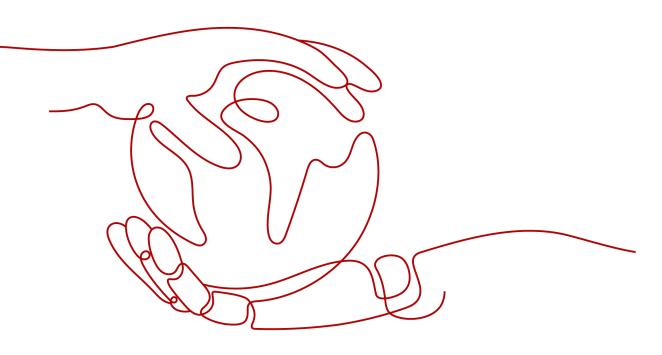
MetaStudio

Getting Started

 Issue
 01

 Date
 2024-09-27





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Prerequisites

Registration

- 1. **Register** a Huawei Cloud account.
- 2. Complete **real-name authentication**.
- 3. **Top up** your account.
- 4. Log in to the **MetaStudio console** and subscribe to MetaStudio as prompted.

Recommended Browsers

Access the MetaStudio console from the Chrome browser.

2 Image Modeling

MetaStudio allows customizing your virtual avatar.

Prerequisites

Before creating a virtual avatar customization task, you need to prepare the following items by referring to **Procedure**:

Video of 5–6 minutes recorded in a green-screen studio
 Note: If you choose **Retain** for **Video Background** when creating a virtual avatar image, you need to prepare a video of location shooting.

Procedure

- Step 1 Log in to the MetaStudio console.
- Step 2 Click Create under Image modeling.

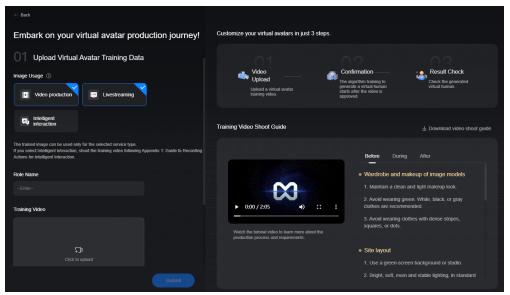
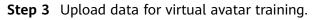


Figure 2-1 Customizing your virtual avatar image



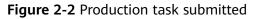
For details, see **Table 2-1**.

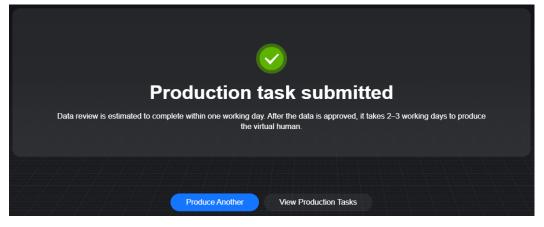
Table 2-1 GUI operations

Area	Paramet er	Description
Upload Virtual Avatar	Role Name	Enter the role name of the virtual avatar. Example: Sara
Training Data	Training Video	Upload a qualified human-recorded video from the local PC. Supported video: MP4/MOV, 4K, 5–6 minutes, ≥ 1080p, 16:9 (landscape) or 9:16 (portrait, recommended)
	Video Backgrou nd	If you select Remove , you can change the background when creating a virtual avatar video.

Step 4 Click Submit.

After the data is uploaded, the message **Production task submitted** is displayed, as shown in **Figure 2-2**.





Step 5 You can click **View Production Tasks** to view the virtual avatar customization task list.

Figure 2-3 Task list

←Overview										
Virtual Avatar	r s Void	e Modeling	Video Pro	duction						
Select a status.										
No.	Thumbnail	Batch Name	Resolution	Task Name	Edition	Task ID	Status		Operation	
1			1080P		Standard	d0060211b14b420 🕞	• Reviewing — • Wa	ting for algorithm training $\ ullet$	Q View Details	i Delete

Step 6 Click **View Details** in the row of the task. The **Customization Task Details** page is displayed, as shown in **Figure 2-4**.

