

Video Streaming Test on Android

Goal: Run a video streaming test on an android device to measure access point performance and stability. This test streams videos from the local browser on the LANforge or on the Android phone which is connected to the access point.

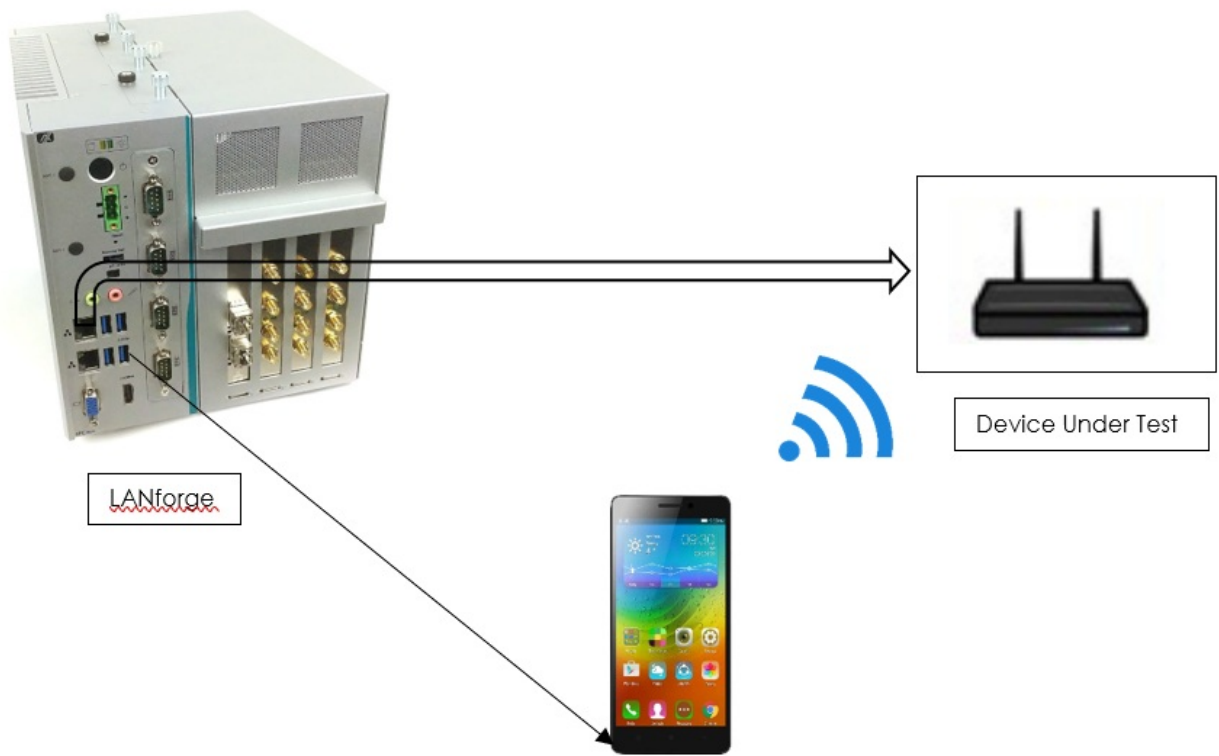
This cookbook requires LANforge GUI version 5.4.6 and above.

Background

The LANforge InterOp App has an inbuilt Video Media Player called *Exoplayer* which can run various types of media formats. Some examples are:

- * MP4
- * DASH (Dynamic Adaptive Streaming over HTTPS)
- * Smooth Streaming Media Source
- * HLS- Media Source (HTTP Live Streaming)
- * Progressive Media Source
- * Real Time Streaming Protocol

Test Diagram



Video Streaming can be done offline or online.

