

CEC
2.5.0.0.0

Development Overview

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1 Development Map

Before development, you need to have a general understanding of the CEC open capabilities.

Figure 1-1 Development map

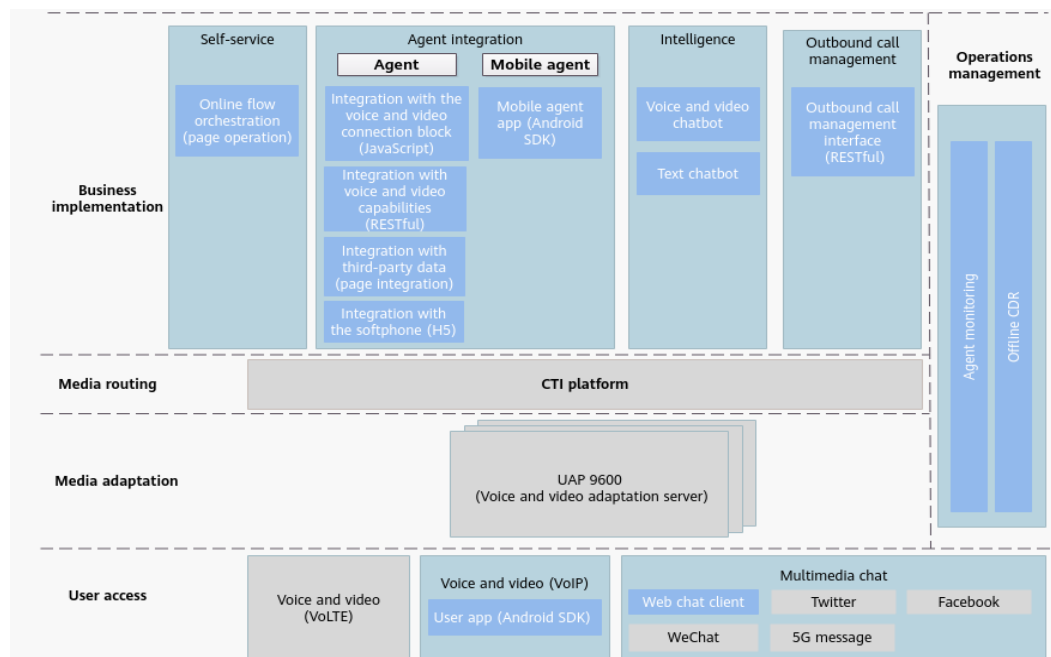


Table 1-1 Development map

Layer	Open Characteristics	Implementation Method	Supported Scenario
Business implementation	Self-service	Online page configuration	<p>An enterprise can customize the IVR flows of a call center on the online flow orchestration page of the CEC. The IVR flows can be used to implement functions such as voice/video playing during ringing, voice/video digit collection, call transfer, interface invoking, and value assignment judgment. For details, see 2.2 Self-Service (IVR) Integration Solution.</p> <p>NOTE</p> <ul style="list-style-type: none"> • To use the intelligent voice navigation (IVN) function, use the voice and video chatbots in the intelligence module together. • If automatic outbound calls are required, this feature can be used together with the outbound call management feature. • It can also be configured together with an agent skill queue to implement the functions of playing the waiting tone and prompting the number of waiting users when a user accesses the agent skill queue.

Layer	Open Characteristics	Implementation Method	Supported Scenario
	Agent	<ul style="list-style-type: none"> • JavaScript invoking • RESTful invoking • Page integration • H5 integration 	<p>On the agent workbench, the button area for customer service personnel to answer and process inbound calls is called a connection bar or connection block. The connection bar or block can connect, hold, transfer, or hang up an agent's phone (OpenEye softphone provided by the CEC). The CEC provides the following agent-related open capabilities. For details, see 2.3 Voice and Video Agent Integration Solution.</p> <ul style="list-style-type: none"> • If an enterprise does not have special requirements on the style of the connection bar or connection block, the lightweight connection bar (which can perform voice and video call operations such as answering, initiating, transferring, muting, and holding calls) can be directly integrated into the CRM page in JavaScript integration mode for users to answer calls on their own work portals. • If an enterprise has requirements on the style and location of a connection bar, the enterprise can invoke the voice and video call processing interfaces of the CEC using RESTful interfaces to develop the connection bar function to implement the call control capability of the call center. • If an enterprise uses the agent workbench provided by the CEC and expects that customer service personnel can view user data during calls with the users, the enterprise can use the embedded third-party system page to integrate the third-party page for user information display. • If an enterprise does not want to use the OpenEye softphone, the enterprise can integrate the voice and video call capabilities of the OpenEye softphone using H5 and develop its own softphone applications.

Layer	Open Characteristics	Implementation Method	Supported Scenario
	Intelligence	<ul style="list-style-type: none"> • Page configuration • RESTful invoking 	<p>If an enterprise needs to use the voice self-service or text chatbot, the enterprise can use the intelligent IVR page provided by the CEC to complete related configurations.</p> <p>In addition, to provide guidance on agent scripts and check whether the agent scripts contain sensitive words, you can configure the intelligent IVR and enable the intelligent assistant feature.</p> <p>For enterprises that do not use the agent workbench provided by the CEC, the RESTful interfaces of the OIAP can be used to query the existing chatbot configuration and bind dialog IDs. In addition, the intelligent subscription RESTful interfaces of the CC-Gateway can be used to display the quasi-real-time ASR result on the self-developed workbench, and complete the identification of the natural language.</p> <p>For details, see 2.7 Intelligence Solution.</p>
	Mobile agent	<ul style="list-style-type: none"> • Android SDK invoking • RESTful invoking 	<p>By using the CC-Gateway interfaces and mobile agent interfaces provided by the CEC, enterprises can develop their own H5 apps to enable agents to answer and make calls (VoIP) using mobile phones.</p>
	Outbound call management	RESTful	<p>By invoking the RESTful interfaces of the CC-iSales, enterprises can write the information such as outbound call task data, outbound call sample data, and user blocklist in the outbound call management system developed by the enterprise to the AICC.</p>
Media routing	-	-	<p>The CEC routes voice, video, and multimedia requests in a unified manner.</p>
Media adaptation	Multimedia adaptation service	RESTful	<p>Currently, the CEC supports access through voice and video (VoLTE/VoIP), web client, WeChat, Facebook, Twitter, and 5G message. Except the web client, other channels can be enabled by page configuration. For details, see 2.1 Multimedia Channel Access Solution.</p>

Layer	Open Characteristics	Implementation Method	Supported Scenario
Channel access	User App Integration (Android SDK)	RESTful Android SDK invoking	If an enterprise requires that users can initiate voice and video calls through the Internet, the enterprise can use the Android SDK to integrate self-developed applications. During the development, the enterprise can use related interfaces provided by the CEC to query information. For details, see 2.1 Multimedia Channel Access Solution .
	Text chat access	<ul style="list-style-type: none"> JavaScript integration RESTful integration 	Enterprises provide the following methods to integrate the text chat access capability on the user side. For details, see 2.1 Multimedia Channel Access Solution . <ul style="list-style-type: none"> Web Lightweight Client Integration (JS): If enterprises do not have special requirements on the web chat window style on the user side, the enterprises can use the lightweight web chat plugin to embed the existing client chat window into their web portals in JavaScript integration mode to implement text chat integration. Web Client Access (RESTful): If enterprises have requirements on the page style, the enterprises can develop a web client and invoke the encapsulated web chat interface to implement simple web chat functions.
Operations support	Agent monitoring	RESTful	If enterprises need to query, display, and collect statistics on real-time operations data (such as monitoring data of call center objects including skill queues, agents, teams, and IVRs) of a call center, the enterprises can use RESTful interfaces to obtain related data.
	Offline CDR	RESTful	Enterprises provide an offline CDR download interface for obtaining CDR files and recording files in batches.

