



Guide to Schemas for CDSM

CDSM Schema Guide

Version 2021-NOV

December 1, 2022

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Table of Contents

Chapter 1 - Introduction	1
1.1 - Purpose	1
Chapter 2 - Schema Files	2
2.1 - CDSM.xsd	2
2.2 - CDSM-guard.xsd	14
2.3 - SchemaGuideSchema.xsd	18

Chapter 1 - Introduction

1.1 - Purpose

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

Chapter 2 - Schema Files

2.1 - CDSM.xsd

```
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"
            xmlns="urn:us:gov:ic:cdsmanifest"
            xmlns:xhtml="http://www.w3.org/1999/xhtml-StopBrowserRendering"
            xmlns:cdsm="urn:us:gov:ic:cdsmanifest"
            xmlns:tdf="urn:us:gov:ic:tdf"
            targetNamespace="urn:us:gov:ic:cdsmanifest"
            elementFormDefault="qualified"
            attributeFormDefault="qualified"
            ism:compliesWith="USGov USIC"
            ism:DESVersion="202111"
            ism:ISMCACTCESVersion="202205"
            ism:createDate="2019-09-18"
            ism:resourceElement="true"
            ism:classification="U"
            ism:ownerProducer="USA"
            version="202111">
  <xs:annotation>
    <xs:documentation>
      <xhtml:h1 ism:ownerProducer="USA" ism:classification="U">Intelligence Community Technical Specification XML Data
        Encoding Specification for Cross Domain System Manifest Assertion
        (CDSM.XML)</xhtml:h1>

      </xs:documentation>
      <xs: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>

        </xs:documentation>
        <xs: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 Data Encoding Specification for Cross Domain System Manifest Assertion
            (CDSM.XML).</xhtml:p>

          </xs:documentation>
          <xs: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 Data Encoding
              Specification (DES). Please see the document titled<xhtml:i>
                <xhtml:a href="../../Documents/CDSM/DesCdsml.pdf">XML
                  Data Encoding Specification for Cross Domain System Manifest Assertion</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">It is
              envisioned that this schema or its components, as well
              as other parts of the DES may be overridden for
              localized implementations. Therefore, permission to use,
              copy, modify and distribute this XML Schema and the
              other parts of the DES for any purpose is hereby granted
```

```

        in perpetuity.</xhtml:p>
<xhtml:p ism:ownerProducer="USA" ism:classification="U">Please
        reference the preceding two paragraphs in all copies or
        variations. The developers make no representation about
        the suitability of the schema or DES for any purpose. It
        is provided "as is" without expressed or implied
        warranty.</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 CDSM.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>
</xs:documentation>
<xs:documentation>
    <xhtml:h2 ism:ownerProducer="USA" ism:classification="U">Implementation Notes</xhtml:h2>
    <xhtml:p ism:ownerProducer="USA" ism:classification="U">A CDSM.XML instance is an
        instance of a CDSM-TDO or a TDO with particular payload and assertions. Its structure is similar
        to:</xhtml:p>
    <xhtml:ul>
        <xhtml:p ism:ownerProducer="USA" ism:classification="U">A <xhtml:a href="CDSM-TDF_xsd_Element_TrustedDataObject.html#TrustedDataObject">
            CDSM-TDF tdf:TrustedDataObject</xhtml:a> and has the following assertion:
        </xhtml:p>
        <xhtml:ul>
            <xhtml:li ism:ownerProducer="USA" ism:classification="U">
                <xhtml:a href="CDSM_xsd_Element_CdsManifestAssertion.html#CdsManifestAssertion">csm:CdsManifestAssertion</xhtml:a>
            </xhtml:li>
        </xhtml:ul>
    </xhtml:ul>
    <xhtml:p ism:ownerProducer="USA" ism:classification="U">The root element for Cross Domain System Manifest Assertion
        is <xhtml:a href="CDSM_xsd_Element_CdsManifestAssertion.html#CdsManifestAssertion">csm:CdsManifestAssertion</xhtml:a>
        and is implemented as a TDF assertion.
    </xhtml:p>
</xs:documentation>
<xs: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>
</xs:documentation>
</xs:annotation>

<!-- *****-->

<!-- Start Elements -->

<!-- *****-->

<!-- Root Element -->

<xs:element name="CdsManifestAssertion" type="csm:CdsAssertionType">
    <xs:annotation>
```

```

        <xs:documentation xml:lang="en">
            <xhtml:p ism:ownerProducer="USA" ism:classification="U">The root node of a CDS Manifest assertion for cross domain transfer.</xhtml:p>
        </xs:documentation>
    </xs:annotation>
</xs:element>

<xs:element name="Originator" type="cdsm:OriginatorType">
    <xs:annotation>
        <xs:documentation xml:lang="en">
            <xhtml:p ism:ownerProducer="USA" ism:classification="U">This element represents a software vendor.</xhtml:p>
        </xs:documentation>
    </xs:annotation>
</xs:element>

<xs:element name="Product" type="cdsm:ProductType">
    <xs:annotation>
        <xs:documentation xml:lang="en">
