WiseAI Migration Guide

WiseAI APP

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1. Scope

Scope of this document is to explain how client can integrate & configure app based analytics module, receive events and setup actions.

2. Background

With the increase in demand to support different detection rules and analytics algorithm, its becoming increasingly difficult to package different analytics module in the camera firmware and this results in frequent firmware changes and constant client (VMS/NVR) integration / changes. To overcome this drawback, going forward WiseNet Cameras will leverage the OpenPlaform and provide analytics modules as installable apps.

3. Introduction

Integration with the new app based cameras, involves three levels of integration,

1. **Basic:** Covers receiving app generated events and metadata in SUNAPI and ONVIF
2. **Intermediate:** Basic + Covers configuring the event source in app using OpenAPI
3. **Full:** Basic + Intermediate + Covers configuring the event actions using SUNAPI

Considering the ease of integration and configuring the app, OpenAPI based REST API is used in APP. This allows client to generate stub code for their language.

3.1. WiseAI

WiseAI is a new OpenSDK-based application from Hanwha Vision that provides AI analysis and events.

4. Basic Integration

Ability to receive events/metadata generated by installed APP is considered as the first level of integration.

4.1. Prerequisites

To use the WiseAI App features, the WiseAI App must be installed and running on the device. Otherwise the events of the WiseAI app are **not displayed.** To check WiseAI App is installed and running, you can check with the command below. For more details on the OpenSDK configuration, refer to the SUNAPI opensdk document.

NOTE	The WiseAI app starts after a while after the camera boots up, and the app's events may not be displayed during the time the app is not started.

REQUEST

```
http://<Device IP>/stw-cgi/opensdk.cgi?msubmenu=apps&action=view
```

TEXT RESPONSE

```
InstalledApps=1
WiseAI.Status=Running
WiseAI.InstalledDate=Thu Mar 23 07:07:15 2023
WiseAI.Version=1.02.00
WiseAI.Permission=Device
WiseAI.AutoStart=True
WiseAI.Priority=High
WiseAI.ControlForbidden=
WiseAI.IsDefault=True
```

JSON RESPONSE


```
{
    "InstalledApps": 1,
    "Apps": [
        {
            "AppID": "WiseAI",
            "Status": "Running",
            "InstalledDate": "Thu Mar 23 07:07:15 2023",
            "Version": "1.02.00",
            "Permission": [
                "Device"
            ],
            "AutoStart": true,
            "Priority": "High",
            "IsDefault": true,
            "ControlForbidden": []
        }
    ]
}
```


4.2. Metadata

Metadata notification from the App is delivered through the same Metadata RTP session used in the camera. Client can receive metadata from the App as before. Additionally it follows the ONVIF metadata schema for delivering the metadata.

> **NOTE** From App version 1.02.00 onwards **metaframecapability** is supported.

To findout the supported values and fields in the metadata (After installing the WiseAI app), below submenu response can be used.

REQUEST

```
http://<Device IP>/stw-cgi/opensdk.cgi?msubmenu=metaframecapability&action=view
```

JSON RESPONSE

```
HTTP/1.0 200 OK
Content-type: application/json
<Body>
```


```
{
    "MetaFrameCapability": [
        {
            "Channel": 0,
            "AppCapabilities": [
                {
                    "AppID": "WiseAI",
                    "Capabilities": [
                        {
                            "xpath":
"//tt:VideoAnalytics/tt:Frame/tt:Object/tt:Appearance/tt:Class/tt:Type",
                            "type": "xs:string",
                            "enum": [
                                "Face",
                                "Human",
                                "Vehicle",
                                "LicensePlate",
                                "Head",
                                "Unknown"
                            ]
                        },
                        {
                            "xpath":
"//tt:VideoAnalytics/tt:Frame/tt:Object/tt:Appearance/tt:Class/tt:Type/@Likelihood",
                            "type": "xs:float",
                            "minimum": 0.0,
                            "maximum": 1.0
                        },
                        {
                            "xpath":
"//tt:VideoAnalytics/tt:Frame/tt:Object/tt:Appearance/tt:Color/tt:ColorCluster/tt:ColorStri
ng",
                            "type": "xs:string",
                            "enum": [
                                "Yellow",
                                "White",
                                "Red",
                                "Purple",
                                "Orange",
                                "Gray",
                                "Green",
                                "Blue",
                                "Black",
```

```
                            "Other"
                        ]
                    },
                    {
                        "xpath":
"//tt:VideoAnalytics/tt:Frame/tt:Object/tt:Appearance/tt:VehicleInfo/tt:Type",
                        "type": "xs:string",
                        "enum": [
                            "Bicycle",
                            "Car",
                            "Motorcycle",
                            "Bus",
                            "Truck",
                            "Train",
                            "Unknown"
                        ]
                    },
                    {
                        "xpath":
"//tt:VideoAnalytics/tt:Frame/tt:Object/tt:Appearance/tt:VehicleInfo/tt:Type/@Likelihood",
                        "type": "xs:float",
                        "minimum": 0.0,
                        "maximum": 1.0
                    },
                    {
                        "xpath":
"//tt:VideoAnalytics/tt:Frame/tt:Object/tt:Appearance/tt:VehicleInfo/tt:Color/tt:ColorClust
er/tt:ColorString",
                        "type": "xs:string",
                        "enum": [
                            "Yellow",
                            "White",
                            "Red",
                            "Purple",
                            "Orange",
                            "Gray",
                            "Green",
                            "Blue",
                            "Black",
                            "Other"
                        ]
                    },
                    {
                        "xpath":
"//tt:VideoAnalytics/tt:Frame/tt:Object/tt:Appearance/tt:LicensePlateInfo/tt:PlateNumber",
                        "type": "xs:string"
                    },
                    {
                        "xpath":
"//tt:VideoAnalytics/tt:Frame/tt:Object/tt:Appearance/tt:HumanFace/fc:Gender",
```

```
                            "type": "xs:string",
                            "enum": [
                                "Male",
                                "Female",
                                "Unknown"
                            ]
                        },
                        {
                            "xpath":
"//tt:VideoAnalytics/tt:Frame/tt:Object/tt:Appearance/tt:HumanFace/fc:AgeType",
                            "type": "xs:string",
                            "enum": [
                                "Child,Young",
                                "Middle",
                                "Old",
                                "Unknown"
                            ]
                        },
                        {
                            "xpath":
"//tt:VideoAnalytics/tt:Frame/tt:Object/tt:Appearance/tt:HumanFace/fc:Accessory/fc:Opticals
/fc:Wear",
                            "type": "xs:boolean"
                        },
                        {
                            "xpath":
"//tt:VideoAnalytics/tt:Frame/tt:Object/tt:Appearance/tt:HumanFace/fc:Accessory/fc:Mask/fc:
Wear",
                            "type": "xs:boolean"
                        },
                        {
                            "xpath":
"//tt:VideoAnalytics/tt:Frame/tt:Object/tt:Appearance/tt:HumanFace/fc:Accessory/fc:Hat/fc:W
ear",
                            "type": "xs:boolean"
                        },
                        {
                            "xpath":
"//tt:VideoAnalytics/tt:Frame/tt:Object/tt:Appearance/tt:HumanBody/bd:Gender",
                            "type": "xs:string",
                            "enum": [
                                "Male",
                                "Female",
                                "Unknown"
                            ]
                        },
                        {
                            "xpath":
"//tt:VideoAnalytics/tt:Frame/tt:Object/tt:Appearance/tt:HumanBody/bd:Clothing/bd:Hat/bd:We
ar",
```

```
                            "type": "xs:boolean"
                        },
                        {
                            "xpath":
"//tt:VideoAnalytics/tt:Frame/tt:Object/tt:Appearance/tt:HumanBody/bd:Clothing/bd:Tops/bd:C
olor/tt:ColorCluster/tt:ColorString",
                            "type": "xs:string",
                            "enum": [
                                "Yellow",
                                "White",
                                "Red",
                                "Purple",
                                "Orange",
                                "Gray",
                                "Green",
                                "Blue",
                                "Black",
                                "Other"
                            ]
                        },
                        {
                            "xpath":
"//tt:VideoAnalytics/tt:Frame/tt:Object/tt:Appearance/tt:HumanBody/bd:Clothing/bd:Tops/bd:L
ength",
                            "type": "xs:string",
                            "enum": [
                                "Short",
                                "Long"
                            ]
                        },
                        {
                            "xpath":
"//tt:VideoAnalytics/tt:Frame/tt:Object/tt:Appearance/tt:HumanBody/bd:Clothing/bd:Bottoms/b
d:Color/tt:ColorCluster/tt:ColorString",
                            "type": "xs:string",
                            "enum": [
                                "Yellow",
                                "White",
                                "Red",
                                "Purple",
                                "Orange",
                                "Gray",
                                "Green",
                                "Blue",
                                "Black",
                                "Other"
                            ]
                        },
                        {
                            "xpath":
```

```
"//tt:VideoAnalytics/tt:Frame/tt:Object/tt:Appearance/tt:HumanBody/bd:Clothing/bd:Bottoms/bd:Length",
                            "type": "xs:string",
                            "enum": [
                                "Short",
                                "Long"
                            ]
                        },
                        {
                            "xpath":
"//tt:VideoAnalytics/tt:Frame/tt:Object/tt:Appearance/tt:HumanBody/bd:Belonging/bd:Bag/bd:Category",
                            "type": "xs:string",
                            "enum": [
                                "Bag"
                            ]
                        },
                        {
                            "xpath":
"//tt:VideoAnalytics/tt:Frame/tt:Object/tt:Appearance/tt:ProximateObjects/tt:ProximateObject/@Id",
                            "type": "xs:integer",
                            "minimum": 0,
                            "maximum": 2147483647
                        },
                        {
                            "xpath":
"//tt:VideoAnalytics/tt:Frame/tt:Object/tt:Appearance/tt:ProximateObjects/tt:ProximateObject/@Distance",
                            "type": "xs:float",
                            "minimum": 0.0,
                            "maximum": 1000.0
                        }
                    ]
                }
            ]
        }
    ]
}
```


4.3. SUNAPI Events

After connecting to the camera, the client can use the cgi call below to check all events are supported by the camera, including installed Apps. In the response, event notification schema is provided either in Text or JSON format based on request.

4.3.1. Getting the supported events and its notification schema

REQUEST

```
http://<Device IP>/stw-cgi/eventstatus.cgi?msubmenu=eventstatusschema&action=view
```

