

# ONVIF EVENT and METADATA FORMAT

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## SUNAPI

2023-06-27

Version: 1.0

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# 1. Scope

This document covers the xml format of each event notified in ONVIF RTP Metadata and also how Frame Metadata is notified.

## 2. Introduction

Onvif Events follow the xml scheme provided in EventService "GetEventProperties" Command response. Onvif events are delivered in following ways.

1. EventService Pull Mechanism
2. EventService BaseNotification Mechanism
3. RTP Metadata format
4. MQTT

In the above list only MQTT delivers the event in JSON format following the conversion rule specified in the [ONVIF Core Specification](#) Section 9.12.6, remaining event delivery mechanism follows XML format.

Frame Metadata from the camera, follow the ONVIF metadata schema definition, defined in [ONVIF METADATA SCHEMA](#) xsd file.

## 3. EventScheme

In camera, some of the event definition are older than onvif definitions and in order to maintain backward compatibility and support new definitions as per ONVIF specification, Camera provides a simple configuration switch, allowing user to choose events in old format or in onvif specified format. To avoid any integration breaks, by default old format is supported [Proprietary mode] and only by changing the configuration as shown in below section, ONVIF specific topics are provided.

### 3.1. Event Format Selection using SUNAPI

**To check configured event scheme**

EventScheme Type can be either of below,

- ONVIF - Event topic according to ONVIF specification
- Proprietary - Some of the old events are delivered with custom topics for backward compatibility.

#### REQUEST

```
http://192.168.75.196/stw-cgi/eventstatus.cgi?msubmenu=eventscheme&action=view
```

#### TXT RESPONSE

```
Type=ONVIF
```

#### JSON RESPONSE

```
{
  "Type": "ONVIF"
}
```

#### To change the event scheme

#### REQUEST

```
http://192.168.75.196/stw-cgi/eventstatus.cgi?msubmenu=eventscheme&action=set&Type=ONVIF
```

#### TXT RESPONSE

```
OK
```

#### JSON RESPONSE

```
{
  "Response": "Success"
}
```

## 4. App Events

With the support of App based detectors / analytics, some of the basic event like IV Area/Line, ObjectDetection etc., are moved to App in some of the cameras, when event is generated from the App, the event topic follows below topic naming conventions

**tns1:OpenApp/{AppID}/{EventName}**

eg., IV LineCrossing event topic generated from **WiseAI** app would be

**tns1:OpenApp/WiseAI/LineCrossing**

## 5. SAMPLE EVENTS IN METADATA

Sample event format in metadata is mentioned below,

### 5.1. Tampering

#### 5.1.1. EventScheme [ONVIF]

```

<wsnt:NotificationMessage>
  <wsnt:Topic Dialect="http://www.onvif.org/ver10/tev/topicExpression/ConcreteSet"
>tns1:VideoSource/GlobalSceneChange/ImagingService</wsnt:Topic>
  <wsnt:Message>
    <tt:Message UtcTime="2022-08-05T02:39:39.142Z">
      <tt:Source>
        <tt:SimpleItem Name="VideoSourceToken" Value="VideoSourceConfigToken-01-0
"/>
      </tt:Source>
      <tt:Data>
        <tt:SimpleItem Name="State" Value="true"/>
      </tt:Data>
    </tt:Message>
  </wsnt:Message>
</wsnt:NotificationMessage>

```

### 5.1.2. EventScheme [Proprietary]

```

<wsnt:NotificationMessage>
  <wsnt:Topic Dialect="http://www.onvif.org/ver10/tev/topicExpression/ConcreteSet"
>tns1:VideoSource/tnssamsung:TamperingDetection</wsnt:Topic>
  <wsnt:Message>
    <tt:Message UtcTime="2022-08-09T02:03:15.430Z">
      <tt:Source>
        <tt:SimpleItem Name="VideoSourceToken" Value="VideoSourceConfigToken-01-0
"/>
      </tt:Source>
      <tt:Data>
        <tt:SimpleItem Name="State" Value="true"/>
      </tt:Data>
    </tt:Message>
  </wsnt:Message>
</wsnt:NotificationMessage>

```

## 5.2. Defocus

```

<wsnt:NotificationMessage>
  <wsnt:Topic Dialect="http://www.onvif.org/ver10/tev/topicExpression/ConcreteSet"
>tns1:VideoSource/ImageTooBlurry/ImagingService</wsnt:Topic>
  <wsnt:Message>
    <tt:Message UtcTime="2022-08-05T02:01:00.427Z" PropertyOperation="Changed">
      <tt:Source>
        <tt:SimpleItem Name="Source" Value="VideoSourceConfigToken-01-0"/>
      </tt:Source>
      <tt:Data>
        <tt:SimpleItem Name="State" Value="false"/>
      </tt:Data>
    </tt:Message>
  </wsnt:Message>
</wsnt:NotificationMessage>

```

## 5.3. FogDetection

```

<wsnt:NotificationMessage>
  <wsnt:Topic Dialect="http://www.onvif.org/ver10/tev/topicExpression/ConcreteSet"
>tns1:VideoSource/ImageTooBright/ImagingService</wsnt:Topic>
  <wsnt:Message>
    <tt:Message UtcTime="2022-01-01T01:15:00.390Z" PropertyOperation="Changed">
      <tt:Source>
        <tt:SimpleItem Name="VideoSourceToken" Value="VideoSourceConfigToken-01-0
"/>
      </tt:Source>
      <tt:Data>
        <tt:SimpleItem Name="State" Value="false"/>
      </tt:Data>
    </tt:Message>
  </wsnt:Message>
</wsnt:NotificationMessage>

```

## 5.4. ShockDetection

```

<wsnt:NotificationMessage>
  <wsnt:Topic Dialect="http://www.onvif.org/ver10/tev/topicExpression/ConcreteSet"
>tns1:VideoSource/tnssamsung:ShockDetection</wsnt:Topic>
  <wsnt:Message>
    <tt:Message UtcTime="2023-04-03T08:43:10.057Z">
      <tt:Source>
        <tt:SimpleItem Name="VideoSource" Value="VideoSourceToken-0"/>
      </tt:Source>
      <tt:Data>
        <tt:SimpleItem Name="State" Value="true"/>
      </tt:Data>
    </tt:Message>
  </wsnt:Message>
</wsnt:NotificationMessage>

```

## 5.5. Motion

```

<wsnt:NotificationMessage>
  <wsnt:Topic Dialect="http://www.onvif.org/ver10/tev/topicExpression/ConcreteSet"
>tns1:VideoSource/MotionAlarm</wsnt:Topic>
  <wsnt:Message>
    <tt:Message UtcTime="2022-08-04T23:35:35.006Z" PropertyOperation="Initialized">
      <tt:Source>
        <tt:SimpleItem Name="VideoSource" Value="VideoSourceConfigToken-01-0"/>
        <tt:SimpleItem Name="RuleName" Value="MotionRule-1"/>
      </tt:Source>
      <tt:Data>
        <tt:SimpleItem Name="State" Value="false"/>
      </tt:Data>
    </tt:Message>
  </wsnt:Message>
</wsnt:NotificationMessage>

```

## 5.6. MotionRegionDetector

### 5.6.1. EventScheme [ONVIF]



```

<wsnt:NotificationMessage>
  <wsnt:Topic Dialect="http://www.onvif.org/ver10/tev/topicExpression/ConcreteSet"
>tns1:RuleEngine/MotionRegionDetector/Motion</wsnt:Topic>
  <wsnt:Message>
    <tt:Message UtcTime="2022-08-04T23:35:35.006Z" PropertyOperation="Initialized">
      <tt:Source>
        <tt:SimpleItem Name="VideoSource" Value="VideoSourceConfigToken-01-0"/>
        <tt:SimpleItem Name="RuleName" Value="MotionRule-1"/>
      </tt:Source>
      <tt:Data>
        <tt:SimpleItem Name="State" Value="false"/>
      </tt:Data>
    </tt:Message>
  </wsnt:Message>
</wsnt:NotificationMessage>

