ONVIF™

PTZ Client Test Specification

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REVISION HISTORY

Vers.	Date	Description
17.12	Aug 15, 2017	Requirement level of Profile T of the following features was changed from Mandatory to Cconditional according to #220: PTZ Presets PTZ Home Position PTZ - Set Preset
17.06	Jun 15, 2017	Links in Normative references section were updated.
17.06	Jun 8, 2017	The following test cases added accoring to #201: PTZ Get Compatible Configurations Test Cases PTZ Media2 Profile Configuration Test Cases PTZ Set Configuration Test Cases
17.06	Jun 6, 2017	First issue of PTZ Client Test Specification. The following PTZ test cases moved from ONVIF Profile S Client Test Specification accoring to #194: PTZ - Listing PTZ - Configuration PTZ - Continuous Positioning PTZ - Absolute Positioning PTZ - Relative Positioning PTZ Presets PTZ Home Position PTZ - Auxiliary Command PTZ - Auxiliary Command The following PTZ test cases moved from ONVIF Profile T Client Test Specification accoring to #194: PTZ Using Media2 Absolute Positioning PTZ Using Media2 Continuous Positioning PTZ - Set Preset Annex A.1 Get default PTZ space of PTZ Configuration corresponding to Move Operation

Table of Contents

1 Introduction 8
1.1 Scope 8
1.2 PTZ - Listing 8
1.3 PTZ - Configuration 9
1.4 PTZ - Continuous Positioning 9
1.5 PTZ - Absolute Positioning 9
1.6 PTZ - Relative Positioning 9
1.7 PTZ Presets 9
1.8 PTZ Home Position 9
1.9 PTZ - Auxiliary Command 9
1.10 PTZ Using Media2 Absolute Positioning 9
1.11 PTZ Using Media2 Continuous Positioning 10
1.12 PTZ - Set Preset 10
1.13 PTZ Get Compatible Configurations 10
1.14 PTZ Media2 Profile Configuration 10
1.15 PTZ Set Configuration 10
2 Normative references 11
3 Terms and Definitions 12
3.1 Conventions 12
3.2 Definitions 12
3.3 Abbreviations 12
3.4 Namespaces 13
4 Test Overview 14
4.1 General 14
4.1.1 Feature Level Requirement 14
4.1.2 Expected Scenarios Under Test 14
4.1.3 Test Cases 14
4.2 Test Setup 15
4.3 Prerequisites 15
5 PTZ - Listing Test Cases 16

5.1 Feature Level Requirement: 16
5.2 Expected Scenarios Under Test: 16
5.3 GET NODES 16
5.4 GET NODE 17
6 PTZ - Configuration Test Cases 19
6.1 Feature Level Requirement: 19
6.2 Expected Scenarios Under Test: 19
6.3 ADD PTZ CONFIGURATION 19
7 PTZ - Continuous Positioning Test Cases 21
7.1 Feature Level Requirement: 21
7.2 Expected Scenarios Under Test: 21
7.3 PTZ CONTINUOUS MOVE PAN/TILT 22
7.4 PTZ CONTINUOUS MOVE ZOOM 23
7.5 PTZ STOP 24
7.6 STOP MOVEMENT USING PTZ CONTINUOUS MOVE 25
8 PTZ - Absolute Positioning Test Cases 28
8.1 Feature Level Requirement: 28
8.2 Expected Scenarios Under Test: 28
8.3 PTZ ABSOLUTE MOVE PAN/TILT 28
8.4 PTZ ABSOLUTE MOVE ZOOM 29
9 PTZ - Relative Positioning Test Cases 31
9.1 Feature Level Requirement: 31
9.2 Expected Scenarios Under Test: 31
9.3 PTZ RELATIVE MOVE PAN/TILT 31
9.4 PTZ RELATIVE MOVE ZOOM 32
10 PTZ Presets Test Cases 34
10.1 Feature Level Requirement: 34
10.2 Expected Scenarios Under Test: 34
10.3 PTZ GET PRESETS 34
10.4 PTZ GOTO PRESET 35
11 PTZ Home Position Test Cases 37

11.1 Feature Level Requirement: 37
11.2 Expected Scenarios Under Test: 37
11.3 PTZ HOME POSITION 37
12 PTZ - Auxiliary Command Test Cases 39
12.1 Feature Level Requirement: 39
12.2 Expected Scenarios Under Test: 39
12.3 PTZ SEND AUXILIARY COMMAND 39
13 PTZ Using Media2 Absolute Positioning Test Cases 41
13.1 Feature Level Requirement: 41
13.2 Expected Scenarios Under Test: 41
13.3 PTZ ABSOLUTE MOVE PAN/TILT SPHERICAL POSITION SPACE DEGREES ... 43
13.4 PTZ ABSOLUTE MOVE PAN/TILT POSITION GENERIC SPACE 44
13.5 PTZ ABSOLUTE MOVE ZOOM POSITION GENERIC SPACE 46
14 PTZ Using Media2 Continuous Positioning Test Cases 48
14.1 Feature Level Requirement: 48
14.2 Expected Scenarios Under Test: 48
14.3 PTZ CONTINUOUS MOVE PAN/TILT VELOCITY GENERIC SPACE 49
14.4 PTZ CONTINUOUS MOVE ZOOM VELOCITY GENERIC SPACE 51
15 PTZ - Set Preset Test Cases 53
15.1 Feature Level Requirement: 53
15.2 Expected Scenarios Under Test: 53
15.3 PTZ SET PRESET 53
16 PTZ Get Compatible Configurations Test Cases 55
16.1 Feature Level Requirement: 55
16.2 Expected Scenarios Under Test: 55
16.3 PTZ GET COMPATIBLE CONFIGURATIONS 55
17 PTZ Media2 Profile Configuration Test Cases 57
17.1 Feature Level Requirement: 57
17.2 Expected Scenarios Under Test: 57
17.3 ADD PTZ CONFIGURATION USING MEDIA2 57
18 PTZ Set Configuration Test Cases 60

18.1 Feature Level Requirement: 60
18.2 Expected Scenarios Under Test: 60
18.3 PTZ SET CONFIGURATION 60
A Test for Appendix A 62
A.1 Get default PTZ space of PTZ Configuration corresponding to Move Operation 62

1 Introduction

The goal of the ONVIF Test Specification set is to make it possible to realize fully interoperable IP physical security implementations from different vendors. This specification also acts as an input document to the development of a test tool which will be used to test the ONVIF Client implementation conformance towards ONVIF standard. This Client Test Tool analyzes network communications between ONVIF Devices and Clients being tested and determines whether a specific Client is ONVIF conformant (see ONVIF Conformance Process Specification).

This particular document defines test cases required for testing PTZ features of a Client application e.g. PTZ listing, configuration, continuous positioning, absolute positioning, relative positioning, presets, home position, and PTZ auxiliary command. It also describes the test framework, test setup, prerequisites, test policies needed for the execution of the described test cases.

1.1 Scope

This ONVIF PTZ Client Test Specification defines and regulates the conformance testing procedure for the ONVIF conformant Clients in the scope of PTZ Service features. Conformance testing is meant to be black-box network traces analysis and verification. The objective of this specification is to provide the test cases to test individual requirements of ONVIF Clients in the scope of PTZ Service features according to ONVIF PTZ Service Specification.

The principal intended purposes are:

- Provide self-assessment tool for implementations.
- Provide comprehensive test suite coverage for PTZ Service features.

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

- Product use cases and non-functional (performance and regression) testing and analysis.
- SOAP Implementation Interoperability test i.e. Web Services Interoperability Basic Profile version 2.0 (WS-I BP2.0).
- Network protocol implementation Conformance test for HTTPS, HTTP, RTP and RTSP protocols.

The following sections cover test cases needed for the verification of relevant features as mentioned in the ONVIF Profile Specifications.

1.2 PTZ - Listing

PTZ - Listing section specifies Client ability to read PTZ capabilities.

1.3 PTZ - Configuration

PTZ - Configuration section specifies Client ability to add PTZ configuration to a media profile.

1.4 PTZ - Continuous Positioning

PTZ - Continuous Move section specifies Client ability to move a PTZ Device using ContinuousMove operation and stop ongoing movement using Stop operation or sending zero values for Pan/Tilt and Zoom.

1.5 PTZ - Absolute Positioning

PTZ - Absolute Positioning section specifies Client ability to move a PTZ Device using the AbsoluteMove operation.

1.6 PTZ - Relative Positioning

PTZ - Relative Positioning section specifies Client ability to move a PTZ Device using the RelativeMove operation.

1.7 PTZ Presets

PTZ Presets section specifies Client ability to list the presets of a PTZ Node and move a PTZ Device to a specific preset.

1.8 PTZ Home Position

PTZ Home Position section specifies Client ability to move a PTZ Device to its home position.

1.9 PTZ - Auxiliary Command

PTZ - Auxiliary Command section specifies Client ability to send auxiliary commands to a PTZ Device.

1.10 PTZ Using Media2 Absolute Positioning

PTZ Using Media2 Absolute Positioning section specifies Client ability to move a PTZ Device using the AbsoluteMove operation for Media2 profile.

1.11 PTZ Using Media2 Continuous Positioning

PTZ Using Media2 Continuous Positioning section specifies Client ability to move a PTZ Device using ContinuousMove operation for Media2 profile.

1.12 PTZ - Set Preset

PTZ - Set Preset section specifies Client ability to store a preset.

1.13 PTZ Get Compatible Configurations

PTZ Get Compatible Configurations specifies Client ability to get PTZ configurations compatible with media profile from the device.

1.14 PTZ Media2 Profile Configuration

PTZ Media2 Profile Configuration specifies Client ability to add compatible with media profile PTZ configuration to a Media2 profile.

1.15 PTZ Set Configuration

PTZ Set Configuration specifies Client ability to modify PTZ configuration on the device.

2 Normative references

- ONVIF Conformance Process Specification:

  https://www.onvif.org/profiles/conformance/

- ONVIF Profile Policy:

  https://www.onvif.org/profiles/

- ONVIF Core Specifications:

  https://www.onvif.org/profiles/specifications/

- ONVIF Core Client Test Specification:

  https://www.onvif.org/profiles/conformance/client-test/

- ONVIF PTZ Service Specification:

  https://www.onvif.org/profiles/specifications/

- ISO/IEC Directives, Part 2, Annex H:

  www.iso.org/directives

- ISO 16484-5:2014-09 Annex P:

  https://www.iso.org/obp/ui/#!iso:std:63753:en

- W3C SOAP 1.2, Part 1, Messaging Framework:

  http://www.w3.org/TR/soap12-part1/

- W3C XML Schema Part 1: Structures Second Edition:

  http://www.w3.org/TR/xmlschema-1/

- W3C XML Schema Part 2: Datatypes Second Edition:

  "http://www.w3.org/TR/xmlschema-2/ [http://www.w3.org/TR/xmlschema-2/]

- W3C Web Services Addressing 1.0 – Core:

  http://www.w3.org/TR/ws-addr-core/

3 Terms and Definitions

3.1 Conventions

The key words "shall", "shall not", "should", "should not", "may", "need not", "can", "cannot" in this specification are to be interpreted as described in [ISO/IEC Directives Part 2].

