



Statement of Compliance for use of XML Schema in Eclipse Titan

Adrien Kirjak

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Abstract

The present document provides the Implementation Conformance Statement (ICS) proforma for the conformance test suite for the Eclipse Titan TTCN-3 implementation.

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Chapter 1. Description

The present document provides the Implementation Conformance Statement (ICS) proforma for the conformance test suite for using XML Schema with TTCN-3 as defined in [ETSI ES 201 873-1](#).

In the present document only XML related features, specified in [ETSI ES 201 873 9](#) have been considered but not

- the core language features (see [ETSI ES 201 873-1](#)), nor
- tool implementation (see [ETSI ES 201 873-5](#) and [ETSI ES 201 873-6](#)),
- language mapping (see [ETSI ES 201 873-7](#) and [ETSI ES 201 873-8](#)) and language extension (see e.g. [ETSI ES 202 781](#), [ETSI ES 202 784](#) and [ETSI ES 202 785](#)) aspects.

Chapter 2. References

2.1. Normative references

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

1. [ETSI ES 201 873-9 \(V4.6.1\): "Methods for Testing and Specification \(MTS\); The Testing and Test Control Notation version 3; Part 9: Using XML schema with TTCN-3"](#).
2. [ISO/IEC 9646-7 \(1994\): "Conformance testing methodology and framework – Part 7: Implementation Conformance Statement"](#).
3. [ISO/IEC 9646-1 \(1992\): "Information Technology – Open Systems Interconnection – Conformance Testing Methodology and Framework – Part 1: General concepts"](#).
4. [ETSI ES 202 785: "Methods for Testing and Specification \(MTS\); The Testing and Test Control Notation version 3; TTCN-3 Language Extensions: Behaviour Types"](#).

2.2. Informative references

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.

5. [ETSI ES 201 873-1: "Methods for Testing and Specification \(MTS\); The Testing and Test Control Notation version 3; Part 1: TTCN-3 Core Language"](#).
6. [ETSI ES 201 873-5: "Methods for Testing and Specification \(MTS\); The Testing and Test Control Notation version 3; Part 5: TTCN-3 Runtime Interface \(TRI\)"](#).
7. [ETSI ES 201 873-6: "Methods for Testing and Specification \(MTS\); The Testing and Test Control Notation version 3; Part 6: TTCN-3 Control Interface \(TCI\)"](#).
8. [ETSI ES 201 873-7: "Methods for Testing and Specification \(MTS\); The Testing and Test Control Notation version 3; Part 7: Using ASN.1 with TTCN-3"](#).
9. [ETSI ES 201 873-8: "Methods for Testing and Specification \(MTS\); The Testing and Test Control Notation version 3; Part 8: The IDL to TTCN-3 Mapping"](#).
10. [ETSI ES 202 781: "Methods for Testing and Specification \(MTS\); The Testing and Test Control Notation version 3; TTCN-3 Language Extensions: Configuration and Deployment Support"](#).
11. [ETSI ES 202 784: "Methods for Testing and Specification \(MTS\); The Testing and Test Control Notation version 3; TTCN-3 Language Extensions: Advanced Parameterization"](#).

Chapter 3. Definitions and abbreviations

3.1. Definitions

Abstract Test Suite (ATS):

Test suite composed of abstract test cases

Implementation Conformance Statement (ICS):

Statement made by the supplier of an implementation claimed to conform to a given specification, stating which capabilities have been implemented

ICS proforma:

Document, in the form of a questionnaire, which when completed for an implementation or system becomes an ICS

Implementation eXtra Information for Testing (IXIT):

Statement made by a supplier or implementor of an IUT which contains or references all of the information related to the IUT and its testing environment, which will enable the test laboratory to run an appropriate test suite against the IUT

IXIT proforma:

Document, in the form of a questionnaire, which when completed for the IUT becomes the IXIT

Implementation Under Test (IUT):

Implementation of one or more OSI protocols in an adjacent user/provider relationship, being part of a real open system which is to be studied by testing

3.2. Abbreviations

ASCI

American Standard Code for Information Interchange

ATS

Abstract Test Suite

BNF

Backus Naur Form

ICS

Implementation Conformance Statement

IUT

Implementation under Test

IXIT

Implementation eXtra Information for Testing

SUT

System Under Test

TC

Test Case

TCI

TTCN-3 Control Interface

TP

Test Purpose

TRI

TTCN-3 Runtime Interface

TS

Test System

TSS

Test Suite Structure

TSS&TP

Test Suite Structure and Test Purposes

TTCN

Testing and Test Control Notation

TTCN-3

Testing and Test Control Notation edition 3

URI

Uniform Resource Identifier

URL

Uniform Resource Locator

XML

eXtensible Markup Language

XSD

W3C XML Schema Definition

Chapter 4. Instructions for completing the ICS proforma

4.1. Other information

More detailed instructions are given at the beginning of the different clauses of the ICS proforma.

The supplier of the implementation shall complete the ICS proforma in each of the spaces provided. If necessary, the supplier may provide additional comments separately in Clause A.4.

4.1.1. Purposes and structure

The purpose of this ICS proforma is to provide a mechanism whereby a TTCN-3 tool vendor of the [TTCN-3 core language](#) may provide information about the implementation in a standardized manner.

The ICS proforma is subdivided into clauses for the following categories of information:

- instructions for completing the ICS proforma;
- identification of the implementation;
- ICS proforma tables (containing the global statement of conformance).

4.1.2. Conventions

The ICS proforma is composed of information in tabular form in accordance with the guidelines presented in [ISO/IEC 96467](#).

Item column

It contains a number that identifies the item in the table.

Item description column

It describes each respective item (e.g. parameters, timers, etc.).

Reference column

It gives reference to the [TTCN-3 core language](#), except where explicitly stated otherwise.

Status column

The following notations, defined in [ISO/IEC 96467](#), are used for the status column:

- m mandatory - the capability is required to be supported.
- n/a not applicable - in the given context, it is impossible to use the capability. No answer in the support column is required.
- u undecided
- o optional - the capability may be supported or not.
- o.i qualified optional - for mutually exclusive or selectable options from a set. "i" is an integer

which identifies a unique group of related optional items and the logic of their selection which is defined immediately following the table.

- ci conditional - the requirement on the capability ("m", "o" or "n/a") depends on the support of other optional or conditional items. "i" is an integer identifying a unique conditional status expression that is defined immediately following the table. For nested conditional expressions, the syntax **IF ... THEN (IF ... THEN ... ELSE...)** **ELSE ...** shall be used to avoid ambiguities. If an ELSE clause is omitted, **ELSE n/a** shall be implied.

NOTE

Support of a capability means that the capability is implemented in conformance to the [TTCN-3 core language](#).

Support column

The support column shall be filled in by the supplier of the implementation. The following common notations, defined in [ISO/IEC 96467](#), are used for the support column:

- Y or y supported by the implementation.
- N or n not supported by the implementation.
- N/A or n/a or "no answer required" (allowed only if the status is N/A, directly or after evaluation of a conditional status).

Values allowed column

This column contains the values or the ranges of values allowed.

Values supported column

The support column shall be filled in by the supplier of the implementation. In this column the values or the ranges of values supported by the implementation shall be indicated.

References to items

For each possible item answer (answer in the support column) within the ICS proforma, a unique reference exists. It is defined as the table identifier, followed by a slash character "/", followed by the item number in the table. If there is more than one support column in a table, the columns shall be discriminated by letters (a, b, etc.) respectively.

EXAMPLE: 5/4 is the reference to the answer of item 4 in Table 5.

4.2. Identification of the implementation

Identification of the Implementation under Test (IUT) and the system in which it resides - the System Under Test (SUT) should be filled in so as to provide as much detail as possible regarding version numbers and configuration options.

The product supplier information and client information should both be filled in if they are different.

A person who can answer queries regarding information supplied in the ICS should be named as the contact person.

4.2.1. Date of the statement

| | |
|------------------------|------------|
| Date of the statement: | 2016.07.19 |
|------------------------|------------|

4.2.2. Implementation under Test (IUT) identification

| | |
|--------------|-------------------|
| IUT name: | Eclipse Titan |
| IUT version: | CRL 113 200/5 R5B |

4.2.3. ICS contact person

| | |
|-------------------------|--|
| Name: | Elemer Lelik |
| Telephone number: | |
| Facsimile number: | |
| E-mail address: | Elemer.Lelik@ericsson.com |
| Additional information: | |

Chapter 5. ICS proforma tables

5.1. Global statement of conformance

| | (Yes/No) |
|---|----------|
| Are all mandatory capabilities implemented? | |

5.2. Mapping XML Schemas

Table 1. Mapping XML Schemas

| Item | TC/TP reference | Purpose | Reference in ETSI ES 201 8739 | Status | Support |
|------|----------------------|--|-------------------------------|--------|---------|
| 1 | Neg_05_top_level_001 | Verify that error is generated for missing XSD language tag in import clause | Clause 5 | m | n |

5.3. Namespaces

Table 2. Namespaces

| Item | TC/TP reference | Purpose | Reference in ETSI ES 201 8739 | Status | Support |
|------|----------------------------|---|-------------------------------|--------|---------|
| 1 | Pos_050_101_namespaces_001 | Verify that schema with target namespace is correctly translated into single module | Clause 5.1.1 | m | y |
| 2 | Pos_050_101_namespaces_002 | Verify schema with no target namespace is correctly translated into single module | Clause 5.1.1 | m | y |
| 3 | Pos_050_101_namespaces_003 | Verify that two schemas with the same target namespace are correctly translated | Clause 5.1.1 | m | y |
| 4 | Pos_050_101_namespaces_004 | Verify that two schemas with no target namespace are correctly translated | Clause 5.1.1 | m | y |

5.4. Includes

Table 3. Includes

| Item | TC/TP reference | Purpose | Reference in ETSI ES 201 8739 | Status | Support |
|------|--------------------------|--|-------------------------------|--------|---------|
| 1 | Pos_050 102_includes_001 | Test inclusion of a schema with the same namespace | Clause 5.1.2 | m | y |
| 2 | Pos_050 102_includes_002 | Verify that included schema with no target namespace is transformed twice (inclusion) | Clause 5.1.2 | m | y |
| 3 | Pos_050 102_includes_003 | Verify that included schema with no target namespace is transformed twice (no namespace) | Clause 5.1.2 | m | y |

5.5. Imports

Table 4. Imports

| Item | TC/TP reference | Purpose | Reference in ETSI ES 201 8739 | Status | Support |
|------|-------------------------|--|-------------------------------|--------|---------|
| 1 | Neg_050 103_imports_001 | Verify that it is not allowed to import imports from XSD schemas | Clause 5.1.3 | m | y |
| 2 | Pos_050 103_imports_001 | Verify that XSD import statement is handled correctly | Clause 5.1.3 | m | y |

