

# In a browser using Flash Player via RTMP

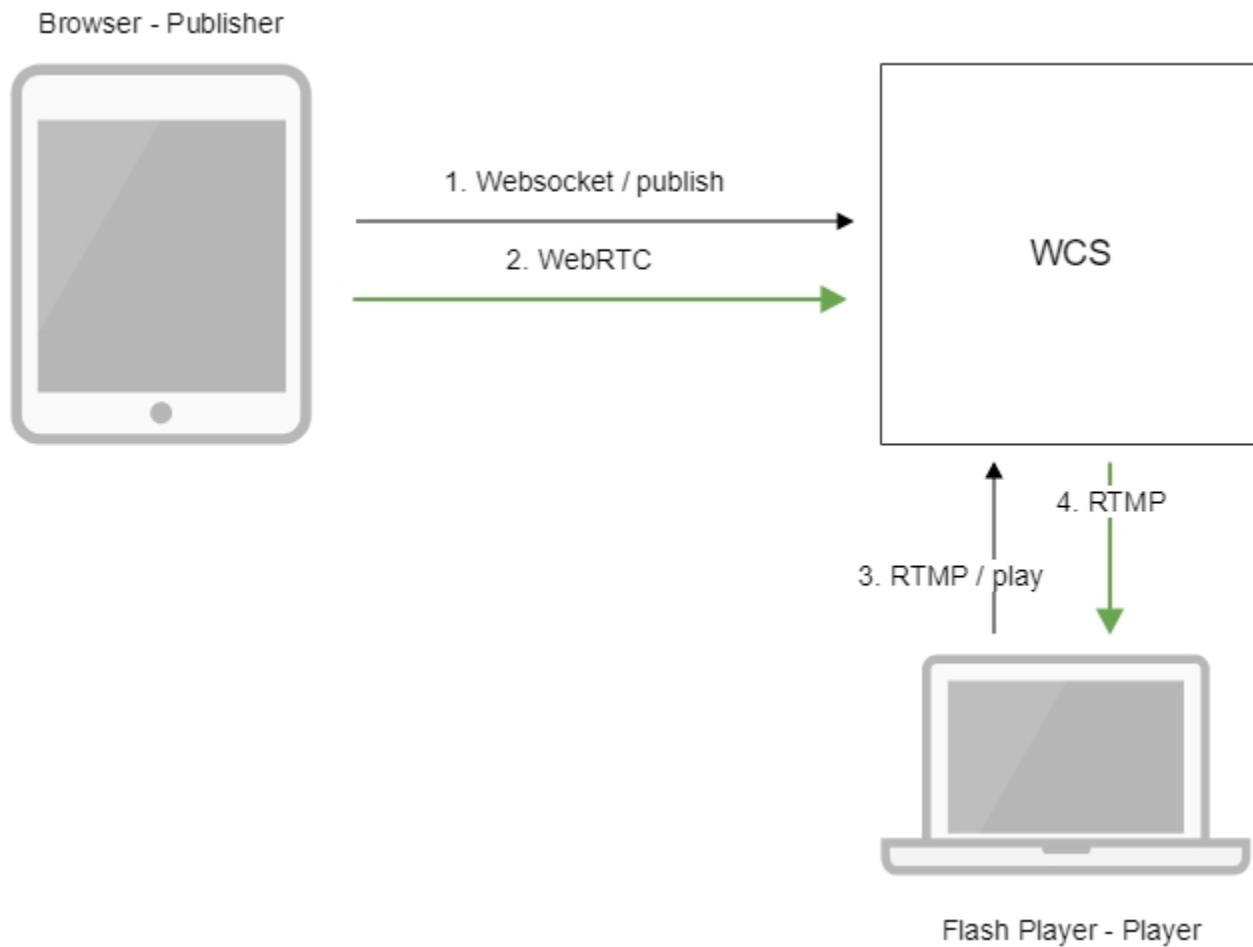
- [Overview](#)
  - [Supported platforms](#)
  - [Operation flowchart](#)
- [Quick manual on testing](#)
  - [Publishing of a web camera stream to the server and playing it with Flash Player](#)
- [Call Flow](#)

## Overview

### Supported platforms

	Adobe Flash
Windows	+
Mac OS	+
Linux	+

### Operation flowchart



1. The browser establishes a connection via Websocket and sends the publish command.
2. the browser sends the WebRTC stream to the server.
3. Flash Player connects to the server via the RTMP protocol and sends the play command.
4. Flash Player receives the RTMP stream from the server.

