Unified Contact Center Enterprise

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New Features

VPN-less Access to Finesse Desktop (For Agents and Supervisors)

This feature provides the flexibility for agents and supervisors to access the Finesse desktop from anywhere through the Internet without requiring VPN connectivity to the enterprise data center. To enable this feature, a reverse-proxy pair must be deployed in the DMZ. For more information on this feature, see the Cisco Unified Contact Center Enterprise Features Guide, Release 12.6(1) and Security Guide for Cisco Unified ICM/Contact Center Enterprise, Release 12.6(1).

Media access remains unchanged in reverse-proxy deployments. To connect to the media, agents and supervisors can use Cisco Jabber over MRA or the Mobile Agent capability of Contact Center Enterprise with a PSTN or mobile endpoint.

To use VPN-less access to Finesse desktop, you must upgrade Finesse, IdS, and CUIC to Release 12.6(1) ES02 or above. If you are using Unified CCE 12.6(1), you must upgrade Live Data to 12.6(1) ES02 or above. You can access the 12.6(1) ES03 Release and Readme from the following locations:

- Finesse 12.6(1) ES
- CUIC/LD/IdS 12.6(1) ES

Note

- For Nginx-based reverse-proxy rules, installation, configuration, and security hardening instructions, refer to the Nginx TechNote article. Any reverse-proxy supporting the required criteria (as mentioned in the **Reverse-Proxy Selection Criteria** section of Cisco Unified Contact Center Enterprise Features Guide, Release 12.6(1)) can be used in place of Nginx for supporting this feature.
- If CORS status is "enabled", you must explicitly add the reverse-proxy domain name to the list of CORS trusted domain names.

Agent Answers

Unified CCE solution leverages Artificial Intelligence (AI) and Natural Language Understanding (NLU) to provide services that assist agents. These Contact Center AI services are available for the agents through the Agent Answers gadget and the Call Transcript gadget on the Cisco Finesse desktop.

The Agent Answers gadget displays relevant suggestions and recommendations in real time for the agent to consider. The suggestions and recommendations are based on the ongoing conversation between the caller and the agent. Agent Answers enhances the customer experience because the timely suggestions improve the ability of the agent to respond.

The Call Transcript gadget dynamically converts the ongoing voice conversation to text and presents the text to an agent for real-time viewing and reference.

For details on how to configure the Agent Answers and Call Transcription features, see the *Agent Answers* and the *Call Transcription* chapters in the following documents:

- *Cisco Unified Contact Center Enterprise Features Guide, Release 12.5(1)* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-feature-guides-list.html

For information on the design considerations of the Agent Answers and Call Transcription features, see the *Contact Center AI Services Considerations* section in following documents:

- *Solution Design Guide for Cisco Unified Contact Center Enterprise, Release 12.5(1)* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-implementation-design-guides-list.html

Support for 36000 Agents

You can modify your existing 24000 agent reference design to scale up to 36000 agents. This is accomplished by adding more peripheral VMs and peripheral gateways to the deployment and modifying specific configuration limits. You must also modify the OVA files for Live Data and Cisco Identity Service (IdS).

Note The following engineering specials are required to support 36000 agents:

- ICM_12.5(1)_ES45
- CUIC_12.5(1)_ES07 if you are using Live Data

Edge Chromium Browser Support

This release supports Edge Chromium (Microsoft Edge) . For more information, see the *Supported Browsers* section in the *Contact Center Enterprise Solution Compatibility Matrix* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-device-support-tables-list.html.

Note To enable this browser support in **Administration Client Setup for Cisco Unified ICM/Contact Center Enterprise**, install the ICM_12.5(1)_ES30.

Smart Licensing

This release introduces Smart Licensing that delivers visibility into your license ownership and consumption. Smart Licensing helps you to procure, deploy, and manage licenses easily and report license consumption. It pools license entitlements in a single account and allows you to move licenses freely through the virtual accounts.

Smart Licensing registers the product instance, reports license usage, and obtains the necessary authorization from Cisco Smart Software Manager or Cisco Smart Software Manager On-Prem.

For more information, see *Configuration Guide for Cisco Unified ICM/Contact Center Enterprise* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-installation-and-configuration-guides-list.html.

For more information, see *Administration Guide for Cisco Unified Customer Voice Portal* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-customer-voice-portal/products-installation-and-configuration-guides-list.html.

Cloud Connect

Cloud Connect is an infrastructure component that hosts services that enable integration with Cisco Webex Cloud Services, such as Cisco Webex Experience Management.

Cisco Webex Experience Management

Cisco Webex Experience Management (referred to as Experience Management) is the platform for Customer Experience Management (CEM), integrated with powerful tools that allow you to see your business from your customer's perspective.

