ONVIF® | Standardizing IP Connectivity for Physical Security
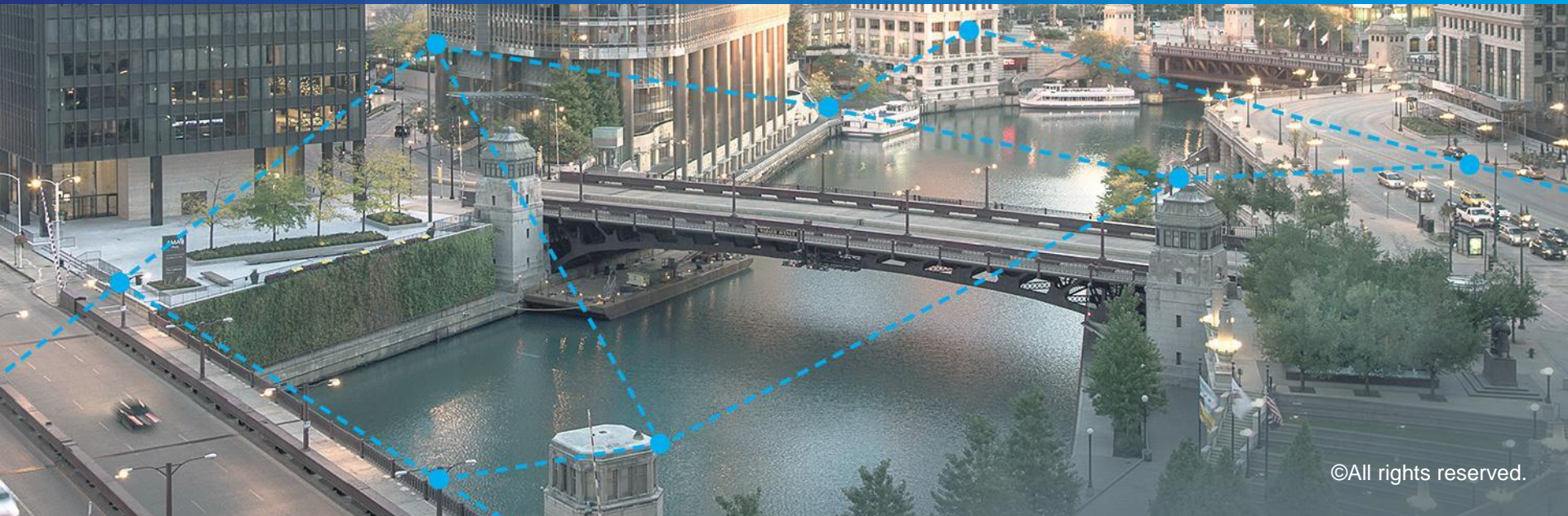
April 2024

# ONVIF Add-on Concept & TLS Configuration Add-on Explained

Topics

- ONVIF Add-on Concept

- TLS Configuration Add-on

- Use Cases & Scenarios

- Obtaining Conformance for an Add-On

- Conclusion

- Q&A

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ONVIF Add-on Concept

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ONVIF Add-on

- One or more features that solve one use case
  - Not enough to qualify as a profile by itself
- Allows for version handling
  - Features can be added/removed if there is market justification
- Devices/clients claiming add-on conformance must:
  - Pass add-on conformance tests
  - Conform to an ONVIF profile
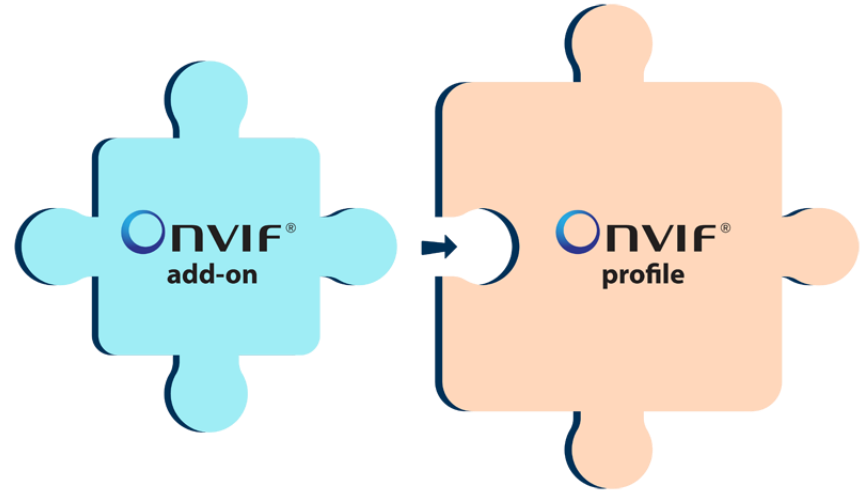
Benefits of Add-on

- For manufacturers
  - Allows ONVIF profile conformant device/client to claim conformance to additional capabilities outside of profiles

  - Easier and quicker to develop and release due to its limited features as compared with a profile