View the review progress of the virtual avatar customization task. The current status is **Reviewing**. After the virtual avatar customization task is submitted, it will be reviewed within one working day.



< Back Customization Task Details				
				🖉 Edit
<u>e</u>	Tas	sk Status	Reviewing — Waiting for algorithm training — To be reviewed by user	
	Тад			
			5/58 70 @	
			32fe a7 @	
	05:00 ●) 坐 🕻	bmitted	2024-09-23 19:56:43	
		ition	Standard	

Step 7 After the task is approved, the task status changes to **Algorithm training ongoing**.

After the virtual avatar customization task is approved, algorithm training will be completed within three days. Then a virtual avatar image will be generated.

I	rigure z-	• 5 VI	ludi dv	dldi	LUSLOITIIZO		dSKS			
	← Overview									
	Virtual Avatars	a Void	ce Modeling	Video F	roduction					
			Select a resolution.		Start Date — End Date				C	
	No.	Thumbnail	Batch Name	Resolutio	n Task Name	Edition	Task ID	Status		Operation
	NO.	Inumbhail	balch Name	Resolutio	n Task Name	Eduon	Idsk ID	Sialus		Орегалоп
		•		1080P		Standar	d d00602f1bf4b420	🕘 😔 Reviewed -	— • Algorithm training ongoing	● T⊢ Q. View [

Figure 2-5 Virtual avatar customization tasks

Step 8 After the training is completed, the task status changes to **Algorithm training completed**, as shown in **Figure 2-6**.

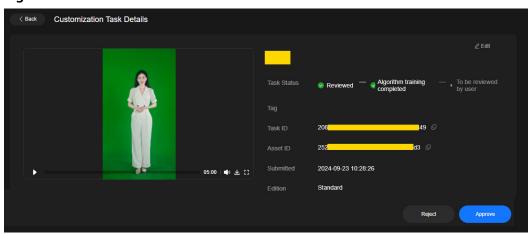


Figure 2-6 Virtual avatar customization tasks

Step 9 If the trained virtual avatar image meets the requirements, click **Approve** in the lower right corner. In the dialog box displayed, click **OK**. The virtual avatar image has been generated.

----End

3 Voice Modeling

MetaStudio allows customizing virtual avatar voices.

Prerequisites

Before creating a voice modeling task, you need to prepare the following items by referring to **Procedure**:

Record a WAV human audio file of 100 phrases (with a pause of 2–3 seconds between phrases). Script Examples (Advanced Edition) is recommended.

Procedure

- **Step 1** Log in to the **MetaStudio console**.
- Step 2 Click Create under Voice modeling.

\leftarrow Back						📰 Task Center
Embark on your custom voice p	production journ	ey!				
Huawei Models Third-party Models						
Voice modeling (advanced edition)		Recommended				
Mobile phone recording Upload a 100-phrase audio		aining times:				
package (15 min) Reviewed and produced within 1-3 working days	Custom O					
		Ci	ustomize your voice in just 4 ste	eps:		
Voice Settings						
			Recording Upload	🚊 Manual Review	Q Voice Training	(Detaining Models
Voice Gender			Uploading a Recording	Check the audio	Training duration varies	The model can be applied to
O Male O Female			Recording	audio	by package.	video production and
Input Language						
O Chinese O English						
Voice Tag						
News Marketing						
Produce Voice						
Script Upload						
Voice modeling (advanced edition) qu	ota needed: 1					

Figure 3-1 Customizing a voice

Step 3 Under the **Huawei Models** tab, configure voice modeling parameters.

For details, see **Table 3-1**.

Table 3-1 GUI operations

Parameter	Description
Voice modeling	If you select Voice modeling (advanced edition) , record a WAV audio file of 100 phrases as a whole, with a pause of 2–3 seconds between phrases. The audio duration ranges from 10–30 minutes (recommended: 15 minutes).
Voice Settings	Enter a voice name. Example: emotion_joyful_healing
Voice Gender	Gender of the voice. Example: Female
lnput Language	Language of the voice. Example: Chinese
Voice Tag	 Tag of the voice. Select a tag based on the selected script example. Options: Marketing News
Produce Voice	If you select Script Upload , upload a WAV audio recording without being compressed or containing TXT files.

