

Foglight® 7.3.0

REST API Reference Guide



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Legend

- **WARNING:** A WARNING icon indicates a potential for property damage, personal injury, or death.

- ⚠ **CAUTION:** A CAUTION icon indicates potential damage to hardware or loss of data if instructions are not followed.

- ⓘ **IMPORTANT NOTE, NOTE, TIP, MOBILE, or VIDEO:** An information icon indicates supporting information.

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Getting Started - Rest API

The Foglight REST API is an application programming interface (API) that uses HTTP requests to GET, PUT, POST, and DELETE data.

The *REST API Reference Guide* is intended for users who have been assigned the *API Access* and the *Administrator* roles and who need programmatic access to easily create professional services and better integrate with third-party systems.

This section introduces you to the Foglight REST APIs. For more information, see the following topics:

- [Glossary](#)
- [Prerequisites](#)
- [Overview](#)

Glossary

[Table 1](#) explains the token that protects the access to REST APIs and is used as the request header for REST APIs. Auth-Token has been replaced with Access-Token in the Foglight Management Server 5.9.1, but Auth-Token is still supported. Quest recommends that you change to use Access-Token as the request header for REST APIs, as Auth-Token will be deprecated in future product release.

i | NOTE: Retrieving the access token through authToken is only available in the Foglight release 5.7.5.7 or later.

Table 1. Glossary

Glossary	Description
Auth-Token (available in Foglight 5.7.5.7 and 5.7.5.8 releases only)	An Auth-Token is used as a request header for REST APIs, which protects the access to the REST APIs. This Auth-Token has been replaced with Access-Token since Foglight 5.9.1.
Access-Token (replaces Auth-Token starting with 5.9.1 release)	An Access-Token is used as a request header for REST APIs, which protects the access to the REST APIs.

Prerequisites

REST APIs are protected by authentications, which means you need retrieve an access token before using REST APIs. The authentications protecting REST APIs include the following two approaches:

- *User credentials:* User account and user password
- *Access-Token:* Token-based authentication

Use the [Security — Login](#) API to retrieve an access token through user credentials or an authToken, then include this access token in an HTTP request header to operate with REST APIs.

i | NOTE: The minimum version required for operating REST APIs is Foglight Management Server 5.7.0. Retrieving an access token through authToken is only available in the Foglight release 5.7.5.7 or later.

For more information about how to use the [Security — Login API](#) with third party tools, visit the [Foglight REST APIs Introduction - Java and Python Sample Code](#).

Overview

Table 2 lists the registry variables available after installing the *Forge-RestAPI* cartridge:

Table 2. Available registry variables

Registry variable name	Type	Description
<i>REST_Audit_Enable</i>	Boolean	Specifies whether the audit feature is enabled in the REST API. Enable is set by default. The audit logs can be found in the <i>Audit</i> dashboard.
<i>REST_Audit_Filter</i>	String	If the resource name is specified using this variable, audit logs of specified resources cannot be found in the <i>Audit</i> dashboard and the audit feature is disabled. <ul style="list-style-type: none"> Separate multiple resource names with a comma. Regular expression is also supported. The resource name is the part following "api" in the URL address. For example, for the URL address is <i>http://<server>:<port>/api/v1/topology/query</i>, the resource name is "v1/topology/query".
<i>REST_DisabledAPI</i>	String	Specifies the REST API that is disabled by default. "Run Script" is set by default, which means <i>Script — Run Script</i> will be disabled after the installation.
<i>REST_MaxDepth</i>	Integer	Specifies the expansion depth of a global object. This value starts from 0, and the default value is 1. Take the Host object as an example: <ul style="list-style-type: none"> If the max depth is 0, the Host name and Host unique ID are returned. If the max depth is 1, the first-level properties of the Host are returned.
<i>REST_MaxObjectCount</i>	Integer	Specifies how many objects are invoked through a response. An object is one instance that contains multiple properties.
<i>REST_RetrieveMetricCurrentValue</i>	Boolean	Specifies whether to retrieve the metric current value of a topology object in a response. False is set by default. <p>NOTE: If this registry variable is set to True, the Management Server will retrieve the metric current value only, while latest, period, and history values of this topology object will not be retrieved.</p>
<i>REST_RetrieveObservationValue</i>	Boolean	Specifies whether to retrieve the observation current value of a topology object in a response. False is set by default.
<i>REST_ShowLinks</i>	Boolean	Specifies whether to show the link field through a response. False is set by default. The link field includes the following two types: <ul style="list-style-type: none"> Link pointing to the object type Link pointing to the object
<i>REST_TokenExpirationTime</i>	Integer	Specifies the token expiration time (in seconds). This variable takes effect when the token is accessed, when a login attempt using a new API or an API request is received on the server side, for example.

Table 2. Available registry variables

Registry variable name	Type	Description
<i>REST_CrossOriginResourceAllowe dDomain</i>	String	Specifies whether the request from the third-party integration site can be allowed. This variable has no default value.
<i>REST_AccessControlAllowCredenti als</i>	Boolean	Specifies whether the response to a request can be exposed to the page. If the returned value is: <ul style="list-style-type: none"> • True: the response to a request can be exposed. • False: the response cannot be exposed.
<i>REST_ShowTopologyTypeLocalPro perties</i>	Boolean	Specifies whether to show the property of Topology Object type in an instance. False is set by default.
<i>REST_AgentSubmitInfoObservation Duration</i>	Integer	Specifies the observation duration of the <i>agents</i> property in the <i>RestAPIInfo</i> type. The default value is 300, which is identical to 5 minutes.
<i>REST_AgentSubmitInfoQueueSize</i>	Integer	Specifies the cache size that stores the detailed information of submitted data. The default value is 100.

Most of registry variables listed in [Table 3: URL parameters](#) on page 8 can be overwritten by the following URL parameters per request.

Table 3. URL parameters

URL parameter name	Description
<i>maxObjectCount</i>	Specifies how many objects are invoked through a response. An object is one instance that contains multiple properties.
<i>maxDepth</i>	Specifies the expansion depth of the global object. This value starts from 0, and the default value is 1. Take the Host object as an example: <ul style="list-style-type: none"> • If the max depth is 0, the Host name and Host unique ID are returned. • If the max depth is 1, the first-level properties of the Host are returned.
<i>durationMS</i>	Specifies the time duration, including <i>startTimeMS</i> and <i>endTime</i> . If <i>startTimeMS</i> is not set, the <i>endTime</i> value is used as the current time, and the <i>startTime</i> value is calculated as <i>endTime</i> minus the specified duration. NOTE: This parameter does not impact the Topology — Observations query and Topology — TopologyObject query API.
<i>startTimeMS</i>	Specifies the <i>startTime</i> . The <i>endTime</i> is the sum of <i>startTime</i> and <i>durationMS</i> . NOTE: This parameter does not impact the Topology — Observations query and Topology — TopologyObject query API.
<i>retrieveMetricValue</i>	Specifies whether to retrieve the metric current value of a Topology object in a response.
<i>retrieveObservationValue</i>	Specifies whether to retrieve the observation current value of a Topology object in a response.
<i>showLinks</i>	Specifies whether to show the link field through a response. False is set by default. The link field includes the following types: <ul style="list-style-type: none"> • Link pointing to the object type • Link pointing to the object
<i>excludePropertyPatterns</i>	Excludes the properties in a Topology object. Take <code>http://<server>:<port>/api/v1/type/Host/instances?excludePropertyPatterns=.*Alarm.*.*State.*</code> as an example, this URL address excludes the properties which name contains "Alarm" and "State".

Table 3. URL parameters

URL parameter name	Description
<i>includePropertyPatterns</i>	<p>Includes the properties in a Topology object. Take <code>http://<server>:<port>/api/v1/type/Host/instances?includePropertyPatterns=.*Alarm.*.*State.*</code> as an example, this URL address includes the properties which name contains "Alarm" and "State".</p> <p>NOTE: If <i>excludePropertyPatterns</i> and <i>includePropertyPatterns</i> are set to the same value, the value set in <i>excludePropertyPatterns</i> is ignored.</p>
<i>showTopologyTypeLocalProperties</i>	Specifies whether to show the property of the Topology type in an instance.