2 Development Solutions

[2.1 Multimedia Channel Access Solution](#)

[2.2 Self-Service \(IVR\) Integration Solution](#)

The CEC provides the IVR capability for enterprises. Enterprises can customize IVR flows to meet their own business requirements.

[2.3 Voice and Video Agent Integration Solution](#)

Enterprises can develop operation pages for agents to answer and process calls, or integrate the agent connection plugins of the CEC into their own pages.

[2.4 Multimedia Agent Integration Solution](#)

The CEC allows agents to process multimedia requests from users. If an enterprise does not use the CEC agent workbench but uses a self-developed or integrated one, this solution needs to be used to supplement the multimedia request processing capability of agents in the agent operating system.

[2.5 Mobile Agent Integration Solution](#)

The mobile agent interface is mainly used in outbound call scenarios and supports solutions such as one-click bidirectional call and mobile customer service manager.

[2.6 Screen Pop-up Integration Solution](#)

When an enterprise uses the CEC agent workbench, customer information needs to be displayed on the screen pop-up.

[2.7 Intelligence Solution](#)

The CEC integrates intelligent functions such as voice chatbot, text chatbot, ASR, and intelligent agent recommendation and notification.

[2.8 Operations Monitoring and Report Integration Solution](#)

CC-CMS interfaces of the CEC can be used for customized development in the operations monitoring solution.

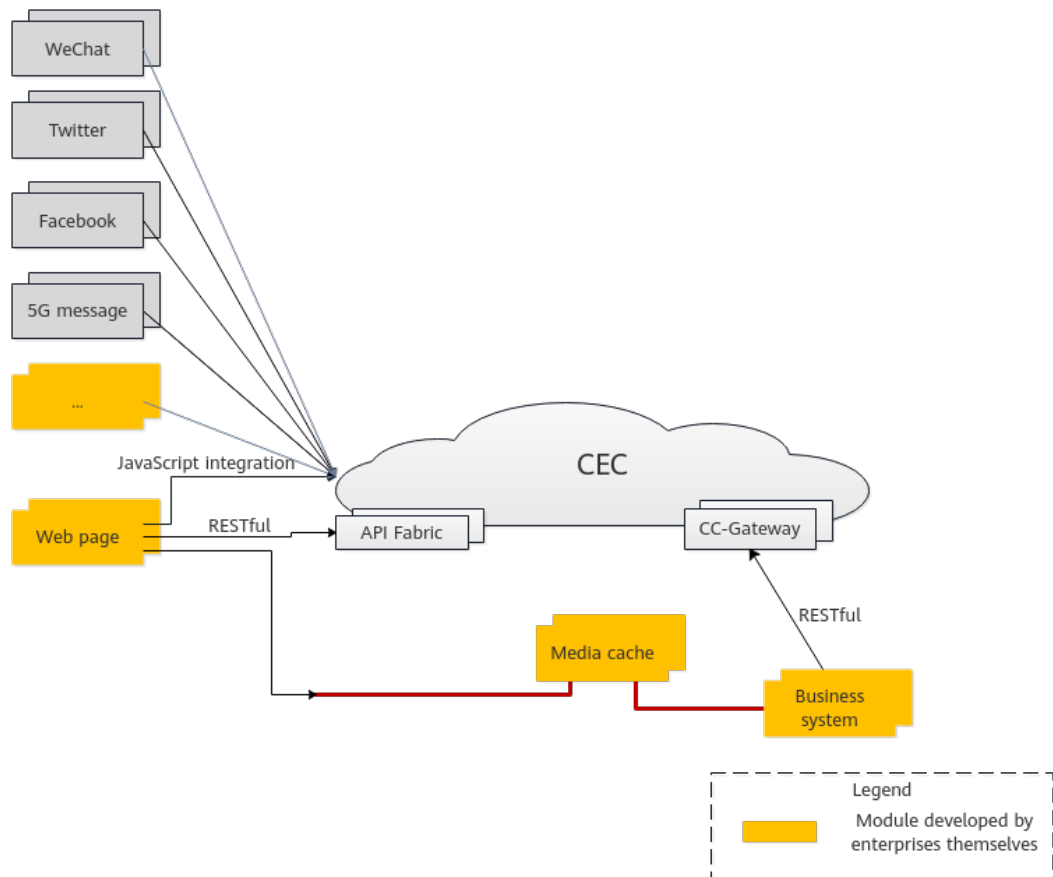
[2.9 Automatic Outbound Call Integration Solution](#)

The enterprise administrator imports samples to the automatic outbound call system. The system then automatically executes outbound call tasks according to the policies. Calls successfully connected can be transferred to the IVR, skill queue, or agent.

[2.10 CDR Download and Recording Backhaul Integration Solution](#)

2.1 Multimedia Channel Access Solution

Figure 2-1 Multimedia connection integration solution



Currently, the CEC supports two multimedia channel access modes: web page and WeChat.

- In web page access mode, enterprises need to develop client apps by themselves. The client applications developed by enterprises integrate the text chat capabilities of the CEC as follows:
 - The CEC lightweight web chat plugins are directly integrated.
 - The web customer service interfaces provided by the CEC using the API Fabric are integrated.

The following table describes the advantages and disadvantages of the two modes.

Integration Mode	Workload	Technical Threshold	Definition Personalization
Lightweight web chat plugin	Light Only JavaScript invoking and a few authentication-related developments are required.	Low	Low Not supported
Web customer service interface of the API Fabric	Medium	Medium	Medium

- Other social media access methods:
 - In WeChat access mode, enterprises can directly use the WeChat channel capabilities of the CEC.
 - In Facebook access mode, enterprises can directly use the Facebook channel capabilities of the CEC.
 - In Twitter access mode, enterprises can directly use the Twitter channel capabilities of the CEC.
 - In new message access mode, enterprises can directly use the new message channel capabilities of the CEC.
 - In email access mode, enterprises can directly use the email channel capabilities of the CEC.
 - In LINE access mode, enterprises can directly use the LINE channel capabilities of the CEC.
 - In WhatsApp access mode, enterprises can directly use the WhatsApp channel capabilities of the CEC.

For details about the configuration method, see *User Guide*.

