



# FUJITSU Cloud Service for OSS IaaS API Reference (Management Administration)

Version 2.8  
FUJITSU LIMITED

All Rights Reserved, Copyright FUJITSU LIMITED 2015-2018

# Preface

---

## Structure of the manuals

Manual Title	Purposes and Methods of Use
iaaS API Reference <ul style="list-style-type: none"><li>• Foundation Service</li><li>• Network</li><li>• Application Platform Service</li><li>• Management Administration (this document)</li><li>• Contract Management</li></ul>	Detailed reference for using the REST API.
iaaS Features Handbook	Explains the features provided by this service.
iaaS API User Guide	Explains how to use the REST API, how to build the API runtime environment, and sample scripts according to usage sequences, etc.

## Trademarks

---

- Adobe, the Adobe logo, Acrobat, and Adobe Reader are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States and/or other countries.
- Apache and Tomcat are either registered trademarks or trademarks of The Apache Software Foundation in the United States and/or other countries.
- Microsoft, Windows, and Windows Server are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
- VMware, the VMware logo and VMotion are registered trademarks or trademarks of VMware, Inc. in the United States and other countries.
- The OpenStack Word Mark is either a registered trademark/service mark or trademark/service mark of the OpenStack Foundation, in the United States and other countries and is used with the OpenStack Foundation's permission.
- Oracle and Java are registered trademarks of Oracle and/or its affiliates.
- Red Hat is a registered trademark of Red Hat, Inc. in the U.S. and other countries.
- UNIX is a registered trademark of The Open Group.

Note that trademark symbols (™ or ®) are not appended to system names or product names used in this document.

## Export restrictions

---

Exportation/release of this document may require necessary procedures in accordance with the regulations of your resident country and/or US export control laws.

## Notes

---

- In this document it is assumed that APIs are executed using curl commands. It is also assumed that "bash" will be used as the execution environment for curl commands.
- For details on the characters that can be used for each service described in this document, refer to "[Character Strings Specifiable for Names](#)" in the "Features Handbook".

## Notice

---

- Information in this document may be subject to change without prior notice.

- No part of the content of this document may be reproduced without the written permission of Fujitsu Limited.
- Information in this document is the latest information as of the date of revision.
- Fujitsu assumes no responsibility for infringement of any patent rights or other rights of third parties arising from the use of information in this document.

# Revision History

Edition	Date of Update	Location	Overview
2.1	March 24, 2017	API list	Description modified
		Revoke role from group on project (DELETE / v3/projects/{project_id}/groups/{group_id}/roles/{role_id})	Description modified
		List role assignments (GET / v3/role_assignments{?group_id,role_id,scope.domain_id,scope.project_id,user_id})	Description modified
		Create trust (POST /v3/OS-TRUST/trusts)	Description modified
		List trusts (GET /v3/OS-TRUST/trusts{?trustee_user_id,trustor_user_id})	Description modified
		Show trust (GET/v3/OS-TRUST/trusts/{trust_id})	Description modified
2.2	October 27, 2017	Register/update details on supported software (PUT /v1.0/software_support)	Description modified
2.3	November 2, 2017	Register/update details on supported software (PUT /v1.0/software_support)	Description modified
2.4	December 22, 2017	Register/update details on supported software (PUT /v1.0/software_support)	Description modified
2.5	January 26, 2018	API list	Description modified
2.6	February 22, 2018	Preface	Description modified
		Authenticate (POST /v3/auth/tokens)	Description modified
		Create key metadata container (POST /v1/{tenant_id}/containers)	Description modified
2.7	April 19, 2018	API list	Description modified
		List API V3 versions (GET /v3)	Description modified
		Register/update details on supported software (PUT /v1.0/software_support)	Description modified
2.8	December 20, 2018	User management	Description modified
		Preface	Description added

# Contents

Part 1: User Management.....	1
1.1 User Management.....	2
1.1.1 User management.....	2
1.1.2 API list.....	3
1.1.3 Glossary.....	6
1.1.4 General requirements.....	7
1.1.5 API details.....	7
1.1.5.1 List API V3 versions (GET /v3).....	7
1.1.5.2 Authenticate (POST /v3/auth/tokens).....	11
1.1.5.3 Revoke token (DELETE /v3/auth/tokens).....	24
1.1.5.4 List regions (GET /v3/regions{?parent_region_id}).....	26
1.1.5.5 Show region (GET /v3/regions/{region_id}).....	29
1.1.5.6 Show domain (GET /v3/domains/{domain_id}).....	32
1.1.5.7 Create project (POST /v3/projects).....	35
1.1.5.8 Project reference (list) (GET /v3/projects{?domain_id,name,enabled }).....	39
1.1.5.9 Show project (GET /v3/projects/{project_id}).....	44
1.1.5.10 Update project (PATCH /v3/projects/{project_id}).....	47
1.1.5.11 List users (GET /v3/users{?domain_id,name,enabled }).....	52
1.1.5.12 Show user (GET /v3/users/{user_id}).....	56
1.1.5.13 List groups to which a user belongs (GET /v3/users/{user_id}/groups{?name}).....	60
1.1.5.14 List projects for user (GET /v3/users/{user_id}/projects{?enabled,name}).....	64
1.1.5.15 Create group (POST /v3/groups).....	68
1.1.5.16 List groups (GET /v3/groups{?domain_id,name }).....	71
1.1.5.17 Show group (GET /v3/groups/{group_id}).....	75
1.1.5.18 Update group (PATCH /v3/groups/{group_id}).....	78
1.1.5.19 Delete group (DELETE /v3/groups/{group_id}).....	81
1.1.5.20 List users in group (GET /v3/groups/{group_id}/users{?name,enabled}).....	82
1.1.5.21 Add user to group (PUT /v3/groups/{group_id}/users/{user_id}).....	87
1.1.5.22 Remove user from group (DELETE /v3/groups/{group_id}/users/{user_id}).....	88
1.1.5.23 Check whether user belongs to group (HEAD /v3/groups/{group_id}/users/{user_id}).....	90
1.1.5.24 List roles (GET /v3/roles{?name }).....	92
1.1.5.25 Show role (GET /v3/roles/{role_id}).....	95
1.1.5.26 Grant role to user on domain (PUT /v3/domains/{domain_id}/users/{user_id}/roles/{role_id}).....	97
1.1.5.27 Grant role to group on domain (PUT /v3/domains/{domain_id}/groups/{group_id}/roles/{role_id}).....	100
1.1.5.28 List roles for user on domain (GET /v3/domains/{domain_id}/users/{user_id}/roles).....	102
1.1.5.29 List roles for group on domain (GET /v3/domains/{domain_id}/groups/{group_id}/roles).....	106
1.1.5.30 Check whether user has role on domain (HEAD /v3/domains/{domain_id}/users/{user_id}/roles/{role_id}).....	109
1.1.5.31 Check whether group has role on domain (HEAD /v3/domains/{domain_id}/groups/{group_id}/roles/{role_id}).....	112
1.1.5.32 Revoke role from user on domain (DELETE /v3/domains/{domain_id}/users/{user_id}/roles/{role_id}).....	114
1.1.5.33 Revoke role from group on domain (DELETE /v3/domains/{domain_id}/groups/{group_id}/roles/{role_id}).....	116
1.1.5.34 Grant role to user on project (PUT /v3/projects/{project_id}/users/{user_id}/roles/{role_id}).....	118

1.1.5.35 Grant role to group on project (PUT /v3/projects/{project_id}/groups/{group_id}/roles/{role_id}).....	120
1.1.5.36 List roles for user on project (GET /v3/projects/{project_id}/users/{user_id}/roles).....	123
1.1.5.37 List roles for group on project (GET /v3/projects/{project_id}/groups/{group_id}/roles).....	126
1.1.5.38 Check whether user has role on project (HEAD /v3/projects/{project_id}/users/{user_id}/roles/{role_id}).....	130
1.1.5.39 Check whether group has role on project (HEAD /v3/projects/{project_id}/groups/{group_id}/roles/{role_id}).....	132
1.1.5.40 Revoke role from user on project (DELETE /v3/projects/{project_id}/users/{user_id}/roles/{role_id}).....	134
1.1.5.41 Revoke role from group on project (DELETE /v3/projects/{project_id}/groups/{group_id}/roles/{role_id}).....	136
1.1.5.42 List role assignments (GET /v3/role_assignments{?group.id,role.id,scope.domain.id,scope.project.id,user.id}).....	139
1.1.5.43 Create trust (POST /v3/OS-TRUST/trusts).....	144
1.1.5.44 List trusts (GET /v3/OS-TRUST/trusts{? trustee_user_id,trustor_user_id}).....	151
1.1.5.45 Show trust (GET/v3/OS-TRUST/trusts/{trust_id}).....	155
1.1.5.46 Delete trust (DELETE /v3/OS-TRUST/trusts/{trust_id}).....	160
1.1.5.47 List trust roles (GET /v3/OS-TRUST/trusts/{trust_id}/roles).....	161
1.1.5.48 Show trust role (GET /v3/OS-TRUST/trusts/{trust_id}/roles/{role_id}).....	165
1.1.5.49 Acquisition of user authentication method information (GET /v3/users/{user_id}/auth_type).....	168
1.1.5.50 Inter-regional synchronization confirmation (GET /v3/synchronous_regions{?domain_id,region_id}).....	169
Part 2: Key Management.....	172
2.1 Key Management.....	173
2.1.1 API list.....	173
2.1.2 General requirements.....	173
2.1.3 API details.....	173
2.1.3.1 List key metadata (GET /v1/{tenant_id}/secrets).....	173
2.1.3.2 Retrieve key metadata (GET /v1/{tenant_id}/secrets/{resource_id}).....	177
2.1.3.3 Create key metadata (POST /v1/{tenant_id}/secrets).....	181
2.1.3.4 Delete key metadata (DELETE /v1/{tenant_id}/secrets/{resource_id}).....	184
2.1.3.5 List key metadata containers (GET /v1/{tenant_id}/containers).....	185
2.1.3.6 Retrieve key metadata container (GET /v1/{tenant_id}/containers/{resource_id}).....	189
2.1.3.7 Create key metadata container (POST /v1/{tenant_id}/containers).....	191
2.1.3.8 Delete key metadata container (DELETE /v1/{tenant_id}/containers/{resource_id}).....	194
Part 3: Software Management.....	196
3.1 Software Management.....	197
3.1.1 API list.....	197
3.1.2 General requirements.....	197
3.1.3 API details.....	197
3.1.3.1 Register/update details on supported software (PUT /v1.0/software_support).....	197
3.1.3.2 Retrieve details on supported software (GET /v1.0/software_support).....	203
Part 4: Monitoring Service.....	207

4.1 Monitoring Service.....	208
4.1.1 API list.....	208
4.1.2 Glossary.....	208
4.1.3 General requirements.....	209
4.1.4 Common API items.....	209
4.1.5 Common API error codes.....	210
4.1.6 API details.....	212
4.1.6.1 List meters (GET /v2/meters).....	212
4.1.6.2 List samples for meter (GET /v2/meters/{meter_name}).....	214
4.1.6.3 Add samples to meter (POST /v2/meters/{meter_name}).....	216
4.1.6.4 Show meter statistics (GET /v2/meters/{meter_name}/statistics).....	218
4.1.6.5 List alarms (GET /v2/alarms).....	221
4.1.6.6 Create alarm (POST /v2/alarms).....	224
4.1.6.7 Show alarm details (GET /v2/alarms/{alarm_id}).....	225
4.1.6.8 Update alarm (PUT /v2/alarms/{alarm_id}).....	226
4.1.6.9 Delete alarm (DELETE /v2/alarms/{alarm_id}).....	228
4.1.6.10 Show alarm state (GET /v2/alarms/{alarm_id}/state).....	229
4.1.6.11 Update alarm state (PUT /v2/alarms/{alarm_id}/state).....	229
4.1.6.12 Show alarm history (GET /v2/alarms/{alarm_id}/history).....	231
4.1.6.13 List resources (GET /v2/resources).....	233
4.1.6.14 Show resource details (GET /v2/resources/{resource_id}).....	236
4.1.7 Data type.....	237
4.1.7.1 type Meter.....	237
4.1.7.2 type OldSample.....	238
4.1.7.3 type Statistics.....	241
4.1.7.4 type Alarm.....	243
4.1.7.5 type AlarmAction.....	246
4.1.7.6 type AlarmThresholdRule.....	248
4.1.7.7 type AlarmCombinationRule.....	250
4.1.7.8 type AlarmTimeConstraint.....	250
4.1.7.9 type AlarmChange.....	251
4.1.7.10 type Query.....	254
4.1.7.11 type Resource.....	255
4.1.7.12 type Link.....	255
4.1.8 Note: How to troubleshoot alarm actions.....	256
4.1.8.1 Note: How to troubleshoot alarm actions.....	256
4.1.8.2 Check the alarm history.....	256
4.1.8.3 Check the alarm details.....	257
4.1.8.4 Check the meter statistics.....	259

---

# Part 1: User Management

---

Topics:

- [User Management](#)



# 1.1 User Management

---

## 1.1.1 User management

---

### Global resources and local resources

---

Global resources are resources unique across regions.