REST APIs

This section provides you with essential information about available Foglight REST APIs. For more information, see the following topics:

- [App](#)
- [Security](#)
- [Agent](#)
- [Alarm](#)
- [Cartridge](#)
- [Registry](#)
- [Remote client](#)
- [Rule](#)
- [Script](#)
- [Subscribe alarm](#)
- [Topology](#)
- [TopologyType](#)
- [User Information](#)

App

The App related API includes the following:

- [APP — Get App information](#)

APP — Get App information

- **API Name:** Get App information
- **Description:** Get the application information.
- **Request type:** GET
- **API path:** /api/v1/
- **Sample usage:** http://<server>:<port>/api/v1/
- **Header:**

Field	Type	Description
Access-Token	String	The token is retrieved after successfully logging in to the Management Server.
Accept	String	Specifies the response data format which can be either <code>application/json</code> or <code>application/xml</code> . The default value is <code>application/json</code> .

- **Returned value:**

Field	Type	Description
status	String	The response status.
data	String	Either the response data format (JSON/XML) or exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown.

Security

The Security related APIs include the following:

- [Security — Login](#)
- [Security — Logout](#)
- [Security — Set Auth Token for a given user](#)
- [Security — Delete Auth Token for a given user](#)
- [Security — Set Auth Token for current user](#)
- [Security — Delete Auth Token for current user](#)

Security — Login

- **API Name:** Login
- **Description:** Obtain an access token through user credentials (namely *username* and *pwd* in the [Parameter:](#) table) or a digital token (namely *authToken* in the [Parameter:](#) table).
 - **NOTE:** Retrieving an access token through the *authToken* parameter is only available in the Foglight Management Server 5.7.5.7 or later.
 - **NOTE:** The associated user account should be granted with the *API Access* role.
- **Request type:** POST
- **API path:** /api/v1/security/login
- **Sample usage:** http://<server>:<port>/api/v1/security/login
- **Header:**

Field	Type	Description
Accept	String	Specifies the response data format which can be either <code>application/json</code> or <code>application/xml</code> . The default value is <code>application/json</code> .

- **Parameter:**

Field	Type	Description
username	String	User account.
pwd	String	Password associated with the user account.
authToken	String	The token is generated from the <i>User Management</i> dashboard or Foglight command line.

NOTE: This parameter is only available in Foglight release 5.7.5.7 or later.

- **Returned value:**

Field	Type	Description
status	String	The response status.
data	String	Either the response data format (JSON/XML) or exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown.

Security — Logout

- **API Name:** Logout
- **Description:** Expire an access token.
- **Request type:** GET
- **API path:** /api/v1/security/logout
- **Sample usage:** http://<server>:<port>/api/v1/security/logout
- **Header:**

Field	Type	Description
Access-Token	String	The token is retrieved after successfully logging in to the Management Server.
Accept	String	Specifies the response data format which can be either <code>application/json</code> or <code>application/xml</code> . The default value is <code>application/json</code> .

- **Returned value:**

Field	Type	Description
status	String	The response status
data	String	Either the response data format data (JSON/XML) or exception message
error	String	Error code if some exception occurs; otherwise this field is not shown.

Security — Set Auth Token for a given user

- **API Name:** Set Auth Token for a given user
- **Description:** Set the Auth Token, which is also referred to as digital token, for a specified user account. The current user who is logging in to REST service must have the Administrator permission to use this API.

i | NOTE: This API is only available in the Foglight Management Server 5.7.5.7 or later.

After setting a token for the specified user, the old token (if exists) is expired. This causes the login status of this user is also expired, if this user has logged in to REST service. This user should log in to the REST service again using the new authToken or credentials.

- **Request type:** GET
- **API path:** /api/v1/security/setAuthToken/username
- **Sample usage:** http://<server>:<port>/api/v1/security/setAuthToken/abcuser
- **Header:**

Field	Type	Description
Accept	String	Specifies the response data format which can be either <code>application/json</code> or <code>application/xml</code> . The default value is <code>application/json</code> .

- **Parameter:**

Field	Type	Description
username	String	User account which Auth Token is to be set.

- **Returned value:**

Field	Type	Description
status	String	The response status.
data	String	Either the response data format (JSON/XML) or exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown.

Security — Delete Auth Token for a given user

- **API Name:** Delete Auth Token for a given user
- **Description:** Delete the Auth Token, which is also referred to as digital token, for a specified user account. The current user who is logging in to REST service must have the Administrator permission to use this API.

i | NOTE: This API is only available in the Foglight Management Server 5.7.5.7 or later.

After deleting a token for the specified user, the old token (if exists) is expired. This causes the login status of this user is also expired, if this user has logged in to REST service.

- **Request type:** GET
- **API path:** /api/v1/security/deleteAuthToken/username
- **Sample usage:** http://<server>:<port>/api/v1/security/deleteAuthToken/abcuser
- **Header:**

Field	Type	Description
Accept	String	Specifies the response data format which can be either <code>application/json</code> or <code>application/xml</code> . The default value is <code>application/json</code> .

- **Parameter:**

Field	Type	Description
username	String	User account which Auth Token is to be deleted.

- **Returned value:** —

Field	Type	Description
status	String	The response status.
data	String	Either the response data format (JSON/XML) or exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown.

Security — Set Auth Token for current user

- **API Name:** Set Auth Token for the current user
- **Description:** Set the Auth Token, which is also referred to as digital token, for the current login user.

i | NOTE: This API is only available in the Foglight Management Server 5.7.5.7 or later.

After setting a token for the current user, the old token (if exists) is expired. This causes the login status of current user is also expired. The current user should log in to the REST service again using the new authToken or credentials.

- **Request type:** GET
- **API path:** /api/v1/security/setOwnAuthToken
- **Sample usage:** http://<server>:<port>/api/v1/security/setOwnAuthToken
- **Header:**

Field	Type	Description
Accept	String	Specifies the response data format which can be either <code>application/json</code> or <code>application/xml</code> . The default value is <code>application/json</code> .

- **Returned value:**

Field	Type	Description
status	String	The response status.
data	String	Either the response data format (JSON/XML) or exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown.

Security — Delete Auth Token for current user

- **API Name:** Delete Auth Token for the current user
- **Description:** Delete the Auth Token, which is also referred to as digital token, for the current login user.
i | NOTE: This API is only available in the Foglight Management Server 5.7.5.7 or later.

After deleting a token for the current user, the old token (if exists) is expired. This causes the login status of current user is also expired. The current user should log in to the REST service again using user credentials.

- **Request type:** GET
- **API path:** /api/v1/security/deleteOwnAuthToken
- **Sample usage:** http://<server>:<port>/api/v1/security/deleteOwnAuthToken
- **Header:**

Field	Type	Description
Accept	String	Specifies the response data format which can be either <code>application/json</code> or <code>application/xml</code> . The default value is <code>application/json</code> .

- **Returned value:**

Field	Type	Description
status	String	The response status.
data	String	Either the response data format (JSON/XML) or exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown.

Agent

The Agent related APIs include the following:

- [Agent — Get agent by agent ID](#)
- [Agent — Get all active agents](#)
- [Agent — Get all agents](#)
- [Agent — Get all inactive agents](#)
- [Agent — Start agent by agent ID](#)
- [Agent — Stop agent by agent ID](#)
- [Agent — Delete agent by agent ID](#)

Agent — Get agent by agent ID

- **API Name:** Get agent by agent ID.
- **Description:** Filter out agents by the agent ID.
- **Request type:** GET
- **API path:** /api/v1/agent/agentId/agentId
- **Sample usage:** http://<server>:<port>/api/v1/agent/agentId/1
- **Header:**

Field	Type	Description
Access-Token	String	The token is retrieved after successfully logging in to the Management Server.
Accept	String	Specifies the response data format which can be either <code>application/json</code> or <code>application/xml</code> . The default value is <code>application/json</code> .

- **Returned value:**

Field	Type	Description
status	String	The response status.
data	String	Either the response data format (JSON/XML) or exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown.

Agent — Get all active agents

- **API Name:** Get all active agents.
- **Description:** Filter out all active agents.
- **Request type:** GET
- **API path:** /api/v1/agent/active
- **Sample usage:** http://<server>:<port>/api/v1/agent/active
- **Header:**

Field	Type	Description
Access-Token	String	The token is retrieved after successfully logging in to the Management Server.
Accept	String	Specifies the response data format which can be either <code>application/json</code> or <code>application/xml</code> . The default value is <code>application/json</code> .

- **Returned value:**

Field	Type	Description
status	String	The response status.
data	String	Either the response data format (JSON/XML) or exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown.