5.6. Attributes of the XSD schema element

Table 5. Attributes of the XSD schema element

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|---|---|--|--------------------|--------------------------|
| 1 | Pos_050 104_attri butes_of _the_xsd _schema _elemen t_001 | Verify that qualified default element form is correctly processed (no namespace prefix) | Clause 5.1.4 | m | y |
| 2 | Pos_050 104_attri butes_of _the_xsd _schema _elemen t_002 | Verify that qualified default element form is correctly processed (namespace prefix used) | Clause 5.1.4 | m | y |
| 3 | Pos_050 104_attri butes_of _the_xsd _schema _elemen t_003 | Verify that unqualified default element form is correctly processed | Clause 5.1.4 | m | y |
| 4 | Pos_050 104_attri butes_of _the_xsd _schema _elemen t_004 | Verify that qualified default attribute form is correctly processed (no namespace prefix) | Clause 5.1.4 | m | y |
| 5 | Pos_050 104_attri butes_of _the_xsd _schema _elemen t_005 | Verify that qualified default attribute form is correctly processed (namespace prefix used) | Clause 5.1.4 | m | y |
| 6 | Pos_050 104_attri butes_of _the_xsd _schema _elemen t_006 | Verify that unqualified default attribute form is correctly processed | Clause 5.1.4 | m | y |

5.7. Name conversion rules

Table 6. Name conversion rules

| Item | TC/TP reference | Purpose | Reference in ETSI ES 201 8739 | Status | Support |
|-------------|--|---|--------------------------------------|---------------|----------------|
| 1 | Pos_050 202_name_conversion_rules_001 | Verify conversion of symbols into U+005f (low line) | Clause 5.2.2 | m | y |
| 2 | Pos_050 202_name_conversion_rules_002 | Verify that non-ASCII letters are not present in transforming identifiers | Clause 5.2.2 | m | y |
| 3 | Pos_050 202_name_conversion_rules_003 | Verify that multiple "_" are simplified in transforming identifiers | Clause 5.2.2 | m | y |
| 4 | Pos_050 202_name_conversion_rules_004 | Verify that leading and trailing low lines are removed | Clause 5.2.2 | m | y |
| 5 | Pos_050 202_name_conversion_rules_005 | Verify that type names are capitalized | Clause 5.2.2 | m | y |
| 6 | Pos_050 202_name_conversion_rules_006 | Verify that prefixing type names with "X" works correctly | Clause 5.2.2 | m | y |
| 7 | Pos_050 202_name_conversion_rules_007 | Verify that names of field of structure types are uncapitalized | Clause 5.2.2 | m | y |

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|--|---|--|--------------------|--------------------------|
| 8 | Pos_050 202_na me_conv ersion_r ules_008 | Verify that names of enumerated items are uncapitalized | Clause 5.2.2 | m | y |
| 9 | Pos_050 202_na me_conv ersion_r ules_009 | Verify that prefixing field names of structured types with "x" works correctly | Clause 5.2.2 | m | y |
| 10 | Pos_050 202_na me_conv ersion_r ules_010 | Verify that prefixing enumerated items with "x" works correctly | Clause 5.2.2 | m | y |
| 11 | Pos_050 202_na me_conv ersion_r ules_011 | Check transformation of empty type identifier into "X" | Clause 5.2.2 | m | y |
| 12 | Pos_050 202_na me_conv ersion_r ules_012 | Check transformation of empty structured field identifier into "x" | Clause 5.2.2 | m | y |
| 13 | Pos_050 202_na me_conv ersion_r ules_013 | Check transformation of empty enumerated value into "x" | Clause 5.2.2 | m | y |
| 14 | Pos_050 202_na me_conv ersion_r ules_014 | Verify that additional suffices are attached in case of name clashes between types | Clause 5.2.2 | m | y |
| 15 | Pos_050 202_na me_conv ersion_r ules_015 | Verify that suffix is attached in case of name clash between types and local module | Clause 5.2.2 | m | y |

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|--|--|--|--------------------|--------------------------|
| 16 | Pos_050 202_na me_conv ersion_r ules_016 | Verify that suffix is attached in case of name clash between types and imported module | Clause 5.2.2 | m | y |
| 17 | Pos_050 202_na me_conv ersion_r ules_017 | Verify that suffix is attached in case of name clash between field names | Clause 5.2.2 | m | y |
| 18 | Pos_050 202_na me_conv ersion_r ules_018 | Verify that suffix is attached in case of name clash between field name and keyword | Clause 5.2.2 | m | y |
| 19 | Pos_050 202_na me_conv ersion_r ules_019 | Verify that suffix is attached in case of name clash between field name and predefined function | Clause 5.2.2 | m | y |
| 20 | Pos_050 202_na me_conv ersion_r ules_020 | Verify that suffix is attached in case of name clash between enumerated items | Clause 5.2.2 | m | y |
| 21 | Pos_050 202_na me_conv ersion_r ules_021 | Verify that suffix is attached in case of name clash between enumerated item and keyword | Clause 5.2.2 | m | y |
| 22 | Pos_050 202_na me_conv ersion_r ules_022 | Verify that suffix is attached in case of name clash between enumerated item and predefined function | Clause 5.2.2 | m | y |
| 23 | Pos_050 202_na me_conv ersion_r ules_023 | Verify that name clash between module names is resolved using suffix | Clause 5.2.2 | m | y |

5.8. Order of the mapping

Table 7. Order of the mapping

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|---|--|--|--------------------|--------------------------|
| 1 | Pos_050 203_ord er_of_th e_mappi ng_001 | Verify order of top-level schema components | Clause 5.2.3 | m | y |
| 2 | Pos_050 203_ord er_of_th e_mappi ng_002 | Verify that alphabetical sorting is based on character ordinal numbers | Clause 5.2.3 | m | y |
| 3 | Pos_050 203_ord er_of_th e_mappi ng_003 | Verify that alphabetical sorting is done only inside sets of items | Clause 5.2.3 | m | y |
| 4 | Pos_050 203_ord er_of_th e_mappi ng_004 | Assure that namespaces are ordered lexically | Clause 5.2.3 | m | y |
| 5 | Pos_050 203_ord er_of_th e_mappi ng_005 | Assure that namespaces are ordered lexically | Clause 5.2.3 | m | y |

5.9. Built-in data types

Table 8. Built-in data types

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|---------------------------------|--|--|--------------------|--------------------------|
| 1 | Pos_06_t op_level _001 | Verify conversion of simpleType based on built-in XSD type | Clause 6 | m | y |

5.10. Length

Table 9. Length

| Item | TC/TP reference | Purpose | Reference in ETSI ES 201 8739 | Status | Support |
|------|------------------------|--|-------------------------------|--------|---------|
| 1 | Neg_060 101_length_001 | Verify that a length-restricted XSD type shall be mapped to a corresponding length restricted TTCN-3 type. | Clause 6.1.1 | m | y |
| 2 | Pos_060 101_length_001 | Verify that a length-restricted XSD type shall be mapped to a corresponding length restricted TTCN-3 type. | Clause 6.1.1 | m | y |
| 3 | Pos_060 101_length_002 | Verify that a length-restricted XSD type shall be mapped to a corresponding length restricted TTCN-3 type. | Clause 6.1.1 | m | y |

5.11. Enumeration

Table 10. Enumeration

| Item | TC/TP reference | Purpose | Reference in ETSI ES 201 8739 | Status | Support |
|------|-----------------------------|---|-------------------------------|--------|---------|
| 1 | Neg_060 105_enumeration_001 | Verify if tool rejects validation in case of restricted value due xsd type declaration. | Clause 6.1.5 | m | y |
| 2 | Neg_060 105_enumeration_002 | Verify if tool rejects validation in case of restricted enumerated value length due xsd type declaration. | Clause 6.1.5 | m | y |
| 3 | Neg_060 105_enumeration_003 | Verify if tool rejects validation in case of restricted value due xsd type declaration. | Clause 6.1.5 | m | y |
| 4 | Neg_060 105_enumeration_004 | Disallow enumeration values removed by restriction | Clause 6.1.5 | m | y |
| 5 | Pos_060 105_enumeration_001 | Verify mapping of simple type definition that is a restriction of string type with an enumeration facet | Clause 6.1.5 | m | y |

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|--|--|--|--------------------|--------------------------|
| 6 | Pos_060 105_enu meratio n_002 | Verify mapping of simple type definition that is a restriction of integer type with an enumeration facet | Clause 6.1.5 | m | y |
| 7 | Pos_060 105_enu meratio n_003 | Verify mapping of simple type definition that is a restriction of integer type with a minInclusive and a maxInclusive facet | Clause 6.1.5 | m | y |
| 8 | Pos_060 105_enu meratio n_004 | Verify mapping of simple type definition that is a restriction of another simple type of definition, derived by restriction from integer type with the addition of a minInclusive and a maxInclusive facet | Clause 6.1.5 | m | y |
| 9 | Pos_060 105_enu meratio n_005 | Verify mapping of simple type definition that is a restriction of another type definition, derived by restriction from string with the addition of an enumeration facet | Clause 6.1.5 | m | y |
| 10 | Pos_060 105_enu meratio n_006 | Verify mapping of simple type definition that is a restriction of another simple type definition, derived by restriction from string with the addition of an enumeration facet | Clause 6.1.5 | m | y |

5.12. MinInclusive

Table 11. MinInclusive

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|---|---|--|--------------------|--------------------------|
| 1 | Pos_060 107_min inclusiv e_001 | Verify mapping of an integer element with a minInclusive facet | Clause 6.1.7 | m | y |
| 2 | Pos_060 107_min inclusiv e_002 | Verify mapping of a float element with a numeric minInclusive value | Clause 6.1.7 | m | y |
| 3 | Pos_060 107_min inclusiv e_003 | Verify mapping of a float element with special minInclusive values | Clause 6.1.7 | m | y |

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|---|---|--|--------------------|--------------------------|
| 4 | Pos_060 107_min inclusiv e_004 | Verify mapping of a float element with special minInclusive values | Clause 6.1.7 | m | y |
| 5 | Pos_060 107_min inclusiv e_005 | Verify mapping of a float element with special minInclusive values | Clause 6.1.7 | m | y |

5.13. MaxInclusive

Table 12. MaxInclusive

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|---|---|--|--------------------|--------------------------|
| 1 | Pos_060 108_max inclusiv e_001 | Verify mapping of elements of type integer with maxInclusive facet | Clause 6.1.8 | m | y |
| 2 | Pos_060 108_max inclusiv e_002 | Verify mapping of a float type with a numeric maxInclusive facet | Clause 6.1.8 | m | y |
| 3 | Pos_060 108_max inclusiv e_003 | Verify mapping of a float type with a numeric maxInclusive facet | Clause 6.1.8 | m | y |
| 4 | Pos_060 108_max inclusiv e_004 | Verify mapping of a float type with a numeric maxInclusive facet | Clause 6.1.8 | m | y |