Information managed by the user management function includes domains, groups, users, and roles.

Local resources are resources enclosed within each region.

Information managed by the user management function includes projects, tokens, trusts, and role assignments.

### User management function for local use

---

The user management function for local use provides features for user authentication and reference, project creation, and other features at the IaaS service portal and APIs in each region.

For users to use services of each region including the user management function for local use, it is necessary to perform authentication with the user management function for local use and acquire tokens issued by this function.

For the determination of local services, use the list (URL) included in the catalog that is also returned at the time of authentication with the user management function for local use.

### User management function for global use

---

The user management function for global use provides the authentication feature to use global services such as APIs for adding and updating groups to be global resources, and contract management.

For users to use global services, it is necessary to perform authentication with the user management function for global use and acquire tokens issued by this function.

For the determination of global services, use the list (URL) included in the catalog that is also returned at the time of authentication with the user management function for global use.

The following services are global services.

- Global user management
- Contract management
- Global role management
- Accounting management
- Product management
- Content delivery service



CAUTION

The tokens authenticated with the user management function for global use are valid only for global services but cannot be used for local services.

By contrast, the tokens acquired with the user management function for local use are valid only for local services of the relevant region but cannot be used for global services and local services of other regions.

\* As for client certificates, the function is not provided at the time when this document is released.

## 1.1.2 API list

Item	API	Description
1	GET /v3 List API V3 versions	Lists information about Identity API v3 versions.
2	POST /v3/auth/tokens Authentication	Authenticates an identity and generates a token.
3	DELETE /v3/auth/tokens Revoke token	Revokes the specified token.
4	GET /v3/regions{?parent_region_id} List regions	Lists regions.
5	GET /v3/regions/{region_id} Show region	Shows the specified region.
6	GET /v3/domains/{domain_id} Show domain	Shows the specified domain.
7	POST /v3/projects Create project (* Available only for local user management)	Creates a project.
8	GET /v3/projects{?domain_id,name,enabled } Project reference (list)	Lists projects.
9	GET /v3/projects/{project_id} Show project	Shows the specified project.
10	PATCH /v3/projects/{project_id} Update project (* Available only for local user management)	Updates the specified project.
11	GET /v3/users{?domain_id,name,enabled } List users	Lists users.
12	GET /v3/users/{user_id} Show user	Shows the specified user.
13	GET /v3/users/{user_id}/groups{?name} List groups to which a user belongs	Lists groups to which the specified user belongs.
14	GET /v3/users/{user_id}/projects{?name,enabled} List projects for user	Lists projects that a role is granted for the specified user.
15	POST /v3/groups Create group (* Available only for global user management)	Creates a group.
16	GET /v3/groups{?domain_id,name } List groups	Lists groups.

Item	API	Description
17	GET /v3/groups/{group_id} Show group	Shows the specified group.
18	PATCH /v3/groups/{group_id} Update group (* Available only for global user management)	Updates the specified group.
19	DELETE /v3/groups/{group_id} Delete group (* Available only for global user management)	Deletes the specified group.
20	GET /v3/groups/{group_id}/users{?name, enabled} List users in group	Lists the users that belong to the specified group.
21	PUT /v3/groups/{group_id}/users/{user_id} Add user to group (* Available only for global user management)	Adds the specified user to the specified group.
22	DELETE /v3/groups/{group_id}/users/{user_id} Remove user from group (* Available only for global user management)	Removes the specified user from the specified group.
23	HEAD /v3/groups/{group_id}/users/{user_id} Check whether user belongs to group	Validates that the specified user belongs to the specified group.
24	GET /v3/roles{?name } List roles	Lists roles.
25	GET /v3/roles/{role_id} Show role	Shows the specified role.
26	PUT /v3/domains/{domain_id}/users/{user_id}/roles/{role_id} Grant role to user on domain	Grant the specified role to the specified user on the specified domain.
27	PUT /v3/domains/{domain_id}/groups/{group_id}/roles/{role_id} Grant role to group on domain	Grants the specified role to the specified group on the specified domain.
28	GET /v3/domains/{domain_id}/users/{user_id}/roles List roles for user on domain	Lists roles for the specified user on the specified domain.
29	GET /v3/domains/{domain_id}/groups/{group_id}/roles List roles for group on domain	Lists roles for the specified group on the specified domain.
30	HEAD /v3/domains/{domain_id}/users/{user_id}/roles/{role_id} Check whether user has role on domain	Validates that the specified user has the specified role on the specified domain.

Item	API	Description
31	HEAD /v3/domains/{domain_id}/groups/{group_id}/roles/{role_id} Check whether group has role on domain	Validates that the specified group has the specified role on the specified domain.
32	DELETE /v3/domains/{domain_id}/users/{user_id}/roles/{role_id} Revoke role from user on domain	Revokes the specified role from the specified user on the specified domain.
33	DELETE /v3/domains/{domain_id}/groups/{group_id}/roles/{role_id} Revoke role from group on domain	Revokes the specified role from the specified group on the specified domain.
34	PUT /v3/projects/{project_id}/users/{user_id}/roles/{role_id} Grant role to user on project	Grant the specified role to the specified user on the specified project.
35	PUT /v3/projects/{project_id}/groups/{group_id}/roles/{role_id} Grant role to group on project	Grant the specified role to the specified group on the specified project.
36	GET /v3/projects/{project_id}/users/{user_id}/roles List roles for user on project	Lists roles for the specified user on the specified project.
37	GET /v3/projects/{project_id}/groups/{group_id}/roles List roles for group on project	Lists roles for the specified group on the specified project.
38	HEAD /v3/projects/{project_id}/users/{user_id}/roles/{role_id} Check whether user has role on project	Validates that the specified user has the specified role on the specified project.
39	HEAD /v3/projects/{project_id}/groups/{group_id}/roles/{role_id} Check whether group has role on project	Validates that the specified group has the specified role on the specified project.
40	DELETE /v3/projects/{project_id}/users/{user_id}/roles/{role_id} Revoke role from user on project	Revokes the specified role from the specified user on the specified project.
41	DELETE /v3/projects/{project_id}/groups/{group_id}/roles/{role_id} Revoke role from group on project	Revokes the specified role from the specified group on the specified project.
42	GET /v3/role_assignments{?group.id,role.id,scope.domain.id,scope.project.id,user.id} List role assignments	Lists role assignments.
43	POST /v3/OS-TRUST/trusts Create trust (* Available only for local user management)	Creates a trust.
44	GET /v3/OS-TRUST/trusts{? trustee_user_id, trustor_user_id} List trusts (* Available only for local user management)	Lists trusts.

Item	API	Description
45	GET /v3/OS-TRUST/trusts/{trust_id} Show trust (* Available only for local user management)	Shows the specified trust.
46	DELETE /v3/OS-TRUST/trusts/{trust_id} Delete trust (* Available only for local user management)	Deletes the specified trust.
47	GET /v3/OS-TRUST/trusts/{trust_id}/roles List trust roles (* Available only for local user management)	Lists roles delegated by the specified trust.
48	GET /v3/OS-TRUST/trusts/{trust_id}/roles/{role_id} Show trust role (* Available only for local user management)	Shows the specified role of the specified trust.
49	GET /v3/users/{user_id}/auth_type User authentication method information acquisition	Acquires user authentication method information
50	(GET /v3/synchronous_regions{?domain_id,region_id}) Inter-regional synchronization state confirmation (* Available only for global user management)	Confirms the status of inter-regional synchronization

### 1.1.3 Glossary

Term	Description
Domain	Namespace that defines administrative boundaries such as a company. Applies to a contracting organization.
Domain name	Name used to identify a domain. Unique within the system.
Domain ID	ID used to identify a domain. Unique within the system.
Project	A large group or organization to which a user belongs.
Default project	Project that user belongs to. The default project of the contractor is set to a user when the user is created. The default project set to the user cannot be changed.
Project name	Name used to identify a project. Unique within the domain.
Project ID	ID used to identify a project. Unique within the system.
User	A person who uses and manages features (or systems, or services).
User name	Name used to identify a user. Unique within the domain.

Term	Description
User ID	ID used to identify a user. Unique within the system.
Group	A collection of users. Roles can be assigned to groups.
Group name	Name used to identify a group. Unique within the domain.
Group ID	ID used to identify a group. Unique within the system.
Role	Information used to assign permissions to people or group. A role can be used to identify APIs that a user can use.
Role name	Name used to identify a role. Unique within the system.
Role ID	ID used to identify a role. Unique within the system.
Token	Authentication information with expiry that is issued as a proof of authentication.

## 1.1.4 General requirements

---

This section describes general requirements to use this API.

- If a value in the request parameter contains a character that cannot be used as is in the URL, it must be encoded using UTF-8.

## 1.1.5 API details

---

### 1.1.5.1 List API V3 versions (GET /v3)

---

Lists information about Identity API v3 versions.

#### Request headers

---

##### **Content-type**

Indicates the format of content defined in the MIME specification.

Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

##### **Accept**

Indicates the accept format defined in the MIME specification.

Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

#### Request parameters

---

None

## Response headers

---

### **HTTP status code**

Returns the HTTP status code of the request.  
One of the following values will be returned.

200:	Normal completion
400:	Invalid access (invalid parameter, etc.)
401:	Authentication error
403:	Cannot access (no privileges)
404:	No applicable resources
409:	Data conflict occurred
500:	Unexpected error
501:	Has not been implemented
503:	Cannot use service

Data type	Cardinality
int	1..1

### **Vary**

By setting or changing the following header, notification is given that expressions can be requested in a different file format.

X-Auth-Token

Data type	Cardinality
xsd:string	1..1

### **Content-Type**

Indicates the format of content defined in the MIME specification.

application/json

Data type	Cardinality
xsd:string	1..1

### **Content-Length**

Indicates the length of an entity in bytes.

Data type	Cardinality
int	1..1

### **Date**

Indicates the date when the request was created.

Data type	Cardinality
date	1..1

## Response elements

### **version**

version object

Data type	Cardinality	Parent element	Child element
Element	1..1	None	status updated media-types id links

### **status**

Version status

stable:

Stable

experimental:

Not yet a stable release

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	version	None

### **updated**

Last update datetime

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	version	None

### **media-types**

media-types object

Data type	Cardinality	Parent element	Child element
Element	1::1	version	(media-type)

### **(media-type)**

media-type object (object name is not displayed)

Data type	Cardinality	Parent element	Child element
Element	1::2	(media-types)	base type

### **base**

Support media base

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(media-type)	None

### **type**

Support media type



Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(media-type)	None

### id

Version ID

Always returns "v3.0".

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	version	None

### links

Version link information

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	version	href rel

### Example of request

```
GET /v3
```

### Example of response

```
HTTP/1.1 200 OK
Vary: X-Auth-Token
Content-Type: application/json
Content-Length: 335
Date: Tue, 02 Sep 2014 00:05:22 GMT

{
  "version": {
    "status": "stable",
    "updated": "2013-03-06T00:00:00Z",
    "media-types": [
      {
        "base": "application/json",
        "type": "application/vnd.openstack.identity-v3+json"
      },
      {
        "base": "application/xml",
        "type": "application/vnd.openstack.identity-v3+xml"
      }
    ],
    "id": "v3.0",
    "links": [
      {
        "href": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/",
        "rel": "self"
      }
    ]
  }
}
```

## 1.1.5.2 Authenticate (POST /v3/auth/tokens)

---

Authenticates an identity and generates a token.

Delete control characters such as carriage returns from the generated token, and specify it in the X-Auth-Token request header of each API (refer to the end of this section for an example)

If consecutive password errors exceeding the threshold (5 times) are detected within a certain period of time (15 minutes), an authentication error will occur for a certain period (15 minutes), during which time it will not be possible to perform authentication.

