

EZDRM WisePlay Keys Guide

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Introduction

The base CPIX URL for EZDRM WisePlay is shown below:

<https://cpix.ezdrm.com/KeyGenerator/cpix.aspx?k=KeyID&u=username&p=password&c=resourcename>

The following is the XML return for the test URL above (values returned are defined in the next sections):

This XML file does not appear to have any style information associated with it. The document tree is shown below.

```
<?xml version="1.0" encoding="utf-8" standalone="no" ?>
<cpix:CPiX xmlns:cpix="urn:dashif:org:cpix" xmlns:pskc="urn:ietf:params:xml:ns:keyprov:pskc" id="1">
  <cpix:ContentKeyList>
    <cpix:ContentKey kid="77794" systemId="909a99b6" explicitIV="d3INE" jQztg="">
      <cpix:Data>
        <pskc:Secret>
          <pskc:PlainValue>7si|...:nrQ==</pskc:PlainValue>
        </pskc:Secret>
      </cpix:Data>
    </cpix:ContentKey>
  </cpix:ContentKeyList>
  <cpix:DRMSysList>
    <cpix:DRMSysSystem kid="77794" systemId="909a99b6" systemId="edef8ba9-79d6-4ace-a3c8-27cd51d21ed">
      <cpix:PSSH>AAAAAdnBzc2gAAAAA7e+LqXnlvS6jyCtC1R0h7|hoZURUvM02HTREchtKcVp0Zz09IiivdHjY2tzIjpbI1NEI119Kg3TRA==</cpix:PSSH>
    </cpix:DRMSysSystem>
    <cpix:DRMSysSystem kid="77794" systemId="909a99b6" systemId="9a04f079-9840-4286-ab92-e65be0885f95">
      <cpix:PSSH>AAAAADnBzc2gAAAAAmgTweZhaQoarkuZ4IhACIAAAB0AHQcAA6ACBALwBzAGHAaB1AG0AYQBzAC4AbQBPAGfAcgBvAHfAbwBm4HQALgBj4G
      <cpix:ContentProtectionData>P6IzcH16cH3vIHhtbG
      </cpix:ContentProtectionData>
    </cpix:DRMSysSystem>
    <cpix:DRMSysSystem kid="77794" systemId="909a99b6" systemId="94ce86fb-07ff-4f43-adb8-93d2fa968ca2">
      <cpix:URIExtXKey>c2tk018v2nZDUSLWjHZDct0081Ytku0NE50M12</cpix:URIExtXKey>
    </cpix:DRMSysSystem>
    <cpix:DRMSysSystem kid="77794" systemId="909a99b6" systemId="3d5e6d35-9b9a-41e8-b843-dd3c6e72c42c">
      <cpix:PSSH>AAAAAq3Bzc2gAAAAAPVstNZuQe1AQ908bnLEBeejAS1iwIzW5zY2h1bwE101JDRU5DI1iwa21kcyI6hy30emHzT1R5a1pq5Xh0eod6TkdRiU9X5M
    </cpix:DRMSysSystem>
  </cpix:DRMSysList>
</cpix:CPiX>
```

CPIX Parameters

The CPIX parameters are as follows using the sample URL below:

<https://cpix.ezdrm.com/KeyGenerator/cpix.aspx?k=ebXXXXXX-abXX-4XX4-8X6c-XXXXaXXfXXXX&u=username&p=password&c=resourcename>

Parameter	Description
k=	Key ID value (client generated) in GUID format
u=	Username
p=	Password
c=	Content Resource ID (such as a stream name or media asset name)*

* To generate a GUID for the k value, you can use a GUID generator like the one found here: <https://www.guidgenerator.com/>.

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 https://cpix.ezdrm.com/keygenerator/cpix.aspx?k=kid&u=username&p=password&c=resourcename
```

WisePlay DRM

Key Value Definitions

This XML file does not appear to have any style information associated with it. The document tree is shown below.