5.14. MinExclusive

Table 13. MinExclusive

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|---|---|--|--------------------|--------------------------|
| 1 | Neg_060 109_min exclusiv e_001 | Verify if tool rejects validation in case of restricted value due xsd type declaration. | Clause 6.1.9 | m | y |
| 2 | Neg_060 109_min exclusiv e_002 | Verify if tool rejects validation in case of restricted value due xsd type declaration. | Clause 6.1.9 | m | y |
| 3 | Pos_060 109_min exclusiv e_001 | Verify if tool accepts values restricted by xsd type declaration. | Clause 6.1.9 | m | y |
| 4 | Pos_060 109_min exclusiv e_002 | Verify if tool accepts values restricted by xsd type declaration. | Clause 6.1.9 | m | y |

5.15. MaxExclusive

Table 14. MaxExclusive

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|---|--|--|--------------------|--------------------------|
| 1 | Neg_060 110_max exclusiv e_001 | Verify that INF (negative infinity) or NaN (not-a-number), this type shall not be translated to TTCN-3 | Clause 6.1.10 | m | y |
| 2 | Pos_060 110_max exclusiv e_001 | Verify mapping of a maxExclusive facet applied to a type, which is derivative of integer | Clause 6.1.10 | m | y |
| 3 | Pos_060 110_max exclusiv e_002 | Verify mapping of a maxExclusive facet applied to the float type | Clause 6.1.10 | m | y |
| 4 | Pos_060 110_max exclusiv e_003 | Verify mapping of a maxExclusive facet applied to the float type | Clause 6.1.10 | m | y |

5.16. Total digits

Table 15. Total digits

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|---|--|--|--------------------|--------------------------|
| 1 | Neg_060 111_tota l_digits_ 001 | Check that totalDigits are converted to value boundaries | Clause 6.1.11 | m | y |
| 2 | Neg_060 111_tota l_digits_ 002 | Check that totalDigits are converted to value boundaries | Clause 6.1.11 | m | y |
| 3 | Neg_060 111_tota l_digits_ 003 | Check that totalDigits are converted to value boundaries | Clause 6.1.11 | m | y |
| 4 | Neg_060 111_tota l_digits_ 004 | Check that totalDigits are converted to value boundaries | Clause 6.1.11 | m | y |
| 5 | Pos_060 111_tota l_digits_ 001 | Check that totalDigits are converted to value boundaries | Clause 6.1.11 | m | y |
| 6 | Pos_060 111_tota l_digits_ 002 | Check that totalDigits are converted to value boundaries | Clause 6.1.11 | m | y |
| 7 | Pos_060 111_tota l_digits_ 003 | Check that totalDigits are converted to value boundaries | Clause 6.1.11 | m | y |
| 8 | Pos_060 111_tota l_digits_ 004 | Check that totalDigits are converted to value boundaries | Clause 6.1.11 | m | y |
| 9 | Pos_060 111_tota l_digits_ 005 | Check that totalDigits are converted to value boundaries | Clause 6.1.11 | m | y |

5.17. Fraction digits

Table 16. Fraction digits

| Item | TC/TP reference | Purpose | Reference in ETSI ES 201 8739 | Status | Support |
|------|--------------------------------|--|-------------------------------|--------|---------|
| 1 | Pos_060112_fraction_digits_001 | Check that floats having same accuracy as fractionDigits are converted correctly | Clause 6.1.12 | m | y |
| 2 | Pos_060112_fraction_digits_002 | Check that floats having higher accuracy than fractionDigits are converted correctly | Clause 6.1.12 | m | y |

5.18. Not specifically mapped facets

Table 17. Not specifically mapped facets

| Item | TC/TP reference | Purpose | Reference in ETSI ES 201 8739 | Status | Support |
|------|---------------------------|---|-------------------------------|--------|---------|
| 1 | Pos_060113_not_mapped_001 | Handle not mapped facets to transparent | Clause 6.1.13 | m | n |

5.19. String

Table 18. String

| Item | TC/TP reference | Purpose | Reference in ETSI ES 201 8739 | Status | Support |
|------|-----------------------|---------------------------------|-------------------------------|--------|---------|
| 1 | Pos_060201_string_001 | Verify mapping of a string type | Clause 6.2.1 | m | y |

5.20. Name

Table 19. Name

| Item | TC/TP reference | Purpose | Reference in ETSI ES 201 8739 | Status | Support |
|------|---------------------|-------------------------------|-------------------------------|--------|---------|
| 1 | Pos_060204_name_001 | Verify mapping of a Name type | Clause 6.2.4 | m | y |

5.21. Any URI

Table 20. Any URI

| Item | TC/TP reference | Purpose | Reference in ETSI ES 201 8739 | Status | Support |
|------|------------------------|----------------------------------|-------------------------------|--------|---------|
| 1 | Neg_060212_any_uri_001 | Verify mapping of an anyURI type | Clause 6.2.12 | m | y |
| 2 | Neg_060212_any_uri_002 | Verify mapping of an anyURI type | Clause 6.2.12 | m | y |
| 3 | Pos_060212_any_uri_001 | Verify mapping of an anyURI type | Clause 6.2.12 | m | y |

5.22. Integer

Table 21. Integer

| Item | TC/TP reference | Purpose | Reference in ETSI ES 201 8739 | Status | Support |
|------|------------------------|---|-------------------------------|--------|---------|
| 1 | Pos_060301_integer_001 | Verify that the integer type shall be translated to TTCN-3 as a plain integer | Clause 6.3.1 | m | y |

5.23. Positive integer

Table 22. Positive integer

| Item | TC/TP reference | Purpose | Reference in ETSI ES 201 8739 | Status | Support |
|------|---------------------------------|--|-------------------------------|--------|---------|
| 1 | Pos_060302_positive_integer_001 | Verify that the integer type shall be translated to TTCN-3 as the range-restricted integer | Clause 6.3.2 | m | y |

5.24. Non-positive integer

Table 23. Non-positive integer

| Item | TC/TP reference | Purpose | Reference in ETSI ES 201 8739 | Status | Support |
|------|-------------------------------------|---|-------------------------------|--------|---------|
| 1 | Pos_060303_non_positive_integer_001 | Verify that the non positive integer type shall be translated to TTCN-3 as the range-restricted integer | Clause 6.3.3 | m | y |

5.25. Negative integer

Table 24. Negative integer

| Item | TC/TP reference | Purpose | Reference in ETSI ES 201 8739 | Status | Support |
|------|---------------------------------|---|-------------------------------|--------|---------|
| 1 | Pos_060304_negative_integer_001 | Verify that the negative integer type shall be translated to TTCN-3 as the range-restricted integer | Clause 6.3.4 | m | y |

5.26. Non-negative integer

Table 25. Non-negative integer

| Item | TC/TP reference | Purpose | Reference in ETSI ES 201 8739 | Status | Support |
|------|-------------------------------------|---|-------------------------------|--------|---------|
| 1 | Pos_060305_non_negative_integer_001 | Verify that the non negative integer type shall be translated to TTCN-3 as the range-restricted integer | Clause 6.3.5 | m | y |

5.27. Long

Table 26. Long

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|---------------------------------|---|--|--------------------|--------------------------|
| 1 | Pos_060 306_long _001 | Verify that long type (64bit) shall be translated to TTCN-3 as a plain long | Clause 6.3.6 | m | y |

5.28. Unsigned long

Table 27. Unsigned long

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|--|---|--|--------------------|--------------------------|
| 1 | Pos_060 307_unsi gned_lo ng_001 | Verify that unsigned long type (64bit) shall be translated to TTCN-3 as a plain unsigned long | Clause 6.3.7 | m | y |

5.29. Int

Table 28. Int

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|---------------------------------|--|--|--------------------|--------------------------|
| 1 | Pos_060 308_int_ 001 | Verify that int type (32 bit) shall be translated to TTCN-3 as a plain long as defined in clause 6.3.8 of ETSI ES 201 873 9 Methods for Testing and Specification (MTS); The Testing and Test Control Notation version 3; Part 9: Using XML schema with TTCN-3 | Clause 6.3.8 | m | y |

5.30. Unsigned int

Table 29. Unsigned int

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|---|--|--|--------------------|--------------------------|
| 1 | Pos_060 309_unsi gned_int _001 | Verify that unsigned int type (32 bit) shall be translated to TTCN-3 as a plain unsigned long as defined in clause 6.3.9 of ETSI ES 201 873 9 Methods for Testing and Specification (MTS); The Testing and Test Control Notation version 3; Part 9: Using XML schema with TTCN-3 | Clause 6.3.9 | m | y |

5.31. Short

Table 30. Short

| Item | TC/TP reference | Purpose | Reference in ETSI ES 201 8739 | Status | Support |
|------|----------------------|--|-------------------------------|--------|---------|
| 1 | Pos_060310_short_001 | Verify that short type (16 bit) shall be translated to TTCN-3 as a plain short as defined in clause 6.3.10 of ETSI ES 201 873 9 Methods for Testing and Specification (MTS) ; The Testing and Test Control Notation version 3 ; Part 9: Using XML schema with TTCN-3 | Clause 6.3.10 | m | y |

5.32. Unsigned Short

Table 31. Unsigned Short

| Item | TC/TP reference | Purpose | Reference in ETSI ES 201 8739 | Status | Support |
|------|-------------------------------|--|-------------------------------|--------|---------|
| 1 | Pos_060311_unsigned_short_001 | Verify that unsigned short type (16 bit) shall be translated to TTCN-3 as a plain unsigned short as defined in clause 6.3.11 of ETSI ES 201 873 9 Methods for Testing and Specification (MTS) ; The Testing and Test Control Notation version 3 ; Part 9: Using XML schema with TTCN-3 | Clause 6.3.11 | m | y |

5.33. Byte

Table 32. Byte

| Item | TC/TP reference | Purpose | Reference in ETSI ES 201 8739 | Status | Support |
|------|---------------------|---|-------------------------------|--------|---------|
| 1 | Pos_060312_byte_001 | Verify that byte type (8 bit) shall be translated to TTCN-3 as a plain byte as defined in clause 6.3.12 of ETSI ES 201 873 9 Methods for Testing and Specification (MTS) ; The Testing and Test Control Notation version 3 ; Part 9: Using XML schema with TTCN-3 | Clause 6.3.12 | m | y |

5.34. Unsigned byte

Table 33. Unsigned byte

| Item | TC/TP reference | Purpose | Reference in ETSI ES 201 8739 | Status | Support |
|------|------------------------------|---|-------------------------------|--------|---------|
| 1 | Pos_060313_unsigned_byte_001 | Verify that unsigned byte type (8 bit) shall be translated to TTCN-3 as a plain unsigned byte as defined in clause 6.3.13 of ETSI ES 201 873 9 Methods for Testing and Specification (MTS); The Testing and Test Control Notation version 3; Part 9: Using XML schema with TTCN-3 | Clause 6.3.13 | m | y |

