Request for Quotation (RfQ)

For ONVIF Technical Services Committee,

Device Testing Tool Working Group,

Profile D Working Group

&

Profile M Working Group

Projects “Kirin” & “Left Hand”

Circulation : June 14, 2019

Quotation Due : June 28, 2019

Contents

1. Introduction

ONVIF™ is an open industry forum for the development of a global standard for the interface of IP-based physical security products. Information about ONVIF, its objectives and members can be found on http://www.onvif.org/.

The ONVIF Device Test Tool will be used by the members of ONVIF to test conformance of IP-based physical security products with the ONVIF Test Specification, which in turn is based on the ONVIF Profile Specifications and ONVIF Network Interface Specifications, and WSDL and XML schemas, as described in the ONVIF Conformance Process Specification.

2. Abbreviations

WG	Working Group
DTT WG	ONVIF Device Testing Working Group
Profile D WG	ONVIF Profile D Working Group
Profile M WG	ONVIF Profile M Working Group
DTT	ONVIF Device Test Tool
ODP	ONVIF Developer's Plugfest

3. Project Purpose

The purpose of this project is to produce two releases of the ONVIF Device Test Tool and ONVIF Test Specification for Profile S, Profile G, Profile C, Profile Q, Profile A, Profile T and for profiles D and M which are under development.

This project will deliver an incremental release of the ONVIF Device Test Tool and ONVIF Test Specification at the end of project Kirin ('v19.12') followed by another incremental release at the end of project Left Hand ('v20.06').

4. Service Requested

- Update the Test Specification and Test Tool for ONVIF Devices based on two successive Scopes-of-Work: ***Project*** Kirin for a December 2019 release and ***Project*** Left Hand for a June 2020 release. It will require development of the ONVIF Device Test Tool, writing test cases for the ONVIF Test Specification and implementation of the test cases in the ONVIF Device Test Tool.
- Additional work items and requirements might be identified during the project and will be prioritized by the workgroups before being submitted to the contractor.

- Coordinate the development effort made by the other ONVIF working groups working with the Contractor. The Device Testing WG is responsible for the integration and coordination of the different ONVIF working group development efforts on the ONVIF Device Test Tool and ONVIF Test Specification and will be the main point of contact to the Contractor in case of conflicts between projects run in parallel.
- Prepare documents for public release.
- Run Test Tool Clinics at relevant ONVIF Developers' Plugfests (ODP) for the purpose of practical field test, to collect member feedback and improvement suggestions and DTT member training. The Device Testing WG may assign additional tasks and priorities during the preparation period for each ODP.

For a detailed description of the service requested, see Section 4, Description of Requested Service.

5. Description of Requested Service

The service being requested MUST fulfil the following requirements. Requirement levels MUST be interpreted as described in RFC 2119[1] "Key words for use in RFCs to indicate requirement levels".

1. The projects MUST be developed in accordance with the schedule outlined in Appendix A.
2. Any deviations from the schedule outlined in Appendix A MUST be approved by ONVIF.
3. The project SHOULD use the following resources (manpower equivalent) for respective projects.

   A) Project Kirin

      i. 1200 man-hours total, including project management, design and implementation of ONVIF Device Test Tool features, new test case implementation, modification of existing test cases and bug fixing, testing, design and modification of test cases for ONVIF Test specification documents, validation of test cases, regression testing of bug fixes and modifications to existing test cases and features and updating the technical and architectural documentation of the tool.

      ii. 300 man-hours for service buffer. This number of man-hours should be allocated as a service buffer for Project Kirin. This buffer should be used in case the allocated resources above run out and additional work items need to be carried out during the project.

   B) Project Left Hand

      i. 1000 man-hours total, including project management, design and implementation of ONVIF Device Test Tool features, new test case implementation, modification of existing test cases and bug fixing, testing, design and modification of test cases for ONVIF Test specification documents, validation of test cases, regression testing of bug fixes and modifications to existing test cases and features and technical and architectural documentation.

      ii. 200 man-hours for service buffer. This number of man-hours should be allocated as a service buffer for Project Left Hand. This resource should be used in case the allocated resources above run out and additional work items need to be carried out during the project.

[1] See: http://www.ietf.org/rfc/rfc2119.txt

4. The projects MUST include the work items outlined in Appendix D, Appendix E and Appendix F. The ***DTT WG, Profile M and Profile D WG*** can at any time decide to drop or postpone a work item and the Contractor MUST rollback the changes if any progress was made on the work item at no additional charge. The scope of the project deliverables will be adjusted if necessary, to keep the release date of the official release (see Appendix A) and/or to keep the project within the resource plan (as described above).
5. Evolution tasks are marked "EVO" in their title and figure in appendix D and E. Evolution tasks are to be developed in a separate branch in the SVN repository used to host and track all ONVIF development. Once an evolution task is complete, it can be merged in the project subject to the ***DTT WG*** approval. The Contractor cannot make the decision to merge the changes until then and, upon request from the ***DTT WG***, MUST rollback any changes to the main branch and rearrange those changes in a separate branch at no additional charges if the merge is done without ***DTT WG*** approval.
6. The projects MUST deliver an ONVIF Device Test Tool and Test Specification and DUT Simulator as outlined in Appendix B and Appendix C.
7. The projects MUST follow the technical requirements outlined in Appendix G during the ONVIF Device Test Tool and DUT Simulator development.
8. The projects MUST respect the style and structure of the ONVIF Test Specification when updating the documents.
9. The final deliverables MUST pass a review before the service is considered delivered; up to 30 days might be required to complete the review. If the workgroup exceeds the 30-day period, the service will automatically be considered delivered for all payment purposes.
10. Any further maintenance and expansion work done to the ONVIF Device Test Tool and/or ONVIF Test Specification is subject to further quotations and separate contracts. A renewed cooperation of the Contractor and ONVIF for these tasks over many development steps is possible and where possible appreciated, however not guaranteed.