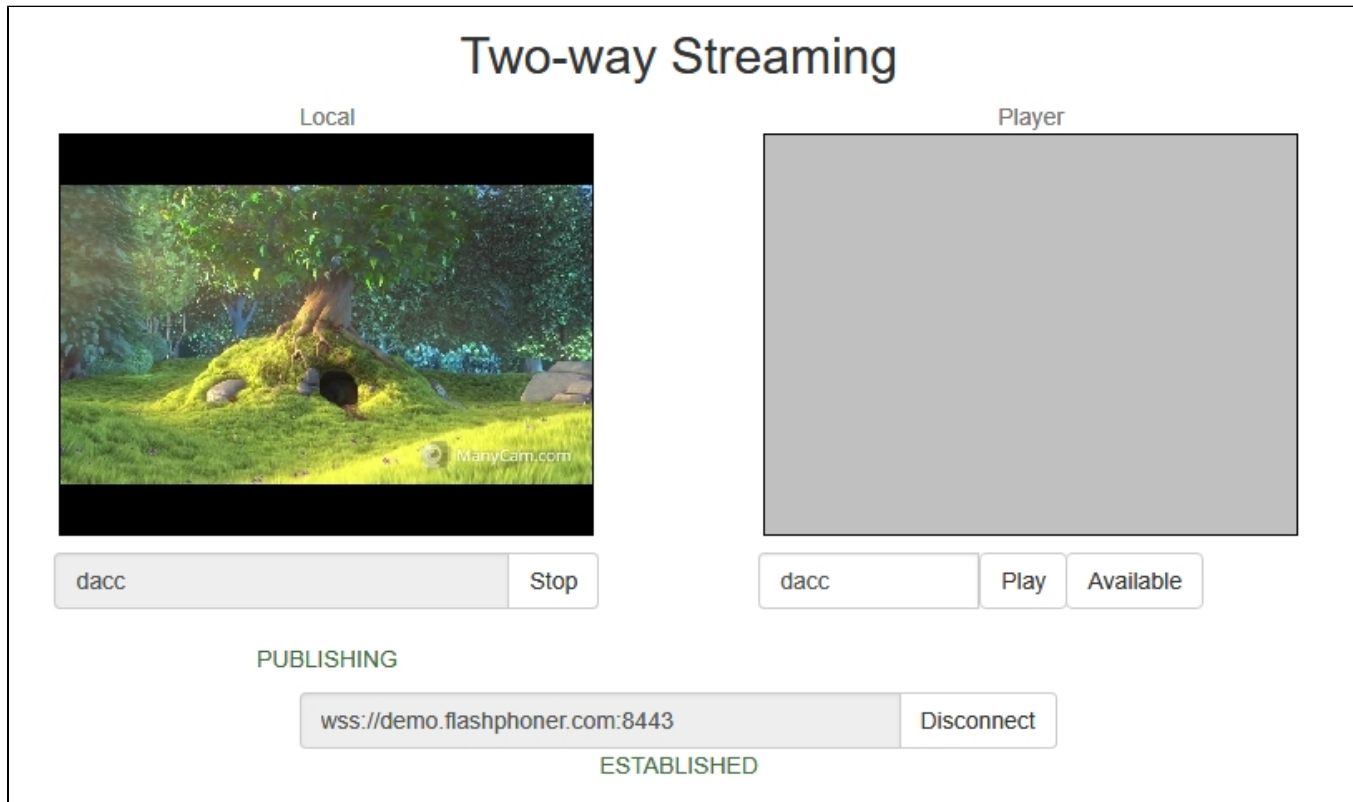
## Quick manual on testing

### Publishing of a web camera stream to the server and playing it with Flash Player

1. For the test we use:

- the demo server at [demo.flashphoner.com](http://demo.flashphoner.com):
- the [Two Way Streaming](#) web application in the Chrome browser to publish the stream
- the [Flash Streaming](#) web application in the Internet Explorer browser to play the stream

2. Open the Two Way Streaming application. Click Connect, then Publish. Copy the identifier of the stream:



The screenshot shows the 'Two-way Streaming' application interface. It is divided into two main sections: 'Local' and 'Player'.