3.2 Definitions

This section describes terms and definitions used in this document.

Address	An address refers to a URI.
Profile	See ONVIF Profile Policy.
ONVIF Device	Computer appliance or software program that exposes one or multiple ONVIF Web Services.
ONVIF Client	Computer appliance or software program that uses ONVIF Web Services.
Conversation	A Conversation is all exchanges between two MAC addresses that contains SOAP request and response.
Network	A network is an interconnected group of devices communicating using the Internet protocol.
Network Trace Capture file	Data file created by a network protocol analyzer software (such as Wireshark). Contains network packets data recorded during a live network communications.
Media Profile	A media profile maps a video and/or audio source to a video and/or an audio encoder, PTZ and analytics configurations.
SOAP	SOAP is a lightweight protocol intended for exchanging structured information in a decentralized, distributed environment. It uses XML technologies to define an extensible messaging framework providing a message construct that can be exchanged over a variety of underlying protocols.
Client Test Tool	ONVIF Client Test Tool that tests ONVIF Client implementation towards the ONVIF Test Specification set.
Valid Device Response	Device has responded to specific request with code HTTP or RTSP 200 OK and SOAP fault message has not appeared.
PTZ Node	Low-level PTZ entity that maps to the PTZ Device and its capabilities.
PTZ Service	The web service interface for configuration and operation of pan tilt zoom controllers.

3.3 Abbreviations

This section describes abbreviations used in this document.

HTTP Hyper Text Transport Protocol.

HTTPS Hyper Text Transport Protocol over Secure Socket Layer.

URI Uniform Resource Identifier.

WSDL Web Services Description Language.

XML eXtensible Markup Language.

PTZ Pan/Tilt/Zoom.

3.4 Namespaces

Prefix and namespaces used in this test specification are listed in Table 1. These prefixes are not part of the standard and an implementation can use any prefix.

Table 3.1. Defined namespaces in this specification

Prefix	Namespace URI	Description
soapenv	http://www.w3.org/2003/05/soap-envelope	Envelope namespace as defined by SOAP 1.2 [SOAP 1.2, Part 1]
tt	http://www.onvif.org/ver10/schema	ONVIF XML schema descriptions
tptz	http://www.onvif.org/ver20/ptz/wsdl	The namespace for the WSDL PTZ service

4 Test Overview

This section provides information for the test setup procedure and required prerequisites that should be followed during test case execution.

An ONVIF Client with PTZ features supports for control of PTZ.

An ONVIF Profile is described by a fixed set of functionalities through a number of services that are provided by the ONVIF standard. A number of services and functionalities are mandatory for each type of ONVIF Profile. An ONVIF Device and ONVIF Client may support any combination of Profiles and other optional services and functionalities.

4.1 General

Test Cases are grouped depending on features. Each Test Cases group provides description of feature requirement level for Profiles, expected scenario under test and related test cases:

- Feature Level Requirement
- Expected Scenarios Under Test
- List of Test Cases

4.1.1 Feature Level Requirement

Feature Level Requirement item contains a feature ID and feature requirement level for the Profiles, which will be used for Profiles conformance.

If Feature Level Requirement is defined as Mandatory for some Profile, Client shall pass Expected Scenario Under Test for each Device with this Profile support to claim this Profile Conformance.

If Feature Level Requirement is defined as Conditional, Optional for some Profile, Client shall pass Expected Scenario Under Test for at least one Device with this Profile support to claim feature as supported.

4.1.2 Expected Scenarios Under Test

Expected Scenarios Under Test item contains expected scenario under test, conditions when the feature will be defined as supported and as not supported.

4.1.3 Test Cases

Test Case items contain list of test cases which are related to feature. Test cases provide exact procedure of testing feature support conditions.

Each Test Case contains the following parts:

- Test Label - Unique label for each test
- Test Case ID - Unique ID for each test
- Profile Normative References - Requirement level for the feature under test is defined in Profile Specification. This reference is informative and will not be used in conformance procedure.
- Feature Under Test - Feature which is under current test. Typically a particular command or an event.
- Test Purpose - The purpose of current test case.
- Pre-Requisite - The pre-requisite defines when the test should be performed. In case if pre-reqiusite does not match, the test result will be NOT DETECTED.
- Test Procedure - scenario expected to be reflected in network trace file.
- Test Result - Passed and failed criteria of the test case. Depending on these criteria test result will be defined as PASSED or FAILED.
- Validated Feature List - list of features ID related to this test case.

4.2 Test Setup

Collect Network traces files required by the test cases.

Collect Feature List XML files for Devices detected in the Network Trace files.

Client shall support all mandatory and conditional features listed in the Device Feature List XML file supplied for the Profiles supported by the Client.

For ONVIF compatibility, the ONVIF Client shall follow the requirements of the conformance process. For details please see the latest ONVIF Conformance Process Specification.

4.3 Prerequisites

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

The Device shall be configured with an IPv4 address.

The Device shall be able to be discovered by the Client.

5 PTZ - Listing Test Cases

5.1 Feature Level Requirement:

Validated Feature: PtzListing

Profile S Requirement: Conditional

Profile T Requirement: Conditional

5.2 Expected Scenarios Under Test:

1. Client connects to Device to read PTZ capabilities.
2. Client is considered as supporting PTZ - Listing if the following conditions are met:
   - Client is able to read PTZ capabilities from PTZ Node using EITHER GetNodes OR GetNode operations.
3. Client is considered as NOT supporting PTZ - Listing if ANY of the following is TRUE:
   - No Valid Device Response to GetNodes request AND
   - No Valid Device Response to GetNode request.

5.3 GET NODES

Test Label: PTZ Listing - GetNodes

Test Case ID: PTZLISTING-1

Profile S Normative Reference: Conditional

Profile T Normative Reference: Conditional

Feature Under Test: PTZ Listing

Test Purpose: To verify that list of all existing PTZ capabilities from Device is received by Client using the GetNodes operation.

Pre-Requisite:

- The Network Trace Capture files contains at least one conversation between Client and Device with GetNodes operation present.

Test Procedure (expected to be reflected in network trace file):

1. Client invokes GetNodes request message to retrieve complete PTZ capabilities list from Device.
2. Device responds with code HTTP 200 OK and GetNodesResponse message.

Test Result:

PASS -

- Client **GetNodes** request messages are valid according to XML Schemas listed in Namespaces AND
- Client **GetNodes** request in Test Procedure fulfills the following requirements:
  - [S1] Client request contains "<GetNodes>" tag after the "<Body>" tag AND
  - [S2] Device response contains "HTTP/* 200 OK" AND
  - [S3] Device response contains "<GetNodesResponse>" tag.

FAIL -

- The Client failed PASS criteria.

Validated Feature List: PtzListing.GetNodes

5.4 GET NODE

Test Label: PTZ Listing - GetNode

Test Case ID: PTZLISTING-2

Profile S Normative Reference: Conditional

Profile T Normative Reference: Conditional

Feature Under Test: PTZ Listing

Test Purpose: To verify that Client is able to retrieve a specific PTZ capability properties from Device using the GetNode operation.

Pre-Requisite:

- The Network Trace Capture files contains at least one conversation between Client and Device with GetNode operation present.

Test Procedure (expected to be reflected in network trace file):

1. Client invokes GetNode request message to retrieve a specific PTZ capability properties from Device.
2. Device responds with code HTTP 200 OK and GetNodeResponse message.

Test Result:

PASS -

- Client **GetNode** request messages are valid according to XML Schemas listed in Namespaces AND
- Client **GetNode** request in Test Procedure fulfills the following requirements:
  - [S1] Client request contains "<GetNode>" tag after the "<Body>" tag AND
  - [S2] "<GetNode>" includes tag: "<NodeToken>" with non-empty string value of specific token AND
  - [S3] Device response contains "HTTP/* 200 OK" AND
  - [S4] Device response contains "<GetNodeResponse>" tag.

FAIL -

- The Client failed PASS criteria.

Validated Feature List: PTZListing_GetNode

6 PTZ - Configuration Test Cases

6.1 Feature Level Requirement:

Validated Feature: PtzConfiguration

Profile S Requirement: Conditional

6.2 Expected Scenarios Under Test:

1. Client connects to Device to add PTZ configuration to a media profile.
2. Client is considered as supporting PTZ - Configuration if the following conditions are met:
   - Client is able to add PTZ configuration to an existing media profile using GetConfigurations operation AND AddPTZConfiguration operation.
3. Client is considered as NOT supporting PTZ - Configuration if ANY of the following is TRUE:
   - No Valid Device Response to GetConfigurations request OR
   - No Valid Device Response to AddPTZConfiguration request.

6.3 ADD PTZ CONFIGURATION

Test Label: PTZ Configuration - Add PTZ Configuration

Test Case ID: PTZCONFIGURATION-1

Profile S Normative Reference: Conditional

Feature Under Test: PTZ Configuration

Test Purpose: To verify that Client is able to add PTZ configuration to a profile using GetConfigurations and AddPTZConfiguration operations.

Pre-Requisite:

- The Network Trace Capture files contains at least one conversation between Client and Device with GetConfigurations and AddPTZConfiguration operations present.

Test Procedure (expected to be reflected in network trace file):

1. Client invokes GetConfigurations request message to retrieve all available PTZ configurations from Device.

2. Device responds with code HTTP 200 OK and GetConfigurationsResponse message.
3. Client invokes AddPTZConfiguration request message to add a PTZ configuration to an existing media profile.
4. Device responds with code HTTP 200 OK and AddPTZConfigurationResponse message.

Test Result:

PASS -

- Client **GetConfigurations** request messages are valid according to XML Schemas listed in Namespaces AND
- Client **GetConfigurations** request in Test Procedure fulfills the following requirements:
  - [S1] Client request contains "<GetConfigurations>" tag after the "<Body>" tag AND
  - [S2] Device response contains "HTTP/* 200 OK" AND
  - [S3] Device response contains "<GetConfigurationsResponse>" tag AND
- Client **AddPTZConfiguration** request messages are valid according to XML Schemas listed in Namespaces AND
- Client **AddPTZConfiguration** request in Test Procedure fulfills the following requirements:
  - [S4] Client request contains "<AddPTZConfiguration>" tag after the "<Body>" tag AND
  - [S5] "<AddPTZConfiguration>" includes tag: "<ProfileToken>" with non-empty string value of specific token AND
  - [S6] "<AddPTZConfiguration>" includes tag: "<ConfigurationToken>" with non-empty string value of specific token AND
  - [S7] Device response contains "HTTP/* 200 OK" AND
  - [S8] Device response contains "<AddPTZConfigurationResponse>" tag.

