



**millimetre Wave Transmission (mWT);  
Conformance Test Specification for Wireless Transport Profile  
for Standard SDN Northbound Interfaces;  
Part 2: Test Suite Structure (TSS) and Test Purposes (TP)**

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Reference

DGS/mWT-0029-2

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Keywords

mWT, NBI, SDN, testing

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# Foreword

This Group Specification (GS) has been produced by ETSI Industry Specification Group (ISG) millimetre Wave Transmission (mWT).

The present document is part 2 of a multi-part deliverable covering Conformance Test Specification for Wireless Transport Profile for Standard SDN Northbound Interfaces, as identified below:

Part 1: "Implementation Conformance Statement (ICS)";

**Part 2: "Test Suite Structure (TSS) and Test Purposes (TP)";**

Part 3: "Abstract Test Suite (ATS) and partial Implementation eXtra Information for Testing (PIXIT)".

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# Modal verbs terminology

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# 1 Scope

The present document provides the Test Suite Structure (TSS) and Test Purposes (TP) of a multi-part conformance test specification for the mWT Standard SDN northbound APIs for the exchange of messages, complying with the ETSI GS mWT 024 [1] specifications, in accordance with the relevant guidance given in ISO/IEC 9646-7 [i.4].

The ISO standards for the methodology of conformance testing (ISO/IEC 9646-1 [i.1] and ISO/IEC 9646-2 [i.2]) as well as the ETSI rules for conformance testing (ETSI ETS 300 406 [i.5]) are used as a basis for the test methodology.

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## 2 References

### 2.1 Normative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the referenced document (including any amendments) applies.

Referenced documents which are not found to be publicly available in the expected location might be found in the [ETSI docbox](#).

NOTE: While any hyperlinks included in this clause were valid at the time of publication, ETSI cannot guarantee their long term validity.

The following referenced documents are necessary for the application of the present document.

- [1] [ETSI GS mWT 024](#): "millimetre Wave Transmission (mWT); Definition of a Wireless Transport Profile for Standard SDN Northbound Interfaces".
- [2] [IETF RFC 8453](#): "Framework for Abstraction and Control of TE Networks (ACTN)".
- [3] [ETSI GS mWT 029-1](#): "millimetre Wave Transmission (mWT); Conformance Test Specification for Wireless Transport Profile for Standard SDN Northbound Interfaces; Part 1: Implementation Conformance Statement (ICS)".

### 2.2 Informative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the referenced document (including any amendments) applies.

NOTE: While any hyperlinks included in this clause were valid at the time of publication, ETSI cannot guarantee their long term validity.

The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

- [i.1] ISO/IEC 9646-1 (1994): "Information technology — Open Systems Interconnection — Conformance testing methodology and framework — Part 1: General concepts".
- [i.2] ISO/IEC 9646-2 (1994): "Information technology — Open Systems Interconnection — Conformance testing methodology and framework — Part 2: Abstract Test Suite specification".
- [i.3] ISO/IEC 9646-6 (1994): "Information technology — Open Systems Interconnection — Conformance testing methodology and framework — Part 6: Protocol profile test specification".

- [i.4] ISO/IEC 9646-7 (1995): "Information technology — Open Systems Interconnection — Conformance testing methodology and framework — Part 7: Implementation Conformance Statements".
- [i.5] ETSI ETS 300 406 (1995): "Methods for testing and Specification (MTS); Protocol and profile conformance testing specifications; Standardization methodology".
- [i.6] IETF RFC 8040: "RESTCONF Protocol".
- [i.7] IETF RFC 8525: "YANG Library".
- [i.8] IETF RFC 8345: "A YANG Data Model for Network Topologies".
- [i.9] IETF RFC 8795: "YANG Data Model for Traffic Engineering (TE) Topologies".
- [i.10] draft-ietf-ccamp-mw-topo-yang-02: "A YANG Data Model for Microwave Topology".
- [i.11] IETF RFC 6991: "Common YANG Data Types".
- [i.12] IETF RFC 8776: "Common YANG Data Types for Traffic Engineering".
- [i.13] draft-ietf-ccamp-client-signal-yang-05: "A YANG Data Model for Transport Network Client Signals".

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## 3 Definition of terms, symbols and abbreviations

### 3.1 Terms

For the purposes of the present document, the terms given in ETSI GS mWT 024 [1], ISO/IEC 9646-6 [i.3] and ISO/IEC 9646-7 [i.4] apply.

### 3.2 Symbols

Void.

### 3.3 Abbreviations

For the purposes of the present document, the following abbreviations apply:

API	Application Programming Interface
ATS	Abstract Test Suite
BO	Invalid Behavior
BV	Valid Behaviour
CBS	Committed Burst Size
CIR	Committed Information Rate
EBS	Excess Burst Size
EIR	Excess Information Rate
ETS	European Telecommunication Standard
ICS	Implementation eXtra Information for Testing
MDSC	Multi Domain Service Coordinator
MPI	MDSC-PNC Interface
MSDC	Massively Scalable Data Centers
MW	Microwave
mWT	millimetre Wave Transmission
N/A	Not Applicable
PICS	Partial Implementation Conformance Statement
PIXIT	Partial Implementation eXtra Information for Testing
PNC	Provisioning Network Controller
SDN	Software Defined Networking

TE Traffic Engineering URIUniform Resource Identifier  
 YANG Yet Another Next Generation

## 4 Test Suite Structure (TSS)

### 4.1 Structure for ETSI mWT Standard SDN northbound API tests

Table 1 shows the ETSI mWT Standard SDN northbound API Test Suite Structure (TSS) defined for conformance testing.

**Table 1: TSS for mWT Standard SDN northbound API**

Root	Group	Sub-group	Category
mWT	MDSC	MW_TOPO	Valid and Invalid
		ETH_TOPO	Valid
	PNC	MW_TOPO	Valid and Invalid
		ETH_TOPO	Valid

## 5 Test Purposes (TP)

### 5.1 Introduction

#### 5.1.1 TP definition conventions

The TP definition is built according to ISO/IEC 9646-6 [i.3].

#### 5.1.2 TP Identifier naming conventions

The identifier of the TP is built according to table 2.

**Table 2: TP naming convention**

Identifier	TP <root> <tgt> <gr> <sub-gr> <sn> <x>	Sub-Group	Category
TP	<root> = root	mWT	mWT Conformance tests
	<tgt> = target	MDSC	Multi-Domain Service Coordinator
		PNC	Provisioning Network Controller
	<gr> = group	RESTCONF	RESTCONF support
		ABSTRACT_BB	Abstract Blackbox
		PARTIALLY_TRANS	Partially Transparent
	<gr> = sub-group	MW_TOPO	Microwave topology
		ETH_TOPO	Ethernet Topology
		ETH_SERVICE	Ethernet Service
	<sn> = test purpose sequential number		01 to 99
	<x> = category	BV	Valid Behaviour tests
		BO	Invalid Behaviour Tests

#### 5.1.3 Rules for the behaviour description

The description of the TP is built according to ISO/IEC 9646-6 [i.3].

Being "idle" refers to the starting point of the initial device configuration. There are no pending actions, no instantiated buffers or variables, which could disturb the execution of a test.

## 5.1.4 Sources of TP definitions

All TPs have been specified according to ETSI GS mWT 024 [1] and IETF RFC 8453 [2].

## 5.1.5 Mnemonics for PICS reference

To avoid an update of all TPs when the PICS document is changed, table 3 introduces mnemonics name and the correspondence with the real PICS item number. The 'PICS item' as defined in ETSI GS mWT 024 [1] and IETF RFC 8453 [2] shall be used to determine the test applicability.

**Table 3: Mnemonics for PICS reference**

	<b>Mnemonic</b>	<b>PICS item</b>
1	IUT_SDN	[3] A.1/1
2	IUT_APP	[3] A.1/2
3	ABSTRACT_BB	[3] A.2/1
4	PARTIALLY_TRANS	[3] A.2/2
5	MW_TOPO	[3] A.3/1
6	ETH_TOPO	[3] A.3/2
7	SERVICE_TOPO	[3] A.3/3

## 5.2 Test Purposes for MSDC

N/A.

