ONVIF™

Access Rules Device Test Specification

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REVISION HISTORY

Vers.	Date	Description
15.06		First issue of Access Rules Test Specification
17.01	Jan, 2017	ACCESS_RULES-3-1-11 CREATE ACCESS PROFILE - NOT EMPTY ACCESS PROFILE TOKEN was updated according ticket #1124.
17.12	Jul 14, 2017	ACCESS_RULES-3-1-5 CREATE ACCESS PROFILE was updated according ticket # 1365. The following annexes were added according to #1365: A.12 Get service capabilities (Schedule) A.13 Generate UID value for iCalendar A.14 Generate iCalendar value for Schedule A.15 Create special day group A.16 Create Schedule
17.12	Jul 20, 2017	ACCESS_RULES-3-1-5 CREATE ACCESS PROFILE was updated according ticket # 1365. The following annexes were added according to #1365: A.17 Delete schedule A.18 Delete special day group
17.12	Aug 16, 2017	Current document name was changed from Access Rules Test Specification to Access Rules Device Test Specification. The document formatting was updated.

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1 Introduction

The goal of the ONVIF test specification set is to make it possible to realize fully interoperable IP physical security implementation from different vendors. The set of ONVIF test specification describes the test cases need to verify the [ONVIF Network Interface Specs] and [ONVIF Conformance] requirements. In addition, the test cases are to be basic inputs for some Profile specification requirements. It also describes the test framework, test setup, pre-requisites, test policies needed for the execution of the described test cases.

This ONVIF Access Rules Test Specification acts as a supplementary document to the [ONVIF Network Interface Specs], illustrating test cases need to be executed and passed. In addition, this specification acts as an input document to the development of test tool that will be used to test the ONVIF device implementation conformance towards ONVIF standard. This test tool is referred as ONVIF Client hereafter.

1.1 Scope

This ONVIF Access Rules Test Specification defines and regulates the conformance testing procedure for the ONVIF conformant devices. Conformance testing is meant to be functional black-box testing. The objective of this specification is to provide test cases to test individual requirements of ONVIF devices according to the ONVIF Access Rules Service, which is defined in [ONVIF Access Rules Service].

The principal intended purposes are:

- Provide self-assessment tool for implementations.
- Provide comprehensive test suite coverage for [ONVIF Network Interface Specs].

This specification **does not** address the following:

- Product use cases and non-functional (performance and regression) testing.
- SOAP Implementation Interoperability test i.e. Web Service Interoperability Basic Profile version 2.0 (WS-I BP 2.0).
- Network protocol implementation Conformance test for HTTP, HTTPS, RTP and RTSP protocol.
- Wi-Fi Conformance test

The set of ONVIF Test Specification will not cover the complete set of requirements as defined in [ONVIF Network Interface Specs]; instead it will cover its subset.

This ONVIF Access Rules Test Specification covers the ONVIF Access Rules Service, which is a functional block of [ONVIF Network Interface Specs]. The following section gives a brief overview of each functional block and its scope.

1.1.1 Capabilities

The Capabilities section covers the test cases needed for getting capabilities from an ONVIF device.

The scope of this specification section is to cover the following functions:

- Getting capabilities with GetServiceCapabilities command
- Getting capabilities with GetServices command via Device service

1.1.2 Access Profile Info

The Access Profile Info section covers the test cases needed for getting access profile list and information from an ONVIF device.

The scope of this specification section is to cover the following functions:

- Getting access profile information with GetAccessProfileInfo command
- Getting access profile information list with GetAccessProfileInfoList command

1.1.3 Access Profile

The Access Profile section covers the test cases needed for getting access profile from an ONVIF device.

The scope of this specification section is to cover the following functions:

- Getting access profile with GetAccessProfiles command
- Getting access profile list with GetAccessProfileList command
- Creating access profile with CreateAccessProfile command
- Modifying access profile with ModifyAccessProfile command
- Deleting access profile with DeleteAccessProfile command

1.1.4 Events

The Events section covers the test cases needed for checking specified events format.

The scope of this specification section is to cover the following functions:

- Getting event properties with GetEventProperties command

1.1.5 Consistency

Consistency test cases cover verification of consistency between different entities and commands.

Consistency between the following entities is covered by the following test case:

- Access Policies and Access Point

2 Terms and Definitions

2.1 Definitions

This section describes terms and definitions used in this document.

Access Policy An association of an access point and a schedule. It defines when an access point can be accessed using an access profile which contains this access policy. Several access policies specifying different schedules for the same access point will result in a union of the schedule.

Access Profile A collection of access policies, used to define role based access. Two types of access profile can be defined for example: standard access profile and temporary access profile. The difference between the two, is that temporary access profile have optional validity from / to dates, and standard access profile do not.

Access Point A logical composition of a physical door and ID point(s) controlling access in one direction.

Credentials A physical/tangible object, a piece of knowledge, or a facet of a person's physical being, that enables an individual access to a given physical facility or computer-based information system.

Credential Number A sequence of bytes uniquely identifying a credential at an access point.

Validity Period From a certain point in time, to a later point in time. If a validity period is set on several entities (such as credentials, access profile and the association between them) the resulting validity period is the intersection of the three period.

Schedule A set of time periods, for example: working hours (weekdays from 08:00 AM to 06:00 PM). It may also include one or more special days schedule.

Role based access It is a method of regulating access to resources, for example: premises, building etc.

2.2 Abbreviations

This section describes abbreviations used in this document.

DUT Device Under Test

HTTP Hypertext Transfer Protocol

PACS Physical Access Control System

3 Test Overview

This section describes about the test setup and prerequisites needed, and the test policies that should be followed for test case execution.

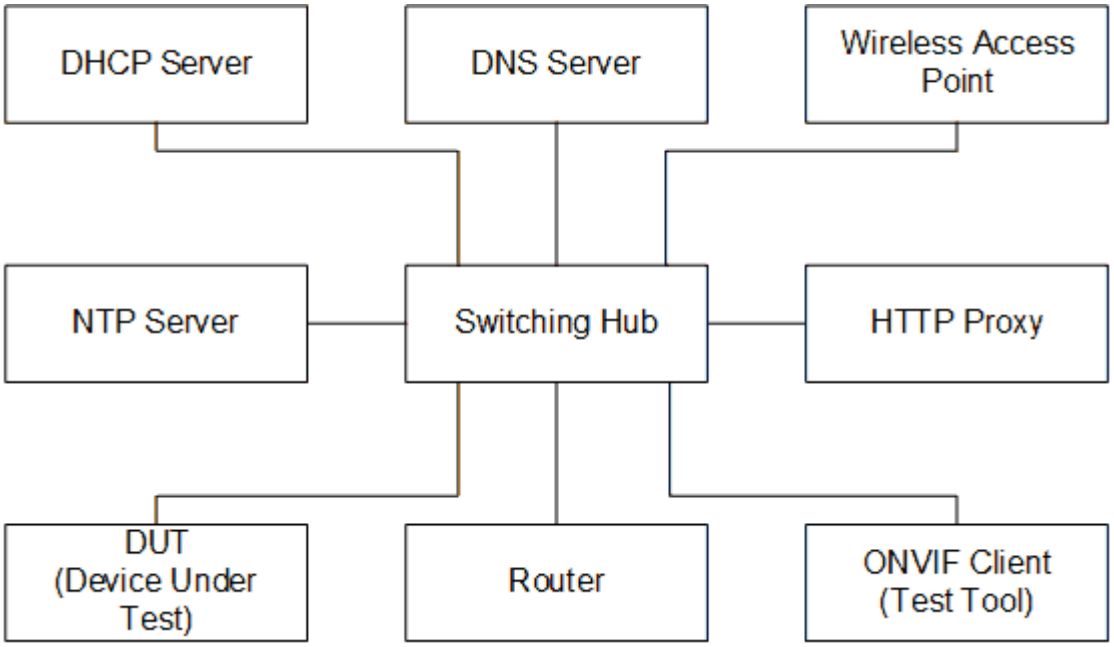
3.1 Test Setup

3.1.1 Network Configuration for DUT

The generic test configuration for the execution of test cases defined in this document is as shown below (Figure 1).

Based on the individual test case requirements, some of the entities in the below setup may not be needed for the execution of those corresponding test cases.

Figure 3.1. Test Configuration for DUT



DUT: ONVIF device to be tested. Hereafter, this is referred to as DUT (Device Under Test).

ONVIF Client (Test Tool): Tests are executed by this system and it controls the behavior of the DUT. It handles both expected and unexpected behavior.

HTTP Proxy: provides facilitation in case of RTP and RTSP tunneling over HTTP.

Wireless Access Point: provides wireless connectivity to the devices that support wireless connection.

DNS Server: provides DNS related information to the connected devices.

DHCP Server: provides IPv4 Address to the connected devices.

NTP Server: provides time synchronization between ONVIF Client and DUT.

Switching Hub: provides network connectivity among all the test equipments in the test environment. All devices should be connected to the Switching Hub.

Router: provides router advertisements for IPv6 configuration.

3.2 Prerequisites

The pre-requisites for executing the test cases described in this Test Specification are:

- The DUT shall be configured with an IPv4 address.
- The DUT shall be IP reachable [in the test configuration].
- The DUT shall be able to be discovered by the Test Tool.
- The DUT shall be configured with the time i.e. manual configuration of UTC time and if NTP is supported by DUT, then NTP time shall be synchronized with NTP Server.

3.3 Test Policy

This section describes the test policies specific to the test case execution of each functional block.

The DUT shall adhere to the test policies defined in this section.

3.3.1 Capabilities

The test policies specific to the test case execution of Capabilities functional block:

- DUT shall give the Access Rules Service entry point by GetServices command, if DUT supports this service. If DUT does not support Access Rules Service, these test cases will be skipped.
- DUT shall support the following commands:
  - GetServices
  - GetServiceCapabilities
- The following tests are performed

- Getting capabilities with GetServiceCapabilities command
- Getting capabilities with GetServices command

Please, refer to Section 4.1 for Capabilities Test Cases.

3.3.2 Access Profile Info

The test policies specific to the test case execution of Access Profile Info functional block:

- DUT shall give the Access Rules Service entry point by GetServices command, if DUT supports this service. If DUT does not support Access Rules Service, these test cases will be skipped.
- DUT shall support the following commands:
  - GetServices
  - GetServiceCapabilities
  - GetAccessProfileInfo
  - GetAccessProfileInfoList
- DUT shall not return more items in GetAccessProfileInfo and GetAccessProfileInfoList responses than specified in service capabilities by MaxLimit.
- DUT shall not return more items in GetAccessProfileInfoList response than specified by Limit parameter in a request.
- DUT shall not return more AccessProfilesInfo items in GetAccessProfileInfoList responses than specified in service capabilities by MaxAccessProfiles.
- DUT shall not return items with the same tokens in GetAccessProfileInfoList responses for one access profile info list receiving.
- DUT shall not return any fault if GetAccessProfileInfo was invoked for non-exciting AccessProfile token. Such tokens shall be ignored.
- DUT shall return SOAP 1.2 fault message (InvalidArgs/TooManyItems) if more items than MaxLimit was requested by GetAccessProfileInfo command.
- The following tests are performed
  - Getting access profile info with GetAccessProfileInfo command

- Getting access profile info list with GetAccessProfileInfoList command with using different Limit and NextReference values
- Getting access profile info with invalid access profile token
- Getting access profile info with number of requested items is greater than MaxLimit

Please refer to Section 4.2 for Access Profile Info Test Cases.

3.3.3 Access Profile

The test policies specific to the test case execution of Access Profile functional block:

- DUT shall give the Access Rules Service entry point by GetServices command, if DUT supports this service. Otherwise, these test cases will be skipped.
- DUT shall support the following commands:
  - GetServices
  - GetServiceCapabilities
  - GetAccessProfiles
  - GetAccessProfileList
  - GetAccessProfileInfoList
  - CreateAccessProfile
  - ModifyAccessProfile
  - DeleteAccessProfile
- DUT shall return only requested items in GetAccessProfiles response that specified in GetAccessProfiles request.
- DUT shall return all requested items in GetAccessProfiles response that specified in GetAccessProfiles request.
- DUT shall not return more items in GetAccessProfiles responses than specified in service capabilities by MaxLimit.
- DUT shall return the same information in GetAccessProfiles responses and in GetAccessProfileInfoList responses for the items with the same token.