6. Execution of Service

The execution of the service must fulfill the following requirements:

1. The service must be executed by capable and qualified employees or sub-contractors under the same rules.
2. The Contractor MUST provide a weekly progress report to the ***DTT WG*** outlining the tasks performed and the issues encountered. The report must be done on the internal wiki for each project. It must be maintained and show what tasks have been completed, what the next tasks for next week will be and remaining time available to approve new tasks.
3. The contractor must provide the results of the regression tests executed for every release of a prototype. Regression testing of the prototypes and the final release is restricted to 64-bit versions of Windows 7 and 10 operating systems.
4. Interpretation issues encountered during development or test case writing MUST be forwarded to and handled by the corresponding working group based on the responsibilities listed in Appendix C.
5. Throughout the projects the ***DTT WG*** might call for telephone conferences and/or face-to-face meetings with the Contractor to address any possible open questions and to review the progress.

   The Contractor MUST attend those requested telephone conferences and face-to-face meetings.

   a. The Contractor may be requested to attend ONVIF Face-to-Face Meeting.
   b. The Contractor is requested to participate in the 2 ONVIF Developers' Plugfest (ODP) in RfQ time frame and shall run the 'Test Tool Clinic'.
   c. The ***DTT WG*** MUST give the Contractor a notice of at least two months in advance if participation is required.
   d. At least one technical resource and one manager assigned to the projects must be legally authorized to travel outside of their home country.

7. Protective Rights

1. ONVIF will hold all rights to the ONVIF Device Test Tool software (the development results), its source code, documentation, and related inventions, achieved by employees and sub-contractors of the Contractor.
2. ONVIF will obtain exclusive and discretional rights of use without any territorial restrictions or time limits.
3. The Contractor notifies ONVIF if and where it intends to use material in the ONVIF Device Test Tool which is affecting rights of a third party.

4. The Contractor will ensure in an appropriate way that ONVIF can claim inventions made by employees and sub-contractors of the Contractor.

8. Confidentiality

1. The Contractor MUST sign a non-disclosure agreement (NDA) with ONVIF prior to the initiation of the project. This NDA is for ONVIF to share draft technical specifications as well as other necessary non-public information of ONVIF, needed to fulfil this requested service.
2. The Contractor MUST keep all development results and related documents strictly confidential and must release them only to the ONVIF office and the assigned technical contacts of ONVIF.

9. Quotation

The quotation MUST at least contain the following information:

1. Cost of requested service and all other related costs.
2. Cost of travel expenses for two representatives of the Contractor at the Developers' Plugfest for "Device Test Tool Clinic".
    a. Required travel request: Rome (Italy), 13-15 November 2019
    b. Required travel request: Date and region to be determined, May or June 2020

    Estimate for travel expenses for two representatives of the Contractor. The Contractor may not be needed for the whole duration of the meetings. Additional representative(s) of the Contractor at the meetings is subject to approval from ONVIF.
    c. Possible travel requests for project Kirin:
        i. Kowloon (Hong Kong), 17-20 September 2019
        ii. Rome (Italy) 18-21, November 2019
    d. Possible travel requests for project Left Hand:
        i. Date and region to be determined, February/March 2020
        ii. Date and region to be determined, May/June 2020

10. References

The following ONVIF documents MUST be used as a reference in the project:

- Profile S Specification (https://www.onvif.org/profiles/profile-s/)
- Profile C Specification (https://www.onvif.org/profiles/profile-c/)
- Profile G Specification (https://www.onvif.org/profiles/profile-g/)
- Profile Q Specification (https://www.onvif.org/profiles/profile-q/)
- Profile A Specification (https://www.onvif.org/profiles/profile-a/)
- Profile T Spécification (https://www.onvif.org/profiles/profile-t/)
- Profile D Specification (under development, see contacts)
- Profile M Specification (under development, see contacts)
- Network Interface Specifications (https://www.onvif.org/profiles/specifications/)
- Device Test Specifications (https://www.onvif.org/profiles/conformance/device-test/)
- Conformance Process Specification (https://www.onvif.org/profiles/conformance/)
- Application Programmers Guide (https://www.onvif.org/profiles/whitepapers/)

These documents are to be delivered together with this document or upon request by the Contractor. These documents MAY be replaced with newer versions after the start of the project. In such a case the ***DTT WG*** will inform the Contractor and discuss appropriate actions.

11. Contacts

General contact:

ONVIF

Kevin A. Schader, *Executive Director*

onvif_ed@inventures.com

San Ramon, CA 94583

Phone: +1.925.275.6672

Fax: +1.925.275.6691

www.onvif.org

Technical Contacts:

Technical issues and questions concerning the ONVIF specifications, schemas, and this Request for Quotation MUST be addressed to:

ONVIF TSC Device Testing WG

Madhu Rao, Chairman, Device Testing WG

Phone : +91 98409 21405

E-mail : madhu.rao@developer.onvif.org

ONVIF TSC Profile D WG

Weiming Mao, Chairman, Profile D Working Group

Phone: +86 18969951205

E-mail: weiming.mao@dahuatech.com

ONVIF TSC Profile M WG

Dora Han, Chairman, Profile M Working Group

Phone: +86 15355059366

E-mail: hanhaina@hikvision.com

Appendix A - Timeline for Service

Due dates correspond to end of day in UTC time. See Appendix B for definition of deliverables.