With Experience Management integrated with Unified CCE:

- Administrators can configure post call surveys to collect feedback directly from customers.
- Administrator can configure and initiate digital channel surveys when the agent responds to an email or chat from a customer by using the Enterprise Chat and Email gadget.
- Administrators can configure analytical gadgets, which can be viewed on the Finesse desktop.
- Agents and Supervisors can view pulse of the customers through industry standard metrics such as NPS, CSAT, and CES, or other KPIs.

See Experience Management Voice Surveys, on page 4

See Experience Management Email/SMS Surveys, on page 4

Experience Management Voice Surveys

The voice surveys can be triggered through Experience Management, using CVP IVR. Experience Management surveys use the same scripting and call flows as Post Call Survey, with the exception that the questionnaire is provided by the cloud-based Experience Management service. The Call Studio survey is configured in the router script that runs during the survey leg of the call, and is passed to the CVP through an ECC variable.

The CVP Call Studio survey application fetches the questions from the Experience Management service, collects the answers from the caller, and submits them to the Experience Management service over REST APIs.

For more information on how to configure Experience Management, see the *Webex Experience Management* chapter in the *Cisco Unified Contact Center Enterprise Features Guide* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-feature-guides-list.html

Experience Management is supported in all the deployment types. For more information on the call flow and design considerations, see the *Solution Design Guide for Cisco Unified Contact Center Enterprise* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-implementation-design-guides-list.html

Experience Management Email/SMS Surveys

This feature allows customers to participate in the post-call surveys using links sent over SMS or Email.

Administrators can configure and customize the survey in Experience Management. The responses are displayed on the Customer Experience Journey gadget on the Finesse desktop.

For more information on the list of tasks required to integrate Experience Management, refer to the section *Experience Management Task Flow* in *Cisco Unified Contact Center Enterprise Features Guide* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-feature-guides-list.html

Agent Summary Live Data Report

This release adds the Agent Summary Live Data report which displays real-time agent statistics such as not ready time, total number of calls handled, and wrap-up time. This report is also available in a Finesse gadget and displays agent statistics to an agent and team statistics to a supervisor. The report is useful when monitoring the performance of an agent.

For details see the *Cisco Unified Contact Center Enterprise Reporting User Guide, Release 12.5* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-user-guide-list.html

Encryption Support for External DBLookUp Registry Configuration

External DBLookUp registry configuration will support only encrypted value, the CCEDataProtect Tool is used to encrypt and decrypt sensitive information that the Windows registry stores in it. After upgrading to Release 12.5, if the DBLookUp is configured, then you must reconfigure the external DBLookUp registry value using the CCEDataProtect Tool to encrypt the data in the registry. For more information, refer to the **Configure External DBLookUp Registry Value using CCEDataProtect Tool** procedure in *Administration*

Guide for Cisco Unified Contact Center Enterprise at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-maintenance-guides-list.html.

Campaign Skillgroup Dialing Mode

Configure the mode and percentage of the Campaign Skillgroup directly from the Campaign Skillgroup tab. This eliminates the need to use an administrative script to update the skill groups dynamically. An administrative script, if used, will override the configuration changes made from the Campaign Skillgroup tab.

For more details, see the Administrative Scripts for Outbound Option and Set Up an Administrative Script sections in the *Outbound Option Guide for Unified Contact Center Enterprise* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-user-guide-list.html

Live Data CLIs

Live Data HSTS Configuration

This release allows an Administrator to turn on or off HTTP Strict Transport Security (HSTS) on live-data and also show the current status of the HSTS property.

HSTS is a web security policy mechanism that helps to protect websites against protocol downgrade attacks and cookie hijacking. It allows web servers to declare that the web browsers (or other complying user agents) interact with it using only secure HTTPS connections, and never through the insecure HTTP protocol.

For more information, see *Cisco Unified Contact Center Enterprise Installation and Upgrade Guide* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-installation-guides-list.html.

Live Data HTTP Configuration

This release allows an Administrator to turn on or off HTTP access to live-data and also show the current status of the http-enabled property.

Any changes to http-enabled status needs a restart of CCE Live Data NGINX Service.

Note By default, HTTP is disabled. You can enable HTTP (if required) using the `set live-data properties http-enabled on` command.

For more information, see *Cisco Unified Contact Center Enterprise Installation and Upgrade Guide* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-installation-guides-list.html.

Agents Placing Outbound Calls in Available State

If agents in Available state place outbound calls, the Unified CCE system sets the agent's state to NotReady before allowing the call (without manually setting the agent's state to NotReady from the CTI interface). The system changes the agent's state back to Available when the call ends or fails to connect.

