RTPParser Script for Cameras and Doorbells

User Guide

November 2018

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Introduction

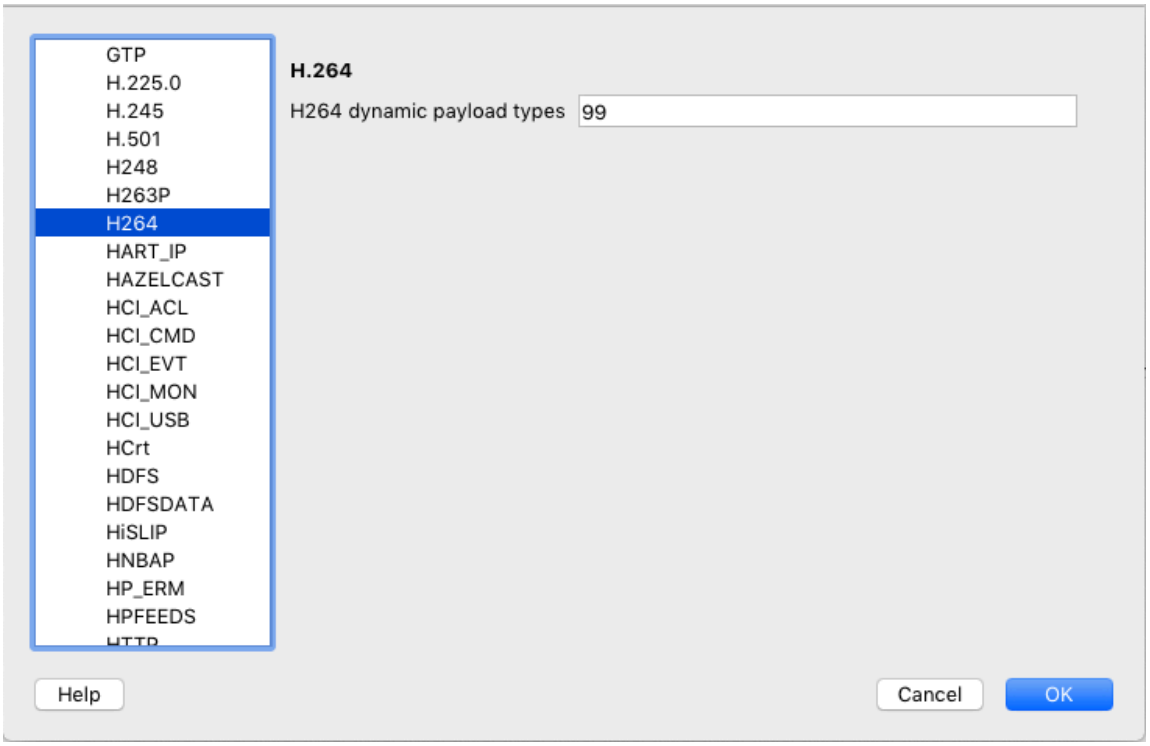
This document describes how to download and use the RTPParser script to validate IP video/audio streams and the accessory's RTP implementation (e.g. packet structure, frame rate) to ensure that they adhere to the specification required to correctly display on iOS devices.

Download Instructions

To download the prerequisites and configure the settings for this tool, please perform the following steps:

1. Download and install Wireshark: macOS 10.6 and later Intel 64-bit .dmg (https://2.na.dl.wireshark.org/osx/Wireshark%202.6.4%20Intel%2064.dmg).

2. Launch Wireshark and navigate to Wireshark>Preferences>Protocols>H264 and configure "H264 dynamic payload types" to "99."



3. Download and install Xcode: https://developer.apple.com/xcode/.

4. Launch Xcode and allow installation of additional components.

5. Download and install "pip." In terminal run:

```
$ curl https://bootstrap.pypa.io/get-pip.py -o get-pip.py
$ sudo python get-pip.py
```

6. Download and install “pyshark.” In terminal run:

```
$ git clone https://github.com/KimiNewt/pyshark-legacy
$ cd pyshark-legacy/src/
$ sudo python setup.py install
$ Xcode-select --install
$ sudo pip install biplist
$ sudo pip install termcolor
```

How to gather pcap logs using HAT

1. Download and launch the latest version of HAT. This is available in the Certification Tools section of the MFi Portal Document Center.