            <xhtml:p ism:ownerProducer="USA" ism:classification="U">This element represents a software product.</xhtml:p>
        </xs:documentation>
    </xs:annotation>
</xs:element>

<xs:element name="PayloadVersion" type="cdsm:PayloadVersionType">
    <xs:annotation>
        <xs:documentation xml:lang="en">
            <xhtml:p ism:ownerProducer="USA" ism:classification="U">This element represents a software version.</xhtml:p>
        </xs:documentation>
    </xs:annotation>
</xs:element>

<xs:element name="CPE" type="cdsm:CPEType">
    <xs:annotation>
        <xs:documentation xml:lang="en">
            <xhtml:p ism:ownerProducer="USA" ism:classification="U">This element represents a software common platform enumeration (CPE).</xhtml:p>
        </xs:documentation>
    </xs:annotation>
</xs:element>

<xs:element name="Arch" type="cdsm:ArchType">
    <xs:annotation>
        <xs:documentation xml:lang="en">
            <xhtml:p ism:ownerProducer="USA" ism:classification="U">This element represents a software architecture.</xhtml:p>
        </xs:documentation>
    </xs:annotation>
</xs:element>

<xs:element name="Routing" type="MediumStringType">
    <xs:annotation>
        <xs:documentation xml:lang="en">
            <xhtml:p ism:ownerProducer="USA" ism:classification="U">This element represents routing info.</xhtml:p>
        </xs:documentation>
    </xs:annotation>
</xs:element>
```

```
<xs:element name="Workflowid" type="MediumStringType">
  <xs:annotation>
    <xs:documentation xml:lang="en">
      <xhtml:p ism:ownerProducer="USA" ism:classification="U">This element represents work flow id.</xhtml:p>
    </xs:documentation>
  </xs:annotation>
</xs:element>

<xs:element name="Userkey" type="MediumStringType">
  <xs:annotation>
    <xs:documentation xml:lang="en">
      <xhtml:p ism:ownerProducer="USA" ism:classification="U">This element represents user key.</xhtml:p>
    </xs:documentation>
  </xs:annotation>
</xs:element>

<xs:element name="VendorChecksum" type="cdsm:VendorChecksumType">
  <xs:annotation>
    <xs:documentation xml:lang="en">
      <xhtml:p ism:ownerProducer="USA" ism:classification="U">This element represents a software vendor checksum.</xhtml:p>
    </xs:documentation>
  </xs:annotation>
</xs:element>

<xs:element name="VirusScanList" type="cdsm:VirusScanListType">
  <xs:annotation>
    <xs:documentation xml:lang="en">
      <xhtml:p ism:ownerProducer="USA" ism:classification="U">This element represents a list of virus scans.</xhtml:p>
    </xs:documentation>
  </xs:annotation>
</xs:element>

<xs:element name="VirusScan" type="cdsm:VirusScanType">
  <xs:annotation>
    <xs:documentation xml:lang="en">
      <xhtml:p ism:ownerProducer="USA" ism:classification="U">This element represents a software virus scan.</xhtml:p>
    </xs:documentation>
  </xs:annotation>
</xs:element>

<xs:element name="MD5" type="cdsm:MD5Type">
  <xs:annotation>
    <xs:documentation xml:lang="en">
      <xhtml:p ism:ownerProducer="USA" ism:classification="U">This element represents a vendor md5 checksum.</xhtml:p>
    </xs:documentation>
  </xs:annotation>
</xs:element>

<xs:element name="SHA256" type="cdsm:SHA256Type">
  <xs:annotation>
    <xs:documentation xml:lang="en">
      <xhtml:p ism:ownerProducer="USA" ism:classification="U">This element represents a vendor sha256 checksum.</xhtml:p>
    </xs:documentation>
  </xs:annotation>
</xs:element>
```



```

    </xs:element>

    <xs:element name="SHA512" type="cdsm:SHA512Type">
      <xs:annotation>
        <xs:documentation xml:lang="en">
          <xhtml:p ism:ownerProducer="USA" ism:classification="U">This element represents a vendor sha512 checksum.</xhtml:p>
        </xs:documentation>
      </xs:annotation>
    </xs:element>

    <xs:element name="ScanVendor" type="cdsm:ScanVendorType">
      <xs:annotation>
        <xs:documentation xml:lang="en">
          <xhtml:p ism:ownerProducer="USA" ism:classification="U">This element represents a virus scan vendor.</xhtml:p>
        </xs:documentation>
      </xs:annotation>
    </xs:element>

    <xs:element name="ScanVersion" type="cdsm:ScanVersionType">
      <xs:annotation>
        <xs:documentation xml:lang="en">
          <xhtml:p ism:ownerProducer="USA" ism:classification="U">This element represents a virus scan version.</xhtml:p>
        </xs:documentation>
      </xs:annotation>
    </xs:element>

    <xs:element name="SignatureDate" type="cdsm:SignatureDateType">
      <xs:annotation>
        <xs:documentation xml:lang="en">
          <xhtml:p ism:ownerProducer="USA" ism:classification="U">This element represents a signature date.</xhtml:p>
        </xs:documentation>
      </xs:annotation>
    </xs:element>

    <xs:element name="ScanResult" type="cdsm:ScanResultType">
      <xs:annotation>
        <xs:documentation xml:lang="en">
          <xhtml:p ism:ownerProducer="USA" ism:classification="U">This element represents a virus scan result.</xhtml:p>
        </xs:documentation>
      </xs:annotation>
    </xs:element>

    <!--*****-->

    <!-- End Elements -->

    <!--*****-->

    <!--*****-->

    <!-- Start Attributes -->

    <!--*****-->