### Request headers

---

#### **Content-type**

Indicates the format of content defined in the MIME specification.

Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

#### **Accept**

Indicates the accept format defined in the MIME specification.

Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

### Request parameters

---

#### **auth**

auth object (required)

Data type	Cardinality	Parent element	Child element
Element	1..1	None	identity scope

#### **identity**

identity object (required)

Data type	Cardinality	Parent element	Child element
Element	1..1	auth	methods password token saml2

#### **methods**

Authentication method (required)

- Specify either password authentication or token authentication

Input value

- password: Password authentication
- token: Token authentication

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	identity	None

### **password**

password object (required when using password authentication)

Specify when using password authentication.

Perform authentication using one of the following combinations:

- User ID and password
- Domain ID, user name, and password
- Domain name, user name, and password

Data type	Cardinality	Parent element	Child element
Element	0..1	identity	user

### **user**

user object (required when using password authentication)

Specify an ID or name to uniquely identify the user and password.

Data type	Cardinality	Parent element	Child element
Element	0..1	password	domain id name password

### **domain**

domain object

Data type	Cardinality	Parent element	Child element
Element	0..1	user	id name

### **id**

Domain ID

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	domain	None

### **name**

Domain name

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	domain	None

### **id**

User ID

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	user	None

### **name**

User name

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	user	None

### **password**

Password (required when using password authentication)

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	user	None

### **token**

token object (required when using token authentication)

Specify when using token authentication.

Data type	Cardinality	Parent element	Child element
Element	0..1	identity	id

### **id**

Authenticated token (required when using token authentication)

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	token	None

### **scope**

scope object

Specify ID or name to uniquely identify the domain or project.

When project is specified in the scope parameter, the project ID is not mandatory, and it is possible to retrieve a token with the project name. However, additional parameters are necessary when using the project name. When project is specified for scope, the required parameter varies depending on the parameter specified for project.

- When specifying a project ID for the parameter specified in project  
In the following, only the ID of the project is specified.

```
{"scope": {"project": {"id": "--project-id--"}}
```

- When specifying a project name for the parameter specified in project  
As a token cannot be retrieved with only the project name, it is necessary to add the domain parameter as well as the project name.

Specify id or name for the domain parameter

- Example of Project name + Domain ID:

```
{"scope": {"project": {"name": "--project-name--", "domain": {"id": "--domain-id--"}}
```

- Example of Project name + Domain name:

```
{"scope": {"project": {"name": "--project-name--", "domain": {"name": "--domain-name--"}}
```

If performing token authentication, specify trust.

If this element is omitted, the result will be the same as specifying a project.

Also, if this element is specified in the wrong location in the request, it may be ignored.

Data type	Cardinality	Parent element	Child element
Element	0..1	auth	project domain OS-TRUST:trust

### **project**

project object

Data type	Cardinality	Parent element	Child element
Element	0..1	scope	domain id name

### **domain**

domain object

Data type	Cardinality	Parent element	Child element
Element	0..1	project	id name

### **id**

Domain ID

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	domain	None

### **name**

Domain name

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	domain	None

### **id**

Project ID

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	project	None

### **name**

Project name

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	project	None

### **domain**

domain object

Data type	Cardinality	Parent element	Child element
Element	0..1	scope	id name

### **id**

Domain ID

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	domain	None

### **name**

Domain name

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	domain	None

### **OS-TRUST:trust**

OS-TRUST:trust object

Data type	Cardinality	Parent element	Child element
Element	0..1	scope	id

### **id**

Trust ID

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	OS-TRUST:trust	None

## **Response headers**

---

### **HTTP status code**

Returns the HTTP status code of the request.

One of the following values will be returned.

201:	Normal completion
400:	Invalid access (invalid parameter, etc.)
401:	Authentication error
403:	Cannot access (no privileges)
404:	No applicable resources
409:	Data conflict occurred

500: Unexpected error  
 501: Has not been implemented  
 503: Cannot use service

Data type	Cardinality
int	1..1

### **Vary**

By setting or changing the following header, notification is given that expressions can be requested in a different file format.

X-Auth-Token

Data type	Cardinality
xsd:string	1..1

### **Content-Type**

Indicates the format of content defined in the MIME specification.

application/json

Data type	Cardinality
xsd:string	1..1

### **Content-Length**

Indicates the length of an entity in bytes.

Data type	Cardinality
int	1..1

### **Date**

Indicates the date when the request was created.

Data type	Cardinality
date	1..1

### **X-Subject-Token**

Token (Unscoped token or Scoped token)

Data type	Cardinality
xsd:string	1..1

## **Response elements**

---

### **token**

token object

Data type	Cardinality	Parent element	Child element
Element	1..1	None	expires_at issued_at methods roles domain project catalog extras user

### **expires\_at**

Token expiry datetime

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	token	None

### **issued\_at**

Token issue datetime

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	token	None

### **methods**

Authentication method

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	token	None

### **roles**

roles object

Data type	Cardinality	Parent element	Child element
Element	0..1	token	(role)

### **(role)**

role object (object name is not displayed)

Data type	Cardinality	Parent element	Child element
Element	1..n	roles	id name

### **id**

Role ID



Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(role)	None

### **name**

Role name

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(role)	None

### **domain**

domain object

This is set when a domain is specified for scope.

Information about the domain that was specified for scope

Data type	Cardinality	Parent element	Child element
Element	0..1	token	id name

### **id**

Domain ID

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	domain	None

### **name**

Domain name

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	domain	None

### **project**

project object

This is set when a project is specified for scope.

Information about the project that was specified for scope

Data type	Cardinality	Parent element	Child element
Element	0..1	token	domain id name

### **domain**

domain object

Data type	Cardinality	Parent element	Child element
Element	0..1	project	id name

**id**

Domain ID

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	domain	None

**name**

Domain name

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	domain	None

**id**

Project ID

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	project	None

**name**

Project name

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	project	None

**catalog**

catalog object

Data type	Cardinality	Parent element	Child element
Element	0..1	token	endpoints type name id

**endpoints**

endpoints object

Data type	Cardinality	Parent element	Child element
Element	0..1	catalog	(endpoint)

**endpoint**

endpoint object (object name is not displayed)

Data type	Cardinality	Parent element	Child element
Element	1..n	endpoints	name url region region_id interface id

### **name**

Endpoint name

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(endpoint)	None

### **url**

url information

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(endpoint)	None

### **region**

Region name

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(endpoint)	None

### **region\_id**

Region ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(endpoint)	None

### **interface**

Interface information

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(endpoint)	None

### **id**

Endpoint ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(endpoint)	None

### **type**

Service type

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	catalog	None

**name**

Service name

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	catalog	None

**id**

Service ID

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	catalog	None

**extras**

Extension information

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	token	None

**users**

users object

Data type	Cardinality	Parent element	Child element
Element	1..1	token	domain id name

**domain**

domain object

Data type	Cardinality	Parent element	Child element
Element	1..1	user	id name

**id**

Domain ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	domain	None

**name**

Domain name

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	domain	None

### **id**

User ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	user	None

### **name**

User name

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	user	None

## Example of request

POST /v3/auth/tokens

### Example 1: Password authentication

The domain ID and user name are specified, and the scope parameter is omitted (therefore the result will be the same as if a project was specified)

```
{
  "auth": {
    "identity": {
      "methods": [
        "password"
      ],
      "password": {
        "user": {
          "domain": {
            "id": "--domain-id--"
          },
          "name": "username",
          "password": "userpassword9999"
        }
      }
    }
  }
}
```

### Example 2: Token authentication

```
{
  "auth": {
    "identity": {
      "methods": [
        "token"
      ],
      "token": {
        "id": "(specify the authentication token)"
      }
    },
    "scope": {
      "OS-TRUST:trust": {
        "id": "--trust_id--"
      }
    }
  }
}
```

## Example of response

Example: In password authentication, an example response when project information is specified in scope

```
{
  "token": {
    "methods": [
      "password"
    ],
    "roles": [
      {
        "id": "--role-id--",
        "name": "admin"
      }
    ],
    "expires_at": "2013-02-27T18:30:59.999999Z",
    "project": {
      "domain": {
        "id": "--domain-id--",
        "name": "admin"
      },
      "id": "--project-id--",
      "name": "admin"
    },
    "catalog": [
      {
        "endpoints": [
          {
            "name": "identityv3",
            "url": "https://identity.jp-east-1.cloud.global.fujitsu.com/v3",
            "region": "jp-east-1",
            "region_id": "jp-east-1",
            "interface": "public",
            "id": "--endpoint-id--"
          }
        ],
        "type": "identityv3",
        "name": "identityv3",
        "id": "--service-id--"
      },
      {
        "endpoints": [
          {
            "name": "image",
            "url": "https://image.jp-east-1.cloud.global.fujitsu.com",
            "region": "jp-east-1",
            "region_id": "jp-east-1",
            "interface": "public",
            "id": "--endpoint-id--"
          }
        ],
        "type": "image",
        "name": "image",
        "id": "--service-id--"
      }
    ],
    "extras": {},
    "user": {
      "domain": {
        "id": "--domain-id--",
        "name": "admin"
      },
      "id": "--user-id--",
      "name": "username"
    }
  }
}
```

```
    },
    "issued_at": "2013-02-27T16:30:59.999999Z"
  }
}
```

## Example of using curl command to delete carriage returns from end of token

```
export TOKEN=`curl -si -H "Content-Type:application/json" -d @data.json
http://xxxxx/v3/auth/tokens | awk '/X-Subject-Token/ {print $2}' | tr -d "¥r"``
```

### 1.1.5.3 Revoke token (DELETE /v3/auth/tokens)

Revokes the specified token.

#### Request headers

##### Content-type

Indicates the format of content defined in the MIME specification.

Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

##### Accept

Indicates the accept format defined in the MIME specification.

Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

##### X-Auth-Token

Valid authentication token

Data type	Cardinality
xsd:string	1..1

##### X-Subject-Token

The token to be revoked

Data type	Cardinality
xsd:string	1..1

#### Request parameters

None

#### Response headers

##### HTTP status code

Returns the HTTP status code of the request.

One of the following values will be returned.

204:	Normal completion
400:	Invalid access (invalid parameter, etc.)
401:	Authentication error
403:	Cannot access (no privileges)
404:	No applicable resources
409:	Data conflict occurred
500:	Unexpected error
501:	Has not been implemented
503:	Cannot use service

Data type	Cardinality
int	1..1

### Vary

By setting or changing the following header, notification is given that expressions can be requested in a different file format.

X-Auth-Token

Data type	Cardinality
xsd:string	1..1

### Content-Length

Indicates the length of an entity in bytes.

Data type	Cardinality
int	1..1

### Date

Indicates the date when the request was created.

Data type	Cardinality
date	1..1

### Response elements

---

None

### Example of request

---

```
DELETE /v3/auth/tokens
X-Auth-Token: MIIHgyJKoZIhvcNAQcCoIIIDzCCCAAsCAQExC . . .
X-Subject-Token: MIIxAYJKoZIhvcNAQcCoIIIItTCCCLECAQExCTAH . . .
```



## Example of response

```
HTTP/1.1 204 No Content
Vary: X-Auth-Token
Content-Length: 0
Date: Mon, 01 Sep 2014 12:22:21 GMT
```

## 1.1.5.4 List regions (GET /v3/regions{?parent\_region\_id})

Lists regions.

### Request headers

#### **Content-type**

Indicates the format of content defined in the MIME specification.  
Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

#### **Accept**

Indicates the accept format defined in the MIME specification.  
Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

#### **X-Auth-Token**

Valid authentication token

Data type	Cardinality
xsd:string	1..1

### Request parameters

#### **parent\_region\_id**

Parent region ID

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	None	None

### Response headers

#### **HTTP status code**

Returns the HTTP status code of the request.  
One of the following values will be returned.

200:	Normal completion
400:	Invalid access (invalid parameter, etc.)
401:	Authentication error

403:	Cannot access (no privileges)
404:	No applicable resources
409:	Data conflict occurred
500:	Unexpected error
501:	Has not been implemented
503:	Cannot use service

Data type	Cardinality
int	1..1

### **Vary**

By setting or changing the following header, notification is given that expressions can be requested in a different file format.

X-Auth-Token

Data type	Cardinality
xsd:string	1..1

### **Content-Type**

Indicates the format of content defined in the MIME specification.

application/json

Data type	Cardinality
xsd:string	1..1

### **Content-Length**

Indicates the length of an entity in bytes.

