OTOY Client API

The OTOY Client is launched from a URL, and supports a number of parameters to support different behaviour.

URL Syntax

The URL to access the OTOY client is built up as follows:

```
http://aws.otoy.com/?connect=//<ip>/?<key>=<value>;...
```

Where the <ip> is the public ip address of the instance you wish to connect to, and the parameters are <key>=<value> pairs as indicated.

Parameters

The following sections provide details about the parameters that are supported in native ORBX. ORBX.js supports a growing subset of these commands within the browser sandbox, and all of these parameters when launched with the ORBX user mode driver installed in the OS:

ACODEC

```
ACODEC=<codec>
```
Sets the audio codec to use for the audio stream. At present only celt is defined, however this may be expanded in the future, and audio codecs may be added with loadable modules.
Default is 'celt'.

APPICON

```
APPICON=<filename>
```
Specifies the filename and path for application icon to be used by the client window.
Default is not specified.

APPLICATION (APP)

```
APPLICATION=<module_name|pid>
```
Captures from the primary window of the given application. The application may be specified by the module_name (full path), or the process ID. If specified by the module name, then the first instance of that module found will be chosen. The parameter name may also be shortened to APP.
Default is not specified.

ASOURCE (ASRC)

`ASOURCE=<source>`

Specifies the audio source to be captured. The parameter name may be shortened to ASRC.

Default is WASAPI on Windows and Pulse on Linux.

AUDIO

`AUDIO=<1|0>`

Enables the capture and streaming of audio from the Stream Host to the Client. This captures all audio from the host machine. Requires that both client and host have working sound drivers, and that the host audio device is configured for 44.1 kHz 16-bit stereo output.

Default is 0.

AUTOQUIT

`AUTOQUIT=<seconds>`

Ends the session if there has been no mouse/keyboard activity after the specified number of seconds. A value of zero (0) disables the auto-quit functionality. e.g. AUTOQUIT=600 will quit after 10 minutes of no activity.

Default is 0.

AUTOREBOOT

`AUTOREBOOT=<true|false>`

Automatically reboot the host computer on disconnection of the client session.

Default is false.

AUTORESIZE

`AUTORESIZE=<true|false>`

Restores the host console session desktop to original size on disconnect when set to true.

Default is true.

AUTOSHUTDOWN

`AUTOSHUTDOWN=<true|false>`

Automatically perform a full shut down of the host computer on disconnection.

Default is false.

AUTOSLEEP

`AUTOSLEEP=<true|false>`

Automatically place the host computer into a low-power sleep state on disconnect.

Default is false.

AUTOSUSPEND

`AUTOSUSPEND=<true|false>`

Automatically place the host computer into the suspend state on disconnection.
Default is false.

BORDERLESS

```
BORDERLESS=<true|false>
```
Creates the client window with no border.
Default is false.

CANVAS

```
CANVAS=<window_handle>
```
Embeds the client window as a child of the specified window.
Default is not specified.

CAPTION

```
CAPTION=<true|false>
```
Create the client window with a title bar when set to true.
Default is false.

CLIENT

```
CLIENT=<os_name>
```
The name of the client operating system (OS).
Default is not specified.

CLIPBOARD

```
CLIPBOARD=<1|0>
```
Enable or disable clipboard functionality between the hosted session and the client.
Default is 0.

CODEC (VCODEC)

```
CODEC=<codec>
```
Sets the video codec to use for the video stream. Current options for codecs are ORBX1, ORBX2, and x264. This parameter is also aliased as VCODEC.
Default is 'orbx1'.

CRYPTO

```
CRYPTO=<true|false>
```
Enables or disables the channel encryption from the Session Host to the Stream Client.
Default is true.

CURSORS

```
CURSORS=<1|0>
```
Enables capture of the cursor from the hosted session.
Default is 0.

CX

```
CX=<x_position>
```

Specifies the integer x-coordinate of the client window position.
Default is not specified.

CY

```
CY=<y_position>
```
Specifies the integer y-coordinate of the client window position.
Default is not specified.

DEBLOCK

```
DEBLOCK=<true|false>
```
Enables ORBX in-loop deblocking filter for the Y channel.
Default is false.

DEBLOCKUV

```
DEBLOCKUV=<true|false>
```
Enables ORBX in-loop deblocking filter for the U and V channels.
Default is false.

DESKTOP

```
DESKTOP=<true|false>
```
Enables capture from the entire host desktop. Note, that this overrides and setting of
WINDOW.
Default is true.