Step 4 Click Submit.

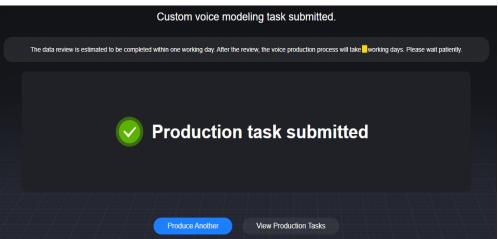
The **Information** dialog box is displayed, notifying you of the remaining voice modeling quota and indicating that one resource will be consumed this time.

Step 5 After confirming the information, click **Submit**.

After the voice modeling task is submitted, the message **Production task submitted** is displayed, as shown in **Figure 3-2**.

After the voice modeling task is submitted, the task review will take about one day. After the task is approved, you can start voice modeling.



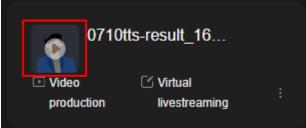


Step 6 You can click **View Production Tasks** to view the review progress of the voice modeling task.

When the status changes to **Reviewed**, algorithm training is automatically started. If there are multiple algorithm training tasks, queuing and delay may occur.

- **Step 7** After the training is complete, choose **My Creations** in the navigation pane.
- **Step 8** Select the **Voices** tab, find the generated voice, and click the avatar in the voice card to preview the voice.





----End

4 Video Production

MetaStudio allows producing virtual avatar videos.

Procedure

- **Step 1** Log in to the **MetaStudio console**.
- **Step 2** Choose **Workbench** in the left navigation pane. Click **Create** under **Video production**.

The Video Production page is displayed, as shown in Figure 4-1.

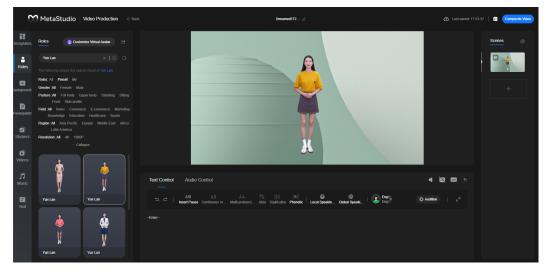


Figure 4-1 Video production

- Step 3 On the left of the page, set elements such as role, background, sticker, and video.For details, see Operations of Video Materials.
- Step 4 Create an audio file.

Select **Text Control**. Enter text in the text box to generate an audio file, as shown in **Figure 4-2**.

Example: Today is September 26, Tuesday. The weather is agreeable. Welcome all of you. The site is well decorated with various types of plants and flowers, and is spacious and bright for all of you to talk with each other comfortably.

Figure 4-2 Text control

Text Control	Audio Co	ntrol					۹ 🕅 😐
A/B Insert Pause	<u>A B</u> Continuous re		ॐ8 2‰ Alias Digit/Letter		© Global Speaki	NIM-VoiceClo English	• Audition
Today is Tuesday, S veryone to commun			Everyone is welcome	e. We have carefully arranged	the scene, the indoor di	splay of a variety of plants and flov	wers, the venue is spacious and bright enough for e
veryone to commun	icate and activities	illuoois.					

Step 5 After the audio file is created, you can click **I** to adjust the audio volume.

After the preceding operations are complete, the video content of the first scene has been created.

Step 6 If you need to create more scenes, click the **+** icon under the **Scenes** tab to add a scene. The scene creation process is the same.



Figure 4-3 Scenes

Step 7 After all scenes are set, click **Composite Video** in the upper right corner of the page. The **Compositing Settings** dialog box is displayed.

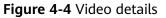
Configure the following parameters:

- **Resolution**: Select a video resolution.
- Exported File Name: Enter the name of the file to export.
- **Image Enhancement**: (Optional) After this function is enabled, the video definition is improved but more time is needed for video compositing.
- **Step 8** Click **OK**. The **Video Production Task Center** dialog box is displayed.

You can check the progress of the video compositing task.