For details on the reason code, see the *Database Schema Handbook for Cisco Unified ICM/Contact Center Enterprise, Release 12.5(1)* at https://www.cisco.com/c/en/us/support/customer-collaboration/

unified-contact-center-enterprise/products-technical-reference-list.html. For details on the call manner type, see the *CTI Server Message Reference Guide (Protocol Version 23) for Cisco Unified Contact Center Enterprise, Release 12.5(1)*.

This enhancement also enables the Finesse Make Call from Ready feature via the Finesse API. For details, see Changes in REST APIs and the *REST API Developer Guide* at https://developer.cisco.com/docs/finesse/#!rest-api-dev-guide.

Shared ACD Line

Note Shared ACD line feature introduced in an ICM_12.5(1)_ES4, will require additional configuration in case you want to use it on 12.6(1). The behavior changes are: in that you will now select which device to use when you log into Finesse. It also requires a change in agent desk settings to enable for the agent.

1. When you log in to Finesse, you will now select which device to use.
2. Additional changes are required in agent desk setting incase you want to enable it for the agents.

This release includes shared ACD lines support for up to two devices. The support enables an agent with devices at different locations to utilize the same extension.

Note UCM auto-answer and Agent Desk Settings auto-answer are not supported when shared ACD lines are in use.

For more information, see the *Call Type Considerations for Phone Extensions* section in the *Solution Design Guide for Cisco Unified Contact Center Enterprise, Release 12.5(1)* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-implementation-design-guides-list.html.

Customer Journey Analyzer for Business Metrics (Trials)

Customer Journey Analyzer is a cloud service that processes historical contact center data from on-premise deployment to generate specific Business Metrics across the contact center. It displays trends to help you identify patterns and gain insight for continuous improvement. You can view the Abandoned Contacts dashboard on the Customer Journey Analyzer which enables supervisors and business analysts to identify where contacts are being abandoned and take appropriate action. You can use Customer Journey Analyzer to create visualizations using Customer Activity Records, Customer Session Records, and Agent Activity Records.

Note Customer Journey Analyzer is available as Trials. Please contact your Cisco Support to get started on Trials.

Webex Workforce Optimization (WFO) Support with Contact Center Enterprise (CCE) Solutions

The Contact Center Enterprise (Unified CCE/Packaged CCE/Webex CCE) solutions supports the Webex Workforce Optimization offering. See https://www.cisco.com/c/en/us/support/contact-center/webex-workforce-optimization/series.html.

Updated Features

Increased PG Agent Capacity for Mobile Agents

Added on May 14th, 2021

The mobile agent capacity on the PG has increased as follows:

- 2000 with nailed-up connections (1:1)
- 1500 with nailed-up connections if the average handle time is less than 3 minutes, or if agent greeting or whisper announcement features are used with the mobile agent (1.3:1)
- 1500 with call-by-call connections (1.3:1)

For more details, see the *PG Agent Capacity with Mobile Agents* section in the *Sizing and Operating Conditions for Reference Designs* chapter at *Solution Design Guide for Cisco Unified Contact Center Enterprise* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-implementation-design-guides-list.html

Non-Production System (NPS)

Note This feature requires ICM_12.5(1)_ES25 to be installed on the 12.5(1) target system to enable the Non-Production System (NPS) .

Non-Production System (NPS) usage mode gives you more control on license usage. With NPS, you can switch from production deployment to other deployment types such as lab, testing, and staging.

For more information, see the *Smart Licensing* section in the *Administration Guide for Cisco Unified Contact Center Enterprise* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-maintenance-guides-list.html.

Security Enhancements

This release introduces following security enhancements for CCE Administration:

- It is mandatory to import self-signed certificates (if CA-signed certificates are not used) of Solution components into the AW machines.

For more information, see the *Cisco Unified Contact Center Enterprise Installation and Upgrade Guide* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-installation-guides-list.html.

- HTTP Security headers (Content-Security-Policy (CSP), X-Frame-Options, X-XSS-Protection, X-Content-Type-Options, and Strict-Transport-Security) have been introduced in the browser response to prevent cross-site scripting (XSS) vulnerabilities.

Tomcat Upgrade

Tomcat is upgraded from 7.0.x to 9.0.21.

Configuration Limit Changes

The following configuration limits have increased from this release:

- Outbound dialer maximum calls per second per dialer increased from 20 to 60 for the 2000 agent deployment and from 30 to 60 for the 4000 agent, 12000 agent, and 24000 agent deployments.
- Outbound dialer maximum ports per SIP dialer increased from 1500 to 3000 for all the deployment types.
- Number of campaigns per system increased from 600 to 1500 for all the deployment types.