```

## 5.6.2. EventScheme [Proprietary]

```

<wsnt:NotificationMessage>
  <wsnt:Topic Dialect="http://www.onvif.org/ver10/tev/topicExpression/ConcreteSet"
>tns1:VideoAnalytics/tnssamsung:MotionDetection</wsnt:Topic>
  <wsnt:Message>
    <tt:Message UtcTime="2022-08-09T01:57:14.641Z" PropertyOperation="Changed">
      <tt:Source>
        <tt:SimpleItem Name="VideoSource" Value="VideoSourceConfigToken-01-0"/>
      </tt:Source>
      <tt:Key>
        <tt:SimpleItemDescription Name="RuleName" Value="MotionRule-1"/>
      </tt:Key>
      <tt:Data>
        <tt:SimpleItem Name="State" Value="true"/>
      </tt:Data>
    </tt:Message>
  </wsnt:Message>
</wsnt:NotificationMessage>

```

## 5.7. DigitalInput

### 5.7.1. EventScheme [ONVIF]

```

<wsnt:NotificationMessage>
  <wsnt:Topic Dialect="http://www.onvif.org/ver10/tev/topicExpression/ConcreteSet"
>tns1:Device/Trigger/DigitalInput</wsnt:Topic>
  <wsnt:Message>
    <tt:Message UtcTime="2022-08-05T14:27:00.455Z" PropertyOperation="Changed">
      <tt:Source>
        <tt:SimpleItem Name="InputToken" Value="DigitalInput-1"/>
      </tt:Source>
      <tt>Data>
        <tt:SimpleItem Name="LogicalState" Value="false"/>
      </tt>Data>
    </tt:Message>
  </wsnt:Message>
</wsnt:NotificationMessage>

```

## 5.7.2. EventScheme [Proprietary]

```

<wsnt:NotificationMessage>
  <wsnt:Topic Dialect="http://www.onvif.org/ver10/tev/topicExpression/ConcreteSet"
>tns1:Device/tns1:Trigger/tnssamsung:DigitalInput</wsnt:Topic>
  <wsnt:Message>
    <tt:Message UtcTime="2022-08-09T01:49:00.288Z" PropertyOperation="Changed">
      <tt:Source>
        <tt:SimpleItem Name="Index" Value="0"/>
        <tt:SimpleItem Name="AlarmInID" Value="1"/>
      </tt:Source>
      <tt>Data>
        <tt:SimpleItem Name="Level" Value="false"/>
      </tt>Data>
    </tt:Message>
  </wsnt:Message>
</wsnt:NotificationMessage>

```

## 5.8. DigitalOutput/Relay

### 5.8.1. EventScheme [ONVIF]

```

<wsnt:NotificationMessage>
  <wsnt:Topic Dialect="http://www.onvif.org/ver10/tev/topicExpression/ConcreteSet"
>tns1:Device/Trigger/Relay</wsnt:Topic>
  <wsnt:Message>
    <tt:Message UtcTime="2022-08-05T14:18:00.003Z" PropertyOperation="Initialized">
      <tt:Source>
        <tt:SimpleItem Name="RelayToken" Value="Relay-1"/>
      </tt:Source>
      <tt:Data>
        <tt:SimpleItem Name="LogicalState" Value="inactive"/>
      </tt:Data>
    </tt:Message>
  </wsnt:Message>
</wsnt:NotificationMessage>

```

### 5.8.2. EventScheme [Proprietary]

```

<wsnt:NotificationMessage>
  <wsnt:Topic Dialect="http://www.onvif.org/ver10/tev/topicExpression/ConcreteSet"
>tns1:Device/tns1:Trigger/tns1:Relay</wsnt:Topic>
  <wsnt:Message>
    <tt:Message UtcTime="2022-08-09T01:39:40.000Z" PropertyOperation="Initialized">
      <tt:Source>
        <tt:SimpleItem Name="RelayToken" Value="Relay-1"/>
      </tt:Source>
      <tt:Data>
        <tt:SimpleItem Name="LogicalState" Value="inactive"/>
      </tt:Data>
    </tt:Message>
  </wsnt:Message>
</wsnt:NotificationMessage>

```

**NOTE** | Here LogicalState can be either **active** or **inactive**.

## 5.9. DigitalAutoTracking

```

<wsnt:NotificationMessage>
  <wsnt:Topic Dialect="http://www.onvif.org/ver10/tev/topicExpression/ConcreteSet"
>tns1:VideoSource/tnssamsung:DigitalAutoTracking</wsnt:Topic>
  <wsnt:Message>
    <tt:Message UtcTime="2022-08-05T14:27:40.883Z" PropertyOperation="Changed">
      <tt:Source>
        <tt:SimpleItem Name="MediaProfileToken" Value="digital_auto_tracking_token
"/>
      </tt:Source>
      <tt:Data>
        <tt:SimpleItem Name="State" Value="false"/>
      </tt:Data>
    </tt:Message>
  </wsnt:Message>
</wsnt:NotificationMessage>

```

## 5.10. AudioDetection

```

<wsnt:NotificationMessage>
  <wsnt:Topic Dialect="http://www.onvif.org/ver10/tev/topicExpression/ConcreteSet"
>tns1:AudioSource/tnssamsung:AudioDetection</wsnt:Topic>
  <wsnt:Message>
    <tt:Message UtcTime="2022-08-05T14:27:00.455Z" PropertyOperation="Changed">
      <tt:Source>
        <tt:SimpleItem Name="AudioSourceToken" Value="AudioSource-0"/>
      </tt:Source>
      <tt:Data>
        <tt:SimpleItem Name="State" Value="0"/>
      </tt:Data>
    </tt:Message>
  </wsnt:Message>
</wsnt:NotificationMessage>

```

## 5.11. AudioClassification

```

<wsnt:NotificationMessage>
  <wsnt:Topic Dialect="http://www.onvif.org/ver10/tev/topicExpression/ConcreteSet
xmlns:wsnt=http://docs.oasis-open.org/wsn/b-2 xmlns:tns1=http://www.onvif.org/ver10/topics
">tns1:AudioAnalytics/Audio/DetectedSound </wsnt:Topic>
  <wsnt:Message>
    <tt:Message PropertyOperation="Initialized" UtcTime="2022-08-05T15:54:44Z">
      <tt:Source>
        <tt:SimpleItem Value="AudioSourceConfigurationToken" Name=
"AudioSourceConfig1"/>
        <tt:SimpleItem Value="AudioAnalyticsConfigurationToken" Name=
"AudioAnalyticsConfig-01"/>
        <tt:SimpleItem Value="Rule" Name="Rule1"/>
      </tt:Source>
      <tt>Data>
        <tt:SimpleItem Value="true" Name="isSoundDetected"/>
        <tt:SimpleItem Value="2022-08-05T15:54:44Z" Name="UTCTime"/>
        <tt:SimpleItem Value="gun_shot" Name="AudioClassifications"/>
        <tt:ElementItem Name="AudioClassifications">
          <tt:AudioClassDescriptor>
            <tt:ClassCandidate>
              <tt:Type>"gun_shot"</tt:Type>
              <tt:Likelihood>"0.6"</tt:Likelihood>
            </tt:ClassCandidate>
          </tt:AudioClassDescriptor>
        </tt:ElementItem>
      </tt>Data>
    </tt:Message>
  </wsnt:Message>
</wsnt:NotificationMessage>

```

**NOTE** | Supported types "scream", "gun\_shot", "explosion" or "glass\_breaking"

## 5.12. FaceDetection

```

<wsnt:NotificationMessage>
  <wsnt:Topic Dialect="http://www.onvif.org/ver10/tev/topicExpression/ConcreteSet
xmlns:wsnt=http://docs.oasis-open.org/wsn/b-2 xmlns:tns1=http://www.onvif.org/ver10/topics
xmlns:tnssamsung=http://www.samsungcctv.com/2011/event/topics">tns1:VideoSource/tnssamsung:
FaceDetection</wsnt:Topic>
  <wsnt:Message>
    <tt:Message UtcTime="2022-08-04T15:54:44Z">
      <tt:Source>
        <tt:SimpleItem Name="VideoSourceToken" Value="VideoSource1"/>
      </tt:Source>
      <tt>Data>
        <tt:SimpleItem Name="Face" Value="0"/>
      </tt>Data>
    </tt:Message>
  </wsnt:Message>
</wsnt:NotificationMessage>