Agent — Get all agents

- **API Name:** Get all agents.
- **Description:** Get all agents.
- **Request type:** GET
- **API path:** /api/v1/agent/allAgents
- **Sample usage:** http://<server>:<port>/api/v1/agent/allAgents
- **Header:**

Field	Type	Description
Access-Token	String	The token is retrieved after successfully logging in to the Management Server.
Accept	String	Specifies the response data format which can be either <code>application/json</code> or <code>application/xml</code> . The default value is <code>application/json</code> .

- **Returned value:**

Field	Type	Description
status	String	The response status.
data	String	Either the response data format (JSON/XML) or exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown.

Agent — Get all inactive agents

- **API Name:** Get all inactive agents.
- **Description:** Filter out all inactive agents.
- **Request type:** GET
- **API path:** /api/v1/agent/inactive
- **Sample usage:** http://<server>:<port>/api/v1/agent/inactive
- **Header:**

Field	Type	Description
Access-Token	String	The token is retrieved after successfully logging in to the Management Server.
Accept	String	Specifies the response data format which can be either <code>application/json</code> or <code>application/xml</code> . The default value is <code>application/json</code> .

- **Returned value:**

Field	Type	Description
status	String	The response status.
data	String	Either the response data format (JSON/XML) or exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown.

Agent — Start agent by agent ID

- **API Name:** Start agent by agent ID.
- **Description:** Active agent and then start data collection by agent ID.
- **Request type:** POST
- **API path:** /api/v1/agent/start/agentId/:agentId
- **Sample usage:** http://<server>:<port>/api/v1/agent/start/agentId/1
- **Header:**

Field	Type	Description
Access-Token	String	The token you get after you login successfully.
Accept	String	Should be <code>application/json</code> or <code>application/xml</code> , to define the response data format, default is <code>application/json</code> .

- **Returned value:**

Field	Type	Description
status	String	The response status.
data	String	Either the response data format (JSON/XML) or exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown.

Agent — Stop agent by agent ID

- **API Name:** Stop agent by agent ID.
- **Description:** Stop data collection and then deactivate agent by agent ID.
- **Request type:** POST
- **API path:** /api/v1/agent/stop/agentId/:agentId
- **Sample usage:** http://<server>:<port>/api/v1/agent/stop/agentId/1
- **Header:**

Field	Type	Description
Access-Token	String	The token you get after you login successfully.
Accept	String	Should be <code>application/json</code> or <code>application/xml</code> , to define the response data format, default is <code>application/json</code> .

- **Returned value:**

Field	Type	Description
status	String	The response status.
data	String	Either the response data format (JSON/XML) or exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown.

Agent — Delete agent by agent ID

- **API Name:** Delete agent by agent ID.
- **Description:** Delete an agent by agent ID.
- **Request type:** DELETE
- **API path:** /api/v1/agent/delete/agentId/:agentId
- **Sample usage:** http://<server>:<port>/api/v1/agent/delete/agentId/1
- **Header:**

Field	Type	Description
Access-Token	String	The token you get after you login successfully.
Accept	String	Should be <code>application/json</code> or <code>application/xml</code> , to define the response data format, default is <code>application/json</code> .

- **Returned value:**

Field	Type	Description
status	String	The response status.
data	String	Either the response data format (JSON/XML) or exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown.

Alarm

The Alarm related APIs include the following:

- [Alarm — Acknowledge alarm by alarm ID](#)
- [Alarm — Clear alarm by alarm ID](#)
- [Alarm — Get alarm by alarm ID](#)
- [Alarm — Get alarm by rule ID](#)
- [Alarm — Get current alarms](#)
- [Alarm — Get history alarms](#)
- [Alarm — Get topology object current alarms](#)
- [Alarm — Get topology object history alarms](#)
- [Alarm — Push alarms](#)
- [Alarm — Push alarms by properties](#)
- [Alarm — Push alarms by query](#)

Alarm — Acknowledge alarm by alarm ID

- **API Name:** Acknowledge alarm by alarm ID
- **Description:** Acknowledge an alarm by its ID.
- **Request type:** GET
- **API path:** /api/v1/alarm/ack/alarmId
- **Sample usage:** http://<server>:<port>/api/v1/alarm/ack/1f478dec-f920-4da9-a8d2-b9ba0dcd4394
- **Header:**

Field	Type	Description
Access-Token	String	The token is retrieved after successfully logging in to the Management Server.
Accept	String	Specifies the response data format which can be either <code>application/json</code> or <code>application/xml</code> . The default value is <code>application/json</code> .

- **Returned value:**

Field	Type	Description
status	String	The response status.
data	String	Either the response data format (JSON/XML) or exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown.

Alarm — Clear alarm by alarm ID

- **API Name:** Clear alarm by alarm ID
- **Description:** Clear an alarm by its ID.
- **Request type:** GET
- **API path:** /api/v1/alarm/clear/alarmId
- **Sample usage:** http://<server>:<port>/api/v1/alarm/clear/1f478dec-f920-4da9-a8d2-b9ba0dcd4394
- **Header:**

Field	Type	Description
Access-Token	String	The token is retrieved after successfully logging in to the Management Server.
Accept	String	Specifies the response data format which can be either <code>application/json</code> or <code>application/xml</code> . The default value is <code>application/json</code> .

- **Returned value:**

Field	Type	Description
status	String	The response status.
data	String	Either the response data format (JSON/XML) or exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown.

Alarm — Get alarm by alarm ID

- **API Name:** Get alarm by alarm ID

- **Description:** Filter out alarms by alarm ID.
- **Request type:** GET
- **API path:** /api/v1/alarm/alarmlid
- **Sample usage:** http://<server>:<port>/api/v1/alarm/1f478dec-f920-4da9-a8d2-b9ba0dcd4394
- **Header:**

Field	Type	Description
Access-Token	String	The token is retrieved after successfully logging in to the Management Server.
Accept	String	Specifies the response data format which can be either <code>application/json</code> or <code>application/xml</code> . The default value is <code>application/json</code> .

- **Returned value:**

Field	Type	Description
status	String	The response status.
data	String	Either the response data format (JSON/XML) or exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown.

Alarm — Get alarm by rule ID

- **API Name:** Get alarm by rule ID.
- **Description:** Filter out alarms by a rule ID. Time range is the default value set in the Management Server, and you can customize the time range using the `startTimeMS` and `durationMS` parameter.
- **Request type:** GET
- **API path:** /api/v1/alarm/ruleid/ruleid
- **Sample usage:** http://<server>:<port>/api/v1/alarm/ruleid/se478dec-f920-4de9-a8d2-b9ba0dcasd94
- **Header:**

Field	Type	Description
Access-Token	String	The token is retrieved after successfully logging in to the Management Server.
Accept	String	Specifies the response data format which can be either <code>application/json</code> or <code>application/xml</code> . The default value is <code>application/json</code> .

- **Returned value:**

Field	Type	Description
status	String	The response status.
data	String	Either the response data format (JSON/XML) or exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown.

Alarm — Get current alarms

- **API Name:** Get current alarms
- **Description:** Filter out current alarms.
- **Request type:** GET

- **API path:** /api/v1/alarm/current
- **Sample usage:** http://<server>:<port>/api/v1/alarm/current
- **Header:**

Field	Type	Description
Access-Token	String	The token is retrieved after successfully logging in to the Management Server.
Accept	String	Specifies the response data format which can be either <code>application/json</code> or <code>application/xml</code> . The default value is <code>application/json</code> .

- **Returned value:**

Field	Type	Description
status	String	The response status.
data	String	Either the response data format (JSON/XML) or exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown.

Alarm — Get history alarms

- **API Name:** Get history alarms
- **Description:** Filter out all history alarms.
- **Request type:** GET
- **API path:** /api/v1/alarm/history
- **Sample usage:** http://<server>:<port>/api/v1/alarm/history
- **Header:**

Field	Type	Description
Access-Token	String	The token is retrieved after successfully logging in to the Management Server.
Accept	String	Specifies the response data format which can be either <code>application/json</code> or <code>application/xml</code> . The default value is <code>application/json</code> .

- **Returned value:**

Field	Type	Description
status	String	The response status.
data	String	Either the response data format (JSON/XML) or exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown.