Step 9 When the task status becomes **Composited**, click on the right of **Composited**. The video details page is displayed, as shown in **Figure 4-4**.

Click **Preview** to watch the composited video. During the preview, you can play the video in full screen or download the video.



My Assets / Videos details				Back	Deactivate
Preview Videos					
<u>گ</u>	Asset Title Videos Overvier	aaa ["]			
y v	Keyword (
	Publishe	d 2024-07-16 17:59:04			
Preview Download	Update	d 2024-07-16 17:59:43			
	Asset I	D f70	bff		
	Application Typ	e 👒 Material video			
		00:15	Layout	Portrait	
	Video Resolution	1080 × 1920	Video Encoding Format	h264	
	Video Bitrate	6787 kbps	Frame Rate	25/1 fps	
	Audio Sampling Rate	16 KHz	Audio Encoding Format	aac	
	Audio Bitrate	82 kbps			

----End

5 Livestreaming

MetaStudio allows creating a live room with a virtual avatar.

Procedure:

- Adding a Product
- Adding an Interaction Rule Library
- Creating a Live Room
- Viewing a Livestreaming Task

Precautions

Access the MetaStudio console from the Chrome browser.

Adding a Product

In the **Products** area of the **Virtual Avatar Livestreaming** page, you can add products. Products are automatically displayed as materials for livestreaming in the **Products** area of the live room.

- Step 1 Log in to the MetaStudio console.
- **Step 2** Choose **Workbench** in the left navigation pane. Click **Create** under **Livestreaming**.
- Step 3 On the page displayed, click **Products**, as shown in **Figure 5-1**.

Figure 5-1 Products

MM	letaStudio Virtual Avatar Liv	estreaming ↔	Back				
	Livestre	ams (Interactions	Products	E Livestrea	ming Tasks	
	+ Create Start Date — End Date 🖽	Q Enter a keyword.					
	Thumbn Product Name	Category	Description	Material Qu	Modified	Operation	
				}			
				ilable.			

Step 4 Click **Create**. The **Create Product** page is displayed, as shown in **Figure 5-2**.

 Table 5-1 describes the required parameters.

Figure 5-2 Creating a product

← Products / Create Product							
	* Product Name Description						
Ai	Category	CulturalBrigade	Ecommerce	Foodie Knowledge	Technology	y BeaulyMakeup + Add	
	* Material	Sticker	Video	Text	Audio		
		€ ,					
				Create			

Table 5-1	Parameters	for	creating	а	product
-----------	------------	-----	----------	---	---------

Parameter	Description	
Product Name	Product name.	
Description	Product description.	
Category	Product category. The selected category will become the product tag, which facilitates product search. You can select more than one category or add new categories.	

Parameter	Description
Material	Materials integrated into a product.
	Options:
	• Sticker: Select a local image.
	• Video: Select a local video file.
	• Text : Enter the text.
	Audio: Select a local audio file.

Step 5 Click Create. The message Created successfully is displayed.

The newly created product is displayed in the product list on the **Products** page.

You can perform the following operations on a product:

- Click **View** in the **Operation** column of a product. On the **Product Details** page displayed, click **Edit** to edit the product information.
- Click **Edit** in the **Operation** column of a product. On the page displayed, edit the product information and click **Save**.
- Click **Delete** in the **Operation** column of a product to delete the product.
- ----End

Adding an Interaction Rule Library

Under the **Interactions** tab of the **Virtual Avatar Livestreaming** page, you can add an interaction rule library and interaction rules. The added interaction rule library can be directly imported to and used in the live room.

- Step 1 Log in to the MetaStudio console.
- **Step 2** Choose **Workbench** in the left navigation pane. Click **Create** under **Livestreaming**.
- **Step 3** On the page displayed, click **Interactions**, as shown in **Figure 5-3**.

MetaStudio Virtual Av	atar Livestreaming ←				
	Livestreams	Interactions	Products	E Livestreaming Task	s
Interaction Rule Libraries	Batch Manage	+ Add Type 🗸 🗸			
	Rule Name	Туре	Triggering Conditions	Content	Operation
			No data available.		
+ Add					

Figure 5-3 Interactions

Step 4 In the **Interaction Rule Libraries** area on the left, click **Add** in the lower part. A horizontal line will be displayed, as shown in **Figure 5-4**.

