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Writing Sample

This writing sample is an excerpt from a how-to document I wrote for Wowza Streaming Engine. There are additional steps to the article that have been left out in this version. This represents original writing. I was the only editor for this article. I gathered the information for this article on a call with an SME. All code samples were provided by the SME.

I was asked to produce this article with a quick turnaround because it is a workaround for an issue that was causing support calls. I met with the SME to understand the process in the morning and then I published it in the evening of the next day.

Send Apple HLS content to Amazon S3 using Wowza REST APIs

This article explains how to create a Fastly stream target with a push connection to distribute your lives streams using Wowza CDN on Fastly. You will need an Amazon AWS account and a Wowza Streaming Cloud account for this workflow.

Alternatively, you may configure your connection to for a pull-based workflow where the destination pulls the stream data from the server.

Unless there is a specific need for a push-based workflow, it's strongly recommended to use a pull-based workflow instead. See Migrate to Wowza CDN on Fastly to learn more about the advantages and disadvantages of the push and pull workflows.

To configure your stream target using a pull connection, see Stream to Wowza CDN from Wowza Streaming Engine using Wowza REST APIs.

Before you start

You should have access to the following items:

- A valid **Wowza Streaming Engine license and a Wowza CDN subscription**. Contact sales@wowza.com for more information.
- An Amazon Web Service account with create, read, and write access to S3 storage using access key security credentials. See AWS Free Tier to create a free account.

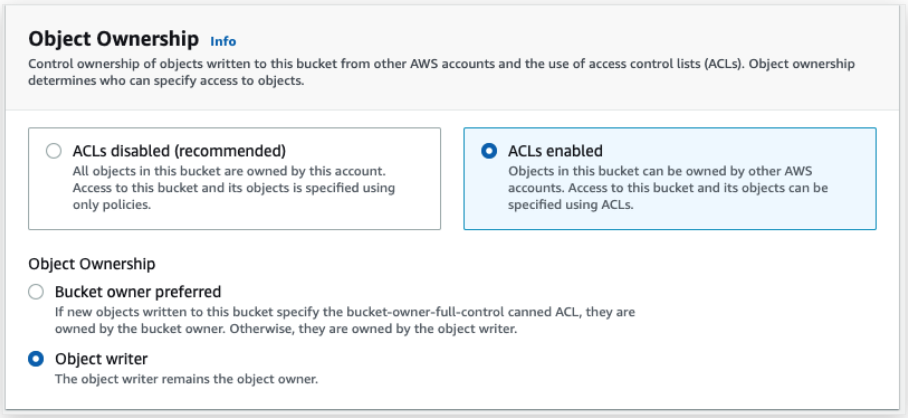
1. Configure a bucket in AWS S3

Note: See Creating a bucket for instructions on how to create a bucket in AWS.

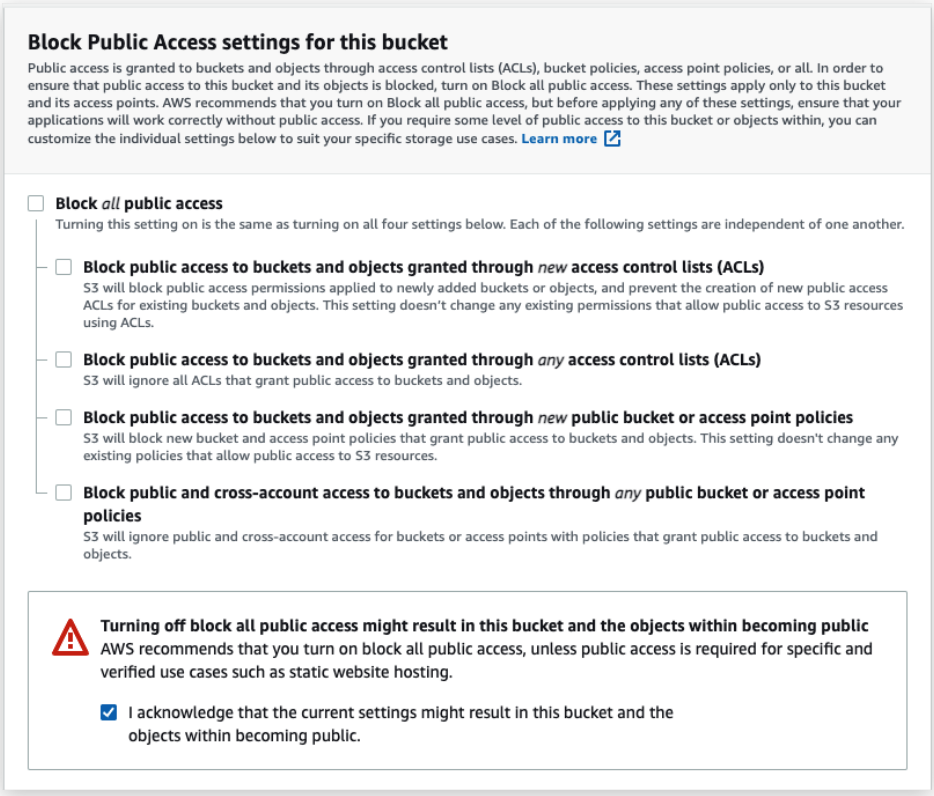
You'll need to configure some settings to allow streams to be played back from your S3 bucket.

