



Guide to Schemas for Whitelist

Whitelist Schema Guide

Version 2019-MAR

December 1, 2022

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Chapter 1 - Introduction

1.1 - Purpose

This is an informative supplement for *Whitelist*. This guide is generated from the *Whitelist Schemas* and provides a consolidated reference for the schemas of this specification.

Chapter 2 - Schema Files

2.1 - Whitelist.rng

```
<grammar xmlns="http://relaxng.org/ns/structure/1.0"
          xmlns:a="http://relaxng.org/ns/compatibility/annotations/1.0"
          datatypeLibrary="http://www.w3.org/2001/XMLSchema-datatypes">
  <start>
    <element name="Whitelist">
      <interleave>
        <!-- Whitelist only elements -->

        <optional>
          <element name="Classification">
            <ref name="whitelistOnlyValues"/>
          </element>
        </optional>

        <optional>
          <element name="DisseminationControls">
            <ref name="whitelistOnlyValues"/>
          </element>
        </optional>

        <optional>
          <element name="AtomicEnergyMarkings">
            <ref name="whitelistOnlyValues"/>
          </element>
        </optional>

        <optional>
          <element name="NonICmarkings">
            <ref name="whitelistOnlyValues"/>
          </element>
        </optional>

        <optional>
          <element name="NonUSControls">
            <ref name="whitelistOnlyValues"/>
          </element>
        </optional>

        <optional>
          <element name="SCIControls">
            <ref name="whitelistOnlyValues"/>
          </element>
        </optional>

        <optional>
          <element name="SARIdentifier">
            <ref name="whitelistOnlyValues"/>
          </element>
        </optional>
      </interleave>
    </element>
  </start>
</grammar>
```

```

        <!-- whitelist or blacklist-->

<optional>
    <element name="ISMAAttributes">
        <ref name="whitelistOrBlacklistValues"/>
    </element>
</optional>

<optional>
    <element name="DisplayOnlyTo">
        <ref name="whitelistOrBlacklistValues"/>
    </element>
</optional>

<optional>
    <element name="FGISourceOpen">
        <ref name="whitelistOrBlacklistValues"/>
    </element>
</optional>

<optional>
    <element name="FGISourceProtected">
        <ref name="whitelistOrBlacklistValues"/>
    </element>
</optional>

<optional>
    <element name="OwnerProducer">
        <ref name="whitelistOrBlacklistValues"/>
    </element>
</optional>

        <!-- extend whitelist or blacklist with minimum allowable values -->

<optional>
    <element name="ReleasableTo">
        <ref name="whitelistOrBlacklistValues"/>
        <optional>
            <element name="minimumValues">
                <text/>
            </element>
        </optional>
    </element>
</optional>

        <!-- NTK -->

<optional>
    <element name="NtkAccessProfile">
        <ref name="typeChoice"/>
        <oneOrMore>
            <element name="value">
                <attribute name="accessPolicy"/>
            </element>
        </oneOrMore>
    </element>
</optional>

```

```

        <attribute name="profileDes"/>
        <optional>
            <attribute name="qualifier"/>
        </optional>
        <optional>
            <attribute name="profileValue"/>
        </optional>
    </element>
</oneOrMore>
</element>
</optional>
</interleave>
</element>
</start>

<define name="whitelistOrBlacklistValues">
    <element name="values">
        <ref name="typeChoice"/>
        <data type="token"/>
    </element>
</define>

<define name="whitelistOnlyValues">
    <element name="values">
        <data type="token"/>
    </element>
</define>

<define name="typeChoice">
    <attribute name="type">
        <choice>
            <value>whitelist</value>
            <value>blacklist</value>
        </choice>
    </attribute>
</define>

</grammar>
```