14 Jun 2019	Circulation of this Request for Quotation
28 Jun 2019	Quotation must be received by the ***ONVIF Office*** and ***Device Testing Tool WG*** by e-mail
15 Jul 2019	Contractor selected & agreement signed

Project Kirin

30 Aug 2019	Delivery of ONVIF Device Test Tool 1st Prototype & Test Specification 1stDraft
17-20 Sep 2019	F2F Meetings in Kowloon, Hong Kong
4 Oct 2019	Delivery of ONVIF Device Test Tool 2nd Prototype & Test Specification 2nd Draft
4 Nov 2019	Delivery of ONVIF Device Test Tool 3rd Prototype & Test Specification 3rd Draft
13-15 Nov 2019	Developers' Plugfest in Rome, Italy
18-21 Nov 2019	F2F Meetings in Rome, Italy
29 Nov 2019	Delivery of ONVIF Device Test Tool & Test Specification Release Candidate
16 Dec 2019	Delivery of Device Test Tool & Test Specification v20.06

Project Left Hand

17 Feb 2020	Delivery of ONVIF Device Test Tool 1st Prototype & Test Specification 1st Draft
Feb/Mar 2020	F2F Meetings (date and region to be determined)
30 Mar 2020	Delivery of ONVIF Device Test Tool 2nd Prototype & Test Specification 2nd Draft
27 Apr 2020	Delivery of ONVIF Device Test Tool 3rd Prototype & Test Specification 3rd Draft
May/Jun 2020	Developers' Plugfest (date and region to be determined)
May/Jun 2020	F2F Meetings (date and region to be determined)
12 June 2020	Delivery of ONVIF Device Test Tool & Test Specification Release Candidate
26 June 2020	Delivery of ONVIF Device Test Tool & Test Specification v20.12

Appendix B - Definition of Deliverables

Name	Description
ONVIF Test Specification Draft	• Document template updated. • "Test Cases/Use-Cases" integrated into their corresponding Test Specification document in draft form. • History document must be provided for each specification document and kept up-to-date with each subsequent delivery.
ONVIF Test Specification Release Candidate	• Only stable "Test Cases/Use-Cases" are included in this delivery. • Total List of "Test Cases/Use-Cases" must be provided. • From that point on, only fixes requested by WG are allowed.
ONVIF Test Specification Final Release	• Issues identified in Release Candidate fixed or documented in release notes. • All tickets for the corresponding Milestone have been addressed or postponed (Kirin for December 2019 release, Left Hand for June 2020 release)
ONVIF Device Test Tool Prototype	• Partial implementation of "Test Cases/Use-Cases" validation and Test Tool features. Only tested "Test Cases/Use-Cases" and features should be delivered. • List of "Test Cases/Use-Cases" and features implemented in the prototype must also be provided.
ONVIF Device Test Tool Release Candidate	• Only stable "Test Cases/Use-Cases" and Features are included in this delivery. • From that point on, only fixes requested by WG are allowed.
ONVIF Device Test Tool Final Release	• Issues identified in Release Candidate fixed or documented in release notes. • All tickets for the corresponding Milestone have been addressed or postponed (Kirin for December 2019 release, Left Hand for June 2020 release)

Appendix C - Delivery Packages and Responsibilities

Delivery Package	Item	Target	Editing Responsibility	Review Responsibility
Test Specification	Internal Releases Notes	Workgroup	Contractor	Device Testing WG Manager
	Official Release Notes	Public	Device Testing WG	All WGs
	Base Test Specification	Public	Contractor	All WGs
	Media Test Specification	Public	Contractor	Device Testing WG
	Real Time Streaming Test Specification	Public	Contractor	Device Testing WG
	Imaging Test Specification	Public	Contractor	Device Testing WG
	PTZ Test Specification	Public	Contractor	Device Testing WG
	Door Control Test Specification	Public	Contractor	Device Testing WG
	Access Control Test Specification	Public	Contractor	Device Testing WG
	Replay Test Specification	Public	Contractor	Device Testing WG
	Receiver Test Specification	Public	Contractor	Device Testing WG
	Recording Control Test Specification	Public	Contractor	Device Testing WG
	Search Test Specification	Public	Contractor	Device Testing WG
	Advanced Security Service Test Specification	Public	Contractor	Device Testing
	Profile Q Test Specification	Public	Contractor	Device Testing WG
	Profile T Test Specification	Public	Contractor	Device Testing WG
	Profile D Test Specification	Workgroup	Contractor	Profile D WG
	Profile M Test Specification	Workgroup	Contractor	Profile M WG
	Access Rules Test Specification	Public	Contractor	Device Testing WG
	Credential Test Specification	Public	Contractor	Device Testing WG
	Schedule Test Specification	Public	Contractor	Device Testing WG
	Analytics Engine Device Test Specification	Public	Contractor	Device Testing WG
	Test Case Summary for Profile Conformance	Public	Contractor	All WGs
	Total List of Test Cases	WG	Contractor	All WGs
ONVIF Device Test Tool	Binaries	ONVIF Members	Contractor	All WGs
	Source Code	Workgroup	Contractor	All WGs
	Help Files	ONVIF Members	Contractor	Device Testing WG
	Installation Guide	ONVIF Members	Contractor	Device Testing WG
	Internal Release Notes	Workgroup	Contractor	All WGs
	Official Release Notes	ONVIF Members	Device Testing WG	All WGs
	Errata Document	ONVIF Members	Device Testing WG	Device Testing WG

Delivery Package	Item	Target	Editing Responsibility	Review Responsibility
	Test Coverage Map	Workgroup	Contractor	Device Testing WG
Profile	Profile S Specification	Public	Device Testing WG	Device Testing WG
	Profile C Specification	Public	Device Testing WG	Device Testing WG
	Profile G Specification	Public	Device Testing WG	Device Testing WG
	Profile Q Specification	Public	Device Testing WG	Device Testing WG
	Profile A Specification	Public	Device Testing WG	Device Testing WG
	Profile T Specification	Public	Device Testing WG	Device Testing WG
	Profile M Specification	Workgroup	Profile M WG	Profile M WG
	Profile D Specification	Workgroup	Profile D WG	Profile D WG

Appendix D - Project KIRIN– Scope-of-work (Service based)

The ***DTT WG, Profile M WG and Profile D WG*** use a ticket system to manage all work items for the Contractor and for the working group. The tickets can be consulted at https://wush.net/trac/onvif-ext/

Only tickets targeted at the Milestone Kirin are part of this Scope-of-work. Additional tickets will be created during the project and will be prioritized by the workgroup.

