

# Scripts to test a maximum number of WebRTC publishers/subscribers

Since build [5.2.1766](#) a scripts are available to test a maximum number of WebRTC publisher or subscribers per WCS server. The scripts are implemented in bash and use REST API to publish and pull WebRTC streams from a WCS server under test. The scripts are in `/usr/local/FlashphonerWebCallServer/tools` folder.

To perform a load test, the following should be prepared:

- WCS server to test
- WCS server to perform the test
- a tool to publish a source stream (OBS to publish RTMP, or Media Devices example to publish WebRTC)

## Attention

Note that the server performance to perform the test should be at least twice as the server under test, otherwise the testing server may be a bottleneck.

## Testing a maximum number of WebRTC publishers

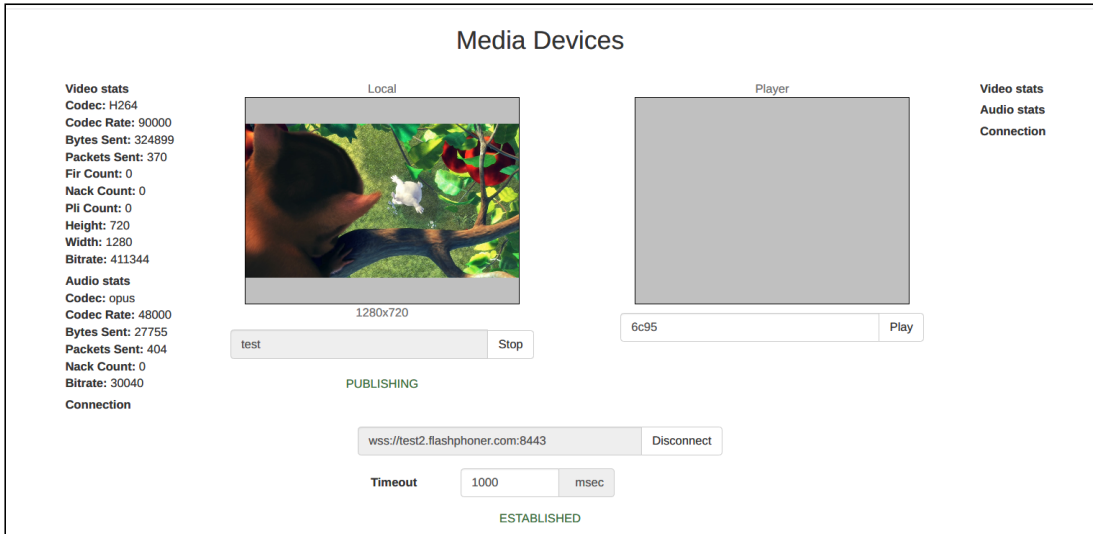
A maximum number of WebRTC publishers test is performed with the following script

```
/usr/local/FlashphonerWebCallServer/tools/pushStreams.sh
```

1. The following should be used for test:

- `test1.flashphoner.com` - WCS server to test
- `test2.flashphoner.com` - WCS server to perform the test
- Media Devices example to publish a source stream

2. Publish the source stream to the server `test2.flashponer.com`



3. Launch `pushStreams` script on `test2.flashponer.com`

```
/usr/local/FlashponerWebCallServer/tools/pushStreams.sh  
ws://test1.flashponer.com:8080 http://test1.flashponer.com:8081 test  
loadtest 10
```

Where:

- `ws://test1.flashponer.com:8080` - websocket URL of the server to test
- `http://test1.flashponer.com:8081` - HTTP REST API URL of the server to test
- `test` - the source stream published to the testing name
- `loadtest` - the name prefix used to publish streams to the server to test
- `10` - publishers count

The script displays a publishers list when successfully launched

```
Publishing stream test to ws://test1.flashponer.com:8080 as loadtest1  
Publishing stream test to ws://test1.flashponer.com:8080 as loadtest2  
Publishing stream test to ws://test1.flashponer.com:8080 as loadtest3  
Publishing stream test to ws://test1.flashponer.com:8080 as loadtest4  
Publishing stream test to ws://test1.flashponer.com:8080 as loadtest5  
Publishing stream test to ws://test1.flashponer.com:8080 as loadtest6  
Publishing stream test to ws://test1.flashponer.com:8080 as loadtest7  
Publishing stream test to ws://test1.flashponer.com:8080 as loadtest8  
Publishing stream test to ws://test1.flashponer.com:8080 as loadtest9  
Publishing stream test to ws://test1.flashponer.com:8080 as loadtest10  
Stream test is publishing successfully as loadtest1 to ws://test1.flashponer.com:8080  
Stream test is publishing successfully as loadtest2 to ws://test1.flashponer.com:8080  
Stream test is publishing successfully as loadtest3 to ws://test1.flashponer.com:8080  
Stream test is publishing successfully as loadtest4 to ws://test1.flashponer.com:8080  
Stream test is publishing successfully as loadtest5 to ws://test1.flashponer.com:8080  
Stream test is publishing successfully as loadtest6 to ws://test1.flashponer.com:8080  
Stream test is publishing successfully as loadtest7 to ws://test1.flashponer.com:8080  
Stream test is publishing successfully as loadtest8 to ws://test1.flashponer.com:8080  
Stream test is publishing successfully as loadtest9 to ws://test1.flashponer.com:8080  
Stream test is publishing successfully as loadtest10 to ws://test1.flashponer.com:8080
```