- DUT shall not return more items in GetAccessProfileList response than specified by Limit parameter in a request.
- DUT shall not return items with the same tokens in GetAccessProfileList responses for one access profile list receiving.
- DUT shall return the same information in GetAccessProfiles responses and in GetAccessProfilesList responses for the items with the same token.
- DUT shall return the same information in GetAccessProfileList responses and in GetAccessProfileInfoList responses for the items with the same token.
- DUT shall return the access profiles in GetAccessProfileList responses and in GetAccessProfileInfoList responses.
- DUT shall support creation of access profile.
- DUT shall support modifying of access profile.
- DUT shall support deletion of access profile.
- DUT shall not return any fault if GetAccessProfiles was invoked for non-exciting AccessProfile token. Such tokens shall be ignored.
- DUT shall return SOAP 1.2 fault message (InvalidArgs/TooManyItems) if more items than MaxLimit was requested by GetAccessProfiles command.
- The DUT shall support creating of access profile.
- The DUT shall support modifying of access profile.
- The DUT shall support deleting of access profile.
- DUT shall return SOAP 1.2 fault message (InvalidArgs) if access profile token is specified in CreateAccessProfile request.
- DUT should return SOAP 1.2 fault message (CapabilityViolated/ MultipleSchedulesPerAccessPointSupported) if multiple schedules for the same access point is sent in the create access profile and MultipleSchedulesPerAccessPointSupported is not supported.
- DUT should return SOAP 1.2 fault message (InvalidArgVal/NotFound) if ModifyAccessProfile or DeleteAccessProfile command was invoked for non-exciting access profile token.
- The following tests are performed

- Getting access profile with GetAccessProfiles command and test that it includes the same information with GetAccessProfileList command
- Getting access profile info list with GetAccessProfileList command with using different Limit and NextReference values and test that it includes the same information with GetAccessProfileInfoList command
- Creating access profile with CreateAccessProfile command with empty token and test that corresponding notification message is received
- Modifying access profile with ModifyAccessProfile command and test that corresponding notification message is received
- Deleting access profile with DeleteAccessProfile command and test that corresponding notification message is received
- Getting access profiles with invalid access profile token
- Getting access profiles with number of requested items is greater than MaxLimit
- Creating access profile with CreateAccessProfile command with specified token
- Creating access profile with multiple schedules for the same access point when MultipleSchedulesPerAccessPointSupported is not supported
- Modifying access profile with ModifyAccessProfile command with invalid token
- Deleting access profile with DeleteAccessProfile command with invalid token

Please refer to Section 4.3 for Access Profile Test Cases.

3.3.4 Events

The test policies specific to the test case execution of Events functional block:

- DUT shall give the Access Rules Service and Event Service entry points by GetServices command, if DUT supports this service. Otherwise, these test cases will be skipped.
- DUT shall support the following commands:
  - GetServices
  - GetEventProperties
- DUT shall support Pull Point Subscription and Topic Expression filter.

- DUT shall generate property events with initial state after subscription was done.
- DUT shall generate property events with current state after corresponding properties were changed.
- The following tests are performed
  - Getting event properties with GetEventProperties command

Please refer to Section 4.4 for Events Test Cases.

3.3.5 Consistency

The test policies specific to the test case execution of Consistency functional block:

- DUT shall give the Access Rules Service and Access Control Service entry points by GetServices command, if DUT supports this service. Otherwise, these test cases will be skipped.
- DUT shall support the following commands:
  - GetServices
  - GetAccessProfileInfo
  - GetCredentials
- The following tests are performed
  - Access Policies and Access Point consistency

Please refer to Section 4.5 for Consistency Test Cases.

4 Access Rules Test Cases

4.1 Capabilities

4.1.1 ACCESS RULES SERVICE CAPABILITIES

Test Case ID: ACCESS_RULES-1-1-1

Specification Coverage: ServiceCapabilities (ONVIF Access Rules Service Specification), GetServiceCapabilities command (ONVIF Access Rules Service Specification)

Feature Under Test: GetServiceCapabilities (for Access Rules Service)

WSDL Reference: accessrules.wsdl

Test Purpose: To verify DUT Access Rules Service Capabilities.

Pre-Requisite: Access Rules Service is received from the DUT.

Test Configuration: ONVIF Client and DUT

Test Procedure:

1. Start an ONVIF Client.
2. Start the DUT.
3. ONVIF Client invokes **GetServiceCapabilities**.
4. The DUT responds with **GetServiceCapabilitiesResponse** message with parameters
   - Capabilities =: *cap*

Test Result:

PASS –

- DUT passes all assertions.

FAIL –

- DUT did not send **GetServiceCapabilitiesResponse** message.

4.1.2 GET SERVICES AND GET ACCESS RULES SERVICE CAPABILITIES CONSISTENCY

Test Case ID: ACCESS_RULES-1-1-2

Specification Coverage: Capability exchange (ONVIF Core Specification), ServiceCapabilities (ONVIF Access Rules Service Specification), GetServiceCapabilities command (ONVIF Access Rules Service Specification)

Feature Under Test: GetServices, GetServiceCapabilities (for Access Rules Service)

WSDL Reference: devicemgmt.wsdl, accessrules.wsdl

Test Purpose: To verify Get Services and Access Rules Service Capabilities consistency.

Pre-Requisite: None.

Test Configuration: ONVIF Client and DUT

Test Procedure:

1. Start an ONVIF Client.
2. Start the DUT.
3. ONVIF Client invokes **GetServices** with parameters
   - IncludeCapability := true
4. The DUT responds with a **GetServicesResponse** message with parameters
   - Services list =: *servicesList*
5. ONVIF Client selects Service with Service.Namespace = “http://www.onvif.org/ver10/accessrules/wsdl”:
   - Services list [Namespace = “http://www.onvif.org/ver10/accessrules/wsdl”] =: *accessRulesService*
6. ONVIF Client invokes **GetServiceCapabilities**.
7. The DUT responds with a **GetServiceCapabilitiesResponse** message with parameters
   - Capabilities =: *cap*
8. If *cap* differs from *accessRulesService*.Capabilities.Capabilities, FAIL the test.

Test Result:

PASS –

- DUT passes all assertions.

FAIL –

- DUT did not send **GetServicesResponse** message.
- DUT did not send **GetServiceCapabilitiesResponse** message.

Note: The following fields are compared at step 8:

- MaxLimit
- MaxAccessProfiles
- MaxAccessPoliciesPerAccessProfile
- MultipleSchedulesPerAccessPointSupported

4.2 Access Profile Info

4.2.1 GET ACCESS PROFILE INFO

Test Case ID: ACCESS_RULES-2-1-1

Specification Coverage: AccessProfileInfo (ONVIF Access Rules Service Specification), GetAccessProfileInfo command (ONVIF Access Rules Service Specification)

Feature Under Test: GetAccessProfileInfo

WSDL Reference: accessrules.wsdl

Test Purpose: To verify Get Access Profile Info.

Pre-Requisite: Access Rules Service is received from the DUT.

Test Configuration: ONVIF Client and DUT

Test Procedure:

1. Start an ONVIF Client.
2. Start the DUT.
3. ONVIF Client retrieves a complete list of access profile info (out *accessProfileInfoCompleteList*) by following the procedure mentioned in Annex A.1.
4. If *accessProfileInfoCompleteList* is empty, skip other steps.
5. ONVIF Client gets the service capabilities (out *cap*) by following the procedure mentioned in Annex A.2.

6. Set the following:
   - *tokenList* := [subset of *accessProfileInfoCompleteList*.token values with items number equal to *cap*.MaxLimit]
7. ONVIF client invokes **GetAccessProfileInfo** with parameters
   - Token list := *tokenList*
8. The DUT responds with **GetAccessProfileInfoResponse** message with parameters
   - AccessProfileInfo list =: *accessProfileInfoList1*
9. If *accessProfileInfoList1* does not contain AccessProfileInfo item for each token from *tokenList*, FAIL the test and skip other steps.
10. If *accessProfileInfoList1* contains at least two AccessProfileInfo item with equal token, FAIL the test and skip other steps.
11. If *accessProfileInfoList1* contains other AccessProfileInfo items then listed in *tokenList*, FAIL the test and skip other steps.
12. For each AccessProfile.token *token* from *accessProfileInfoCompleteList* repeat the following steps:
    12.1. ONVIF client invokes **GetAccessProfileInfo** with parameters
       - Token[0] := *token*
    12.2. The DUT responds with **GetAccessProfileInfoResponse** message with parameters
       - AccessProfileInfo list =: *accessProfileInfoList2*
    12.3. If *accessProfileInfoList2* does not contain only one AccessProfileInfo item with token equal to *token*, FAIL the test and skip other steps.
    12.4. If *accessProfileInfoList2*[0] item is not equal to *accessProfileInfoCompleteList*[token = *token*] item, FAIL the test and skip other steps.

Test Result:

PASS –

- DUT passes all assertions.

FAIL –

- DUT did not send **GetAccessProfileInfoResponse** message.

Note: If number of items in *accessProfileInfoCompleteList*, less than Capabilities =: *cap*.MaxLimit, then all *accessProfileInfoCompleteList*.Token items shall be used for the step 6.

Note: The following fields are compared at step 12.4:

- AccessProfileInfo:
  - token
  - Name
  - Description

4.2.2 GET ACCESS PROFILE INFO LIST - LIMIT

Test Case ID: ACCESS_RULES-2-1-2

Specification Coverage: AccessProfileInfo (ONVIF Access Rules Service Specification), GetAccessProfileInfoList command (ONVIF Access Rules Service Specification)

Feature Under Test: GetAccessProfileInfoList

WSDL Reference: accessrules.wsdl

Test Purpose: To verify Get Access Profile Info List using Limit.

Pre-Requisite: Access Rules Service is received from the DUT.

Test Configuration: ONVIF Client and DUT

Test Procedure:

1. Start an ONVIF Client.
2. Start the DUT.
3. ONVIF Client gets the service capabilities (out *cap*) by following the procedure mentioned in Annex A.2.
4. ONVIF client invokes **GetAccessProfileInfoList** with parameters
   - Limit := 1
   - StartReference skipped
5. The DUT responds with **GetAccessProfileInfoListResponse** message with parameters
   - NextStartReference =: *nextStartReference*

- AccessProfileInfo list =: *accessProfileInfoList1*

6. If *accessProfileInfoList1* contains more AccessProfileInfo items than 1, FAIL the test and skip other steps.
7. If *cap*.MaxLimit is equal to 1, skip other steps.
8. ONVIF client invokes **GetAccessProfileInfoList** with parameters
   - Limit := *cap*.MaxLimit
   - StartReference skipped
9. The DUT responds with **GetAccessProfileInfoListResponse** message with parameters
   - NextStartReference =: *nextStartReference*
   - AccessProfileInfo list =: *accessProfileInfoList2*
10. If *accessProfileInfoList2* contains more AccessProfileInfo items than *cap*.MaxLimit, FAIL the test and skip other steps.
11. If *cap*.MaxLimit is equal to 2, skip other steps.
12. Set the following:
    - *limit* := [number between 1 and *cap*.MaxLimit]
13. ONVIF client invokes **GetAccessProfileInfoList** with parameters
    - Limit := *limit*
    - StartReference skipped
14. The DUT responds with **GetAccessProfileInfoListResponse** message with parameters
    - NextStartReference =: *nextStartReference*
    - AccessProfileInfo list =: *accessProfileInfoList3*
15. If *accessProfileInfoList3* contains more AccessProfileInfo items than *limit*, FAIL the test and skip other steps.

Test Result:

PASS –

- DUT passes all assertions.

FAIL –

- DUT did not send **GetAccessProfileInfoListResponse** message.

4.2.3 GET ACCESS PROFILE INFO LIST - START REFERENCE AND LIMIT

Test Case ID: ACCESS_RULES-2-1-3

Specification Coverage: AccessProfileInfo (ONVIF Access Rules Service Specification), GetAccessProfileInfoList command (ONVIF Access Rules Service Specification)

Feature Under Test: GetAccessProfileInfoList

WSDL Reference: accessrules.wsdl

Test Purpose: To verify Get Access Profile Info List using StartReference and Limit.

Pre-Requisite: Access Rules Service is received from the DUT.

Test Configuration: ONVIF Client and DUT

Test Procedure:

1. Start an ONVIF Client.
2. Start the DUT.
3. ONVIF Client gets the service capabilities (out *cap*) by following the procedure mentioned in Annex A.2.
4. ONVIF client invokes **GetAccessProfileInfoList** with parameters
   - Limit := *cap*.MaxLimit
   - StartReference skipped
5. The DUT responds with **GetAccessProfileInfoListResponse** message with parameters
   - NextStartReference =: *nextStartReference*
   - AccessProfileInfo list =: *accessProfileInfoList1*
6. If *accessProfileInfoList1* contains more AccessProfileInfo items than *cap*.MaxLimit, FAIL the test and skip other steps.
7. Until *nextStartReference* is not null, repeat the following steps:

7.1. ONVIF client invokes **GetAccessProfileInfoList** with parameters

- Limit := *cap*.MaxLimit
- StartReference := *nextStartReference*

7.2. The DUT responds with **GetAccessProfileInfoListResponse** message with parameters

- NextStartReference =: *nextStartReference*
- AccessProfileInfo list =: *accessProfileInfoListPart*

7.3. If *accessProfileInfoListPart* contains more AccessProfileInfo items than *cap*.MaxLimit, FAIL the test and skip other steps.