DRAGNDROP

```
DRAGNDROP=<1|0>
```
Enables or disables drag-and-drop functionality.
Default is 0.

FAST

```
FAST=<1|0>
```
Enables fast motion estimation for 2-4x encoding speed on a low end CPU at the
expense of bandwidth for high motion scenes. This us turned on by default for CPU
encoding, enabling 60 Hz HD streams using only 2 physical CPU cores..
Default is 0.

FULLSCREEN

```
FULLSCREEN=<1|0>
```
Requests that the connected client be run full-screen.
Default is false.

GPU

```
GPU=<1|0>
```
Enable GPU encoding on the host. Requires Cayman AMD GPU (e.g. Radeon 6970 or,
FirePro v7900).
Default is 0.

HEIGHT

`HEIGHT=<height>`

Specifies the height in pixels of the client session window. Also see WIDTH.
Default is not specified.

KEYBOARD

`KEYBOARD=<1|0>`

Enable or disable capture of key-presses from the keyboard.
Default is 0.

LOGGING

`LOGGING=<true|false>`

Enables a debug and error log written to a file. Has no effect if logging was disabled when the Stream Host was built.
Default is false.

MAXFPS

`MAXFPS=<maximum>`

Sets the maximum frames per second allowed for adaptive streaming of the video stream sent to the client. This value is enforced once the stream reaches the maximum quality or bit-rate settings specified through other parameters. The valid range for the maximum is 0-1000, with 0 being no-limit.
Default is 10.

MAXIMIZE (MAXBOX)

`MAXIMIZE=<true|false>`

Creates the client window with a maximize button when true. The parameter name may also be shortened to MAXBOX.
Default is false.

MAXQ

`MAXQ=<maximum>`

Sets the maximum video quality of the stream as a percent value between 0 to 100. For ORBX1 video streams, an 85% quality setting represents near loss-less quality (after color conversion to YUV 4:2:0 from RGB). For ORBX2, a 50% value represents near loss-less quality.
Default is 85.

MAXUSERS

`MAXUSERS=<maximum>`

Sets the maximum number of concurrently connected users.
Default is 4.

MINFPS

`MINFPS=<minimum>`

Specifies the minimum frames per second targeted for adaptive streaming by the client, overriding the target bit-rate and quality settings. The valid range for the minimum is 0-1000, with 0 being no-floor.
Default is 5.

MINIMIZE (MINBOX)

`MINIMIZE=<true|false>`

Creates the client window with a minimize button when true. The parameter name may also be shortened to MINBOX.
Default is false.

MINQ

`MINQ=<minimum>`

Sets the minimum video quality of the stream as a percentage value between 0 to 100. For ORBX1 values below 20% may show noticeable artifacts, but may be required to sustain 30 Hz or higher frame rates at low bit-rates.
Default is 10.

MOTION

`MOTION=<frequency>`

3D device motion sensor input frequency, in Hz. If 0, then device does not send motion data. For iOS devices the frequency values should be 60 (on) or 0 (off).
Default is 0.

MOUSE

`MOUSE=<1|0>`

Enable or disable mouse capture.
Default is 0.

MULTICAST

`MULTICAST=<multicast_ip>:<multicast_port>[:<iframe_interval]`

Starts a multicast client session on the given multicast IP address and multicast port. The multicast IP address must be in the reserved multicast address range 224.0.0.0 to 239.255.255.255, however any multicast port number may be used.
The iframe_interval parameter is optional and specifies the maximum number of milliseconds between iframes, e.g. 500 means that an iframe will be generated at least every 500 milliseconds. The default iframe interval is 0, which means the server will generate iframes whenever it determines they are required.
Note that in some situations the colon between the IP address and port, and the optional iframe interval, will need to be percent-encoded as '%3A' to be passed correctly.

NOCRYPTO

`NOCRYPTO=1`

Disables the channel encryption from the Session Host to the Stream Client.

PROFILE

`PROFILE=<name>`

Selects the built in profile with the given name. Profiles collect together a set of default values for one or more of the parameters.
Currently supported profiles are:

- ios
- desktop
- wan
- lan

Default is undefined.

REFRESHRATE

`REFRESHRATE=<frequency>`

Sets the screen refresh rate of the host display (in Hz, i.e. 60 = 60 Hz or 60 fps).
Default is not specified.

RESIZEHOST

`RESIZEHOST=<1|0>`

Requests the Session Host to resize the desktop to match the client dimensions as closely as possible.
Default is 1.

RESTOREHOST

`RESTOREHOST=<true|false>`

Requests the Session Host restore the desktop to the original dimensions once the session has completed.
Default is false.

