

Cloud Application Rendering Console Guide Product Documentation





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Console Guide Application Management Uploading Applications

Last updated : 2024-01-26 12:00:38

CAR lets you upload your own applications. You can package your application as a ZIP/RAR/7z file and upload it from your local system or through a URL to deploy it as a cloud application.

CAR supports three application types: cloud 3D, cloud XR, and cloud APK.

Cloud 3D: For general 3D applications (non-AR/VR). These applications are generally controlled using keyboard and mouse, such as virtual event applications and PC games.

Cloud XR (in beta test): For VR/AR/MR applications.

Cloud APK (in beta test): For APK applications.

Note:

Cloud APK and cloud XR are in beta test. For more information, please contact your Tencent Cloud sales rep.

Uploading a cloud 3D application (.exe)

1. Package the application as a ZIP, RAR, or 7z file. Go to the **Applications** page in the CAR console, upload the application file, and wait for the application to be created.

We recommend you use UTF-8 encoding for compression (7-Zip is recommended); otherwise, it may lead to garbled characters or other issues with the files or folder names after decompression.

Application management	t					No taska ye
1 Create application Uploading an application file [2 Setting startup parameters [2		2 Create project Creating a project £2	3 Buy concurrency packs for the project Buying concurrency packs for a project [2]		4 Integrate the CAR SDK Quick Integration 12	5 Launch your cloud application
Create application						Separate keywords with " "; press Enter to separate filter
Application ID/name	Status T	Update status T	Application type	Creation time \$	Operation	
			You don't have any appl	ications yet. Create		
Total items: 0						20 • / page H 4 1 /1 page

2. In the **Create application** pop-up window, select an application type. You can select a file, drag a file, or enter a URL to upload a file.

Note:

The download URL must be a URL that can be accessed and trigger download directly. Download URLs of cloud disks or other URLs requiring verification are not supported.

Application name	Same as app file name by default
	Max 16 characters. Chinese characters, letters, numbers, and hyphens (-) are allowed.
Application type	Cloud 3D Cloud XR
Upload file	
	Click to select a file/Enter a download URL/Drag and drop
	Only ZIP and BAR files are supported

3. After you submit the application upload task, you can proceed with the Application Configuration.

4. You can view the application upload progress for a selected or dragged file by clicking **Upload tasks** in the topright corner. An application uploaded through a URL will be downloaded on the backend. You can directly view the application creation progress in the upload task list on the **Applications** page.

Application management						C	Jpload tasks in progress	Beginner
Create application						Separate keywords with " "; pres	s Enter to separate filter	(
Application ID/name	Status T	Update status T	Application type	Creation time \$	Operation			
	Normal	None	Cloud 3D	2022-09-13 20:14:18	Startup parameter	s Versions New project Delete		
	Normal	Ready for release	Cloud 3D	2022-09-13 20:15:08	Startup parameter	s Versions New project Delete		
	Startup parameters not set	None	Cloud 3D	2022-09-13 20:15:22	Startup parameter	s Versions New project Delete		
	Creating application 30%	Creating version	Cloud 3D	2022-09-13 20:21:41	Startup parameter	s Versions New project Delete		
	Creating application 0%	Creating version	Cloud 3D	2022-09-14 10:40:52	Startup parameter	s Versions New project Delete		
Total items: 5						20 v / page		/ 1 page

 i Refreshing or closing this page will cancel all ongoing tasks and clear the upload history. Uploading (0) Uploaded (2) I ► Application creation:test.zip Completed 	Upload tas	ks		>
 ✓ Uploading (0) Uploaded (2) I ▶ Application creation:test.zip ✓ Completed 	i Ref all c hist	reshing or clo ongoing tasks ory.	sing this page will cancel and clear the upload	
Completed	Uploa Application	ading (0) n creation:test	Uploaded (2)	I.→
	🔗 Compl	eted		_

Cloud XR and cloud APK applications

CAR also supports high-precision content in various forms such as VR and AR as well as interaction with VR/AR glasses, mobile phones, tablets, PC, holographic devices, and other devices. This allows for scenarios such as cloud



VR-based multi-person co-training, online large-scale VR entertainment, VR live streaming, and cloud VR/AR exhibitions.

In addition to EXE applications, CAR also supports running APK applications in the cloud so as to enable playing download-free mobile games in advertising, webpages, and other scenarios or to reduce the application file size. **Note:**

Cloud XR and cloud APK are in beta test. For more information, please contact your Tencent Cloud sales rep.

Application Configuration

Last updated : 2024-01-26 12:00:38

In CAR, you can configure your own startup parameters for your applications. A newly created cloud application can run normally in the CAR environment only after you configure its startup parameters.

Directions

- 1. Enter the CAR console.
- 2. Click My Applications on the left sidebar, and click Application Configuration of the target application.

Cloud Application Rendering	My Applications					Beginner's guide Documentation 🖄 No task
B Overview	Create application					Separate keywords with 11°; press Enter to separate filter tags
S My Applications	Application ID/name	Status T	Update status T	Application type	Creation time \$	Operation
Control Center Trojects	app- Demo App	⊘ Normal	None	Cloud 3D	2022-09-14 11:38:48	Application Configuration Versions New project Delete
E: Concurrency packs	app-i	Normal	Ready for release	Cloud 3D	2022-09-20 10:38:36	Application Configuration Versions New project Delete
Scene Service	app-	Missing path for the main executable file	None	Cloud 3D	2022-09-20 10:42:56	Application Configuration Versions New project Delete
Jaivila	app-	Normal	None	Cloud 3D	2022-09-20 11:20:03	Application Configuration Versions New project Delete

3. Complete the required information:

	guration		
Application informat	on		
Application ID app			
Application name	stDemo)	
Max	16 characters. Chinese characters, letters, numbers, and hyphens (-) are allow	ved.	Colort or optics the correct colorting path of the main everytable
			To avoid errors which may cause the application to fail to start
Basic settings Examp	ie 🖸		properly, we recommend that you directly click "Browse" to get
Path of the main executa	le file * test_demo\test_demo.exe	Browse	startup path after the application is created.)
Process list - optional	test_demo.exe		
		Configure	the capture mode.
Advanced settings		lf you wan	nt the end user to see the full-screen effect, it is recommended that
. aranoou ootungo		11 4 4 4	
Application startup paran Application full screen Adaptive resolution settin	eter It necessary, you can specify the parameters passed in when the exe st . Display effect when opened locally Not-full screen Bordert Screen capture mode Capture the entire desktop	adjust the set the Scr ess windowed full screen () Capture a window	Paptication to bordertess fullscreen mode (according to step 1.1) reen Capture Mode to Capture the entire desktop.
Application startup paran Application full screen Adaptive resolution settin	eter If necessary, you can specify the parameters passed in when the exe al To Display effect when opened locally Not-full screen Border Screen capture mode Capture the entire desktop It is recommended to adjust the application to Borderless wind It is recommended to adjust the application to Borderless wind	adjust the set the Scr ess windowed full screen () Capture a window	e application to borderless fullscreen mode (according to step 1.1) reen Capture Mode to Capture the entire desktop.
Application startup paran Application full screen Adaptive resolution settin	eter If necessary, you can specify the parameters passed in when the exe at • Display effect when opened locally Not-full screen Borderf Screen capture mode • Capture the entire desktop • It is recommended to adjust the application to Borderfess winn uploaded), and select Capture the entire desktop screen capture	adjust the set the Scr ess windowed full screen () Capture a window	e application to bordertess fullscreen mode (according to step 1.1) reen Capture Mode to Capture the entire desktop.
Application startup paran Application full screen Adaptive resolution settin Value-added feature	It recessary, you can specify the parameters passed in when the exe st To Display effect when opened locally Not-full screen Border Screen capture mode Capture the entire desktop It is recommended to adjust the application to Borderless win uploaded), and select Capture the entire desktop screen capt	adjust the set the Scr ess windowed full screen () Capture a window	e application to border tess fullscreen mode (according to step 1.1) reen Capture Mode to Capture the entire desktop.
Application startup paran Application full screen Adaptive resolution settin Value-added feature	eter If necessary, you can specify the parameters passed in when the exe st	adjust the set the Scr ess windowed full screen () Capture a window	Paptication to border tess fullscreen mode (according to step 1.1) reen Capture Mode to Capture the entire desktop. Local display effect Local display effect Completed before the application is packaged and O Where to view log/archive Value-added features can be configure

Basic settings

Path of the main executable file

The path of the main executable file of the application is the full relative path of the exe file that launches the application. If your application has been created, you can simply click **Browse** to select and obtain the right path. **Do not select** the path of processes that are not required to start the application, such as

UnityCrashHandler64.exe .