7.4. Set the following:

- *accessProfileInfoCompleteList1* := *accessProfileInfoCompleteList1* + *accessProfileInfoListPart*

8. If *accessProfileInfoCompleteList1* contains at least two AccessProfileInfo items with equal token, FAIL the test and skip other steps.
9. If *cap*.MaxLimit is equal to 1, skip other steps.
10. ONVIF client invokes **GetAccessProfileInfoList** with parameters
    - Limit := 1
    - StartReference skipped
11. The DUT responds with **GetAccessProfileInfoListResponse** message with parameters
    - NextStartReference =: *nextStartReference*
    - AccessProfileInfo list =: *accessProfileInfoCompleteList2*
12. If *caccessProfileInfoCompleteList2* contains more AccessProfileInfo items than 1, FAIL the test and skip other steps.
13. Until *nextStartReference* is not null, repeat the following steps:

    13.1. ONVIF client invokes **GetAccessProfileInfoList** with parameters

    - Limit := 1
    - StartReference := *nextStartReference*

13.2. The DUT responds with **GetAccessProfileInfoListResponse** message with parameters

- NextStartReference =: *nextStartReference*
- AccessProfileInfo list =: *accessProfileInfoListPart*

13.3. If *accessProfileInfoListPart* contains more AccessProfileInfo items than 1, FAIL the test and skip other steps.

13.4. Set the following:

- *accessProfileInfoCompleteList2* := *accessProfileInfoCompleteList2* + *accessProfileInfoListPart*

14. If *accessProfileInfoCompleteList2* contains at least two AccessProfileInfo item with equal token, FAIL the test and skip other steps.

15. If *accessProfileInfoCompleteList2* does not contain all access profiles from *accessProfileInfoCompleteList1*, FAIL the test and skip other steps.

16. If *accessProfileInfoCompleteList2* contains access profiles other than access profiles from *accessProfileInfoCompleteList1*, FAIL the test and skip other steps.

17. If *cap*.MaxLimit is equal to 2, skip other steps.

18. Set the following:

- *limit* := [number between 1 and *cap*.MaxLimit]

19. ONVIF client invokes **GetAccessProfileInfoList** with parameters

- Limit := *limit*
- StartReference skipped

20. The DUT responds with **GetAccessProfileInfoListResponse** message with parameters

- NextStartReference =: *nextStartReference*
- AccessProfileInfo list =: *accessProfileInfoCompleteList3*

21. If *accessProfileInfoCompleteList3* contains more AccessProfileInfo items than *limit*, FAIL the test and skip other steps.

22. Until *nextStartReference* is not null, repeat the following steps:

22.1. ONVIF client invokes **GetAccessProfileInfoList** with parameters

- Limit := *limit*
- StartReference := *nextStartReference*

22.2. The DUT responds with **GetAccessProfileInfoListResponse** message with parameters

- NextStartReference =: *nextStartReference*
- AccessProfileInfo list =: *accessProfileInfoListPart*

22.3. If *accessProfileInfoListPart* contains more AccessProfileInfo items than *limit*, FAIL the test and skip other steps.

22.4. Set the following:

- *accessProfileInfoCompleteList3* := *accessProfileInfoCompleteList3* + *accessProfileInfoListPart*

23. If *accessProfileInfoCompleteList3* contains at least two AccessProfileInfo item with equal token, FAIL the test and skip other steps.

24. If *accessProfileInfoCompleteList3* does not contain all access profiles from *accessProfileInfoCompleteList1*, FAIL the test and skip other steps.

25. If *accessProfileInfoCompleteList3* contains access profiles other than access profiles from *accessProfileInfoCompleteList1*, FAIL the test and skip other steps.

Test Result:

PASS –

- DUT passes all assertions.

FAIL –

- DUT did not send **GetAccessProfileInfoListResponse** message.

4.2.4 GET ACCESS PROFILE INFO LIST - NO LIMIT

Test Case ID: ACCESS_RULES-2-1-4

Specification Coverage: AccessProfileInfo (ONVIF Access Rules Service Specification), GetAccessProfileInfoList command (ONVIF Access Rules Service Specification)

Feature Under Test: GetAccessProfileInfoList

WSDL Reference: accessrules.wsdl

Test Purpose: To verify Get Access Profile Info List without using Limit.

Pre-Requisite: Access Rules Service is received from the DUT.

Test Configuration: ONVIF Client and DUT

Test Procedure:

1. Start an ONVIF Client.
2. Start the DUT.
3. ONVIF Client gets the service capabilities (out *cap*) by following the procedure mentioned in Annex A.2.
4. ONVIF client invokes **GetAccessProfileInfoList** with parameters
   - Limit skipped
   - StartReference skipped
5. The DUT responds with **GetAccessProfileInfoListResponse** message with parameters
   - NextStartReference =: *nextStartReference*
   - AccessProfileInfo list =: *accessProfileInfoCompleteList*
6. If *accessProfileInfoCompleteList* contains more AccessProfileInfo items than *cap*.MaxLimit, FAIL the test and skip other steps.
7. Until *nextStartReference* is not null, repeat the following steps:
   7.1. ONVIF client invokes **GetAccessProfileInfoList** with parameters
      - Limit skipped
      - StartReference := *nextStartReference*
   7.2. The DUT responds with **GetAccessProfileInfoListResponse** message with parameters
      - NextStartReference =: *nextStartReference*
      - AccessProfileInfo list =: *accessProfileInfoListPart*
   7.3. If *accessProfileInfoListPart* contains more AccessProfileInfo items than *cap*.MaxLimit, FAIL the test and skip other steps.

7.4. Set the following:

- *accessProfileInfoCompleteList* := *accessProfileInfoCompleteList* + *accessProfileInfoListPart*

8. If *accessProfileInfoCompleteList* contains at least two AccessProfileInfo items with equal token, FAIL the test.
9. If *accessProfileInfoCompleteList* contains more AccessProfileInfo items than *cap*.MaxAccessProfiles, FAIL the test and skip other steps.

Test Result:

PASS –

- DUT passes all assertions.

FAIL –

- DUT did not send **GetAccessProfileInfoListResponse** message.

4.2.5 GET ACCESS PROFILE INFO WITH INVALID TOKEN

Test Case ID: ACCESS_RULES-2-1-5

Specification Coverage: GetAccessProfileInfo command (ONVIF Access Rules Service Specification)

Feature Under Test: GetAccessProfileInfo

WSDL Reference: accessrules.wsdl

Test Purpose: To verify Get Access Profile Info with invalid token.

Pre-Requisite: Access Rules Service is received from the DUT.

Test Configuration: ONVIF Client and DUT

Test Procedure:

1. Start an ONVIF Client.
2. Start the DUT.
3. ONVIF Client retrieves a complete list of access profiles (out *accessProfileInfoCompleteList*) by following the procedure mentioned in Annex A.1.
4. Set the following:

- *invalidToken* := value not equal to any *accessProfileInfoCompleteList*.token

5. ONVIF client invokes **GetAccessProfileInfo** with parameters
   - Token list := *invalidToken*
6. The DUT responds with **GetAccessProfileInfoResponse** message with parameters
   - AccessProfileInfo list =: *accessProfileInfoList*
7. If *accessProfileInfoList* is not empty, FAIL the test.
8. If *accessProfileInfoCompleteList* is empty, skip other steps.
9. ONVIF Client gets the service capabilities (out *cap*) by following the procedure mentioned in Annex A.2.
10. If *cap*.MaxLimit is less than 2, skip other steps.
11. ONVIF client invokes **GetAccessProfileInfo** with parameters
    - Token[0]:= *invalidToken*
    - Token[1]:= *accessProfileInfoCompleteList*[0].token
12. The DUT responds with **GetAccessProfileInfoResponse** message with parameters
    - AccessProfileInfo list =: *accessProfileInfoList*
13. If *accessProfileInfoList* is empty, FAIL the test.
14. If *accessProfileInfoList* contains more than one item, FAIL the test.
15. If *accessProfileInfoList*[0].token does not equal *accessProfileInfoCompleteList*[0].token, FAIL the test.

Test Result:

PASS –

- DUT passes all assertions.

FAIL –

- DUT did not send **GetAccessProfileInfoResponse** message.

4.2.6 GET ACCESS PROFILE INFO - TOO MANY ITEMS

Test Case ID: ACCESS_RULES-2-1-6

Specification Coverage: AccessProfileInfo (ONVIF Access Rules Service Specification), GetAccessProfileInfo command (ONVIF Access Rules Service Specification)

Feature Under Test: GetAccessProfileInfo

WSDL Reference: accessrules.wsdl

Test Purpose: To verify Get Access Profile Info in case if there a more items than MaxLimit in request.

Pre-Requisite: Access Rules Service is received from the DUT.

Test Configuration: ONVIF Client and DUT

Test Procedure:

1. Start an ONVIF Client.
2. Start the DUT.
3. ONVIF Client retrieves a complete list of access profiles (out *accessProfileInfoCompleteList*) by following the procedure mentioned in Annex A.1.
4. ONVIF Client gets the service capabilities (out *cap*) by following the procedure mentioned in Annex A.2.
5. If *accessProfileInfoCompleteList*.token items number is less than *cap*.MaxLimit or equal to cap.MaxLimit, skip other steps.
6. Set the following:
   - *tokenList* := [subset of *accessProfileInfoCompleteList*.token values with items number equal to *cap*.MaxLimit + 1]
7. ONVIF client invokes **GetAccessProfileInfo** with parameters
   - Token list := *tokenList*
8. The DUT returns **env:Sender\ter:InvalidArgs\ter:TooManyItems** SOAP 1.2 fault.

Test Result:

PASS –

- DUT passes all assertions.

FAIL –

- The DUT did not send env:Sender\ter:InvalidArgs\ter:TooManyItems SOAP 1.2 fault

4.3 Access Profile

4.3.1 GET ACCESS PROFILES

Test Case ID: ACCESS_RULES-3-1-1

Specification Coverage: AccessProfileInfo (ONVIF Access Rules Service Specification), AccessProfile (ONVIF Access Rules Service Specification), GetAccessProfiles command (ONVIF Access Rules Service Specification)

Feature Under Test: GetAccessProfiles

WSDL Reference: accessrules.wsdl

Test Purpose: To verify Get Access Profiles.

Pre-Requisite: Access Rules Service is received from the DUT.

Test Configuration: ONVIF Client and DUT

Test Procedure:

1. Start an ONVIF Client.
2. Start the DUT.
3. ONVIF Client retrieves a complete list of access profiles (out *accessProfileCompleteList*) by following the procedure mentioned in Annex A.3.
4. If *accessProfileCompleteList* is empty, skip other steps.
5. ONVIF Client gets the service capabilities (out *cap*) by following the procedure mentioned in Annex A.2.
6. Set the following:
   - *tokenList* := [subset of *accessProfileCompleteList*.token values with items number equal to *cap*.MaxLimit]
7. ONVIF client invokes **GetAccessProfiles** with parameters
   - Token list := *tokenList*
8. The DUT responds with **GetAccessProfilesResponse** message with parameters
   - AccessProfile list =: *accessProfileList1*

9. If *accessProfileList1* does not contain AccessProfile item for each token from *tokenList*, FAIL the test and skip other steps.
10. If *accessProfileList1* contains at least two AccessProfile items with equal token, FAIL the test and skip other steps.
11. If *accessProfileList1* contains other AccessProfile items then listed in *tokenList*, FAIL the test and skip other steps.
12. For each *AccessProfileInfo*.token token from *accessProfileCompleteList* repeat the following steps:

    12.1. ONVIF client invokes **GetAccessProfiles** with parameters

    - Token[0] := *token*

    12.2. The DUT responds with **GetAccessProfilesResponse** message with parameters

    - AccessProfile list =: *accessProfileList2*

    12.3. If *accessProfileList2* does not contain only one AccessProfile item with token equal to *token*, FAIL the test and skip other steps.

    12.4. If *accessProfileList2*[0] item does not have equal field values to *accessProfileCompleteList*[token = *token*] item, FAIL the test and skip other steps.

Test Result:

PASS –

- DUT passes all assertions.

FAIL –

- DUT did not send **GetAccessProfilesResponse** message.

Note: If number of items in *accessProfileCompleteList*, less than *cap*.MaxLimit, then all *accessProfileCompleteList*.Token items shall be used for the step 6.

Note: The following fields are compared at step 12.4:

- AccessProfile:
  - token
  - Name
  - Description

- AccessPolicy list (ScheduleToken is used as unique key for comparing)
  - ScheduleToken
  - Entity
  - EntityType

4.3.2 GET ACCESS PROFILE LIST - LIMIT

Test Case ID: ACCESS_RULES-3-1-2

Specification Coverage: AccessProfileInfo (ONVIF Access Rules Service Specification), AccessProfile (ONVIF Access Rules Service Specification), GetAccessProfileList command (ONVIF Access Rules Service Specification)

Feature Under Test: GetAccessProfileList

WSDL Reference: accessrules.wsdl

Test Purpose: To verify Get Access Profile List using Limit.