Alarm — Get topology object current alarms

- **API Name:** Get topology object current alarms
- **Description:** Filter out current alarms by the ID of a topology object.
- **Request type:** GET
- **API path:** /api/v1/alarm/current/topologyId
- **Sample usage:** http://<server>:<port>/api/v1/alarm/current/se478dec-f920-4de9-a8d2-b9ba0dcasd94

- **Header:**

Field	Type	Description
Access-Token	String	The token is retrieved after successfully logging in to the Management Server.
Accept	String	Specifies the response data format which can be either <code>application/json</code> or <code>application/xml</code> . The default value is <code>application/json</code> .

- **Returned value:**

Field	Type	Description
status	String	The response status.
data	String	Either the response data format (JSON/XML) or exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown.

Alarm — Get topology object history alarms

- **API Name:** Get topology object history alarms
- **Description:** Filter out history alarms by the ID of a topology object.
- **Request type:** GET
- **API path:** `/api/v1/alarm/history/topologyId`
- **Sample usage:** `http://<server>:<port>/api/v1/alarm/history/se478dec-f920-4de9-a8d2-b9ba0dcasd94`
- **Header:**

Field	Type	Description
Access-Token	String	The token is retrieved after successfully logging in to the Management Server.
Accept	String	Specifies the response data format which can be either <code>application/json</code> or <code>application/xml</code> . The default value is <code>application/json</code> .

- **Returned value:**

Field	Type	Description
status	String	The response status.
data	String	Either the response data format (JSON/XML) or exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown.

Alarm — Push alarms

- **API Name:** Push alarms
- **Description:** Push an alarm to an existing topology object, and the imported alarm will show on the *Alarm* dashboard. The `topologyObjectId` field is mandatory and the `ruleId` field is optional. This API set the value of `ruleId` to `ExternalAlarm` by default, if this field is not set. If you invoke this API using both fields, ensure that `ruleId` is properly defined to link with its `topologyObjectId`; otherwise the alarm might be imported into a wrong topology object. Consider for example a rule `CPU Utilization` is related to the `HostCPUs` object. If you define `topologyObjectId` to `Host`, this API imports `CPU Utilization` to the `Host` object. Postman provides "Alarm - Push Alarm XML" and "Alarm - Push Alarm JSON" sample codes for reference. Click [here](#) to download and import the sample codes.
- **Request type:** POST
- **API path:** `/api/v1/alarm/pushAlarm`

- **Sample usage:** When using the *pushAlarm* API, note the following:
 - Make sure to use the following as the value of **alarmMessage**: *AAA. BBB*. AAA represents the title of the alarm dialog box, while BBB stands for the alarm message. Make sure to add a space between "." and "BBB".
 - To get the value of *ruleId*, do either of the following:
 - Invoke the [Rule — Get all rules' data](#) API.
 - Execute the following scripts in the *Administration > Tooling > Script Console* dashboard:

```
def ruleName = <RULE_NAME>
def rule = server.RuleService.getAllRules().find{
it.name == ruleName
}

if(rule){
return rule.id;
}else{
return "Rule not found."
}
}
```

The following illustrates the sample code of request body in XML and JSON separately.

Request body in XML:

```
<externalAlarmParamBean>
<alarmMessage>title of alarm dialog. alarm message</alarmMessage>
<severity>3</severity>
<topologyObjectId>94e27d92-08a5-4c28-9a90-8856a7689105</topologyObjectId>
<ruleId>c83632ae-3468-4ac1-bd69-523595e18750</ruleId>
</externalAlarmParamBean>
```

Request body in JSON

```
{"alarmMessage":"title of alarm dialog. alarm message", "severity":"2",
"topologyObjectId":"94e27d92-08a5-4c28-9a90-8856a7689105"}
```

- **Severity value:**

Value	Description
2	Warning
3	Critical
4	Fatal

- **Header:**

Field	Type	Description
Access-Token	String	The token is retrieved after successfully logging in to the Management Server.
Accept	String	Specifies the response data format which can be either <code>application/json</code> or <code>application/xml</code> . The default value is <code>application/json</code> .
Content-Type	String	<ul style="list-style-type: none"> • Data format = JSON, this value is <code>application/json</code>. • Data format = XML, this value is <code>application/xml</code>.

- **Returned value:**

Field	Type	Description
status	String	The response status.
data	String	Either the response data format (JSON/XML) or exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown.

Alarm — Push alarms by properties

- **API Name:** Push alarms by properties
- **Description:** Push alarms based on the properties of a topology object.
- **Request type:** POST
- **API path:** /api/v1/alarm/pushAlarmByProperties
- **Sample usage:** The following illustrates the sample code of request body in XML and JSON separately.

Request body in XML:

```
<externalAlarmParamBean>
<alarmMessage>Test Alarm.This is a test alarm message from postman</alarmMessage>
<severity>3</severity>
<type>Host</type>
<properties>
<entry>
<key>name</key>
<value>nameofHost</value>
</entry>
</properties>
</externalAlarmParamBean>
```

Request body in JSON

```
{"alarmMessage":"This is a test alarm message from postman. asdfasdf",
"severity":"2", "type":"Host", "properties":{"name":"nameofHost"},
"ruleId":"72b73d98-8c6c-4ee1-b5ba-fd7c14645280"}
```

Alarm — Push alarms by query

- **API Name:** Push alarms by query
- **Description:** Push alarms using the query.
- **Request type:** POST
- **API path:** /api/v1/alarm/pushAlarmByQuery
- **Sample usage:** The following illustrates the sample code of request body in XML and JSON separately.

Request body in XML:

```
<externalAlarmParamBean>
<alarmMessage>Test Alarm.This is a test alarm message from postman</alarmMessage>
<severity>3</severity>
<query>!Host:name="nameofHost"</query>
</externalAlarmParamBean>
```

Request body in JSON

```
{"alarmMessage":"This is a test alarm message from postman. asdfasdf",
"severity":"2", "query":"!Host:name='nameofHost'"}
```

Cartridge

The Cartridge related APIs include the following:

- [Cartridge — Get all cartridges' data](#)
- [Cartridge — Get all core cartridges' data](#)

- [Cartridge — Get all non-core cartridges' data](#)

Cartridge — Get all cartridges' data

- **API Name:** Get all cartridge's data
- **Description:** Get data of all cartridges.
- **Request type:** GET
- **API path:** /api/v1/cartridge/allCartridges
- **Sample usage:** http://<server>:<port>/api/v1/cartridge/allCartridges
- **Header:**

Field	Type	Description
Access-Token	String	The token is retrieved after successfully logging in to the Management Server.
Accept	String	Specifies the response data format which can be either <code>application/json</code> or <code>application/xml</code> . The default value is <code>application/json</code> .

- **Returned value:**

Field	Type	Description
status	String	The response status.
data	String	Either the response data format (JSON/XML) or exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown.

Cartridge — Get all core cartridges' data

- **API Name:** Get all core cartridge's data
- **Description:** Get data of all the core cartridges.
- **Request type:** GET
- **API path:** /api/v1/cartridge/allCartridges/core
- **Sample usage:** http://<server>:<port>/api/v1/cartridge/allCartridges/core
- **Header:**

Field	Type	Description
Access-Token	String	The token is retrieved after successfully logging in to the Management Server.
Accept	String	Specifies the response data format which can be either <code>application/json</code> or <code>application/xml</code> . The default value is <code>application/json</code> .

- **Returned value:**

Field	Type	Description
status	String	The response status.
data	String	Either the response data format (JSON/XML) exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown.

Cartridge — Get all non-core cartridges' data

- **API Name:** Get all non-core cartridge's data
- **Description:** Get data of all the non-core cartridges.
- **Request type:** GET
- **API path:** /api/v1/cartridge/allCartridges/nonCore
- **Sample usage:** http://<server>:<port>/api/v1/cartridge/allCartridges/nonCore
- **Header:**

Field	Type	Description
Access-Token	String	The token is retrieved after successfully logging in to the Management Server.
Accept	String	Specifies the response data format which can be either <code>application/json</code> or <code>application/xml</code> . The default value is <code>application/json</code> .

- **Returned value:**

Field	Type	Description
status	String	The response status.
data	String	Either the response data format (JSON/XML) or exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown.

Registry

The Registry related API includes the following:

- [Registry — Get all registries' data](#)

Registry — Get all registries' data

- **API Name:** Get all registries' data
- **Description:** Get data of all registries.
- **Request type:** GET
- **API path:** /api/v1/registry/allRegistries
- **Sample usage:** http://<server>:<port>/api/v1/registry/allRegistries
- **Header:**

Field	Type	Description
Access-Token	String	The token is retrieved after successfully logging in to the Management Server.
Accept	String	Specifies the response data format which can be either <code>application/json</code> or <code>application/xml</code> . The default value is <code>application/json</code> .

