

**MetaStudio**

# Getting Started

**Issue** 01  
**Date** 2024-09-27



**Copyright © Huawei Cloud Computing Technologies Co., Ltd. 2024. All rights reserved.**

No part of this document may be reproduced or transmitted in any form or by any means without prior written consent of Huawei Cloud Computing Technologies Co., Ltd.

## **Trademarks and Permissions**



HUAWEI and other Huawei trademarks are the property of Huawei Technologies Co., Ltd.

All other trademarks and trade names mentioned in this document are the property of their respective holders.

## **Notice**

The purchased products, services and features are stipulated by the contract made between Huawei Cloud and the customer. All or part of the products, services and features described in this document may not be within the purchase scope or the usage scope. Unless otherwise specified in the contract, all statements, information, and recommendations in this document are provided "AS IS" without warranties, guarantees or representations of any kind, either express or implied.

The information in this document is subject to change without notice. Every effort has been made in the preparation of this document to ensure accuracy of the contents, but all statements, information, and recommendations in this document do not constitute a warranty of any kind, express or implied.

## **Huawei Cloud Computing Technologies Co., Ltd.**

Address: Huawei Cloud Data Center Jiaoxinggong Road  
Qianzhong Avenue  
Gui'an New District  
Gui Zhou 550029  
People's Republic of China

Website: <https://www.huaweicloud.com/intl/en-us/>

---

# Contents

---

<b>1 Prerequisites.....</b>	<b>1</b>
<b>2 Image Modeling.....</b>	<b>2</b>
<b>3 Voice Modeling.....</b>	<b>6</b>
<b>4 Video Production.....</b>	<b>9</b>
<b>5 Livestreaming.....</b>	<b>12</b>

# 1 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

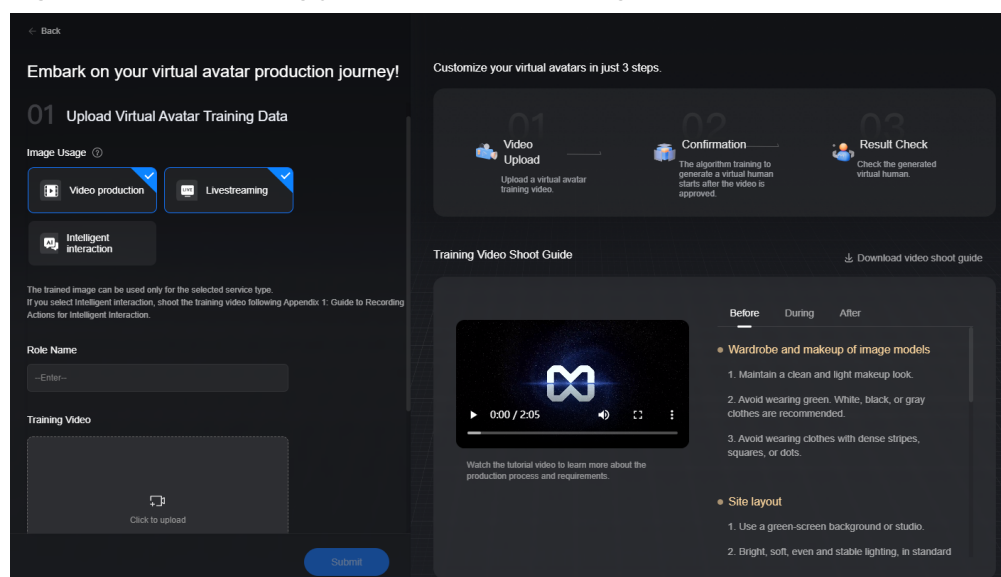
Note: If you choose **Retain** for **Video Background** when creating a virtual avatar image, you need to prepare a video of location shooting.

## Procedure

**Step 1** Log in to the [MetaStudio console](#).

**Step 2** Click **Create** under **Image modeling**.

**Figure 2-1** Customizing your virtual avatar image



**Step 3** Upload data for virtual avatar training.

For details, see [Table 2-1](#).

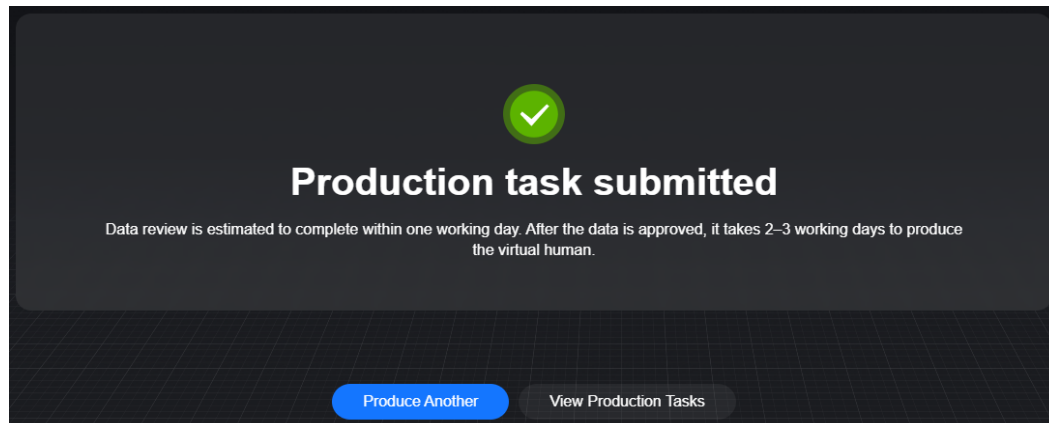
**Table 2-1** GUI operations

Area	Parameter	Description
Upload Virtual Avatar Training Data	Role Name	Enter the role name of the virtual avatar. Example: Sara
	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 Background	If you select <b>Remove</b> , you can change the background when creating a virtual avatar video.

**Step 4** Click **Submit**.

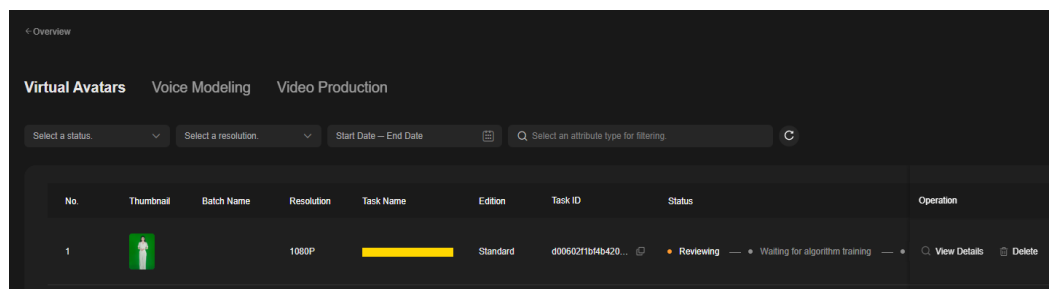
After the data is uploaded, the message **Production task submitted** is displayed, as shown in [Figure 2-2](#).