Pre-Requisite: Access Rules Service is received from the DUT.

Test Configuration: ONVIF Client and DUT

Test Procedure:

1. Start an ONVIF Client.
2. Start the DUT.
3. ONVIF Client gets the service capabilities (out *cap*) by following the procedure mentioned in Annex A.2.
4. ONVIF client invokes **GetAccessProfieList** with parameters
   - Limit := 1
   - StartReference skipped
5. The DUT responds with **GetAccessProfieListResponse** message with parameters
   - NextStartReference =: *nextStartReference*
   - AccessProfile list =: *accessProfileList1*

6. If *accessProfileList1* contains more AccessProfile items than 1, FAIL the test and skip other steps.
7. If *cap*.MaxLimit is equal to 1, skip other steps.
8. ONVIF client invokes **GetAccessProfieList** with parameters
   - Limit := *cap*.MaxLimit
   - StartReference skipped
9. The DUT responds with **GetAccessProfieListResponse** message with parameters
   - NextStartReference =: *nextStartReference*
   - AccessProfile list =: *accessProfileList2*
10. If *accessProfileList2* contains more AccessProfile items than *cap*.MaxLimit, FAIL the test and skip other steps.
11. If *cap*.MaxLimit is equal to 2, skip other steps.
12. Set the following:
    - *limit* := [number between 1 and *cap*.MaxLimit]
13. ONVIF client invokes **GetAccessProfieList** with parameters
    - Limit := *limit*
    - StartReference skipped
14. The DUT responds with **GetAccessProfieListResponse** message with parameters
    - NextStartReference =: *nextStartReference*
    - AccessProfile list =: *accessProfileList3*
15. If *accessProfileList3* contains more AccessProfile items than *limit*, FAIL the test and skip other steps.

Test Result:

PASS –

- DUT passes all assertions.

FAIL –

- DUT did not send **GetAccessProfieListResponse** message.

4.3.3 GET ACCESS PROFILE LIST - START REFERENCE AND LIMIT

Test Case ID: ACCESS_RULES-3-1-3

Specification Coverage: AccessProfileInfo (ONVIF Access Rules Service Specification), AccessProfile (ONVIF Access Rules Service Specification), GetAccessProfileList command (ONVIF Access Rules Service Specification)

Feature Under Test: GetAccessProfileList

WSDL Reference: accessrules.wsdl

Test Purpose: To verify Get Access Profile List using StartReference and Limit.

Pre-Requisite: Access Rules Service is received from the DUT.

Test Configuration: ONVIF Client and DUT

Test Procedure:

1. Start an ONVIF Client.
2. Start the DUT.
3. ONVIF Client gets the service capabilities (out *cap*) by following the procedure mentioned in Annex A.2.
4. ONVIF client invokes **GetAccessProfieList** with parameters
   - Limit := *cap*.MaxLimit
   - StartReference skipped
5. The DUT responds with **GetAccessProfieListResponse** message with parameters
   - NextStartReference =: *nextStartReference*
   - AccessProfile list =: *accessProfileCompleteList1*
6. If *accessProfileCompleteList1* contains more AccessProfile items than *cap*.MaxLimit, FAIL the test and skip other steps.
7. Until *nextStartReference* is not null, repeat the following steps:

   7.1. ONVIF client invokes **GetAccessProfieList** with parameters

- Limit := *cap*.MaxLimit
- StartReference := *nextStartReference*

7.2. The DUT responds with **GetAccessProfieListResponse** message with parameters

- NextStartReference =: *nextStartReference*
- AccessProfile list =: *accessProfileListPart*

7.3. If *accessProfileListPart* contains more AccessProfile items than *cap*.MaxLimit, FAIL the test and skip other steps.

7.4. Set the following:

- *accessProfileCompleteList1* := *accessProfileCompleteList1* + *accessProfileListPart*

8. If *accessProfileCompleteList1* contains at least two AccessProfile item with equal token, FAIL the test and skip other steps.

9. If *cap*.MaxLimit is equal to 1, do the following steps:

9.1. ONVIF Client retrieves a complete list of access profiles (out *accessProfileInfoCompleteList*) by following the procedure mentioned in Annex A.1.

9.2. If *accessProfileCompleteList1* does not contain all access profiles from *accessProfileInfoCompleteList*, FAIL the test and skip other steps.

9.3. If *accessProfileCompleteList1* contains access profiles other than access profiles from *accessProfileInfoCompleteList*, FAIL the test and skip other steps.

9.4. For each AccessProfileInfo.token *token* from *accessProfileInfoCompleteList* repeat the following steps:

9.4.1. If *accessProfileCompleteList1*[token = *token*] item does not have equal field values to *accessProfileInfoCompleteList*[token = *token*] item, FAIL the test and skip other steps.

9.5. Skip other steps.

10. ONVIF client invokes **GetAccessProfieList** with parameters

- Limit := 1
- StartReference skipped

11. The DUT responds with **GetAccessProfieListResponse** message with parameters

- NextStartReference =: *nextStartReference*
- AccessProfile list =: *accessProfileCompleteList2*

12. If *accessProfileCompleteList2* contains more AccessProfile items than 1, FAIL the test and skip other steps.
13. Until *nextStartReference* is not null, repeat the following steps:
    13.1. ONVIF client invokes **GetAccessProfieList** with parameters
        - Limit := 1
        - StartReference := *nextStartReference*
    13.2. The DUT responds with **GetAccessProfieListResponse** message with parameters
        - NextStartReference =: *nextStartReference*
        - Access Profile list =: *accessProfileListPart*
    13.3. If *accessProfileListPart* contains more AccessProfile items than 1, FAIL the test and skip other steps.
    13.4. Set the following:
        - *accessProfileCompleteList2* := *accessProfileCompleteList2* + *accessProfileListPart*
14. If *accessProfileCompleteList2* contains at least two AccessProfile item with equal token, FAIL the test and skip other steps.
15. If *accessProfileCompleteList2* does not contain all access profiles from *accessProfileCompleteList1*, FAIL the test and skip other steps.
16. If *accessProfileCompleteList2* contains access profiles other than access profiles from *accessProfileCompleteList1*, FAIL the test and skip other steps.
17. If *cap*.MaxLimit is equal to 2, do the following steps:
    17.1. ONVIF Client retrieves a complete list of access profiles (out *accessProfileInfoCompleteList*) by following the procedure mentioned in Annex A.1.
    17.2. If *accessProfileCompleteList2* does not contain all access profiles from *accessProfileInfoCompleteList*, FAIL the test and skip other steps.
    17.3. If *accessProfileCompleteList2* contains access profiles other than access profiles from *accessProfileInfoCompleteList*, FAIL the test and skip other steps.

17.4. For each AccessProfileInfo.token *token* from *accessProfileInfoCompleteList* repeat the following steps:

17.4.1. If *accessProfileCompleteList2*[token = *token*] item does not have equal field values to *accessProfileInfoCompleteList*[token = *token*] item, FAIL the test and skip other steps.

17.5. Skip other steps.

18. Set the following:

- *limit* := [number between 1 and *cap*.MaxLimit]

19. ONVIF client invokes **GetAccessProfieList** with parameters

- Limit := *limit*
- StartReference skipped

20. The DUT responds with **GetAccessProfieListResponse** message with parameters

- NextStartReference =: *nextStartReference*
- AccessProfile list =: *accessProfileCompleteList3*

21. If *accessProfileCompleteList3* contains more AccessProfile items than *limit*, FAIL the test and skip other steps.

22. Until *nextStartReference* is not null, repeat the following steps:

22.1. ONVIF client invokes **GetAccessProfieList** with parameters

- Limit := *limit*
- StartReference := *nextStartReference*

22.2. The DUT responds with **GetAccessProfieListResponse** message with parameters

- NextStartReference =: *nextStartReference*
- AccessProfile list =: *accessProfileListPart*

22.3. If *accessProfileListPart* contains more AccessProfile items than *limit*, FAIL the test and skip other steps.

22.4. Set the following:

- *accessProfileCompleteList3* := *accessProfileCompleteList3* + *accessProfileListPart*

23. If *accessProfileCompleteList3* contains at least two AccessProfile item with equal token, FAIL the test and skip other steps.
24. If *accessProfileCompleteList3* does not contain all access profiles from *accessProfileCompleteList1*, FAIL the test and skip other steps.
25. If *accessProfileCompleteList3* contains access profiles other than access profiles from *accessProfileCompleteList1*, FAIL the test and skip other steps.
26. ONVIF Client retrieves a complete list of access profiles (out *accessProfileInfoCompleteList*) by following the procedure mentioned in Annex A.1.
27. If *accessProfileCompleteList3* does not contain all access profiles from *accessProfileInfoCompleteList*, FAIL the test and skip other steps.
28. If *accessProfileCompleteList3* contains access profiles other than access profiles from *accessProfileInfoCompleteList*, FAIL the test and skip other steps.
29. For each AccessProfileInfo.token *token* from *accessProfileInfoCompleteList* repeat the following steps:
    29.1. If *accessProfileCompleteList3*[token = *token*] item does not have equal field values to *accessProfileInfoCompleteList*[token = *token*] item, FAIL the test and skip other steps.

Test Result:

PASS –

- DUT passes all assertions.

FAIL –

- DUT did not send **GetAccessProfieListResponse** message.

Note: The following fields are compared at step 29.1:

- AccessProfileInfo:
  - token
  - Name
  - Description

4.3.4 GET ACCESS PROFILE LIST - NO LIMIT

Test Case ID: ACCESS_RULES-3-1-4

Specification Coverage: AccessProfileInfo (ONVIF Access Rules Service Specification), AccessProfile (ONVIF Access Rules Service Specification), GetAccessProfileList command (ONVIF Access Rules Service Specification)

Feature Under Test: GetAccessProfileList

WSDL Reference: accessrules.wsdl

Test Purpose: To verify Get Access Profile List without using Limit.

Pre-Requisite: Access Rules Service is received from the DUT.

Test Configuration: ONVIF Client and DUT

Test Procedure:

1. Start an ONVIF Client.
2. Start the DUT.
3. ONVIF Client gets the service capabilities (out *cap*) by following the procedure mentioned in Annex A.2.
4. ONVIF client invokes **GetAccessProfieList** with parameters
   - Limit skipped
   - StartReference skipped
5. The DUT responds with **GetAccessProfieListResponse** message with parameters
   - NextStartReference =: *nextStartReference*
   - AccessProfile list =: *accessProfileCompleteList*
6. If *accessProfileCompleteList* contains more AccessProfile items than *cap*.MaxLimit, FAIL the test and skip other steps.
7. Until *nextStartReference* is not null repeat, the following steps:
   7.1. ONVIF client invokes **GetAccessProfieList** with parameters
      - Limit skipped
      - StartReference := *nextStartReference*
   7.2. The DUT responds with **GetAccessProfieListResponse** message with parameters
      - NextStartReference =: *nextStartReference*

- AccessProfile list =: *accessProfileListPart*

7.3. If *accessProfileListPart* contains more AccessProfile items than *cap*.MaxLimit, FAIL the test and skip other steps.

7.4. Set the following:

- *accessProfileCompleteList* := *accessProfileCompleteList* + *accessProfileListPart*

8. If *accessProfileCompleteList* contains at least two AccessProfile item with equal token, FAIL the test.

9. ONVIF Client retrieves a complete list of access profiles (out *accessProfileInfoCompleteList*) by following the procedure mentioned in Annex A.1.

10. If *accessProfileCompleteList* does not contain all access profiles from *accessProfileInfoCompleteList*, FAIL the test and skip other steps.

11. If *accessProfileCompleteList* contains access profiles other than access profiles from *accessProfileInfoCompleteList*, FAIL the test and skip other steps.

12. For each AccessProfileInfo.token *token* from *accessProfileInfoCompleteList* repeat the following steps:

12.1. If *accessProfileCompleteList*[token = *token*] item does not have equal field values to *accessProfileInfoCompleteList*[token = *token*] item, FAIL the test and skip other steps.

Test Result:

PASS –

- DUT passes all assertions.

FAIL –

- DUT did not send **GetAccessProfieListResponse** message.

Note: The following fields are compared at step 12.1:

- AccessProfileInfo:
  - token
  - Name
  - Description

4.3.5 CREATE ACCESS PROFILE

Test Case ID: ACCESS_RULES-3-1-5

Specification Coverage: AccessProfileInfo (ONVIF Access Rules Service Specification), AccessProfile (ONVIF Access Rules Service Specification), CreateAccessProfile command (ONVIF Access Rules Service Specification).

Feature Under Test: CreateAccessProfile

WSDL Reference: accessrules.wsdl and event.wsdl

Test Purpose: To verify Create Access Profiles with empty token and to verify tns1:Configuration/AccessProfile/Changed event generation.

