Driving IP-based physical security through global standardization

# ONVIF<sup>TM</sup>

## ONVIF Specification Version 2.4.1
## Release Notes

# 1. Summary

The ONVIF 2.4.1 release incorporates minor clarifications for better interoperability among ONVIF conformant clients and devices. The changes themselves are described in details in the list below chapters 2 and 3.

# 2. Additions

In this maintenance release, there is no new service addition in the network specification set.

# 3. Changes

Find below all errata from Version 2.4 to 2.4.1in order to improve interoperability. The numbers correspond to the Change Request ticket numbers and are not necessarily continuously ascending.

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

## 1148 Requirement for how a device should give the boolean values for MetadataAttributes

In section 5.25.8 in ONVIF Recording Control service specification, add the following sentence after the three bullets.
> A device shall only set any of CanContainPTZ, CanContainAnalytics and CanContainNotifications to true if the recording actually contains the corresponding type of metadata.

## 1164 Clarification for standard behaviours in Objects (Analytics)

In section 5.1.3.1 in ONVIF Analytics service specification, replace the sentences in 4th paragraph
> This specification defines two standard behaviours for objects. When an object stops moving, it can be marked as Idle.

By
> This specification defines two standard behaviours for objects : Removed or Idle.

## 1185 Remove blanks in auxiliary command

In section 8.6 in ONVIF Core specification, remove the excessive blank character in "tt: WashingProcedue |Off", i.e. replace

tt: WashingProcedue |Off

By

tt:WashingProcedue|Off

## 1213 Correct misspelling in section 8.6

In section 8.6 in ONVIF Core specification, correct some misspelling as follows. Replace

All the occurrence of "WashingProcedue"

By

"WashingProcedure"

And also replace the word

tt:Washer|Off– Request to stop the washe.

By

tt:Washer|Off– Request to stop the washer.

## 1189 Clarify GetRecordingOptions 'Spare' attributes

In section 5.20 in ONVIF Recording Control service specification, add the following sentences in the GetRecordingOptionsResponse description part in Table 18.

By setting none of the Spare attribute the device signals that no job can be created.

By setting none of the SpareXXX attributes the device signals that no track can be added.

In section 5.13 in ONVIF Recording Control service specification, add the following sentence.

A device shall support adding a RecordingJob to a recording for which it signals Spare Jobs via GetRecordingOptions.

In section 5.9 in ONVIF Recording Control service specification, replace

This method shall create a new track within a recording.

By

This method shall create a new track within a recording if the method GetRecordingOptions signals spare tracks for the recording. For a track to be created the SpareXXX (where XXX is the track type) needs to be set.

## 1190 Modify description of 'IsDataPresent' SimpleItem for Recording History events

In section 5.19 in ONVIF Recording Search service specification, replace the sentences

When the data becomes present, a message with IsDataPresent set to TRUE shall be sent. When the data becomes unavailable, The message with IsDataPresent set to FALSE shall be sent.

By

When the data becomes present, a message with IsDataPresent set to true shall be sent. When the data becomes unavailable, The message with IsDataPresent set to false shall be sent.

## 1193 Minor typos in Analytics service

In chapter 4 in ONVIF Analytics service specification, replace following words in the second paragraph

video analytics architecture

By

Analytics architecture

In section 5.3.3.1 in ONVIF Analytics service specification, replace the following words

ONVIFschema file

By

ONVIF schema file

In section 5.3.3.2 in ONVIF Analytics service specification, replace the following sentence.

The following operation retrieves the currently installed analytics modules:

By

The following operation retrieves the currently installed analytics modules.

