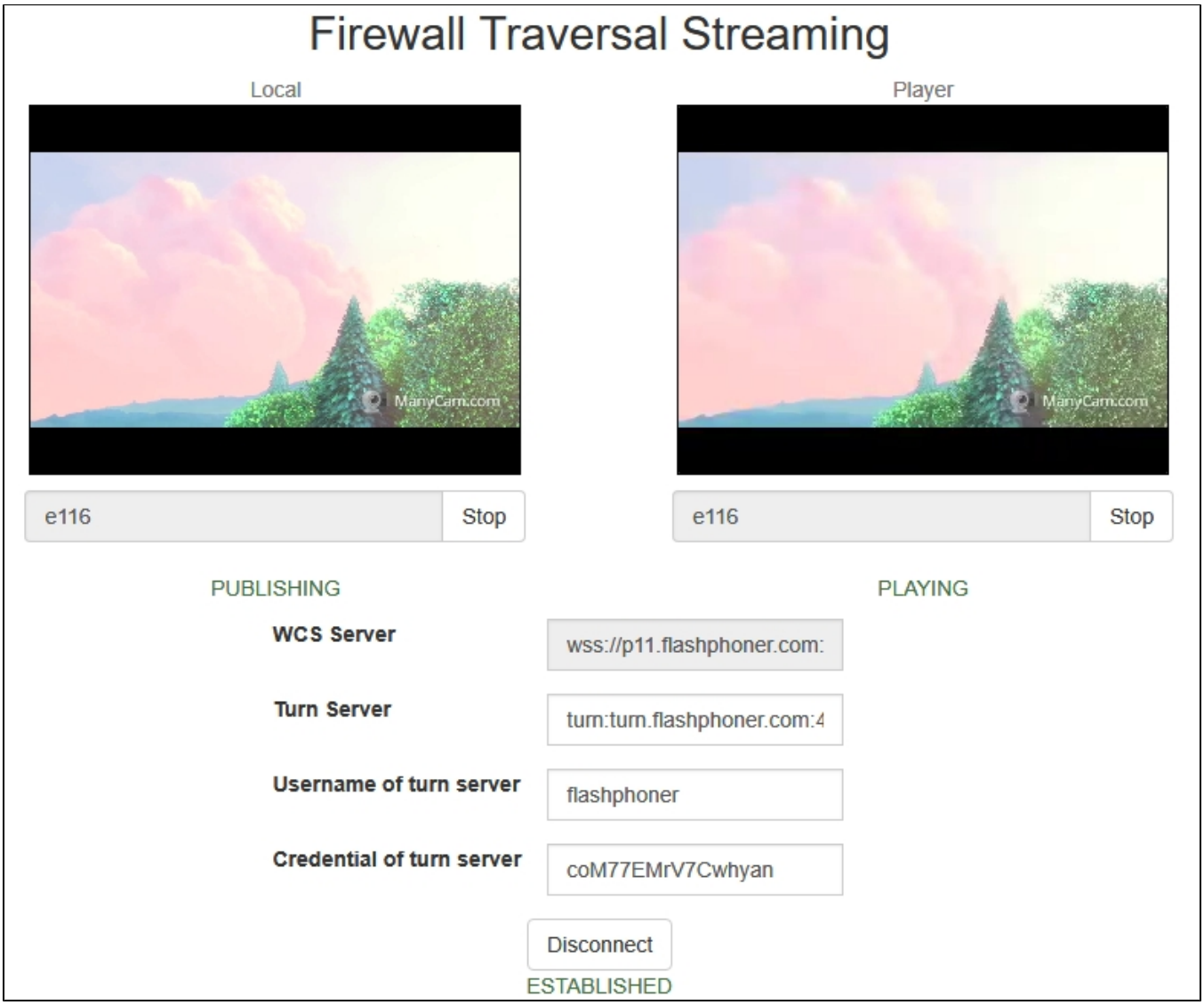
Firewall Streaming

The example of firewall traversal video streaming and playback using TURN server. It works in all browsers except Microsoft Edge because this browser do not support TURN over TCP.



The code of the example

The source code of the example is on WCS server by this path:

/usr/local/FlashphonerWebCallServer/client2/examples/demo/streaming/firewall-traversal-streaming/

firewall-traversal-streaming.css - CSS style file
firewall-traversal-streaming.html - the example page
firewall-traversal-streaming.js - script for example to work

The example may be tested at this URL:

https://host:8888/client2/examples/demo/streaming/firewall-traversal-streaming/firewall-traversal-streaming.html

where host is your WCS server address.