```

**NOTE** | Face value can be 0 or 1, where 1 means face is detected.

## 5.13. FaceMaskDetection

```

<wsnt:NotificationMessage xmlns:wsnt="http://docs.oasis-open.org/wsn/b-2">
  <wsnt:Topic Dialect="http://www.onvif.org/ver10/tev/topicExpression/ConcreteSet
xmlns:wsnt=http://docs.oasis-open.org/wsn/b-2 xmlns:tns1=http://www.onvif.org/ver10/topics
">tns1:RuleEngine/Detection/Mask</wsnt:Topic>
  <wsnt:Message>
    <tt:Message UtcTime="2022-08-04T15:54:44Z" xmlns:tt=
"http://www.onvif.org/ver10/schema/">
      <tt:Source>
        <tt:SimpleItem Name="VideoSourceToken" Value="VideoSouceTok1"/>
        <tt:SimpleItem Name="RuleName" Value="MaskDetectionRule1"/>
      </tt:Source>
      <tt>Data>
        <tt:SimpleItem Name="State" Value="true"/>
        <tt:SimpleItem Name="ObjectID" Value="100023"/>
      </tt>Data>
    </tt:Message>
  </wsnt:Message>
</wsnt:NotificationMessage>

```

### 5.13.1. FaceMaskDetection [From WiseAI App]

```

<wsnt:NotificationMessage>
  <wsnt:Topic Dialect="http://www.onvif.org/ver10/tev/topicExpression/ConcreteSet"
>tns1:OpenApp/WiseAI/MaskDetection</wsnt:Topic>
  <wsnt:Message>
    <tt:Message UtcTime="2023-03-30T09:03:55.805Z">
      <tt:Source>
        <tt:SimpleItem Name="VideoSourceToken" Value="VideoSourceToken-0"/>
        <tt:SimpleItem Name="RuleName" Value="MaskDetectionRule1"/>
      </tt:Source>
      <tt:Data>
        <tt:SimpleItem Name="State" Value="true"/>
        <tt:SimpleItem Name="ObjectId" Value="8902"/>
      </tt:Data>
    </tt:Message>
  </wsnt:Message>
</wsnt:NotificationMessage>

```

## 5.14. SocialDistancingViolation Detection

```

<wsnt:NotificationMessage xmlns:wsnt="http://docs.oasis-open.org/wsn/b-2">
  <wsnt:Topic Dialect="http://www.onvif.org/ver10/tev/topicExpression/ConcreteSet
xmlns:wsnt=http://docs.oasis-open.org/wsn/b-2 xmlns:tns1=http://www.onvif.org/ver10/topics
">tns1:RuleEngine/Detection/SocialDistancingViolation</wsnt:Topic>
  <wsnt:Message>
    <tt:Message UtcTime="2022-08-04T05:51:11Z" xmlns:tt=
"http://www.onvif.org/ver10/schema/">
      <tt:Source>
        <tt:SimpleItem Name="VideoSource" Value="VideoSouceTok1"/>
        <tt:SimpleItem Name="RuleName" Value="SocialDistancingViolationRule-1"/>
      </tt:Source>
      <tt:Data>
        <tt:SimpleItem Name="State" Value="true"/>
        <tt:SimpleItem Name="ObjectIDs" Value="100023 100020 110221"/>
      </tt:Data>
    </tt:Message>
  </wsnt:Message>
</wsnt:NotificationMessage>

```

### 5.14.1. SocialDistancingViolation Detection [From WiseAI App]

```

<wsnt:NotificationMessage>
  <wsnt:Topic Dialect="http://www.onvif.org/ver10/tev/topicExpression/ConcreteSet"
>tns1:OpenApp/WiseAI/SocialDistancingViolation</wsnt:Topic>
  <wsnt:Message>
    <tt:Message UtcTime="2023-03-30T09:08:29.438Z" PropertyOperation="Changed">
      <tt:Source>
        <tt:SimpleItem Name="VideoSourceToken" Value="VideoSourceToken-0"/>
        <tt:SimpleItem Name="RuleName" Value="SocialDistanceViolationRule-1"/>
      </tt:Source>
      <tt:Data>
        <tt:SimpleItem Name="State" Value="false"/>
        <tt:SimpleItem Name="ObjectId" Value=""/>
      </tt:Data>
    </tt:Message>
  </wsnt:Message>
</wsnt:NotificationMessage>

```

## 5.15. VideoAnalytics[IVA/Line]

```

<wsnt:NotificationMessage>
  <wsnt:Topic Dialect="http://www.onvif.org/ver10/tev/topicExpression/ConcreteSet"
>tns1:VideoAnalytics/tnssamsung:VideoAnalytics</wsnt:Topic>
  <wsnt:Message>
    <tt:Message UtcTime="2022-01-01T01:19:13.832Z">
      <tt:Source>
        <tt:SimpleItem Name="VideoSourceToken" Value="VideoSourceConfigToken-01-0
"/>
        <tt:SimpleItem Name="RuleName" Value="LineRule-1"/>
      </tt:Source>
      <tt:Data>
        <tt:SimpleItem Name="State" Value="1"/>
        <tt:SimpleItem Name="ObjectId" Value="10"/>
        <tt:SimpleItem Name="Action" Value="Right"/>
      </tt:Data>
    </tt:Message>
  </wsnt:Message>
</wsnt:NotificationMessage>

```

### NOTE

Here the **Action** can have any of the following values Right, Left, Enter, Exit, Appear/Disappear, Loitering, Intrusion.

**VideoAnalytics** events after moving to WiseAI app is split into two, LineCrossing and IvaArea events.

### 5.15.1. LineCrossing [From WiseAI APP]



```

<wsnt:NotificationMessage>
  <wsnt:Topic Dialect="http://www.onvif.org/ver10/tev/topicExpression/ConcreteSet"
>tns1:OpenApp/WiseAI/LineCrossing</wsnt:Topic>
  <wsnt:Message>
    <tt:Message UtcTime="2022-08-09T03:54:52.181Z">
      <tt:Source>
        <tt:SimpleItem Name="VideoSourceToken" Value="VideoSourceToken-0"/>
        <tt:SimpleItem Name="RuleName" Value="name1"/>
      </tt:Source>
      <tt:Data>
        <tt:SimpleItem Name="State" Value="true"/>
        <tt:SimpleItem Name="ObjectId" Value="575"/>
        <tt:SimpleItem Name="Action" Value="Right"/>
      </tt:Data>
    </tt:Message>
  </wsnt:Message>
</wsnt:NotificationMessage>

```

#### NOTE

Here the **Action** can have any of the following values Right, Left.

### 5.15.2. IV Area [From WiseAI APP]

```

<wsnt:NotificationMessage>
  <wsnt:Topic Dialect="http://www.onvif.org/ver10/tev/topicExpression/ConcreteSet"
>tns1:OpenApp/WiseAI/IvaArea</wsnt:Topic>
  <wsnt:Message>
    <tt:Message UtcTime="2022-08-09T03:54:52.181Z">
      <tt:Source>
        <tt:SimpleItem Name="VideoSourceToken" Value="VideoSourceToken-0"/>
        <tt:SimpleItem Name="RuleName" Value="Area1"/>
      </tt:Source>
      <tt:Data>
        <tt:SimpleItem Name="State" Value="true"/>
        <tt:SimpleItem Name="ObjectId" Value="332"/>
        <tt:SimpleItem Name="Action" Value="Enter"/>
      </tt:Data>
    </tt:Message>
  </wsnt:Message>
</wsnt:NotificationMessage>

```

#### NOTE

Here the **Action** can have any of the following values Enter, Exit, Appear/Disappear, Loitering, Intrusion.