## 1194 onvif.xsd: Missing AudioAnalyticsStream in MetadataStreamExtension

In ONVIF Schema (onvif.xsd), replace the following

```
<xs:complexType name="MetadataStreamExtension">
```

```
<xs:sequence>
<xs:any namespace="##any" processContents="lax" minOccurs="0"
maxOccurs="unbounded"/>
</xs:sequence>
</xs:complexType>
```
By
```
<xs:complexType name="MetadataStreamExtension">
<xs:sequence>
<xs:any namespace="##other" processContents="lax" minOccurs="0"
maxOccurs="unbounded"/>
<xs:element name="AudioAnalyticsStream" type="tt:AudioAnalyticsStream"
minOccurs="0"/>
<xs:element name="Extension" type="tt:MetadataStreamExtension2" minOccurs="0"/>
</xs:sequence>
</xs:complexType>
<!--===============================-->
<xs:complexType name="MetadataStreamExtension2">
<xs:sequence>
<xs:any namespace="##targetnamespace" processContents="lax" minOccurs="0"
maxOccurs="unbounded"/>
</xs:sequence>
<xs:anyAttributeprocessContents="lax"/>
</xs:complexType>
<!--===============================-->
<xs:complexType name="AudioAnalyticsStream">
<xs:sequence>
<xs:element name="AudioDescriptor" type="tt:AudioDescriptor" minOccurs="0"
maxOccurs="unbounded"/>
<xs:element name="Extension" type="tt:AudioAnalyticsStreamExtension" minOccurs="0"
/>
</xs:sequence>
<xs:anyAttributeprocessContents="lax"/>
</xs:complexType>
<!--===============================-->
<xs:complexType name="AudioDescriptor">
<xs:sequence>
<xs:any namespace="##any" processContents="lax" minOccurs="0"
maxOccurs="unbounded"/>
</xs:sequence>
<xs:attribute name="UtcTime" type="xs:dateTime" use="required">
</xs:attribute>
```

```
<xs:anyAttributeprocessContents="lax"/>

</xs:complexType>

<!--================================-->

<xs:complexType name="AudioAnalyticsStreamExtension">

<xs:sequence>

<xs:any namespace="##any" processContents="lax" minOccurs="0"

maxOccurs="unbounded"/>

</xs:sequence>

<xs:anyAttributeprocessContents="lax"/>

</xs:complexType>
```

## 1195 Revise description of Analytics flag in MetadataConfigurationExtension

In ONVIF Schema (onvif.xsd) MetadataConfigurationExtensiondatatype definition, replace the following documentation

Defines if data to include from the analytics engine part shall be included in the stream

By

Defines whether the streamed metadata will include metadata from the analytics engines (video, cell motion, audio, etc.)

## 1207 Improve wording for preset creation

In section 5.4.1 in ONVIF PTZ service specification, replace the following sentence

In order to create a new preset, the SetPresetRequest contains no PresetToken.

By

If the PresetToken parameter is absent the device shall create a new preset. Otherwise it shall update the stored position and optionally the name of the given preset.

## 1208 PTZ Position Search clarification - PTZ Spaces

In section 5.6 in ONVIF Recording Search service specification, replace the following sentences

Devices inidcatingCanContainPTZ and returning non generic spaces shall report the PTZ spaces in use at the specified point in time. For optimal interoperability device implementations should use generic spaces.

By

Devices indicating CanContainPTZ shall report the PTZ spaces in use at the specified point in time (including generic spaces). For optimal interoperability device implementations should use generic spaces.

## 1212 Correct extension for SupportedPresetTour in PTZNodeExtension

In SupportedPresetTour data type definition in ONVIF Schema (onvif.xsd), replace the following

```
<xs:element name="SupportedPresetTour" type="tt:PTZPresetTourSupported">
```

By

```
<xs:element name="SupportedPresetTour" type="tt:PTZPresetTourSupported"
minOccurs="0">
```

## 1215 Clarification for the behavior when zero is set in ContinousMove

In section 5.3.3 in ONVIF PTZ service specification, replace the following sentence

The command can be used to stop the PTZ device at its current position by sending zero values for the Pan/Tilt and Zoom parameters.

By

A device shall stop movement in a particular axis (Pan, Tilt, or Zoom) when zero is sent as the ContinuousMove parameter for that axis.

## 1216 Add capability for indicating max users

In table 12 in ONVIF Core Specification add the following.

Security MaxUsers        The maximum number of users that the device supports.

In section 8.4.4 in ONVIF Core Specification, replace the following sentence

The device shall support creation of device users and their credentials for authentication through the CreateUsers command.

By

The device shall support creation of device users and their credentials for authentication through the CreateUsers command as long as the number of existing users does not exceed the capability value MaxUsers.

In devicemgmt.wsdl, add the following attribute in SecurityCapabilities as follows.

```
<xs:attribute name="MaxUsers?" type="xs:int">
<xs:annotation>
<xs:documentation>The maximum number of users that the device
supports.</xs:documentation>
</xs:annotation>
</xs:attribute>
```

## 1217 Change requirement level for GetDigitalInputs

In section 5.10.1 in ONVIF Device IO service specification, replace the following sentence

A device that has one or more physical digital inputs should support listing of available inputs through the GetDigitalInputs command.

By

A device that signals support for digital inputs via its capabilities shall support listing of available inputs through the GetDigitalInputs command.