FAIL -

- The Client failed PASS criteria.

Validated Feature List: PtzConfiguration.AddPTZConfiguration

7 PTZ - Continuous Positioning Test Cases

7.1 Feature Level Requirement:

Validated Feature: PtzContinuousPositioning

Profile S Requirement: Conditional

7.2 Expected Scenarios Under Test:

1. Client connects to Device to control PTZ position using continuous move.
2. Client is considered as supporting PTZ - Continuous Positioning if the following conditions are met:
   - Client is able to move PTZ Device using the ContinuousMove operation with specified PanTilt element OR with specified Zoom element AND
   - Client is able to move PTZ Device using the ContinuousMove operation with specified PanTilt element if Device supports PTZContinuousPanTilt AND
   - Client is able to move PTZ Device using the ContinuousMove operation with specified Zoom element if Device supports PTZContinuousZoom AND
   - Client is able to stop PTZ Device movement using the Stop operation OR using ContinuousMove operation with zero values in PanTilt element if device supports PTZContinuousPanTilt and with zero value in Zoom element if device supports PTZContinuousZoom.
3. Client is considered as NOT supporting PTZ - Continuous Positioning if ANY of the following is TRUE:
   - Client is unable to move a PTZ device using the ContinuousMove operation with specified EITHER PanTilt element OR Zoom element OR
   - No Valid Device Response to **ContinuousMove** request with specified PanTilt element if device supports PTZContinuousPanTilt OR
   - No Valid Device Response to **ContinuousMove** request with specified Zoom element if device supports PTZContinuousZoom OR
   - Client is unable to stop PTZ movement using EITHER Stop operation OR using ContinuousMove operation OR

- No Valid Device Response to **Stop** request if detected OR
- No Valid Device Response to **ContinuousMove** request with zero "x" and "y" attributes values in PanTilt element if detected and if device supports PTZContinuousPanTilt OR
- No Valid Device Response to **ContinuousMove** request with zero "x" attribute value in Zoom element if detected and if device supports PTZContinuousZoom.

7.3 PTZ CONTINUOUS MOVE PAN/TILT

Test Label: PTZ Continuous Positioning - ContinuousMove PanTilt

Test Case ID: PTZCONTINUOUSPOSITIONING-1

Profile S Normative Reference: Conditional

Feature Under Test: PTZ Continuous Positioning

Test Purpose: To verify that Client is able to move a PTZ Device using the ContinuousMove operation with specified PanTilt element.

Pre-Requisite:

- The Network Trace Capture files contains at least one conversation between Client and Device with ContinuousMove operation present.
- Device supports PTZContinuousPanTilt.

Test Procedure (expected to be reflected in network trace file):

1. Client invokes ContinuousMove request message to start move of PTZ Device using specific value of PanTilt element.
2. Device responds with code HTTP 200 OK and ContinuousMoveResponse message.

Test Result:

PASS -

- Client **ContinuousMove** request messages are valid according to XML Schemas listed in Namespaces AND
- Client **ContinuousMove** request in Test Procedure fulfills the following requirements:
  - [S1] Client request contains "<ContinuousMove>" tag after the "<Body>" tag AND

- [S2] "<ContinuousMove>" includes tag: "<ProfileToken>" with non-empty string value of specific token AND
- [S4] "<Velocity>" includes tag: "<PanTilt>" AND
- [S7] Device response contains "HTTP/* 200 OK" AND
- [S8] Device response contains "<ContinuousMoveResponse>" tag.

FAIL -

- The Client failed PASS criteria.

Validated Feature List: PtzContinuousPositioning.ContinuousMovePanTilt

7.4 PTZ CONTINUOUS MOVE ZOOM

Test Label: PTZ Continuous Positioning - ContinuousMove Zoom

Test Case ID: PTZCONTINUOUSPOSITIONING-2

Profile S Normative Reference: Conditional

Feature Under Test: PTZ Continuous Positioning

Test Purpose: To verify that Client is able to change zoom of PTZ Device using the ContinuousMove operation with specified Zoom element.

Pre-Requisite:

- The Network Trace Capture files contains at least one conversation between Client and Device with ContinuousMove operation present.
- Device supports PTZContinuousZoom.

Test Procedure (expected to be reflected in network trace file):

1. Client invokes ContinuousMove request message to change zoom of PTZ Device using specific value of Zoom element.
2. Device responds with code HTTP 200 OK and ContinuousMoveResponse message.

Test Result:

PASS -

- Client **ContinuousMove** request messages are valid according to XML Schemas listed in Namespaces AND
- Client **ContinuousMove** request in Test Procedure fulfills the following requirements:
  - [S1] Client request contains "<ContinuousMove>" tag after the "<Body>" tag AND
  - [S2] "<ContinuousMove>" includes tag: "<ProfileToken>" with non-empty string value of specific token AND
  - [S4] "<Velocity>" includes tag: "<Zoom>" AND
  - [S6] Device response contains "HTTP/* 200 OK" AND
  - [S7] Device response contains "<ContinuousMoveResponse>" tag.

FAIL -

- The Client failed PASS criteria.

Validated Feature List: PtzContinuousPositioning.ContinuousMoveZoom

7.5 PTZ STOP

Test Label: PTZ Continuous Positioning - Stop

Test Case ID: PTZCONTINUOUSPOSITIONING-3

Profile S Normative Reference: Conditional

Feature Under Test: PTZ Continuous Positioning

Test Purpose: To verify that Client is able to stop a PTZ Device movement using the Stop operation.

Pre-Requisite:

- The Network Trace Capture files contains at least one conversation between Client and Device with Stop operation present

Test Procedure (expected to be reflected in network trace file):

1. Client invokes Stop request message to stop ongoing movements of PTZ Device.
2. Device responds with code HTTP 200 OK and StopResponse message.

Test Result:

PASS -

- Client **Stop** request messages are valid according to XML Schemas listed in Namespaces AND
- Client **Stop** request in Test Procedure fulfills the following requirements:
  - [S1] **soapenv:Body** element has child element **tptz:Stop** AND
  - [S2] **tptz:Stop/tptz:ProfileToken** element has non-empty string value of specific token AND
- Device response on the **Stop** request fulfills the following requirements:
  - [S3] It has HTTP 200 response code AND
  - [S4] **soapenv:Body** element has child element **tptz:StopResponse**.

FAIL -

- The Client failed PASS criteria.

Validated Feature List: PtzContinuousPositioning.Stop

7.6 STOP MOVEMENT USING PTZ CONTINUOUS MOVE

Test Label: PTZ Continuous Positioning - Stop Movement using ContinuousMove

Test Case ID: PTZCONTINUOUSPOSITIONING-4

Profile S Normative Reference: Conditional

Feature Under Test: PTZ Continuous Positioning

Test Purpose: To verify that Client is able to stop a PTZ Device movement using ContinuousMove operation with zero values in PanTilt and Zoom elements.

Pre-Requisite:

- The Network Trace Capture files contains at least one conversation between Client and Device with ContinuousMove operation present.

Test Procedure (expected to be reflected in network trace file):

1. Client invokes ContinuousMove request message with zero "x" and "y" attributes values in PanTilt element.

2. Client invokes ContinuousMove request message with zero "x" attribute value in Zoom element.

3. Device responds with code HTTP 200 OK and ContinuousMoveResponse message.

Test Result:

NOTE: In case when device does not support both PTZContinuousPanTilt and PTZContinuousZoom features then the test shall be deemed as "NOT DETECTED". In case Client does not send ContinuousMove request message with zero "x" and "y" attributes values in PanTilt element if device supports PTZContinuousPanTilt then the test shall be deemed as "NOT DETECTED". In case Client does not send ContinuousMove request message with zero "x" attribute value in Zoom element if device supports PTZContinuousZoom then the test shall be deemed as "NOT DETECTED".

PASS -

- If device supports PTZContinuousPanTilt then there is client **ContinuousMove** request messages which corresponds to the following requirements (else skip the check):
  - Client **ContinuousMove** request messages are valid according to XML Schemas listed in Namespaces AND
  - Client **ContinuousMove** request in Test Procedure fulfills the following requirements:
    - [S1] **soapenv:Body** element has child element **tptz:ContinuousMove** AND
    - [S2] **tptz:ContinuousMove/tptz:ProfileToken** element has non-empty string value of specific token AND
    - [S3] **tptz:ContinuousMove/tptz:Velocity** containt tag **tt:PanTilt** AND
    - [S4] **tptz:ContinuousMove/tptz:Velocity/tt:PanTilt/@x** attribute value is equal to 0 AND
    - [S5] **tptz:ContinuousMove/tptz:Velocity/tt:PanTilt/@y** attribute value is equal to 0 AND
  - Device response on the **ContinuousMove** request fulfills the following requirements:
    - [S6] It has HTTP 200 response code AND
    - [S7] **soapenv:Body** element has child element **tptz:ContinuousMoveResponse**.
- If device supports PTZContinuousZoom then there is client **ContinuousMove** request messages which corresponds to the following requirements (else skip the check):

- Client **ContinuousMove** request messages are valid according to XML Schemas listed in Namespaces AND
- Client **ContinuousMove** request in Test Procedure fulfills the following requirements:
  - [S8] **soapenv:Body** element has child element **tptz:ContinuousMove** AND
  - [S9] **tptz:ContinuousMove/tptz:ProfileToken** element has non-empty string value of specific token AND
  - [S10] **tptz:ContinuousMove/tptz:Velocity** containt tag **tt:Zoom** AND
  - [S11] **tptz:ContinuousMove/tptz:Velocity/tt:Zoom/@x** attribute value is equal to 0.
- Device response on the **ContinuousMove** request fulfills the following requirements:
  - [S12] It has HTTP 200 response code AND
  - [S13] **soapenv:Body** element has child element **tptz:ContinuousMoveResponse**.

FAIL -

- The Client failed PASS criteria.

