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## Preface

### Change History

Table 1  Reference Guide Change History

<table>
<thead>
<tr>
<th>Date</th>
<th>Change</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 2018</td>
<td>Updated software version from X8.11 to X8.11.1, as version X8.11 is no longer available.</td>
<td>Software withdrawn.</td>
</tr>
<tr>
<td>July 2018</td>
<td>Removed details about individual API calls, as the API is self-documented.</td>
<td>Released with X8.11.</td>
</tr>
<tr>
<td>July 2017</td>
<td>Phase three of REST API. Now includes firewall rules, SIP, and domain certificates.</td>
<td>Released with X8.10.</td>
</tr>
<tr>
<td>January 2017</td>
<td>Updated with HTTP allow list calls and get by filter option.</td>
<td>Released with X8.9.1.</td>
</tr>
<tr>
<td>December 2016</td>
<td>Phase two of REST API. Now includes B2B functionality and ability to delete.</td>
<td>Released with X8.9.</td>
</tr>
<tr>
<td>June 2016</td>
<td>First phase of REST API to set up Mobile and Remote Access (MRA).</td>
<td>Released with X8.8.</td>
</tr>
</tbody>
</table>
Using the Cisco VCS REST API

The Cisco VCS REST API is compliant with RAML version 0.8 (raml.org/spec.html). Although the API is fully compliant, it does not support nested APIs.

The API is self-documented using RESTful API Modeling Language (RAML). You can access the RAML definitions for your system at https://<Expressway FQDN or IP address>/api/provisioning/raml. An experimental schema browser is embedded in the web user interface, and can be accessed from the Experimental menu.

Schemas

All request and response schema on the Cisco VCS REST API use JSON Schema version 4 (json-schema.org/documentation.html). Request parameters are not supported and only JSON schemas are used.

Authentication

The API is only accessible via HTTPS and requires authentication. The authentication credentials are the administrator credentials on the Cisco VCS node.

Base URI

The base URI to access the Cisco VCS REST API is: http://<external_address>/api. For example, to access the management API commands: https://10.0.0.1/api/management

The REST API is published in the following categories:

- Cisco VCS Expressway
  /edge/ <remaining path> (for example, http://10.0.0.1/api/provisioning/edge/credential)
- Cisco VCS Control
  /controller/ <remaining path> (for example, http://10.0.0.1/api/provisioning/controller/domain)
- Common between Cisco VCS Expressway and Cisco VCS Control
  /common/<remaining path> (for example, http://10.0.0.1/api/provisioning/common/certs/root)

Some maintenance-related items like restart and system information are standalone calls and do not apply to any of the categories.

You can also filter Get requests to find a specific entry. For example, /controller/zone/traversalclient/name/myzone returns the traversal client zone called "myzone"

Sample Requests and Responses

This section provides examples on how to use Cisco VCS API methods. The examples relate to API methods for the DNS server and NTP server.

Example: Using API for DNS Server

Retrieving DNS Server information

This example retrieves the DNS server information using JSON API.

<table>
<thead>
<tr>
<th>URI</th>
<th>GET https://&lt;Cisco VCS FQDN or IP address&gt;/api/provisioning/common/dns/dnsserver</th>
</tr>
</thead>
<tbody>
<tr>
<td>Request body</td>
<td>This operation does not require a request body.</td>
</tr>
</tbody>
</table>
This example retrieves the DNS server information using cURL.

```
curl -X GET -k -i 'https://<Cisco VCS FQDN or IP address>/api/provisioning/v1/common/dns/dnsserver'
```

**Adding DNS Server**

This example adds a DNS server with an IP address 10.0.0.2 and index value 2 using JSON API.

```
URI POST https://<Cisco VCS FQDN or IP address>/api/provisioning/v1/common/dns/dnsserver
```

**Request body**

```json
{
    "DefaultDNSServers":
    {
        "index": 2,
        "address": "10.0.0.2"
    }
}
```

**Response body**

```json
{
    "Message": "The operation was successful"
}
```

This example adds a DNS server with an IP address 10.0.0.2 and index value 2 using cURL.

```
curl -X POST -k -i 'https://<Cisco VCS FQDN or IP address>/api/provisioning/v1/common/dns/dnsserver' --data '{"DefaultDNSServers": {"index": 2, "address": "10.0.0.2"}}'
```