Data type	Cardinality
int	1..1

### **Date**

Indicates the date when the request was created.

Data type	Cardinality
date	1..1

## **Response elements**

### **regions**

regions object

Data type	Cardinality	Parent element	Child element
Element	1..1	None	(region)

### **(region)**

region object (object name is not displayed)

Data type	Cardinality	Parent element	Child element
Element	0..n	None	parent_region_id id links description

### **parent\_region\_id**

Parent region ID

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	(region)	None

### **id**

Region ID

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	(region)	None

### **links**

Link information of region

Data type	Cardinality	Parent element	Child element
Element	0..1	(region)	self

### **description**

Description of region

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	(region)	None

### **links**

API link information

Data type	Cardinality	Parent element	Child element
Element	0..1	None	self previous next

## Example of request

```
GET /v3/regions
X-Auth-Token: MIIHgyJKoZIhvcNAQcCoIIIDzCCCAAsCAQExC . . .
```

## Example of response

```
HTTP/1.1 200 OK
Vary: X-Auth-Token
Content-Type: application/json
Content-Length: 412
Date: Mon, 01 Sep 2014 23:49:00 GMT

{
  "regions": [
    {
      "description": "jp-east-1 region",
      "id": "jp-east-1",
      "links": {
        "self": "https://identity.jp-east-1.cloud.global.fujitsu.com/v3/regions/jp-east-1",
      },
      "parent_region_id": null
    },
    {
      "description": "jp-east-1a AZ",
      "id": "jp-east-1a",
      "links": {
        "self": "https://identity.jp-east-1.cloud.global.fujitsu.com/v3/regions/jp-east-1a",
      },
      "parent_region_id": "jp-east-1"
    }
  ],
  "links": {
    "self": "https://identity.jp-east-1.cloud.global.fujitsu.com/v3/regions",
    "previous": null,
    "next": null
  }
}
```

### 1.1.5.5 Show region (GET /v3/regions/{region\_id})

Shows the specified region.

#### Request headers

##### Content-type

Indicates the format of content defined in the MIME specification.

Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

##### Accept

Indicates the accept format defined in the MIME specification.

Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

##### X-Auth-Token

Valid authentication token

Data type	Cardinality
xsd:string	1..1

## Request parameters

---

### **region\_id**

Region ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

## Response headers

---

### **HTTP status code**

Returns the HTTP status code of the request.

One of the following values will be returned.

200:	Normal completion
400:	Invalid access (invalid parameter, etc.)
401:	Authentication error
403:	Cannot access (no privileges)
404:	No applicable resources
409:	Data conflict occurred
500:	Unexpected error
501:	Has not been implemented
503:	Cannot use service

Data type	Cardinality
int	1..1

### **Vary**

By setting or changing the following header, notification is given that expressions can be requested in a different file format.

X-Auth-Token

Data type	Cardinality
xsd:string	1..1

### **Content-Type**

Indicates the format of content defined in the MIME specification.

application/json

Data type	Cardinality
xsd:string	1..1

### **Content-Length**

Indicates the length of an entity in bytes.

Data type	Cardinality
int	1..1

### **Date**

Indicates the date when the request was created.

Data type	Cardinality
date	1..1

## **Response elements**

---

### **region**

region object

Data type	Cardinality	Parent element	Child element
Element	1..1	None	parent_region_id id links description

### **parent\_region\_id**

Parent region ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	region	None

### **id**

Region ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	region	None

### **links**

Link information of region

Data type	Cardinality	Parent element	Child element
Element	1..1	region	self

### **description**

Description of region

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	region	None

## Example of request

```
GET /v3/regions/--region-id--  
X-Auth-Token: MIIHgYJKoZihvcNAQcCoIIIDzCCCAAsCAQExC . . .
```

## Example of response

```
HTTP/1.1 200 OK  
Vary: X-Auth-Token  
Content-Type: application/json  
Content-Length: 161  
Date: Tue, 02 Sep 2014 00:31:11 GMT  
  
{  
  "region": {  
    "parent_region_id": null,  
    "id": "jp-east-1",  
    "links": {  
      "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/regions/jp-  
east-1"  
    },  
    "description": "jp-east-1 region"  
  }  
}
```

## 1.1.5.6 Show domain (GET /v3/domains/{domain\_id})

Shows the specified domain.

### Request headers

#### **Content-type**

Indicates the format of content defined in the MIME specification.  
Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

#### **Accept**

Indicates the accept format defined in the MIME specification.  
Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

#### **X-Auth-Token**

Valid authentication token

Data type	Cardinality
xsd:string	1..1

## Request parameters

### **domain\_id**

Domain ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

## Response headers

### **HTTP status code**

Returns the HTTP status code of the request.

One of the following values will be returned.

200:	Normal completion
400:	Invalid access (invalid parameter, etc.)
401:	Authentication error
403:	Cannot access (no privileges)
404:	No applicable resources
409:	Data conflict occurred
500:	Unexpected error
501:	Has not been implemented
503:	Cannot use service

Data type	Cardinality
int	1..1

### **Vary**

By setting or changing the following header, notification is given that expressions can be requested in a different file format.

X-Auth-Token

Data type	Cardinality
xsd:string	1..1

### **Content-Type**

Indicates the format of content defined in the MIME specification.

application/json

Data type	Cardinality
xsd:string	1..1

### **Content-Length**

Indicates the length of an entity in bytes.

Data type	Cardinality
int	1..1



**Date**

Indicates the date when the request was created.

Data type	Cardinality
date	1..1

**Response elements****domain**

domain object

Data type	Cardinality	Parent element	Child element
Element	1..1	None	description enabled id links name

**description**

Description of domain

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	domain	None

**enabled**

Enabled setting

Data type	Cardinality	Parent element	Child element
xsd:boolean	1..1	domain	None

**id**

Domain ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	domain	None

**links**

Link information of domain

Data type	Cardinality	Parent element	Child element
Element	1..1	domain	self

**name**

Domain name

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	domain	None

### Example of request

```
GET /v3/domains/--domain-id--
X-Auth-Token: MIIHgyJKoZIHvcNAQcCoIIIDzCCCAAsCAQExC . . .
```

### Example of response

```
HTTP/1.1 200 OK
Vary: X-Auth-Token
Content-Type: application/json
Content-Length: 220
Date: Tue, 02 Sep 2014 02:01:25 GMT

{
  "domain": {
    "links": {
      "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/domains/--
domain-id--"
    },
    "enabled": true,
    "description": "keystone admin domain",
    "name": "admin",
    "id": "--domain-id--"
  }
}
```

## 1.1.5.7 Create project (POST /v3/projects)

Creates a project.

### Request headers

#### Content-type

Indicates the format of content defined in the MIME specification.  
Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

#### Accept

Indicates the accept format defined in the MIME specification.  
Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

#### X-Auth-Token

Valid authentication token

Data type	Cardinality
xsd:string	1..1

## Request parameters

---

### **project**

project object (required)

Data type	Cardinality	Parent element	Child element
Element	1..1	None	description domain_id enabled name

### **description**

Description of project

Input value

- Up to 255 characters

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	project	None

### **domain\_id**

Domain ID (required)

If omitted, the default domain will be used, so it is necessary for the user to specify this.

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	project	None

### **enabled**

Enabled setting

If omitted, enabled is used

Input value

- true: Enabled
- false: Disabled

Data type	Cardinality	Parent element	Child element
xsd:boolean	0..1	project	None

### **name**

Project name (required)

Input value

- 4 to 64 characters
- Halfwidth alphanumeric characters and the following symbols:  
Plus (+), equal sign (=), comma (,), period (.), at-sign (@), hyphen (-), underscore (\_)
- Not case-sensitive

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	project	None

## Response headers

### **HTTP status code**

Returns the HTTP status code of the request.

One of the following values will be returned.

201:	Normal completion
400:	Invalid access (invalid parameter, etc.)
401:	Authentication error
403:	Cannot access (no privileges)
404:	No applicable resources
409:	Data conflict occurred
500:	Unexpected error
501:	Has not been implemented
503:	Cannot use service

Data type	Cardinality
int	1..1

### **Vary**

By setting or changing the following header, notification is given that expressions can be requested in a different file format.

X-Auth-Token

Data type	Cardinality
xsd:string	1..1

### **Content-Type**

Indicates the format of content defined in the MIME specification.

application/json

Data type	Cardinality
xsd:string	1..1

### **Content-Length**

Indicates the length of an entity in bytes.

Data type	Cardinality
int	1..1

### **Date**

Indicates the date when the request was created.

Data type	Cardinality
date	1..1

## Response elements

### **project**

project object

Data type	Cardinality	Parent element	Child element
Element	1..1	None	description domain_id enabled id links name parent_id

### **description**

Description of project

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	project	None

### **domain\_id**

Domain ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	project	None

### **enabled**

Enabled setting

Data type	Cardinality	Parent element	Child element
xsd:boolean	1..1	project	project

### **id**

Project ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	project	None

### **links**

Link information of project

Data type	Cardinality	Parent element	Child element
Element	1..1	project	self

### **name**

Project name

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	project	None

### **parent\_id**

Parent ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	project	None

## Example of request

---

```
POST /v3/projects
X-Auth-Token: MIIIHgYJKoZIHvcNAQcCoIIIDzCCCA$CAQExC . . .

{
  "project": {
    "description": "my create project",
    "domain_id": "--domain-id--",
    "enabled": true,
    "name": "projectname",
    "parent_id": null
  }
}
```

## Example of response

---

```
HTTP/1.1 201 Created
Vary: X-Auth-Token
Content-Type: application/json
Content-Length: 258
Date: Tue, 02 Sep 2014 01:13:18 GMT

{
  "project": {
    "description": "my create project",
    "domain_id": "--domain-id--",
    "enabled": true,
    "id": "--project-id--",
    "links": {
      "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/projects/--
project-id--"
    },
    "name": "projectname"
  }
}
```

## 1.1.5.8 Project reference (list) (GET /v3/projects{?domain\_id,name,enabled })

---

Displays a list of projects.

## Request headers

---

### **Content-type**

Indicates the format of content defined in the MIME specification.

Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

### **Accept**

Indicates the accept format defined in the MIME specification.

Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

### **X-Auth-Token**

Valid authentication token

Data type	Cardinality
xsd:string	1..1

## Request parameters

---

### **domain\_id**

Domain ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

### **name**

Project name

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	None	None

### **enabled**

Enabled setting

Data type	Cardinality	Parent element	Child element
xsd:boolean	0..1	None	None

## Response headers

---

### **HTTP status code**

Returns the HTTP status code of the request.

One of the following values will be returned.

200:	Normal completion
400:	Invalid access (invalid parameter, etc.)
401:	Authentication error
403:	Cannot access (no privileges)
404:	No applicable resources
409:	Data conflict occurred
500:	Unexpected error
501:	Has not been implemented
503:	Cannot use service

Data type	Cardinality
int	1..1

### **Vary**

By setting or changing the following header, notification is given that expressions can be requested in a different file format.

X-Auth-Token

Data type	Cardinality
xsd:string	1..1

### **Content-Type**

Indicates the format of content defined in the MIME specification.

application/json

Data type	Cardinality
xsd:string	1..1

### **Content-Length**

Indicates the length of an entity in bytes.

Data type	Cardinality
int	1..1

### **Date**

Indicates the date when the request was created.

Data type	Cardinality
date	1..1

## **Response elements**

---

### **projects**

projects object



Data type	Cardinality	Parent element	Child element
Element	1..1	None	(project)

### **(project)**

project object (object name is not displayed)

Data type	Cardinality	Parent element	Child element
Element	1..n	projects	description domain_id enabled id links name parent_id

### **description**

Description of project

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(project)	None

### **domain\_id**

Domain ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(project)	None

### **enabled**

Enabled setting

Data type	Cardinality	Parent element	Child element
xsd:boolean	1..1	(project)	None

### **id**

Project ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(project)	None

### **links**

Link information of project

Data type	Cardinality	Parent element	Child element
Element	1..1	(project)	self

### **name**

Project name

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(project)	None

### **parent\_id**

Parent ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(project)	None

### **links**

API link information

Data type	Cardinality	Parent element	Child element
Element	1..1	None	self previous next

## Example of request

```
GET /v3/projects?domain_id=--domain-id--  
X-Auth-Token: MIIHgyJKoZIHvcNAQcCoIIIDzCCCAAsCAQExC (omitted)
```

## Example of response

```
HTTP/1.1 200 OK  
Vary: X-Auth-Token  
Content-Type: application/json  
Content-Length: 3419  
Date: Tue, 02 Sep 2014 01:41:15 GMT
```

```
{  
  "projects": [  
    {  
      "description": "my create project",  
      "domain_id": "--domain-id--",  
      "enabled": true,  
      "id": "--project-id--",  
      "links": {  
        "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/projects/--  
project-id--"  
      },  
      "name": "projectname1",  
      "parent_id": null  
    },  
    {  
      "description": "my create project",  
      "domain_id": "--domain-id--",  
      "enabled": true,  
      "id": "--project-id--",  
      "links": {  
        "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/projects/--  
project-id--"  
      }  
    }  
  ]  
}
```

```

    },
    "name": "projectname2",
    "parent_id": null
  }
],
"links": {
  "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/projects",
  "previous": null,
  "next": null
}
}

```

## 1.1.5.9 Show project (GET /v3/projects/{project\_id})

---

Shows the specified project.

