

# ONVIF™

## ONVIF Specification Version 19.06 Release Notes

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# 1. Summary

The ONVIF 19.06 release incorporates a number of major enhancements and 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

The ONVIF 19.06 adopts following features with passing through the [IPR review](#).

### 2.1. Active Sessions

The new event definition in the Media2 service allows to efficiently signal state and changes of the active connections. This signals active streaming sessions with encoder, decoder or metadata configuration token, and list of sessions to client.

### 2.2. Focus Modes

This is an enhancement parameter for Imaging Service auto focus feature. This enables a focus mode '*OnceAfterMove*', it adjusts the focus just after PTZ move, and keeps the state until next move.

### 2.3. Guaranteed Framerate

This is an enhancement parameter for Media Service and Media2 Service video encoder. This signals treating the frame rate limit as an absolute frame rate in order to enable meeting regulatory requirements.

### 2.4. Scheduled Recording

This enhancement enables scheduled recording. An additional schedule token in the recording job configuration links the schedule to a recording job. The recording is executed according to the schedule.

### 2.5. Generic Analytics Options

This defines a generic mechanism for signaling valid parameter configuration values for simple items through the Analytics Service Rule interface and Analytics Modules interface. This enhancement is incorporated by Change Request 2465.

## 2.6. Tampering Configuration

This enhances functionality of Tampering event which has been defined as the topic name in Imaging Service. This enables control of parameters and clarifies which topics are generated with Analytics Service rule engine interface.

## 2.7. PTZ Motion Region Configuration

Analytics Service Motion region detector has been defined in screen coordinates. This enhancement associates the region with PTZ position. PTZ camera can be set independent the regions by every PTZ preset positions.

# 3. Changes

Find below all errata from Version 18.12 to 19.06 in 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.

### 2384 Imaging - Clarify Exposure.Iris

Add annotation about *Min/MaxIris* under *Exposure/Auto* parameter at section 5.1.1 *Parameters* in Imaging Service specification, as replace

- o *Min/MaxIris* – The iris range allowed to be used by the algorithm.

With

- o *Min/MaxIris* – The iris range allowed to be used by the algorithm. 0dB maps to a fully opened iris and positive values map to higher attenuation.

Add annotation about *Iris* under *Exposure/Manual* parameter, as replace

- o *Iris* – The fixed attenuation of input light affected by the iris (dB). 0dB maps to a fully opened iris.

With

- o *Iris* – The fixed attenuation of input light affected by the iris (dB). 0dB maps to a fully opened iris and positive values map to higher attenuation.

Add annotation into *MinIris* and *MaxIris* element definitions under *Exposure20* complexType in *onvif.xsd*, as replace

```
<xs:element name="MinIris" type="xs:float" minOccurs="0">
  <xs:annotation>
```

```

    <xs:documentation>
      Minimum value of the iris range allowed to be used by the algorithm.
    </xs:documentation>
  </xs:annotation>
</xs:element>
<xs:element name="MaxIris" type="xs:float" minOccurs="0">
  <xs:annotation>
    <xs:documentation>
      Maximum value of the iris range allowed to be used by the algorithm.
    </xs:documentation>
  </xs:annotation>
</xs:element>

```

With

```

<xs:element name="MinIris" type="xs:float" minOccurs="0">
  <xs:annotation>
    <xs:documentation>
      Minimum value of the iris range allowed to be used by the algorithm. 0dB maps to a fully
      opened iris and positive values map to higher attenuation.
    </xs:documentation>
  </xs:annotation>
</xs:element>
<xs:element name="MaxIris" type="xs:float" minOccurs="0">
  <xs:annotation>
    <xs:documentation>
      Maximum value of the iris range allowed to be used by the algorithm. 0dB maps to a fully
      opened iris and positive values map to higher attenuation.
    </xs:documentation>
  </xs:annotation>
</xs:element>

```

Add annotation into *MinIris* and *MaxIris* element definitions under *Exposure20* complexType, as replace

```

<xs:element name="Iris" type="xs:float" minOccurs="0">
  <xs:annotation>
    <xs:documentation>
      The fixed attenuation of input light affected by the iris (dB). 0dB maps to a fully opened iris.
    </xs:documentation>
  </xs:annotation>
</xs:element>

```

With

```

<xs:element name="Iris" type="xs:float" minOccurs="0">

```

```

<xs:annotation>
  <xs:documentation>
    The fixed attenuation of input light affected by the iris (dB). 0dB maps to a fully opened iris
    and positive values map to higher attenuation.
  </xs:documentation>
</xs:annotation>
</xs:element>

