



XML Schema for SNMP Endpoint Proxy

- [XML Schema, page 1](#)
- [Sample XML, page 3](#)

XML Schema

Use the rules of the schema to create an XML file. The XML file that you create maps MIB Object Identifiers (MIB OIDs) to the EnergyWise attributes. We recommend that you have one XML file for each MIB.

To use SNMP Endpoint proxy, you have to implement the following schema:

```
<?xml version="1.0" encoding="ISO-8859-1" ?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <!-- Definition of Simple Elements -->
  <xs:element name="description" type="xs:string" />
  <!-- Definition of Attributes -->
  <xs:attribute name="name" type="xs:string" />
  <xs:attribute name="datatype" type="xs:string" />
  <xs:attribute name="value" type="xs:string" />
  <xs:attribute name="default" type="xs:string" />
  <xs:attribute name="invalue" type="xs:integer" />
  <xs:attribute name="outvalue" type="xs:integer" />
  <xs:attribute name="lowerrange" type="xs:integer" />
  <xs:attribute name="upperrange" type="xs:integer" />
  <!-- Definition of Complex Elements -->
  <xs:element name="mapping" >
    <xs:complexType>
      <xs:attribute ref="invalue" />
      <xs:attribute ref="outvalue" />
      <xs:attribute ref="lowerrange" />
      <xs:attribute ref="upperrange" />
    </xs:complexType>
  </xs:element>
  <xs:element name="oid" >
    <xs:complexType>
      <xs:sequence>
        <xs:element ref="mapping" maxOccurs="unbounded" minOccurs="0" />
      </xs:sequence>
      <xs:attribute ref="name" />
      <xs:attribute name="action" >
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:enumeration value="get" />
            <xs:enumeration value="set" />
          </xs:restriction>
        </xs:simpleType>
      </xs:attribute>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

```

</xs:simpleType>
</xs:attribute>
<xs:attribute ref="datatype" />
<xs:attribute ref="value" />
</xs:complexType>
</xs:element>
<xs:element name="constant" >
<xs:complexType>
<xs:attribute name="type" use="required">
<xs:simpleType>
<xs:restriction base="xs:string">
<xs:enumeration value="level" />
<xs:enumeration value="importance" />
<xs:enumeration value="string" />
<xs:enumeration value="watts" />
<xs:enumeration value="integer" />
</xs:restriction>
</xs:simpleType>
</xs:attribute>
<xs:attribute ref="value" />
</xs:complexType>
</xs:element>
<xs:element name="method">
<xs:complexType>
<xs:sequence>
<xs:element ref="description" minOccurs="0" maxOccurs="1" />
<xs:choice minOccurs="0">
<xs:element ref="oid" />
<xs:element ref="constant" />
</xs:choice>
</xs:sequence>
<xs:attribute name="name" use="required">
<xs:simpleType>
<xs:restriction base="xs:string">
<xs:enumeration value="fn_get_usage" />
<xs:enumeration value="fn_get_keywords" />
<xs:enumeration value="fn_set_keywords" />
<xs:enumeration value="fn_get_importance" />
<xs:enumeration value="fn_set_importance" />
<xs:enumeration value="fn_get_name" />
<xs:enumeration value="fn_set_name" />
<xs:enumeration value="fn_get_role" />
<xs:enumeration value="fn_set_role" />
<xs:enumeration value="fn_get_level" />
<xs:enumeration value="fn_set_level" />
<xs:enumeration value="fn_get_deviceType" />
<xs:enumeration value="fn_get_units" />
<xs:enumeration value="fn_get_usageCaliber" />
<xs:enumeration value="fn_get_entityCategory" />
</xs:restriction>
</xs:simpleType>
</xs:attribute>
<xs:attribute name="action" use="required">
<xs:simpleType>
<xs:restriction base="xs:string">
<xs:enumeration value="cache" />
<xs:enumeration value="constant" />
<xs:enumeration value="nack" />
<xs:enumeration value="oid" />
</xs:restriction>
</xs:simpleType>
</xs:attribute>
<xs:attribute ref="value" />
<xs:attribute ref="default" />
</xs:complexType>
</xs:element>
<xs:element name="interface">
<xs:complexType>
<xs:sequence>
<xs:element ref="method" maxOccurs="unbounded" minOccurs="0" />
</xs:sequence>
<xs:attribute name="protocol">
<xs:simpleType>

```

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<xs:restriction base="xs:string">
<xs:enumeration value="snmp" />
</xs:restriction>
</xs:simpleType>
</xs:attribute>
</xs:complexType>
</xs:element>
<xs:element name="CiscoEnergyWise">
<xs:complexType>
<xs:all>
<xs:element ref="interface" />
</xs:all>
<xs:attribute name="version" default="1.0" />
</xs:complexType>
</xs:element>
</xs:schema>