Validated Feature List: PtzContinuousPositioning.StopMovementUsingContinuousMove

8 PTZ - Absolute Positioning Test Cases

8.1 Feature Level Requirement:

Validated Feature: PtzAbsolutePositioning

Profile S Requirement: Conditional

8.2 Expected Scenarios Under Test:

1. Client connects to Device to read PTZ capabilities and control the position using absolute positioning.
2. Client is considered as supporting PTZ - Absolute Positioning if the following conditions are met:
   - Client is able to read PTZ capabilities from PTZ Node using EITHER GetNodes OR GetNode operations AND
   - Client is able to move PTZ Device using the AbsoluteMove operation by EITHER Move a PTZ Device using the AbsoluteMove operation with specified PanTilt element OR change zoom of PTZ Device using the AbsoluteMove operation with specified Zoom element.
3. Client is considered as NOT supporting PTZ - Absolute Positioning if ANY of the following is TRUE:
   - BOTH (No Valid Device Response to GetNodes request AND No Valid Device Response to GetNode request) OR
   - BOTH (No Valid Device Response to AbsoluteMove request with specified PanTilt element AND No Valid Device Response to AbsoluteMove request with specified Zoom element).

8.3 PTZ ABSOLUTE MOVE PAN/TILT

Test Label: PTZ Absolute Positioning - AbsoluteMove PanTilt

Test Case ID: PTZABSOLUTEPOSITIONING-1

Profile S Normative Reference: Conditional

Feature Under Test: PTZ Absolute Positioning

Test Purpose: To verify that Client is able to move a PTZ Device using the AbsoluteMove operation with specified PanTilt element.

Pre-Requisite:

- The Network Trace Capture files contains at least one conversation between Client and Device with AbsoluteMove operation present.

Test Procedure (expected to be reflected in network trace file):

1. Client invokes AbsoluteMove request message to move of PTZ Device using specific value of PanTilt element.
2. Device responds with code HTTP 200 OK and AbsoluteMoveResponse message.

Test Result:

NOTE: If Client AbsoluteMove request message does not contain "<PanTilt>" tag inside "<Position>" tag then Test shall be deemed as "NOT DETECTED".

PASS -

- Client **AbsoluteMove** request messages are valid according to XML Schemas listed in Namespaces AND
- Client **AbsoluteMove** request in Test Procedure fulfills the following requirements:
  - [S1] Client request contains "<AbsoluteMove>" tag after the "<Body>" tag AND
  - [S2] "<AbsoluteMove>" includes tag: "<ProfileToken>" with non-empty string value of specific token AND
  - [S4] "<Position>" includes tag: "<PanTilt>" AND
  - [S7] Device response contains "HTTP/* 200 OK" AND
  - [S8] Device response contains "<AbsoluteMoveResponse>" tag.

FAIL -

- The Client failed PASS criteria.

Validated Feature List: PTZAbsolutePositioning_AbsoluteMovePanTilt

8.4 PTZ ABSOLUTE MOVE ZOOM

Test Label: PTZ Absolute Positioning - AbsoluteMove Zoom

Test Case ID: PTZABSOLUTEPOSITIONING-2

Profile S Normative Reference: Conditional

Feature Under Test: PTZ Absolute Positioning

Test Purpose: To verify that Client is able to change zoom of PTZ Device using the AbsoluteMove operation with specified Zoom element.

Pre-Requisite:

- The Network Trace Capture files contains at least one conversation between Client and Device with AbsoluteMove operation present.

Test Procedure (expected to be reflected in network trace file):

1. Client invokes AbsoluteMove request message to change zoom of PTZ Device using specific value of Zoom element.
2. Device responds with code HTTP 200 OK and AbsoluteMoveResponse message.

Test Result:

PASS -

- Client **AbsoluteMove** request messages are valid according to XML Schemas listed in Namespaces AND
- Client **AbsoluteMove** request in Test Procedure fulfills the following requirements:
  - [S1] Client request contains "<AbsoluteMove>" tag after the "<Body>" tag AND
  - [S2] "<AbsoluteMove>" includes tag: "<ProfileToken>" with non-empty string value of specific token AND
  - [S4] "<Position>" includes tag: "<Zoom>" AND
  - [S6] Device response contains "HTTP/* 200 OK" AND
  - [S7] Device response contains "<AbsoluteMoveResponse>" tag.

FAIL -

- The Client failed PASS criteria.

Validated Feature List: PTZAbsolutePositioning_AbsoluteMoveZoom

9 PTZ - Relative Positioning Test Cases

9.1 Feature Level Requirement:

Validated Feature: PtzRelativePositioning

Profile S Requirement: Conditional

9.2 Expected Scenarios Under Test:

1. Client connects to Device to read PTZ capabilities and control the position using relative positioning.
2. Client is considered as supporting PTZ - Relative Positioning if the following conditions are met:
   - Client is able to read PTZ capabilities from PTZ Node using EITHER GetNodes OR GetNode operations AND
   - Client is able to move PTZ Device using the RelativeMove operation by EITHER Move a PTZ Device using the RelativeMove operation with specified PanTilt element OR change zoom of PTZ Device using the RelativeMove operation with specified Zoom element).
3. Client is considered as NOT supporting PTZ - Relative Positioning if ANY of the following is TRUE:
   - BOTH (No Valid Device Response to GetNodes request AND No Valid Device Response to GetNode request) OR
   - BOTH (No Valid Device Response to RelativeMove request with specified PanTilt element AND No Valid Device Response to RelativeMove request with specified Zoom element).

9.3 PTZ RELATIVE MOVE PAN/TILT

Test Label: PTZ Relative Positioning - RelativeMove PanTilt

Test Case ID: PTZRELATIVEPOSITIONING-1

Profile S Normative Reference: Conditional

Feature Under Test: PTZ Relative Positioning

Test Purpose: To verify that Client is able to move a PTZ Device using the RelativeMove operation with specified PanTilt element.

Pre-Requisite:

- The Network Trace Capture files contains at least one conversation between Client and Device with RelativeMove operation present.

Test Procedure (expected to be reflected in network trace file):

1. Client invokes RelativeMove request message to move of PTZ Device using specific value of PanTilt element.
2. Device responds with code HTTP 200 OK and RelativeMoveResponse message.

Test Result:

NOTE: If Client RelativeMove request message does not contain "<PanTilt>" tag inside "<Translation>" tag then Test shall be deemed as "NOT DETECTED".

PASS -

- Client **RelativeMove** request messages are valid according to XML Schemas listed in Namespaces AND
- Client **RelativeMove** request in Test Procedure fulfills the following requirements:
  - [S1] Client request contains "<RelativeMove>" tag after the "<Body>" tag AND
  - [S2] "<RelativeMove>" includes tag: "<ProfileToken>" with non-empty string value of specific token AND
  - [S4] "<Translation>" includes tag: "<PanTilt>" AND
  - [S7] Device response contains "HTTP/* 200 OK" AND
  - [S8] Device response contains "<RelativeMoveResponse>" tag.

FAIL -

- The Client failed PASS criteria.

Validated Feature List: PTZRelativePositioning_RelativeMovePanTilt

9.4 PTZ RELATIVE MOVE ZOOM

Test Label: PTZ Relative Positioning - RelativeMove Zoom

Test Case ID: PTZRELATIVEPOSITIONING-2

Profile S Normative Reference: Conditional

Feature Under Test: PTZ Relative Positioning

Test Purpose: To verify that Client is able to change zoom of PTZ Device using the RelativeMove operation with specified Zoom element.

Pre-Requisite:

- The Network Trace Capture files contains at least one conversation between Client and Device with RelativeMove operation present.

Test Procedure (expected to be reflected in network trace file):

1. Client invokes RelativeMove request message to change zoom of PTZ Device using specific value of Zoom element.
2. Device responds with code HTTP 200 OK and RelativeMoveResponse message.

Test Result:

NOTE: If Client AbsoluteMove request message does not contain "<Zoom>" tag inside "<Translation>" tag then Test shall be deemed as "NOT DETECTED".

PASS -

- Client **RelativeMove** request messages are valid according to XML Schemas listed in Namespaces AND
- Client **RelativeMove** request in Test Procedure fulfills the following requirements:
  - [S1] Client request contains "<RelativeMove>" tag after the "<Body>" tag AND
  - [S2] "<RelativeMove>" includes tag: "<ProfileToken>" with non-empty string value of specific token AND
  - [S4] "<Translation>" includes tag: "<Zoom>" AND
  - [S6] Device response contains "HTTP/* 200 OK" AND
  - [S7] Device response contains "<RelativeMoveResponse>" tag.

FAIL -

- The Client failed PASS criteria.

Validated Feature List: PTZRelativePositioning_RelativeMoveZoom

10 PTZ Presets Test Cases

10.1 Feature Level Requirement:

Validated Feature: PtzPresets

Profile S Requirement: Conditional

Profile T Requirement: Conditional

10.2 Expected Scenarios Under Test:

1. Client connects to Device to manage the presets of a PTZ Node.
2. Client is considered as supporting PTZ Presets if the following conditions are met:
   - Client is able to list the presets using the GetPresets operation AND
   - Client is able to move a PTZ Device to a specific preset using the GotoPreset operation.
3. Client is considered as NOT supporting PTZ Presets if ANY of the following is TRUE:
   - No Valid Device Response to GetPresets request OR
   - No Valid Device Response to GotoPreset request.

10.3 PTZ GET PRESETS

Test Label: PTZ Presets - GetPresets

Test Case ID: PTZPRESETS-1

Profile S Normative Reference: Conditional

Profile T Normative Reference: Conditional

Feature Under Test: PTZ Presets

Test Purpose: To verify that Client is able to list the presets using the GetPresets operation.

Pre-Requisite:

- The Network Trace Capture files contains at least one conversation between Client and Device with GetPresets operation present.

Test Procedure (expected to be reflected in network trace file):

1. Client invokes GetPresets request message to list the available presets from Device.
2. Device responds with code HTTP 200 OK and GetPresetsResponse message.

Test Result:

PASS -

- Client **GetPresets** request messages are valid according to XML Schemas listed in Namespaces AND
- Client **GetPresets** request in Test Procedure fulfills the following requirements:
  - [S1] Client request contains "<GetPresets>" tag after the "<Body>" tag AND
  - [S2] "<GetPresets>" includes tag: "<ProfileToken>" with non-empty string value of specific token AND
  - [S3] Device response contains "HTTP/* 200 OK" AND
  - [S4] Device response contains "<GetPresetsResponse>" tag.

FAIL -

- The Client failed PASS criteria.

Validated Feature List: PTZPresets_GetPresets

10.4 PTZ GOTO PRESET

Test Label: PTZ Presets - GotoPreset

Test Case ID: PTZPRESETS-2

Profile S Normative Reference: Conditional

Profile T Normative Reference: Conditional

Feature Under Test: PTZ Presets

Test Purpose: To verify that Client is able to move a PTZ Device to a specific preset using the GotoPreset operation.