### Request headers

---

#### **Content-type**

Indicates the format of content defined in the MIME specification.  
Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

#### **Accept**

Indicates the accept format defined in the MIME specification.  
Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

#### **X-Auth-Token**

Valid authentication token

Data type	Cardinality
xsd:string	1..1

### Request parameters

---

#### **project\_id**

ID of the project (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

### Response headers

---

#### **HTTP status code**

Returns the HTTP status code of the request.  
One of the following values will be returned.

200:	Normal completion
400:	Invalid access (invalid parameter, etc.)
401:	Authentication error
403:	Cannot access (no privileges)
404:	No applicable resources
409:	Data conflict occurred
500:	Unexpected error
501:	Has not been implemented
503:	Cannot use service

Data type	Cardinality
int	1..1

### **Vary**

By setting or changing the following header, notification is given that expressions can be requested in a different file format.

X-Auth-Token

Data type	Cardinality
xsd:string	1..1

### **Content-Type**

Indicates the format of content defined in the MIME specification.

application/json

Data type	Cardinality
xsd:string	1..1

### **Content-Length**

Indicates the length of an entity in bytes.

Data type	Cardinality
int	1..1

### **Date**

Indicates the date when the request was created.

Data type	Cardinality
date	1..1

## **Response elements**

---

### **project**

project object

Data type	Cardinality	Parent element	Child element
Element	1..1	None	description domain_id enabled id links name parent_id

### **description**

Description of project

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	project	None

### **domain\_id**

Domain ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	project	None

### **enabled**

Enabled setting

Data type	Cardinality	Parent element	Child element
xsd:boolean	1..1	project	None

### **id**

Project ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	project	None

### **links**

Link information of project

Data type	Cardinality	Parent element	Child element
Element	1..1	project	self

### **name**

Project name

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	project	None

## parent\_id

Parent ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	project	None

## Example of request

```
GET /v3/projects/--project-id--  
X-Auth-Token: MIIHGYJKoZIHvcNAQcCoIIIDzCCCAAsCAQExC . . .
```

## Example of response

```
HTTP/1.1 200 OK  
Vary: X-Auth-Token  
Content-Type: application/json  
Content-Length: 283  
Date: Tue, 02 Sep 2014 05:43:42 GMT  
  
{  
  "project": {  
    "description": "my create project",  
    "domain_id": "--domain-id--",  
    "enabled": true,  
    "id": "--project-id--",  
    "links": {  
      "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/projects/--  
project-id--"  
    },  
    "name": "projectname",  
    "parent_id": null  
  }  
}
```

## 1.1.5.10 Update project (PATCH /v3/projects/{project\_id})

Updates the specified project.

When a project is no longer used, disable it by changing the "enabled" setting to false.

However, before disabling a project, it is necessary to stop or delete the resources under it (If the resources are not stopped, they will remain billable).

Authentication (including retrieval of roles) will no longer be possible for a disabled project. If tokens for the disabled projects are used, they will become invalid.

## Request headers

### Content-type

Indicates the format of content defined in the MIME specification.

Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

## Accept

Indicates the accept format defined in the MIME specification.  
Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

### **X-Auth-Token**

Valid authentication token

Data type	Cardinality
xsd:string	1..1

## **Request parameters**

---

### **project\_id**

ID of the project (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

### **project**

project object

Data type	Cardinality	Parent element	Child element
Element	1.1	None	description enabled name

### **description**

Description of project

Refer to "[Create project \(POST /v3/projects\)](#)" for details on input values

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	project	None

### **enabled**

Enabled setting

Refer to "[Create project \(POST /v3/projects\)](#)" for details on input values

Data type	Cardinality	Parent element	Child element
xsd:boolean	0..1	project	None

### **name**

Project name

Refer to "[Create project \(POST /v3/projects\)](#)" for details on input values

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	project	None

## Response headers

### **HTTP status code**

Returns the HTTP status code of the request.

One of the following values will be returned.

200:	Normal completion
400:	Invalid access (invalid parameter, etc.)
401:	Authentication error
403:	Cannot access (no privileges)
404:	No applicable resources
409:	Data conflict occurred
500:	Unexpected error
501:	Has not been implemented
503:	Cannot use service

Data type	Cardinality
int	1..1

### **Vary**

By setting or changing the following header, notification is given that expressions can be requested in a different file format.

X-Auth-Token

Data type	Cardinality
xsd:string	1..1

### **Content-Type**

Indicates the format of content defined in the MIME specification.

application/json

Data type	Cardinality
xsd:string	1..1

### **Content-Length**

Indicates the length of an entity in bytes.

Data type	Cardinality
int	1..1

### **Date**

Indicates the date when the request was created.



Data type	Cardinality
date	1..1

## Response elements

### **project**

project object

Data type	Cardinality	Parent element	Child element
Element	1..1	None	description domain_id enabled extra id links name parent_id

### **description**

Description of project

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	project	None

### **domain\_id**

Domain ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	project	None

### **enabled**

Enabled setting

Data type	Cardinality	Parent element	Child element
xsd:boolean	1..1	project	None

### **extra**

Extension information

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	project	None

### **id**

Project ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	project	None

### **links**

Link information of project

Data type	Cardinality	Parent element	Child element
Element	1..1	project	self

### **name**

Project name

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	project	None

### **parent\_id**

Parent ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	project	None

## Example of request

```
PATCH /v3/projects/--project-id--
X-Auth-Token: MIIIHgYJKoZIHvcNAQcGoIIIDzCCCAAsCAQExC . . .
{
  "project": {
    "description": "my updated project",
    "enabled": true,
    "name": "myUpdatedProject"
  }
}
```

## Example of response

```
HTTP/1.1 200 OK
Vary: X-Auth-Token
Content-Type: application/json
Content-Length: 299
Date: Tue, 02 Sep 2014 06:07:40 GMT

{
  "project": {
    "description": "my updated project",
    "domain_id": "--domain-id--",
    "enabled": true,
    "extra": {},
    "id": "--project-id--",
    "links": {
      "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/projects/--
project-id--"
    },
    "name": "myUpdatedProject",
```

```
    "parent_id": null
  }
}
```

### 1.1.5.11 List users (GET /v3/users{?domain\_id,name,enabled })

Lists users.

#### Request headers

##### **Content-type**

Indicates the format of content defined in the MIME specification.  
Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

##### **Accept**

Indicates the accept format defined in the MIME specification.  
Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

##### **X-Auth-Token**

Valid authentication token

Data type	Cardinality
xsd:string	1..1

#### Request parameters

##### **domain\_id**

Domain ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

##### **name**

User name

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	None	None

##### **enabled**

Enabled setting

Data type	Cardinality	Parent element	Child element
xsd:boolean	0..1	None	None

## Response headers

### **HTTP status code**

Returns the HTTP status code of the request.

One of the following values will be returned.

200:	Normal completion
400:	Invalid access (invalid parameter, etc.)
401:	Authentication error
403:	Cannot access (no privileges)
404:	No applicable resources
409:	Data conflict occurred
500:	Unexpected error
501:	Has not been implemented
503:	Cannot use service

Data type	Cardinality
int	1..1

### **Vary**

By setting or changing the following header, notification is given that expressions can be requested in a different file format.

X-Auth-Token

Data type	Cardinality
xsd:string	1..1

### **Content-Type**

Indicates the format of content defined in the MIME specification.

application/json

Data type	Cardinality
xsd:string	1..1

### **Content-Length**

Indicates the length of an entity in bytes.

Data type	Cardinality
int	1..1

### **Date**

Indicates the date when the request was created.

Data type	Cardinality
date	1..1

## Response elements

### **users**

users object

Data type	Cardinality	Parent element	Child element
Element	1..1	None	(user)

### **(user)**

user object (object name is not displayed)

Data type	Cardinality	Parent element	Child element
Element	1..n	users	default_project_id description domain_id enabled id name locale links

### **default\_project\_id**

Default project ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(user)	None

### **description**

Description of user

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(user)	None

### **domain\_id**

Domain ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(user)	None

### **enabled**

Enabled setting

Data type	Cardinality	Parent element	Child element
xsd:boolean	1..1	(user)	None

### **id**

User ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(user)	None

### **name**

User name

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(user)	None

### **locale**

Email notification language

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(user)	None

### **links**

Link information of user

Data type	Cardinality	Parent element	Child element
Element	1..1	(user)	self

### **links**

API link information

Data type	Cardinality	Parent element	Child element
Element	1..1	None	self previous next

## Example of request

```
GET /v3/users?domain_id=--domain-id--
X-Auth-Token: MIIHgyJKoZIhvcNAQcCoIIIDzCCCAAsCAQExC . . .
```

## Example of response

```
HTTP/1.1 200 OK
Vary: X-Auth-Token
Content-Type: application/json
Content-Length: 443
Date: Tue, 02 Sep 2014 09:32:58 GMT
```

```

{
  "users": [
    {
      "default_project_id": "--project-id--",
      "description": "admin user",
      "domain_id": "--domain-id--",
      "enabled": true,
      "id": "--user-id--",
      "links": {
        "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/users/--
user-id--"
      },
      "locale": "ja",
      "name": "admin"
    },
    {
      "default_project_id": "--project-id--",
      "description": "another user",
      "domain_id": "--domain-id--",
      "enabled": true,
      "id": "--user-id--",
      "links": {
        "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/users/--
user-id--"
      },
      "locale": "ja",
      "name": "someone"
    }
  ],
  "links": {
    "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/users",
    "previous": null,
    "next": null
  }
}

```

### 1.1.5.12 Show user (GET /v3/users/{user\_id})

Shows the specified user.

#### Request headers

##### Content-type

Indicates the format of content defined in the MIME specification.

Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

##### Accept

Indicates the accept format defined in the MIME specification.

Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

##### X-Auth-Token

Valid authentication token

Data type	Cardinality
xsd:string	1..1

## Request parameters

### **user\_id**

User ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

## Response headers

### **HTTP status code**

Returns the HTTP status code of the request.

One of the following values will be returned.

200:	Normal completion
400:	Invalid access (invalid parameter, etc.)
401:	Authentication error
403:	Cannot access (no privileges)
404:	No applicable resources
409:	Data conflict occurred
500:	Unexpected error
501:	Has not been implemented
503:	Cannot use service

Data type	Cardinality
int	1..1

### **Vary**

By setting or changing the following header, notification is given that expressions can be requested in a different file format.

X-Auth-Token

Data type	Cardinality
xsd:string	1..1

### **Content-Type**

Indicates the format of content defined in the MIME specification.

application/json

Data type	Cardinality
xsd:string	1..1



**Content-Length**

Indicates the length of an entity in bytes.

Data type	Cardinality
int	1..1

**Date**

Indicates the date when the request was created.

Data type	Cardinality
date	1..1

**Response elements****user**

user object

Data type	Cardinality	Parent element	Child element
Element	1..1	None	default_project_id description domain_id email enabled id name locale links

**default\_project\_id**

Default project ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	user	None

**description**

Description of user

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	user	None

**domain\_id**

Domain ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	user	None

**email**

Email address

Returns only the email address of the specified user.

Email addresses of other users are not returned.