📀 Tencent Cloud

For example, for the following application package:



The path should be configured as WindowsNoEditor\\demo.exe

Process list (optional)

We recommend you completely enter all processes to be run by the application, such as demo.exelWin64-Shipping.exe . This way, when a user exits, we will ensure that all filled processes are closed, thereby ensuring stability for the next user who enters. You can run the application on your local PC and open **Windows Task Manager** to check which processes are required.

Advanced settings

Application fullscreen and adaptive resolution setting

CAR provides the adaptive resolution feature which can make the application display full-screen, adapt to the resolution of end-user devices, and have no black borders on the screen.

[Recommend] If you have set the application to a borderless windowed fullscreen mode that can adapt the desktop resolution (have to be done before being uploaded to CAR) according to the User Guides, you can set the Screen Capture Mode to Capture the entire desktop .

If your application only has a not-fullscreen window mode and cannot be adjusted to borderless fullscreen mode, you can use the Capture a window mode. You need to fill in the correct Window title and Class name according to the instructions. If the window title isn't customized during development, the window title for `Demo.exe` will be `Demo`. If your application is built by Unreal Engine, enter `UnrealWindow` for the Class name.



Application startup parameters (optional)

Some applications require command-line (cmd) parameters to be passed in when used locally to achieve effects such as language switching and resolution adjustment. For this, you can fill in the application startup parameters.

Note:

It is recommended to establish communication between the client and cloud applications through a Data Channel, so that the cloud application can obtain the necessary information from the client.

Value-added features (optional)



CAR will automatically clean, reset, and reload the concurrency instance and the cloud application after a user disconnects to ensure data security and stability. Therefore, without configuring value-added features, the user operation logs and usage progress files of cloud applications will not be saved.

If you need to obtain the log files of a cloud application, you can configure the Save Application Log feature If you need to save the user usage progress of an application, you can configure the Save Application Archive feature

Using Window Capturing Mode

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CAR provides a way to capture the window of the cloud application. In this way, the end user will only see the application window and not the rest of the desktop, achieving a full-screen-like effect.

You need to provide the application class name and title (the title is the window title during application startup). If the window title isn't customized during development, the window title after `Demo.exe` starts will be `Demo`. If your application is a UE application, enter `UnrealWindow` for the **Class name**.

This document describes how to use WinSpy to capture the application class name and title for the startup parameter configuration.

Directions

- 1. Download WinSpy to capture the window attributes.
- 2. Unzip WinSpy, and open WinSpy32.exe or WinSpy64.exe based on your system type.

Constants	2022/0/22 10:57	
	2022/9/22 19.57	WinSpy —
Resources	2022/9/22 19:57	📃 🔚 Drag the Finder Tool over a window 🗌 Detect Hidden Win
WinSpy.ahk	2018/9/8 15:07	to select it, then release the mouse 🗌 Compact Mode
WinSpy.ini	2022/9/22 20:06	General Styles Details Messages Extra Windows Process
🔄 WinSpy32.exe	2018/9/8 18:22	General Styles Details Messages Extra Windows Process
💽 WinSpy64.exe	2018/9/8 18:22	Handle: Command
		Text: Set Text
		Class:
		ClassNN:
		Style:
		Extended:
		Position: Change
		Size:
		Cursor: Screen
		Find Tree Copy Screenst



3. Open the application to capture (such as Google Chrome), click and move the Finder Tool (shown in the red box) to the application window, and release it.

· · □ ×	🖾 WinSpy —
	Drag the Finder Tool over a window
$\leftarrow \rightarrow C$ in cloud.tencent.com/prod $E $ \Rightarrow \Box in the second	Gonoral Styles Datails Massages Fytra Windows Process
$\mathbf{O} = \mathbf{O}$	General Styles Details Wiessages Extra Windows Process
	Handle: Commands
	Text: Set Text
	Class:
	ClassNN:
	I
	Style:
	Extended:
	Position: Change
	Size
Cloud Application Rendering	Cursor: Screen
cloud Application Rendering (CAR) enables you to move your application to the cloud, where it can be rendered and then	Eind Tree Conv Screensho
streamed to users in real time. Users can access and use	w Ind Icc Copy Screensing

4. WinSpy captures the window attributes.

Title: Window title of your application (such as CAR - Google Chrome)

Class: Application class name (such as Chrome_WidgetWin_1)



5. Modify the startup parameter configuration according to the captured attributes.

	rmation	
Application ID	app-yioh6xwu	
Application name	test	${\boldsymbol{ \oslash}}$
	Max 16 characters. Chinese characters, letters, numbers, and hyphens (-) are	allowed.
Basic startup p	arameters	
Startup path •	Test\Chrome.exe	Browse
Processes (Chrome.exe	
Advanced start	up parameters () Enter the parameter to pass in when starting this app with a command	
Capture		
	Capture the desktop Capture a window	
Mode •		
Mode • O	CAR - Google Chrome	

Value-Added Features (Saving Application Logs and Archives)

Last updated : 2024-04-17 10:37:45

To ensure data security and application stability, the CAR concurrency automatically cleans, resets, and reloads the application after the user disconnects. This is done to ensure that the next user who connects will not access the data of the previous user. Therefore, if no value-added features are configured, the user's operation logs, usage progress, and other files of the cloud application will not be saved.

To query the log files of a cloud application, you can configure the Application Log Saving feature.

To save the user's application usage so they can continue next time they reconnect, you can configure the Application Archive Saving feature (in beta test).



Cloud Application Rendering	Application Configuration	Б
Uverview		
S My Applications	Application information	
Control Center	Application ID app-	
Projects	Application name TestDemo	
E: Concurrency packs	Max 16 characters. Chinese characters, letters, numbers, and hyphens (-) are allowed.	
Scene Service		
Stream Push	Basic settings Example (2	
Service	Path of the main executable file * test_demoltest_	
	Process list - optional test_demo.exe	
	Advanced settings	
	Application startup parameter	
	Application full screen Adaptive resolution satting • Display effect when opened locally Oto-full screen O Borderless windowed full screen ()	
	Screen capture mode Capture the entire desktop Capture a window	
	It is recommended to adjust the application to Borderless windowed full screen mode (need to be completed before the application is packaged and uploaded), and select Capture the entire desktop screen capture mode.	
	Value-added feature	Where to view log/archive fil
	Save Application Log	
	Can automatically upload specified files to Tencent Cloud Object Storage Can archive user operation progress, suitable for single-player game cloud	
	(COS), suitable for scenarios such as obtaining user operation logs archive and similar scenarios	
	This feature depends on Tencent Cloud COS product. After being configured correctly, it can automatically upload the contents of a specified folder (such as log files) when the user closes the application. This feature relies on Tencent Cloud COS product. Once configured correctly, the archive will be saved according to userid, and will be automatically downloaded or uploaded when a user uses or closes the application.	
	Save configuration Cancel	

Note:

Activate COS before using value-added features.