Pre-Requisite:

- The Network Trace Capture files contains at least one conversation between Client and Device with GotoPreset operation present.

Test Procedure (expected to be reflected in network trace file):

1. Client invokes GotoPreset request message to move PTZ Device to specific preset.
2. Device responds with code HTTP 200 OK and GotoPresetResponse message.

Test Result:

PASS -

- Client **GotoPreset** request messages are valid according to XML Schemas listed in Namespaces AND
- Client **GotoPreset** request in Test Procedure fulfills the following requirements:
  - [S1] Client request contains "<GotoPreset>" tag after the "<Body>" tag AND
  - [S2] "<GotoPreset>" includes tag: "<ProfileToken>" with non-empty string value of specific token AND
  - [S3] "<GotoPreset>" includes tag: "<PresetToken>" with non-empty string value of specific token AND
  - [S4] Device response contains "HTTP/* 200 OK" AND
  - [S5] Device response contains "<GotoPresetResponse>" tag.

FAIL -

- The Client failed PASS criteria.

Validated Feature List: PTZPresets_GotoPreset

11 PTZ Home Position Test Cases

11.1 Feature Level Requirement:

Validated Feature: PtzHomePosition

Profile S Requirement: Conditional

Profile T Requirement: Conditional

11.2 Expected Scenarios Under Test:

1. Client connects to Device to manage the home position of a PTZ Node.
2. Client is considered as supporting PTZ Home Position if the following conditions are met:
   - Client is able to move PTZ Device to its home position using the GotoHomePosition operation
3. Client is considered as NOT supporting PTZ Home Position if ANY of the following is TRUE:
   - No Valid Device Response to GotoHomePosition request.

11.3 PTZ HOME POSITION

Test Label: PTZ Presets - GotoHomePosition

Test Case ID: PTZHOMEPOSITION-1

Profile S Normative Reference: Conditional

Profile T Normative Reference: Conditional

Feature Under Test: PTZ Presets

Test Purpose: To verify that Client is able to move PTZ Device to its home position using the GotoHomePosition operation.

Pre-Requisite:

- The Network Trace Capture files contains at least one conversation between Client and Device with GotoHomePosition operation present.

Test Procedure (expected to be reflected in network trace file):

1. Client invokes GotoHomePosition request message to move PTZ Device to its home position.
2. Device responds with code HTTP 200 OK and GotoHomeResponse message.

Test Result:

PASS -

- Client **GotoHomePosition** request messages are valid according to XML Schemas listed in Namespaces AND
- Client **GotoHomePosition** request in Test Procedure fulfills the following requirements:
  - [S1] Client request contains "<GotoHomePosition>" tag after the "<Body>" tag AND
  - [S2] "<GotoHomePosition>" includes tag: "<ProfileToken>" with non-empty string value of specific token AND
  - [S3] Device response contains "HTTP/* 200 OK" AND
  - [S4] Device response contains "<GotoHomePositionResponse>" tag.

FAIL -

- The Client failed PASS criteria.

Validated Feature List: PTZPresets_GotoHomePosition

12 PTZ - Auxiliary Command Test Cases

12.1 Feature Level Requirement:

Validated Feature: PtzAuxiliaryCommand

Profile S Requirement: Conditional

12.2 Expected Scenarios Under Test:

1. Client connects to Device to manage the auxiliary commands of a PTZ Node.
2. Client is considered as supporting PTZ - Auxiliary Command if the following conditions are met:
   - Client is able to read PTZ capabilities from PTZ Node using EITHER GetNodes OR GetNode operations AND
   - Client is able to call an auxiliary operation on Device using the SendAuxiliaryCommand operation.
3. Client is considered as NOT supporting PTZ - Auxiliary Command if ANY of the following is TRUE:
   - BOTH (No Valid Device Response to GetNodes request AND No Valid Device Response to GetNode request) OR
   - No Valid Device Response to SendAuxiliaryCommand request.

12.3 PTZ SEND AUXILIARY COMMAND

Test Label: PTZ Auxiliary Command - Send Auxiliary Command

Test Case ID: PTZAUXILIARYCOMMAND-1

Profile S Normative Reference: Conditional

Feature Under Test: PTZ Auxiliary Command

Test Purpose: To verify that Client is able to call an auxiliary operation on Device using the **SendAuxiliaryCommand** operation (PTZ Service).

Pre-Requisite:

- The Network Trace Capture files contains at least one conversation between Client and Device with **SendAuxiliaryCommand** operation (PTZ Service) present.

Test Procedure (expected to be reflected in network trace file):

1. Client invokes **SendAuxiliaryCommand** request message (PTZ Service) to call an auxiliary operation on Device.
2. Device responds with code HTTP 200 OK and **SendAuxiliaryCommandResponse** message.

Test Result:

PASS -

- Client **SendAuxiliaryCommand** request messages are valid according to XML Schemas listed in Namespaces AND
- Client **SendAuxiliaryCommand** request in Test Procedure fulfills the following requirements:
  - [S1] **soapenv:Body** element has child element **tptz:SendAuxiliaryCommand** AND
  - [S2] It contains **tptz:ProfileToken** element with non-empty string value AND
  - [S3] It contains **tptz:AuxiliaryData** element with non-empty string value AND
- Device response on the **SendAuxiliaryCommand** request fulfills the following requirements:
  - [S4] It has HTTP 200 response code AND
  - [S5] **soapenv:Body** element has child element **tptz:SendAuxiliaryCommandResponse**.

FAIL -

- The Client failed PASS criteria.

Validated Feature List: ptz.auxiliary.send_auxiliary_command

13 PTZ Using Media2 Absolute Positioning Test Cases

13.1 Feature Level Requirement:

Validated Feature: PtzUsingMedia2AbsolutePositioning

Profile T Requirement: Mandatory

13.2 Expected Scenarios Under Test:

1. Client connects to Device control the position using absolute positioning with SphericalPositionSpaceDegrees and PositionGenericSpace PTZ spaces.

2. Client is considered as supporting PTZ Using Media2 Absolute Positioning if the following conditions are met:

   - Client is able to move PTZ Device using the **AbsoluteMove** operation with specified PanTilt element EITHER using space attribute in PanTilt element with **http://www.onvif.org/ver10/tptz/PanTiltSpaces/SphericalPositionSpaceDegrees** value OR using Media Profile with PTZConfiguration with DefaultAbsolutePantTiltPositionSpace value is equal to **http://www.onvif.org/ver10/tptz/PanTiltSpaces/SphericalPositionSpaceDegrees** AND

   - Client is able to move PTZ Device using the **AbsoluteMove** operation with specified PanTilt element EITHER using space attribute in PanTilt element with **http://www.onvif.org/ver10/tptz/PanTiltSpaces/PositionGenericSpace** value OR using Media Profile with PTZConfiguration with DefaultAbsolutePantTiltPositionSpace value is equal to **http://www.onvif.org/ver10/tptz/PanTiltSpaces/PositionGenericSpace** AND

   - Client is able to move PTZ Device using the **AbsoluteMove** operation with specified Zoom element EITHER using space attribute in Zoom element with **http://www.onvif.org/ver10/tptz/ZoomSpaces/PositionGenericSpace** value OR using Media Profile with PTZConfiguration with DefaultAbsoluteZoomPositionSpace value is equal to **http://www.onvif.org/ver10/tptz/ZoomSpaces/PositionGenericSpace** AND

3. Client is considered as NOT supporting PTZ Using Media2 Absolute Positioning if ANY of the following is TRUE:

   - No valid response to **AbsoluteMove** request with **http://www.onvif.org/ver10/tptz/PanTiltSpaces/SphericalPositionSpaceDegrees** PTZ space if detected AND

- No valid response to **AbsoluteMove** request with skipped PTZ space attribute for **AbsoluteMove** operations which use media profile with DefaultAbsolutePantTiltPositionSpace value in PTZConfiguration is equal to **http://www.onvif.org/ver10/tptz/PanTiltSpaces/SphericalPositionSpaceDegrees** if detected OR

- No **AbsoluteMove** request with **http://www.onvif.org/ver10/tptz/PanTiltSpaces/SphericalPositionSpaceDegrees** PTZ space is detected AND no **AbsoluteMove** request with skipped PTZ space attribute which use media profile with DefaultAbsolutePantTiltPositionSpace value in PTZConfiguration is equal to **http://www.onvif.org/ver10/tptz/PanTiltSpaces/SphericalPositionSpaceDegrees** is detected

- No valid response to **AbsoluteMove** request with **http://www.onvif.org/ver10/tptz/PanTiltSpaces/PositionGenericSpace** PTZ space if detected AND

- No valid response to **AbsoluteMove** request with skipped PTZ space attribute for **AbsoluteMove** operations which use media profile with DefaultAbsolutePantTiltPositionSpace value in PTZConfiguration is equal to **http://www.onvif.org/ver10/tptz/PanTiltSpaces/PositionGenericSpace** if detected OR

- No **AbsoluteMove** request with **http://www.onvif.org/ver10/tptz/PanTiltSpaces/PositionGenericSpace** PTZ space is detected AND no **AbsoluteMove** request with skipped PTZ space attribute which use media profile with DefaultAbsolutePantTiltPositionSpace value in PTZConfiguration is equal to **http://www.onvif.org/ver10/tptz/PanTiltSpaces/PositionGenericSpace** is detected

- No valid response to **AbsoluteMove** request with **http://www.onvif.org/ver10/tptz/ZoomSpaces/PositionGenericSpace** PTZ space if detcted AND

- No valid response to **AbsoluteMove** request with skipped PTZ space attribute for **AbsoluteMove** operations which use media profile with DefaultAbsoluteZoomPositionSpace value in PTZConfiguration is equal to **http://www.onvif.org/ver10/tptz/ZoomSpaces/PositionGenericSpace** if detected OR

- No **AbsoluteMove** request with **http://www.onvif.org/ver10/tptz/ZoomSpaces/PositionGenericSpace** PTZ space is detected AND no **AbsoluteMove** request with skipped PTZ space attribute which use media profile with DefaultAbsoluteZoomPositionSpace value in PTZConfiguration is equal to **http://www.onvif.org/ver10/tptz/ZoomSpaces/PositionGenericSpace** is detected

13.3 PTZ ABSOLUTE MOVE PAN/TILT SPHERICAL POSITION SPACE DEGREES

Test Label: PTZ Using Media2 Absolute Positioning - AbsoluteMove PanTilt

Test Case ID: PTZUSINGMEDIA2ABSOLUTEPOSITIONING-1

Profile T Normative Reference: Mandatory

Feature Under Test: PTZAbsolutePositioningPanTiltSphericalPositionSpaceDegrees

Test Purpose: To verify that Client is able to move a PTZ Device using the AbsoluteMove operation with specified PanTilt element using **http://www.onvif.org/ver10/tptz/PanTiltSpaces/SphericalPositionSpaceDegrees** PTZ space.

