

Reference of ONVIF Development

Version 1.01.02
January 2011



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Introduction

The purpose of this document is to explain the situation of NVT implementing ONVIF specification. The corresponding version of ONVIF is **V1.01**. As for the detail content please refer to ONVIF specification.

Changelog

This section contains an overview of the changes made in Version 1.01 to Version 1.01.02.

Version 1.01

- Created

Version 1.01.02(1/5/2011)

- 3.3.2 Video Stream Accessing:
The Stream URI is changed.
- 3.4 NVT Audio configuration:
Audio encoding algorithm which Our NVT supported is changed.
- 4.3.7 Audio encoder configurations:
Audio encoding algorithm which Our NVT supported is changed.

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2 Terms and Definitions

2.1 Conventions

The key words “MUST”, “MUST NOT”, “REQUIRED”, “SHALL”, “SHALL NOT”, “SHOULD”, “SHOULD NOT”, “RECOMMENDED”, “MAY”, and “OPTIONAL” in this document are to be interpreted as described in [RFC 2119].

2.2 Definitions

Capability	The capability commands allow an NVC to ask for the services provided by an NVT.
Configuration Entity	A network video device media abstract component that is used to produce a media stream on the network, i.e. video and/or audio stream.
Control Plane	Consists of Media control functions, such as device control, media configuration and PTZ commands.
Digital PTZ	Function that diminishes or crops an image to adjust the image position and ratio.
Imaging Service	Services for exposure time, gain and white balance parameters among others.
Input/Output (I/O)	Currently only relay ports are handled.
Media Entity	Media configuration entity such as video source, encoder, audio source, PTZ, and analytics, for example.

Media Plane	Consists of media stream, such as video, audio and metadata.
Media Profile	Maps a video or an audio source to a video or an audio encoder, PTZ and analytics configurations.
Metadata	All streaming data except video and audio, including video analytics results, PTZ position data and other functions.
Network Video Client (NVC)	Network video receiver or controller device communicating with an NVT over an IP network.
Network Video Transmitter (NVT)	Network video server (an IP network camera or an encoder device, for example) that sends media data over an IP network to an NVC.
Optical Zoom	Changes the focal length (angle of view) for the NVT by moving the zoom lens in the camera optics.
PKCS	Refers to a group of Public Key Cryptography Standards devised and published by RSA Security.
PTZ Node	Low-level PTZ entity that maps to the PTZ device and its capabilities.
Remote Discovery	The remote DP allows a NVT to register at the remote DP and at the NVC to find Proxy (Remote DP) registered NVTs through the remote DP even if the NVC and NVT resides in different administrative network domains.

Scene Description Metadata output by video analytics describing object location and behaviour.

Video Analytics Algorithms or programs used to analyze video data and to generate data describing object location and behaviour.

3 Development Notes

3.1 NVT Port configuration

There are three protocols defined by ONVIF, HTTP, HTTPS and RTSP. However, the NVT supports two of them, HTTP and RTSP. The default port value is as follows:

- **Web Service Port:**8080
- **RTSP Port:**554

The ports can be modified through ONVIF interfaces or NVT web UI.

3.2 NVT Security

The ONVIF specification defines security mechanisms on two communication levels:

- Transport level security
- Message level security

Our NVT implemented Message level security. For security, Our NVT implements User name token [WS-UsernameToken]. Our NVT does not configure Message level security in default, so it will not verify the user's request. WS-Policy can be configured by interface GetAccessPolicy and SetAccessPolicy.

```
<?xml version="1.0" encoding="UTF-8" standalone="yes" ?>
<wsp:Policy
  xmlns:wsp=http://schemas.xmlsoap.org/ws/2004/09/policy
  xmlns:sp=http://schemas.xmlsoap.org/ws/2005/07/securitypolicy
  xmlns:xsi=http://www.w3.org/2001/XMLSchema-instance
  xsi:schemaLocation="http://schemas.xmlsoap.org/ws/2005/07/securitypolicy
  http://schemas.xmlsoap.org/ws/2005/07/securitypolicy/ws-securitypolicy.xsd">
  <wsp:ExactlyOne>
    <wsp:All>
      <sp:UsernameToken
        sp:IncludeToken="http://schemas.xmlsoap.org/ws/2005/07/securitypolicy/IncludeTok
```

```
en/Never" />
    <wsp:Policy>
        <sp:WssUsernameToken10 />
    </wsp:Policy>
</wsp:All>
</wsp:ExactlyOne>
</wsp:Policy>
```

sp:IncludeToken is used to set the WS-UsernameToken security authentication. Our NVT has the following two ways:

- <http://schemas.xmlsoap.org/ws/2005/07/securitypolicy/IncludeToken/Never>
When it is set as this value, Our NVT will do no authentication.
- <http://schemas.xmlsoap.org/ws/2005/07/securitypolicy/IncludeToken/AlwaysToRecipient>
When it is set as this value, NVC needs to have username and password according to the rules of WS_UsernameToken when sending the command each time.

Taking Username and password can be managed by the following interface:

- GetUsers
- SetUser
- CreateUsers
- DeleteUsers

3.3 NVT Video Stream Accessing

3.3.1 Media stream protocol

Real-time Transport Protocol (RTP) is a media transfer protocol. NVT supports the following protocol:

- RTP/UDP

- RTP/RTSP/TCP
- RTP/RTSP/HTTP/TCP

The following three sections describe RTP data transfer.

3.3.1.1 RTP data transfer via UDP

UDP has the smallest overhead and is able to transfer real-time data in an efficient manner. The NVT support the RTP/UDP protocol.

3.3.1.2 RTP/RTSP/TCP

The NVT support media streaming using RTP/RTSP to traverse a firewall using an RTSP tunnel. This protocol conform to [RFC 2326] Section 10.12.

3.3.1.3 RTP/RTSP/HTTP/TCP

The data stream MUST be sent via HTTP to traverse a firewall. The NVT support media streaming using RTP/RTSP/HTTP/TCP.

3.3.2 Video Stream Accessing

The following players can be used in viewing the video by NVC

- QuickTime Player
- VLC
- RealPlayer

Example URI of requesting video by player:

```
rtsp://192.168.10.35/sn/live/1/2
```

192.168.10.35: Device IP

1: Camera ID

2: Stream ID

If the device has two cameras, you can can access video stream with the following URI:

```
rtsp://192.168.10.35/sn/live/1/1
```

```
rtsp://192.168.10.35/sn/live/2/1
```

3.4 NVT Audio configuration

ONVIF supports: G711, G726 and AAC audio encoding algorithms. About G711,

ONVIF do not specify G711A or G711U. Our NVT supports G711U.

When Users add audio source configuration and audio encoder configuration to a profile, NVT will send G711U audio stream.

3.5 Self-defined schema files of NVT and Namespaces

3.5.1 Self-defined schema files

Our NVT defined SNL.XSD scheme file based on ONVIF Specification. It is needed when any NVC wants to integrate video analytics and rule configuration. This file defines NVT self-defined data type, including the data structure of video analytics configuration, rule configuration. You can get WSDL and schema files address from the interface GetWsdUrl and GetSupportedRules, and download them.

NVT Self-defined namespace is “onvif/extend/snl/ver10/schema”.

3.6 NVT Video analytics

3.6.1 Video analytics Interfaces

The following table list the Video analytics Interfaces of our NVT

ONVIF Interface	Implemented(Y/N)
Analytics Module interface	N
Scene description	N
Rules interface	Y
Event interface	Y

Our NVT defined rule configuration of Montion Detection. Please refer other concreted definition.

3.6.2 Rules interface

Our NVT defined rule configuration base on ONVIF Rule Description Language. To get detailed data structure, please refer to schema file "SNL.XSD".