Pre-Requisite: Access Rules Service is received from the DUT. Schedule Service is received from the DUT. Event Service is received from the DUT. The DUT shall have enough free storage capacity for one additional Access Profile.

Test Configuration: ONVIF Client and DUT

Test Procedure:

1. Start an ONVIF Client.
2. Start the DUT.
3. ONVIF Client retrieves a complete list of access profiles (out *accessProfileCompleteList1*) by following the procedure mentioned in Annex A.3.
4. ONVIF Client checks free storage for additional Access Profile (in *accessProfileCompleteList1*, out *accessProfileToRestore*) by following the procedure mentioned in Annex A.7.
5. If Access Control service is supported by the DUT, ONVIF Client retrieves a complete list of access point information (out *accessPointInfoCompleteList*) by following the procedure mentioned in Annex A.5.
6. If *accessPointInfoCompleteList* is not empty:
    6.1. ONVIF Client retrieves a complete list of schedules (out *scheduleCompleteList*) by following the procedure mentioned in Annex A.4.
    6.2. If *scheduleCompleteList* is not empty:
        6.2.1. Set *scheduleToken*:= *scheduleCompleteList*[0].token

6.2.2. Go to step 7.

6.3. ONVIF Client gets the service capabilities (out *cap*) by following the procedure mentioned in Annex A.12

6.4. ONVIF Client generates appropriate iCalendar value for the Schedule.Standard field (in *cap*, out *scheduleiCalendarValue*) by following the procedure mentioned in Annex A.14.

6.5. If *cap*.SpecialDaysSupported is equal to true, ONVIF Client creates SpecialDayGroup (out *specialDayGroupToken*) by following the procedure mentioned in Annex A.15.

6.6. ONVIF Client creates Schedule with Schedule token (out *scheduleToken*), with iCalendar value of the Schedule.Standard field (in *scheduleiCalendarValue*) and with SpecialDayGroupToken (in *specialDayGroupToken*) if Special Days is supported by the DUT by following the procedure mentioned in Annex A.16.

7. ONVIF Client invokes **CreatePullPointSubscription** with parameters
   - Filter.TopicExpression := “tns1:Configuration/AccessProfile/Changed”
8. The DUT responds with a **CreatePullPointSubscriptionResponse** message with parameters
   - SubscriptionReference =: *s*
   - CurrentTime =: *ct*
   - TerminationTime =: *tt*
9. ONVIF client invokes **CreateAccessProfile** with parameters
   - AccessProfile.token := “”
   - AccessProfile.Name := “Test Access Profile”
   - AccessProfile.Description := “Test Description”
   - AccessProfile.AccessPolicy is skipped if *accessPointInfoCompleteList* is empty
   - AccessProfile.AccessPolicy[0].ScheduleToken := *scheduleToken*
   - AccessProfile.AccessPolicy[0].Entity := *accessPointInfoCompleteList*[0].token
   - AccessProfile.AccessPolicy[0].EntityType skipped
   - AccessProfile.AccessPolicy[0].Extension skipped

- AccessProfile.Extension skipped

10. The DUT responds with **CreateAccessProfileResponse** message with parameters
    - Token =: *accessProfileToken*
11. If *accessProfileCompleteList1* contains item with token equal to *accessProfileToken*, FAIL the test and go to Step 24.
12. Until *timeout1* timeout expires, repeat the following steps:
    12.1. ONVIF Client waits for time *t* := min{(*tt*-*ct*)/2, 1 second}.
    12.2. ONVIF Client invokes **PullMessages** to the subscription endpoint s with parameters
        - Timeout := PT60S
        - MessageLimit := 1
    12.3. The DUT responds with **PullMessagesResponse** message with parameters
        - CurrentTime =: *ct*
        - TerminationTime =: *tt*
        - NotificationMessage =: *m*
    12.4. If *m* is not null and the TopicExpression item in *m* is not equal to “tns1:Configuration/AccessProfile/Changed”, FAIL the test and go to the step 24.
    12.5. If *m* is not null and the AccessProfileToken source simple item in *m* is not equal to *accessProfileToken*, go to the step 24.
    12.6. If *m* is not null and the AccessProfileToken source simple item in *m* is equal to *accessProfileToken*, go to the step 14.
13. If *timeout1* timeout expires for step 12 without Notification with AccessProfileToken source simple item equal to *accessProfileToken*, FAIL the test and go to the step 24.
14. ONVIF Client retrieves an access profile (in *accessProfileToken*, out *accessProfileList*) by following the procedure mentioned in Annex A.8.
15. If *accessProfileList* contains more or less than one *AccessProfile* item, FAIL the test and go to step 24.
16. If *accessProfileList*[0] item does not have equal field values to values from step 9, FAIL the test and go Step 24.

17. ONVIF Client retrieves an access profile info (in *accessProfileToken*, out *accessProfileInfoList*) by following the procedure mentioned in Annex A.9.
18. If *accessProfileInfoList* contains more or less than one *AccessProfile* item, FAIL the test and go to step 24.
19. If *accessProfileInfoList*[0] item does not have equal field values to values from step 9, FAIL the test and go Step 24.
20. ONVIF Client retrieves a complete list of access profiles (out *accessProfileInfoCompleteList*) by following the procedure mentioned in Annex A.1.
21. If *accessProfileInfoCompleteList* does not have *accessProfileInfo*.[token:= *accessProfileToken*] item equal field values to values from step 9, FAIL the test and go Step 24.
22. ONVIF Client retrieves a complete list of access profiles (out *accessProfileCompleteList2*) by following the procedure mentioned in Annex A.3.
23. If *accessProfileCompleteList2* does not have *accessProfile*.[token:= *accessProfileToken*] item equal field values to values from step 9, FAIL the test and go to Step 24.
24. ONVIF Client deletes the Access Profile (in *accessProfileToken*) by following the procedure mentioned in Annex A.6 to restore DUT configuration.
25. If there was access profile deleted at Step 4, restore it (in *accessProfileToRestore*) by following the procedure mentioned in Annex A.10 to restore DUT configuration.
26. ONVIF Client deletes the Schedule (in *scheduleToken*) by following the procedure mentioned in Annex A.17 to restore DUT configuration.
27. If SpecialDayGroup was created at step 6.5, ONVIF Client deletes the SpecialDayGroup (in *specialDayGroupToken*) by following the procedure mentioned in Annex A.18 to restore DUT configuration.
28. ONVIF Client sends an **Unsubscribe** to the subscription endpoint *s*.
29. The DUT responds with **UnsubscribeResponse** message.

Test Result:

PASS –

- DUT passes all assertions.

FAIL –

- The DUT did not send **CreateAccessProfilesResponse** message.

- The DUT did not send **CreatePullpointSubscriptionResponse** message.
- The DUT did not send **PullMessagesResponse** message.
- The DUT did not send **UnsubscribeResponse** message.

Note: *timeout1* will be taken from Operation Delay field of ONVIF Device Test Tool.

Note: ONVIF Client skips whole AccessProfile.AccessPolicy field at step 9, if AccessProfile.AccessPolicy[0].ScheduleToken and AccessProfile.AccessPolicy[0].Entity field are skipped.

Note: The following fields are compared at steps 15, 21:

- AccessProfile:
  - token
  - Name
  - Description
  - AccessPolicy
    - ScheduleToken
    - Entity
    - EntityType

Note: The following fields are compared at steps 17, 19:

- AccessProfileInfo:
  - token
  - Name
  - Description

4.3.6 MODIFY ACCESS PROFILE

Test Case ID: ACCESS_RULES-3-1-7

Specification Coverage: AccessProfileInfo (ONVIF Access Rules Service Specification), AccessProfile (ONVIF Access Rules Service Specification), ModifyAccessProfile command (ONVIF Access Rules Service Specification).

Feature Under Test: ModifyAccessProfile

WSDL Reference: accessrules.wsdl and event.wsdl

Test Purpose: To verify Modify Access Profile and to verify tns1:Configuration/AccessProfile/Changed event generation.

Pre-Requisite: Access Rules Service is received from the DUT. Schedule Service is received from the DUT. Event Service is received from the DUT. The DUT shall have enough free storage capacity for one additional Access Profile.

Test Configuration: ONVIF Client and DUT

Test Procedure:

1. Start an ONVIF Client.
2. Start the DUT.
3. ONVIF Client retrieves a complete list of access profiles (out *accessProfileCompleteList1*) by following the procedure mentioned in Annex A.3.
4. ONVIF Client checks free storage for additional Access Profile (in *accessProfileCompleteList1*, out *accessProfileToRestore*) by following the procedure mentioned in Annex A.7.
5. ONVIF Client retrieves a complete list of schedules (out *scheduleCompleteList*) by following the procedure mentioned in Annex A.4.
6. If Access Control service is supported by the DUT, ONVIF Client retrieves a complete list of access point information (out *accessPointInfoCompleteList*) by following the procedure mentioned in Annex A.5.
7. ONVIF client creates access profile (in *scheduleCompleteList*, *accessPointInfoCompleteList*, out *accessProfileToken*) by following the procedure mentioned in Annex A.11.
8. ONVIF Client invokes **CreatePullPointSubscription** with parameters
   - Filter.TopicExpression := “tns1:Configuration/AccessProfile/Changed”
9. The DUT responds with a **CreatePullPointSubscriptionResponse** message with parameters
   - SubscriptionReference =: *s*
   - CurrentTime =: *ct*

- TerminationTime =: *tt*

10. ONVIF client invokes **ModifyAccessProfile** with parameters
    - AccessProfile.token := *accessProfileToken*
    - AccessProfile.Name := “Test Access Profile 2”
    - AccessProfile.Description := “Test Description 2”
    - AccessProfile.AccessPolicy is skipped if *scheduleCompleteList* or *accessPointInfoCompleteList* is empty
    - AccessProfile.AccessPolicy[0].ScheduleToken := *scheduleCompleteList*[0].token
    - AccessProfile.AccessPolicy[0].Entity := *accessPointInfoCompleteList*[0].token
    - AccessProfile.AccessPolicy[0].EntityType skipped
    - AccessProfile.AccessPolicy[0].Extension skipped
    - AccessProfile.Extension skipped
11. The DUT responds with empty **ModifyAccessProfileResponse** message.
12. Until *timeout1* timeout expires, repeat the following steps:
    12.1. ONVIF Client waits for time *t* := min{(*tt*-*ct*)/2, 1 second}.
    12.2. ONVIF Client invokes **PullMessages** to the subscription endpoint s with parameters
        - Timeout := PT60S
        - MessageLimit := 1

    12.3. The DUT responds with **PullMessagesResponse** message with parameters
        - CurrentTime =: *ct*
        - TerminationTime =: *tt*
        - NotificationMessage =: *m*

    12.4. If *m* is not null and the TopicExpression item in *m* is not equal to “tns1:Configuration/AccessProfile/Changed”, FAIL the test and go to the step 17.
    12.5. If *m* is not null and the AccessProfileToken source simple item in *m* is not equal to *accessProfileToken*, go to the step 17.

12.6. If *m* is not null and the AccessProfileToken source simple item in *m* is equal to *accessProfileToken*, go to the step 17.

13. If *timeout1* timeout expires for step 12 without Notification with AccessProfileToken source simple item equal to *accessProfileToken*, FAIL the test and go to the step 17.

14. ONVIF Client retrieves an access profile (in *accessProfileToken*, out *accessProfileList*) by following the procedure mentioned in Annex A.8.

15. If *accessProfileList* contains more or less than one *AccessProfile* item, FAIL the test and go to step 17.

16. If *accessProfileList*[0] item does not have equal field values to values from step 10, FAIL the test and go Step 17.

17. ONVIF Client deletes the Access Profile (in *accessProfileToken*) by following the procedure mentioned in Annex A.6 to restore DUT configuration.

18. If there was access profile deleted at Step 4, restore it (in *accessProfileToRestore*) by following the procedure mentioned in Annex A.10 to restore DUT configuration.

19. ONVIF Client sends an **Unsubscribe** to the subscription endpoint *s*.

20. The DUT responds with **UnsubscribeResponse** message.

Test Result:

PASS –

- DUT passes all assertions.

FAIL –

- The DUT did not send **ModifyAccessProfilesResponse** message.
- The DUT did not send **CreatePullpointSubscriptionResponse** message.
- The DUT did not send **PullMessagesResponse** message.
- The DUT did not send **UnsubscribeResponse** message.

Note: *timeout1* will be taken from Operation Delay field of ONVIF Device Test Tool.

Note: The following fields are compared at step 16:

- AccessProfile:

- token
- Name
- Description
- AccessPolicy
  - ScheduleToken
  - Entity
  - EntityType (skipped and "tac:AccessPointInfo" means the same, where tac is the namespace of the access control service: “http://www.onvif.org/ver10/accesscontrol/wsdl”)

4.3.7 DELETE ACCESS PROFILE

Test Case ID: ACCESS_RULES-3-1-8

Specification Coverage: AccessProfileInfo (ONVIF Access Rules Service Specification), AccessProfile (ONVIF Access Rules Service Specification), DeleteAccessProfile command (ONVIF Access Rules Service Specification).