When you use value-added features, possible charges will be incurred by COS instead of CAR. For more information, see COS Billing Overview.

Saving Application Logs

With this feature, a specified folder (such as the Log folder) will be automatically uploaded to the COS bucket after a user disconnects from the application. The basic logic is as follows:

1. In the console, configure the relative path of the folder that needs to be uploaded. Example:

WindowsNoEditor\\saved.

Note:

Only folder paths in the application package are supported. To use a path outside the application package, such as the system disk path, contact Tencent Cloud's architect or your sales rep for assistance.

If you upgrade the application, ensure that the file paths used in the old and new applications are the same; otherwise, the system will be unable to locate the specified file, and the feature will no longer work.

2. When a user connects to the application, it should write log files to the application package directory and saves them locally on the concurrent instance.

3. After the user exits the application, the system will automatically search for the specified file based on the path configured in the console and upload it to the COS bucket.



Saving Application Archives (in Beta Test)

With this feature, a user's application usage will be archived and can be resumed the next time the user connects to the application. The basic logic is as follows:

1. In the console, configure the relative path of the archive folder. Example: WindowsNoEditor\\UserArchive. Note:

This feature is in beta test. To try it out, please contact your Tencent Cloud architect or sales rep.

Only folder paths in the application package are supported. To use a path outside the application package, such as the system disk path, contact us for assistance.

If you upgrade the application, ensure that the file paths used in the old and new applications are the same; otherwise, the system will be unable to locate the specified file, and the feature will no longer work.

2. When a user connects to the application, the system will automatically read previous archives from the COS bucket based on the UserId.

3. If the user has any archives existing, then before the application starts, the archive folder will be automatically downloaded to the relative path you configured in the console.

4. The data of all the operations the user performs on the application will be archived locally on the concurrent instance.

5. After the user exits the application, the system will automatically upload the archived data to the COS bucket.



How to View the Saved Logs or Archives?

Assume that you have an application with the ApplicationId "app-1234abcd"

The user's UserId is "user123"

The RequestId of the last session is "01fdc815-c4e7-4642-819e-a011856dfd5a1"

The timestamp of the last session is "1709284736"

Then, the storage path in COS should be:

Save Application Log: AppLogs/app-1234abcd/01fdc815-c4e7-4642-819e-a011856dfd5a1.zip

Save Application Archive **(in beta test)**: userData/app-1234abcd/user123-1709284736-tx

FAQs

What are UserId and RequestId?

UserId is the custom unique user identifier passed in to CAR, such as user123456 . A RequestId , such as 01fdc815-c4e7-4642-819e-a011856dfd5a1 , is returned when CAR requests a TencentCloud API.

How do I view the RequestId?

If you are using a test or quick launch link, you can open the debug panel in the toolbar displayed on the application's main page ($Ctrl+\sim$) and view the RequestId information at the bottom.

If you use Chrome DevTools, you can get the RequestId of CreateSession on the Network tab. If you have integrated to the CAR SDK, the returned values of the TencentCloud API include RequestId . We recommend you record it on the business backend.

Application Update and Version Management

Last updated : 2024-01-26 12:00:38

CAR offers version management capabilities. Under the same application ID, you can maintain up to **five** versions and perform operations such as new version upload and release as well as version rollback.

Application version Update

Note:

During application update, make sure that the application startup path is the same as that of the original application package; otherwise, you need to modify the startup parameter configuration. The URL must be a URL that can be accessed and trigger download directly. Download URLs of cloud disks or other URLs requiring verification are not supported.

1. Go to the CAR console.

2. Click **Application management** on the left sidebar and click **Versions** on the **Application management** page.

Application management	:					C	Jpload tasks in progress	Beginner
Create application						Separate keywords with "I"; pres	s Enter to separate filter	(
Application ID/name	Status T	Update status T	Application type	Creation time \$	Operation			
	Normal	None	Cloud 3D	2022-09-13 20:14:18	Startup parameters	Versions New project Delete		
	Normal	Ready for release	Cloud 3D	2022-09-13 20:15:08	Startup parameters	Versions New project Delete		
	 Startup parameters not set 	None	Cloud 3D	2022-09-13 20:15:22	Startup parameters	Versions New project Delete		
	Creating application 30%	Creating version	Cloud 3D	2022-09-13 20:21:41	Startup parameters	Versions New project Delete		
	Creating application 0%	Creating version	Cloud 3D	2022-09-14 10:40:52	Startup parameters	Versions New project Delete		
Total items: 5						20 💌 / page		/ 1 page

3. In the Manage application versions pop-up window, click Upload new version.

Upload new version	on 🛈			
/ersion ID/Name	Status	Size	Creation \$	Operation
	Creating	0.00KB	2022-09-09	
	(10%)	0.0010	17:10:17	

4. Select an upload method. You can select a file, drag a file, or enter a URL to upload a file.

Upload	×
Application ID/name	
Startup path	- Make sure this path is the same as the startup path of the application; otherwise, the application will fail to start after the new version is released.
Application type	Cloud 3D
Upload file	
	Click to select a file/Enter a download URL/Drag and drop
	Only ZIP and RAR files are supported
	Upload Cancel

5. After submission, the application version will be created immediately. You can view the upload progress in **Manage application versions**.

Upload new version	on (j			
ersion ID/Name	Status	Size	Creation \$	Operation
	Current	2958.28M	2022-09-14	
	version	В	20:47:33	
	Ready for	2958.28M	2022-09-15	Delete
	release	в	09:36:46	Release

6. After the creation, you can test the new version in the business environment based on the version ID. After the test is completed, click **Release**.

Application version Rollback

Note:

During version rollback, make sure that the startup paths of different versions are the same; otherwise, the application will be unavailable during version switch as the startup parameter configuration doesn't match the version startup path.

1. Go to the CAR console.

2. Click **Application management** on the left sidebar and click **Versions** on the **Application management** page.

Application management						C u	Jpload tasks in progress	Beginner
Create application						Separate keywords with " "; press	s Enter to separate filter	(
Application ID/name	Status T	Update status T	Application type	Creation time \$	Operation			
	🕢 Normal	None	Cloud 3D	2022-09-13 20:14:18	Startup parameters	Versions New project Delete		
	Normal	Ready for release	Cloud 3D	2022-09-13 20:15:08	Startup parameters	Versions New project Delete		
	 Startup parameters not set 	None	Cloud 3D	2022-09-13 20:15:22	Startup parameters	Versions New project Delete		
	Creating application 30%	Creating version	Cloud 3D	2022-09-13 20:21:41	Startup parameters	Versions New project Delete		
	Creating application 0%	Creating version	Cloud 3D	2022-09-14 10:40:52	Startup parameters	Versions New project Delete		
Total items: 5						20 - / page	₩ 4 1 /	1 page

3. In the **Manage application versions** pop-up window, select an earlier version and click **Revert to this version**.

Upload ne	w version			
Version ID/I	Name Status	Size	Creation	Operation
	Available	2958.28M	2022-09-14	Delete
	Available	В	20:47:33	Revert to this version
	Current	2958.28M	2022-09-15	
	version	В	09:36:46	

4. In the **Confirm revert** pop-up window, confirm that everything is correct and click **Revert**.

fter reverting, equested. Are	this version will b you sure you wan	e used by default when it to revert to this version	the application is 1?
Version ID/	Status	Size	Creation time
	Available	2958.28MB	2022-09-14 20:47:33

Project Management Creating a Project

Last updated : 2024-01-26 12:00:38

In CAR, concurrencies are scheduled for applications based on which project the application is associated with. After you upload an application, you need to associate it with a project. Then the application can use the concurrency packs (computing resources) that are bound to that project.

