

EZDRM WOWZA Configuration WOWZA Module



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Introduction

The EZDRM java DRM plugin for Wowza integrates directly with the EZDRM DRM-asa-Service Key API. The current version of the plugin allows you to automatically encrypt:

- EZDRM Universal MPEG DASH streams with both Google Widevine and Microsoft PlayReady with common encryption.
- EZDRM FPS Apple HLS streams with Apple FairPlay Streaming (FPS)
- EZDRM PlayReady Microsoft Smooth Streaming with Microsoft PlayReady

For each stream served by the Wowza server, the plugin will call with DRM Keys corresponding to the ContentID so that each steam uses the same media encryption keys. You can use the EZDRM DRM-as-a-Service Key API to generate CENC Keys and copy the ContentID.

Create DRM key set (ContentID) entries in advance in the EZDRM DRM-as-a-Service Key API for each stream that you will serve using the Wowza server. This is best used for multi-bitrate Synchronized Multimedia Integration Language (SMIL) streaming in addition to using a single DRM Key set per channel.



Installation of the EZDRM Wowza Module Java DRM Plug-in

1. To install the plugin, download the module using this link in a browser:

Http://www.ezdrm.com/downloads/WowzaMod/EzdrmWowzaModule.zip

2. Copy the plugin file EzdrmWowzaModule.jar to the server's 'lib' folder ([installdir]/lib).

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🕑 🍥 🔻 🏦 🕌 « Local Disk (C:) 🕨 Prog	gram Files (x86) 🕨 Wowza Media Systems	 Wowza Streaming Engine 4.7 	.0 ► lib	✓ 🖒 Search lib
4 퉬 Wowza Streaming Engine 4.7.0 \land	Name	Date modified	Туре	Size
applications	▲ azure-storage-2.2.0	4/19/2017 12:51 PM	Executable Jar File	632 KB
🌆 backup	bcprov-jdk15on-154	4/19/2017 12:51 PM	Executable Jar File	3,201 KB
jii bin	▲ commons-lang-2.6	4/19/2017 12:51 PM	Executable Jar File	278 KB
▷ in cont	Commons-langs-3.4	4/19/2017 12:51 PM	Executable Jar File	425 KB
content	EzdrmWowzaModule	2/26/2018 3:50 PM	Executable Jar File	10 KB
	🎒 ງາດວີເເບີ 0.5.4	4/19/2017 12:51 PM	Executable Jar File	231 KB
v examples	🅌 joda-time-2.3	4/19/2017 12:51 PM	Executable Jar File	568 KB
b keye	🌆 log4j-1.2.17	4/19/2017 12:51 PM	Executable Jar File	479 KB
keys - Conv	🍰 slf4j-api-1.6.4	4/19/2017 12:51 PM	Executable Jar File	26 KB
	islf4j-log4j12-1.6.4 🖌	4/19/2017 12:51 PM	Executable Jar File	10 KB
lib	snmp4j-2.4.3	4/19/2017 12:51 PM	Executable Jar File	463 KB
D In Inb-native	snmp4j-agent-2.4.2	4/19/2017 12:51 PM	Executable Jar File	607 KB
logs	🕌 wms-amazonutil	4/19/2017 12:51 PM	Executable Jar File	37 KB
🛛 📔 manager	🔮 wms-ant	4/19/2017 12:51 PM	Executable Jar File	2 KB

3. Restart the server (not just individual applications).



ile Action View	Help					
-	2 🗟 🚺 📷 🕨 🔲 🕪 👘					
Services (Local)	Services (Local)					
	Wowza Streaming Engine 4.7.0	Name	Description	Status	Startup Type	Log ^
		🔍 Windows Connection Mana	Makes auto	Running	Automatic (T	Loc
	Start the service	🔍 Windows Driver Foundation	Creates and		Manual (Trig	Loc
		🔍 Windows Encryption Provid	Windows E		Manual (Trig	Loc
	Description:	🖓 Windows Error Reporting Se	Allows error		Manual (Trig	Loc
	Wowza Streaming Engine 4.7.0	🦓 Windows Event Collector	This service		Manual	Net
		🔍 Windows Event Log	This service	Running	Automatic	Loc
		🔍 Windows Firewall	Windows Fi	Running	Automatic	Loc
		Windows Font Cache Service	Optimizes p	Running	Automatic	Loc
		🖓 Windows Installer	Adds, modi		Manual	Loc
		🖓 Windows Management Inst	Provides a c	Running	Automatic	Loc
		🖓 Windows Modules Installer	Enables inst	_	Manual	Loc
		🖓 Windows Remote Manage	Windows R	Running	Automatic	Net
		Windows Store Service (WS	Provides inf	-	Manual (Trig	Loc
		🔍 Windows Time	Maintains d	Running	Manual (Trig	Loc
		🔍 Windows Update	Enables the	-	Manual (Trig	Loc
		WinHTTP Web Proxy Auto	WinHTTP i	Running	Manual	Loc
		Wired AutoConfig	The Wired	,	Manual	Loc
		WMI Performance Adapter	Provides pen		Manual	Loc
		Workstation	Creates and	Running	Automatic	Net =
		Wowza Streaming Engine 4	Wowza Stre		Automatic (D	Loc
		🔍 Wowza Streaming Engine	Wow Sta	art N	matic	Loc 🗸
		<	III Sto	S ac		>
	Extended Standard		Pa	use		
rt service Wowza St	reaming Engine 4.7.0 on Local Compute	er	Re	sume		
			The second			

4. Once the plugin is installed, it can be configured by editing your application's configuration either through the Web UI, or directly by editing the application's configuration XML file.