```

## 2430 Privacy mask color space and color list not explained in media2 spec

Insert documentations into *complexType* "Color" and "ColorCovariance" in common.xsd, as replace

```

<xs:complexType name="Color">
  <xs:attribute name="X" type="xs:float" use="required"/>
  <xs:attribute name="Y" type="xs:float" use="required"/>
  <xs:attribute name="Z" type="xs:float" use="required"/>
  <xs:attribute name="Colorspace" type="xs:anyURI"/>
</xs:complexType>
<xs:complexType name="ColorCovariance">
  <xs:attribute name="XX" type="xs:float" use="required"/>
  <xs:attribute name="YY" type="xs:float" use="required"/>
  <xs:attribute name="ZZ" type="xs:float" use="required"/>
  <xs:attribute name="XY" type="xs:float"/>
  <xs:attribute name="XZ" type="xs:float"/>
  <xs:attribute name="YZ" type="xs:float"/>
  <xs:attribute name="Colorspace" type="xs:anyURI"/>
</xs:complexType>

```

With

```

<xs:complexType name="Color">
  <xs:attribute name="X" type="xs:float" use="required"/>
  <xs:attribute name="Y" type="xs:float" use="required"/>
  <xs:attribute name="Z" type="xs:float" use="required"/>
  <xs:attribute name="Colorspace" type="xs:anyURI">
    <xs:annotation>
      <xs:documentation>
        Acceptable values:
        <ul>
          <li>http://www.onvif.org/ver10/colorspace/YCbCr - YCbCr
            <ul><li>X attribute = Y value</li>
              <li>Y attribute = Cb value</li>
              <li>Z attribute = Cr value</li></ul>
          </li>
        </ul>
      </xs:documentation>
    </xs:annotation>
  </xs:attribute>
</xs:complexType>

```

```

    </li>
    <li>http://www.onvif.org/ver10/colospace/RGB - RGB
      <ul><li>X attribute = R value</li>
        <li>Y attribute = G value</li>
        <li>Z attribute = B value</li></ul>
    </li>
  </ul>
  If the Colorspace attribute is absent, YCbCr is implied.

```

```

  Deprecated values:
  <ul>
    <li>http://www.onvif.org/ver10/colospace/CIELUV - CIE LUV</li>
    <li>http://www.onvif.org/ver10/colospace/CIELAB - CIE 1976 (L*a*b*)</li>
    <li>http://www.onvif.org/ver10/colospace/HSV - HSV</li>
  </ul>
</xs:documentation>

```

```

</xs:annotation>
</xs:attribute>
</xs:complexType>
<xs:complexType name="ColorCovariance">
  <xs:attribute name="XX" type="xs:float" use="required"/>
  <xs:attribute name="YY" type="xs:float" use="required"/>
  <xs:attribute name="ZZ" type="xs:float" use="required"/>
  <xs:attribute name="XY" type="xs:float"/>
  <xs:attribute name="XZ" type="xs:float"/>
  <xs:attribute name="YZ" type="xs:float"/>
  <xs:attribute name="Colorspace" type="xs:anyURI">
    <xs:annotation>
      <xs:documentation>
        Acceptable values are the same as in tt:Color.
      </xs:documentation>
    </xs:annotation>
  </xs:attribute>
</xs:complexType>

```

Replace documentations for *complexType* “ColorspaceRange” and “ColorOptions” in onvif.xsd

```

<xs:complexType name="ColorspaceRange">
  <xs:sequence>
    <xs:element name="X" type="tt:FloatRange"/>
    <xs:element name="Y" type="tt:FloatRange"/>
  </xs:sequence>
</xs:complexType>

```

```

    <xs:element name="Z" type="tt:FloatRange"/>
    <xs:element name="Colorspace" type="xs:anyURI"/>
  </xs:sequence>
  <xs:anyAttribute processContents="lax"/>
</xs:complexType>
<!------->
<xs:complexType name="ColorOptions">
  <xs:annotation>
    <xs:documentation>Describe the option of the color supported. Either list each color or define
the range of color value. The following values are acceptable for Colourspace
attribute.<ul><li>http://www.onvif.org/ver10/colorspace/YCbCr - YCbCr colourspace</li>
  <li>http://www.onvif.org/ver10/colorspace/CIELUV - CIE LUV</li>
  <li>http://www.onvif.org/ver10/colorspace/CIELAB - CIE 1976 (L*a*b*)</li>
  <li>http://www.onvif.org/ver10/colorspace/HSV - HSV colourspace</li></ul>
    </xs:documentation>
  </xs:annotation>

```

With

```

<xs:complexType name="ColorspaceRange">
  <xs:sequence>
    <xs:element name="X" type="tt:FloatRange"/>
    <xs:element name="Y" type="tt:FloatRange"/>
    <xs:element name="Z" type="tt:FloatRange"/>
    <xs:element name="Colorspace" type="xs:anyURI">
      <xs:annotation>
        <xs:documentation>
          Acceptable values are the same as in tt:Color.
        </xs:documentation>
      </xs:annotation>
    </xs:element>
  </xs:sequence>
  <xs:anyAttribute processContents="lax"/>
</xs:complexType>
<!------->
<xs:complexType name="ColorOptions">
  <xs:annotation>
    <xs:documentation>
      Describe the colors supported. Either list each color or define the range of color values.
    </xs:documentation>
  </xs:annotation>

```



Service specification.