The Contractor must follow the instructions detailed here https://wush.net/trac/onvif-ext/wiki/best_practices_vendor_company when working with the tickets.

Ticket	Summary	Type	Priority
#1113	Lots of Advanced Security tests failed with Bouncy Castle v1.8.1 (Dec2015 Release)	Defect	High
Several advanced security tests fail (tests listed in the ticket) with the version of Bouncy Castle used in the tool. The vendor MUST propose a solution to the workgroup for resolving the issue.			

Ticket	Summary	Type	Priority
#1820	Profile M: Test Spec: Analytics engine-Face descriptor	New task	High
Add test cases for verifying human face metadata. For test sequence, please refer to <ONVIF_ProfileM_Test_Clarification> For xml schema, please refer to 'humanfacemetadata.xsd'			

Ticket	Summary	Type	Priority
#1821	Profile M: DTT: Analytics engine-Face descriptor	New task	High
Produce Device Test Tool that verifies face descriptor according to test case written for ticket #1820. New test cases should be located under 'Analytics'.			

Ticket	Summary	Type	Priority
#1831	Profile M: Test Spec: Metadata capabilities	New task	High
The vendor MUST add test cases for testing metadata capabilities. Add test cases for: GetSupportedMetadata GetMetadataInstance For service spec, please refer to "MetadataInfo" proposal			

Ticket	Summary	Type	Priority
#1832	Profile M: DTT: Metadata capabilities	New task	High
The vendor MUST produce Device Test Tool that verifies get metadata capabilities according to test cases written for ticket #1831. New test cases should be located under "Analytics Engine"			

Ticket	Summary	Type	Priority
#1833	Profile M: Test Spec: analytics modules configuration	New task	High
The vendor MUST add test cases for testing analytics modules configuration. Add test cases for: GetSupportedAnalyticsModules GetAnalyticsModules GetAnalyticsModuleOptions ModifyAnalyticsModules For service spec, please refer to 'Analytics.doc'			

Ticket	Summary	Type	Priority
#1834	Profile M: DTT: analytics modules configuration	New task	High
The vendor MUST produce Device Test Tool that verifies analytics modules configuration according to test cases written for ticket #1833. New test cases should be located under "Analytics"			

Ticket	Summary	Type	Priority
#1835	Profile M: Test Spec: Image sending	New task	High
The vendor MUST add test cases for testing image sending functions. Add test cases for: Sending image together with events Sending image together with metadata For service spec, please refer to 'MQTTEvents' and 'ImageSending?' proposal			

Ticket	Summary	Type	Priority
#1836	Profile M: DTT: Image sending	New task	Medium
The vendor MUST produce Device Test Tool that verifies image sending according to test cases written for ticket #1835. New test cases should be located under "Analytics"			

Ticket	Summary	Type	Priority
#1837	Profile M: Test Spec: Analytics engine-Object classification	New task	Medium
The vendor MUST add test cases for testing monitored object type classification. Add test cases for: Set monitored object type. Check returned object type is the same as set. If the device doesn't support setting monitored object type, just check the returned ObjectType?. For service spec, please refer to proposal 'LineAndAreaRuleEnhancement'			

Ticket	Summary	Type	Priority
#1838	Profile M: DTT: Analytics engine-Object classification	New task	Medium
The vendor MUST produce Device Test Tool that verifies object type according to test cases written for ticket #1837. New test cases should be located under "Analytics"			

Ticket	Summary	Type	Priority
#1839	Profile M: Test Spec: Analytics engine-Human body descriptor	New task	Medium
The vendor MUST add test cases for verifying human body metadata. For test sequence, please refer to <ONVIF_ProfileM_Test_Clarification> For xml schema, please refer to 'humanbodymetadata.xsd'.			

Ticket	Summary	Type	Priority
#1840	Profile M: DTT: Analytics engine-Human body descriptor	New task	Medium
The vendor MUST produce Device Test Tool that verifies human body descriptor according to test case written for ticket #1839. New test cases should be located under 'Analytics'.			

Ticket	Summary	Type	Priority
#1841	Profile M: Test Spec: Analytics engine-Vehicle descriptor	New task	High
The vendor MUST add test cases for verifying Vehicle descriptor. For test sequence, please refer to <ONVIF_ProfileM_Test_Clarification> For xml schema, please refer to 'metadatastream.xsd			

Ticket	Summary	Type	Priority
#1842	Profile M: DTT: Analytics engine-Vehicle descriptor	New task	High
The vendor MUST produce Device Test Tool that verifies vehicle descriptor according to test case written for ticket #1841. New test cases should be located under 'Analytics'.			

Ticket	Summary	Type	Priority
#1843	Profile M: Test Spec: Analytics engine-License plate descriptor	New task	High
The vendor MUST add test cases for verifying license plate descriptor. For test sequence, please refer to <ONVIF_ProfileM_Test_Clarification> For xml schema, please refer to 'metadatastream.xsd'.			