## 5.3 Test Purposes for PNC

### 5.3.1 RESTCONF support

<b>TP Id</b>	TP_mWT_PNC_RESTCONF_GET_BV_01
<b>Test Objective</b>	Verify that the IUT supports RESTCONF API request.
<b>Reference</b>	ETSI GS mWT 024 [1], clause 5.2.1 "RESTCONF Protocol" IETF RFC 8040 [i.6] "RESTCONF Protocol" IETF RFC 8525 [i.7] "YANG Library"
<b>Configuration</b>	Config_mWT_2
<b>PICS Selection</b>	IUT_PNC and RESTCONF and SEC_TLS
<b>Initial Conditions</b>	
with { the IUT is idle }	
<b>Expected Behaviour</b>	
<pre> ensure that {   when {     the IUT receives a vRequestGet containing       uri indicating value "/restconf/data/ietf-yang-library:modules-state"     from the TEST_SYSTEM entity   } then {     the IUT sends a r200 containing       headers containing         content_type indicating value "application/yang-data+xml",       body containing         modules_state containing           name_ indicating value "ietf-yang-library:modules-state",           modules containing             non empty list         to the TEST_SYSTEM entity   } }</pre>	



<b>TP Id</b>	TP_mWT_PNC_RESTCONF_GET_BV_02
<b>Test Objective</b>	Verify that the IUT supports the basic YANG data models.
<b>Reference</b>	ETSI GS mWT 024 [1], clause 5.2.1 "RESTCONF Protocol" ETSI GS mWT 024 [1], clause 5.2.2 "YANG Version" IETF RFC 8040 [i.6] "RESTCONF Protocol" IETF RFC 8525 [i.7] "YANG Library"
<b>Configuration</b>	Config_mWT_2
<b>PICS Selection</b>	IUT_PNC and RESTCONF and SEC_TLS
<b>Initial Conditions</b>	
with { the IUT is idle }	
<b>Expected Behaviour</b>	
<pre> ensure that {   when {     the IUT receives a vRequestGet containing       uri indicating value "/restconf/data/ietf-yang-library:modules-state"     from the TEST_SYSTEM entity   } then {     the IUT sends a r200 containing       headers containing         content_type indicating value "application/yang-data+xml",       body containing         modules_state containing           name_ indicating value "ietf-yang-library:modules-state",           modules containing             entry containing               name_ indicating value "ietf-datastores",               revision indicating value "2018-02-14",               schema indicating value                 "https://localhost:443/restconf/data/modules/ietf-datastores/2018-02-14",               namespace indicating value "urn:ietf:params:xml:ns:yang:ietf- datastores",               conformance_type indicating value "import",             entry containing               name_ indicating value "ietf-inet-types",               revision indicating value "2013-07-15",               schema indicating value                 "https://localhost:443/restconf/data/modules/ietf-inet-types/2013-07-15",               namespace indicating value "urn:ietf:params:xml:ns:yang:ietf-inet- types",               conformance_type indicating value "import",             entry containing               name_ indicating value "ietf-interfaces",               revision indicating value "2018-02-20",               schema indicating value                 "https://localhost:443/restconf/data/modules/ietf-interfaces/2018-02-20",               namespace indicating value "urn:ietf:params:xml:ns:yang:ietf- interfaces",               conformance_type indicating value "import",             entry containing               name_ indicating value "ietf-ip",               revision indicating value "2018-02-22",               schema indicating value                 "https://localhost:443/restconf/data/modules/ietf-ip/2018-02-22",               namespace indicating value "urn:ietf:params:xml:ns:yang:ietf-ip",               conformance_type indicating value "import",             entry containing               name_ indicating value "ietf-network-instance",               revision indicating value "2019-01-21",               schema indicating value                 "https://localhost:443/restconf/data/modules/ietf-network-instance/2019-01-21",               namespace indicating value "urn:ietf:params:xml:ns:yang:ietf-network- instance",               conformance_type indicating value "import",             entry containing               name_ indicating value "ietf-restconf",               revision indicating value "2017-01-26",               schema indicating value                 "https://localhost:443/restconf/data/modules/ietf-restconf/2017-01-26",               namespace indicating value "urn:ietf:params:xml:ns:yang:ietf- restconf",               conformance_type indicating value "implement",             entry containing               name_ indicating value "ietf-yang-types",               revision indicating value "2013-07-15", </pre>	

```

        schema indicating value
"https://localhost:443/restconf/data/modules/ietf-restconf/2017-01-26",
        namespace indicating value "urn:ietf:params:xml:ns:yang:ietf-
restconf",
        conformance_type indicating value "import",
        entry containing
        name_ indicating value "ietf-yang-library",
        revision indicating value "2019-01-04",
        schema indicating value
"https://localhost:443/restconf/data/modules/ietf-yang-types/2013-07-15",
        namespace indicating value "urn:ietf:params:xml:ns:yang:ietf-yang-
types",
        conformance_type indicating value "implement"
to the TEST_SYSTEM entity
    }
}

```

<b>TP Id</b>	TP_mWT_PNC_RESTCONF_GET_BV_03
<b>Test Objective</b>	Verify that the IUT provides the list of supported ETSI GS mWT 024 [1] YANG data models.
<b>Reference</b>	ETSI GS mWT 024 [1], clause 5.2.2.2 "Common YANG data models" ETSI GS mWT 024 [1], clause 5.2.2.3 "YANG Data Models at the Microwave MPI" ETSI GS mWT 024 [1], clause 5.2.2.4 "Hierarchical relationship among YANG data models"
<b>Configuration</b>	Config_mWT_2
<b>PICS Selection</b>	IUT_PNC and RESTCONF and SEC_TLS
<b>Initial Conditions</b>	
with { the IUT is idle }	
<b>Expected Behaviour</b>	
<pre> ensure that {   when {     the IUT receives a vRequestGet containing       uri indicating value "/restconf/data/ietf-yang-library:modules-state"     from the TEST_SYSTEM entity   } then {     the IUT sends a r200 containing       body containing         modules_state containing           modules containing             entry containing               name_ indicating value "ietf-microwave-topology",               revision indicating value "2021-10-12",               schema indicating value "draft-ietf-ccamp-mw-topo-yang-02",               namespace indicating value "",               conformance_type indicating value "implement",             entry containing               name_ indicating value "ietf-eth-te-topology",               revision indicating value "2019-11-18",               schema indicating value "draft-ietf-ccamp-eth-client-te-topo-yang-01",               namespace indicating value "",               conformance_type indicating value "implement",             entry containing               name_ indicating value "idraft-ietf-ccamp-client-signal-yang-06",               revision indicating value "",               schema indicating value "draft-ietf-ccamp-client-signal-yang-06",               namespace indicating value "",               conformance_type indicating value ""           to the TEST_SYSTEM entity         }       }     }   } </pre>	

### 5.3.2 Black-box abstraction level

<b>TP Id</b>	TP_mWT_PNC_BB_MW_TOPO_GET_BV_01
<b>Test Objective</b>	Verify that the IUT does not provide any MW network topology.
<b>Reference</b>	ETSI GS mWT 024 [1], clause 4.3.2 ETSI GS mWT 024 [1], clause A.2.3 IETF RFC 8345 [i.8] "A YANG Data Model for Network Topologies" IETF RFC 8795 [i.9] "YANG Data Model for Traffic Engineering (TE) Topologies"
<b>Configuration</b>	Config_mWT_2
<b>PICS Selection</b>	IUT_PNC and RESTCONF and SEC_TLS and ABSTRACT_BB
<b>Initial Conditions</b>	
with { the IUT is idle }	
<b>Expected Behaviour</b>	
<pre> ensure that {   when {     the IUT receives a vRequestGet containing       uri indicating value "/restconf/data/ietf-network:networks"     from the TEST_SYSTEM entity   } then {     the IUT sends a r200 containing       headers containing         content_type indicating value "application/yang-data+xml",       body containing         networks containing           networksList containing             name_ indicating value any_value,             networks containing               network_id indicating value any_value,               network_types containing                 not te_topology              ,             node_id indicating value any_value,             termination_points indicating value any_value,             links indicating value any_value            to the TEST_SYSTEM entity         }       }     } </pre>	

