Cisco Unified Customer Voice Portal 11.0

Product Overview

Cisco® Unified Customer Voice Portal (Unified CVP) is an award-winning product that provides IP-based self-service and call routing. It combines open-standards support for speech with intelligent application development and industry-best call control to deliver personalized self-service to callers - either as a standalone interactive-voice-response (IVR) system or transparently integrated with a contact center.

Business Value

With Cisco Unified CVP, businesses and organizations can provide incoming callers with automated, intelligent self-service using touch-tone input or speech recognition. Callers can access and modify their accounts, place orders, get status updates, retrieve information, and resolve problems - all without speaking to a live agent. This paradigm results in dramatic savings in agent costs. However, if an agent's services are required, Cisco Unified CVP can queue the call and then transfer it to an agent - along with information about the caller and the self-service session. With this solution agent productivity improves and customers enjoy a smooth service experience.

Cisco Unified CVP is an IP-based system, but it easily interoperates with traditional telephony networks through voice gateways using open-standards VoiceXML. These same voice gateways serve as VoiceXML browsers under the control of Cisco Unified CVP, allowing them to play announcements, collect information, and queue calls. The architecture of Cisco Unified CVP provides distributed call treatment with centralized application management, allowing calls to receive self-service and queuing at the most efficient (or desirable) location, while still enabling consistent branding and caller experience, and easy application updates.

When self-service or queuing is complete, Cisco Unified CVP uses Session Initiation Protocol (SIP)-based call control to instruct the network where to route the call, possibly reducing or eliminating telephony carrier transfer costs. The ability of Cisco Unified CVP to route calls across customer service sites enables resource virtualization, allowing businesses and organizations to lower their costs significantly by reducing the number of agents required to maintain a given service level. For example, a customer might call a local office and if no agents are free there, Cisco Unified CVP can easily route the call to a different site where an agent is available.

Cisco Unified CVP is especially powerful when used as part of the broader portfolio of Cisco Unified Communications Solutions, because it takes full advantage of the superior capabilities of Cisco routers and session border controllers (SBCs).

Table 1 lists the new features and benefits available in the latest release of Cisco Unified CVP.

Table 1. New Features and Benefits of Cisco Unified CVP 11.0

Feature	Benefits
Service creation enhancements	The CVP Studio service creation environment offers several new enhancements, including: ● Local variable: A new setVariable element has been introduced for defining local scope variables for holding intermediate results in the script for any desired business logic. It also allows executing Java script that provides custom logic without resorting to Java. Developers can introduce string, arithmetic, and logical operations including special functions as required. Local variables can then be used in substitution and decision evaluation.

Feature	Benefits
	• Representational state transfer (REST) client integration: A new REST client element has been added to use RESTful operations (e.g., GET, POST, DELETE, and PUT) and result processing in a nonprogrammatic, business modeling way. This business modeling approach enables easy integration with enterprise business systems in a secure manner. • Variable manipulation while debugging: During debugging, when an element is focused, the variable view shows all related variables in the same view. The variables can be expanded (if applicable), showing all the local and environment variables. These variables can be modified when a previously set debug breakpoint is hit, greatly simplifying debugging. • Multiapplication debugging: This debugging enables developers to troubleshoot end-to-end call flows involving multiple applications and subflows within the same workspace.
Context Service enabled	CVP adds support for Context Service, a cloud-based omnichannel data repository that can store information from customer IVR sessions. CVP enables this by providing new nodes in CVP Studio to read or write data in Context Service. For more information about Context Service and its availability, see http://docwiki.cisco.com/wiki/Context_Service.
Platform upgrades	• Windows 2012 and Informix 12.10 (for CVP reporting server) are supported.
IPv6 dual mode	• Cisco Unified CVP and Cisco Unified Contact Center Enterprise (UCCE) support IPv6 endpoints in dual-network mode, enabling easier migration from IPv4.

Table 2 lists continuing features and benefits of Cisco Unified Customer Voice Portal.