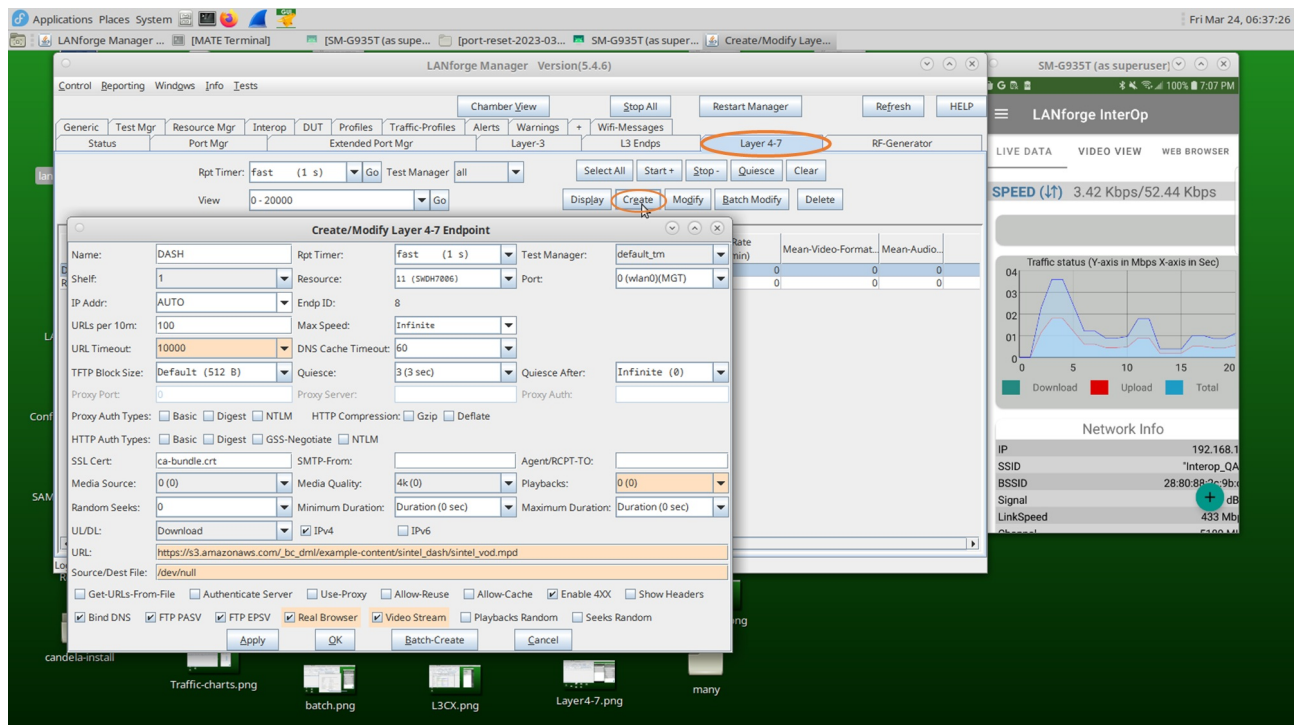
Make sure the DUT is connected to internet & initial Android InterOp setup is complete. Initial Android InterOp setup can be found using the following link: [InterOp Android Setup](#)

