In a browser using Flash Player via RTMP

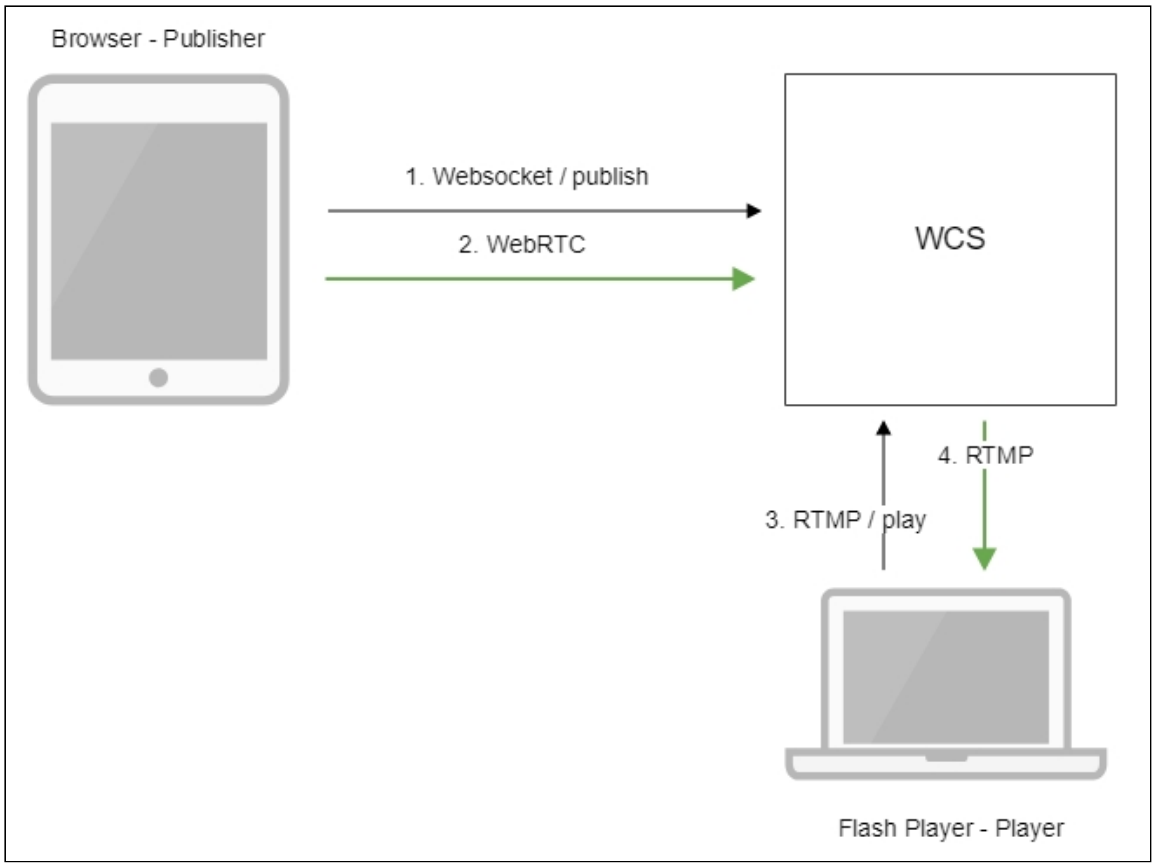
Overview

> **Warning**
>
> Adobe Flash Player is unsupported now in the all modern browsers. Do not use it any more. Use third party player to play a stream from Web Call Server as RTMP