- Rule Description Language: Standard description language defined by ONVIF

Rule Example

```
<wsdl:Rule Name="MotionDetector" Type="snl:MotionDetector">
  <sch:Parameters>
    <sch:ElementItem Name="MotionDetectionRule">
      <snl:MotionDetector>
        <snl:EnableFlag>true</snl:EnableFlag>
        <snl:DetectionAreas x="10" y="10" width="90" hight="90"/>
        <snl:DetectionAreas x="0" y="0" width="100" hight="100"/>
        .....
        <snl:CheckBlockNum>60</snl:CheckBlockNum>
        <snl:FrameInterval>10</snl:FrameInterval>
        <snl:Sensitivity>3</snl:Sensitivity>
        <snl:ScheduleWeeks WeekDay="Fri">
          <snl:ScheduleTime>
            <snl:StartTime>
              <snl:Time>
                <snl:Hour>10</snl:Hour>
                <snl:Minute>0</snl:Minute>
                <snl:Second>0</snl:Second>
              </snl:Time>
            </snl:StartTime>
            <snl:EndTime>
              <snl:Time>
                <snl:Hour>23</snl:Hour>
                <snl:Minute>0</snl:Minute>
```

```

                                <snl:Second>0</snl:Second>
                                </snl:Time>
                                </snl:EndTime>
                                </snl:ScheduleTime>
                                .....
                                </snl:ScheduleWeeks>
                                .....
                                </snl:MotionDetector>
                                </sch:ElementItem>
                                </sch:Parameters>
                                </wsdl:Rule>

```

Comments of the elements above:

- URL with “snl” prefix: onvif/extend/snl/ver10/schema.
- Rule Name: it is used to identify a rule which can be set by NVC.
- Rule Type: we only support MotionDetector.
- EnableFlag: Enable Motion.true:start to detect;false:Not detect.
- DetectionArea: rectangle area.

The parameters of the rule configuration contains:

- DetectionAreas:
- CheckBlockNum range: 1—100, it presents the percentage of the detected area within the whole video area. For example, 60 means that there are 60% objects are moving in the video area.
- FrameInterval: interval frames for image detection.
- Sensitivity: value 1, 2, 3: the higher the value is, the easier to trigger the event.
- ScheduleWeeks: alarm arming time (unit: week).
- WeekDay: week day.
- ScheduleTime: time range of alarm arming.
- StartTime: start time of alarm arming.

- EndTime: end time of alarm arming.

Range of rectangle area parameters x,y,width,height :1—100:

x: the percentage of the top left Coordinate X comparing the whole width of the video area.

y: the percentage of the top left Coordinate Y comparing the whole height of the video area.

width: the percentage of rectangle width comparing the width of the video area.

height: the percentage of rectangle height comparing the height of the video area.

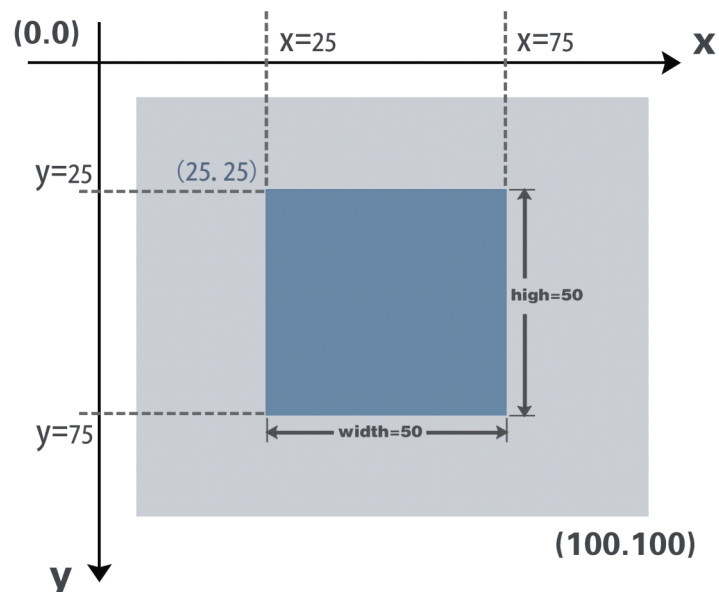
For example: video area has a height of 100 and a width of 100. If the top left Coordinate is (25, 25), and the width and height is both 50, DetectionArea needs to be set as:

$$x = 25/100*100 = 25;$$

$$y = 25/100*100 = 25;$$

$$\text{width} = 50/100*100 = 50;$$

$$\text{high} = 50/100*100 = 50;$$



Configure Rules through the following interfaces:

GetSupportedRules

GetRules

CreateRules

ModifyRules

DeleteRules

GetVideoAnalyticsConfigurations

GetVideoAnalyticsConfiguration

GetCompatibleVideoAnalyticsConfigurations

SetVideoAnalyticsConfiguration

3.7 Event interface

This NVT implemented Event Notification topics:

RuleEngine/FiledDetector

Device/Trigger/Relay

NVC can subscribe Event Notification through ONVIF Event Handling. When NVC subscribing Event Notification, but does not indicate a termination time, NVT will consider this subscription has infinite duration.

The Notify example describe as follow:

If NVC subscribe the topic "RuleEngine/FieldDetector", notify message should be:

```
<?xml version="1.0" encoding="UTF-8"?>
<SOAP-ENV:Envelope
  xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:SOAP-ENC="http://schemas.xmlsoap.org/soap/encoding/"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns:tt="http://www.onvif.org/ver10/schema"
  xmlns:wsa="http://schemas.xmlsoap.org/ws/2004/08/addressing">
```

```

xmlns:wsnt="http://docs.oasis-open.org/wsn/b-2"
xmlns:tns1="http://www.onvif.org/ver10/topics" >
<SOAP-ENV:Header>
  <wsa:Action>
    http://docs.oasis-open.org/wsn/bw-2/NotificationConsumer/Notify
  </wsa:Action>
</SOAP-ENV:Header>
<SOAP-ENV:Body>
  <wsnt:Notify>
    <wsnt:NotificationMessage
xsi:type="wsnt:NotificationMessageHolderType">
      <wsnt:SubscriptionReference
xsi:type="w3sa:EndpointReferenceType">
        <w3sa:Address xsi:type="w3sa:AttributedURIType">
          http://192.168.10.98/Subscription?Idx=c15c19f0-b1e5-11df-97f8-55c41c5c57b5
        </w3sa:Address>
      </wsnt:SubscriptionReference>
      <wsnt:Topic xsi:type="wsnt:TopicExpressionType"
Dialect="http://docs.oasis-open.org/wsn/t-1/TopicExpression/Concrete">
        tns1:RuleEngine/FiledDetector
      </wsnt:Topic>
    <wsnt:Message>
      <tt:Message UtcTime="2010- 8-27T14: 2:10">
        <tt:Source>
          <tt:SimpleItem Name="VideoSourceConfigurationToken"
Value="VideoSourceConfiguration_1" />
          <tt:SimpleItem
Name="VideoAnalyticsConfigurationToken"
Value="VideoAnalyticsConfiguration_1" />

```

```

        <tt:SimpleItem Name="RuleName"
Value="MotionDetectionRule" />
        </tt:Source>
        <tt:Data>
            <tt:SimpleItem Name="IsInside" Value="true" />
        </tt:Data>
    </tt:Message>
</wsnt:Message>
</wsnt:NotificationMessage>
</wsnt:Notify>
</SOAP-ENV:Body>
</SOAP-ENV:Envelope>