Table 2. Cisco Unified CVP Features and Benefits

Feature	Benefits
Self-Service	
Play announcements, prompts, and audio	Cisco Unified CVP can play prerecorded announcements and prompts to callers, supporting a wide variety of informational and self-service applications. Streaming audio is also supported (with Real-Time Streaming Protocol [RTSP]), allowing play of live audio sources.
Collect caller input	Cisco Unified CVP can collect information from callers in a variety of ways (for example, yes or no, menu choices, forms, and data types), enabling faster, more intuitive self-service sessions.
Barge and type ahead	Knowledgeable callers can save time by skipping through prompts and announcements they are already familiar with.
Opt out	Callers have the option to "zero-out" to speak with a live agent.
G.729 codec	Support for this audio codec helps ensure that network bandwidth is used more efficiently.
Postcall surveys	Support for caller surveys following the self-service session enhances customer satisfaction and provides valuable feedback to the business or organization.
Courtesy callback	Callers in queue can request a callback when an agent becomes available, reducing time spent on hold and lowering caller frustration.
Speech (ASR and Text-to-Speech [TTS])	ASR and TTS are optionally supported through Nuance, providing a faster, more intuitive self-service session. Media Resource Control Protocol (MRCP) Version 2 is supported, allowing support for optional, advanced speech-based features. For additional information, visit the Cisco Developer Network at: https://marketplace.cisco.com/catalog.
Database read and write	Cisco Unified CVP can read and write information from back-office databases, providing callers with real-time access to their accounts.
Web services support	Cisco Unified CVP supports web services interfaces such as Web Services Description Language (WSDL) and Simple Object Access Protocol (SOAP), enabling real-time integration with web-enabled business applications.
IVR application debugging	Application debugging tools enable deployment of robust, error-free Cisco Unified CVP self-service applications the first time. Debugging capabilities include: • Debug tool integration with Microsoft's Speech application programming interface (API) for an enhanced debugging experience with speech applications • Introduction of debugging break points, which can suspend the debug flow at designated nodes to verify inputs and outputs, and navigate through call flows using debug commands • Event handlers in Cisco Unified CVP Studio applications to handle VoiceXML events and Java exceptions at the most appropriate place within the call flow; exception events are mapped to more context-specific errors to provide better information to troubleshooters
Third-party device integration	Cisco Unified CVP is integrable with select third-party recording and analytic tools that help businesses and organizations improve their customer care. For additional information, visit the Cisco Developer Network at: https://marketplace.cisco.com/catalog.