5.35. Decimal

Table 34. Decimal

| Item | TC/TP reference | Purpose | Reference in ETSI ES 201 8739 | Status | Support |
|------|------------------------|---|-------------------------------|--------|---------|
| 1 | Pos_060401_decimal_001 | Verify that decimal type shall be translated to TTCN-3 as a plain float | Clause 6.4.1 | m | y |

5.36. Float

Table 35. Float

| Item | TC/TP reference | Purpose | Reference in ETSI ES 201 8739 | Status | Support |
|------|----------------------|-------------------------------------|-------------------------------|--------|---------|
| 1 | Pos_060402_float_001 | Verify conversion of XSD float type | Clause 6.4.2 | m | y |

5.37. Double

Table 36. Double

| Item | TC/TP reference | Purpose | Reference in ETSI ES 201 8739 | Status | Support |
|------|-----------------------|--|-------------------------------|--------|---------|
| 1 | Pos_060403_double_001 | Verify that double type shall be translated to TTCN-3 as an IEEE754double as defined in clause 6.4.3 of ETSI ES 201 873 9 Methods for Testing and Specification (MTS); The Testing and Test Control Notation version 3; Part 9: Using XML schema with TTCN-3 | Clause 6.4.3 | m | y |

5.38. Date and time

Table 37. Date and time

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|--|---|--|--------------------|--------------------------|
| 1 | Neg_060 502_date _and_ti me_001 | Verify that the dateTime type shall be translated to TTCN-3 using the pattern-restricted charstring | Clause 6.5.2 | m | y |
| 2 | Neg_060 502_date _and_ti me_002 | Verify that the dateTime type shall be translated to TTCN-3 using the pattern-restricted charstring | Clause 6.5.2 | m | y |
| 3 | Neg_060 502_date _and_ti me_003 | Verify that the dateTime type shall be translated to TTCN-3 using the pattern-restricted charstring | Clause 6.5.2 | m | y |
| 4 | Neg_060 502_date _and_ti me_004 | Verify that the dateTime type shall be translated to TTCN-3 using the pattern-restricted charstring | Clause 6.5.2 | m | y |
| 5 | Pos_060 502_date _and_ti me_001 | Verify that the dateTime type shall be translated to TTCN-3 using the pattern-restricted charstring | Clause 6.5.2 | m | y |
| 6 | Pos_060 502_date _and_ti me_002 | Verify that the dateTime type shall be translated to TTCN-3 using the pattern-restricted charstring | Clause 6.5.2 | m | y |
| 7 | Pos_060 502_date _and_ti me_003 | Verify that the dateTime type shall be translated to TTCN-3 using the pattern-restricted charstring | Clause 6.5.2 | m | y |
| 8 | Pos_060 502_date _and_ti me_004 | Verify that the dateTime type shall be translated to TTCN-3 using the pattern-restricted charstring | Clause 6.5.2 | m | y |

5.39. Date

Table 38. Date

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|---------------------------------|---|--|--------------------|--------------------------|
| 1 | Neg_060 504_date _001 | Verify that the date type shall be translated to TTCN-3 using the pattern-restricted charstring | Clause 6.5.4 | m | y |
| 2 | Neg_060 504_date _002 | Verify that the date type shall be translated to TTCN-3 using the pattern-restricted charstring | Clause 6.5.4 | m | y |
| 3 | Neg_060 504_date _003 | Verify that the date type shall be translated to TTCN-3 using the pattern-restricted charstring | Clause 6.5.4 | m | y |
| 4 | Neg_060 504_date _004 | Verify that the date type shall be translated to TTCN-3 using the pattern-restricted charstring | Clause 6.5.4 | m | y |
| 5 | Pos_060 504_date _001 | Verify that the date type shall be translated to TTCN-3 using the pattern-restricted charstring | Clause 6.5.4 | m | y |
| 6 | Pos_060 504_date _002 | Verify that the date type shall be translated to TTCN-3 using the pattern-restricted charstring | Clause 6.5.4 | m | y |
| 7 | Pos_060 504_date _003 | Verify that the date type shall be translated to TTCN-3 using the pattern-restricted charstring | Clause 6.5.4 | m | y |
| 8 | Pos_060 504_date _004 | Verify that the date type shall be translated to TTCN-3 using the pattern-restricted charstring | Clause 6.5.4 | m | y |

5.40. Gregorian year and month

Table 39. Gregorian year and month

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|---|---|--|--------------------|--------------------------|
| 1 | Neg_060 505_greg orian_ye ar_and_ month_0 01 | Verify that the gYearMonth type shall be translated to TTCN-3 using the pattern-restricted charstring | Clause 6.5.5 | m | y |

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|---|---|--|--------------------|--------------------------|
| 2 | Neg_060 505_greg orian_ye ar_and_ month_0 02 | Verify that the gYearMonth type shall be translated to TTCN-3 using the pattern-restricted charstring | Clause 6.5.5 | m | y |
| 3 | Neg_060 505_greg orian_ye ar_and_ month_0 03 | Verify that the gYearMonth type shall be translated to TTCN-3 using the pattern-restricted charstring | Clause 6.5.5 | m | y |
| 4 | Neg_060 505_greg orian_ye ar_and_ month_0 04 | Verify that the gYearMonth type shall be translated to TTCN-3 using the pattern-restricted charstring | Clause 6.5.5 | m | y |
| 5 | Pos_060 505_greg orian_ye ar_and_ month_0 01 | Verify that the gYearMonth type shall be translated to TTCN-3 using the pattern-restricted charstring | Clause 6.5.5 | m | y |
| 6 | Pos_060 505_greg orian_ye ar_and_ month_0 02 | Verify that the gYearMonth type shall be translated to TTCN-3 using the pattern-restricted charstring | Clause 6.5.5 | m | y |

5.41. Gregorian year

Table 40. Gregorian year

| Item | TC/TP reference | Purpose | Reference in ETSI ES 201 8739 | St atus | Su pp ort |
|------|---|--|-------------------------------------|------------|-----------------|
| 1 | Neg_06 0506_g regoria n_year _001 | Verify that the gYear type shall be translated to TTCN-3 using the pattern-restricted charstring | Clause 6.5.6 | m | y |
| 2 | Pos_06 0506_g regoria n_year _001 | Verify that the gYear type shall be translated to TTCN-3 using the pattern-restricted charstring | Clause 6.5.6 | m | y |
| 3 | Pos_06 0506_g regoria n_year _002 | Verify that the gYear type shall be translated to TTCN-3 using the pattern-restricted charstring | Clause 6.5.6 | m | y |
| 4 | Pos_06 0506_g regoria n_year _003 | Verify that the gYear allows year 0 | Clause 6.5.6 | m | y |
| 5 | Pos_06 0506_g regoria n_year _004 | Verify that the gYear type shall be translated to TTCN-3 using the pattern-restricted charstring | Clause 6.5.6 | m | y |
| 6 | Pos_06 0506_g regoria n_year _005 | Verify that the gYear accepts negative years | Clause 6.5.6 | m | y |
| 7 | Pos_06 0506_g regoria n_year _006 | Verify that the gYear allows negative year with more than 4 digits | Clause 6.5.6 | m | y |

5.42. Boolean type

Table 41. Boolean type

| Item | TC/TP reference | Purpose | Reference in ETSI ES 201 8739 | Status | Support |
|------|---------------------------|---|-------------------------------|--------|---------|
| 1 | Pos_0607_boolean_type_001 | Verify that the XSD boolean type shall be mapped to the TTCN-3 boolean type | Clause 6.7 | m | y |
| 2 | Pos_0607_boolean_type_002 | Verify that the XSD boolean type shall be mapped to the TTCN-3 boolean type | Clause 6.7 | m | y |

5.43. AnyType and anySimpleType types

Table 42. AnyType and anySimpleType types

| Item | TC/TP reference | Purpose | Reference in ETSI ES 201 8739 | Status | Support |
|------|--|------------------------------------|-------------------------------|--------|---------|
| 1 | Pos_0608_anytype_and_anysimpletype_types_001 | Verify conversion of anySimpleType | Clause 6.8 | m | y |
| 2 | Pos_0608_anytype_and_anysimpletype_types_002 | Verify conversion of anyType | Clause 6.8 | m | y |

5.44. Id

Table 43. Id

| Item | TC/TP reference | Purpose | Reference in ETSI ES 201 8739 | Status | Support |
|------|-------------------|---|-------------------------------|--------|---------|
| 1 | Pos_070101_id_001 | Verify conversion of id attribute of global element | Clause 7.1.1 | m | n |

| Item | TC/TP reference | Purpose | Reference in ETSI ES 201 8739 | Status | Support |
|------|--------------------|--|-------------------------------------|--------|---------|
| 2 | Pos_070101_id_002 | verify conversion of id attribute of local element | Clause 7.1.1 | m | n |

5.45. MinOccurs and maxOccurs

Table 44. MinOccurs and maxOccurs

| Item | TC/TP reference | Purpose | Reference in ETSI ES 201 8739 | Status | Support |
|------|--|--|-------------------------------------|--------|---------|
| 1 | Neg_070104_minOccurs_and_maxOccurs_001 | a list with minOccurs 0 should not be mapped optional in TTCN-3 | Clause 7.1.4 | m | y |
| 2 | Neg_070104_minOccurs_and_maxOccurs_002 | A restricted length list [5, 10] should not allow less than 5 elements | Clause 7.1.4 | m | y |
| 3 | Neg_070104_minOccurs_and_maxOccurs_003 | A restricted length list [5, 10] should not allow more than 10 elements | Clause 7.1.4 | m | y |
| 4 | Pos_070104_minOccurs_and_maxOccurs_001 | Optional field defined by minOccurs has to be mapped as optional in TTCN-3 | Clause 7.1.4 | m | y |
| 5 | Pos_070104_minOccurs_and_maxOccurs_002 | Optional field defined by minOccurs has to exist in TTCN-3 and match the value | Clause 7.1.4 | m | y |

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|--|---|--|--------------------|--------------------------|
| 6 | Pos_070 104_min occurs_a nd_max occurs_0 03 | a list with minOccurs 0 should allow zero elements | Clause 7.1.4 | m | y |
| 7 | Pos_070 104_min occurs_a nd_max occurs_0 04 | A restricted length list (0, unbounded) should allow elements | Clause 7.1.4 | m | y |
| 8 | Pos_070 104_min occurs_a nd_max occurs_0 05 | A restricted length list [5, 10] should allow 5 elements | Clause 7.1.4 | m | y |
| 9 | Pos_070 104_min occurs_a nd_max occurs_0 06 | A restricted length list [5, 10] should allow 10 elements | Clause 7.1.4 | m | y |
| 10 | Pos_070 104_min occurs_a nd_max occurs_0 07 | A restricted length list [5, 10] should allow 7 elements | Clause 7.1.4 | m | y |