```

If NVC subscribe the topic "Device/Trigger/Relay", notify message should be:

```

<?xml version="1.0" encoding="UTF-8"?>
<SOAP-ENV:Envelope
  xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:SOAP-ENC="http://schemas.xmlsoap.org/soap/encoding/"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns:tt="http://www.onvif.org/ver10/schema"
  xmlns:wsa="http://schemas.xmlsoap.org/ws/2004/08/addressing"
  xmlns:wsnt="http://docs.oasis-open.org/wsn/b-2"
  xmlns:tns1="http://www.onvif.org/ver10/topics" >
  <SOAP-ENV:Header>
    <wsa:Action>
      http://docs.oasis-open.org/wsn/bw-2/NotificationConsumer/Notify
    </wsa:Action>
  </SOAP-ENV:Header>
  <SOAP-ENV:Body>

```

```

<wsnt:Notify>
  <wsnt:NotificationMessage
xsi:type="wsnt:NotificationMessageHolderType">
    <wsnt:SubscriptionReference
xsi:type="w3sa:EndpointReferenceType">
      <w3sa:Address xsi:type="w3sa:AttributedURIType">
        http://192.168.10.98/Subscription?Idx=eeb8f7c0-b1e9-11df-a6ae-f1f956274b87
      </w3sa:Address>
    </wsnt:SubscriptionReference>
    <wsnt:Topic xsi:type="wsnt:TopicExpressionType"
Dialect="http://docs.oasis-open.org/wsn/t-1/TopicExpression/Concrete">tns1:Device/Trig
ger/Relay
    </wsnt:Topic>
    <wsnt:Message>
      <tt:Message UtcTime="2010- 8-27T14:46:33">
        <tt:Source>
          <tt:SimpleItem Name="RelayToken"
Value="Relay_1" />
        </tt:Source>
        <tt:Data>
          <tt:SimpleItem Name="LogicalState" Value="active"
/>
        </tt:Data>
      </tt:Message>
    </wsnt:Message>
  </wsnt:NotificationMessage>
</wsnt:Notify>
</SOAP-ENV:Body>
</SOAP-ENV:Envelope>

```


3.8 Referenced Namespaces

NVT uses Onvif namespaces, such as WS-Security, Event-handling and also use some standard namespaces of WS.

Namespaces:

Namespace URI	Description
http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd	The Namespace for the WSDL Security service.
http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd	The Namespace for the WSDL Security service.
http://www.w3.org/2001/10/xml-exc-c14n#	The Namespace for the WSDL Discovery service.
http://www.w3.org/2000/09/xmlsig#	The Namespace for the WSDL Discovery service.
http://www.onvif.org/ver10/network/wsd/DiscoveryLookupBinding	The Namespace for the WSDL Discovery service.
http://www.onvif.org/ver10/network/wsd/RemoteDiscoveryBinding	The Namespace for the WSDL Discovery service.
http://docs.oasis-open.org/wsrf/r-2	The Namespace for the WSDL Event Handling service.
http://www.w3.org/2005/05/xmlmime	The Namespace for the WSDL Event Handling service.
http://docs.oasis-open.org/wsrf/bf-2	The Namespace for the WSDL Event Handling service.
http://www.onvif.org/ver10/analytics/wsd/AnalyticsEngineBinding	The Namespace for the WSDL Video Analytics service.
http://www.onvif.org/ver10/analytics/wsd/RuleEngineBinding	The Namespace for the WSDL Video Analytics service.

3.9 SOAP Fault Messages

NVT will send a soap error message when error occurs in NVT services or there is something wrong when sending message by NVC. The soap error is based on ONVIF-defined standard message.

4 Functionalities Specification

NVT follows Onvif interfaces, including device management, image configuration, media configuration, event handling, PTZ control, and video analytics. The following instruct the details of the interfaces.

4.1 Device management

The Device Service is divided into five different categories: capabilities, network, system, I/O and security commands. This set of commands can be used to get information about the NVT capabilities and configurations or to set NVT configurations. This NVT support the device management service as specified in [ONVIF DM WSDL]. A basic set of operations are required for the device management service, other operations are recommended or optional to support. The detailed requirements are listed under the command descriptions.

4.1.1 Capabilities

4.1.1.1 Get WSDL URL

Command	GetWsdUrl
Requirement	MUST
Implemented(Y/N)	Y
Note	

4.1.1.2 Capability exchange

Command	GetCapabilities
----------------	-----------------

Requirement	MUST
Implemented(Y/N)	Y
Note	

4.1.2 Network

4.1.2.1 Get hostname

Command	GetHostname
Requirement	MUST
Implemented(Y/N)	Y
Note	

4.1.2.2 Set hostname

Command	SetHostname
Requirement	MUST
Implemented(Y/N)	Y
Note	

4.1.2.3 Get DNS settings

Command	GetDNS
Requirement	MUST
Implemented(Y/N)	Y
Note	The not implemented fields of GetDNSResponse: i) SearchDomain

4.1.2.4 Set DNS settings

Command	SetDNS
Requirement	MUST
Implemented(Y/N)	Y
Note	The not implemented fields of SetDNSRequest: i) SearchDomain

4.1.2.5 Get NTP settings

Command	GetNTP
Requirement	MUST
Implemented(Y/N)	Y
Note	The not implemented fields of GetNTPResponse: i) NTPFromDHCP ii) NTPManual->IPv6Address iii) NTPManual->DNSname

4.1.2.6 Set NTP settings

Command	SetNTP
Requirement	MUST
Implemented(Y/N)	Y
Note	The not implemented fields of SetNTPRequest: i) NTPManual->NetworkHost->IPv6Address ii) NTPManual->NetworkHost->DNSname

4.1.2.7 Get dynamic DNS settings

Command	GetDynamicDNS
Requirement	If the NVT supports dynamic DNS as specified in [RFC 2136] and [RFC 4702], it MUST be possible to get the type, name and TTL through the GetDynamicDNS command.
Implemented(Y/N)	N
Note	

4.1.2.8 Set dynamic DNS settings

Command	SetDynamicDNS
Requirement	If the NVT supports dynamic DNS as specified in [RFC 2136] and [RFC 4702], it MUST be possible to set the type, name and TTL through the SetDynamicDNS command.
Implemented(Y/N)	N
Note	

4.1.2.9 Get network interface configuration

Command	GetNetworkInterfaces
Requirement	MUST
Implemented(Y/N)	Y
Note	The not implemented fields of GetNetworkInterfacesResponse: <ul style="list-style-type: none"> i) NetworkInterface->Link->AdminSettings->Speed ii) NetworkInterface->Link->OperSettings->Speed iii) NetworkInterface->IPv4->LinkLocal->FromDHCP iv) NetworkInterface->IPv4->LinkLocal->LinkLocal v) NetworkInterface->IPv6

4.1.2.10 Set network interface configuration

Command	SetNetworkInterfaces
Requirement	MUST
Implemented(Y/N)	Y
Note	The not implemented fields of SetNetworkInterfacesRequest: i) NetworkInterface->Link ii) NetworkInterface->MTU iii) NetworkInterface->IPv6

4.1.2.11 Get network protocols

Command	GetNetworkProtocols
Requirement	MUST
Implemented(Y/N)	Y
Note	

4.1.2.12 Set network protocols

Command	SetNetworkProtocols
Requirement	MUST
Implemented(Y/N)	Y
Note	

4.1.2.13 Get default gateway

Command	GetNetworkDefaultGateway
Requirement	MUST
Implemented(Y/N)	Y
Note	

4.1.2.14 Set default gateway

Command	SetNetworkDefaultGateway
Requirement	MUST
Implemented(Y/N)	Y
Note	

4.1.2.15 Get zero configuration

Command	GetZeroConfiguration
Requirement	If the NVT supports dynamic IP configuration according to [RFC3927], it MUST support the return of IPv4 zero configuration address and status through the GetZeroConfiguration command
Implemented(Y/N)	N
Note	

