Driving IP-based physical security through global standardization

ONVIF™

ONVIF Specification Version 2.3
Release Notes

1. Summary

The ONVIF 2.3 release incorporates new services for the Profile C clients and devices that are intended to be network capable Physical Access Control System clients and devices. And also this release incorporates number of minor clarifications for better interoperability among ONVIF conformant clients and devices. The changes themselves are described in details in the list below chapter 3.

2. Additions

This release adds two service specifications to the set of ONVIF Network Interface Specifications called Access Control Service and Door Control Service:

- The Access Control Service offers commands to retrieve status information and to control AccessPoint instances.
- The Door Control Service allows to retrieve status information of doors and to control doors.

3. Changes

Find below all errata from Version 2.2.1 to 2.3 in order to improve interoperability. The numbers correspond to the Change Request ticket numbers and are not necessarily continuouslyascending.

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

884 Clarification of Recording Search Service 5.3.8

The PTZ Position Filter EnterOrExit does not clearly define what should be returned. In section 5.3.8 of Recording Search Service specification, replace

EnterOrExit - If true, search for when entering or exiting the specified PTZ volume.

by

EnterOrExit - If true, report the positions when entering or exiting the specified PTZ volume. Otherwise report all recorded positions within the specified PTZ volume.

898 Add reasoning for supporting multiple pull points

Add the following sentence in section 9.2 Real-time Pull-Point Notification Interface in ONVIF Core Specification.

A device should support multiple pull points in order to allow precise event generation and / or multiple clients. For a device implementation it is important to support multiple pull points per client in order to allow precise event generation. If a device would only support one subscription at a time a client would probably need to subscribe without any scope restriction, because changing of event subscription is not possible. Hence this would require the device to serve all available events for which the device would have to activate all subsystems that generate events. This may cause unnecessary load by e.g. activating multiple motion detectors and similar without need. Additionally the traffic produced by all these events may cause a substantial network load.

Typically a network device serves multiple clients in parallel. Typically each of the clients is interested in some of the events for which they have to subscribe.

790 Independence of Configuration Entities for a Media Profile

Replace the following paragraphs present in “Add xxx encoder configuration to a profile” in ONVIF Media Service Specification.

Adding a(n)XXXEncoderConfiguration to a media profile means that streams using that media profile will contain xxx data. XXX encoder configurations should be added after adding a(n)xxx source configuration.

By

A device shall support adding a compatible XXXEncoderConfiguration to a profile containing an XXXSourceConfiguration and shall support streaming xxx data of such a profile.

And also replace the following sentence in section 5.15.1

If a multicast stream is requested the VideoEncoderConfiguration….

By

If a multicast stream is requested any present VideoEncoderConfiguration…

693, 844 Remove mandatory requirement for Location scope

Remove the following sentence in table 8 Scope parameters list in ONVIF Core Specification

A device shall include at least one location entry into its scope list.

793 Clarification of action header for fault in Event service

Replace the following paragraph in section 9.10 SOAP Fault Messages in ONVIF Core Specification

All SOAP 1.2 fault messages shall be generated according to [WS-BaseNotification] and [WS-Topics] specifications.

By

All SOAP 1.2 fault messages shall be generated according to [WS-BaseNotification] and [WS-Topics] specifications with one exception; All faults shall use the following URI for the WS-Addressing [action] Message Addressing Property::

`http://www.w3.org/2005/08/addressing/soap/fault`

Furthermore the error should be sent as an SOAP receiver fault (env:Receiver), i.e. the HTTP error code shall be 500.

928 Clarification on Message Description Language

Add the following paragraph in section 9.5.4 Message Description Language in ONVIF Core Specification.

The Message Description Language does not mandate the order of the Items in each of the categories Source, Key and Data. Additionally Items documented as optional by an ONVIF

Event definition are not required to be present to in a message. This applies also to optional Items that are described in the related MessageDescription.

859 Errors in TopicSet examples

Replace the following paragraph in section 9.7.2 Topic Type Information in ONVIF Core Specification.

The type information is added below a topic element by adding a MessageDescription element of type MessageDescriptionType defined in Section 9.5.4. Topic elements can be identified by the wstop:topic attribute with value "true".

By

A device shall add a MessageDescriptionelement, of type MessageDescriptionType defined in Section 9.5.4, below all elements representing topics in the topic set supported by the device. Furthermore a device shall, in accordance with the notification specification, identify all element representing topics in the topic set by including the wstop:topic attribute with value "true".

