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About this Document

This document provides installation instructions for Cisco Virtualized Voice Browser ES08. It also contains a list of issues resolved by this ES. Please review all sections in this document pertaining to installation before installing the product. Failure to install this ES as described may result in inconsistent behavior.

Supported VVB Version

This ES (ciscovb.1262.ES08.cop.sgn) is to be installed on VVB Version 12.6.2 **using CLI** only. Installing the ES on previous ES's will not create any repercussions.

Important Notice: End of Software Maintenance for UCCE, PCCE, and CVP Versions 12.5 and 12.6

Software maintenance for Cisco Unified Contact Center Enterprise (UCCE), Packaged Contact Center Enterprise (PCCE), and Customer Voice Portal (CVP) versions 12.5 and 12.6 will officially end in December 2026. After this date, no further software updates, security patches, or bug fixes will be provided.
For full details, please refer to the official Cisco End-of-Life announcement: End-of-Sale and End-of-Life Announcement for Cisco Version 12.5/12.6 of On-Premises Contact Center Applications (UCCE, PCCE, UCCX, CVP)
Action Required: To maintain a secure and fully supported environment and to take advantage of the latest features, including **enhanced AI capabilities**, we strongly recommend upgrading to **version 15.0**.

Resolved Caveats

The details of the defects fixed in this ES are mentioned below.

Cisco VVB 12.6(2) ES08	
Bug ID	**Description**
CSCwr78776	VVB Engine service crash with core dump
CSCws74490	VVB traceback and reload caused vmcore - IPVMS
CSCwq26973	Serviceability - Need to enhance the default speechserver logs to print TTS requests with CallID
CSCwr61699	Serviceability: strict_hostname exceptions even if strict_hostname_verifier is false
CSCws26694	Time taken to get final response in SpeechServer log is calculated incorrectly during no-input scenario

Cisco VVB 12.6(2) ES07	
Bug ID	**Description**
CSCwj33374	VVB traceback and reload caused vmcore seen due to IPVMS
CSCwo55923	IPVMS crash on VVB
CSCwp12513	VVB traceback and reload caused vmcore seen due to IPVMS
CSCwo67375	OUT_OF_RANGE error when the caller hangs up the call

CSCwo54339	VVB Unexpected Barge In
CSCwp05870	VVB Cookie needs to be corrected to not use port number for a given domain

Cisco VVB 12.6(2) ES06	
Bug ID	**Description**
CSCwm96709	ENH: Support for pre-recording audio for VAV element
CSCwn75413	VVB sends only one out of 10 DTMF digit numbers to VXML server after bridge transfer element
CSCwk13753	Fetchaudio not working after VAV element
CSCwk56759	Speechserver does not fetch the access-token if it is not available in cache during error condition
CSCwk73201	Speech server logs shows config error when service restart is needed
CSCwk83135	Speech server threads increasing upon no response from google.
CSCwm57630	Cannot add/delete a subset of a previous host-to-ip entry
CSCwm53837	VVB NO_RESOURCE error seen in MIVR logs
CSCwm53832	VVB DEADLINE_EXCEEDED seen in speechserver logs
CSCwb27688	VXML server should have special call treatment, when NULL response comes from Google CCAI
CSCwn12501	SSL Source index 32 out of Bounds for byte [31]
Cisco VVB 12.6(2) ES05	
Bug ID	**Description**
CSCwj06971	VVB sends SRTP reply for ringback request on port 5060
CSCwf55306	Cisco VVB 12.6.1, call disconnect after 5 seconds
CSCwi69639	VVB 12.6.1-VVB unable to cache wav file during the transfer
CSCwi87134	SIP Headers not passed to DF-CX
CSCwj33374	VVB traceback and reload caused vmcore seen due to IPVMS
CSCwj36712	VVB Engine sends \"VBEventHandler::handleEvent event: error: UNKNOWN\" error to VXML application
CSCwj43058	VAV calls fail with Internal Error

CSCwj87296	Duplicate RTP Entries in 200 OK causing calls to fail
CSCwj72886	VVB Engine logs need to explicitly state if the 'No Resource' error is returned for MRCP or CCAI

Cisco VVB 12.6(2) ES04	
Bug ID	**Description**
CSCwi31734	HTTP request doesn’t go out of VVB for 10s of seconds
CSCwi29713	VVB initialization got stuck post fresh install
CSCwi58513	VVB Speechserver heap goes OOM after continues hitting "OUT_OF_RANGE" error
CSCwh68998	VVB Stream not closing at set timeout value
CSCwe66429	VVB plays a silence stream after sending CUCM a REFER for the blind transfer
CSCwh63595	VVB Appadmin page became inaccessible due to Tomcat OOM
CSCwi61346	VVB 12.6.1 UNKNOWN_ALARM:Connection::close - Closing connection

Cisco VVB 12.6(2) ES03	
Bug ID	**Description**
CSCwh43295	VVB API Prompt Management is not working as expected
CSCwh62435	Transcribe/Dialogflow Intent element is unable to recognize all caller utterances.
CSCwh23974	Incorrect speechserver trace when DTMF is used
CSCwh21371	VVB Administrator and Serviceability are not up after upgrade to 12.6.2
CSCwh11185	Neural2/Studio voices don't work if only TTS functionality is used
CSCwh55406	Switches to Speech Server Mode instead MRCP
CSCwd52362	VVB Cookie handling needs to be enhanced to map domain to the request URL