## 1219 Correct reference to fault code

In table 7 in ONVIF Advance Security service specification, replace the following fault code

env:Receiver

ter:Action

ter:MaximumNumberofCertificatesReached

By

env:Receiver

ter:Action

ter:MaximumNumberOfCertificatesReached

## 1220 Add capability-implied requirements for PKCS10

In table 23 in ONVIF Advanced Security service specification, add the following clarification

If true, MaximumNumberOfKeys>0 must hold.

## 1221 Correct inconsistencies for RSA key lengths

In advancedsecurity.wsdl, change the data type for RSAKeyLengths from

```
<xs:listitemType="xs:int">
```

To

```
<xs:listitemType="xs:nonNegativeInteger">
```

## 1285 Update the link for RTP/RTSP/HTTP/TCP document

In section 5.1.1 in ONVIF Streaming specification, replace the following hyperlink text

http://developer.apple.com/quicktime/icefloe/dispatch028.html

By

http://www.opensource.apple.com/source/QuickTimeStreamingServer/QuickTimeStreamingServer-412.42/Documentation/RTSP_Over_HTTP.pdf

## 1234 Change the requirement level for Anonymous Denied Event

In section 6.5.2 in ONVIF Access Control service specification, replace the following sentence

The device that signals support for AnonymousAccess capability for a particular AccessPoint instance shall provide the following event when access is denied and credential information is not provided:

By

The device that signals support for AnonymousAccess capability for a particular AccessPoint instance should provide the following event when access is denied and credential information is not provided:

## 1240 Remove Byte Order Mark

Removed first two bytes <feff> from media.wsdl that were accidentally added with version 2.4.

## 1277 Correct fault in CreateCertificationPath

In Table 24 in ONVIF Advanced Security Service Specification, add the fault

      env:Receiver

      ter:Action

      ter: MaximumNumberOfTLSCertificationPathsReached

      Maximum number of TLS certification paths reached

      The maximum number of certification paths that may be assigned to the TLS server simultaneously is reached.

In Sect. 5.3.2.1 (Add Server Certificate Assignment) in ONVIF Advanced Security Service Specification, replace

      If the maximum number of certification paths that may be assigned to the TLS server simultaneously is reached, the device shall generate a MaximumNumberOfCertificationPathsReached fault and the requested certification path shall not be assigned to the TLS server.

by

      If the maximum number of certification paths that may be assigned to the TLS server simultaneously is reached, the device shall generate a MaximumNumberOfTLSCertificationPathsReached fault and the requested certification path shall not be assigned to the TLS server.

In Table 16 (Add Server Certificate Assignment command) in ONVIF Advanced Security Service specification, replace

      ter.MaximumNumberOfCertPathsReached

by

      ter:MaximumNumberOfTLSCertificationPathsReached

## 1271 Add annotation to the Key Status event

In Sect. 5.5.1 (Key Status) in ONVIF Advanced Security Service specification, change

```
<tt:SimpleItemDescription Name="OldStatus" Type="xs:KeyStatus"/>
```

to

```
<tt:SimpleItemDescription minOccurs="0" Name="OldStatus" Type="xs:KeyStatus">
    <xs:annotation>
        <xs:documentation>The old status shall be included in the event
        unless NewStatus = "generating". </xs:documentation>
    </xs:annotation>
</tt:SimpleItemDescription>
```

## 1272 Correct error message text for GetPrivateKeyStatus

In Sect. 5.2.6.1.3 (Get Private Key Status) in ONVIF Advanced Security Service specification, change

> If no key is stored under the requested key ID in the keystore or the key identified by the
> requested key ID does not identify a key pair, the device shall produce an InvalidKeyID fault.

to

> If no key is stored under the requested key ID in the keystore, an invalid key ID fault shall be
> produced. If a key is stored under the requested keyID in the keystore, but this key is not a key
> pair, an invalid key type fault shall be produced.

In Table 3 (Get Private Key Status command) in ONVIF Advanced Security Service specification, change

> env: Sender
>
> ter:InvalidArgVal
>
> ter:KeyID
>
> No key is stored under the requested KeyID or the identified key does not identify a key pair.

to

> env: Sender
>
> ter:InvalidArgVal
>
> ter:KeyID
>
> No key is stored under the requested KeyID.
>
> env: Sender
>
> ter:InvalidArgVal
>
> ter:InvalidKeyType
>
> The key stored under the requested KeyID does not identify a key pair.