4.1.2.16 Set zero configuration

Command	SetZeroConfiguration
Requirement	If the NVT supports dynamic IP configuration according to [RFC 3927], it MUST support the configuration of IPv4 zero configuration address and status through the SetZeroConfiguration command.
Implemented(Y/N)	N
Note	

4.1.2.17 Get IP address filter

Command	GetIPAddressFilter
----------------	--------------------

Requirement	If the NVT supports NVT access control based on IP filtering rules (denied or accepted ranges of IP addresses), the NVT MUST support the GetIPAddressFilter command.
Implemented(Yes/No)	N
Note	

4.1.2.18 Set IP address filter

Command	SetIPAddressFilter
Requirement	If the NVT supports NVT access control based on IP filtering rules (denied or accepted ranges of IP addresses), the NVT MUST support configuration of IP filtering rules through the SetIPAddressFilter command.
Implemented(Y/N)	N
Note	

4.1.2.19 Add an IP filter address

Command	AddIPAddressFilter
Requirement	If the NVT supports NVT access control based on IP filtering rules (denied or accepted ranges of IP addresses), the NVT MUST support adding of IP filtering addresses through the AddIPAddressFilter command.
Implemented(Y/N)	N
Note	

4.1.2.20 Remove an IP filter address

Command	RemoveIPAddressFilter
Requirement	If the NVT supports NVT access control based on IP filtering

	rules(denied or accepted ranges of IP addresses), the NVT MUST support deletion of IP filtering addresses through the RemoveIPAddressFilter command.
Implemented(Y/N)	N
Note	

4.1.3 System

4.1.3.1 Device Information

Command	GetDeviceInformation
Requirement	MUST
Implemented(Y/N)	Y
Note	

4.1.3.2 Backup

Command	GetSystemBackup
Requirement	SHOULD
Implemented(Y/N)	N
Note	

4.1.3.3 Restore

Command	RestoreSystem
Requirement	SHOULD
Implemented(Y/N)	N
Note	

4.1.3.4 Get system date and time

Command	GetSystemDateAndTime
Requirement	MUST
Implemented(Y/N)	Y
Note	

4.1.3.5 Set system date and time

Command	SetSystemDateAndTime
Requirement	MUST
Implemented(Y/N)	Y
Note	

4.1.3.6 Factory default

Command	SetSystemFactoryDefault
Requirement	MUST
Implemented(Y/N)	Y
Note	

4.1.3.7 Firmware upgrade

Command	UpgradeSystemFirmware
Requirement	SHOULD
Implemented(Y/N)	N
Note	

4.1.3.8 Get system logs

Command	GetSystemLog
Requirement	SHOULD
Implemented(Y/N)	Y
Note	The not implemented fields of GetSystemLogRequest: i) LogType->System

4.1.3.9 Get support information

Command	GetSystemSupportInformation
Requirement	MAY
Implemented(Y/N)	N
Note	

4.1.3.10 Reboot

Command	SystemReboot
Requirement	MUST
Implemented(Y/N)	Y
Note	

4.1.3.11 Get scope parameters

Command	GetScopes
Requirement	MUST
Implemented(Y/N)	Y
Note	

4.1.3.12 Set scope parameters

Command	SetScopes
Requirement	MUST
Implemented(Y/N)	Y
Note	

4.1.3.13 Add scope parameters

Command	AddScopes
Requirement	MUST
Implemented(Y/N)	Y
Note	

4.1.3.14 Remove scope parameters

Command	RemoveScopes
Requirement	MUST
Implemented(Y/N)	Y
Note	

4.1.3.15 Get discovery mode

Command	GetDiscoveryMode
Requirement	MUST
Implemented(Y/N)	Y
Note	

4.1.3.16 Set discovery mode

Command	SetDiscoveryMode
Requirement	MUST
Implemented(Y/N)	Y
Note	

4.1.3.17 Get remote discovery mode

Command	GetRemoteDiscoveryMode
Requirement	An NVT that supports remote discovery MUST support retrieval of the remote discovery mode setting through the GetRemoteDiscoveryMode command.
Implemented(Y/N)	N
Note	

4.1.3.18 Set remote discovery mode

Command	SetRemoteDiscoveryMode
Requirement	An NVT that supports remote discovery MUST support configuration of the discovery mode setting through the SetRemoteDiscoveryMode command.
Implemented(Y/N)	N
Note	

4.1.3.19 Get remote DP addresses

Command	GetDPAddresses
Requirement	If the NVT supports remote discovery, as specified in Section 7.4, the NVT MUST support retrieval of the remote DP

	address(es) through the GetDPAddresses command.
Implemented(Y/N)	N
Note	

4.1.3.20 Set remote DP addresses

Command	SetDPAddresses
Requirement	If the NVT supports remote discovery, as specified in Section 7.4, the NVT MUST support configuration of the remote DP address(es) through the SetDPAddresses command.
Implemented(Y/N)	N
Note	

4.1.4 Security

4.1.4.1 Get access policy

Command	GetAccessPolicy
Requirement	If the NVT supports access policy settings based on WS-Security authentication, then the NVT MUST support this command.
Implemented(Y/N)	Y
Note	

4.1.4.2 Set access policy

Command	SetAccessPolicy
Requirement	If the NVT supports access policy settings based on WS-Security authentication, then the NVT MUST support this command.

Implemented(Y/N)	Y
Note	

4.1.4.3 Get users

Command	GetUsers
Requirement	MUST
Implemented(Y/N)	Y
Note	

4.1.4.4 Create users

Command	CreateUsers
Requirement	MUST
Implemented(Y/N)	Y
Note	

4.1.4.5 Delete users

Command	DeleteUsers
Requirement	MUST
Implemented(Y/N)	Y
Note	

4.1.4.6 Set users settings

Command	SetUser
Requirement	MUST
Implemented(Y/N)	Y
Note	

4.1.4.7 Create self-signed certificate

Command	CreateCertificate
Requirement	If the NVT supports onboard public key pair generation, the NVT that supports TLS1.0 MUST support the certificate creation command.
Implemented(Y/N)	N
Note	

4.1.4.8 Get certificates

Command	GetCertificates
Requirement	the NVT that supports TLS1.0 MUST support the certificate creation command.
Implemented(Y/N)	N
Note	

4.1.4.9 Get certificate status

Command	GetCertificatesStatus
Requirement	the NVT that supports TLS1.0 MUST support the certificate creation command.
Implemented(Y/N)	N
Note	

4.1.4.10 Set certificate status

Command	SetCertificatesStatus
Requirement	the NVT that supports TLS1.0 MUST support the certificate creation command.

Implemented(Y/N)	N
Note	

4.1.4.11 Get certificate request

Command	GetPkcs10Request
Requirement	An NVT that supports onboard key generation that supports TLS1.0 MUST support this command.
Implemented(Y/N)	N
Note	

4.1.4.12 Get client certificate status

Command	GetClientCertificateMode
Requirement	An NVT that supports TLS1.0 MUST support this command.
Implemented(Y/N)	N
Note	

4.1.4.13 Set client certificate status

Command	SetClientCertificateMode
Requirement	An NVT that supports TLS1.0 MUST support this command.
Implemented(Y/N)	N
Note	

4.1.4.14 Load NVT certificate

Command	LoadCertificates
Requirement	An NVT that supports TLS1.0 MUST support this command.
Implemented(Y/N)	N

Note	
-------------	--

4.1.4.15 Delete certificate

Command	DeleteCertificates
Requirement	An NVT that supports TLS1.0 MUST support this command.
Implemented(Y/N)	N
Note	

4.1.5 Input/output

4.1.5.1 Get relay outputs

Command	GetRelayOutputs
Requirement	If the NVT has I/O ports, then it MUST support the I/O command.
Implemented(Y/N)	Y
Note	

4.1.5.2 Set relay output settings

Command	SetRelayOutputSettings
Requirement	If the NVT has I/O ports, then it MUST support the I/O command.
Implemented(Y/N)	Y
Note	

4.1.5.3 Trigger relay output

Command	SetRelayOutputState
----------------	---------------------

Requirement	If the NVT has I/O ports, then it MUST support the I/O command.
Implemented(Y/N)	Y
Note	

4.2 Imaging configuration

The imaging service provides operations used to control and configure imaging properties on an NVT. This NVT support the imaging service as defined in [ONVIF Imaging WSDL].