Directions

1. In the CAR console, click Projects on the left sidebar and click Create project.

Project manageme	nt					Beginne
Create project						Separate keywords with " "; press Enter to separate filter
Project ID/Name	Status	Application	Concurrency scale T	Usage	Creation time \$	Operation
	O Application launched		M - For rendering medium-sized applications	0/1	2022-09-14 19:40:13	Settings App versions Delete
	O Application launched		S - For rendering small applications	0/1	2022-09-14 20:13:20	Settings App versions Delete
	No concurrency allocated		L - For rendering large applications	0/0	2022-09-14 20:42:23	Settings App versions Delete
Total items: 3						20 💌 / page 🛛 k 🤜 1 🛛 / 1 page

2. On the **Create project** page, set the following configuration items and click **Create**.

Basic settings		There are two types of project: single-application and
Project name	test-0807	multi-application.
N	Aax 16 characters. Chinese characters, letters, numbers, and hyphens (-) are allowed.	 Single-application type: This project is associated with only one application, and the concurrency pack under
Project type	Single-application project Multi-application project The project is associated with only one application, and the bound concurrency packs are exclusively for that application. The pre-launch function can be enabled.	the project can only be used by that application. This ensures resource availability and enables pre-launch function to achieve instant application startup without loading. - Multi-application type: This is similar to a "resource
Application	test (app-tsf4hhe1) v	pool". The concurrency pack under the project can be shared by all applications.
Concurrency scale	S - For rendering small applications	
		The concurrency scale under a project must be consister
Advanced settings		You can create multiple projects for an application and
O Default Custo	m	effects of different concurrency scales. It is recommende
Frame rate	Dynamic frame rate (recommended)	to start testing from L scales to avoid problems such as
Bitrate range 🚯	3Mbps - 6Mbps	stattering caused og insuncient concurrency performan
Default resolution	1920 width x 1080 height	Advanced project settings: Projects allow customization of parameters such as
	You can also use setRemoteDesktopResolution \blacksquare to set the cloud resolution and enable adaptive resolution \blacksquare	frame rate, bit rate range, default cloud desktop
Startup parameter	None	resolution, application startup parameters, prelaunch feature, and so on. You can adjust them accordino to
App pre-launch (j)		your needs.
	Wait time for pre-launch 0 s (default)	
	To improve user experience, it is recommended to set an appropriate waiting time to skip the application loading process. This is necessary because cloud disk I0 speed is slower than local disk, causing slower application startup in the cloud. A recommended waiting time is 6 times the application opening time on	Liser & closes — Waition for Liser — Waition for amplication
	a local device. For instance, if the app takes 5 seconds to open locally, it is recommended to set the waiting time to be 30 seconds. Generally speaking, if the application takes 5 seconds to start locally, it is recommended to set the pre-launch time to 30 seconds.	User A is using the concurrency (around 1 min) User B is using the concurrency (around 1 min)
Walting time for reco	nnection 120 s (default)	Concurrency is released Concurrency is recovered = Calling DestroySession API to idle state
	A certain period of time is reserved for users to reconnect the application, in case they exit by mistake. You can also directly release the concurrency by calling the DestroySession API in waiting time for reconnection.	Note: Waiting for reconnection, automatic cleaning, and waiting for application prelaunch all prevent concurrency from being used by the next user. Therefore, setting a reasonable duration can help improve concurrency utilization.

Basic settings

Configuration Items		Description
Basic settings	Project name	A custom project name. It can contain up to 16 letters, digits, or hyphens (-).
	Project type	Single-application: The project is associated with only one application, and all concurrency packs bound to the project are dedicated to that one application. The prelaunch feature can be enabled.

	Multi-application: Concurrency packs that are bound to the project are shared by all applications within the project, but the prelaunch feature cannot be enabled. For more information, see Project types.
Application	Select an application to be associated with the project.
Concurrency Scale	Select the concurrency scale for the project.

Project types

CAR supports two types of projects:

Single-application project: The project is associated with only one application, and all concurrency packs bound to the project are dedicated to that one application. This guarantees the availability of resources, and you can enable the prelaunch feature to quickly load the application when a user connects to it.

Multi-application project: Like a resource pool, concurrency packs bound to the project can be shared by all applications. When an end user makes a request, idle concurrencies can be scheduled from the pool in real time. For more information, see How to Implement Concurrency Sharing Through Multi-Application Project.





When you call the ApplyConcurrent API to request a concurrency, you need to pass in **both the ProjectId** and **ApplicationId** parameters.

to reduce costs.

concurrencies from the pool as needed when there are user access requests.

Note:

To maintain a balance between user experience and cost optimization, you can create a single-application project and a multi-application project and use them together:

When there are user requests, you can first schedule the concurrencies in the single-application project. If prelaunch is enabled for the project, users can quickly use the application without waiting for it to load.

When available concurrencies in the single-application project become insufficient (ApplyConcurrent() returns a prompt indicating that **there are no idle concurrencies**), you can then schedule concurrencies in the multi-application project.

For more information, see Starting an Application and Queue Feature.

Advanced settings

Projects allow customization of parameters such as frame rate, bitrate range, default cloud desktop resolution, application startup parameters, pre-launch, wait time for reconnection, etc. You can adjust these parameters according to your needs.

You can create different projects to set different parameters for the same application. For example, you can create two projects for the same application, one project with S-type concurrency, 30FPS, and 3-6Mbps bitrate range, and the other project with L-type concurrency, 60FPS, and 5-8Mbps bitrate range. This way, you can provide the first project to ordinary users and the second project to VIP users.

Configuratio	n Items	Description
Advanced settings	Frame rate	Dynamic frame rate (recommended): adjusts the actual encoding frame rate based (actual rendering frame rate of the cloud application. Specified frame rate: supports options of 30FPS and 60FPS. If you have other requi please contact your Tencent Cloud sales rep for assistance.
	Bitrate range	The bitrate range is related to the concurrency scale, and the default values are as for S - For rendering small applications: 3-6Mbps M - For rendering medium-sized applications: 4-8Mbps L - For rendering large applications: 5-8Mbps XL - For rendering extra large applications: 7-10Mbps It is not supported to exceed the maximum bit rate value specified by the concurrence you have special requirements, please contact your Tencent Cloud sales rep for ass
	Default resolution	That is the default desktop resolution of the cloud concurrency instance, which can to 3000 x 3000. If you have higher resolution requirements, please contact your Ten

	Cloud sales rep for a devices, please refe	assistance. If you need to adapt to the resolution of different term or to the adaptive resolution documentation.
Startup parameter	The startup paramet configured in the app configuration will be	ters configured in the project will override the startup parameters plication. If not filled in, the startup parameters filled in the applic used by default.
App prelaunch	This feature allows y (without any addition achieving instant ap applications and is r	you to open the application in advance in the cloud concurrency nal fees) and complete the loading process before the user uses plication startup. This feature is only available for single-applica not supported for multi-application type projects.
Wait time for prelaunch	Cloud disks have slower IO speed compared to local disks, causing slower startup of applications in concurrencies. To ensure a smoother user experience, it's recommended to enable the prelaunch function and set an appropriate wait time to allow prelaunch to complete before connecting the next user. For instance, if the app takes 5 seconds to open locally, it is recommended to set the waiting time to 30 seconds.	User A closes the page User A is using the concurrency Concurrency is released - Calling DestroySession AP User B is using the concurrency Concurrency is released - Calling DestroySession AP User B is using the concurrency is released - Concurrency is recovered - Concurrency is recovered - Concurrency is recovered - Concurrency to ide state - Concurrency -

Waiting time	To prevent	
for	users from	
reconnection	accidentally	
	exiting the	
	application, a	
	certain duration	
	is reserved for	
	users to re-	
	enter the	
	application.	
	You can also	
	maintain user	
	connection	
	status based	
	on heartbeats	
	in the backend,	
	and release the	
	concurrency	
	directly by	
	calling the	
	DestroySession	
	API (without	
	waiting for	
	reconnection).	

