



Guide to Schematron Rules and Patterns

NTK Schematron Guide

Version 6

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Chapter 1 - Introduction

1.1 - Purpose

(U) The following documentation is informative. The actual Schematron files are the normative record. This documentation is generated from the Schematron files via XSLT it may be missing some file or pieces of a file but whatever is here other than titles came from the original file.

(U) It is envisioned that this will be a useful resource to search and read but for questions and debates the source files should be consulted.

(U) Rules are all of the format IRM-ID-XXXXX any other heading is a supporting file that may strongly influence a rule but is not actually a numbered rule.

Chapter 2 - Rules

2.1 - ./Rules/generalConstraints/NTK_ID_00001.sch

Rule Description: NTK-ID-00001 [NTK-ID-00001][] Removed in V4.

Code Description:

Schematron Code:

```
<?ICEA pattern?><!-- Notices - distEditionBlockReplace-->
<sch:pattern id="NTK-ID-00001">

    </sch:pattern>
```

2.2 - ./Rules/generalConstraints/NTK_ID_00002.sch

Rule Description: NTK-ID-00002 [MAT-ID-00002][Error] ntk:Access must contain at least one of ntk:AccessIndividualList, ntk:AccessGroupList, ntk:AccessProfileList.

Code Description: We make sure that either ntk:AccessIndividualList, ntk:AccessGroupList, or ntk:AccessProfileList exist as child elements of ntk:Access.

Schematron Code:

```
<?ICEA pattern?><!-- Notices - distEditionBlockReplace-->
<sch:pattern id="NTK-ID-00002">

    <sch:rule context="ntk:Access">
        <sch:assert test="ntk:AccessIndividualList or
ntk:AccessGroupList or ntk:AccessProfileList" flag="error">
            [NTK-ID-00002][Error] All NTK.XML documents must have least one
of ntk:AccessIndividualList,
            ntk:AccessGroupList, ntk:AccessProfileList.
        </sch:assert>
    </sch:rule>
</sch:pattern>
```

2.3 - ./Rules/globalConstraints/NTK_ID_00003.sch

Rule Description: NTK-ID-00005 [NTK-ID-00005][] Removed in V3.

Code Description:

Schematron Code:

```
<?ICEA pattern?><!-- Notices - distEditionBlockReplace-->
<sch:pattern id="NTK-ID-00005">

    </sch:pattern>
```

2.4 - ./Rules/globalConstraints/NTK_ID_00004.sch

Rule Description: NTK-ID-00004 [NTK-ID-00004][Error] Every attribute in the document must be specified with a non-whitespace value.

Code Description: For each element with at least one attribute specified, we normalize the space of the value of each attribute and make sure that the resulting string has a length greater than zero, which indicates non-whitespace content.

Schematron Code:

```
<?ICEA pattern?><!-- Notices - distEditionBlockReplace-->
<sch:pattern id="NTK-ID-00004">

    <sch:rule context="//*[@*]">
        <sch:assert test="every $attribute in ./@* satisfies
string-length(normalize-space(string($attribute))) > 0" flag="error">
            [NTK-ID-00004][Error] Every attribute in the document must be
specified with a non-whitespace value.
        </sch:assert>
    </sch:rule>
</sch:pattern>
```

Chapter 3 - Abstract Patterns

Chapter 4 - Schematron Schema

4.1 - ./NTK_XML.sch

Rule Description:

Code Description:

Schematron Code:

```
<?ICEA master?><!-- Notices - distEditionBlockReplace-->
<sch:schema queryBinding="xslt2">
  <sch:ns uri="urn:us:gov:ic:pubs" prefix="pubs"/>
  <sch:ns uri="urn:us:gov:ic:cve" prefix="cve"/>
  <sch:ns uri="http://www.w3.org/1999/xlink" prefix="xlink"/>
  <sch:ns uri="urn:us:gov:ic:ism" prefix="ism"/>
  <sch:ns uri="urn:us:gov:ic:mat" prefix="mat"/>
  <sch:ns uri="urn:us:gov:ic:ntk" prefix="ntk"/>
  <sch:ns uri="urn:us:gov:ic:irm" prefix="irm"/>
  <sch:ns uri="http://www.w3.org/2001/XMLSchema" prefix="xs"/>

  <!--*****-->
<!-- (U) NTK ID Rules -->
<!--*****-->

<!--(U) generalConstraints-->
  <sch:include href="./Rules/generalConstraints/NTK_ID_00001.sch"/>
  <sch:include href="./Rules/generalConstraints/NTK_ID_00002.sch"/>

  <!--(U) globalConstraints-->
  <sch:include href="./Rules/globalConstraints/NTK_ID_00003.sch"/>
  <sch:include href="./Rules/globalConstraints/NTK_ID_00004.sch"/>
</sch:schema>
```