4.2.1.1 Get imaging settings

Command	GetImagingSettings
Requirement	SHOULD
Implemented(Y/N)	Y
Note	The not implemented fields of GetImagingSettingsResponse: i) ImagingSettings->BacklightCompenstation ii) ImagingSettings->Exposure iii) ImagingSettings->Focus iv) ImagingSettings->IrCutFilter v) ImagingSettings->Sharpness vi) ImagingSettings->WideDynamicRange vii) ImagingSettings->WhiteBalance

4.2.1.2 Set imaging settings

Command	SetImagingSettings
Requirement	SHOULD
Implemented(Y/N)	Y
Note	The not implemented fields of SetImagingSettingsRequest:

	<ul style="list-style-type: none"> i) ImagingSettings->BacklightCompenstation ii) ImagingSettings->Exposure iii) ImagingSettings->Focus iv) ImagingSettings->IrCutFilter v) ImagingSettings->Sharpness vi) ImagingSettings->WideDynamicRange vii) ImagingSettings->WhiteBalance
--	---

4.2.1.3 Get options

Command	GetOptions
Requirement	If the NVT supports the SetImagingSettings command to set imaging parameter on the NVT, then it MUST get the configuration options from the NVT through the GetOptions command.
Implemented(Y/N)	Y
Note	<p>The not implemented fields of GetOptionsResponse:</p> <ul style="list-style-type: none"> i) ImagingSettings->BacklightCompenstation ii) ImagingSettings->Exposure iii) ImagingSettings->Focus iv) ImagingSettings->IrCutFilter v) ImagingSettings->Sharpness vi) ImagingSettings->WideDynamicRange vii) ImagingSettings->WhiteBalance

4.2.1.4 Move

Command	Move
Requirement	SHOULD
Implemented(Y/N)	N

Note	
-------------	--

4.2.1.5 Get move options

Command	GetMoveOptions
Requirement	SHOULD
Implemented(Y/N)	N
Note	

4.2.1.6 Stop

Command	Stop
Requirement	SHOULD
Implemented(Y/N)	N
Note	

4.2.1.7 Get imaging status

Command	GetStatus
Requirement	SHOULD
Implemented(Y/N)	N
Note	

4.3 Media configuration

The media service is used to configure the NVT media streaming properties. This NVT support the media service as specified in [ONVIF Media WSDL].

4.3.1.1 Create media profile

Command	CreateProfile
----------------	---------------

Requirement	MUST
Implemented(Y/N)	Y
Note	

4.3.1.2 Get media profiles

Command	GetProfiles
Requirement	MUST
Implemented(Y/N)	Y
Note	<p>The not implemented fields of GetProfilesResponse:</p> <ul style="list-style-type: none"> i) Profile->VideoEncoderConfiguration->H264Configuration->H264Profile->Main ii) Profile->VideoEncoderConfiguration->H264Configuration->H264Profile->High iii) Profile->AudioEncoderConfiguration->Encoding->G711 iv) Profile->AudioEncoderConfiguration->Encoding->G726 v) Profile->AudioEncoderConfiguration->Encoding->AAC(We only support G723.1) vi) Profile->VideoAnalyticsConfiguration->AnalyticsEngineConfiguration->AnalyticsModule->Parameters->ElementItem vii) Profile->VideoAnalyticsConfiguration->RuleEngineConfiguration->Rule->Parameters->SimpleItem viii) Profile->PTZConfiguration->DefaultAbsolutePanTiltPositionSpace ix) Profile->PTZConfiguration->DefaultAbsoluteZoomPositionSpace x) Profile->PTZConfiguration->DefaultRelativePanTiltTranslationSpace

	<ul style="list-style-type: none"> xi) Profile->PTZConfiguration->DefaultRelativeZoomTranslationSpace xii) Profile->MetadataConfiguration
--	--

4.3.1.3 Get media profile

Command	GetProfile
Requirement	MUST
Implemented(Y/N)	Y
Note	<p>The not implemented fields of GetProfileResponse:</p> <ul style="list-style-type: none"> i) Profile->VideoEncoderConfiguration->H264Configuration → H264ProfileProfile->Main ii) Profile->VideoEncoderConfiguration->H264Configuration → H264ProfileProfile->High iii) Profile->VideoEncoderConfiguration->MPEG4 iv) Profile->AudioEncoderConfiguration->Encoding->G711 v) Profile->AudioEncoderConfiguration->Encoding->G726 vi) Profile->AudioEncoderConfiguration->Encoding->AAC(We only support G723.1) vii) Profile->VideoAnalyticsConfiguration->AnalyticsEngineConfiguration->AnalyticsModule->Parameters->ElementItem viii) Profile->VideoAnalyticsConfiguration->RuleEngineConfiguration->Rule->Parameters->SimpleItem ix) Profile->PTZConfiguration->DefaultAbsolutePanTiltPositionSpace x) Profile->PTZConfiguration->DefaultAbsoluteZoomPositionSpace xi) Profile->PTZConfiguration->DefaultRelativePanTiltTranslationSpace

	xii) Profile->PTZConfiguration->DefaultRelativeZoomTranslationSpace i) Profile->MetadataConfiguration
--	--

4.3.1.4 Add video source configuration to a profile

Command	AddVideoSourceConfiguration
Requirement	MUST
Implemented(Y/N)	Y
Note	

4.3.1.5 Add video encoder configuration to a profile

Command	AddVideoEncoderConfiguration
Requirement	MUST
Implemented(Y/N)	Y
Note	

4.3.1.6 Add audio source configuration to a profile

Command	AddAudioSourceConfiguration
Requirement	An NVT that supports audio streaming from NVT to NVC MUST support addition of audio source to a profile through the AddAudioSourceConfiguration command.
Implemented(Y/N)	Y
Note	

4.3.1.7 Add audio encoder configuration to a profile

Command	AddAudioEncoderConfiguration
----------------	------------------------------

Requirement	An NVT that supports audio streaming from NVT to NVC MUST support addition of audio configurations to a profile through the AddAudioEncoderConfiguration command.
Implemented(Y/N)	Y
Note	Our NVT only supports G723.1 audio encoding algorithm.