And also, replace the following TopicSet example

```
<tns1:RuleEngine wstop:topic="true">
<tns1:LineDetector wstop:topic="true">
<tns1:Crossed wstop:topic="true">
<tt:MessageDescription>
<tt:Source>
<tt:SimpleItemDescription Name="VideoSourceConfigurationToken"
                                    Type="tt:ReferenceToken"/>
<tt:SimpleItemDescription Name="VideoAnalyticsConfigurationToken"
                                    Type="tt:ReferenceToken"/>
<tt:SimpleItemDescription Name="Rule" Type="xs:string"/>
</tt:Source>
<tt:Data>
<tt:SimpleItemDescription Name="ObjectId" Type="xs:integer"/>
</tt:Data>
</tt:MessageDescription>
</tns1:Crossed>
</tns1:LineDetector>
<tns1:FieldDetector wstop:topic="true">
<tns1:ObjectsInside wstop:topic="true">
<tt:MessageDescription IsProperty="true">
<tt:Source>
<tt:SimpleItemDescription Name="VideoSourceConfigurationToken"
```

```
                                        Type="tt:ReferenceToken"/>
<tt:SimpleItemDescription Name="VideoAnalyticsConfigurationToken"
                                        Type="tt:ReferenceToken"/>
<tt:SimpleItemDescription Name="Rule" Type="xs:string"/>
</tt:Source>
<tt:Key>
<tt:SimpleItemDescription Name="ObjectId" Type="xs:integer"/>
</tt;Key>
<tt:Data>
<tt:SimpleItemDescription Name="IsInside" Type="xs:boolean"/>
</tt:Data>
</tt:MessageDescription>
</tns1:ObjectsInside>
</tns1:FieldDetector>
</tns1:RuleEngine>
```

By

```
<wstop:TopicSet xmlns="">
<tns1:RuleEngine>
<LineDetector>
<Crossed wstop:topic="true">
<tt:MessageDescription>
<tt:Source>
<tt:SimpleItemDescription Name="VideoSourceConfigurationToken"
                                    Type="tt:ReferenceToken"/>
<tt:SimpleItemDescription Name="VideoAnalyticsConfigurationToken"
                                    Type="tt:ReferenceToken"/>
<tt:SimpleItemDescription Name="Rule" Type="xs:string"/>
</tt:Source>
<tt:Data>
<tt:SimpleItemDescription Name="ObjectId" Type="xs:integer"/>
</tt:Data>
</tt:MessageDescription>
</Crossed>
</LineDetector>
<FieldDetector>
<ObjectsInside wstop:topic="true">
<tt:MessageDescription IsProperty="true">
<tt:Source>
<tt:SimpleItemDescription Name="VideoSourceConfigurationToken"
                                    Type="tt:ReferenceToken"/>
<tt:SimpleItemDescription Name="VideoAnalyticsConfigurationToken"
```

```
                                        Type="tt:ReferenceToken"/>
        <tt:SimpleItemDescription Name="Rule" Type="xs:string"/>
        </tt:Source>
        <tt:Key>
        <tt:SimpleItemDescription Name="ObjectId" Type="xs:integer"/>
        </tt:Key>
        <tt:Data>
        <tt:SimpleItemDescription Name="IsInside" Type="xs:boolean"/>
        </tt:Data>
        </tt:MessageDescription>
        </ObjectsInside>
        </FieldDetector>
        </tns1:RuleEngine>
        </wstop:TopicSet>
```

along with the following note,

> Note: xmlns="" is included in the example to make sure that there is no default namespace in scope for any of the descendents of the TopicSet element, see the [WS-Topics] specification for more information.

The same rule should be also applied in the GetEventPropertiesResponse in Section 9.11.2 of ONVIF Core Specification.

876 New Access Class READ_SYSTEM_SENSITIVE

Add the following new Access Class description in Section 5.12.1.1 of ONVIF Core Specification.

> READ_SYSTEM_SENSITIVE
> The service reads sensitive (but not really confidential9 system configuration information from the device.

And also add the following Access Class row between READ_SYSTEM and READ_SYSTEM_SECRET in table 7 in ONVIF Core Specification.

> READ_SYSTEM_SENSITIVE [X] (for Administrator), [X] (for Operator)

887 Remove requirement statement for WS BaseNotification

Replace the following sentence in Chapter 9 in ONVIF Core Specification

> This standard requires the implementation of the basic notification interface as described in section 9.1, which conforms completely to the [WS-BaseNotification] specification.

By

This standard requires the implementation of the basic notification interface as described in section 9.1 if the capability MaxNotificationProducers is non-zero or not present.