Default Test Project and Free Concurrency Pack for New Users

Last updated : 2024-01-26 12:00:38

CAR offers new users a 30-day free concurrency pack of two L concurrencies.

The free concurrency pack offered to new users is bound to the default test project, which you can use to **test the uploaded application** for free.

Note:

Please choose an availability zone closer to the testers to avoid lagging problems caused by the distance. For instance, If you are in Japan or Seoul, you will need to select the Tokyo region. The 30-day free concurrency pack only support a few available zones for now, please refer to Billing for all availability zones supported by CAR.

The default test project and the free concurrency pack offered to new users are intended for testing only. **They can be** used by each user for two minutes each time and cannot be scheduled through the SDK or used in a production environment.

30-day free concu	rency		Experience cloud rendering
Concurrency scale	L - For rendering large applications		
Availability zone	Tokyo		
Max concurrency	2 concurrent users	÷	
se limits	Two minutes each tim <mark>e</mark>		
alid till	2023-05-26 17:11:34		marra
The concurrent	cy pack has been bound to a default test project,		A demo application has been provided for you and works as above (you can also

Directions

1. Click **Test now** in the pop-up window or go to the **Projects** page, find the default test project, and click **Test** under the **Operation** column.

Cap Test Project O Normal Multi-application L - For rendering large applications (i)	2023-04-26 16:20:58	Not supported for this project type	Settings Test Duick launch
--	------------------------	-------------------------------------	----------------------------

2. Select the demo application or your uploaded application to generate a test link and password. If you select your uploaded application, you will first need to correctly configure the application startup parameters.



Note:

If you need to test multiple applications, you can click **Test** multiple times and select a different application each time to generate a new password. Make sure to save the generated information locally.

A test password is valid for seven days. Each time you click **Test**, a new password will be generated, but the previously generated passwords are still valid if they haven't expired.

While a test password is still valid, you don't need to generate a new one to perform operations such as purchasing a concurrency pack and updating the application version.



3. Start a test as instructed in Test.



Effect of the demo application

Common issues encountered during testing:

A message is displayed indicating that there are no idle concurrencies:

Check whether there are any idle concurrencies under the project in the console. When a user exits the application, it takes about one minute for the concurrency to be automatically cleared. Only then will the concurrency become idle so that a new user can connect to it.

The application cannot start:

We recommend that you first check whether the application startup parameters are correctly configured. If the application uses window capturing mode, check whether the window title and class name are correctly entered. If they are configured incorrectly, a black screen will occur.

The application starts slowly:

Generally, the prelaunch feature is used to load an application in advance so the application will already be running when a user connects to it. Because multi-application projects do not support prelaunch, the applications under those projects take a longer time to start.

For a single-application project, you can enable prelaunch so that the application will be loaded in seconds when the user connects to it.

When a user exits the application, the concurrency they were connected to will be repossessed, cleared, and reset, and when the concurrency becomes idle, the application will be prelaunched again. If the next user enters the

application just when the concurrency becomes idle, the application may have not been completely prelaunched.

The delay data is abnormal: We recommend that you first check for local network jitter. You can try accessing over a 4G/5G network.

The application is slow: This may be because your application has high requirements for computing power but the concurrency scale is low (such as S). We recommend you try a higher concurrency scale.

If your problem still persists, contact us for assistance. For more FAQs, see Cloud Application FAQs.

Test

Last updated : 2024-01-26 12:00:38

The test feature lets you experience the basic effects of operating your application in the cloud and helps you select the most appropriate concurrency specification for your application. To meet your special business requirements and guarantee the optimal user experience, you also need to set up your own client program and backend service and connect to CAR's backend APIs and SDKs. You can use the <u>demo</u> to quickly launch your business.

Directions

Prerequisites

You must perform the following steps before you can start a test:

- 1. Upload an application and correctly configure the application startup parameters.
- 2. Create a project, associate it with the uploaded application, and specify the concurrency specification.
- 3. Purchase a concurrency pack suitable for the project and bind it to the project.

After completing the above steps, you can go to the **Projects** page n the CAR console to test the application.

Step 1. Click Test to generate a test link and password

After you click Test, a test link and password will be generated automatically.

Note:

A password is valid for seven days. Each time you click **Test**, a new password will be generated, but the previously generated passwords will still be valid if they haven't expired.

While a password is still valid, you don't need to generate a new one to perform operations such as purchasing a concurrency pack and updating the application version.

Cloud Application Rendering	cap racing-game	concurrency allocated	Single-application project	app racing-game	M - For rendering medium-sized applications	0/0	2022-09-21 15:08:59	Enabled	Settings Test
E Overview	car Windows-1018	No concurrency allocated	Single-application project	app Windows	M - For rendering medium-sized applications	0/0	2022-10-18 14:09:09	Enabled	Settings Test
 Projects E: Concurrency packs 	car. test123-1026	O Application	Single-application project	app test123	S - For rendering small applications	0/1	2022-10-26 14:31:06	Enabled	Settings Test
packs	cap 2022010-1219	No concurrency allocated	Single-application project	app- 20220106333333 33	S - For rendering small applications	0/0	2022-12-19 17:43:24	Enabled	Settings Test

Select an application for tes	st	
test123 (app		•
Application:test123(app	-	
Test link:		
https:/	index.html?	
type=application&env=intl		
Test code:		
Test code:	ided. The test code is valid till 2023-03-03 20:41:49 .	

Step 2. Test the effect

Open the test link and enter the password to access the cloud application. This lets you experience the effect of accessing and operating the application online. You can test different concurrency specifications to find the most appropriate one for your application.

Open the debug panel (Ctrl+ \sim) in the toolbar on the Test page. You should pay attention to the following: **FPS (frame rate):** In normal cases, the frame rate should be kept above 30. If you find that the frame rate suddenly drops when you enter certain scenes or perform certain operations, it may be due to a sudden increase in GPU computing power consumption that exceeds the capacity of the current concurrency specification and results in frame drop. In this case, we recommend you try using a higher concurrency specification.

RTT (round-trip time): When the RTT value exceeds 100 ms, it may result in noticeable latency. We recommend you first check for local network jitter. You can try accessing over a 4G/5G network. Additionally, if the concurrency region is too far from your physical location, it can also result in high RTT.

Region: The region where the concurrency is located. CAR can automatically schedule the nearest available concurrency based on the IP address of the end user. If you find that the concurrency region is too far away, it may be due to insufficient number of available concurrencies that are closer to the end user. You can contact us for assistance.

InstanceType (concurrency specification): CAR supports four concurrency specifications: S, M, L, and XL, which are suitable for rendering small, medium-sized, large, and extra large applications. For details, see the official billing documentation. If your application requires high computing power but is using a lower concurrency specification, it may lead to high CPU/GPU usage, causing lags or forced quits.

CpuUsage: If you notice a drop in FPS data, check if there is a CPU usage of 90-100%. If so, the current concurrency specification is insufficient. Try using a higher concurrency specification.

GpuUsage: Pay attention to the value of L (load). If you notice a drop in FPS data, check if there is an L value of 90-100%. If so, the current concurrency specification is insufficient. Try using a higher concurrency specification.

RequestId: If you have any questions, try to persist the connection and contact us with the RequestId. You can obtain the RequestId in the following methods:

If you use Chrome DevTools, you can obtain the RequestId of CreateSession on the Network tab. If you have integrated to the CAR SDK, the returned values of the TencentCloud API include RequestId . We recommend you record it on the business backend.