Feature	Benefits
Video	
Video contact center	Cisco Unified CVP supports **audio**-based self-service and queuing for calls, which optionally become **video** calls when routed to a contact center agent. This support provides rich caller - agent interactions while saving costs and bandwidth during the self-service portion of the call.
Video in queue	The Cisco Unified CVP video-in-queue feature allows a video caller on Cisco Unified Communications Manager (UCM) to view a high-definition (HD) video prompt and navigate a video menu using dual-tone multifrequency (DTMF) keys while in queue for a video agent. This feature allows businesses and organizations to provide personalized, "high-touch" services to customers at remote and branch-office sites such as a local bank office or a retail store. **Note:** For a current list of supported video endpoints, consult the latest hardware and system software specification for Cisco Unified CVP at: http://www.cisco.com/en/US/products/sw/custcosw/ps1006/prod_technical_reference_list.html.
Cisco Virtual Expert Management	Cisco Unified CVP is tested with validated reference designs for Cisco Virtual Expert Management, which is designed for retail businesses that want to redefine their relationships with their customer base by providing a superior consultative experience around complicated products or services. For additional information, visit: http://www.cisco.com/en/US/solutions/ns340/ns414/ns742/ns821/landing_oracle_siebel.html.
Multichannel	
Email	Cisco Unified CVP supports integration with email servers to send email messages based on caller self-service input, allowing callers to benefit from this additional service channel.
Short Message Service (SMS)	Cisco Unified CVP supports integration with SMS servers to send messages based on caller self-service input, allowing callers to benefit from this additional service channel.
Basic outbound	Built-in outbound functions enable Cisco Unified CVP to make an outbound call from a polled data file, providing simple outbound functions without the complexity and expense of a complete solution.
Outbound with Cisco Unified Contact Center Enterprise	If full outbound functions are required, Cisco Unified CVP can be deployed with the Cisco Unified Contact Center Enterprise Outbound option.
Call Control and CTI	
Transfer to agent, IVR, private branch exchange (PBX), automatic call distributor (ACD), or carrier network	In addition to its self-service and queuing capabilities, Cisco Unified CVP possesses powerful SIP-based call control to instruct the IP network where to route the call. This control can include call transfer to an agent, IVR, ACD, PBX, or a carrier network, providing a wealth of customer service options. Cisco Services and authorized Cisco Advanced Technology Partners can assist with integrations to specific devices and carrier networks.
Computer telephony integration (CTI)	Cisco Unified CVP can transfer the call to an agent along with CTI information about the caller and the caller's self-service session. This feature improves agent productivity and results in a smoother customer service experience. CTI data can be passed either through Cisco Unified Intelligent Contact Management (ICM) or directly to SIP-enabled devices through the SIP message header.
Carrier interoperability	Testing and certification have been performed with Cisco Unified CVP and the following telephony carrier call-transfer mechanisms: ● *8 ● Two B-Channel Transfer (TBCT) ● ATT's IP Trunking
SIP	Information about the call and caller can be provided to the agent in the SIP header, speeding problem resolution. Support for Cisco Unified SIP Proxy improves solution redundancy by enabling dynamic reroute around an endpoint that is down. Cisco Unified CVP supports SIP trunks with mu-law and a-law encoding. Cisco Unified CVP supports a range of SIP RFCs to enable powerful, comprehensive, and efficient control over calls. Some of the major RFCs supported include: ● RFC 3261: Session Initiation Protocol ● RFC 3811: SIP UPDATE method (Cisco Unified CVP receives and responds) ● RFC 3515: SIP REFER method (Cisco Unified CVP sends) ● RFC 3891: SIP REPLACE method (no special handling)
Dynamic routing	Cisco Unified CVP can route calls based on trunk group and endpoint availability, improving call-completion rates and providing trunk reporting.
Locations-Based Call Admission Control (LBCAC)	LBCAC enables you to control the audio quality and video quality of calls over a wide-area (IP WAN) link by limiting the number of calls that are allowed on that location at the same time. Enhanced LBCAC bandwidth calculations are more accurate, and the feature can now select a local VoiceXML gateway for voice-response-unit (VRU) treatment at the branch office during warm transfers from an agent.
Agent greeting	A configurable, automated agent greeting can be played to callers, standardizing the caller experience. The agent greeting helps to keep agents' voices fresh by saving them from having to repeat the same greeting on every call.