Enter an interaction rule library name.

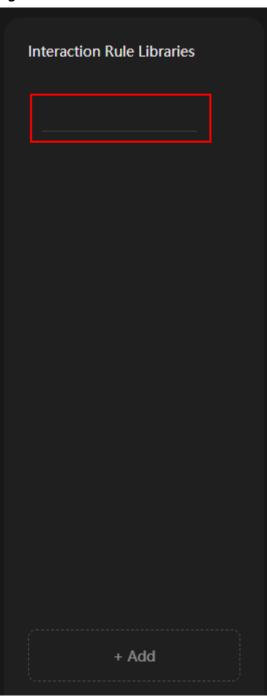
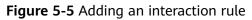


Figure 5-4 Interaction rule libraries

Step 5 Select an interaction rule library on the left and click **Add** on the right. The **Add Interaction Rule** dialog box is displayed, as shown in **Figure 5-5**.

You can add an interaction rule to the interaction rule library. See Table 5-2.



Add Interac	tion Rule
Туре	On-screen Comments V
Interaction Name (Optional)	
Triggering Mode	Enter trigger keywords and separate them with vertical bars ().
Reply Mode	Streamer V Reply Text V
	Enter up to five replies.
Additional Material (Optional)	+ Image/Video 0/1
	Save Cancel

Table 5-2 Parameters for adding an interaction rule

Parameter	Description	
Туре	Interaction type. Select On-screen Comments .	
Interaction Name (Optional)	Interaction name. Example: Welcome to the live room.	
Triggering Mode	Enter trigger keywords as required.	
Reply Mode	Select Text for Reply and enter the text. When the triggering condition is met, the virtual avatar reads the text.	
Additional Material (Optional)	Upload an image or video from the local PC. When a reply related to the uploaded material is read in the live room, the image or video uploaded here will be displayed in the live video.	
	You do not need to configure this parameter.	

Step 6 Click **Save**. An interaction rule has been added.

You can add more interaction rules to the interaction rule library or add more interaction rule libraries as needed.

----End

Creating a Live Room

- **Step 1** Log in to the **MetaStudio console**.
- **Step 2** Choose **Workbench** in the left navigation pane. Click **Create** under **Livestreaming**.

The **Virtual Avatar Livestreaming** home page is displayed, as shown in **Figure 5-6**.



MetaStudio	Virtual Avatar Livestreaming - Back			
My Live Rooms	Livestreams —	Interactions	Products	Livestreaming Tasks
+ Create a live room				

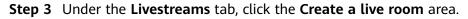


Figure 5-7 shows the page details.

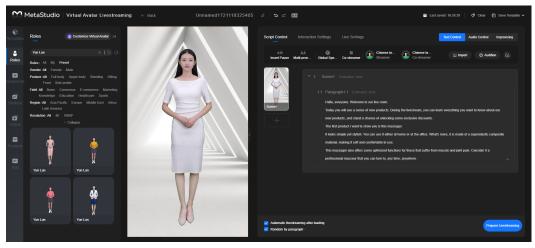


Figure 5-7 Creating a live room

Step 4 In the live video preview window, set the role, background, sticker, and video.

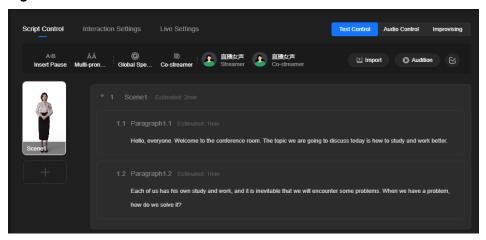
For details, see **Operations of Video Materials**.

Products added in **Adding a Product** are automatically displayed in the **Products** area and can be directly used.

Step 5 After the live video is created, you need to create a script.