**Figure 2-2** Production task submitted



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

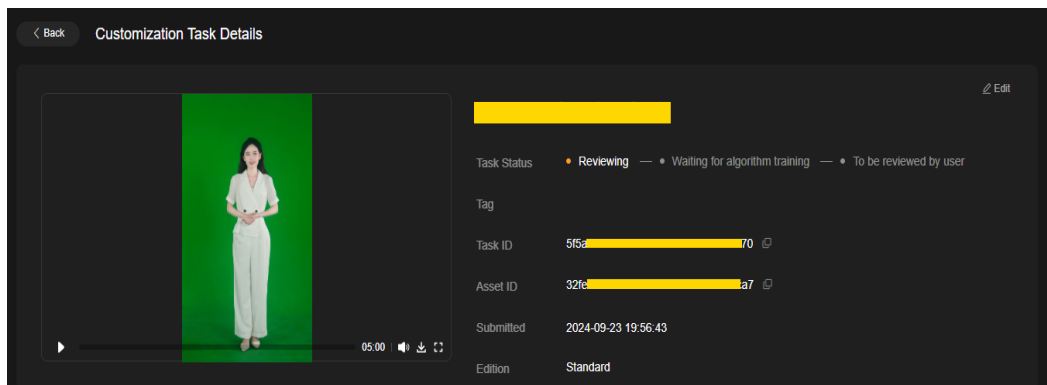
**Figure 2-3** Task list



**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.

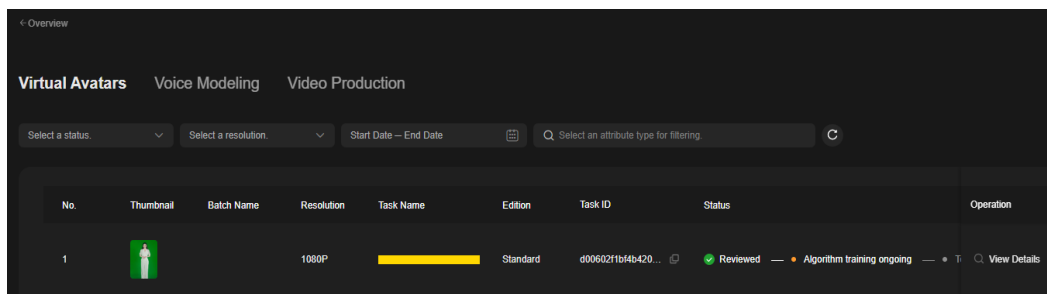
**Figure 2-4** Customization task details



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

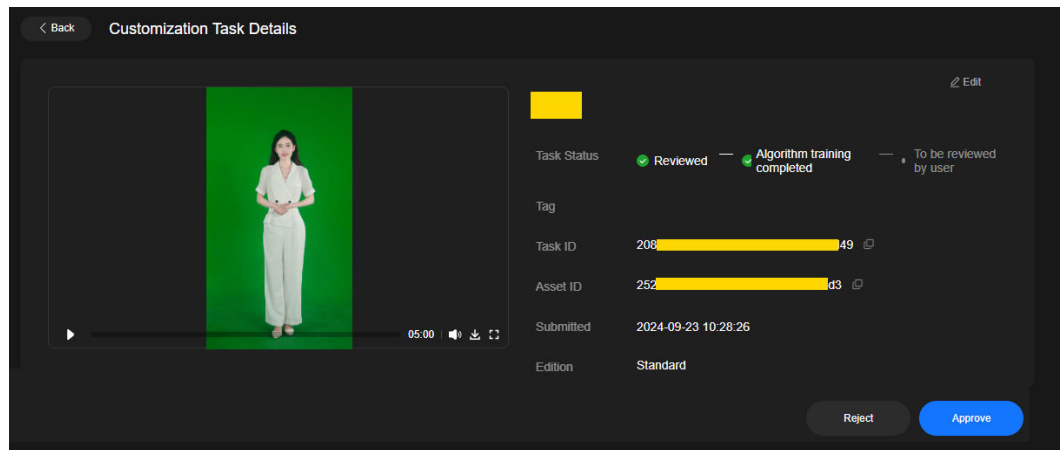
After the virtual avatar customization task is approved, algorithm training will be completed within three days. Then a virtual avatar image will be generated.

**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](#):

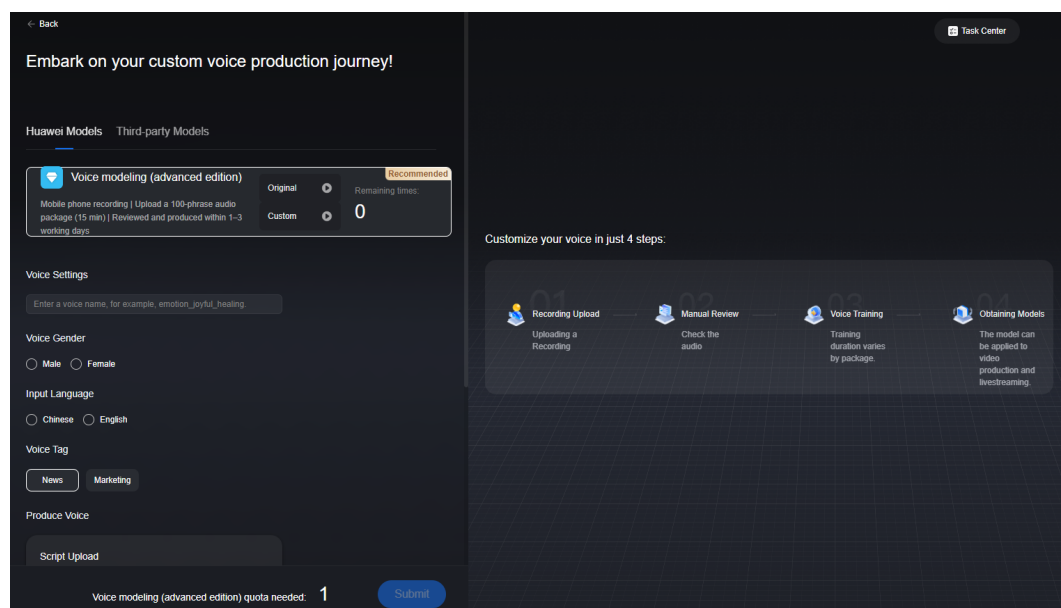
- [Record a WAV human audio file](#) of 100 phrases (with a pause of 2–3 seconds between phrases). [Script Examples \(Advanced Edition\)](#) is recommended.

## Procedure

**Step 1** Log in to the [MetaStudio console](#).

**Step 2** Click **Create** under **Voice modeling**.

**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 <b>Voice modeling (advanced edition)</b> , 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: <b>Female</b>
Input Language	Language of the voice. Example: <b>Chinese</b>
Voice Tag	Tag of the voice. Select a tag based on the selected script example. Options: <ul style="list-style-type: none"> <li>• <b>Marketing</b></li> <li>• <b>News</b></li> </ul>
Produce Voice	If you select <b>Script Upload</b> , upload a WAV audio recording without being compressed or containing TXT files.

