

# Logging

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## Default logger, enabling and disabling

By default, WebSDK functions log will be displayed to the browser console with INFO level

|                                       |                                      |
|---------------------------------------|--------------------------------------|
| 09:46:56 INFO webrtc - Initialized    | <a href="#">flashphoner.js:35631</a> |
| 09:46:56 INFO websocket - Initialized | <a href="#">flashphoner.js:35631</a> |
| 09:46:56 INFO core - Initialized      | <a href="#">flashphoner.js:35631</a> |

Since build [0.5.28.2753.131](#) (the source code is available on GitHub by tag [05cb5bd](#)), logging can be fully disabled while API initializing

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

or in an application code by the following function call

```
Flashphoner.getLogger().setEnableLogs(false);
```

Then, logging can be enabled again if necessary

```
Flashphoner.getLogger().setEnableLogs(true);
```

## Log level adjusting

Logging level can be changed while API initializing

```
Flashphoner.init({flashMediaProviderSwfLocation: '../media-provider.swf', logger: {severity: "WARN"}});
```

or in an application code by the following function call

```
Flashphoner.getLogger().setLevel("WARN");
```

The following logging levels are supported:

| Level text constant | Description                           |
|---------------------|---------------------------------------|
| ERROR               | Errors only                           |
| WARN                | Errors and warnings                   |
| INFO                | WebSDK functions normal log (default) |
| DEBUG               | Debug info                            |
| TRACE               | Execution trace                       |

## Push logs to the server

By default, client logs will no be pushed to the server. This feature can be enabled if necessary while API initializing

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

or in an application code by the following function call

```
Flashphoner.getLogger().setPushLogs(true);
```

In this case client logs will be sent to WCS server via Websocket connection and will be passed to backend using [REST hook](#) /pushLogs:

```
10:16:03,335 INFO RestClient - API-ASYNC-pool-12-thread-5 SEND REST OBJECT ==>
URL:http://localhost:8081/apps/EchoApp/pushLogs
OBJECT:
{
  "nodeId" : "vdUfWbDQUa9TIFfYSwGmXhDs3zplvH4p@192.168.0.111",
  "appKey" : "defaultApp",
  "sessionId" : "/192.168.0.100:50627/192.168.0.111:8443-966a2082-8033-4982-9bcb-fecc1bd46169",
  "logs" : "10:15:55 INFO webrtc - \"Initialized\\n\",
  "origin" : "https://test.flashphoner.com:8888"
}
```

On Websocket connection closing, client logs will be written to server logs:

#### Client log example in server logs

```
10:16:09,144 INFO WCS4Handler - DISCONNECT-CLIENT-pool-5-thread-7
[-- BEGIN CLIENT LOG --]
CONF: ClientConfig{rtspMedia=false,rtmpAgent=false, wsTunnel=false, login='rcmv5ls2g9fjno4rf09h7ct0d4',
authenticationName='null', password='null', domain='null', outboundProxy='null', port=0, visibleName='null',
regRequired=false, applicationName='null', swfUrl='null', qValue='null', pAssociatedUri='null',
contactParams='null', authDate=Thu Dec 17 10:16:00 NOVT 2019, authToken='/192.168.0.100:50627/192.168.0.111:
8443-966a2082-8033-4982-9bcb-fecc1bd46169', logsFolderName='null', clientVersion='0.5.28', clientOSVersion='5.0
(Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/79.0.3945.79 Safari/537.36',
clientBrowserVersion='Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome
/79.0.3945.79 Safari/537.36', wsTunnelPacketization2='false', custom='{origin=https://test.flashphoner.com:
8888}'}
IMPL: WSClient{channel=[id: 0x14913825, /192.168.0.100:50627 -> /192.168.0.111:8443], handler=com.flashphoner.
server.client.handler.DelegateHandler@488a567e, closed=false, pageUrl='null', countUnansweredPing=0}
LOGS:
10:15:55 INFO webrtc - "Initialized"
10:15:55 INFO core - "Initialized"
10:16:03 DEBUG core - "Publish stream 826f"
10:16:03 INFO webrtc - {"audio":true,"video":{"width":320,"height":240,"frameRate":{"ideal":30}}}
10:15:55 INFO websocket - "Initialized"
10:16:04 INFO webrtc - "FOUND WEBRTC CACHED INSTANCE, id 8f70ebf0-207b-11ea-a503-b90a7846c4dd-
LOCAL_CACHED_VIDEO"
10:16:04 DEBUG webrtc - "unknown device audioinput id communications"
10:16:04 DEBUG core - "Offer SDP:\nv=0\r\no=- 711383983964074476 2 IN IP4 127.0.0.1\r\ns=-\r\nnt=0 0\r\na=group:
BUNDLE 0 1\r\na=msid-semantic: WMS s1BjksaRG0gqj5VSdPsLLMGDVWxrCDnGTxhK\r\nm=audio 9 UDP/TLS/RTP/SAVPF 111 103
104 9 0 8 106 105 13 110 112 113 126\r\nnc=IN IP4 0.0.0.0\r\na=rtcp:9 IN IP4 0.0.0.0\r\na=ice-ufrag:
Od1r\r\na=ice-pwd:6pgmvqFhvU6kZAvh6YyUm3x0\r\na=ice-options:trickle\r\na=fingerprint:sha-256 C6:73:08:03:00:33:
DE:19:19:F3:A2:E6:E6:82:57:8A:7C:C4:F2:E5:40:6A:B8:7D:17:BD:0F:0C:1F:1B:5C:7D\r\na=setup:actpass\r\na=mid:
0\r\na=extmap:1 urn:ietf:params:rtp-hdrext:ssrc-audio-level\r\na=extmap:2 http://www.webrtc.org/experiments/rtp-
hdrext/abs-send-time\r\na=extmap:3 http://www.ietf.org/id/draft-holmer-rmcat-transport-wide-cc-extensions-
01\r\na=extmap:4 urn:ietf:params:rtp-hdrext:sdes:mid\r\na=extmap:5 urn:ietf:params:rtp-hdrext:sdes:rtp-stream-
id\r\na=extmap:6 urn:ietf:params:rtp-hdrext:sdes:repaired-rtp-stream-id\r\na=sendonly\r\na=msid:
s1BjksaRG0gqj5VSdPsLLMGDVWxrCDnGTxhK 25d893b6-58b4-4000-b8ca-9848f134919d\r\na=rtcp-mux\r\na=rtpmap:111 opus
/48000/2\r\na=rtcp-fb:111 transport-cc\r\na=fmtp:111 minptime=10;useinbandfec=1\r\na=rtpmap:103 ISAC
/16000\r\na=rtpmap:104 ISAC/32000\r\na=rtpmap:9 G722/8000\r\na=rtpmap:0 PCMU/8000\r\na=rtpmap:8 PCMA
/8000\r\na=rtpmap:106 CN/32000\r\na=rtpmap:105 CN/16000\r\na=rtpmap:13 CN/8000\r\na=rtpmap:110 telephone-event
/48000\r\na=rtpmap:112 telephone-event/32000\r\na=rtpmap:113 telephone-event/16000\r\na=rtpmap:126 telephone-
event/8000\r\na=ssrc:2608046740 cname:5en189cAwo3Zr4+N\r\na=ssrc:2608046740 msid:
s1BjksaRG0gqj5VSdPsLLMGDVWxrCDnGTxhK 25d893b6-58b4-4000-b8ca-9848f134919d\r\na=ssrc:2608046740 mslabel:
s1BjksaRG0gqj5VSdPsLLMGDVWxrCDnGTxhK\r\na=ssrc:2608046740 label:25d893b6-58b4-4000-b8ca-9848f134919d\r\nm=video
9 UDP/TLS/RTP/SAVPF 96 97 98 99 100 101 102 122 127 121 125 107 108 109 124 120 123 119 114 115 116\r\nnc=IN IP4
0.0.0.0\r\na=rtcp:9 IN IP4 0.0.0.0\r\na=ice-ufrag:Od1r\r\na=ice-pwd:6pgmvqFhvU6kZAvh6YyUm3x0\r\na=ice-options:
trickle\r\na=fingerprint:sha-256 C6:73:08:03:00:33:DE:19:19:F3:A2:E6:E6:82:57:8A:7C:C4:F2:E5:40:6A:B8:7D:17:BD:
```

```

OC:1F:1B:5C:7D\r\nna=setup:actpass\r\nna=mid:1\r\nna=extmap:14 urn:iETF:params:rtp-hdrexT:toffset\r\nna=extmap:2
http://www.webrtc.org/experiments/rtp-hdrext/abs-send-time\r\nna=extmap:13 urn:3gpp:video-orientation\r\nna=extmap:3 http://www.ietf.org/id/draft-holmer-rmcat-transport-wide-cc-extensions-01\r\nna=extmap:12 http://www.webrtc.org/experiments/rtp-hdrext/playout-delay\r\nna=extmap:11 http://www.webrtc.org/experiments/rtp-hdrext/video-content-type\r\nna=extmap:7 http://www.webrtc.org/experiments/rtp-hdrext/video-timing\r\nna=extmap:8 http://tools.ietf.org/html/draft-ietf-avtext-framemarking-07\r\nna=extmap:9 http://www.webrtc.org/experiments/rtp-hdrext/color-space\r\nna=extmap:4 urn:iETF:params:rtp-hdrext:sdes:mid\r\nna=extmap:5 urn:iETF:params:rtp-hdrext:sdes:rtp-stream-id\r\nna=extmap:6 urn:iETF:params:rtp-hdrext:sdes:repaired-rtp-stream-id\r\nna=sendonly\r\nna=msid:s1BjksaRG0ggj5VSdPsLLMGDVWxrCDnGTxHk a5feb98a-4e85-4afe-b562-0d4dacaca904\r\nna=rtcp-mux\r\nna=rtcp-rsize\r\nna=rtcpmap:96 VP8/90000\r\nna=rtcp-fb:96 goog-remb\r\nna=rtcp-fb:96 transport-cc\r\nna=rtcp-fb:96 ccm fir\r\nna=rtcp-fb:96 nack\r\nna=rtcp-fb:96 nack pli\r\nna=rtcpmap:97 rtx/90000\r\nna=fmtp:97 apt=96\r\nna=rtcpmap:98 VP9/90000\r\nna=rtcp-fb:98 goog-remb\r\nna=rtcp-fb:98 transport-cc\r\nna=rtcp-fb:98 ccm fir\r\nna=rtcp-fb:98 nack\r\nna=rtcp-fb:98 nack pli\r\nna=fmtp:98 