

ONVIF™

ONVIF Specification Version 2.2 Release Notes

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1. Summary

The ONVIF 2.2 release incorporates supplementary functionality for devices conformant to the Profile S plus a number of minor clarifications. The changes themselves are described in detail in the list below.

2. Additions

2.1 Action Engine Service

The Action Engine Service specification defines the web service interface for configuration of the Actions and Action Trigger conditions based on events.

2.1 Device and Service monitoring

The following chapters have been added to several specifications to provided normative event definitions:

- ONVIF Core Specification:
Monitoring Events
- ONVIF Device IO Service Specification
RelayOutput and DigitalInput
- ONVIF Imaging Service Specification:
Tampering and Motion Alarm
- ONVIF Media Service Specification:
Configuration Changes and Active Connections
- ONVIF PTZ Service Specification
Presets and Preset Tours
- ONVIF Receiver Service Specification
Change State and Connection Failed
- ONVIF Recording Control Service Specification
Recording Job State Changes, Configuration Changes, Data Deletion and Track Creation and Deletion.

2.2 Standardized Auxiliary Commands

An ONVIF reserved prefix has been introduced. Predefined commands for washer, wiper and washing procedure haven been defined in the ONVIF Core Specification.

2.3 Image Stabilization

The Imaging Service now supports configuration of imaging stabilization modes and level.

2.4 PTZ Tours

A set of Methods has been added to the PTZ Service Specification for configuration and execution of PTZ tours:

- GetPresetTours enumerates the configured tours
- GetPresetTourOptions shows the preset tour modes of operation supported by a device
- CreatePresetTour provides an interface to define an additional preset tour
- ModifyPresetTour allows to reconfigure an existing preset tour
- OperatePresetTour allows to start, pause, resume and stop the operation of a preset tour
- RemovePresetTour allows to delete an existing preset tour

2.5 Pan and Tilt Control Direction

The following new functionality has been added to the PTZ Service Specification:

- E-Flip
E-Flip is flipping of the control directions of pan and tilt when the lens passes nadir or zenith direction during a tilt movement. This functionality is useful when controlling domes using human joystick control, where a client can track an object that passes nadir and doesn't have to bother about inverted controls.
- Reverse
Reverse parameter is for switching positive and negative of the pan and tilt control direction. This feature can be used to configure appropriate control direction of pan and tilt based on directions that the device is mounted, for example, in the ceiling downwards or on the surface upwards.

3. Changes

Find below all errata's from Version 2.1.1 to 2.2 in order to improve interoperability.

The numbers correspond to the Change Request ticket numbers and are not necessarily continuous ascending.

If not noted otherwise the changes refer to the Core specification.

580 Clarify empty RateControl element

Add the following paragraph to section 5.5. of the ONVIF Media Service Specification:

If the whole RateControl parameter structure is missing the current state of rate control is undefined and vendor specific. A device, supporting disabling rate control mechanisms shall reflect that by omitting the RateControl element after removal by a client otherwise it shall return the current values used for RateControl. If RateControl is missing, the respective options define whether a RateControl element can be (re-)added.

590 Clarify content of informative Search Service data types

In the ONVIF Recording Search Specification add the text "If the content is unknown this field is empty" to

"5.3.1 RecordingInformation"

- Content

"5.3.2 RecordingSourceInformation"

- SourceId
- Name
- Location
- Description

"5.3.3 TrackInformation"

- Description

591 Add an additional error code to GetMedia Attributes

In the ONVIF Recording Search Specification add to table 3:

env:Sender

ter:InvalidArgVal

ter:NoRecording

"No recording available"

592 Add additional error codes to FindRecordings

In the ONVIF Recording Search Specification add to table 4:

- env:Sender,ter:InvalidArgVal,ter:InvalidToken "The recording token is invalid"
- env:Sender, ter:InvalidArgVal, ter:InvalidSource "The recording source is invalid"

594 Limit requirement for supported keep-alive

In the ONVIF Recording Search Specification add to the find methods the statement:

For the KeepAliveTime a device shall support at least values up to ten seconds. A device may adapt larger values.