5.46. Default and Fixed

Table 45. Default and Fixed

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|--|---|--|--------------------|--------------------------|
| 1 | Neg_070 105_defa ult_and_ fixed_00 1 | Verify constraint of type based on XSD definition with fixed attribute | Clause 7.1.5 | m | y |
| 2 | Pos_070 105_defa ult_and_ fixed_00 1 | Verify conversion of fixed attribute | Clause 7.1.5 | m | y |
| 3 | Pos_070 105_defa ult_and_ fixed_00 2 | Verify conversion of default attribute | Clause 7.1.5 | m | y |
| 4 | Pos_070 105_defa ult_and_ fixed_00 3 | Verify that default value is automatically assigned to empty element by decoder | Clause 7.1.5 | m | y |
| 5 | Pos_070 105_defa ult_and_ fixed_00 4 | Verify that fixed value is automatically assigned to empty element by decoder | Clause 7.1.5 | m | y |

5.47. Form

Table 46. Form

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|---------------------------------|--|--|--------------------|--------------------------|
| 1 | Neg_070 106_for m_001 | check correct namespace prefix encoding for elementFormDefault | Clause 7.1.6 | m | n |
| 2 | Neg_070 106_for m_002 | check correct namespace prefix encoding for elementFormDefault | Clause 7.1.6 | m | n |

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|---------------------------------|---|--|--------------------|--------------------------|
| 3 | Neg_070 106_for m_003 | check correct namespace prefix encoding for attributeFormDefault | Clause 7.1.6 | m | n |
| 4 | Neg_070 106_for m_004 | check correct namespace prefix encoding for attributeFormDefault | Clause 7.1.6 | m | n |
| 5 | Pos_070 106_for m_001 | Verify that unqualified attribute form is correctly converted (unqualified attributeFormDefault) | Clause 7.1.6 | m | y |
| 6 | Pos_070 106_for m_002 | Verify that unqualified attribute form is correctly converted (qualified attributeFormDefault) | Clause 7.1.6 | m | y |
| 7 | Pos_070 106_for m_003 | Verify that qualified attribute form is correctly converted (unqualified attributeFormDefault) | Clause 7.1.6 | m | y |
| 8 | Pos_070 106_for m_004 | Verify that qualified attribute form is correctly converted (qualified attributeFormDefault) | Clause 7.1.6 | m | y |
| 9 | Pos_070 106_for m_005 | Verify that unqualified element form is correctly converted (unqualified elementFormDefault) | Clause 7.1.6 | m | y |
| 10 | Pos_070 106_for m_006 | Verify that unqualified element form is correctly converted (qualified elementFormDefault) | Clause 7.1.6 | m | y |
| 11 | Pos_070 106_for m_007 | Verify that qualified element form is correctly converted (unqualified elementFormDefault) | Clause 7.1.6 | m | y |
| 12 | Pos_070 106_for m_008 | Verify that qualified element form is correctly converted (qualified elementFormDefault) | Clause 7.1.6 | m | y |
| 13 | Pos_070 106_for m_009 | check correct namespace prefix encoding for elementFormDefault | Clause 7.1.6 | m | y |
| 14 | Pos_070 106_for m_010 | check correct namespace prefix encoding for elementFormDefault | Clause 7.1.6 | m | y |
| 15 | Pos_070 106_for m_011 | check correct namespace prefix encoding for attributeFormDefault | Clause 7.1.6 | m | y |

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|---------------------------------|---|--|--------------------|--------------------------|
| 16 | Pos_070 106_for m_012 | check correct namespace prefix encoding for attributeFormDefault | Clause 7.1.6 | m | y |

5.48. Type

Table 47. Type

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|---------------------------------|---|--|--------------------|--------------------------|
| 1 | Pos_070 107_type _001 | Verify conversion of type attribute referencing global simpleType | Clause 7.1.7 | m | y |
| 2 | Pos_070 107_type _002 | Verify conversion of type attribute referencing global complexType | Clause 7.1.7 | m | y |
| 3 | Pos_070 107_type _003 | Verify conversion of type attribute referencing built-in type | Clause 7.1.7 | m | y |

5.49. Use

Table 48. Use

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|---------------------------------|---|--|--------------------|--------------------------|
| 1 | Neg_070 112_use_ 001 | Verify that attribute with required use cannot be omitted | Clause 7.1.12 | m | y |
| 2 | Pos_070 112_use_ 001 | Verify that attribute with required use is correctly converted | Clause 7.1.12 | m | y |
| 3 | Pos_070 112_use_ 002 | Verify that attribute with optional use is correctly converted | Clause 7.1.12 | m | y |
| 4 | Pos_070 112_use_ 003 | Verify that attribute with prohibited use is not converted | Clause 7.1.12 | m | y |

5.50. Final

Table 49. Final

| Item | TC/TP reference | Purpose | Reference in ETSI ES 201 8739 | Status | Support |
|------|----------------------|--|-------------------------------|--------|---------|
| 1 | Pos_070114_final_001 | Verify conversion of elements with final attribute | Clause 7.1.14 | m | y |

5.51. Element component

Table 50. Element component

| Item | TC/TP reference | Purpose | Reference in ETSI ES 201 8739 | Status | Support |
|------|--------------------------------|---|-------------------------------|--------|---------|
| 1 | Pos_0703_element_component_001 | Verify conversion of global element of simple type | Clause 7.3 | m | y |
| 2 | Pos_0703_element_component_002 | Verify conversion of global element of user defined type | Clause 7.3 | m | y |
| 3 | Pos_0703_element_component_003 | Verify conversion of global element of locally defined complex type | Clause 7.3 | m | y |
| 4 | Pos_0703_element_component_004 | Verify conversion of local elements defined by reference with different namespace | Clause 7.3 | m | y |

5.52. Attribute element definitions

Table 51. Attribute element definitions

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|--|--|--|--------------------|--------------------------|
| 1 | Pos_070 401_attri bute_ele ment_de finitions _001 | Verify mapping of a globally defined attribute | Clause 7.4.1 | m | y |

5.53. Attribute group definitions

Table 52. Attribute group definitions

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|--|--|--|--------------------|--------------------------|
| 1 | Pos_070 402_attri bute_gro up_defin itions_00 1 | Verify mapping of a globally defined attribute group | Clause 7.4.2 | m | y |

5.54. Derivation by restriction

Table 53. Derivation by restriction

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|--|---|--|--------------------|--------------------------|
| 1 | Pos_070 501_deri vation_b y_restric tion_001 | Verify that it is possible to convert anonymously | Clause 7.5.1 | m | y |

5.55. Derivation by list

Table 54. Derivation by list

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|---|---|--|--------------------|--------------------------|
| 1 | Neg_070 502_derivation_b y_list_00 1 | Verify length constraint imposed on type derived by list | Clause 7.5.2 | m | y |
| 2 | Neg_070 502_derivation_b y_list_00 2 | Verify constraint imposed on inner type defined inside XSD list | Clause 7.5.2 | m | y |
| 3 | Pos_070 502_derivation_b y_list_00 1 | Verify that derivation by list is converted to record of | Clause 7.5.2 | m | y |
| 4 | Pos_070 502_derivation_b y_list_00 2 | Verify mapping of facets connected applied to derivation by list | Clause 7.5.2 | m | y |
| 5 | Pos_070 502_derivation_b y_list_00 3 | Verify conversion of facets defined inside XSD list | Clause 7.5.2 | m | y |
| 6 | Pos_070 502_derivation_b y_list_00 4 | Verify transformation of derivation by list with enumerated facets inside | Clause 7.5.2 | m | y |
| 7 | Pos_070 502_derivation_b y_list_00 5 | Verify transformation of list containing union content | Clause 7.5.2 | m | y |

5.56. Derivation by union

Table 55. Derivation by union

| Item | TC/TP reference | Purpose | Reference in ETSI ES 201 8739 | Status | Support |
|-------------|------------------------------------|--|--------------------------------------|---------------|----------------|
| 1 | Pos_070503_derivation_by_union_001 | Verify transformation of union with memberTypes attribute | Clause 7.5.3 | m | y |
| 2 | Pos_070503_derivation_by_union_002 | Verify transformation of union with unnamed member types | Clause 7.5.3 | m | y |
| 3 | Pos_070503_derivation_by_union_003 | Verify transformation of union with memberTypes attribute and unnamed member types | Clause 7.5.3 | m | y |
| 4 | Pos_070503_derivation_by_union_004 | Verify transformation of union with memberTypes attribute and unnamed enumeration | Clause 7.5.3 | m | y |
| 5 | Pos_070503_derivation_by_union_005 | Verify transformation of union content containing enumeration facets | Clause 7.5.3 | m | y |
| 6 | Pos_070503_derivation_by_union_006 | Verify transformation of union containing list content | Clause 7.5.3 | m | y |

5.57. Extending simple content

Table 56. Extending simple content

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|---|--|--|--------------------|--------------------------|
| 1 | Pos_070 60101_e xtending _simple_ content_ 001 | Verify extension of a built-in type by adding an attribute | Clause 7.6.1.1 | m | y |

5.58. Restricting simple content

Table 57. Restricting simple content

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|---|-----------------------------------|--|--------------------|--------------------------|
| 1 | Neg_070 60102_re stricting _simple_ content_ 001 | Verify restriction of a base type | Clause 7.6.1.2 | m | y |
| 2 | Pos_070 60102_re stricting _simple_ content_ 001 | Verify restriction of a base type | Clause 7.6.1.2 | m | y |

5.59. Complex content derived by extension

Table 58. Complex content derived by extension

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|---|---|--|--------------------|--------------------------|
| 1 | Pos_070 60201_d erived_b y_extens ion_001 | Verify mapping of complex type where both the base and the extending types have the compositor sequence | Clause 7.6.2.1 | m | y |

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|---|---|--|--------------------|--------------------------|
| 2 | Pos_070 60201_d erived_b y_extens ion_002 | Verify mapping of complex type where both the base and the extending types have the compositor sequence and multiple occurrences are allowed | Clause 7.6.2.1 | m | y |
| 3 | Pos_070 60201_d erived_b y_extens ion_003 | Verify mapping of complex type where both the base and the extending types have the compositor sequence and multiple occurrences are allowed | Clause 7.6.2.1 | m | y |
| 4 | Pos_070 60201_d erived_b y_extens ion_004 | Verify mapping of complex type where both the base and the extending types have the compositor sequence and multiple occurrences are allowed | Clause 7.6.2.1 | m | y |
| 5 | Pos_070 60201_d erived_b y_extens ion_005 | Verify mapping of complex type where both the base and the extending types have the compositor sequence and multiple occurrences are allowed | Clause 7.6.2.1 | m | y |
| 6 | Pos_070 60201_d erived_b y_extens ion_006 | Verify mapping of complex type where both the base and the extending types have the compositor choice | Clause 7.6.2.1 | m | y |
| 7 | Pos_070 60201_d erived_b y_extens ion_007 | Verify mapping of complex type where extension of a sequence base type by a choice model group | Clause 7.6.2.1 | m | y |
| 8 | Pos_070 60201_d erived_b y_extens ion_008 | Verify mapping of complex type: extending of a base type with choice model group by a sequence model group | Clause 7.6.2.1 | m | y |
| 9 | Pos_070 60201_d erived_b y_extens ion_009 | Verify mapping of complex type: Recursive extension of an anonymous inner type is realized using the TTCN-3 dot notation (starts from the name of the outmost type) | Clause 7.6.2.1 | m | y |