Feature Under Test: DeleteAccessProfile

WSDL Reference: accessrules.wsdl and event.wsdl

Test Purpose: To verify Delete Access Profile and to verify tns1:Configuration/AccessProfile/Removed event generation.

Pre-Requisite: Access Rules Service is received from the DUT. Schedule Service is received from the DUT. Event Service is received from the DUT. The DUT shall have enough free storage capacity for one additional Access Profile.

Test Configuration: ONVIF Client and DUT

Test Procedure:

1. Start an ONVIF Client.
2. Start the DUT.
3. ONVIF Client retrieves a complete list of access profiles (out *accessProfileCompleteList1*) by following the procedure mentioned in Annex A.3.

4. ONVIF Client checks free storage for additional Access Profile (in *accessProfileCompleteList1*, out *accessProfileToRestore*) by following the procedure mentioned in Annex A.7.

5. ONVIF Client retrieves a complete list of schedules (out *scheduleCompleteList*) by following the procedure mentioned in Annex A.4.

6. If Access Control service is supported by the DUT, ONVIF Client retrieves a complete list of access point information (out *accessPointInfoCompleteList*) by following the procedure mentioned in Annex A.5.

7. ONVIF client creates access profile (in *scheduleCompleteList*, *accessPointInfoCompleteList*, out *accessProfileToken*) by following the procedure mentioned in Annex A.11.

8. ONVIF Client invokes **CreatePullPointSubscription** with parameters

   - Filter.TopicExpression := “tns1:Configuration/AccessProfile/Removed"

9. The DUT responds with a **CreatePullPointSubscriptionResponse** message with parameters

   - SubscriptionReference =: *s*
   - CurrentTime =: *ct*
   - TerminationTime =: *tt*

10. ONVIF client invokes **DeleteAccessProfile** with parameters

    - Token =: *accessProfileToken*

11. The DUT responds with empty **DeleteAccessProfileResponse** message.

12. Until *timeout1* timeout expires, repeat the following steps:

    12.1. ONVIF Client waits for time *t* := min{(*tt*-*ct*)/2, 1 second}.

    12.2. ONVIF Client invokes **PullMessages** to the subscription endpoint s with parameters

    - Timeout := PT60S
    - MessageLimit := 1

    12.3. The DUT responds with **PullMessagesResponse** message with parameters

    - CurrentTime =: *ct*

- TerminationTime =: *tt*
- NotificationMessage =: *m*

12.4. If *m* is not null and the TopicExpression item in *m* is not equal to “tns1:Configuration/AccessProfile/Removed", FAIL the test and go to the step 25.

12.5. If *m* is not null and the AccessProfileToken source simple item in *m* is not equal to *accessProfileToken*, go to the step 23.

12.6. If *m* is not null and the AccessProfileToken source simple item in *m* is equal to *accessProfileToken*, go to the step 14.

13. If *timeout1* timeout expires for step 12 without Notification with AccessProfileToken source simple item equal to *accessProfileToken*, FAIL the test and go to the step 23.

14. ONVIF Client retrieves an access profile (in *accessProfileToken*, out *accessProfileList*) by following the procedure mentioned in Annex A.8.

15. If *accessProfileList* is not empty, FAIL the test and go Step 23.

16. ONVIF Client retrieves an access profile info (in *accessProfileToken*, out *accessProfileInfo*) by following the procedure mentioned in Annex A.9.

17. If *accessProfileInfo* is not empty, FAIL the test and go Step 23.

18. ONVIF Client retrieves a complete list of access profiles info (out *accessProfileInfoCompleteList*) by following the procedure mentioned in Annex A.1.

19. If *accessProfileInfoCompleteList* have *accessProfileInfo* item with token equal to *accessProfileToken*, FAIL the test and go step 23.

20. ONVIF Client retrieves a complete list of access profiles (out *accessProfileCompleteList2*) by following the procedure mentioned in Annex A.3.

21. If there was access profile deleted at step 4:

- *accessProfileCompleteList1* := *accessProfileCompleteList1* without *accessProfileToRestore*

22. If *accessProfileCompleteList2* is not equal to *accessProfileCompleteList1*, FAIL the test and go to step 23.

23. If there was access profile deleted at Step 4, restore it (in *accessProfileToRestore*) by following the procedure mentioned in Annex A.10 to restore DUT configuration.

24. ONVIF Client sends an **Unsubscribe** to the subscription endpoint *s*.

25. The DUT responds with **UnsubscribeResponse** message.

Test Result:

PASS –

- DUT passes all assertions.

FAIL –

- The DUT did not send **DeleteAccessProfilesResponse** message.
- The DUT did not send **CreatePullpointSubscriptionResponse** message.
- The DUT did not send **PullMessagesResponse** message.
- The DUT did not send **UnsubscribeResponse** message.

Note: *timeout1* will be taken from Operation Delay field of ONVIF Device Test Tool.

4.3.8 GET ACCESS PROFILES WITH INVALID TOKEN

Test Case ID: ACCESS_RULES-3-1-9

Specification Coverage: AccessProfileInfo (ONVIF Access Rules Service Specification), AccessProfile (ONVIF Access Rules Service Specification), GetAccessProfiles command (ONVIF Access Rules Service Specification)

Feature Under Test: GetAccessProfiles

WSDL Reference: accessrules.wsdl

Test Purpose: To verify Get Access Profiles with invalid Token.

Pre-Requisite: Access Rules Service is received from the DUT.

Test Configuration: ONVIF Client and DUT

Test Procedure:

1. Start an ONVIF Client.
2. Start the DUT.
3. ONVIF Client retrieves a complete list of access profiles (out *accessProfileInfoCompleteList*) by following the procedure mentioned in Annex A.1.

4. Set the following:
   - *invalidToken* := value not equal to any *accessProfileInfoCompleteList*.token
5. ONVIF client invokes **GetAccessProfiles** with parameters
   - Token list := *invalidToken*
6. The DUT responds with **GetAccessProfilesResponse** message with parameters
   - AccessProfile list =: *accessProfilesList*
7. If *accessProfilesList* is not empty, FAIL the test.
8. If *accessProfileInfoCompleteList* is empty, skip other steps.
9. ONVIF Client gets the service capabilities (out *cap*) by following the procedure mentioned in Annex A.2.
10. If *cap*.MaxLimit is less than 2, skip other steps.
11. ONVIF client invokes **GetAccessProfiles** with parameters
    - Token[0]:= *invalidToken*
    - Token[1]:= *accessProfileInfoCompleteList*[0].token
12. The DUT responds with **GetAccessProfilesResponse** message with parameters
    - AccessProfileInfo list =: *accessProfilesList*
13. If *accessProfilesList* is empty, FAIL the test.
14. If *accessProfilesList* contains more than one item, FAIL the test.
15. If *accessProfilesList*[0].token does not equal to *accessProfileInfoCompleteList*[0].token, FAIL the test.

Test Result:

PASS –

- DUT passes all assertions.

FAIL –

- DUT did not send **GetAccessProfilesResponse** message.

4.3.9 GET ACCESS PROFILES - TOO MANY ITEMS

Test Case ID: ACCESS_RULES-3-1-10

Specification Coverage: AccessProfile (ONVIF Access Rules Service Specification), GetAccessProfiles command (ONVIF Access Rules Service Specification)

Feature Under Test: GetAccessProfiles

WSDL Reference: accessrules.wsdl

Test Purpose: To verify Get Access Profiles in case if there a more items than MaxLimit in request.

Pre-Requisite: Access Rules Service is received from the DUT.

Test Configuration: ONVIF Client and DUT

Test Procedure:

1. Start an ONVIF Client.
2. Start the DUT.
3. ONVIF Client retrieves a complete list of access profiles (out *accessProfileCompleteList*) by following the procedure mentioned in Annex A.3.
4. ONVIF Client gets the service capabilities (out *cap*) by following the procedure mentioned in Annex A.2.
5. If *accessProfileCompleteList*.token items number is less than *cap*.MaxLimit or equal to *cap*.MaxLimit, skip other steps.
6. Set the following:
   - *tokenList* := [subset of *accessProfileInfoCompleteList*.token values with items number equal to *cap*.MaxLimit + 1]
7. ONVIF client invokes **GetAccessProfiles** with parameters
   - Token list := *tokenList*
8. The DUT returns **env:Sender\ter:InvalidArgs\ter:TooManyItems** SOAP 1.2 fault.

Test Result:

PASS –

- DUT passes all assertions.

FAIL –

- The DUT did not send env:Sender\ter:InvalidArgs\ter:TooManyItems SOAP 1.2 fault.

4.3.10 CREATE ACCESS PROFILE - NOT EMPTY ACCESS PROFILE TOKEN

Test Case ID: ACCESS_RULES-3-1-11

Specification Coverage: AccessProfile (ONVIF Access Rules Service Specification), CreateAccessProfile command (ONVIF Access Rules Service Specification).

Feature Under Test: CreateAccessProfile

WSDL Reference: accessrules.wsdl

Test Purpose: To verify Create Access Profiles with not empty token.

Pre-Requisite: Access Rules Service is received from the DUT. The DUT shall have enough free storage capacity for one additional Access Profile.

Test Configuration: ONVIF Client and DUT

Test Procedure:

1. Start an ONVIF Client.
2. Start the DUT.
3. ONVIF client invokes **CreateAccessProfile** with parameters
   - AccessProfile.token := “AccessProfileToken”
   - AccessProfile.Name := “Test Access Profile”
   - AccessProfile.Description := “Test Description”
   - AccessProfile.AccessPolicy is skipped
4. The DUT returns **env:Sender\ter:InvalidArgs** SOAP 1.2 fault.

Test Result:

PASS –

- DUT passes all assertions.

FAIL –

- The DUT did not send env:Sender\ter:InvalidArgs SOAP 1.2 fault.

4.3.11 CREATE ACCESS PROFILE - MULTIPLE SCHEDULES NOT SUPPORTED

Test Case ID: ACCESS_RULES-3-1-12

Specification Coverage: AccessProfileInfo (ONVIF Access Rules Service Specification), AccessProfile (ONVIF Access Rules Service Specification), CreateAccessProfile command (ONVIF Access Rules Service Specification).

Feature Under Test: CreateAccessProfile

WSDL Reference: accessrules.wsdl

Test Purpose: To verify Create Access Profiles with several access policies specifying different schedules for the same access point when MultipleSchedulesPerAccessPointSupported is not Supported.

Pre-Requisite: Access Rules Service is received from the DUT. Schedule Service is received from the DUT. The DUT shall have enough free storage capacity for one additional Access Profile.

Test Configuration: ONVIF Client and DUT

Test Procedure:

1. Start an ONVIF Client.
2. Start the DUT.
3. ONVIF Client gets the service capabilities (out *cap*) by following the procedure mentioned in Annex A.2.
4. If *cap*.MultipleSchedulesPerAccessPointSupported is equal to true, skip other steps.
5. ONVIF Client retrieves a complete list of schedules (out *scheduleCompleteList*) by following the procedure mentioned in Annex A.4.
6. If *scheduleCompleteList* contains less than two schedules, skip other steps.
7. If Access Control service is supported by the DUT, ONVIF Client retrieves a complete list of access point information (out *accessPointInfoCompleteList*) by following the procedure mentioned in Annex A.5.

8. If *accessPointInfoCompleteList* is empty, skip other steps.
9. ONVIF client invokes **CreateAccessProfile** with parameters
   - AccessProfile.token := “”
   - AccessProfile.Name := “Test Access Profile”
   - AccessProfile.Description := “Test Description”
   - AccessProfile.AccessPolicy[0].ScheduleToken := *scheduleCompleteList*[0].token
   - AccessProfile.AccessPolicy[0].Entity := *accessPointInfoCompleteList*[0].token
   - AccessProfile.AccessPolicy[0].EntityType skipped
   - AccessProfile.AccessPolicy[0].Extension skipped
   - AccessProfile.AccessPolicy[1].ScheduleToken := *scheduleCompleteList*[1].token
   - AccessProfile.AccessPolicy[1].Entity := *accessPointInfoCompleteList*[0].token
   - AccessProfile.AccessPolicy[1].EntityType skipped
   - AccessProfile.AccessPolicy[1].Extension skipped
   - AccessProfile.Extension skipped
10. The DUT returns **env:Sender\ter:CapabilityViolated \ter:MultipleSchedulesPerAccessPointSupported** SOAP 1.2 fault.

Test Result:

PASS –

- DUT passes all assertions.

FAIL –

- The DUT did not send **env:Sender\ter:CapabilityViolated \ter:MultipleSchedulesPerAccessPointSupported** SOAP 1.2 fault

Note: If the DUT sends other SOAP 1.2 fault message than specified, log WARNING message, and PASS the test.