Refer to your preferred configuration:

- Configuration Method 1 Using the Web UI
- Configuration Method 2 Editing the Applications XML File



<u>Configuration Method 1</u> – Using the Web UI

Once the module plugin is installed, this method allows the plugin to be configured through the Wowza UI. If you'd prefer to directly edit the application's configuration XML file, skip to <u>this section</u>.

Setting permissions

User accounts can have either administrative or read-only access to Wowza Streaming Engine Manager.

NOTE: Access to the Modules tab is limited to administrators with advanced permissions.

- 1. Sign into Wowza Streaming Engine Manager using your user name and password.
- 2. Streaming Engine Manager, click the **Server** tab and then click **Users** in the contents panel.

Wowza Streaming Engine	🕷 Home 🖵 Server 🗲 App	lications 👻	<
SERVER	Users		
Server Setup			
Server Monitoring	Grant access to Wowza St creating user accounts.	reaming Engine Manager and control permissions to features by	Hide Help »
Virtual Host Monitoring	Users		
Transcoder	+ Add User		
Media Cache	userName	Access Level	Actions
Users	WAdmin	Admin (advanced)	User A
Performance Tuning -		Luit UNS	
		~~~~~~	

- 3. Select the name of the user and click the **Edit pencil icon**.
- 4. Under **Preferences**, click the checkbox to "Allow access to advanced properties and features". Once this is selected, you should see the Modules and Properties tab.)



#### Users > WAdmin

← Return to Users
* = Required field Hide Help >>
You are changing account settings for the signed-in user. After you save the changes, you will be signed-out of the manager and must sign in again.
Password *
Confirm Password *
Access Level
Read-Only Read-Only Read-only users cannot add, edit, or delete items and cannot control the server.
<ul> <li>Administrator</li> <li>Admin users have full access to add, edit, and delete items and can control the server.</li> </ul>
Preferences ✓ Allow access to advanced properties and features Only for expert Wowza Streaming Engine users.
E Save Cancel

5. Click **Save** to update User preferences.

For more information, see 'Manage credentials / Enable access to advanced administrative settings' in the Wowza documentation:

http://www.wowza.com/forums/content.php?625-How-to-get-started-as-a-Wowza-Streaming-Engine-Manager-administrator#signinManager

## Adding the Module in Wowza

Once permissions are set, you are ready to add the module.

- 1. In the manager **Welcome** page, click the **Applications** tab at the top of the page.
- 2. In the **Applications** contents panel, click the name of your application (such as **live** or **vod**).



Wowza Streaming Engine 😽	Home 🖵 Server 🗲 Ap	plications 👻		1	a WAd	dmin 🛛 Help	🕞 Sign Out
	vod			► Test Players	伦 Copy	2 Restart	
Add Application SELECTED APPLICATION vod	Video on Demand Single Sen	Modules					
Monitoring Wowza Player Playback Security SMIL Files DRM	Note: Items on this page Modules Java classes application. The modules application for it to opera	should be configured t that extend an applica are loaded dynamicall te properly.	by advanced users only. tion's functionality. The list below defines an order-d y when the application instance is loaded. The base	dependent list of modu (ModuleCore) module	les to be loade must be includ	d for a given ded by the	
	Name	Description	Fully Qualified Class Name				
VOD APPLICATIONS	base	Base	com.wowza.wms.module.ModuleCo	re			
• vod	logging	Client Logging	com.wowza.wms.module.ModuleClie	entLogging			
	flvplayback	FLVPlayback	com.wowza.wms.module.ModuleFLV	/Playback			

- 3. On the **Modules** tab, click the **Edit** button.
- 4. Click Add

Setup	Properties	Modules	
🖹 Save	Cancel		
odules J	ava classes th he modules a	nat extend an application's f re loaded dynamically when	unctionality. The list below defines the application instance is loaded
odules J oplication. T r it to opera + Add Mod	ava classes the modules a the property.	nat extend an application's f re loaded dynamically when Description	unctionality. The list below defines the application instance is loaded Fully Qualified Clas

- 5. In the Add New Module screen, enter the following:
  - Name: EZDRM
  - **Description:** EZDRM
  - Fully Qualified Class Name: com.ezdrm.wowza.EzdrmWowzaModule



Add New Module	Х
Name *	
EZDRM	
Description *	
EZDRM	
Fully Qualified Class Name *	
com.ezdrm.wowza.EzdrmWowzaModule	
	Cancel + Add

6. Click +Add button.

7. For the changes to take effect, click **Restart Now** to restart the application.

() Saved	II You must rest	art the applicati	ion for changes to take effect.	C Restart Now				
<b>vod</b> Video on Der	nand Single Serve	r or Origin		~	► Test Players	샵 Copy	₽ Restart	窗 Delete
Setup	Properties	Modules						
Note: Item:	s on this page s	hould be config	jured by advanced users only.					

Modules Java classes that extend an application's functionality. The list below defines an order-dependent list of modules to be loaded for a given application. The modules are loaded dynamically when the application instance is loaded. The base (ModuleCore) module must be included by the application for it to operate properly.

e Eult		
Name	Description	Fully Qualified Class Name
base	Base	com.wowza.wms.module.ModuleCore
logging	Client Logging	com.wowza.wms.module.ModuleClientLogging