Configure the following:

- **ACLS** must be **enabled**. For best results, the Object Ownership should be set to the Object Writer.



- **Public Access** must be **enabled** for objects in the bucket.



- For testing direct playback from the bucket, you may need to enable Cross-origin resource sharing (CORS). After the bucket is created, select the **Permissions** tab for the bucket and add the following **CORS configuration.**

  Note: CORS is only required for direct playback from the bucket. It's not required for playback via the Fastly Custom Stream Target.

```
[
    {
        "AllowedHeaders": [],
        "AllowedMethods": [
            "GET"
        ],
        "AllowedOrigins": [
            "*"
        ],
        "ExposeHeaders": []
    }
]
```

Once your bucket is created, you'll need to record the following information from your amazon account:

- **Bucket name**, for example *my-s3-bucket*
- **Bucket Region**, for example *us-west-1*
- **AWS Bucket URL**. This will be used with the Fastly Custom Stream Target. The format for the AWS Bucket URL is *https://[bucket-name].s3.[region].amazonaws.com/*

  For example, https://my-s3-bucket.s3.us-west-1.amazonaws.com/

  Note: For buckets in the us-east-1 region, AWS doesn't require the region in the URL (https://[bucket-name].s3.amazonasw.com/). This is a legacy format AWS URL. It won't work with Fastly Custom Stream Targets. Instead, you need to use the regionalised S3 URL for us-east-1, which is https://[bucket-name].s3.**us-east-1**.amazonaws.com

You'll also need to record your IAM credentials. These are set per user in AWS. See Create an IAM admin and user group in AWS for more information.

Record the following:

- **Access ID**, for example *AKIAI6234VXXREN3KWJQ*
- **Secret Access Key**, for example *y1PFFPOEwSrUfvvvdalA1qs9sFDM7+QzQTMHoqP7*

2. Create a stream target in Wowza Streaming Engine to send the stream to AWS S3

1. Once you have created your AWS S3 bucket and recorded your credentials, you'll need to create a stream target in Wowza Streaming Engine by sending a *POST* request to the */v2/servers/_defaultServer_/vhosts/_defaultVHost_/applications/live/pushpublish/mapentries/WSC_via_S3* endpoint.

   You can use the following sample request, making sure to:

- Set *http.relativePlaylists* to **true**. It is set to false by default.
- Set *entryName* to a unique name for your stream target.
  For Adaptive Bitrate streams, set *adaptiveGroup* to the same value for each stream entry.
- Set *cloudstorage.string.bucketName* to the **Bucket Name** provided by AWS in Step 1.
- Change any additional values to be unique to your stream target.
- Before saving the file, use a JSON Validator, such as https://jsonlint.com, to validate the map entries. Copy the complete text after the = sign into the validator to check the syntax.

Sample Request

```
curl -X POST \
-H 'Accept:application/json; charset=utf-8' \
-H 'Content-Type:application/json; charset=utf-8' \
```

```
http://localhost:8087/v2/servers/_defaultServer_/vhosts/_defaultVHost_/applications/live/pushpublish/mapentries/WSC_via_S3_720p \
-d '
{
    "entryName": "WSC_via_S3_720p",
    "sourceStreamName": "stream_name",
    "streamName": "stream_name",
    "profile": "cupertino-cloudstorage",
    "debugLog": false,
    "extraOptions": {
        "cloudstorage.provider": "S3",
        "cloudstorage.string.provider": "S3",
        "cloudstorage.string.bucketName": "my-s3-bucket",
        "cloudstorage.string.region": "us-west-1",
        "cloudstorage.string.accessID": "AKIAI6IO5VXX-EXAMPLE",
        "cloudstorage.string.secretAccessKey": "y1PFFPOEwSrUfWyhalA1qs9sFDM7+QzQ-example",
        "cloudstorage.transportDebug": false,
        "http.relativePlaylists": true
    }
}
```

Sample Response

```
{
    "success": true,
    "message": "Entry (WSC via S3 - source) saved successfully",
    "data": null
}
```

2. Copy the **URL** for the playlist from your S3 bucket, for example *https://my-s3-bucket.s3-us-west-1.amazonaws.com/myStream/playlist.m3u8*

   Note: For buckets in the us-east-1 region, this URL will be the legacy format and needs to be changed to include the region.

3. Test the playback using the **URL** for your playlist in your player.