4.3.12 MODIFY ACCESS PROFILE WITH INVALID TOKEN

Test Case ID: ACCESS_RULES-3-1-13

Specification Coverage: ModifyAccessProfile command (ONVIF Access Rules Service Specification).

Feature Under Test: ModifyAccessProfile

WSDL Reference: accessrules.wsdl

Test Purpose: To verify Modify Access Profile with invalid Access Profile token.

Pre-Requisite: Access Rules Service is received from the DUT.

Test Configuration: ONVIF Client and DUT

Test Procedure:

1. Start an ONVIF Client.
2. Start the DUT.
3. ONVIF Client retrieves a complete list of access profile info (out *accessProfileInfoCompleteList*) by following the procedure mentioned in Annex A.1.
4. Set the following:
   - *invalidToken* := value not equal to any *accessProfileInfoCompleteList*.token
5. ONVIF client invokes **ModifyAccessProfile** with parameters
   - AccessProfile.token := *invalidToken*
   - AccessProfile.Name := “Test Access Profile”
   - AccessProfile.Description := “Test Description”
   - AccessProfile.AccessPolicy is skipped
6. The DUT returns **env:Sender\ter:InvalidArgVal\ter:NotFound** SOAP 1.2 fault.

Test Result:

PASS –

- DUT passes all assertions.

FAIL –

- DUT did not send **env:Sender\ter:InvalidArgVal\ter:NotFound** SOAP 1.2 fault

Note: If the DUT sends other SOAP 1.2 fault message than specified, log WARNING message, and PASS the test.

4.3.13 DELETE ACCESS PROFILE WITH INVALID TOKEN

Test Case ID: ACCESS_RULES-3-1-14

Specification Coverage: DeleteAccessProfile command (ONVIF Access Rules Service Specification).

Feature Under Test: DeleteAccessProfile

WSDL Reference: accessrules.wsdl

Test Purpose: To verify Delete Access Profile with invalid Access Profile token.

Pre-Requisite: Access Rules Service is received from the DUT.

Test Configuration: ONVIF Client and DUT

Test Procedure:

1. Start an ONVIF Client.
2. Start the DUT.
3. ONVIF Client retrieves a complete list of access profile info (out *accessProfileInfoCompleteList*) by following the procedure mentioned in Annex A.1.
4. Set the following:
   - *invalidToken* := value not equal to any *accessProfileInfoCompleteList*.token
5. ONVIF client invokes **DeleteAccessProfile** with parameters
   - Token =: *accessProfileToken*
6. The DUT returns **env:Sender\ter:InvalidArgVal\ter:NotFound** SOAP 1.2 fault.

Test Result:

PASS –

- DUT passes all assertions.

FAIL –

- The DUT did not send **env:Sender\ter:InvalidArgVal\ter:NotFound** SOAP 1.2 fault

Note: If the DUT sends other SOAP 1.2 fault message than specified, log WARNING message, and PASS the test.

4.4 Events

4.4.1 ACCESS PROFILE CHANGED EVENT

Test Case ID: ACCESS_RULES-5-1-1

Specification Coverage: Event Changed (ONVIF Access Rules Service Specification)

Feature Under Test: GetEventProperties

WSDL Reference: accessrules.wsdl and event.wsdl

Test Purpose: To verify tns1:Configuration/AccessProfile/Changed event format.

Pre-Requisite: Access Rules Service is supported by the DUT. Event Service is received from the DUT.

Test Configuration: ONVIF Client and DUT

Test Procedure:

1. Start an ONVIF Client.
2. Start the DUT.
3. ONVIF Client invokes **GetEventProperties**.
4. The DUT responds with a **GetEventPropertiesResponse** message with parameters
   - TopicNamespaceLocation list
   - FixedTopicSet
   - TopicSet =: *topicSet*
   - TopicExpressionDialect list
   - MessageContentFilterDialect list
   - MessageContentSchemaLocation list
5. If *topicSet* does not contain tns1:Configuration/AccessProfile/Changed topic, FAIL the test and skip other steps.
6. ONVIF Client verifies tns1:Configuration/AccessProfile/Changed topic (*ChangedTopic*) from *topicSet*:

6.1. If *ChangedTopic*.MessageDescription.IsProperty equals to true, FAIL the test and skip other steps.

6.2. If *ChangedTopic* does not contain MessageDescription.Source.SimpleItemDescription item with Name = “AccessProfileToken”, FAIL the test and skip other steps.

6.3. If *ChangedTopic*.MessageDescription.Source.SimpleItemDescription with Name = “AccessProfileToken” does not have Type = “pt:ReferenceToken”, FAIL the test and skip other steps.

Test Result:

PASS –

- DUT passes all assertions.

FAIL –

- DUT did not send **GetEventPropertiesResponse** message.

4.4.2 ACCESS PROFILE REMOVED EVENT

Test Case ID: ACCESS_RULES-5-1-2

Specification Coverage: Event Changed (ONVIF Access Rules Service Specification)

Feature Under Test: GetEventProperties

WSDL Reference: accessrules.wsdl and event.wsdl

Test Purpose: To verify tns1:Configuration/AccessProfile/Removed event format.

Pre-Requisite: Access Rules Service is supported by the DUT. Event Service is received from the DUT.

Test Configuration: ONVIF Client and DUT

Test Procedure:

1. Start an ONVIF Client.
2. Start the DUT.
3. ONVIF Client invokes **GetEventProperties**.
4. The DUT responds with a **GetEventPropertiesResponse** message with parameters

- TopicNamespaceLocation list
- FixedTopicSet
- TopicSet =: *topicSet*
- TopicExpressionDialect list
- MessageContentFilterDialect list
- MessageContentSchemaLocation list

5. If *topicSet* does not contain tns1:Configuration/AccessProfile/Removed topic, FAIL the test and skip other steps.
6. ONVIF Client verifies tns1:Configuration/AccessProfile/Removed topic (*RemovedTopic*) from *topicSet*:
   6.1. If *RemovedTopic*.MessageDescription.IsProperty equals to true, FAIL the test and skip other steps.
   6.2. If *RemovedTopic* does not contain MessageDescription.Source.SimpleItemDescription item with Name = “AccessProfileToken”, FAIL the test and skip other steps.
   6.3. If *RemovedTopic*.MessageDescription.Source.SimpleItemDescription with Name = “AccessProfileToken” does not have Type = “pt:ReferenceToken”, FAIL the test and skip other steps.

Test Result:

PASS –

- DUT passes all assertions.

FAIL –

- DUT did not send **GetEventPropertiesResponse** message.

4.5 Consistency

4.5.1 ACCESS POLICIES AND ACCESS POINT CONSISTENCY

Test Case ID: ACCESS_RULES-6-1-1

Specification Coverage: AccessPolicy (ONVIF Access Rules Service Specification), AccessPoint (ONVIF Access Control Service Specification) ServiceCapabilities (ONVIF Access Rules Service Specification), GetServiceCapabilities command (ONVIF Access Rules Service Specification)

Feature Under Test: GetAccessProfileList, GetAccessPointInfoList

WSDL Reference: accessrules.wsdl and accesscontrol.wsdl

Test Purpose: To verify that Access Policies List contains only Access Points from Access Point Info List.

Pre-Requisite: Access Rules Service is received from the DUT. Access Control Service is received from the DUT.

Test Configuration: ONVIF Client and DUT

Test Procedure:

1. Start an ONVIF Client.
2. Start the DUT.
3. ONVIF Client retrieves a complete list of access profiles (out *accessProfileCompleteList*) by following the procedure mentioned in Annex A.3.
4. ONVIF Client retrieves a complete list of access point information (out *accessPointInfoCompleteList*) by following the procedure mentioned in Annex A.5.
5. For each access profile (*accessProfile*) from *accessProfileCompleteList* do the following:
   5.1. For each *accessProfile*.AccessPolicy with skipped EntityType or EntityType equal to tac:AccessPoint repeat the following steps:
      5.1.1. If *accessPointInfoCompleteList* does not contain Access Point token equal to *accessProfile*.AccessPolicy.Entity item, FAIL the test and skip other steps.

Test Result:

PASS –

- DUT passes all assertions.

Annex A Helper Procedures and Additional Notes

A.1 Get access profiles information list

Name: HelperGetAccessProfileInfoList

Procedure Purpose: Helper procedure to get complete access profiles information list.

Pre-requisite: Access Rules Service is received from the DUT.

Input: None.

Returns: The complete list of access profiles information (*accessProfileInfoCompleteList*).

Procedure:

1. ONVIF client invokes **GetAccessProfileInfoList** with parameters
   - Limit skipped
   - StartReference skipped
2. The DUT responds with **GetAccessProfileInfoListResponse** message with parameters
   - NextStartReference =: *nextStartReference*
   - AccessProfileInfo list =: *accessProfileInfoCompleteList*
3. Until *nextStartReference* is not null, repeat the following steps:
   3.1. ONVIF client invokes **GetAccessProfileInfoList** with parameters
      - Limit skipped
      - StartReference := *nextStartReference*
   3.2. The DUT responds with **GetAccessProfileInfoListResponse** message with parameters
      - NextStartReference =: *nextStartReference*
      - AccessProfileInfo list =: *accessProfileInfoListPart*
   3.3. Set the following:
      - *accessProfileInfoCompleteList* := *accessProfileInfoCompleteList* + *accessProfileInfoListPart*

Procedure Result:

PASS –

- DUT passes all assertions.

FAIL –

- DUT did not send **GetAccessProfileInfoListResponse** message.

A.2 Get service capabilities

Name: HelperGetServiceCapabilities

Procedure Purpose: Helper procedure to get service capabilities.

Pre-requisite: Access Rules Service is received from the DUT.

Input: None

Returns: The service capabilities (*cap*).

Procedure:

1. ONVIF client invokes **GetServiceCapabilities**.
2. The DUT responds with a **GetServiceCapabilitiesResponse** message with parameters
   - Capabilities =: *cap*

Procedure Result:

PASS –

- The DUT passed all assertions.

FAIL –

- The DUT did not send **GetServiceCapabilitiesResponse** message.

A.3 Get access profiles list

Name: HelperGetAccessProfilesList

Procedure Purpose: Helper procedure to get complete access profiless list with.

Pre-requisite: Access Rules Service is received from the DUT.

Input: None.

Returns: The complete list of access profiles (*accessProfileCompleteList*).

Procedure:

1. ONVIF client invokes **GetAccessProfileList** with parameters
   - Limit skipped
   - StartReference skipped
2. The DUT responds with **GetAccessProfileListResponse** message with parameters
   - NextStartReference =: *nextStartReference*
   - AccessProfile list =: *accessProfileCompleteList*
3. Until *nextStartReference* is not null, repeat the following steps:
   3.1. ONVIF client invokes **GetAccessProfileList** with parameters
      - Limit skipped
      - StartReference := *nextStartReference*
   3.2. The DUT responds with **GetAccessProfileListResponse** message with parameters
      - NextStartReference =: *nextStartReference*
      - AccessProfile list =: *accessProfileListPart*
   3.3. Set the following:
      - *accessProfileCompleteList* := *accessProfileCompleteList* + *accessProfileListPart*

Procedure Result:

PASS –

- DUT passes all assertions.

FAIL –

- DUT did not send **GetAccessProfileListResponse** message.

A.4 Get schedule list

Name: HelperGetScheduleList

Procedure Purpose: Helper procedure to get complete schedule list.

Pre-requisite: Schedule Service is received from the DUT.

Input: None.

Returns: The complete list of schedules (*scheduleCompleteList*).

Procedure:

1. ONVIF Client invokes **GetScheduleList** request with parameters
   - Limit skipped
   - StartReference skipped
2. The DUT responds with **GetScheduleListResponse** message with parameters
   - NextStartReference =: *nextStartReference*
   - Schedule list =: *scheduleCompleteList*
3. Until *nextStartReference* is not null, repeat the following steps:
   3.1. ONVIF client invokes **GetScheduleList** with parameters
      - Limit skipped
      - StartReference := *nextStartReference*
   3.2. The DUT responds with **GetScheduleListResponse** message with parameters
      - NextStartReference =: *nextStartReference*
      - Schedule list =: *scheduleListPart*
   3.3. Set the following:
      - *scheduleCompleteList* := *scheduleCompleteList* + *scheduleListPart*

Procedure Result:

PASS –

- DUT passes all assertions.

FAIL –

- DUT did not send **GetScheduleListResponse** message.

A.5 Get access point information list

Name: HelperGetAccessPointInfoList

Procedure Purpose: Helper procedure to get complete access point information list.

Pre-requisite: Access Control Service is received from the DUT.

Input: None.

Returns: The complete list of access point information (*accessPointInfoCompleteList*).