**Modify DNS Server**

This example modifies the IP address of the DNS server with the index value 2 using JSON API.

```
URI PUT https://<Cisco VCS FQDN or IP address>/api/provisioning/v1/common/dns/dnsserver
```

This example adds a DNS server with an IP address 10.0.0.2 and index value 2 using cURL.
This example modifies the IP address of the DNS server with the index value 2 using cURL.

```
curl -X PUT -k -i 'https://<Cisco VCS FQDN or IP address>/api/provisioning/v1/common/dns/dnsserver' --data '{"DefaultDNSServers": {"index": 2, "address": "10.0.0.3"}}'
```

### Delete DNS Server

This example deletes the DNS server with the index value of 2 using JSON API.

```
Request body
{
  "index": 2
}
Response body
{
  "Message": "The operation was successful"
}
```

This example deletes the DNS server with the index value of 2 using cURL.

```
curl -X DELETE -k -i 'https://<Cisco VCS FQDN or IP address>/api/provisioning/v1/common/dns/dnsserver' --data '{"index": 2}''
```

### Example: Using API for NTP Server

#### Retrieving NTP Server information

This example retrieves the NTP server information using JSON API.

```
Request body
This operation does not require a request body.
```
This example retrieves the NTP server information using cURL.

curl -X GET -k -i 'https://<Cisco VCS FQDN or IP address>/api/provisioning/v1/common/time/ntpserver'

Adding NTP Server

This example adds an NTP server with an IP address 10.0.0.2 using JSON API.

```
<table>
<thead>
<tr>
<th>URI</th>
<th>POST https://&lt;Cisco VCS FQDN or IP Address&gt;/api/provisioning/v1/common/time/ntpserver</th>
</tr>
</thead>
<tbody>
<tr>
<td>Request body</td>
<td>{</td>
</tr>
<tr>
<td></td>
<td>&quot;index&quot;: 6,</td>
</tr>
<tr>
<td></td>
<td>&quot;Address&quot;: &quot;10.0.0.2&quot;,</td>
</tr>
<tr>
<td></td>
<td>&quot;KeyId&quot;: 1,</td>
</tr>
<tr>
<td></td>
<td>&quot;Hash&quot;: &quot;sha1&quot;,</td>
</tr>
<tr>
<td></td>
<td>&quot;Authentication&quot;: &quot;disabled&quot;</td>
</tr>
<tr>
<td></td>
<td>}</td>
</tr>
</tbody>
</table>

Response body

```

```{ "Message": "The operation was successful" }```}

This example adds an NTP server with an IP address 10.0.0.2 using cURL.

curl -X POST -k -i 'https://<Cisco VCS FQDN or IP address>/api/provisioning/v1/common/time/ntpserver' --data '{"index": 6, "Address": "10.0.0.2", "KeyId": 1, "Hash": "sha1", "Authentication": "disabled"}'

Modify NTP Server information

This example modifies IP address of the NTP server with the index value 6 using JSON API.

```
| URI | PUT https://<Cisco VCS FQDN or IP address>/api/provisioning/v1/common/time/ntpserver |
```

```
Request body

```
{
  "index": 6,
  "Address": "10.0.0.3",
  "KeyId": 1,
  "Hash": "sha1",
  "Authentication": "disabled"
}
```

Response body

```
{
  "Message": "The operation was successful"
}
```

This example modifies IP address of the NTP server with the index value 6 using cURL.

```
curl -X POST -k -i 'https://<Cisco VCS FQDN or IP address>/api/provisioning/v1/common/time/ntpserver' --data '{"index": 6, "Address": "10.0.0.3", "KeyId": 1, "Hash": "sha1", "Authentication": "disabled"}'
```

**Delete NTP Server**

This example deletes the NTP server with the index value of 6 using JSON API.

<table>
<thead>
<tr>
<th>URI</th>
<th>DELETE https://&lt;Cisco VCS FQDN or IP address&gt;/api/provisioning/v1/common/time/ntpserver</th>
</tr>
</thead>
</table>
| Request body | {
| | "index": 6   |
| | }
| Response body | {
| | "Message": "The operation was successful"
| | }

This example deletes the DNS server with the index value of 6 using cURL.

```
curl -X DELETE -k -i 'https://<Cisco VCS FQDN or IP address>/api/provisioning/v1/common/time/ntpserver' --data '{"index": 6}''
```
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