Cisco VVB 12.6(2) ES02

Bug ID	Description
CSCwf35130	CLI "show speechserver audioPacketSizeInBytes" not working
CSCwf83214	VVB 12.6 | Remove Weak Cipher TLS_RSA_WITH_AES_128_CBC_SHA
CSCwf84081	VVB Not Responding to MRCP events properly received from Nuance ASR
CSCwf83531	VVB wrongly interprets fmt header from WAV file
CSCwf36954	VVB browser goes for fetch loop when caller presses digit during queuing
CSCwf92952	VVB Defaults to male voice when regardless of voice profile
CSCwf87601	VVB: HTTP Status 404 Not found message is displayed with the Tomcat version for port 9080.
CSCwh18670	The last prompt from DF CX does not play after installing 12.6(2) ES 01

New Features

The following features have been included in ES08:

Support	Description
Nutanix M2 migration	As part of the support for migration of VVB 12.6.2 from VMWare to 15.0 SU1 Nutanix, below CLI commands are added. The below command helps with the platform data export: **utils system upgrade dataexport initiate** The status of the above operation can be viewed with the help of below CLI command. **utils system upgrade dataexport status** The below command helps with the VVB data export: **utils component dataexport initiate** The status of the above operation can be checked using below command. **utils component datamigration status** Please refer to "Migration from VMWare 15 to Nutanix" documentation for more details.

The following features have been included in ES06:

Feature	Description
Custom blind transfer	The VVB has been enhanced to provide specific call error status information to the VXML Server during a Blind Transfer, enabling the VXML application to dynamically adjust the call flow based on the error status. By default, this feature is disabled To use this feature, execute the below CLI commands. To view, use command, “show vvb call blindTransferContinueOnerror” Sample: Admin: show vvb call blindTransferContinueOnerror false Command successful. To enable, use command, “set vvb call blindTransferContinueOnerror enable” Sample: Admin: set vvb call blindTransferContinueOnerror enable Command successful.
Call completion for DF-CX	VVB is enhanced to automatically clean up Google sessions in Dialogflow CX call flow.
Alaw support for Google DF CX	For DFCX application, A-law encoding is supported.
Alaw support for Google TTS	For Google TTS, A-Law encoding is supported.
VAV Error Handling	For seamless integration of VirtualAgentVoice with the Google DFCX Agent, every dialogue response must include at least one of the following: 1. Output audio text (with or without SSML)

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	2. Pre-recorded audio playback Agent responses can contain multiple instances of Output audio text and Pre-recorded audio, in any order. However, Output audio text cannot be empty or consist solely of spaces. If a DFCX Agent lacks any dialogue without agent response defined, the VirtualAgentVoice call flow will terminate with an error.badfetch. This prevents undesirable "dead air" with indication to ensures agent responses are properly defined in Google DFCX. Thus, it is recommended to provide agent responses for every dialogue to avoid VirtualAgentVoice call flow termination with an error.badfetch. If handling error.badfetch gracefully is preferred instead of defining responses for every dialogue, Call Studio application developers using the VirtualAgentVoice element can manage this error similarly to error.noresource. To define an exit state in the VirtualAgentVoice element: Add an event with Event Type set to "VXML Event" Select "error.badfetch" from the event list This exit state in VirtualAgentVoice element ensures a controlled call flow, even in cases where agent responses are missing.

The following features have been included in ES04:

Feature	**Description**
AppD Upgrade	AppD version has been upgraded to 23.11.0.3839
VAV via Cloud-Based Connector	VVB will use RTMS data centre. WXCC data centre will not be used. Please refer solution feature guide of 12.6.2 for URLs and port details.

	Note: There is no impact on feature and its functionalities

The following features have been included in ES03:

Feature	VXML Properties
Recognize all caller utterances for Transcribe/DialogflowIntent element when spoken with pauses.	Dialogflow.isFinalWaitTimeout(value in seconds)- This property considers caller utterances when spoken with pauses in specified duration. This is used as a wait timeout in a dialogue to allow processing if anything spoken and considered as an utterance by Google. "Final Silence" attribute for Transcribe or DFIntent Element value should be greater than or equal to the Dialogflow.isFinalWaitTimeout. If "final silence" triggers before isFinalWaitTimeout, then responses until then will be considered and isFinalWaitTimeout will not be honoured. Please refer to cdet, CSCwh62435, for more details.

