The Stream Targets feature in Wowza Streaming Engine™ media server software allows you to send live streams to widely distributed destinations. For example, you can send a live stream from a server running Wowza Streaming Engine to an Alibaba Cloud CDN destination. This allows you to use the Alibaba CDN network to deliver the stream to viewers. This article explains how to set up Wowza Streaming Engine so that you can send a single live stream to an Alibaba Cloud destination for distributed delivery.

Notes:
- Wowza Streaming Engine 4.6.0.03 or later is required.
- Adaptive-bitrate streaming isn't support on Alibaba Cloud destinations.

Contents

Configure Alibaba Cloud to receive and distribute the stream
  Configure token authentication
Create an application in Wowza Streaming Engine to ingest the live source video
Create a stream target to send the stream to Alibaba Cloud
Enable Stream Targets
Test the connection
More resources

Configure Alibaba Cloud to receive and distribute the stream

Before you start, make sure you have an Alibaba Cloud account that has an ICP domain configured. Then sign in to Alibaba Cloud and create a stream URL that will be used to send the source stream from Wowza Streaming Engine to Alibaba Cloud CDN and deliver it for final viewing.

1. Navigate to Alibaba Cloud and click Log In. Enter your Account username, Password, and the Verification Code captcha, and then click Sign In.
2. At the top of the webpage, move your pointer over **My Account** and select **View Console**. This opens the AliCloud Console Home.

3. In the AliCloud Console **Products & Services** block, under **Storage & CDN**, click **Alibaba Cloud CDN**.

4. In the CDN Console navigation panel on the right, click **CDN domain name list**, and then click on the name of the domain you’re sending the stream to.

5. The **Basic Information** page provides the basic **Stream Push Address**, which you’ll need when you create the stream target in Wowza Streaming Engine.

The **Stream Push Address** URL is in the following format:

```
rtmp://video-center.alivecdn.com/app-name/video-name?vhost=[your-domain]
```

Where:

- **app-name** is the name of the live application in Wowza Streaming Engine you’re using to send the stream to Alibaba Cloud, such as `live`.
- **video-name** is the name of the stream you’re sending to Alibaba Cloud.
- **vhost=[your-domain]** is the vhost query parameter, which takes the name of your ICP domain that you’re sending the stream to (`[your-domain-name]`). For example, if the test domain is `mydomain.cdnpe.com`, the vhost query parameter would be: `vhost=mydomain.cdnpe.com`.

**Note:** If you want to secure the stream, you must generate authentication tokens. See **Configure token authentication**.

Configure token authentication

If you want to secure your stream, you can generate and add an **auth_key** query parameter to the basic **Stream Push Address**, creating an authenticated URL.

1. In the CDN Console, click **Authentication Configuration** in the navigation panel, and make sure **Enable authentication function** is turned on. If it isn’t on, click the toggle button to turn it on, and then use authentication **Type A**, enter a **Master Key**, and click...
2. Click **Basic Information** in the navigation panel, and copy the **Stream Push Address** URL leaving out only the vhost query parameter: `rtmp://video-center.alivecdn.com/app-name/video-name`.

3. Click **Authentication Configuration** in the navigation panel, provide the following information and then click **Generate**:
   - **Original URL** - Paste the Stream Push Address URL, and replace `app-name` and `video-name` accordingly. For example, if your app-name is `live` and your video-name is `mystream`, the URL would be: `rtmp://video-center.alivecdn.com/live/mystream`.
   - **Authentication Type** - Use **Type A**.
   - **Authenticator Key** - Enter the **Master Key** value that you specified when enabling authentication. This is case-sensitive.
   - **Effective Time** - Enter the time, in seconds, the authentication token should be valid. For example, entering `3600` creates a token that is valid for one hour.

4. Copy and paste just the `auth_key` query parameter at the end of the generated authentication URL into a .txt file, and save it. This information can't be viewed again after you leave the page. If necessary, you can repeat these steps to generate a new auth_key value.

   **Note:** To play an authenticated stream, you must also generate authentication URLs for each of the **Live Streaming Addresses** on the Basic Information page. One at a time, copy and paste the whole Live Streaming Address URL into the **Original URL** field, replacing the `app-name` and `video-name`. Then copy and paste the whole generated authentication URL into a .txt file and save.

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**Create an application in Wowza Streaming Engine to ingest the live source video**

Next, create a live application in Wowza Streaming Engine Manager that will receive the live stream from an H.264 encoder or camera and send it to Alibaba Cloud for distributed delivery.

1. In Wowza Streaming Engine Manager, click the **Applications** tab at the top of the page, and then click **live** in the contents panel.
Create a stream target to send the stream to Alibaba Cloud

After the live application is created in Wowza Streaming Engine, it must be configured to send the stream to the Alibaba Cloud destination.

