



Cisco Expressway REST API

Summary Guide

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Contents

Preface	3
Change History	3
Using the Expressway REST API	4
Schemas	4
Authentication	4
Base URI	4
Sample Requests and Responses	4
Example: Using API for DNS Server	4
Example: Using API for NTP Server	6
Cisco Legal Information	9
Cisco Trademark	10

Preface

Change History

Table 1 Summary Guide Change History

Date	Change	Reason
January 2019	Remove software version from document, as it is no longer version-specific.	Documentation correction
September 2018	Updated software version from X8.11 to X8.11.1, as version X8.11 is no longer available.	Software withdrawn
July 2018	Removed details about individual API calls, as the API is self-documented.	Released with X8.11
July 2017	Phase three of REST API. Now includes firewall rules, SIP, and domain certificates.	Released with X8.10
January 2017	Updated with HTTP allow list calls and get by filter option.	Released with X8.9.1
December 2016	Phase two of REST API. Now includes B2B functionality and ability to delete.	Released with X8.9
June 2016	First phase of REST API to set up Mobile and Remote Access (MRA).	Released with X8.8

Using the Expressway REST API

The Expressway 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 Expressway 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 Expressway node.

Base URI

The base URI to access the Expressway 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 Expressway-E
/edge/ <remaining path> (for example, `http://10.0.0.1/api/provisioning/edge/credential`)
- Cisco Expressway-C
/controller/ <remaining path> (for example, `http://10.0.0.1/api/provisioning/controller/domain`)
- Common between Cisco Expressway-E and Cisco Expressway-C
/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 Expressway 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.

URI	GET <code>https://<Expressway FQDN or IP address>/api/provisioning/common/dns/dnsserver</code>
Request body	This operation does not require a request body.

Using the Expressway REST API

Response body	<pre>{ "DefaultDNSServers": { "index": 1, "address": "10.0.0.1" } }</pre>
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This example retrieves the DNS server information using cURL.

```
curl -X GET -k -i 'https://<Expressway 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://<Expressway FQDN or IP address>/api/provisioning/common/dns/dnsserver'
Request body	<pre>{ "DefaultDNSServers": { "index": 2, "address": "10.0.0.2" } }</pre>
Response body	<pre>{ "Message": "The operation was successful" }</pre>

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://<Expressway 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://<Expressway FQDN or IP address>/api/provisioning/common/dns/dnsserver
-----	---

Using the Expressway REST API

Request body	<pre>{ "DefaultDNSServers": { "index": 2, "address": "10.0.0.3" } }</pre>
Response body	<pre>{ "Message": "The operation was successful" }</pre>

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

```
curl -X PUT -k -i 'https://<Expressway 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.

URI	DELETE https://<Expressway FQDN or IP address>/api/provisioning/v1/common/dns/dnsserver
Request body	<pre>{ "index": 2 }</pre>
Response body	<pre>{ "Message": "The operation was successful" }</pre>

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

```
curl -X DELETE -k -i 'https://<Expressway 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.

URI	GET https://<Expressway FQDN or IP address>/api/provisioning/v1/common/time/ntpserver
Request body	This operation does not require a request body.

Using the Expressway REST API

Response body	<pre>{ "index": 5, "KeyId": 1, "Hash": "sha1", "Authentication": "disabled", "Address": "10.0.0.1" }</pre>
---------------	--

This example retrieves the NTP server information using cURL.

```
curl -X GET -k -i '<Expressway 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.

URI	POST <a href="https://<Expressway FQDN or IP Address>/api/provisioning/v1/common/time/ntpserver">https://<Expressway FQDN or IP Address>/api/provisioning/v1/common/time/ntpserver
Request body	<pre>{ "index": 6, "Address": "10.0.0.2", "KeyId": 1, "Hash": "sha1", "Authentication": "disabled" }</pre>
Response body	<pre>{ "Message": "The operation was successful" }</pre>

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

```
curl -X POST -k -i 'https://<Expressway 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 <a href="https://<Expressway FQDN or IP address>/api/provisioning/v1/common/time/ntpserver">https://<Expressway FQDN or IP address>/api/provisioning/v1/common/time/ntpserver
-----	---

Using the Expressway REST API

Request body	<pre>{ "index": 6, "Address": "10.0.0.3", "KeyId": 1, "Hash": "sha1", "Authentication": "disabled" }</pre>
Response body	<pre>{ "Message": "The operation was successful" }</pre>

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

```
curl -X POST -k -i 'https://<Expressway 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.

URI	DELETE https://<Expressway FQDN or IP address>/api/provisioning/v1/common/time/ntpserver
Request body	<pre>{ "index": 6 }</pre>
Response body	<pre>{ "Message": "The operation was successful" }</pre>

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

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




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