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	user	None

**enabled**

Enabled setting

Data type	Cardinality	Parent element	Child element
xsd:boolean	1..1	user	None

**id**

User ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	user	None

**name**

User name

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	user	None

**locale**

Email notification language

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	user	None

**links**

Link information of user

Data type	Cardinality	Parent element	Child element
Element	1..1	user	self

**Example of request**

```
GET /v3/users/--user-id--
X-Auth-Token: MIIHgyJKoZIhvcNAQcCoIIIDzCCCAAsCAQExC . . .
```

**Example of response**

```
HTTP/1.1 200 OK
```

Vary: X-Auth-Token  
Content-Type: application/json  
Content-Length: 350  
Date: Tue, 02 Sep 2014 10:00:48 GMT

```
{
  "user": {
    "default_project_id": "--project-id--",
    "description": "admin user",
    "domain_id": "--domain-id--",
    "email": "admin@example.com",
    "enabled": true,
    "id": "--user-id--",
    "links": {
      "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/users/--user-
id--"
    },
    "locale": "ja",
    "name": "admin"
  }
}
```

### 1.1.5.13 List groups to which a user belongs (GET /v3/users/{user\_id}/groups{?name})

---

Lists groups to which the specified user belongs.

#### Request headers

---

##### **Content-type**

Indicates the format of content defined in the MIME specification.  
Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

##### **Accept**

Indicates the accept format defined in the MIME specification.  
Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

##### **X-Auth-Token**

Valid authentication token

Data type	Cardinality
xsd:string	1..1

#### Request parameters

---

##### **user\_id**

User ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

### **name**

Group name

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	None	None

## **Response headers**

---

### **HTTP status code**

Returns the HTTP status code of the request.

One of the following values will be returned.

200:	Normal completion
400:	Invalid access (invalid parameter, etc.)
401:	Authentication error
403:	Cannot access (no privileges)
404:	No applicable resources
409:	Data conflict occurred
500:	Unexpected error
501:	Has not been implemented
503:	Cannot use service

Data type	Cardinality
int	1..1

### **Vary**

By setting or changing the following header, notification is given that expressions can be requested in a different file format.

X-Auth-Token

Data type	Cardinality
xsd:string	1..1

### **Content-Type**

Indicates the format of content defined in the MIME specification.

application/json

Data type	Cardinality
xsd:string	1..1

### **Content-Length**

Indicates the length of an entity in bytes.

Data type	Cardinality
int	1..1

### **Date**

Indicates the date when the request was created.

Data type	Cardinality
date	1..1

## **Response elements**

### **groups**

groups object

Data type	Cardinality	Parent element	Child element
Element	1..1	None	(group)

### **(group)**

group object (object name is not displayed)

Data type	Cardinality	Parent element	Child element
Element	1..n	groups	description domain_id id links name

### **description**

Description of group

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(group)	None

### **domain\_id**

Domain ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(group)	None

### **id**

ID of the group

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(group)	None

### **links**

## Link information of group

Data type	Cardinality	Parent element	Child element
Element	1..1	(group)	self

## name

Group name

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(group)	None

## links

API link information

Data type	Cardinality	Parent element	Child element
Element	1..1	None	self previous next

## Example of request

```
GET /v3/users/--user-id-/groups
X-Auth-Token: MIIHgyJKoZihvcNAQcGoIIIDzCCCAAsCAQExC . . .
```

## Example of response

```
HTTP/1.1 200 OK
Vary: X-Auth-Token
Content-Type: application/json
Content-Length: 399
Date: Tue, 02 Sep 2014 10:50:28 GMT
```

```
{
  "groups": [
    {
      "description": "general projects"
      "domain_id": "--domain-id--",
      "id": "--group-id--",
      "links": {
        "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/groups/--
group-id--"
      },
      "name": "Developers"
    },
    {
      "description": "secret projects"
      "domain_id": "--domain-id--",
      "id": "--group-id--",
      "links": {
        "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/groups/--
group-id--"
      },
      "name": "Secure Developers"
    }
  ]
}
```

```

"links": {
  "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/users/--user-id--/
groups",
  "previous": null,
  "next": null
}
}

```

### 1.1.5.14 List projects for user (GET /v3/users/{user\_id}/projects{?enabled,name})

Lists projects for the specified user.

#### Request headers

##### **Content-type**

Indicates the format of content defined in the MIME specification.  
Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

##### **Accept**

Indicates the accept format defined in the MIME specification.  
Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

##### **X-Auth-Token**

Valid authentication token

Data type	Cardinality
xsd:string	1..1

#### Request parameters

##### **user\_id**

User ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

##### **enabled**

Enabled setting

Data type	Cardinality	Parent element	Child element
xsd:boolean	0..1	None	None

**name**

Project name

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	None	None

**Response headers****HTTP status code**

Returns the HTTP status code of the request.

One of the following values will be returned.

200:	Normal completion
400:	Invalid access (invalid parameter, etc.)
401:	Authentication error
403:	Cannot access (no privileges)
404:	No applicable resources
409:	Data conflict occurred
500:	Unexpected error
501:	Has not been implemented
503:	Cannot use service

Data type	Cardinality
int	1..1

**Vary**

By setting or changing the following header, notification is given that expressions can be requested in a different file format.

X-Auth-Token

Data type	Cardinality
xsd:string	1..1

**Content-Type**

Indicates the format of content defined in the MIME specification.

application/json

Data type	Cardinality
xsd:string	1..1

**Content-Length**

Indicates the length of an entity in bytes.

Data type	Cardinality
int	1..1



**Date**

Indicates the date when the request was created.

Data type	Cardinality
date	1..1

**Response elements****projects**

projects object

Data type	Cardinality	Parent element	Child element
Element	1..1	None	(project)

**(project)**

project object (object name is not displayed)

Data type	Cardinality	Parent element	Child element
Element	1..n	projects	description domain_id id links enabled name

**description**

Description of project

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(project)	None

**domain\_id**

Domain ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(project)	None

**id**

ID of the group

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(project)	None

**links**

Link information of project

Data type	Cardinality	Parent element	Child element
Element	1..1	(project)	self

### **enabled**

Enabled setting

Data type	Cardinality	Parent element	Child element
xsd:boolean	1..1	(project)	None

### **name**

Group name

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(project)	None

### **links**

API link information

Data type	Cardinality	Parent element	Child element
Element	1..1	None	self previous next

## Example of request

```
GET /v3/users/--user-id--/projects
X-Auth-Token: MIIIHgYJKoZihvcNAQcCoIIIDzCCCAAsCAQExC . . .
```

## Example of response

```
HTTP/1.1 200 OK
Vary: X-Auth-Token
Content-Type: application/json
Content-Length: 408
Date: Tue, 02 Sep 2014 12:14:05 GMT
```

```
{
  "projects": [
    {
      "description": "my create project",
      "domain_id": "--domain-id--",
      "enabled": true,
      "id": "--project-id--",
      "links": {
        "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/projects/--
project-id--"
      },
      "name": "Test Group"
    },
    {
      "description": "my create project",
      "domain_id": "--domain-id--",
```

```

    "enabled": true,
    "id": "--project-id--",
    "links": {
      "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/projects/--
project-id--"
    },
    "name": "Build Group"
  },
  "links": {
    "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/users/--user-id--/
projects",
    "previous": null,
    "next": null
  }
}

```

### 1.1.5.15 Create group (POST /v3/groups)

Creates a group.

If a multi-region user executes this API, a 403 error occurs.

A certain period of time is required for the synchronization of an added group with other regions in use.

#### Request headers

##### Content-type

Indicates the format of content defined in the MIME specification.

Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

##### Accept

Indicates the accept format defined in the MIME specification.

Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

##### X-Auth-Token

Valid authentication token

Data type	Cardinality
xsd:string	1..1

#### Request parameters

##### group

group object (required)

Data type	Cardinality	Parent element	Child element
Element	1..1	None	description domain_id name

### **description**

Description of group  
Input value  
• Up to 255 characters

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	group	None

### **domain\_id**

Domain ID (required)  
If omitted, the default domain is input.

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	group	None

### **name**

Group name (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	group	None

## **Response headers**

---

### **HTTP status code**

Returns the HTTP status code of the request.  
One of the following values will be returned.

201:	Normal completion
400:	The request format is incorrect. For example, a required parameter has not been specified.
401:	The token is invalid.
403:	Authority to execute the requested action not possessed.
404:	The specified domain_id was not found.
500:	An internal error occurred.
504:	The processing was not completed within a certain period of time.

Data type	Cardinality
int	1..1

## Response elements

---

### **group**

group object

Data type	Cardinality	Parent element	Child element
Element	1..1	None	description domain_id id links name

### **description**

Description of group

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	group	None

### **domain\_id**

Domain ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	group	None

### **id**

ID of the group

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	group	None

### **links**

Link information of group

Data type	Cardinality	Parent element	Child element
Element	1..1	group	self

### **name**

Group name

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	group	None

## Example of request

---

```
{
  "group": {
    "description": " Developers cleared for work on secret projects",
```

```

    "domain_id": "--domain-id--",
    "name": "Secure Developers"
  }
}

```

### Example of response

```

{
  "group": {
    "description": "Developers cleared for work on secret projects",
    "domain_id": "--domain-id--",
    "id": "--group-id--",
    "links": {
      "self": "http://identity.gls.cloud.global.fujitsu.com/v3/groups/--group-id--"
    },
    "name": "Secure Developers"
  }
}

```

## 1.1.5.16 List groups (GET /v3/groups{?domain\_id,name })

Lists groups.

### Request headers

#### Content-type

Indicates the format of content defined in the MIME specification.

Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

#### Accept

Indicates the accept format defined in the MIME specification.

Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

#### X-Auth-Token

Valid authentication token

Data type	Cardinality
xsd:string	1..1

### Request parameters

#### domain\_id

Domain ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

### **name**

Group name

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	None	None

## **Response headers**

---

### **HTTP status code**

Returns the HTTP status code of the request.

One of the following values will be returned.

200:	Normal completion
400:	Invalid access (invalid parameter, etc.)
401:	Authentication error
403:	Cannot access (no privileges)
404:	No applicable resources
409:	Data conflict occurred
500:	Unexpected error
501:	Has not been implemented
503:	Cannot use service

Data type	Cardinality
int	1..1

### **Vary**

By setting or changing the following header, notification is given that expressions can be requested in a different file format.

X-Auth-Token

Data type	Cardinality
xsd:string	1..1

### **Content-Type**

Indicates the format of content defined in the MIME specification.

application/json

Data type	Cardinality
xsd:string	1..1

### **Content-Length**

Indicates the length of an entity in bytes.

Data type	Cardinality
int	1..1

### **Date**

Indicates the date when the request was created.

Data type	Cardinality
date	1..1

## **Response elements**

### **groups**

groups object

Data type	Cardinality	Parent element	Child element
Element	1..1	None	(group)

### **(group)**

group object (object name is not displayed)

Data type	Cardinality	Parent element	Child element
Element	1..n	groups	description domain_id id links name

### **description**

Description of group

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(group)	None

### **domain\_id**

Domain ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(group)	None

### **id**

ID of the group

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(group)	None

### **links**



## Link information of group

Data type	Cardinality	Parent element	Child element
Element	1..1	(group)	self

## name

Group name

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(group)	None

## links

API link information

Data type	Cardinality	Parent element	Child element
Element	1..1	None	self previous next

## Example of request

```
GET /v3/groups?domain_id=--domain-id--  
X-Auth-Token: MIIHgyJKoZIHvcNAQcCoIIIDzCCCAAsCAQExC . . .
```

## Example of response

```
HTTP/1.1 200 OK  
Vary: X-Auth-Token  
Content-Type: application/json  
Content-Length: 3514  
Date: Wed, 03 Sep 2014 02:56:28 GM
```

```
{  
  "groups": [  
    {  
      "description": "general projects",  
      "domain_id": "--domain-id--",  
      "id": "--group-id--",  
      "links": {  
        "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/groups/--  
group-id--"  
      },  
      "name": "Developers"  
    },  
    {  
      "description": " secret projects",  
      "domain_id": "--domain-id--",  
      "id": "--group-id--",  
      "links": {  
        "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/groups/--  
group-id--"  
      },  
      "name": "Secure Developers"  
    }  
  ],  
}
```

```

"links": {
  "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/groups",
  "previous": null,
  "next": null
}
}

```

### 1.1.5.17 Show group (GET /v3/groups/{group\_id})

---

Shows the specified group.

#### Request headers

---

##### **Content-type**

Indicates the format of content defined in the MIME specification.

Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

##### **Accept**

Indicates the accept format defined in the MIME specification.

Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

##### **X-Auth-Token**

Valid authentication token

Data type	Cardinality
xsd:string	1..1

#### Request parameters

---

##### **group\_id**

Group ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

#### Response headers

---

##### **HTTP status code**

Returns the HTTP status code of the request.

One of the following values will be returned.