2.2 Self-Service (IVR) Integration Solution

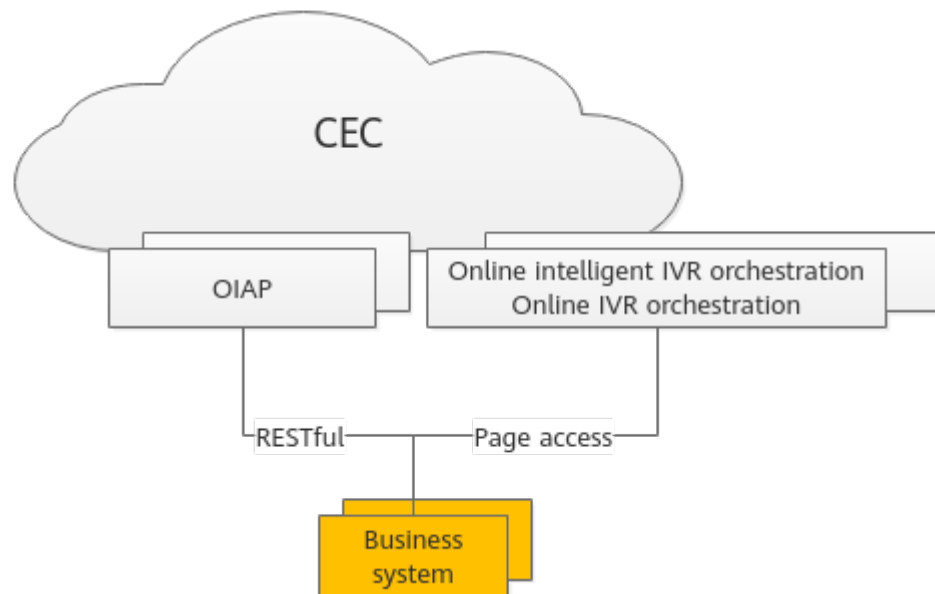
The CEC provides the IVR capability for enterprises. Enterprises can customize IVR flows to meet their own business requirements.

The CEC provides the following self-services:

- Common IVR
- Intelligent IVR

The intelligent IVR integrates the chatbot function based on the common IVR functions.

Figure 2-2 Self-service integration solution



- Online IVR orchestration provides traditional IVR functions, and intelligent IVR online orchestration provides the intelligent chatbot configuration function.
- To implement the function of interacting with the chatbot on the client of a user, you can use the RESTful interface provided by the OIAP to bind the dialog ID and obtain the intelligent recognition result.
To use this interface, you must orchestrate and release available chatbots in the online intelligent IVR orchestration.
- Based on online configuration, the common IVR can be redirected to the intelligent IVR, and the intelligent IVR can be redirected to the common IVR.
- During orchestration, the common IVR and intelligent IVR can invoke the interfaces of third-party systems to obtain third-party information.

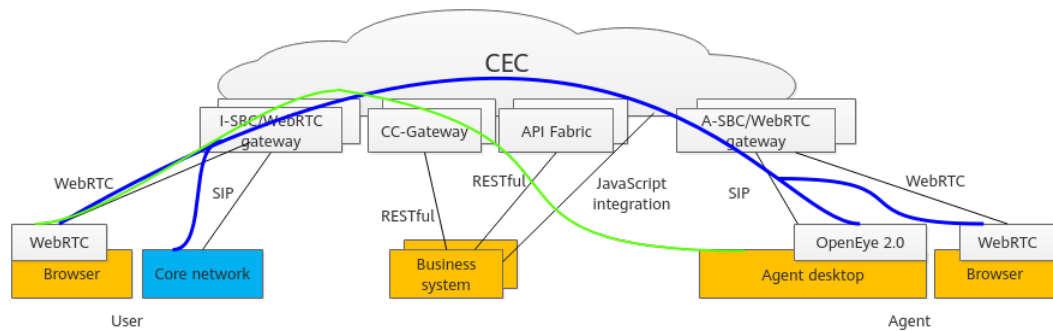
NOTE

The intelligent IVR is usually used to configure and implement the voice and text chatbot capabilities. Therefore, the intelligent IVR is classified into intelligence in the following sections.

2.3 Voice and Video Agent Integration Solution

Enterprises can develop operation pages for agents to answer and process calls, or integrate the agent connection plugins of the CEC into their own pages.

Figure 2-3 Voice connection integration solution



As shown in the preceding figure, to enable an agent to answer a call, the following two flows need to be processed:

- Data control flow, as shown in the green line in the preceding figure. The flow passes through the CEC NEs and finally reaches the browser page of the agent, notifying the agent of a new call. However, the agent cannot hear the user's voice. The CEC calls the operations that the agent responds to the data control flow as connection operations. The connection is usually performed through the HTTPS channel.

In this solution, the integration of voice and video agents refers to the integration of the connection operation capabilities of agents.

The agent side can implement the voice and video connection function in either of the following ways:

- The lightweight connection bar plugin of the CEC is directly integrated using the authentication interface and agent information obtaining and synchronization interface in the API Fabric based on JavaScript integration. This mode can implement quick integration, but the style of the connection bar cannot be customized.
- The RESTful interfaces provided by the CC-Gateway of the CEC can be integrated directly to implement the connection functions of the agent system. This mode can implement the connection bar that complies with the style of the enterprise business system, but the development takes a long time.
- Signaling and media flow, as shown in the blue line in the preceding figure. This flow is transmitted from a user's phone (or softphone) to an agent's (soft) phone through an NE (such as the UAP) used by the CEC to process signaling and media. The agent can hear the user's voice and talk with the user only through the (soft) phone. That is, a signaling and media flow is transmitted over the link between phones or softphones.

The CEC supports the following phone types:

- OpenEye 2.0 softphone
- Browser (WebRTC)
- Mobile phone or fixed-line phone using the carrier's network

The OpenEye 2.0 softphone or WebRTC needs to be determined based on the configuration of the tenant space that the enterprise applies for.

If the preceding phones are not used, enterprises need to ensure that the phone applications developed by themselves support the SIP or WebRTC protocol.

In the CEC standard solution, OpenEye 2.0 is installed on agent desktops. Agent connection operations are performed in the business system.

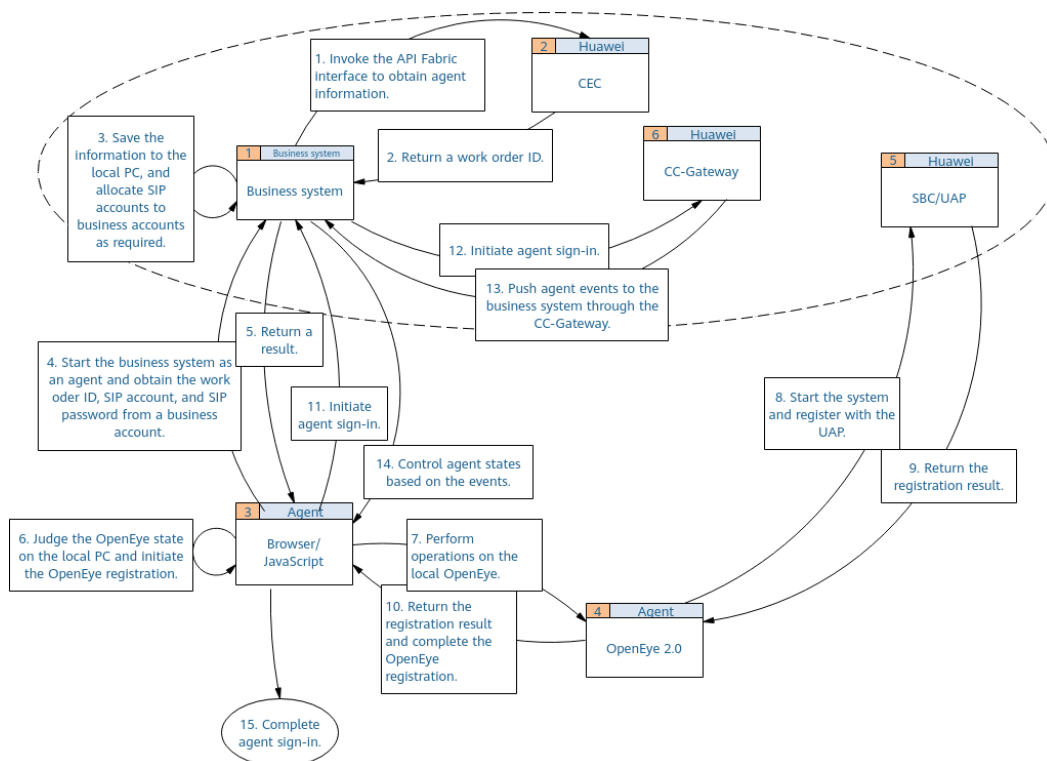
NOTE

OpenEye 2.0 functions similarly as an IP phone.