## 5.16. RadiometryAlarm

```

<wsnt:NotificationMessage>
  <wsnt:Topic Dialect="http://www.onvif.org/ver10/tev/topicExpression/ConcreteSet"
>tns1:VideoSource/RadiometryAlarm</wsnt:Topic>
  <wsnt:Message>
    <tt:Message UtcTime="2022-08-04T23:35:35.006Z" PropertyOperation="Initialized">
      <tt:Source>
        <tt:SimpleItem Name="Source" Value="VideoSourceConfigToken-01-0"/>
      </tt:Source>
      <tt:Data>
        <tt:SimpleItem Name="State" Value="false"/>
      </tt:Data>
    </tt:Message>
  </wsnt:Message>
</wsnt:NotificationMessage>

```

## 5.17. TrackingDetection

```

<wsnt:NotificationMessage>
  <wsnt:Topic Dialect="http://www.onvif.org/ver10/tev/topicExpression/ConcreteSet"
>tns1:VideoSource/tnssamsung:TrackingDetection</wsnt:Topic>
  <wsnt:Message>
    <tt:Message UtcTime="2022-08-05T03:01:00.427Z" PropertyOperation="Changed">
      <tt:Source>
        <tt:SimpleItem Name="VideoSourceToken" Value="VideoSourceConfigToken-01-0
"/>
      </tt:Source>
      <tt:Data>
        <tt:SimpleItem Name="State" Value="false"/>
      </tt:Data>
    </tt:Message>
  </wsnt:Message>
</wsnt:NotificationMessage>

```

## 5.18. TemperatureAlarm

```

<wsnt:NotificationMessage>
  <wsnt:Topic Dialect="http://www.onvif.org/ver10/tev/topicExpression/ConcreteSet"
>tns1:RuleEngine/Radiometry/TemperatureAlarm</wsnt:Topic>
  <wsnt:Message>
    <tt:Message UtcTime="2022-01-01T01:19:13.832Z" PropertyOperation="Changed">
      <tt:Source>
        <tt:SimpleItem Name="VideoSourceToken" Value="VideoSourceConfigToken-01-0
"/>
        <tt:SimpleItem Name="VideoAnalyticsConfigurationToken" Value=
"VideoAnalyticsConfigToken-01"/>
        <tt:SimpleItem Name="RuleName" Value="TemperatureDetectionModule-1"/>
      </tt:Source>
      <tt:Data>
        <tt:SimpleItem Name="AlarmActive" Value="true"/>
        <tt:SimpleItem Name="TimeStamp" Value="2022-01-01T01:19:13.832Z"/>
      </tt:Data>
    </tt:Message>
  </wsnt:Message>
</wsnt:NotificationMessage>

```

## 5.19. ObjectDetection

```

<wsnt:NotificationMessage>
  <wsnt:Topic Dialect="http://www.onvif.org/ver10/tev/topicExpression/ConcreteSet"
>tns1:RuleEngine/ObjectDetection/Object</wsnt:Topic>
  <wsnt:Message>
    <tt:Message UtcTime="2019-11-14T05:50:51.290Z" PropertyOperation="Changed">
      <tt:Source>
        <tt:SimpleItem Name="VideoSource" Value="VideoSourceToken-0"/>
        <tt:SimpleItem Name="RuleName" Value="ObjectDetectionRule-1"/>
      </tt:Source>
      <tt:Data>
        <tt:SimpleItem Name="ClassTypes" Value="Person Vehicle"/>
      </tt:Data>
    </tt:Message>
  </wsnt:Message>
</wsnt:NotificationMessage>

```

### NOTE

**ClassTypes** is space separated list and it can have any of the following values, "Person", "Vehicle", "Face", "LicensePlate", "Bicycle", "Car", "Motorcycle", "Bus", "Truck"

### 5.19.1. ObjectDetection [From WiseAI APP]

```

<wsnt:NotificationMessage>
  <wsnt:Topic Dialect="http://www.onvif.org/ver10/tev/topicExpression/ConcreteSet"
>tns1:OpenApp/WiseAI/ObjectDetection</wsnt:Topic>
  <wsnt:Message>
    <tt:Message UtcTime="2022-08-09T04:15:25.407Z" PropertyOperation="Changed">
      <tt:Source>
        <tt:SimpleItem Name="VideoSourceToken" Value="VideoSourceToken-0"/>
        <tt:SimpleItem Name="RuleName" Value="ObjectDetectionRule-1"/>
      </tt:Source>
      <tt:Data>
        <tt:SimpleItem Name="State" Value="true"/>
        <tt:SimpleItem Name="ClassTypes" Value="Person Vehicle"/>
      </tt:Data>
    </tt:Message>
  </wsnt:Message>
</wsnt:NotificationMessage>

```

#### NOTE

**ClassTypes** is space separated list and it can have any of the following values, "Person", "Vehicle", "Face", "LicensePlate", "Bicycle", "Car", "Motorcycle", "Bus", "Truck" In addition if wisedetector is supported in the APP, the ClassTypes supported will dynamically change depending on the models uploaded.

## 5.20. BodyTemperature

```

<wsnt:NotificationMessage xmlns:wsnt="http://docs.oasis-open.org/wsn/b-2">
  <wsnt:Topic Dialect="http://www.onvif.org/ver10/tev/topicExpression/ConcreteSet
xmlns:wsnt=http://docs.oasis-open.org/wsn/b-2 xmlns:tns1=http://www.onvif.org/ver10/topics
">tns1:RuleEngine/Detection/BodyTemperature</wsnt:Topic>
  <wsnt:Message>
    <tt:Message UtcTime="2020-07-14T15:54:44Z" xmlns:tt=
"http://www.onvif.org/ver10/schema/">
      <tt:Source>
        <tt:SimpleItem Name="VideoSourceToken" Value="VideoSouceToken-1"/>
        <tt:SimpleItem Name="RuleName" Value="BodyTemperatureDetectionRule-1"/>
      </tt:Source>
      <tt:Data>
        <tt:SimpleItem Name="State" Value="true"/>
        <tt:SimpleItem Name="ObjectID" Value="100023"/>
        <tt:SimpleItem Name="Temperature" Value="312.0"/>
      </tt:Data>
    </tt:Message>
  </wsnt:Message>
</wsnt:NotificationMessage>

```

#### NOTE

Here unit of temperature is in Kelvin

## 5.21. ProfileChanged

```
<wsnt:NotificationMessage>
  <wsnt:Topic Dialect="http://www.onvif.org/ver10/tev/topicExpression/ConcreteSet"
>tns1:Media/ProfileChanged</wsnt:Topic>
  <wsnt:Message>
    <tt:Message UtcTime="2022-07-02T00:22:50.063Z">
      <tt:Source>
        <tt:SimpleItem Name="Token" Value="DefaultProfile-04-0"/>
      </tt:Source>
      <tt:Data/>
    </tt:Message>
  </wsnt:Message>
</wsnt:NotificationMessage>
```

## 5.22. ConfigurationChanged

```
<wsnt:NotificationMessage>
  <wsnt:Topic Dialect="http://www.onvif.org/ver10/tev/topicExpression/ConcreteSet"
>tns1:Media/ConfigurationChanged</wsnt:Topic>
  <wsnt:Message>
    <tt:Message UtcTime="2022-08-01T07:00:20.490Z">
      <tt:Source>
        <tt:SimpleItem Name="Token" Value="VideoEncoderToken-02-0"/>
        <tt:SimpleItem Name="Type" Value="VideoEncoder"/>
      </tt:Source>
      <tt:Data/>
    </tt:Message>
  </wsnt:Message>
</wsnt:NotificationMessage>
```

### NOTE

Here the **Type** can be any of "VideoSource", "VideoEncoder", "VideoAnalytics", "PTZ", "Metadata", "AudioSource", "AudioEncoder", "AudioDecoder", "AudioOutput".

## 5.23. GeoLocation

```

<wsnt:NotificationMessage>
  <wsnt:Topic Dialect="http://www.onvif.org/ver10/tev/topicExpression/ConcreteSet"
>tns1:Monitoring/GeoLocation</wsnt:Topic>
  <wsnt:Message>
    <tt:Message UtcTime="2022-08-09T00:20:57.645Z" PropertyOperation="Changed">
      <tt:Source>
        <tt:SimpleItem Name="Token" Value="GPSDeviceToken"/>
      </tt:Source>
      <tt:Data>
        <tt:ElementItem Name="CurrentLocation">
          <tt:GeoLocation lon="20.000000" lat="10.000000" elevation="11.000000"/>
        </tt:ElementItem>
      </tt:Data>
    </tt:Message>
  </wsnt:Message>
</wsnt:NotificationMessage>