200:	Normal completion
400:	Invalid access (invalid parameter, etc.)
401:	Authentication error

403:	Cannot access (no privileges)
404:	No applicable resources
409:	Data conflict occurred
500:	Unexpected error
501:	Has not been implemented
503:	Cannot use service

Data type	Cardinality
int	1..1

### **Vary**

By setting or changing the following header, notification is given that expressions can be requested in a different file format.

X-Auth-Token

Data type	Cardinality
xsd:string	1..1

### **Content-Type**

Indicates the format of content defined in the MIME specification.

application/json

Data type	Cardinality
xsd:string	1..1

### **Content-Length**

Indicates the length of an entity in bytes.

Data type	Cardinality
int	1..1

### **Date**

Indicates the date when the request was created.

Data type	Cardinality
date	1..1

## **Response elements**

---

### **group**

group object

Data type	Cardinality	Parent element	Child element
Element	1..1	None	description domain_id id links name

### **description**

Description of group

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	group	None

### **domain\_id**

Domain ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	group	None

### **id**

ID of the group

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	group	None

### **links**

Link information of group

Data type	Cardinality	Parent element	Child element
Element	1..1	group	self

### **name**

Group name

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	group	None

## Example of request

```
GET /v3/groups/--group-id--
X-Auth-Token: MIIHgyJKoZlhvcNAQcCoIIIDzCCCAAsCAQExC . . .
```

## Example of response

```
HTTP/1.1 200 OK
```

Vary: X-Auth-Token  
Content-Type: application/json  
Content-Length: 281  
Date: Wed, 03 Sep 2014 05:18:18 GMT

```
{
  "group": {
    "description": "general projects",
    "domain_id": "--domain-id--",
    "id": "--group-id--",
    "links": {
      "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/groups/--group-id--"
    },
    "name": "Developers"
  }
}
```

### 1.1.5.18 Update group (PATCH /v3/groups/{group\_id})

---

Updates the specified group.

#### Request headers

---

##### Content-type

Indicates the format of content defined in the MIME specification.

Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

##### Accept

Indicates the accept format defined in the MIME specification.

Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

##### X-Auth-Token

Valid authentication token

Data type	Cardinality
xsd:string	1..1

#### Request parameters

---

##### group\_id

Group ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

##### group

Group object (required)

Data type	Cardinality	Parent element	Child element
Element	1..1	None	description name

**description**

Description of group

Refer to "[Create group \(POST /v3/groups\)](#)" for details on input values

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	(group)	None

**name**

Group name

Refer to "[Create group \(POST /v3/groups\)](#)" for details on input values

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	(group)	None

**Response headers**

---

**HTTP status code**

Returns the HTTP status code of the request.

One of the following values will be returned.

- 200: Normal completion
- 400: Invalid access (invalid parameter, etc.)
- 401: Authentication error
- 403: Cannot access (no privileges)
- 404: No applicable resources
- 409: Data conflict occurred
- 500: Unexpected error
- 501: Has not been implemented
- 503: Cannot use service

Data type	Cardinality
int	1..1

**Vary**

By setting or changing the following header, notification is given that expressions can be requested in a different file format.

X-Auth-Token

Data type	Cardinality
xsd:string	1..1

### **Content-Type**

Indicates the format of content defined in the MIME specification.

application/json

Data type	Cardinality
xsd:string	1..1

### **Content-Length**

Indicates the length of an entity in bytes.

Data type	Cardinality
int	1..1

### **Date**

Indicates the date when the request was created.

Data type	Cardinality
date	1..1

## **Response elements**

---

### **group**

group object

Data type	Cardinality	Parent element	Child element
Element	1..1	None	description domain_id id links name

### **description**

Description of group

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	group	None

### **domain\_id**

Domain ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	group	None

### **id**

ID of the group

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	group	None

### links

Link information of group

Data type	Cardinality	Parent element	Child element
Element	1..1	group	self

### name

Group name

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	group	None

### Example of request

```
{
  "group": {
    "description": "secret projects",
    "name": " Secure Developers"
  }
}
```

### Example of response

```
{
  "group": {
    "description": "secret projects",
    "domain_id": "--domain-id--",
    "id": "--group-id--",
    "links": {
      "self": "http://identity.gls.cloud.global.fujitsu.com/v3/groups/--group-id--"
    },
    "name": "Secure Developers"
  }
}
```

## 1.1.5.19 Delete group (DELETE /v3/groups/{group\_id})

Deletes the specified group.

If a multi-region user executes this API, a 403 error occurs.

A certain period of time is required for the synchronization of a deleted group with other regions in use.

### Request headers

#### Content-type

Indicates the format of content defined in the MIME specification.

Specify application/json. (required)



Data type	Cardinality
xsd:string	1..1

### Accept

Indicates the accept format defined in the MIME specification.  
Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

### X-Auth-Token

Valid authentication token

Data type	Cardinality
xsd:string	1..1

## Request parameters

---

### group\_id

Group ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

## Response headers

---

### HTTP status code

Returns the HTTP status code of the request.  
One of the following values will be returned.

204:	Normal completion
401:	The token is invalid.
403:	Authority to execute the requested action not possessed.
404:	The specified group was not found.
500:	An internal error occurred.
504:	The processing was not completed within a certain period of time.

Data type	Cardinality
int	1..1

## 1.1.5.20 List users in group (GET /v3/groups/{group\_id}/users{?name,enabled})

---

Lists the users that belong to the specified group.

## Request headers

---

### **Content-type**

Indicates the format of content defined in the MIME specification.

Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

### **Accept**

Indicates the accept format defined in the MIME specification.

Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

### **X-Auth-Token**

Valid authentication token

Data type	Cardinality
xsd:string	1..1

## Request parameters

---

### **group\_id**

Group ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

### **name**

User name

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	None	None

### **enabled**

Enabled setting

Data type	Cardinality	Parent element	Child element
xsd:boolean	0..1	None	None

## Response headers

---

### **HTTP status code**

Returns the HTTP status code of the request.

One of the following values will be returned.

200:	Normal completion
400:	Invalid access (invalid parameter, etc.)
401:	Authentication error
403:	Cannot access (no privileges)
404:	No applicable resources
409:	Data conflict occurred
500:	Unexpected error
501:	Has not been implemented
503:	Cannot use service

Data type	Cardinality
int	1..1

### **Vary**

By setting or changing the following header, notification is given that expressions can be requested in a different file format.

X-Auth-Token

Data type	Cardinality
xsd:string	1..1

### **Content-Type**

Indicates the format of content defined in the MIME specification.

application/json

Data type	Cardinality
xsd:string	1..1

### **Content-Length**

Indicates the length of an entity in bytes.

Data type	Cardinality
int	1..1

### **Date**

Indicates the date when the request was created.

Data type	Cardinality
date	1..1

## **Response elements**

---

### **users**

users object

Data type	Cardinality	Parent element	Child element
Element	1..1	None	(user)

### **(user)**

user object (object name is not displayed)

Data type	Cardinality	Parent element	Child element
Element	1..n	users	default_project_id description domain_id enabled id name locale links

### **default\_project\_id**

Default project ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(user)	None

### **description**

Description of user

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(user)	None

### **domain\_id**

Domain ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(user)	None

### **enabled**

Enabled setting

Data type	Cardinality	Parent element	Child element
xsd:boolean	1..1	(user)	None

### **id**

User ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(user)	None

**name**

User name

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(user)	None

**locale**

Email notification language

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(user)	None

**links**

Link information of user

Data type	Cardinality	Parent element	Child element
Element	1..1	(user)	self

**links**

API link information

Data type	Cardinality	Parent element	Child element
Element	1..1	None	self previous next

**Example of request**

```
GET /v3/groups/--group-id--/users
X-Auth-Token: MIIHgyJKoZIhvcNAQcGoIIIDzCCCAAsCAQExC . . .
```

**Example of response**

```
HTTP/1.1 200 OK
Vary: X-Auth-Token
Content-Type: application/json
Content-Length: 492
Date: Wed, 03 Sep 2014 05:50:28 GMT
```

```
{
  "users": [
    {
      "default_project_id": "--project-id--",
      "description": "admin user",
      "domain_id": "--domain-id--",
      "enabled": true,
      "id": "--user-id--",
      "links": {
        "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/users/--
user-id--"
      }
    }
  ],
}
```

```

    "locale": "ja",
    "name": "admin"
  },
  {
    "default_project_id": "--project-id--",
    "description": "another user",
    "domain_id": "--domain-id--",
    "enabled": true,
    "id": "--user-id--",
    "links": {
      "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/users/--
user-id--"
    },
    "locale": "ja",
    "name": "someone"
  }
],
"links": {
  "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/groups/--group-id--/
users",
  "previous": null,
  "next": null
}
}

```

### 1.1.5.21 Add user to group (PUT /v3/groups/{group\_id}/users/{user\_id})

Adds the specified user to the specified group.

If a multi-region user executes this API, a 403 error occurs.

A certain period of time is required for the synchronization of added group information with other regions in use.

#### Request headers

##### Content-type

Indicates the format of content defined in the MIME specification.

Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

##### Accept

Indicates the accept format defined in the MIME specification.

Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

##### X-Auth-Token

Valid authentication token

Data type	Cardinality
xsd:string	1..1

## Request parameters

---

### **group\_id**

Group ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

### **user\_id**

User ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

## Response headers

---

### **HTTP status code**

Returns the HTTP status code of the request.

One of the following values will be returned.

204:	Normal completion
401:	The token is invalid.
403:	Authority to execute the requested action not possessed.
404:	The specified user was not found.
404:	The specified group was not found.
500:	Unexpected error
504:	The processing was not completed within a certain period of time.

Data type	Cardinality
int	1..1

## 1.1.5.22 Remove user from group (DELETE /v3/groups/{group\_id}/users/{user\_id})

---

Removes the specified user from the specified group.

If a user is removed from a group, the token used by the changed user may become invalid.

If a multi-region user executes this API, a 403 error occurs.

A certain period of time is required for the synchronization of deleted group information with other regions in use.

## Request headers

---

### **Content-type**

Indicates the format of content defined in the MIME specification.

Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

### Accept

Indicates the accept format defined in the MIME specification.  
Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

### X-Auth-Token

Valid authentication token

Data type	Cardinality
xsd:string	1..1

## Request parameters

---

### **group\_id**

Group ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

### **user\_id**

User ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

## Response headers

---

### **HTTP status code**

Returns the HTTP status code of the request.  
One of the following values will be returned.

204:	Normal completion
401:	The token is invalid.
403:	Authority to execute the requested action not possessed.
404:	The specified user was not found.
404:	The specified group was not found.
500:	Unexpected error
504:	The processing was not completed within a certain period of time.



Data type	Cardinality
int	1..1

### 1.1.5.23 Check whether user belongs to group (HEAD /v3/groups/{group\_id}/users/{user\_id})

---

Validates that the specified user belongs to the specified group.

#### Request headers

---

##### **Content-type**

Indicates the format of content defined in the MIME specification.

Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

##### **Accept**

Indicates the accept format defined in the MIME specification.

Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

##### **X-Auth-Token**

Valid authentication token

Data type	Cardinality
xsd:string	1..1

#### Request parameters

---

##### **group\_id**

Group ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

##### **user\_id**

User ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

#### Response headers

---

##### **HTTP status code**

Returns the HTTP status code of the request.  
One of the following values will be returned.

204:	Normal completion
400:	Invalid access (invalid parameter, etc.)
401:	Authentication error
403:	Cannot access (no privileges)
404:	No applicable resources
409:	Data conflict occurred
500:	Unexpected error
501:	Has not been implemented
503:	Cannot use service

Data type	Cardinality
int	1..1

### **Vary**

By setting or changing the following header, notification is given that expressions can be requested in a different file format.

X-Auth-Token

Data type	Cardinality
xsd:string	1..1

### **Content-Length**

Indicates the length of an entity in bytes.

Data type	Cardinality
int	1..1

### **Date**

Indicates the date when the request was created.

Data type	Cardinality
date	1..1

### **Response elements**

None

### **Example of request**

```
HEAD /v3/groups/--group-id--/users/--user-id--
X-Auth-Token: MIIHgyJKoZIhvcNAQcCoIIIDzCCCAAsCAQExC . . .
```

## Example of response

```
HTTP/1.1 204 No Content
Vary: X-Auth-Token
Content-Length: 0
Date: Thu, 04 Sep 2014 4:32:37 AM GMT
```

## 1.1.5.24 List roles (GET /v3/roles{?name })

Lists roles.