fivplayback	FLVPlayback	com.wowza.wms.module.ModuleFLVPlayback
EZDRM	EZDRM	com.ezdrm.wowza.EzdrmWowzaModule



## Adding the Properties for the EZDRM Universal Module

Once the module has been added in Wowza, you will need to add Custom Properties for the module.

- 1. In the manager **Welcome** page, click the **Applications** tab at the top of the page.
- 2. In the **Applications** contents panel, click the name of your application (such as **live** or **vod**). Then click on the **Properties** tab.

Wowza Streaming Engine	A Home 🖵 Server 🗲 Applications 🗸
+ Add Application	Vod Video on Demand Single Server or Origin
SELECTED APPLICATION	Setup Properties Modules
Monitoring	Note: Items on this page S ould be configured by advanced user
Wowza Player Playback Security	Quick Links Use the following links to jump to the correct ser

3. Scroll down to the bottom of the Properties window to the **Custom** section. Click the **Edit** button.

Custom Custom properties added by you to extend the functionality of Wowza Streaming Engine software.

Return to top **↑** 



If you can't find the property that you're looking for in the previous sections, click the Edit button and then click the Add Custom Property button on the Custom Property page.



4. Click the **Add Custom Property** button.

<b>vod</b> Video on Dema	and Single Server or Origin			
Setup	Properties Modules			
Save Custom	Cancel	extend the functionality of Wow	rza Streaming Engine software.	
+ Add Cu	stom Property			
Path	Name	Туре	Value	Actions
🖺 Save	Cancel			

5. There are five properties that will be added:

Add Custom Property	х
Path	
/Root/Application	\$
lame *	
username	
уре	
String	\$
alue *	
yourezdrmusername	
	Cancel + Add

- **username:** this is your EZDRM username.
- **password:** this is your EZDRM password.
- **contentId:** specify the contentId for the DRM keys. Refer to the <u>next</u> <u>section</u> for more details on how to generate the contentId.
- **ezdrmUrl:** this is the EZDRM Key API URL.
- **debugFlag:** this will enable logging in the WOWZA logs for troubleshooting and is true or false.



	Path	Name	Туре	Value
1	/Root/Application	username	String	<see above="" note=""></see>
2	/Root/Application	password	String	<see above="" note=""></see>
3	/Root/Application	contentId	String	<see above="" note=""></see>
4	/Root/Application	ezdrmUrl	String	https://wvm.ezdrm.com/ws/Lice
				<u>nselnfo.asmx/GenerateKeys</u>
5	/Root/Application	debugflag	Boolean	<see above="" note=""></see>

Fill in the Path, Name, Type and Value for each Custom Property and click the +Add button to save. You will do this for each of the five entries above.

Setup	Properties	Modules			
🖺 Save	Cancel				
Custom	Custom properti	es added by you to extend the functionality	of Wowza Streaming Eng	jine software.	
+ Add Cu	ustom Property				
Path		Name	Туре	Value	Actions
/Root/App	olication	username	String	Your EZDRM username here	圃
/Root/App	lication	password	String	Your EZDRM password here	创
/Root/App	olication	contentId	String		圓
/Root/App	olication	ezdrmUrl	String	https://wvm.ezdrm.com/ws/LicenseInfo.a	创
/Root/App	olication	debugFlag	Boolean	⊙ True ○ False	圓

7. For the changes to take effect, click **Restart Now** to restart the application.



O Saved	i! You must rest	art the applica	ation for changes to take effect.	CRestart Now				
<b>vod</b> Video on Der	nand Single Serve	r or Oriain		~	► Test Players	ළු Copy	2 Restart	甸 Delete
Setup	Properties	Modules						

Note: Items on this page should be configured by advanced users only.

Modules Java classes that extend an application's functionality. The list below defines an order-dependent list of modules to be loaded for a given application. The modules are loaded dynamically when the application instance is loaded. The base (ModuleCore) module must be included by the application for it to operate properly.

🖋 Edit		
Name	Description	Fully Qualified Class Name
base	Base	com.wowza.wms.module.ModuleCore
logging	Client Logging	com.wowza.wms.module.ModuleClientLogging
flvplayback	FLVPlayback	com.wowza.wms.module.ModuleFLVPlayback
EZDRM	EZDRM	com.ezdrm.wowza.EzdrmWowzaModule



## EZDRM ContentId

Generating a contentId will allow you to encrypt content and have that content share one license. A unique contentId is generated the first time you use this web service. To generate a new ID you will send a blank value for contentId. For additional calls it can be blank for new keys or use an existing contentId.

To request the DRM keys from EZDRM, there are two options, you can call the EZDRM web service in a browser, or you can script this process with curl or other web service calls.

#### Option 1: Request DRM keys using EZDRM Web Service

- Call the EZDRM web service in a browser: <u>https://wvm.ezdrm.com/ws/LicenseInfo.asmx?op=GenerateKeys</u>
- 2. Generate Key values by entering the parameters values and clicking "Invoke".

LicenseInfo							
Click here for a complete list of operations.							
GenerateK	GenerateKeys						
Test							
To test the ope	ration using the HTTP POST protocol, click the 'Invoke' button.						
Parameter Va	alue						
U:							
P:	P:						
C:							
	Invoke						

The parameters are as follows:

Parameter	Description
u	EZDRM username
р	EZDRM password
С	ContentID **optional

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#### 3. The response from EZDRM will look like this:

```
▼<EZDRM xmlns="">
  v<WideVine diffgr:id="WideVine1" msdata:rowOrder="0" diffgr:hasChanges="inserted">
     <ContentID>6IxXXx028xXXXXXXLbg==</ContentID>
     <Key>W5XXXXXXZHxTjhXXXXVw==</Key>
     <KeyHEX>5bXXXXXXXX9191fXXe38XXXXX56bf </KeyHEX>
     <KeyID>WVXXXXXX1iBEXXw+XXXXX==</KeyID>
     <KeyIDGUID>5XXXXXX3-36XX-5XX8-8XX1-10XXXXXXXb</KeyIDGUID>
     <KeyIDHEX>5XXXXX36d85XXXXXXXXXXb24XXXb</KeyIDHEX>
    V<PSSH>
       EhXXXXXXXXXXXXXXX6skGLGXXXXXXXQ6IebXXXZ8kSYMXXXXXXXXXXXXXXXXj3JXXXX==
     </PSSH>
     <ServerURL>https://widevine-dash.ezdrm.com/proxy?pX=XXXXXX</ServerURL>
    v<ServerGet>
      request={"policy": "", "tracks": [ {"type": "SD"}], "content_id": "6IxXXx028xXXXXXXLbg=="}
     </ServerGet>
    ▼<ResponseRaw>
       {"status":"OK","drm":[{"type":"WIDEVINE","system_id":"edef8ba979d64acea3c827dcd51d21ed"}],"tracks":
[{"type":"SD","key_id":"WVXXXXXX1iBEXXw+XXXX==","key":"WVXXXXXX1iBEXXw+XXXX==,"pssh":
[{"drm_type":"WIDEVINE","data":"EhXXXXXXXXXXXX6skGLGXXXXXXXQ61ebXXX28kSYMXXXXXXXXXXXXXXXXXX3J3JXXXX=="}]}]
     </ResponseRaw>
   </WideVine>
  v<PlayReady diffgr:id="PlayReady1" msdata:rowOrder="0" diffgr:hasChanges="inserted">
     <Key>W5XXXXXXZHxTjhXXXXvw==</Key>
     <KeyHEX>5bXXXXXXXX9191fXXe38XXXXX56bf</KeyHEX>
     <KeyIDGUID>5xxxxx3-36xx-5xx8-8xx1-10xxxxxxxb</KeyIDGUID>
   ▼<LAURL>
       https://playready.ezdrm.com/cency/preauth.aspx?pX=XXXXXX
     </LAURL>
     <Checksum> 1Xg+XXXXX0=<//Checksum>
   </PlayReady>
 </EZDRM>
```

## **Option 2: Request DRM keys with curl**

The second option to request DRM keys from EZDRM is to script the process with curl or another web service call.

Using EZDRM's web service, the curl script below retrieves the DRM values from the web service.

curl -v 'http://wvm.ezdrm.com/ws/LicenseInfo.asmx/GenerateKeys?U=EZDRM USERNAME&P=EZDRM PASSWORD&C= """

The parameters are as follows:

Parameter	Description
U	EZDRM username
Ρ	EZDRM password
С	ContentID **optional, for blank pass ""

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Note: Although ContentID is optional you must pass a "" for blank if you do not specify a ContentID.

## The following is returned from the web service:

<ezdrm xmlns=""></ezdrm>							
<widevine diffgr:haschanges="inserted" diffgr:id="WideVine1" msdata:roworder="0"></widevine>							
<contentid><u>6IxXXx0Z8xXXXXXXXXLbg==</u></contentid>							
<key>W5XXXXXXZHxTjhXXXXvw==</key>							
<keyhex>5bXXXXXXXX9191fXXe38XXXXX56bf </keyhex>							
<keyid>WVXXXXXXIiBEXXw+XXXXX==</keyid>							
<keyidguid>5XXXXXX3-36XX-5XX8-8XX1-10XXXXXXXb</keyidguid>							
<keyidhex>5XXXXXX36d85XXXXXXXXXXXb24XXXb</keyidhex>							
<pssh>EhXXXXXXXXXXXXXXXXX6skGLGXXXXXXQ6lebXXXZ8kSYMXXXXXXXXXXXXXXXXXj3JXXXX==</pssh>							
<serverurl>https://widevine-dash.ezdrm.com/proxy?pX=XXXXXX</serverurl>							
<serverget>request={"policy": "", "tracks": [ {"type": "SD"}], "content_id": "6lxXXx0Z8xXXXXXXXXLbg=="}</serverget>							
et>							
<responseraw></responseraw>							
{"status":"OK","drm":[{"type":"WIDEVINE","system_id":"edef8ba979d64acea3c827dcd51d21ed"}],"tracks":[{"type":"SD","key_id"							
:" WVXXXXXXIiBEXXw+XXXXX==","key":" W5XXXXXXZHxTjhXXXXxvw==","pssh":[{"drm_type":"WIDEVINE","data":"EhXXXXXXXX							
XXXXXXXXX6skGLGXXXXXXQ6lebXXXZ8kSYMXXXXXXXXXXXXXXXj3JXXXX=="}]}]							
<playready diffgr:haschanges="inserted" diffgr:id="PlayReady1" msdata:roworder="0"></playready>							
<key>W5XXXXXXZHxTjhXXXXvw==</key>							
<keyhex>5bXXXXXXXX9191fXXe38XXXXX56bf</keyhex>							
<keyidguid>5XXXXXX3-36XX-5XX8-8XX1-10XXXXXXXb</keyidguid>							
<laurl>https://playready.ezdrm.com/cency/preauth.aspx?pX=XXXXXX</laurl>							
<checksum>1Xq+XXXXX0=</checksum>							



## Adding the Properties for the EZDRM Apple FairPlay Streaming Module

## Wowza Server Settings for FPS

For Apple FairPlay Streaming, you will need to update property settings in the WOWZA Streaming Engine Manager. Apple FairPlay requires **cupertinoExtXVersion** to be at Level **7**.

- 1. In the manager **Welcome** page, click the **Applications** tab at the top of the page.
- 2. In the **Applications** contents panel, click the name of your application (such as **live** or **vod**).



3. On the live application page **Properties** tab, and under **HTTP Streamers Cupertino Settings** click the **Edit** button.



/od						► Test Players	伦 Copy	C Restart	⊞ De
leo on Der	mand Single Serve	r or Origin							
Setup	Properties	Modules							
ote: Item	s on this page s	hould be config	jured by adva	nced users only.					
uick Li	nks Use the fo	llowing links to	jump to the c	orrect section on th	is page.				