932 event.wsdl contains unnecessary import

Remove the following onvif.xsd import as well as its namespace prefix declaration from event.wsdl.

```
xmlns:tt="http://www.onvif.org/ver10/schema"
<xs:import namespace=" http://www.onvif.org/ver10/schema"
schemaLocation="../../../ver10/schema/onvif.xsd"/>
```

933 Discrepancy between Core Spec v2.2.1 and event.wsdl

Remove the following “RateLimitPolicy” attribute from event.wsdl

```
<xs:attribute name="RateLimitPolicySupport" type="xs:boolean">
	<xs:annotation>
		<xs:documentation>Indication if the device supports the rate
limitation policy.</xs:documentation>
	</xs:annotation>
</xs:attribute>
```

934 Typo in CreateRecording

Replace the following sentence in Section 5.4 in ONVIF Recording Control Service Specification

All TrackConfigurations shall have the MaximumRetentionTime set to 0 (unlimited), and the Description set to the empty string.

By

The RecordingConfiguration shall have MaximumRetentionTime set to 0 (unlimited) and all TrackConfigurations shall have the Description set to the empty string.

950 Add fault codes for SetNetworkDefaultGateway

Add the following fault codes in Table 28 in ONVIF Core Specification.

```
env:Sender
  ter:InvalidArgVal
    ter:InvalidIPv4Address The suggested IPv4 address is invalid.
env:Sender
  ter:InvalidArgVal
    ter:InvalidIPv6Address The suggested IPv6 address is invalid.
```

968 ForcePersistence=false in Media service spec

Replace all the occurences of the following sentence in ONVIF Media Service Specification

The ForcePersistence element determines if the configuration changes shall be stored and remain after reboot. If true, changes shall be persistent. If false, changes MAY revert to previous values after reboot.

By

The ForcePersistence element is obsolete and should always be assumed to be true.

972 Correct error code FixPane to FixedPane

Replace the following error code in Table 12 in ONVIF Display Service Specification

ter:FixPane

By

ter:FixedPane

988 Wrong section references in event.wsdl

Remove any wrong ONVIF Core Specification Section references from event.wsdl annotation texts.

989 Clarification of RebootNeeded behavior

Add the following paragraphs in Section 8.2.11 in ONVIF Core Specification

If a device responds with RebootNeeded set to false, the device can be reached via the new IP

address without further action. A client should be aware that a device may not be responsive for a short period of time until it signals availability at the new address via the discovery Hello messages as defined in 7.3.2.

by

If a device responds with RebootNeeded set to true, it will be further available under its previous IP address. The settings will only be activated when the device is rebooted via the SystemReboot command.

1025 Addition of an error to SetUser operation

Add the following error code in Table 67 in ONVIF Core Specification

env:Sender
ter:InvalidArgVal
ter:FixedUser Password or User level may not be changed.

1029 Annotation of “Minor” should be updated

Change the annotation text in “Minor” element as follows.

```
<xs:documentation>Two digit minor version number (e.g. X.0.1 maps to "01" and
X.2.1 maps to "21" where X stands for Major version number).</xs:documentation>
```

1032 Allow Profiles to not support Content Filtering

Replace Section 9.1.2 in ONVIF Core Specification

The device shall support TopicExpression and MessageContent filters with at least the dialects described in Sections 9.5.5 and 9.7.3.

By

The device shall support TopicExpression filters with the dialects described in 9.7.3. The support for MessageContent filters is signalled via the GetEventProperties method.

And remove the following sentence in Section 9.5.5

An ONVIF compliant device shall implement the subset of XPath 1.0.

And then, replace the following paragraph in Section 9.8

The following MessageContentFilterDialects are mandatory for the an ONVIF compliant device(see Section 9.5.5):

http://www.onvif.org/ver10/tev/messageContentFilter/ItemFilter

By

A device that does not support any MessageContentFilterDialect shall return a single empty url.

1049 Wrong access class for SetAudioDecoderConfiguration

Replace the access class for SetAudioDecoderConfiguration in ONVIF Media Service Specification

READ_MEDIA

By

ACTUATE

1051 Clarification of G.711 coding support

Replace the following item in ONVIF Streaming Sepcification

G.711 [ITU-T G.711]

By

G.711 [ITU-T G.711 uLaw]

1052 Clarification for Multicast address and port number in MulticastConfiguration

Add the following clarification sentence in Section 5.21.50 in ONVIF Media Service Specification

A device may accept the same IP address and port number of different multicast configurations.

873 Clarification for event Seek and property event behavior

Add the following paragraph in Section 9.2.3 in ONVIF Core Specification

A device shall not provide information of the initial generate property state as response to a call to the Seek method.