

# WebRTC as RTMP re-publishing

## Example of republishing a WebRTC audio / video stream as RTMP

This example shows how you can send audio and video from the browser to the server with the WebRTC technology and redirect the received traffic to the same or another server via RTMP.

On the below screenshot, the browser has established connection to the WCS server and is sending audio and video to the server that performs republishing to localhost via the RTMP protocol.



To play the redirected stream, copy the RTMP URL to external RTMP player, VLC for example

## Code of the example

The source code of this example can be found on the WCS server at:

`/usr/local/FlashphonerWebCallServer/client2/examples/demo/streaming/webrtc-as-rtmp-republishing`

- webrtc-as-rtmp-republishing.css – cascade style sheet file
- webrtc-as-rtmp-republishing.html - example page
- webrtc-as-rtmp-republishing.js - script

You can test this example at this address:

*https://host:8888/client2/examples/demo/streaming/conference/webrtc-as-rtmp-republishing.html*

Here, host is the address of the WCS server.

## Analyzing the code

To analyze the code, let's take the version of the `webrtc-as-rtmp-republishing.js` file with the hash of `ecbadc3`, which is available [here](#) and can be downloaded with the corresponding build [2.0.212](#).

The script establishes connection to the WCS server and manages publishing of the WebRTC stream. In addition, the script places the test RTMP player on the webpage and passes the resulting RTMP address to it for playback.

### 1. Initialize API

`Flashphoner.init()` [code](#)

```
Flashphoner.init();
```

### 2. Connect to the server

`Flashphoner.createSession()` [code](#)

```
Flashphoner.createSession({urlServer: url}).on(SESSION_STATUS.ESTABLISHED,
function(session){
    ...
});
```

### 3. Receiving the event confirming successful connection

`ConnectionStatusEvent ESTABLISHED` [code](#)

```
Flashphoner.createSession({urlServer: url}).on(SESSION_STATUS.ESTABLISHED,
function(session){
    //session connected, start streaming
    startStreaming(session);
}).on(SESSION_STATUS.DISCONNECTED, function(){
```

```
...
}).on(SESSION_STATUS.FAILED, function(){
...
});
```

#### 4. Send WebRTC video stream with republishing to RTMP server

`Session.createStream()`, `Stream.publish()` [code](#)

When the `createStream()` method is used to create the stream, aside from the standard parameters this field is also specified `rtmpUrl`. It contains the RTMP address of the server this stream will be republished to. The name of the republished RTMP stream is

`rtmp_{streamName}`, where `rtmp_` is the standard prefix set in the [flashphoner.properties](#) file.

For example, if `streamName=stream1`, then the resulting RTMP stream will be named

`rtmp_stream1`

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

#### 5. Receiving the event confirming successful streaming

`StreamStatusEvent PUBLISHING` [code](#)

```
session.createStream({
...
}).on(STREAM_STATUS.PUBLISHING, function(publishStream){
  setStatus(STREAM_STATUS.PUBLISHING);
  onStart(publishStream);
  sendDataToPlayer();
}).on(STREAM_STATUS.UNPUBLISHED, function(){
...
}).on(STREAM_STATUS.FAILED, function(){
...
}).publish();
```

#### 6. Forming the RTMP URL to display on the page and copy to an external player

`sendDataToPlayer()` [code](#)

```
function sendDataToPlayer() {
  var player = document.getElementById("player");
  var host = field("rtmpUrl")
    .replace("localhost", window.location.hostname)
    .replace("127.0.0.1", window.location.hostname);

  var rtmpStreamPrefix = "rtmp_";
  var url = host + "/" + rtmpStreamPrefix + field("streamName");
  player.setURLtoFlash(url);
}
```