<b>TP Id</b>	TP_mWT_PNC_BB_MW_TOPO_GET_BV_01
<b>Test Objective</b>	Verify that the IUT provides a network list containing only one node.
<b>Reference</b>	ETSI GS mWT 024 [1], clause 4.3.2 ETSI GS mWT 024 [1], clause A.2.3 IETF RFC 8345 [i.8] "A YANG Data Model for Network Topologies" IETF RFC 8795 [i.9] "YANG Data Model for Traffic Engineering (TE) Topologies"
<b>Configuration</b>	Config_mWT_2
<b>PICS Selection</b>	IUT_PNC and RESTCONF and SEC_TLS and ABSTRACT_BB
<b>Initial Conditions</b>	
with { the IUT is idle }	
<b>Expected Behaviour</b>	
<pre> ensure that {   when {     the IUT receives a vRequestGet containing       uri indicating value "/restconf/data/ietf-network:networks"     from the TEST_SYSTEM entity   } then {     the IUT sends a r200 containing       headers containing         content_type indicating value "application/yang-data+xml",       body containing         networks containing           networksList containing             one network node            to the TEST_SYSTEM entity         }       }     } </pre>	

### 5.3.3 Partially Transparent abstraction level

#### 5.3.3.1 Microwave topology inventory

<b>TP Id</b>	TP_mWT_PNC_PT_MW_TOPO_GET_BV_01
<b>Test Objective</b>	Verify that the IUT provides the MW network topology for all networks with mandatory ETSI GS mWT 024 [1] data elements subset.
<b>Reference</b>	ETSI GS mWT 024 [1], clause 4.3.3 ETSI GS mWT 024 [1], clause A.2.2 IETF RFC 8345 [i.8] "A YANG Data Model for Network Topologies" IETF RFC 8795 [i.9] "YANG Data Model for Traffic Engineering (TE) Topologies" draft-ietf-ccamp-mw-topo-yang-02 [i.10] "A YANG Data Model for Microwave Topology"
<b>Configuration</b>	Config_mWT_2
<b>PICS Selection</b>	IUT_PNC and RESTCONF and SEC_TLS and ABSTRACT_PT and MW_TOPO
<b>Initial Conditions</b>	
with { the IUT is idle and the IUT having discovered several MW ethernet networks topologies }	
<b>Expected Behaviour</b>	
ensure that { when { the IUT receives a vRequestGet containing uri indicating value "/restconf/data/ietf-network:networks/topologyId/mw-native-topology", headers containing content_type indicating value "application/yang-data+xml" from the TEST_SYSTEM entity } then { the IUT sends a r200 containing headers containing content_type indicating value "application/yang-data+xml", body containing networks containing networksList containing name_ indicating value any_value, networks containing network_id indicating value any_value, network_types containing te_topology containing mw_topology containing mw_tp_choice indicating value any_value , node_id indicating value any_value, termination_points indicating value any_value, links indicating value any_value to the TEST_SYSTEM entity } }	

<b>TP Id</b>	TP_mWT_PNC_PT_MW_TOPO_GET_BV_02
<b>Test Objective</b>	Verify that the IUT provides the MW network topology for a specific network with mandatory ETSI GS mWT 024 [1] data elements subset.
<b>Reference</b>	ETSI GS mWT 024 [1], clause 4.3.3 ETSI GS mWT 024 [1], clause A.2.2.1 IETF RFC 8345 [i.8] "A YANG Data Model for Network Topologies" IETF RFC 8795 [i.9] "YANG Data Model for Traffic Engineering (TE) Topologies"
<b>Configuration</b>	Config_mWT_2
<b>PICS Selection</b>	IUT_PNC and RESTCONF and SEC_TLS and ABSTRACT_PT and MW_TOPO
<b>Initial Conditions</b>	
with { the IUT is idle and the IUT having discovered a network topology NETWORK_TOPO }	

<b>Expected Behaviour</b>
<pre> ensure that {   when {     the IUT receives a vRequestGet containing       uri indicating value "/restconf/data/ietf-microwave-topology/ietf- network:networks/network={NETWORK_ID/topologyId/mw-native-topology",       headers containing         content_type indicating value "application/yang-data+xml"     from the TEST_SYSTEM entity   } then {     the IUT sends a r200 containing       headers containing         content_type indicating value "application/yang-data+xml",       body containing         networks containing           network_id indicating value NETWORK_ID,           network_types containing             te_topology containing               mw_topology containing                 mw_tp_choice indicating value any_value           ,           node_id indicating value any_value,           termination_points indicating value any_value,           links indicating value any_value      to the TEST_SYSTEM entity   } } </pre>

<b>TP Id</b>	TP_mWT_PNC_PT_MW_TOPO_GET_BO_01
<b>Test Objective</b>	Verify that the IUT replies with an error code when the request is malformed.
<b>Reference</b>	ETSI GS mWT 024 [1], clause 4.3.3 ETSI GS mWT 024 [1], clause 5.3.2 "Exception Handling" ETSI GS mWT 024 [1], clause A.2.2 IETF RFC 8345 [i.8] "A YANG Data Model for Network Topologies" IETF RFC 8795 [i.9] "YANG Data Model for Traffic Engineering (TE) Topologies"
<b>Configuration</b>	Config_mWT_2
<b>PICS Selection</b>	IUT_PNC and RESTCONF and SEC_TLS and ABSTRACT_PT and MW_TOPO
<b>Initial Conditions</b>	
<pre> with {   the IUT is idle and   the IUT having discovered a network topology NETWORK_TOPO } </pre>	
<b>Expected Behaviour</b>	
<pre> ensure that {   when {     the IUT receives a vRequestGet containing       uri indicating value "/restconf/data/networks" // Malformed URI     from the TEST_SYSTEM entity   } then {     the IUT sends a r400     to the TEST_SYSTEM entity   } } </pre>	

<b>TP Id</b>	TP_mWT_PNC_PT_MW_TOPO_GET_BO_02
<b>Test Objective</b>	Verify that the IUT replies with an error code when the network identifier is unknown.
<b>Reference</b>	ETSI GS mWT 024 [1], clause 4.3.3 ETSI GS mWT 024 [1], clause 5.3.2 "Exception Handling" ETSI GS mWT 024 [1], clause A.2.2 IETF RFC 8345 [i.8] "A YANG Data Model for Network Topologies" IETF RFC 8795 [i.9] "YANG Data Model for Traffic Engineering (TE) Topologies"
<b>Configuration</b>	Config_mWT_2
<b>PICS Selection</b>	IUT_PNC and RESTCONF and SEC_TLS and ABSTRACT_PT and MW_TOPO

<b>Initial Conditions</b>	
<pre>with { the IUT is idle and the IUT having discovered a network topology NETWORK_TOPO }</pre>	
<b>Expected Behaviour</b>	
<pre>ensure that {   when {     the IUT receives a vRequestGet containing       uri indicating value "/restconf/data/ietf- network:networks/network={UNKNOWN_NETWORK_ID/topologyId/mw-native-topology"     from the TEST_SYSTEM entity   } then {     the IUT sends a r404     to the TEST_SYSTEM entity   } }</pre>	

<b>TP Id</b>	TP_mWT_PNC_PT_MW_NODE_GET_BV_01
<b>Test Objective</b>	Verify that the IUT provides the MW network topology for all nodes with mandatory ETSI GS mWT 024 [1] data elements subset.
<b>Reference</b>	ETSI GS mWT 024 [1], clause 4.3.3 ETSI GS mWT 024 [1], clause A.2.2.1 IETF RFC 8345 [i.8] "A YANG Data Model for Network Topologies" IETF RFC 8795 [i.9] "YANG Data Model for Traffic Engineering (TE) Topologies" draft-ietf-ccamp-mw-topo-yang-02 [i.10] "A YANG Data Model for Microwave Topology"
<b>Configuration</b>	Config_mWT_2
<b>PICS Selection</b>	IUT_PNC and RESTCONF and SEC_TLS and ABSTRACT_PT and MW_TOPO
<b>Initial Conditions</b>	
<pre>with { the IUT is idle and the IUT having discovered several MW ethernet networks topologies }</pre>	
<b>Expected Behaviour</b>	
<pre>ensure that {   when {     the IUT receives a vRequestGet containing       uri indicating value "/restconf/data/ietf-microwave-topology/ietf- network:networks/network={NETWORK_ID/node/topologyId/mw-native-topology"     from the TEST_SYSTEM entity   } then {     the IUT sends a r200 containing     headers containing       content_type indicating value "application/yang-data+xml",     body containing       networks containing         networksList containing           name_ indicating value any_value,           networks containing             network_id indicating value any_value,             network_types containing               te_topology containing                 mw_native_topology indicating value any_value              node_id indicating value any_value,             termination_points indicating value any_value,             links indicating value any_value            to the TEST_SYSTEM entity         }       } }</pre>	