Online Video Streaming

DASH Video Streaming

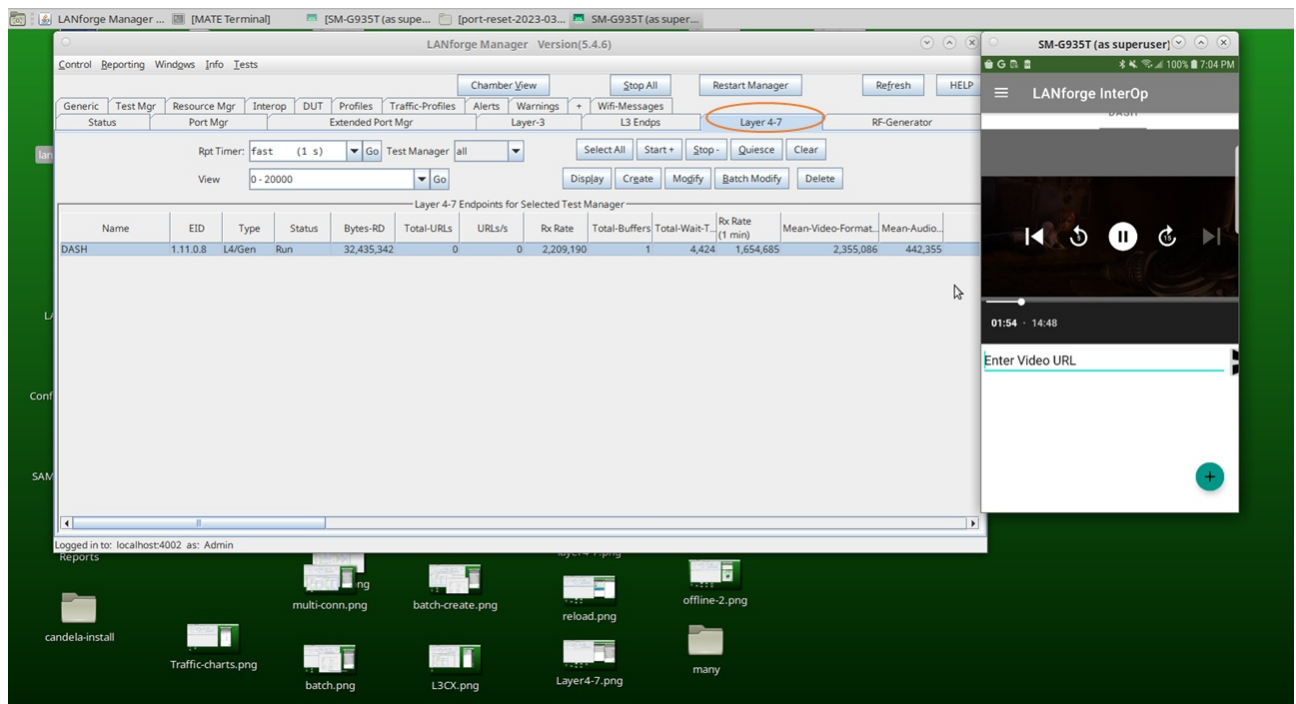
1. Create a Layer 4-7 cross-connect by using the details pictured below.

Use the following sample URL link to run DASH video : https://s3.amazonaws.com/_bc_dml/example-content/sintel_dash/sintel_vod.mpd



2. Start the Layer 4-7 cross-connect and select the *Video-View* tab in the app to view the running video.

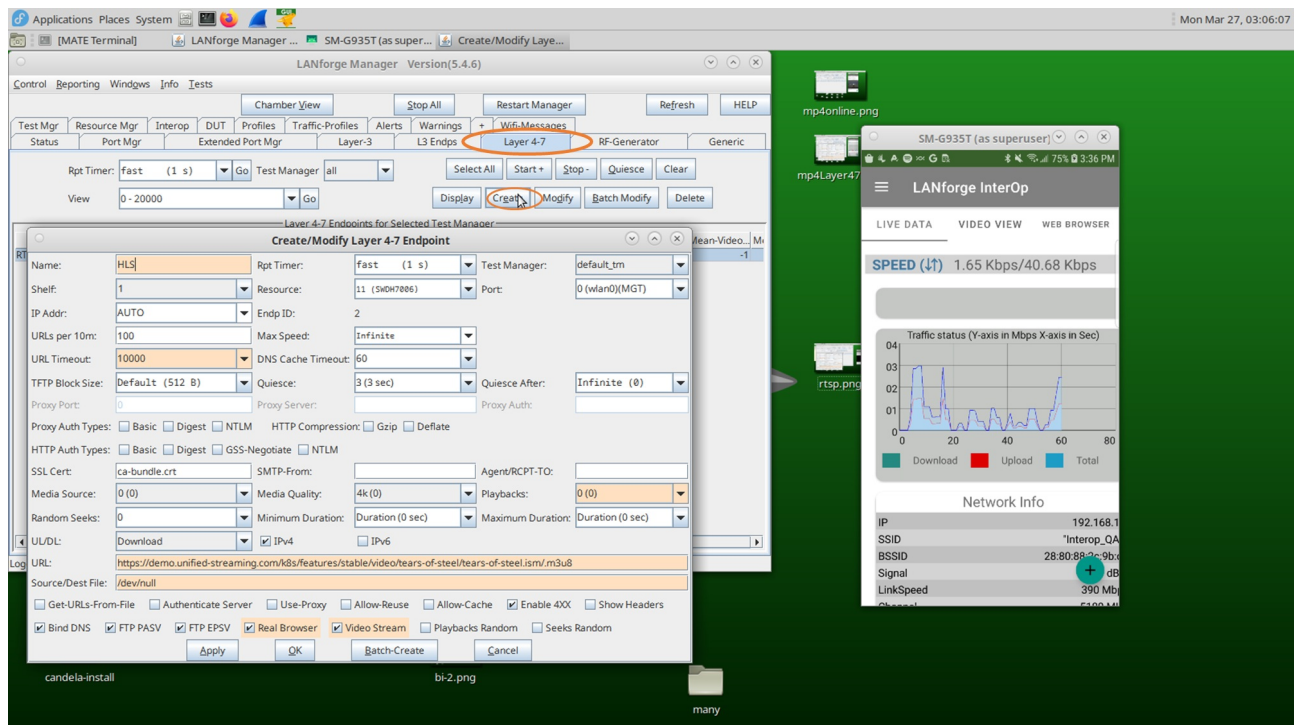
While the video is running, the Layer 4-7 cross-connect statistics (e.g. Bytes-RD, Total-URLs, URLs/s, Rx Rate, Total-Buffers, Total Wait Time, Mean Video format, Mean Audio format) are able to be viewed in the *Layer 4-7* tab.