Supported platforms

	Adobe Flash
Windows	✅
Mac OS	✅
Linux	✅

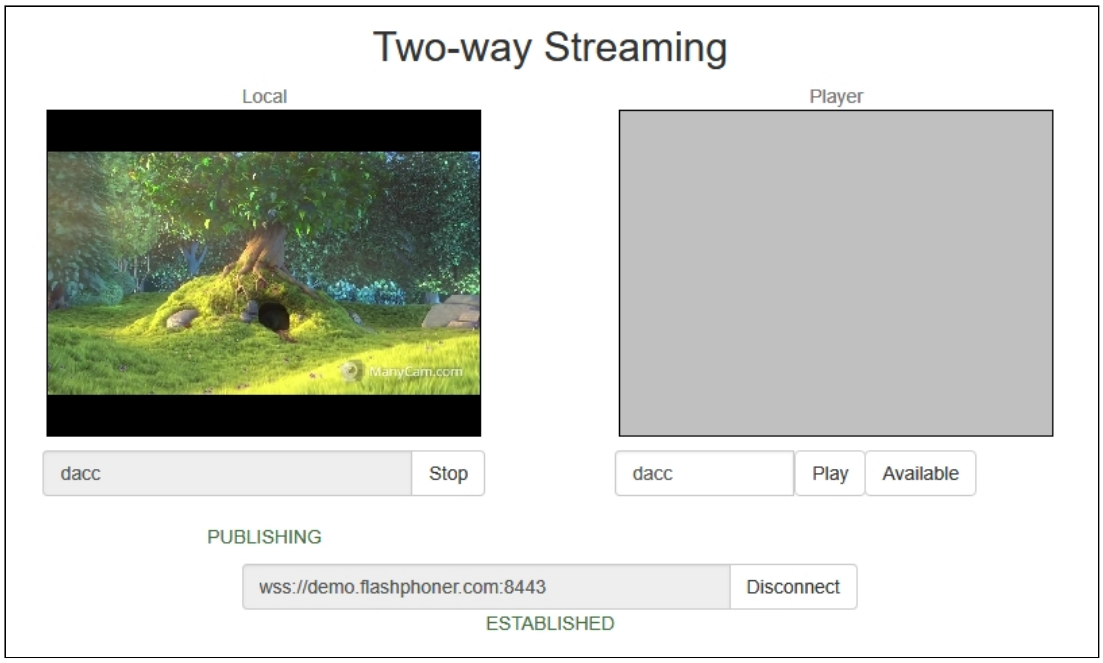
Operation flowchart



1. The browser establishes a connection via Websocket and sends the `publishStream` 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

1. For the test we use:
2. the demo server at `demo.flashphoner.com`;
3. the Two Way Streaming web application in the Chrome browser to publish the stream;
4. the Flash Streaming web application in the Internet Explorer browser to play the stream
5. Open the Two Way Streaming application. Click `Connect`, then `Publish`. Copy the identifier of the stream:



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

Flash Streaming

Server: rtmp://demo.flashphoner.com:1935 Login

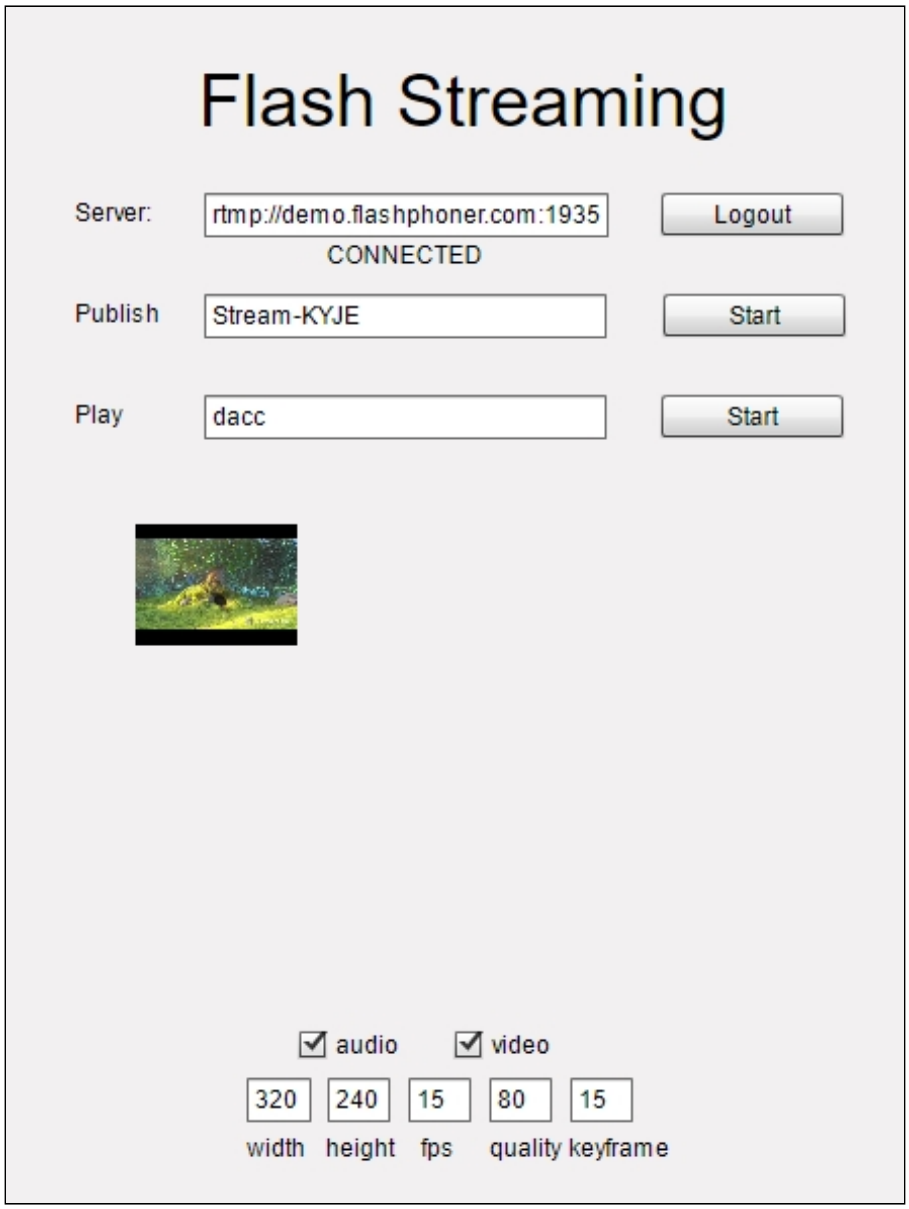
Publish Stream-KYJE Start

Play Stream-KYJE Start

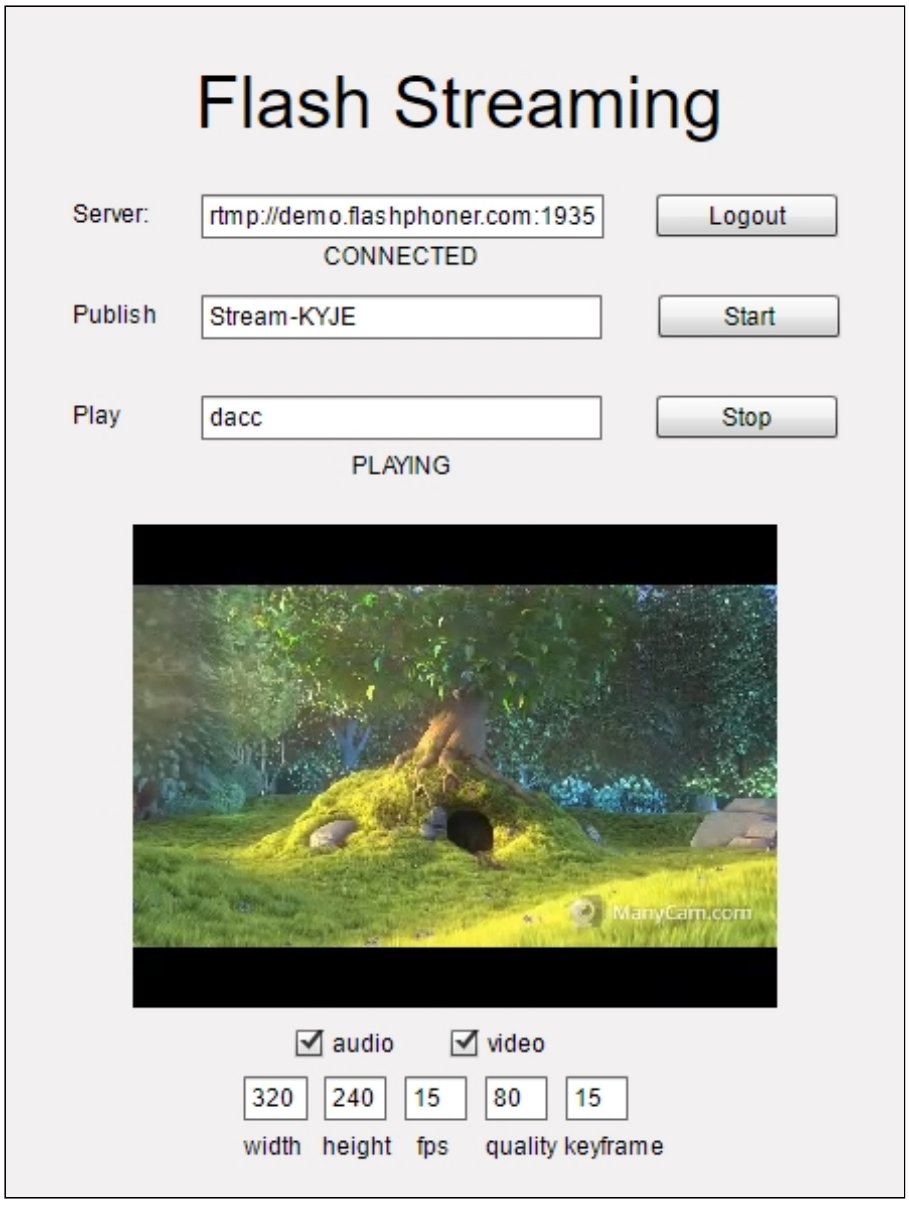
audio video

320	240	15	80	15
width	height	fps	quality	keyframe

7. Click the `Login` button. When you see the `Connected` label, set the stream identifier in the `Play` field:



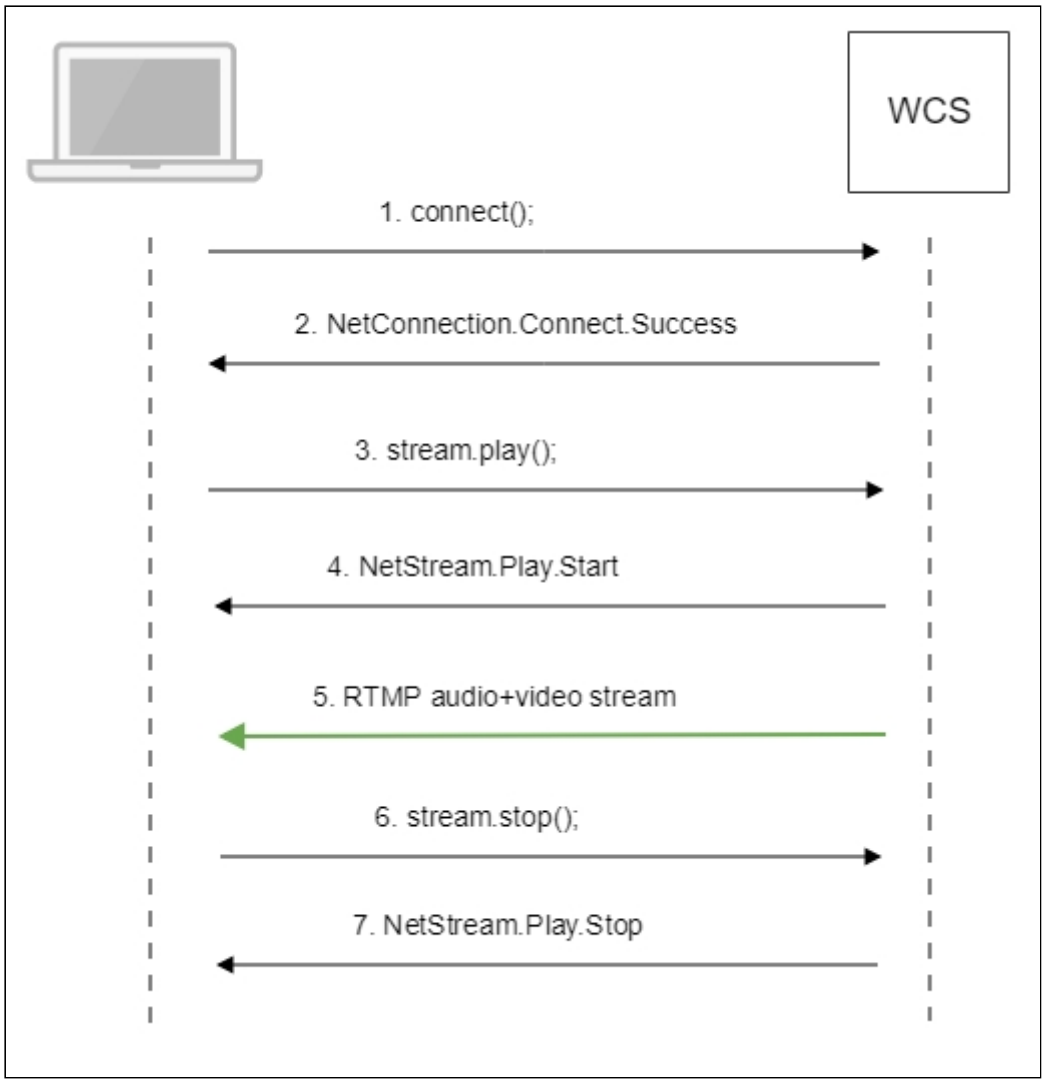
8. Click the `Start` button in the `Play` field. The stream starts playing:



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 " &#9989; 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.Success` code

```
private function handleConnectionStatus(event:NetStatusEvent):void{
  Logger.info("handleConnectionStatus: "&#9989;event.info.code);
  if (event.info.code=="NetConnection.Connect.Success"){
      Logger.info("near id: "&#9989;nc.nearID);
      Logger.info("far id: "&#9989;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.Start` code

```
private function handleSubscribeStreamStatus(event:NetStatusEvent):void{
  Logger.info("handleSubscribeStreamStatus: "&#9989;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.Stop` code

```
private function handleSubscribeStreamStatus(event:NetStatusEvent):void{
  Logger.info("handleSubscribeStreamStatus: "&#9989;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;
       ...
  }
}
```