2. In the bottom-left section of HAT click the “+” and choose “Create IP Controller.”

3. In the top-left section of HAT select “Controller 1” under “IP Controllers.”

4. Under “Discovery” click “Start” and allow HAT a moment to discover the accessory.

5. In the top-left section of HAT under “Controller 1” click on the IP Camera that will be tested.

6. Under “Pairing” click “Start Pairing” and enter the setup code then press enter.

7. Once pairing is complete click “Discover” under the “Summary” section of the accessory.

8. In the left column of the accessory in HAT click on “Camera RTP Stream Management Service.”

9. Set the resolution config to a supported resolution and frame rate by using the drop down menu in “Select Initial Configuration”.

10. Set the encryption to “None” under “Select Crypto Suite” and click “Negotiate.”

11. Click “Start Streaming” and begin a timer for 120 seconds.

12. After 120 seconds has passed click “Stop Streaming.”

13. In the bottom-right section of HAT click “Trace”.

14. After the Trace opens, navigate to File>Save As, and save the HAT Trace locally.

Note: You may need to quit and relaunch HAT after each iteration of this test.

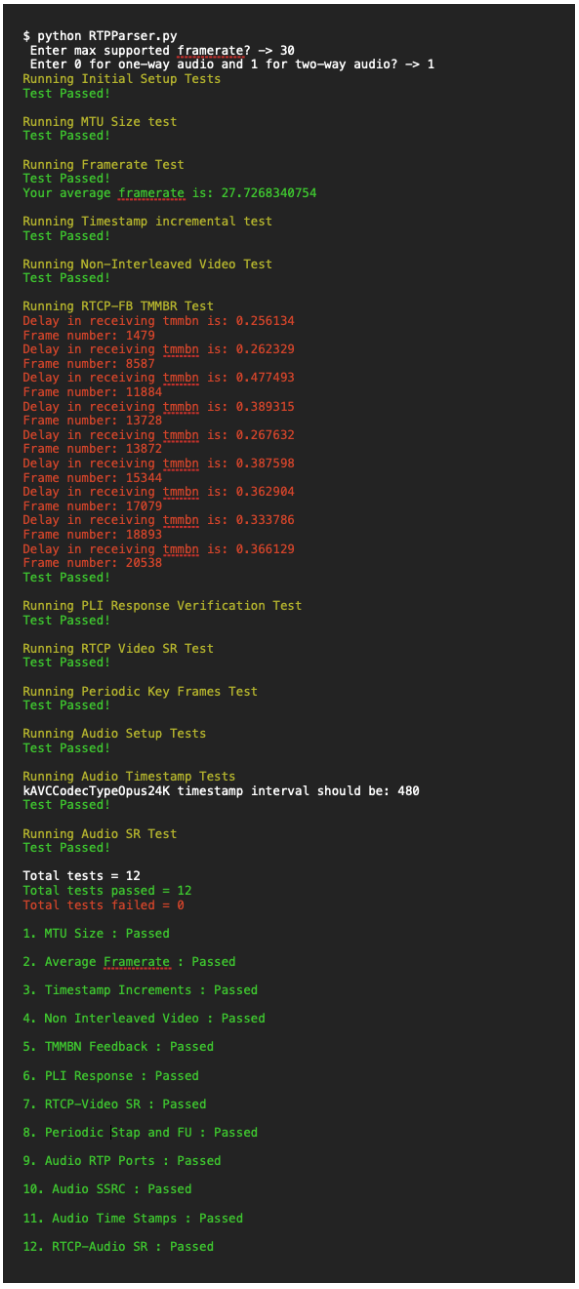
How to execute RTPParser script

1. Navigate to the folder that contains the saved HAT trace and right-click and choose “Show Package Contents”.

2. Move the “hat-traffic.pcap” and the “StreamConfiguration.plist” to the location of the CamParser folder.

3. In terminal cd to file where RTPParser is and run:

```
$ python RTPParser.py
```



Bug Filing Instructions

To ensure that we address your issue as effectively as possible:

- Report all RTPParser issues to bugreport.apple.com under "HomeKit Accessory Development | Certification Tools."

- In the version/build section, include the build number for HAT and RTPParser.

- In the configuration section, include the build number for macOS.

- In the configuration section, include the MFi Product Plan ID for your accessory and the firmware version. Describe your results and how they differ from what is expected.

- In the "Additional notes" section, explain the impact on your development (e.g., inconvenience, blocking certification, etc.).

- In the "Additional notes" section, include any additional configuration, spec language, workarounds, or other relevant information.

- A trace or screenshot with annotations is strongly recommended to help understand your issue in a timely manner. Additional logs and/or videos will help expedite a fix.

Revision History

Date	Description
November 2018	Initial Release