Colours are represented by three-dimensional vectors. Additionally, the colourspace of each colour vector can be specified by a colourspace attribute. If the colourspace attribute is missing, the YCbCr colourspace is assumed. It refers to the 'sRGB' gamut with the RGB to YCbCr transformation as of ISO/IEC 10918-1 (Information technology -- Digital compression and coding of continuous-tone still images: Requirements and guidelines), a.k.a. JPEG. The following table lists the acceptable values for Colourspace attribute

**Table 78 Colourspace namespace values**

Namespace URI	Description
http://www.onvif.org/ver10/colourspace/YCbCr	YCbCr colourspace
http://www.onvif.org/ver10/colourspace/CIELUV	CIE LUV
http://www.onvif.org/ver10/colourspace/CIELAB	CIE 1976 (L*a*b*)
http://www.onvif.org/ver10/colourspace/HSV	HSV colourspace

## 2431 Clarity on imaging service presets and get/setimagingsettings

Insert following sentence as the second paragraph at section 5.1.3 *SetImagingSettings* in Imaging Service specification.

A device indicating support for the AdaptablePreset capability shall apply the same settings to the current active preset, see 5.2.

Add following list item into section 5.4 *GetCapabilities*.

**AdaptablePreset:** Indicates whether or not imaging preset settings can be updated, see 5.1.3.

And, add following attribute definition under *Capabilities complexType* in imaging.wsdl.

```
<xs:attribute name="AdaptablePreset" type="xs:boolean">
  <xs:annotation>
    <xs:documentation>Indicates whether or not imaging preset settings can be
updated.</xs:documentation>
  </xs:annotation>
</xs:attribute>
```

## 2434 ConfigOptions contains type twice

Replace definition of "Type" attribute under "ConfigOptions" complexType in analytics.wsdl

```

<xs:attribute name="Type" type="xs:QName" use="required">
  <xs:annotation>
    <xs:documentation>
      Type of the Rule Options represented by a unique QName.
      The Type defines the element contained in this structure.
    </xs:documentation>
  </xs:annotation>
</xs:attribute>

```

With

```

<xs:attribute name="Type" type="xs:QName">
  <xs:annotation>
    <xs:documentation>
      Type of the Rule Options represented by a unique QName.
      The Type defines the element contained in this structure.
      This attribute is deprecated since its value must be identical to the embedded element.
    </xs:documentation>
  </xs:annotation>
</xs:attribute>

```

## 2446 Clarify audio backchannel use POST with base64 encoded data

Replace whole contents of section 5.1.1.4 *RTP/RTSP/HTTP/TCP* in Streaming specification

### 5.1.1.4 RTP/RTSP/HTTP/TCP

The data stream shall be sent via HTTP to traverse a firewall. A device shall support media transfer using RTP/RTSP/HTTP/TCP. And if a device supports TLS, the data stream shall be sent or received via HTTPS to traverse a firewall, and a device shall support media transfer using RTP/RTSP/HTTPS/TCP.

This protocol shall conform to [RFC 2326] Section 10.12.

This tunnelling method shall also conform to QuickTime available from Apple Inc. The mandatory parts of the following document shall be implemented by an NVT.

[http://www.opensource.apple.com/source/QuickTimeStreamingServer/QuickTimeStreamingServer-412.42/Documentation/RTSP\\_Over\\_HTTP.pdf](http://www.opensource.apple.com/source/QuickTimeStreamingServer/QuickTimeStreamingServer-412.42/Documentation/RTSP_Over_HTTP.pdf)

with

### 5.1.1.4 RTP/RTSP/HTTP/TCP

The data stream shall be sent via HTTP to traverse a firewall. A device shall support media transfer using RTP/RTSP/HTTP/TCP. If a device supports TLS, the data stream shall support transmission via HTTPS to traverse a firewall, and a device shall support media transfer using RTP/RTSP/HTTPS/TCP.

This protocol shall conform to [RFC 2326] Section 10.12.

This traversal method shall conform to [RTSP over HTTP]. Note that according to this specification all data sent from the client via POST must be base64 encoded.