5.60. Complex content derived by restriction

Table 59. Complex content derived by restriction

| Item | TC/TP reference | Purpose | Reference in ETSI ES 201 8739 | Status | Support |
|------|---|--|-------------------------------|--------|---------|
| 1 | Pos_07060202_derived_by_restriction_001 | Verify mapping of complex content derived by restriction | Clause 7.6.2.2 | m | y |

5.61. Referencing group components

Table 60. Referencing group components

| Item | TC/TP reference | Purpose | Reference in ETSI ES 201 8739 | Status | Support |
|------|---|---|-------------------------------|--------|---------|
| 1 | Pos_070603_referencing_group_components_001 | Verify conversion of group reference occurring as child of complex type (sequence, one occurrence) | Clause 7.6.3 | m | y |
| 2 | Pos_070603_referencing_group_components_002 | Verify conversion of group reference occurring inside sequence | Clause 7.6.3 | m | y |
| 3 | Pos_070603_referencing_group_components_003 | Verify conversion of group reference occurring as child of complex type (sequence, optional occurrence) | Clause 7.6.3 | m | y |

| Item | TC/TP reference | Purpose | Reference in ETSI ES 201 8739 | Status | Support |
|-------------|--|--|--------------------------------------|---------------|----------------|
| 4 | Pos_070_603_referencing_group_components_004 | Verify conversion of group reference occurring as child of complex type (sequence, 0..N) | Clause 7.6.3 | m | y |
| 5 | Pos_070_603_referencing_group_components_005 | Verify conversion of group reference occurring as child of complex type (all, one occurrence) | Clause 7.6.3 | m | y |
| 6 | Pos_070_603_referencing_group_components_006 | Verify conversion of group reference occurring as child of complex type (all, 0..1) | Clause 7.6.3 | m | y |
| 7 | Pos_070_603_referencing_group_components_007 | Verify conversion of group reference occurring as child of complex type (choice, one occurrence) | Clause 7.6.3 | m | y |
| 8 | Pos_070_603_referencing_group_components_008 | Verify conversion of group reference occurring as child of complex type (choice, 0..1) | Clause 7.6.3 | m | y |
| 9 | Pos_070_603_referencing_group_components_009 | Verify conversion of group reference occurring as child of complex type (choice, 0..N) | Clause 7.6.3 | m | y |

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|---|--|--|--------------------|--------------------------|
| 10 | Pos_070 603_refe rencing_ group_c ompone nts_010 | Verify conversion of group reference occurring inside choice | Clause 7.6.3 | m | y |

5.62. All content

Table 61. All content

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Su pp ort |
|------------------|--|---|--|--------------------|--------------------------|
| 1 | Pos_070 604_all_ content_ 001 | Verify conversion of all content containing mandatory fields | Clause 7.6.4 | m | y |
| 2 | Pos_070 604_all_ content_ 002 | Verify conversion of all content with minOccurs="0" | Clause 7.6.4 | m | y |
| 3 | Pos_070 604_all_ content_ 003 | Verify transformation of elements with minOccurs attribute occurring inside all content | Clause 7.6.4 | m | y |
| 4 | Pos_070 604_all_ content_ 004 | Verify transformation of all content containing attributes | Clause 7.6.4 | m | y |

5.63. Choice content

Table 62. Choice content

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|--------------------------------------|---|--|--------------------|--------------------------|
| 1 | Pos_070 605_top_ level_00 1 | Verify that choice content with minOccurs different than 1 is correctly transformed | Clause 7.6.5 | m | y |

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|--------------------------------------|--|--|--------------------|--------------------------|
| 2 | Pos_070 605_top_ level_00 2 | Verify that choice content with maxOccurs larger than 1 is correctly transformed | Clause 7.6.5 | m | y |

5.64. Choice with nested elements

Table 63. Choice with nested elements

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|--|--|--|--------------------|--------------------------|
| 1 | Pos_070 60501_c hoice_wi th_neste d_eleme nts_001 | Verify that choice content with nested elements is correctly transformed | Clause 7.6.5.1 | m | y |

5.65. Choice with nested group

Table 64. Choice with nested group

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|---|---|--|--------------------|--------------------------|
| 1 | Pos_070 60502_c hoice_wi th_neste d_group _001 | Verify that choice content with nested group is correctly transformed | Clause 7.6.5.2 | m | y |

5.66. Choice with nested choice

Table 65. Choice with nested choice

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|---------------------------------|----------------|--|--------------------|--------------------------|
| | | | | | |

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|--|--|--|--------------------|--------------------------|
| 1 | Pos_070 60503_c hoice_wi th_neste d_choice _001 | Verify that choice content with nested choice is correctly transformed | Clause 7.6.5.3 | m | y |

5.67. Choice with nested sequence

Table 66. Choice with nested sequence

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|--|--|--|--------------------|--------------------------|
| 1 | Pos_070 60504_c hoice_wi th_neste d_seque nce_001 | Verify that choice content with nested sequence is correctly transformed | Clause 7.6.5.4 | m | y |
| 2 | Pos_070 60504_c hoice_wi th_neste d_seque nce_002 | Verify that choice content with multiple nested sequences is correctly transformed | Clause 7.6.5.4 | m | y |

5.68. Choice with nested any

Table 67. Choice with nested any

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|---|---|--|--------------------|--------------------------|
| 1 | Pos_070 60505_c hoice_wi th_neste d_any_0 01 | Verify that choice content with nested any is correctly transformed | Clause 7.6.5.5 | m | y |

5.69. Sequence with nested element content

Table 68. Sequence with nested element content

| Item | TC/TP reference | Purpose | Reference in ETSI ES 201 8739 | Status | Support |
|------|---|--|-------------------------------|--------|---------|
| 1 | Pos_07060601_sequence_with_nested_element_001 | Verify that sequence content with nested elements is correctly transformed | Clause 7.6.6.1 | m | y |

5.70. Sequence with nested group content

Table 69. Sequence with nested group content

| Item | TC/TP reference | Purpose | Reference in ETSI ES 201 8739 | Status | Support |
|------|---|--|-------------------------------|--------|---------|
| 1 | Pos_07060602_sequence_with_nested_group_001 | Verify that sequence content with group reference is correctly transformed | Clause 7.6.6.2 | m | y |

5.71. Sequence with nested choice content

Table 70. Sequence with nested choice content

| Item | TC/TP reference | Purpose | Reference in ETSI ES 201 8739 | Status | Support |
|------|--|--|-------------------------------|--------|---------|
| 1 | Pos_07060603_sequence_with_nested_choice_001 | Verify that sequence content with nested choice is correctly transformed | Clause 7.6.6.3 | m | y |

5.72. Sequence with nested sequence content

Table 71. Sequence with nested sequence content

| Item | TC/TP reference | Purpose | Reference in ETSI ES 201 8739 | Status | Support |
|------|--|---|-------------------------------|--------|---------|
| 1 | Pos_07060604_sequence_with_nested_sequence_001 | Verify that sequence content with sequence is correctly transformed | Clause 7.6.6.4 | m | y |
| 2 | Pos_07060604_sequence_with_nested_sequence_002 | Verify that sequence content with various nested particles is correctly transformed | Clause 7.6.6.4 | m | y |

5.73. Sequence with nested any content

Table 72. Sequence with nested any content

| Item | TC/TP reference | Purpose | Reference in ETSI ES 201 8739 | Status | Support |
|------|---|---|-------------------------------|--------|---------|
| 1 | Pos_07060605_sequence_with_nested_any_content_001 | Verify that sequence content with nested any content is correctly transformed | Clause 7.6.6.5 | m | y |

5.74. Effect of the minOccurs and maxOccurs attributes on the mapping

Table 73. Effect of the minOccurs and maxOccurs attributes on the mapping

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|--|--|--|--------------------|--------------------------|
| 1 | Pos_070 60606_ef fect_of_ minoccu rs_and_ maxocc urs_001 | Verify that sequences with minOccurs=0 are correctly converted to optional fields | Clause 7.6.6.6 | m | y |
| 2 | Pos_070 60606_ef fect_of_ minoccu rs_and_ maxocc urs_002 | Verify that nested sequences are correctly converted to optional fields | Clause 7.6.6.6 | m | y |
| 3 | Pos_070 60606_ef fect_of_ minoccu rs_and_ maxocc urs_003 | Verify that sequences with minOccurs=unbounded are correctly converted to record of fields | Clause 7.6.6.6 | m | y |
| 4 | Pos_070 60606_ef fect_of_ minoccu rs_and_ maxocc urs_004 | Verify that nested sequences are correctly converted to record of fields | Clause 7.6.6.6 | m | y |

5.75. Attribute definitions, attribute and attributeGroup references

Table 74. Attribute definitions, attribute and attributeGroup references

| Item | TC/TP reference | Purpose | Reference in ETSI ES 201 8739 | Status | Support |
|-------------|--|--|--------------------------------------|---------------|----------------|
| 1 | Pos_070607_attribute_definitions_attribute_and_attributegroup_references_001 | Verify referencing an attributeGroup in a complexType | Clause 7.6.7 | m | y |
| 2 | Pos_070607_attribute_definitions_attribute_and_attributegroup_references_002 | Verify mapping of a local attributes, attribute references and attribute group references without a target namespace | Clause 7.6.7 | m | y |
| 3 | Pos_070607_attribute_definitions_attribute_and_attributegroup_references_003 | Verify mapping of a local attributes, attribute references and attribute group references with a target namespace | Clause 7.6.7 | m | y |

5.76. Mixed content

Table 75. Mixed content

| Item | TC/TP reference | Purpose | Reference in ETSI ES 201 8739 | Status | Support |
|-------------|------------------------------|--|--------------------------------------|---------------|----------------|
| 1 | Pos_070608_mixed_content_001 | Verify transformation of complex type with sequence constructor and mixed content type | Clause 7.6.8 | m | y |