4. Check stream publishers at the tested server statistics page

`http://test1.flashponer.com:8081/?action=stat`

```
← → ↻ 🔒 Not secure | test1.flashphoner.com:8081?action=stat
-----Connection Stats-----
connections=10
connections_rtmp=0
connections_websocket=10
connections_hls=0
-----Port Stats-----
ports_media_free=9989
ports_media_busy=10
ports_media_quarantine=0
ports_wcs_agents_free=998
ports_wcs_agents_busy=0
ports_wcs_agents_quarantine=0
-----Stream Stats-----
streams_webrtc_in=10
streams_webrtc_out=0
streams_websocket_out=0
streams_rtmp_in=0
streams_rtmp_out=0
streams_hls=0
streams_viewers=loadtest1/0;loadtest10/0;loadtest6/0;loadtest3/0;loadtest8/0;loadtest5/0;loadtest9/0;loadtest2/0;loadtest4/0;loadtest7/0
streams_synchronization=loadtest1/-65;loadtest10/-52;loadtest6/-31;loadtest3/-66;loadtest8/-66;loadtest5/-66;loadtest9/-66;loadtest2/-66;loadtest4/-86;loadtest7/-86
stats_size=0
streams_rtsp_in=0
streams_rtsp_out=0
streams_rtsp_push_in=0
streams_rtsp_push_out=0
streams_rtmp_client_out=0
streams_play_rate=0
streams_stop_rate=0
```

5. Launch `pushStreams` script on `test2.flashphoner.com` to stop the test

```
/usr/local/FlashphonerWebCallServer/tools/pushStreams.sh
ws://test1.flashphoner.com:8080 http://test1.flashphoner.com:8081 test
loadtest stop
```

Where:

- `ws://test1.flashphoner.com:8080` - tested server websocket URL
- `http://test1.flashphoner.com:8081` - HTTP REST API URL of the tested server
- `test` - the source stream name published to the tested server
- `loadtest` - the name prefix used to publish streams to the tested server
- `stop` - keyword to stop the publishers with the parameters above

The script displays a stopped publishers list when successfully launched

```
Stream test is publishing as loadtest1 to ws://test1.flashphoner.com:8080, stopping
Stream test is publishing as loadtest2 to ws://test1.flashphoner.com:8080, stopping
Stream test is publishing as loadtest3 to ws://test1.flashphoner.com:8080, stopping
Stream test is publishing as loadtest4 to ws://test1.flashphoner.com:8080, stopping
Stream test is publishing as loadtest5 to ws://test1.flashphoner.com:8080, stopping
Stream test is publishing as loadtest6 to ws://test1.flashphoner.com:8080, stopping
Stream test is publishing as loadtest7 to ws://test1.flashphoner.com:8080, stopping
Stream test is publishing as loadtest8 to ws://test1.flashphoner.com:8080, stopping
Stream test is publishing as loadtest9 to ws://test1.flashphoner.com:8080, stopping
Stream test is publishing as loadtest10 to ws://test1.flashphoner.com:8080, stopping
```

## Testing a maximum number of WebRTC subscribers

A maximum number of WebRTC publishers test is performed with the following script

```
/usr/local/FlashphonerWebCallServer/tools/pullStreams.sh
```

1. The following should be used for test:

- `test1.flashphoner.com` - WCS server to test
- `test2.flashphoner.com` - WCS server to perform the test

- Media Devices example to publish a source stream

## 2. Publish the source stream to the server `test1.flashphoner.com`

The screenshot shows the 'Media Devices' interface. On the left, there are 'Video stats' and 'Audio stats' sections. The 'Local' video player shows a video of a rabbit in a field. Below it, there is a 'test' input field and a 'Stop' button. The 'Player' video player is currently blank. Below it, there is a '0756' input field and a 'Play' button. At the bottom, there is a 'wss://test1.flashphoner.com:8443' input field and a 'Disconnect' button. A 'Timeout' field is set to '1000' msec. The status at the bottom is 'ESTABLISHED'.