TEXT RESPONSE

```
HTTP/1.0 200 OK
Content-type: text/plain
<Body>
```

```
EventStatus.1.Name=AlarmInput
EventStatus.1.Schema.1.Name=AlarmInput.<int>
EventStatus.1.Schema.1.Value=<boolean>
EventStatus.2.Name=AlarmOutput
EventStatus.2.Schema.1.Name=AlarmOutput.<int>
EventStatus.2.Schema.1.Value=<boolean>
EventStatus.3.Name=MotionDetection
EventStatus.3.Schema.1.Name=Channel.<int>.MotionDetection
EventStatus.3.Schema.1.Value=<boolean>
EventStatus.3.Schema.2.Name=Channel.<int>.MotionDetection.RegionID.<int>
EventStatus.3.Schema.2.Value=<boolean>
EventStatus.3.Schema.3.Name=Channel.<int>.MotionDetection.RegionID.<int>.Level
EventStatus.3.Schema.3.Value=<int>
EventStatus.4.Name=Tampering
EventStatus.4.Schema.1.Name=Channel.<int>.Tampering
EventStatus.4.Schema.1.Value=<boolean>
EventStatus.5.Name=AudioDetection
EventStatus.5.Schema.1.Name=Channel.<int>.AudioDetection
EventStatus.5.Schema.1.Value=<boolean>
EventStatus.6.Name=DefocusDetection
EventStatus.6.Schema.1.Name=Channel.<int>.DefocusDetection
EventStatus.6.Schema.1.Value=<boolean>
EventStatus.7.Name=AudioAnalytics
EventStatus.7.Schema.1.Name=Channel.<int>.AudioAnalytics.Scream
EventStatus.7.Schema.1.Value=<boolean>
EventStatus.7.Schema.2.Name=Channel.<int>.AudioAnalytics.Gunshot
EventStatus.7.Schema.2.Value=<boolean>
EventStatus.7.Schema.3.Name=Channel.<int>.AudioAnalytics.Explosion
EventStatus.7.Schema.3.Value=<boolean>
EventStatus.7.Schema.4.Name=Channel.<int>.AudioAnalytics.GlassBreak
EventStatus.7.Schema.4.Value=<boolean>
EventStatus.8.Name=SystemEvent
EventStatus.8.Schema.1.Name=SystemEvent.TimeChange
EventStatus.8.Schema.1.Value=<boolean>
EventStatus.8.Schema.2.Name=SystemEvent.PowerReboot
EventStatus.8.Schema.2.Value=<boolean>
EventStatus.8.Schema.3.Name=SystemEvent.FWUpdate
EventStatus.8.Schema.3.Value=<boolean>
```

```
EventStatus.8.Schema.4.Name=SystemEvent.FactoryReset
EventStatus.8.Schema.4.Value=<boolean>
EventStatus.8.Schema.5.Name=SystemEvent.ConfigurationBackup
EventStatus.8.Schema.5.Value=<boolean>
EventStatus.8.Schema.6.Name=SystemEvent.ConfigurationRestore
EventStatus.8.Schema.6.Value=<boolean>
EventStatus.8.Schema.7.Name=SystemEvent.ConfigChange
EventStatus.8.Schema.7.Value=<boolean>
EventStatus.8.Schema.8.Name=ChangedConfigURI
EventStatus.8.Schema.8.Value=<string>
EventStatus.8.Schema.9.Name=SystemEvent.SDFormat
EventStatus.8.Schema.9.Value=<boolean>
EventStatus.8.Schema.10.Name=SystemEvent.SDFail
EventStatus.8.Schema.10.Value=<boolean>
EventStatus.8.Schema.11.Name=SystemEvent.SDFull
EventStatus.8.Schema.11.Value=<boolean>
EventStatus.8.Schema.12.Name=SystemEvent.SDInsert
EventStatus.8.Schema.12.Value=<boolean>
EventStatus.8.Schema.13.Name=SystemEvent.SDRemove
EventStatus.8.Schema.13.Value=<boolean>
EventStatus.8.Schema.14.Name=SystemEvent.NASConnect
EventStatus.8.Schema.14.Value=<boolean>
EventStatus.8.Schema.15.Name=SystemEvent.NASDisconnect
EventStatus.8.Schema.15.Value=<boolean>
EventStatus.8.Schema.16.Name=SystemEvent.NASFail
EventStatus.8.Schema.16.Value=<boolean>
EventStatus.8.Schema.17.Name=SystemEvent.NASFull
EventStatus.8.Schema.17.Value=<boolean>
EventStatus.8.Schema.18.Name=SystemEvent.NASFormat
EventStatus.8.Schema.18.Value=<boolean>
EventStatus.9.Name=OpenSDK.WiseAI.LineCrossing ①
EventStatus.9.Schema.1.Name=Channel.<int>.OpenSDK.WiseAI.LineCrossing
EventStatus.9.Schema.1.Value=<boolean>
EventStatus.9.Schema.2.Name=Channel.<int>.OpenSDK.WiseAI.LineCrossing.<int>.VideoSourceToke
n
EventStatus.9.Schema.2.Value=<string>
EventStatus.9.Schema.3.Name=Channel.<int>.OpenSDK.WiseAI.LineCrossing.<int>.RuleName
EventStatus.9.Schema.3.Value=<string>
EventStatus.9.Schema.4.Name=Channel.<int>.OpenSDK.WiseAI.LineCrossing.<int>.State
EventStatus.9.Schema.4.Value=<boolean>
EventStatus.9.Schema.5.Name=Channel.<int>.OpenSDK.WiseAI.LineCrossing.<int>.ObjectId
EventStatus.9.Schema.5.Value=<string>
EventStatus.9.Schema.6.Name=Channel.<int>.OpenSDK.WiseAI.LineCrossing.<int>.Action
EventStatus.9.Schema.6.Value=<string>
EventStatus.10.Name=OpenSDK.WiseAI.IvaArea ②
EventStatus.10.Schema.1.Name=Channel.<int>.OpenSDK.WiseAI.IvaArea
EventStatus.10.Schema.1.Value=<boolean>
EventStatus.10.Schema.2.Name=Channel.<int>.OpenSDK.WiseAI.IvaArea.<int>.VideoSourceToken
EventStatus.10.Schema.2.Value=<string>
EventStatus.10.Schema.3.Name=Channel.<int>.OpenSDK.WiseAI.IvaArea.<int>.RuleName
```

```
EventStatus.10.Schema.3.Value=<string>
EventStatus.10.Schema.4.Name=Channel.<int>.OpenSDK.WiseAI.IvaArea.<int>.State
EventStatus.10.Schema.4.Value=<boolean>
EventStatus.10.Schema.5.Name=Channel.<int>.OpenSDK.WiseAI.IvaArea.<int>.ObjectId
EventStatus.10.Schema.5.Value=<string>
EventStatus.10.Schema.6.Name=Channel.<int>.OpenSDK.WiseAI.IvaArea.<int>.Action
EventStatus.10.Schema.6.Value=<string>
EventStatus.11.Name=OpenSDK.WiseAI.ObjectDetection ③
EventStatus.11.Schema.1.Name=Channel.<int>.OpenSDK.WiseAI.ObjectDetection
EventStatus.11.Schema.1.Value=<boolean>
EventStatus.11.Schema.2.Name=Channel.<int>.OpenSDK.WiseAI.ObjectDetection.<int>.VideoSource
Token
EventStatus.11.Schema.2.Value=<string>
EventStatus.11.Schema.3.Name=Channel.<int>.OpenSDK.WiseAI.ObjectDetection.<int>.RuleName
EventStatus.11.Schema.3.Value=<string>
EventStatus.11.Schema.4.Name=Channel.<int>.OpenSDK.WiseAI.ObjectDetection.<int>.State
EventStatus.11.Schema.4.Value=<boolean>
EventStatus.11.Schema.5.Name=Channel.<int>.OpenSDK.WiseAI.ObjectDetection.<int>.ClassTypes
EventStatus.11.Schema.5.Value=<string>
EventStatus.12.Name=OpenSDK.WiseAI.StoppedVehicleDetection ④
EventStatus.12.Schema.1.Name=Channel.<int>.OpenSDK.WiseAI.StoppedVehicleDetection
EventStatus.12.Schema.1.Value=<boolean>
EventStatus.12.Schema.2.Name=Channel.<int>.OpenSDK.WiseAI.StoppedVehicleDetection.<int>.Vid
eoSourceToken
EventStatus.12.Schema.2.Value=<string>
EventStatus.12.Schema.3.Name=Channel.<int>.OpenSDK.WiseAI.StoppedVehicleDetection.<int>.Rul
eName
EventStatus.12.Schema.3.Value=<string>
EventStatus.12.Schema.4.Name=Channel.<int>.OpenSDK.WiseAI.StoppedVehicleDetection.<int>.Sta
te
EventStatus.12.Schema.4.Value=<boolean>
EventStatus.12.Schema.5.Name=Channel.<int>.OpenSDK.WiseAI.StoppedVehicleDetection.<int>.Veh
icleTypes
EventStatus.12.Schema.5.Value=<string>
EventStatus.12.Schema.6.Name=Channel.<int>.OpenSDK.WiseAI.StoppedVehicleDetection.<int>.Obj
ectIDs
EventStatus.12.Schema.6.Value=<string>
EventStatus.13.Name=OpenSDK.WiseAI.TrafficJamDetection ⑤
EventStatus.13.Schema.1.Name=Channel.<int>.OpenSDK.WiseAI.TrafficJamDetection
EventStatus.13.Schema.1.Value=<boolean>
EventStatus.13.Schema.2.Name=Channel.<int>.OpenSDK.WiseAI.TrafficJamDetection.<int>.VideoSo
urceToken
EventStatus.13.Schema.2.Value=<string>
EventStatus.13.Schema.3.Name=Channel.<int>.OpenSDK.WiseAI.TrafficJamDetection.<int>.RuleNam
e
EventStatus.13.Schema.3.Value=<string>
EventStatus.13.Schema.4.Name=Channel.<int>.OpenSDK.WiseAI.TrafficJamDetection.<int>.State
EventStatus.13.Schema.4.Value=<boolean>
EventStatus.14.Name=OpenSDK.WiseAI.QueueHigh ⑥
EventStatus.14.Schema.1.Name=Channel.<int>.OpenSDK.WiseAI.QueueHigh
```

```
EventStatus.14.Schema.1.Value=<boolean>
EventStatus.14.Schema.2.Name=Channel.<int>.OpenSDK.WiseAI.QueueHigh.<int>.VideoSourceToken
EventStatus.14.Schema.2.Value=<string>
EventStatus.14.Schema.3.Name=Channel.<int>.OpenSDK.WiseAI.QueueHigh.<int>.RuleName
EventStatus.14.Schema.3.Value=<string>
EventStatus.14.Schema.4.Name=Channel.<int>.OpenSDK.WiseAI.QueueHigh.<int>.State
EventStatus.14.Schema.4.Value=<boolean>
EventStatus.15.Name=OpenSDK.WiseAI.QueueMedium ⑦
EventStatus.15.Schema.1.Name=Channel.<int>.OpenSDK.WiseAI.QueueMedium
EventStatus.15.Schema.1.Value=<boolean>
EventStatus.15.Schema.2.Name=Channel.<int>.OpenSDK.WiseAI.QueueMedium.<int>.VideoSourceToke
n
EventStatus.15.Schema.2.Value=<string>
EventStatus.15.Schema.3.Name=Channel.<int>.OpenSDK.WiseAI.QueueMedium.<int>.RuleName
EventStatus.15.Schema.3.Value=<string>
EventStatus.15.Schema.4.Name=Channel.<int>.OpenSDK.WiseAI.QueueMedium.<int>.State
EventStatus.15.Schema.4.Value=<boolean>
EventStatus.16.Name=OpenSDK.WiseAI.MaskDetection ⑧
EventStatus.16.Schema.1.Name=Channel.<int>.OpenSDK.WiseAI.MaskDetection
EventStatus.16.Schema.1.Value=<boolean>
EventStatus.16.Schema.2.Name=Channel.<int>.OpenSDK.WiseAI.MaskDetection.<int>.VideoSourceTo
ken
EventStatus.16.Schema.2.Value=<string>
EventStatus.16.Schema.3.Name=Channel.<int>.OpenSDK.WiseAI.MaskDetection.<int>.RuleName
EventStatus.16.Schema.3.Value=<string>
EventStatus.16.Schema.4.Name=Channel.<int>.OpenSDK.WiseAI.MaskDetection.<int>.State
EventStatus.16.Schema.4.Value=<boolean>
EventStatus.16.Schema.5.Name=Channel.<int>.OpenSDK.WiseAI.MaskDetection.<int>.ObjectId
EventStatus.16.Schema.5.Value=<int>
EventStatus.17.Name=OpenSDK.WiseAI.SocialDistancingViolation ⑨
EventStatus.17.Schema.1.Name=Channel.<int>.OpenSDK.WiseAI.SocialDistancingViolation
EventStatus.17.Schema.1.Value=<boolean>
EventStatus.17.Schema.2.Name=Channel.<int>.OpenSDK.WiseAI.SocialDistancingViolation.<int>.V
ideoSourceToken
EventStatus.17.Schema.2.Value=<string>
EventStatus.17.Schema.3.Name=Channel.<int>.OpenSDK.WiseAI.SocialDistancingViolation.<int>.R
uleName
EventStatus.17.Schema.3.Value=<string>
EventStatus.17.Schema.4.Name=Channel.<int>.OpenSDK.WiseAI.SocialDistancingViolation.<int>.S
tate
EventStatus.17.Schema.4.Value=<boolean>
EventStatus.17.Schema.5.Name=Channel.<int>.OpenSDK.WiseAI.SocialDistancingViolation.<int>.O
bjectId
EventStatus.17.Schema.5.Value=<string>
EventStatus.18.Name=OpenSDK.WiseAI.SlipAndFallDetection ⑩
EventStatus.18.Schema.1.Name=Channel.<int>.OpenSDK.WiseAI.SlipAndFallDetection
EventStatus.18.Schema.1.Value=<boolean>
EventStatus.18.Schema.2.Name=Channel.<int>.OpenSDK.WiseAI.SlipAndFallDetection.<int>.VideoS
ourceToken
EventStatus.18.Schema.2.Value=<string>
```

```
EventStatus.18.Schema.3.Name=Channel.<int>.OpenSDK.WiseAI.SlipAndFallDetection.<int>.RuleNa
me
EventStatus.18.Schema.3.Value=<string>
EventStatus.18.Schema.4.Name=Channel.<int>.OpenSDK.WiseAI.SlipAndFallDetection.<int>.State
EventStatus.18.Schema.4.Value=<boolean>
EventStatus.18.Schema.5.Name=Channel.<int>.OpenSDK.WiseAI.SlipAndFallDetection.<int>.Object
Id
EventStatus.18.Schema.5.Value=<int>
```

① : LineCrossing Event Schema in Text Response

② : IvaArea Event Schema in Text Response

③ : ObjectDetection schema in Text Response

④ : StoppedVehicleDetection schema in Text Response

⑤ : TrafficJamDetection schema in Text Response

⑥ : Queue Management event schema in Text Response

⑦ : Queue Management event schema in Text Response

⑧ : MaskDetection event schema in Text Response

⑨ : SocialDistancingViolation event schema in Text Response

⑩ : Slip and Fall detection event schema in Text Response.

