PIPELINE 2.6

Web Service API Reference

Telestream

Record commands (Mac and Windows)

Record commands apply to *Pipeline Control for Mac v2.6* and *Pipeline Control for Windows v2.6 or later*.

The Pipeline web service API enables the ability to remotely start and stop captures through the Pipeline Trigger document engine. The Pipeline *Trigger Document* type will allow recording to be controlled manually through the user interface or through simple HTTP web service commands described below.

Each Pipeline *Trigger Document* publishes a web service that allows media clips to be recorded using a simple HTTP based commands set.

- A clip can be scheduled for recording up to 6 hours before the start time.
- If a start time is not specified the clip begins recording immediately.
- If an end time is not specified the clip will record for the maximum duration of 9 hours.
- A clip will remain in the active list up to 4 hours after recording has ended.

NOTE: See the Pipeline User Guide for specific details on enabling the Pipeline Trigger web services.

When a Pipeline *Trigger Document* is placed into an active state the web service will begin listening for requests on the selected port. The user will be warned if the port is in use by another Pipeline *Trigger Document* or by some other service on the host computer.

A web service command is invoked using an HTTP GET request in the following form:

http://host:port/**record**/command[?parameter=value[&parameter=value]]

NOTE: This guide assumes that the programming environment being used by the developer includes a library that abstracts the process of command submission and responses through the HTTP protocol.

If your environment does not include a library to perform this abstraction then you will have to directly format your commands to adhere to the HTTP protocol.

See http://en.wikipedia.org/wiki/Hypertext_Transfer_Protocol for details on the HTTP protocol.

Where 'host' is the DNS name or IP address of the Pipeline host computer that the Pipeline Control software is running on, 'port' is the user assigned TCP/IP port for the active Pipeline document and 'command' identify a specific web service command. If the command requires additional arguments they are supplied as name/value pairs in the query portion of the request.

host	The DNS name or IP address of the computer running the Pipeline software, for example "localhost" or 192.168.1.2.
port	The TCP/IP port number assigned to the web service. The port number is user selectable and displayed in the Web Service configuration area of the document.
command	The web service command to execute.
parameter	A named parameter defined by the web service command.
value	The parameter value.

The web service response consists of the normal HTTP status line (for example '200 OK' or '404 Not found'), HTTP headers and an XML body. The following common data elements are returned as part of the web service response of Pipeline Control for Mac and Windows (additional elements may be present):

Common Response Elements

XMLRevision: 2	The XML response revision.
EngineTime* : 12:34:56:00	The current Pipeline time code. This was formally 'Time' in previous web services responses.
UUID: {5b1eb65c-3018-a4cf-8134-6e1c16b378a7}	The unique identifier assigned to a clip.
Start: 01:23:45;00	The anticipated starting time code of a clip.
End: 02:23:50;00	The anticipated ending time code of a clip.
MarkIN: 01:23:45;00	The actual starting time code of a clip (returned from STATUS and STOP command).
MarkOut: 02:23:50;00	The actual ending time code of a clip (returned from STATUS and STOP command).
Name: Clip.mov	The name of the clip to be recorded.
Path: /Users/Shared/Clip.mov	The fully qualified path to the file containing a recorded clip.
State: Waiting, Opened, Closed, Cancelled	The state of the recorded clip.

Additional Response Elements

VideoFormat	The codec currently active
HorizontalResolution	The clip's horizontal resolution
VerticalResolution	The clip's vertical resolution
FrameRate	The clip's frame rate
Channels	The number of audio channels in the clip
AudioFormat	The audio format
EngineState	The state of the Pipeline Engine
EngineOperation	The operational state of the Pipeline system

EngineTime was formally '*Time*' in previous web services responses. Change your source code to reflect this change.

Commands

Help

Displays a help web page describing the operation and features of the Pipeline Control web service.

This request has the following format:

http://address:port/   or   http://address:port/Help

Start

Starts recording a new clip. The following parameters are supported:

This request has the following format:

http://address:port/record/start

Optional parameters

http://host:port/command[?parameter=value[&parameter=value]]

Example:
http://10.5.2.1:8080/record/start?duration=00:00:10:00

start=01:12:35:00	Specifies the starting time code for the clip. If a start time is not specified the clip will begin recording immediately. Responds with '400 Bad Request' if the specified start time is more than 6 hours in the future.
duration=00:30:00:00	Specifies the duration of the clip. If a duration is not specified (or implied by the end time parameter) the clip will record for a maximum of 9 hours. Responds with '400 Bad Request' if the specified duration greater than 9 hours.
end=01:42:35:00	Specifies the end time code for the clip. If an end time is not specified (or implied by the duration parameter) the clip will record for a maximum of 9 hours. Responds with '400 Bad Request' if the specified end time results in

	a clip duration greater than 9 hours.
Tape=Tape Name	Specifies a name for the Tape Name or Reel. The Tape Name/Reel will be embedded directly into QuickTime files and Avid MXF OPAtom files. Responds with '400 Bad Request' if the name contains invalid characters.
name=myclip	Specifies a name for the clip. If a clip name is not specified a random name is generated. In either case the appropriate file extension is automatically added to the file name. If a file exists the web service will not overwrite the existing file and will append a sequential number to the end of the filename. Responds with '400 Bad Request' if the name contains invalid characters.
folderPath=/Users/Shared	Specifies the path to a folder where the clip should be recorded. If a folder is added to a fully qualified root and it does not exist an error will be reported. If a folder path is not specified the clip will be recorded in the storage folder associated with the Trigger document. Responds with '400 Bad Request' if the folder does not exist.