And add (move from section 5.1.1.4) a following URL to section 2 *Normative references*,

Apple Computer Inc. RTSP over HTTP, Tunneling QuickTime RTSP and RTP over HTTP  
<[https://opensource.apple.com/source/QuickTimeStreamingServer/QuickTimeStreamingServer-412.42/Documentation/RTSP\\_Over\\_HTTP.pdf](https://opensource.apple.com/source/QuickTimeStreamingServer/QuickTimeStreamingServer-412.42/Documentation/RTSP_Over_HTTP.pdf)>

## 2447 Clarify AAC mime type and RFC

Add an enumerator into “*AudioEncodingMimeNames*” *simpleType* in *onvif.xsd*, as replace

```
<xs:simpleType name="AudioEncodingMimeNames">
  <xs:annotation>
    ...
  </xs:annotation>
  <xs:restriction base="xs:string">
    <xs:enumeration value="PCMU"/>          <!-- G.711 uLaw -->
    <xs:enumeration value="G726"/>
    <xs:enumeration value="MP4A-LATM"/>    <!-- AAC -->
  </xs:restriction>
</xs:simpleType>
```

With

```
<xs:simpleType name="AudioEncodingMimeNames">
  <xs:annotation>
    ...
  </xs:annotation>
  <xs:restriction base="xs:string">
    <xs:enumeration value="PCMU"/>          <!-- G.711 uLaw -->
    <xs:enumeration value="G726"/>
    <xs:enumeration value="MP4A-LATM"/>    <!-- AAC -->
    <xs:enumeration value="mpeg4-generic"/>
  </xs:restriction>
</xs:simpleType>
```

## 2450 Wrong fault code for MinIdentifiersPerCredential

Replace a row which describes a fault code at *Table 18 DeleteCredentialIdentifier command* in *Credential Service* specification.

<u>env:Receiver</u> ter:ConstraintViolated ter:MinIdentifiersPerCredential	<u>At least one credential identifier is required</u>
--	---

With

<u>env:Sender</u> ter:ConstraintViolated ter:MinIdentifiersPerCredential	<u>The last (or unique) identifier cannot be removed.</u>
--	---

## 2453 Make sure that core spec 5.12 doesn't conflicts with TLS client certificate authorization

Replace first paragraph of section 5.12.1 *Authentication* in ONVIF core specification.

The services defined in this standard shall be protected using digest authentication according to [RFC 2617] with the exception of legacy devices supporting [WS-UsernameToken].

With

The services defined in this standard shall be protected using digest authentication according to [RFC 2617] with the following exceptions.

- legacy devices supporting [WS-UsernameToken] and
- TLS client authorization.

## 2454 Correct GetSerialPortConfiguration response

Replace RESPONSE description at section 5.8.2 *GetSerialPortConfiguration* in Device IO Service specification.

RESPONSE:

- SerialPortConfiguration - optional, unbounded [tmd:SerialPortConfiguration]

The configuration of the serial port.

With

RESPONSE:

- SerialPortConfiguration - [tmd:SerialPortConfiguration]

The configuration of the serial port.

## 2455 Clarification on ValidTo without time part

Replace descriptions about a parameter *ValidTo* at section 5.3.2.1 *CredentialInfo* in Credential Service specification

- ValidTo

The expiration date/time validity of the credential. If the `ValiditySupportsTimeValue` capability is set to false, then only date is supported (time is ignored).

With

- ValidTo

The expiration date/time validity of the credential. If the `ValiditySupportsTimeValue` capability is set to false, then only date is supported (time is ignored).

The end time is exclusive, meaning that the exact moment in time is not part of the period.

If `ValiditySupportsTimeValue` is set to false, then a `ValidFrom` date implicitly means 00:00 that day, and a `ValidTo` date implicitly means that the whole day is included in the range. E.g. the validity June 6 to June 7 is the same as June 6 00:00 to June 8 00:00 (note that the end time is exclusive).

And

- ValidTo

The end date/time of the validity for the association between the credential and the access profile. If the `ValiditySupportsTimeValue` capability is set to false, then only date is supported (time is ignored).