JSON RESPONSE

```
HTTP/1.0 200 OK
Content-type: application/json
<Body>
```

```
{
    "type": "array",
    "items": [
        {
            "type": "object",
            "properties": {
                "Time": {
                    "type": "string"
                },
                "EventName": {
                    "enum": [
                        "AlarmInput",
                        "AlarmOutput"
                    ]
                },
                "Source": {
                    "type": "object",
                    "properties": {
```

```
                    "Channel": {
                        "type": "number"
                    },
                    "SourceID": {
                        "type": "number"
                    }
                }
            },
            "Data": {
                "type": "object",
                "properties": {
                    "State": {
                        "type": "boolean"
                    }
                }
            }
        }
    },
    {
        "type": "object",
        "properties": {
            "Time": {
                "type": "string"
            },
            "EventName": {
                "enum": [
                    "Tampering",
                    "AudioDetection",
                    "DefocusDetection"
                ]
            },
            "Source": {
                "type": "object",
                "properties": {
                    "Channel": {
                        "type": "number"
                    }
                }
            },
            "Data": {
                "type": "object",
                "properties": {
                    "State": {
                        "type": "boolean"
                    }
                }
            }
        }
    },
    {
```

```
            "type": "object",
            "properties": {
                "Time": {
                    "type": "string"
                },
                "EventName": {
                    "enum": [
                        "AudioAnalytics.Scream",
                        "AudioAnalytics.Gunshot",
                        "AudioAnalytics.Explosion",
                        "AudioAnalytics.GlassBreak"
                    ]
                },
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                    "type": "object",
                    "properties": {
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                            "type": "number"
                        }
                    }
                },
                "Data": {
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                    "properties": {
                        "State": {
                            "type": "boolean"
                        }
                    }
                }
            }
        },
        {
            "type": "object",
            "properties": {
                "Time": {
                    "type": "string"
                },
                "EventName": {
                    "enum": [
                        "MotionDetection"
                    ]
                },
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                    "properties": {
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                            "type": "number"
                        },
                        "ROIID": {
                            "type": "number"
```

```
                    }
                }
            },
            "Data": {
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                "properties": {
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                        "type": "boolean"
                    },
                    "Level": {
                        "type": "number"
                    }
                }
            }
        }
    },
    {
        "type": "object",
        "properties": {
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                "type": "string"
            },
            "EventName": {
                "enum": [
                    "SystemEvent.TimeChange",
                    "SystemEvent.PowerReboot",
                    "SystemEvent.FWUpdate",
                    "SystemEvent.FactoryReset",
                    "SystemEvent.ConfigurationBackup",
                    "SystemEvent.ConfigurationRestore",
                    "SystemEvent.ConfigChange",
                    "SystemEvent.SDFormat",
                    "SystemEvent.SDFail",
                    "SystemEvent.SDFull",
                    "SystemEvent.SDInsert",
                    "SystemEvent.SDRemove",
                    "SystemEvent.NASConnect",
                    "SystemEvent.NASDisconnect",
                    "SystemEvent.NASFail",
                    "SystemEvent.NASFull",
                    "SystemEvent.NASFormat"
                ]
            },
            "Source": {
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                "properties": {}
            },
            "Data": {
                "type": "object",
                "properties": {
```

```
                    "State": {
                        "type": "boolean"
                    }
                }
            }
        }
    },
    {
        "type": "object",
        "properties": {
            "Time": {
                "type": "string"
            },
            "EventName": {
                "enum": [
                    "ConfigChange"
                ]
            },
            "Source": {
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                "properties": {
                    "Channel": {
                        "type": "number"
                    },
                    "ChangedConfigURI": {
                        "type": "string"
                    }
                }
            },
            "Data": {
                "type": "object",
                "properties": {
                    "State": {
                        "type": "boolean"
                    }
                }
            }
        }
    },
    {
        "type": "object",
        "properties": {
            "Time": {
                "type": "string"
            },
            "EventName": {
                "enum": [
                    "OpenSDK.WiseAI.LineCrossing"  ①
                ]
            },
```

```
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                            "type": "number"
                        },
                        "AppName": {
                            "type": "string"
                        },
                        "AppEvent": {
                            "type": "string"
                        },
                        "AppID": {
                            "type": "string"
                        },
                        "Type": {
                            "enum": [
                                "Event"
                            ]
                        },
                        "VideoSourceToken": {
                            "type": "string"
                        },
                        "RuleName": {
                            "type": "string"
                        }
                    }
                },
                "Data": {
                    "type": "object",
                    "properties": {
                        "State": {
                            "type": "boolean"
                        },
                        "ObjectId": {
                            "type": "string"
                        },
                        "Action": {
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                        }
                    }
                }
            }
        },
        {
            "type": "object",
            "properties": {
                "Time": {
                    "type": "string"
                },
```

```
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                    "OpenSDK.WiseAI.IvaArea" ②
                ]
            },
            "Source": {
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                "properties": {
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                        "type": "number"
                    },
                    "AppName": {
                        "type": "string"
                    },
                    "AppEvent": {
                        "type": "string"
                    },
                    "AppID": {
                        "type": "string"
                    },
                    "Type": {
                        "enum": [
                            "Event"
                        ]
                    },
                    "VideoSourceToken": {
                        "type": "string"
                    },
                    "RuleName": {
                        "type": "string"
                    }
                }
            },
            "Data": {
                "type": "object",
                "properties": {
                    "State": {
                        "type": "boolean"
                    },
                    "ObjectId": {
                        "type": "string"
                    },
                    "Action": {
                        "type": "string"
                    }
                }
            }
        }
    },
    {
```

```
            "type": "object",
            "properties": {
                "Time": {
                    "type": "string"
                },
                "EventName": {
                    "enum": [
                        "OpenSDK.WiseAI.ObjectDetection" ③
                    ]
                },
                "Source": {
                    "type": "object",
                    "properties": {
                        "Channel": {
                            "type": "number"
                        },
                        "AppName": {
                            "type": "string"
                        },
                        "AppEvent": {
                            "type": "string"
                        },
                        "AppID": {
                            "type": "string"
                        },
                        "Type": {
                            "enum": [
                                "Event"
                            ]
                        },
                        "VideoSourceToken": {
                            "type": "string"
                        },
                        "RuleName": {
                            "type": "string"
                        }
                    }
                },
                "Data": {
                    "type": "object",
                    "properties": {
                        "State": {
                            "type": "boolean"
                        },
                        "ClassTypes": {
                            "type": "string"
                        }
                    }
                }
            }
```

```
        },
        {
            "type": "object",
            "properties": {
                "Time": {
                    "type": "string"
                },
                "EventName": {
                    "enum": [
                        "OpenSDK.WiseAI.ObjectCounting" ④
                    ]
                },
                "Source": {
                    "type": "object",
                    "properties": {
                        "Channel": {
                            "type": "number"
                        },
                        "AppName": {
                            "type": "string"
                        },
                        "AppEvent": {
                            "type": "string"
                        },
                        "AppID": {
                            "type": "string"
                        },
                        "Type": {
                            "enum": [
                                "Event"
                            ]
                        },
                        "VideoSourceToken": {
                            "type": "string"
                        },
                        "RuleName": {
                            "type": "string"
                        }
                    }
                },
                "Data": {
                    "type": "object",
                    "properties": {
                        "ReportType": {
                            "type": "string"
                        },
                        "ObjectType": {
                            "type": "string"
                        },
                        "Direction": {
```

```
                        "type": "string"
                    },
                    "Count": {
                        "type": "number"
                    }
                }
            }
        }
    },
    {
        "type": "object",
        "properties": {
            "Time": {
                "type": "string"
            },
            "EventName": {
                "enum": [
                    "OpenSDK.WiseAI.StoppedVehicleDetection" ⑤
                ]
            },
            "Source": {
                "type": "object",
                "properties": {
                    "Channel": {
                        "type": "number"
                    },
                    "AppName": {
                        "type": "string"
                    },
                    "AppEvent": {
                        "type": "string"
                    },
                    "AppID": {
                        "type": "string"
                    },
                    "Type": {
                        "enum": [
                            "Event"
                        ]
                    },
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                        "type": "string"
                    },
                    "RuleName": {
                        "type": "string"
                    }
                }
            },
            "Data": {
                "type": "object",
```

```
                "properties": {
                    "State": {
                        "type": "boolean"
                    },
                    "VehicleTypes": {
                        "type": "string"
                    },
                    "ObjectIDs": {
                        "type": "string"
                    }
                }
            }
        }
    },
    {
        "type": "object",
        "properties": {
            "Time": {
                "type": "string"
            },
            "EventName": {
                "enum": [
                    "OpenSDK.WiseAI.TrafficJamDetection" ⑥
                ]
            },
            "Source": {
                "type": "object",
                "properties": {
                    "Channel": {
                        "type": "number"
                    },
                    "AppName": {
                        "type": "string"
                    },
                    "AppEvent": {
                        "type": "string"
                    },
                    "AppID": {
                        "type": "string"
                    },
                    "Type": {
                        "enum": [
                            "Event"
                        ]
                    },
                    "VideoSourceToken": {
                        "type": "string"
                    },
                    "RuleName": {
                        "type": "string"
```

```
                    }
                }
            },
            "Data": {
                "type": "object",
                "properties": {
                    "State": {
                        "type": "boolean"
                    }
                }
            }
        }
    }
    ]
}
```

① LineCrossing Event Schema in JSON Response

② IvaArea Event Schema in JSON Response

③ ObjectDetection schema in JSON Response

④ ObjectCounting schema in JSON Response

⑤ StoppedVehicleDetection schema in JSON Response

⑥ TrafficJamDetection schema in JSON Response

4.3.1.1. Issue with Schema

In above example schema we can see that, though client can know what event and what fields are supported from the schema, it cannot know what values are supported in some of the key fields eg., **ClassTypes**

4.3.1.2. Enhancement To Schema

To address the above issue we plan to provide the supported values in the schema following below rule.

NOTE	Supported from App version 1.02.00 onwards

- If the value takes only one enum value **cenum** field (Custom Enum) is added to notify expected values.
- If the value takes list of enum values space separated or command separated **pattern** field is added.
  - For Comma seperated values pattern can be **"[^,]+"**
  - For Space separated values pattern can be **"[^]+"**

With this enhancement, schema response would look like,

REQUEST

```
http://<Device IP>/stw-cgi/eventstatus.cgi?msubmenu=eventstatusschema&action=view
```