Ticket	Summary	Type	Priority
#1844	Profile M: DTT: Analytics engine- License plate descriptor	New task	High
The vendor MUST produce Device Test Tool that verifies license plate descriptor according to test case written for ticket #1843. New test cases should be located under 'Analytics'.			

Ticket	Summary	Type	Priority
#1845	Profile M: Test Spec: Analytics engine-Geo tracking	New task	High
The vendor MUST add test cases for verifying geolocation metadata. For test sequence, please refer to <ONVIF_ProfileM_Test_Clarification> For xml schema, please refer to 'metadatastream.xsd'.			

Ticket	Summary	Type	Priority
#1846	Profile M: DTT: Analytics engine-Geo tracking	New task	High
The vendor MUST produce Device Test Tool that verifies geolocation metadata according to test case written for ticket #1845. New test cases should be located under 'Analytics'.			

Ticket	Summary	Type	Priority
#1847	Profile M: Test Spec: Rule engine-Face recognition	New task	High
The vendor MUST add test cases for verifying face recognition. For test sequence, please refer to <ONVIF_ProfileM_Test_Clarification> For service spec, please refer to proposal 'FaceRecognition'.			

Ticket	Summary	Type	Priority
#1848	Profile M: DTT: Rule engine-Face recognition	New task	High
The vendor MUST produce Device Test Tool that verifies face recognition according to test case written for ticket #1847. New test cases should be located under 'Analytics'.			

Ticket	Summary	Type	Priority
#1849	Profile M: Test Spec: Rule engine- Vehicle & plate detection	New task	High
The vendor MUST add test cases for Vehicle & plate detection. For test sequence, please refer to <ONVIF_ProfileM_Test_Clarification> For service spec, please refer to proposal 'Vehicle & license plate detection.			

Ticket	Summary	Type	Priority
#1850	Profile M: DTT: Rule engine- Vehicle & plate detection	New task	High
The vendor MUST produce Device Test Tool that verifies Vehicle & plate detection according to test case written for ticket #1849. New test cases should be located under 'Analytics'.			

Ticket	Summary	Type	Priority
#1851	Profile M: Test Spec: Rule engine- Traffic statistics	New task	Low
The vendor MUST add test cases for Traffic statistics. For test sequence, please refer to <ONVIF_ProfileM_Test_Clarification> For service spec, please refer to proposal 'Traffic Statistics'.			

Ticket	Summary	Type	Priority
#1852	Profile M: DTT: Rule engine- Traffic statistics	New task	Low
The vendor MUST produce Device Test Tool that verifies traffic statistics according to test case written for ticket #1851. New test cases should be located under 'Analytics'.			

Ticket	Summary	Type	Priority
#1853	Profile M: Test Spec: Rule engine- Line crossing counter	New task	Low
The vendor MUST add test cases for Line crossing counter. For test sequence, please refer to <ONVIF_ProfileM_Test_Clarification> For service spec, please refer to proposal 'Line crossing counter'.			

Ticket	Summary	Type	Priority
#1854	Profile M: DTT: Rule engine- Line crossing counter	New task	Low
The vendor MUST produce Device Test Tool that verifies Line crossing counter according to test case written for ticket #1853. New test cases should be located under 'Analytics'.			

Ticket	Summary	Type	Priority
#1878	Test Spec and Test Implementation: Access Control (tns1:AccessControl/Request/Identifier)	New Task	High

The vendor MUST produce the following in the scope of this ticket:

- Create test specification to cover tns1:AccessControl/Request/Identifier event functionality based on scenarios provided in "Profile D commands" document
- Implement specified test cases in DTT
- Add required features in feature discovery specification
- Implement specified features in DTT

Ticket	Summary	Type	Priority
#1880	Test Spec: Credential Whitelisting	New Task	High

The following MUST be done by the vendor in the scope of this ticket:

- Create test specification to cover the following functionality based on scenarios provided in "Profile D commands" document:
  - GetWhitelist
  - AddToWhitelist
  - RemoveFromWhitelist
  - DeleteWhitelist
- tns1:AccessControl/AccessGranted/Identifier
- Add required features in feature discovery specification

Ticket	Summary	Type	Priority
#1881	Test Implementation: Credential Whitelisting	New Task	High

The vendor MUST produce the following test in the test tool:

- Implement specified test cases in DTT and specified features in DTT based on specifications designed in #1880

Ticket	Summary	Type	Priority
#1882	Test Spec: Credential Blacklisting	New Task	High

The vendor MUST do the following in the scope of this ticket:

Create test specification to cover the following functionality based on scenarios provided in "Profile D commands" document:

- GetBlacklist
- AddToBlacklist
- RemoveFromBlacklist
- DeleteBlacklist
- tns1:AccessControl/Denied/Identifier
  * Add required features in feature discovery specification

Ticket	Summary	Type	Priority
#1883	Test Implementation: Credential Blacklisting	New Task	High

The vendor MUST implement specified test cases and features in DTT based on specifications designed in #1882

Ticket	Summary	Type	Priority
#1866	Profile D features in DTT	Task	High

Once the Profile D features are agreed upon the required test cases must be created and implemented in DTT. This is a placeholder for future scope of work from Profile D workgroup.
Coverage map for Profile D must be updated with the tests. Ticket to be closed after all related tickets are completed.

Ticket	Summary	Type	Priority
#1642	Imaging - Check Exposure.Iris for 0 db and range validity	Defect	Medium

It is observed that the imaging tests do not seem to validate the requirement related to the Exposure.Iris parameter. The wsdl states

"Iris - optional; [float]
The fixed attenuation of input light affected by the iris (dB). 0dB maps to a fully opened iris."