Common issues encountered during testing:

A message is displayed indicating that there are no available concurrencies:

Check whether there are any available concurrencies under the project in the console. When a user exits the application, it takes about one minute for the concurrency to be automatically cleared. Only then will the concurrency become available so that a new user can connect to it.

The application cannot start or occurs a black screen:

We recommend you first check whether the path of the main executable file is correctly configured.

If the application uses window capturing mode, check whether the window title and class name are correctly entered. If they are configured incorrectly, a black screen will occur.

The application starts slowly:

Generally, the prelaunch feature is used to load an application in advance so the application will already be running when a user connects to it. Because multi-application projects do not support prelaunch, the applications under those projects take a longer time to start.

For a single-application project, you can enable prelaunch so that the application will be loaded in seconds when the user connects to it.

When a user exits the application, the concurrency they were connected to will be repossessed, cleared, and reset. When the concurrency becomes idle, the application will be prelaunched again. If the next user enters the application as soon as the concurrency becomes available, the application may have not been completely prelaunched.

The latency is high or the RTT value is abnormal: We recommend you first check for local network jitter. You can try accessing over a 4G/5G network.

The application is slow: This may be because your application has high requirements for the computing power but the concurrency specification is low (such as S). We recommend you try using a higher concurrency specification.

A message is displayed indicating that the connection is interrupted: If you are using a company Wi-Fi network, we recommend you check whether the network meets the CAR service environment, i.e., if all UDP ports are open. You can also check for local network jitter antry accessing over a 4G/5G network.

If your problem still persists, contact us for assistance. For more FAQs, see Cloud Application FAQs.

Quick Launch

Last updated : 2024-01-26 12:00:38

After completing a test, you can launch a web page to access your cloud application using a preset page configuration with **no coding required**. To do so, click **Quick launch** in the **Operation** column to configure the front-end UI and generate a page link.





Directions

Step 1: Select the application you want to launch

A **single-application project** is only associated with one application, so there is no need to select the specific application to launch.

A **multi-application project** is associated with multiple applications, so you need to select the specific application you want to launch. If you want to launch multiple applications, you can select the first application to generate a link, and then select another application to generate another link. For more information, see Description of project types and How to implement concurrency sharing.

Step 2: Select a preset or custom configuration

The standard preset configuration allows you to launch your page quickly. You can modify the loading page logo, main page toolbar, built-in control mode, and virtual joystick for mobile devices.

Preset configuration: Three preset page configurations are available.

Custom Configuration: Use a custom configuration if you want your page to display a custom logo, display only the left joystick, or if you have other custom requirements.

If you have other special requirements, such as using a custom domain name, custom front-end display, or want to implement the Queue feature, you can integrate the SDK to develop your own front-end client and backend service. For a demo and detailed guides, see User guide.

Preset configuration

	Description
General configuration for test projects	Displays frame rate and latency information, virtual buttons, debug panel, and other tools. Provided to help developers conveniently test the cloud application.
General configuration for mouse control applications	The Tencent Cloud logo and toolbar are hidden. Keyboard and mouse events are sent to the cloud application , and left/right virtual joysticks are enabled for users on mobile devices. This is suitable for applications that only natively support keyboard and mouse controls. For users on mobile devices, a virtual joystick mapped to the WASD and Space keys needs to be displayed to allow the user to move around and jump.
General configuration for multi-touch applications	The Tencent Cloud logo and toolbar are hidden. Touch events are sent to the cloud application , and mobile devices do not use the CAR virtual joystick plugin. Note: This is only suitable for applications that natively support touch controls. The application must be capable of managing touch window messages in Windows, and it has been locally tested with a physical Windows touch screen device to ensure successful operation. It is NOT advisable to rely on mouse-to-touch conversion within UE or Unity engines for testing touch message handling, as touch behavior on touch screen devices may behave unpredictably.

If the application only natively supports mouse and keyboard commands, this configuration will not work for implementing touch controls. You can integrate the SDK and use the onTouchEvent callback to obtain the corresponding touch point coordinates and send keyboard/mouse commands as touch commands.

Custom configuration

	Description
Loading page logo	You can use a custom logo by entering the URL for the logo image, (for example, https://qcloudimg.tencent-cloud.cn/raw/5e1434b0dd32f26d9f064853aef02a33.png). The recommended logo dimensions are 90px (height) x 360px (width) .
Toolbar displayed on the main page	 Mobile tools include frame rate and latency information, full screen switch (only supports Android; iOS does not support full screen due to system limitations), rotate, mic switch, virtual joystick switch, virtual keyboard switch, debug panel, application restart, and application close. PC tools include frame rate and latency information, full screen switch, debug panel, application restart, and application close.
Application built-in control modes	 Keyboard + mouse: Select if the application natively accepts keyboard and mouse commands to control the application. This typically requires the CAR virtual joystick plugin in order to accommodate users on mobile devices. Touch: Select if the application natively accepts touch commands for control and does not require the CAR virtual joystick plugin. The application must be capable of managing touch window messages in Windows, and it has been locally tested with a physical Windows touch screen device to ensure successful operation. It is NOT advisable to rely on mouse-to-touch conversion within UE or Unity engines for testing touch message handling, as touch behavior on touch screen devices may behave unpredictably. How to implement multi-touch if the application only supports mouse and keyboard commands? You need to integrate the SDK and use the onTouchEvent callback to obtain the corresponding touch point coordinates and send keyboard/mouse commands as touch commands.
Mobile virtual joystick	Left joystick: Sends keyboard WASD commands to the cloud application, usually used to control left/right/up/down movements. Right joystick: Sends keyboard Space key commands to the cloud application, usually used to jump.



Advanced settings

	Description
Landscape mode (default for mobile devices)	When enabled, the cloud rendered image will be displayed in landscape mode by default on mobile devices. This is typically enabled for applications and games whose display width is greater than the display height.
Mic enabled by default	When enabled, sound from the end user's microphone will be sent to the cloud application by default (requires end-user device support, such as Chrome requiring permission to use a microphone). This is typically enabled for applications and games that feature voice communication, such as group conferences and interactive live streaming applications.

Stream Push Service Pushing Streams to CSS

Last updated : 2024-01-26 12:00:38

When running cloud applications for on-screen commenting interactive games, virtual meetings, and virtual exhibitions, it is often necessary to push a video stream to a live room at the same time so that more audience members in the live room can view the application. To do this, CAR provides the stream push service, which you can use with the following methods:

Push a cloud video stream to CSS by binding a push domain.

Push a cloud video stream to a third-party address according to the destination URL you enter. For more information, see Pushing Streams to Third-Party Addresses.

First, you need to **bind a push domain** so that you can call the stream push API on the running concurrency to push cloud video streams to CSS in real time.

Bind a push domain

1. Go to the CAR console.

2. Click **Stream Push Service** on the left sidebar and select the Push to CSS page.

3. In the pop-up window, click **Confirm**. This operation authorizes the calling of CSS APIs, allowing you to use CSS and other related features.

Service Authorization							
The features of other Tencent Cloud services will be used when you perform operations related to this service. You need to create a Service-Linked Role for Cloud Streaming Services and authorize it to call the APIs of other Tencent Cloud services.							
Role Name CAR_QCSLinkedRoleInVirtuallive (Service-Linked Role)							
Description The current role is the CAR service linked role, which will access your other service resources within the scope of the permissions of the associated policy.							
(Preset) Permissions Policy QcloudAccessForCARLinkedRoleInVirtuallive ①							
Grant Cancel							

4. Click **Bind a domain**, select a domain, and then click **Bind**. CSS comes with a default push domain. To add a new domain, go to the domain management page.