JSON RESPONSE

```
HTTP/1.0 200 OK
Content-type: application/json
<Body>
```


```
{
    "type": "array",
    "items": [
        {
            "type": "object",
            "properties": {
                "Time": {
                    "type": "string"
                },
                "EventName": {
                    "enum": [
                        "AlarmInput",
                        "AlarmOutput"
                    ]
                },
                "Source": {
                    "type": "object",
                    "properties": {
                        "Channel": {
                            "type": "number"
                        },
                        "SourceID": {
                            "type": "number"
                        }
                    }
                },
                "Data": {
                    "type": "object",
                    "properties": {
                        "State": {
                            "type": "boolean"
                        }
                    }
                }
            }
        },
        {
            "type": "object",
            "properties": {
                "Time": {
                    "type": "string"
                },
                "EventName": {
```

```
                "enum": [
                    "Tampering",
                    "AudioDetection",
                    "DefocusDetection",
                    "ShockDetection"
                ]
            },
            "Source": {
                "type": "object",
                "properties": {
                    "Channel": {
                        "type": "number"
                    }
                }
            },
            "Data": {
                "type": "object",
                "properties": {
                    "State": {
                        "type": "boolean"
                    }
                }
            }
        }
    },
    {
        "type": "object",
        "properties": {
            "Time": {
                "type": "string"
            },
            "EventName": {
                "enum": [
                    "DigitalAutoTracking"
                ]
            },
            "Source": {
                "type": "object",
                "properties": {
                    "Channel": {
                        "type": "number"
                    },
                    "Profile": {
                        "type": "number"
                    }
                }
            },
            "Data": {
                "type": "object",
                "properties": {
```

```
                    "State": {
                        "type": "boolean"
                    }
                }
            }
        }
    },
    {
        "type": "object",
        "properties": {
            "Time": {
                "type": "string"
            },
            "EventName": {
                "enum": [
                    "AudioAnalytics.Scream",
                    "AudioAnalytics.Gunshot",
                    "AudioAnalytics.Explosion",
                    "AudioAnalytics.GlassBreak"
                ]
            },
            "Source": {
                "type": "object",
                "properties": {
                    "Channel": {
                        "type": "number"
                    }
                }
            },
            "Data": {
                "type": "object",
                "properties": {
                    "State": {
                        "type": "boolean"
                    }
                }
            }
        }
    },
    {
        "type": "object",
        "properties": {
            "Time": {
                "type": "string"
            },
            "EventName": {
                "enum": [
                    "MotionDetection"
                ]
            },
```

```
                "Source": {
                    "type": "object",
                    "properties": {
                        "Channel": {
                            "type": "number"
                        },
                        "ROIID": {
                            "type": "number"
                        }
                    }
                },
                "Data": {
                    "type": "object",
                    "properties": {
                        "State": {
                            "type": "boolean"
                        },
                        "Level": {
                            "type": "number"
                        }
                    }
                }
            }
        },
        {
            "type": "object",
            "properties": {
                "Time": {
                    "type": "string"
                },
                "EventName": {
                    "enum": [
                        "SystemEvent.TimeChange",
                        "SystemEvent.PowerReboot",
                        "SystemEvent.FWUpdate",
                        "SystemEvent.FactoryReset",
                        "SystemEvent.ConfigurationBackup",
                        "SystemEvent.ConfigurationRestore",
                        "SystemEvent.ConfigChange",
                        "SystemEvent.SDFormat",
                        "SystemEvent.SDFail",
                        "SystemEvent.SDFull",
                        "SystemEvent.SDInsert",
                        "SystemEvent.SDRemove",
                        "SystemEvent.NASConnect",
                        "SystemEvent.NASDisconnect",
                        "SystemEvent.NASFail",
                        "SystemEvent.NASFull",
                        "SystemEvent.NASFormat"
                    ]
```

```
                },
                "Source": {
                    "type": "object",
                    "properties": {}
                },
                "Data": {
                    "type": "object",
                    "properties": {
                        "State": {
                            "type": "boolean"
                        }
                    }
                }
            }
        },
        {
            "type": "object",
            "properties": {
                "Time": {
                    "type": "string"
                },
                "EventName": {
                    "enum": [
                        "ConfigChange"
                    ]
                },
                "Source": {
                    "type": "object",
                    "properties": {
                        "Channel": {
                            "type": "number"
                        },
                        "ChangedConfigURI": {
                            "type": "string"
                        }
                    }
                },
                "Data": {
                    "type": "object",
                    "properties": {
                        "State": {
                            "type": "boolean"
                        }
                    }
                }
            }
        },
        {
            "type": "object",
            "properties": {
```

```
                "Time": {
                    "type": "string"
                },
                "EventName": {
                    "enum": [
                        "OpenSDK.WiseAI.AppSettingChanged"
                    ]
                },
                "Source": {
                    "type": "object",
                    "properties": {
                        "Channel": {
                            "type": "number"
                        },
                        "AppName": {
                            "type": "string"
                        },
                        "AppEvent": {
                            "type": "string"
                        },
                        "AppID": {
                            "type": "string"
                        },
                        "Type": {
                            "enum": [
                                "Event"
                            ]
                        },
                        "RuleIndex": {
                            "type": "number"
                        },
                        "VideoSourceToken": {
                            "type": "string"
                        }
                    }
                },
                "Data": {
                    "type": "object",
                    "properties": {
                        "Path": {
                            "type": "string"
                        }
                    }
                }
            }
        },
        {
            "type": "object",
            "properties": {
                "Time": {
```

```
                "type": "string"
            },
            "EventName": {
                "enum": [
                    "OpenSDK.WiseAI.LineCrossing" ①
                ]
            },
            "Source": {
                "type": "object",
                "properties": {
                    "Channel": {
                        "type": "number"
                    },
                    "AppName": {
                        "type": "string"
                    },
                    "AppEvent": {
                        "type": "string"
                    },
                    "AppID": {
                        "type": "string"
                    },
                    "Type": {
                        "enum": [
                            "Event"
                        ]
                    },
                    "RuleIndex": {
                        "type": "number"
                    },
                    "VideoSourceToken": {
                        "type": "string"
                    },
                    "RuleName": {
                        "type": "string"
                    }
                }
            },
            "Data": {
                "type": "object",
                "properties": {
                    "State": {
                        "type": "boolean"
                    },
                    "ObjectId": {
                        "type": "string"
                    },
                    "Action": {
                        "type": "string",
                        "pattern": "[^ ]+",
```

```
                        "cenum": [
                            "Left",
                            "Right"
                        ]
                    }
                }
            }
        }
    },
    {
        "type": "object",
        "properties": {
            "Time": {
                "type": "string"
            },
            "EventName": {
                "enum": [
                    "OpenSDK.WiseAI.IvaArea" ②
                ]
            },
            "Source": {
                "type": "object",
                "properties": {
                    "Channel": {
                        "type": "number"
                    },
                    "AppName": {
                        "type": "string"
                    },
                    "AppEvent": {
                        "type": "string"
                    },
                    "AppID": {
                        "type": "string"
                    },
                    "Type": {
                        "enum": [
                            "Event"
                        ]
                    },
                    "RuleIndex": {
                        "type": "number"
                    },
                    "VideoSourceToken": {
                        "type": "string"
                    },
                    "RuleName": {
                        "type": "string"
                    }
                }
```

```
                },
                "Data": {
                    "type": "object",
                    "properties": {
                        "State": {
                            "type": "boolean"
                        },
                        "ObjectId": {
                            "type": "string"
                        },
                        "Action": {
                            "type": "string",
                            "pattern": "[^ ]+",
                            "cenum": [
                                "Enter",
                                "Exit",
                                "Appear/Disappear",
                                "Loitering",
                                "Intrusion"
                            ]
                        }
                    }
                }
            }
        },
        {
            "type": "object",
            "properties": {
                "Time": {
                    "type": "string"
                },
                "EventName": {
                    "enum": [
                        "OpenSDK.WiseAI.ObjectDetection" ③
                    ]
                },
                "Source": {
                    "type": "object",
                    "properties": {
                        "Channel": {
                            "type": "number"
                        },
                        "AppName": {
                            "type": "string"
                        },
                        "AppEvent": {
                            "type": "string"
                        },
                        "AppID": {
                            "type": "string"
```

```
                    },
                    "Type": {
                        "enum": [
                            "Event"
                        ]
                    },
                    "RuleIndex": {
                        "type": "number"
                    },
                    "VideoSourceToken": {
                        "type": "string"
                    },
                    "RuleName": {
                        "type": "string"
                    }
                }
            },
            "Data": {
                "type": "object",
                "properties": {
                    "State": {
                        "type": "boolean"
                    },
                    "ClassTypes": {
                        "type": "string",
                        "pattern": "[^ ]+",
                        "cenum": [
                            "Person",
                            "Vehicle",
                            "Face",
                            "LicensePlate",
                            "Vehicle.Bicycle",
                            "Vehicle.Car",
                            "Vehicle.Motorcycle",
                            "Vehicle.Bus",
                            "Vehicle.Truck"
                        ]
                    }
                }
            }
        }
    },
    {
        "type": "object",
        "properties": {
            "Time": {
                "type": "string"
            },
            "EventName": {
                "enum": [
```

```
                    "OpenSDK.WiseAI.SlipAndFallDetection" ④
                ]
            },
            "Source": {
                "type": "object",
                "properties": {
                    "Channel": {
                        "type": "number"
                    },
                    "AppName": {
                        "type": "string"
                    },
                    "AppEvent": {
                        "type": "string"
                    },
                    "AppID": {
                        "type": "string"
                    },
                    "Type": {
                        "enum": [
                            "Event"
                        ]
                    },
                    "RuleIndex": {
                        "type": "number"
                    },
                    "VideoSourceToken": {
                        "type": "string"
                    },
                    "RuleName": {
                        "type": "string"
                    }
                }
            },
            "Data": {
                "type": "object",
                "properties": {
                    "State": {
                        "type": "boolean"
                    },
                    "ObjectId": {
                        "type": "number"
                    }
                }
            }
        }
    },
    {
        "type": "object",
        "properties": {
```

```
            "Time": {
                "type": "string"
            },
            "EventName": {
                "enum": [
                    "OpenSDK.WiseAI.ObjectCounting" ⑤
                ]
            },
            "Source": {
                "type": "object",
                "properties": {
                    "Channel": {
                        "type": "number"
                    },
                    "AppName": {
                        "type": "string"
                    },
                    "AppEvent": {
                        "type": "string"
                    },
                    "AppID": {
                        "type": "string"
                    },
                    "Type": {
                        "enum": [
                            "Event"
                        ]
                    },
                    "RuleIndex": {
                        "type": "number"
                    },
                    "VideoSourceToken": {
                        "type": "string"
                    },
                    "RuleName": {
                        "type": "string"
                    }
                }
            },
            "Data": {
                "type": "object",
                "properties": {
                    "ReportType": {
                        "type": "string",
                        "cenum": [
                            "Punctual",
                            "Summary"
                        ]
                    },
                    "ObjectType": {
```

```
                        "type": "string",
                        "cenum": [
                            "Person",
                            "Vehicle"
                        ]
                    },
                    "Direction": {
                        "type": "string",
                        "cenum": [
                            "IN",
                            "OUT"
                        ]
                    },
                    "Count": {
                        "type": "number"
                    }
                }
            }
        }
    },
    {
        "type": "object",
        "properties": {
            "Time": {
                "type": "string"
            },
            "EventName": {
                "enum": [
                    "OpenSDK.WiseAI.QueueHigh" ⑥
                ]
            },
            "Source": {
                "type": "object",
                "properties": {
                    "Channel": {
                        "type": "number"
                    },
                    "AppName": {
                        "type": "string"
                    },
                    "AppEvent": {
                        "type": "string"
                    },
                    "AppID": {
                        "type": "string"
                    },
                    "Type": {
                        "enum": [
                            "Event"
                        ]
```

```
                    },
                    "RuleIndex": {
                        "type": "number"
                    },
                    "VideoSourceToken": {
                        "type": "string"
                    },
                    "RuleName": {
                        "type": "string"
                    }
                }
            },
            "Data": {
                "type": "object",
                "properties": {
                    "State": {
                        "type": "boolean"
                    }
                }
            }
        }
    },
    {
        "type": "object",
        "properties": {
            "Time": {
                "type": "string"
            },
            "EventName": {
                "enum": [
                    "OpenSDK.WiseAI.QueueMedium" ⑦
                ]
            },
            "Source": {
                "type": "object",
                "properties": {
                    "Channel": {
                        "type": "number"
                    },
                    "AppName": {
                        "type": "string"
                    },
                    "AppEvent": {
                        "type": "string"
                    },
                    "AppID": {
                        "type": "string"
                    },
                    "Type": {
                        "enum": [
```

```
                            "Event"
                        ]
                    },
                    "RuleIndex": {
                        "type": "number"
                    },
                    "VideoSourceToken": {
                        "type": "string"
                    },
                    "RuleName": {
                        "type": "string"
                    }
                }
            },
            "Data": {
                "type": "object",
                "properties": {
                    "State": {
                        "type": "boolean"
                    }
                }
            }
        }
    },
    {
        "type": "object",
        "properties": {
            "Time": {
                "type": "string"
            },
            "EventName": {
                "enum": [
                    "OpenSDK.WiseAI.QueueCountChanged" ⑧
                ]
            },
            "Source": {
                "type": "object",
                "properties": {
                    "Channel": {
                        "type": "number"
                    },
                    "AppName": {
                        "type": "string"
                    },
                    "AppEvent": {
                        "type": "string"
                    },
                    "AppID": {
                        "type": "string"
                    },
```

```
                    "Type": {
                        "enum": [
                            "Event"
                        ]
                    },
                    "RuleIndex": {
                        "type": "number"
                    },
                    "VideoSourceToken": {
                        "type": "string"
                    },
                    "RuleName": {
                        "type": "string"
                    }
                }
            },
            "Data": {
                "type": "object",
                "properties": {
                    "Count": {
                        "type": "number"
                    }
                }
            }
        }
    },
    {
        "type": "object",
        "properties": {
            "Time": {
                "type": "string"
            },
            "EventName": {
                "enum": [
                    "OpenSDK.WiseAI.MaskDetection" ⑨
                ]
            },
            "Source": {
                "type": "object",
                "properties": {
                    "Channel": {
                        "type": "number"
                    },
                    "AppName": {
                        "type": "string"
                    },
                    "AppEvent": {
                        "type": "string"
                    },
                    "AppID": {
```

```
                        "type": "string"
                    },
                    "Type": {
                        "enum": [
                            "Event"
                        ]
                    },
                    "RuleIndex": {
                        "type": "number"
                    },
                    "VideoSourceToken": {
                        "type": "string"
                    },
                    "RuleName": {
                        "type": "string"
                    }
                }
            },
            "Data": {
                "type": "object",
                "properties": {
                    "State": {
                        "type": "boolean"
                    },
                    "ObjectId": {
                        "type": "number"
                    }
                }
            }
        }
    },
    {
        "type": "object",
        "properties": {
            "Time": {
                "type": "string"
            },
            "EventName": {
                "enum": [
                    "OpenSDK.WiseAI.SocialDistancingViolation" ⑩
                ]
            },
            "Source": {
                "type": "object",
                "properties": {
                    "Channel": {
                        "type": "number"
                    },
                    "AppName": {
                        "type": "string"
```

```
                    },
                    "AppEvent": {
                        "type": "string"
                    },
                    "AppID": {
                        "type": "string"
                    },
                    "Type": {
                        "enum": [
                            "Event"
                        ]
                    },
                    "RuleIndex": {
                        "type": "number"
                    },
                    "VideoSourceToken": {
                        "type": "string"
                    },
                    "RuleName": {
                        "type": "string"
                    }
                }
            },
            "Data": {
                "type": "object",
                "properties": {
                    "State": {
                        "type": "boolean"
                    },
                    "ObjectId": {
                        "type": "string"
                    }
                }
            }
        }
    },
    {
        "type": "object",
        "properties": {
            "Time": {
                "type": "string"
            },
            "EventName": {
                "enum": [
                    "MQTTSubscription"
                ]
            },
            "Source": {
                "type": "object",
                "properties": {
```

```
                    "Index": {
                        "type": "number"
                    }
                }
            },
            "Data": {
                "type": "object",
                "properties": {
                    "State": {
                        "type": "boolean"
                    }
                }
            }
        }
    },
    {
        "type": "object",
        "properties": {
            "Time": {
                "type": "string"
            },
            "EventName": {
                "enum": [
                    "OpenSDKAppStatus"
                ]
            },
            "Source": {
                "type": "object",
                "properties": {
                    "AppID": {
                        "type": "string"
                    }
                }
            },
            "Data": {
                "type": "object",
                "properties": {
                    "Status": {
                        "enum": [
                            "Installing",
                            "Inactive",
                            "Active",
                            "Uninstalling",
                            "Removed",
                            "InstallationFailed"
                        ]
                    },
                    "Description": {
                        "type": "string"
                    }
```

```
                    }
                }
            }
        }
    ]
}
```

① : LineCross Event Schema

② : IvArea Event Schema

③ : ObjectDetection Event Schema

④ : SlipAndFallDetection Event Schema

⑤ : Object Counting Event Schema

⑥ : QueueHigh Event Schema

⑦ : QueueMedium Event Schema

⑧ : QueueCountChanged Event Schema

⑨ : MaskDetection Event Schema

⑩ : SocialDistancingViolation Event Schema

4.3.2. Event Status Response

Eventstatus response format for the app generated event is shown below depending on whether SchemaBased request is made or not. When SchemaBased eventstatus request is made, more information regarding the event can be received in addition to the basic event notification (Example like which area or line triggered the event). Therefore, It is recommended to use SchemaBased requests that can receive all information rather than normal data, which is abbreviated information. For more details on getting event status, refer to **5.1. Event Status** of the SUNAPI event document.

Table 1. TEXT RESPONSE FORMAT (NORMAL)

Event Name	EventStatus Response
ObjectDetection	`Channel.0.OpenSDK.WiseAI.ObjectDetection=False`
IvaArea	`Channel.0.OpenSDK.WiseAI.IvaArea=True`
LineCrossing	`Channel.0.OpenSDK.WiseAI.LineCrossing=True`
StoppedVehicleDetection	`Channel.0.OpenSDK.WiseAI.StoppedVehicleDetection=True`

Event Name	EventStatus Response
TrafficJamDetection	`Channel.0.OpenSDK.WiseAI.TrafficJamDetection=True`
SlipAndFallDetection	`Channel.0.OpenSDK.WiseAI.SlipAndFallDetection=False`
MaskDetection	`Channel.0.OpenSDK.WiseAI.MaskDetection=False` `Channel.0.OpenSDK.WiseAI.MaskDetection.1=False`
SocialDistancingViolation	`Channel.0.OpenSDK.WiseAI.SocialDistancingViolation=False` `Channel.0.OpenSDK.WiseAI.SocialDistancingViolation.1=False`

QueueHigh	`Channel.0.OpenSDK.WiseAI.QueueHigh=False`
	`Channel.0.OpenSDK.WiseAI.QueueHigh.1=False`
	`Channel.0.OpenSDK.WiseAI.QueueHigh.2=False`

QueueMedium	`Channel.0.OpenSDK.WiseAI.QueueMedium=False`
	`Channel.0.OpenSDK.WiseAI.QueueMedium.1=False`
	`Channel.0.OpenSDK.WiseAI.QueueMedium.2=False`

Table 2. JSON RESPONSE FORMAT (NORMAL)

Event Name	EventStatus Response

ObjectDetection	{
	"ChannelEvent": [
	{
	"Channel": 0,
	"OpenSDK":{
	"WiseAI":{
	"ObjectDetection" : true
	}
	}
	}
	]
	}

Event Name	EventStatus Response

IvaArea	<pre>{
	"ChannelEvent": [
	{
	"Channel": 0,
	"OpenSDK":{
	"WiseAI":{
	"IvaArea" : false
	}
	}
	}
	]
	}</pre>

LineCrossing	<pre>{
	"ChannelEvent": [
	{
	"Channel": 0,
	"OpenSDK":{
	"WiseAI":{
	"LineCrossing" : true
	}
	}
	}
	]
	}</pre>

StoppedVehicleDetection	<pre>{
	"ChannelEvent": [
	{
	"Channel": 0,
	"OpenSDK":{
	"WiseAI":{
	"StoppedVehicleDetection" : false
	}
	}
	}
	]
	}</pre>

Event Name	EventStatus Response

TrafficJamDetection	<pre>{
	"ChannelEvent": [
	{
	"Channel": 0,
	"OpenSDK":{
	"WiseAI":{
	"TrafficJamDetection" : false
	}
	}
	}
	]
	}</pre>

SlipAndFallDetection	<pre>{
	"ChannelEvent": [
	{
	"Channel": 0,
	"OpenSDK":{
	"WiseAI":{
	"SlipAndFallDetection": false,
	"SlipAndFallDetectionRules": {
	"1": false
	}
	}
	}
	}
	]
	}</pre>

Event Name	EventStatus Response

SocialDistancingViolation	<pre>{
	    "ChannelEvent": [
	        {
	            "Channel": 0,
	            "OpenSDK":{
	                "WiseAI":{
	                    "SocialDistancingViolation": false,
	                    "SocialDistancingViolationRules": {
	                        "1": false
	                    }
	                }
	            }
	        }
	    ]
	}</pre>

MaskDetection	<pre>{
	    "ChannelEvent": [
	        {
	            "Channel": 0,
	            "OpenSDK":{
	                "WiseAI":{
	                    "MaskDetection": false,
	                    "MaskDetectionRules": {
	                        "1": false
	                    },
	                }
	            }
	        }
	    ]
	}</pre>

Event Name	EventStatus Response

Queue Management	{
	"ChannelEvent": [
	{
	"Channel": 0,
	"OpenSDK":{
	"WiseAI":{
	"QueueHigh": false,
	"QueueHighRules": {
	"1": false,
	"2": false
	},
	"QueueMedium": false,
	"QueueMediumRules": {
	"1": false,
	"2": false
	},
	}
	}
	}
	]
	}

Table 3. TEXT RESPONSE FORMAT (SCHEMA BASED)

Event Name	EventStatus Response
ObjectDetection	Channel.0.OpenSDK.WiseAI.ObjectDetection=True Channel.0.OpenSDK.WiseAI.ObjectDetection.1.VideoSourceToken=Token1 Channel.0.OpenSDK.WiseAI.ObjectDetection.1.RuleName=RuleName1 Channel.0.OpenSDK.WiseAI.ObjectDetection.1.State=True Channel.0.OpenSDK.WiseAI.ObjectDetection.1.ClassType=PersonVehicle