The vendor MUST implement changes in the tests based on the outcome of the internal ticket (https://wush.net/trac/onvif/ticket/2384) raised to clarify the interpretation.

Ticket	Summary	Type	Priority
#1879	Test Spec and Test Implementation: Access Taken (tns1:AccessControl/AccessTaken/Identifier and tns1:AccessControl/AccessNotTaken/Identifier)	New Task	Medium

The following MUST be done by the vendor in the scope of this ticket:

- Create test specification to cover tns1:AccessControl/AccessTaken/Identifier and tns1:AccessControl/AccessNotTaken/Identifier events functionality based on scenarios provided in "Profile D commands" document
- Implement specified test cases in DTT
- Add required features in feature discovery specification

Ticket	Summary	Type	Priority
#1668	Support for client-supplied tokens in Door Control Specification	Task	Medium

The ClientSuppliedTokenSupported capability and SetDoor command have been added to Door Control Specification to be able to create or update entities using a client-supplied token.

If the ClientSuppliedTokenSupported capability is set to true, the vendor MUST implement the following test cases:

- When the door does not exist, it will be created using SetDoor
- When the door exists, it will be updated using SetDoor

Ticket	Summary	Type	Priority
#1669	Support for client-supplied tokens in Access Control Specification	Task	Medium

The ClientSuppliedTokenSupported capability, SetAccessPoint and SetArea commands have been added to Access Control Specification to be able to create or update entities using a client-supplied token.
If the ClientSuppliedTokenSupported capability is set to true, the vendor MUST implement the following test cases:

- When the access point does not exist, it will be created using SetAccessPoint
- When the access point exists, it will be updated using SetAccessPoint
- When the area does not exist, it will be created using SetArea
- When the area exists, it will be updated using SetArea

Ticket	Summary	Type	Priority
#1673	New specification: Authentication Behavior Specification	Task	Medium

This specification defines the web service interface for interaction with ONVIF devices which support scheduled authentication behaviour (i.e. when what security level applies) for access points.
Note that there is no profile requiring any of the commands in the Authentication Behavior. However, the test tool should have the tests to verify that they work as expected.

The set of test cases are very similar to e.g. Access Rules Spec or Schedule Spec test cases.

This is a placeholder ticket for future scope of work and will be used to track the creation and implementation of tests in the Device Test Tool. The vendor MUST ensure that the specification is updated based on the progress.

Ticket	Summary	Type	Priority
#1674	Added support for authentication behavior in Access Control Specification	Task	Medium

The SetAccessPointAuthenticationProfile and DeleteAccessPointAuthenticationProfile operations, the SupportedSecurityLevels capability and the AccessPoint/State/SecurityLevel event have been added to the Access Control Specification.

The vendor MUST create the following tests:

- SetAccessPointAuthenticationProfile command with defined security level
- DeleteAccessPointAuthenticationProfile command with defined security level
- SetAccessPointAuthenticationProfile command with undefined security level
- DeleteAccessPointAuthenticationProfile command with undefined security level
- Test to verify that the AccessPoint/State/SecurityLevel is sent when the security level changes according to a schedule

Ticket	Summary	Type	Priority
#1675	Full management support (CRUD) for doors	Task	Medium

The GetDoors, GetDoorList, CreateDoor, ModifyDoor and DeleteDoor operations have been added in Door Control Service. In addition, the Door and Timings data structures and the MaxDoors capability have been added. The vendor MUST create the following tests:

- Regular test cases as in Access Rules Specification
- Additional tests to verify that proper door state events are sent according to defined timing parameters in the Timings structure.

Ticket	Summary	Type	Priority
#1676	Full management support (CRUD) for access points and areas	Task	Medium

The GetAccessPoints, GetAccessPointList, CreateAccessPoint, ModifyAccessPoint and DeleteAccessPoint operations have been added in Access Control Service. In addition the AccessPoint data structure and the MaxAccessPoints capability have been added.

The vendor MUST create a regular set of test cases similar to the tests in Access Rules Specification.

Ticket	Summary	Type	Priority
#1688	Save network trace from failed tests	Enhancement	Medium

It's very common that users need a network trace when a test fails. The XML log gives some data but does not include many parts that can be interesting (for example, RTP packets). It's also easier to read a Wireshark trace than an XML log. Running traces in the background takes more time and extracting parts from traces that contain failed tests takes time as well. There would be less overhead if the DTT can save the output for the failed tests.

The vendor MUST develop the following prototypes:

- A prototype allowing to run a custom script before and after each test. This could be used to start/stop Wireshark in the background.
- Another prototype that is using Pcap to capture packets. Pcap is licensed under BSD, which makes the integration easier.

Ticket	Summary	Type	Priority
#1718	[Auth Behavior Specification] Description field clarification	Clarification	Medium

The vendor MUST clarify with the PACS workgroup on the Description field in the Authentication Behavior Specification and confirm:

- If the field is not supported by the device how should the Client recognise this field.
- If the field is supported by the device what action to take when the Client skips the field in SET request.

This ticket is related to clarifications raised in ticket #1673.

Ticket	Summary	Type	Priority
#1720	[Auth Behavior Specification] List values modifications clarification	Clarification	Medium
The vendor MUST confirm from the PACS workgroup on how AuthenticationPolicy list shall be updated during modification by SetAuthenticationProfile command and ModifyAuthenticationProfile command. This ticket is related to clarifications raised in ticket #1673.			

Ticket	Summary	Type	Priority
#1722	[Auth Behavior Specification] Recognition Types clarification	Clarification	Medium
The vendor MUST confirm from the PACS workgroup on how a Client will recognize which RecognitionTypes are supported by the DUT. This ticket is related to clarifications listed in ticket #1673.			