```

```
<xs:attribute name="DESVersion" type="cdsm:DESVersionType">
  <xs:annotation>
    <xs:documentation xml:lang="en">
      <xhtml:p ism:ownerProducer="USA" ism:classification="U">The version number of the DES</xhtml:p>
    </xs:documentation>
  </xs:annotation>
</xs:attribute>

<!-- ***** -->

<!--End Attributes -->

<!-- ***** -->

<!-- ***** -->

<!--Start Type Definitions -->

<!-- ***** -->

<xs:complexType name="CdsAssertionType">
  <xs:annotation>
    <xs:documentation xml:lang="en">
      <xhtml:p ism:ownerProducer="USA" ism:classification="U">The root node of a CDS Manifest assertion for cross domain transfer.</xhtml:p>
    </xs:documentation>
  </xs:annotation>
  <xs:all>
    <!-- required -->

    <xs:element ref="cdsm:Originator" minOccurs="1" maxOccurs="1"/>
    <xs:element ref="cdsm:Product" minOccurs="1" maxOccurs="1"/>
    <xs:element ref="cdsm:PayloadVersion" minOccurs="1" maxOccurs="1"/>
    <xs:element ref="cdsm:Arch" minOccurs="1" maxOccurs="1"/>
    <xs:element ref="cdsm:VirusScanList" minOccurs="1" maxOccurs="1"/>

    <!-- optional -->

    <xs:element ref="cdsm:CPE" minOccurs="0" maxOccurs="1"/>
    <xs:element ref="cdsm:Routing" minOccurs="0" maxOccurs="1"/>
    <xs:element ref="cdsm:Workflowid" minOccurs="0" maxOccurs="1"/>
    <xs:element ref="cdsm:Userkey" minOccurs="0" maxOccurs="1"/>
    <xs:element ref="cdsm:VendorChecksum" minOccurs="0" maxOccurs="1"/>
  </xs:all>
  <xs:attribute ref="cdsm:DESVersion" use="required"/>
</xs:complexType>

<xs:complexType name="VirusScanListType">
  <xs:annotation>
    <xs:documentation xml:lang="en">
      <xhtml:p ism:ownerProducer="USA" ism:classification="U">This element represents a list of virus scans.</xhtml:p>
    </xs:documentation>
  </xs:annotation>
```