1. In the contents panel, click Stream Targets and then click Add Stream Target.
2. On the Add Stream Target page under Third-Party Target Destinations, click Alibaba Cloud. Wowza Streaming Engine sends the stream to Alibaba Cloud over RTMP.
3. On the Alibaba Cloud Configuration page, provide the following information:
   - **Stream Target Name** - A descriptive name for this target setup in Wowza Streaming Engine. The name must be unique and can't contain less-than (<), greater-than (>), colon ( : ), quotation (" and "), forward slash (/), backslash (), pipe (|), question mark (?), asterisk (*), double-dot (..), or tilde (~) characters.
   - **Source Stream Name** - The name of the incoming stream that you specified in Wowza Streaming Engine when you set up the video source.
   - **Destination Application Name** - Alibaba automatically creates an application with this name. For simplicity, we recommend using the name of the live application you created in Wowza Streaming Engine Manager. Note that when working with the Alibaba Stream Push Address and Live Streaming Address URLs you must replace `app-name`.
   - **Destination Application Instance** - Leave blank.
   - **Destination Host** - The hostname or IP address of the Alibaba Cloud CDN destination. For example, if your Alibaba Cloud Stream Push Address is
rtmp://video-center.alivecdn.com/app-name/video-name?
vhost=mydomain.cdnpe.com, the destination host is video-center.alivecdn.com.

- **Destination Port** - Use the default port, **1935**. Alibaba Cloud doesn’t support other ports.
- **Destination Stream Name** - Enter a name for the stream, using the following format: a name for the stream content (such as **myStream**) followed by the vhost query parameter and, if you’re using authentication, the auth_key parameter from Alibaba’s **Stream Push Address** URL.

**Note:** When working with the Alibaba **Stream Push Address** and **Live Streaming Address** URLs, you must replace **video-name** with the name specified here, such as **myStream**.

- If you’re not using authentication, enter the following, replacing **video-name** and **[your-domain-name]**:

  video-name?vhost=[your-domain-name]

- If you’re using authentication, enter the following, replacing **video-name**, **[your-domain-name]**, and **[your-key]**:

  video-name?vhost=[your-domain-name]&auth_key=[your-key]

4. Click **Add this target**.

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**Enable Stream Targets**

Before you stream, you must enable the Stream Targets feature for the Wowza Streaming Engine application and the stream target you created.

If you don’t see a checkmark next to **Stream Targets** in the contents panel of the application, click **Stream Targets** in the contents panel and then click **Enable Stream Targets**. When prompted, click **Restart Now** so your change takes effect. When Stream Targets is enabled, a checkmark appears next to **Stream Targets** in the contents panel and the **Stream Targets** page shows **Status** is **Enabled**.

If the **Status** of an individual stream target is **Disabled**, click the **Enable** icon for the stream in the **Actions** column.
When a stream target is enabled, its status on the **Stream Targets** page is one of the following:

- **Waiting.** The target is enabled but is not yet pushing the stream to the Alibaba Cloud destination because either the target’s configured source stream is not connected to the Wowza Streaming Engine input or Wowza Streaming Engine has not completed initializing the connection to the Alibaba Cloud destination.
- **Active.** The Wowza Streaming Engine instance successfully connected to the Alibaba Cloud destination and is actively pushing the stream.
- **Error.** The Wowza Streaming Engine instance unsuccessfully tried to connect to the Alibaba Cloud destination. Make sure the target’s configured source stream is connected to the Wowza Streaming Engine input. Errors might be due to an invalid target configuration or issue with the destination server.

The status of each stream target updates automatically if your Wowza Streaming Engine application has fewer than 100 stream targets. If your application has more than 100 stream targets, you can click **Refresh** to update the status.

### Test the connection

Configure your encoder and then test the live stream.

1. Start the stream in the H.264 camera or encoder that’s sending the stream to the **live** application in Wowza Streaming Engine.

   The **live** application ingests the live stream and sends it to the Alibaba Cloud target.

2. In Wowza Streaming Engine, verify that the stream is working by clicking **Incoming Streams**, and then clicking the stream name.

   The stream detail page displays the **Status** of the stream (**Active**) as well as details about connections, uptime, and throughput for the live stream.

3. Verify that your Alibaba Cloud target is receiving, publishing, and distributing the stream as you’ve configured it to do. To do this, use the **Live Streaming Address** URLs provided in the Alibaba CDN Console:

   **Note:** If you’re using authentication, repeat the steps in **Configure token authentication** to generate the **Live Streaming Address** URLs with authentication tokens.
- For RTMP, copy and paste the following URL into a player like VLC and replace [your-domain], app-name, and video-name with the correct values:

  rtmp://[your-domain]/app-name/video-name

- For Apple HLS, use the following format and replace [your-domain], app-name, and video-name with the correct values:

  http://wowzalivetest.cdnpe.com/app-name/video-name.m3u8

4. Stop the stream in the source camera or encoder to end your test connection.

More resources

- Use CDNs and services to distribute live streams from Wowza Streaming Engine
- Sample map file entries for Stream Target destinations (push publishing)