Feature	Benefits
Agent whisper	A configurable announcement can be played to an agent right before the caller is connected, providing information about the type of call being delivered (for example, "sales" or "tech support") and other guidance. This feature gives agents information about the caller, speeding problem handling and improving first-call resolution.
Architecture	
Scalability	Cisco Unified CVP is extremely scalable, supporting deployments from as small as 24 ports (a single T1) to as large as 15,000 ports.
Gateway VoiceXML browsers	Cisco Unified CVP interoperates with voice gateways using open-standards VoiceXML, allowing it to instruct the gateways to play announcements, collect information, and queue calls. Gateways can be deployed essentially anywhere on the network, allowing self-service and queuing to occur at the most efficient and cost-effective location.
Load-balancer support	Cisco Unified CVP supports Citrix NetScaler and other third-party load balancers meeting defined criteria, which provide load distribution and high availability with resources such as speech-recognition servers. For more detailed interoperability information, please visit: http://www.cisco.com/c/en/us/solutions/enterprise/interoperability-portal/voice_portal.html or consult the latest CVP design guide at: http://www.cisco.com/c/en/us/support/customer-collaboration/unified-customer-voice-portal/products-implementation-design-guides-list.html.
Cisco Unified Computing System™ (Cisco UCS®) server support	The cost per server is lower with Cisco Unified CVP. Virtual-machine co-residency allows server consolidation, reducing power, rack space, and cooling requirements.
Cisco ASR 1000 Aggregation Services Router support	The router consolidates the Cisco Unified CVP Voice Browser with other network functions on a single server, reducing hardware and support requirements.
Network queuing	The ability of the application to treat and queue calls on network gateways helps businesses and organizations achieve higher customer service levels by virtualizing resources across multiple sites. For example, a customer might call the local Boston office and if no agents are free there, Cisco Unified CVP can easily route the call to a different site where an agent is available.
Failover	The distributed architecture of the application provides robust failover capabilities. For example, if a network gateway is taken out of service, subsequent calls can be immediately routed to a different gateway for treatment.
VMware support	Support for VMware and a co-resident peripheral gateway (PG) provides more Cisco Unified CVP deployment options on fewer boxes. VMware ESXi 5.5 is supported.
Management	
Operations console	A built-in operations console gives managers and operators straightforward configuration of Cisco Unified CVP components.
Cisco Analysis Manager	Integration with Cisco Analysis Manager provides integrated alarming and diagnostics across the Cisco Unified Communications Solution, enhancing Cisco Unified CVP serviceability and operational management.
System call-trace support	Cisco Unified CVP provides IT managers with end-to-end call tracing, expediting problem resolution.
Unified system command-line interface (CLI)	Unified system CLI enables you to collect diagnostic (health and status) information about Cisco Unified CVP servers and to collect device-specific information from each supported node connected to the Cisco Unified CVP server from which you are using the unified system CLI.
Simplified configuration and administration	The REST APIs for service fulfillment (for example, media files and VoiceXML scripts) and service assurance (for example, syslog configurations and Simple Network Management Protocol [SNMP] alerts) provide easy manageability of VoiceXML applications and media files across the network and simplify the configuration of syslog and SNMP alerts. Cisco Unified CVP service assurance APIs support SNMP Version 3.
Reporting	
Reporting database	A built-in reporting database enables businesses and organizations to create their own Cisco Unified CVP reports using third-party tools.
Cisco Unified Intelligence Center	Customers can optionally purchase Cisco Unified Intelligence Center with Cisco Unified CVP to create customizable reports showing a holistic view of their customer interactions.
Unified Communications Integration	
Cisco solution releases	Cisco Unified CVP is fully tested with other Cisco Unified Communications products (for example, Cisco Unified Communications Manager) as part of each Cisco Unified Communications release, helping assure customers of robust, fully supported end-to-end solutions. Testing includes certification with major Cisco Unified CVP solution components such as proxy servers, content-server switches, Cisco Unified Border Element gateways, Cisco Unified Contact Center Enterprise (Unified CCE), and Cisco PGW soft switches.

Platform Support, Compatibility, and Specifications

Consult the Hardware and System Software Specification for Cisco Unified CVP (Bill of Materials [BOM]) for hardware and operating system requirements, for compatibility with other Cisco and third-party products, and for additional product specifications: http://www.cisco.com/en/US/products/sw/custcosw/ps1006/prod_technical_reference_list.html.

Licensing

Cisco Unified CVP is licensed by self-service ports and call-control sessions.

Warranty Information

Find warranty information on Cisco.com at the Product Warranties page.

Ordering Information

To place an order, visit the Cisco Ordering Home Page. To download software, visit the Cisco Software Center.

Cisco Services

Cisco Services adapt to market changes while increasing productivity, improving competitive advantage, and delivering a rich-media experience across any workspace.

The combined strengths of Cisco and our partners provide a portfolio of services that can help you prepare your infrastructure for future changes aligning to long-term business goals.

Together we create innovative, network-centric architecture solutions resulting in a scalable and responsive foundation that can help you realize the full value of your IT and communication investment.

For more information about Cisco Unified Contact Center Services, visit http://www.cisco.com/go/uccservices.

Cisco Authorized Technology Partners

Cisco Unified CVP Advanced Technology Partners (ATPs) have completed rigorous training and validation of their knowledge of the product and can offer customers some or all of the following capabilities:

- Planning
- Design
- Implementation
- Operation
- Optimization
- Product resale
- Professional services
- Postsales support

Information about Cisco contact center ATP partners is available at: http://www.cisco.com/web/partners/pr11/atp/ucc_enterprise/index.html.

Cisco Developer Network Partners

The Cisco Developer Network program offers a formalized means for developers to certify value-added applications and solutions for use with Cisco Unified Customer Voice Portal. Information about Cisco Developer

Network partners is available at: https://marketplace.cisco.com/catalog. Under "Find a Solution/Service By" choose "Technology", then "Contact Center Applications" (in the left drop-down box), and click "Find Solution".

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