Cloud Application						
Rendering					2	Bind a push domain
Overview	Danmaku-Game i Real-time streaming o	n live room	NORTHER VIEW CONTRACTOR CONT			
℅ My Applications		Bind a domain		×		Integrate Cloud Application Rendering SDK
Management Center						
Projects		 Only a push domain that he bound. To add a new domain 	as been added in Tencent Cloud CSS can be			
E: Concurrency	Virtual human live	bound. To add a new doma	an, go to <u>Domains</u>		4	Call the stream push interface
packs		Push domain		Q		
Scene Service		Domain	Status			
Service		O .push.tlivecloud.c	om Enabled			
			Bind Cancel			
	Bind a domain					

5. The push domain you have bound can be viewed in the console. Currently, only one push domain can be bound at a time. You can click **Change domain** to bind a different push domain.

Cloud Application Rendering	Stream the screen of your cloud application	to the live room	Expand introduction Document reference 🖄
E Overview	Change domain Unbind		
My Applications	Domain	Status	Operation
Management Center Projects	.push.tlivecloud.com	Enabled	Unbind
E: Concurrency packs			
Scene Service			
I Stream Push Service			

After a push domain is successfully bound, you can call the stream push API on the running concurrency to push cloud video streams in real time to CSS.

Unbind a push domain

You can unbind a push domain in the following steps.

- 1. Go to the CAR console.
- 2. Click Stream Push Service on the left sidebar and enter the Push to CSS page.

3. Click **Unbind**, and then confirm your operation in the pop-up window. After a push domain is unbound, the stream push API cannot be used for pushing video streams. If any push tasks are still running when the push domain is unbound, they will keep running until the concurrency is disconnected.

Cloud Application Rendering	Stream the screen of your cloud application to the live room		Expand introduction Document refer
Overview	Change domain Unbind		
My Applications	Domain	Status	Operation
Management Center	push.tlivecloud.com	Enabled	Unbind
E: Concurrency packs			
Scene Service			
Stream Push Service			

Pushing Streams to Third-Party Addresses

Last updated : 2024-01-26 12:00:38

When running cloud applications for on-screen commenting interactive games, virtual meetings, and virtual exhibitions, it is often necessary to push a video stream to a live room at the same time so that more audience members in the live room can view the application. To do this, CAR provides the stream push service, which you can use with the following methods:

Push a cloud video stream to CSS by binding a push domain. For more information, see Pushing Streams to CSS.
 Push a cloud video stream to a third-party address according to the destination URL you enter.

After you activate pushing streams to third-party addresses, call the stream push API on the running concurrency to push cloud video streams to third-party addresses you specify in real time.

Directions

1. First, activate the service on the **Push to third-party address** page.



Note:

Using this feature will incur stream push bandwidth fees. For details, see Billing Overview.



After pushing streams to third-party addresses is activated, you can call the stream push API on the running concurrency to push cloud video streams to third-party addresses you specify in real time.
 After using the stream push service, you can check the usage in the console.



Note:

The usage statistics may have a delay of 5-20 minutes.

Concurrency Management Purchasing a Concurrency Pack

Last updated : 2024-01-26 12:00:38

In CAR, users access your application by connecting to concurrencies. Each concurrency supports access by only one user at a time. If you want your business to sustain 100 concurrent online users, you need to purchase 100 concurrencies.

To purchase and manage concurrencies for your application, you need to purchase a concurrency pack. Concurrency packs are configured with resources and concurrencies, and can then allocated to your projects.

Directions

1. Go to the CAR console.

2. Click **Concurrency management** on the left sidebar and click **Buy concurrency pack** on the **Concurrency management** page.

Concurrency management							Beginne
Buy concurrency pack Allocate	Unbind Rener	v Terminate/Return	Auto-renew			Separate keywords with	" "; press Enter to separate filter
Pack ID/Name	Status	Concurrency scale T	Region T	Usage	Project	Billing mode	Operation
	🔗 Available	S - For rendering small applications		0/1		Daily Expires on 2022-09-17 14:42:57	Allocate More -
	⊘ Available	M - For rendering medium- sized applications		0/1		Monthly Auto-renewal disabled Expires on 2022-10-14 19:32:18	Allocate More 🔻
	O Available	M - For rendering medium- sized applications		0/1		Daily Expires on 2022-09-17 19:42:52	Allocate More -
	⊘ Available	L - For rendering large applications		0/1	-	Monthly Auto-renewal enabled Expires on 2022-11-14 20:38:54	Allocate More -
Total items: 4						20 v	/ page 🛛 4 1 / 1 page

3. On the **purchase page**, set the following configuration items:

Cloud	Application Rendering
Application typ	Desktop
Project	Unallocated \checkmark ϕ
Billing mode	Monthly Daily
Region	Japan Korea Singapore
Resources	Concurrency scale Specification
	S – For rendering small applications At least 4–core vCPU, 8 GB memory, 2 TF SP/30T INT GPU
	M – For rendering medium- sized applications At least 4–core vCPU, 16 GB memory, 4 TF SP/30T INT GPU
	O L - For rendering large applications At least 10-core vCPU, 32 GB memory, 8.1 TF SP/30T INT GPU
Max concurrency	- 1 + concurrencies Max concurrency is the maximum number of users that can access your application at the same time. For example, if you purchase 100 concurrencies, up to 100 users can access your application simultane Suppose each user uses your application for 10 minutes. 120 users can access your application per day for each concurrency purchased.
Duration	1 month(s) 2 month(s) 3 month(s) 4 month(s) 5 month(s) 6 month(s) 7 month(s) 8 month(s) 9 month(s) 10 month(s) 11 month(s) One year
Auto-renewal	Renew a pack automatically if your account has sufficient balance
Pack name	Randomly generated if not specifie Only Chinese characters, letters, numbers, and hyphens (-) are allowed
	Cost Buy not

subscriptions. For more information, see Billing Description.

Region	As cross-region CAR concurrency scheduling severely affects the operation experience, you need to select regions based where your business and users are located. Each concurrency can be used by only one user at a time. You need to select the number of concurrencies and the region based on the expected number of concurrent users in each region.
Concurrency scale	When you purchase a CAR concurrency pack, select a concurrency scale based on the concurrency scale that you specified for your project. If a project is selected, that project's concurrency scale will be selected.
Quantity	Select the number of concurrencies you want to purchase. You can purchase up to 100 concurrencies at a time.
Pack duration	Select the duration for the concurrency pack based on your business needs.
Auto-renew	If you enable Auto-renew , the concurrency pack will be automatically renewed monthly upon expiration if your Tencent Cloud account balance is sufficient. Only monthly subscription supports automatic renewal .
Pack name	Name the concurrency pack. If the pack contains multiple concurrencies, a number will be added to the end of the name of each CAR concurrency for identification.

4. Click **Buy Now** and confirm the information on the order details page.

Disconnect from user

Last updated : 2025-06-12 17:31:43

In **Concurrency packs**, you can use the **Disconnect from user** feature to "remove" **all users** who are currently occupying the concurrency pack. For example, if 20 concurrencies in a concurrency pack is being used, this number will change to zero after the concurrency pack is disconnected from the users.

How do I fix the issue of abnormal concurrency usage?

If you find that a user is occupying a concurrency for a long time in a test, you can use the disconnection feature to remove the user.

During technical integration, the SDK callback can be used to check whether a user is inactive for a long time. You can customize the idleThreshold parameter to set the threshold for user inactivity, so that the DestroySession API can be called to release the concurrency after the callback is received.

Do not use **Disconnected** and **DestroySession** at the same time, Just choose one of them. Otherwise, the concurrency cleanup time will be extended.

If the frontend user directly closes the page to close the connection to CAR, as DestroySession is not called, the CAR concurrency will wait 90 seconds for the user to reconnect. We recommend you maintain a heartbeat connection between the business backend and the client to check the user status and close the connection. For more information, see Concurrency Scheduling.