```

## 5.24. PeopleCountPunctual

```

<wsnt:NotificationMessage xmlns:wsnt="http://docs.oasis-open.org/wsn/b-2">
  <wsnt:Topic Dialect="http://www.onvif.org/ver10/tev/topicExpression/ConcreteSet
xmlns:wsnt=http://docs.oasis-open.org/wsn/b-2 xmlns:tns1=http://www.onvif.org/ver10/topics
">ns:PeopleCounting/PeopleCountPunctual</wsnt:Topic>
  <wsnt:Message>
    <tt:Message UtcTime="2022-07-14T15:54:44Z" xmlns:tt=
"http://www.onvif.org/ver10/schema/">
      <tt:Source>
        <tt:SimpleItem Name="VideoSourceConfigToken" Value="VideoSourceConfigToken-
01-0"/>
        <tt:SimpleItem Name="RuleName" Value="line1"/>
      </tt:Source>
      <tt:Data>
        <tt:SimpleItem Name="Direction" Value="in"/>
        <tt:SimpleItem Name="Count" Value="100"/>
      </tt:Data>
    </tt:Message>
  </wsnt:Message>
</wsnt:NotificationMessage>

```

## 5.25. PeopleCountSummary

```

<wsnt:NotificationMessage xmlns:wsnt="http://docs.oasis-open.org/wsn/b-2">
  <wsnt:Topic Dialect="http://www.onvif.org/ver10/tev/topicExpression/ConcreteSet
xmlns:wsnt=http://docs.oasis-open.org/wsn/b-2 xmlns:tns1=http://www.onvif.org/ver10/topics
">ns:PeopleCounting/PeopleCountSummary</wsnt:Topic>
  <wsnt:Message>
    <tt:Message UtcTime="2022-07-14T15:54:44Z" xmlns:tt=
"http://www.onvif.org/ver10/schema/">
      <tt:Source>
        <tt:SimpleItem Name="VideoSourceConfigToken" Value="VideoSourceConfigToken-
01-0"/>
        <tt:SimpleItem Name="RuleName" Value="line1"/>
      </tt:Source>
      <tt:Data>
        <tt:SimpleItem Name="Direction" Value="in"/>
        <tt:SimpleItem Name="Count" Value="100"/>
      </tt:Data>
    </tt:Message>
  </wsnt:Message>
</wsnt:NotificationMessage>

```

## 5.26. ParkingDetection

```

<wsnt:NotificationMessage xmlns:wsnt="http://docs.oasis-open.org/wsn/b-2">
  <wsnt:Topic Dialect="http://www.onvif.org/ver10/tev/topicExpression/ConcreteSet
xmlns:wsnt=http://docs.oasis-open.org/wsn/b-2 xmlns:tns1=http://www.onvif.org/ver10/topics
">tns1:RuleEngine/Detection/Parking</wsnt:Topic>
  <wsnt:Message>
    <tt:Message UtcTime="2022-07-14T15:54:44Z" PropertyOperation="Changed">
      <tt:Source>
        <tt:SimpleItem Name="VideoSourceToken" Value="VideoSourceConfigToken-01-0
"/>
        <tt:SimpleItem Name="RuleName" Value="ParkingDetectionRule1"/>
      </tt:Source>
      <tt:Data>
        <tt:SimpleItem Name="State" Value="true"/>
      </tt:Data>
    </tt:Message>
  </wsnt:Message>
</wsnt:NotificationMessage>

```

## 5.27. ParkedVehicleCountChanged

```

<wsnt:NotificationMessage xmlns:wsnt="http://docs.oasis-open.org/wsn/b-2">
  <wsnt:Topic Dialect="http://www.onvif.org/ver10/tev/topicExpression/ConcreteSet
xmlns:wsnt=http://docs.oasis-open.org/wsn/b-2 xmlns:tns1=http://www.onvif.org/ver10/topics
">tns1:RuleEngine/Detection/ParkedVehicleCountChanged</wsnt:Topic>
  <wsnt:Message>
    <tt:Message UtcTime="2022-07-14T15:54:44Z" PropertyOperation="Changed">
      <tt:Source>
        <tt:SimpleItem Name="VideoSourceToken" Value="VideoSourceConfigToken-01-0
"/>
        <tt:SimpleItem Name="RuleName" Value="ParkingArea"/>
      </tt:Source>
      <tt>Data>
        <tt:SimpleItem Name="CurrentCount" Value="2"/>
        <tt:SimpleItem Name="MaximumCount" Value="4"/>
      </tt>Data>
    </tt:Message>
  </wsnt:Message>
</wsnt:NotificationMessage>

```

## 5.28. CallRequest

```

<wsnt:NotificationMessage xmlns:wsnt="http://docs.oasis-open.org/wsn/b-2">
  <wsnt:Topic Dialect="http://www.onvif.org/ver10/tev/topicExpression/ConcreteSet
xmlns:wsnt=http://docs.oasis-open.org/wsn/b-2 xmlns:tns1=http://www.onvif.org/ver10/topics
">tns1:Device/Trigger/CallRequest</wsnt:Topic>
  <wsnt:Message>
    <tt:Message UtcTime="2020-07-14T15:54:44Z"
      xmlns:tt="https://www.onvif.org/ver10/schema/">
      <tt:Source>
        <tt:SimpleItem Name="SourceToken" Value="CallRequest-1"/>
      </tt:Source>
      <tt>Data>
        <tt:SimpleItem Name="State" Value="true"/>
      </tt>Data>
    </tt:Message>
  </wsnt:Message>
</wsnt:NotificationMessage>

```

## 5.29. TamperingSwitch



```

<wsnt:NotificationMessage xmlns:wsnt="http://docs.oasis-open.org/wsn/b-2">
  <wsnt:Topic Dialect="http://www.onvif.org/ver10/tev/topicExpression/ConcreteSet
xmlns:wsnt=http://docs.oasis-open.org/wsn/b-2 xmlns:tns1=http://www.onvif.org/ver10/topics
">tns1:Device/Trigger/TamperingSwitch</wsnt:Topic>
  <wsnt:Message>
    <tt:Message UtcTime="2020-07-14T15:54:44Z"
      xmlns:tt="https://www.onvif.org/ver10/schema/">
      <tt:Source>
        <tt:SimpleItem Name="SourceToken" Value="TamperingSwitchToken-1"/>
      </tt:Source>
      <tt>Data>
        <tt:SimpleItem Name="State" Value="true"/>
      </tt>Data>
    </tt:Message>
  </wsnt:Message>
</wsnt:NotificationMessage>

```

## 5.30. DTMF

```

<wsnt:NotificationMessage xmlns:wsnt="http://docs.oasis-open.org/wsn/b-2">
  <wsnt:Topic Dialect="http://www.onvif.org/ver10/tev/topicExpression/ConcreteSet
xmlns:wsnt=http://docs.oasis-open.org/wsn/b-2 xmlns:tns1=http://www.onvif.org/ver10/topics
">tns1:Device/Trigger/DTMF</wsnt:Topic>
  <wsnt:Message>
    <tt:Message UtcTime="2020-07-14T15:54:44Z"
      xmlns:tt="https://www.onvif.org/ver10/schema/">
      <tt:Source>
        <tt:SimpleItem Name="RuleName" Value="DTMF-1"/>
      </tt:Source>
      <tt>Data>
        <tt:SimpleItem Name="State" Value="true"/>
      </tt>Data>
    </tt:Message>
  </wsnt:Message>
</wsnt:NotificationMessage>

```

## 5.31. StoppedVehicleDetection

This event is supported only in APP.

```

<wsnt:NotificationMessage xmlns:wsnt="http://docs.oasis-open.org/wsn/b-2">
  <wsnt:Topic Dialect="http://www.onvif.org/ver10/tev/topicExpression/ConcreteSet
xmlns:wsnt=http://docs.oasis-open.org/wsn/b-2 xmlns:tns1=http://www.onvif.org/ver10/topics
">tns1:OpenApp/WiseAI/StoppedVehicleDetection</wsnt:Topic>
  <wsnt:Message>
    <tt:Message UtcTime="2022-04-21T11:33:41Z"
      xmlns:tt="https://www.onvif.org/ver10/schema/">
      <tt:Source>
        <tt:SimpleItem Name="VideoSourceToken" Value="VideoSourceToken-0"/>
        <tt:SimpleItem Name="RuleName" Value="SVArea1"/>
      </tt:Source>
      <tt:Data>
        <tt:SimpleItem Name="State" Value="true"/>
        <tt:SimpleItem Name="VehicleTypes" Value="Car Bus"/>
        <tt:SimpleItem Name="ObjectIDs" Value="12211 12222"/>
      </tt:Data>
    </tt:Message>
  </wsnt:Message>
</wsnt:NotificationMessage>