Pre-Requisite:

- The Network Trace Capture files contains at least one conversation between Client and Device with AbsoluteMove operation present.
- Device supports PTZ Service.
- Device supports Absolute Pan/Tilt movement (PTZAbsolutePanTilt).

Test Procedure (expected to be reflected in network trace file):

1. Client invokes **AbsoluteMove** request message to move of PTZ Device using specific value of PanTilt element with **http://www.onvif.org/ver10/tptz/PanTiltSpaces/SphericalPositionSpaceDegrees** space attribute value OR
2. Client find or configure media profile to contain PTZConfiguration with DefaultAbsolutePantTiltPositionSpace with value is equal to **http://www.onvif.org/ver10/tptz/PanTiltSpaces/SphericalPositionSpaceDegrees** and invokes **AbsoluteMove** request message using specific value of PanTilt element with no space attribute.
3. Device responds with code HTTP 200 OK and **AbsoluteMoveResponse** message.

Test Result:

- Client **AbsoluteMove** request messages are valid according to XML Schemas listed in Namespaces AND
- Client **AbsoluteMove** request in Test Procedure fulfills the following requirements:
  - [S1] **soapenv:Body** element has child element **tptz:AbsoluteMove** AND

- [S2] It contains **tptz:Position/tt:PanTilt** element AND
- [S3] If it contains **tptz:Position/tt:PanTilt/@space** attribute, THEN **tptz:Position/tt:PanTilt/@space** element value is equal to **http://www.onvif.org/ver10/tptz/PanTiltSpaces/SphericalPositionSpaceDegrees** AND
- [S4] ELSE PTZConfiguration that corresponding to media profile used in **AbsoluteMove** request (PTZ Move operation) has DefaultAbsolutePantTiltPositionSpace (Default space element name to get) value is equal to http://www.onvif.org/ver10/tptz/PanTiltSpaces/SphericalPositionSpaceDegrees (see Annex A.1 HelperGetDefaultPtzSpaceOfPtzConfigurationCorrespondingToMove)

- Device response on the **AbsoluteMove** request fulfills the following requirements:
  - [S4] It has HTTP 200 response code AND
  - [S5] **soapenv:Body** element has child element **tptz:AbsoluteMoveResponse**.

FAIL -

- The Client failed PASS criteria.

Validated Feature List:
PTZUsingMedia2AbsolutePositioning_PanTiltSphericalPositionSpaceDegrees

13.4 PTZ ABSOLUTE MOVE PAN/TILT POSITION GENERIC SPACE

Test Label: PTZ Using Media2 Absolute Positioning - AbsoluteMove PanTilt

Test Case ID: PTZUSINGMEDIA2ABSOLUTEPOSITIONING-2

Profile T Normative Reference: Mandatory

Feature Under Test: PTZAbsolutePositioningPanTiltPositionGenericSpace

Test Purpose: To verify that Client is able to move a PTZ Device using the AbsoluteMove operation with specified PanTilt element using **http://www.onvif.org/ver10/tptz/PanTiltSpaces/PositionGenericSpace** PTZ space.

Pre-Requisite:

- The Network Trace Capture files contains at least one conversation between Client and Device with AbsoluteMove operation present.

- Device supports PTZ Service.
- Device supports Absolute Pan/Tilt movement (PTZAbsolutePanTilt).

Test Procedure (expected to be reflected in network trace file):

1. Client invokes **AbsoluteMove** request message to move of PTZ Device using specific value of PanTilt element with **http://www.onvif.org/ver10/tptz/PanTiltSpaces/PositionGenericSpace** space attribute value OR
2. Client find or configure media profile to contain PTZConfiguration with DefaultAbsolutePantTiltPositionSpace with value is equal to **http://www.onvif.org/ver10/tptz/PanTiltSpaces/PositionGenericSpace** and invokes **AbsoluteMove** request message using specific value of PanTilt element with no space attribute.
3. Device responds with code HTTP 200 OK and **AbsoluteMoveResponse** message.

Test Result:

- Client **AbsoluteMove** request messages are valid according to XML Schemas listed in Namespaces AND
- Client **AbsoluteMove** request in Test Procedure fulfills the following requirements:
  - [S1] **soapenv:Body** element has child element **tptz:AbsoluteMove** AND
  - [S2] It contains **tptz:Position/tt:PanTilt** element AND
  - [S3] If it contains **tptz:Position/tt:PanTilt/@space** attribute, THEN **tptz:Position/tt:PanTilt/@space** element value is equal to **http://www.onvif.org/ver10/tptz/PanTiltSpaces/PositionGenericSpace** AND
  - [S4] ELSE PTZConfiguration that corresponding to media profile used in **AbsoluteMove** request (PTZ Move operation) has DefaultAbsolutePantTiltPositionSpace (Default space element name to get) value is equal to http://www.onvif.org/ver10/tptz/PanTiltSpaces/PositionGenericSpace (see Annex A.1 HelperGetDefaultPtzSpaceOfPtzConfigurationCorrespondingToMove)
- Device response on the **AbsoluteMove** request fulfills the following requirements:
  - [S4] It has HTTP 200 response code AND
  - [S5] **soapenv:Body** element has child element **tptz:AbsoluteMoveResponse**.

FAIL -

- The Client failed PASS criteria.

Validated Feature List: PTZUsingMedia2AbsolutePositioning_PanTiltPositionGenericSpace

13.5 PTZ ABSOLUTE MOVE ZOOM POSITION GENERIC SPACE

Test Label: PTZ Using Media2 Absolute Positioning - AbsoluteMove Zoom

Test Case ID: PTZUSINGMEDIA2ABSOLUTEPOSITIONING-3

Profile T Normative Reference: Mandatory

Feature Under Test: PTZAbsolutePositioningZoomPositionGenericSpace

Test Purpose: To verify that Client is able to move a PTZ Device using the AbsoluteMove operation with specified Zoom element using **http://www.onvif.org/ver10/tptz/ZoomSpaces/PositionGenericSpace** PTZ space.

Pre-Requisite:

- The Network Trace Capture files contains at least one conversation between Client and Device with AbsoluteMove operation present.
- Device supports PTZ Service.
- Device supports Absolute Zoom movement (PTZAbsoluteZoom).

Test Procedure (expected to be reflected in network trace file):

1. Client invokes **AbsoluteMove** request message to move of PTZ Device using specific value of Zoom element with **http://www.onvif.org/ver10/tptz/ZoomSpaces/PositionGenericSpace** space attribute value OR
2. Client find or configure media profile to contain PTZConfiguration with DefaultAbsolutePantTiltPositionSpace with value is equal to **http://www.onvif.org/ver10/tptz/ZoomSpaces/PositionGenericSpace** and invokes **AbsoluteMove** request message using specific value of Zoom element with no space attribute.
3. Device responds with code HTTP 200 OK and **AbsoluteMoveResponse** message.

Test Result:

- Client **AbsoluteMove** request messages are valid according to XML Schemas listed in Namespaces AND
- Client **AbsoluteMove** request in Test Procedure fulfills the following requirements:

- [S1] **soapenv:Body** element has child element **tptz:AbsoluteMove** AND
- [S2] It contains **tptz:Position/tt:Zoom** element AND
- [S3] If it contains **tptz:Position/tt:Zoom/@space** attribute, THEN **tptz:Position/tt:Zoom/@space** element value is equal to **http://www.onvif.org/ver10/tptz/ZoomSpaces/PositionGenericSpace** AND
- [S4] ELSE PTZConfiguration that corresponding to media profile used in **AbsoluteMove** request (PTZ Move operation) has DefaultAbsoluteZoomPositionSpace (Default space element name to get) value is equal to http://www.onvif.org/ver10/tptz/ZoomSpaces/PositionGenericSpace (see Annex A.1 HelperGetDefaultPtzSpaceOfPtzConfigurationCorrespondingToMove)

- Device response on the **AbsoluteMove** request fulfills the following requirements:
  - [S4] It has HTTP 200 response code AND
  - [S5] **soapenv:Body** element has child element **tptz:AbsoluteMoveResponse**.

FAIL -

- The Client failed PASS criteria.

Validated Feature List: PTZUsingMedia2AbsolutePositioning_ZoomPositionGenericSpace

14 PTZ Using Media2 Continuous Positioning Test Cases

14.1 Feature Level Requirement:

Validated Feature: PtzUsingMedia2ContinuousPositioning

Profile T Requirement: Mandatory

14.2 Expected Scenarios Under Test:

1. Client connects to Device control the position using absolute positioning with VelocityGenericSpace PTZ spaces.

2. Client is considered as supporting PTZ Using Media2 Continuous Positioning if the following conditions are met:

   - Client is able to move PTZ Device using the **ContinuousMove** operation with specified PanTilt element EITHER using space attribute in PanTilt element with **http://www.onvif.org/ver10/tptz/PanTiltSpaces/VelocityGenericSpace** value OR using Media Profile with PTZConfiguration with DefaultContinuousPanTiltVelocitySpace value is equal to **http://www.onvif.org/ver10/tptz/PanTiltSpaces/VelocityGenericSpace** AND

   - Client is able to move PTZ Device using the **ContinuousMove** operation with specified Zoom element EITHER using space attribute in Zoom element with **http://www.onvif.org/ver10/tptz/ZoomSpaces/VelocityGenericSpace** value OR using Media Profile with PTZConfiguration with DefaultContinuousZoomVelocitySpace value is equal to **http://www.onvif.org/ver10/tptz/ZoomSpaces/VelocityGenericSpace** AND

   - Client supports PtzContinuousPositioning.Stop feature OR PtzContinuousPositioning.StopMovementUsingContinuousMove feature.