Event Name	EventStatus Response
IvaArea	Channel.0.OpenSDK.WiseAI.IvaArea=True Channel.0.OpenSDK.WiseAI.IvaArea.1.VideoSourceToken=VideoSourceToken-0 Channel.0.OpenSDK.WiseAI.IvaArea.1.RuleName=Rule1 Channel.0.OpenSDK.WiseAI.IvaArea.1.State=True Channel.0.OpenSDK.WiseAI.IvaArea.1.ObjectId=10 Channel.0.OpenSDK.WiseAI.IvaArea.1.Action=Intrusion Channel.0.OpenSDK.WiseAI.IvaArea.2.VideoSourceToken=VideoSourceToken-0 Channel.0.OpenSDK.WiseAI.IvaArea.2.RuleName=Rule2 Channel.0.OpenSDK.WiseAI.IvaArea.2.State=True Channel.0.OpenSDK.WiseAI.IvaArea.2.ObjectId=12 Channel.0.OpenSDK.WiseAI.IvaArea.2.Action=Enter
LineCrossing	Channel.0.OpenSDK.WiseAI.LineCrossing=True Channel.0.OpenSDK.WiseAI.LineCrossing.1.VideoSourceToken=VideoSourceToken-0 Channel.0.OpenSDK.WiseAI.LineCrossing.1.RuleName=RuleName1 Channel.0.OpenSDK.WiseAI.LineCrossing.1.State=True Channel.0.OpenSDK.WiseAI.LineCrossing.1.ObjectId=13 Channel.0.OpenSDK.WiseAI.LineCrossing.1.Action=Right
StoppedVehicleDetection	Channel.0.OpenSDK.WiseAI.StoppedVehicleDetection=True Channel.0.OpenSDK.WiseAI.StoppedVehicleDetection.1.VideoSourceToken=VideoSourceToken-0 Channel.0.OpenSDK.WiseAI.StoppedVehicleDetection.1.RuleName=rulename Channel.0.OpenSDK.WiseAI.StoppedVehicleDetection.1.State=true Channel.0.OpenSDK.WiseAI.StoppedVehicleDetection.1.VehicleTypes=Car Bus Truck Motorcycle Bicycle Channel.0.OpenSDK.WiseAI.StoppedVehicleDetection.1.ObjectIDs=258 260 261 278 280
TrafficJamDetection	Channel.0.OpenSDK.WiseAI.TrafficJamDetection=True Channel.0.OpenSDK.WiseAI.TrafficJamDetection.1.VideoSourceToken=VideoSourceToken-0 Channel.0.OpenSDK.WiseAI.TrafficJamDetection.1.RuleName=rulename Channel.0.OpenSDK.WiseAI.TrafficJamDetection.1.State=True

Event Name	EventStatus Response
SocialDistancingViolation	Channel.0.OpenSDK.WiseAI.SocialDistancingViolation=False Channel.0.OpenSDK.WiseAI.SocialDistancingViolation.1.VideoSourceToken=VideoSourceToken-0 Channel.0.OpenSDK.WiseAI.SocialDistancingViolation.1.RuleName=SocialDistanceViolationRule-1 Channel.0.OpenSDK.WiseAI.SocialDistancingViolation.1.State=False Channel.0.OpenSDK.WiseAI.SocialDistancingViolation.1.ObjectId=
MaskDetection	Channel.0.OpenSDK.WiseAI.MaskDetection=False Channel.0.OpenSDK.WiseAI.MaskDetection.1.VideoSourceToken=VideoSourceToken-0 Channel.0.OpenSDK.WiseAI.MaskDetection.1.RuleName=MaskDetectionRule1 Channel.0.OpenSDK.WiseAI.MaskDetection.1.State=False Channel.0.OpenSDK.WiseAI.MaskDetection.1.ObjectId=
QueueHigh	Channel.0.OpenSDK.WiseAI.QueueHigh=False Channel.0.OpenSDK.WiseAI.QueueHigh.1.VideoSourceToken=VideoSourceToken-0 Channel.0.OpenSDK.WiseAI.QueueHigh.1.RuleName=name1 Channel.0.OpenSDK.WiseAI.QueueHigh.1.State=False Channel.0.OpenSDK.WiseAI.QueueHigh.2.VideoSourceToken=VideoSourceToken-0 Channel.0.OpenSDK.WiseAI.QueueHigh.2.RuleName=name2 Channel.0.OpenSDK.WiseAI.QueueHigh.2.State=False
QueueMedium	Channel.0.OpenSDK.WiseAI.QueueMedium=False Channel.0.OpenSDK.WiseAI.QueueMedium.1.VideoSourceToken=VideoSourceToken-0 Channel.0.OpenSDK.WiseAI.QueueMedium.1.RuleName=name1 Channel.0.OpenSDK.WiseAI.QueueMedium.1.State=False Channel.0.OpenSDK.WiseAI.QueueMedium.2.VideoSourceToken=VideoSourceToken-0 Channel.0.OpenSDK.WiseAI.QueueMedium.2.RuleName=name2 Channel.0.OpenSDK.WiseAI.QueueMedium.2.State=False

Event Name	EventStatus Response
SlipAndFallDetection	Channel.0.OpenSDK.WiseAI.SlipAndFallDetection=True Channel.0.OpenSDK.WiseAI.SlipAndFallDetection.1.VideoSourceToken=VideoSourceToken-0 Channel.0.OpenSDK.WiseAI.SlipAndFallDetection.1.RuleName=name1 Channel.0.OpenSDK.WiseAI.SlipAndFallDetection.1.State=True Channel.0.OpenSDK.WiseAI.SlipAndFallDetection.1.ObjectId=133

Table 4. JSON RESPONSE FORMAT (SCHEMA BASED)

Event Name	EventStatus Response

ObjectDetection	{
	"EventName": "OpenSDK.WiseAI.ObjectDetection",
	"Time": "2021-10-27T07:36:14.509+00:00",
	"Source": {
	"Channel": 0,
	"AppName": "WiseAI",
	"AppEvent": "ObjectDetection",
	"AppID": "WiseAI",
	"Type": "Event",
	"VideoSourceToken": "VideoSourceToken-0",
	"RuleName": "Rule1",
	},
	"Data": {
	"ClassTypes": "Person Vehicle",
	"State": true,
	}
	}

Event Name	EventStatus Response

IvaArea	{
	"EventName": "OpenSDK.WiseAI.IvaArea",
	"Time": "2021-10-27T07:36:14.509+00:00",
	"Source": {
	"Channel": 0,
	"AppName": "WiseAI",
	"AppEvent": "IvaArea",
	"AppID": "WiseAI",
	"Type": "Event",
	"VideoSourceToken": "VideoSourceToken-0",
	"RuleName": "Rule1",
	},
	"Data": {
	"State": true,
	"ObjectId": "10",
	"Action": "Enter"
	}
	}

LineCrossing	{
	"EventName": "OpenSDK.WiseAI.LineCrossing",
	"Time": "2021-10-27T07:36:14.509+00:00",
	"Source": {
	"Channel": 0,
	"AppName": "WiseAI",
	"AppID": "WiseAI",
	"AppEvent": "LineCrossing",
	"Type": "Event",
	"VideoSourceToken": "VideoSourceToken-0",
	"RuleName": "RuleName1",
	},
	"Data": {
	"State": true,
	"ObjectId": "11",
	"Action": "Right"
	}
	}

Event Name	EventStatus Response

StoppedVehicleDetection	{
	"EventName": "OpenSDK.WiseAI.StoppedVehicleDetection",
	"Time": "2021-10-27T07:36:14.509+00:00",
	"Source": {
	"Channel": 0,
	"AppName": "WiseAI",
	"AppID": "WiseAI",
	"AppEvent": "StoppedVehicleDetection",
	"Type": "Event",
	"VideoSourceToken": "VideoSourceToken-0",
	"RuleName": "rulename",
	},
	"Data": {
	"State": true,
	"VehicleTypes": "Car Bus Truck Motorcycle Bicycle",
	"ObjectIDs": "258 260 261 278 280"
	}
	}

TrafficJamDetection	{
	"EventName": "OpenSDK.WiseAI.TrafficJamDetection",
	"Time": "2021-10-27T07:36:14.509+00:00",
	"Source": {
	"Channel": 0,
	"AppName": "WiseAI",
	"AppID": "WiseAI",
	"AppEvent": "TrafficJamDetection",
	"Type": "Event",
	"VideoSourceToken": "VideoSourceToken-0",
	"RuleName": "rulename",
	},
	"Data": {
	"State": true
	}
	}

Event Name	EventStatus Response
ObjectCounting	**NOTE** The ObjectCounting event is generated only in JSON schema format, this event occurs only when the Count value is changed. "Count" data is counted over 1 second, not cumulative value. Currently only "Punctual" ReportType is supported, but it may be extended to other ReportTypes such as "Summary" in the future. `{ "EventName": "OpenSDK.WiseAI.ObjectCounting", "Time": "2021-10-27T07:36:14.509+00:00", "Source": { "Channel": 0, "AppName": "WiseAI", "AppID": "WiseAI", "AppEvent": "ObjectCounting", "Type": "Event", "VideoSourceToken": "VideoSourceToken-0", "RuleName": "rulename" }, "Data": { "ReportType": "Punctual", "ObjectType": "Vehicle", "Direction": "IN", "Count": 1 } }`

Event Name	EventStatus Response

SlipAndFallDetection	{
	"EventName": "OpenSDK.WiseAI.SlipAndFallDetection",
	"Time": "2023-03-24T03:51:16.006+00:00",
	"Source": {
	"Channel": 0,
	"AppName": "WiseAI",
	"AppID": "WiseAI",
	"AppEvent": "SlipAndFallDetection",
	"Type": "Event",
	"RuleIndex": 1,
	"VideoSourceToken": "VideoSourceToken-0",
	"RuleName": "name1"
	},
	"Data": {
	"State": false,
	"ObjectId": 0
	}
	}

QueueHigh	{
	"EventName": "OpenSDK.WiseAI.QueueHigh",
	"Time": "2023-03-24T03:39:51.223+00:00",
	"Source": {
	"Channel": 0,
	"AppName": "WiseAI",
	"AppID": "WiseAI",
	"AppEvent": "QueueHigh",
	"Type": "Event",
	"RuleIndex": 1,
	"VideoSourceToken": "VideoSourceToken-0",
	"RuleName": "name1"
	},
	"Data": {
	"State": false
	}
	}

Event Name	EventStatus Response

QueueMedium	{
	"EventName": "OpenSDK.WiseAI.QueueMedium",
	"Time": "2023-03-24T03:39:51.223+00:00",
	"Source": {
	"Channel": 0,
	"AppName": "WiseAI",
	"AppID": "WiseAI",
	"AppEvent": "QueueMedium",
	"Type": "Event",
	"RuleIndex": 1,
	"VideoSourceToken": "VideoSourceToken-0",
	"RuleName": "name1"
	},
	"Data": {
	"State": false
	}
	}

SocialDistancingViolation	{
	"EventName": "
	OpenSDK.WiseAI.SocialDistancingViolation",
	"Time": "2023-03-24T03:39:51.224+00:00",
	"Source": {
	"Channel": 0,
	"AppName": "WiseAI",
	"AppID": "WiseAI",
	"AppEvent": "SocialDistancingViolation",
	"Type": "Event",
	"RuleIndex": 1,
	"VideoSourceToken": "VideoSourceToken-0",
	"RuleName": "SocialDistanceViolationRule-1"
	},
	"Data": {
	"State": false,
	"ObjectId": ""
	}
	}

Event Name	EventStatus Response

MaskDetection	{
	"EventName": "OpenSDK.WiseAI.MaskDetection",
	"Time": "2023-03-24T03:39:51.224+00:00",
	"Source": {
	"Channel": 0,
	"AppName": "WiseAI",
	"AppID": "WiseAI",
	"AppEvent": "MaskDetection",
	"Type": "Event",
	"RuleIndex": 1,
	"VideoSourceToken": "VideoSourceToken-0",
	"RuleName": "MaskDetectionRule1"
	},
	"Data": {
	"State": false,
	"ObjectId": 0
	}
	}

4.3.3. ONVIF

When connecting to camera through ONVIF, events supported in Apps are listed as part of ONVIF EventService **GetEventProperties** Command Response. Event topic in ONVIF is structured like below,

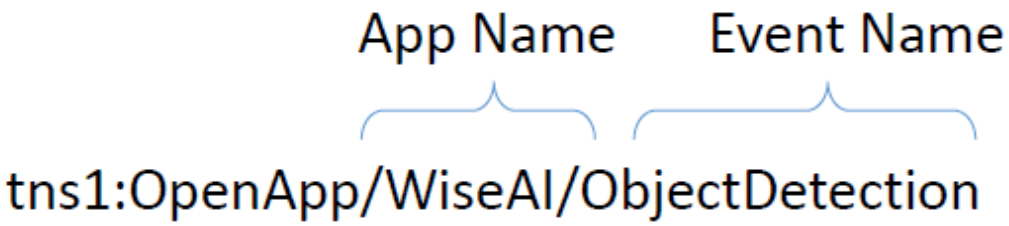


Table 5. Supported EventTopics and Schema

Event	Topic & Schema

ObjectDetection	**Topic:** tns1:OpenApp/WiseAI/ObjectDetection
	
	`<?xml version="1.0" encoding="UTF-8"?>`
	`<ObjectDetection wstop:topic="true" xmlns:tt="http://www.onvif.org/ver10/schema">`
	`  <tt:MessageDescription IsProperty="true">`
	`  <tt:Source>`
	`  <tt:SimpleItemDescription Name="VideoSourceToken" Type="tt:ReferenceToken"/>`
	`  <tt:SimpleItemDescription Name="RuleName" Type="xsd:string"/>`
	`  </tt:Source>`
	`  <tt:Data>`
	`  <tt:SimpleItemDescription Name="ClassTypes" Type="tt:StringList"/>`
	`  <tt:SimpleItemDescription Name="State" Type="xsd:boolean"/>`
	`  </tt:Data>`
	`  </tt:MessageDescription>`
	`</ObjectDetection>`

IvaArea	**Topic:** tns1:OpenApp/WiseAI/IvaArea
	
	`<?xml version="1.0" encoding="UTF-8"?>`
	`<IvaArea wstop:topic="true">`
	`  <tt:MessageDescription>`
	`  <tt:Source>`
	`  <tt:SimpleItemDescription Name="VideoSourceToken" Type="tt:ReferenceToken"/>`
	`  <tt:SimpleItemDescription Name="RuleName" Type="xsd:string"/>`
	`  </tt:Source>`
	`  <tt:Data>`
	`  <tt:SimpleItemDescription Name="State" Type="xsd:boolean"/>`
	`  <tt:SimpleItemDescription Name="ObjectId" Type="tt:StringList"/>`
	`  <tt:SimpleItemDescription Name="Action" Type="tt:StringList"/>`
	`  </tt:Data>`
	`  </tt:MessageDescription>`
	`</IvaArea>`

