



Request Routing Engine APIs

This chapter describes the following APIs for the Request Routing Engine:

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- [Last-Resort URL Translator Web Services API, page 4-2](#)

Request Routing Engine APIs

The Request Routing Engine APIs allows another platform’s software client to make queries, in the form of an HTTP request, to the Request Routing Engine about which Service Engine the Request Routing Engine selects.



Note

The Request Routing Engine APIs does not support service-aware routing.

Parameter

The Request Routing Engine determines the best Service Engine based on the client IP address and requested URL; therefore, the platform’s software client must include these two parameters in the API query.

- Service Router IP address (required)
- CDNURL (required)
- ClientIP (required)

Request Syntax

`http://ServiceRouterIP/routeURL?CDNURL=<Requested URL>&ClientIP=<ClientIP>`

Request Example

The following is an example of a client’s API HTTP request:

```
http://10.252.250.118/routeURL?CDNURL=http://cbs.mov/smooth_linear/cnn.isml/victory&ClientIP=165.137.13.117
```

In this example, the request parameters have the following values:

- Service Router IP address—10.252.250.118
- CDNURL—http://cbs.mov/smooth_linear/cnn.isml/victory
- ClientIP—192.0.2.121

Return

The Request Routing Engine returns an HTTP response with an XML payload with the following information:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<RoutedURLResponse>
<primaryContentRoutedURL>SRresponse</primaryContentRoutedURL>
</RoutedURLResponse>
```

The response identifies the name of the Service Engine the Request Routing Engine selected.

Return Example

For the example HTTP request described above, the HTTP response would be the following:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<RoutedURLResponse>
<primaryContentRoutedURL>http://str01-hub03.se.cds.mov/smooth_linear/cnn.isml/victory</pri
maryContentRoutedURL>
</RoutedURLResponse>
```

In this example, str-01-hub03 is the Service Engine the Request Routing Engine selected.

**Note**

When there are API query requests for `clientaccesspolicy.xml` or `crossdomain.xml`, the requests are treated like normal API request and the XML payload is sent in the HTTP response as described above.

If requests for `clientaccesspolicy.xml` or `crossdomain.xml` are sent directly to the Request Routing Engine (non-API request), then these files are served. For more information about the Cross-Domain Policy, refer to the *Cisco Videoscape Distribution Suite, Internet Streamer 4.2.1 Software Configuration Guide*. See the “[Related Documentation](#)” section on page [xiii](#) for links to documentation online.

Last-Resort URL Translator Web Services API

The last-resort URL translator provides a way to dynamically translate the client request URL in order to redirect the client to a different CDN. With the URL translator option, the following occurs if the Request Routing Engine uses last-resort routing for a client request:

1. The Request Routing Engine contacts the third-party URL translator through the web service API.
2. The third-party URL translator sends the translated URL in the response to the Request Routing Engine.
3. The Request Routing Engine sends a 302 redirect message to the client with the translated URL it received from the third-party URL translator.

The timeout for connecting to the URL translator server is 500 milliseconds. There are no retries if the URL translator cannot be reached.

If there is no configuration on the URL translator for the requested domain or the connection timeout threshold has been reached, the Request Routing Engine last-resort routing falls back to the alternate domain configuration.

The Request Routing Engine sends the client IP address and the requested URL to the URL translator. The URL translator returns the translated URL and a signed URL.

**Note**

Customer ID and CDN name fields are not currently supported.