4.3.1.8 Add PTZ configuration to a profile

Command	AddPTZConfiguration
Requirement	An NVT that supports PTZ control MUST support addition of PTZ configurations to a profile through the AddPTZConfiguration command.
Implemented(Y/N)	Y
Note	

4.3.1.9 Add video analytics configuration to a profile

Command	AddVideoAnalytics
Requirement	An NVT that supports video analytics MUST support addition of video analytics configurations to a profile through the AddVideoAnalyticsConfiguration command.
Implemented(Y/N)	Y
Note	

4.3.1.10 Add metadata configuration to a profile

Command	AddMetadataConfiguration
Requirement	MUST
Implemented(Y/N)	N
Note	

4.3.1.11 Remove video source configuration from a profile

Command	RemoveVideoSourceConfiguration
Requirement	MUST
Implemented(Y/N)	Y
Note	

4.3.1.12 Remove video encoder configuration from a profile

Command	RemoveVideoEncoderConfiguration
Requirement	MUST
Implemented(Y/N)	Y
Note	

4.3.1.13 Remove audio source configuration from a profile

Command	RemoveAudioSourceConfiguration
Requirement	An NVT that supports audio streaming from NVT to NVC MUST support removal of an audio source from a profile through the RemoveAudioSourceConfiguration command.
Implemented(Y/N)	Y
Note	

4.3.1.14 Remove audio encoder configuration from a profile

Command	RemoveAudioEncoderConfiguration
Requirement	An NVT that supports audio streaming from NVT to NVC MUST support removal of audio configurations from a profile through the RemoveAudioEncoderConfiguration command.
Implemented(Y/N)	Y

Note	Our NVT only supports G723.1 audio encoding algorithm.
-------------	--

4.3.1.15 Remove PTZ configuration from a profile

Command	RemovePTZConfiguration
Requirement	An NVT that supports PTZ control MUST support removal of PTZ configurations from a profile through the RemovePTZConfiguration command.
Implemented(Y/N)	Y
Note	

4.3.1.16 Remove video analytics configuration from a profile

Command	RemoveVideoAnalyticsConfiguration
Requirement	An NVT that supports video analytics MUST support removal of an analytics configuration from a profile through the RemoveVideoAnalyticsConfiguration command.
Implemented(Y/N)	Y
Note	

4.3.1.17 Remove metadata configuration from a profile

Command	RemoveMetadataConfiguration
Requirement	MUST
Implemented(Y/N)	N
Note	

4.3.1.18 Delete media profile

Command	DeleteProfile
----------------	---------------

Requirement	MUST
Implemented(Y/N)	Y
Note	

4.3.2 VideoSource

4.3.2.1 Get video source configurations

Command	GetVideoSourceConfigurations
Requirement	MUST
Implemented(Y/N)	Y
Note	

4.3.3 Video Source configuration

4.3.3.1 Get compatible video source configurations

Command	GetCompatibleVideoSourceConfigurations
Requirement	MUST
Implemented(Y/N)	Y
Note	

4.3.3.2 Get video source configuration options

Command	GetVideoSourceConfigurationOptions
Requirement	MUST
Implemented(Y/N)	Y
Note	

4.3.3.3 Modify a video source configuration

Command	SetVideoSourceConfiguration
Requirement	MUST
Implemented(Y/N)	Y
Note	

4.3.4 Video Encoder Configuration

4.3.4.1 Get video encoder configurations

Command	GetVideoEncoderConfigurations
Requirement	MUST
Implemented(Y/N)	Y
Note	<p>The not implemented fields of GetVideoEncoderConfigurationsResponse:</p> <ul style="list-style-type: none"> i) Configurations->VideoEncoderConfiguration->H264Configuration->H264Profile->Main ii) Configurations->VideoEncoderConfiguration->H264Configuration->H264Profile->High iii) Configurations->MPEG4

4.3.4.2 Get video encoder configuration

Command	GetVideoEncoderConfiguration
Requirement	MUST

Implemented(Y/N)	Y
Note	<p>The not implemented fields of GetVideoEncoderConfigurationResponse:</p> <ul style="list-style-type: none"> i) Configuration->VideoEncoderConfiguration->H264Configuration->H264ProfileProfile->Main ii) Configuration->VideoEncoderConfiguration->H264Configuration->H264ProfileProfile->High iii) Configuration->MPEG4

4.3.4.3 Get compatible video encoder configurations

Command	GetCompatibleVideoEncoderConfigurations
Requirement	MUST
Implemented(Y/N)	Y
Note	<p>The not implemented fields of GetCompatibleVideoEncoderConfigurationsResponse:</p> <ul style="list-style-type: none"> i) Configuration->VideoEncoderConfiguration->H264Configuration->H264ProfileProfile->Main ii) Configuration->VideoEncoderConfiguration->H264Configuration->H264ProfileProfile->High iii) Configuration->MPEG4

4.3.4.4 Get video encoder configuration options

Command	GetVideoEncoderConfigurationOptions
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Requirement	MUST
Implemented(Y/N)	Y
Note	<p>The not implemented fields of GetVideoEncoderConfigurationOptionsResponse:</p> <ul style="list-style-type: none"> i) Options->JPEG ii) Options->MPEG4 iii) Options->H264->H264Options->H264ProfilesSupported->Main iv) Options->H264->H264Options->H264ProfilesSupported->High

4.3.4.5 Modify a video encoder configuration

Command	SetVideoEncoderConfiguration
Requirement	MUST
Implemented(Y/N)	Y
Note	<p>The not implemented fields of SetVideoEncoderConfiguration-Request:</p> <ul style="list-style-type: none"> i) Configuration->MPEG4 ii) Configuration->H264 iii) Options->H264->H264Options->H264ProfilesSupported->Main iv) Options->H264->H264Options->H264ProfilesSupported->High

4.3.5 Audio Source

4.3.5.1 Get audio sources

Command	GetAudioSources
Requirement	MUST
Implemented(Y/N)	Y
Note	

4.3.6 Audio source configuration

4.3.6.1 Get audio source configurations

Command	GetAudioSourceConfigurations
Requirement	MUST
Implemented(Y/N)	Y
Note	

4.3.6.2 Get audio source configuration

Command	GetAudioSourceConfigurations
Requirement	MUST
Implemented(Y/N)	Y
Note	

4.3.6.3 Get compatible audio source configurations

Command	GetCompatibleAudioSourceConfigurations
Requirement	MUST
Implemented(Y/N)	Y
Note	

4.3.6.4 Get audio source configuration options

Command	GetAudioSourceConfigurationOptions
Requirement	An NVT that supports audio streaming from NVT to NVC MUST support the listing of available audio parameter options (for a given profile and configuration) through the GetAudioSourceConfigurationOptions command.
Implemented(Y/N)	Y
Note	

4.3.6.5 Modify an audio source configuration

Command	SetAudioSourceConfiguration
Requirement	An NVT that supports audio streaming from NVT to NVC MUST support the configuration of audio source parameters through the SetAudioSourceConfiguration command.
Implemented(Y/N)	Y
Note	

4.3.7 Audio encoder configurations

4.3.7.1 Get audio encoder configurations

Command	GetAudioEncoderConfigurations
Requirement	An NVT that supports audio streaming from NVT to NVC MUST support the listing of available audio encoder configurations
Implemented(Y/N)	Y
Note	Our NVT only supports G711U audio encoding algorithm.

4.3.7.2 Get audio encoder configuration

Command	GetAudioEncoderConfiguration
Requirement	An NVT that supports audio streaming from NVT to NVC MUST support the listing of a specific audio encoder configuration through the GetAudioEncoderConfiguration command.
Implemented(Y/N)	Y
Note	Our NVT only supports G711U audio encoding algorithm.

4.3.7.3 Get compatible audio encoder configurations

Command	GetCompatibleAudioEncoderConfigurations
Requirement	An NVT that supports audio streaming from NVT to NVC MUST support listing of compatible (with a specific profile) audio encoder configurations through the GetCompatibleAudioEncoderConfigurations command.
Implemented(Y/N)	Y
Note	Our NVT only supports G711U audio encoding algorithm.

4.3.7.4 Get audio encoder configuration options

Command	GetAudioEncoderConfigurationOptions
Requirement	An NVT that supports audio streaming from NVT to NVC MUST support the listing of available audio encoder parameter options (for a given profile and configuration) through the GetAudioEncoderConfigurationOptions command.
Implemented(Y/N)	Y
Note	Our NVT only supports G711U audio encoding algorithm.