profile-id=0\r\nna=rtcpmap:99 rtx/90000\r\nna=fmtp:99 apt=98\r\nna=rtcpmap:100 VP9/90000\r\nna=rtcp-fb:100 goog-remb\r\nna=rtcp-fb:100 transport-cc\r\nna=rtcp-fb:100 ccm fir\r\nna=rtcp-fb:100 nack\r\nna=rtcp-fb:100 nack pli\r\nna=fmtp:100 profile-id=2\r\nna=rtcpmap:101 rtx/90000\r\nna=fmtp:101 apt=100\r\nna=rtcpmap:102 H264/90000\r\nna=rtcp-fb:102 goog-remb\r\nna=rtcp-fb:102 transport-cc\r\nna=rtcp-fb:102 ccm fir\r\nna=rtcp-fb:102 nack\r\nna=rtcp-fb:102 nack pli\r\nna=fmtp:102 level-asymmetry-allowed=1;packetization-mode=1;profile-level-id=42001f\r\nna=rtcpmap:122 rtx/90000\r\nna=fmtp:122 apt=102\r\nna=rtcpmap:127 H264/90000\r\nna=rtcp-fb:127 goog-remb\r\nna=rtcp-fb:127 transport-cc\r\nna=rtcp-fb:127 ccm fir\r\nna=rtcp-fb:127 nack\r\nna=rtcp-fb:127 nack pli\r\nna=fmtp:127 level-asymmetry-allowed=1;packetization-mode=0;profile-level-id=42001f\r\nna=rtcpmap:121 rtx/90000\r\nna=fmtp:121 apt=127\r\nna=rtcpmap:125 H264/90000\r\nna=rtcp-fb:125 goog-remb\r\nna=rtcp-fb:125 transport-cc\r\nna=rtcp-fb:125 ccm fir\r\nna=rtcp-fb:125 nack\r\nna=rtcp-fb:125 nack pli\r\nna=fmtp:125 level-asymmetry-allowed=1;packetization-mode=1;profile-level-id=42e01f\r\nna=rtcpmap:107 rtx/90000\r\nna=fmtp:107 apt=125\r\nna=rtcpmap:108 H264/90000\r\nna=rtcp-fb:108 goog-remb\r\nna=rtcp-fb:108 transport-cc\r\nna=rtcp-fb:108 ccm fir\r\nna=rtcp-fb:108 nack\r\nna=rtcp-fb:108 nack pli\r\nna=fmtp:108 level-asymmetry-allowed=1;packetization-mode=0;profile-level-id=42e01f\r\nna=rtcpmap:109 rtx/90000\r\nna=fmtp:109 apt=108\r\nna=rtcpmap:124 H264/90000\r\nna=rtcp-fb:124 goog-remb\r\nna=rtcp-fb:124 transport-cc\r\nna=rtcp-fb:124 ccm fir\r\nna=rtcp-fb:124 nack\r\nna=rtcp-fb:124 nack pli\r\nna=fmtp:124 level-asymmetry-allowed=1;packetization-mode=1;profile-level-id=4d0032\r\nna=rtcpmap:120 rtx/90000\r\nna=fmtp:120 apt=124\r\nna=rtcpmap:123 H264/90000\r\nna=rtcp-fb:123 goog-remb\r\nna=rtcp-fb:123 transport-cc\r\nna=rtcp-fb:123 ccm fir\r\nna=rtcp-fb:123 nack\r\nna=rtcp-fb:123 nack pli\r\nna=fmtp:123 level-asymmetry-allowed=1;packetization-mode=1;profile-level-id=640032\r\nna=rtcpmap:119 rtx/90000\r\nna=fmtp:119 apt=123\r\nna=rtcpmap:114 red/90000\r\nna=rtcpmap:115 rtx/90000\r\nna=fmtp:115 apt=114\r\nna=rtcpmap:116 ulpfec/90000\r\nna=ssrc-group:FID 473001812 3694826197\r\nna=ssrc:473001812 cname:5en189cAwo3Zr4+N\r\nna=ssrc:473001812 msid:s1BjksaRG0ggj5VSdPsLLMGDVWxrCDnGTxHk a5feb98a-4e85-4afe-b562-0d4dacaca904\r\nna=ssrc:473001812 mslabel:s1BjksaRG0ggj5VSdPsLLMGDVWxrCDnGTxHk\r\nna=ssrc:3694826197 msid:s1BjksaRG0ggj5VSdPsLLMGDVWxrCDnGTxHk a5feb98a-4e85-4afe-b562-0d4dacaca904\r\nna=ssrc:3694826197 mslabel:s1BjksaRG0ggj5VSdPsLLMGDVWxrCDnGTxHk\r\nna=ssrc:3694826197 label:a5feb98a-4e85-4afe-b562-0d4dacaca904\r\nna"