With

- ValidTo

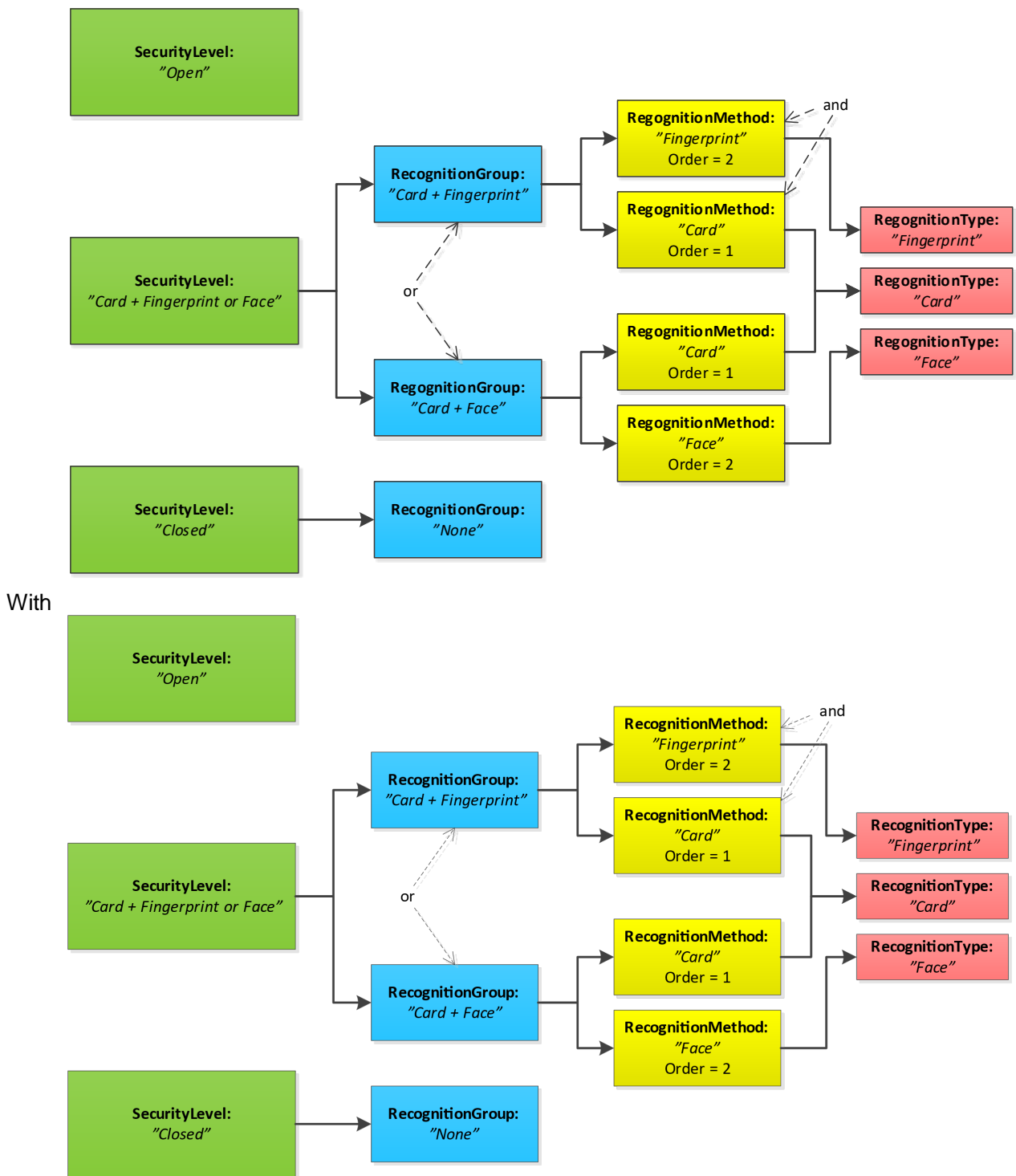
The end date/time of the validity for the association between the credential and the access profile. The end time is exclusive, meaning that the exact moment in time is not part of the period.

Devices without `ValiditySupportsTimeValue` support shall ignore the time value and interpret the provided date as inclusive.

For example if `ValiditySupportsTimeValue` is set to false, then a `ValidFrom` date implicitly means 00:00 that day, and a `ValidTo` date implicitly means that the whole day is included in the range. E.g. the validity June 6 to June 7 is the same as June 6 00:00 to June 8 00:00 (note that the end time is exclusive).

## 2457 Spelling error in Authentication Behavior figure

Replace following *Figure 4* at section 5.3.2.2 *SecurityLevel* in Authentication Behavior specification.



## 2462 Fit analytics config options type to wsd1

Replace a datatype of response parameter *Options* at section 5.3.3.6 *GetAnalyticsModuleOptions* in Analytics Service specification.

RESPONSE:

Options - optional, unbounded [tan:[AnalyticsModuleConfigOptions](#)]

With

RESPONSE:

Options - optional, unbounded [tan:[ConfigOptions](#)]

## 2463 Createpullpointsubscription SubscriptionPolicy element type is not set

Replace a following complexType definition with a different element in event.wsdl,

```
<xs:complexType name="SubscriptionPolicy">
  <xs:annotation><xs:documentation>Optional ONVIF defined pull point subscription
policies</xs:documentation></xs:annotation>
  <xs:sequence>
    <xs:any namespace="##any" processContents="lax" minOccurs="0"
maxOccurs="unbounded"/>
  </xs:sequence>
  <xs:attribute name="ChangedOnly" type="xs:boolean">
    <xs:annotation><xs:documentation>The pullpoint should not provide Initialized nor Deleted
events for Properties.</xs:documentation></xs:annotation>
  </xs:attribute>
  <xs:anyAttribute processContents="lax"/>
</xs:complexType>
```