- **Returned value:**

Field	Type	Description
status	String	The response status.

Field	Type	Description
data	String	Either the response data format (JSON/XML) or exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown.

Remote client

The Remote related API includes the following:

- [Remote client — Get all remote clients' data](#)

Remote client — Get all remote clients' data

- **API Name:** Get all remote clients' data
- **Description:** Get data of all the remote clients.
- **Request type:** GET
- **API path:** /api/v1/remoteClient/allRemoteClients
- **Sample usage:** http://<server>:<port>/api/v1/remoteClient/allRemoteClients
- **Header:**

Field	Type	Description
Access-Token	String	The token is retrieved after successfully logging in to the Management Server.
Accept	String	Specifies the response data format which can be either <code>application/json</code> or <code>application/xml</code> . The default value is <code>application/json</code> .

- **Returned value:**

Field	Type	Description
status	String	The response status.
data	String	Either the response data format (JSON/XML) or exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown.

Rule

The Rule related APIs include the following:

- [Rule — Get all rules' data](#)
- [Rule — Get rule by id](#)

Rule — Get all rules' data

- **API Name:** Get all rules' data
- **Description:** Get data of all rules.
- **Request type:** GET
- **API path:** /api/v1/rule/allRules

- **Sample usage:** `http://<server>:<port>/api/v1/rule/allRules`

- **Header:**

Field	Type	Description
Access-Token	String	The token is retrieved after successfully logging in to the Management Server.
Accept	String	Specifies the response data format which can be either <code>application/json</code> or <code>application/xml</code> . The default value is <code>application/json</code> .

- **Returned value:**

Field	Type	Description
status	String	The response status.
data	String	Either the response data format (JSON/XML) or exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown.

Rule — Get rule by id

- **API Name:** Get rule by ID
- **Description:** Filter out rules by a rule ID.
- **Request type:** GET
- **API path:** `/api/v1/rule/ruleId`
- **Sample usage:** `http://<server>:<port>/api/v1/rule/ruleId`
- **Header:**

Field	Type	Description
Access-Token	String	The token is retrieved after successfully logging in to the Management Server.
Accept	String	Specifies the response data format which can be either <code>application/json</code> or <code>application/xml</code> . The default value is <code>application/json</code> .

- **Returned value:**

Field	Type	Description
status	String	The response status.
data	String	Either the response data format (JSON/XML) or exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown

Script

The Script related API includes the following:

- [Script — Run Script](#)
- [Script — Publish custom REST API](#)
- [Script — Run named scripts](#)

Script — Run Script

- **API Name:** Run Script
- **Description:** You need be granted both the *Administrator* and *API Access* roles to use this API. This API is similar to the script console, but it does not support *functionHelper*, *log*, and *out* variables that are supported in the script console.

Name	Description
script	The script content.
cartridgeName	Specifies the name of associated cartridge, and the name is case-sensitive.
scopeObjectId	Specifies the scope object. This item must be set if the <i>scope</i> variable is being used in scripts.

This API is disabled by default after the installation. Refer to the *REST_DisabledAPI* Registry Variable in [Table 2](#) for more information about how to change this configuration.

- **Request type:** POST
- **API path:** /api/v1/script/runScript
- **Sample usage:**

i | NOTE: If you use **&** in your sample codes, make sure to convert it to **&**.

Generate a post request using the following URL:
`http://<server>:<port>/api/v1/script/runScript`

The basic format of request body can be set as below:

JSON:

```
{"script": "System.err.println('Hello World!')"} 
```

XML:

```
<ScriptBean>  
<script>System.err.println("Hello World!");</script>  
</ScriptBean>
```

The complete format is as below:

JSON:

```
{"script": "#utilization#", "scopeObjectId": "3ebb2158-e5e9-4403-be3c-46fd8020efeb",  
"cartridgeName": "Infrastructure"}
```

XML:

```
<ScriptBean>  
<script>#utilization#</script>  
<cartridgeName>Infrastructure</cartridgeName>  
<scopeObjectId>3ebb2158-e5e9-4403-be3c-46fd8020efeb</scopeObjectId>  
</ScriptBean>
```

- **Header:**

Field	Type	Description
Access-Token	String	The token is retrieved after successfully logging in to the Management Server.
Accept	String	Specifies the response data format which can be either <code>application/json</code> or <code>application/xml</code> . The default value is <code>application/json</code>

- **Parameter:**

Field	Type	Description
Content-Type	String	<ul style="list-style-type: none"> • Data format = JSON, this value is "application/json". • Data format = XML, this value is "application/xml".

- **Returned value:**

Field	Type	Description
status	String	The response status.
data	String	Either the response data format (JSON/XML) or exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown.

Script — Publish custom REST API

- **API Name:** Publish custom REST API
- **Description:** The Management Server provides the capability for publishing custom REST API with scripts. To run scripts of custom REST API, ensure that the value of **Choose an Associated Cartridge (Optional)** is set to *Forge-RestAPI* in the **Administration > Tooling > Script Console > Scripts > Add > Run Script** dialog box. This API is a runtime registration, so the registered custom REST APIs will be lost after restarting the server.
- **Request type:** Depends on the API definition.
- **API path:** Depends on the API definition.
- **Sample usage:** See below for the template about how to publish a custom REST API.

```

/*Hint: disable @variable usage, use server.context('variable') instead*/
import javax.ws.rs.*;
import javax.ws.rs.core.*;
import javax.ws.rs.container.*;
import javax.servlet.http.*;
import com.quest.forge.rest.annotation.Secured;
import com.quest.forge.rest.service.*;
import com.quest.forge.rest.api.*;

@Path("/echo")
@Secured
@Produces("application/json")
class MyResource{
    @Context
    private ContainerRequestContext requestContext;

    @Context
    protected HttpServletRequest request;

    @GET
    @Path("host")
    public Response echoSampleHost(){
        def fogleightServiceLocator =
ServiceFactory.getInstance().getFogleightServiceLocator();
        def ts = fogleightServiceLocator.getTopologyService();
        def hosts = ts.getObjectsOfType(ts.getType("Host"));
        if(!hosts){
            return Response.ok("Empty hosts").build();
        }else{
            def host = (hosts as List).get(0);

```

```

        def helper =
foglighthouseServiceLocator.getExtensionContext().get(ForgeRestApiHelper.class);
        def entity = null;
        try{
            entity = helper.toSerializableEntity(host, request, requestContext);
        }catch(ConversionException e){
            entity = host.toString();
        }
        return Response.ok(entity).build();
    }
}

class MyRestAPIExtension implements ForgeRestAPIExtension{
    @Override
    public Class getRestResourceClz(){
        return MyResource.class;
    }

    @Override
    public String getCartridgeName(){
        return "DummyCartridge";
    }
}

def rrm = server.context('extensionContext').get(RestResourceManager.class);
rrm.registerRestAPIExtension(new MyRestAPIExtension());

```

After running the above codes in the **Script Console** dashboard, you can access this API with the `http://<fms_ip>:<fms_port>/api/v1/echo/host` URL.

Note the following:

- Use `rrm.registerRestAPIExtension` (replaces `MyRestAPIExtension()`) to register the custom API.
- Use `rrm.unregisterRestAPIExtensions` (`DummyCartridge`) to remove the custom API.
- The `@Path` annotation is used to define the relative URI path.
- The `@Get` annotation is used to define the request type.
- The `@Produces` annotation is used to define the MIME media types of representations a resource can produce and send back to the client.
- The `@Secured` annotation is used to define whether the access token is required. If `@Secured` is used, `Access-Token` must be set in the request header.

For more information about annotations, visit [JAX-RS Application, Resources and Sub-Resources](#).

- **Header:** Depends on the API definition.
- **Returned value:**

Field	Type	Description
status	String	The response status.
data	String	Either the response data format (JSON/XML) or exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown.

Script — Run named scripts

- **API Name:** Run named scripts
- **Description:** Foglight supports embedding named scripts into cartridges by editing the monitoring policy XML. This API is used to call those named scripts.

- **Request type:** GET
- **API path:** /api/v1/script/runNamedScript?scriptName=<namedScriptName>¶m=<script_parameter>
- **Sample usage:** Consider for example there is a named script called 'getHostById', this named script requires the host instance id which type is string, then the sample API should be following:
http://server_url:port/api/v1/script/runNamedScript?scriptName=getHostById¶m=b1b3ad72-2460-4576-b1ec-3ffd57016deb.