For more details see the *Outbound Campaign Limits* section in the *Solution Design Guide for Cisco Unified Contact Center Enterprise, Release 12.5* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-implementation-design-guides-list.html.

Replication Enhancements

With Outbound Option High Availability, replication of data is managed by the Campaign Manager running on the standby side, through a series of files in a replication folder. For more information, see *Outbound Option Guide for Unified Contact Center Enterprise* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-user-guide-list.html

Note Direct access to the Personal_Callback_List table is not supported with Outbound Option High Availability enabled. Use the Outbound API to insert customer records directly into the Personal_Callback_List table. For information on Outbound APIs, see the *Cisco Unified Contact Center Enterprise Developer Reference* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-programming-reference-guides-list.html

Outbound Option Predictive Algorithm Enhancements

Note To enable these Outbound Option enhancements, you must install the ICM_12.5(1)_ES90 on 12.5(1).

The following enhancements have been made to the Outbound Option feature:

- *EnhancedPredictiveDialing*, a new registry setting is added to reduce the idle time when there is a low hit rate for voice customers and when the agent idle times are long. This change adapts to the dialing rate more aggressively, irrespective of the configured abandon limit. This feature is disabled by default.
- The logic associated with the existing *ReclassifyTransferFailures* registry setting is modified so that the answering machine calls that are abandoned due to lack of agent or IVR resources are not counted as abandoned voice calls but as answering machine calls. *ReclassifyTransferFailures* registry setting is enabled by default on fresh installs and disabled by default in upgraded systems.

For more information, see the *Dialer Registry Settings* section in the *Outbound Option Guide for Unified Contact Center Enterprise* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-user-guide-list.html

Database Schema Changes

Unified CCE Database Schema Changes

Release 12.5.1 includes several changes to the database schema for the main database. The release adds the following new tables:

- Smart_License_Server
- Smart_License_Info
- Smart_License_Entitlements
- Smart_License_Product

The release includes datatype changes to the following tables:

Table	Changes
Config_Message_Log	Changed datatype of ConfigMessage to varbinary(max).
Event	Changed datatype of BinData to varbinary(max).
Application_Event	Changed datatype of BinData to varbinary(max).
Feature_Control_Set	Changed datatype of FeatureSetData to varbinary(max).
Route_Call_Detail	Changed datatype of CallTrace to varbinary(max).
Machine_Connection_Profile	Changed datatype of Password to varbinary(max).
Machine_Service	• Changed datatype of EnablePassword to varbinary(max). • Changed datatype of Password to varbinary(max).
Script_Real_Time	Changed datatype of ScriptMeters to varbinary(max).
Script_Data	Changed datatype of ScriptData to varbinary(max).
System_Capacity_Interval	Changed datatype of DbDateTime to DBDATETIME NULL.

The release added new fields to the following tables:

Table	Changes
ICR_Globals	Added these fields: • AnalyzerIntegrated • CVPCxSurveyAppName
System_Capacity_Interval	Added these fields: • MaxVoiceAgentsLoggedIn • MaxNonVoiceAgentsLoggedIn • MaxAgentsHandledPrevOB • MaxAgentsHandledPredProgOB • MaxPerpetualPremiumAgentsLoggedIn • MaxFlexStdAgentsLoggedIn • MaxFlexPremiumAgentsLoggedIn • CustomerDefinitionId
System_Capacity_Real_Time	Added these fields: • MaxVoiceAgentsLoggedIn • MaxNonVoiceAgentsLoggedIn • MaxAgentsHandledPrevOB • MaxAgentsHandledPredProgOB • MaxPerpetualPremiumAgentsLoggedInNow • MaxStdAgentsLoggedInNow • MaxPremiumAgentsLoggedInNow • MaxCVPCallControlPorts • MaxVRUPorts • CustomerDefinitionId • FutureUseInt3 • FutureUseInt4

Table	Changes
Agent_Event_Detail	Added these fields: • RouterCallKey • RouterCallKeyDay • PeripheralCallKey • AgentDialedNumber • EventDateTimeUTC • DialedNumber • TaskIndex • AgentSessionId • AgentState • RouterCallKeySequenceNumber • Direction • PrecisionQueueID • SkillGroupID • WrapupData
Route_Call_Detail	Added the CallStartDateTimeUTC field.
Termination_Call_Detail	Added these fields: • AnsweredDateTimeUTC • WrapUpStartDateTimeUTC • ConsultStartDateTimeUTC • ConsultEndDateTimeUTC • ConferenceStartDateTimeUTC • ConferenceEndDateTimeUTC • TransferredDateTimeUTC • CallTerminatedDateTimeUTC • AgentSessionId
User_Group	Added the EmailAddress field.