10:16:04 DEBUG webrtc - "unknown device audiooutput id default"
10:16:04 DEBUG webrtc - "unknown device audiooutput id
6e3a02b2757fala862fe0c38cc9901fdaela96ffc171489d13714e0530cbf12f"
10:16:04 DEBUG webrtc - "unknown device audiooutput id
888ce197e3dbe33d68c51c46e37dfee6534cd98523ef7c0c8aa6a80cb71288d3"
10:16:04 DEBUG webrtc - "unknown device audiooutput id communications"
10:16:04 DEBUG webrtc - "Added icecandidate: candidate:2407917592 1 udp 2122260223 172.16.0.142 50895 typ host
generation 0 ufrag OdIr network-id 1"
10:16:04 DEBUG webrtc - "Added icecandidate: candidate:2131708102 1 udp 2122194687 192.168.0.100 50896 typ host
generation 0 ufrag OdIr network-id 2"
10:16:04 DEBUG webrtc - "Added icecandidate: candidate:2407917592 1 udp 2122260223 172.16.0.142 50898 typ host
generation 0 ufrag OdIr network-id 1"
10:16:04 DEBUG webrtc - "Added icecandidate: candidate:3119442946 1 udp 2122129151 169.254.219.216 50897 typ
host generation 0 ufrag OdIr network-id 3"
10:16:04 DEBUG webrtc - "Added icecandidate: candidate:3119442946 1 udp 2122129151 169.254.219.216 50900 typ
host generation 0 ufrag OdIr network-id 3"
10:16:04 DEBUG webrtc - "Added icecandidate: candidate:2131708102 1 udp 2122194687 192.168.0.100 50899 typ host
generation 0 ufrag OdIr network-id 2"
10:16:04 DEBUG webrtc - "unknown device audiooutput id default"
10:16:04 DEBUG webrtc - "unknown device audioinput id communications"
10:16:04 DEBUG webrtc - "unknown device audiooutput id communications"
10:16:04 DEBUG webrtc - "unknown device audiooutput id
888ce197e3dbe33d68c51c46e37dfee6534cd98523ef7c0c8aa6a80cb71288d3"
10:16:04 DEBUG webrtc - "unknown device audiooutput id
6e3a02b2757fala862fe0c38cc9901fdaela96ffc171489d13714e0530cbf12f"
10:16:04 DEBUG webrtc - "setRemoteSDP:"
10:16:04 DEBUG webrtc - "v=0\r\no=Flashphoner 0 1576552564626 IN IP4 192.168.0.111\r\ns=Flashphoner/1.0\r\nnc=IN
IP4 192.168.0.111\r\nnt=0 0\r\nnm=audio 31038 RTP/SAVPF 111 8 9\r\nnc=IN IP4 192.168.0.111\r\nna=mid:0\r\nna=rtcpmap:
111 opus/48000/2\r\nna=rtcpmap:8 PCMA/8000\r\nna=rtcpmap:9 G722/8000\r\nna=ptime:20\r\nna=ice-pwd:
6306qauil0p05ablls153qs71\r\nna=ice-ufrag:8eba9440-207b-11ea-a503-b90a7846c4dd8scpalads8tmlsa\r\nna=fingerprint:
SHA-256 2E:38:3D:F8:CE:9D:74:4A:96:C2:AC:47:92:89:74:15:CF:C7:2C:7A:0B:F3:63:83:6B:0D:57:A1:03:22:C0:
45\r\nna=candidate:1 1 udp 2130706431 192.168.0.111 31038 typ host\r\nna=candidate:1 2 udp 2130706431