- **Header:**

Field	Type	Description
Access-Token	String	The token is retrieved after successfully logging in to the Management Server.

- **Parameter:**

Field	Type	Description
param	String	This value is optional and depends whether the naming script has parameter. Separate multiple parameters by commas.

- **Returned value:**

Field	Type	Description
status	String	The response status.
data	String	Either the response data format (JSON/XML) or exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown.

Subscribe alarm

The Subscribe related APIs include the following:

- [Subscribe alarm — Disconnect SSE](#)
- [Subscribe alarm — List SSE](#)
- [Subscribe alarm — Subscribe alarms by object ID](#)
- [Subscribe alarm — Subscribe all alarms](#)

Subscribe alarm — Disconnect SSE

- **API Name:** Disconnect SSE
- **Description:** Disconnect all the active Server-Sent Events (SSE) subscriptions.
- **Request type:** GET
- **API path:** /api/v1/subscription/disconnect/all/
- **Sample usage:** http://<server>:<port>/api/v1/subscription/disconnect/all/
- **Header:**

Field	Type	Description
Access-Token	String	The token is retrieved after successfully logging in to the Management Server.
Accept	String	Specifies the response data format which can be either <code>application/json</code> or <code>application/xml</code> . The default value is <code>application/json</code> .

- **Returned value:**

Field	Type	Description
status	String	The response status.
data	String	Either the response data format (JSON/XML) or exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown.

Subscribe alarm — List SSE

- **API Name:** List SSE
- **Description:** Filter out all the active SSE subscriptions.
- **Request type:** GET
- **API path:** /api/v1/subscription/list/
- **Sample usage:** http://<server>:<port>/api/v1/subscription/list
- **Header:**

Field	Type	Description
Access-Token	String	The token is retrieved after successfully logging in to the Management Server.
Accept	String	Specifies the response data format which can be either <code>application/json</code> or <code>application/xml</code> . The default value is <code>application/json</code> .

- **Returned value:**

Field	Type	Description
status	String	The response status.
data	String	Either the response data format (JSON/XML) or exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown.

Subscribe alarm — Subscribe alarms by object ID

- **API Name:** Subscribe alarms by object ID
- **Description:** Watch the topology object by its topologyId, and subscribe to alarm-generated events through SSE. When the client is disconnected, there is no retry mechanism to send an event to the client. For more information, visit [Server-Sent Events \(SSE\) Support](#) and [Server-Sent Events](#).

i **NOTE:** If the version of your Foglight Management Server is lower than 5.7.5.7, open the *server.xml* file under `<fms_home>/server/tomcat/`, then add `asyncSupported="true"` to all value items (for example, `<Valve className="com.quest.nitro.web.tomcat.HttpsRedirectValve" asyncSupported="true"/>`).

- **Request type:** GET
- **API path:** /api/v1/subscription/alarm/subscribe/topologyId
- **Sample usage:**

```
<script>
if(typeof(EventSource) !== "undefined")
{var source = new
EventSource("http://<server>:<port>/api/v1/subscription/alarm/subscribe
```

```

/67beea68-fa6f-4cd3-b122-dcb20db50360?Accept=application/json&Access-
Token=sanpqvi54h9a59n03u6illuahj", {withCredentials: true});source.onmessage =
function(event)
{
document.getElementById("result").innerHTML += event.data + "<br>";
};
} else {
document.getElementById("result").innerHTML = "Sorry, your browser does not support
server-sent events...";
}
}
</script>

```

- **Returned value:**

Field	Type	Description
status	String	The response status.
data	String	Either the response data format (JSON/XML) or exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown.

Subscribe alarm — Subscribe all alarms

- **API Name:** Subscribe to all alarms
- **Description:** Subscribe to alarm-generated events through SSE. When the client is disconnected, there is no retry mechanism to send an event to the client. For more information, visit [Server-Sent Events \(SSE\) Support](#) and [Server-Sent Events](#).

i **NOTE:** If the version of your Foglight Management Server is lower than 5.7.5.7, open the *server.xml* file under `<fms_home>/server/tomcat/`, then add `asyncSupported="true"` to all value items (for example, `<Valve className="com.quest.nitro.web.tomcat.httpsRedirectValve" asyncSupported="true"/>`).

- **Request type:** GET
- **API path:** `/api/v1/subscription/alarm/subscribe`
- **Sample usage:**

```

<script>
if(typeof(EventSource) !== "undefined") {
var source = new
EventSource("http://<server>:<port>/api/v1/subscription/alarm/subscribe?Accept=appl
ication/json&Access-Token=5vr9jmptoskrpheaj2e31vvna6", {withCredentials: true});
source.onmessage = function(event) {
document.getElementById("result").innerHTML += event.data + "<br>";
};
} else {
document.getElementById("result").innerHTML = "Sorry, your browser does not support
server-sent events...";
}
}
</script>

```

- **Returned value:**

Field	Type	Description
status	String	The response status.
data	String	Either the response data format (JSON/XML) or exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown.

Topology

The Topology related APIs include the following:

- [Topology — Get properties' value](#)
- [Topology — Get property value](#)
- [Topology — Get topology object by id](#)
- [Topology — Get topology object by ids](#)
- [Topology — Observations query](#)
- [Topology — TopologyObject query](#)
- [Topology — Push data](#)

Topology — Get properties' value

- **API Name:** Get properties' value
- **Description:** Get properties of one topology object based on *path*. This topology object is specified by *uniqueId*.
- **Request type:** GET
- **API path:** /api/v1/topology/topologyId/paths
- **Sample usage:** http://<server>:<port>/api/v1/topology/3546fa55-11b6-4943-b7cb-84ddcf350bc5/paths?path=name&path=uniqueId&path=utilization

- **Header:**

Field	Type	Description
Access-Token	String	The token is retrieved after successfully logging in to the Management Server.
Accept	String	Specifies the response data format which can be either <code>application/json</code> or <code>application/xml</code> . The default value is <code>application/json</code> .

- **Parameter:**

Field	Type	Description
path	String	The property path. This may include multiple paths.

- **Returned value:**

Field	Type	Description
status	String	The response status.
data	String	Either the response data format (JSON/XML) or exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown.

Topology — Get property value

- **API Name:** Get property value
- **Description:** Get property values by the path defined based on the given topology ID. The result may be *DataObject*, *Primitive Object*, *Observation*, or else.
- **Request type:** GET

- **API path:** /api/v1/topology/topologyId/path
- **Sample usage:** http://<server>:<port>/api/v1/topology/abc94b3d-f599-4766-a979-f32d372ff47d/cpus/utilization
- **Header:**

Field	Type	Description
Access-Token	String	The token is retrieved after successfully logging in to the Management Server.
Accept	String	Specifies the response data format which can be either <code>application/json</code> or <code>application/xml</code> . The default value is <code>application/json</code> .

- **Returned value:**

Field	Type	Description
status	String	The response status.
data	String	Either the response data format (JSON/XML) or exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown.

Topology — Get topology object by id

- **API Name:** Get topology object by IDs
- **Description:** Filter out topology objects by an object ID.
- **Request type:** GET
- **API path:** /api/v1/topology/topologyObjectId
- **Sample usage:** http://<server>:<port>/api/v1/topology/1f478dec-f920-4da9-a8d2-b9ba0dcd4394
- **Header:**

Field	Type	Description
Access-Token	String	The token is retrieved after successfully logging in to the Management Server.
Accept	String	Specifies the response data format which can be either <code>application/json</code> or <code>application/xml</code> . The default value is <code>application/json</code> .

- **Returned value:**

Field	Type	Description
status	String	The response status.
data	String	Either the response data format (JSON/XML) or exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown.

Topology — Get topology object by ids

- **API Name:** Get topology object by ids
- **Description:** Filter out topology objects by multiple IDs.
- **Request type:** GET
- **API path:** /api/v1/topology/topologyIds
- **Sample usage:** http://<server>:<port>/api/v1/topology/topologyIds?id=3546fa55-11b6-4943-b7cb-84ddcf350bc5&id=67beea68-fa6f-4cd3-b122-dcb20db50360

- **Header:**

Field	Type	Description
Access-Token	String	The token is retrieved after successfully logging in to the Management Server.
Accept	String	Specifies the response data format which can be either <code>application/json</code> or <code>application/xml</code> . The default value is <code>application/json</code> .