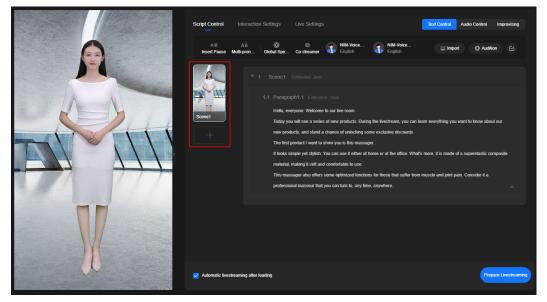
You can use the preset script, as shown in **Figure 5-8**. You can also customize the script and click to add a paragraph.

Figure 5-8 Text control



Step 6 If you need to create multiple scenes, click the + icon under **Scene 1** on the right of the livestream preview window to add a scene. Then set the layout and script of the new scene based on the previous scene.

Figure 5-9 Live room page



Step 7 After setting the image layout and script of all scenes, click the **Interaction Settings** tab, as shown in **Figure 5-10**.

Figure 5-10 Interaction settings

Script Control Interaction Settings Live Settings		
On-screen Comments Joining Live Rooms Likes Gifts	⑦	Live Assistant
E Import + Add + Add General Reply ③		
A _		
No interaction rules set yet.		
Add Rule		

- **Step 8** Click **Import**. The **Import Interactions** dialog box is displayed. Select one or more interaction rule libraries and interaction rules.
- Step 9 Click OK.

The interaction rule list in the interaction rule library has been imported.

Step 10 Click the **Live Settings** tab, as shown in **Figure 5-11**.

See Table 5-3.

Script Control	Interaction Settings Live Settings
	Playback Startup
Playback Startup	Playback Startup Mode (Either)
Output	Mode 1 Window capture (default) Live Streaming Guidance
More	Mode 2 Ingest URLEnter-
	Stream Key Enter only if the livestreaming platform provides one.
	Output
	Livestreaming Image HD ~
	Playback Times 💿 – 1 + 🔿 Infinite loop
	Default Full screen: The captured image is larger and needs to be rotated in the livestreaming partner (recommended).
	More

Figure 5-11 My videos

Table 5-3 Live settings

Area	Parameter	Description
Playback Startup	Playback Startup Mode (Either)	Select a livestream startup mode as needed and perform operations as prompted.
Output	Livestreamin g Image	 Select the definition of the livestreaming image. Options: Smooth HD UHD Default value: HD
Playback Times		Set the number of times that a livestream should be played in a cyclical manner, or select Infinite loop . By default, the livestream is played once.

Area	Parameter	Description	
	Live Window	Size of the live window. The window can be adjusted to vertical orientation.	
		Options:	
		• Portrait	
		• Full screen (recommended): The captured frame is larger and needs to be rotated in the third-party live studio.	
		The default value is Portrait .	
More	Event Callback Address	Fields of scene and paragraph events can be returned during livestreaming. This paramete applicable to API calling or secondary development.	
	Live Room ID	You do not need to set it. It is automatically displayed after the current live room is saved.	

- **Step 11** After the preceding operations are complete, click \square in the upper right corner to save the streaming content.
- **Step 12** Click **Prepare Livestreaming** in the lower right corner of the page. The **Warning** dialog box is displayed, as shown in **Figure 5-12**.

You need to check the warning items one by one to optimize the livestreaming content.

A Warning Refer to the following content for optimization	on:	×
Total Script Duration Total playback duration in the script list Not satisfied/≥ 1 hour	Number of Scripts Number of scripts in the script list Not satisfied/>= 60 scripts	Interaction Rules Interaction rules replied by the streamer Not satisfied/> 10 rules
Shuffle The playlist will be reshuffled once each round of playback is complete. Satisfied/Recommended: Enable	Streamer Rotation The streamer image will change once the scene is changed. Not satisfied/Recommended: Enable	Duplicate Image Material Change the background and image. Add multiple scenes for each round of livestreaming.
	Skip to Stream Back to Edit	

Figure 5-12 Warning

- **Step 13** You can start livestreaming after the risks are eliminated, or select **Skip to Stream**.
- **Step 14** After the livestream is started, the livestream startup progress is displayed in the livestream preview window.