In Table 24 (Advanced security service specific fault codes) in ONVIF Advanced Security Service specification, change

> env: Sender
>
> ter:InvalidArgVal
>
> ter:KeyID
>
> KeyID not appropriate
>
> No key is stored under the requested KeyID or the identified key is of an inappropriate type

to

> env: Sender
>
> ter:InvalidArgVal
>
> ter:KeyID
>
> KeyID invalid
>
> No key is stored in the keystore under the requested KeyID.
>
> env: Sender
>
> ter:InvalidArgVal
>
> ter:InvalidKeyType
>
> Key type invalid
>
> The key stored in the keystore under the requested KeyID is of an invalid type.

## 1222 Relax constraints on xs:any elements

In advancedsecurity.wsdl and ONVIF Advanced Security Service specification Sect. 5.6, DistinguishedName type definition, replace

```
<xs:any maxOccurs="unbounded" namespace="##any" processContents="lax"/>
```

by

```
<xs:any minOccurs="0" maxOccurs="unbounded" namespace="##any"
processContents="lax"/>
```

In advancedsecurity.wsdl and ONVIF Advanced Security Service specification Sect. 5.6, AlgorithmIdentifier type definition, replace

```
<xs:any maxOccurs="unbounded" namespace="##any" processContents="lax"/>
```

by

```
<xs:any minOccurs="0" maxOccurs="unbounded" namespace="##any"
processContents="lax"/>
```

In advancedsecurity.wsdl and ONVIF Advanced Security Service specification Sect. 5.6, CSRAttribute type definition, replace

```
<xs:any maxOccurs="unbounded" namespace="##any" processContents="lax"/>
```

by

```
<xs:any minOccurs="0" maxOccurs="unbounded" namespace="##any"
processContents="lax"/>
```

In advancedsecurity.wsdl and ONVIF Advanced Security Service specification Sect. 5.6, X509V3Extension type definition, replace

```
<xs:any maxOccurs="unbounded" namespace="##any" processContents="lax"/>
```

by

```
<xs:any minOccurs="0" maxOccurs="unbounded" namespace="##any"
processContents="lax"/>
```

In advancedsecurity.wsdl and ONVIF Advanced Security Service specification Sect. 5.6, X509Certificate type definition, replace

```
<xs:any maxOccurs="unbounded" namespace="##any" processContents="lax"/>
```

by

```
<xs:any minOccurs="0" maxOccurs="unbounded" namespace="##any"
processContents="lax"/>
```

In advancedsecurity.wsdl and ONVIF Advanced Security Service specification Sect. 5.6, KeyAttribute type definition, replace

```
<xs:any namespace="##any" processContents="lax"/>
```

by

```
<xs:any minOccurs="0" maxOccurs="unbounded" namespace="##any"
processContents="lax"/>
```

# 1267 Clarify attribute definition in PKCS10CSR

In advancedsecurity.wsdl and ONVIF Advanced Security Service specification, add the following type definition:

```
<xs:complexType name="BasicRequestAttribute">
        <xs:annotation>
          <xs:documentation>A CSR attribute as specified in RFC
2986.</xs:documentation>
        </xs:annotation>
        <xs:sequence>
          <xs:element name="OID" type="tas:DotDecimalOID">
            <xs:annotation>
              <xs:documentation>The OID of the attribute.</xs:documentation>
            </xs:annotation>
          </xs:element>
          <xs:element name="value" type="tas:Base64DERencodedASN1Value">
            <xs:annotation>
              <xs:documentation>The value of the attribute as a base64-encoded DER
representation of an ASN.1 value.</xs:documentation>
            </xs:annotation>
          </xs:element>
          <xs:any minOccurs="0" maxOccurs="unbounded" namespace="##any"
processContents="lax"/>
        </xs:sequence>
        <xs:anyAttribute processContents="lax"/>
      </xs:complexType>
```

In advancedsecurity.wsdl and ONVIF Advanced Security Service specification, CSRAttribute type definition, replace

```
<xs:element name="GenericAttribute" type="tas:Base64DERencodedASN1Value">
 <xs:annotation>
  <xs:documentation>A generic attribute.</xs:documentation>
 </xs:annotation>
</xs:element>
```

by

```
<xs:element name="BasicRequestAttribute" type="tas:BasicRequestAttribute">
 <xs:annotation>
  <xs:documentation>A basic CSR attribute.</xs:documentation>
 </xs:annotation>
</xs:element>
```