2.2 - Whitelist.xsd

```
<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema"
            xmlns:xhtml="http://www.w3.org/1999/xhtml-StopBrowserRendering"
            xml:lang="en"
            ism:resourceElement="true"
            ism:compliesWith="USGov"
            ism:createDate="2011-12-01"
            ism:DESVersion="202111"
            ism:classification="U"
            ism:ownerProducer="USA"
            elementFormDefault="qualified"
            attributeFormDefault="qualified"
            version="201903">
  <xsd:annotation>
    <xsd:documentation>
      <xhtml:h1 ism:ownerProducer="USA" ism:classification="U">Intelligence Community Whitelist Guidance for ISM and NTK</xhtml:h1>
    </xsd:documentation>
    <xsd:documentation>
      <xhtml:h2 ism:ownerProducer="USA" ism:classification="U">Notices</xhtml:h2>
      <xhtml:p ism:ownerProducer="USA" ism:classification="U">Distribution Notice:
This document has been approved for Public Release and is available for use without restriction.
</xhtml:p>
      </xsd:documentation>
      <xsd:documentation>
        <xhtml:h2 ism:ownerProducer="USA" ism:classification="U">Description</xhtml:h2>
        <xhtml:p ism:ownerProducer="USA" ism:classification="U">W3C XML Schema for the XML Encoding Specification
defining whitelist rule validation for ISM and NTK.</xhtml:p>
        </xsd:documentation>
        <xsd:documentation>
          <xhtml:h2 ism:ownerProducer="USA" ism:classification="U">Introduction</xhtml:h2>
          <xhtml:p ism:ownerProducer="USA" ism:classification="U">This XML Schema file is one component of the XML
Encoding Specification. Please see the document titled<xhtml:i>
          <xhtml:a href="../../Documents/Whitelist/DesWhitelistXml.pdf">XML Encoding Specification providing
Whitelist Guidance for ISM and NTK.</xhtml:a>
          </xhtml:i>for a complete description of the encoding as well as list of all components.</xhtml:p>
          <xhtml:p ism:ownerProducer="USA" ism:classification="U">If you modify this XML Schema in any way label your
schema as a variant of Whitelist.XML.</xhtml:p>
          <xhtml:p ism:ownerProducer="USA" ism:classification="U">Please direct all questions, bug reports, or suggestions
for changes to the points of contact identified in the document referenced above.</xhtml:p>
          </xsd:documentation>
          <xsd:documentation>
            <xhtml:h2 ism:ownerProducer="USA" ism:classification="U">Creators</xhtml:h2>
            <xhtml:p ism:ownerProducer="USA" ism:classification="U">Office of the Director of National Intelligence
Intelligence Community Chief Information Officer</xhtml:p>
            </xsd:documentation>
          </xsd:annotation>
          <xsd:element name="Whitelist" type="whitelistInfo">
            <xsd:annotation>
              <xsd:documentation>
                <xhtml:p ism:ownerProducer="USA" ism:classification="U">
This is the root node of the whitelist configuration for implementing whitelist validation
of ISM / NTK values.</xhtml:p>
              </xsd:documentation>
            </xsd:documentation>
          </xsd:element>
        </xsd:annotation>
      </xsd:documentation>
    </xsd:annotation>
  </xsd:schema>
```



```

    </xsd:annotation>
  </xsd:element>
  <xsd:complexType name="whitelistInfo">
    <xsd:sequence>
      <xsd:group minOccurs="0" maxOccurs="1" ref="ismGroup"/>
      <xsd:group minOccurs="0" maxOccurs="1" ref="ntkGroup"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:group name="ismGroup">
    <xsd:annotation>
      <xsd:documentation>
        <xhtml:p ism:ownerProducer="USA" ism:classification="U">
The set of ISM attributes that can be whitelisted.</xhtml:p>
        </xsd:documentation>
      </xsd:annotation>
      <xsd:sequence>
        <xsd:element minOccurs="1" maxOccurs="1" ref="ISMAttributes"/>
        <xsd:element minOccurs="1" maxOccurs="1" ref="Classification"/>
        <xsd:element minOccurs="1" maxOccurs="1" ref="DisseminationControls"/>
        <xsd:element minOccurs="1" maxOccurs="1" ref="ReleasableTo"/>
        <xsd:element minOccurs="1" maxOccurs="1" ref="DisplayOnlyTo"/>
        <xsd:element minOccurs="1" maxOccurs="1" ref="FGISourceOpen"/>
        <xsd:element minOccurs="1" maxOccurs="1" ref="FGISourceProtected"/>
        <xsd:element minOccurs="1" maxOccurs="1" ref="AtomicEnergyMarkings"/>
        <xsd:element minOccurs="1" maxOccurs="1" ref="NonICmarkings"/>
        <xsd:element minOccurs="1" maxOccurs="1" ref="NonUSControls"/>
        <xsd:element minOccurs="1" maxOccurs="1" ref="SCIControls"/>
        <xsd:element minOccurs="1" maxOccurs="1" ref="SARIdentifier"/>
        <xsd:element minOccurs="1" maxOccurs="1" ref="OwnerProducer"/>
      </xsd:sequence>
    </xsd:group>
    <xsd:group name="ntkGroup">
      <xsd:annotation>
        <xsd:documentation>
          <xhtml:p ism:ownerProducer="USA" ism:classification="U">
The set of NKT elements / attributes that can be whitelisted.</xhtml:p>
          </xsd:documentation>
        </xsd:annotation>
        <xsd:sequence>
          <xsd:element minOccurs="0" maxOccurs="1" ref="NtkPolicy"/>
          <xsd:element minOccurs="0" maxOccurs="1" ref="NtkVocabulary"/>
          <xsd:element maxOccurs="unbounded" ref="NtkAccessProfile"/>
        </xsd:sequence>
      </xsd:group>
      <xsd:element name="ISMAttributes" type="whitelistOnlyValues">
        <xsd:annotation>
          <xsd:documentation>
            <xhtml:p ism:ownerProducer="USA" ism:classification="U">Contains the whitelist of ISM attributes supported
by the system implementing the whitelist.</xhtml:p>
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="Classification" type="whitelistOnlyValues">
          <xsd:annotation>

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        <xsd:documentation>
            <xhtml:p ism:ownerProducer="USA" ism:classification="U">Contains the whitelist of values allowed in the ISM
classification attribute. </xhtml:p>
        </xsd:documentation>
    </xsd:annotation>
</xsd:element>
<xsd:element name="DisseminationControls" type="whitelistOnlyValues">
    <xsd:annotation>
        <xsd:documentation>
            <xhtml:p ism:ownerProducer="USA" ism:classification="U">Contains the whitelist of values allowed in the ISM
disseminationControls attribute. </xhtml:p>
        </xsd:documentation>
    </xsd:annotation>
</xsd:element>
<xsd:element name="AtomicEnergyMarkings" type="whitelistOnlyValues">
    <xsd:annotation>
        <xsd:documentation>
            <xhtml:p ism:ownerProducer="USA" ism:classification="U"> Contains the whitelist of values allowed in the ISM
atomicEnergyMarkings attribute.</xhtml:p>
        </xsd:documentation>
    </xsd:annotation>
</xsd:element>
<xsd:element name="NonICmarkings" type="whitelistOnlyValues">
    <xsd:annotation>
        <xsd:documentation>
            <xhtml:p ism:ownerProducer="USA" ism:classification="U">Contains the whitelist of values allowed in the ISM
nonICmarkings attribute.</xhtml:p>
        </xsd:documentation>
    </xsd:annotation>
</xsd:element>
<xsd:element name="NonUSControls" type="whitelistOnlyValues">
    <xsd:annotation>
        <xsd:documentation>
            <xhtml:p ism:ownerProducer="USA" ism:classification="U">Contains the whitelist of values allowed in the ISM
nonUSControls attribute.</xhtml:p>
        </xsd:documentation>
    </xsd:annotation>
</xsd:element>
<xsd:element name="SCIControls" type="whitelistOnlyValues">
    <xsd:annotation>
        <xsd:documentation>
            <xhtml:p ism:ownerProducer="USA" ism:classification="U">
                Contains the whitelist of values allowed in the ISM SCIcontrols attribute.
            </xhtml:p>
        </xsd:documentation>
    </xsd:annotation>
</xsd:element>
<xsd:element name="SARIdentifier" type="whitelistOnlyValues">
    <xsd:annotation>
        <xsd:documentation>
            <xhtml:p ism:ownerProducer="USA" ism:classification="U">
                Contains the whitelist of values allowed in the ISM SARIdentifier attribute.
            </xhtml:p>
        </xsd:documentation>
    </xsd:annotation>
</xsd:element>