```

#### NOTE

Here **VehicleTypes** list can have any of the following values  
Car,Bus,Truck,Motorcycle,Bicycle

## 5.32. TrafficJamDetection

This event is supported only in APP.

```

<wsnt:NotificationMessage xmlns:wsnt="http://docs.oasis-open.org/wsn/b-2">
  <wsnt:Topic Dialect="http://www.onvif.org/ver10/tev/topicExpression/ConcreteSet
xmlns:wsnt=http://docs.oasis-open.org/wsn/b-2 xmlns:tns1=http://www.onvif.org/ver10/topics
">tns1:OpenApp/WiseAI/TrafficJamDetection</wsnt:Topic>
  <wsnt:Message>
    <tt:Message UtcTime="2022-06-11T16:53:22Z"
      xmlns:tt="https://www.onvif.org/ver10/schema/">
      <tt:Source>
        <tt:SimpleItem Name="VideoSourceToken" Value="VideoSourceToken-0"/>
        <tt:SimpleItem Name="RuleName" Value="TJRule1"/>
      </tt:Source>
      <tt:Data>
        <tt:SimpleItem Name="State" Value="true"/>
      </tt:Data>
    </tt:Message>
  </wsnt:Message>
</wsnt:NotificationMessage>

```

## 5.33. ObjectCounting

This event is supported only in APP.

```
<wsnt:NotificationMessage xmlns:wsnt="http://docs.oasis-open.org/wsn/b-2">
  <wsnt:Topic Dialect="http://www.onvif.org/ver10/tev/topicExpression/ConcreteSet
xmlns:wsnt=http://docs.oasis-open.org/wsn/b-2 xmlns:tns1=http://www.onvif.org/ver10/topics
">tns1:OpenApp/WiseAI/ObjectCounting</wsnt:Topic>
  <wsnt:Message>
    <tt:Message UtcTime="2023-02-23T02:18:15Z"
      xmlns:tt="https://www.onvif.org/ver10/schema/">
      <tt:Source>
        <tt:SimpleItem Name="VideoSource" Value="VideoSourceToken-0"/>
        <tt:SimpleItem Name="RuleName" Value="OCArea1"/>
      </tt:Source>
      <tt>Data>
        <tt:SimpleItem Name="ReportType" Value="Punctual"/>
        <tt:SimpleItem Name="ObjectType" Value="People"/>
        <tt:SimpleItem Name="Direction" Value="LeftToRightIn"/>
        <tt:SimpleItem Name="Count" Value="10"/>
      </tt>Data>
    </tt:Message>
  </wsnt:Message>
</wsnt:NotificationMessage>
```

### NOTE

Here **ReportType** list can have any of the following values Punctual, Summary.  
**ObjectType** list can have any of the following values People, Vehicle.  
**Direction** list can have any of the following values LeftToRightIn, RightToLeftIn.

## 5.34. QueueManagement

This event is supported only in APP.

### 5.34.1. QueueHigh

```

<wsnt:NotificationMessage xmlns:wsnt="http://docs.oasis-open.org/wsn/b-2">
  <wsnt:Topic Dialect="http://www.onvif.org/ver10/tev/topicExpression/ConcreteSet
xmlns:wsnt=http://docs.oasis-open.org/wsn/b-2 xmlns:tns1=http://www.onvif.org/ver10/topics
">tns1:OpenApp/WiseAI/QueueHigh</wsnt:Topic>
  <wsnt:Message>
    <tt:Message UtcTime="2023-02-23T07:21:52Z"
      xmlns:tt="https://www.onvif.org/ver10/schema/">
      <tt:Source>
        <tt:SimpleItem Name="VideoSourceToken" Value="VideoSourceToken-0"/>
        <tt:SimpleItem Name="RuleName" Value="queue1"/>
      </tt:Source>
      <tt:Data>
        <tt:SimpleItem Name="State" Value="true"/>
      </tt:Data>
    </tt:Message>
  </wsnt:Message>
</wsnt:NotificationMessage>

```

### 5.34.2. QueueMedium

```

<wsnt:NotificationMessage xmlns:wsnt="http://docs.oasis-open.org/wsn/b-2">
  <wsnt:Topic Dialect="http://www.onvif.org/ver10/tev/topicExpression/ConcreteSet
xmlns:wsnt=http://docs.oasis-open.org/wsn/b-2 xmlns:tns1=http://www.onvif.org/ver10/topics
">tns1:OpenApp/WiseAI/QueueMedium</wsnt:Topic>
  <wsnt:Message>
    <tt:Message UtcTime="2023-02-23T07:28:40Z"
      xmlns:tt="https://www.onvif.org/ver10/schema/">
      <tt:Source>
        <tt:SimpleItem Name="VideoSourceToken" Value="VideoSourceToken-0"/>
        <tt:SimpleItem Name="RuleName" Value="queue1"/>
      </tt:Source>
      <tt:Data>
        <tt:SimpleItem Name="State" Value="true"/>
      </tt:Data>
    </tt:Message>
  </wsnt:Message>
</wsnt:NotificationMessage>

```

## 5.35. SlipAndFallDetection

This event is supported only in APP.

```

<wsnt:NotificationMessage xmlns:wsnt="http://docs.oasis-open.org/wsn/b-2">
  <wsnt:Topic Dialect="http://www.onvif.org/ver10/tev/topicExpression/ConcreteSet
xmlns:wsnt=http://docs.oasis-open.org/wsn/b-2 xmlns:tns1=http://www.onvif.org/ver10/topics
">tns1:OpenApp/WiseAI/SlipAndFallDetection</wsnt:Topic>
  <wsnt:Message>
    <tt:Message UtcTime="2023-02-23T07:28:57Z"
      xmlns:tt="https://www.onvif.org/ver10/schema/">
      <tt:Source>
        <tt:SimpleItem Name="VideoSource" Value="VideoSourceToken-0"/>
        <tt:SimpleItem Name="RuleName" Value="SFDArea1"/>
      </tt:Source>
      <tt:Data>
        <tt:SimpleItem Name="State" Value="true"/>
        <tt:SimpleItem Name="ObjectId" Value="1"/>
      </tt:Data>
    </tt:Message>
  </wsnt:Message>
</wsnt:NotificationMessage>

```

## 5.36. CrowdCounting

This event is supported only in APP.

```

<wsnt:NotificationMessage xmlns:wsnt="http://docs.oasis-open.org/wsn/b-2">
  <wsnt:Topic Dialect="http://www.onvif.org/ver10/tev/topicExpression/ConcreteSet
xmlns:wsnt=http://docs.oasis-open.org/wsn/b-2 xmlns:tns1=http://www.onvif.org/ver10/topics
">tns1:OpenApp/WiseAI/CrowdCountChanged</wsnt:Topic>
  <wsnt:Message>
    <tt:Message UtcTime="2022-06-11T16:53:22Z"
      xmlns:tt="https://www.onvif.org/ver10/schema/">
      <tt:Source>
        <tt:SimpleItem Name="VideoSource" Value="VideoSourceToken-0"/>
        <tt:SimpleItem Name="RuleName" Value="TJRule1"/>
      </tt:Source>
      <tt:Data>
        <tt:SimpleItem Name="Count" Value="10"/>
      </tt:Data>
    </tt:Message>
  </wsnt:Message>
</wsnt:NotificationMessage>

```

## 6. Frame Metadata Samples

Following class types are supported

Face, Human, Vehicle, LicensePlate, Head and Unknown

Some of the fields in the metadata are not defined in ONVIF schema and are custom extensions like,

- <tt:ColorString>  
According to onvif only YCbCr color space information is defined, this is added for easy readability.
- <tt:ImageRefShape>  
This is provided to give the bounding box information of the object when best shot was taken.
- <fc:AgeType>
- <bd:Gender>
- <tt:ProximateObjects>

