EZDRM
Shaka Player Integration

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Introduction

This document outlines the steps necessary to successfully integrate EZDRM with the Shaka player.

Shaka accepts streams from an MPEG-DASH (*.mpd) file for Microsoft PlayReady and Google Widevine, and/or a *.m3u8 file for Apple FairPlay and HLS.

For information about the Shaka video player, see:

- Shaka Player demo online guide: https://shaka-player-demo.appspot.com/docs/api/tutorial-welcome.html

Requirements

1. Basic understanding of HLS, MPEG/DASH, and other streaming protocols and formats.
2. Shaka Player HTML Plug-in Code.

Sample Code Files

EZDRM provides complete sample html files that you can configure and use:

- shaka-dash.html [Widevine and PlayReady]
- shaka-fps.html [Apple FairPlay]

You can download these files at:
https://www.ezdrm.com/downloads/players/shaka/shaka-player-dash-hls.zip

The following sections show how to customize the html files.

Widevine/PlayReady Universal DRM

Head Section Code: shaka-dash.html

There are two files required, one to load the Shaka player and the second is provided by EZDRM to configure for playback.

```
<!DOCTYPE html>
<html lang="en" class="wide wow-animation smoothscroll scrollTo">
  <head>

      <script src="shaka-player.compiled.js"></script> //Loads the java script necessary to run the player
      <script src="shaka-demo.js"></script> //Configurable file provided by EZDRM
```

Body Section Code: shaka-dash.html

The last section of code creates a video object.

```
  </head>
          <body>
          <video id="video" width="640" poster="sample.png" controls autoplay></video>
          </body>
</html>
```

Required values

MPEG-DASH requires 3 values:

1. The **.mpd URL**
2. The **Widevine Proxy URL**
3. The **PlayReady Proxy URL**

Obtaining a PX Value

You will need your six-digit PXs values as part of the LA_URLs in the upcoming sections.

Your Widevine PX value is the last six characters of your Widevine Profile ID. Your PlayReady PX value is the last six characters of your PlayReady Profile ID. The appropriate one is required for all packagers you use.

Visit https://www.ezdrm.com/Documentation/EZDRM_Testing_Playback_v2.pdf for more details on how to find your PX value.

Widevine Server URL

The Widevine base server URL is:
https://widevine-dash.ezdrm.com/widevine-php/widevine-foreignkey.php?pX= XXXXXX

Replace **XXXXXX** with your Widevine PX Value.

PlayReady Server URL

For PlayReady, the base server URL is:
https://playready.ezdrm.com/cency/preauth.aspx?pX= XXXXXX

Replace **XXXXXX** with your PlayReady PX Value.

Head Section Code: shaka-demo.js

Update the manifestUri with the .mpd URL and the Widevine and PlayReady server URLs in the head section code as shown in the sample below:

```
// myapp.js

var manifestUri =    'https://wvm.ezdrm.com/demo/dash/BigBuckBunny_320x180.mpd';

function initApp() {
    // Install built-in polyfills to patch browser incompatibilities.
    shaka.polyfill.installAll();

    // Check to see if the browser supports the basic APIs Shaka needs.
    if (shaka.Player.isBrowserSupported()) {
        // Everything looks good!
        initPlayer();
    } else {
        // This browser does not have the minimum set of APIs we need.
        console.error('Browser not supported!');
    }
}

function initPlayer() {
    // Create a Player instance.
    var video = document.getElementById('video');
    var player = new shaka.Player(video);

    player.configure({
        drm: {
            servers: {
                'com.widevine.alpha': 'https://widevine-dash.ezdrm.com/widevine-php/widevine-foreignkey.php?pX=XXXXXX',
                'com.microsoft.playready': 'https://playready.ezdrm.com/cency/preauth.aspx?pX=XXXXXX'
            }
        }
    });
```

Apple FairPlay DRM for HLS

Head Section Code: shaka-fps.html

The shaka-fps.html file is provided by EZDRM to configure for playback.

```
<!DOCTYPE html>
<html lang="en" class="wide wow-animation smoothscroll scrollTo">
  <head>

      <script src="fps-demo.js"></script> //Configurable file provided by EZDRM
```

Body Section Code: shaka-fps.html

The last section of code creates a video object.

```
  </head>
          <body>
          <video id="video" width="640" poster="sample.png" controls autoplay></video>
          </body>
</html>
```

Required values

Apple FairPlay requires 3 values.

1. The **serverMediaSourcePath** is the **.m3u8 URL**
2. The **serverProcessSPCPath** is the **FairPlay license URL**
    - The base URL is **https://fps.ezdrm.com/api/licenses/<<ASSET-ID>>**
3. The **serverCertificatePath** is the **FairPlay Certificate URL**
    - This is the .cer file for your media provided by Apple. This URL should be either on your Website or CDN.

Head Section Code: fps-demo.js

Update the values in the head section code as shown in the sample below:

```
/*
            The EME specification (https://dvcs.w3.org/hg/html-media/raw-file/tip/encrypted-media/encrypte
d-media.html)
            is supported starting OSX 10.10 and greater.
        */
        var keySystem;
        var certificate;

        // ########### ------------------------------------- ###########
        // ----------------------PATHS TO ADJUST----------------------
        // ------------------------------------------------------------

        var serverCertificatePath = 'https://fps.ezdrm.com/demo/video/XXXXX.cer';
          // ADAPT: This is the path to the fps certificate on your server.
        var serverProcessSPCPath  = 'https://fps.ezdrm.com/api/licenses/fd537439-74e2-XXXX-8adb-XXXXX6417c
59';     // ADAPT: This is the path/URL to the keyserver module that processes the SPC and returns a CKC
        var serverMediaSourcePath = 'https://fps.ezdrm.com/demo/hls/BigBuckBunny_320x180.m3u8';

        function stringToArray(string) {
            var buffer = new ArrayBuffer(string.length*2); // 2 bytes for each char
            var array = new Uint16Array(buffer);
            for (var i=0, strLen=string.length; i<strLen; i++) {
                array[i] = string.charCodeAt(i);
            }
            return array;
        }
```

Additional Information

For additional questions and comments please contact simplify@ezdrm.com