```

```

    </xsd:annotation>
  </xsd:element>
  <xsd:element name="DisplayOnlyTo" type="whitelistOnlyValues">
    <xsd:annotation>
      <xsd:documentation>
        <xhtml:p ism:ownerProducer="USA" ism:classification="U">
          Contains the whitelist of values allowed in the ISM displayOnlyTo attribute.
        </xhtml:p>
      </xsd:documentation>
    </xsd:annotation>
  </xsd:element>
  <xsd:element name="FGISourceOpen" type="whitelistOnlyValues">
    <xsd:annotation>
      <xsd:documentation>
        <xhtml:p ism:ownerProducer="USA" ism:classification="U">
          Contains the whitelist of values allowed in the ISM FGISourceOpen attribute.
        </xhtml:p>
      </xsd:documentation>
    </xsd:annotation>
  </xsd:element>
  <xsd:element name="FGISourceProtected" type="whitelistOnlyValues">
    <xsd:annotation>
      <xsd:documentation>
        <xhtml:p ism:ownerProducer="USA" ism:classification="U">
          Contains the whitelist of values allowed in the ISM FGISourceProtected attribute.
        </xhtml:p>
      </xsd:documentation>
    </xsd:annotation>
  </xsd:element>
  <xsd:element name="OwnerProducer" type="whitelistOrBlacklistValues">
    <xsd:annotation>
      <xsd:documentation>
        <xhtml:p ism:ownerProducer="USA" ism:classification="U">
          Contains the whitelist of values allowed in the ISM ownerProducer attribute
          or the blacklist of values not allowed.
        </xhtml:p>
        <xhtml:p ism:ownerProducer="USA" ism:classification="U">
          Since this attribute contains a list of countries, it may be more desirable to
          limit a small number of countries with a blacklist than to allow a large number
          of countries with a whitelist.
        </xhtml:p>
      </xsd:documentation>
    </xsd:annotation>
  </xsd:element>

  <xsd:element name="ReleasableTo">
    <xsd:annotation>
      <xsd:documentation>
        <xhtml:p ism:ownerProducer="USA" ism:classification="U">
          Contains the whitelist of values allowed in the ISM releasableTo attribute.
        </xhtml:p>
        <xhtml:p ism:ownerProducer="USA" ism:classification="U">
          Allows definition of a minimum set of values that must be included in ism:releasableTo.
        </xhtml:p>
      </xsd:documentation>
    </xsd:annotation>
  </xsd:element>