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|--|---|--|--------------------|--------------------------|
| 2 | Pos_070 608_mix ed_conte nt_002 | Verify transformation of complex type definition with sequence constructor of multiple occurrences and mixed content type | Clause 7.6.8 | m | n |
| 3 | Pos_070 608_mix ed_conte nt_003 | Verify transformation of complex type definition with all constructor and mixed content type | Clause 7.6.8 | m | y |
| 4 | Pos_070 608_mix ed_conte nt_004 | Verify transformation of complex type definition with all constructor, optional elements and mixed content type | Clause 7.6.8 | m | n |
| 5 | Pos_070 608_mix ed_conte nt_005 | Verify transformation of complex type definition with all constructor, optional elements and mixed content type | Clause 7.6.8 | m | y |

5.77. The any element

Table 76. The any element

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|--|--|--|--------------------|--------------------------|
| 1 | Pos_070 701_the_ any_ele ment_00 1 | Verify conversion of the any element without namespace attribute | Clause 7.7.1 | m | y |
| 2 | Pos_070 701_the_ any_ele ment_00 2 | Verify conversion of the any element with ##any namespace | Clause 7.7.1 | m | y |
| 3 | Pos_070 701_the_ any_ele ment_00 3 | Verify conversion of the any element with ##local namespace | Clause 7.7.1 | m | y |

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|--|---|--|--------------------|--------------------------|
| 4 | Pos_070 701_the_ any_ele ment_00 4 | Verify conversion of the any element with ##other namespace | Clause 7.7.1 | m | y |
| 5 | Pos_070 701_the_ any_ele ment_00 5 | Verify conversion of the any element with ##targetNamespace namespace | Clause 7.7.1 | m | y |
| 6 | Pos_070 701_the_ any_ele ment_00 6 | Verify conversion of the any element with URL as namespace into record of | Clause 7.7.1 | m | y |

5.78. The anyAttribute element

Table 77. The anyAttribute element

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|---|--|--|--------------------|--------------------------|
| 1 | Pos_070 702_the_ anyattri bute_ele ment_00 1 | Verify conversion of anyAttribute element | Clause 7.7.2 | m | y |
| 2 | Pos_070 702_the_ anyattri bute_ele ment_00 2 | Verify that anyAttribute is converted into optional field | Clause 7.7.2 | m | y |
| 3 | Pos_070 702_the_ anyattri bute_ele ment_00 3 | Verify that the naming rules apply to converted anyAttribute field | Clause 7.7.2 | m | y |

| Item | TC/TP reference | Purpose | Reference in ETSI ES 201 8739 | Status | Support |
|-------------|---|---|--------------------------------------|---------------|----------------|
| 4 | Pos_070702_the_anyattribute_element_004 | Verify that conversion of anyAttribute present both in extended type and extension base | Clause 7.7.2 | m | y |
| 5 | Pos_070702_the_anyattribute_element_005 | Verify that converted anyAttribute field is in correct place | Clause 7.7.2 | m | y |

5.79. Annotation

Table 78. Annotation

| Item | TC/TP reference | Purpose | Reference in ETSI ES 201 8739 | Status | Support |
|-------------|-------------------------|---|--------------------------------------|---------------|----------------|
| 1 | Pos_0708_annotation_001 | Verify that XSD annotation can be processed | Clause 7.8 | m | y |

5.80. Group components

Table 79. Group components

| Item | TC/TP reference | Purpose | Reference in ETSI ES 201 8739 | Status | Support |
|-------------|-------------------------------|--|--------------------------------------|---------------|----------------|
| 1 | Pos_0709_group_components_001 | Verify conversion of group definition with sequence compositor | Clause 7.9 | m | y |
| 2 | Pos_0709_group_components_002 | Verify transformation of group definition with sequence compositor | Clause 7.9 | m | y |

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|---|---|--|--------------------|--------------------------|
| 3 | Pos_070 9_group _compo nents_00 3 | Verify conversion of group definition with all compositor | Clause 7.9 | m | y |

5.81. Identity-constraint definition schema components

Table 80. Identity-constraint definition schema components

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|---|---|--|--------------------|--------------------------|
| 1 | Pos_071 0_identit y_constr aint_defi nition_sc hema_co mponen ts_001 | Verify that unique elements (and nested selector and field) are ignored during conversion | Clause 7.10 | m | y |
| 2 | Pos_071 0_identit y_constr aint_defi nition_sc hema_co mponen ts_002 | Verify that key elements (and nested selector and field) are ignored during conversion | Clause 7.10 | m | y |
| 3 | Pos_071 0_identit y_constr aint_defi nition_sc hema_co mponen ts_003 | Verify that keyRef elements (and nested selector and field) are ignored during conversion | Clause 7.10 | m | y |

5.82. Head elements of substitution groups

Table 81. Head elements of substitution groups

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|---|--|--|--------------------|--------------------------|
| 1 | Pos_080 101_hea d_eleme nts_of_s ubstituti on_grou ps_001 | Generic substitution group example | Clause 8.1.1 | m | y |
| 2 | Pos_080 101_hea d_eleme nts_of_s ubstituti on_grou ps_002 | Show effect of the block and abstract attributes on element substitution | Clause 8.1.1 | m | y |
| 3 | Neg_080 101_hea d_eleme nts_of_s ubstituti on_grou ps_002 | Show effect of the block and abstract attributes on element substitution | Clause 8.1.1 | m | y |
| 4 | Pos_080 101_hea d_eleme nts_of_s ubstituti on_grou ps_003 | Blocking substitution | Clause 8.1.1 | m | y |
| 5 | Neg_080 101_hea d_eleme nts_of_s ubstituti on_grou ps_003 | Blocking substitution | Clause 8.1.1 | m | y |

5.83. TTCN-3 module XSD

Table 82. TTCN-3 module XSD

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|--|---|--|--------------------|--------------------------|
| 1 | Neg_A_tt cn3_mo dule_xsd _001 | Ensure the builtin XSD type AnySimpleType allows only valid values | Annex A | m | y |
| 2 | Neg_A_tt cn3_mo dule_xsd _002 | Ensure the builtin XSD type AnyType allows only valid values | Annex A | m | y |
| 3 | Neg_A_tt cn3_mo dule_xsd _003 | Ensure the builtin XSD type String allows only valid values | Annex A | m | y |
| 4 | Neg_A_tt cn3_mo dule_xsd _004 | Ensure the builtin XSD type NormalizedString allows only valid values | Annex A | m | y |
| 5 | Neg_A_tt cn3_mo dule_xsd _005 | Ensure the builtin XSD type Token allows only valid values | Annex A | m | y |
| 6 | Neg_A_tt cn3_mo dule_xsd _006 | Ensure the builtin XSD type Name allows only valid values | Annex A | m | y |
| 7 | Neg_A_tt cn3_mo dule_xsd _007 | Ensure the builtin XSD type NMTOKEN allows only valid values | Annex A | m | y |
| 8 | Neg_A_tt cn3_mo dule_xsd _008 | Ensure the builtin XSD type NCName allows only valid values | Annex A | m | y |
| 9 | Neg_A_tt cn3_mo dule_xsd _009 | Ensure the builtin XSD type ID allows only valid values | Annex A | m | y |
| 10 | Neg_A_tt cn3_mo dule_xsd _010 | Ensure the builtin XSD type IDREF allows only valid values | Annex A | m | y |

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|--|---|--|--------------------|--------------------------|
| 11 | Neg_A_tt cn3_mo dule_xsd _011 | Ensure the builtin XSD type ENTITY allows only valid values | Annex A | m | y |
| 12 | Neg_A_tt cn3_mo dule_xsd _012 | Ensure the builtin XSD type HexBinary allows only valid values | Annex A | m | y |
| 13 | Neg_A_tt cn3_mo dule_xsd _013 | Ensure the builtin XSD type Base64Binary allows only valid values | Annex A | m | y |
| 14 | Neg_A_tt cn3_mo dule_xsd _014 | Ensure the builtin XSD type AnyURI allows only valid values | Annex A | m | y |
| 15 | Neg_A_tt cn3_mo dule_xsd _015 | Ensure the builtin XSD type Language allows only valid values | Annex A | m | y |
| 16 | Neg_A_tt cn3_mo dule_xsd _016 | Ensure the builtin XSD type Integer allows only valid values | Annex A | m | y |
| 17 | Neg_A_tt cn3_mo dule_xsd _017 | Ensure the builtin XSD type PositiveInteger allows only valid values | Annex A | m | y |
| 18 | Neg_A_tt cn3_mo dule_xsd _018 | Ensure the builtin XSD type NonPositiveInteger allows only valid values | Annex A | m | y |
| 19 | Neg_A_tt cn3_mo dule_xsd _019 | Ensure the builtin XSD type NegativeInteger allows only valid values | Annex A | m | y |
| 20 | Neg_A_tt cn3_mo dule_xsd _020 | Ensure the builtin XSD type NonNegativeInteger allows only valid values | Annex A | m | y |

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|--|--|--|--------------------|--------------------------|
| 21 | Neg_A_tt cn3_mo dule_xsd _021 | Ensure the builtin XSD type Long allows only valid values | Annex A | m | y |
| 22 | Neg_A_tt cn3_mo dule_xsd _022 | Ensure the builtin XSD type UnsignedLong allows only valid values | Annex A | m | y |
| 23 | Neg_A_tt cn3_mo dule_xsd _023 | Ensure the builtin XSD type Int allows only valid values | Annex A | m | y |
| 24 | Neg_A_tt cn3_mo dule_xsd _024 | Ensure the builtin XSD type UnsignedInt allows only valid values | Annex A | m | y |
| 25 | Neg_A_tt cn3_mo dule_xsd _025 | Ensure the builtin XSD type Short allows only valid values | Annex A | m | y |
| 26 | Neg_A_tt cn3_mo dule_xsd _026 | Ensure the builtin XSD type UnsignedShort allows only valid values | Annex A | m | y |
| 27 | Neg_A_tt cn3_mo dule_xsd _027 | Ensure the builtin XSD type Byte allows only valid values | Annex A | m | y |
| 28 | Neg_A_tt cn3_mo dule_xsd _028 | Ensure the builtin XSD type UnsignedByte allows only valid values | Annex A | m | y |
| 29 | Neg_A_tt cn3_mo dule_xsd _029 | Ensure the builtin XSD type Decimal allows only valid values | Annex A | m | y |
| 30 | Neg_A_tt cn3_mo dule_xsd _030 | Ensure the builtin XSD type Float allows only valid values | Annex A | m | y |