<b>TP Id</b>	TP_mWT_PNC_PT_MW_NODE_GET_BV_02
<b>Test Objective</b>	Verify that the IUT provides the MW network topology for a specific node with mandatory ETSI GS mWT 024 [1] data elements subset.
<b>Reference</b>	ETSI GS mWT 024 [1], clause 4.3.3 ETSI GS mWT 024 [1], clause A.2.2.1 IETF RFC 8345 [i.8] "A YANG Data Model for Network Topologies" IETF RFC 8795 [i.9] "YANG Data Model for Traffic Engineering (TE) Topologies" draft-ietf-ccamp-mw-topo-yang-02 [i.10] "A YANG Data Model for Microwave Topology"
<b>Configuration</b>	Config_mWT_2
<b>PICS Selection</b>	IUT_PNC and RESTCONF and SEC_TLS and ABSTRACT_PT and MW_TOPO
<b>Initial Conditions</b>	
with { the IUT is idle and the IUT having discovered several MW ethernet networks topologies }	
<b>Expected Behaviour</b>	
ensure that { when { the IUT receives a vRequestGet containing uri indicating value "/restconf/data/ietf-microwave-topology/ietf-network:networks/network={NETWORK_ID/node={NODE_ID}/topologyId/mw-native-topology" from the TEST_SYSTEM entity } then { the IUT sends a r200 containing headers containing content_type indicating value "application/yang-data+xml", body containing networks containing networksList containing name_ indicating value any_value, networks containing network_id indicating value NETWORK_ID, network_types containing te_topology containing mw_native_topology indicating value any_value , node_id indicating value NODE_ID, termination_points indicating value any_value, links indicating value any_value to the TEST_SYSTEM entity } } }	

<b>TP Id</b>	TP_mWT_PNC_PT_MW_NODE_GET_BO_01
<b>Test Objective</b>	Verify that the IUT replies with an error code when the node identifier is unknown.
<b>Reference</b>	ETSI GS mWT 024 [1] clause 4.3.3 ETSI GS mWT 024 [1] clause 5.3.2 "Exception Handling" ETSI GS mWT 024 [1] clause A.2.2 IETF RFC 8345 [i.8] "A YANG Data Model for Network Topologies" IETF RFC 8795 [i.9] "YANG Data Model for Traffic Engineering (TE) Topologies" draft-ietf-ccamp-mw-topo-yang-02 [i.10] "A YANG Data Model for Microwave Topology"
<b>Configuration</b>	Config_mWT_2
<b>PICS Selection</b>	IUT_PNC and RESTCONF and SEC_TLS and ABSTRACT_PT and MW_TOPO
<b>Initial Conditions</b>	
with { the IUT is idle and the IUT having discovered several MW ethernet networks topologies }	
<b>Expected Behaviour</b>	
ensure that { when { the IUT receives a vRequestGet containing uri indicating value "/restconf/data/ietf-microwave-topology/ietf-network:networks/network={NETWORK_ID/node={UNKNOWN_NODE_ID}/topologyId/mw-native-topology" from the TEST_SYSTEM entity } then { the IUT sends a r404 to the TEST_SYSTEM entity } } }	

## 5.3.3.2 Ethernet topology inventory

<b>TP Id</b>	TP_mWT_PNC_PT_ETH_TOPO_GET_BV_01
<b>Test Objective</b>	Verify that the IUT provides the Ethernet network topology for all networks with mandatory ETSI GS mWT 024 [1] data elements subset.
<b>Reference</b>	ETSI GS mWT 024 [1], clause 4.3.3 ETSI GS mWT 024 [1], clause A.2.2 IETF RFC 8345 [i.8] "A YANG Data Model for Network Topologies" IETF RFC 8795 [i.9] "YANG Data Model for Traffic Engineering (TE) Topologies" draft-ietf-ccamp-mw-topo-yang-02 [i.10] "A YANG Data Model for Microwave Topology"
<b>Configuration</b>	Config_mWT_2
<b>PICS Selection</b>	IUT_PNC and RESTCONF and SEC_TLS and ABSTRACT_PT and ETH_TOPO
<b>Initial Conditions</b>	
with { the IUT is idle and the IUT having discovered several MW ethernet networks topologies }	
<b>Expected Behaviour</b>	
<pre> ensure that {   when {     the IUT receives a vRequestGet containing       uri indicating value "/restconf/data/ietf-network:networks",       headers containing         content_type indicating value "application/yang-data+xml"     from the TEST_SYSTEM entity   } then {     the IUT sends a r200 containing       headers containing         content_type indicating value "application/yang-data+xml",       body containing         networks containing           networksList containing             name_ indicating value any_value,             networks containing               network_id indicating value any_value,               network_types containing                 te_topology containing                   mw_topology containing                     mw_tp_choice indicating value any_value               ,               node_id indicating value any_value,               termination_points indicating value any_value,               links indicating value any_value           to the TEST_SYSTEM entity         }   } </pre>	

<b>TP Id</b>	TP_mWT_PNC_PT_ETH_TOPO_GET_BV_02
<b>Test Objective</b>	Verify that the IUT provides the Ethernet network topology for a specific network with mandatory ETSI GS mWT 024 [1] data elements subset.
<b>Reference</b>	ETSI GS mWT 024 [1], clause 4.3.3 ETSI GS mWT 024 [1], clause A.1.2 IETF RFC 8345 [i.8] "A YANG Data Model for Network Topologies" IETF RFC 8795 [i.9] "YANG Data Model for Traffic Engineering (TE) Topologies"
<b>Configuration</b>	Config_mWT_2
<b>PICS Selection</b>	IUT_PNC and RESTCONF and SEC_TLS and ABSTRACT_PT and ETH_TOPO
<b>Initial Conditions</b>	
with { the IUT is idle and the IUT having discovered a network topology NETWORK_TOPO }	



<b>Expected Behaviour</b>	
<pre> ensure that {   when {     the IUT receives a vRequestGet containing       uri indicating value "/restconf/data/ietf-network:networks/network={NETWORK_ID}",       headers containing         content_type indicating value "application/yang-data+xml"     from the TEST_SYSTEM entity   } then {     the IUT sends a r200 containing       headers containing         content_type indicating value "application/yang-data+xml",       body containing         networks containing           network_id indicating value NETWORK_ID,           network_types containing             te_topology indicating value any_value,           node_id indicating value any_value,           termination_points indicating value any_value,           links indicating value any_value      to the TEST_SYSTEM entity   } } </pre>	

<b>TP Id</b>	TP_mWT_PNC_PT_ETH_TOPO_GET_BO_01
<b>Test Objective</b>	Verify that the IUT replies with an error code when the request is malformed.
<b>Reference</b>	ETSI GS mWT 024 [1], clause 4.3.3 ETSI GS mWT 024 [1], clause 5.3.2 "Exception Handling" ETSI GS mWT 024 [1], clause A.1.2 IETF RFC 8345 [i.8] "A YANG Data Model for Network Topologies" IETF RFC 8795 [i.9] "YANG Data Model for Traffic Engineering (TE) Topologies"
<b>Configuration</b>	Config_mWT_2
<b>PICS Selection</b>	IUT_PNC and RESTCONF and SEC_TLS and ABSTRACT_PT and ETH_TOPO
<b>Initial Conditions</b>	
<pre> with {   the IUT is idle and   the IUT having discovered a network topology NETWORK_TOPO } </pre>	
<b>Expected Behaviour</b>	
<pre> ensure that {   when {     the IUT receives a vRequestGet containing       uri indicating value "/restconf/data/networks/NETWORK_ID" // Malformed URI     from the TEST_SYSTEM entity   } then {     the IUT sends a r400     to the TEST_SYSTEM entity   } } </pre>	