3. Client is considered as NOT supporting PTZ Using Media2 Continuous Positioning if ANY of the following is TRUE:

   - No valid response to **ContinuousMove** request with **http://www.onvif.org/ver10/tptz/PanTiltSpaces/VelocityGenericSpace** PTZ space if detected AND

   - No valid response to **ContinuousMove** request with skipped PTZ space attribute for **ContinuousMove** operations which use media profile with

DefaultContinuousPanTiltVelocitySpace value in PTZConfiguration is equal to **http://www.onvif.org/ver10/tptz/PanTiltSpaces/VelocityGenericSpace** if detected OR

- No **ContinuousMove** request with **http://www.onvif.org/ver10/tptz/PanTiltSpaces/VelocityGenericSpace** PTZ space is detected AND no **ContinuousMove** request with skipped PTZ space attribute which use media profile with DefaultContinuousPanTiltVelocitySpace value in PTZConfiguration is equal to **http://www.onvif.org/ver10/tptz/PanTiltSpaces/VelocityGenericSpace** is detected AND
- No valid response to **ContinuousMove** request with **http://www.onvif.org/ver10/tptz/ZoomSpaces/VelocityGenericSpace** PTZ space if detcted AND
- No valid response to **ContinuousMove** request with skipped PTZ space attribute for **ContinuousMove** operations which use media profile with DefaultContinuousZoomVelocitySpace value in PTZConfiguration is equal to **http://www.onvif.org/ver10/tptz/ZoomSpaces/VelocityGenericSpace** if detected OR
- No **ContinuousMove** request with **http://www.onvif.org/ver10/tptz/ZoomSpaces/VelocityGenericSpace** PTZ space is detected AND no **ContinuousMove** request with skipped PTZ space attribute which use media profile with DefaultContinuousZoomVelocitySpace value in PTZConfiguration is equal to **http://www.onvif.org/ver10/tptz/ZoomSpaces/VelocityGenericSpace** is detected AND
- Client does not support PtzContinuousPositioning.Stop feature AND PtzContinuousPositioning.StopMovementUsingContinuousMove feature.

14.3 PTZ CONTINUOUS MOVE PAN/TILT VELOCITY GENERIC SPACE

Test Label: PTZ Using Media2 Continuous Positioning - ContinuousMove PanTilt

Test Case ID: PTZUSINGMEDIA2CONTINUOUSPOSITIONING-1

Profile T Normative Reference: Mandatory

Feature Under Test: PTZContinuousPositioningPanTiltVelocityGenericSpace

Test Purpose: To verify that Client is able to move a PTZ Device using the ContinuousMove operation with specified PanTilt element using **http://www.onvif.org/ver10/tptz/PanTiltSpaces/VelocityGenericSpace** PTZ space.

Pre-Requisite:

- The Network Trace Capture files contains at least one conversation between Client and Device with ContinuousMove operation present.

- Device supports PTZ Service.
- Device supports Continuous Pan/Tilt movement (PTZContinuousPanTilt).

Test Procedure (expected to be reflected in network trace file):

1. Client invokes **ContinuousMove** request message to move of PTZ Device using specific value of PanTilt element with **http://www.onvif.org/ver10/tptz/PanTiltSpaces/VelocityGenericSpace** space attribute value OR
2. Client find or configure media profile to contain PTZConfiguration with DefaultContinuousPanTiltVelocitySpace with value is equal to **http://www.onvif.org/ver10/tptz/PanTiltSpaces/VelocityGenericSpace** and invokes **ContinuousMove** request message using specific value of PanTilt element with no space attribute.
3. Device responds with code HTTP 200 OK and **ContinuousMoveResponse** message.

Test Result:

- Client **ContinuousMove** request messages are valid according to XML Schemas listed in Namespaces AND
- Client **ContinuousMove** request in Test Procedure fulfills the following requirements:
  - [S1] **soapenv:Body** element has child element **tptz:ContinuousMove** AND
  - [S2] It contains **tptz:Velocity/tt:PanTilt** element AND
  - [S3] If it contains **tptz:Velocity/tt:PanTilt/@space** attribute, THEN **tptz:Velocity/tt:PanTilt/@space** element value is equal to **http://www.onvif.org/ver10/tptz/PanTiltSpaces/VelocityGenericSpace** AND
  - [S4] ELSE PTZConfiguration that corresponding to media profile used in **ContinuousMove** request (PTZ Move operation) has DefaultContinuousPanTiltVelocitySpace (Default space element name to get) value is equal to http://www.onvif.org/ver10/tptz/PanTiltSpaces/VelocityGenericSpace (see Annex A.1 HelperGetDefaultPtzSpaceOfPtzConfigurationCorrespondingToMove)
- Device response on the **ContinuousMove** request fulfills the following requirements:
  - [S4] It has HTTP 200 response code AND
  - [S5] **soapenv:Body** element has child element **tptz:ContinuousMoveResponse**.

FAIL -

- The Client failed PASS criteria.

Validated Feature List: PTZUsingMedia2ContinuousPositioning_PanTiltVelocityGenericSpace

14.4 PTZ CONTINUOUS MOVE ZOOM VELOCITY GENERIC SPACE

Test Label: PTZ Using Media2 Continuous Positioning - ContinuousMove Zoom

Test Case ID: PTZUSINGMEDIA2CONTINUOUSPOSITIONING-2

Profile T Normative Reference: Mandatory

Feature Under Test: PTZContinuousPositioningZoomVelocityGenericSpace

Test Purpose: To verify that Client is able to move a PTZ Device using the ContinuousMove operation with specified Zoom element using **http://www.onvif.org/ver10/tptz/ZoomSpaces/VelocityGenericSpace** PTZ space.

Pre-Requisite:

- The Network Trace Capture files contains at least one conversation between Client and Device with ContinuousMove operation present.
- Device supports PTZ Service.
- Device supports Continuous Zoom movement (PTZContinuousZoom).

Test Procedure (expected to be reflected in network trace file):

1. Client invokes **ContinuousMove** request message to move of PTZ Device using specific value of Zoom element with **http://www.onvif.org/ver10/tptz/ZoomSpaces/VelocityGenericSpace** space attribute value OR
2. Client find or configure media profile to contain PTZConfiguration with DefaultContinuousPanTiltVelocitySpace with value is equal to **http://www.onvif.org/ver10/tptz/ZoomSpaces/VelocityGenericSpace** and invokes **ContinuousMove** request message using specific value of Zoom element with no space attribute.
3. Device responds with code HTTP 200 OK and **ContinuousMoveResponse** message.

Test Result:

- Client **ContinuousMove** request messages are valid according to XML Schemas listed in Namespaces AND
- Client **ContinuousMove** request in Test Procedure fulfills the following requirements:

- [S1] **soapenv:Body** element has child element **tptz:ContinuousMove** AND
- [S2] It contains **tptz:Velocity/tt:Zoom** element AND
- [S3] If it contains **tptz:Velocity/tt:Zoom/@space** attribute, THEN **tptz:Velocity/tt:Zoom/@space** element value is equal to **http://www.onvif.org/ver10/tptz/ZoomSpaces/VelocityGenericSpace** AND
- [S4] ELSE PTZConfiguration that corresponding to media profile used in **ContinuousMove** request (PTZ Move operation) has DefaultContinuousZoomVelocitySpace (Default space element name to get) value is equal to http://www.onvif.org/ver10/tptz/ZoomSpaces/VelocityGenericSpace (see Annex A.1 HelperGetDefaultPtzSpaceOfPtzConfigurationCorrespondingToMove)

- Device response on the **ContinuousMove** request fulfills the following requirements:
  - [S4] It has HTTP 200 response code AND
  - [S5] **soapenv:Body** element has child element **tptz:ContinuousMoveResponse**.

FAIL -

- The Client failed PASS criteria.

Validated Feature List: PTZUsingMedia2ContinuousPositioning_ZoomVelocityGenericSpace

15 PTZ - Set Preset Test Cases

15.1 Feature Level Requirement:

Validated Feature: PtzSetPreset

Profile T Requirement: Conditional

15.2 Expected Scenarios Under Test:

1. Client connects to Device to store a preset using the **SetPreset** operation.
2. Client is considered as supporting PTZ - SetPreset if the following conditions are met:
   - Client is able to store a preset using the **SetPreset** operation.
3. Client is considered as NOT supporting PTZ - SetPreset if ANY of the following is TRUE:
   - No Valid Device Response to **SetPreset** request.

15.3 PTZ SET PRESET

Test Label: PTZ SetPreset

Test Case ID: PTZSETPRESET-1

Profile T Normative Reference: Conditional

Feature Under Test: PTZ Set Preset

Test Purpose: To verify that Client is able to to store a preset using the **SetPreset** operation.

Pre-Requisite:

- The Network Trace Capture files contains at least one conversation between Client and Device with SetPreset operation present.
- Device supports PTZ Presets (PTZPresets).

Test Procedure (expected to be reflected in network trace file):

1. Client invokes SetPreset request message to store a preset on the Device.
2. Device responds with code HTTP 200 OK and SetPresetResponse message.

Test Result:

PASS -

- Client **SetPreset** request messages are valid according to XML Schemas listed in Namespaces AND
- Client **SetPreset** request in Test Procedure fulfills the following requirements:
  - [S1] **soapenv:Body** element has child element **tptz:SetPreset** AND
- Device response on the **SetPreset** request fulfills the following requirements:
  - [S2] It has HTTP 200 response code AND
  - [S3] **soapenv:Body** element has child element **tptz:SetPresetResponse**.

FAIL -

- The Client failed PASS criteria.

Validated Feature List: PtzSetPreset.SetPreset

16 PTZ Get Compatible Configurations Test Cases

16.1 Feature Level Requirement:

Validated Feature: PtzGetCompatibleConfigurations

Profile T Requirement: Conditional

16.2 Expected Scenarios Under Test:

1. Client connects to Device to retrieve PTZ configurations compatible with profile using the **GetCompatibleConfigurations** operation.
2. Client is considered as supporting PTZ Get Compatible Configurations if the following conditions are met:
   - Client is able to retrieve PTZ configurations compatible with profile using the **GetCompatibleConfigurations** operation.
3. Client is considered as NOT supporting PTZ Get Compatible Configurations if ANY of the following is TRUE:
   - No Valid Device Response to **GetCompatibleConfigurations** request.

16.3 PTZ GET COMPATIBLE CONFIGURATIONS

Test Label: PTZ GetCompatibleConfigurations

Test Case ID: PTZGETCOMPATIBLECONFIGURATIONS-1

Profile T Normative Reference: Conditional

Feature Under Test: PTZ Get Compatible Configurations

Test Purpose: To verify that Client is able to retrieve PTZ configurations compatible with profile using the **GetCompatibleConfigurations** operation.

Pre-Requisite:

- The Network Trace Capture files contains at least one conversation between Client and Device with GetCompatibleConfigurations operation present.
- Device supports Get Compatible Configurations feature (PTZGetCompatibleConfigurations).

Test Procedure (expected to be reflected in network trace file):

1. Client invokes GetCompatibleConfigurations request message to get TPZ configurations compatible with profile.
2. Device responds with code HTTP 200 OK and GetCompatibleConfigurationsResponse message.

