


Stream Diagnostic

Video streaming and playback with debug information output example

The example shows the possibility to get debug information while streaming and put it on the web page. The `sessionDebugEnabled` option in `wcs-core.properties` file **must** be set to `true` to get debug log and corresponding event in session. This requires server to be restarted.


The example of diagnostic information output while stream is published

Stream Diagnostic



Local

➔




Preview

PUBLISHING

Create new session with url `ws://localhost:8080/test`
Debug session STARTED
Stream test PUBLISHING
Stream test PLAYING

and when streaming is stopped

Stream Diagnostic



Local

➔

Preview

UNPUBLISHED

[Download debug logs](#)

```

Create new session with url ws://localhost:8080/test
Debug session STARTED
Stream test PUBLISHING
Stream test PLAYING
Stream test STOPPED
Stream test UNPUBLISHED
Debug session STOPPED
Debug session PASSED

```

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/stream-diagnostic

- stream-diagnostic.css - CSS style file
- stream-diagnostic.html - the example page
- stream-diagnostic.js - script for example to work

The example can be tested at this URL:

https://host:8888/client2/examples/demo/streaming/stream-diagnostic/stream-diagnostic.html

where host is your WCS server address.

Analyzing the code

To analyze the code get `stream-diagnostic.js` file version with hash `ecbadc3` that can be found [here](#) and is available to download in build [2.0.212](#).

1. API initializing

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

```
Flashphoner.init({createMicGainNode: false});
```

2. Connection to the server

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

Every action will be printed to the special page element by function `log()` call

```
var url = field('url');
log("Create new session with url " + url);
$('#url').prop('disabled', true);
session = Flashphoner.createSession({urlServer:
url}).on(SESSION_STATUS.ESTABLISHED, function(session){
    ...
});
```

3. Receiving the event confirming successful connection

`ConnectionStatusEvent ESTABLISHED` [code](#)

```
session = 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(){
    ...
}).on(SESSION_STATUS.DEBUG, function(event){
    ...
});
```

4. Start debug output and video streaming

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

On stream creation these parameters are passed:

- `streamName` - the stream name
- `localVideo` - `div` element to display video from web camera

```
session.startDebug();
session.createStream({
    name: streamName,
```

```
display: localVideo,  
cacheLocalResources: true,  
receiveVideo: false,  
receiveAudio: false  
...  
}).publish();
```

5. Receiving the event confirming successful streaming

`StreamStatusEvent PUBLISHING` [code](#)

On this event, preview stream is created with `Session.createStream()`, and `Stream.play()` called to play it

```
session.createStream({  
    ...  
}).on(STREAM_STATUS.PUBLISHING, function(publishStream){  
    log("Stream " + streamName + " " + STREAM_STATUS.PUBLISHING);  
    setStatus(STREAM_STATUS.PUBLISHING);  
    //play preview  
    session.createStream({  
        name: streamName,  
        display: remoteVideo  
        ...  
    }).play();  
}).on(STREAM_STATUS.UNPUBLISHED, function(){  
    ...  
}).on(STREAM_STATUS.FAILED, function(stream){  
    ...  
}).publish();
```

6. PreviewsStream playback stop

`Stream.stop()` [code](#)

```
function onStarted(publishStream, previewStream) {  
    $("#publishBtn").text("Stop").off('click').click(function(){  
        $(this).prop('disabled', true);  
        previewStream.stop();  
    }).prop('disabled', false);  
    $("#downloadDiv").hide();  
}
```

7. Receiving the event confirming successful playback stop

`StreamStatusEvent STOPPED` [code](#)

```
session.createStream({  
    name: streamName,  
    display: remoteVideo
```

```

    }).on(STREAM_STATUS.PLAYING, function(previewStream){
        ...
    }).on(STREAM_STATUS.STOPPED, function(){
        log("Stream " + streamName + " " + STREAM_STATUS.STOPPED);
        publishStream.stop();
    }).on(STREAM_STATUS.FAILED, function(stream){
        ...
    }).play();

```

8. Streaming stop when playback is stopped

`Stream.stop()` [code](#)

```

session.createStream({
    name: streamName,
    display: remoteVideo
}).on(STREAM_STATUS.PLAYING, function(previewStream){
    ...
}).on(STREAM_STATUS.STOPPED, function(){
    log("Stream " + streamName + " " + STREAM_STATUS.STOPPED);
    publishStream.stop();
}).on(STREAM_STATUS.FAILED, function(stream){
    ...
}).play();

```

9. Receiving the event confirming successful streaming stop

`StreamStatusEvent UNPUBLISHED` [code](#)

```

session.createStream({
    name: streamName,
    display: localVideo,
    cacheLocalResources: true,
    receiveVideo: false,
    receiveAudio: false
}).on(STREAM_STATUS.PUBLISHING, function(publishStream){
    ...
}).on(STREAM_STATUS.UNPUBLISHED, function(){
    setStatus(STREAM_STATUS.UNPUBLISHED);
    log("Stream " + streamName + " " + STREAM_STATUS.UNPUBLISHED);
    //enable start button
    onStopped();
}).on(STREAM_STATUS.FAILED, function(stream){
    ...
}).publish();

```

10. Debug information output stop when streaming is stopped

`Session.stopDebug()` [code](#)

```
function onStopped() {
    ...
    if (session)
        session.stopDebug();
}
```

11. Receiving the event the end of debugging session

`ConnectionStatusEvent` `DEBUG` code

On this event, the link to download session log is forming

```
session = Flashphoner.createSession({urlServer:
url}).on(SESSION_STATUS.ESTABLISHED, function(session){
    ...
}).on(SESSION_STATUS.DISCONNECTED, function(){
    ...
}).on(SESSION_STATUS.FAILED, function(){
    ...
}).on(SESSION_STATUS.DEBUG, function(event){
    log("Debug session " + event.status);
    if (event.file) {
        var link = window.location.protocol + "://" + window.location.host +
"/" + event.file;
        $("#link").attr("href", link);
        $("#downloadDiv").show();
    }
});
```

12. Debug information output to the page element

code

```
function log(string) {
    document.getElementById("debug").innerHTML += string + '</br>';
}
```