**Step 4** Click **Submit**.

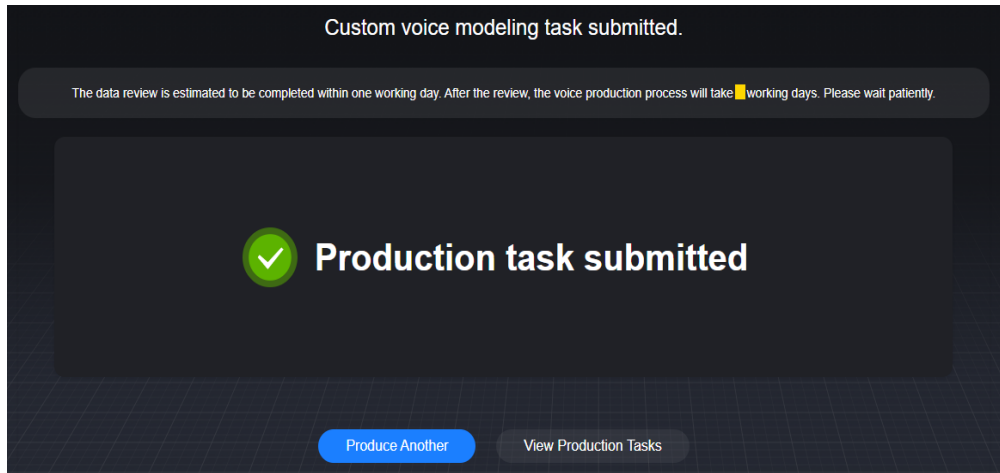
The **Information** dialog box is displayed, notifying you of the remaining voice modeling quota and indicating that one resource will be consumed this time.

**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.

**Figure 3-2** Production task submitted



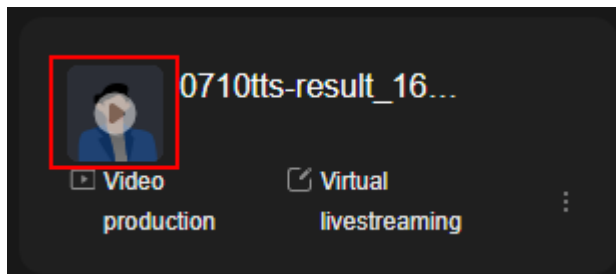
**Step 6** You can click **View Production Tasks** to view the review progress of the voice modeling task.

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.

**Figure 3-3** Voice



----End

# 4 Video Production

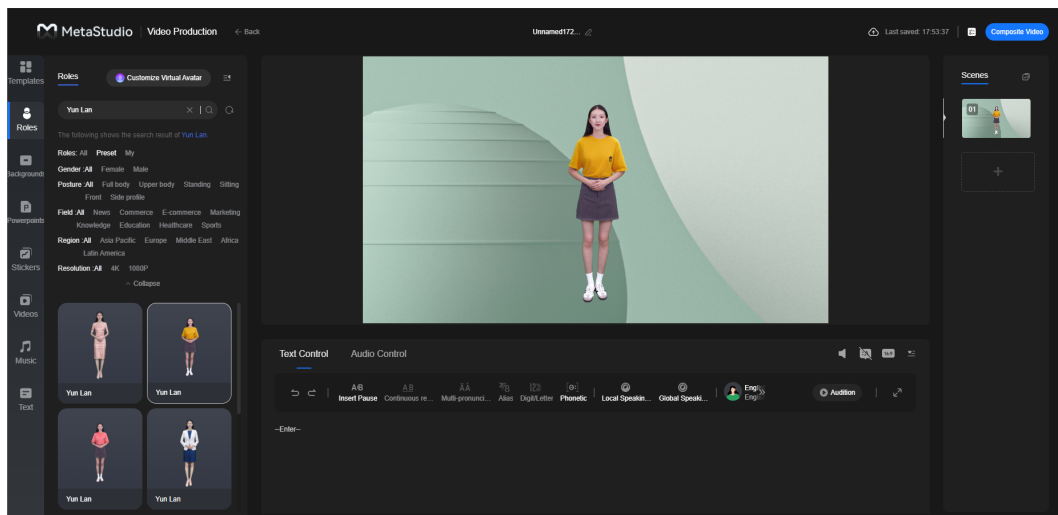
MetaStudio allows producing virtual avatar videos.

## 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



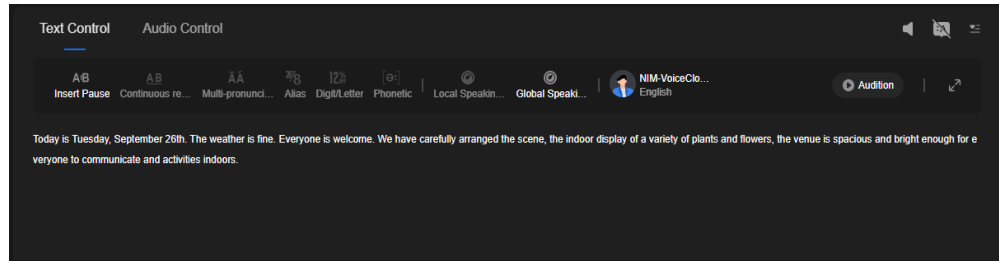
- Step 3** On the left of the page, set elements such as role, background, sticker, and video. For details, see [Operations of Video Materials](#).


- 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

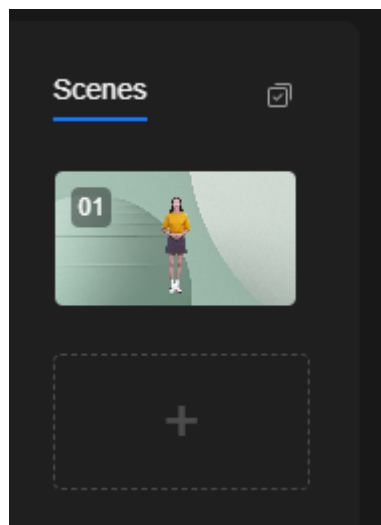


**Step 5** After the audio file is created, you can click  to adjust the audio volume.

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.