attributes.</xhtml:p>

```

        </xs:documentation>
    </xs:annotation>
    <xs:sequence>
        <xs:element ref="cdsm:VirusScan" minOccurs="1" maxOccurs="10"/>
    </xs:sequence>
</xs:complexType>

<xs:simpleType name="MediumStringType">
    <xs:annotation>
        <xs:documentation xml:lang="en">
            <xhtml:p ism:ownerProducer="USA" ism:classification="U">An attribute for a medium string, less than or equal to 1024 characters, for CDSM
attributes.</xhtml:p>
        </xs:documentation>
    </xs:annotation>
    <xs:restriction base="xs:string">
        <xs:minLength value="1"/>
        <xs:maxLength value="1024"/>
        <xs:pattern value="([a-zA-Z0-9\s_-])*"/>
    </xs:restriction>
</xs:simpleType>

<xs:complexType name="VendorChecksumType">
    <xs:annotation>
        <xs:documentation xml:lang="en">
            <xhtml:p ism:ownerProducer="USA" ism:classification="U">An attribute for expressing a software vendor checksum.</xhtml:p>
        </xs:documentation>
    </xs:annotation>
    <xs:sequence>
        <xs:element ref="cdsm:MD5" minOccurs="0" maxOccurs="1"/>
        <xs:element ref="cdsm:SHA256" minOccurs="1" maxOccurs="1"/>
        <xs:element ref="cdsm:SHA512" minOccurs="0" maxOccurs="1"/>
    </xs:sequence>
</xs:complexType>

<xs:complexType name="VirusScanType">
    <xs:annotation>
        <xs:documentation xml:lang="en">
            <xhtml:p ism:ownerProducer="USA" ism:classification="U">An attribute for expressing software virus scan details.</xhtml:p>
        </xs:documentation>
    </xs:annotation>
    <xs:sequence>
        <xs:element ref="cdsm:ScanVendor" minOccurs="1" maxOccurs="1"/>
        <xs:element ref="cdsm:ScanVersion" minOccurs="1" maxOccurs="1"/>
        <xs:element ref="cdsm:SignatureDate" minOccurs="1" maxOccurs="1"/>
        <xs:element ref="cdsm:ScanResult" minOccurs="1" maxOccurs="1"/>
    </xs:sequence>
</xs:complexType>

<xs:simpleType name="OriginatorType">
    <xs:annotation>
        <xs:documentation xml:lang="en">
            <xhtml:p ism:ownerProducer="USA" ism:classification="U">A list for expressing software vendors.</xhtml:p>
        </xs:documentation>
    </xs:annotation>
```

```
<xs:restriction base="xs:string">
    <xs:minLength value="1"/>
    <xs:maxLength value="50"/>
    <xs:pattern value="([a-zA-Z0-9\s_-])*"/>
</xs:restriction>
</xs:simpleType>

<xs:simpleType name="ProductType">
    <xs:annotation>
        <xs:documentation xml:lang="en">
            <xhtml:p ism:ownerProducer="USA" ism:classification="U">A list for expressing a software products.</xhtml:p>
        </xs:documentation>
    </xs:annotation>
    <xs:restriction base="xs:string">
        <xs:minLength value="1"/>
        <xs:maxLength value="256"/>
        <xs:pattern value="([a-zA-Z0-9\s_-])*"/>
    </xs:restriction>
</xs:simpleType>

<xs:simpleType name="PayloadVersionType">
    <xs:annotation>
        <xs:documentation xml:lang="en">
            <xhtml:p ism:ownerProducer="USA" ism:classification="U">An attribute for expressing a software versions.</xhtml:p>
        </xs:documentation>
    </xs:annotation>
    <xs:restriction base="xs:string">
        <xs:minLength value="1"/>
        <xs:maxLength value="30"/>
        <xs:pattern value="([a-zA-Z0-9\.-])*"/>
    </xs:restriction>
</xs:simpleType>

<xs:simpleType name="CPEType">
    <xs:annotation>
        <xs:documentation xml:lang="en">
            <xhtml:p ism:ownerProducer="USA" ism:classification="U">
                The regular expressions OR'ed together in this
                type were copied verbatim from the cpe22Type and
                cpe23Type definitions in
                <xhtml:a xhtml:href="https://csrc.nist.gov/schema/cpe/2.3/cpe-naming_2.3.xsd">
                    the official CPE schema
                </xhtml:a>
                . The length restriction is added to constrain
                the values to a reasonable length for cross-domain
                use.
            </xhtml:p>
        </xs:documentation>
    </xs:annotation>
    <xs:restriction base="xs:anyURI">
        <xs:minLength value="1"/>
        <xs:maxLength value="1024"/>
        <xs:pattern value="([c][p][eE]:/[AHOaho]?(:[A-Za-z0-9\._\-\~%]*){0,6})|(cpe:2\.3:[aho\*\-](:(((\?*|\*?)([a-zA-Z0-9\._\-\~%]|(\[
```