Stop

Stops recording and/or removes a clip from the active list. The following parameters are supported:

This request has the following format:
http://address:port/record/stop

uuid={5b1e...78a7}	The unique identifier of the clip to interrogate. When this command is issue the response will contain all information for the associated clip. If a clip is not specified in the request the response contains the UUID of each clip in the active list. Responds with '404 Not Found' if the specified clip is not in the active list.

Status

Requests status information for a clip. The following parameters are supported:

This request has the following format:

http://address:port/record/status
        or
http://address:port/record/status?uuid=[*UUID returned from Start or Status command*]

uuid={5b1e...78a7}	The unique identifier of the clip to stop. When this command is issue the response will contain all information for the associated clip and the clip will be removed from the active list. If a clip is not specified **ALL** clips are stopped and removed from the active list.
	Responds with '404 Not Found' if the specified clip is not in the active list.

Playout commands (Windows only)

Playout commands apply to *Pipeline Control for Windows v2.6 or later*.

> **NOTE**: See the Pipeline User Guide for specific details on enabling the Pipeline Controlled Playout web services.

The Pipeline web service API enables the ability to remotely play out files through the Pipeline Controlled Playout document engine. The Pipeline Controlled Playout document type will allow play out to be controlled manually through the user interface, via an external controller (RS422 or USB) or through simple HTTP web service commands described below.

Each instance of Pipeline Controlled Playout document publishes a web service that allows media clips to be played out using a simple HTTP based commands set.

When a Pipeline Controlled Playout document is placed into an active play out state the web service will begin listening for requests on the selected port. The user will be warned if the port is in use by another Pipeline Controlled Playout document or by some other service on the host computer.

A web service command is invoked using an HTTP GET request in the following form:

http://host:port/***playout***/command[?parameter=value[&parameter=value]]

> **NOTE**: This guide assumes that the programming environment being used by the developer includes a library that abstracts the process of command submission and responses through the HTTP protocol.
>
> If your environment does not include a library to perform this abstraction then you will have to directly format your commands to adhere to the HTTP protocol.
>
> See http://en.wikipedia.org/wiki/Hypertext_Transfer_Protocol for details on the HTTP protocol.

Where 'host' is the DNS name or IP address of the Pipeline host computer that the Pipeline Control software is running on, 'port' is the user assigned TCP/IP port for the active Pipeline document and 'command' identify a specific web service command. If the command requires additional arguments they are supplied as name/value pairs in the query portion of the request.

host	The DNS name or IP address of the computer running the Pipeline software, for example "localhost" or 192.168.1.2.
port	The TCP/IP port number assigned to the web service. The port number is user selectable and displayed in the Web Service configuration area of the document.

command	The web service command to execute.
parameter	A named parameter defined by the web service command.
value	The parameter value.

The web service response consists of the normal HTTP status line (for example '200 OK' or '404 Not found'), HTTP headers and an XML body. The following common data elements are returned as part of the web service response of Pipeline Control (additional elements may be present):

Response Elements

Time: 12:34:56:00	The current Pipeline time code.
UUID: {5b1eb65c-3018-a4cf-8134-6e1c16b378a7}	The unique identifier assigned to a clip.
Start: 01:23:45;00	The starting time code of a clip.
End: 02:23:50;00	The ending time code of a clip.
Path: /Users/Shared/Clip.mov	The fully qualified path to the file to be played out .
State: Waiting, Opened	The state of the clip.

Commands

Help

Displays a help web page describing the operation and features of the Pipeline Control web service.

http://address:port/   or   http://address:port/Help

Play

Plays out a clip(s) in the document.

 http://address:port/playout/play

If **play** is issued without a specific UUID the currently active clip will be played out. Additional clips may be played out depending on the configuration of the document.

Optional parameters

uuid={5b1e...78a7}	The unique identifier of the clip to playout.
	Responds with '404 Not Found' if the specified clip is not in the active list.

Stop

Stops the current clip being played out.

http://address:port/playout/stop

Status

Request status information. Returns general status or clip specific status.

General Status - http://address:port/playout/status

Returns current Time and UUIDs for all clips loaded

Clip specific status - *http://address:port/playout/status?uuid=[UUID]*
Returns: Time, Start, End, Path, State status elements for selected clip.

Optional parameters

uuid={5b1e...78a7}	The unique identifier of the clip.
	Responds with '404 Not Found' if the specified clip is not in the active list.

Rewind

Rewinds playback of the clips at 2X the normal speed.

http://address:port/playout/rewind

FastForward

Fast Forwards playback of the clips at 2X the normal speed.

http://address:port/playout/fastforward

Jog

Offsets the playing clip's position.

http://address:port/playout/jog?offset=x

offset=5	Specifies the number of frames to offset in the currently playing clip. Can be negative or positive.

Shuttle

Shuttles playback either in forward or reverse.

http://address:port/playout/shuttle?speed=x

speed=2.5	Specifies the speed to shuttle playback. Can be a value between -3.0 and 3.0 inclusive.