



Using the Expressway REST API

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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/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 URL

The base URL to access the Expressway REST API is http://<external_address>/api. For example, to access the system information, use <https://10.0.0.1/api/provisioning/sysinfo>.

The REST API is published in the following categories:

- Cisco Expressway-E
[/provisioning/edge/ <remaining path>](#) (for example, <https://10.0.0.1/api/provisioning/edge/zone/traversalserver>)
- Cisco Expressway-C
[/provisioning/controller/ <remaining path>](#) (for example, <https://10.0.0.1/api/provisioning/controller/zone/traversalclient>)
- Common between Cisco Expressway-E and Cisco Expressway-C

/provisioning/common/<remaining path> (for example,
<https://10.0.0.1/api/provisioning/common/adminaccount/changepassword>)

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".

- REST APIs which get the status of functionalities as [status/common/<remaining path>](http://10.0.0.1/api/status/common/smartlicensing/licensing) (for example, <http://10.0.0.1/api/status/common/smartlicensing/licensing>)

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

Retrieve DNS Server information

This example retrieves the DNS server information using JSON API.

URL	GET <a href="https://<Expressway FQDN or IP address>/api/v1/provisioning/common/dns/dnsserver">https://<Expressway FQDN or IP address>/api/v1/provisioning/common/dns/dnsserver
Request body	This operation does not require a request body.
Response body	<pre>{ "DefaultDNSServers": { "index": 2, "address": "10.0.0.2" } }</pre>

This example retrieves the DNS server information using cURL.

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

Add DNS server

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

URL	POST <a href="https://<Expressway FQDN or IP address>/api/v1/provisioning/common/dns/dnsserver">https://<Expressway FQDN or IP address>/api/v1/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/v1/provisioning/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.

URL	PUT https://<Expressway FQDN or IP address>/api/v1/provisioning/common/dns/dnsserver
Request body	{ "DefaultDNSServers": { "index": 2, "address": "10.0.0.3" } }
Response body	{ "Message": "The operation was successful" }

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/v1/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.

URL	DELETE https://<Expressway FQDN or IP address>/api/v1/provisioning/common/dns/dnsserver
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://<Expressway FQDN or IP
address>/api/v1/provisioning/common/dns/dnsserver' --data '{"index": 2}'
```

Example: USING API FOR NTP SERVER

Retrieve NTP Server information

This example retrieves the NTP server information using JSON API.

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

Response body	<pre>{ "index": 5, "KeyId": 1, "Hash": "sha1", "Authentication": "disabled", "Address": "10.0.0.1" }</pre>
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This example retrieves the NTP server information using cURL.

```
curl -X GET -k -i '<Expressway FQDN or IP address>/api/v1/provisioning/common/time/ntpserver'
```

Add NTP Server

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

URL	POST https://<Expressway FQDN or IP Address>/api/v1/provisioning/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/v1/provisioning/common/time/ntpserver' --data '{"index": 6, "Address": "10.0.0.2", "KeyId": 1, "Hash": "sha1", "Authentication": "disabled"}'
```

Modify NTP Server information

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

URL	PUT https://<Expressway FQDN or IP address>/api/v1/provisioning/common/time/ntpserver
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/v1/provisioning/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.

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

Example: USING API FOR RETRIEVING SMART LICENSING STATUS

Retrieve Smart Licensing Status

This example retrieves Smart Licensing Status.

URL	GET https://<Expressway FQDN or IP address>/api/v1/status/common/smartlicensing/licensing
Request body	This operation does not require a request body.
Response body	{ "ExportControlledFunctionality": "True", "VirtualAccount": "Expressway", "SmartAccount": "testaccount.cisco.com", "Authorization": { "LicenseAuthorizationStatus": "OUT OF COMPLIANCE", "AuthorizationExpires": "May, 05 May 2020 06:13:06 GMT", "NextAuthorizationAttempt": "February, 05 Feb 2020 18:18:07 GMT", "LastAuthorizationAttempt": "February, 05 Feb 2020 06:18:07 GMT" }, "Registration": { "RegistrationStatus": "REGISTERED", "InitialRegistration": "February, 05 Feb 2020 05:59:04 GMT", "RegistrationExpires": "February, 04 Feb 2021 05:54:03 GMT", "NextRenewalAttempt": "August, 03 Aug 2020 05:59:04 GMT" } }

This example retrieves the Smart Licensing Status information using cURL.

```
curl -X GET -k -i 'https://<Expressway FQDN or IP address>/api/v1/status/common/smartlicensing/licensing'
```