Agents can answer calls in the following modes:

- Agent PC (WebRTC)
- Agent PC+OpenEye 2.0
- Agent PC+mobile phone/fixed-line phone

Figure 2-4 Business system integration process



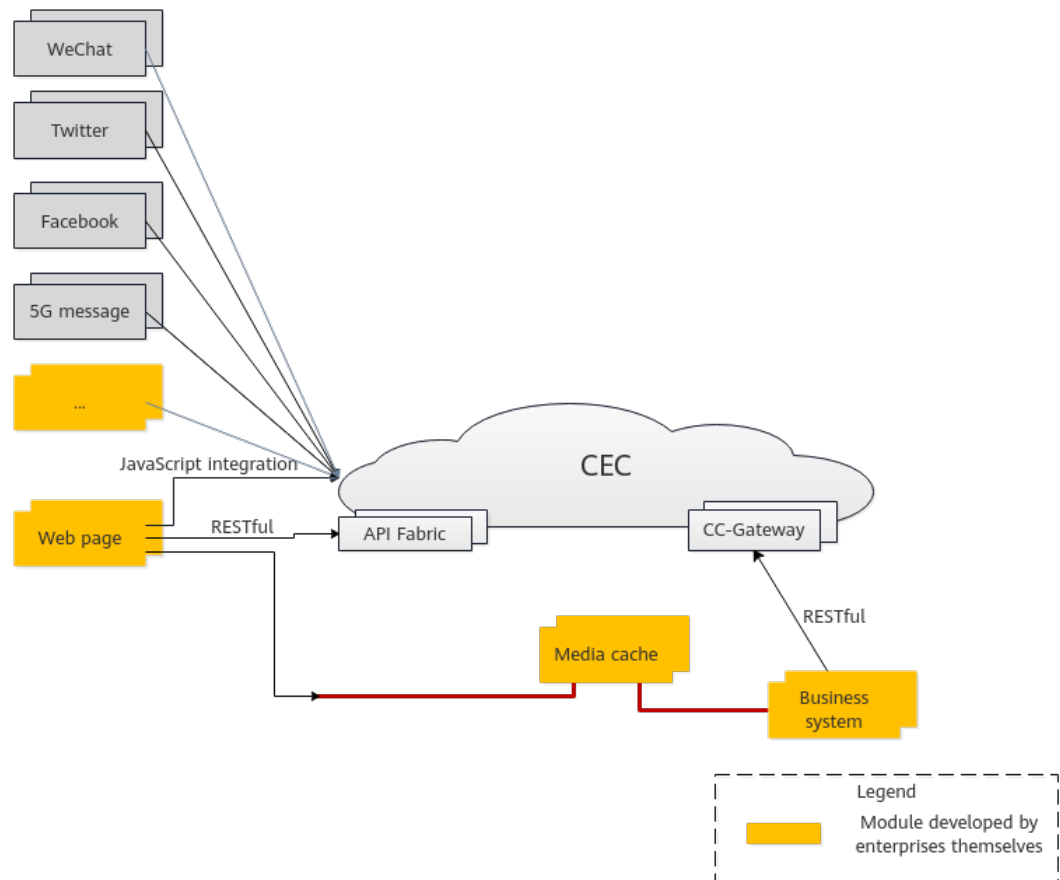
To ensure smooth integration, enterprises need to complete basic tenant space configuration on the CEC, including:

- Personnel management
- Skill queue management
- Agent management
- Called party route management

2.4 Multimedia Agent Integration Solution

The CEC allows agents to process multimedia requests from users. If an enterprise does not use the CEC agent workbench but uses a self-developed or integrated one, this solution needs to be used to supplement the multimedia request processing capability of agents in the agent operating system.

Figure 2-5 Multimedia connection integration solution



NOTE

As mentioned in the multimedia channel access solution, an enterprise provides the web page access capability for enterprise users in three modes. This solution applies only to the third mode (integrated CCUCS interface). Otherwise, the agent cannot obtain multimedia messages such as images, voice files, and files sent by the user.

For the first two web page access modes in the multimedia channel access solution, the agent workbench provided by the CEC can be used.

To provide manual services for a user who accesses the CEC through a multimedia channel, the CEC must have an idle agent in the specified multimedia skill queue.

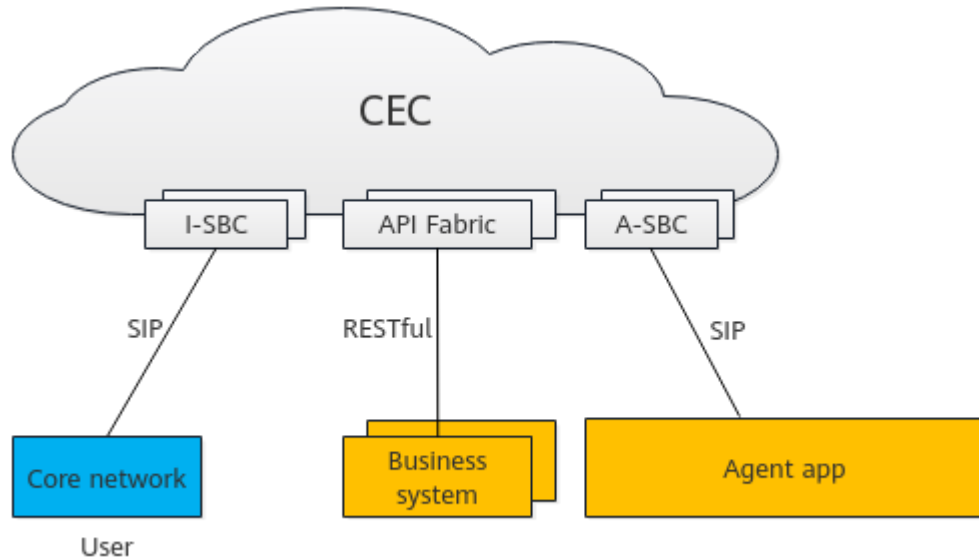
When configuring a channel in the multimedia channel access solution, an enterprise needs to access a multimedia skill queue.

1. The agent business system developed by an enterprise needs to use the multimedia interface of the CC-Gateway to send and receive messages on the agent side.
2. Multimedia files (such as videos and images) on the agent side and the client of the user are transferred using the media cache. Before sending a multimedia file, the user uploads the file to the cache and sends the ID in the cache to the agent side. The agent side receives the corresponding multimedia information by ID.
3. Before development, the web channel must be configured by referring to [Configuring the Web Channel](#) so that messages can be properly received by agents.