Test Result:

PASS -

- Client **GetCompatibleConfigurations** request messages are valid according to XML Schemas listed in Namespaces AND
- Client **GetCompatibleConfigurations** request in Test Procedure fulfills the following requirements:
  - [S1] **soapenv:Body** element has child element **tptz:GetCompatibleConfigurations** AND
- Device response on the **GetCompatibleConfigurations** request fulfills the following requirements:
  - [S2] It has HTTP 200 response code AND
  - [S3] **soapenv:Body** element has child element **tptz:GetCompatibleConfigurationsResponse**.

FAIL -

- The Client failed PASS criteria.

Validated Feature List: PtzGetCompatibleConfigurations.GetCompatibleConfigurations

17 PTZ Media2 Profile Configuration Test Cases

17.1 Feature Level Requirement:

Validated Feature: PTZUsingMedia2ProfileConfiguration

Profile T Requirement: Conditional

17.2 Expected Scenarios Under Test:

1. Client connects to Device to add compatible ptz configuration to a Media Profile.
2. Client is considered as supporting PTZ Media2 Profile Configuration if the following conditions are met:
   - Client supports **PtzGetCompatibleConfigurations** feature AND
   - Client is able to add compatible ptz configuration using **GetCompatibleConfigurations** operation and **AddConfiguration** operation with Type element value is equal to **PTZ**.
3. Client is considered as NOT supporting PTZ Media2 Profile Configuration if ANY of the following is TRUE:
   - Client does not support **PtzGetCompatibleConfigurations** feature OR
   - Client is unable to add an ptz configuration compatible with profile using **GetCompatibleConfigurations** operation and **AddConfiguration** operation OR
   - No valid responses for **GetCompatibleConfigurations** request OR
   - No valid responses for **AddConfiguration** request with Type element value is equal to **PTZ**.

17.3 ADD PTZ CONFIGURATION USING MEDIA2

Test Label: Add PTZ Configuration to Media2 Profile

Test Case ID: PTZUSINGMEDIA2PROFILECONFIGURATION-1

Profile T Normative Reference: Conditional

Feature Under Test: AddConfiguration (Media2 Service)

Test Purpose: To verify that Client is able to add an ptz configuration to a media profile using the **AddConfiguration** operation.

Pre-Requisite:

- The Network Trace Capture files contains at least one Conversation between Client and Device with **AddConfiguration** operation with Type value is equal to **PTZ** present.
- Device supports Media2 Service (Media2Service).
- Device supports PTZ service (PTZService).

Test Procedure (expected to be reflected in network trace file):

1. Client invokes **GetCompatibleConfigurations** request message with specified **ProfileToken** to retrieve compatible ptz configurations for specified media profile from the Device.
2. Device responds with code HTTP 200 OK and **GetCompatibleConfigurationsResponse** message.
3. Client invokes **AddConfiguration** request message with Type element value is equal to PTZ and with Configuration token that was recieved in **GetCompatibleConfigurationsResponse** message for the same media profile to add an ptz configuration to specified media profile on the Device.
4. Device responds with code HTTP 200 OK and **AddConfigurationResponse** message.

Test Result:

PASS -

- Client **AddConfiguration** request messages are valid according to XML Schemas listed in Namespaces AND
- Client **AddConfiguration** request in Test Procedure fulfills the following requirements:
  - [S1] **soapenv:Body** element has child element **tr2:AddConfiguration** AND
  - [S2] It has **tr2:Configuration/tr2:Type** element with value is equal to **PTZ** AND
- Device response to the **AddConfiguration** request fulfills the following requirements:
  - [S3] It has HTTP 200 response code AND
  - [S4] **soapenv:Body** element has child element **tr2:AddConfigurationResponse**.
- There is Client **GetCompatibleConfigurations** request in Test Procedure that fulfills the following requirements:
  - [S5] It is invoked before the Client **AddConfiguration** request AND

- [S6] It has **tptz:ProfileToken** element with value is equal to **tr2:ProfileToken** element value from the **AddConfiguration** request AND
- [S7] It is the last **GetCompatibleConfigurations** request which corresponds to [S5], AND [S6] AND

- Device response to the **GetCompatibleConfigurations** request fulfills the following requirements:
  - [S8] It has HTTP 200 response code AND
  - [S9] **soapenv:Body** element has child element **tptz:GetCompatibleConfigurationsResponse** AND
  - [S10] It contains **tptz:PTZConfiguration** element with **@token** attribute value is equal to **tr2:Configuration/tr2:Token** value for Configuration with **tr2:Configuration/tr2:Type** value is equal to PTZ from the **AddConfiguration** request message.

FAIL -

- The Client failed PASS criteria.

Validated Feature List: PTZUsingMedia2ProfileConfiguration.AddPTZConfiguration

18 PTZ Set Configuration Test Cases

18.1 Feature Level Requirement:

Validated Feature: PtzSetConfiguration

Profile T Requirement: Conditional

18.2 Expected Scenarios Under Test:

1. Client connects to Device to modify a PTZ configuration using the **SetConfiguration** operation.
2. Client is considered as supporting PTZ Set Configuration if the following conditions are met:
   - Client is able to modify a PTZ configuration using the **SetConfiguration** operation.
3. Client is considered as NOT supporting PTZ Set Configuration if ANY of the following is TRUE:
   - No Valid Device Response to **SetConfiguration** request.

18.3 PTZ SET CONFIGURATION

Test Label: PTZ Set Configuration

Test Case ID: PTZSETCONFIGURATION-1

Profile T Normative Reference: Conditional

Feature Under Test: PTZ Set Configuration

Test Purpose: To verify that Client is able to to modify a PTZ configuration using the **SetConfiguration** operation.

Pre-Requisite:

- The Network Trace Capture files contains at least one conversation between Client and Device with SetConfiguration operation present.
- Device supports PTZ Service (PTZService).

Test Procedure (expected to be reflected in network trace file):

1. Client invokes SetConfiguration request message to modify a PTZ configuration on the Device.
2. Device responds with code HTTP 200 OK and SetConfigurationResponse message.

Test Result:

PASS -

- Client **SetConfiguration** request messages are valid according to XML Schemas listed in Namespaces AND
- Client **SetConfiguration** request in Test Procedure fulfills the following requirements:
  - [S1] **soapenv:Body** element has child element **tptz:SetConfiguration** AND
- Device response on the **SetConfiguration** request fulfills the following requirements:
  - [S2] It has HTTP 200 response code AND
  - [S3] **soapenv:Body** element has child element **tptz:SetConfigurationResponse**.

FAIL -

- The Client failed PASS criteria.

Validated Feature List: PtzSetConfiguration.SetConfiguration

Annex A Test for Appendix A

A.1 Get default PTZ space of PTZ Configuration corresponding to Move Operation

Name: HelperGetDefaultPtzSpaceOfPtzConfigurationCorrespondingToMove

Procedure Purpose: Get default PTZ space of PTZ Configuration corresponding to PTZ Move Operation.

Pre-requisite:

- The Network Trace Capture files contains at least one Conversation between Client and Device with **GetProfiles** (Media2 Service) or **AddConfiguration** (Media2 Service) operations present.

Input: PTZ Move Opertaion request (AbsoluteMove or ContinuousMove) (*moveOpertaion*), Default space element name to get (*defaultSpace*)

Returns: Default PTZ space value (*spaceValue*).

Annex Procedure:

- The Client Test Tool checks that there is Client **AddConfiguration** request or Device **GetProfilesResponse** in Test Procedure that fulfills the following requirements:
  - [S1] It is invoked before *moveOpertaion* request AND
  - If it is **AddConfiguration** request:
    - [S2] **tr2:AddConfiguration/tr2:ProfileToken** value is equal to **ProfileToken** value from *moveOpertaion* request AND
    - [S3] **tr2:AddConfiguration** has **tr2:Configuration** element with **tr2:Type** value is equal to **PTZ** AND

    If it is **GetProfilesResponse** message:
    - [S4] It contains **tr2:Profiles** element with **tr2:Profiles/@token** value is equal to **ProfileToken** value from *moveOpertaion* request (hereinafter *profile*) AND
    - [S5] *profile* has **tr2:Configurations/tr2:PTZ** element AND
  - [S6] It is the closest one preceding *moveOpertaion* request that fullfils ([S2] and [S3]) or ([S4] and [S5]) requirements AND

- The Client Test Tool checks if there is **SetConfiguration** command that fulfills the following requirements:
  - If **AddConfiguration** request was found during previous steps:
    - [S7] It invoked after **AddConfiguration** request AND
    - [S8] It is the closest one preceding the *moveOpertaion* request AND
    - [S9] **tptz:SetConfiguration/tptz:PTZConfiguration/@token** value is equal to **tr2:AddConfiguration/tr2:Configuration/tr2:Token** value of **tr2:Configuration** with **tr2:Type** value is equal to **PTZ** AND
  - If **GetProfiles** request was found during previous steps:
    - [S10] It invoked after **GetProfiles** request AND
    - [S11] It is the closest one preceding the *moveOpertaion* request AND
    - [S12] **tptz:SetConfiguration/tptz:PTZConfiguration/@token** value is equal to **tr2:PTZ/@token** value of *profile* AND
- IF **SetConfiguration** command was detected during previous steps then *defaultSpace* element value of **tptz:SetConfiguration/tptz:PTZConfiguration** will be returened as result of current procedure
- ELSE IF **GetProfiles** response was found during previous steps then *defaultSpace* value of **tr2:Configurations/tr2:PTZ** from *profile* will be returened as result of current procedure
- ELSE IF **AddConfiguration** request was found during previous steps and no **SetConfiguration** was found during previous steps, the Client Test Tool checks the following:
  - There is **GetCompatibleConfigurations** request in Test Procedure that fulfills the following requirements:
    - [S13] It is the closest one preceding the **AddConfiguration** request AND
    - [S14] **tptz:GetCompatibleConfigurations/tptz:ProfileToken** value is equal to **ProfileToken** value from *moveOpertaion* request AND
  - Device response on the **GetCompatibleConfigurations** request fulfills the following requirements:
    - [S15] It has HTTP 200 response code AND
    - [S16] **soapenv:Body** element has child element **tptz:GetCompatibleConfigurationsResponse** AND

- [S17] It contains **tptz:PTZConfiguration/@token** value is equal to **tr2:AddConfiguration/tr2:Configuration/tr2:Token** value of **tr2:Configuration** with **tr2:Type** value is equal to **PTZ** AND

- [S18] *defaultSpace* value from **tptz:GetCompatibleConfigurationsResponse/ tptz:PTZConfiguration** element with @token is equal to **tr2:AddConfiguration/ tr2:Configuration/tr2:Token** value of **tr2:Configuration** with **tr2:Type** value is equal to **PTZ** will be returened as result of current procedure.