+ , / ; < > @ [\] ^ _ { | } ~)) + (? * [* ?) [\ * -]) } 5 { (: (([a - z A - Z] { 2 , 3 } - ([a - z A - Z] { 2 } [0 - 9] { 3 })) ?) [\ * -])) (: (((? * [* ?] ([a - z A - Z 0 - 9 \ - . _] | (\ (\ \ \ \ * ? ! & # 3 4 ; \$ % & amp ; ' \ (\) \ + , / ; < > @ [\] ^ _ _

```

{\\|}~|)))+(\\?|\\*?))|[\\*\\-|))){4}}"/>
  </xs:restriction>
</xs:simpleType>

<xs:simpleType name="ArchType">
  <xs:annotation>
    <xs:documentation xml:lang="en">
      <xhtml:p ism:ownerProducer="USA" ism:classification="U">An attribute for expressing a software architectures.</xhtml:p>
    </xs:documentation>
  </xs:annotation>
  <xs:restriction base="xs:string">
    <xs:enumeration value="i386"/>
    <xs:enumeration value="i486"/>
    <xs:enumeration value="i586"/>
    <xs:enumeration value="i686"/>
    <xs:enumeration value="x86_64"/>
    <xs:enumeration value="amd64"/>
    <xs:enumeration value="ia64"/>
    <xs:enumeration value="armv6l"/>
    <xs:enumeration value="armv7l"/>
    <xs:enumeration value="sparc"/>
    <xs:enumeration value="sparc64"/>
    <xs:enumeration value="sparc64v"/>
    <xs:enumeration value="ppc"/>
    <xs:enumeration value="ppc64"/>
    <xs:enumeration value="ppc64le"/>
    <xs:enumeration value="s390"/>
    <xs:enumeration value="s390x"/>
    <xs:enumeration value="64-bit"/>
    <xs:enumeration value="32-bit"/>
    <xs:enumeration value="none"/>
    <xs:enumeration value="noarch"/>
  </xs:restriction>
</xs:simpleType>

<xs:simpleType name="MD5Type">
  <xs:annotation>
    <xs:documentation xml:lang="en">
      <xhtml:p ism:ownerProducer="USA" ism:classification="U">An attribute for expressing vendor md5 checksums.</xhtml:p>
    </xs:documentation>
  </xs:annotation>
  <xs:restriction base="xs:string">
    <xs:minLength value="32"/>
    <xs:maxLength value="32"/>
    <xs:pattern value="([a-fA-F0-9])*"/>
  </xs:restriction>
</xs:simpleType>

<xs:simpleType name="SHA256Type">
  <xs:annotation>
    <xs:documentation xml:lang="en">
      <xhtml:p ism:ownerProducer="USA" ism:classification="U">An attribute for expressing vendor sha256 checksums.</xhtml:p>
    </xs:documentation>
  </xs:annotation>

```

```
<xs:restriction base="xs:string">
  <xs:minLength value="64"/>
  <xs:maxLength value="64"/>
  <xs:pattern value="([a-fA-F0-9])*"/>
</xs:restriction>
</xs:simpleType>

<xs:simpleType name="SHA512Type">
  <xs:annotation>
    <xs:documentation xml:lang="en">
      <xhtml:p ism:ownerProducer="USA" ism:classification="U">An attribute for expressing vendor sha512 checksums.</xhtml:p>
    </xs:documentation>
  </xs:annotation>
  <xs:restriction base="xs:string">
    <xs:minLength value="128"/>
    <xs:maxLength value="128"/>
    <xs:pattern value="([a-fA-F0-9])*"/>
  </xs:restriction>
</xs:simpleType>

<xs:simpleType name="ScanVendorType">
  <xs:annotation>
    <xs:documentation xml:lang="en">
      <xhtml:p ism:ownerProducer="USA" ism:classification="U">An attribute for expressing virus scan vendors.</xhtml:p>
    </xs:documentation>
  </xs:annotation>
  <xs:restriction base="xs:string">
    <xs:minLength value="3"/>
    <xs:maxLength value="20"/>
    <xs:pattern value="([a-zA-Z0-9\s_-])*"/>
  </xs:restriction>
</xs:simpleType>

<xs:simpleType name="ScanVersionType">
  <xs:annotation>
    <xs:documentation xml:lang="en">
      <xhtml:p ism:ownerProducer="USA" ism:classification="U">An attribute for expressing virus scan versions.</xhtml:p>
    </xs:documentation>
  </xs:annotation>
  <xs:restriction base="xs:string">
    <xs:minLength value="1"/>
    <xs:maxLength value="20"/>
    <xs:pattern value="([a-zA-Z0-9\.-])*"/>
  </xs:restriction>
</xs:simpleType>

<xs:simpleType name="SignatureDateType">
  <xs:annotation>
    <xs:documentation xml:lang="en">
      <xhtml:p ism:ownerProducer="USA" ism:classification="U">An attribute for expressing signature dates.</xhtml:p>
    </xs:documentation>
  </xs:annotation>
  <xs:restriction base="xs:dateTime"/>
</xs:simpleType>
```

```
<xs:simpleType name="ScanResultType">
  <xs:annotation>
    <xs:documentation xml:lang="en">
      <xhtml:p ism:ownerProducer="USA" ism:classification="U">An attribute for expressing virus scan results.</xhtml:p>
    </xs:documentation>
  </xs:annotation>
  <xs:restriction base="xs:string">
    <xs:pattern value="pass|clean|Pass|Clean"/>
  </xs:restriction>
</xs:simpleType>
<xs:annotation>
  <xs:documentation xml:lang="en">
    <xhtml:p ism:ownerProducer="USA" ism:classification="U">An attribute for expressing version number of the DES.</xhtml:p>
  </xs:documentation>
</xs:annotation>
<xs:simpleType name="DESVersionType">

  <xs:restriction base="xs:string">
    <xs:pattern value="[0-9]{6}(\.[0-9]{6})?(\-{1,23})?" />
  </xs:restriction>
</xs:simpleType>

<!--*****-->

<!--End Type Definitions      -->

<!--*****-->

<xs:annotation>
  <xs:documentation>
    <xhtml:h2 ism:ownerProducer="USA" ism:classification="U">Formal Change List</xhtml:h2>
    <xhtml:table ism:ownerProducer="USA" ism:classification="U" id="ChangeHistory">
      <xhtml:caption>Change History</xhtml:caption>
      <xhtml:thead>
        <xhtml:tr>
          <xhtml:th>Version</xhtml:th>
          <xhtml:th>Date</xhtml:th>
          <xhtml:th>By</xhtml:th>
          <xhtml:th>Description</xhtml:th>
        </xhtml:tr>
      </xhtml:thead>
      <xhtml:tbody>
        <xhtml:tr>
          <xhtml:td>2021-JAN</xhtml:td>
          <xhtml:td>2020-12-01</xhtml:td>
          <xhtml:td>ODNI/CIO/IAD</xhtml:td>
          <xhtml:td>Initial creation, reference the change history in the DES.</xhtml:td>
        </xhtml:tr>
      </xhtml:tbody>
    </xhtml:table>
  </xs:documentation>
```

```
</xs:annotation>
</xs:schema>
```