The Web Services Description Language (WSDL) for the Request Routing Engine to URL translator communication is the following:

```
<?xml version="1.0" encoding="utf-8"?>
<wsdl:definitions name="CDNUrlTranslationDefinitions"
  targetNamespace="http://cisco/CDS/CDNUrlTranslation"
  xmlns:ut="http://cisco/CDS/CDNUrlTranslation"
  xmlns:utxsd="http://schemas.cisco/CDS/CDNUrlTranslation/Schema"
  xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
  xmlns:wSDL="http://schemas.xmlsoap.org/wsdl/">

  <wsdl:types>
    <xsd:schema targetNamespace="http://schemas.cisco/CDS/CDNUrlTranslation/Schema"
      xmlns:xsd="http://www.w3.org/2001/XMLSchema">

      <!-- UrlTranslationRequest [ClientIP string, Url string, CustomerId string, CDNName string] -->

      <xsd:element name="UrlTranslationRequest">
        <xsd:complexType>
          <xsd:annotation>
            <xsd:documentation>Request to translate the url for a specific
CDN</xsd:documentation>
          </xsd:annotation>
          <xsd:sequence>
            <xsd:element name="ClientIP" minOccurs="1" nillable="false" type="xsd:string">
              <xsd:annotation>
                <xsd:documentation>Get Client IP address</xsd:documentation>
              </xsd:annotation>
            </xsd:element>

            <xsd:element name="Url" minOccurs="1" nillable="false" type="xsd:string">
              <xsd:annotation>
                <xsd:documentation>Client requested url</xsd:documentation>
              </xsd:annotation>
            </xsd:element>

            <xsd:element name="CustomerId" type="xsd:string">
              <xsd:annotation>
                <xsd:documentation>Customer Identifier</xsd:documentation>
              </xsd:annotation>
            </xsd:element>

            <xsd:element name="CDNName" type="xsd:string">
              <xsd:annotation>
                <xsd:documentation>CDN Name</xsd:documentation>
              </xsd:annotation>
            </xsd:element>

            <xsd:element name="SignUrl" minOccurs="1" nillable="false" type="xsd:boolean">
              <xsd:annotation>
                <xsd:documentation>Generate url signature</xsd:documentation>
              </xsd:annotation>
            </xsd:element>

          </xsd:sequence>
        </xsd:complexType>
      </xsd:element>
      <!-- UrlTranslationResponse [TranslatedUrl string] -->
      <xsd:element name="UrlTranslationResponse">
        <xsd:complexType>
          <xsd:annotation>
            <xsd:documentation>Response with the translated url</xsd:documentation>
          </xsd:annotation>
          <xsd:sequence>
```

```

        <xsd:element name="TranslatedUrl" minOccurs="1" nillable="false"
type="xsd:string">
            <xsd:annotation>
                <xsd:documentation>Translated CDN Url</xsd:documentation>
            </xsd:annotation>
        </xsd:element>
        <xsd:element name="SignedUrl" minOccurs="1" nillable="false" type="xsd:boolean">
            <xsd:annotation>
                <xsd:documentation>Signed Url</xsd:documentation>
            </xsd:annotation>
        </xsd:element>
    </xsd:sequence>
</xsd:complexType>
</xsd:element>

</xsd:schema>
</wsdl:types>

<wsdl:message name="UrlTranslationRequest">
    <wsdl:part name="parameters" element="utxsd:UrlTranslationRequest"/>
</wsdl:message>

<wsdl:message name="UrlTranslationResponse">
    <wsdl:part name="parameters" element="utxsd:UrlTranslationResponse"/>
</wsdl:message>

<wsdl:portType name="UrlTranslationPortType">
    <wsdl:operation name="GetUrlTranslation">
        <wsdl:input message="ut:UrlTranslationRequest"/>
        <wsdl:output message="ut:UrlTranslationResponse"/>
    </wsdl:operation>
</wsdl:portType>

<wsdl:binding name="UrlTranslationBinding" type="ut:UrlTranslationPortType">
    <soap:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
    <wsdl:operation name="GetUrlTranslation">
        <soap:operation soapAction="" style="document"/>
        <wsdl:input>
            <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal"/>
        </wsdl:output>
    </wsdl:operation>
</wsdl:binding>

<wsdl:service name="CDNUrlTranslationService">
    <wsdl:documentation>CDN Url Translation Service</wsdl:documentation>
    <wsdl:port name="UrlTranslationPort" binding="ut:UrlTranslationBinding">
        <soap:address location="http://localhost/CDNUrlTranslationService"/>
    </wsdl:port>
</wsdl:service>
</wsdl:definitions>

```