```

```

        </xsd:documentation>
    </xsd:annotation>
    <xsd:complexType>
        <xsd:complexContent>
            <xsd:extension base="whitelistOnlyValues">
                <xsd:sequence>
                    <xsd:element minOccurs="0" maxOccurs="1" ref="minimumValues"/>
                </xsd:sequence>
            </xsd:extension>
        </xsd:complexContent>
    </xsd:complexType>
</xsd:element>

<xsd:element name="NtkPolicy">
    <xsd:annotation>
        <xsd:documentation>
            <xhtml:p ism:ownerProducer="USA" ism:classification="U">
                Contains the whitelist of values allowed in the NTK AccessPolicy element.
            </xhtml:p>
        </xsd:documentation>
    </xsd:annotation>
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element maxOccurs="unbounded" ref="value"/>
        </xsd:sequence>
    </xsd:complexType>
</xsd:element>

<xsd:element name="NtkVocabulary">
    <xsd:annotation>
        <xsd:documentation>
            <xhtml:p ism:ownerProducer="USA" ism:classification="U">
                Contains the whitelist of values allowed in the name attribute of the NTK VocabularyType element.
            </xhtml:p>
        </xsd:documentation>
    </xsd:annotation>
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element maxOccurs="unbounded" ref="value"/>
        </xsd:sequence>
    </xsd:complexType>
</xsd:element>

<xsd:element name="value" type="xsd:NMTOKEN"/>

<xsd:element name="NtkAccessProfile">
    <xsd:annotation>
        <xsd:documentation>
            <xhtml:p ism:ownerProducer="USA" ism:classification="U">
                Contains the whitelist of values allowed in the NTK AccessProfile structure.
            </xhtml:p>
        </xsd:documentation>
    </xsd:annotation>
    <xhtml:p ism:ownerProducer="USA" ism:classification="U">
        The accessPolicy attribute contains value of NTK AccessPolicy element. There must
        be one NtkAccessProfile element per unique accessPolicy value.
    </xhtml:p>