Ticket	Summary	Type	Priority
#1836	Profile M: DTT: Image sending	Task	Medium
The vendor MUST produce Device Test Tool that verifies image sending according to test cases written for ticket #1835. New test cases should be located under "Analytics"			

Ticket	Summary	Type	Priority
#1837	Profile M: Test Spec: Analytics engine-Object classification	Task	Medium
The vendor MUST add the following test cases for testing monitored object type classification. • Set monitored object type. • Check returned object type is the same as Set. • If the device doesn't support setting monitored object type, just check the returned ObjectType			

Ticket	Summary	Type	Priority
#1838	Profile M: DTT: Analytics engine-Object classification	Task	Medium
The vendor MUST produce Device Test Tool that verifies object type according to test cases written for ticket #1837. New test cases should be located under "Analytics".			

Ticket	Summary	Type	Priority
#1839	Profile M: Test Spec: Analytics engine-Human body descriptor	Task	Medium
The vendor MUST Add test cases for verifying human body metadata. Details on the test sequence and schema will be shared by the Profile M workgroup.			

Ticket	Summary	Type	Priority
#1840	Profile M: DTT: Analytics engine-Human body descriptor	Task	Medium
The vendor MUST produce Device Test Tool that verifies human body descriptor according to test cases written for ticket #1839. New test cases should be located under 'Analytics'.			

Ticket	Summary	Type	Priority
#1856	[EVO] Latest sent requests on request tab	ChangeRequest	Medium
On the request tab the vendor MUST add some functionality for "Latest sent requests" so that 5-10 of the latest sent requests are saved and can be reused easily. It would also be preferable if these are saved when tool closes so that they are available when opening tool next time as well.			

Ticket	Summary	Type	Priority
#1857	[EVO] Syntax highlighting in requests and responses	ChangeRequest	Medium
The vendor MUST add syntax highlighting to improve readability of requests and responses.			

Ticket	Summary	Type	Priority
#1858	[GetSupportedAnalyticsModules] Description of AnalyticsModuleContentSchemaLocation field description in service spec has conflict with description in wsdl	Clarification	Medium

As per analytics.wsdl, GetSupportedAnalyticsModules, AnalyticsModuleContentSchemaLocation field description:
If the analytics module descriptions reference types or elements of the ONVIF schema file, the ONVIF schema file MUST be explicitly listed.

And as per Analytics Service Specification, 5.3.3.1 GetSupportedAnalyticsModules section:
Analytics module descriptions that reference types or elements imported from any ONVIF defined schema files need not explicitly list those schema files.

The vendor MUST clarify with the Profile M workgroup which description is valid for implementation in the Device Test Tool.

Ticket	Summary	Type	Priority
#1859	[GetSupportedAnalyticsModules] Dependency on overall Video analytics configuration	Clarification	Medium

In analytics.wsdl**,** description in GetSupportedAnalyticsModules is as follows**:**
The result of this method may depend on the overall Video analytics configuration of the device, which is available via the current set of profiles.

The vendor MUST clarify with the Profile M workgroup on how the Device Test Tool (and other clients as well) shall configure profiles to get list of supported modules.

Ticket	Summary	Type	Priority
#1860	[Analytics Modules] Operations on analytics modules support condition	Clarification	Medium
The vendor MUST clarify with the Profile M workgroup on the definition of the “Analytics Engine as defined by ONVIF” referred in sections 5.3 and 5.3.3 of the Analytics Service Specification.			

Ticket	Summary	Type	Priority
#1861	[GetSupportedAnalyticsModules] maxInstances attribute clarification	Clarification	Medium
According to analytics.wsdl **maxInstances** attribute is optional for **AnalyticsModuleDescription**. The vendor MUST get clarity on Device skip **maxInstances** attribute and the impact if the tool skips the attribute from the Profile M workgroup.			

Ticket	Summary	Type	Priority
#1862	[GetSupportedAnalyticsModules] fixed attribute clarification	Clarification	Medium
According to analytics.wsdl fixed attribute is optional for **AnalyticsModuleDescription**. The vendor MUST clarify the use of the attribute and the impact if the tool skips the attribute from the Profile M workgroup.			

Ticket	Summary	Type	Priority
#1321	DTT: Geo Location Configuration	Task	Low
Add test cases to Base Test Specification for testing Geo Location Configuration. Add test cases for: • GetGeoLocation • SetGeoLocation • DeleteGeoLocation Get Location is part of the Core Spec: https://www.onvif.org/specs/core/ONVIF-Core-Specification.pdf			

Ticket	Summary	Type	Priority
#1408	Test spec: Privacy Masks	Task	Low
The vendor MUST add to "Media2 Test Specification" test cases for Privacy Masks, testing the following operations: • CreateMask • DeleteMask • SetMask • GetMasks • GetMaskOptions			

Ticket	Summary	Type	Priority
#1410	DTT: Privacy Masks	Task	Low

The vendor MUST produce Device Test Tool that verifies Privacy Mask operations of the Media2 Service according to test cases written for ticket #1408.

New test cases shall be located under "Media2 Configuration" -> "Privacy Masks"

Ticket	Summary	Type	Priority
#1827	[EVO] Make improvements/additions to request tab under debug tab	Task	Low

The vendor MUST add/improve the following in the request tab:

- Make changes so that Service Address is automatically populated with address selected in Discovery tab. Credentials from Discovery tab are already used so it makes more sense to also use IP address from there.
- Add new request templates (more details than there are in existing ones and more informative file names if possible) for:
    - Media2
    - Analytics
    - DeviceIO
    - Thermal
- Improve existing templates so that they include more detailed examples. Start with media1 for example.