With

```
<xs:element name="ChangedOnly">
  <xs:annotation><xs:documentation>When this element is included in the SubscriptionPolicy,
the pullpoint shall not provide Initialized or Deleted events for
Properties.</xs:documentation></xs:annotation>
</xs:element>
```

## 2464 PTZStream Metadata clarification and example

Compensate missing *type* attribute of PTZStatus element in XML structure at 5.1.2.1.1 RTP for *Metadata stream* in Streaming specification, as replace

```
<xs:complexType name="PTZStream">
  <xs:choice minOccurs="0" maxOccurs="unbounded">
    <xs:element name="PTZStatus"/>
    ...
  </xs:choice>
</xs:complexType>
```

With

```
<xs:complexType name="PTZStream">
  <xs:choice minOccurs="0" maxOccurs="unbounded">
```

```
<xs:element name="PTZStatus" type="tt:PTZStatus"/>
...
</xs:choice>
</xs:complexType>
```

Insert following script as fifth paragraph (just after the XML structure) of section 5.1.2.1.1 *RTP for Metadata stream*,

Note: For a PTZ supported device, the PTZStream in metadata provides the PTZ position information, whenever there is a change in the PTZ position, whereas PTZStatus defined inside VideoAnalyticsStream, provides PTZ position information at the time of generating scene description.

## 2465 Incorporate "Description Language Parameter Options: with 5.22

Restructured rule/analytics module interface description sections.

Insert new section 5.2 *Configuration description language* with a part of previous *rule interface* scripts.

Replace first and second paragraphs in section 5.3.1 *Rule representation* with

The rule representation uses the configuration language as defined in section 5.2.1. The following example shows a complete analytics configuration containing two rules:

Replace all paragraphs else the last in section 5.3.2 *Rule description language* with

Rules are described using the rule description language defined in section 5.2.2.

Replace first sentence of section 5.4.1 *Analytics module configuration*,

The analytics module configuration uses the configuration description language as described in section 5.2.1.

With

The analytics module configuration is identical to the rule configuration, described in section 5.2.1.

Replace first sentence of section 5.4.2 *Analytics module description language*,

The Analytics Module uses the configuration description language, described in section 5.2.2:

With

The Analytics Module reuses the Rule Description Language, described in Section 5.2.2. The



following AnalyticsModuleDescription element replaces the RuleDescription element:

## 2467 Enhancement to the rotateoptions

Add following attribute definition under *RotateOptions complexType* in *onvif.xsd*.

```
<xs:attribute name="Reboot" type="xs:boolean">
  <xs:annotation>
    <xs:documentation>After setting the rotation, if a device starts to reboot this value is true.
    If a device can handle rotation setting without rebooting this value is
    false.</xs:documentation>
  </xs:annotation>
</xs:attribute>
```

## 2475 Override new defined behavior from Core spec in Authentication Behavior Specification

Add following sentence into description part of section *5.2.2.1 AuthenticationProfileInfo* in Authentication Behavior specification.

Note that when this optional field is omitted, the device will assume an empty value.

Replace a description of *AuthenticationPolicy* at section *5.2.2.2 AuthenticationProfile*.

Each authentication policy associates a security level with a schedule (during which the specified security level will be required at the access point).

With

Each authentication policy associates a security level with a schedule (during which the specified security level will be required at the access point). If no authentication policies are specified, then DefaultSecurityLevelToken will be used.

Note that when an authentication profile is updated, then any previous authentication policies are replaced with the new list.

Add following sentence into description of *SecurityLevelConstraint* at section *5.2.2.3 AuthenticationPolicy*.

Note that when an authentication policy is updated, then any previous security level constraints are replaced with the new list.

Add following sentence into description part of section *5.3.2.1 SecurityLevelInfo*.

Note that when this optional field is omitted, the device will assume an empty value.

Add following sentence into description of *RecognitionGroup* at section 5.3.2.2 *SecurityLevel*.

Note that when a security level is updated, then any previous recognition groups are replaced with the new list.

Replace a description of *RecognitionMethod* at section 5.3.2.3 *RecognitionGroup*.

A list of recognition methods to request for at the access point.

With

A list of recognition methods to request for at the access point. No recognition methods mean that the access point is closed.

Note that when a recognition group is updated, then any previous recognition methods are replaced with the new list.

## 2477 Image stabilization capability

Add a deprecating declaration sentence to description of *ImageStabilization* capability at section 5.4 *GetCapabilities* in Imaging Service specification. As replace

**ImageStabilization:** Indicates whether or not Image Stabilization feature is supported.

With

**ImageStabilization:** Indicates whether or not Image Stabilization feature is supported. The use of this capability is deprecated, a client should use GetOption to find out if image stabilization is supported.