In search.wsdl replace the KeepAlive annotation

The time the search session will be kept alive after responding to this and subsequent requests.
If not specified, the KeepAliveTime is determined by the server.

by

The time the search session will be kept alive after responding to this and subsequent requests.
A device shall support at least values up to ten seconds.

595 Do not limit FindEvents method to "RecordingEvents"

In the ONVIF Recording Search Specification replace in section 5.9 FindEvents:

FindEvents starts a search session, looking for recording events (see 5.2.2) in the *scope* (See 5.2.2) that match the search filter defined in the request.

by

FindEvents starts a search session, looking for events in the *scope* (See 5.2.4) that match the search filter defined in the request. Events are recording events (see 5.2.2) and other events that are available in the track.

599 Clarify end conditions of search session

In the ONVIF Recording Search Specification replace the content of 5.3.4 SearchState Enumeration with

SearchState indicates search session state. The search session state can be one of

- Searching – The database search is in progress and there may be results available that can be fetched via the method GetEventSearchResults.
- Completed – Search has been completed and all results have been delivered via GetEventSearchResults.

Additionally Queued stated has been declared deprecated.

Replace the description of 5.15 GetSearchState

Queued, Searching or Completed. This operation is mandatory to support for a device implementing the recording search service.

by

This command is deprecated.

601 Clarification of Track Information

Apply the following changes to the ONVIF Recording Search Specification and the wsdl annotation.

Add to 5.8:

The number of results relates to the number of recordings. For viewing individual recorded data for a signal track use the FindEvents method.

Add to 5.3.3:

Note that a track may represent a single contiguous time span or consist of multiple slices as shown in the introduction of the ONVIF Recording Control Specification.

Replace in 5.3.3:

DataFrom – The date and time of the oldest recorded data in the track.

DataTo – The date and time of the newest recorded data in the track.

by

DataFrom – The start date and time of the oldest recorded data in the track.

DataTo – The stop date and time of the newest recorded data in the track.

607 Improve GetMediaAttributes reply description

Replace:

Contains a MediaAttributes structure for each RecordingToken specified in the request.

With:

Contains a MediaAttributes structure for the RecordingToken specified in the request. Note that each RecordingToken can result in zero or one MediaAttributes.

608 Definition of Recording

Replace in the definition section of the ONVIF Recording Control Search and Replay Specifications:

Represents the currently stored media (if any) and metadata on the NVS from a single data source. A recording comprises one or more tracks. A recording can have more than one track of the same type e.g. two different video tracks recorded in parallel with different settings

by

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.

Add to 5.3.3 RecordingJobConfiguration:

The TrackInformation field for a Track holds a single Source. In case multiple RecordingJobs with differing Source are recording to the same Track it is undefined which of them is reported in the corresponding TrackInformation of the the RecordingSearch API.

609 Fix payload of VideoParameters event

Change in Recording Search Specification from:

```
<tt:SimpleItemDescription Name="tt:RateControl" Type="VideoRateControl?"/>
```

to:

```
<tt:SimpleItemDescription
```

613 Refer to Capability for ReversePlayback

Replace

ONVIF devices MAY support reverse playback.

by:

The ReversePlayback capability defined in the ONVIF Streaming Specification signals if a devices supports reverse playback.

614 State Exclusive Usage of UTC for the RecordingSearch Service

In the ONVIF Search Service Specification add a subclause to 5.2 Concepts.

5.2.6 Time Information

An ONVIF compliant device shall support time values in request parameters that are given in utc with the 'Z' indicator and respond all time values as utc including the 'Z' indicator.

616 Clarify Handling of Empty Tracks

Add to the ONVIF Search Service Specification 5.3.3 the following sentence:

If there is no recorded data for a track the TrackInformation shall not be provided.