Directions

- 1. Go to the CAR console.
- 2. Click **Concurrency management** on the left sidebar and select the target concurrency pack.
- 3. Select Disconnect from user and click Confirm.

Multiplayer Interaction

Last updated : 2024-04-03 19:31:24

In the multiplayer interaction mode, the room is created by a CAR player (i.e., the room owner), and then other players (i.e., interactive audience) can join the same room via the room owner's UserId. In the same room, all users can see the same cloud-rendered scene through a cloud rendering connection. To use the multiplayer interaction feature, it must be actively enabled in the console, and then it can be called via API.

1. The multiplayer interactive feature requires activation via a whitelist. Before utilizing this function, please ensure that you have contacted the staff to enable whitelist access.

2. On the multiplayer interaction feature page in the console, confirm to enable the service.

Click **Enabled** to pop up the service confirmation dialog.

d Application lering	Multiplayer interaction			
verview	Conditions for using cloud rendering music	ultiplayer interactive feature: The application itself should support mul	iple character control, such as two-player co-op, multipla	yer party games, etc. Understanding <u>Best practices</u> 🛽
gement Center	1	2	3	
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ervice		end and back-end deployment.	interaction Best practices 2, it is	
am Push vice			characters to join the same	
eraction	Usage Today Yesterday Last 7 days Multiplayer interactive bandwidth (Mbpa)	Last 30 days 2024-03-14 00:00 ~ 2024-03-14 08	52 Troject All projects	Application All applications

Click **Confirm** to complete the enabling of the multiplayer interaction service.

Note:

Using this feature will incur multiplayer interaction bandwidth fees. For details, please see billing overview.

3. After enabling the feature, refer to the document how to implement multiplayer interaction to use the multiplayer interaction feature.

4. Once a multiplayer interaction connection has occurred, it can viewed in the **Usage Statistics** from the console page.

Note:

There will be a 5 to 20 minutes delay in accessing statistics.

Session Status

Last updated : 2024-06-18 15:10:57

During access testing and online operations, if you encounter lag, application crashes, black screens, or blurred images, it is necessary to locate the issue by combining multiple data metrics. The console offers the session status query feature, which allows searching for session information within 14 days by entering the UserId or RequestId.

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ATT (Round-trip latency from SDK to cloud, ms) If the HTT value exceeds 120 ms, it indicates that the local network environment of the end user is unstable during this period, which may lead to legs. ID	uestid Enter the Requestid 5 minutes 30 minutes 1Hour display ♥ RTT (ms) GPU Usage (%) mouny	3 hours 12 hours 24 hours CPU Usage (%) Memory (%)	Uterid Enter the Userid 2024-06-13 17:32 - 2024-06-13 17:47 Frame Rate (PPS) Utdeo Upstream Bitrate (r	Cops) Video Downstream Bitrate (Kops) Audio	u Upstream Bitrate (Kops) 🗌 Audio Downstream Bitrat	e (Kbps) Push Streaming Bitrate (Kbps)	
	(Round-trip latency from SDK to cloud, the RTT value exceeds 120 ms, it indicates that th	ms) e local network environment of the end u	ser is unstable during this period, which may lead to la	gs.			
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Data Metrics and Interpretations

RTT (ms):

Network latency metric Round-Trip Time (RTT) is an important parameter for measuring network performance. It represents the total time required for a data packet to travel from the sender to the receiver and back. If this metric is high or shows fluctuations, it indicates poor network conditions on the user's side.

GPU Usage (%):

If the GPU usage rate remains high during this connection, issues such as application lag, low rendering frame rates, and occasional application crashes may occur. It is recommended to switch to a concurrent model with a higher graphics card configuration or optimize the application to reduce GPU performance overhead.

CPU Usage (%):

If the CPU usage rate remains high during this connection, issues such as application lag, low rendering frame rates, and occasional application crashes may occur. It is recommended to switch to a concurrent model with more CPU cores or optimize the application to reduce CPU performance overhead.

Memory (%):

If the memory usage rate remains high during this connection, issues such as application lag and application crashes may occur. It is recommended to check for situations such as memory overflow and stack due to untimely task cleanup, and consider switching to a concurrent model with higher memory.

Frame Rate (FPS):

If the capture frame rate is too low, it may cause lag and other issues. This indicates that the current concurrency specification is insufficient to handle the load. It is recommended to use a higher specification of concurrency. When the capture frame rate is below 30 FPS, to stabilize the frame rate, Cloud Application Rendering (CAR) will insert duplicate frames to fill the encoding frame rate up to 30 FPS (without causing additional delay). A low frame rate is usually the result of other causes, and needs to be analyzed in conjunction with the CPU/GPU/memory usage rate at the same time, as well as application runtime logs.

Video Uplink Bitrate (Kbps)

Displays the bitrate for video uplink transmission. The CAR client SDK can collect data from the local camera and package it as input for the virtual camera on a cloud machine. If the local SDK device has the camera feature enabled, this data can be queried.

Video Downlink Bitrate (Kbps)

Displays the bitrate for cloud image transmission. If the bitrate is unstable or too low, it can cause the user to see a blurred image. This may be related to the user's local network conditions or the bitrate range settings of the project.

Audio Uplink Bitrate (Kbps)

Displays the bitrate for audio uplink transmission. The CAR client SDK can collect data from the local microphone and package it as input for the virtual microphone on a cloud machine. If the local SDK device has the microphone feature enabled, this data can be queried.

Audio Downlink Bitrate (Kbps)

Displays the bitrate for cloud audio transmission. This data metric is less likely to be affected by network conditions or performance.

Common Issues and Self-help Troubleshooting Methods

Users report severe lag during use. How should this be handled?

It is recommended to obtain the RequestId of this session from the backend data, and query the **RTT, GPU usage rate, CPU usage rate, memory, and frame rate** for that time period on the session status query page. Possible reasons for the lag include:

1. If the RTT is high, it can be determined that the user's poor network conditions are causing the screen to lag, along with a degree of packet loss leading to blurred images and dropped frames.

2. If the FPS is low, it can be determined that the issue is caused by the cloud machine's rendering results. You can check the GPU/CPU/memory usage rate to see whether there is a performance bottleneck, and it could also be due to the application itself.

Users report the screen goes black. How should this be handled?

First, based on the RequestId and the connection results of this session, determine whether a connection to CAR has been established. Sometimes, a black screen occurs because preliminary steps were not executed successfully, and the process has not progressed to connecting to the cloud display. If CAR has been connected, query the **RTT, GPU usage rate, CPU usage rate, memory, frame rate, and downlink bitrate** for that time period on the session status query page. Possible reasons for black screens include:

1. If the frame rate and bitrate are both 0, it can be determined that CAR has disconnected from the client. It is necessary to check the logs to see whether the session was terminated, and whether there was a reconnection logic in the code if the network instability led to disconnection.

2. If the frame rate and bitrate are not 0, it indicates that CAR is still connected. A black screen might be due to the application loading/starting, or because the application has frozen or crashed. The analysis should be done in conjunction with the **GPU usage rate, CPU usage rate, and memory** data, as well as application logs. Refer to Value-Added Features (Saving Application Logs and Archives) for methods to obtain cloud logs.

Users report blurred application images. How should this be handled?

First, obtain the RequestId of this session from the backend data, and query the **RTT**, frame rate, and video **downlink bitrate** for that time period on the session status query page. Possible reasons for blurred images include: 1. If the RTT is high and the downlink bitrate is unstable, it can be determined that the user's poor network conditions are causing the screen to lag, along with a degree of packet loss leading to blurred images and dropped frames. 2. If the downlink bitrate remains at a very low level, it is necessary to check the bitrate range settings in the project configuration. If the bitrate is set within a very low range (for example, below 3 Mbps), blurred images and mosaic effects are likely to occur in 3D scenes and complex images.