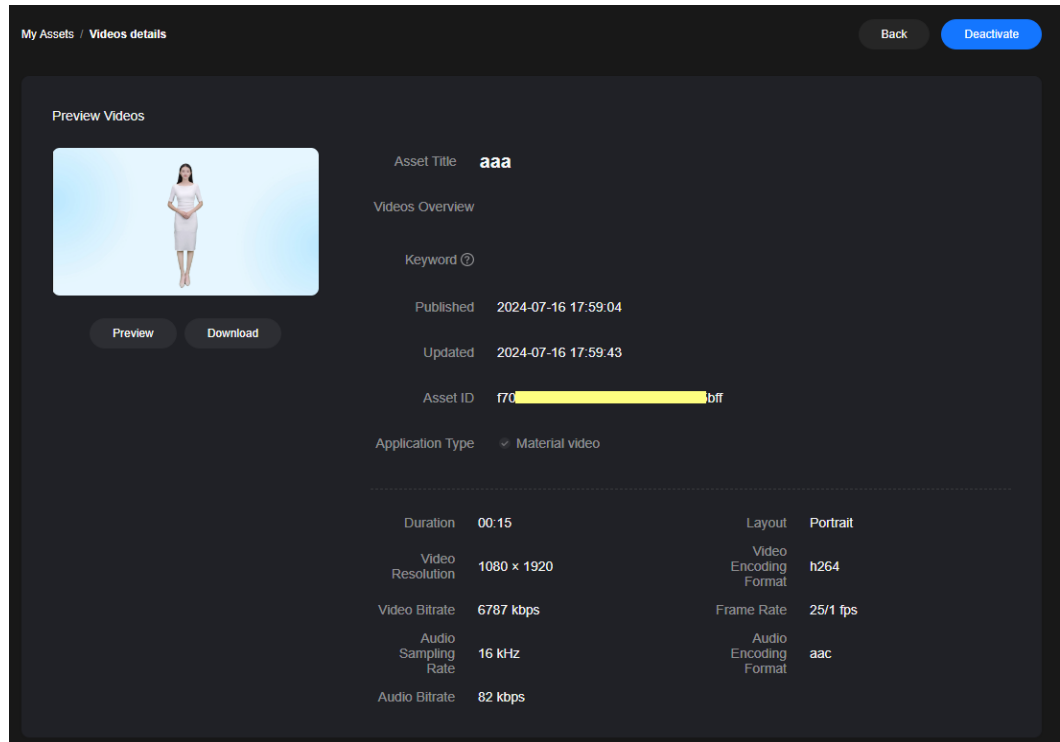
**Step 8** Click **OK**. The **Video Production Task Center** dialog box is displayed.

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.

**Figure 4-4** Video details



----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

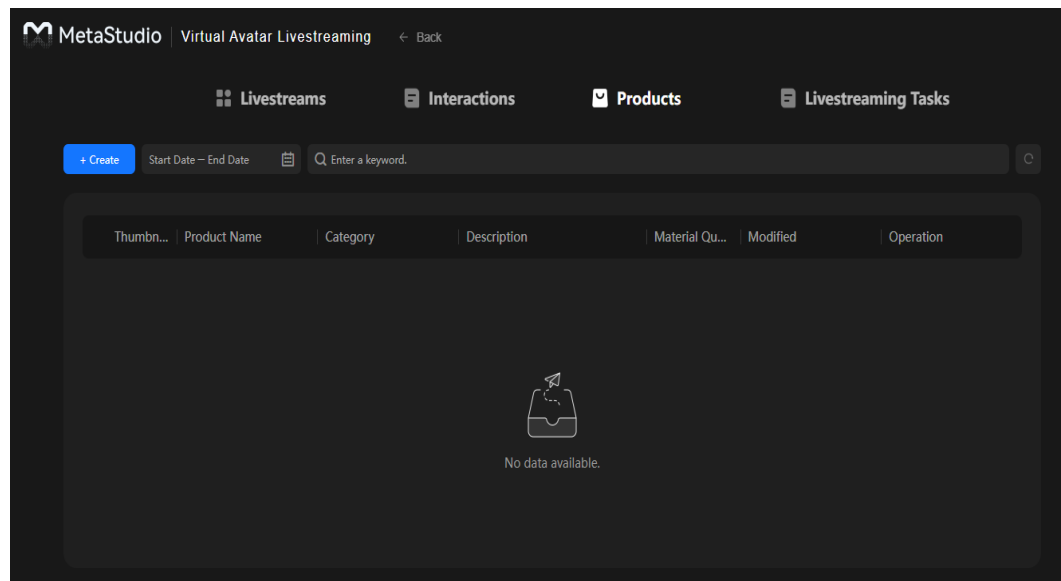
Access the MetaStudio console from the Chrome browser.

## 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](#).

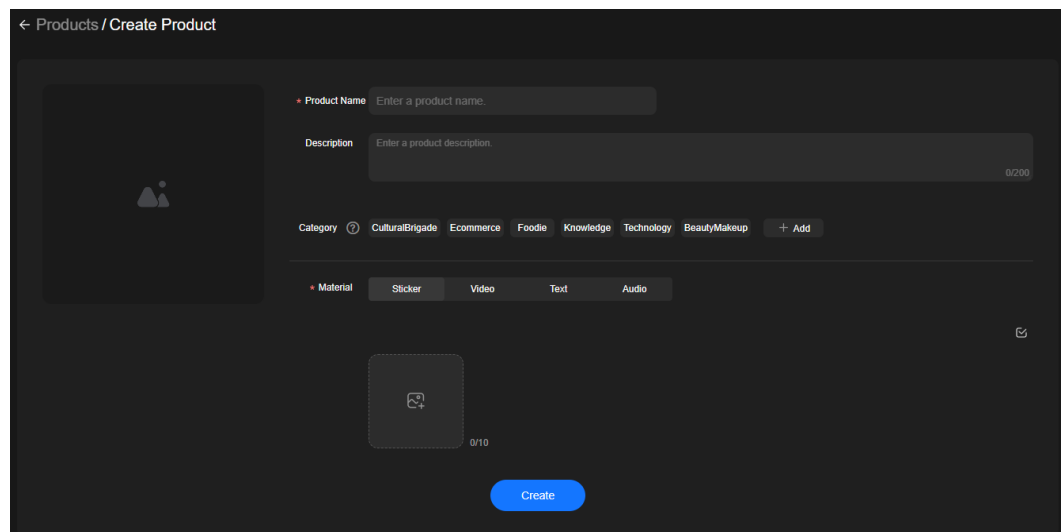
**Figure 5-1** Products



**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



**Table 5-1** Parameters for creating a 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: <ul style="list-style-type: none"><li>● <b>Sticker</b>: Select a local image.</li><li>● <b>Video</b>: Select a local video file.</li><li>● <b>Text</b>: Enter the text.</li><li>● <b>Audio</b>: Select a local audio file.</li></ul>

**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

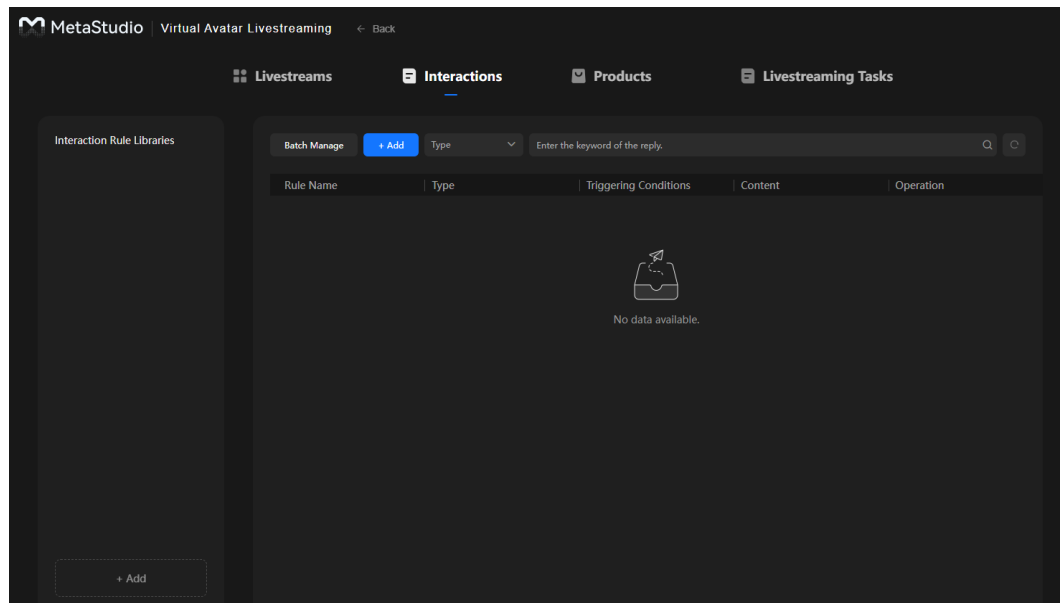
Under the **Interactions** tab of the **Virtual Avatar Livestreaming** page, you can add an interaction rule library and interaction rules. The added interaction rule library can be directly imported to and used in the live room.