2.2 - CDSM-guard.xsd

```
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"
            xmlns="urn:us:gov:ic:cdsmanifest"
            xmlns:cdsm="urn:us:gov:ic:cdsmanifest"
            xmlns:tdf="urn:us:gov:ic:tdf"
            targetNamespace="urn:us:gov:ic:cdsmanifest"
            elementFormDefault="qualified"
            attributeFormDefault="qualified"
            version="202111">
  <xs:element name="CdsManifestAssertion" type="cdsm:CdsAssertionType"/>
  <xs:element name="Originator" type="cdsm:OriginatorType"/>
  <xs:element name="Product" type="cdsm:ProductType"/>
  <xs:element name="PayloadVersion" type="cdsm:PayloadVersionType"/>
  <xs:element name="CPE" type="cdsm:CPEType"/>
  <xs:element name="Arch" type="cdsm:ArchType"/>
  <xs:element name="Routing" type="MediumStringType"/>
  <xs:element name="WorkFlowid" type="MediumStringType"/>
  <xs:element name="Userkey" type="MediumStringType"/>
  <xs:element name="VendorChecksum" type="cdsm:VendorChecksumType"/>
  <xs:element name="VirusScanList" type="cdsm:VirusScanListType"/>
  <xs:element name="VirusScan" type="cdsm:VirusScanType"/>
  <xs:element name="MD5" type="cdsm:MD5Type"/>
  <xs:element name="SHA256" type="cdsm:SHA256Type"/>
  <xs:element name="SHA512" type="cdsm:SHA512Type"/>
  <xs:element name="ScanVendor" type="cdsm:ScanVendorType"/>
  <xs:element name="ScanVersion" type="cdsm:ScanVersionType"/>
  <xs:element name="SignatureDate" type="cdsm:SignatureDateType"/>
  <xs:element name="ScanResult" type="cdsm:ScanResultType"/>
  <xs:attribute name="DESVersion" type="cdsm:DESVersionType"/>
  <xs:complexType name="CdsAssertionType">
    <xs:all>
      <xs:element ref="cdsm:Originator"/>
      <xs:element ref="cdsm:Product"/>
      <xs:element ref="cdsm:PayloadVersion"/>
      <xs:element ref="cdsm:Arch"/>
      <xs:element ref="cdsm:VirusScanList"/>
      <xs:element ref="cdsm:CPE" minOccurs="0"/>
      <xs:element ref="cdsm:Routing" minOccurs="0"/>
      <xs:element ref="cdsm:WorkFlowid" minOccurs="0"/>
      <xs:element ref="cdsm:Userkey" minOccurs="0"/>
      <xs:element ref="cdsm:VendorChecksum" minOccurs="0"/>
    </xs:all>
    <xs:attribute ref="cdsm:DESVersion" use="required"/>
  </xs:complexType>
  <xs:complexType name="VirusScanListType">
    <xs:sequence>
      <xs:element ref="cdsm:VirusScan" maxOccurs="10"/>
    </xs:sequence>
  </xs:complexType>
  <xs:simpleType name="MediumStringType">
    <xs:restriction base="xs:string">
      <xs:minLength value="1"/>
      <xs:maxLength value="1024"/>
    </xs:restriction>
  </xs:simpleType>
</xs:schema>
```

```
<xs:pattern value="([a-zA-Z0-9\s_-])*/>
</xs:restriction>
</xs:simpleType>
<xs:complexType name="VendorChecksumType">
  <xs:sequence>
    <xs:element ref="cdsm:MD5" minOccurs="0"/>
    <xs:element ref="cdsm:SHA256"/>
    <xs:element ref="cdsm:SHA512" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="VirusScanType">
  <xs:sequence>
    <xs:element ref="cdsm:ScanVendor"/>
    <xs:element ref="cdsm:ScanVersion"/>
    <xs:element ref="cdsm:SignatureDate"/>
    <xs:element ref="cdsm:ScanResult"/>
  </xs:sequence>
</xs:complexType>
<xs:simpleType name="OriginatorType">
  <xs:restriction base="xs:string">
    <xs:minLength value="1"/>
    <xs:maxLength value="50"/>