```

```

192.168.0.111 31038 typ host\r\na=end-of-candidates\r\na=rtcp-mux\r\na=rtcp:31038 IN IP4 192.168.0.111
\r\na=recvonly\r\nnm=video 31040 RTP/SAVPF 102 125 124 123 127 108 96\r\nnc=IN IP4 192.168.0.111\r\na=mid:
1\r\na=rtpmap:102 H264/90000\r\na=fmtp:102 level-asymmetry-allowed=1;packetization-mode=1;profile-level-
id=42001f\r\na=rtpmap:125 H264/90000\r\na=fmtp:125 level-asymmetry-allowed=1;packetization-mode=1;profile-level-
id=42e01f\r\na=rtpmap:124 H264/90000\r\na=fmtp:124 level-asymmetry-allowed=1;packetization-mode=1;profile-level-
id=4d0032\r\na=rtpmap:123 H264/90000\r\na=fmtp:123 level-asymmetry-allowed=1;packetization-mode=1;profile-level-
id=640032\r\na=rtpmap:127 H264/90000\r\na=fmtp:127 level-asymmetry-allowed=1;packetization-mode=0;profile-level-
id=42001f\r\na=rtpmap:108 H264/90000\r\na=fmtp:108 level-asymmetry-allowed=1;packetization-mode=0;profile-level-
id=42e01f\r\na=rtpmap:96 VP8/90000\r\na=rtcp-fb:* ccm fir\r\na=rtcp-fb:* nack\r\na=rtcp-fb:* nack pli\r\na=rtcp-
fb:* goog-remb\r\na=ice-pwd:63o06qauil0p05ablls153qs71\r\na=ice-ufrag:8eba9440-207b-11ea-a503-
b90a7846c4dd8scpalds8tmlsa\r\na=fingerprint:SHA-256 2E:38:3D:F8:CE:9D:74:4A:96:C2:AC:47:92:89:74:15:CF:C7:2C:7A:
0B:F3:63:83:6B:0D:57:A1:03:22:C0:45\r\na=candidate:1 1 udp 2130706431 192.168.0.111 31040 typ
host\r\na=candidate:1 2 udp 2130706431 192.168.0.111 31040 typ host\r\na=end-of-candidates\r\na=rtcp-
mux\r\na=rtcp:31040 IN IP4 192.168.0.111\r\na=recvonly\r\n"
10:16:04 DEBUG webrtc - "Added icecandidate: candidate:831304758 1 tcp 1518214911 192.168.0.100 9 typ host
tcptype active generation 0 ufrag Od1r network-id 2"
10:16:04 DEBUG webrtc - "Added icecandidate: candidate:4151120114 1 tcp 1518149375 169.254.219.216 9 typ host
tcptype active generation 0 ufrag Od1r network-id 3"
10:16:04 DEBUG webrtc - "Added icecandidate: candidate:3238401256 1 tcp 1518280447 172.16.0.142 9 typ host
tcptype active generation 0 ufrag Od1r network-id 1"
10:16:04 DEBUG webrtc - "Added icecandidate: candidate:831304758 1 tcp 1518214911 192.168.0.100 9 typ host
tcptype active generation 0 ufrag Od1r network-id 2"
10:16:04 DEBUG webrtc - "Added icecandidate: candidate:3238401256 1 tcp 1518280447 172.16.0.142 9 typ host
tcptype active generation 0 ufrag Od1r network-id 1"
10:16:04 DEBUG webrtc - "Added icecandidate: candidate:4151120114 1 tcp 1518149375 169.254.219.216 9 typ host
tcptype active generation 0 ufrag Od1r network-id 3"
10:16:08 DEBUG core - "Stop stream 826f"

[-- END CLIENT LOG ----]