- **Parameter:**

Field	Type	Description
Id	String	The topology object ID. This may include multiple IDs.

- **Returned value:**

Field	Type	Description
status	String	The response status.
data	String	Either the response data format (JSON/XML) or exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown.

Topology — Observations query

- **API Name:** Observations query
- **Description:** Filter out observations value by a batch query. The following lists the *retrievalType*:

Name	Description
RAW	Retrieve the raw data of an observation based on the time range.
AGGREGATE	Retrieve the aggregate data of an observation based on the time range.
AGGREGATE_AND_LAST	Retrieve the aggregate and last data of an observation based on the time range.
LAST_N	Retrieve the last N data of the observation based on the time range. If <i>retrievalType</i> is set to <i>LAST_N</i> , you need configure the value of <i>numberOfValue</i> that defines the letter N of <i>LAST_N</i> .

- **Request type:** POST
- **API path:** `/api/v1/topology/batchQuery`
- **Sample usage:**

Generate a post request using the following url:
`"http://<server>:<port>/api/v1/topology/batchQuery"`

The basic format of request body can be set as below:
`{"includes":[{"ids":["ca83d1a2-f04b-483d-b224-055967777e72"],"observationName":"utilization"}], "endTime":1477987660722}`

The following is the complete format of request body:
 JSON:
`{
 "includes":[{"ids":["ca83d1a2-f04b-483d-b224-055967777e72"],"observationName":"utilization"},
 {"ids":["f58f36ef-88ef-4264-9b8a-91df79fd37e9"],"observationName":"utilization"},
 {"ids":["f3df86e1-0718-4ccf-ae05-c25414b53db9"],`

```
"7910afd1-0247-4309-bae4-05f9419ab719",
"4ed2b409-cf18-4c14-a6ab-fdc19cff006e"],
"observationName":"percentMemory"}],
"startTime":1477984060722,
"endTime":1477987660722,
"granularity":3600000,
"numberOfValue":1,
"retrievalType":"AGGREGATE_AND_LAST"
}
```

XML:

```
<observationQueryParamBean>
<endTime>1477988816209</endTime>
<granularity>3600000</granularity>
<includes>
  <ids>ca83d1a2-f04b-483d-b224-055967777e72</ids>
  <observationName>utilization</observationName>
</includes>
<includes>
  <ids>f58f36ef-88ef-4264-9b8a-91df79fd37e9</ids>
  <observationName>utilization</observationName>
</includes>
<includes>
  <ids>f3df86e1-0718-4ccf-ae05-c25414b53db9</ids>
  <ids>7910afd1-0247-4309-bae4-05f9419ab719</ids>
  <ids>4ed2b409-cf18-4c14-a6ab-fdc19cff006e</ids>
  <observationName>percentMemory</observationName>
</includes>
<numberOfValue>1</numberOfValue>
<retrievalType>AGGREGATE_AND_LAST</retrievalType>
<startTime>1477985216208</startTime>
</observationQueryParamBean>
```

- **Header:**

Field	Type	Description
Access-Token	String	The token is retrieved after successfully logging in to the Management Server.
Accept	String	Specifies the response data format which can be either <code>application/json</code> or <code>application/xml</code> . The default value is <code>application/json</code> .

- **Parameter:**

Field	Type	Description
Content-Type	String	<ul style="list-style-type: none"> • Data format = JSON, this value is "application/json". • Data format = XML, this value is "application/xml".

- **Returned value:**

Field	Type	Description
status	String	The response status.
data	String	Either the response data format (JSON/XML) or exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown.

Topology — TopologyObject query

- **API Name:** TopologyObject query

- **Description:** Filter out topology objects by a batch query.
- **Request type:** POST
- **API path:** /api/v1/topology/query
- **Sample usage:**

Generate a post request using the following url:
 http://<server>:<port>/api/v1/topology/query

The basic format of request body can be set as below:
 {"queryText":"!Host"}

The following is the complete format of request body:
 JSON:

```
{
  "queryText":"!Host",
  "caseSensitive":true,
  "freshnessFactor":3600000.0,
  "params":[{"name":"name","value":"nameofHost"},
  {"name":"domainName","value":"nameofDomain"}],
  "queryTopologyObjects":true,
  "requiresCoherentResults":true,
  "scopingTopologyObjectId":"4f888425-a734-4bee-a5a7-4e24cd3c83cd",
  "transactionTimestampMillis":3600000,
  "timeRangeStartTime":1477984060722,
  "timeRangeEndTime":1477987094482,
  "timeRangeGranularity":3600000,
  "timeRangeMaxPoints":500
}
```

XML:

```
<queryParamBean>
  <caseSensitive>true</caseSensitive>
  <freshnessFactor>3600000.0</freshnessFactor>
  <params>
    <name>name</name>
    <value>nameofHost</value>
  </params>
  <params>
    <name>domainName</name>
    <value>nameofDomain</value>
  </params>
  <queryText>!Host</queryText>
  <queryTopologyObjects>true</queryTopologyObjects>
  <requiresCoherentResults>true</requiresCoherentResults>
  <scopingTopologyObjectId>4f888425-a734-4bee-a5a7-
4e24cd3c83cd</scopingTopologyObjectId>
  <transactionTimestampMillis>3600000</transactionTimestampMillis>
  <timeRangeStartTime>1477984060722</timeRangeStartTime>
  <timeRangeEndTime>1477987094482</timeRangeEndTime>
  <timeRangeGranularity>3600000</timeRangeGranularity>
  <timeRangeMaxPoints>500</timeRangeMaxPoints>
</queryParamBean>
```

- **Header:**

Field	Type	Description
Access-Token	String	The token is retrieved after successfully logging in to the Management Server.
Accept	String	Specifies the response data format which can be either application/json or application/xml. The default value is application/json.

- **Parameter:**

Field	Type	Description
Content-Type	String	<ul style="list-style-type: none"> • Data format = JSON, this value is "application/json". • Data format = XML, this value is "application/xml".

- **Returned value:**

Field	Type	Description
status	String	The response status.
data	String	Either the response data format (JSON/XML) or exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown.

Topology — Push data

- **API Name:** Push data
- **Description:** Push data to an existing topology object. The request body should be RAW data and the basic format can be set as below:

```
{
  "data": [{
    "typeName": "TypeName",
    "properties": {
      "simplePropertyName": "TestData1",
      "MetricPropertyName": 11234,
      "ObservationPropertyName": {
        "simplePropertyNameOne": "testObservation1",
        "simplePropertyNameTwo": 1495447993592,
        "simplePropertyNameThree": 1495447993592
      }
    }
  }
],
  "startTime": 1495180240539,
  "endTime": 1495180540539,
  "agentName": "sampleagent"
}
```

Name	Description
data	Mandatory. Specifies the detailed data of an object.
typeName	Mandatory. Specifies the data type, and this field must be either of <i>TopologyObject</i> or its sub type.
properties	Mandatory. Specifies the property value of the type.
startTime	Mandatory. Specifies the data start time.
endTime	Mandatory. Specifies the data end time.
agentName	Mandatory. Specifies the value (in the string format) which identifies the client running this API.

When invoking this API, note the following:

- Ensure that the data type (*typeName*) already exists in the server; otherwise this operation will fail.
If the data type is a new type, import this type by selecting **Dashboards > Administrator > Data > Add Topology Type**. Click the **Help** tab in the *Add Topology Type* dashboard to understand details of this new type.
- All topology objects have the identity property (*properties*). The Management Server, based on this identity property, decides to merge the object with an existing object or to create a new object.

To find the identity property of a type, select **Dashboards > Development Tools > Schema Browser** (ensure that you have the *Cartridge Developer* role). If the identity property is a topology object, you can use the object unique ID as its reference. For more information, refer to the following *Sample usage* section.

The identity of *Host* type (*hostId*) is generated by some fields, so set the *name* and *hostId* properties at least if you want to create a host.

- For the Observation type (including Metric) data, the data start time and end time use *startTime* and *endTime* in the request body.
- If you see the message like “*The rest agent cache queue is full...*” in the log file, increase the value of the *REST_AgentSubmitInfoQueueSize* Registry Variable, and then run the following script in the **Run Script** dialog box. To run the following script, ensure that the value of **Choose an Associated Cartridge (Optional)** is set to *Forge-RestAPI* in the **Administration > Tooling > Script Console > Scripts > Add > Run Script** dialog box.

```
import com.quest.forge.rest.service.impl.RestAgentManagerImpl;
RestAgentManagerImpl.updateConfig();
```

- **Request type:** POST
- **API path:** /api/v1/topology/pushData
- **Header:**

Field	Type	Description
Access-Token	String	The token is retrieved after successfully logging in to the Management Server.
Content-Type	String	Data format = JSON, this value is “application/json”.