Figure 5-13 shows an ongoing livestream. **Table 5-4** describes the operations in the lower right corner of the page.

Figure 5-13 Ongoing livestream	Fiaure	5-13	Onaoina	livestream
--------------------------------	--------	------	---------	------------

Script Control	Interaction Settings	Live Settings		
Chinese bi Streamer	Chinese br			
Scenet	1.1 Parag Hello, Today produ The fir it look materi This n	ts, and stand a chance of unlocking some e st product I want to show you is this massag s simple yet stylish. You can use it eilher at h al, making it soft and comfortable to use.		superelastic composite
60 00:00:20		er what you want to say and is Enter to send it.	🖗 🔹 Real Person Takeover	II Pause 🔽 Stop

Table 5-4 About the GUI

GUI Element	Description
00:01:20	Livestreaming timing. For example, 00:01:20 indicates that the livestream has lasted one minute and 20 seconds.
Strmm =	Switches the voice of reading interactive content. The streamer's voice is used by default. You can switch to the co-streamer's voice.
Quick	Click this icon to select and send the preset interactive content for the streamer to read.
Entering interactive content and pressing Enter to send the content	After the interactive content is entered and sent, the streamer or co-streamer reads the newly inserted content. After reading the newly inserted content, the streamer or co-streamer continues reading the original content.

GUI Element	Description			
Real Person Takeover	Click Real Person Takeover . In this case, the virtual streamer stops voicing and only acts as programmed, and a real person voices for the virtual streamer.			
	After the real person stops speaking, click Cancel Real Person Takeover to let the virtual streamer continue reading the original content.			
Pause	Click Pause to pause the livestream.			
	Click Continue to resume the livestream.			
Stop	Click Stop to stop the livestream.			

----End

Viewing a Livestreaming Task

The live rooms that you created are displayed in the list on the **Livestreaming Tasks** tab of the **Virtual Avatar Livestreaming** page. You can access a live room, modify the livestreaming content, and restart the livestreaming.

- Step 1 Log in to the MetaStudio console.
- **Step 2** Choose **Workbench** in the left navigation pane. Click **Create** under **Livestreaming**.
- Step 3 Choose the Livestreaming Tasks tab, as shown in Figure 5-14.

The list of all livestreaming tasks you created is displayed. You can click **View Details** on the right of a livestreaming task to go to the live room, modify the content in the live room, or restart livestreaming.

Fiaure	5-14	Livestrear	nina	tasks
inguic		LIVESCICUL	i ili ig	casits

		E Lives	streams	Interactions	Products	6	Livestreaming Tas	iks		
+ Create All statuses • Start										
Task ID	Uvestream Name	Thumbnail	Created	Started	Ended	Status			Operation	
548fcc9c1b4c48959a3f39292286	17127375		2024/04/11 09:25:12	2024/04/11 09:25:23	2024/04/11 09:27:27	• Ended			View Details	
adeffaa8f7964c159e77daee75b2	17127375		2024/04/10 17:44:29	2024/04/10 17:44:29	2024/04/10 17:46:33	• Ended			Q View Details	
074f31dd0d56469fbb7f2b9fa85	17127375	Y	2024/04/10 17:43:30	2024/04/10 17:43:41	2024/04/10 17:44:25	• Ended			Q View Details) Expor
9de436e43e094e3b936802d868	17127375	Supervice	2024/04/10 16:30:03	2024/04/10 16:31:23	2024/04/10 16:33:30	• Ended			Q View Details	
17471b379c35440aa7d147b73ff	17127375	J	2024/04/10 16:29:42			• Failed	20010037	Live task has been ex	View Details	💭 Expor
f8bd8addc5bd4c2ea64b337d2e	17127375		2024/04/10 16:28:16	2024/04/10 16:29:36	2024/04/10 16:31:54	• Ended			Q View Details	
5f17280022eb4ed388458aaa06d	17127375		2024/04/10 16:26:59	2024/04/10 16:28:19	2024/04/10 16:30:40	• Ended			View Details	
Total Records: 3475							10) • (1 2	3 4 5	- 348 >

----End