HTTP	Streamers Cupe	rtino Settings	MediaCast	ter Stream Monitor	RTP Jitter Buffer	RTSP/RTP Window Ti	tle Stream	Recorder Default	S
Stream	s Closed C	aptions Cu	stom						
	roomore Cu	nortino Cott	ingo Dagad	tion for controlling A		an adde like a nad fa akuraa			
	reamers Cu	peruno Seu	Ings Propert	ties for controlling A	pple HLS playlist com	idationity and teatures.			
TTP St						,,,			
✓ Edit									
Edit Enabled	Name						Value		
Edit Enabled	Name	Musica					Value		•

4. To enable a property, select the **Enabled** check box for the property. Update the **cupertinoExtXVersion** value to 7. (The default for this value is 3.) This is done to support Apple FairPlay Streaming.

Wowza Streaming Engine	🎢 Home 🖵 Ser	ver 🖕 Applications 👻	🚢 WAdmin 🛛 Help G
+ Add Application	<b>vod</b> Video on Den	nand Single Server or Origin	
SELECTED APPLICATION	Setup	Properties Modules	
Monitoring Wowza Player	Save HTTP St	Cancel reamers Cupertino Settings Properties for controllin	ig Apple HLS playlist compatibility and features.
SMIL Files	Enabled	Name	Value
DRM LIVE APPLICATIONS	۵	cupertinoExtXVersion	7 default: 3
Ive VOD APPLICATIONS		cupertinoFloatingPointDurations	○ True ○ False default: false
		cupertinoCodecStringFormatId	default: 1
	•	cupertinoAutoCreateMultibitratePlaylist	⊖ True ⊖ False

5. Click **Save** to update the value, and then restart the application when prompted to apply the changes.



## **Module Properties for FPS**

Once the module has been added in Wowza and the cupertinoExtXVersion set, you will need to add Custom Properties for the FPS module.

- 1. In the manager **Welcome** page, click the **Applications** tab at the top of the page.
- 2. In the **Applications** contents panel, click the name of your application (such as **live** or **vod**). Then click on the **Properties** tab.

Wowza Streaming Engine	📽 Home 🖵 Serve	er 🖕 Applications 👻
+ Add Application	vod Video on Demai	nd Single Server or Origin
SELECTED APPLICATION	Setup	Properties Modules
Monitoring Wowza Player	Note: Items o	In this page should be configured by advanced use
Playback Security	Quick Link	S Use the following links to jump to the correct sector

3. Scroll down to the bottom of the Properties window to the **Custom** section. Click the **Edit** button.



4. Click the Add Custom Property button.



<b>vod</b> Video on Derr	nand Single Server or Origin			
Setup	Properties Module			
Save	Cancel Custom properties added	by you to extend the functionality of	Wowza Streaming Engine softw	vare.
Path	Name	Туре	Value	Actions
🖹 Save	Cancel			

5. There are six properties that will be added (if they do not already exist in Custom properties):

Add Custom Property	х
Path	
/Root/Application	\$
Name *	
username	
Туре	
String	\$
Value *	
yourezdrmusername	
	Cancel + Add

- **username:** this is your EZDRM username
- **password:** this is your EZDRM password
- **FPScontentId:** specify the FPS AssetID for the DRM keys. Refer to the <u>next</u> <u>section</u> for more details on how to generate the FPScontentId.
- ezdrmFPSUrL: this is the EZDRM Key API URL
- **cupertinoEncryptionAPIBased:** this is a Boolean value that will be set to true.
- **debugFlag:** this will enable logging in the WOWZA logs for troubleshooting and is true or false



	Path	Name	Туре	Value
1	/Root/Applicatio	username	String	<see above="" note=""></see>
	n			
2	/Root/Applicatio	password	String	<see above="" note=""></see>
	n			
3	/Root/Applicatio	FPScontentId	String	<see above="" note=""></see>
	n			
4	/Root/Applicatio	ezdrmFPSUrl	String	http://fps.ezdrm.com/Api/ke
	n			<u>ys</u>
5	/Root/Applicatio	cupertinoEncryptio	Boolean	<see above="" note=""></see>
	n	nAPIBased		
6	/Root/Applicatio	debugflag	Boolean	<see above="" note=""></see>
	n			

 Fill in the Path, Name, Type and Value for each Custom Property and click the +Add button to save. You will do this for each of the six entries above, if they do not already exist in Custom properties.

vod Video on Demand Single Server o	or Origin			
Setup Properties	Modules			
Save Cancel				
Custom Custom propertie	es added by you to extend the functionality of W	owza Streaming Er	ngine software.	
+ Add Custom Property				
Path	Name	Туре	Value	Actions
/Root/Application	username	String	Your EZDRM username here	圓
/Root/Application	password	String	Your EZDRM password here	圓
/Root/Application	debugFlag	Boolean	⊙ True ○ False	圓
/Root/Application	ezdrmFPSUrl	String	http://fps.ezdrm.com/Api/keys	圓
/Root/Application	cupertinoEncryptionAPIBased	Boolean	⊙ True ○ False	圓
/Root/Application	FPSContentID	String		圓
Save Cancel				



#### 7. For the changes to take effect, click **Restart Now** to restart the application.

O Saved	d! You must rest	art the application	or changes to take effect.	C Restart Now				