    <xs:pattern value="([a-zA-Z0-9\s_-])*/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="ProductType">
  <xs:restriction base="xs:string">
    <xs:minLength value="1"/>
    <xs:maxLength value="256"/>
    <xs:pattern value="([a-zA-Z0-9\s_-])*/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="PayloadVersionType">
  <xs:restriction base="xs:string">
    <xs:minLength value="1"/>
    <xs:maxLength value="30"/>
    <xs:pattern value="([a-zA-Z0-9\.-])*/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="CPEType">
  <xs:restriction base="xs:anyURI">
    <xs:minLength value="1"/>
    <xs:maxLength value="1024"/>
    <xs:pattern value="([c][pP][eE]:([A-Za-z0-9\._\-\~%]*){0,6})|(cpe:2\.3:[aho\*\-](:(((\?*|\*?)([a-zA-Z0-9\-\._]|(\[\[\*\?!\&#34;#$$$&amp;'\"(\)\+,/:;&lt;=&gt;@\[\]\^`{\}|~})))+(\\*|\*?))|[\*\-])){5}(:((([a-zA-Z]{2,3}(-([a-zA-Z]{2}|[0-9]{3}))?)|[\*\-]))(:(((\?*|\*?)([a-zA-Z0-9\-\._]|(\[\[\*\?!\&#34;#$$$&amp;'\"(\)\+,/:;&lt;=&gt;@\[\]\^`{\}|~})))+(\\*|\*?))|[\*\-])){4})"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="ArchType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="i386"/>
    <xs:enumeration value="i486"/>
    <xs:enumeration value="i586"/>
    <xs:enumeration value="i686"/>
  </xs:restriction>
</xs:simpleType>
```

```
<xs:enumeration value="x86_64"/>
<xs:enumeration value="amd64"/>
<xs:enumeration value="ia64"/>
<xs:enumeration value="armv6l"/>
<xs:enumeration value="armv7l"/>
<xs:enumeration value="sparc"/>
<xs:enumeration value="sparc64"/>
<xs:enumeration value="sparc64v"/>
<xs:enumeration value="ppc"/>
<xs:enumeration value="ppc64"/>
<xs:enumeration value="ppc64le"/>
<xs:enumeration value="s390"/>
<xs:enumeration value="s390x"/>
<xs:enumeration value="64-bit"/>
<xs:enumeration value="32-bit"/>
<xs:enumeration value="none"/>
<xs:enumeration value="noarch"/>
</xs:restriction>
</xs:simpleType>
<xs:simpleType name="MD5Type">
  <xs:restriction base="xs:string">
    <xs:minLength value="32"/>
    <xs:maxLength value="32"/>
    <xs:pattern value="([a-fA-F0-9])*"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="SHA256Type">
  <xs:restriction base="xs:string">
    <xs:minLength value="64"/>
    <xs:maxLength value="64"/>
    <xs:pattern value="([a-fA-F0-9])*"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="SHA512Type">
  <xs:restriction base="xs:string">
    <xs:minLength value="128"/>
    <xs:maxLength value="128"/>
    <xs:pattern value="([a-fA-F0-9])*"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="ScanVendorType">
  <xs:restriction base="xs:string">
    <xs:minLength value="3"/>
    <xs:maxLength value="20"/>
    <xs:pattern value="([a-zA-Z0-9\s_-])*"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="ScanVersionType">
  <xs:restriction base="xs:string">
    <xs:minLength value="1"/>
    <xs:maxLength value="20"/>
    <xs:pattern value="([a-zA-Z0-9\.-])*"/>
  </xs:restriction>
</xs:simpleType>
```

```
<xs:simpleType name="SignatureDateType">
  <xs:restriction base="xs:dateTime"/>
</xs:simpleType>
<xs:simpleType name="ScanResultType">
  <xs:restriction base="xs:string">
    <xs:pattern value="pass|clean|Pass|Clean"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="DESVersionType">
  <xs:restriction base="xs:string">
    <xs:pattern value="[0-9]{6}(\.[0-9]{6})?(\-{1,23})?" />
  </xs:restriction>
</xs:simpleType>
</xs:schema>
```