4.3.7.5 Modify audio encoder configurations

Command	SetAudioEncoderConfiguration
Requirement	An NVT that supports audio streaming from NVT to NVC MUST support the configuration of audio encoder parameters
Implemented(Y/N)	Y
Note	Our NVT only supports G711U audio encoding algorithm.

4.3.8 video analytics configurations

4.3.8.1 Get video analytics configurations

Command	GetVideoAnalyticsConfigurations
Requirement	An NVT that supports video analytics MUST support the listing of available video analytics configuration through the GetVideoAnalyticsConfigurations command.
Implemented(Y/N)	Y
Note	The not implemented fields of GetVideoAnalyticsConfigurations-Response:

	<ul style="list-style-type: none"> i) Configurations->AnalyticsEngineConfiguration->Analytics Module->Parameters->ElementItem ii) Configurations->RuleEngineConfiguration->Rule->Parameters->SimpleItem.
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4.3.8.2 Get video analytics configuration

Command	GetVideoAnalyticsConfiguration
Requirement	An NVT that supports video analytics MUST support the listing of a specific video analytics configuration through the GetVideoAnalyticsConfiguration command.
Implemented(Y/N)	Y
Note	<p>The not implemented fields of GetVideoAnalyticsConfiguration-Response:</p> <ul style="list-style-type: none"> i) Configuration->AnalyticsEngineConfiguration->AnalyticsModule->Parameters->ElementItem ii) Configuration->RuleEngineConfiguration->Rule->Parameters->SimpleItem

4.3.8.3 Get compatible video analytics configurations

Command	GetCompatibleVideoAnalyticsConfigurations
Requirement	An NVT that supports video analytics MUST support the listing of compatible (with a specific profile) video analytics configuration through the GetCompatibleVideoAnalyticsConfigurations command.
Implemented(Y/N)	Y
Note	The not implemented fields of

	<p>GetCompatibleVideoAnalytics-ConfigurationsResponse:</p> <ul style="list-style-type: none"> i) Configurations->AnalyticsEngineConfiguration->AnalyticsModule->Parameters->ElementItem ii) Configurations->RuleEngineConfiguration->Rule->Parameters->SimpleItem
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4.3.8.4 Modify a video analytics configuration

Command	SetVideoAnalyticsConfiguration
Requirement	An NVT that supports video analytics MUST support the configuration of video analytics parameters through the SetVideoAnalyticsConfiguration command.
Implemented(Y/N)	Y
Note	<p>The not implemented fields of SetVideoAnalyticsConfiguration-Request:</p> <ul style="list-style-type: none"> i) Configuration->AnalyticsEngineConfiguration ii) Configuration->RuleEngineConfiguration <p>We only support modifying the name of analytics configuration.</p>

4.3.9 Metadata configuration

4.3.9.1 Get metadata configurations

Command	GetMetadataConfigurations
Requirement	MUST
Implemented(Y/N)	N
Note	

4.3.9.2 Get metadata configuration

Command	GetMetadataConfiguration
Requirement	MUST
Implemented(Y/N)	N
Note	

4.3.9.3 Get compatible metadata configurations

Command	GetCompatibleMetadataConfigurations
Requirement	MUST
Implemented(Y/N)	N
Note	

4.3.9.4 Get metadata configuration options

Command	GetMetadataConfigurationOptions
Requirement	MUST
Implemented(Y/N)	N
Note	

4.3.9.5 Modify a metadata configuration

Command	SetMetadataConfiguration
Requirement	MUST
Implemented(Y/N)	N
Note	

4.3.10 Stream URI

4.3.10.1 Request stream URI

Command	GetStreamUri
Requirement	MUST
Implemented(Y/N)	Y
Note	

4.3.11 Snapshot

4.3.11.1 Request snapshot URI

Command	GetSnapshotUri
Requirement	MUST
Implemented(Y/N)	N
Note	

4.3.12 Multicast

4.3.12.1 Start multicast streaming

Command	StartMulticastStreaming
Requirement	An NVT that supports video or audio multicast streaming MUST support the starting of a multicast stream through the StartMulticastStreaming command.
Implemented(Y/N)	N
Note	

4.3.12.2 Stop multicast streaming

Command	StopMulticastStreaming
Requirement	An NVT that supports video or audio multicast streaming MUST support the stopping of a multicast stream through the StopMulticastStreaming command.
Implemented(Y/N)	N
Note	

4.3.12.3 Set synchronization point

Command	StopMulticastStreaming
Requirement	MUST
Implemented(Y/N)	N
Note	

4.4 Event handling

An event is an action or occurrence detected by an NVT that an NVC can subscribe to. Events are handled through the event service. This NVT MUST provide an event services as defined in [ONVIF Event WSDL].

4.4.1 Get event properties

Command	GetEventProperties
Requirement	MUST
Implemented(Y/N)	Y
Note	

4.4.2 Subscribe

Command	Subscribe
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Requirement	MUST
Implemented(Y/N)	Y
Note	The not implemented fields of GetImagingSettingsResponse: i) Subscribe->ConsumerReference->Metadata ii) Subscribe->SubscriptionPolicy

4.4.3 Unsubscribe

Command	Unsubscribe
Requirement	MUST
Implemented(Y/N)	Y
Note	

4.4.4 GetCurrentMessage

Command	GetCurrentMessage
Requirement	MUST
Implemented(Y/N)	Y
Note	

4.4.5 Renew

Command	Renew
Requirement	MUST
Implemented(Y/N)	Y
Note	

4.4.6 Notify

Command	Notify
Requirement	MUST
Implemented(Y/N)	Y
Note	

4.4.7 Synchronization Point

Command	SetSynchronizationPoint
Requirement	MUST
Implemented(Y/N)	N
Note	

4.4.8 Create pull point subscription

Command	CreatePullPointSubscription
Requirement	MUST
Implemented(Y/N)	N
Note	

4.4.9 Pull messages

Command	PullMessages
Requirement	MUST
Implemented(Y/N)	N
Note	

4.4.10 GetMessages

Command	GetMessages
Requirement	MUST
Implemented(Y/N)	N
Note	

4.4.11 PauseSubscription

Command	PauseSubscription
Requirement	MUST
Implemented(Y/N)	N
Note	

4.4.12 ResumeSubscription

Command	ResumeSubscription
Requirement	MUST
Implemented(Y/N)	N
Note	

4.4.13 DestroyPullPoint

Command	DestroyPullPoint
Requirement	MUST
Implemented(Y/N)	N
Note	

4.5 PTZ control

The PTZ service provides operations used to perform NVT pan, tilt and zoom control. This NVT with pan, tilt and zoom capability and support the PTZ service.

Only continuous motion is supported. Supporting coordinate systems are:

- Continuous Velocity Spaces
- Generic Pan/Tilt Speed Space
- Generic Zoom Speed Space

The corresponding URIs:

- <http://www.onvif.org/ver10/tptz/PanTiltSpaces/VelocityGenericSpace>
- <http://www.onvif.org/ver10/tptz/ZoomSpaces/VelocityGenericSpace>
- <http://www.onvif.org/ver10/tptz/PanTiltSpaces/GenericSpeedSpace>
- <http://www.onvif.org/ver10/tptz/ZoomSpaces/ZoomGenericSpeedSpace>

4.5.1 PTZ Node

4.5.1.1 GetNodes

Command	GetNodes
Requirement	MUST
Implemented(Y/N)	Y
Note	<p>The not implemented fields of GetNodesResponse:</p> <ul style="list-style-type: none"> i) PTZNode->SupportedPTZSpaces->AbsolutePanTiltPositionSpace ii) PTZNode->SupportedPTZSpaces->AbsoluteZoomPositionSpace iii) PTZNode->SupportedPTZSpaces->RelativePanTiltTranslationSpace iv) PTZNode->SupportedPTZSpaces->RelativeZoomTransl

	ationSpace v) PTZNode->AuxiliaryCommands
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4.5.1.2 GetNode

