# **Request for Quotation** (RfQ)

For ONVIF Technical Services Committee,

Client Test Tool Working Group

&

Profile T Working Group

# **Projects “Glengoyne” & “Hazelburn”**

Circulation: 2017-June-09

Quotation Due: 2017-June-20

# 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 Client 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 Network Interface Specifications, the ONVIF Profile Specifications and WSDL and XML schemas, as described in the ONVIF Conformance Process Specification.

# 2. Project Purpose

The purpose of this project is to produce two service releases of the ONVIF Client Test Tool and ONVIF Test Specification for Profile S, Profile G, Profile C, Profile Q and Profile A and Profile T.

This project will deliver an incremental service release of the ONVIF Client Test Tool and ONVIF Test Specification at the end of project Glengoyne ('v17.12') followed by another incremental service release at the end of project Hazelburn ('v18.06').

# 3. Service Requested

- Update the Test Specification and Test Tool for ONVIF Clients based on two successive Scope-of-Works: ***Project Glengoyne*** for a December 2017 release and ***Project Hazelburn*** for a June 2018 release.
- 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 ***Client Test Tool WG*** is responsible for the integration and coordination of the different ONVIF working group development efforts on the ONVIF Client 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 purposes of practical field test, to collect member feedback and improvement suggestions and CTT member training. The ***Client Test Tool 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.

# 4. 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 Glengoyne

    - 500 man-hours total, including project management, design and implementation of ONVIF Client 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 documentation.

    B) Project Hazelburn

    - 500 man-hours total, including project management, design and implementation of ONVIF Client 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 documentation.

    C) Service buffer - 400 man-hours

    - In addition to the above resources of the Projects Glengoyne & Hazelburn, another 400 man-hours of the resource are allocated as a service buffer. In case that the allocated resources for respective projects are run out and some more work items are essential to be carried out during this project, this resource should be used.

4. The projects MUST include the work items outlined in Appendix D and Appendix E. The ***Client Test Tool WG*** can at any time decide to drop or postpone a work item. 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).

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

5. The projects MUST deliver an ONVIF Client Test Tool and Test Specification as outlined in Appendix B and Appendix C.
6. The projects MUST follow the technical requirements outlined in Appendix F during the ONVIF Client Test Tool development.
7. The projects MUST respect the style of the ONVIF Test Specification when updating the documents. The structure MUST be defined with the help of the ***Client Test Tool WG.***
8. 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 does not provide feedback within the 30 days period; the service will automatically be considered delivered for all payment purpose.
9. Any further maintenance and expansion work done to the ONVIF Client 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.

## 5. Execution of Service

The execution of the service must fulfil 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 ***Client Test Tool WG*** outlining the tasks performed and the issues encountered. The report must preferably consist of a burndown chart or similar graphical representation of work left to do versus time.
3. Throughout the projects the ***Client Test Tool 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 required to attend the ONVIF face-to-face meetings.
   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 ***Client Test Tool 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.

## 6. Protective Rights

1. ONVIF will hold all rights to the ONVIF Client 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 Client 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.

## 7. 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.

## 8. Quotation

The quotation MUST at least contain the following information:

1. Cost of requested service and all other related cost.
2. Estimate for a service-based block of 400 hours in addition to the work required for the different Scope-of-Works. This is a work buffer that might be use partially or not at all depending on the need of the Client Test Tool workgroup for new work items not already included in this RfQ.
3. Estimate for travel expenses for two representatives of the Contractor:
   - Possible travel requests for project Glengoyne: Verona (Italy), Sep 2017 and Seoul (South Korea), Nov 2017
   - Possible travel requests for project Hazelburn: Americas, Feb 2018 and Europe, June 2018

   Travel arrangements should be consolidated when possible in case the Contractor is working on parallel projects for ONVIF.

## 9. References

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

- Profile S Specification
- Profile C Specification
- Profile G Specification
- Profile Q Specification
- Profile A Specification RC
- Profile T Specification Draft
- Network Interface Specifications v16.12
- Feature Discovery Specification v17.01
- Test Case Summary for Profile Conformance v17.01
- Client Test Specification v17.01
- Client Test Specification v16.12
- Conformance Process Specification v4.0
- Application Programmers Guide

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 ***Client Test Tool WG*** will inform the Contractor and discuss appropriate actions.

