ONVIF™
Network Video Analytics Device Definition

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CONTENTS

1 Scope

This document contains the definition for the ONVIF Network Video Analytics device type. This document describes the mandatory and optional services for this entity but does not include the description of the services themselves. The services are described in separate documents. Use the ONVIF Specification Document Map to locate the documentation for the relevant services.

2 Normative references

ONVIF Core Specification Version 2.1
<http://www.onvif.org/specs/core/ONVIF-Core-Spec-v210.pdf>
ONVIF Video Analytics Service Specification Version 2.1
<http://www.onvif.org/specs/srv/analytics/ONVIF-VideoAnalytics-Service-Spec-v210.pdf>
ONVIF Video Analytics Device Service Specification Version 2.1
<http://www.onvif.org/specs/srv/analytics/ONVIF-VideoAnalyticsDevice-Service-Spec-v210.pdf>
ONVIF Receiver Service Specification Version 2.1
<http://www.onvif.org/specs/srv/rcv/ONVIF-Receiver-Service-Spec-v210.pdf>
ONVIF Streaming Specification Version 2.1
<http://www.onvif.org/specs/stream/ONVIF-Streaming-Spec-v210.pdf>

3 Terms and Definitions

3.1 Definitions

Network Video Analytics (NVA)	A device that performs analysis on data received from a streaming device, such as an NVT, or a storage device, such as an NVS.

3.2 Abbreviations

NVA	Network Video Analytcis
ONVIF	Open Network Video Interface Forum

4 Overview

A Network Video Analytics (NVA) device is an ONVIF device that performs analysis on media data and meta data received from from an IP streaming device. For example, an NVA may be an analytics server device that receives and analyses live data from a Network Video Transmitter to generate events, or analyses recorded data from a Network Video Storage device, to perform forensic searches. Evaluations may involve more than one media stream or metadata enhanced media stream at a time.

An NVA exposes its functionality through a number of services that are provided by the ONVIF standard. A number of services are mandatory for each type of ONVIF device. The device may support other services and the device signals availability of optional services via the device discovery service.

An NVA implements the following services to provide its core functionality:

Device service enables an NVA to provide device management functionality such as device capabilities, system and network settings, security settings and firmware upgrade.

Event service enables an NVA to send events to clients.

Video Analytics service enables a client to configure the video analytic algorithms of the NVA.

Video Analytics Device service enables a client to configure NVA functionality, assign input streams and analytics to be performed as well as control analytics processes and parameter.

Receiver service enables an NVA to receive media streams from a media source e.g. a Network Video Transmitter (NVT).

5 NVA Requirements (normative)

5.1 Services

Table 1 shows which services are required for the NVA device type. Mandatory services are marked with ‘M’ and services that are mandatory if a related feature is supported by the device are marked with ‘C’. Optional services are marked with ‘O’.

Table 1: Service requirements for the NVA device type

	Required?
Device	M
Event	M
Analytics	M
Analytics Device	M
Receiver	M

An NVA may include additional ONVIF services not shown in Table 1.

5.2 Device Discovery

An NVA shall implement device discovery as specified in the ONVIF Core Specification.

The basic capabilities and other properties of a device are defined by a number of scope parameters. The NVA shall include the general scope parameters defined in the ONVIF Core Specification. In addition an NVA shall include the specific scope parameters as presented in Table 2. Apart from these pre-defined parameters, it shall be possible to set any scope parameter as defined by the device owner.

Scope parameters can be listed and set through the commands provided by the Device service, defined in the ONVIF Core Specification.

Table 2: Scope parameters

Category	Defined values	Description
type	Network_Video_Analytic	The network video analytic scope indicates if the device is an NVA compliant device. An NVA shall include a scope entry with this value in its scope list