Analyzing the code

To analyze the code getfirewall-traversal-streaming.js file version with hash66cc393 that can be foundhereand is available to download in build0.5.28.2753.133.

1. API initializing.

Flashphoner.init()code

```
Flashphoner.init({flashMediaProviderSwfLocation: '../../../../media-provider.swf'});
```

2. Connection to the server.

Flashphoner.createSession()code

These parameters are passed to createSession() method:

- WCS server URL
- TURN server URL
- TURN server user credentials

```
var options = {
    urlServer: url,
    mediaOptions: {
        "iceServers": [
            {
                'url': $('#urlTurnServer').val(),
                'username': $('#usernameTurnServer').val(),
                'credential': $('#credentialTurnServer').val()
            }
        ]
    }
};
if ($("#forceRelay").is(':checked')) {
    options.mediaOptions.iceTransportPolicy = "relay";
}
Flashphoner.createSession(options).on(SESSION_STATUS.ESTABLISHED, function (session) {
    ...
});
```

3.Receiving the event confirming successful connection

ConnectionStatusEvent ESTABLISHEDcode

```
Flashphoner.createSession(options).on(SESSION_STATUS.ESTABLISHED, function (session) {
    setStatus("#connectStatus", session.status());
    onConnected(session);
}).on(SESSION_STATUS.DISCONNECTED, function () {
    ...
}).on(SESSION_STATUS.FAILED, function () {
    ...
});
```

4. Video streaming

session.createStream(), publish()code

These parameters are passed to createStream() method:

- streamName - the stream name
- localVideo - element to display preview stream.

```
session.createStream({
    name: streamName,
    display: localVideo,
    cacheLocalResources: true,
    receiveVideo: false,
    receiveAudio: false
    ...
}).publish();
```

5.Receiving the event confirming successful streaming

StreamStatusEvent PUBLISHINGcode

```
    session.createStream({
        ...
    }).on(STREAM_STATUS.PUBLISHING, function (stream) {
        setStatus("#publishStatus", STREAM_STATUS.PUBLISHING);
        onPublishing(stream);
    }).on(STREAM_STATUS.UNPUBLISHED, function () {
        ...
    }).on(STREAM_STATUS.FAILED, function () {
        ...
    }).publish();
```

6. Stream playback

session.createStream(), play()code

These parameters are passed to createStream() method:

- streamName - the stream name (including the stream published on step above)
- remoteVideo - element to display stream playback.

```
    session.createStream({
        name: streamName,
        display: remoteVideo
        ...
    }).play();
```

7.Receiving the event confirming successful stream playback

StreamStatusEvent PLAYINGcode

```
    session.createStream({
        ...
    }).on(STREAM_STATUS.PLAYING, function (stream) {
        document.getElementById(stream.id()).addEventListener('resize', function (event) {
            resizeVideo(event.target);
        });
        setStatus("#playStatus", stream.status());
        onPlaying(stream);
    }).on(STREAM_STATUS.STOPPED, function () {
        ...
    }).on(STREAM_STATUS.FAILED, function () {
        ...
    }).play();
```

8. Stream playback stop

stream.stop()code

```
function onPlaying(stream) {
    $("#playBtn").text("Stop").off('click').click(function () {
        $(this).prop('disabled', true);
        stream.stop();
    }).prop('disabled', false);
}
```

9.Receiving the event confirming successful playback stop

StreamStatusEvent STOPPEDcode

```
    session.createStream({
        name: streamName,
        display: remoteVideo
    }).on(STREAM_STATUS.PLAYING, function (stream) {
        ...
    }).on(STREAM_STATUS.STOPPED, function () {
        setStatus("#playStatus", STREAM_STATUS.STOPPED);
        onStopped();
    }).on(STREAM_STATUS.FAILED, function () {
        ...
    }).play();
```

10. Streaming stop

stream.stop()code

```
function onPublishing(stream) {
    $("#publishBtn").text("Stop").off('click').click(function () {
        $(this).prop('disabled', true);
        stream.stop();
    }).prop('disabled', false);
}
```

11.Receiving the event confirming successful streaming stop

StreamStatusEvent UNPUBLISHEDcode

```
    session.createStream({
        ...
    }).on(STREAM_STATUS.PUBLISHING, function (stream) {
        ...
    }).on(STREAM_STATUS.UNPUBLISHED, function () {
        setStatus("#publishStatus", STREAM_STATUS.UNPUBLISHED);
        onUnpublished();
    }).on(STREAM_STATUS.FAILED, function () {
        ...
    }).publish();
```