ONVIF™
Replay Control Service Specification

Version 21.12

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1 Scope

This document defines the web service interface for the control of a replay of recorded Video, Audio and Metadata. Additionally the associated events are defined.

For a definition of the storage model see the ONVIF Recording Control Specification.

Web service usage is outside of the scope of this document. Please refer to the ONVIF core specification.

2 Normative references

ONVIF Core Specification
<http://www.onvif.org/specs/core/ONVIF-Core-Specification.pdf>

ONVIF Recording Control Specification
<http://www.onvif.org/specs/srv/rec/ONVIF-RecordingControl-Service-Spec.pdf>

ONVIF Streaming Specification
<http://www.onvif.org/onvif/specs/stream/ONVIF-Streaming-Spec.pdf>

3 Terms and Definitions

3.1 Definitions

Metadata	All streaming data except video and audio, including video analytics results, PTZ position data and other metadata (such as textual data from POS applications).
Recording	A container for a set of audio, video and metadata tracks. A recording can hold one or more tracks. A track is viewed as an infinite timeline that holds data at certain times.
Recording Event	An event associated with a Recording, represented by a notification message in the APIs
Recording Job	A job performs the transfer of data from a data source to a particular recording using a particular configuration
Track	An individual data channel consisting of video, audio, or metadata. This definition is consistent with the definition of track in [RFC 2326]
Video Analytics	Algorithms or programs used to analyze video data and to generate data describing object location and behaviour.

4 Overview

The replay service provides a mechanism for replay of stored video, audio and metadata. This mechanism may also be used to download data from the storage device so that export functionality can be provided.

The replay protocol is based on RTSP [RFC 2326]. However because RTSP does not directly support all of the requirements for replay, several extensions have been added to the protocol. In particular, an RTP header extension is defined to allow an absolute timestamp to be associated with each access unit (e.g. video frame), and to convey information about stream continuity.

The GetReplayUri command in the replay service returns the RTSP URL of a recording to allow it to be replayed using RTSP.

WSDL for this service is specified in http://www.onvif.org/ver10/replay.wsdl. The following table shows the namespace prefix mapping used throughout this specification.

Table 1: Referenced namespaces (with prefix)

Prefix	Namespace URI
env	http://www.w3.org/2003/05/soap-envelope
ter	http://www.onvif.org/ver10/error
xs	http://www.w3.org/2001/XMLSchema
tt	http://www.onvif.org/ver10/schema
trp	http://www.onvif.org/ver10/replay/wsdl

5 Replay Control

This section defines a service for mapping replay endpoints to URI for use in RTSP.

5.1 GetReplayUri

GetReplayUri requests a URI that can be used to initiate playback of a recorded stream using RTSP as the control protocol. The URI is valid only as it is specified in the response. A device supporting the Replay Service shall support the GetReplayUri command.

REQUEST:

- **StreamSetup [tt:StreamSetup]**
  The StreamSetup element contains two parts. StreamType defines if a unicast or multicast media stream is requested. Transport specifies a chain of transport protocols defining the tunnelling of the media stream over different network protocols.

- **RecordingToken [tt:RefernceToken]**
  Indicates the recording to be streamed.

RESPONSE:

- **Uri [xs:anyURI]**
  Contains the Uri to be used for requesting the media stream.

FAULTS:

- **env:Sender - ter:InvalidArgVal - ter:InvalidStreamSetup**
  Specification of StreamType or Transport part in StreamSetup is not supported.

- **env:Sender - ter:OperationProhibited - ter:StreamConflict**
  Specification of StreamType or Transport part in StreamSetup causes conflict with other streams.

- **env:Sender - ter:InvalidArgVal - ter:NoRecording**
  The recording does not exist.

ACCESS CLASS:

   READ_MEDIA

5.2 ReplayConfiguration

The ReplayConfiguration provides optional configuration information. Currently it only contains the deprecated RTSP SessionTimeout which can be controlled via the RTSP layer.

5.3 SetReplayConfiguration

SetReplayConfiguration changes the configuration of the replay service. The replay service shall allow its configuration to be changed using this command.

REQUEST:

- **Configuration [tt:ReplayConfiguration]**
  Holds the new configuration for the replay service.

RESPONSE:

This is an empty message.

FAULTS:

- **env:Sender - ter:InvalidArgVal - ter:ConfigModify**
  The values in the configuration cannot be set.

ACCESS CLASS:

ACTUATE

5.4 GetReplayConfiguration

GetReplayConfiguration returns the current configuration of the replay service. The replay service shall allow its configuration to be retrieved using this command.

REQUEST:

This is an empty message.

RESPONSE:

- **Configuration [tt:ReplayConfiguration]**
  Holds the current configuration for the replay service.

FAULTS:

None

ACCESS CLASS:

READ_MEDIA

5.5 GetServiceCapabilities

The capabilities reflect optional functions and functionality of a service. The information is static and does not change during device operation.

REQUEST:

This is an empty message.

RESPONSE:

- **Capabilities [trp:Capabilities]**
  Contains the requested service capabilities using a hierarchical XML capability structure.

FAULTS:

None

ACCESS CLASS:

PRE_AUTH

The following capabilites are available:

ReversePlayback   Indicator that the Device supports reverse playback as defined in the ONVIF Streaming Specification.

SessionTimeoutRange   Lists the upper and lower bound of the supported range for the session timeout. This capability defaults to the RTSP default value.

RTP_RTSP_TCP   Indication if the device supports RTP/RTSP/TCP transport, see Section 5.1.1.3 of the ONVIF Streaming Specificiation.

RTSPOverWebSocket   Indicates if the device supports RTSP/RTP Playback Streaming support over WebSocket and provides the WebSocket URI for replay as described in the ONVIF Streaming Specification section 5.1.1.5.

Annex A.
Revision History

Rev.	Date	Editor	Changes
2.1	Jul-2011	Hans Busch	Split from Core 2.0 without change of content.
2.1.1	Jan-2012	Hans Busch	Change Requests 287, 342, 535
2.2	May-2012	Hans Busch	Change Requests 608, 677
2.2.1	Dec-2012	Hans Busch	Change Requests 708, 742, 743
16.12	Dec-2016	Sujith Raman	Added RTSP over WebSocket
17.06	Jun-2017	Stefan Andersson, Hiroyuki Sano	Update method layouts Change Request 1843 Change Request 2054, 2065
21.12	Dec-2021	Oksana Tyushkina, SergeyBogdanov	Fix typo in commands names and role names.