## 10.Contacts

**General contact:**

**ONVIF**

Stan Moyer, *Vice President, Executive Director*

onvif_ed@inventures.com

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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 Client Test Tool WG**

Madhu Rao, Chairman, Client Test Tool Working Group

Phone: +91-9840921405

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

**ONVIF Profile T WG**

Fredrik Svensson, Chairman

Phone: +46 (46) 272 1853

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# Appendix A - Timeline for Service

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

| | |
|---|---|
| 09-Jun-2017 | Circulation of this Request for Quotation |
| 20-Jun-2017 | Quotation due to be received by the ***ONVIF Office*** and ***Client Test Tool WG*** by e-mail |
| 03-Jul-2017 | Contractor selected & agreement signed |

**Project Glengoyne**

| | |
|---|---|
| 18-Aug-2017 | Delivery of ONVIF Client Test Tool 1st Prototype & Test Specification 1stDraft |
| 12-15 Sep-2017 | F2F Meeting Verona |
| 22-Sep-2017 | Delivery of ONVIF Client Test Tool 2nd Prototype & Test Specification 2nd Draft |
| 27-Oct-2017 | Delivery of ONVIF Client Test Tool & Test Specification Release Candidate |
| 08-10 Nov 2017 | 17th ONVIF Developers' Plugfest, Seoul (South Korea) |
| 13-16 Nov 2017 | F2F Asia, Seoul (South Korea) |
| 16-Dec -2017 | Delivery of Client Test Tool & Test Specification v17.12 (version YY.MM) |

**Project Hazelburn**

| | |
|---|---|
| 09-Feb-2018 | Delivery of ONVIF Client Test Tool 1st Prototype & Test Specification 1st Draft |
| 27/28 Feb 2018 | F2F Meeting Americas (location tbc) |
| 12-Mar-2018 | Delivery of ONVIF Client Test Tool 2nd Prototype & Test Specification 2nd Draft |
| 13-Apr-2018 | Delivery of ONVIF Client Test Tool 3rd Prototype & Test Specification 3rd Draft |
| 18-May-2018 | Delivery of ONVIF Client Test Tool & Test Specification Release Candidate |
| 06-08 Jun 2018 | 18th ONVIF Developers' Plugfest, Europe, location tbc |
| 11/12 Jun 2018 | F2F Meeting Europe (location tbc) |
| 22-Jun-2018 | Delivery of ONVIF Client Test Tool & Test Specification v18.06 |

# Appendix B - Definition of Deliverables

| Name | Description |
|---|---|
| ONVIF Test Specification Draft | • Document template updated.<br>• "Test Cases/Use-Cases" integrated into their corresponding Test Specification document in draft form.<br>• 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.<br>• Total List of "Test Cases/Use-Cases" must be provided.<br>• 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.<br>• All tickets for the corresponding Milestone have been addressed or postponed. |
| ONVIF Client 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.<br>• List of "Test Cases/Use-Cases" and features implemented in the prototype must also be provided. |
| ONVIF Client Test Tool Release Candidate | • Only stable "Test Cases/Use-Cases" and Features are included in this delivery.<br>• From that point on, only fixes requested by WG are allowed. |
| ONVIF Client Test Tool Final Release | • Issues identified in Release Candidate fixed or documented in release notes.<br>• All tickets for the corresponding Milestone have been addressed or postponed. |

# Appendix C - Delivery Packages and Responsibilities

| Delivery Package | Item | Target | Editing Responsibility |
|---|---|---|---|
| **Client Test Specification** | Internal Releases Notes | Workgroup | Contractor |
| | Official Release Notes | Public | Workgroup |
| | Core Test Specification | Public | Contractor |
| | Imaging Test Specification | Public | Contractor |
| | Audio Backchannel Test Specification | Public | Contractor |
| | Advanced Security Test Specification | Public | Contractor |
| | OSD Test Specification | Public | Contractor |
| | Profile S Test Specification | Public | Contractor |
| | Profile G Test Specification | Public | Contractor |
| | Profile C Test Specification | Public | Contractor |
| | Profile Q Test Specification | Public | Contractor |
| | Profile A Test Specification | Public | Contractor |
| | Profile T Test Specification | Workgroup | Contractor |
| **ONVIF Client Test Tool** | Binaries | ONVIF Members | Contractor |
| | Source Code | Workgroup | Contractor |
| | Help Files | ONVIF Members | Contractor |
| | Installation Guide | ONVIF Members | Contractor |
| | Internal Release Notes | Workgroup | Contractor |
| | Official Release Notes | ONVIF Members | Workgroup |
| | Errata Document | ONVIF Members | Workgroup |
| **Profile** | Profile S Specification | Public | Device Testing WG |
| | Profile C Specification | Public | Device Testing WG |
| | Profile G Specification | Public | Device Testing WG |
| | Profile Q Specification | Public | Device Testing WG |
| | Profile A Specification | Public | Profile A WG |
| | Profile T Specification | Workgroup | Profile T WG |

# Appendix D - Project Glengoyne – Initial Scope-of-work

The ***Client Test Tool WG*** uses 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-ext3/report/3. Only tickets targeted at the Milestone G 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-ext3/wiki/best_practices_vendor_company when working with the tickets.

| Ticket | Summary | Type | Priority |
|---|---|---|---|
| #205 | Add applied Errata case information to xml feature list | Interoperability | Blocker |

During the upload process of product information to the ONVIF Conformant Product database, key information to represent the conformant product in the online database is drawn from the xml feature list generated by the CTT.