```

Sample XML

The following sample XML code uses the EnergyWise MIB:

```

<?xml version="1.0" ?>
- <CiscoEnergyWise version="1.0">
- <interface protocol="snmp" version="v2c">
- <method name="fn_get_usage" action="oid">
- <oid name="cewEntEnergyUsage" action="get" value="1.3.6.1.4.1.9.9.683.1.6.1.8.1001" />
</method>
- <method name="fn_get_units" action="oid">
- <oid name="cewEntEnergyUnits" action="get" value="1.3.6.1.4.1.9.9.683.1.6.1.7.1001" />
</method>
- <method name="fn_set_keywords" action="oid">
- <oid name="cewEntKeyword" action="set" datatype="string"
value="1.3.6.1.4.1.9.9.683.1.6.1.3.1001" />
</method>
- <method name="fn_get_keywords" action="oid">
- <oid name="cewEntKeyword" action="get" value="1.3.6.1.4.1.9.9.683.1.6.1.3.1001" />
</method>
- <method name="fn_set_importance" action="oid">
- <oid name="cewEntImportanceInt" action="set" datatype="unsigned32"
value="1.3.6.1.4.1.9.9.683.1.6.1.12.1001" />
</method>
- <method name="fn_get_importance" action="oid">
- <oid name="cewEntImportanceInt" action="get" value="1.3.6.1.4.1.9.9.683.1.6.1.12.1001" />
</method>
- <method name="fn_set_name" action="oid">
- <oid name="cewEntName" action="set" datatype="string"
value="1.3.6.1.4.1.9.9.683.1.6.1.4.1001" />
</method>
- <method name="fn_get_name" action="oid">
- <oid name="cewEntName" action="get" value="1.3.6.1.4.1.9.9.683.1.6.1.4.1001" />
</method>
- <method name="fn_set_role" action="oid">
- <oid name="cewEntRoleDescription" action="set" datatype="string"
value="1.3.6.1.4.1.9.9.683.1.6.1.5.1001" />
</method>
- <method name="fn_get_role" action="oid">
- <oid name="cewEntRoleDescription" action="get" value="1.3.6.1.4.1.9.9.683.1.6.1.5.1001" />
</method>
- <method name="fn_set_level" action="oid">
- <oid name="cewEntEnergyLevel" action="set" datatype="integer"
value="1.3.6.1.4.1.9.9.683.1.6.1.10.1001">
<mapping inval="0" outval="1" />
<mapping inval="1" outval="2" />
<mapping inval="2" outval="3" />
<mapping inval="3" outval="4" />
<mapping inval="4" outval="5" />
<mapping inval="5" outval="6" />
<mapping inval="6" outval="7" />

```

```

<mapping invalue="7" outvalue="8" />
<mapping invalue="8" outvalue="9" />
<mapping invalue="9" outvalue="10" />
<mapping invalue="10" outvalue="11" />
</oid>
</method>
- <method name="fn_get_level" action="oid">
- <oid name="cewEntEnergyLevel" action="get" value="1.3.6.1.4.1.9.9.683.1.6.1.10.1001">
<mapping invalue="1" outvalue="0" />
<mapping invalue="2" outvalue="1" />
<mapping invalue="3" outvalue="2" />
<mapping invalue="4" outvalue="3" />
<mapping invalue="5" outvalue="4" />
<mapping invalue="6" outvalue="5" />
<mapping invalue="7" outvalue="6" />
<mapping invalue="8" outvalue="7" />
<mapping invalue="9" outvalue="8" />
<mapping invalue="10" outvalue="9" />
<mapping invalue="11" outvalue="10" />
</oid>
</method>
- <method name="fn_get_usageCaliber" action="oid">
<oid name="cewEntEnergyUsageCaliber" action="get" value="1.3.6.1.4.1.9.9.683.1.6.1.9.1001"
/>
</method>
- <method name="fn_get_entityCategory" action="cache">
<description>Let the switch return cache the consumer category for this
device.</description>
</method>
- <method name="fn_get_deviceType" action="constant">
<constant type="string" value="Printer" />
</method>
</interface>
</CiscoEnergyWise>

```