2.5 Mobile Agent Integration Solution

The mobile agent interface is mainly used in outbound call scenarios and supports solutions such as one-click bidirectional call and mobile customer service manager.

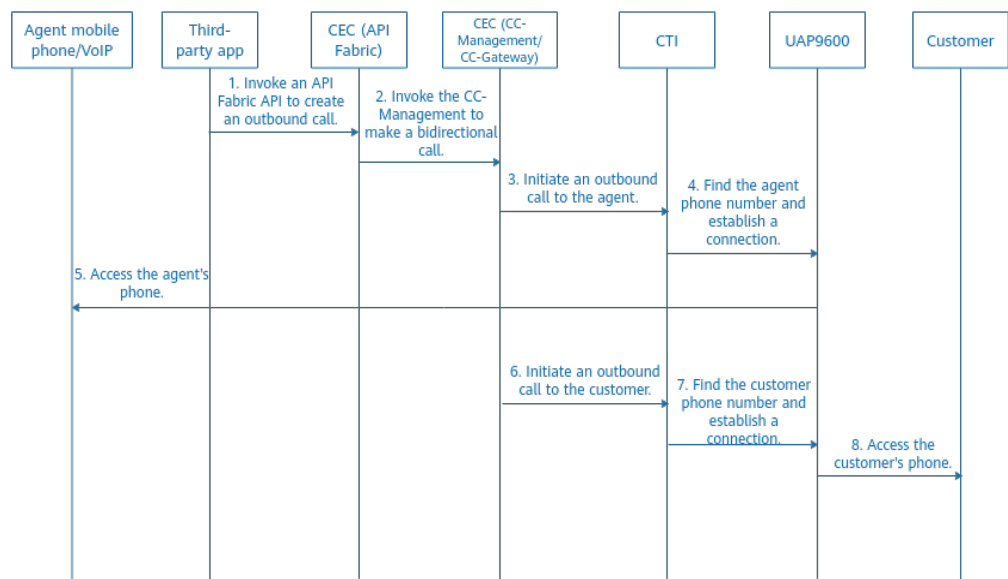
Figure 2-6 Mobile agent integration solution



Agents can answer calls in the following ways:

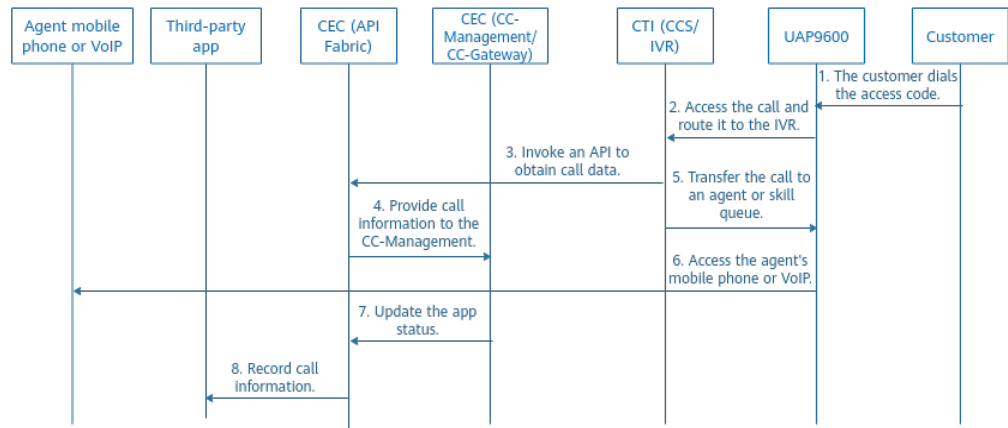
1. Mobile app+mobile number
2. Mobile app
- The following figure shows the call access process in the outbound call scenario.

Figure 2-7 Mobile agent outbound call scenario



- The following figure shows the call access process in the inbound call scenario.

Figure 2-8 Mobile agent inbound call scenario



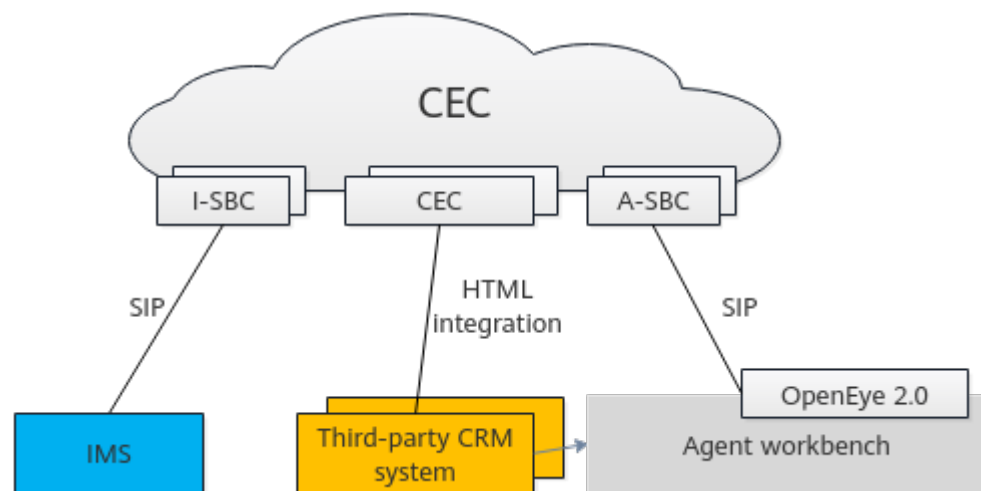
According to the preceding process, you need to configure the API and IVR flow information of the API Fabric in the CEC to complete the call transfer operation.

According to the preceding flows, in the public cloud scenario, mobile agents need to use the mobile agent interfaces and IVR flows in the API Fabric to implement complete mobile customer service capabilities. If enterprises need to use mobile agents, mobile applications must be developed based on the CEC-APP SDK, agent bidirectional call interface, and agent information query interface to implement the mobile agent function.

2.6 Screen Pop-up Integration Solution

When an enterprise uses the CEC agent workbench, customer information needs to be displayed on the screen pop-up.

Figure 2-9 Screen pop-up integration solution



An inbound call screen pop-up is implemented by integrating a third-party page into the iFrame of the agent workbench. The agent workbench can transfer call information, such as the calling and called numbers, to third parties using a URL.