<b>vod</b> Video on Der	mand Single Serve	r or Origin		へ	► Test Players	අ Copy	2 Restart	甸 Delete
Setup	Properties	Modules						
Note: Item	s on this page s	hould be configure	I by advanced users only.					

Modules Java classes that extend an application's functionality. The list below defines an order-dependent list of modules to be loaded for a given application. The modules are loaded dynamically when the application instance is loaded. The base (ModuleCore) module must be included by the application for it to operate properly.

Name	Description	Fully Qualified Class Name
base	Base	com.wowza.wms.module.ModuleCore
logging	Client Logging	com.wowza.wms.module.ModuleClientLogging
flvplayback	FLVPlayback	com.wowza.wms.module.ModuleFLVPlayback
EZDRM	EZDRM	com.ezdrm.wowza.EzdrmWowzaModule



## EZDRM FPS ContentID

Generating a ContentID will allow you to encrypt content and have that content share one license. FPS generates a unique ContentID, called **AssetID**. This ID is generated the first time you use the API.

To request the DRM keys from EZDRM to package the media, there are two options, you can call the EZDRM Key Servers API, or you can script this process with curl or other web service calls.

#### **Option 1: Request DRM keys using EZDRM Key Servers API**

- 1. To request the DRM keys through Advanced REST client (ARC) API, open a session and select HTTP Request. If you do not have the ARC plug-in for Chrome, see <u>Appendix 1</u> for instructions.
- 2. Change the Method dropdown to **POST**.

	Request	
HTTP request	GET	Request URL https://
Socket	POST	~
History ^	PUT	Headers
Today		

3. Enter the Request URL below updated with your username and password and click **Send**:

http://fps.ezdrm.com/api/keys?u=<u>USERNAME&p=PASSWORD</u>

The parameters are as follows:

Parameter	Description
u	EZDRM username
р	EZDRM password



HTTP request	Method Request URL POST + http://fps.ezdrm.com/api/keys/AssetID?u=USERNAME&p=PASSWORD	SEND
Socket	Parameters A	
History ^	Headers Body	Variables
Today		
POST http://fps.ezdrm.com/api/keys/AssetID?u		
Monday, February 26, 2018	Header name Header value	×
GET http://fps.ezdrm.com/api/keys/1fdfc660-c7	ADD HEADER	
POST http://fps.ezdrm.com/api/keys?u=cpix@e	A Headers are valid	Headers size: bytes
Friday, February 23, 2018	200 OK 160.20 ms	DETAILS 🗸
POST http://fps.ezdrm.com/api/keys?u=cpix@e		
Saved ^		
Save a request and recall it from here	<pre> FairPlay&gt;</pre>	B yUri>
Projects 🗸		

4. The following is an example of the response:

<fairplay></fairplay>
<assetid>1XXXXXX0-c7ed-4XXX-b15c-XXXXXXXX225</assetid>
<pre><keyhex>D230XXXXXXXXXXX17300XXXXXXXX4EABXXXXXXX44ABXXXXXX4349271XXXXXB</keyhex></pre>
<keyid>0jXXXXXXXXXXXXXWDRjUrJ/XXXXXXXXXXQ0knFXXX=</keyid>
<keyuri>skd://fps.ezdrm.com/;1XXXXXX0-c7ed-4XXX-b15c-XXXXXXXXa25</keyuri>
<pre><licensesurl>http://fps.ezdrm.com/api/licenses</licensesurl></pre>
<supportedfpsversions>1</supportedfpsversions>

## The **AssetID** above will be the **FPScontentId**.



## **Option 2: Request DRM keys with curl**

Using EZDRM's web service, the curl script below retrieves the DRM values from the web service.

curl -X POST 'http://fps.ezdrm.com/api/keys?U=<u>Username</u>&P=<u>Password</u>' -d ' '

*Note: there is a space between the single quotes at the end of the line.* 

The parameters are as follows:

Parameter	Description
U	EZDRM username
Р	EZDRM password

#### The following is returned:

<fairplay></fairplay>
<assetid>1XXXXXX0-c7ed-4XXX-b15c-XXXXXXXXa25</assetid>
<keyhex>D230XXXXXXXXXXXX17300XXXXXXXXXX4EABXXXXXXXXXXXX4349271XXXXXB</keyhex>
<keyid>0jXXXXXXXXXXWDRjUrJ/XXXXXXXXXXXkQ0knFXXX=</keyid>
<keyuri>skd://fps.ezdrm.com/;1XXXXXX0-c7ed-4XXX-b15c-XXXXXXXXa25</keyuri>
<licensesurl>http://fps.ezdrm.com/api/licenses</licensesurl>
<supportedfpsversions>1</supportedfpsversions>

## The **AssetID** above will be the **FPScontentID**.



# <u>Configuration Method 2</u> – Editing the Application's XML File

Once the module plugin is installed, this method allows the plugin to be configured directly by editing the application's configuration XML file. If you'd prefer to configure the module settings through the Wowza UI, skip to <u>this section</u>.

1. The application's configuration file is located in **[install-dir]/conf** folder.



2. Choose either the **[install-dir]/conf/vod** or **[install-dir]/conf/live** folder (Edits are the same for either).



3. Click to open the **Application** XML document.



## Adding the Module

To add the EZDRM module, add the following lines to **Modules** section:

```
- <Module>
        <Name>EZDRM</Name>
        <Description>EZDRM</Description>
        <Class>com.ezdrm.wowza.EzdrmWowzaModule</Class>
        </Module>
```

There are three entries are:

- Name: EZDRM
- **Description:** EZDRM
- Fully Qualified Class Name: com.ezdrm.wowza.EzdrmWowzaModule

The XML should look like this with the EZDRM Module added:

```
    <Modules>

   - <Module>
        <Name>base</Name>
        <Description>Base</Description>
        <Class>com.wowza.wms.module.ModuleCore</Class>
     </Module>
   - <Module>
        <Name>logging</Name>
        <Description>Client Logging</Description>
        <Class>com.wowza.wms.module.ModuleClientLogging</Class>
     </Module>
   - <Module>
        <Name>flvplayback</Name>
        <Description>FLVPlayback</Description>
        <Class>com.wowza.wms.module.ModuleFLVPlayback</Class>
    </Module>
   - <Module>
        <Name>EZDRM</Name>
        <Description>EZDRM</Description>
        <Class>com.ezdrm.wowza.EzdrmWowzaModule</Class>
     </Module>
 </Modules>
```



## Adding the Properties for the EZDRM Universal Module

There are five properties that will be added to the **Properties** section:

- **username:** this is your EZDRM username.
- **password:** this is your EZDRM password.
- **contentId:** specify the contentId for the DRM keys. Refer to the <u>this section</u> for more details on how to generate the contentId.
- **ezdrmUrl:** this is the EZDRM Key API URL.
- **debugFlag:** this will enable logging in the WOWZA logs for troubleshooting and is true or false.

	Path	Name	Туре	Value
1	/Root/Application	username	String	<see above="" note=""></see>
2	/Root/Application	password	String	<see above="" note=""></see>
3	/Root/Application	contentId	String	<see above="" note=""></see>
4	/Root/Application	ezdrmUrl	String	https://wvm.ezdrm.com/ws/Lice
				<u>nselnfo.asmx/GenerateKeys</u>
5	/Root/Application	debugflag	Boolean	<see above="" note=""></see>

Here are the lines to add to the **Properties** section:

Properties defined here will be added to the IApplication.getProperties() and IApplicationInstance.getProperti
es() collections>
- <properties></properties>
- <property></property>
<name>username</name>
<value>EZDRM Username here</value>
<type>String</type>
- <property></property>
<name>password</name>
<value>EZDRM Password here</value>
<type>String</type>
- <property></property>
<name>contentId</name>



<value>EZDRM ContentID here</value>
<type><b>String</b></type>
- <property></property>
<name>ezdrmUrl</name>
<value>https://wvm.ezdrm.com/ws/LicenseInfo.asmx?op=GenerateKeys</value>
<type><b>String</b></type>
- <property></property>
<name>debugFlag</name>
<value>true</value>
<type><b>Boolean</b></type>

#### The XML should look like this with the EZDRM Properties added:

- <Properties</p>





## Adding the Properties for the EZDRM Apple FairPlay Streaming Module

## Wowza Settings for FPS

For Apple FairPlay Streaming, you will need to update the HTTP Streamer properties. Apple FairPlay requires **cupertinoExtXVersion** to be at Level **7**. The default value is Level 3.

Update the XML to look like this:

-	< <u>MediaWriter&gt;</u>
	loaded by this applications>
	<properties> </properties>
-	<livestreampacketizer></livestreampacketizer>
	Properties defined here will override any properties defined in conf/LiveStreamPacketizers.xml for any</th
	LiveStreamPacketizers loaded by this applications>
	<pre><properties> </properties></pre>
-	<httpstreamer></httpstreamer>
	Properties defined here will override any properties defined in conf/HTTPStreamers.xml for any HTTPStreamer</th
	loaded by this applications>
	- <properties></properties>
	- <property></property>
	<name>cupertinoExtXVersion</name>
	<value>7</value>
	<type>Integer</type>
-	<manager></manager>
	Properties defined are used by the Manager
	<properties> </properties>

## **Module Properties for FPS**

Once the module has been added in the XML file and the cupertinoExtXVersion set, you will need to add Custom Properties for the FPS module.

There are six properties that will be added (if they do not already exist in Custom properties):

- **username:** this is your EZDRM username
- **password:** this is your EZDRM password
- **FPScontentId:** specify the FPS AssetID for the DRM keys. Refer to <u>this section</u> for more details on how to generate the FPScontentId.
- ezdrmFPSUrI: this is the EZDRM Key API URL
- **cupertinoEncryptionAPIBased:** this is a Boolean value that will be set to true.
- **debugFlag:** this will enable logging in the WOWZA logs for troubleshooting and is true or false



	Path	Name	Туре	Value
1	/Root/Applicatio	username	String	<see above="" note=""></see>
	n			
2	/Root/Applicatio	password	String	<see above="" note=""></see>
	n			
3	/Root/Applicatio	FPScontentId	String	<see above="" note=""></see>
	n			
4	/Root/Applicatio	ezdrmFPSUrl	String	http://fps.ezdrm.com/Api/ke
	n			<u>ys</u>
5	/Root/Applicatio	cupertinoEncryptio	Boolean	<see above="" note=""></see>
	n	nAPIBased		
6	/Root/Applicatio	debugflag	Boolean	<see above="" note=""></see>
	n			

## Here are the lines to add to the **Properties** section:

```
- <Property>
       <Name>username</Name>
       <Value>EZDRM Username here</Value>
       <Type>String</Type>
  </Property>
- <Property>
       <Name>password</Name>
       <Value>EZDRM Password here</Value>
       <Type>String</Type>
   </Property>
- <Property>
       <Name>ezdrmFPSUrl</Name>
       <Value>http://fps.ezdrm.com/Api/keys</Value>
       <Type>String</Type>
   </Property>
- <Property>
       <Name>cupertinoEncryptionAPIBased</Name>
       <Value>true</Value>
       <Type>Boolean</Type>
   </Property>
- <Property>
```



<name>FPSContentID</name>	
<value>EZDRM FPS AssetID here</value>	
<type><b>String</b></type>	
- <property></property>	
<name>debugFlag</name>	
<value>true</value>	
<type><b>Boolean</b></type>	

#### The XML should look like this with the EZDRM FPS Properties added:





# Appendix 1 – Installing ARC Plug-in

- a. To install the Advanced REST client (ARC) plug-in for Chrome in order to call the EZDRM Key Servers API, search for "Advanced REST client" using the Google search engine.
- b. Click the "Advanced REST client Chrome Web Store" link.

Google	advanced rest client	<b>ų</b> q				
	All Videos News Images Shopping More	Settings Tools				
	About 2,280,000 results (0.31 seconds) Advanced REST client - Chrome Web Store https://chrome.google.com//advanced-rest-client/hgmloofd/bffdnphfgcellkdfbfbjeloo  * ***** Rating: 4.5 - 12,213 votes - Free - Chrome - Developer Feb 4, 2018 - THIS APPLICATION IS DEPRECATED BY GOODE. Please, install desktop client from https://intell advancedrestclient.com A better Abr testing tool! Save your time with the easiest API testing tool out there. No complicated forms and scripts. Easy to use yet very powerful. The only REST client that makes					
	Advanced REST client - Chrome Web Store https://chrome.google.com//advanced-rest-client/hgmloofd ***** Rating: 4.5 - 12,213 votes - Free - Chrome - Developer Feb 4, 2018 - THIS APPLICATION IS DEPRECATED BY GOOGLE. Ple- https://metall.advancedrestclient.com A better API testing tool! Sav testing tool out there. No complicated forms and scripts. Easy to us client that makes	dliffdnphfgcellkdfbfbjeloo • ease, install desktop client from ive your time with the easiest API ise yet very powerful. The only <b>REST</b>				

c. Click on the **+Add to Chrome** button to install the plug-in.

***	★★ (12213) Extensions	1,150,924 users			
OVERVIEW	REVIEWS	SUPPORT	RELATED		
• • • • •					
• • •					Compatible with your device
Request	Request		8 =		
Socket	> Request URL			:	The web developers helper program
Projects				requests.	
Saved	GET O POST O PUT O	DELETE Other methods *			
History	Raw headers	Headers form	Predefined sets		GOOGLE.
import / export					Please, install desktop client from https://install.advancedrestclient.com



d. Click the **Add app** button to confirm installation.



e. Open the plug-in by clicking the ARC app button.



Return to <u>Apple FairPlay Streaming</u> section to continue instructions for calling the EZDRM Key servers API.