- Local:** Contains a video feed of a forest scene with a tree and a small figure. Below the video is a text input field containing 'dacc' and a 'Stop' button.
- Player:** Contains a large grey rectangular area representing the player. Below it are text input fields containing 'dacc', 'Play', and 'Available' buttons.

At the bottom of the interface, the word 'PUBLISHING' is displayed in green. Below it, a text input field contains the stream identifier 'wss://demo.flashphoner.com:8443' and a 'Disconnect' button. The word 'ESTABLISHED' is displayed in green below the input field.

3. Install Flash Player. Open the page of the Flash Streaming web application, and allow running Flash in the browser:

# Flash Streaming

Server:

Publish

Play



audio     video

width height fps quality keyframe

4. Click the login button. When you see the "Connected" label, specify the identifier of the broadcast stream in the Play field:

# Flash Streaming

Server:

CONNECTED

Publish

Play



audio     video

width height fps quality keyframe

5. Click the Start button in the Play field. The stream starts playing:

# Flash Streaming

Server:

CONNECTED

Publish

Play

PLAYING



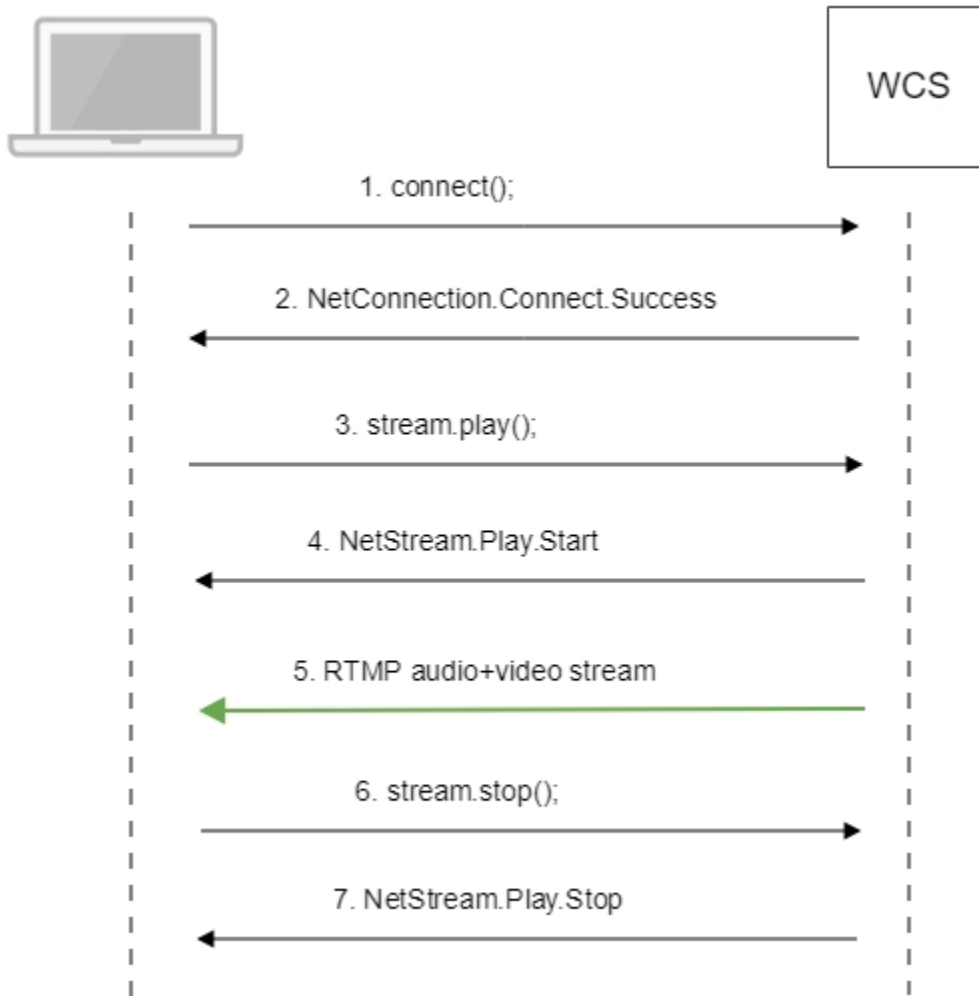
audio     video

<input type="text" value="320"/>	<input type="text" value="240"/>	<input type="text" value="15"/>	<input type="text" value="80"/>	<input type="text" value="15"/>
width	height	fps	quality	keyframe

## Call Flow

Below is the call flow when using the Flash Streaming example to play the stream

[streaming.mxml](#)



1. Establishing a connection to the server.

connect();code

```

private function connect():void{
    var url:String = StringUtil.trim(connectUrl.text);
    Logger.info("connect " + url);
    nc = new NetConnection();
    //if (url.indexOf("rtmp") == 0){
    //    nc.objectEncoding = ObjectEncoding.AMF0;
    //}
    nc.client = this;
    nc.addEventListener(NetStatusEvent.NET_STATUS,
handleConnectionStatus);
    var obj:Object = new Object();
    obj.login = generateRandomString(20);
    obj.appKey = "flashStreamingApp";
    nc.connect(url,obj);
}
  
```

2. Receiving from the server an event confirming successful connection.

NetConnection.Connect.Successcode

```

private function handleConnectionStatus(event:NetStatusEvent):void{
    Logger.info("handleConnectionStatus: "+event.info.code);