<b>TP Id</b>	TP_mWT_PNC_PT_ETH_TOPO_GET_BO_02
<b>Test Objective</b>	Verify that the IUT replies with an error code when the network identifier is unknown.
<b>Reference</b>	ETSI GS mWT 024 [1], clause 4.3.3 ETSI GS mWT 024 [1], clause 5.3.2 "Exception Handling" ETSI GS mWT 024 [1], clause A.1.2 IETF RFC 8345 [i.8] "A YANG Data Model for Network Topologies" IETF RFC 8795 [i.9] "YANG Data Model for Traffic Engineering (TE) Topologies"
<b>Configuration</b>	Config_mWT_2
<b>PICS Selection</b>	IUT_PNC and RESTCONF and SEC_TLS and ABSTRACT_PT and ETH_TOPO
<b>Initial Conditions</b>	
<pre> with {   the IUT is idle and   the IUT having discovered a network topology NETWORK_TOPO } </pre>	

<b>Expected Behaviour</b>	
<pre> ensure that {   when {     the IUT receives a vRequestGet containing       uri indicating value "/restconf/data/ietf- network:networks/network={UNKNOWN_NETWORK_ID"     from the TEST_SYSTEM entity   } then {     the IUT sends a r404     to the TEST_SYSTEM entity   } } </pre>	

<b>TP Id</b>	TP_mWT_PNC_PT_ETH_NODE_GET_BV_01
<b>Test Objective</b>	Verify that the IUT provides the Ethernet network topology for all nodes with mandatory ETSI GS mWT 024 [1] data elements subset.
<b>Reference</b>	ETSI GS mWT 024 [1], clause 4.3.3 ETSI GS mWT 024 [1], clause A.2.2 IETF RFC 8345 [i.8] "A YANG Data Model for Network Topologies" IETF RFC 8795 [i.9] "YANG Data Model for Traffic Engineering (TE) Topologies" draft-ietf-ccamp-mw-topo-yang-02 [i.10] "A YANG Data Model for Microwave Topology"
<b>Configuration</b>	Config_mWT_2
<b>PICS Selection</b>	IUT_PNC and RESTCONF and SEC_TLS and ABSTRACT_PT and ETH_TOPO
<b>Initial Conditions</b>	
<pre> with { the IUT is idle and the IUT having discovered several MW ethernet networks topologies } </pre>	
<b>Expected Behaviour</b>	
<pre> ensure that {   when {     the IUT receives a vRequestGet containing       uri indicating value "/restconf/data/ietf-network:networks/network={NETWORK_ID/node"     from the TEST_SYSTEM entity   } then {     the IUT sends a r200 containing       headers containing         content_type indicating value "application/yang-data+xml",       body containing         networks containing           networksList containing             name_ indicating value any_value,             networks containing               network_id indicating value any_value,               network_types containing                 te_topology containing                   mw_topology containing                     mw_tp_choice indicating value any_value               ,               node_id indicating value any_value,               termination_points indicating value any_value,               links indicating value any_value           to the TEST_SYSTEM entity         }       } } </pre>	

<b>TP Id</b>	TP_mWT_PNC_PT_ETH_NODE_GET_BV_02
<b>Test Objective</b>	Verify that the IUT provides the Ethernet network topology for specific node with mandatory ETSI GS mWT 024 [1] data elements subset.
<b>Reference</b>	ETSI GS mWT 024 [1], clause 4.3.3 ETSI GS mWT 024 [1], clause A.2.2 IETF RFC 8345 [i.8] "A YANG Data Model for Network Topologies" IETF RFC 8795 [i.9] "YANG Data Model for Traffic Engineering (TE) Topologies" draft-ietf-ccamp-mw-topo-yang-02 [i.10] "A YANG Data Model for Microwave Topology"
<b>Configuration</b>	Config_mWT_2
<b>PICS Selection</b>	IUT_PNC and RESTCONF and SEC_TLS and ABSTRACT_PT and ETH_TOPO

<b>Initial Conditions</b>
<pre>with { the IUT is idle and the IUT having discovered several MW ethernet networks topologies }</pre>
<b>Expected Behaviour</b>
<pre>ensure that {   when {     the IUT receives a vRequestGet containing       uri indicating value "/restconf/data/ietf- network:networks/network={NETWORK_ID/node={NODE_ID}"     from the TEST_SYSTEM entity   } then {     the IUT sends a r200 containing       headers containing         content_type indicating value "application/yang-data+xml",       body containing         networks containing           networksList containing             name_ indicating value any_value,           networks containing             network_id indicating value any_value,             network_types containing               te_topology containing                 mw_topology containing                   mw_tp_choice indicating value any_value             ,             node_id indicating value any_value,             termination_points indicating value any_value,             links indicating value any_value      to the TEST_SYSTEM entity   } }</pre>

<b>TP Id</b>	TP_mWT_PNC_PT_ETH_NODE_GET_BO_01
<b>Test Objective</b>	Verify that the IUT replies with an error code when the node identifier is unknown.
<b>Reference</b>	ETSI GS mWT 024 [1], clause 4.3.3 ETSI GS mWT 024 [1], clause 5.3.2 "Exception Handling" ETSI GS mWT 024 [1], clause A.2.2 IETF RFC 8345 [i.8] "A YANG Data Model for Network Topologies" IETF RFC 8795 [i.9] "YANG Data Model for Traffic Engineering (TE) Topologies" draft-ietf-ccamp-mw-topo-yang-02 [i.10] "A YANG Data Model for Microwave Topology"
<b>Configuration</b>	Config_mWT_2
<b>PICS Selection</b>	IUT_PNC and RESTCONF and SEC_TLS and ABSTRACT_PT and ETH_TOPO
<b>Initial Conditions</b>	<pre>with { the IUT is idle and the IUT having discovered several MW ethernet networks topologies }</pre>
<b>Expected Behaviour</b>	<pre>ensure that {   when {     the IUT receives a vRequestGet containing       uri indicating value "/restconf/data/ietf- network:networks/network={NETWORK_ID/node={UNKNOWN_NODE_ID}"     from the TEST_SYSTEM entity   } then {     the IUT sends a r404     to the TEST_SYSTEM entity   } }</pre>

## 5.3.3.3 Ethernet services

<b>TP Id</b>	TP_mWT_PNC_PT_ETH_SVC_GET_BV_01
<b>Test Objective</b>	Verify that the IUT provides all the Bandwidth profiles with mandatory ETSI GS mWT 024 [1] data elements subset.
<b>Reference</b>	ETSI GS mWT 024 [1], clause 4.3.3 ETSI GS mWT 024 [1], clause A.2.2 IETF RFC 8345 [i.8] "A YANG Data Model for Network Topologies" IETF RFC 8795 [i.9] "YANG Data Model for Traffic Engineering (TE) Topologies" draft-ietf-ccamp-client-signal-yang-05 [i.13] "A YANG Data Model for Transport Network Client Signals"
<b>Configuration</b>	Config_mWT_2
<b>PICS Selection</b>	IUT_PNC and RESTCONF and SEC_TLS and ABSTRACT_PT
<b>Initial Conditions</b>	
<pre>with { the IUT is idle and the IUT having discovered several MW ethernet networks topologies and the IUT having a Bandwidth profile created and the IUT having a service profile created }</pre>	
<b>Expected Behaviour</b>	
<pre>ensure that {   when {     the IUT receives a vRequestGet containing       uri indicating value "/restconf/data/ietf-eth-tran-service:eth-t-svc/globals"     from the TEST_SYSTEM entity   } then {     the IUT sends a r200 containing       headers containing         content_type indicating value "application/yang-data+xml",       body containing         eth_svc containing           globals containing             band_width_profiles containing               band_width_profile indicating value BAND_WIDTH_PROFILE           ,           ethSvcInstanceList containing             ethSvcInstance containing               name_ indicating value any_value,               title indicating value any_value,               desc indicating value any_value,               customer indicating value any_value           to the TEST_SYSTEM entity         }   } }</pre>	