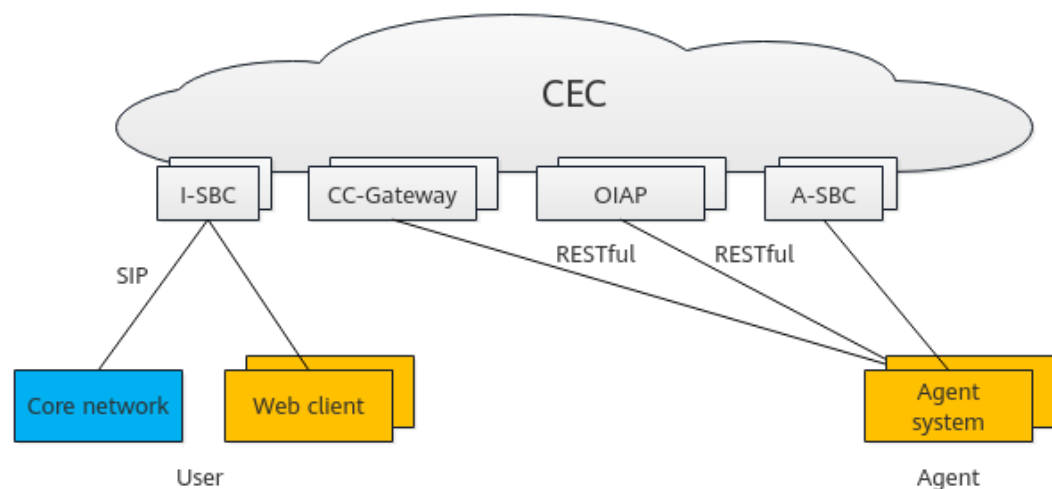
NOTE

When the AICC integrates screen pop-ups, page authentication is not supported currently.

2.7 Intelligence Solution

The CEC integrates intelligent functions such as voice chatbot, text chatbot, ASR, and intelligent agent recommendation and notification.

Figure 2-10 Intelligence solution



The core module of the CEC intelligence solution is OIAP, which has the online script flow orchestration capability and natural language recognition engine. After the text is sent to the OIAP, the OIAP can implement semantic understanding and response capabilities of the chatbot based on the configured recognition and script templates.

In addition, the intelligence capability can be used as a supplement to other features to implement the intelligent assistance capability.

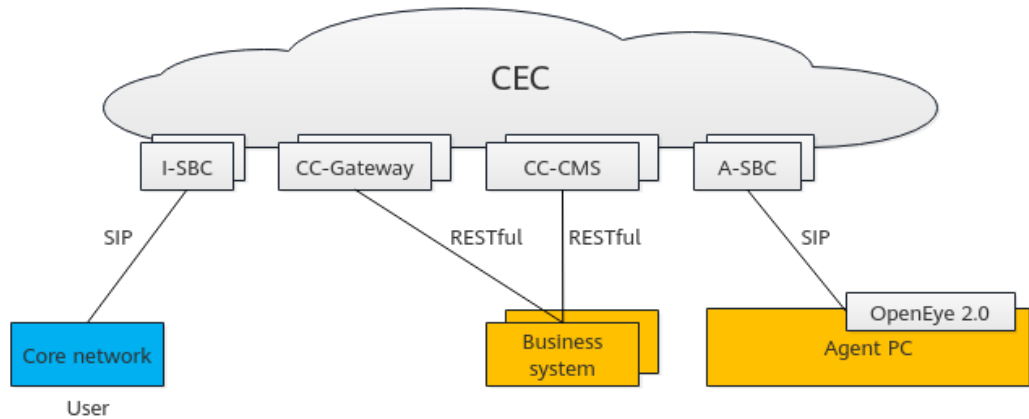
Examples are as follows:

- The intelligent IVR and traditional IVR can switch to each other using the call transfer diagram element. In this way, the traditional IVR can switch to the IVN by pressing keys.
- After the ASR is enabled and the intelligent agent assistant works with the chatbot script flows configured on the intelligent IVR, script guidance, knowledge recommendation, and sensitive word notification can be implemented during communication between agents and users.
- During channel configuration, the chatbot script flows configured on the intelligent IVR side are used to implement the interaction between the text chatbot and customers. The text chatbot can be switched to an agent at any time.

2.8 Operations Monitoring and Report Integration Solution

CC-CMS interfaces of the CEC can be used for customized development in the operations monitoring solution.

Figure 2-11 Operations monitoring and report integration solution

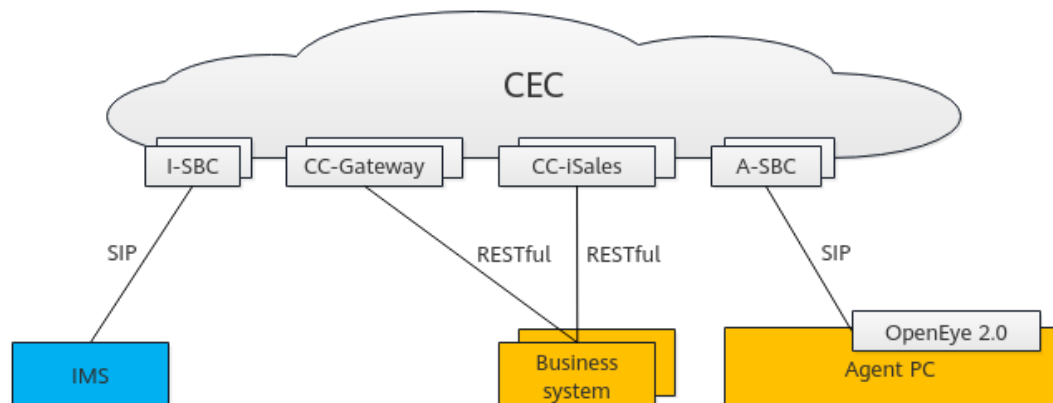


The call operations data between users and the CEC is summarized and collected in real time from multiple dimensions. Enterprises can invoke the interfaces provided by the CC-CMS to obtain indicator and report data.

2.9 Automatic Outbound Call Integration Solution

The enterprise administrator imports samples to the automatic outbound call system. The system then automatically executes outbound call tasks according to the policies. Calls successfully connected can be transferred to the IVR, skill queue, or agent.

Figure 2-12 Automatic outbound call integration solution



The interface of the CC-iSales module of the CEC provides the automatic outbound call integration capability for enterprises. Currently, the following automatic outbound call scenarios are supported:

- A user dials a user number through the self-service IVR flow to initiate an outbound call to the user. After the call is connected, the user can interact with the CEC by dialing a key (common IVR) or speaking (intelligent IVR).
In this scenario, you need to use the online development tool in [2.2 Self-Service \(IVR\) Integration Solution](#) to develop common IVR or intelligent IVR flows.
- Based on the predicted outbound call algorithm, the system automatically matches appropriate agents for user numbers. Agents do not need to search for or make calls but only need to wait for the system to allocate inbound calls. By using the predicted outbound call algorithm, agent resources can be properly arranged to the maximum extent.
- Agents view the user number list and directly make calls.

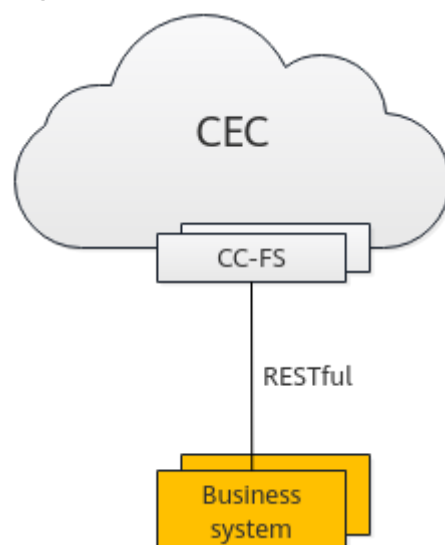
To integrate the outbound call function, create an outbound call task, add outbound call data, and ensure that the outbound call task is enabled. The outbound call interface of the CEC is similar to the intelligent outbound call function provided on the page. It is recommended that developers who use the outbound call interface for the first time understand the flows of [Managing Outbound Call Tasks](#) on the page and then integrate the interface.