- **Returned value:**

Field	Type	Description
status	String	The response status.
data	String	Either the response data format (JSON/XML) or exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown.

- **Sample usage:**

- **Case 1:** Create a general topology type instance. Consider for example we create an *FSMAgentBlackout* type instance. Find the identity of type *FSMAgentBlackout* is *name* in the *Schema Browser* dashboard. Use the following request body to create the *FSMAgentBlackout* type instance.

```
{
  "data": [{
    "typeName": "FSMAgentBlackout",
    "properties": {
      "name" : "Test-FSMAgentBlackout"
    }
  }],
  "startTime": 1495180240539,
  "endTime": 1495180540539,
  "agentName": "sampleagent"
}
```

- **Case 2:** Create a *Host* instance. If you want to submit Host type data, the *name* property is mandatory while *vmId* and *systemId* properties are optional. You can set both optional properties if you know their values. *hostId* is automatically generated based upon values of *name*, *systemId*, and *vmId*, so it is not required to set manually.

```
{
```

```

"data": [{
  "typeName": "Host",
  "properties": {
    "hostId": "Test-Host",
    "name": "Test-Host"
  }
}],
"startTime": 1495180240539,
"endTime": 1495180540539,
"agentName": "sampleagent"
}

```

- **Case 3:** Create a type instance which identity property is a topology object. Consider for example we create a *HostProcess* type instance. In the *Schema Browser* dashboard, find the identity properties of type *HostProcess* are *name* and *os*. The *name* property is a string, while the *os* property is *OperatingSystem* which is a topology type. Use the uniqueid of *OperatingSystem* as the reference, then create the *HostProcess* type instance as follows.

```

{
  "data": [{
    "name": "HostProcess",
    "properties": {
      "os": "e197ee1a-a60d-4627-8313-72d6bd49ce61",
      "name": "Test-HostProcess"
    }
  }],
  "startTime": 1495180240539,
  "endTime": 1495180540539,
  "agentName": "sampleagent"
}

```

- **Case 4:** Create a custom type instance. Consider for example we have imported the below type definition in the *Add Topology Type* dashboard.

```

<type name='PushDataTest' extends='TopologyObject'>
<property name='name' type='String' is-identity='true' />
</type>

```

The identity property is *name* in the above type definition. Use the following request body to create the custom type instance:

```

{
  "data": [{
    "typeName": "PushDataTest",
    "properties": {
      "name": "Test-PushDataTest"
    }
  }],
  "startTime": 1495180240539,
  "endTime": 1495180540539,
  "agentName": "sampleagent"
}

```

- **Case 5:** Consider for example we have the following type definition.

```

<type name='PushDataTest' extends='TopologyObject'>
<property name='name' type='String' is-identity='true' />
<property name='testMetric' type='Metric' is-containment='true'
  unit-name='count' />
</type>

```

Use the following request body to push metrics.

```

{
  "data": [{
    "typeName": "PushDataTest",

```

```

    "properties": {
      "name" : "Test-PushDataTest",
      "testMetric" : 100
    }
  }],
  "startTime": 1499830726959,
  "endTime": 1499830786959,
  "agentName": "sampleagent"
}

```

If you still see your metrics after the metrics push, check the server log to see if you see any “Discarded value” warning.

- **Case 6:** Consider for example we have the following type definition.

```

<type name='PushDataTest' extends='TopologyObject'>
  <property name='name' type='String' is-identity='true' />
  <property name='testMetric' type='Metric' is-containment='true' unit-
name='count' />
  <property name='testObservation' type='TestObservation' is-
containment='true' unit-name='count' />
</type>

<type name='TestObservation' extends='ComplexObservation'>
  <property name='current' type='TestObservationValue' is-many='false' is-
containment='true' />
  <property name='latest' type='TestObservationValue' is-many='false' is-
containment='true' />
  <property name='history' type='TestObservationValue' is-many='true' is-
containment='true' />
</type>

<type name='TestObservationValue' extends='ObservedValue'>
  <property name='value' type='TestObject' is-containment='true' />
</type>

<type name='TestObject' extends='DataObject'>
  <property name='testName' type='String' />
  <property name='createDate' type='Date' />
  <property name='createTime' type='Double' />
</type>

```

Use the following request body to push observations.

```

{
  "data": [{
    "typeName": "PushDataTest",
    "properties": {
      "name" : "PushDataTest",
      "testMetric": 112233,
      "testObservation": {
        "testName" : "testObservation",
        "createDate": 1495447993592,
        "createTime": 1495447993592
      }
    }
  }],
  "startTime": 1499839494614,
  "endTime": 1499839554614,
  "agentName": "sampleagent"
}

```

TopologyType

The TopologyType related APIs include the following:

- [TopologyType — Get type information](#)
- [TopologyType — Get type super type's information](#)
- [TopologyType — Get all instances of a type](#)

TopologyType — Get type information

- **API Name:** Get type information
- **Description:** Get the information of an type.
- **Request type:** GET
- **API path:** /api/v1/type/typeName
- **Sample usage:** http://<server>:<port>/api/v1/type/Host
- **Header:**

Field	Type	Description
Access-Token	String	The token is retrieved after successfully logging in to the Management Server.
Accept	String	Specifies the response data format which can be either <code>application/json</code> or <code>application/xml</code> . The default value is <code>application/json</code> .

- **Returned value:**

Field	Type	Description
status	String	The response status.
data	String	Either the response data format (JSON/XML) or exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown.

TopologyType — Get type super type's information

- **API Name:** Get type super type's information
- **Description:** Get the information of a type's parent type.
- **Request type:** GET
- **API path:** /api/v1/type/typeName/super
- **Sample usage:** http://<server>:<port>/api/v1/type/Host/super
- **Header:**

Field	Type	Description
Access-Token	String	The token is retrieved after successfully logging in to the Management Server.
Accept	String	Specifies the response data format which can be either <code>application/json</code> or <code>application/xml</code> . The default value is <code>application/json</code> .

- **Returned value:**

Field	Type	Description
status	String	The response status.
data	String	Either the response data format (JSON/XML) or exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown.

TopologyType — Get all instances of a type

- **API Name:** Get all instances of a type
- **Description:** Get all instances of a type.
- **Request type:** GET
- **API path:** /api/v1/type/typeName/instances
- **Sample usage:** http://<server>:<port>/api/v1/type/Host/instances
- **Header:**

Field	Type	Description
Access-Token	String	The token is retrieved after successfully logging in to the Management Server.
Accept	String	Specifies the response data format which can be either <code>application/json</code> or <code>application/xml</code> . The default value is <code>application/json</code> .

- **Returned value:**

Field	Type	Description
status	String	The response status.
data	String	Either the response data format (JSON/XML) or exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown.

User Information

The User Information related API includes the following:

- [User Information — Get current user information](#)

User Information — Get current user information

- **API Name:** Get current user information
- **Description:** Get the information of the current user.
- **Request type:** GET
- **API path:** /api/v1/user/current
- **Sample usage:** http://<server>:<port>/api/v1/user/current

- **Header:**

Field	Type	Description
Access-Token	String	The token is retrieved after successfully logging in to the Management Server.
Accept	String	Specifies the response data format which can be either <code>application/json</code> or <code>application/xml</code> . The default value is <code>application/json</code> .

- **Returned value:**

Field	Type	Description
status	String	The response status.
data	String	Either the response data format (JSON/XML) or exception message.
error	String	Error code if some exception occurs; otherwise this field is not shown.

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Technical support resources

Technical support is available to Quest customers with a valid maintenance contract and customers who have trial versions. You can access the Quest Support Portal at <https://support.quest.com>.

The Support Portal provides self-help tools you can use to solve problems quickly and independently, 24 hours a day, 365 days a year. The Support Portal enables you to:

- Submit and manage a Service Request.
- View Knowledge Base articles.
- Sign up for product notifications.
- Download software and technical documentation.
- View how-to-videos.
- Engage in community discussions.
- Chat with support engineers online.
- View services to assist you with your product.