In case of an errata applicable, the current CTT adds this Errata # only to the DoC document, but not to the xml feature list. In consequence, any products applying an erratum cannot be added via the automatic upload process as essential information to Profile conformance are missing in the xml feature list (so manual handling by ONVIF office is needed).

The vendor MUST amend the xml feature list generated by the CTT to allow self-submission via the member portal also for conformant products claiming applicability of an errata case:

- state applicable errata # with affected test case in the xml feature list
- State relevant Profile conformance for the product under test if only the test case related to the claimed errata is failed.

| Ticket | Summary | Type | Priority |
|---|---|---|---|
| #203 | Parsing log improvement: keep only devices/clients search before conformance run | Enhancement | Medium |

Currently parsing of the log takes a lot of time. Also, it runs before conformance configuration and this is not user friendly, because test operator must wait until parsing is over to run conformance.

**Proposal:**
The vendor MUST include only devices and clients search in parsing procedure prior to configuration. Other parsing procedures should be moved in conformance run.

| Ticket | Summary | Type | Priority |
|---|---|---|---|
| #204 | Parsing log improvement: parsing log performance and issue | Enhancement | Medium |

Currently TShark text output is used for parsing logs and has the following issues:
1) performance issues
2) issues with [truncated] data (see #200 for example)
3) issues with SOAP

Proposal:
The vendor MUST use TShark only as a supplementary tool and parse pcaps directly. The vendor MUST also investigate and give a detailed proposal of the implementation.

| Ticket | Summary | Type | Priority |
|---|---|---|---|
| #208 | Command line CTT: validate all the xml before starting the parsing and conformance | Enhancement | Medium |

When using the CTT in command line, the feature files are only fetched at the end of the parsing of the traces. If any errors occur the paths or the files cannot be accessed by the CTT and time spent in parsing is wasted.

The vendor MUST validate all the paths and files referenced in the xml to ensure that the CTT has access to these files before starting any long running task.

| Ticket | Summary | Type | Priority |
|---|---|---|---|
| #209 | Command line CTT: outputDir folders use the 12 hours format without AM and PM | Defect | Low |

The outputDir folders created by the CTT use the 12 hours format, but they don't mention an AM or PM. This means that 07:00 and 19:00 of the same day will have the same folder name.

The vendor MUST ensure that the CTT uses 24 hours format.

| Ticket | Summary | Type | Priority |
|---|---|---|---|
| #161 | Client Features in DoC: improve to readability | Enhancement | Medium |

The vendor MUST improve the DoC generated by the tool based on the following recommendations:

1. Display profile wise features
2. Display only the conditional features (as recommended by WG)
3. Use readable features names

## Appendix E - Project Hazelburn – Initial Scope-of-work

The ***Client Test Tool WG*** uses 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-ext3/report/3. Only tickets targeted at the Milestone H 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-ext3/wiki/best_practices_vendor_company when working with the tickets.

**Project Hazelburn will also include all items postponed from Project Glengoyne.**

| Ticket | Summary | Type | Priority |
|---|---|---|---|
| N/A | | | |
| | | | |

## Appendix F - Technical Requirements for the ONVIF Client Test Tool

1. The ONVIF Client Test Tool v17.06 MUST be used as a base for this project.
2. The existing functionality of the ONVIF Client Test Tool v17.06 MUST NOT be altered other than to incorporate the functions and operations requested herein or where the workgroup explicitly approves the changes.
3. Programing language MUST be C# and target a recent .Net framework (4.5.1 and up)
4. 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.
5. 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 Client Test Tool and Client Test Specification files.
6. All external frameworks used MUST be approved by the workgroup, actively maintained by the community and covered by an open license.
7. 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-ext3) before the projects closure or on request by the working group.
8. 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-ext3).
9. User interaction during execution of tests SHOULD be avoided where possible. Introduction of user interaction MUST be approved by the ***Client Test Tool WG***.
10. Help pages MUST include images and text describing all operation modes of the ONVIF Client Test Tool.
11. Minimum hardware requirements
    a. Ordinary Intel x86 architecture based PC
12. Software requirements
    a. Operating system: 32-bit and 64-bit versions of Windows 7 Professional and later versions.
    b. Graphical User interface in American English language
13. Performance
    a. Memory usage SHOULD stay under 32bits addressable memory space.
    b. Multithreading SHOULD be used when applicable.

# Appendix G - Outline of Quality Related Deliverables

1. Document and execute test cases to validate the behavior of the ONVIF Client 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 with full success run.
2. Report issues to the workgroup with all the necessary information to be easily reproduced, including but not restricted to:
    a. Description of issue
    b. Repro steps
    c. Network traces
3. 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.