```

## Using custom logger

Since build [0.5.28.2753.131](#) (the source code is available on GitHub by tag [05cb5bd](#)), a custom logger can be defined:

```

var customLogger = {
  error: function (text) {
    console.log("custom logger: ERROR:", text);
  },
  warn: function (text) {
    console.log("custom logger: WARN:", text);
  },
  info: function (text) {
    console.log("custom logger: INFO:", text);
  },
  debug: function (text) {
    console.log("custom logger: DEBUG:", text);
  },
  trace: function (text) {
    console.log("custom logger: TRACE:", text);
  }
};

```

and can be enabled while API initializing

```

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

```

or in an application code by the following function call

```

Flashphoner.getLogger().setCustomLogger(customLogger);

```

The custom logger example above will display to the browser console

|  |   |
|--|---|
| custom logger: INFO: Initialized   | <a href="#">two_way_streaming.js:15</a> |
| custom logger: INFO: Initialized   | <a href="#">two_way_streaming.js:15</a> |
| custom logger: INFO: Initialized   | <a href="#">two_way_streaming.js:15</a> |
| Create new session with url <a href="#">wss://test1.flashphoner.com:8443</a>   | <a href="#">two_way_streaming.js:54</a> |
| custom logger: INFO:<br>▶{audio: <a href="#">true</a> , video: {...}, customStream: undefined}   | <a href="#">two_way_streaming.js:15</a> |
| custom logger: INFO: FOUND WEBRTC CACHED INSTANCE, id <a href="#">two_way_streaming.js:15</a><br>8185c8c0-2081-11ea-b1ef-9de17262c752-LOCAL_CACHED_VIDEO |   |

Logging enabling, disabling, level adjusting and pushing logs to the server work for custom logger as well as for default logger.

## A separate logger parameters for session, stream or call

Since WebSDK build [2.0.215](#) it is possible to set a separate logger parameters not only for application, but also for every session, stream or call. In this case, every object uses its own logger instance. For example, let's create a separate custom loggers for stream publishing and playback in Two Way Streaming application:

### 1. Define custom loggers for publishing

```
var publishCustomLogger = {
  error: function (text) {
    console.log("publish: ERROR:",text);
  },
  warn: function (text) {
    console.log("publish: WARN:",text);
  },
  info: function (text) {
    console.log("publish: INFO:",text);
  },
  debug: function (text) {
    console.log("publish: DEBUG:",text);
  },
  trace: function (text) {
    console.log("publish: TRACE:",text);
  }
};
```

and playback

```
var playCustomLogger = {
  error: function (text) {
    console.log("play: ERROR:",text);
  },
  warn: function (text) {
    console.log("play: WARN:",text);
  },
  info: function (text) {
    console.log("play: INFO:",text);
  },
  debug: function (text) {
    console.log("play: DEBUG:",text);
  },
  trace: function (text) {
    console.log("play: TRACE:",text);
  }
};
```

### 2. Set custom logger option when creating Stream objects for publishing

```
function publishStream() {
  ...
  session.createStream({
    name: streamName,
    display: localVideo,
    ...,
    logger: {customLogger: publishCustomLogger}
  }).publish();
}
```

and fro playback

```
function playStream() {
  ...
  session.createStream({
    name: streamName,
    display: remoteVideo,
    logger: {customLogger: playCustomLogger}
  }).play();
}
```

3. The following messages will be displayed in browser xconsole while publishing and playing a stream in modified Two Way Streaming example

|   |   |
|---|---|
| 13:09:10 INFO webrtc - Initialized  | <a href="#">flashphoner.js:14432</a>    |
| 13:09:10 INFO websocket - Initialized   | <a href="#">flashphoner.js:14432</a>    |
| 13:09:10 INFO core - Initialized  | <a href="#">flashphoner.js:14432</a>    |
| ✖ Failed to load resource: the server responded with a status of 404 (Not Found)                        | <a href="#">:8081/favicon.ico:1</a>     |
| Create new session with url ws://localhost:8080   | <a href="#">two way streaming.js:75</a> |
| 13:09:22 INFO webrtc - ▶ {audio: true, video: {...}, customStream: undefined}                           | <a href="#">flashphoner.js:14432</a>    |
| publish: INFO: FOUND WEBRTC CACHED INSTANCE, id c9433740-aa6f-11ec-b31c-1321b67d9aed-LOCAL_CACHED_VIDEO | <a href="#">two way streaming.js:19</a> |
| publish: INFO: Set video track contentHint to detail  | <a href="#">two way streaming.js:19</a> |
| ✖ GET http://localhost:8081/favicon.ico 404 (Not Found)   | <a href="#">favicon.ico:1</a>           |
| 2 Resize from 320x240 to 320x240  | <a href="#">utils.js:185</a>            |
| play: INFO: FOUND WEBRTC CACHED INSTANCE, id cd0a2a50-aa6f-11ec-b31c-1321b67d9aed-REMOTE_CACHED_VIDEO   | <a href="#">two way streaming.js:36</a> |
| 2 Resize from 320x240 to 320x240  | <a href="#">utils.js:185</a>            |
| >   |   |