The release removed this field from the following table:

Table	Changes
ICR_Globals	Removed the ContextServiceConnectionData field.

Important Notes

SQL Server Execution Plan Issue

Microsoft SQL Server 2017 and later versions include an execution plan enhancement that can intermittently cause performance issues with CCE database operations. If your CCE deployment uses SQL Server 2017 or later, set the SQL Server compatibility level for the CCE databases (Logger, AW, BA, and HDS) to the SQL Server 2014 equivalent—compatibility level 120. For more information, see CSCvw51851.

Do not change the compatibility level for SQL Server system databases.

Run the following query against each applicable CCE database:

```
ALTER DATABASE <CCE_database_name> SET COMPATIBILITY_LEVEL = 120
```

You can run this query while the system is in operation.

OpenJDK Java Runtime Environment Update

A new 12.5(1a) base installer is available for customers, which has OpenJDK JRE as the supporting Java runtime for all CCE applications. It is no different from the preceding 12.5(1) installer except for the Java runtime environment installed on the CCE virtual machines (VMs).

You can continue to use Oracle JRE if you installed CCE 12.5(1) before the release of 12.5(1a). Further Java security updates and fixes can be downloaded and installed from the Oracle website.

There is no requirement to redeploy/reinstall existing 12.5 CCE VMs using the 12.5(1a) installer to switch to OpenJDK. Download and install ES55 (mandatory OpenJDK ES) instead, as needed.

However, if you want to install any ESs released after ES55 on 12.5(1), then you must first install ES55 (mandatory OpenJDK ES) on the relevant VMs as a prerequisite.

SocialMiner Renamed

SocialMiner will be referred to as Customer Collaboration Platform from release 12.5(1) onwards.

Certificate Validation

All components now enforce certificate validations. If you use any third-party Certificate Authority (CA) signed or self-signed certificates for any components that are not trusted by the platform by default, then the certificates must be mandatorily imported into the dependent component server trust store.

For more information, see *Cisco Unified Contact Center Enterprise Features Guide* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-feature-guides-list.html.

Outbound Option Import Rule

In Outbound Option Import Rule, when you add or modify a field in the import rule table, change the target table name to save your changes to the import rule. After the name change, the old table remains in the database, but the system does not use it.

Deprecated Features

Deprecated features are fully supported. However, there is no additional development for Deprecated features. These features may be scheduled to be removed in a future release. Plan to transition to the designated replacement feature. If you are implementing a new deployment, use the replacement technology rather than the deprecated feature.

Please review the applicable notes for details about exceptions or other qualifiers.

Deprecated Feature	Announced in Release	Replacement	Notes
Internet Explorer 11	Not applicable[1]	Edge Chromium (Microsoft Edge v79 and later)	None.
Avaya Aura Contact Center (AACC - formerly Symposium) PG	12.5(1)	None.	None.
UCC Enterprise Gateway PG (Parent PG in Parent-Child deployments)	12.5(1)	None.	None.
Aspect PG	12.5(1)	None.	None.
Integrity Check Tool	12.0(1)	None.	None.
External Script Validation	12.0(1)	None.	None.
Translation Route Wizard	12.0(1)	None.	None.
Symposium ACD	12.0(1)	None.	None.
MIB Objects: • cccaDistAwWebViewEnabled • cccaDistAwWebViewServerName • cccaSupportToolsURL • cccaDialerCallAttemptsPerSec	11.6(1)	None.	None.
Generic PG	11.5(1)	Agent PG and VRU PG	None

Deprecated Feature	Announced in Release	Replacement	Notes
ECSPIM	11.5(1)	TAESPIM	Avaya SEI/CVLAN protocol was deprecated by vendor.
"Sprawler" deployment	10.0(1)	A Packaged CCE deployment	A "Sprawler" was a Progger with an Administration & Data Server on a single box. It was used for lab deployments.

[1] Based on external communication from Microsoft

Removed and Unsupported Features

The following features are no longer available:

Feature	Effective from Release	Replacement
Context Service	12.5(1)	None.
Cisco MediaSense	12.5(1)	None.
SHA-1 certificate	12.5(1)	SHA-256
TLS 1.0 and TLS 1.1	12.5(1)	TLS 1.2
Cisco Remote Expert Mobile	12.5(1)	None.

Third Party Software Impacts

See the Unified CCE Compatibility related information located at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-device-support-tables-list.html for information on third-party software.