RPARITY

`RPARITY=<parity_ratio>`

If the parity ratio is exceeded for more than the RUDP time value then the video stream will switch from UDP to Reliable UDP.
Default is 50.

RUDP

`RUDP=<ms_threshold>`

Threshold time value in milliseconds that the parity ratio RPARITY can be exceeded before switching the video stream to Reliable UDP.
Default is 5000.

SCALEHEIGHT

`SCALEHEIGHT=<height>`

Scales the host window to the specified height if scaling is enabled.
Default is 0.

SCALEHOST

`SCALEHOST=<1|0>`

Enables or disables scaling of the host window.

Default is 0.

SCALEWIDTH

`SCALEWIDTH=<width>`

Scales the host window to the specified width if scaling is enabled.

Default is 0.

START

`START=<uri_encoded_full_application_path>`

Launches the specified application when the session starts. The application name should be the URI encoded local path on the host machine. e.g.
START=c%3A%5Cwindows%5Csystem32%5Ccalc.exe

Default is not specified.

STATUS

`STATUS=<1|0>`

Enables the display of video stream status in the caption of the client window.

Default is 0.

STOP

`STOP=<uri_encoded_full_application_path>`

Launches the specified application when the session ends. The application name should be the URI encoded local path on the host machine. e.g.
STOP=c%3A%5Cwindows%5Csystem32%5Ccalc.exe

Default is not specified.

TCP

`TCP=<packet_size>`

Forces TCP/IP video and audio streams in place of UDP streaming. If an integer value of 0 is specified then the default detected packet size is used. If an integer value is specified, then the stream shapes the video packets to fit within the specified number of bytes.

Default is 0.

TOUCH

`TOUCH=<1|0>`

Enable or disable touch event capture.

Default is 0.

UDP

`UDP=<packet_size>`

Enables UDP streaming for video and audio streams. If an integer value of 0 is specified, the default detected packet size is used. If an integer value is specified, then the stream shapes all video packets to fit within the specified number of bytes.
Default is 0.

USERID

`USERID=<token>`

Specifies the OAuth user id token to be verified against the OAuth server URL given in the AUTHURL parameter.
Default is 'orbx1'.

VCAPTURE (VCAP)

`VCAPTURE=<capture_buffer>`

Sets the captured video target buffer. Currently available methods for Window based Stream Hosts are:
- cpu – video captured to CPU buffer. (default)
- opencl – video captured to OpenCL buffer.
  The parameter name may also be shortened to VCAP.
  Default is given above for each platform.

VCODEC (CODEC)

`VCODEC=<codec>`

This is an alias of the CODEC parameter and takes the same values.
Default is 'orbx1'.

VIDEO

`VIDEO=<1|0>`

Enables the capture and streaming of video from the Stream Host to the Client.
Default is 1.

VSOURCE (VSRC)

`VSOURCE=<source>`

Sets the video source for capture. Currently available methods for Window based Stream Hosts are:
- gdi – uses GDI to capture.
- dwm – uses the DWM to capture. Only supported on Vista or better with Aero enabled.
- dxgi – uses DXGI to capture. Only supported on Windows8/Server 2012 or later.
- nvfbc – uses the nVidia Frame Buffer Capture driver if supported. (default)
  Currently available methods for Linux based Stream Hosts are:
- xshm – uses the X Window System Shared Memory Extension to capture video. (default)
  Currently available methods for OSX based Stream Hosts are:
- ogl – uses OpenGL to capture pixels from the front buffer. (default)
  The parameter name may also be shortened to VSRC
  Default is given above for each platform.

WAN

`WAN=<bitrate>`

Maximum allowed bit-rate of the adaptive video and audio stream, in megabits per second (Mbps). This value takes precedence over min/max fps and quality settings and specifies a hard upper bit-rate limit for the session. Note that 25 Mbps is at the limit of what can be streamed on average WiFi network without heavy packet loss. For ORBX1.1, this value may need to be set lower than 25 Mbps (e.g. WAN=5) on routers or ISPs with significant traffic shaping (this should not be needed with ORBX1.2). On 1 Gbps LAN connections, this value can be set to 120 (240 is the maximum allowed, but should not be needed for normal streams).
Default is 25.

WIDTH

`WIDTH=<width>`

Specifies the width in pixels of the client session window. Also see HEIGHT.
Default is not specified

WINDOW

`WINDOW=<window>`

Specify the name of a host window to capture instead of the host desktop.
Default is the desktop.