621 Clarification for time of Recording Event

Add to the ONVIF Search Service Specification 5.18 the following sentence:

The time of all recording events shall specify the actual time relating to recording regardless of the sending time of the event.

623 Add "Z" indicator to examples in Core Spec using UtcTime

Update the examples in the ONVIF Core Specification clause 9.11 by adding the Z-Indicator.

625 URI used by the Recording Control Service as source address

Replace in the ONVIF Recording Control Service Specification 5.23.2 the following sentence:

URI to the media service of the primary recording source.

by

URI provided by the service supplying data to be recorded.

632 Clarify type of MaxRecordings

Replace the following text to the capability annotation of recording.wsd:

Maximum number of recordings supported.

by

Maximum number of recordings supported. (Integer values only.)

636 Clarify Track encoding

Add to the fifth paragraph of the ONVIF Recording Control Service Specification 5.1 the following sentence:

All recorded data of a track shall have the same encoding.

637 Remove serial data from metadata box

Apply the following change to the ONVIF Media Service Specification:

Remove serial data from the metadata box in figure 2.

638 Clarify Preset Name handling of SetPreset

Apply the following change to the ONVIF PTZ Service Specification:

Add the following sentences after the paragraphs in 5.4.1 SetPreset section:

A device shall accept a valid SetPresetRequests that does not include the optional element PresetName.

If PresetName is included in a SetPresetRequests, then the device may require PresetName to be unique. If a device rejects a SetPresetRequests because the device requires the PresetName to be unique, then it shall respond with error message env:Sender ter:InvalidArgVal ter:PresetExist.

671 Correct payload of RecordingHistory/Track/VideoParameters event

Apply the following change to the ONVIF Recording Search Service Specification:

Change from:

```
<tt:SimpleItemDescription Name="RateControl" Type="tt:VideoRateControl?"/>
```

to:

```
<tt:ElementItemDescription Name="RateControl?" Type="tt:VideoRateControl"/>
```

672 Correct payload of tns1:RecordingHistory/XXXX/State

Apply the following change to the ONVIF Recording Search Service Specification:

Change from:

```
<tt:SimpleItemDescription Name="IsRecording?" Type="tt:boolean"/>
```

to:

```
<tt:SimpleItemDescription Name="IsRecording?" Type="xs:boolean"/>
```

673 Handling recording errors due to wrong encoding

Apply the following change to the ONVIF Recording Control Service Specification:

Replace in 5.19

Error, if present, shall hold an implementation defined string value that describes the error. The string should be in English language.

by

Error, optional string describing the error state. The string should be in English. The following values are predefined:

"Incompatible Stream" The stream cannot be recorded because the encoding does not match to previously recorded data.

Add the following text to the first paragraph of 5.19

The RecordingJogState may change due to

- calls that effect the RecordingJobMode, e.g. SetRecordingJobMode,
- internal recording engine state changes,
- changes in the recorded local media profile or
- changes to the RTSP connection defined by the associated Receiver.

677 Correct Access Class for GetServiceCapabilities

Apply the following change to the ONVIF Replay Search Service and ONVIF Replay Service Specification:

Change Access Class from:

READ_MEDIA

to:

PRE_AUTH

679 Correct Message Format of Event Schema in Specification

Apply the following change to the ONVIF Core Specification to reflect the schema:

Change from:

<xs:attribute name="UtcTime?" type="xs:time" use="required"/>

to:

<xs:attribute name="UtcTime?" type="xs:dateTime" use="required"/>

687 Correct Password Derivation Example

Apply the following change to the ONVIF Core Specification:

Remove '+' sign from base 64 string.

691 Correct typo in GetRemoteUser

Apply the following change to the ONVIF Recording Search Service Specification:

Change from:

The algorithm to use for deriving the password is described in section 5.12.2.1section in previous chapter 5].

to:

The algorithm to use for deriving the password is described in section 5.12.2.1.