```

```
</xhtml:p>
  </xsd:documentation>
</xsd:annotation>
<xsd:complexType>
  <xsd:sequence>
    <xsd:element minOccurs="0" maxOccurs="unbounded" ref="profile"/>
    <xsd:element minOccurs="0" maxOccurs="1" ref="minimumValues"/>
  </xsd:sequence>
  <xsd:attribute name="accessPolicy" use="required" type="xsd:NMTOKEN"/>
</xsd:complexType>
</xsd:element>

<xsd:element name="profile">
  <xsd:annotation>
    <xsd:documentation>
      <xhtml:p ism:ownerProducer="USA" ism:classification="U">
Contains the whitelist of values allowed in the NTK AccessProfile structure.
      </xhtml:p>
      <xhtml:p ism:ownerProducer="USA" ism:classification="U">
Contains a map of the vocabulary attribute and the element value of the NTK AccessProfileValue element.
      </xhtml:p>
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexType>
    <xsd:attribute name="vocabulary" use="required" type="xsd:anyURI"/>
    <xsd:attribute name="profileValue" use="required">
      <xsd:simpleType>
        <xsd:restriction base="xsd:string">
          <xsd:pattern value="[\w\d,--_\: \p{Zs}]+\| \*" />
          <!-- Allow \p{Zs} => space Do Not Allow '?' or '.' -->
        </xsd:restriction>
      </xsd:simpleType>
    </xsd:attribute>
  </xsd:complexType>
</xsd:element>

<xsd:element name="minimumValues">
  <xsd:annotation>
    <xsd:documentation>
      <xhtml:p ism:classification="U" ism:ownerProducer="USA">This element holds the list of a minimum
set of values required in an ISM / NTK attribute.</xhtml:p>
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexType mixed="true">
    <xsd:sequence>
      <xsd:element minOccurs="0" maxOccurs="unbounded" ref="profile"/>
    </xsd:sequence>
  </xsd:complexType>
</xsd:element>

<xsd:complexType name="whitelistOrBlacklistValues">
  <xsd:annotation>
    <xsd:documentation>
```

```

        <xhtml:p ism:classification="U" ism:ownerProducer="USA">This type allows either a set of values
        composing either a whitelist or a blacklist depending upon the value defined in the
        type attribute.
    </xhtml:p>
    </xsd:documentation>
</xsd:annotation>
<xsd:sequence>
    <xsd:element name="values">
        <xsd:complexType>
            <xsd:simpleContent>
                <xsd:extension base="xsd:token">
                    <xsd:attributeGroup ref="typeChoice"/>
                </xsd:extension>
            </xsd:simpleContent>
        </xsd:complexType>
    </xsd:element>
</xsd:sequence>
</xsd:complexType>

<xsd:complexType name="whitelistOnlyValues">
    <xsd:annotation>
        <xsd:documentation>
            <xhtml:p ism:classification="U" ism:ownerProducer="USA">This type allows only a set of values
            for a whitelist.
        </xhtml:p>
        </xsd:documentation>
    </xsd:annotation>
    <xsd:sequence>
        <xsd:element name="values" type="xsd:token"/>
    </xsd:sequence>
</xsd:complexType>

<xsd:attributeGroup name="typeChoice">
    <xsd:attribute name="type" use="required">
        <xsd:simpleType>
            <xsd:restriction base="xsd:token">
                <xsd:enumeration value="whitelist"/>
                <xsd:enumeration value="blacklist"/>
            </xsd:restriction>
        </xsd:simpleType>
    </xsd:attribute>
</xsd:attributeGroup>

<xsd:attributeGroup name="typeAnyListChoice">
    <xsd:attribute name="type" use="required">
        <xsd:simpleType>
            <xsd:restriction base="xsd:token">
                <xsd:enumeration value="whitelist"/>
                <xsd:enumeration value="blacklist"/>
                <xsd:enumeration value="minvalues"/>
            </xsd:restriction>
        </xsd:simpleType>
    </xsd:attribute>
</xsd:attributeGroup>

```

```
</xsd:schema>
```