Send streams securely to Wowza CDN on Akamai with the Wowza Streaming Cloud REST API

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With the secure ingest feature, the Wowza Streaming Cloud™ service allows you to secure a stream with a query parameter as it passes from a transcoder to Wowza CDN. When Wowza CDN ingests the stream from the transcoder, it requires the query parameter for processing. This prevents third parties from overriding the contents of your stream with unwanted content. In this article, learn how to enable secure ingest for Wowza CDN on Akamai stream targets using the Wowza Streaming Cloud REST API.

Secure a transcoder

To configure secure ingest for a Wowza CDN on Akamai target, you start by creating a transcoder. It can have a push or pull connection and be passthrough or transcoded (adaptive bitrate), depending on your needs and the functionality available at your broadcast location.

1. In the Wowza Streaming Cloud REST API, create a transcoder.

   Example and response
   
   Create a transcoder:
curl -X POST \
-H "Content-Type: application/json" \
-H "wsc-api-key: ${WSC_API_KEY}" \
-H "wsc-access-key: ${WSC_ACCESS_KEY}" \
-d '{
  "transcoder": {
    "billing_mode": "pay_as_you_go",
    "broadcast_location": "us_west_california",
    "buffer_size": 4000,
    "delivery_method": "push",
    "name": "My secure ingest transcoder",
    "protocol": "rtmp",
    "transcoder_type": "transcoded"
  }
}' \
"${WSC_HOST}/api/${WSC_VERSION}/transcoders"

The request creates a transcoder and returns a response that includes details of the transcoder, including its unique transcoder ID. There are no outputs associated with the transcoder yet. Make note of the ID, which is the transcoder ID that Wowza Streaming Cloud creates for your stream. You'll need it to associate your transcoder with output renditions and stream targets. The response should look something like this:

```json
{
  "transcoder": {
    "id": "abcvwp8k",
    "name": "My secure ingest transcoder",
    "transcoder_type": "transcoded",
    "billing_mode": "pay_as_you_go",
    "broadcast_location": "us_west_california",
    ...
    "protocol": "rtmp",
    "delivery_method": "push",
    "source_port": 1935,
    "domain_name": "[wowza-subdomain].entrypoint.cloud.wowza.com",
    "application_name": "app-5b86",
    "stream_name": "805e7031",
    ...
    "direct_playback_urls": {
      "rtmp": ["names and urls returned here"],
      "rtsp": ["names and urls returned here"],
      "wowz": ["names and urls returned here"]
    },
    "outputs": []
  }
}
```
2. Create a Wowza CDN on Akamai stream target that you’ll associate with the transcoder in the next step.

Set the provider to `akamai_cupertino`, which provides playback over HLS, and set `use_secure_ingest` to `true` to deliver the HLS stream securely between the transcoder and the Wowza CDN.

**Note:** Secure ingest is only available for Wowza CDN on Akamai stream targets with the provider `akamai_cupertino`.

**Example and response**

Create a Wowza CDN on Akamai stream target:

```bash
curl -X POST \
-H "Content-Type: application/json" \
-H "wsc-api-key: ${WSC_API_KEY}" \
-H "wsc-access-key: ${WSC_ACCESS_KEY}" \
-d '{
    "stream_target_akamai": {
        "name": "My secure target",
        "provider": "akamai_cupertino",
        "use_secure_ingest": true
    }
  }
}' \
"${WSC_HOST}/api/${WSC_VERSION}/stream_targets/akamai"
```

The details of the configured target are listed in the response. They include a `secure_ingest_query_param` value, which is used to secure the connection between the transcoder and the CDN. The response should look something like this:
3. Complete the transcoder by adding outputs and associating the stream target to the transcoder.
For instructions on adding output renditions and stream targets to the transcoder, see one of the following articles, depending on whether you’re creating an adaptive bitrate or passthrough transcoder:

- **Create an ABR stream and send it to a target with the Wowza Streaming Cloud REST API**
- **Pass a stream through the transcoder to a target with the Wowza Streaming Cloud REST API**

4. When you start the transcoder and begin sending the source stream from a configured camera or encoder, Wowza CDN parses the `secure_ingest_query_param` value to authorize the incoming stream from the transcoder.

More resources

- **Security features in Wowza Streaming Cloud**
- **Manage HLS playback over SSL for Wowza CDN on Akamai with the Wowza Streaming Cloud REST API**