



Creating Coverage Zone Files

This appendix describes the Coverage Zone file and provides several Coverage Zone file examples.

Introduction

A *Coverage Zone file* is an XML file used to specify a user-defined coverage zone. The Coverage Zone file supports different tags to support different types of proximity configurations.

- Network and subnet—Specify the IP address range
- Geographical location—Specify the longitude and latitude of the data center

In addition to the coverage zone information, two optional elements are created for documentation purposes: a revision value to specify the version of the Coverage Zone file and a customer name.

For information about importing or uploading a Coverage Zone file, see the [“Coverage Zone File Registration” section on page 6-9](#).

For more information about Coverage Zone files, see the [“Coverage Zone File” section on page 1-21](#).

Coverage Zone files can be created using any ASCII text-editing tool. You can use a single coverage zone text-format file to define all the coverage zones for your CDS network.

[Table C-1](#) defines the Coverage Zone file elements.

Table C-1 Coverage Zone File Elements

Tag	Element	Value	Description
location	latitude	float	Value indicating the geographical coordinate (latitude) of the data center.
	longitude	float	Value indicating the geographical coordinate (longitude) of the data center.
coverageZone	network	IP address	Coverage zone IP address range.
	SE	Service Engine name (string)	Specifies the Service Engines serving the coverage zone specified in the network element. This can have one or more elements.
	metric	integer	Value indicating the proximity of the Service Engine to the end user. The lower the value, the closer the Service Engine is to the end user.
	location		Value indicating the geographical coordinates (latitude and longitude) of the data center.

Table C-1 Coverage Zone File Elements (continued)

Tag	Element	Value	Description
CDNNetwork	revision	1.0	Not used in this CDS release.
	customerName	customer name	Not used in this CDS release.
	coverageZone		This can have one or more coverage zones.

**Note**

The metric value of a default coverage zone is set to 20. If a particular SE is preferred for a user-defined coverage zone, the metric value in the Coverage Zone file should be set to a value less than 20. If a default coverage zone is preferred, then the metric value in the Coverage Zone file should be set to a value greater than 20.

Coverage Zone XML Schema

The XML Schema file describes and dictates the content of the XML file. The coveragezone.xsd file contains the XML schema.

The following code is the Coverage Zone XML schema:

```
<?xml version="1.0" encoding="UTF-8"?>
<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <xsd:annotation>
    <xsd:documentation>Revision: 1.0</xsd:documentation>
  </xsd:annotation>
  <xsd:annotation>
    <xsd:documentation> Schema used to validate Cisco CoverageZone file </xsd:documentation>
  </xsd:annotation>
  <xsd:simpleType name="ipAddressType">
    <!-- IPv4 Address -->
    <!-- Snum = 1*3Digit ; representing a decimal integer -->
    <!-- ; value in the range 0 through 255 -->
    <!-- IPv4-address-literal - Snum 3("." Snum) -->
    <xsd:restriction base="xsd:token">
      <xsd:pattern value="((1?[0-9]?[0-9]|2[0-4][0-9]|25[0-5])\.) {3} (1?[0-9]?[0-9]|2[0-4][0-9]|25[0-5])/[0-9]+"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:simpleType name="SENameType">
    <xsd:restriction base="xsd:string">
      <xsd:maxLength value="80"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:simpleType name="LatitudeType">
    <xsd:restriction base="xsd:float">
      <xsd:minInclusive value="90" />
      <xsd:maxInclusive value="90" />
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:simpleType name="LongitudeType">
    <xsd:restriction base="xsd:float">
      <xsd:minInclusive value="180" />
      <xsd:maxInclusive value="180" />
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:complexType name="locationType">
    <xsd:sequence>
```

```

    <xsd:element name="latitude" type="LatitudeType">
    <xsd:element name="longitude" type="LongitudeType">
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="coverageZoneType">
  <xsd:sequence>
    <xsd:choice maxOccurs="1">
      <xsd:sequence maxOccurs="2">
        <xsd:element name="network" type="ipAddressType"/>
        <xsd:element name="location" type="locationType"/>
      </xsd:sequence>
      <xsd:choice maxOccurs="1">
        <xsd:element name="network" type="ipAddressType"/>
        <xsd:element name="location" type="locationType"/>
      </xsd:choice>
    </xsd:choice>
    <xsd:element name="SE" type="SENameType" maxOccurs="unbounded" />
    <xsd:element name="metric" type="xsd:positiveInteger" maxOccurs="1" />
  </xsd:sequence>
</xsd:complexType>
<xsd:element name="CDNNetwork">
  <xsd:complexType>
    <xsd:sequence>
      <xsd:element name="revision" type="xsd:string" minOccurs="0" maxOccurs="1" />
      <xsd:element name="customerName" type="xsd:string" minOccurs="0" maxOccurs="1" />
      <xsd:element name="coverageZone" type="coverageZoneType" minOccurs="0" maxOccurs="unbounded"/>
    </xsd:sequence>
  </xsd:complexType>
</xsd:element>
</xsd:schema>