**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](#).

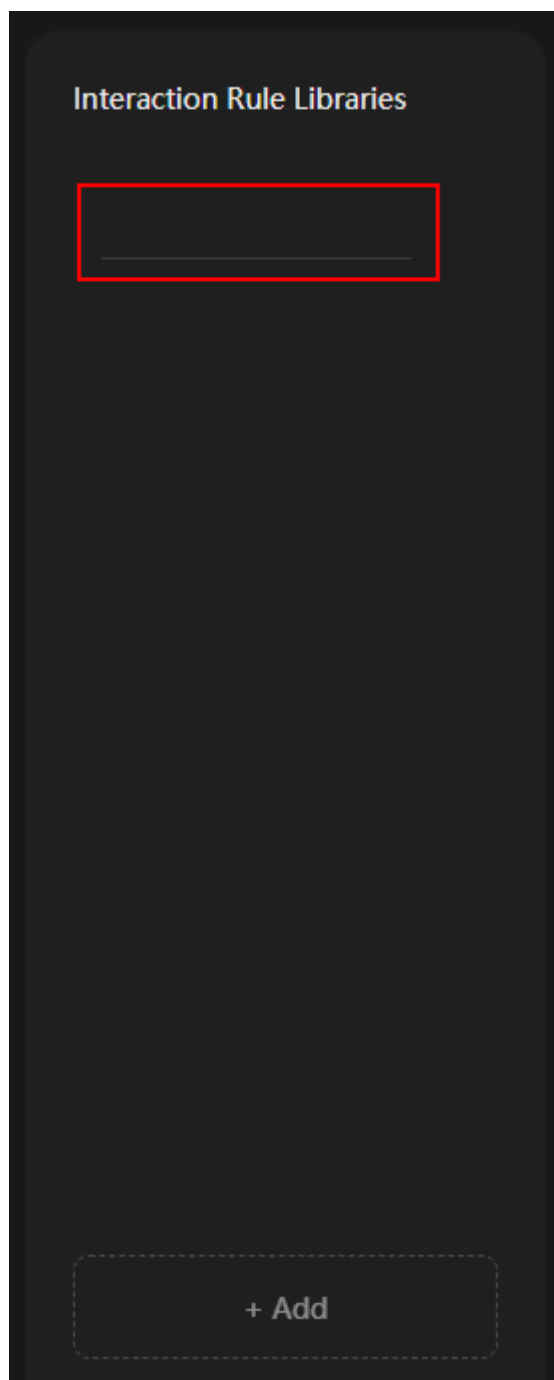
**Figure 5-3 Interactions**



**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.

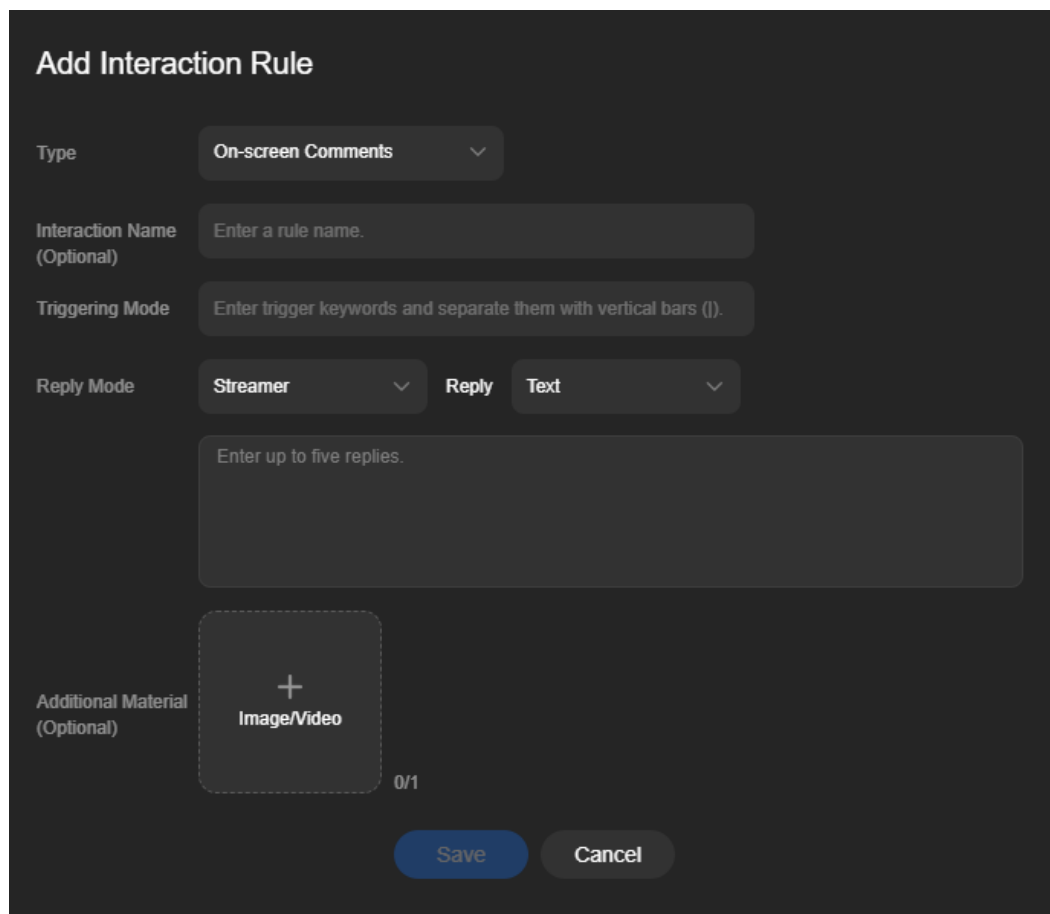
**Figure 5-4** Interaction rule libraries



**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](#).

**Figure 5-5** Adding an interaction rule



**Table 5-2** Parameters for adding an interaction rule

Parameter	Description
Type	Interaction type. Select <b>On-screen Comments</b> .
Interaction Name (Optional)	Interaction name. Example: Welcome to the live room.
Triggering Mode	Enter trigger keywords as required.
Reply Mode	Select <b>Text</b> for <b>Reply</b> 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.