```
<cpix:CPIX xmlns:cpix="urn:dashif:org:cpix" xmlns:pskc="urn:ietf:params:xml:ns:keyprov:pskc" id="1">
  <cpix:ContentKeyList>
    <cpix:ContentKey kid="77794" 9a99b6" explicitIV="d31N" qZtg==">
      <cpix:Data>
        <pskc:Secret>
          <pskc:PlainValue>7sigIXXXXvSN0aXXXXNrQ==</pskc:PlainValue>
        </pskc:Secret>
      </cpix:Data>
    </cpix:ContentKey>
  </cpix:ContentKeyList>
  <cpix:DRMSystemList>
    <cpix:DRMSystem kid="77794d" 909a99b6" systemId="edef8ba9-79d6-4ace-a3c8-27cdc51d21ed">
      <cpix:PSSH>AAAAAdnBzc2gAAAAA7e+LqXnW5s6jyCfc1R0h7QA...09IiwidHjHy2tzIjpbI1NEI119KgJTRA==</cpix:PSSH>
    </cpix:DRMSystem>
    <cpix:DRMSystem kid="77794c" 909a99b6" systemId="9a04f079-9840-4286-ab92-e65be0885f95">
      <cpix:PSSH>AAADbnBzc2gAAAAAmgTweZhaQoarkuZb4Ihf1QA...jAYQ8zAC4AbQ8pAGMAGcBvAHWAwb8mAHQALgBjAG...rk1BSUFcNEFHfEF1QU11QHnQVBRQh1BR2dBZEFCHfIQ...
      <cpix:ContentProtectionData>PG1zchI6cHJvIHhtbG5...
    </cpix:ContentProtectionData>
    </cpix:DRMSystem>
    <cpix:DRMSystem kid="77794d" 909a99b6" systemId="94ce86fb-07ff-4f43-adb8-93d2fa968ca2">
      <cpix:URIExtKey>c2tk0I8vZnBzLr...tOD81YtkvOWE50NI2</cpix:URIExtKey>
    </cpix:DRMSystem>
    <cpix:DRMSystem kid="77794d" 909a99b6" systemId="3d5e6d35-9b9a-41e8-b843-dd3c6e72c42c">
      <cpix:PSSH>AAAAq3Bzc2gAAAAAPV5tN...aejA5Iiw1Zm5zY2h1bWV10iJDRU50Iiw1a21kcyI6MyJ0emMzT1RSa1pqSXh0emd6TkDRMU9XS...
    </cpix:DRMSystem>
  </cpix:DRMSystemList>
</cpix:CPIX>
```

- **systemId**: WisePlay System ID - 3d5e6d35-9b9a-b843-dd3c6e72c42c
- **key_id**: The **kid** used for encryption (also known as KID); Base 64 encoded with no dashes.
- **key**: The DRM content encryption key (128 bit key); Base 64 encoded.

For the **key** value use the **pskc:Secret key** value and decode the Plain Value tag from Base 64 to HEX format in lowercase (no dashes). An example decoder can be found at:

https://tomeko.net/online_tools/base64.php?lang=en

pskc:Secret key (Base 64) = 7sigIXXXXvSN0aXXXXNrQ==



(KeyHEX) = eec8aXXXX5360XXXX4c1d92ca5570dad

- **PSSH** – The modular specific protection system specific header (PSSH) data for the encryption process; Base 64 encoded.

Decode the **PSSH** from Base 64 to HEX format. An example decoder can be found at: https://tomeko.net/online_tools/base64.php?lang=en

PSSH (Base 64) =

AAAAq3Bzc2gAAAAAPV5tNZuaQei4O908bnLELAAAAlt7ImNvbnRlb
nRJRCI6llpETnXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXiwiZW5zY2hIbWEiOijDRU5DIiwia2lkcyI6WyJOemMzT1RSa1pqS
XhOemd6TkdrMU9XSmhaRGM0TUdWaE9UOTVZVGs1WWpZPSJdLC
J2ZXJzaW9uIjoiVjEuMCJ9



PSSH (KeyHEX) =

000000ab70737368000000003d5e6d359b9a41e8b843dd3c6e72c42c0
000008b7b22636f6e74656e744944223a225a444e73546a686f5aXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX43222c226b696473223a5
b224e7a63334f54526b5a6a49784e7a677a4e4751314f574a685a4463
344d4756684f54413559546b35596a593d225d2c2276657273696f6e22
3a2256312e30227d




WisePlay – Raw Key Format

The example raw key format for WisePlay DRM:

```
packager-win.exe in=BigBuckBunny_320x180_Frag.mp4,stream=audio,output=audio.mp4,drm_label=AUDIO in=BigBuck
Bunny_320x180_Frag.mp4,stream=video,output=video.mp4,drm_label=HD
--enable_raw_key_encryption
--keys label=AUDIO:key_id=77794dfXXX34d59XXX80ea909a99b6:key=eec8aXXX5360XXX4c1d92ca5570dad,label=HD:k
ey_id=77794dfXXX34d59XXX80ea909a99b6:key=eec8aXXX5360XXX4c1d92ca5570dad --pssh 000000ab70737368000000
03d5e6d359b9a41e8b843dd3c6e72c42c000008b7b22636f6e74656e744944223a225a444e73546a686f5aXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXX43222c226b696473223a5b224e7a63334f54526b5a6a49784e7a677a4e4751314f574a685a4463344d4756684f
54413559546b35596a593d225d2c2276657273696f6e223a2256312e30227d
--protection_systems CommonSystem
--protection_scheme cenc
--mpd_output sample-wiseplay.mpd
```

```
C:\Users\YES101\Downloads>packager-win.exe in=BigBuckBunny_320x180_Frag.mp4,stream=audio,output=audio.mp4,drm_label=AUDIO in=BigBuckBunny_320x180_Frag.mp4,stream=video,output=video.mp4,drm_label=HD --en
able_raw_key_encryption --keys label=AUDIO:key_id=77794df217834d59b8d788ea909a99b6:key=eec8a022f536053d4c1d92ca5570dad,label=HD:key_id=77794df217834d59b8d788ea909a99b6:key=eec8a
dad --pssh 000000ab707373680000000003d5e6d359b9a41e8b843dd3c6e72c42c000008b7b22636f6e74656e744944223a225a444e73546a686f5aXXXXXXXXXXXXXXXXX43222c226b696473223a5b224e7a63334f54526b5a6a49784e7a677a4e4751314f574a685a4463344d4756684f
3222c226b696473223a5b224e7a63334f54526b5a6a49784e7a677a4e4751314f574a685a4463344d4756684f54413559546b35596a593d225d2c2276657273696f6e223a2256312e30227d
nSystem --mpd_output sample-wiseplay.mpd
[0622/074332:INFO:demuxer.cc(88)] Demuxer::Run() on file 'BigBuckBunny_320x180_Frag.mp4'.
[0622/074332:INFO:demuxer.cc(100)] Initialize Demuxer for file 'BigBuckBunny_320x180_Frag.mp4'.
[0622/074336:INFO:single_segment_segmenter.cc(107)] Update media header (movv) and rewrite the file to 'video.mp4'.
[0622/074336:INFO:mp4_muxer.cc(177)] MP4 file 'video.mp4' finalized.
[0622/074336:INFO:single_segment_segmenter.cc(107)] Update media header (movv) and rewrite the file to 'audio.mp4'.
[0622/074336:INFO:mp4_muxer.cc(177)] MP4 file 'audio.mp4' finalized.
Packaging completed successfully.
```

Output example:

 audio.mp4	6/22/2021 7:43 AM	MP4 File	11,989 KB
 sample-wiseplay.mpd	6/22/2021 7:43 AM	MPD File	3 KB
 video.mp4	6/22/2021 7:43 AM	MP4 File	51,495 KB

Testing Playback – ExoPlayer App

Use ExoPlayer App found at <https://github.com/HMS-Core/hms-wiseplay-demo>

Update the following sample lines as follows:



```

1  [
2  {
3      "name": "Wiseplay Sample",
4      "samples": [
5          {
6              "name": "wiseplay dash cenc",
7              "uri": "https://eu-dev.ezdrm.com/sample/dev/001/hu-wiseplay.mpd",
8              "drm_scheme": "wiseplay",
9              "drm_license_url": "https://wiseplay.ezdrm.com/"
10         }
11     ]
12 }

```

```

{
  "name": "wiseplay dash cenc",
  "uri": "<<URI_TO_sample-wiseplay.mpd>>",
  "drm_scheme": "wiseplay",
  "drm_license_url": "https://wiseplay.ezdrm.com"
},

```


Additional Information

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