```

Coverage Zone File Examples

The following sections show different Coverage Zone file examples in three scenarios.

Scenario 1: Coverage Zone with Client Network Only

```

<?xml version="1.0" ?>
<!-- Coverage Zone data in XML -->
<CDNNetwork>
  <revision>1.0</revision>
  <customerName>Cisco Systems</customerName>
  <!-- San Jose Datacenter -->
  <coverageZone>
    <network> 192.1.2.0/16 </network>
    <SE> CDE-200-SE1 </SE>
    <SE> CDE-200-SE2 </SE>
    <metric> 10 </metric>
  </coverageZone>
  <!-- Chicago Datacenter -->
  <coverageZone>
    <network> 192.1.3.0/24 </network>
    <SE> CDE-200-SE3 </SE>
    <SE> CDE-200-SE4 </SE>
    <metric> 10 </metric>
  </coverageZone>
  <!-- New York Datacenter -->
  <coverageZone>
    <network> 192.1.4.0/24 </network>

```

```

    <SE> CDE-200-SE5 </SE>
    <SE> CDE-200-SE6 </SE>
    <metric> 10 </metric>
  </coverageZone>
</CDNNetwork>

```

Scenario 2: Coverage Zone with Geographical Location of the Datacenter Only

```

<?xml version="1.0" ?>
<!-- Coverage Zone data in XML -->
<CDNNetwork>
  <revision>1.0</revision>
  <customerName>Cisco Systems</customerName>
  <!-- San Jose Datacenter -->
  <coverageZone>
    <location>
      <latitude> 20 </latitude>
      <longitude> -120 </longitude>
    </location>
    <SE> CDE-200-SE1 </SE>
    <SE> CDE-200-SE2 </SE>
    <metric> 10 </metric>
  </coverageZone>
  <!-- Chicago Datacenter -->
  <coverageZone>
    <location>
      <latitude> 20 </latitude>
      <longitude> -120 </longitude>
    </location>
    <SE> CDE-200-SE3 </SE>
    <SE> CDE-200-SE4 </SE>
    <metric> 10 </metric>
  </coverageZone>
  <!-- New York Datacenter -->
  <coverageZone>
    <location>
      <latitude> 20 </latitude>
      <longitude> -120 </longitude>
    </location>
    <SE> CDE-200-SE5 </SE>
    <SE> CDE-200-SE6 </SE>
    <metric> 10 </metric>
  </coverageZone>
</CDNNetwork>

```

Scenario 3: Coverage Zone with Client Network and Geographical Location of the Datacenter

```

<?xml version="1.0" ?>
<!-- Coverage Zone data in XML -->
<CDNNetwork>
  <revision>1.0</revision>
  <customerName>Cisco</customerName>
  <!-- San Jose Datacenter -->
  <coverageZone>
    <network> 192.1.2.0/16 </network>
    <SE> CDE-200-SE1 </SE>
    <SE> CDE-200-SE2 </SE>
    <metric> 10 </metric>
  </coverageZone>
</CDNNetwork>

```

```
</coverageZone>
<!-- Chicago Datacenter -->
<coverageZone>
  <location>
    <latitude> 20 </latitude>
    <longitude> -120 </longitude>
  </location>
  <SE> CDE-200-SE3 </SE>
  <SE> CDE-200-SE4 </SE>
  <metric> 10 </metric>
</coverageZone>
<!-- New York Datacenter -->
<coverageZone>
  <network> 192.1.4.0/24 </network>
  <SE> CDE-200-SE5 </SE>
  <SE> CDE-200-SE6 </SE>
  <metric> 10 </metric>
</coverageZone>
</CDNNetwork>
```