Feature	Description
"DialogflowCX" Via VVB is enhanced for gracefully call handling during gRPC Error Scenarios	The impact of this feature is: Any existing applications using DialogflowCX Via VVB need to be redeployed for Error Handling by Partner/Customer. Existing applications for redeploying need to use Call Studio provided, as part of ES. Mandatory Error exit state need to have graceful handle defined using the Call Studio. UCCE/PCCE existing upgrade process should be followed during the maintenance window i.e., VVB should NOT be upgraded prior to CVP. VVB – CVP need to be on the same version to support DialogflowCX Via VVB, newly introduced gRPC Error Handling Exit State for graceful call handling. Note: There is no impact for VAV Element Via Harness or any other applications. Sample application for "DialogflowCX" Via VVB link: https://github.com/CiscoDevNet/cvp-sample-code/pull/16

The following features have been included in ES02:

Feature	Description

Cookie Handling	Cookies handling in VVB is enhanced to map the domain to the request URL. This feature is disabled by default. To use this feature, execute the below CLI commands. To view, use command, “show vvb domain_cookie_support” Sample admin: show vvb domain_cookie_support false Command successful. To enable, use command, “set vvb domain_cookie_support enable”. Sample admin: set vvb domain_cookie_support enable Command successful. To disable, use command, “set vvb domain_cookie_support disable”. Sample admin: set vvb domain_cookie_support disable Command successful. Please refer to cdet, CSCwd52362, for more details.
Custom SIP Headers	This feature allows end customers to process custom or all SIP headers in their VXML application. SIP headers can be retrieved using the session variable, “session.com.cisco.proto_headers” in the VXML application invoked via subdialog element from Call Studio. Syntax: session.com.cisco.proto_headers[keyname] The SIP headers which needs to be restricted from being passed to VXML server can be added as comma separated list at application root level using the variable name "com.cisco.protoHeadersRestricted". Note: This was a IOS VXML and VVB parity gap.
Inclusive Language Support	In the VVB AppAdmin and VVB Serviceability pages, the exclusionary terms like master/slave and blacklist/whitelist are replaced wherever possible with primary/secondary and blocklist/permitlist. Logs for VVB Service's i.e., Engine, Web Services and others, all the occurrences of "master “, have been replaced, irrespective of its case to "Primary".
Speech Recognition Model Variant Support for Google Dialogflow ES	In DF ES, we can set the model variant in Call Studio using the custom VXML property, Recognize.modelVariant. It supports 3 values- USE_STANDARD, USE_ENHANCED and

	USE_BEST_AVAILABLE (default). Note: Set value as recommended by Google
AppD Upgrade	AppD version has been upgraded to 23.6.0.34839.

The following changes have been included in ES01:

Feature	**Description**
Partial Response for CX via VVB	**Partial Response Feature** has been added for CX via VVB. Please refer the link for more details on the feature.
Partial Response for CX via VAV	**Partial Response Feature** has been added for CX via VAV. Please refer the link for more details on the feature. Please refer link for Sample application and details on VAV element

Note- The behavior is the partial prompt will be stopped playing once the final response is received from Google.

Usage Guidelines

Pre-Requisite -:

For CSCwm96709 :

- WAV files referenced in Google Dialogflow CX (DFCX) applications for pre-recorded audio must be hosted on the local Media Server.
- These WAV files should be accessible through static URLs using HTTP or HTTPS.
- Use the Media Server's FQDN or Hostname in the URL to access the WAV files.
- For HTTPS URLs, certificate exchange must be performed between the Media Server and VVB.
- The WAV file codec must match the codec configuration of the VVB in use.
    - Header-less WAV files are not supported.

These WAV files will be cached locally on the VVB. The cache entries can be viewed using existing VVB commands, such as:

show vvb cache cache_entries

show vvb cache cache_entry

Cached WAV files can be marked as stale using the following commands:

set vvb cache stale_cache_entries

set vvb cache stale_cache_entry

Note : Customer should not use Wav URL in Output audio text. Wav URLs are not supported with partial response.

CSCwj87296

VVB will not support change of DTMF payload in mid call reinvite.

CSCwf55306

As part of this fix, the silence sensitivity of Record element has been increased, due to which it may capture noise as valid audio. This may also impact no input and final silence detection in a noisy environment. If you wish to fine tune the silence sensitivity value, please contact the engineering team.

CSCwh55406

We have introduced a VXML property com.cisco.localTranscribe (value in Boolean) to give preference to MRCP Server, If the property is set to true, then MRPC server is used. By default, Google Transcribe is used.

CSCwp05870

Cookies handling is enhanced to support processing and sending of cookie based on path and FQDN.
These changes are behind domain_cookie_support flag, use following CLI commands to enable/disable domain_cookie_support.
set vvb domain_cookie_support enable
set vvb domain_cookie_support disable

Conditions for Installing ES

Pre-Conditions

Make sure there is no previous ES in progress; else, cancel it by running:
utils system upgrade cancel

Post-Conditions

Once the ES is applied, reboot the Cisco VVB. After reboot, verify from the Cisco VVB App Admin that all services come to In-Service.

Dependencies for this ES

NA

Installing ES

This ES must be installed using CLI only, by running:

utils system upgrade initiate

Follow the instructions and provide the path of the ES. After successful cop installation, please exit from admin CLI session and re-initiate the CLI session to restart the machine after installing the ES.

Refer the following defect details for this behavior change: **CSCwo16200**

Uninstalling ES

Follow similar process for installing the ES but install the specific rollback ES for the version.

Note: An ES rollback uninstalls all the previously installed ESs and brings VVB to the base release.