Replace annotation for “*ImageStabilization*” attribute in “*Capabilities*” *complexType* in *imaging.wSDL* as well.

```
<xs:complexType name="Capabilities">
  ...
  ...
  <xs:attribute name="ImageStabilization" type="xs:boolean">
    <xs:annotation>
      <xs:documentation>Indicates whether or not Image Stabilization feature is
supported.</xs:documentation>
    </xs:annotation>
  </xs:attribute>
```

With

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

...

...

```
<xs:attribute name="ImageStabilization" type="xs:boolean">
```

```
  <xs:annotation>
```

```
    <xs:documentation>Indicates whether or not Image Stabilization feature is supported.
```

```
      The use of this capability is deprecated, a client should use GetOption to find out if image stabilization is supported.</xs:documentation>
```

```
    </xs:annotation>
```

```
  </xs:attribute>
```

## 2478 Image preset strange requirement

Replace second paragraph of section 5.2.1 *GetPresets* in Imaging Service specification.

The output is a list containing the available Imaging Presets. If the device offers no support for Imaging Presets, GetPresetsResponse shall return an empty list.

With

The output is a list containing the available Imaging Presets.

A device indicating the ImagingPresets capability shall support this command.

Replace second paragraph of section 5.2.2 *GetCurrentPreset*.

If Imaging Presets are not supported, or if the video source configuration does not match any of the existing Imaging Presets, the output of GetCurrentPreset shall be Empty.

With

If the video source configuration does not match any of the existing Imaging Presets, the output of GetCurrentPreset shall be Empty.

A device indicating the ImagingPresets capability shall support this command.

Replace first paragraph of section 5.2.3 *SetCurrentPreset*.

The SetCurrentPreset command shall request a given Imaging Preset to be applied to the specified video source. SetCurrentPreset shall only be available for video sources with Imaging Presets capability.

With

The SetCurrentPreset command shall request a given Imaging Preset to be applied to the specified video source.

A device indicating the ImagingPresets capability shall support this command.

## 2479 Fix gaps in Media and Media2 streaming specification

Replace third paragraph at section 5.15.1 *Request stream URI* in Media Service specification

If a multicast stream is requested any present VideoEncoderConfiguration, AudioEncoderConfiguration and MetadataConfiguration element inside the corresponding media profile must be configured with valid multicast settings.

With

If a multicast stream is requested at least one of VideoEncoderConfiguration, AudioEncoderConfiguration and MetadataConfiguration shall have a valid multicast setting.

Replace fault code description for “*env:Receiver/ ter:Action/ ter:IncompleteConfiguration*” in Table 70

The specified media profile does contain either unused sources or encoder configurations without a corresponding source.

With

The specified media profile does not have the minimum amount of configurations to have streams. Please add at least one source configuration and one matching encoder configuration.

Replace fault code description for “*env:Sender/ ter:InvalidArgVal/ ter:InvalidMulticastSettings*”

Not all configurations are configured for multicast.

With

No configuration is configured for multicast.

Replace fault code description for “*env:Sender/ ter:InvalidArgVal/ ter:InvalidMulticastSettings*” at section 5.4.1 *GetStreamUri* in Media2 Service specification

Not all configurations are configured for multicast.

With

No configuration is configured for multicast.

Replace fault code description for “*env:Receiver/ ter:Action/ ter:IncompleteConfiguration*”

The specified media profile does contain either unused sources or encoder configurations without a corresponding source.

With

The specified media profile does not have the minimum amount of configurations to have streams. Please add at least one source configuration and one matching encoder configuration.

Replace annotation sentence for *GetStreamUri* operation definition in ver10/media/wsd1/media.wsd1.

If a multicast stream is requested the VideoEncoderConfiguration, AudioEncoderConfiguration and MetadataConfiguration element inside the corresponding media profile must be configured with valid multicast settings.

With

If a multicast stream is requested at least one of VideoEncoderConfiguration, AudioEncoderConfiguration and MetadataConfiguration shall have a valid multicast setting.

Replace annotation sentence for *GetStreamUri* operation definition in ver20/media/wsd/media.wsd.

If a multicast stream is requested the VideoEncoderConfiguration, AudioEncoderConfiguration and MetadataConfiguration element inside the corresponding media profile must be configured with valid multicast settings.

With

If a multicast stream is requested at least one of VideoEncoder2Configuration, AudioEncoder2Configuration and MetadataConfiguration shall have a valid multicast setting.

## 2482 Replace method tables with agreed format

Replace all command tables with IEC/ISO acceptable command description format in Access Rules Service specification.

## 2484 DTT Clarification Request on the analytics.wsd change

Add following sentence to the end of *RuleOptions* response description at section 5.3.3.6 *GetRuleOptions* in Analytics Service specification.

The response Options shall not contain any AnalyticsModule attribute.

Add following sentence to the end of *AnalyticsModuleOptions* response description at section 5.4.3.6 *GetAnalyticsModuleOptions*.

The response Options shall not contain any RuleType attribute.