Event	Topic & Schema

LineCrossing	**Topic:** tns1:OpenApp/WiseAI/LineCrossing
	
	`<?xml version="1.0" encoding="UTF-8"?>`
	`  <LineCrossing wstop:topic="true">`
	`  <tt:MessageDescription>`
	`  <tt:Source>`
	`  <tt:SimpleItemDescription Name="VideoSourceToken" Type="tt:ReferenceToken"/>`
	`  <tt:SimpleItemDescription Name="RuleName" Type="xsd:string"/>`
	`  </tt:Source>`
	`  <tt:Data>`
	`  <tt:SimpleItemDescription Name="State" Type="xsd:boolean"/>`
	`  <tt:SimpleItemDescription Name="ObjectId" Type="tt:StringList"/>`
	`  <tt:SimpleItemDescription Name="Action" Type="tt:StringList"/>`
	`  </tt:Data>`
	`  </tt:MessageDescription>`
	`  </LineCrossing>`

StoppedVehicleDetection	**Topic:** tns1:OpenApp/WiseAI/StoppedVehicleDetection
	
	`<StoppedVehicleDetection wstop:topic="true">`
	`  <tt:MessageDescription>`
	`  <tt:Source>`
	`  <tt:SimpleItemDescription Name="VideoSourceToken" Type="tt:ReferenceToken"/>`
	`  <tt:SimpleItemDescription Name="RuleName" Type="xsd:string"/>`
	`  </tt:Source>`
	`  <tt:Data>`
	`  <tt:SimpleItemDescription Name="State" Type="xsd:boolean"/>`
	`  <tt:SimpleItemDescription Name="VehicleTypes" Type="tt:StringList"/>`
	`  <tt:SimpleItemDescription Name="ObjectIDs" Type="tt:StringList"/>`
	`  </tt:Data>`
	`  </tt:MessageDescription>`
	`</StoppedVehicleDetection>`

Event	Topic & Schema

TrafficJamDetection	**Topic:** tns1:OpenApp/WiseAI/TrafficJamDetection
	
	`<?xml version="1.0" encoding="UTF-8"?>`
	`<TrafficJamDetection wstop:topic="true">`
	`<tt:MessageDescription>`
	`<tt:Source>`
	`<tt:SimpleItemDescription Name="VideoSourceToken" Type="tt:ReferenceToken"/>`
	`<tt:SimpleItemDescription Name="RuleName" Type="xsd:string"/>`
	`</tt:Source>`
	`<tt:Data>`
	`<tt:SimpleItemDescription Name="State" Type="xsd:boolean"/>`
	`</tt:Data>`
	`</tt:MessageDescription>`
	`</TrafficJamDetection>`

ObjectCounting	**Topic:** tns1:OpenApp/WiseAI/ObjectCounting
	
	`<?xml version="1.0" encoding="UTF-8"?>`
	`<ObjectCounting wstop:topic="true">`
	`<tt:MessageDescription>`
	`<tt:Source>`
	`<tt:SimpleItemDescription Name="VideoSourceToken" Type="tt:ReferenceToken"/>`
	`<tt:SimpleItemDescription Name="RuleName" Type="xsd:string"/>`
	`</tt:Source>`
	`<tt:Data>`
	`<tt:SimpleItemDescription Name="ReportType" Type="xsd:string"/>`
	`<tt:SimpleItemDescription Name="ObjectType" Type="xsd:string"/>`
	`<tt:SimpleItemDescription Name="Direction" Type="xsd:string"/>`
	`<tt:SimpleItemDescription Name="Count" Type="xsd:integer"/>`
	`</tt:Data>`
	`</tt:MessageDescription>`
	`</ObjectCounting>`

Event	Topic & Schema

SocialDistancingViolation	**Topic:** tns1:OpenApp/WiseAI/SocialDistancingViolation
	
	`<?xml version="1.0" encoding="UTF-8"?>`
	`<SocialDistancingViolation wstop:topic="true">`
	`<tt:MessageDescription>`
	`<tt:Source>`
	`<tt:SimpleItemDescription Name="VideoSourceToken" Type="tt:ReferenceToken" />`
	`<tt:SimpleItemDescription Name="RuleName" Type="xsd:string" />`
	`</tt:Source>`
	`<tt:Data>`
	`<tt:SimpleItemDescription Name="State" Type="xsd:boolean" />`
	`<tt:SimpleItemDescription Name="ObjectId" Type="tt:StringList" />`
	`</tt:Data>`
	`</tt:MessageDescription>`
	`</SocialDistancingViolation>`

MaskDetection	**Topic:** tns1:OpenApp/WiseAI/MaskDetection
	
	`<?xml version="1.0" encoding="UTF-8"?>`
	`<MaskDetection wstop:topic="true">`
	`<tt:MessageDescription>`
	`<tt:Source>`
	`<tt:SimpleItemDescription Name="VideoSourceToken" Type="tt:ReferenceToken" />`
	`<tt:SimpleItemDescription Name="RuleName" Type="xsd:string" />`
	`</tt:Source>`
	`<tt:Data>`
	`<tt:SimpleItemDescription Name="State" Type="xsd:boolean" />`
	`<tt:SimpleItemDescription Name="ObjectId" Type="xsd:integer" />`
	`</tt:Data>`
	`</tt:MessageDescription>`
	`</MaskDetection>`

Event	Topic & Schema

SlipAndFallDetection	**Topic:** tns1:OpenApp/WiseAI/SlipAndFallDetection
	
	`<?xml version="1.0" encoding="UTF-8"?>`
	`<SlipAndFallDetection wstop:topic="true">`
	`<tt:MessageDescription>`
	`<tt:Source>`
	`<tt:SimpleItemDescription Name="VideoSourceToken" Type="tt:ReferenceToken" />`
	`<tt:SimpleItemDescription Name="RuleName" Type="xsd:string" />`
	`</tt:Source>`
	`<tt:Data>`
	`<tt:SimpleItemDescription Name="State" Type="xsd:boolean" />`
	`<tt:SimpleItemDescription Name="ObjectId" Type="xsd:integer" />`
	`</tt:Data>`
	`</tt:MessageDescription>`
	`</SlipAndFallDetection>`

QueueHigh	**Topic:** tns1:OpenApp/WiseAI/QueueHigh
	
	`<?xml version="1.0" encoding="UTF-8"?>`
	`<QueueHigh wstop:topic="true">`
	`<tt:MessageDescription IsProperty="true">`
	`<tt:Source>`
	`<tt:SimpleItemDescription Name="VideoSourceToken" Type="tt:ReferenceToken" />`
	`<tt:SimpleItemDescription Name="RuleName" Type="xsd:string" />`
	`</tt:Source>`
	`<tt:Data>`
	`<tt:SimpleItemDescription Name="State" Type="xsd:boolean" />`
	`</tt:Data>`
	`</tt:MessageDescription>`
	`</QueueHigh>`

Event	Topic & Schema

QueueMedium	**Topic:** tns1:OpenApp/WiseAI/QueueMedium
	
	`<?xml version="1.0" encoding="UTF-8"?>`
	`<QueueMedium wstop:topic="true">`
	`<tt:MessageDescription IsProperty="true">`
	`<tt:Source>`
	`<tt:SimpleItemDescription Name="VideoSourceToken" Type="tt:ReferenceToken" />`
	`<tt:SimpleItemDescription Name="RuleName" Type="xsd:string" />`
	`</tt:Source>`
	`<tt:Data>`
	`<tt:SimpleItemDescription Name="State" Type="xsd:boolean" />`
	`</tt:Data>`
	`</tt:MessageDescription>`
	`</QueueMedium>`

QueueCountChanged	**Topic:** tns1:OpenApp/WiseAI/QueueCountChanged
	
	`<?xml version="1.0" encoding="UTF-8"?>`
	`<QueueCountChanged wstop:topic="true">`
	`<tt:MessageDescription>`
	`<tt:Source>`
	`<tt:SimpleItemDescription Name="VideoSourceToken" Type="tt:ReferenceToken" />`
	`<tt:SimpleItemDescription Name="RuleName" Type="xsd:string" />`
	`</tt:Source>`
	`<tt:Data>`
	`<tt:SimpleItemDescription Name="Count" Type="xsd:integer" />`
	`</tt:Data>`
	`</tt:MessageDescription>`
	`</QueueCountChanged>`

5. Intermediate Integration

In addition to the Basic Integration, this section covers how the eventsource can be configured on the WiseAI Application.

5.1. OpenAPI Specification

Unlike SUNAPI, WiseAI App uses OpenAPI Specification to define the service, allowing the client to generate stub code to access the WiseAI app. Please refer to OpenAPI Documentation for basic

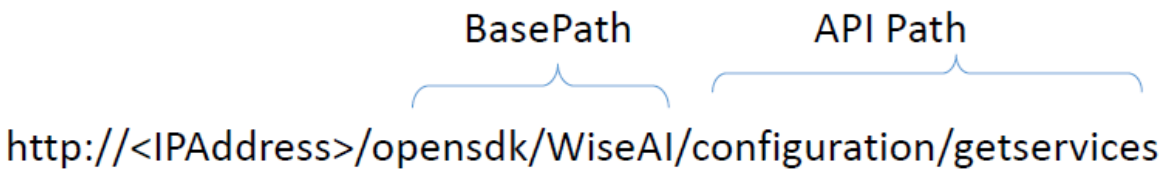
understanding of OpenAPI and OpenAPI Tools for the opensource tools. Could also use swagger hub tools which is free for experimenting and testing SwaggerHub.

5.2. API Usage

For accessing the App's service, below format is followed.

{Scheme}://{Address}/{BasePath}/{APIPath}

Sample getservices api path would look like,



Since the capability of the App varies according the camera on which its installed. Its recommended to follow below steps for integration.

For more information on the WiseAI App and its API please refer to WiseAI API Documentation

NOTE	Please make sure WiseAI App is in **running** state as explained in Prerequisites Section before accessing the WiseAI API.

5.2.1. STEPS

1. Check the response of "configuration/getservices" api to see what services are supported , how many channels are supported and what methods are supported for which API.

   REQUEST

   ```
   http://<Device IP>/opensdk/WiseAI/configuration/getservices?includeDetails=true
   ```

   RESPONSE

   ```
   {
       "appName": "WiseAI",
       "appVersion": "1.02.00",
       "cgiVersion": "1.4.0",
       "language": "English",
       "manufacturer": "Hanwha Vision",
       "serviceCapabilities": [
           {
               "channel": 0,
               "serviceDetails": [
                   {
                       "baseUrl": "/opensdk/WiseAI/configuration",
   ```

```
                "id": "configuration",
                "name": "Configuration Service",
                "urls": [
                    {
                        "methods": [
                            "get"
                        ],
                        "path": "/getservice"
                    },
                    {
                        "methods": [
                            "get"
                        ],
                        "path": "/capability"
                    },
                    {
                        "methods": [
                            "get",
                            "put"
                        ],
                        "path": "/objectdetection"
                    },
                    {
                        "methods": [
                            "get"
                        ],
                        "path": "/objectdetection/options"
                    },
                    {
                        "methods": [
                            "get",
                            "put"
                        ],
                        "path": "/imagetransfer"
                    },
                    {
                        "methods": [
                            "get"
                        ],
                        "path": "/imagetransfer/options"
                    },
                    {
                        "methods": [
                            "get",
                            "put"
                        ],
                        "path": "/ivaarea"
                    },
                    {
                        "methods": [
```

```
                "get"
            ],
            "path": "/ivaarea/options"
        },
        {
            "methods": [
                "delete"
            ],
            "path": "/ivaarea/definedarea"
        },
        {
            "methods": [
                "get",
                "put"
            ],
            "path": "/linecrossing"
        },
        {
            "methods": [
                "get"
            ],
            "path": "/linecrossing/options"
        },
        {
            "methods": [
                "delete"
            ],
            "path": "/linecrossing/line"
        },
        {
            "methods": [
                "get",
                "put"
            ],
            "path": "/analyticsexcludesettings"
        },
        {
            "methods": [
                "get"
            ],
            "path": "/analyticsexcludesettings/options"
        },
        {
            "methods": [
                "delete"
            ],
            "path": "/analyticsexcludesettings/excludeareas"
        },
        {
            "methods": [
```

```
                        "get",
                        "put"
                    ],
                    "path": "/socialdistancingviolation"
                },
                {
                    "methods": [
                        "get"
                    ],
                    "path": "/socialdistancingviolation/options"
                },
                {
                    "methods": [
                        "get",
                        "put"
                    ],
                    "path": "/fasemaskdetection"
                },
                {
                    "methods": [
                        "get"
                    ],
                    "path": "/fasemaskdetection/options"
                },
                {
                    "methods": [
                        "get",
                        "put"
                    ],
                    "path": "/queuemanagement"
                },
                {
                    "methods": [
                        "get"
                    ],
                    "path": "/queuemanagement/options"
                },
                {
                    "methods": [
                        "delete"
                    ],
                    "path": "/queuemanagement/queues"
                },
                {
                    "methods": [
                        "get",
                        "put"
                    ],
                    "path": "/queuemanagement/report"
                },
```

```
                {
                    "methods": [
                        "get"
                    ],
                    "path": "/queuemanagement/report/options"
                },
                {
                    "methods": [
                        "delete"
                    ],
                    "path": "/queuemanagement/data"
                },
                {
                    "methods": [
                        "get",
                        "put"
                    ],
                    "path": "/heatmap"
                },
                {
                    "methods": [
                        "get"
                    ],
                    "path": "/heatmap/options"
                },
                {
                    "methods": [
                        "delete"
                    ],
                    "path": "/heatmap/excludeareas"
                },
                {
                    "methods": [
                        "get",
                        "put"
                    ],
                    "path": "/heatmap/report"
                },
                {
                    "methods": [
                        "get"
                    ],
                    "path": "/heatmap/report/options"
                },
                {
                    "methods": [
                        "delete"
                    ],
                    "path": "/heatmap/data"
                },
```

```
                    {
                        "methods": [
                            "get",
                            "put"
                        ],
                        "path": "/objectcounting"
                    },
                    {
                        "methods": [
                            "get"
                        ],
                        "path": "/objectcounting/options"
                    },
                    {
                        "methods": [
                            "delete"
                        ],
                        "path": "/objectcounting/countingrules/lines"
                    },
                    {
                        "methods": [
                            "delete"
                        ],
                        "path": "/objectcounting/countingrules/excludeareas"
                    },
                    {
                        "methods": [
                            "get",
                            "put"
                        ],
                        "path": "/objectcounting/report"
                    },
                    {
                        "methods": [
                            "get"
                        ],
                        "path": "/objectcounting/report/options"
                    },
                    {
                        "methods": [
                            "delete"
                        ],
                        "path": "/objectcounting/data"
                    },
                    {
                        "methods": [
                            "get",
                            "put"
                        ],
                        "path": "/wisedetector"
```

```
                    },
                    {
                        "methods": [
                            "get"
                        ],
                        "path": "/wisedetector/options"
                    },
                    {
                        "methods": [
                            "post",
                            "delete",
                            "get",
                            "put"
                        ],
                        "path": "/wisedetector/model"
                    },
                    {
                        "methods": [
                            "get",
                            "put"
                        ],
                        "path": "/slipandfalldetection"
                    },
                    {
                        "methods": [
                            "get"
                        ],
                        "path": "/slipandfalldetection/options"
                    },
                    {
                        "methods": [
                            "delete"
                        ],
                        "path": "/slipandfalldetection/areas"
                    },
                    {
                        "methods": [
                            "get",
                            "post",
                            "delete"
                        ],
                        "path": "/settings"
                    },
                    {
                        "methods": [
                            "get",
                            "put"
                        ],
                        "path": "/commonanalyticssettings"
                    },
```

```
                    {
                        "methods": [
                            "get"
                        ],
                        "path": "/commonanalyticssettings/options"
                    },
                    {
                        "methods": [
                            "get"
                        ],
                        "path": "/rsa"
                    },
                    {
                        "methods": [
                            "get"
                        ],
                        "path": "/date"
                    }
                ]
            },
            {
                "baseUrl": "/opensdk/WiseAI/search",
                "id": "search",
                "name": "Search Service",
                "urls": [
                    {
                        "methods": [
                            "get"
                        ],
                        "path": "/capability"
                    },
                    {
                        "methods": [
                            "get"
                        ],
                        "path": "/eventlog"
                    },
                    {
                        "methods": [
                            "get"
                        ],
                        "path": "/systemlog"
                    },
                    {
                        "methods": [
                            "get"
                        ],
                        "path": "/heatmap"
                    },
                    {
```

```
                "methods": [
                    "get"
                ],
                "path": "/heatmap/{searchToken}"
            },
            {
                "methods": [
                    "put"
                ],
                "path": "/heatmap/{searchToken}/cancel"
            },
            {
                "methods": [
                    "get"
                ],
                "path": "/heatmap/{searchToken}/results"
            },
            {
                "methods": [
                    "get"
                ],
                "path": "/heatmap/check"
            },
            {
                "methods": [
                    "get"
                ],
                "path": "/queuemanagement"
            },
            {
                "methods": [
                    "get"
                ],
                "path": "/queuemanagement/{searchToken}"
            },
            {
                "methods": [
                    "put"
                ],
                "path": "/queuemanagement/{searchToken}/cancel"
            },
            {
                "methods": [
                    "get"
                ],
                "path": "/queuemanagement/{searchToken}/results"
            },
            {
                "methods": [
                    "get"
```

```
                        ],
                        "path": "/queuemanagement/check"
                    },
                    {
                        "methods": [
                            "get"
                        ],
                        "path": "/objectcounting"
                    },
                    {
                        "methods": [
                            "get"
                        ],
                        "path": "/objectcounting/{searchToken}"
                    },
                    {
                        "methods": [
                            "put"
                        ],
                        "path": "/objectcounting/{searchToken}/cancel"
                    },
                    {
                        "methods": [
                            "get"
                        ],
                        "path": "/objectcounting/{searchToken}/results"
                    },
                    {
                        "methods": [
                            "get"
                        ],
                        "path": "/objectcounting/check"
                    }
                ]
            }
        ],
        "supportedServices": [
            "configuration",
            "search"
        ]
    }
  ]
}
```