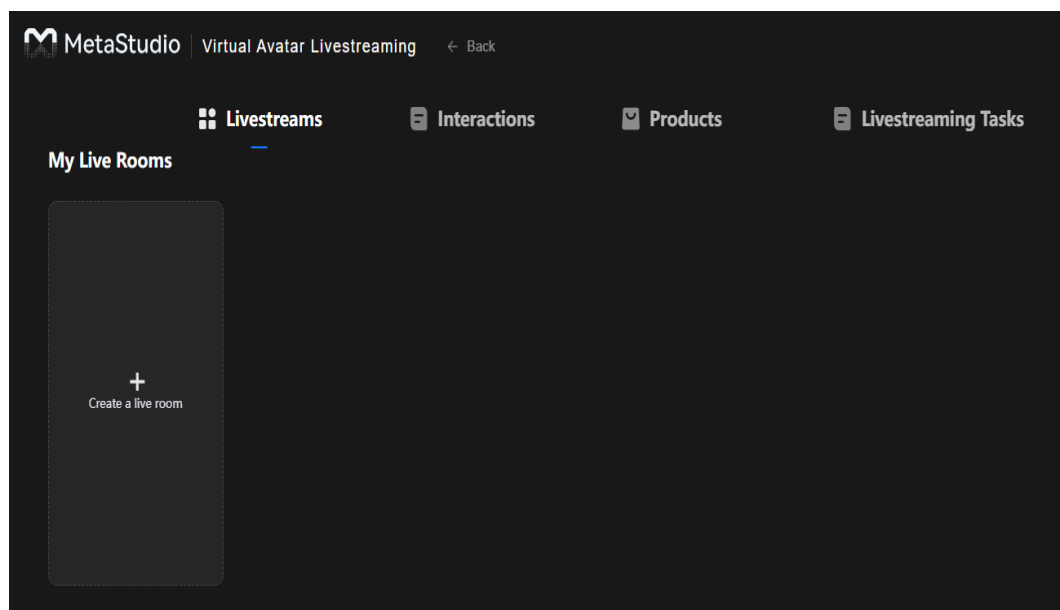
----End

## 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**.

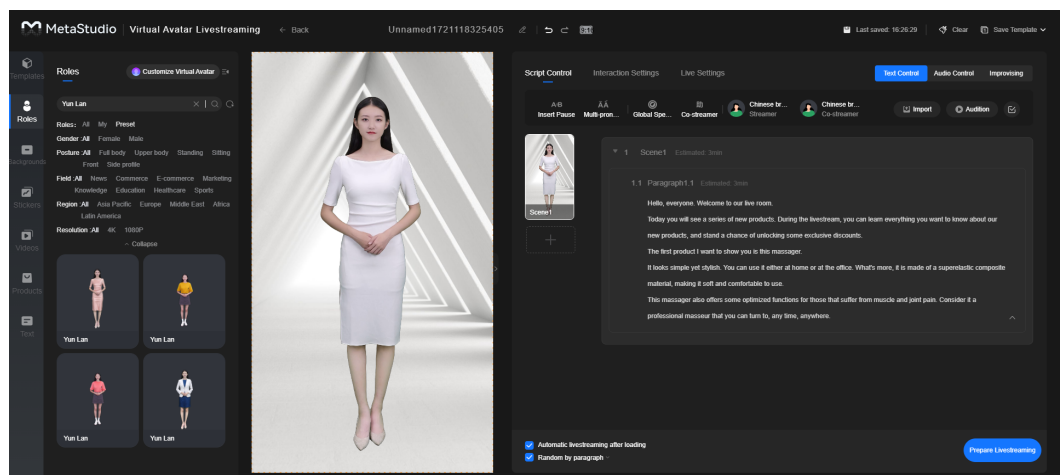
The **Virtual Avatar Livestreaming** home page is displayed, as shown in [Figure 5-6](#).

Figure 5-6 Virtual Avatar Livestreaming home page



- Step 3** Under the **Livestreams** tab, click the **Create a live room** area. [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.

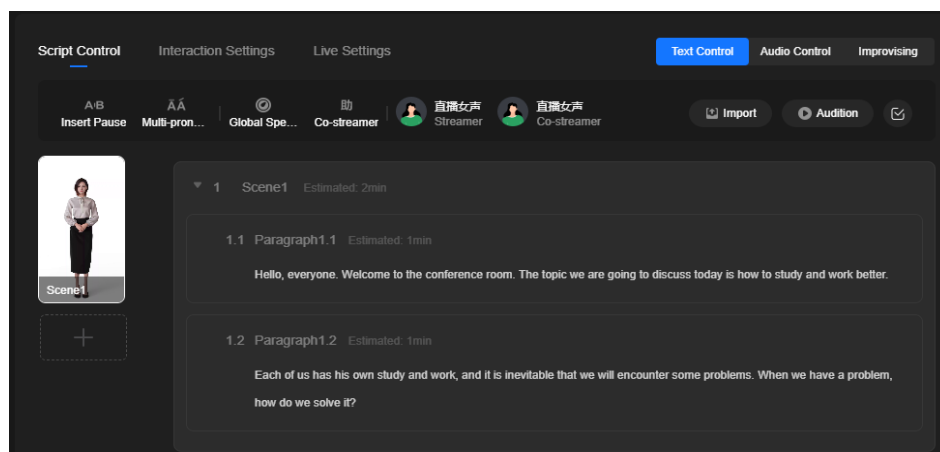
For details, see [Operations of Video Materials](#).

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.

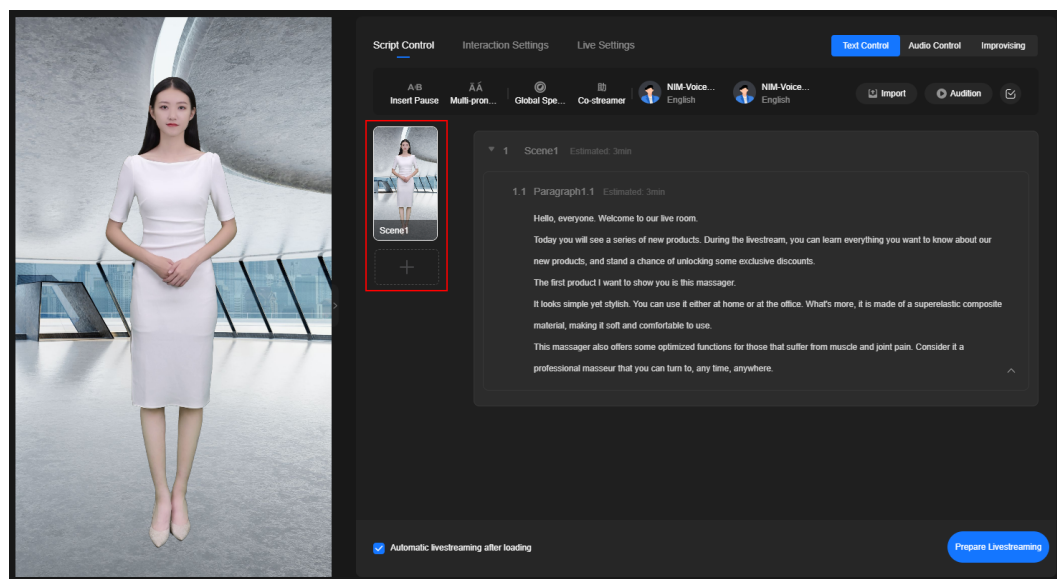
You can use the preset script, as shown in [Figure 5-8](#). You can also customize the script and click  to add a paragraph.