<b>TP Id</b>	TP_mWT_PNC_PT_ETH_SVC_GET_BO_01
<b>Test Objective</b>	Verify that the IUT replies with an error code when the request is malformed.
<b>Reference</b>	ETSI GS mWT 024 [1], clause 4.2.2.1 "Ethernet Ethernet Services" ETSI GS mWT 024 [1], clause 4.3.3 ETSI GS mWT 024 [1], clause 5.3.2 "Exception Handling" ETSI GS mWT 024 [1], clause A.2.4 IETF RFC 6991 [i.11] "Common YANG Data Types" IETF RFC 8776 [i.12] "Common YANG Data Types for Traffic Engineering" draft-ietf-ccamp-client-signal-yang-05 [i.13] "A YANG Data Model for Transport Network Client Signals"
<b>Configuration</b>	Config_mWT_2
<b>PICS Selection</b>	IUT_PNC and RESTCONF and SEC_TLS and ABSTRACT_PT
<b>Initial Conditions</b>	
<pre>with { the IUT is idle and the IUT having discovered several MW ethernet networks topologies }</pre>	

<b>Expected Behaviour</b>
<pre> ensure that {   when {     the IUT receives a vRequestGet containing       uri indicating value "/restconf/data/tran-service:eth-t-svc/globals" // Malformed URI     from the TEST_SYSTEM entity   } then {     the IUT sends a r400     to the TEST_SYSTEM entity   } } </pre>

<b>TP Id</b>	TP_mWT_PNC_PT_ETH_SVC_POST_BV_01
<b>Test Objective</b>	Verify that the IUT creates a new Bandwidth profile with mandatory ETSI GS mWT 024 [1] data elements subset.
<b>Reference</b>	ETSI GS mWT 024 [1], clause 4.2.2.1 "Ethernet Ethernet Services" ETSI GS mWT 024 [1], clause 4.3.3 ETSI GS mWT 024 [1], clause A.2.4 IETF RFC 6991 [i.11] "Common YANG Data Types" IETF RFC 8776 [i.12] "Common YANG Data Types for Traffic Engineering" draft-ietf-ccamp-client-signal-yang-05 [i.13] "A YANG Data Model for Transport Network Client Signals"
<b>Configuration</b>	Config_mWT_2
<b>PICS Selection</b>	IUT_PNC and RESTCONF and SEC_TLS and ABSTRACT_PT and not BWP_SVS_IN_ONE_REQUEST

<b>Initial Conditions</b>
<pre> with {   the IUT is idle and   the IUT having discovered several MW ethernet networks topologies and   the IUT not having a Bandwidth profile created } </pre>

<b>Expected Behaviour</b>
<pre> ensure that {   when {     the IUT receives a vRequestPost containing       uri indicating value "/restconf/data/ietf-eth-tran-service:eth-t-svc/globals",       body containing         eth_svc containing           ethtSvcInstanceList containing             ethtSvcInstance containing               name_ indicating value ETH_T_SVC_NAME,               title indicating value any_value,               desc indicating value any_value,               customer indicating value any_value      from the TEST_SYSTEM entity   } then {     the IUT sends a r201 containing       headers containing         content_type indicating value "application/yang-data+xml",       body containing         eth_svc containing           ethtSvcInstanceList containing             ethtSvcInstance containing               name_ indicating value ETH_T_SVC_NAME,               title indicating value any_value,               desc indicating value any_value,               customer indicating value any_value      to the TEST_SYSTEM entity   } } </pre>

<b>TP Id</b>	TP_mWT_PNC_PT_ETH_SVC_POST_BV_02_01
<b>Test Objective</b>	Verify that the IUT creates a new ethernet service with mandatory ETSI GS mWT 024 [1] data elements subset.
<b>Reference</b>	ETSI GS mWT 024 [1], clause 4.2.2.1 "Ethernet Ethernet Services" ETSI GS mWT 024 [1], clause 4.3.3 ETSI GS mWT 024 [1], clause A.2.4 IETF RFC 6991 [i.11] "Common YANG Data Types" IETF RFC 8776 [i.12] "Common YANG Data Types for Traffic Engineering" draft-ietf-ccamp-client-signal-yang-05 [i.13] "A YANG Data Model for Transport Network Client Signals"
<b>Configuration</b>	Config_mWT_2
<b>PICS Selection</b>	IUT_PNC and RESTCONF and SEC_TLS and ABSTRACT_PT and not BWP_SVS_IN_ONE_REQUEST
<b>Initial Conditions</b>	
<pre>with { the IUT is idle and the IUT having discovered several MW ethernet networks topologies and the IUT having a Bandwidth profile created and the IUT not having a service profile created }</pre>	
<b>Expected Behaviour</b>	
<pre>ensure that {   when {     the IUT receives a vRequestPost containing       uri indicating value "/restconf/data/ietf-eth-tran-service:eth-t-svc",       headers containing         content_type indicating value "application/yang-data+xml",       body containing         eth_svc containing           ethtSvcInstanceList containing             ethtSvcInstance containing               name_ indicating value ETH_T_SVC_NAME,               title indicating value any_value,               desc indicating value any_value,               customer indicating value any_value            from the TEST_SYSTEM entity         } then {           the IUT sends a r201 containing             headers containing               content_type indicating value "application/yang-data+xml",             body containing               eth_svc containing                 ethtSvcInstanceList containing                   ethtSvcInstance containing                     name_ indicating value ETH_T_SVC_NAME,                     title indicating value any_value,                     desc indicating value any_value,                     customer indicating value any_value                  ,                 ethtSvcInstance containing                   name_ indicating value ETH_T_SVC_NAME,                   title indicating value ETH_SVC_TITLE,                   desc indicating value ETH_SVC_DESC,                   customer indicating value ETH_SVC_CUSTOMER            to the TEST_SYSTEM entity         }   } }</pre>	

<b>TP Id</b>	TP_mWT_PNC_PT_ETH_SVC_POST_BV_02_02
<b>Test Objective</b>	Verify that the IUT creates successfully a new Bandwidth profile.
<b>Reference</b>	ETSI GS mWT 024 [1], clause 4.3.3 ETSI GS mWT 024 [1], clause A.2.2 IETF RFC 8345 [i.8] "A YANG Data Model for Network Topologies" IETF RFC 8795 [i.9] "YANG Data Model for Traffic Engineering (TE) Topologies" draft-ietf-ccamp-client-signal-yang-05 [i.13] "A YANG Data Model for Transport Network Client Signals"
<b>Configuration</b>	Config_mWT_2
<b>PICS Selection</b>	IUT_PNC and RESTCONF and SEC_TLS and ABSTRACT_PT and not BWP_SVS_IN_ONE_REQUEST

<b>Initial Conditions</b>
<pre>with { the IUT is idle and the IUT having discovered several MW ethernet networks topologies and the IUT having a Bandwidth profile created and the IUT not having a Bandwidth profile containing     bandwidthProfileName indicating value SDN_BANDWIDTH_PROFILE_NAME and the IUT having a service profile created }</pre>
<b>Expected Behaviour</b>
<pre>ensure that {   when {     the IUT receives a vRequestPost containing       uri indicating value "/restconf/data/ietf-eth-tran-service:eth-t-svc/globals",       headers containing         content_type indicating value "application/yang-data+xml",       body containing         bandwidthProfiles containing           bandwidthProfileName indicating value SDN_BANDWIDTH_PROFILE_NAME,           bandwidthProfileType indicating value SDN_SERVICE_TYPE,           bandwidthProfileCir indicating value CIR,           bandwidthProfileEir indicating value EIR,           bandwidthProfileColorAware indicating value COLOR_AWARE,           bandwidthCouplingFlag indicating value true      from the TEST_SYSTEM entity   } then {     the IUT sends a r201 containing       headers containing         content_type indicating value "application/yang-data+xml",       body containing         bandwidthProfiles containing           bandwidthProfileName indicating value SDN_BANDWIDTH_PROFILE_NAME,           bandwidthProfileType indicating value SDN_SERVICE_TYPE,           bandwidthProfileCir indicating value CIR,           bandwidthProfileEir indicating value EIR,           bandwidthProfileColorAware indicating value COLOR_AWARE,           bandwidthCouplingFlag indicating value true      to the TEST_SYSTEM entity   } }</pre>