2. Each service supported has "capability" api to inform feature level capability for each services of channel. (Alternative to Attribute cgi in SUNAPI)

REQUEST

```
http://<Device IP>/opensdk/WiseAI/configuration/capability
```

RESPONSE


```
{
    "capabilities": [
        {
            "channel": 0,
            "dataserver": false,
            "facemaskdetection": true,
            "frameMetaType": "Detailed",
            "heatmap": true,
            "imagetransfer": true,
            "imagetransferTypes": [
                "Object"
            ],
            "ivaarea": true,
            "linecrossing": true,
            "maxResolution": {
                "height": 2160,
                "width": 3840
            },
            "objectcounting": true,
            "objectcountingTypes": [
                "Person"
            ],
            "objectdetection": true,
            "queuemanagement": true,
            "rotation": false,
            "slipAndFallDetection": true,
            "socialdistancing": true,
            "stoppedvehicledetection": false,
            "trafficjamdetection": false,
            "wisedetector": true,
            "wisedetectorMaxModels": 2
        }
    ]
}
```


3. Based on above capability check, a feature can be configured. While configuring a feature the valid range or allowed values, options response can be referred. For example for configuring "objectdetection" , "objectdetection/options" response can be referred for allowed values.

REQUEST

```
http://<Device IP>/opensdk/WiseAI/configuration/objectdetection/options
```

RESPONSE


```
{
    "objectDetectionOptions": [
        {
            "channel": 0,
            "duration": {
                "max": 5,
                "min": 0
            },
            "objectTypes": [
                "Person",
                "Face",
                "LicensePlate",
                "Vehicle.Bicycle",
                "Vehicle.Car",
                "Vehicle.Motorcycle",
                "Vehicle.Bus",
                "Vehicle.Truck"
            ]
        },
        {
            "channel": 1,
            "duration": {
                "max": 5,
                "min": 0
            },
            "objectTypes": [
                "Person",
                "Face",
                "LicensePlate",
                "Vehicle.Bicycle",
                "Vehicle.Car",
                "Vehicle.Motorcycle",
                "Vehicle.Bus",
                "Vehicle.Truck"
            ]
        }
    ]
}
```


6. Full Integration

In addition to the Basic Integration and Intermediate Integration, this section covers how the eventactions can be configured in camera using SUNAPI.

6.1. Drawback of existing eventaction setup

In SUNAPI for configuring event actions, two submenus are used depending on the number of channels (Videosources) supported, like eventrules.cgi → rules submenu when only one video source is supported and eventactions.cgi → complexaction submenu when more than one video source is supported. Another drawback of existing "complexaction" and "rules" submenu is, user cannot configure actions based on combination of events. For example, one combination action setup can be, triggering Alarmout only when Motiondetection and AlarmIn is detected.

To overcome above drawback, dynamicrules submenu is newly added in eventrules cgi.

6.2. DynamicEventRule in SUNAPI

6.2.1. Dynamic Rules

6.2.1.1. Description

The **dynamicrules** submenu is used to configure rules regarding what actions to take on what channels when an event is notified.

> **NOTE**
>
> Attributes to check **dynamicrules** feature support:
> "attributes/Eventsource/Support/DynamicRule"
> Attribute to check for the maximum number of rules supported:
> "attributes/Eventsource/Limit/MaxDynamicRule"
> Attribute to check for the maximum number of events supported by the rule:
> "attributes/Eventsource/Support/MaxDynamicRule.EventSource" Attribute to check for the maximum number of schedules supported:
> "attributes/Eventsource/Limit/MaxScheduleCount"

Access level

Action	Camera	NVR
view	Admin	User
add, update	Admin	User
remove	Admin	User

6.2.1.2. Syntax

```
http://<Device IP>/stw-cgi/eventrules.cgi?msubmenu=
dynamicrules&action=<value>[&<parameter>=<value>]
```

6.2.1.3. Parameters

Action	Parameter	Request/ Response	Type/ Value	Description
view	Rule.#.RuleName	RES	<string>	Rulename used for uniquely identifying a rule.
	Rule.#.Duration	RES	<int>	Duration in seconds
	Rule.#.ScheduleName	RES	<string>	Determines which schedule is associated with the rule.
	Rule.#.Enable	RES	<bool> True, False	To enable or disable rule.
	Rule.#.Status	RES	<enum> Unavailable, Available	Indicates the operable state of the rule. CAMERA ONLY
	Rule.#.EventSource.#.Type	RES	<enum> MotionDetection, VideoAnalytics, Tampering, DefocusDetection, FogDetection, AudioDetection, AudioAnalytics, NetworkAlarmInput, PasswordChange, HDDStatus, FANError, PowerOnOff, Recording, AppEvent, MQTTSubscription	In a single rule, there can be several eventsources configured.
	Rule.#.EventSource.#.AppName	RES	<string>	The name of the installed app **Rule.#.EventSource.#.AppName** is valid only when **Rule.#.EventSource.#.Type** is set to **AppEvent**. CAMERA ONLY

Action	Parameter	Request/ Response	Type/ Value	Description
	Rule.#.EventSource.#. AppEventType	RES	<string>	The event source type of the installed app **Rule.#.EventSource.#.AppEvent Type** is valid only when **Rule.#.EventSource.#.Type** is set to **AppEvent**. CAMERA ONLY
	Rule.#.EventSource.#. RuleIndexType	RES	<enum> Any, Specific	Rule index of the event source type: • Any – A trigger with one or more of the event's rule indices • Specific - A specific rule index of an event as a trigger > **Note** > If RuleIndexType is **Specific**, it should be specified with the **Rule.#.EventSource.#. RuleIndex** parameter CAMERA ONLY
	Rule.#.EventSource.#. RuleIndex	RES	<int>	A rule index of an event as a trigger. **Rule.#.EventSource.#.RuleIndex** is valid only when **Rule.#.EventSource.#.RuleIndex Type** is set to **Specific**. CAMERA ONLY
	Rule.#.EventSource.#. Channel	RES	<int>	Determines from which channel Event source type needs to be handled. CAMERA ONLY

Action	Parameter	Request/ Response	Type/ Value	Description
	Rule.#.EventSource.#. ChannelIDList	RES	<csv>	Determines from which channels Event source type needs to be handled. NVR ONLY
	Rule.#.EventSource.#. DynamicEventName	RES	<string>	Dynamic event name received from the camera NVR ONLY
	Rule.#.EventSource.#. State	RES	<bool> True, Flase	State of the event source set as the trigger condition CAMERA ONLY
	Rule.#.EventAction.#. Type	RES	<enum> GoToPreset, AlarmOutput.#, SMTP, EventPush, EventSpot, FTP, AudioClip, Record, Handover, MQTTPublication	Any of the following event actions are possible; multiple event actions can be configured.
	Rule.#.EventAction.#. Channel.#.PresetNum ber	RES	<int>	Used when the event action type is GoToPreset
	Rule.#.EventAction.#. AlarmOutput.Mask	RES	<csv>	Used when the event action type is AlarmOutput NVR ONLY
	Rule.#.EventAction.#. AlarmOutput.Duratio n	RES	<enum> Off, 5s, 10s, 20s, 30s, Always	Duration of alarmout
	Rule.#.EventAction.#. SMTP.GroupIndex	RES	<int>	Used when the event action type is SMTP Recipient group index NVR ONLY

Action	Parameter	Request/ Response	Type/ Value	Description
	Rule.#.EventAction.#. SMTP.UserIndex	RES	<int>	Used when the event action type is SMTP Recipient user index NVR ONLY
	Rule.#.EventAction.#. SMTP.Duration	RES	<enum> Off, 5s, 10s, 20s, 30s, Always	Duration NVR ONLY
	Rule.#.EventAction.#. EventSpot.Enable	RES	<bool> True, False	Used when the event action type is EventSpot Enabled or Disabled NVR ONLY
	Rule.#.EventAction.#. EventSpot.Duration	RES	<int>	Used when the event action type is EventSpot Duration NVR ONLY
	Rule.#.EventAction.#. EventPush.Enable	RES	<bool> True, False	Used when the event action type is EventPush Enable or Disabled NVR ONLY
	Rule.#.EventAction.#. AudioClipIndex	RES	<int>	Used when the event action type is AudioClip Audio clip index CAMERA ONLY
	Rule.#.EventAction.#. HandoverIndex	RES	<int>	Used when the event action type is Handover Handover index CAMERA ONLY

Action	Parameter	Request/ Response	Type/ Value	Description
	Rule.#.EventAction.#. MQTTMessageIndex	RES	<int>	Used when the event action type is MQTT publication message MQTT publication index CAMERA ONLY
add/update	RuleName	REQ	<string>	Rulename used for uniquely identifying a rule.
	RuleNewName	REQ	<string>	The Rulename to change. This parameter is used for the **update** action.
	Duration	REQ	<int>	Duration in seconds
	ScheduleName	REQ	<string>	Name of schedule to be associated with this rule.
	Enable	REQ	<bool> True, False	To enable or disable rule.
	Overwrite	REQ	<bool> True, False	Whether to overwrite. This parameter is used for the **update** action. > **Note** > If Overwrite is **True**, all other parameters must be entered.

Action	Parameter	Request/ Response	Type/ Value	Description
	EventSource.#.Type	REQ	<enum> MotionDetection, VideoAnalytics, Tampering, DefocusDetection, FogDetection, AudioDetection, AudioAnalytics, NetworkAlarmInput, PasswordChange, HDDStatus, FANError, PowerOnOff, Recording, AppEvent, MQTTSubscription	For a single rule, multiple eventsources can be configured.
	EventSource.#.AppName	REQ	<string>	The name of the installed app **EventSource.#.AppName** is valid only when **EventSource.#.Type** is set to **AppEvent**. CAMERA ONLY
	EventSource.#.AppEventType	REQ	<string>	The event source type of the installed app **EventSource.#.AppEventType** is valid only when **EventSource.#.Type** is set to **AppEvent**. CAMERA ONLY

Action	Parameter	Request/ Response	Type/ Value	Description
	EventSource.#.RuleIndexType	REQ	<enum> Any, Specific	Rule index of the event source type: • Any – A trigger with one or more of the event's rule indices • Specific - A specific rule index of an event as a trigger **Note** If RuleIndexType is **Specific**, it should be specified with the **EventSource.#.RuleIndex** parameter CAMERA ONLY
	EventSource.#.RuleIndex	REQ	<int>	A rule index of an event as a trigger. **EventSource.#.RuleIndex** is valid only when **EventSource.#.RuleIndexType** is set to **Specific**. CAMERA ONLY
	EventSource.#.Channel	REQ	<int>	Determines from which channel Event source type needs to be handled. CAMERA ONLY
	EventSource.#.ChannelIDList	REQ	<csv>	Determines from which channels Event source type needs to be handled. NVR ONLY
	EventSource.#.DynamicEventName	REQ	<string>	Dynamic event name received from Camera

Action	Parameter	Request/ Response	Type/ Value	Description
	EventSource.#.State	REQ	<bool> True, Flase	Set which state of the event source to set as the trigger condition CAMERA ONLY
	EventAction.#.Type	REQ	<enum> GoToPreset, AlarmOutput.#, SMTP, EventPush, EventSpot, FTP, AudioClip, Record, Handover, MQTTPublication	Any of the following event actions are possible, multiple event actions can be configured.
	EventAction.#.Channel.#.PresetNumber	REQ	<int>	Used when the event action type is GoToPreset
	EventAction.#.AlarmOutput.Mask	REQ	<csv>	Used when the event action type is AlarmOutput NVR ONLY
	EventAction.#.AlarmOutput.Duration	REQ	<enum> Off, 5s, 10s, 20s, 30s, Always	Duration of alarmout
	EventAction.#.SMTP.GroupIndex	REQ	<int>	Used when the event action type is SMTP Recipient group index NVR ONLY
	EventAction.#.SMTP.UserIndex	REQ	<int>	Used when the event action type is SMTP Recipient user index NVR ONLY
	EventAction.#.SMTP.Duration	REQ	<enum> Off, 5s, 10s, 20s, 30s, Always	Duration NVR ONLY

Action	Parameter	Request/ Response	Type/ Value	Description
	EventAction.#.EventSpot.Enable	REQ	<bool> True, False	Used when the event action type is EventSpot Enabled or Disabled NVR ONLY
	EventAction.#.EventSpot.Duration	REQ	<int>	Used when the event action type is EventSpot Duration NVR ONLY
	EventAction.#.EventPush.Enable	REQ	<bool> True, False	Used when the event action type is EventPush Enable or Disabled NVR ONLY
	EventAction.#.AudioClipIndex	REQ	<int>	Used when the event action type is AudioClip Audio clip index CAMERA ONLY
	EventAction.#.HandoverIndex	REQ	<int>	Used when the event action type is Handover Handover index CAMERA ONLY
	EventAction.#.MQTTMessageIndex	REQ	<int>	Used when the event action type is MQTT publication message MQTT publication index CAMERA ONLY **Note** EventAction.#.Type should be **MQTTPublication**

Action	Parameter	Request/ Response	Type/ Value	Description
remove	RuleName	REQ	<string>	Rule name to be deleted

6.2.1.4. Examples (for Camera)

6.2.1.5. Getting the current dynamic rules

NOTE The camera only supports JSON responses.