2.3 - SchemaGuideSchema.xsd

```
<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema"
            xmlns:xhtml="http://www.w3.org/1999/xhtml-StopBrowserRendering"
            attributeFormDefault="qualified"
            ism:compliesWith="USGov USIC"
            ism:resourceElement="true"
            ism:createDate="2019-09-18"
            ism:DESVersion="202111"
            ism:ISMCAICESVersion="202205"
            ism:classification="U"
            ism:ownerProducer="USA"
            version="202111"
            elementFormDefault="qualified"
            targetNamespace="urn:schema:guide:schema:cdsmanifest"
            xml:lang="en">
  <xsd:annotation>
    <xsd:documentation>
      <xhtml:h1 ism:ownerProducer="USA" ism:classification="U">Intelligence Community
Technical Specification XML Data Encoding Specification for Cross Domain System Manifest (CDSM.XML) SchemaGuide</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 used to
facilitate generation of the SchemaGuide for the XML Data Encoding Specification for
Cross Domain System Manifest (CDSM.XML). </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 only
used to produce the schemaGuide for the XML Data Encoding Specification (DES).
Please see the document titled <xhtml:i>
      <xhtml:a href="../../Documents/CDSM/DesCdsMxMl.pdf">XML Data Encoding Specification for
Cross Domain System Manifest Assertion
(CDSM.XML)</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"> It is envisioned that this
schema or its components, as well as other parts of the DES may be overridden for
localized implementations. Therefore, permission to use, copy, modify and distribute
this XML Schema and the other parts of the DES for any purpose is hereby granted in
perpetuity. </xhtml:p>
      <xhtml:p ism:ownerProducer="USA" ism:classification="U"> Please reference the preceding
two paragraphs in all copies or variations. The developers make no representation
about the suitability of the schema or DES for any purpose. It is provided "as is"
without expressed or implied warranty. </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
(CDSM.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">Implementation Notes</xhtml:h2>
    <xhtml:p ism:ownerProducer="USA" ism:classification="U">A CDSM.XML instance is an
instance of a CDSM-TDO or a TDO with particular payload and assertions. Its structure is similar
to:</xhtml:p>
    <xhtml:ul>
      <xhtml:p ism:ownerProducer="USA" ism:classification="U">A <xhtml:a href="CDSM-TDF_xsd_Element_TrustedDataObject.html#TrustedDataObject">
CDSM-TDF tdf:TrustedDataObject</xhtml:a> and has the following assertion:
    </xhtml:p>
      <xhtml:ul>
        <xhtml:li ism:ownerProducer="USA" ism:classification="U">
          <xhtml:a href="CDSM_xsd_Element_CdsManifestAssertion.html#CdsManifestAssertion">csm:CdsManifestAssertion</xhtml:a>
        </xhtml:li>
      </xhtml:ul>
    </xhtml:ul>
    <xhtml:p ism:ownerProducer="USA" ism:classification="U">The root element for Cross Domain System Manifest Assertion
is <xhtml:a href="CDSM_xsd_Element_CdsManifestAssertion.html#CdsManifestAssertion">csm:CdsManifestAssertion</xhtml:a>
and is implemented as a TDF assertion.
  </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>
  <!-- Import the schema for each "dependent" spec. This schema is only used to generate a SchemaGuide -->

<!-- CDSM schema because that is the main spec -->

<xsd:import namespace="urn:us:gov:ic:cdsmanifest" schemaLocation="CDSM.xsd"/>

  <!-- TDF schema because an CDSM.XML goes inside a CDSM-TDO -->

<xsd:import namespace="urn:us:gov:ic:tdf" schemaLocation="../CDSM-TDF/CDSM-TDF.xsd"/>
</xsd:schema>
```