<b>TP Id</b>	TP_mWT_PNC_PT_ETH_SVC_POST_BV_03
<b>Test Objective</b>	Verify that the IUT creates a new Bandwidth profile and a new ethernet service in one POST with mandatory ETSI GS mWT 024 [1] data elements subset.
<b>Reference</b>	ETSI GS mWT 024 [1], clause 4.2.2.1 "Ethernet Services" ETSI GS mWT 024 [1], clause 4.3.3 ETSI GS mWT 024 [1], clause A.2.4 IETF RFC 6991 [i.11] "Common YANG Data Types" IETF RFC 8776 [i.12] "Common YANG Data Types for Traffic Engineering" draft-ietf-ccamp-client-signal-yang-05 [i.13] "A YANG Data Model for Transport Network Client Signals"
<b>Configuration</b>	Config_mWT_2
<b>PICS Selection</b>	IUT_PNC and RESTCONF and SEC_TLS and ABSTRACT_PT and BWP_SVS_IN_ONE_REQUEST
<b>Initial Conditions</b>	<pre>with { the IUT is idle and the IUT having discovered several MW ethernet networks topologies and the IUT not having a Bandwidth profile created }</pre>
<b>Expected Behaviour</b>	<pre>ensure that {   when {     the IUT receives a vRequestPost containing       uri indicating value "/restconf/data/ietf-eth-tran-service:eth-t-svc/globals",       headers containing         content_type indicating value "application/yang-data+xml",       body containing         eth_svc containing           ethSvcInstanceList containing             ethSvcInstance containing               name_ indicating value ETH_T_SVC_NAME,</pre>

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        title indicating value ETH_SVC_TITLE,
        desc indicating value ETH_SVC_DESC,
        customer indicating value ETH_SVC_CUSTOMER,
        ingress_egress_bandwidth_profile containing
            bandwidth_profile_type indicating value BANDWIDTH_PROFILE_TYPE,
            cir indicating value CIR,
            eir indicating value EIR

    from the TEST_SYSTEM entity
} then {
    the IUT sends a r201 containing
    headers containing
        content_type indicating value "application/yang-data+xml",
    body containing
        eth_svc containing
            ethSvcInstanceList containing
                ethSvcInstance containing
                    name_ indicating value ETHHT_SVC_NAME,
                    title indicating value ETH_SVC_TITLE,
                    desc indicating value ETH_SVC_DESC,
                    customer indicating value ETH_SVC_CUSTOMER

    to the TEST_SYSTEM entity
}
}

```

<b>TP Id</b>	TP_mWT_PNC_PT_ETH_SVC_POST_BO_01
<b>Test Objective</b>	Verify that the IUT replies with an error when the request is malformed.
<b>Reference</b>	ETSI GS mWT 024 [1], clause 4.3.3 ETSI GS mWT 024 [1], clause 5.3.2 "Exception Handling" ETSI GS mWT 024 [1], clause A.2.4 IETF RFC 6991 [i.11] "Common YANG Data Types" IETF RFC 8776 [i.12] "Common YANG Data Types for Traffic Engineering" draft-ietf-ccamp-client-signal-yang-05 [i.13] "A YANG Data Model for Transport Network Client Signals"
<b>Configuration</b>	Config_mWT_2
<b>PICS Selection</b>	IUT_PNC and RESTCONF and SEC_TLS and ABSTRACT_PT and not BWP_SVS_IN_ONE_REQUEST
<b>Initial Conditions</b>	
<pre> with { the IUT is idle and the IUT having discovered several MW ethernet networks topologies } </pre>	
<b>Expected Behaviour</b>	
<pre> ensure that {     when {         the IUT receives a vRequestPost containing             uri indicating value "/restconf/data/ethht-svc/globals", // Malformed URI             body containing                 eth_svc containing                     ethSvcInstanceList containing                         ethSvcInstance containing                             name_ indicating value ETHHT_SVC_NAME,                             title indicating value ETH_SVC_TITLE,                             desc indicating value ETH_SVC_DESC,                             customer indicating value ETH_SVC_CUSTOMER          from the TEST_SYSTEM entity     } then {         the IUT sends a r400         to the TEST_SYSTEM entity     } } </pre>	



<b>TP Id</b>	TP_mWT_PNC_PT_ETH_SVC_PUT_BV_01
<b>Test Objective</b>	Verify that the IUT updates an existing Bandwidth profile with mandatory ETSI GS mWT 024 [1] data elements subset.
<b>Reference</b>	ETSI GS mWT 024 [1], clause 4.2.2.1 "Ethernet Services" ETSI GS mWT 024 [1], clause 4.3.3 ETSI GS mWT 024 [1], clause A.2.4 IETF RFC 6991 [i.11] "Common YANG Data Types" IETF RFC 8776 [i.12] "Common YANG Data Types for Traffic Engineering" draft-ietf-ccamp-client-signal-yang-05 [i.13] "A YANG Data Model for Transport Network Client Signals"
<b>Configuration</b>	Config_mWT_2
<b>PICS Selection</b>	IUT_PNC and RESTCONF and SEC_TLS and ABSTRACT_PT
<b>Initial Conditions</b>	
<pre>with { the IUT is idle and the IUT having discovered several MW ethernet networks topologies and the IUT having a Bandwidth profile created }</pre>	
<b>Expected Behaviour</b>	
<pre>ensure that {   when {     the IUT receives a vRequestPut containing       uri indicating value "/restconf/data/ietf-eth-tran-service:eth-tran-service/globals",       headers containing         content_type indicating value "application/yang-data+xml",       body containing         eth_svc containing           globals containing             namedBandwidthProfile containing               bandwidth_profile_name indicating value BANDWIDTH_PROFILE_NAME,               CIR indicating value CIR_VALUE,               CBS indicating value CBS_VALUE,               EIR indicating value EIR_VALUE,               EBS indicating value EBS_VALUE,               color_aware indicating value COLOR_AWARE,               coupling_flag indicating value COUPLING_FLAG      from the TEST_SYSTEM entity   } then {     the IUT sends a r201 containing       headers containing         content_type indicating value "application/yang-data+xml",       body containing         eth_svc containing           globals containing             namedBandwidthProfile containing               bandwidth_profile_name indicating value BANDWIDTH_PROFILE_NAME,               CIR indicating value CIR_VALUE,               CBS indicating value CBS_VALUE,               EIR indicating value EIR_VALUE,               EBS indicating value EBS_VALUE,               color_aware indicating value COLOR_AWARE,               coupling_flag indicating value COUPLING_FLAG      to the TEST_SYSTEM entity   } }</pre>	

<b>TP Id</b>	TP_mWT_PNC_PT_ETH_SVC_PUT_BV_02
<b>Test Objective</b>	Verify that the IUT updates an existing ethernet service.
<b>Reference</b>	ETSI GS mWT 024 [1], clause 4.2.2.1 "Ethernet Services" ETSI GS mWT 024 [1], clause 4.3.3 ETSI GS mWT 024 [1], clause A.2.4 IETF RFC 6991 [i.11] "Common YANG Data Types" IETF RFC 8776 [i.12] "Common YANG Data Types for Traffic Engineering" draft-ietf-ccamp-client-signal-yang-05 [i.13] "A YANG Data Model for Transport Network Client Signals"
<b>Configuration</b>	Config_mWT_2
<b>PICS Selection</b>	IUT_PNC and RESTCONF and SEC_TLS and ABSTRACT_PT

<b>Initial Conditions</b>
<pre>with { the IUT is idle and the IUT having discovered several MW ethernet networks topologies and the IUT having a Bandwidth profile created }</pre>
<b>Expected Behaviour</b>
<pre>ensure that {   when {     the IUT receives a vRequestPut containing     uri indicating value "/restconf/data/ietf-eth-tran-service:eth-t-svc/globals",     headers containing     content_type indicating value "application/yang-data+xml",     body containing     eth_svc containing     ethtSvcInstanceList containing     ethtSvcInstance containing     name_ indicating value ETHT_SVC_NAME,     title indicating value ETH_SVC_TITLE,     desc indicating value ETH_SVC_DESC,     customer indicating value ETH_SVC_CUSTOMER      from the TEST_SYSTEM entity   } then {     the IUT sends a r201 containing     headers containing     content_type indicating value "application/yang-data+xml",     body containing     eth_svc containing     ethtSvcInstanceList containing     ethtSvcInstance containing     name_ indicating value ETHT_SVC_NAME,     title indicating value ETH_SVC_TITLE,     desc indicating value ETH_SVC_DESC,     customer indicating value ETH_SVC_CUSTOMER      to the TEST_SYSTEM entity   } }</pre>

<b>TP Id</b>	TP_mWT_PNC_PT_ETH_SVC_PUT_BO_01
<b>Test Objective</b>	Verify that the IUT replies with an error code when updating an unknown Bandwidth profile with mandatory ETSI GS mWT 024 [1] data elements subset.
<b>Reference</b>	ETSI GS mWT 024 [1], clause 5.3.2 "Exception Handling" ETSI GS mWT 024 [1], clause 4.3.3 ETSI GS mWT 024 [1], clause A.2.4 IETF RFC 6991 [i.11] "Common YANG Data Types" IETF RFC 8776 [i.12] "Common YANG Data Types for Traffic Engineering" draft-ietf-ccamp-client-signal-yang-05 [i.13] "A YANG Data Model for Transport Network Client Signals"
<b>Configuration</b>	Config_mWT_2
<b>PICS Selection</b>	IUT_PNC and RESTCONF and SEC_TLS and ABSTRACT_PT
<b>Initial Conditions</b>	<pre>with { the IUT is idle and the IUT having discovered several MW ethernet networks topologies }</pre>
<b>Expected Behaviour</b>	<pre>ensure that {   when {     the IUT receives a vRequestPut containing     uri indicating value "/restconf/data/ietf-eth-tran-service:eth-t-svc/globals",     body containing     eth_svc containing     ethtSvcInstanceList containing     ethtSvcInstance containing     name_ indicating value UNKNOWN_ETHT_SVC_NAME,     title indicating value ETH_SVC_TITLE,     desc indicating value ETH_SVC_DESC,     customer indicating value ETH_SVC_CUSTOMER      from the TEST_SYSTEM entity   } then {     the IUT sends a r404   } }</pre>