REQUEST

```
http://<Device IP>/stw-cgi/eventrules.cgi?msubmenu=dynamicrules&action=view
```

JSON RESPONSE

```
HTTP/1.0 200 OK
Content-type: application/json
<Body>
```

```
{
    "Rules": [
        {
            "Rule": 0,
            "RuleName": "Test",
            "ScheduleName": "Always",
            "Duration": 5,
            "Enable": true,
            "Status": "Unavailable",
            "EventSources": [
                {
                    "EventSource": 0,
                    "Type": "MotionDetection",
                    "RuleIndexType": "Any",
                    "Channel": 1,
                    "State": true
                },
                {
                    "EventSource": 1,
                    "Type": "AppEvent",
                    "AppName": "WiseAI",
                    "AppEventType": "ObjectDetection",
                    "RuleIndexType": "Any",
                    "Channel": 0,
                    "State": true
                },
                {
```

```
                    "EventSource": 2,
                    "Type": "AppEvent",
                    "AppName": "WiseAI",
                    "AppEventType": "IvaArea",
                    "RuleIndexType": "Specific",
                    "RuleIndex": 1,
                    "Channel": 0,
                    "State": true
                }
            ],
            "EventActions": [
                {
                    "EventAction": 0,
                    "Type": "SMTP"
                }
            ]
        },
        {
            "Rule": 1,
            "RuleName": "test2",
            "ScheduleName": "Always",
            "Duration": 60,
            "Enable": true,
            "Status": "Unavailable",
            "EventSources": [
                {
                    "EventSource": 0,
                    "Type": "AlarmInput.1",
                    "RuleIndexType": "Any",
                    "Channel": 0,
                    "State": true
                },
                {
                    "EventSource": 1,
                    "Type": "TamperingDetection",
                    "RuleIndexType": "Any",
                    "Channel": 0,
                    "State": true
                },
                {
                    "EventSource": 2,
                    "Type": "DefocusDetection",
                    "RuleIndexType": "Any",
                    "Channel": 0,
                    "State": true
                }
            ],
            "EventActions": []
        }
    ]
```

```
}
```

6.2.1.6. Adding a dynamic rule

Adding a new dynamic rule with Rule name 'Test' and several event sources; MotionDetection, IvaArea and ObjectDetection of WiseAI app's event.

NOTE	The camera should see a list of supported events and actions via the **dynamicrulesoptions** submenu. The camera only supports JSON responses.

REQUEST

```
http://<Device IP>/stw-
cgi/eventrules.cgi?msubmenu=dynamicrules&action=add&RuleName=Test&ScheduleName=Always&Enabl
e=True&Duration=5&EventSource.0.Type=MotionDetection&EventSource.0.RuleIndexType=Specific&E
ventSource.0.RuleIndex=1&EventSource.0.Channel=1&EventSource.0.State=True&EventSource.1.Typ
e=AppEvent&EventSource.1.AppName=WiseAI&EventSource.1.AppEventType=IvaArea&EventSource.1.Ru
leIndexType=Any&EventSource.1.Channel=0&EventSource.1.State=False&EventSource.2.Type=AppEve
nt&EventSource.2.AppName=WiseAI&EventSource.2.AppEventType=ObjectDetection&EventSource.2.Ru
leIndexType=Any&EventSource.2.Channel=0&EventSource.2.State=True&EventAction.0.Type=SMTP&Ev
entAction.1.Type=Handover&EventAction.1.HandoverIndex=1
```

JSON RESPONSE

```
HTTP/1.0 200 OK
Content-type: application/json
<Body>
```

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

6.2.1.7. Updating Dynamic Rule

To update an existing event rule, you must indicate the RuleName.

NOTE	The camera only supports JSON responses.

REQUEST

```
http://<Device IP>/stw-
cgi/eventrules.cgi?msubmenu=dynamicrules&action=update&RuleName=Test&RuleNewName=Test2&Enab
le=True&EventAction.0.Type=FTP
```

JSON RESPONSE

```
HTTP/1.0 200 OK
Content-type: application/json
<Body>
```

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

6.2.1.8. Removing Dynamic Rule

To remove a rule with the **remove** action and by passing the RuleName

> **NOTE** The camera only supports JSON responses.

REQUEST

```
http://<Device IP>/stw-cgi/eventrules.cgi?msubmenu=dynamicrules&action=remove&RuleName=Test
```

JSON RESPONSE

```
HTTP/1.0 200 OK
Content-type: application/json
<Body>
```

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

6.2.2. Dynamic Rules Options

6.2.2.1. Description

The **dynamicrulesoptions** submenu provides a list of available event sources and information about their action triggers, that can be used in the **dynamicrules** submenu. Event sources and event actions that are not activated do not appear in the list and cannot be added to rules in the **dynamicrules** submenu

> **NOTE** This chapter applies to network cameras only.

Access level

Action	Camera
view	Admin

6.2.2.2. Syntax

```
http://<Device IP>/stw-cgi/eventrules.cgi?msubmenu=
dynamicrulesoptions&action=<value>[&<parameter>=<value>]
```

6.2.2.3. Parameters

Action	Parameter	Request/ Response	Type/ Value	Description
view	Channel	REQ, RES	<csv>	Channel ID
	Language	REQ	<enum>	Language of the interface to the event type
	EventSource.#.Type	RES	<string>	Event types provided by the device
	EventSource.#.Type_<Language>	RES	<string>	Interface language data for the language selected in the Language parameter Displayed only when the **Language** parameter is specified
	EventSource.#.Status	RES	<enum> Inactive, Active	Indicates whether the event is currently active
	EventSource.#.Policy	RES	<enum> OneShot, Property	Indicates the event policy
	EventSource.#.ActionTypes	RES	<csv> GoToPreset, AlarmOutput.#, SMTP, EventPush, EventSpot, FTP, AudioClip, Record, Handover, MQTTPublication	Event action types provided by the device
	EventSource.#.Rule.#.Name	RES	<string>	The name of the rule in the event
	AppEventSource.#.AppName	RES	<string>	The name of the app installed through the device's opensdk

Action	Parameter	Request/ Response	Type/ Value	Description
	AppEventSource.#.Type	RES	<string>	Event types provided the opensdk app of the device
	AppEventSource.#.Type_<Language>	RES	<string>	Interface language data for the language selected in the Language parameter Displayed only when the **Language** parameter is specified
	AppEventSource.#.Status	RES	<enum> Inactive, Active	Indicates whether the event of the app is currently active
	AppEventSource.#.Policy	RES	<enum> OneShot, Property	'Oneshot' means this event doesn't support "EventSource.#.State" in the dynamicrules submenu. On the other side, 'Property' means the opposite.
	AppEventSource.#.ActionTypes	RES	<csv> GoToPreset, AlarmOutput.#, SMTP, EventPush, EventSpot, FTP, AudioClip, Record, Handover, MQTTPublication	Event types provided by the device for the event source of the app
	AppEventSource.#.Rule.#.Name	RES	<string>	The name of the rule in the event of the app

6.2.2.4. Examples

6.2.2.5. Getting the current dynamic rules options (this submenu supports only JSON responses)

REQUEST

```
http://<Device IP>/stw-cgi/eventrules.cgi?msubmenu=dynamicrulesoptions&action=view
```

JSON RESPONSE

```
HTTP/1.0 200 OK
Content-type: application/json
<Body>
```


```
{
  "DynamicRulesOptions": [
    {
      "Channel": 0,
      "EventSources": [
        {
          "Type": "AlarmInput.1",
          "Status": "Active",
          "ActionTypes": [
            "AlarmOutput.1",
            "AlarmOutput.2",
            "SMTP",
            "FTP",
            "Record",
            "Handover"
          ]
        },
        {
          "Type": "AlarmInput.2",
          "Status": "Active",
          "ActionTypes": [
            "AlarmOutput.1",
            "AlarmOutput.2",
            "SMTP",
            "FTP",
            "Record",
            "Handover"
          ]
        },
        {
          "Type": "AudioAnalysis",
          "Status": "Inactive",
          "ActionTypes": [
            "AlarmOutput.1",
            "AlarmOutput.2",
            "SMTP",
            "FTP",
            "Record",
            "Handover"
          ]
        },
        {
          "Type": "AudioDetection",
```

```
          "Status": "Inactive",
          "ActionTypes": [
            "AlarmOutput.1",
            "AlarmOutput.2",
            "SMTP",
            "FTP",
            "Record",
            "Handover"
          ]
        },
        {
          "Type": "DefocusDetection",
          "Status": "Inactive",
          "ActionTypes": [
            "AlarmOutput.1",
            "AlarmOutput.2",
            "SMTP",
            "FTP",
            "Record",
            "Handover"
          ]
        },
        {
          "Type": "MotionDetection",
          "Status": "Active",
          "ActionTypes": [
            "AlarmOutput.1",
            "AlarmOutput.2",
            "SMTP",
            "FTP",
            "Record",
            "Handover"
          ]
        },
        {
          "Type": "NetworkDisconnect",
          "Status": "Active",
          "ActionTypes": [
            "AlarmOutput.1",
            "AlarmOutput.2",
            "Record"
          ]
        },
        {
          "Type": "TamperingDetection",
          "Status": "Active",
          "ActionTypes": [
            "AlarmOutput.1",
            "AlarmOutput.2",
            "SMTP",
```

```
            "FTP",
            "Record",
            "Handover"
          ]
        },
        {
          "Type": "Timer",
          "Status": "Inactive",
          "ActionTypes": [
            "AlarmOutput.1",
            "AlarmOutput.2",
            "SMTP",
            "FTP",
            "Record",
            "Handover"
          ]
        }
      ],
      "AppEventSources": [
        {
          "Type": "IvaArea",
          "Status": "Active",
          "AppName": "WiseAI",
          "Rule": [
            {
              "Rule": 1,
              "Name": "name 1"
            },
            {
              "Rule": 2,
              "Name": "name 2"
            }
          ],
          "ActionTypes": [
            "AlarmOutput.1",
            "AlarmOutput.2",
            "SMTP",
            "FTP",
            "Record",
            "Handover"
          ]
        },
        {
          "Type": "LineCrossing",
          "Status": "Active",
          "AppName": "WiseAI",
          "Rule": [
            {
              "Rule": 1,
              "Name": "name 1"
```

```
          }
        ],
        "ActionTypes": [
          "AlarmOutput.1",
          "AlarmOutput.2",
          "SMTP",
          "FTP",
          "Record",
          "Handover"
        ]
      },
      {
        "Type": "ObjectDetection",
        "Status": "Active",
        "AppName": "WiseAI",
        "ActionTypes": [
          "AlarmOutput.1",
          "AlarmOutput.2",
          "SMTP",
          "FTP",
          "Record",
          "Handover"
        ]
      }
    ]
  },
  {
    "Channel": 1,
    "EventSources": [
      {
        "Type": "DefocusDetection",
        "Status": "Inactive",
        "ActionTypes": [
          "AlarmOutput.1",
          "AlarmOutput.2",
          "SMTP",
          "FTP",
          "Record",
          "Handover"
        ]
      },
      {
        "Type": "MotionDetection",
        "Status": "Active",
        "ActionTypes": [
          "AlarmOutput.1",
          "AlarmOutput.2",
          "SMTP",
          "FTP",
          "Record",
```

```
            "Handover"
          ]
        },
        {
          "Type": "TamperingDetection",
          "Status": "Inactive",
          "ActionTypes": [
            "AlarmOutput.1",
            "AlarmOutput.2",
            "SMTP",
            "FTP",
            "Record",
            "Handover"
          ]
        }
      ],
      "AppEventSources": [
        {
          "Type": "IvaArea",
          "Status": "Active",
          "AppName": "WiseAI",
          "Rule": [
            {
              "Rule": 1,
              "Name": "name 1"
            }
          ],
          "ActionTypes": [
            "AlarmOutput.1",
            "AlarmOutput.2",
            "SMTP",
            "FTP",
            "Record",
            "Handover"
          ]
        },
        {
          "Type": "LineCrossing",
          "Status": "Active",
          "AppName": "WiseAI",
          "Rule": [
            {
              "Rule": 1,
              "Name": "name 1"
            }
          ],
          "ActionTypes": [
            "AlarmOutput.1",
            "AlarmOutput.2",
            "SMTP",
```

```
            "FTP",
            "Record",
            "Handover"
          ]
        },
        {
          "Type": "ObjectDetection",
          "Status": "Inactive",
          "AppName": "WiseAI",
          "ActionTypes": [
            "AlarmOutput.1",
            "AlarmOutput.2",
            "SMTP",
            "FTP",
            "Record",
            "Handover"
          ]
        }
      ]
    }
  ]
}
```

References

- [1] OpenAPI Documentation
- [2] OpenAPI Tools
- [3] SwaggerHub