## 6.1. Basic Metadata with Bestshot image url

```
<?xml version="1.0" encoding="UTF-8"?>
<tt:MetadataStream
  xmlns:tt="http://www.onvif.org/ver10/schema"
  xmlns:ttr="https://www.onvif.org/ver20/analytics/radiometry"
  xmlns:wsnt="http://docs.oasis-open.org/wsn/b-2"
  xmlns:tns1="http://www.onvif.org/ver10/topics"
  xmlns:tnssamsung="http://www.samsungcctv.com/2011/event/topics"
  xmlns:fc="http://www.onvif.org/ver20/analytics/humanface"
  xmlns:bd="http://www.onvif.org/ver20/analytics/humanbody">
  <tt:VideoAnalytics>
    <tt:Frame UtcTime="2022-08-16T10:16:09.024Z">
      <tt:Transformation>
        <tt:Translate x="-1.0" y="1.0"/>
        <tt:Scale x="0.001042" y="-0.001852"/>
      </tt:Transformation>
      <tt:Object ObjectId="1416469">
        <tt:Appearance>
          <tt:Shape>
            <tt:BoundingBox left="1435.0" top="186.0" right="1481.0" bottom=
"223.0"/>
            <tt:CenterOfGravity x="1458.0" y="204.5"/>
          </tt:Shape>
          <tt:Class>
            <tt:Type Likelihood="0.9">Vehicle</tt:Type>
          </tt:Class>
          <tt:ImageRef>/download/objectid_1416469_1660612569024.jpg</tt:ImageRef>
        </tt:Appearance>
      </tt:Object>
    </tt:Frame>
  </tt:VideoAnalytics>
</tt:MetadataStream>
```

### NOTE

The image naming follows below naming rule,  
objectid\_<object id>\_<timestamp in Millisecs>.jpg

## 6.2. Metadata with Vehicle Info

Following Vehicle info types are supported

Car, Motorcycle, Bus, Bicycle, Truck, Train, Unknown

Following colors are supported

Yellow, White, Red, Purple, Orange, Gray, Green, Blue, Black, Other

```
<?xml version="1.0" encoding="UTF-8"?>
<tt:MetadataStream xmlns:tt="http://www.onvif.org/ver10/schema" xmlns:fc=
"http://www.onvif.org/ver20/analytics/humanface" xmlns:bd=
"http://www.onvif.org/ver20/analytics/humanbody">
  <tt:VideoAnalytics>
    <tt:Frame UtcTime="2019-05-15T12:24:57.321">
      <tt:Transformation>
        <tt:Translate x="-1.0" y="1.0"/>
        <tt:Scale x="0.000781" y="-0.001042"/>
      </tt:Transformation>
      <tt:Object ObjectId="15">
        <tt:Appearance>
          <tt:Shape>
            <tt:BoundingBox left="15.0" top="141.0" right="51.0" bottom="291.0
"/>
            <tt:CenterOfGravity x="31.0" y="218.0"/>
          </tt:Shape>
          <tt:Color>
            <tt:ColorCluster>
              <tt:Color X="58" Y="105" Z="212"/>
              <tt:ColorString>White</tt:ColorString>
            </tt:ColorCluster>
          </tt:Color>
          <tt:Class>
            <tt:Type Likelihood="0.8">Vehicle</tt:Type>
          </tt:Class>
          <tt:VehicleInfo>
            <tt:Type Likelihood="0.8">Car</tt:Type>
          </tt:VehicleInfo>
          <tt:ImageRef>/download/objectid_15_1548728068100.jpg</tt:ImageRef>
          <tt:ImageRefShape>
            <tt:BoundingBox left="15.0" top="141.0" right="51.0" bottom="291.0
"/>
            <tt:CenterOfGravity x="31.0" y="218.0"/>
          </tt:ImageRefShape>
        </tt:Appearance>
      </tt:Object>
    </tt:Frame>
  </tt:VideoAnalytics>
</tt:MetadataStream>
```

## 6.3. Metadata with LicensePlate Info

LicensePlateInfo section will be available only if LP detection application like **RoadAI** is supported.

```
<?xml version="1.0" encoding="UTF-8"?>
<tt:MetadataStream xmlns:tt="http://www.onvif.org/ver10/schema" xmlns:fc=
"http://www.onvif.org/ver20/analytics/humanface" xmlns:bd=
"http://www.onvif.org/ver20/analytics/humanbody">
  <tt:VideoAnalytics>
    <tt:Frame UtcTime="2019-05-15T12:24:57.321">
      <tt:Transformation>
        <tt:Translate x="-1.0" y="1.0"/>
        <tt:Scale x="0.000781" y="-0.001042"/>
      </tt:Transformation>
      <tt:Object ObjectId="15">
        <tt:Appearance>
          <tt:Shape>
            <tt:BoundingBox left="15.0" top="141.0" right="51.0" bottom="291.0
"/>

            <tt:CenterOfGravity x="31.0" y="218.0"/>
          </tt:Shape>
          <tt:Class>
            <tt>Type Likelihood="0.8">LicensePlate</tt:Type>
          </tt:Class>
          <tt:LicensePlateInfo>
            <tt:PlateNumber Likelihood="0.75608">34L2222</tt:PlateNumber>
            <tt:PlateType Likelihood="0.75608">Normal</tt:PlateType>
            <tt:CountryCode Likelihood="0.75608">US</tt:CountryCode>
          </tt:LicensePlateInfo>
          <tt:ImageRef>/download/objectid_15_1548728068100.jpg</tt:ImageRef>
          <tt:ImageRefShape>
            <tt:BoundingBox left="15.0" top="141.0" right="51.0" bottom="291.0
"/>

            <tt:CenterOfGravity x="31.0" y="218.0"/>
          </tt:ImageRefShape>
        </tt:Appearance>
      </tt:Object>
    </tt:Frame>
  </tt:VideoAnalytics>
</tt:MetadataStream>
```

## 6.4. Metadata with Face Info

Following AgeTypes are supported

Child, Young, Middle, Old



```

<tt:MetadataStream xmlns:tt="http://www.onvif.org/ver10/schema"
  xmlns:fc="http://www.onvif.org/ver20/analytics/humanface"
  xmlns:bd="http://www.onvif.org/ver20/analytics/humanbody">
  <tt:VideoAnalytics>
    <tt:Frame UtcTime="2019-05-15T12:24:57.321">
      <tt:Transformation>
        <tt:Translate x="-1.0" y="1.0" />
        <tt:Scale x="0.000781" y="-0.001042" />
      </tt:Transformation>
      <tt:Object ObjectId="12">
        <tt:Appearance>
          <tt:Shape>
            <tt:BoundingBox left="15.0" top="141.0" right="51.0" bottom="291.0"
/>
              <tt:CenterOfGravity x="31.0" y="218.0" />
            </tt:Shape>
            <tt:Class>
              <tt:Type Likelihood="0.8">Face</tt:Type>
            </tt:Class>
            <tt:HumanFace>
              <fc:Gender>Male</fc:Gender>
              <fc:AgeType>Adult</fc:AgeType>
              <fc:Accessory>
                <fc:Opticals>
                  <fc:Wear>true</fc:Wear>
                </fc:Opticals>
                <fc:Mask>
                  <fc:Wear>true</fc:Wear>
                </fc:Mask>
                <fc:Hat>
                  <fc:Wear>>false</fc:Wear>
                </fc:Hat>
              </fc:Accessory>
            </tt:HumanFace>
            <tt:ImageRef>/download/objectid_12_1548728056100.jpg</tt:ImageRef>
            <tt:ImageRefShape>
              <tt:BoundingBox left="15.0" top="141.0" right="51.0" bottom="291.0"
/>
                <tt:CenterOfGravity x="31.0" y="218.0" />
              </tt:ImageRefShape>
            </tt:Appearance>
          </tt:Object>
        </tt:Frame>
      </tt:VideoAnalytics>
    </tt:MetadataStream>