Procedure:

1. ONVIF Client invokes **GetAccessPointInfoList** request with parameters
   - Limit skipped
   - StartReference skipped
2. The DUT responds with **GetAccessPointInfoListResponse** message with parameters
   - NextStartReference =: *nextStartReference*
   - Schedule list =: *accessPointInfoCompleteList*
3. Until *nextStartReference* is not null, repeat the following steps:
   3.1. ONVIF client invokes **GetAccessPointInfoList** with parameters
      - Limit skipped
      - StartReference := *nextStartReference*
   3.2. The DUT responds with **GetAccessPointInfoListResponse** message with parameters
      - NextStartReference =: *nextStartReference*
      - AccessPointInfo list =: *accessPointInfoListPart*
   3.3. Set the following:
      - *accessPointInfoCompleteList* := *accessPointInfoCompleteList* + *accessPointInfoListPart*

Procedure Result:

PASS –

- DUT passes all assertions.

FAIL –

- DUT did not send **GetAccessPointInfoListResponse** message.

A.6 Delete access profile

Name: HelperDeleteAccessProfile

Procedure Purpose: Helper procedure to delete access profile.

Pre-requisite: Access Rules Service is received from the DUT.

Input: Access Profile Token (*accessProfileToken*).

Returns: None.

Procedure:

1. ONVIF Client invokes **DeleteAccessProfile** request.
   - Token =: *accessProfileToken*
2. The DUT responds with empty **DeleteAccessProfileResponse** message.

Procedure Result:

PASS –

- DUT passes all assertions.

FAIL –

- DUT did not send **DeleteAccessProfileResponse** message.

A.7 Free storage for additional access profile

Name: HelperCheckFreeStorageForAccessProfile

Procedure Purpose: Helper procedure to check free storage for additional access profile.

Pre-requisite: Access Rules Service is received from the DUT.

Input: The complete list of access profiles (*accessProfileCompleteList*).

Returns: Access Profile to restore (*accessProfileToRestore*).

Procedure:

1. ONVIF Client gets the service capabilities (out *cap*) by following the procedure mentioned in Annex A.2.
2. ONVIF client compares *cap*.MaxAccessProfiles with number of items at *accessProfileCompleteList*.
3. If number of items at *accessProfileCompleteList* less than *cap*.MaxAccessProfiles, skip other steps.
4. If number of items at *accessProfileCompleteList* equal to *cap*.MaxAccessProfiles, execute the following steps:

   4.1. ONVIF client invokes **GetAccessProfiles** with parameters

   - Token list := *accessProfileCompleteList*[0].token

   4.2. The DUT responds with **GetAccessProfilesResponse** message with parameters

   - AccessProfile list =: *accessProfileToRestore*

   4.3. ONVIF Client deletes the Access Profile (in *accessProfileCompleteList*[0].token) by following the procedure mentioned in Annex A.6.

Procedure Result:

PASS –

- DUT passes all assertions.

FAIL –

- The number of items at *accessProfileCompleteList* more than *cap*.MaxAccessProfiles.

A.8 Get access profile

Name: HelperGetAccessProfile

Procedure Purpose: Helper procedure to get access profile.

Pre-requisite: Access Rules Service is received from the DUT.

Input: Access Profile Token (*accessProfileToken*).

Returns: Access Profile List (*accessProfileList*).

Procedure:

1. ONVIF Client invokes **GetAccessProfiles** request with parameters
   - Token[0] := *accessProfileToken*
2. The DUT responds with **GetAccessProfilesResponse** message with parameters
   - AccessProfile list =: *accessProfileList*

Procedure Result:

PASS –

- DUT passes all assertions.

FAIL –

- DUT did not send **GetAccessProfilesResponse** message.

A.9 Get access profile info

Name: HelperGetAccessProfileInfo

Procedure Purpose: Helper procedure to get access profile info.

Pre-requisite: Access Rules Service is received from the DUT.

Input: Access Profile Token (*accessProfileToken*).

Returns: Access Profile Info List (*accessProfileInfoList*).

Procedure:

1. ONVIF Client invokes **GetAccessProfileInfo** request with parameters
   - Token := *accessProfileToken*
2. The DUT responds with **GetAccessProfileInfoResponse** message with parameters
   - AccessProfileInfo =: *accessProfileInfoList*

Procedure Result:

PASS –

- DUT passes all assertions.

FAIL –

- DUT did not send **GetAccessProfilesResponse** message.

A.10 Restore access profile

Name: HelperRestoreAccessProfile

Procedure Purpose: Helper procedure to restore access profile.

Pre-requisite: Access Rules Service is received from the DUT.

Input: Access Profile (*accessProfile*).

Returns: None.

Procedure:

1. ONVIF Client invokes **CreateAccessProfile** request with parameters
   - AccessProfile := *accessProfile*
2. The DUT responds with **CreateAccessProfileResponse** message with parameters
   - Token =: *accessProfileToken*

Procedure Result:

PASS –

- DUT passes all assertions.

FAIL –

- DUT did not send **CreateAccessProfileResponse** message.

A.11 Create access profile

Name: HelperCreateAccessProfile

Procedure Purpose: Helper procedure to Create access profile.

Pre-requisite: Access Rules Service is received from the DUT.

Input: Complete list of scedules (*scheduleCompleteList*), complete list of accesss point info (*accessPointInfoCompleteList*).

Returns: Access Profile Token (*accessProfileToken*).

Procedure:

1. ONVIF client invokes **CreateAccessProfile** with parameters
   - AccessProfile.token := “”
   - AccessProfile.Name := “Test Access Profile”
   - AccessProfile.Description := “Test Description”
   - AccessProfile.AccessPolicy is skipped if *scheduleCompleteList* or *accessPointInfoCompleteList* is empty
   - AccessProfile.AccessPolicy[0].ScheduleToken := *scheduleCompleteList*[0].token
   - AccessProfile.AccessPolicy[0].Entity := *accessPointInfoCompleteList*[0].token
   - AccessProfile.AccessPolicy[0].EntityType skipped
   - AccessProfile.AccessPolicy[0].Extension skipped
   - AccessProfile.Extension skipped
2. The DUT responds with **CreateAccessProfileResponse** message with parameters
   - Token =: *accessProfileToken*

Procedure Result:

PASS –

- DUT passes all assertions.

FAIL –

- DUT did not send **CreateAccessProfileResponse** message.

A.12 Get service capabilities (Schedule)

Name: HelperGetServiceCapabilitiesSchedule

Procedure Purpose: Helper procedure to get service capabilities for Schedule Service.

Pre-requisite: Schedule Service is received from the DUT.

Input: None.

Returns: The service capabilities (*cap*).

Procedure:

1. ONVIF client invokes **GetServiceCapabilities**.
2. The DUT responds with a **GetServiceCapabilitiesResponse** message with parameters
   - Capabilities =: *cap*

Procedure Result:

PASS –

- The DUT passed all assertions.

FAIL –

- The DUT did not send **GetServiceCapabilitiesResponse** message.

A.13 Generate UID value for iCalendar

Name: HelperUIDiCalendarGeneration

Procedure Purpose: Helper procedure to generate Unique Identifier value for UID field in iCalendar.

Pre-requisite: Schedule Service is received from the DUT.

Input: None.

Returns: Unique Identifier value for UID field in iCalendar (*uid*) that is compliant to [RFC 2445].

Procedure:

1. ONVIF Client generates Globally Unique Identifier value.

A.14 Generate iCalendar value for Schedule

Name: HelperScheduleiCalendarGeneration

Procedure Purpose: Helper procedure to generate iCalendar value for Schedule.Standard field.

Pre-requisite: Schedule Service is received from the DUT.

Input: The Schedule service capabilities (*cap*).

Returns: iCalendar value for Standard field (*scheduleiCalendarValue*) that is compliant to [RFC 2445].

Procedure:

1. ONVIF Client generates Unique Identifier value for UID field in iCalendar (out *uid*) by following the procedure mentioned in Annex A.13.
2. If *cap*.ExtendedRecurrenceSupported is equal to true, set the following:
   - *scheduleiCalendarValue* := "BEGIN:VCALENDAR

     BEGIN:VEVENT

     SUMMARY:Access from 9 AM to 6 PM

     DTSTART:<current year>< current month>< current day>T090000

     DTEND:<year of (current day + one week)><month of (current day + one week)><day of (current day + one week)>T180000

     RRULE:FREQ=DAILY

     UID:*uid*

     END:VEVENT

     END:VCALENDAR"
3. If *cap*.ExtendedRecurrenceSupported is equal to false, set the following:
   - *scheduleiCalendarValue* := "BEGIN:VCALENDAR

     BEGIN:VEVENT

     SUMMARY:Access on weekdays from 9 AM to 6 PM for employees

     DTSTART:1970<current month><current day>T090000

     DTEND:1970<current month><current day>T180000

     RRULE:FREQ=WEEKLY;BYDAY=MO,TU,WE,TH,FR

     UID:*uid*

END:VEVENT

END:VCALENDAR"

A.15 Create special day group

Name: HelperCreateSpecialDayGroup

Procedure Purpose: Helper procedure to create SpecialDayGroup with Days field value that is compliant to [RFC 2445].

Pre-requisite: Schedule Service is received from the DUT. Special Days is supported by the DUT as indicated by the Capabilities.SpecialDaysSupported. The DUT shall have enough free storage capacity for one additional SpecialDayGroup.

Input: iCalendar value of the SpecialDayGroup.Days field (*days*) that is compliant to [RFC 2445].

Returns: Returns: Special day group token (*specialDayGroupToken*), iCalendar value of Days field (*days*) that is compliant to [RFC 2445].

Procedure:

1. ONVIF Client generates Unique Identifier value for UID field in iCalendar (out *uid*) by following the procedure mentioned in Annex A.13.
2. If *days* is empty, set the following:
   - *days* := "BEGIN:VCALENDAR

     BEGIN:VEVENT

     SUMMARY:Test special days

     DTSTART:<current year><current month><current day>T000000

     DTEND:<year of the next day><month of the next day><day of the next day>T000000

     UID:*uid*

     END:VEVENT

     END:VCALENDAR"
3. ONVIF client invokes **CreateSpecialDayGroup** with parameters
   - SpecialDayGroup.token := ""

- SpecialDayGroup.Name := "Test SpecialDayGroup Name"
- SpecialDayGroup.Description := "Test SpecialDayGroup Description"
- SpecialDayGroup.Days := *days*

4. The DUT responds with **CreateSpecialDayGroupResponse** message with parameters
   - Token =: *specialDayGroupToken*

Procedure Result:

PASS –

- The DUT passed all assertions.

FAIL –

- The DUT did not send **CreateSpecialDayGroupResponse** message.

A.16 Create Schedule

Name: HelperCreateSchedule

Procedure Purpose: Helper procedure to create Schedule with Standard field value that is compliant to [RFC 2445].

Pre-requisite: Schedule Service is received from the DUT. The DUT shall have enough free storage capacity for one additional Schedule.

Input: iCalendar value of the Schedule.Standard field (*scheduleiCalendarValue*), SpecialDayGroupToken (*specialDayGroupToken*).

Returns: Schedule token (*scheduleToken*).

Procedure:

1. ONVIF client invokes **CreateSchedule** with parameters
   - Schedule.token := ""
   - Schedule.Description := "Test Description"
   - Schedule.Name := "Test Name"
   - Schedule.Standard := *scheduleiCalendarValue*

- Schedule.SpecialDays skipped if *specialDayGroupToken* is empty
- Schedule.SpecialDays.GroupToken := *specialDayGroupToken*
- Schedule.SpecialDays.TimeRange.From := "22:00:00"
- Schedule.SpecialDays.TimeRange.Until := "23:00:00"

2. The DUT responds with **CreateScheduleResponse** message with parameters
   - Token =: *scheduleToken*

Procedure Result:

PASS –

- The DUT passed all assertions.

FAIL –

- The DUT did not send **CreateScheduleResponse** message.

A.17 Delete schedule

Name: HelperDeleteSchedule

Procedure Purpose: Helper procedure to delete schedule.

Pre-requisite: Schedule Service is received from the DUT.

Input: Schedule Token (*scheduleToken*).

Returns: None.

Procedure:

1. ONVIF client invokes **DeleteSchedule** with parameters
   - Token =: *scheduleToken*
2. The DUT responds with empty **DeleteScheduleResponse** message

Procedure Result:

PASS –

- The DUT passed all assertions.

FAIL –

- The DUT did not send **DeleteScheduleResponse** message.

A.18 Delete special day group

Name: HelperDeleteSpecialDayGroup

Procedure Purpose: Helper procedure to delete SpecialDayGroup.

Pre-requisite: Schedule Service is received from the DUT. Special Days is supported by the DUT as indicated by the Capabilities.SpecialDaysSupported.

Input: SpecialDayGroup Token (*specialDayGroupToken*).

Returns: None.

Procedure:

1. ONVIF client invokes **DeleteSpecialDayGroup** with parameters
   - Token =: *specialDayGroupToken*
2. The DUT responds with empty **DeleteSpecialDayGroupResponse** message

Procedure Result:

PASS –

- The DUT passed all assertions.

FAIL –

- The DUT did not send **DeleteSpecialDayGroupResponse** message.