    if (event.info.code=="NetConnection.Connect.Success"){
        Logger.info("near id: "+nc.nearID);
        Logger.info("far id: "+nc.farID);
        Logger.info("Connection opened");
        disconnectBtn.visible = true;
        connectBtn.visible = false;
        playBtn.enabled = true;
        publishBtn.enabled = true;
        setConnectionStatus("CONNECTED");
    } else if (event.info.code=="NetConnection.Connect.Closed" || event.info.code=="NetConnection.
Connect.Failed"){
        ...
    }
}

```

### 3. Playing the stream.

stream.play();code

```

private function addListenerAndPlay():void{
    ...
    subscribeStreamObject = createStreamObject();
    subscribeStream.play(playStreamName.text);
    videoFarEnd.attachNetStream(subscribeStream);
    videoFarEnd.width = 320;
    videoFarEnd.height = 240;
    videoFarEnd.visible = true;
}

```

### 4. Receiving from the server an event confirming successful playing of the stream.

NetStream.Play.Startcode

```

private function handleSubscribeStreamStatus(event:NetStatusEvent):void{
    Logger.info("handleSubscribeStreamStatus: "+event.info.code);
    switch (event.info.code) {
        case "NetStream.Play.PublishNotify":
        case "NetStream.Play.Start":
            setPlayStatus("PLAYING");
            playBtn.visible = false;
            stopBtn.enabled = true;
            stopBtn.visible = true;
            break;
        ...
    }
}

```

### 5. Receiving the audio and video stream via RTMP

### 6. Stopping the playback of the stream.

stream.close();code

```

private function stop():void{
    if (subscribeStream != null) {
        stopBtn.enabled = false;
        subscribeStream.close();
        subscribeStream = null;
    }
    subscribeStreamObject = null;
    videoFarEnd.visible = false;
}

```

### 7. Receiving from the server an event confirming the playback of the stream is stopped.

## NetStream.Play.Stopcode

```
private function handleSubscribeStreamStatus(event:NetStatusEvent):void{
    Logger.info("handleSubscribeStreamStatus: "+event.info.code);
    switch (event.info.code) {
        ...
        case "NetStream.Play.UnpublishNotify":
        case "NetStream.Play.Stop":
            setPlayStatus("STOPPED");
            playBtn.enabled = true;
            playBtn.visible = true;
            stopBtn.visible = false;
            break;
        ...
    }
}
```