**Figure 5-8** Text control



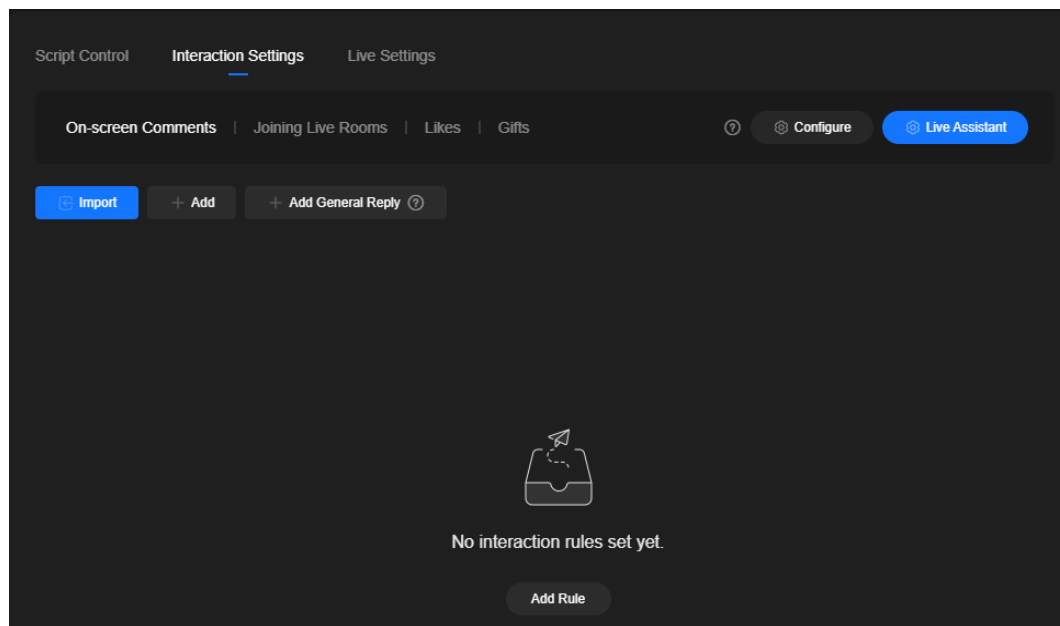
**Step 6** If you need to create multiple scenes, click the + icon under **Scene 1** on the right of the livestream preview window to add a scene. Then set the layout and script of the new scene based on the previous scene.

**Figure 5-9** Live room page



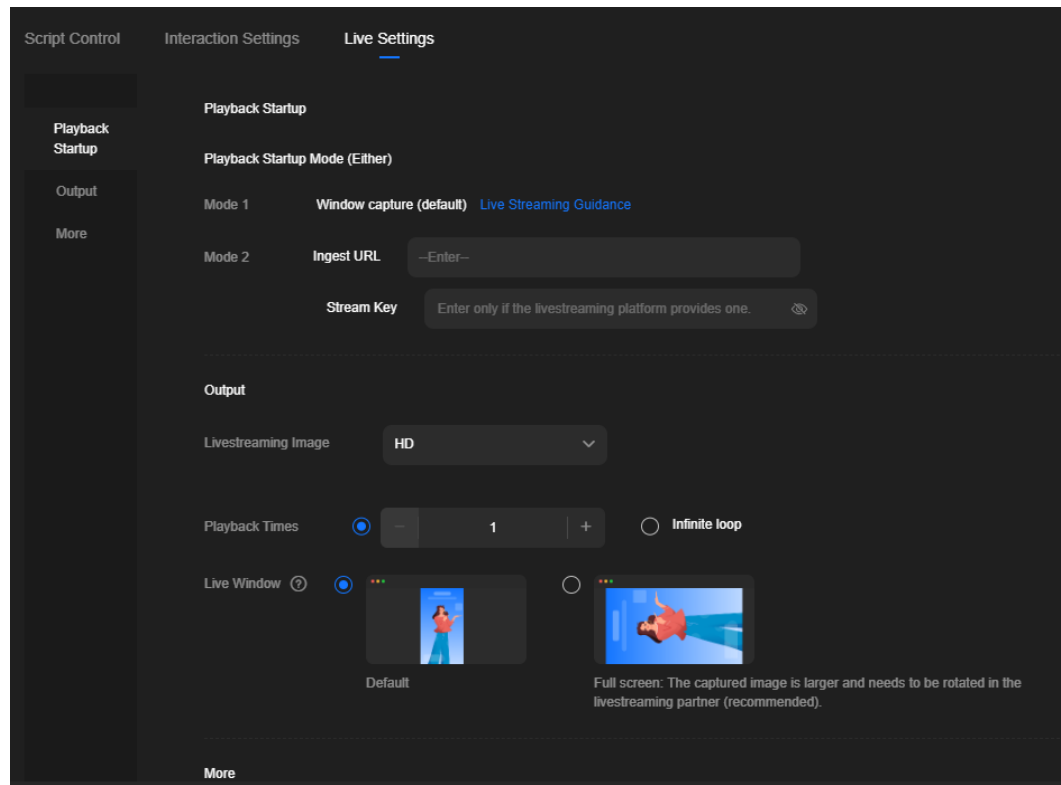
**Step 7** After setting the image layout and script of all scenes, click the **Interaction Settings** tab, as shown in [Figure 5-10](#).

**Figure 5-10** Interaction settings



- 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](#).

**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	Livestreaming Image	Select the definition of the livestreaming image. Options: <ul style="list-style-type: none"> <li>• <b>Smooth</b></li> <li>• <b>HD</b></li> <li>• <b>UHD</b></li> </ul> Default value: <b>HD</b>
	Playback Times	Set the number of times that a livestream should be played in a cyclical manner, or select <b>Infinite loop</b> . By default, the livestream is played once.