Command	GetNode
Requirement	MUST
Implemented(Y/N)	Y
Note	<p>The not implemented fields of GetNodeResponse:</p> <ul style="list-style-type: none"> i) PTZNode->SupportedPTZSpaces->AbsolutePanTiltPositionSpace ii) PTZNode->SupportedPTZSpaces->AbsoluteZoomPositionSpace iii) PTZNode->SupportedPTZSpaces->RelativePanTiltTranslationSpace iv) PTZNode->SupportedPTZSpaces->RelativeZoomTranslationSpace v) PTZNode->AuxiliaryCommands

4.5.2 PTZ Configuration

4.5.2.1 GetConfigurations

Command	GetConfigurations
Requirement	MUST
Implemented(Y/N)	Y
Note	<p>The not implemented fields of GetConfigurationsResponse:</p> <ul style="list-style-type: none"> i) PTZConfiguration->DefaultAbsolutePanTiltPositionSpace ii) PTZConfiguration->DefaultAbsoluteZoomPositionSpace

	<ul style="list-style-type: none"> iii) PTZConfiguration->DefaultRelativePanTiltTranslationSpace iv) PTZConfiguration->DefaultRelativeZoomTranslationSpace
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4.5.2.2 GetConfiguration

Command	GetConfiguration
Requirement	MUST
Implemented(Y/N)	Y
Note	<p>The not implemented fields of GetConfigurationResponse:</p> <ul style="list-style-type: none"> i) PTZConfiguration->DefaultAbsolutePanTiltPositionSpace ii) PTZConfiguration->DefaultAbsoluteZoomPositionSpace iii) PTZConfiguration->DefaultRelativePanTiltTranslationSpace iv) PTZConfiguration->DefaultRelativeZoomTranslationSpace

4.5.2.3 GetConfigurationOptions

Command	GetConfigurationOptions
Requirement	MUST
Implemented(Y/N)	Y
Note	<p>The not implemented fields of GetConfigurationResponse:</p> <ul style="list-style-type: none"> i) PTZConfigurationOptions->Spaces->DefaultAbsolutePanTiltPositionSpace ii) PTZConfigurationOptions->Spaces->DefaultAbsoluteZoomPositionSpace iii) PTZConfigurationOptions->Spaces->DefaultRelativePan

	<p>TiltTranslationSpace</p> <p>iv) PTZConfigurationOptions->Spaces->DefaultRelativeZoomTranslationSpace</p>
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4.5.2.4 SetConfiguration

Command	SetConfiguration
Requirement	MUST
Implemented(Y/N)	Y
Note	<p>The not implemented fields of SetConfigurationRequest:</p> <p>i) PTZConfiguration->UseCount</p> <p>ii) PTZConfiguration->DefaultAbsolutePanTiltPositionSpace</p> <p>iii) PTZConfiguration->DefaultAbsoluteZoomPositionSpace</p> <p>iv) PTZConfiguration->DefaultRelativePanTiltTranslationSpace</p> <p>v) PTZConfiguration->DefaultRelativeZoomTranslationSpace</p>

4.5.3 Move Operations

4.5.3.1 AbsoluteMove

Command	AbsoluteMove
Requirement	OPTIONAL
Implemented(Y/N)	N
Note	

4.5.3.2RelativeMove

Command	RelativeMove
Requirement	OPTIONAL
Implemented(Y/N)	N
Note	

4.5.3.3ContinuousMove

Command	ContinuousMove
Requirement	OPTIONAL
Implemented(Y/N)	Y
Note	

4.5.3.4Stop

Command	Stop
Requirement	MUST
Implemented(Y/N)	Y
Note	

4.5.3.5GetStatus

Command	GetStatus
Requirement	MUST
Implemented(Y/N)	N
Note	

4.5.4 Preset operations

4.5.4.1 SetPreset

Command	SetPreset
Requirement	This operation MUST be implemented for PTZ Nodes supporting presets.
Implemented(Y/N)	Y
Note	

4.5.4.2 GetPresets

Command	GetPresets
Requirement	This operation MUST be implemented for PTZ Nodes supporting presets.
Implemented(Y/N)	Y
Note	The not implemented fields of SetConfigurationRequest: i) Preset->PTZPosition

4.5.4.3 GotoPreset

Command	GotoPreset
Requirement	This operation MUST be implemented for PTZ Nodes supporting presets.
Implemented(Y/N)	Y
Note	The not implemented fields of GotoPresetRequest: Speed

4.5.4.4 RemovePreset

Command	RemovePreset
Requirement	This operation MUST be implemented for PTZ Nodes supporting presets
Implemented(Y/N)	Y
Note	

4.5.4.5 GotoHomePosition

Command	GotoHomePosition
Requirement	This operation MUST be implemented for PTZ Nodes supporting home positions.
Implemented(Y/N)	Y
Note	The not implemented fields of GotoHomePositionRequest: Speed

4.5.4.6 SetHomePosition

Command	SetHomePosition
Requirement	OPTIONAL
Implemented(Y/N)	N
Note	

4.5.4.7 SendAuxiliaryCommand

Command	SendAuxiliaryCommand
Requirement	OPTIONAL
Implemented(Y/N)	N
Note	

4.6 Video analytics

4.6.1 Rule Interface

If the NVT supports a Rule Engine as defined by ONVIF, then it MUST implement the following

operations to manage rules. The Create/Delete/Modify operations are atomic, meaning that either

all modifications can be processed or the complete operation MUST fail.

4.6.1.1 Get Supported rules

Command	GetSupportedRules
Requirement	The NVT MUST indicate the rules it supports by implementing the subsequent operation.
Implemented(Y/N)	Y
Note	The not implemented fields of GetSupportedRulesResponse: <ul style="list-style-type: none"> i) SupportedRules->RuleDescription->Parameters->SimpleItemDescription ii) SupportedRules->RuleDescription->Messages->Source->ElementItemDescription iii) SupportedRules->RuleDescription->Messages->Key iv) SupportedRules->RuleDescription->Messages->Data->ElementItemDescription

4.6.1.2 Get Rules

Command	GetRules
Requirement	
Implemented(Y/N)	Y
Note	The not implemented fields of GetRulesResponse: <ul style="list-style-type: none"> i) Rule->Parameters->SimpleItem

4.6.1.3 Create rules

Command	CreateRules
Requirement	
Implemented(Y/N)	Y
Note	The not implemented fields of CreateRulesRequest: i) Rule->Parameters->SimpleItem

4.6.1.4 Modify Rules

Command	ModifyRules
Requirement	
Implemented(Y/N)	Y
Note	The not implemented fields of ModifyRulesRequest: i) Rule->Parameters->SimpleItem

4.6.1.5 Delete Rules

Command	DeleteRules
Requirement	
Implemented(Y/N)	Y
Note	

4.6.2 Analytics Modules Interface

4.6.2.1 GetSupportedAnalyticsModules

Command	GetSupportedAnalyticsModules
Requirement	MUST

Implemented(Y/N)	N
Note	

4.6.2.2 GetAnalytics Modules

Command	GetAnalyticsModules
Requirement	
Implemented(Y/N)	N
Note	

4.6.2.3 CreateAnalytics Modules

Command	CreateAnalyticsModules
Requirement	
Implemented(Y/N)	N
Note	

4.6.2.4 ModifyAnalytics Modules

Command	ModifyAnalyticsModules
Requirement	
Implemented(Y/N)	N
Note	

4.6.2.5 DeleteAnalytics Modules

Command	DeleteAnalyticsModules
Requirement	
Implemented(Y/N)	N
Note	