```

## 6.5. Metadata with HumanBody Info

```
<tt:MetadataStream xmlns:tt="http://www.onvif.org/ver10/schema" xmlns:fc=
"http://www.onvif.org/ver20/analytics/humanface" xmlns:bd=
"http://www.onvif.org/ver20/analytics/humanbody">
  <tt:VideoAnalytics>
    <tt:Frame UtcTime="2019-05-15T12:24:57.321">
      <tt:Transformation>
        <tt:Translate x="-1.0" y="1.0"/>
        <tt:Scale x="0.000781" y="-0.001042"/>
      </tt:Transformation>
      <tt:Object ObjectId="15">
        <tt:Appearance>
          <tt:Shape>
            <tt:BoundingBox left="15.0" top="141.0" right="51.0" bottom="291.0
"/>

            <tt:CenterOfGravity x="31.0" y="218.0"/>
          </tt:Shape>
          <tt:Color>
            <tt:ColorCluster>
              <tt:Color X="165" Y="44" Z="139"/>
              <tt:ColorString>Blue</tt:ColorString>
            </tt:ColorCluster>
          </tt:Color>
          <tt:Class>
            <tt:Type Likelihood="0.8">Human</tt:Type>
          </tt:Class>
          <tt:HumanBody>
            <bd:Gender>Male</bd:Gender>
            <bd:Clothing>
              <bd:Hat>
                <bd:Wear>>false</bd:Wear>
              </bd:Hat>
              <bd:Tops>
                <bd:Color>
                  <tt:ColorCluster>
                    <tt:Color X="58" Y="105" Z="212"/>
                    <tt:ColorString>White</tt:ColorString>
                  </tt:ColorCluster>
                </bd:Color>
                <bd:Length>Long</bd:Length>
              </bd:Tops>
              <bd:Bottoms>
                <bd:Color>
                  <tt:ColorCluster>
                    <tt:Color X="165" Y="44" Z="139"/>
                    <tt:ColorString>Blue</tt:ColorString>
                  </tt:ColorCluster>
                </bd:Color>
              </bd:Bottoms>
            </bd:Clothing>
          </tt:HumanBody>
        </tt:Appearance>
      </tt:Object>
    </tt:Frame>
  </tt:VideoAnalytics>
</tt:MetadataStream>
```

```

        <bd:Length>Long</bd:Length>
    </bd:Bottoms>
</bd:Clothing>
<bd:Belonging>
    <bd:Bag>
        <bd:Category>Bag</bd:Category>
    </bd:Bag>
</bd:Belonging>
</tt:HumanBody>
<tt:ImageRef>/download/objectid_15_1548728068100.jpg</tt:ImageRef>
<tt:ImageRefShape>
    <tt:BoundingBox left="15.0" top="141.0" right="51.0" bottom="291.0"
"/>

    <tt:CenterOfGravity x="31.0" y="218.0"/>
</tt:ImageRefShape>
</tt:Appearance>
</tt:Object>
</tt:Frame>
</tt:VideoAnalytics>
</tt:MetadataStream>

```

### 6.5.1. SocialDistancing Violation detection supported Apps / Models

**ProximateObjects** provides the objectIDs of nearest humans and distance in meters.

```

<tt:MetadataStream xmlns:tt="http://www.onvif.org/ver10/schema" xmlns:fc=
"http://www.onvif.org/ver20/analytics/humanface" xmlns:bd=
"http://www.onvif.org/ver20/analytics/humanbody">
    <tt:VideoAnalytics>
        <tt:Frame UtcTime="2019-05-15T12:24:57.321">
            <tt:Transformation>
                <tt:Translate x="-1.0" y="1.0"/>
                <tt:Scale x="0.000781" y="-0.001042"/>
            </tt:Transformation>
            <tt:Object ObjectId="16">
                <tt:Appearance>
                    <tt:Shape>
                        <tt:BoundingBox left="115.0" top="241.0" right="151.0" bottom=
"391.0"/>

                        <tt:CenterOfGravity x="131.0" y="318.0"/>
                    </tt:Shape>
                    <tt:Color>
                        <tt:ColorCluster>
                            <tt:Color X="165" Y="44" Z="139"/>
                            <tt:ColorString>Blue</tt:ColorString>
                        </tt:ColorCluster>
                    </tt:Color>
                    <tt:ProximateObjects>
                        <tt:ProximateObject Id="15" Distance="1.2"/>

```

```

        </tt:ProximateObjects>
        <tt:Class>
            <tt:Type Likelihood="0.8">Human</tt:Type>
        </tt:Class>
        <tt:HumanBody>
            <bd:Gender>Male</bd:Gender>
            <bd:Clothing>
                <bd:Hat>
                    <bd:Wear>>false</bd:Wear>
                </bd:Hat>
                <bd:Tops>
                    <bd:Color>
                        <tt:ColorCluster>
                            <tt:Color X="58" Y="105" Z="212"/>
                            <tt:ColorString>White</tt:ColorString>
                        </tt:ColorCluster>
                    </bd:Color>
                    <bd:Length>Long</bd:Length>
                </bd:Tops>
                <bd:Bottoms>
                    <bd:Color>
                        <tt:ColorCluster>
                            <tt:Color X="165" Y="44" Z="139"/>
                            <tt:ColorString>Blue</tt:ColorString>
                        </tt:ColorCluster>
                    </bd:Color>
                    <bd:Length>Long</bd:Length>
                </bd:Bottoms>
            </bd:Clothing>
            <bd:Belonging>
                <bd:Bag>
                    <bd:Category>Bag</bd:Category>
                </bd:Bag>
            </bd:Belonging>
        </tt:HumanBody>
        <tt:ImageRef>/download/objectid_16_1548728068100.jpg</tt:ImageRef>
        <tt:ImageRefShape>
            <tt:BoundingBox left="15.0" top="141.0" right="51.0" bottom="291.0
"/>
            <tt:CenterOfGravity x="31.0" y="218.0"/>
        </tt:ImageRefShape>
    </tt:Appearance>
</tt:Object>
</tt:Frame>
</tt:VideoAnalytics>
</tt:MetadataStream>

```

## 6.6. Metadata with Object Direction information

Direction is provided as a custom attribute inside behaviour section.

Following directions are supported,

"Up", "Down", "Right", "Left", "UpRight", "UpLeft", "DownRight", "DownLeft"

```
<tt:MetadataStream xmlns:tt="http://www.onvif.org/ver10/schema" xmlns:fc=
"http://www.onvif.org/ver20/analytics/humanface" xmlns:bd=
"http://www.onvif.org/ver20/analytics/humanbody">
  <tt:VideoAnalytics>
    <tt:Frame UtcTime="2019-05-15T12:24:57.321">
      <tt:Transformation>
        <tt:Translate x="-1.0" y="1.0"/>
        <tt:Scale x="0.000781" y="-0.001042"/>
      </tt:Transformation>
      <tt:Object ObjectId="15">
        <tt:Appearance>
          <tt:Shape>
            <tt:BoundingBox left="15.0" top="141.0" right="51.0" bottom="291.0
"/>

            <tt:CenterOfGravity x="31.0" y="218.0"/>
          </tt:Shape>
          <tt:Color>
            <tt:ColorCluster>
              <tt:Color X="165" Y="44" Z="139"/>
              <tt:ColorString>Blue</tt:ColorString>
            </tt:ColorCluster>
          </tt:Color>
          <tt:Class>
            <tt:Type Likelihood="0.8">Human</tt:Type>
          </tt:Class>
          <tt:HumanBody>
            <bd:Gender>Male</bd:Gender>
            <bd:Clothing>
              <bd:Hat>
                <bd:Wear>>false</bd:Wear>
              </bd:Hat>
              <bd:Tops>
                <bd:Color>
                  <tt:ColorCluster>
                    <tt:Color X="58" Y="105" Z="212"/>
                    <tt:ColorString>White</tt:ColorString>
                  </tt:ColorCluster>
                </bd:Color>
                <bd:Length>Long</bd:Length>
              </bd:Tops>
              <bd:Bottoms>
                <bd:Color>
                  <tt:ColorCluster>
```

```

        <tt:Color X="165" Y="44" Z="139"/>
        <tt:ColorString>Blue</tt:ColorString>
    </tt:ColorCluster>
</bd:Color>
    <bd:Length>Long</bd:Length>
</bd:Bottoms>
</bd:Clothing>
<bd:Belonging>
    <bd:Bag>
        <bd:Category>Bag</bd:Category>
    </bd:Bag>
</bd:Belonging>
</tt:HumanBody>
<tt:ImageRef>/download/objectid_15_1548728068100.jpg</tt:ImageRef>
<tt:ImageRefShape>
    <tt:BoundingBox left="15.0" top="141.0" right="51.0" bottom="291.0
"/>

    <tt:CenterOfGravity x="31.0" y="218.0"/>
</tt:ImageRefShape>
</tt:Appearance>
    <tt:Behaviour ObjectDirection="DownRight" />
</tt:Object>
</tt:Frame>
</tt:VideoAnalytics>
</tt:MetadataStream>

```

## References

- [1] [ONVIF Core Specification](#)
- [2] [ONVIF Metadata Schema](#)