- For end-users and system integrators
  - Flexibility for market-specific scenarios
  - Interoperability
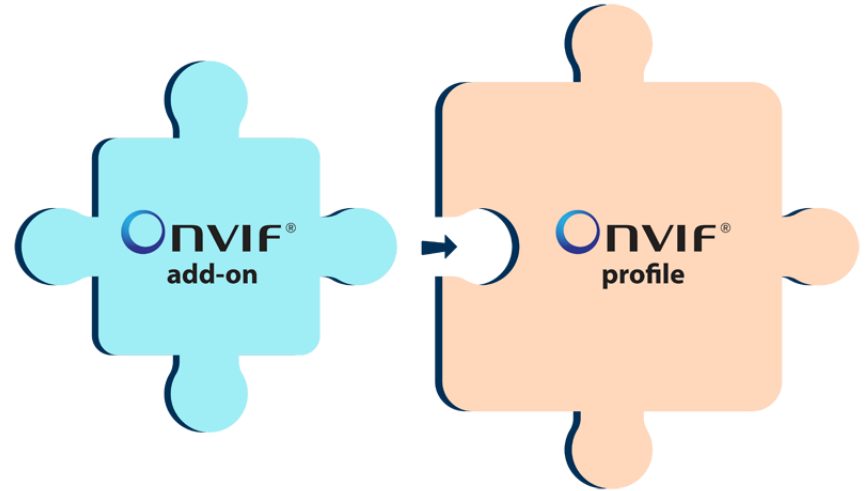
Profile vs. Add-on

Key Differences and Similarities	Applicable for ONVIF profile	Applicable for ONVIF add-on
Comprehensive enough to allow functional product development on its own	Yes	No
Adaptable through version handling	No	Yes
Covers specifications for both client and device	Yes	Yes
Both client and device must pass conformance tests to claim conformance	Yes	Yes
Can be proposed by any ONVIF member, but can only be developed by ONVIF full and contributing members	Yes	Yes

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ONVIF TLS Configuration Add-on

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TLS Configuration Add-on

For encrypted communication using Transport Layer Security (TLS)

TLS encrypts communications to make it more difficult for cyber threats such as eavesdropping and intrusions to occur

First ONVIF add-on, enabling secure communications in physical security systems when using products conformant with the add-on

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Why is it needed?

- Cybersecurity is increasingly a priority for businesses

- Key market demand

  - Standardized way to secure communications between IP-based physical security products from different manufacturers

What is it?

For encrypted communication using TLS

- Provides a baseline for encrypted communications between a client and device that conform with the ONVIF add-on

- Regardless of brand, a client with this add-on will be able to configure and update the TLS settings on a device with the same add-on

Use Cases | Scenarios

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Use Cases

Preventing	• TLS secures communications between VMS and devices, ensuring authentication credentials are not stolen during transmission • Allows VMS to confirm the identity of the camera using certificates
Securing	• Prevent unknown parties from observing video data from cameras by encrypting video streams

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Scenarios

The TLS Configuration Add-on can be bundled easily with other profiles and add-ons

Combined with Profile T to encrypt video traffic	Combined with Profile M for the security of analytics data

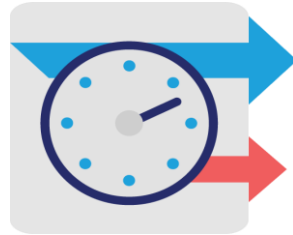ONVIF® | Standardizing IP Connectivity for Physical Security

Obtaining Conformance for an Add-on

Value of Add-on Conformance

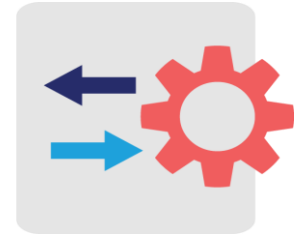Add-on conformance allows ONVIF profile conformant devices/clients to claim conformance to additional capabilities, allowing for even greater functionality.
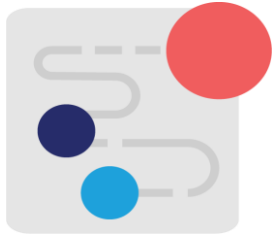
Streamlined process with limited features

Easier and quicker to develop and release due to its limited features as compared with a profile

Customization options for specific requirements

Adaptability to changing technology and market needs

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ONVIF Conformance Process

Self-declaration by ONVIF member for its products

Implement an ONVIF add-on with an ONVIF profile

Pass device/client test tool
New tool versions released every June & December

Submission to ONVIF

DoC
Interface Guide
Feature list

Developers' Plugfest

Verification with other member conformant products

For details, see the ONVIF Conformance Process at onvif.org/profiles/conformance

How to find Add-on Conformant Products

- Check that the product and firmware/software version is listed here on the ONVIF website at: onvif.org/conformant-products/

- Site is the only authoritative source for all ONVIF conformant products

Product Search

Conclusion

Add-on Concept and TLS Configuration

Add-on Concept

An adaptable feature set that complements existing profiles

Mandatory add-on conformance tests

TLS Configuration

Encrypted communication in physical security systems

First ONVIF add-on

A standardized way for a client to be able to configure and update TLS settings on a device

Benefits

	Add-on Concept	*TLS Configuration Add-on*
For manufacturers	- Quick responsiveness - Flexibility of features	A differentiating feature for the ONVIF conformant product portfolio
For end-users and system integrators	- Flexibility for market-specific scenarios - No need to look outside the ONVIF ecosystem for specific demands	- Unified configurations and updates of TLS setting - More peace of mind from cyber threats

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Thank you

For more information, visit **www.onvif.org**

Contact us at **https://help.onvif.org**