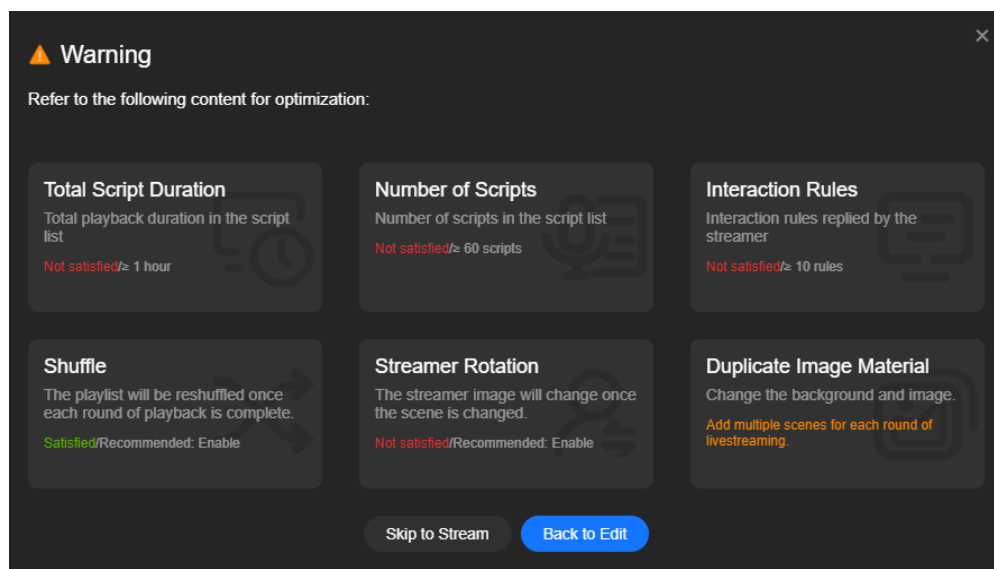
Area	Parameter	Description
	Live Window	Size of the live window. The window can be adjusted to vertical orientation. Options: <ul style="list-style-type: none"> <li>● <b>Portrait</b></li> <li>● <b>Full screen</b> (recommended): The captured frame is larger and needs to be rotated in the third-party live studio.</li> </ul> The default value is <b>Portrait</b> .
More	Event Callback Address	Fields of scene and paragraph events can be returned during livestreaming. This parameter is 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  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.

**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

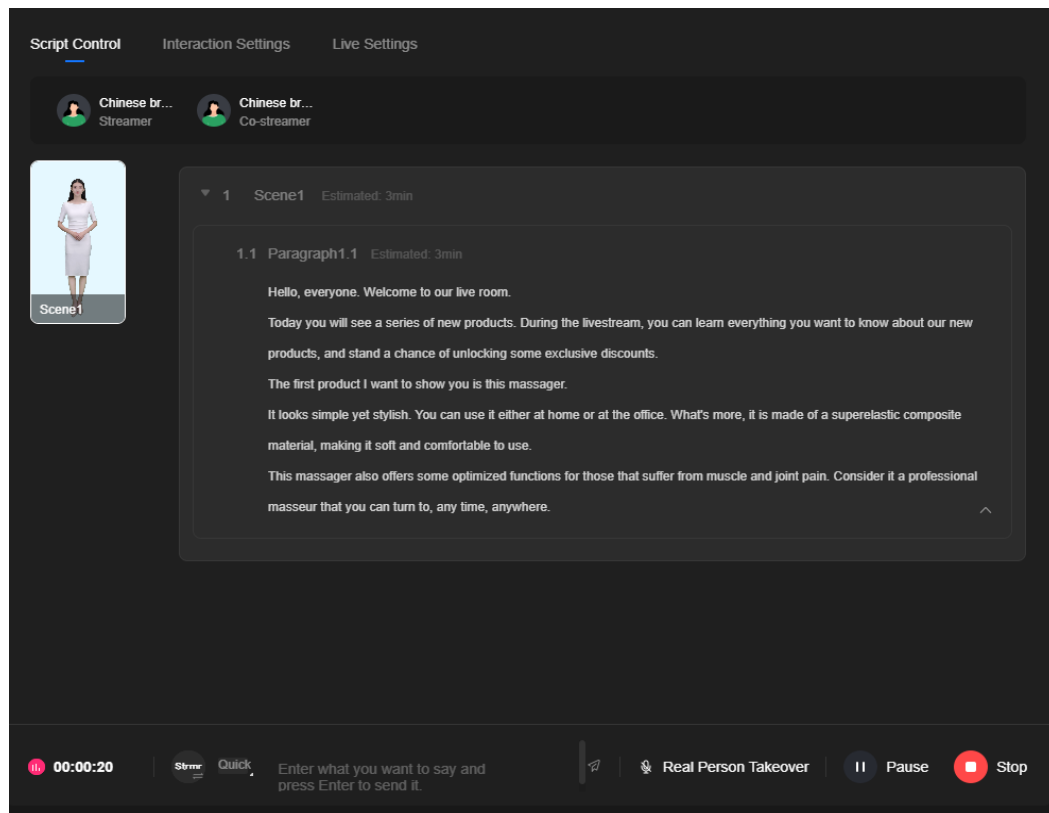




Table 5-4 About the GUI

GUI Element	Description
00:01:20	Livestreaming timing. For example, <b>00:01:20</b> indicates that the livestream has lasted one minute and 20 seconds.
	Switches the voice of reading interactive content. The streamer's voice is used by default. You can switch to the co-streamer's voice.
	Click this icon to select and send the preset interactive content for the streamer to read.
Entering interactive content and pressing <b>Enter</b> 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 <b>Real Person Takeover</b> . 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 <b>Cancel Real Person Takeover</b> to let the virtual streamer continue reading the original content.
Pause	Click <b>Pause</b> to pause the livestream. Click <b>Continue</b> to resume the livestream.
Stop	Click <b>Stop</b> to stop the livestream.

----End

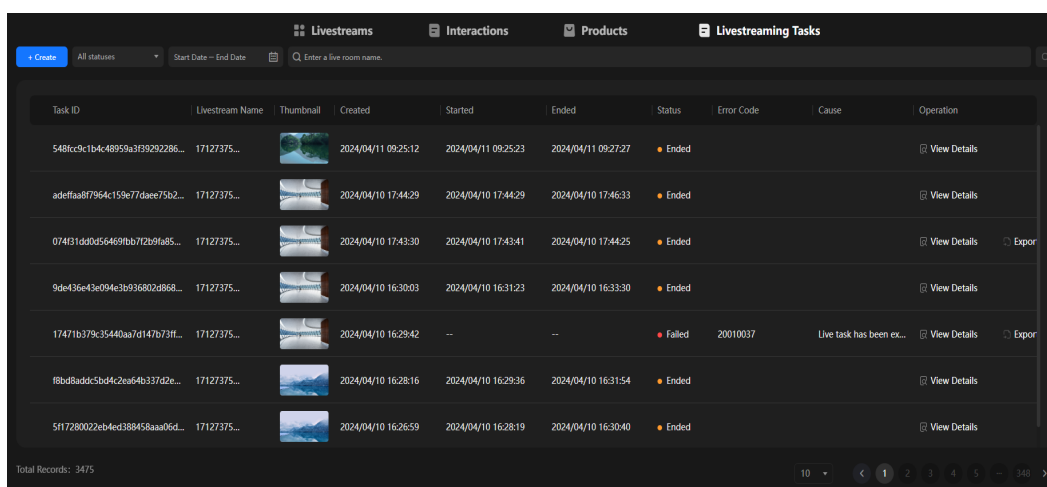
## Viewing a Livestreaming Task

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.

Figure 5-14 Livestreaming tasks



----End