HLS (HTTP Live Streaming)

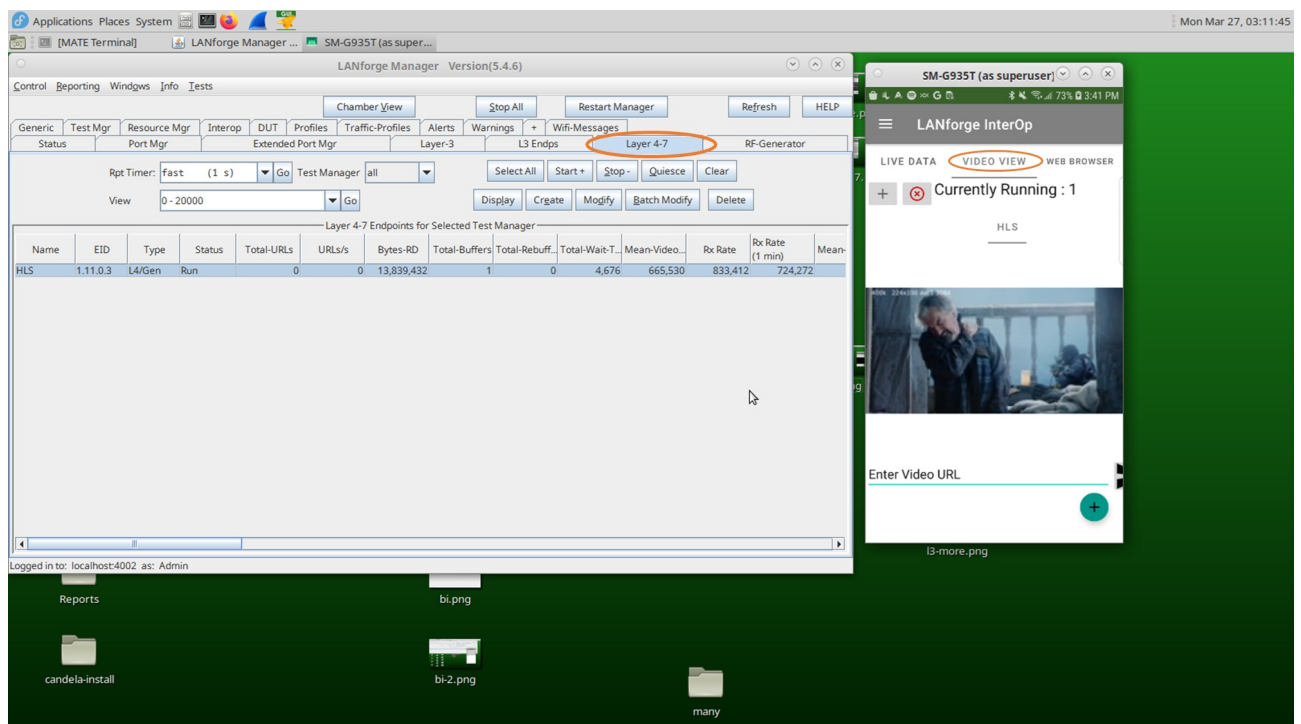
1. Create a Layer 4-7 cross-connect by using the details pictured below.

