About Unified IP IVR

This chapter contains the following:

Product Names

The following product name conventions are used in this guide:

- Cisco Unified IP IVR is abbreviated as Unified IP IVR.

- Cisco Unified Communications Manager is abbreviated as Unified CM.

- Cisco Unified Contact Center Express is abbreviated as Unified CCX.

- Cisco Unified Intelligent Contact Management Enterprise is abbreviated as Unified ICME.

Summary Description of Unified IP IVR

The Unified IP IVR (Interactive Voice Response) is a Unified CCX product package that provides IP call queuing and IP intelligent voice response functionality for a contact center.

The Unified IP IVR uses the script editor and it can be configured to play static or dynamic prompts, to offer menus to callers, queue a call, play music, and so on.

More than One Unified CCX Product Installed on a Server

All Unified CCX product packages are mutually exclusive. This means that only one of them can be installed at any point in time on a Unified CCX server. If multiple licenses are installed, then priority is given to the package with the highest number at the left in the following list:

1. Unified IP IVR

2.

3. Unified CCX Enhanced

4. Unified CCX Premium

Unified IP IVR Features Supported in Each Product

The following table lists the Unified CCX features supported in each product.

Table 1: Supported Features

Feature	Unified IP IVR
Hardware configuration	Cisco UCS and Cisco approved partner servers
Software configuration	Client-server software
Vendor systems	Unified CM 8.x, Unified CM 9.x
Operating systems	Runs on Unified Communication Operating System (Red Hat Enterprise Linux)
Maximum number of CTI ports per server	400
CTI (Computer Telephony Integration) option	Included
Email	Included
Database	Included
Read data from HTTP and XMLpages	Included
MRCP ASR/TTS	Optional using Media Resource Control Protocol (MRCP)-order from a 3rd party vendor. For the currently supported MRCP ASR/TTS vendors, see the current at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-express/products-device-support-tables-list.html.
Play messages to callers—music	Included using Unified CM Music On Hold server or .wav file

Feature	Unified IP IVR
Play messages to callers—prompts	Included using .wav file
Play messages to callers—combine prompts, music and messages	Included and fully customizable
Capture and process caller Dual Tone Multifrequency (DTMF) input	Included and fully customizable
Capture and process caller DTMF input under VXML control	Included
Automated attendant support	Included and fully customizable
All languages	Included, if installed.
Inbound HTTP request	Included
Historical reporting	Included, but limited to Unified IP IVR reports From Unified CCX 10.0(1), access the Historical reports using Unified Intelligence Center. Historical Reporting Client (HRC) is not available.
Custom scripting using Unified CCX Drag and Drop Editor	Included. Has full editing features. All types of applications including ICM, Busy, and RNA are available.
JTAPI Telephony triggers	Included
HTTP triggers	Included
Conditional routing (time of day, day of week, custom variables, and so on.)	Included
Overflow, interflow, intraflow routing	Included
Run defined workflow using HTTP request	Included
Integrated self-service application support	Included

Note To check for the current versions of the preceding software supported by your version of Unified IP IVR, see the at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-express/products-device-support-tables-list.html.

Unified IP IVR Package Description

The following table summarizes the description of the Unified IP IVR package

Table 2: Comparative Descriptions

Product Package	Available Licensed Components	Purpose
Unified IP IVR	• Unified IP IVR Server Software (required) • Unified IP IVR Ports (at least one is a must) • Automatic Speech Recognition (obtained through a separate Vendor) • Text To Speech (obtained through a separate Vendor) • VoiceXML	Allows contact-center applications to handle "typical" questions by letting callers interact directly with back-end databases without agent intervention. This includes integration with Unified CCE if needed. This also includes three subsystems and three corresponding editor pallets: • The HTTP subsystem (which enables both incoming and outgoing HTTP support) • Outgoing email support • Database support

Note Three basic Historical Reports (IVR Traffic Analysis Report, IVR Application Performance Analysis Report, and the Detailed Call by Call CCDR Report) are available with both packages without needing a separate license. All supported Unified CCX languages are included in both packages; it is up to you to install the languages you want.

Unified IP IVR Feature Summary

Unified IP IVR software is a multimedia (voice, data, web) IP-enabled interactive voice response solution that automates call handling by autonomously interacting with contacts.

Using Unified IP IVR, you can create applications to do the following:

- Interpret voice data (as well as keyboard data).

- Translate text to speech.

- Send and respond to HTTP requests.

- Send email.

- Enable Unified CCX to interact directly with back-end databases through ODBC (Open Database Connectivity) support without agent intervention.

- Unified IP IVR applications have ODBC support. Unified IP IVR applications can access Microsoft Structured Query Language (SQL) servers and Oracle, Sybase, and IBM DB2 databases.

Note To check for the current versions of the preceding software supported by your version of Unified IP IVR, see the at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-express/products-device-support-tables-list.html.

Unified CCX Subsystems that Unified IP IVR Supports

Unified IP IVR supports the following subsystems:

Table 3: Subsystems Supported by Unified IP IVR

Subsystem Type	Purpose
MRCP Automatic Speech Recognition (ASR) • ASR Server Software (Required) • ASR ports (at least one is required) The number of ASR ports should be less than or equal to the number of IVR ports. If there are more ASR ports than IVR ports, then the excess ports are automatically disabled.	Allows a script to respond to voice input in addition to DTMF (Dual Tone Multi-Frequency), the signal to the telephone company that is generated when you press a key on a telephone keypad. This allows a caller to verbally convey information to the system for processing instead of pressing keys on a touch-tone telephone.
MRCP Text To Speech (TTS) • TTS Server Software (Required) • TTS Ports (at least one is required)	Composes voice prompts that are generated in real time from text, such as speaking the words in the text of an email message. TTS is primarily used to convey information obtained from a database or other source that is non-repetitive. Examples of such information include name and address verification. Repetitive information, such as numbers comprising an account balance, normally is not conveyed using TTS. Although text to speech technology has improved greatly since its inception, the tone still sounds mechanical. So it is best used only when the information possibilities make wave file generation impossible.
EMail	Adds components to the Unified CCX Engine that allows it to send email messages.

Subsystem Type	Purpose
Database	Handles the connections between the Unified CCX server and the enterprise database.
	Also provides Open Database Connectivity (ODBC) support.
	See *Compatibility Information* for the latest versions of the database software that are supported at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-express/products-device-support-tables-list.html.
Inbound HTTP Request	Adds components to the Unified CCX Engine that allow it to respond to HTTP requests.
Voice Browser	Manages Voice Browser functionality.

Sample Default Unified IP IVR Scripts

The following table describes the sample Unified IP IVR scripts automatically included with your Unified IP IVR system.

Table 4: Sample Default Unified IP IVR Scripts

Sample Script Template	Description
Auto Attendant	Allows a caller to call an agent by entering an extension number or the first few characters of an associated username. If ASR is enabled, the caller may simply speak the extension or the user name.
Spoken Name Upload	Enables Unified CM users to call in, authenticate their identities, and replace their spoken names with newly recorded announcements on their telephones
Voice Browser	Uses ASR functionality to allow a caller to access information from VoiceXML-enabled web sites.