Add annotation sentence into *GetRuleOptionsResponse* element definition in analytics.wsd, as replace

```
<xs:element name=" GetRuleOptionsResponse ">  
  <xs:complexType>
```

```

<xs:sequence>
  <xs:element name="RuleOptions" type="tan:ConfigOptions" minOccurs="0"
maxOccurs="unbounded">
    <xs:annotation>
      <xs:documentation>A device shall provide respective ConfigOptions.RuleType for
each RuleOption if the request does not specify RuleType. </xs:documentation>

```

With

```

<xs:element name="GetRuleOptionsResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="RuleOptions" type="tan:ConfigOptions" minOccurs="0"
maxOccurs="unbounded">
        <xs:annotation>
          <xs:documentation>A device shall provide respective ConfigOptions.RuleType for
each RuleOption if the request does not specify RuleType. The response Options shall not
contain any AnalyticsModule attribute.</xs:documentation>

```

Add annotation into *GetAnalyticsModuleOptionsResponse* element definition, as replace

```

<xs:element name="GetAnalyticsModuleOptionsResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="Options" type="tan:ConfigOptions" minOccurs="0"
maxOccurs="unbounded"/>

```

With

```

<xs:element name=" GetAnalyticsModuleOptionsResponse ">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="Options" type="tan:ConfigOptions" minOccurs="0"
maxOccurs="unbounded">
        <xs:annotation>
          <xs:documentation>List of options for the specified analytics module. The response
Options shall not contain any RuleType attribute.</xs:documentation>
        </xs:annotation>
      </xs:element>

```

## 2512 Add Metadata dependency to Media2

Add dependency descriptions between source configuration and metadata/analytics configuration at section 5.2.1 *General* in Media2 Service specification. Replace the descriptions

- VideoEncoderConfiguration depends on VideoSourceConfiguration
- AudioEncoderConfiguration depends on AudioSourceConfiguration
- PTZConfiguration depends on VideoSourceConfiguration
- AudioDecoderConfiguration depends on AudioOutputConfiguration

With

- VideoEncoderConfiguration depends on VideoSourceConfiguration
- AudioEncoderConfiguration depends on AudioSourceConfiguration
- PTZConfiguration depends on VideoSourceConfiguration
- AudioDecoderConfiguration depends on AudioOutputConfiguration
- MetadataConfiguration depends on VideoSourceConfiguration
- AnalyticsConfiguration depends on VideoSourceConfiguration and/or AudioSourceConfiguration

And replace second paragraph of section 5.2.7 *Analytics Configuration* to remove duplicating dependency explanation.

A device shall return an error (ter:NoConfig) if a client attempts to add VideoAnalyticsConfiguration to the Profile when the required source configuration (e.g., VideoSourceConfiguration) is not present. To avoid this error condition, a client may first add a required source configuration (e.g., VideoSourceConfiguration), or may add a required source configuration (e.g., VideoSourceConfiguration) and VideoAnalyticsConfiguration together in a single AddConfiguration command. A device can deny adding a video analytics configuration before a video source configuration. In this case, it should respond with a ConfigurationConflict Fault.

With

A device shall return an error (ter:NoConfig) if a client attempts to add VideoAnalyticsConfiguration to the Profile when the required source configuration (e.g., VideoSourceConfiguration) is not present.

## 2524 GetSupportedAnalyticsModules conflict definition

Replace an annotation sentence at *SupportedAnalyticsModules/AnalyticsModuleContentSchemaLocation* complexType/element definition in onvif.xsd

```
<xs:complexType name="SupportedAnalyticsModules">
  <xs:sequence>
    <xs:element name=" AnalyticsModuleContentSchemaLocation " type="xs:anyURI"
minOccurs="0" maxOccurs="unbounded">
      <xs:annotation>
        <xs:documentation>It optionally contains a list of URLs that provide the location of
schema files.
```

These schema files describe the types and elements used in the analytics module descriptions.

If the analytics module descriptions reference types or elements of the ONVIF schema file,

the ONVIF schema file MUST be explicitly listed.</xs:documentation>

with

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

```
  <xs:sequence>
```

```
    <xs:element name="AnalyticsModuleContentSchemaLocation" type="xs:anyURI"
minOccurs="0" maxOccurs="unbounded">
```

```
      <xs:annotation>
```

```
        <xs:documentation>It optionally contains a list of URLs that provide the location of
schema files.
```

```
        These schema files describe the types and elements used in the analytics module
descriptions.
```

```
        Analytics module descriptions that reference types or elements imported from any
ONVIF defined schema files
```

```
        need not explicitly list those schema files.</xs:documentation>
```

## 2525 Dependency on overall Video analytics configuration

Remove following annotation sentence from *GetSupportedAnalyticsModules* operation definition in analytics.wsdl.

The result of this method may depend on the overall Video analytics configuration of the device, which is available via the current set of profiles.