Use the following sample URL to run HLS: <https://demo.unified-streaming.com/k8s/features/stable/video/tears-of-steel/tears-of-steel.ism/.m3u8>



2. Start the Layer 4-7 cross-connect and select the *Video-View* tab in the app to observe the running video.

While the video is running, the Layer 4-7 cross-connect statistics (such as Bytes-RD, Total-URLs, URLs/s, Rx Rate, Total-Buffers, Total Wait Time, Mean Video format, Mean Audio format) are able to be in the *Layer 4-7* tab.



The same method of creating a Layer 4-7 cross connect and observing the media in the app can be applied to other media types such as *Smooth*, *RTSP*, and *MP4*.

Some sample links for those 3 media types:

Smooth: http://playready.directtaps.net/smoothstreaming/SSWSS720H264/SuperSpeedway_720.ism/Manifest

RTSP: https://wowzaec2demo.streamlock.net/vod/mp4:BigBuckBunny_115k.mp4

MP4: https://filesamples.com/samples/video/mp4/sample_640x360.mp4

Offline Video Streaming

When offline video streaming, the DUT does not need to be connected to the internet.

DASH Video Streaming

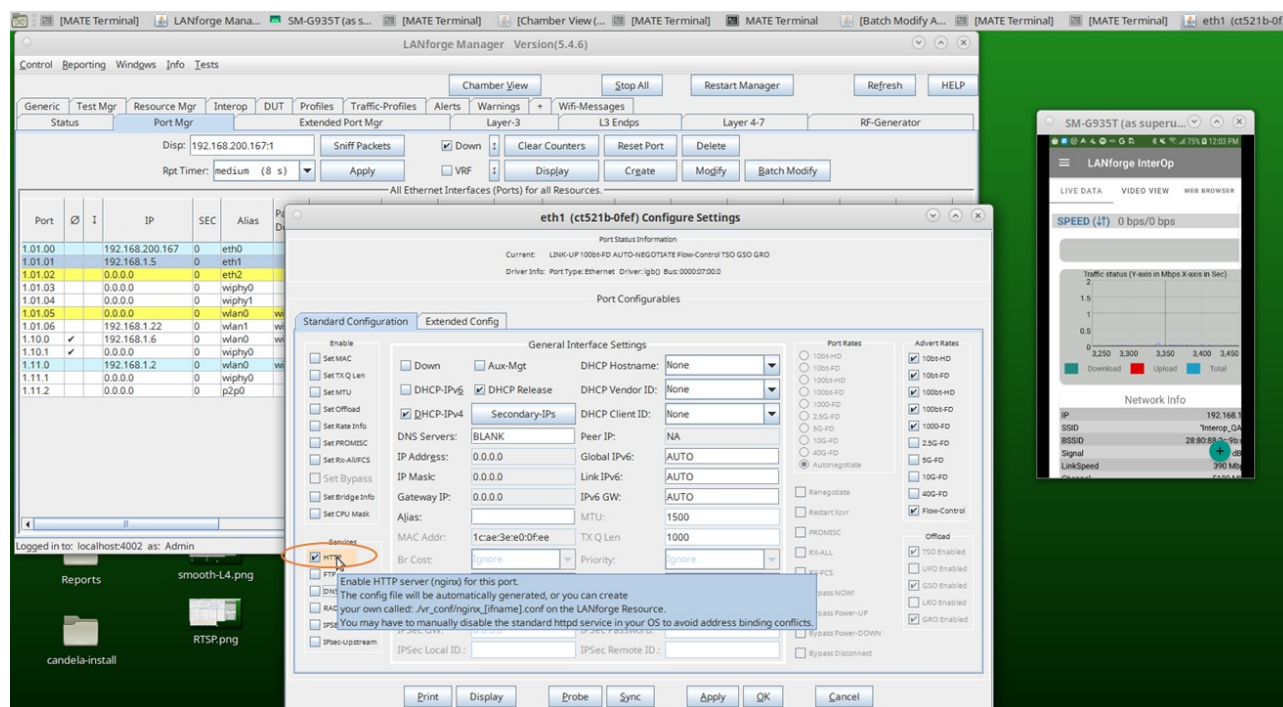
To run an offline DASH video, refer to the following cookbook link:

[https://www.candelatech.com/cookbook.php?](https://www.candelatech.com/cookbook.php?vol=wifi&book=Interop:+Test+Video+Streaming+with+DASH+Server+and+Interop+APK)

[vol=wifi&book=Interop:+Test+Video+Streaming+with+DASH+Server+and+Interop+APK](https://www.candelatech.com/cookbook.php?vol=wifi&book=Interop:+Test+Video+Streaming+with+DASH+Server+and+Interop+APK)

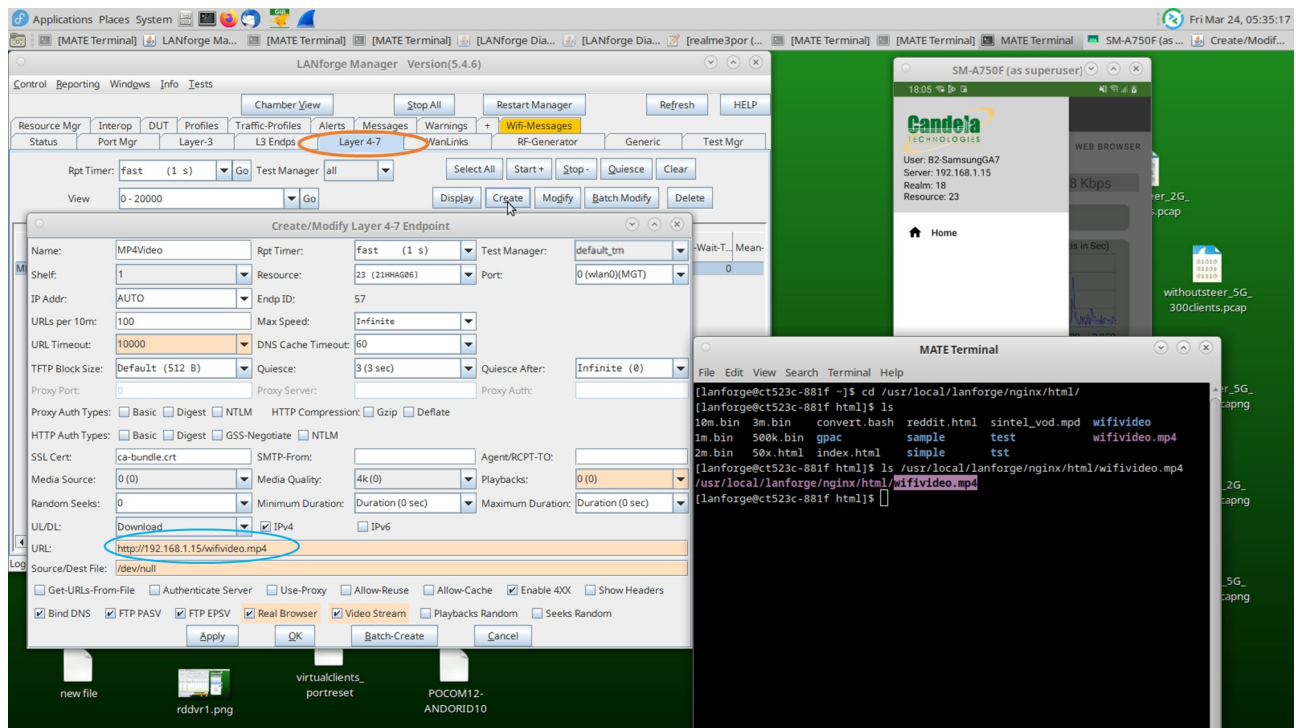
MP4 Streaming

1. Run nginx on *eth1* port by double-clicking on the *eth1* port in the *Port Mgr*, checking the *HTTP* box circled below, and clicking *Apply*.



2. Download and place the .mp4 file in the following path: `/usr/local/lanforge/nginx/html/`

Create a Layer 4-7 cross-connect and add the details pictured below to the Layer 4-7 cross connect. Enter the *URL*, *Source/Dest File*, *Resource* (of the Android mobile), and check the *Real Browser* and *Video Stream* boxes.



3. Start Layer4-7 cross-connect and go to *Video-View* tab in app to observe the running video. Stats can be observed in the *Layer 4-7* cross-connect row.