```

    }
    to the TEST_SYSTEM entity
}

```

<b>TP Id</b>	TP_mWT_PNC_PT_ETH_SVC_DELETE_BV_01
<b>Test Objective</b>	Verify that the IUT deletes an existing ethernet service.
<b>Reference</b>	ETSI GS mWT 024 [1], clause 4.2.2.1 "Ethernet Services" ETSI GS mWT 024 [1], clause 4.3.3 ETSI GS mWT 024 [1], clause A.2.4 IETF RFC 6991 [i.11] "Common YANG Data Types" IETF RFC 8776 [i.12] "Common YANG Data Types for Traffic Engineering" draft-ietf-ccamp-client-signal-yang-05 [i.13] "A YANG Data Model for Transport Network Client Signals"
<b>Configuration</b>	Config_mWT_2
<b>PICS Selection</b>	IUT_PNC and RESTCONF and SEC_TLS and ABSTRACT_PT
<b>Initial Conditions</b>	
<pre> with { the IUT is idle and the IUT having discovered several MW ethernet networks topologies and the IUT having a Bandwidth profile created and the IUT having a service profile created } </pre>	
<b>Expected Behaviour</b>	
<pre> ensure that {   when {     the IUT receives a vRequestDelete containing       uri indicating value "/restconf/data/ietf-eth-tran-service:eth-t-svc/eth-t-svc- instances=ETH_T_SVC_NAME",       headers containing         content_type indicating value "application/yang-data+xml"     from the TEST_SYSTEM entity   } then {     the IUT sends a r204     to the TEST_SYSTEM entity   } } </pre>	

<b>TP Id</b>	TP_mWT_PNC_PT_ETH_SVC_DELETE_BV_02
<b>Test Objective</b>	Verify that the IUT deletes an existing bandwidth profile.
<b>Reference</b>	ETSI GS mWT 024 [1], clause 4.2.2.1 "Ethernet Services" ETSI GS mWT 024 [1], clause 4.3.3 ETSI GS mWT 024 [1], clause A.2.4 IETF RFC 6991 [i.11] "Common YANG Data Types" IETF RFC 8776 [i.12] "Common YANG Data Types for Traffic Engineering" draft-ietf-ccamp-client-signal-yang-05 [i.13] "A YANG Data Model for Transport Network Client Signals"
<b>Configuration</b>	Config_mWT_2
<b>PICS Selection</b>	IUT_PNC and RESTCONF and SEC_TLS and ABSTRACT_PT
<b>Initial Conditions</b>	
<pre> with { the IUT is idle and the IUT having discovered several MW ethernet networks topologies and the IUT having a Bandwidth profile created } </pre>	
<b>Expected Behaviour</b>	
<pre> ensure that {   when {     the IUT receives a vRequestDelete containing       uri indicating value "/restconf/data/ietf-eth-tran-service:eth-t- svc/globals/bandwidth_profile_name=BANDWIDTH_PROFILE_NAME",       headers containing         content_type indicating value "application/yang-data+xml"     from the TEST_SYSTEM entity   } then {     the IUT sends a r204     to the TEST_SYSTEM entity   } } </pre>	

<b>TP Id</b>	TP_mWT_PNC_PT_ETH_SVC_DELETE_BO_01
<b>Test Objective</b>	Verify that the IUT replies with an error code when the request is malformed.
<b>Reference</b>	ETSI GS mWT 024 [1], clause 4.3.3 ETSI GS mWT 024 [1], clause 5.3.2 "Exception Handling" ETSI GS mWT 024 [1], clause A.2.4 IETF RFC 6991 [i.11] "Common YANG Data Types" IETF RFC 8776 [i.12] "Common YANG Data Types for Traffic Engineering" draft-ietf-ccamp-client-signal-yang-05 [i.13] "A YANG Data Model for Transport Network Client Signals"
<b>Configuration</b>	Config_mWT_2
<b>PICS Selection</b>	IUT_PNC and RESTCONF and SEC_TLS and ABSTRACT_PT
<b>Initial Conditions</b>	
with { the IUT is idle and the IUT having discovered several MW ethernet networks topologies }	
<b>Expected Behaviour</b>	
ensure that { when { the IUT receives a vRequestDelete containing uri indicating value "/restconf/data/ietf-eth-tran-service:ethht- svc/instances=ETHHT_SVC_NAME" // Malformed URI from the TEST_SYSTEM entity } then { the IUT sends a r400 to the TEST_SYSTEM entity } }	

<b>TP Id</b>	TP_mWT_PNC_ETH_PT_SVC_DELETE_BO_02
<b>Test Objective</b>	Verify that the IUT replies with an error code when it is requested to delete an unknown Bandwidth profile.
<b>Reference</b>	ETSI GS mWT 024 [1], clause 4.3.3 ETSI GS mWT 024 [1], clause 5.3.2 "Exception Handling" ETSI GS mWT 024 [1], clause A.2.4 IETF RFC 6991 [i.11] "Common YANG Data Types" IETF RFC 8776 [i.12] "Common YANG Data Types for Traffic Engineering" draft-ietf-ccamp-client-signal-yang-05 [i.13] "A YANG Data Model for Transport Network Client Signals"
<b>Configuration</b>	Config_mWT_2
<b>PICS Selection</b>	IUT_PNC and RESTCONF and SEC_TLS and ABSTRACT_PT
<b>Initial Conditions</b>	
with { the IUT is idle and the IUT having discovered several MW ethernet networks topologies }	
<b>Expected Behaviour</b>	
ensure that { when { the IUT receives a vRequestDelete containing uri indicating value "/restconf/data/ietf-eth-tran-service:ethht-svc/ethht-svc- instances=UNKNOWN_ETHHT_SVC_NAME" from the TEST_SYSTEM entity } then { the IUT sends a r404 to the TEST_SYSTEM entity } }	

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## History

<b>Document history</b>		
V1.1.1	December 2024	Publication