2.10 CDR Download and Recording Backhaul Integration Solution

CDRs and recording files generated by the CEC are stored on cloud resources. This solution can be used to dump CDRs and recording files on cloud resources to the local PC.

CDR download and recording backhaul can be implemented using the basic functions of the CEC, or customized based on interfaces.

Figure 2-13 CDR download and recording backhaul integration solution



CDR and recording file download is implemented by the CC-FS module of the CEC. The CC-FS module provides interfaces for enterprises to periodically obtain CDR and recording files.

Currently, only voice files and agent operation bill files can be downloaded in the CEC.

3 Development Preparations

Before development, you need to provision tenants, configure tenants, and obtain tenant information to facilitate subsequent integration.

[3.1 Before You Start](#)

Before integrating CEC functions, read this section to understand the knowledge and information required before integration development.

[3.2 Provisioning and Configuring a Tenant](#)

[3.3 Obtaining Tenant Space Information](#)

After a tenant is provisioned, you need to understand the capabilities supported by the tenant space and provide related tenant information for O&M personnel to obtain information such as the authentication password, AK, and SK.

3.1 Before You Start

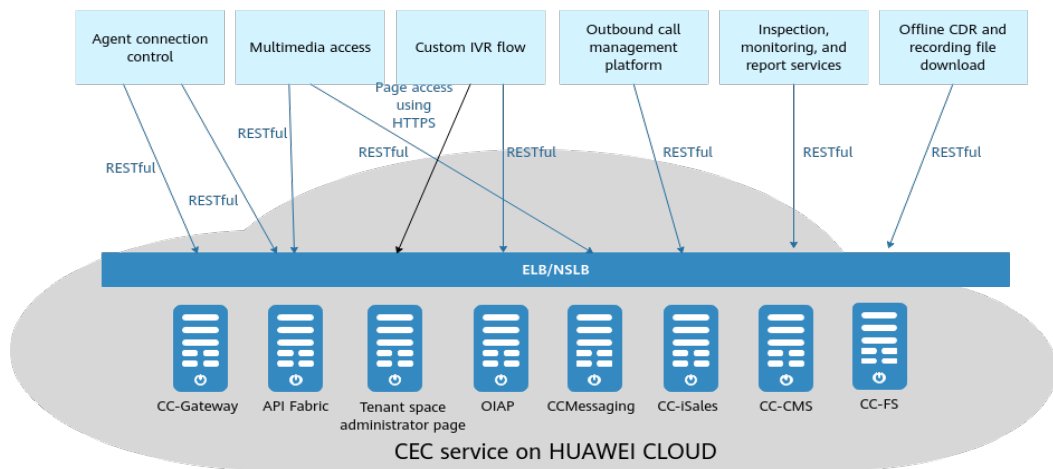
Before integrating CEC functions, read this section to understand the knowledge and information required before integration development.

The CEC provides cloud-based agent services based on SaaS scenarios. For example, tenants can configure and maintain virtual call centers, and manage agents on call centers. With such services, enterprises can build call centers at the minimum cost and provide agent or video services for their customers.

Due to the cloud features of the CEC, enterprises need to understand the functions, open capabilities, and processing logic of the CEC in advance to facilitate subsequent integration.

Open Architecture

Figure 3-1 Logical architecture of CEC open capabilities



The preceding figure shows only the NEs that directly provide capability openness services. Other NEs that provide support capabilities in the CEC are not shown.

Table 3-1 NEs of CEC open capabilities

NE in the CEC	Description
ELB/NSLB	Elastic load balancer/next service load balance, which routes interface requests and service requests to share the access load of each server.
CC-Gateway	Call center gateway, which provides RESTful-based voice and video control capability interfaces and multimedia message processing capability interfaces for apps on the agent side, facilitating flexible development of the agent system. The CC-Gateway uses the GUID to implement interface authentication.
API Fabric	Interface service gateway, which encapsulates the CEC agent information query capability, mobile bidirectional call capability on the agent side, and web text chat function on the user side into RESTful interfaces. To integrate the connection bar on the agent side and web chat window on the user side or implement the mobile agent bidirectional call capability, enterprises can use these interfaces. Interfaces in the API Fabric use the AK/SK for authentication. To use the interfaces, contact the O&M administrator to obtain the AK/SK.

NE in the CEC	Description
Tenant space management page	<p>After applying for tenants successfully, enterprises can obtain the tenant space administrator account information and sign in to the CEC portal to access the tenant space management page and complete personalized configuration.</p> <p>Enterprises can configure common IVR flows and intelligent IVR flows online during tenant space management to enrich the self-service businesses of the CEC.</p>
OIAP	<p>To connect users to the chatbot service, enterprises can use the chatbot interface provided by the Online Intelligent Assistant Platform (OIAP) to implement the semantic recognition capability and receive the recognition result.</p> <p>Before using the RESTful interface of the OIAP, you need to configure the intelligent IVR flow on the tenant space management page.</p>
CC-iSales	<p>Enterprises can use the interfaces provided by the CC-iSales to implement automatic outbound call capabilities such as outbound campaign management and outbound call data management.</p> <p>The CC-iSales uses the token authentication mode of the header field. The enterprise needs to obtain the authentication password of the CC-iSales from the O&M personnel.</p>
CC-CMS	<p>The CC-CMS collects statistics on call data of the CEC in real time from multiple dimensions, for example, the number of online agents in each skill queue. Enterprises can use the CC-CMS interface to obtain and analyze operations data of the CEC.</p> <p>The CC-CMS uses the token authentication mode of the header field. The enterprise needs to obtain the authentication password of the CC-CMS from the O&M personnel.</p>
CC-FS	<p>The CC-FS provides the capability of downloading offline CDRs and recording files.</p> <p>The CC-FS uses the token authentication mode of the header field. The enterprise needs to obtain the CC-FS authentication password from the O&M personnel.</p>

CEC References

Before integration development, you need to have a basic understanding of the business functions and basic operations of the CEC.

For details, see *Service Overview*, *Getting Started*, and *User Guide* in the public cloud documentation center.

Table 3-2 References

Document	Link
Service Overview	https://support.huaweicloud.com/intl/en-us/productdesc-cec/cec_01_0001.html
Getting Started	https://support.huaweicloud.com/intl/en-us/qs-cec/cec_02_0002.html
User Guide > Tenant Administrator Guide	https://support.huaweicloud.com/intl/en-us/usermanual-cec/cec_04_0002.html