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|--|---|--|--------------------|--------------------------|
| 31 | Neg_A_tt cn3_mo dule_xsd _031 | Ensure the builtin XSD type Double allows only valid values | Annex A | m | y |
| 32 | Neg_A_tt cn3_mo dule_xsd _032 | Ensure the builtin XSD type Duration allows only valid values | Annex A | m | y |
| 33 | Neg_A_tt cn3_mo dule_xsd _033 | Ensure the builtin XSD type DateTime allows only valid values | Annex A | m | y |
| 34 | Neg_A_tt cn3_mo dule_xsd _034 | Ensure the builtin XSD type Time allows only valid values | Annex A | m | y |
| 35 | Neg_A_tt cn3_mo dule_xsd _035 | Ensure the builtin XSD type Date allows only valid values | Annex A | m | y |
| 36 | Neg_A_tt cn3_mo dule_xsd _036 | Ensure the builtin XSD type GYearMonth allows only valid values | Annex A | m | y |
| 37 | Neg_A_tt cn3_mo dule_xsd _037 | Ensure the builtin XSD type GYear allows only valid values | Annex A | m | y |
| 38 | Neg_A_tt cn3_mo dule_xsd _038 | Ensure the builtin XSD type GMonthDay allows only valid values | Annex A | m | y |
| 39 | Neg_A_tt cn3_mo dule_xsd _039 | Ensure the builtin XSD type GDay allows only valid values | Annex A | m | y |
| 40 | Neg_A_tt cn3_mo dule_xsd _040 | Ensure the builtin XSD type GMonth allows only valid values | Annex A | m | y |

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|--|--|--|--------------------|--------------------------|
| 41 | Neg_A_tt cn3_mo dule_xsd _041 | Ensure the builtin XSD type NMTOKENS allows only valid values | Annex A | m | y |
| 42 | Neg_A_tt cn3_mo dule_xsd _042 | Ensure the builtin XSD type IDREFS allows only valid values | Annex A | m | y |
| 43 | Neg_A_tt cn3_mo dule_xsd _043 | Ensure the builtin XSD type ENTITIES allows only valid values | Annex A | m | y |
| 44 | Neg_A_tt cn3_mo dule_xsd _044 | Ensure the builtin XSD type QName allows only valid values | Annex A | m | y |
| 45 | Neg_A_tt cn3_mo dule_xsd _045 | Ensure the builtin XSD type Boolean allows only valid values | Annex A | m | y |
| 46 | Neg_A_tt cn3_mo dule_xsd _046 | Ensure the builtin XSD type XMLCompatibleString allows only valid values | Annex A | m | y |
| 47 | Neg_A_tt cn3_mo dule_xsd _047 | Ensure the builtin XSD type XMLStringWithNoWhitespace allows only valid values | Annex A | m | y |
| 48 | Neg_A_tt cn3_mo dule_xsd _048 | Ensure the builtin XSD type XMLStringWithNoCRLFHT allows only valid values | Annex A | m | y |
| 49 | Pos_A_tt cn3_mo dule_xsd _001 | Ensure the module XSD is available and contains the builtin XSD type AnySimpleType | Annex A | m | y |
| 50 | Pos_A_tt cn3_mo dule_xsd _002 | Ensure the module XSD is available and contains the builtin XSD type AnyType | Annex A | m | y |

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|--|---|--|--------------------|--------------------------|
| 51 | Pos_A_tt cn3_mo dule_xsd _003 | Ensure the module XSD is available and contains the builtin XSD type String | Annex A | m | y |
| 52 | Pos_A_tt cn3_mo dule_xsd _004 | Ensure the module XSD is available and contains the builtin XSD type NormalizedString | Annex A | m | y |
| 53 | Pos_A_tt cn3_mo dule_xsd _005 | Ensure the module XSD is available and contains the builtin XSD type Token | Annex A | m | y |
| 54 | Pos_A_tt cn3_mo dule_xsd _006 | Ensure the module XSD is available and contains the builtin XSD type Name | Annex A | m | y |
| 55 | Pos_A_tt cn3_mo dule_xsd _007 | Ensure the module XSD is available and contains the builtin XSD type NMTOKEN | Annex A | m | y |
| 56 | Pos_A_tt cn3_mo dule_xsd _008 | Ensure the module XSD is available and contains the builtin XSD type NCName | Annex A | m | y |
| 57 | Pos_A_tt cn3_mo dule_xsd _009 | Ensure the module XSD is available and contains the builtin XSD type ID | Annex A | m | y |
| 58 | Pos_A_tt cn3_mo dule_xsd _010 | Ensure the module XSD is available and contains the builtin XSD type IDREF | Annex A | m | y |
| 59 | Pos_A_tt cn3_mo dule_xsd _011 | Ensure the module XSD is available and contains the builtin XSD type ENTITY | Annex A | m | y |
| 60 | Pos_A_tt cn3_mo dule_xsd _012 | Ensure the module XSD is available and contains the builtin XSD type HexBinary | Annex A | m | y |

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|--|---|--|--------------------|--------------------------|
| 61 | Pos_A_tt cn3_mo dule_xsd _013 | Ensure the module XSD is available and contains the builtin XSD type Base64Binary | Annex A | m | y |
| 62 | Pos_A_tt cn3_mo dule_xsd _014 | Ensure the module XSD is available and contains the builtin XSD type AnyURI | Annex A | m | y |
| 63 | Pos_A_tt cn3_mo dule_xsd _015 | Ensure the module XSD is available and contains the builtin XSD type Language | Annex A | m | y |
| 64 | Pos_A_tt cn3_mo dule_xsd _016 | Ensure the module XSD is available and contains the builtin XSD type Integer | Annex A | m | y |
| 65 | Pos_A_tt cn3_mo dule_xsd _017 | Ensure the module XSD is available and contains the builtin XSD type PositiveInteger | Annex A | m | y |
| 66 | Pos_A_tt cn3_mo dule_xsd _018 | Ensure the module XSD is available and contains the builtin XSD type NonPositiveInteger | Annex A | m | y |
| 67 | Pos_A_tt cn3_mo dule_xsd _019 | Ensure the module XSD is available and contains the builtin XSD type NegativeInteger | Annex A | m | y |
| 68 | Pos_A_tt cn3_mo dule_xsd _020 | Ensure the module XSD is available and contains the builtin XSD type NonNegativeInteger | Annex A | m | y |
| 69 | Pos_A_tt cn3_mo dule_xsd _021 | Ensure the module XSD is available and contains the builtin XSD type Long | Annex A | m | y |
| 70 | Pos_A_tt cn3_mo dule_xsd _022 | Ensure the module XSD is available and contains the builtin XSD type UnsignedLong | Annex A | m | y |

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|--|--|--|--------------------|--------------------------|
| 71 | Pos_A_tt cn3_mo dule_xsd _023 | Ensure the module XSD is available and contains the builtin XSD type Int | Annex A | m | y |
| 72 | Pos_A_tt cn3_mo dule_xsd _024 | Ensure the module XSD is available and contains the builtin XSD type UnsignedInt | Annex A | m | y |
| 73 | Pos_A_tt cn3_mo dule_xsd _025 | Ensure the module XSD is available and contains the builtin XSD type Short | Annex A | m | y |
| 74 | Pos_A_tt cn3_mo dule_xsd _026 | Ensure the module XSD is available and contains the builtin XSD type UnsignedShort | Annex A | m | y |
| 75 | Pos_A_tt cn3_mo dule_xsd _027 | Ensure the module XSD is available and contains the builtin XSD type Byte | Annex A | m | y |
| 76 | Pos_A_tt cn3_mo dule_xsd _028 | Ensure the module XSD is available and contains the builtin XSD type UnsignedByte | Annex A | m | y |
| 77 | Pos_A_tt cn3_mo dule_xsd _029 | Ensure the module XSD is available and contains the builtin XSD type Decimal | Annex A | m | y |
| 78 | Pos_A_tt cn3_mo dule_xsd _030 | Ensure the module XSD is available and contains the builtin XSD type Float | Annex A | m | y |
| 79 | Pos_A_tt cn3_mo dule_xsd _031 | Ensure the module XSD is available and contains the builtin XSD type Double | Annex A | m | y |
| 80 | Pos_A_tt cn3_mo dule_xsd _032 | Ensure the module XSD is available and contains the builtin XSD type Duration | Annex A | m | y |

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|--|---|--|--------------------|--------------------------|
| 81 | Pos_A_tt cn3_mo dule_xsd _033 | Ensure the module XSD is available and contains the builtin XSD type DateTime | Annex A | m | y |
| 82 | Pos_A_tt cn3_mo dule_xsd _034 | Ensure the module XSD is available and contains the builtin XSD type Time | Annex A | m | y |
| 83 | Pos_A_tt cn3_mo dule_xsd _035 | Ensure the module XSD is available and contains the builtin XSD type Date | Annex A | m | y |
| 84 | Pos_A_tt cn3_mo dule_xsd _036 | Ensure the module XSD is available and contains the builtin XSD type GYearMonth | Annex A | m | y |
| 85 | Pos_A_tt cn3_mo dule_xsd _037 | Ensure the module XSD is available and contains the builtin XSD type GYear | Annex A | m | y |
| 86 | Pos_A_tt cn3_mo dule_xsd _038 | Ensure the module XSD is available and contains the builtin XSD type GMonthDay | Annex A | m | y |
| 87 | Pos_A_tt cn3_mo dule_xsd _039 | Ensure the module XSD is available and contains the builtin XSD type GDay | Annex A | m | y |
| 88 | Pos_A_tt cn3_mo dule_xsd _040 | Ensure the module XSD is available and contains the builtin XSD type GMonth | Annex A | m | y |
| 89 | Pos_A_tt cn3_mo dule_xsd _041 | Ensure the module XSD is available and contains the builtin XSD type NMTOKENS | Annex A | m | y |
| 90 | Pos_A_tt cn3_mo dule_xsd _042 | Ensure the module XSD is available and contains the builtin XSD type IDREFS | Annex A | m | y |

| Ite m | TC/TP referen ce | Purpose | Reference in ETSI ES 201 8739 | Sta tus | Sup por t |
|------------------|--|--|--|--------------------|--------------------------|
| 91 | Pos_A_tt cn3_mo dule_xsd _043 | Ensure the module XSD is available and contains the builtin XSD type ENTITIES | Annex A | m | y |
| 92 | Pos_A_tt cn3_mo dule_xsd _044 | Ensure the module XSD is available and contains the builtin XSD type QName | Annex A | m | y |
| 93 | Pos_A_tt cn3_mo dule_xsd _045 | Ensure the module XSD is available and contains the builtin XSD type Boolean | Annex A | m | y |
| 94 | Pos_A_tt cn3_mo dule_xsd _046 | Ensure the module XSD is available and contains the builtin XSD type XMLCompatibleString | Annex A | m | y |
| 95 | Pos_A_tt cn3_mo dule_xsd _047 | Ensure the module XSD is available and contains the builtin XSD type XMLStringWithNoWhitespace | Annex A | m | y |
| 96 | Pos_A_tt cn3_mo dule_xsd _048 | Ensure the module XSD is available and contains the builtin XSD type XMLStringWithNoCRLFHT | Annex A | m | y |

Chapter 6. Notes