Ticket	Summary	Type	Priority
#1851	Profile M: Test Spec: Rule engine- Traffic statistics	Task	Low

The vendor MUST add test cases for Traffic statistics once details on the test sequence and service specification proposal is made available by the Profile M Workgroup.

Ticket	Summary	Type	Priority
#1852	Profile M: DTT: Rule engine- Traffic statistics	Task	Low

The vendor MUST produce Device Test Tool that verifies traffic statistics according to test case written for ticket #1851. New test cases should be located under 'Analytics'.

Ticket	Summary	Type	Priority
#1854	Profile M: DTT: Rule engine- Line crossing counter	Task	Low
The vendor MUST produce Device Test Tool that verifies Line crossing counter according to test case written for ticket #1853. New test cases should be located under 'Analytics'.			

Ticket	Summary	Type	Priority
#1434	Convert ONVIF Receiver Test Specification to doc book	Task	Low
The vendor MUST convert ONVIF Receiver Test Specification to doc book and integrate in the UI.			

Ticket	Summary	Type	Priority
#1435	Convert ONVIF Recording Control Test Specification to doc book	Task	Low
The vendor MUST convert ONVIF Recording Control Test Specification to doc book and integrate in the UI.			

Ticket	Summary	Type	Priority
#1436	Convert ONVIF Recording Search Test Specification to doc book	Task	Low
The vendor MUST convert ONVIF Recording Search Test Specification to doc book and integratein the UI.			

Ticket	Summary	Type	Priority
#1648	[EVO] Decrease conformance execution time	Enhancement	Low
The vendor MUST make improvements in the tool to decrease the conformance execution time.			

Appendix E - Project Left Hand– Initial Scope-of-work

The ***DTT WG, Profile M WG and Profile D WG*** use a ticket system to manage all work items for the Contractor and for the working group. The tickets can be consulted at https://wush.net/trac/onvif-ext. However, any details about what kind of work items are to be carried out will be discussed and determined at a later stage.

The Contractor must follow the instructions detailed here https://wush.net/trac/onvif-ext/wiki/best_practices_vendor_company when working with the tickets.

Ticket	Summary	Type	Priority
#510	Usability improvements for the Management tab	Enhancement	High
Currently the management tab requires many user configurations in order to run the tool for conformance, the workgroup believes some of those could be automated or improved. The vendor MUST come up with the following: • Provide list of improvements to the workgroup for review and approval • Implement chosen and agreed upon improvements by the workgroup			

Ticket	Summary	Type	Priority
#507	Update the Debug Tab	Enhancement	Medium
There has not been much improvements done to the Debug tab of the ONVIF Device Test Tool. The vendor MUST: • Identify and propose usability improvements for the Debug tab. • Implement chosen improvements.			

Project Left Hand will also include all items postponed from Project Kirin.

Appendix F - Technical Requirements for the ONVIF Device Test Tool

1. The ONVIF Device Test Tool v19.06 MUST be used as a base for this project.
2. The existing functionality of the ONVIF Device Test Tool v19.06 MUST NOT be altered other than to incorporate the functions and operations requested herein or where the workgroup explicitly approves the changes.
3. All configuration changes that are made by a test case MUST be reverted before the test case terminates.
4. Test case definitions MUST support sequential execution of test cases.
5. The structure and coding practice MUST adhere that of the MSDN: Design Guidelines for Class Library Developers, to be easily amended and maintained.
6. The software source code MUST be documented in good practice in English in the standard source code comments scheme. Documentation MUST at least cover classes, methods, parameters, return values, and exceptions. Level of details of the documentation must be such that ONVIF, or a knowledgeable third party requested by ONVIF, can further develop and/or amend the software.
7. The software source code MUST be developed using the workgroup-provided Version Control System. The workgroup is currently using Subversion for version control of the Device Test Tool and Device Test Specification files.
8. Development and validation of the tool MUST be done on 64-bit versions of Windows 7/Windows 10.
9. Implementation MUST be done in C# [C-Sharp] according to respective standards ECMA-334 and ISO/IEC 23270 and SHOULD use the .NET [dotnet] framework.
10. All external frameworks used MUST be approved by the workgroup, actively maintained by the community and covered by an open license.
11. The executable application, the source code and the accompanying documentation MUST be delivered in electronic form to the workgroups, using the External Wiki (https://wush.net/trac/onvif-ext) before the projects closure or on request by the working group.
12. The workgroups MUST report defects against the executable application, the source code and the accompanying documentation using the External Wiki (https://wush.net/trac/onvif-ext).
13. User interaction during execution of tests SHOULD be avoided where possible. Introduction of user interaction MUST be approved by the ***DTT WG***.
14. Help pages MUST include images and text describing all operation modes of the ONVIF Device Test Tool.

15. Minimum hardware requirements
    a. Ordinary Intel x86 architecture-based PC
    b. One Ethernet network interface
16. Software requirements
    a. Operating system: 64-bit versions of Windows 7 Professional and later versions.
    b. Graphical User interface in American English language

Appendix G - Outline of Quality Related Deliverables

1. Document and execute test cases to validate the behaviour of the ONVIF Device Test Tool, including but not restricted to:
    a. Correctness of documents generated by the Tool.
    b. Correctness of test procedure in Conformance Mode.
    c. Execute Test Tool with sample inputs provided by members of ONVIF.
    d. Generation of DoC only after a completely successful run.
2. Provide a “lessons learned” document regarding any relevant problems or issues found during development, including but not restricted to:
    a. Correctness of WSDL files.
    b. Correctness of technical specifications.
    c. Ambiguity or limitations of the specifications.
    d. Process and communication with the workgroup.