chapter: Configuring Skill Targets Section: Skill Groups > How to Define a Skill Group and/or Its Associated Records
13. Configure Services and associate each Service to the appropriate Skill Group.		Chapter: Configuring Skill Targets Section: Services > Service Explorer Section: Skill Groups > Mapping Skill Groups to Services
14. Add a Route to the Service.		Chapter: Configuring Routes and Routing Targets Section: Route Configuration > How to define or Modify a Route
15. Configure all the endpoints as Device Targets using Agent Targeting Rules.		Chapter: Configuring Peripherals and Trunk Groups Section: Configuring Agent Targeting Rules
16. Define Labels for the Device Targets and associate them with the corresponding routing clients.		Chapter: Configuring Routes and Routing Targets Section: Labels

Table 3: Unified Communications Manager Components, CAD Server and Desktop, and CTI OS Server and Desktop Configuration

General Configuration Tasks	System Test Specifics	For More Information, see
1. Create user accounts and associate them with the JTAPI phones.		*Installation and Configuration Guide, Cisco Unified Contact Center Enterprise* Chapter: Installing and Configuring Unified

		Communications Manager for Cisco Unified Contact Center Enterprise Section: About the Unified CM Administration Utility > Unified CM Configuration Tasks
2. Configure Unified Communications Manager components, including agent phones and associations for Unified CVP.		*Installation and Configuration Guide, Cisco Unified Contact Center Enterprise* Chapter: Installing and Configuring Unified Communications Manager for Unified Contact Center Enterprise Section: About the Unified CM Administration Utility > Unified CM Configuration Tasks Section: How to Configure Unified CM for Unified CVP
3. Use the Cisco Agent Desktop (CAD) Configuration Setup utility to configure CAD services.		*Cisco CAD Installation Guide, Cisco Unified Contact Center Enterprise and Hosted* Chapter: Installing CAD 8.5 Applications Section: CAD Configuration Setup Utility
4. Install and configure the CTI OS Server.		*CTI OS System Manager?s Guide for Cisco Unified ICM/Contact Center Enterprise & Hosted* Chapter: CTI OS Server Installation
5. Install and configure CTI OS Agents		*CTI OS System Manager?s Guide for Cisco Unified ICM/Contact Center Enterprise & Hosted* Chapter: CTI Toolkit Desktop Client Installation

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.