## 3. Launch `pullStreams` script on `test2.flashphoner.com`

```
/usr/local/FlashphonerWebCallServer/tools/pullStreams.sh
ws://test1.flashphoner.com:8080 http://test1.flashphoner.com:8081 loadtest
10
```

Where:

- `ws://test1.flashphoner.com:8080` - tested server websocket URL
- `http://test1.flashphoner.com:8081` - HTTP REST API URL of the tested server
- `loadtest` - the name prefix used to pull streams from the tested server
- `10` - subscribers count

Note that script will pull all the streams published on the tested server with a specified number of subscribers per each.

The script displays a subscribers list when successfully launched

```
Playing stream test from ws://test1.flashphoner.com:8080 as loadtest1-test
Playing stream test from ws://test1.flashphoner.com:8080 as loadtest2-test
Playing stream test from ws://test1.flashphoner.com:8080 as loadtest3-test
Playing stream test from ws://test1.flashphoner.com:8080 as loadtest4-test
Playing stream test from ws://test1.flashphoner.com:8080 as loadtest5-test
Playing stream test from ws://test1.flashphoner.com:8080 as loadtest6-test
Playing stream test from ws://test1.flashphoner.com:8080 as loadtest7-test
Playing stream test from ws://test1.flashphoner.com:8080 as loadtest8-test
Playing stream test from ws://test1.flashphoner.com:8080 as loadtest9-test
Playing stream test from ws://test1.flashphoner.com:8080 as loadtest10-test
Stream test is playing successfully as loadtest1-test from ws://test1.flashphoner.com:8080
Stream test is playing successfully as loadtest2-test from ws://test1.flashphoner.com:8080
Stream test is playing successfully as loadtest3-test from ws://test1.flashphoner.com:8080
Stream test is playing successfully as loadtest4-test from ws://test1.flashphoner.com:8080
Stream test is playing successfully as loadtest5-test from ws://test1.flashphoner.com:8080
Stream test is playing successfully as loadtest6-test from ws://test1.flashphoner.com:8080
Stream test is playing successfully as loadtest7-test from ws://test1.flashphoner.com:8080
Stream test is playing successfully as loadtest8-test from ws://test1.flashphoner.com:8080
Stream test is playing successfully as loadtest9-test from ws://test1.flashphoner.com:8080
Stream test is playing successfully as loadtest10-test from ws://test1.flashphoner.com:8080
```

## 4. Check stream subscribers at the tested server statistics page

`http://test1.flashphoner.com:8081/?action=stat`

```
← → ↻ ⚠ Not secure | test1.flashphoner.com:8081/?action=stat
-----Connection Stats-----
connections=11
connections_rtmfp=0
connections_websocket=11
connections_hls=0
-----Port Stats-----
ports_media_free=9988
ports_media_busy=11
ports_media_quarantine=0
ports_wcs_agents_free=998
ports_wcs_agents_busy=0
ports_wcs_agents_quarantine=0
-----Stream Stats-----
streams_webrtc_in=1
streams_webrtc_out=10
streams_websocket_out=0
streams_rtmfp_in=0
streams_rtmfp_out=0
streams_rtmp_in=0
streams_rtmp_out=0
streams_hls=0
streams_viewers=test/10
streams_synchronization=test/-36
stats_size=0
streams_rtsp_in=0
streams_rtsp_out=0
streams_rtsp_push_in=0
streams_rtsp_push_out=0
streams_rtmp_client_out=0
streams_play_rate=0
streams_stop_rate=0
```

5. Launch `pullStreams` script on `test2.flashphoner.com` to stop the test

```
/usr/local/FlashphonerWebCallServer/tools/pullStreams.sh
ws://test1.flashphoner.com:8080 http://test1.flashphoner.com:8081 loadtest
stop
```

Where:

- `ws://test1.flashphoner.com:8080` - tested server websocket URL
- `http://test1.flashphoner.com:8081` - HTTP REST API URL of the tested server
- `loadtest` - the name prefix used to pull streams from the tested server
- `stop` - keyword to stop the subscribers with the parameters above

The script displays a stopped subscribers list when successfully launched

```
Stream test is playing from ws://test1.flashphoner.com:8080 as loadtest1-test, stopping
Stream test is playing from ws://test1.flashphoner.com:8080 as loadtest2-test, stopping
Stream test is playing from ws://test1.flashphoner.com:8080 as loadtest3-test, stopping
Stream test is playing from ws://test1.flashphoner.com:8080 as loadtest4-test, stopping
Stream test is playing from ws://test1.flashphoner.com:8080 as loadtest5-test, stopping
Stream test is playing from ws://test1.flashphoner.com:8080 as loadtest6-test, stopping
Stream test is playing from ws://test1.flashphoner.com:8080 as loadtest7-test, stopping
Stream test is playing from ws://test1.flashphoner.com:8080 as loadtest8-test, stopping
Stream test is playing from ws://test1.flashphoner.com:8080 as loadtest9-test, stopping
Stream test is playing from ws://test1.flashphoner.com:8080 as loadtest10-test, stopping
```