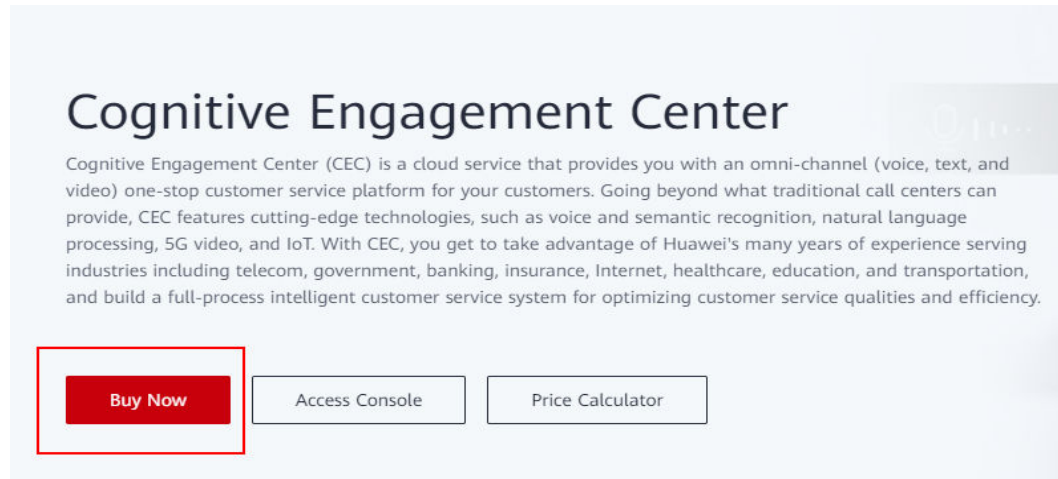
Development Environment Requirements

Table 3-3 Development environment requirements

Tool	Description/How to Obtain
Network	Ensure that the developed client can access the Internet for online configuration.
Browser	Use Google Chrome 80 or later.
Interface commissioning tool (Demo)	https://bbs.huaweicloud.com/forum/thread-122079-1-1.html
Development language	The CEC provides RESTful interfaces for enterprise integration and has good compatibility. Therefore, no requirement is available for the development language and tool. Some functions can be integrated in JavaScript mode.

3.2 Provisioning and Configuring a Tenant

Purchase the CEC at <https://www.huaweicloud.com/intl/en-us/product/cec.html>.



- For details about how to subscribe to the CEC, see [Applying for Commercial Use](#).
- For details about how to configure a tenant, see [Making the First Call](#).

3.3 Obtaining Tenant Space Information

After a tenant is provisioned, you need to understand the capabilities supported by the tenant space and provide related tenant information for O&M personnel to obtain information such as the authentication password, AK, and SK.

Step 1 Contact operations personnel to obtain the following information:

- AKs and SKs corresponding to API Fabric interfaces
In the CEC open services, the web customer service interface, mobile bidirectional call interface, and agent information query interface provide services for external systems through the API Fabric. Therefore, you need to obtain the corresponding AKs and SKs for subsequent development.
- AKs and SKs corresponding to CC-CMS, CC-FS, and CC-iSales interfaces
In the CEC open services, agent monitoring (CC-CMS), CDR and recording file offline download (CC-FS), and outbound call management (CC-iSales) interfaces use their own AKs and SKs for authentication. Therefore, you need to obtain the corresponding AKs and SKs for subsequent development of the corresponding services.
- ID (**ccid**) of the call center to which the tenant space belongs
The invocation of interfaces (such as CC-CMS interfaces) requires the value of **ccid**. Therefore, you need to contact operations personnel to obtain the value in advance. Generally, the value of **ccid** is 1.
- URL of the interface provided by the CC-Gateway for external systems
This interface is used when you need to develop your own agent system and module (connection bar) for agents to answer and handle calls.



Step 2 Sign in to the CEC as a tenant administrator and choose **Configuration Center > System Management > Tenant Information**.

Record the following information, which will be used in subsequent development.

- VDN ID
- Tenant Name
- TenantId

Tenant Info	
Tenant Name	Company
Creation Time	Expiration Date
2022-05-12	2030-04-30
VDN ID	TenantId
40	20888888888888888888
Time Zone	Time Zone Offset
UTC+	00:00
DST	
Disabled	

Step 3 Choose **Configuration Center > System Management > Tenant Information** and check whether the resources purchased by the current tenant space can support integration development. If no, contact the O&M administrator to determine whether more resources are required.

Integration Capability	Resource Requirement
Voice agent	The values of Voice Agents and Max. Concurrent Voice Calls must be greater than 0.
Video agent	The values of Video Agent Quantity and Max. Concurrent Video Calls must be greater than 0.
Mobile agent	Mobile Agent/One-Click Bidirectional Call in the Feature area is set to  .
Text chat through multimedia channels	The value of Number of Multimedia Agents must be greater than 0.
Common IVR	The value of IVR Channel Quantity must be greater than 0. If the function of playing announcements by using variables is required, the value of TTS Quantity must be greater than 0.
Intelligent IVR/ Chatbot	Choose Configuration Center > Flow Configuration > Intelligent IVR (if available) and check whether the corresponding page can be displayed. If yes, the intelligent IVR feature is enabled, and you can configure chatbot script flows. If the voice chatbot function is required, the values of TTS Quantity and ASR Quantity must be greater than 0.
Intelligent recognition	<ul style="list-style-type: none"> • The intelligent IVR feature is enabled. For details, see the description in the previous row. • Intelligent Recognition in the Feature area is set to .

Step 4 Choose **Configuration Center > Employee Center > Agent Management** and obtain the agent ID, platform sign-in password, and softphone registration password.

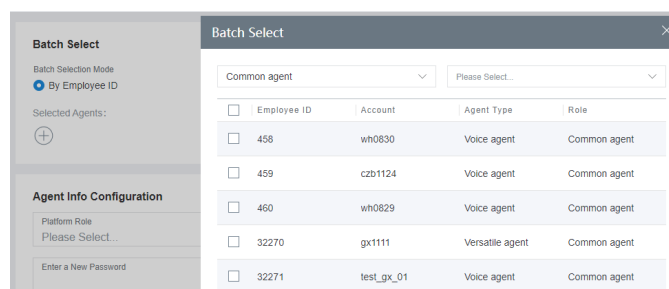
After a skill queue for handling inbound calls is configured for an agent, a platform employee ID (different from the account for signing in to the CEC) is allocated to the agent. After the agent signs in using the platform employee ID and sets the agent status to **Idle**, the agent can handle inbound calls.

To develop your own agent system, you need to obtain the platform employee ID and password of the agent. The password is automatically generated by the system. You need to reset the password for the agent to use the new password to sign in through interface invocation.

The information in the red box in the following figure indicates the platform employee ID.

<input type="checkbox"/>	Employee ID	Softphone Number	Account	Role	Agent Type	Skill Queue
<input type="checkbox"/>	797	86883139		Common agent	Voice agent	defaultAudioSkill
<input type="checkbox"/>	798	86883140		Common agent	Voice agent	defaultAudioSkill

1. Click **Batch Configure**.
2. Click **+**, select the required agents, and click **OK**.



3. Enter a new password and the current account password, and click **Submit**.

Agent Info Configuration

Platform Role Common agent	Agent Type Voice agent
Enter a New Password	Confirm Password
Current Account Password	Password Validity Period (Days)
Intelligent Recognition Please Select...	Single/Phone Agent Recognition Please Select...
Select Skill Queue +	

4. Return to the **Agent Management** page, select the required agents, click **Reset Softphone Password**, and click **YES** in the dialog box that is displayed.
5. Enter a new softphone password and the current account password, and click **Complete**.

change Password ✕

* Current Account Password

* Softphone new password




* Repeat new password

Cancel Complete

----End

4 Contact Us

If you have any questions during business and development, contact us through the following channels.

-  Email: aiccsupport@huawei.com
Service hours: 8:00–20:30, seven days a week
-  Forum: <https://forum.huawei.com/enterprise/en/forum-100801.html>
-  Hotline: <https://support.huawei.com/carrier/docview!docview?nid=IN0000034614&path=NN-000005>