### Request headers

#### **Content-type**

Indicates the format of content defined in the MIME specification.  
Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

#### **Accept**

Indicates the accept format defined in the MIME specification.  
Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

#### **X-Auth-Token**

Valid authentication token

Data type	Cardinality
xsd:string	1..1

### Request parameters

#### **name**

Role name

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	None	None

### Response headers

#### **HTTP status code**

Returns the HTTP status code of the request.  
One of the following values will be returned.

200:	Normal completion
400:	Invalid access (invalid parameter, etc.)
401:	Authentication error

403:	Cannot access (no privileges)
404:	No applicable resources
409:	Data conflict occurred
500:	Unexpected error
501:	Has not been implemented
503:	Cannot use service

Data type	Cardinality
int	1..1

### Vary

By setting or changing the following header, notification is given that expressions can be requested in a different file format.

X-Auth-Token

Data type	Cardinality
xsd:string	1..1

### Content-Type

Indicates the format of content defined in the MIME specification.

application/json

Data type	Cardinality
xsd:string	1..1

### Content-Length

Indicates the length of an entity in bytes.

Data type	Cardinality
int	1..1

### Date

Indicates the date when the request was created.

Data type	Cardinality
date	1..1

## Response elements

### roles

roles object

Data type	Cardinality	Parent element	Child element
Element	1..1	None	(role)

### (role)

role object (object name is not displayed)

Data type	Cardinality	Parent element	Child element
Element	1..n	roles	id links name

### **id**

Role ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(role)	None

### **links**

Link information of role

Data type	Cardinality	Parent element	Child element
Element	1..1	(role)	self

### **name**

Role name

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(role)	None

### **links**

API link information

Data type	Cardinality	Parent element	Child element
Element	1..1	None	self previous next

## Example of request

```
GET /v3/roles
X-Auth-Token: MIIHgyJKoZIhvcNAQcCoIIIDzCCCAAsCAQExC . . .
```

## Example of response

```
[Execution by Global Administrator]
{
  "roles": [
    {
      "id": "--member-role-id--",
      "links": {
        "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/roles/--member-
role-id--"
```

```

    },
    "name": "_member_"
  },
],
"links": {
  "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/roles",
  "previous": null,
  "next": null
}
}

```

### 1.1.5.25 Show role (GET /v3/roles/{role\_id})

---

Shows the specified role.

#### Request headers

---

##### **Content-type**

Indicates the format of content defined in the MIME specification.  
Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

##### **Accept**

Indicates the accept format defined in the MIME specification.  
Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

##### **X-Auth-Token**

Valid authentication token

Data type	Cardinality
xsd:string	1..1

#### Request parameters

---

##### **role\_id**

Role ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

#### Response headers

---

##### **HTTP status code**

Returns the HTTP status code of the request.  
One of the following values will be returned.

200:	Normal completion
400:	Invalid access (invalid parameter, etc.)
401:	Authentication error
403:	Cannot access (no privileges)
404:	No applicable resources
409:	Data conflict occurred
500:	Unexpected error
501:	Has not been implemented
503:	Cannot use service

Data type	Cardinality
int	1..1

### **Vary**

By setting or changing the following header, notification is given that expressions can be requested in a different file format.

X-Auth-Token

Data type	Cardinality
xsd:string	1..1

### **Content-Type**

Indicates the format of content defined in the MIME specification.

application/json

Data type	Cardinality
xsd:string	1..1

### **Content-Length**

Indicates the length of an entity in bytes.

Data type	Cardinality
int	1..1

### **Date**

Indicates the date when the request was created.

Data type	Cardinality
date	1..1

## **Response elements**

---

### **role**

role object

Data type	Cardinality	Parent element	Child element
Element	1..1	None	id links name

### id

Role ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	role	None

### links

Link information of role

Data type	Cardinality	Parent element	Child element
Element	1..1	role	self

### name

Role name

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	role	None

## Example of request

```
GET /v3/roles/--role-id--
X-Auth-Token: MIIIHgYJKoZihvcNAQcCoIIIDzCCCAAsCAQExC . . .
```

## Example of response

```
[Reference when the preset role is Global Administrator]
{
  "role": {
    "id": "--member-role-id--",
    "links": {
      "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/roles/--member-
role-id--"
    },
    "name": "_member_"
  }
}
```

## 1.1.5.26 Grant role to user on domain (PUT /v3/domains/{domain\_id}/users/{user\_id}/roles/{role\_id})

Grant the specified role to the specified user on the specified domain.

The granted role will become effective after the token is obtained again.



## Request headers

---

### **Content-type**

Indicates the format of content defined in the MIME specification.

Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

### **Accept**

Indicates the accept format defined in the MIME specification.

Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

### **X-Auth-Token**

Valid authentication token

Data type	Cardinality
xsd:string	1..1

## Request parameters

---

### **domain\_id**

Domain ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

### **user\_id**

User ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

### **role\_id**

Role ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

## Response headers

---

### **HTTP status code**

Returns the HTTP status code of the request.

One of the following values will be returned.

204:	Normal completion
400:	Invalid access (invalid parameter, etc.)
401:	Authentication error
403:	Cannot access (no privileges)
404:	No applicable resources
409:	Data conflict occurred
500:	Unexpected error
501:	Has not been implemented
503:	Cannot use service

Data type	Cardinality
int	1..1

### Vary

By setting or changing the following header, notification is given that expressions can be requested in a different file format.

X-Auth-Token

Data type	Cardinality
xsd:string	1..1

### Content-Length

Indicates the length of an entity in bytes.

Data type	Cardinality
int	1..1

### Date

Indicates the date when the request was created.

Data type	Cardinality
date	1..1

### Response elements

---

None

### Example of request

---

```
PUT /v3/domains/--domain-id--/users/--user-id--/roles/--role-id-
X-Auth-Token: MIIIHgYJKoZ1hvcNAQcGoIIIDzCCCAAsCAQExC . . .
```

### Example of response

---

```
HTTP/1.1 204 No Content
Vary: X-Auth-Token
```

## 1.1.5.27 Grant role to group on domain (PUT /v3/domains/{domain\_id}/groups/{group\_id}/roles/{role\_id})

Grants the specified role to the specified group on the specified domain.  
The granted role will become effective after the token is obtained again.

### Request headers

#### **Content-type**

Indicates the format of content defined in the MIME specification.  
Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

#### **Accept**

Indicates the accept format defined in the MIME specification.  
Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

#### **X-Auth-Token**

Valid authentication token

Data type	Cardinality
xsd:string	1..1

### Request parameters

#### **domain\_id**

Domain ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

#### **group\_id**

Group ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

#### **role\_id**

Role ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

## Response headers

---

### **HTTP status code**

Returns the HTTP status code of the request.

One of the following values will be returned.

204:	Normal completion
400:	Invalid access (invalid parameter, etc.)
401:	Authentication error
403:	Cannot access (no privileges)
404:	No applicable resources
409:	Data conflict occurred
500:	Unexpected error
501:	Has not been implemented
503:	Cannot use service

Data type	Cardinality
int	1..1

### **Vary**

By setting or changing the following header, notification is given that expressions can be requested in a different file format.

X-Auth-Token

Data type	Cardinality
xsd:string	1..1

### **Content-Length**

Indicates the length of an entity in bytes.

Data type	Cardinality
int	1..1

### **Date**

Indicates the date when the request was created.

Data type	Cardinality
date	1..1

## Response elements

---

None

## Example of request

```
PUT /v3/domains/--domain-id--/groups/--group-id--/roles/--role-id--
X-Auth-Token: MIIHgyJKoZihvcNAQcCoIIIDzCCCAAsCAQExC . . .
```

## Example of response

```
HTTP/1.1 204 No Content
Vary: X-Auth-Token
Content-Length: 0
Date: Thu, 04 Sep 2014 9:51:33 AM GMT
```

## 1.1.5.28 List roles for user on domain (GET /v3/domains/{domain\_id}/users/{user\_id}/roles)

Lists roles for the specified user on the specified domain.

### Request headers

#### Content-type

Indicates the format of content defined in the MIME specification.  
Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

#### Accept

Indicates the accept format defined in the MIME specification.  
Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

#### X-Auth-Token

Valid authentication token

Data type	Cardinality
xsd:string	1..1

### Request parameters

#### domain\_id

Domain ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

#### user\_id

User ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

## Response headers

### HTTP status code

Returns the HTTP status code of the request.

One of the following values will be returned.

200:	Normal completion
400:	Invalid access (invalid parameter, etc.)
401:	Authentication error
403:	Cannot access (no privileges)
404:	No applicable resources
409:	Data conflict occurred
500:	Unexpected error
501:	Has not been implemented
503:	Cannot use service

Data type	Cardinality
int	1..1

### Vary

By setting or changing the following header, notification is given that expressions can be requested in a different file format.

X-Auth-Token

Data type	Cardinality
xsd:string	1..1

### Content-Type

Indicates the format of content defined in the MIME specification.

application/json

Data type	Cardinality
xsd:string	1..1

### Content-Length

Indicates the length of an entity in bytes.

Data type	Cardinality
int	1..1

### Date

Indicates the date when the request was created.

Data type	Cardinality
date	1..1

## Response elements

### **roles**

roles object

Data type	Cardinality	Parent element	Child element
Element	1..1	None	(role)

### **(role)**

role object (object name is not displayed)

Data type	Cardinality	Parent element	Child element
Element	1..n	roles	id links name enabled description

### **id**

Role ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(role)	None

### **links**

Link information of role

Data type	Cardinality	Parent element	Child element
Element	1..1	(role)	self

### **name**

Role name

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(role)	None

### **enabled**

Enabled setting

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(role)	None

### **description**

## Role description

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(role)	None

## links

### API link information

Data type	Cardinality	Parent element	Child element
Element	1..1	None	self previous next

## Example of request

```
GET /v3/domains/--domain-id--/users/--user-id--/roles
X-Auth-Token: MIIHgyJKoZIHvcNAQcCoIIIDzCCCAAsCAQExC . . .
```

## Example of response

```
{
  "roles": [
    {
      "id": "--admin-role-id--",
      "links": {
        "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/roles/--
admin-role-id--"
      },
      "name": "admin"
    },
    {
      "id": "--service-role-id--",
      "links": {
        "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/roles/--
service-role-id--"
      },
      "name": "service"
    },
    {
      "id": "--member-role-id--",
      "links": {
        "self": "http://identity:5000/v3/roles/--member-role-id--"
      },
      "name": "_member_"
    }
  ],
  "links": {
    "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/domains/--domain-
id--/users/--user-id--/roles",
    "previous": null,
    "next": null
  }
}
```



## 1.1.5.29 List roles for group on domain (GET /v3/domains/{domain\_id}/groups/{group\_id}/roles)

---

Lists roles for the specified group on the specified domain.

### Request headers

---

#### **Content-type**

Indicates the format of content defined in the MIME specification.

Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

#### **Accept**

Indicates the accept format defined in the MIME specification.

Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

#### **X-Auth-Token**

Valid authentication token

Data type	Cardinality
xsd:string	1..1

### Request parameters

---

#### **domain\_id**

Domain ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

#### **group\_id**

Group ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

### Response headers

---

#### **HTTP status code**

Returns the HTTP status code of the request.

One of the following values will be returned.

200:	Normal completion
400:	Invalid access (invalid parameter, etc.)

401:	Authentication error
403:	Cannot access (no privileges)
404:	No applicable resources
409:	Data conflict occurred
500:	Unexpected error
501:	Has not been implemented
503:	Cannot use service

Data type	Cardinality
int	1..1

### **Vary**

By setting or changing the following header, notification is given that expressions can be requested in a different file format.

X-Auth-Token

Data type	Cardinality
xsd:string	1..1

### **Content-Type**

Indicates the format of content defined in the MIME specification.

application/json

Data type	Cardinality
xsd:string	1..1

### **Content-Length**

Indicates the length of an entity in bytes.

Data type	Cardinality
int	1..1

### **Date**

Indicates the date when the request was created.

Data type	Cardinality
date	1..1

## **Response elements**

### **roles**

roles object

Data type	Cardinality	Parent element	Child element
Element	1..1	None	(role)

**(role)**

role object (object name is not displayed)

Data type	Cardinality	Parent element	Child element
Element	1..n	roles	id links name enabled description

**id**

Role ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(role)	None

**links**

Link information of role

Data type	Cardinality	Parent element	Child element
Element	1..1	(role)	self

**name**

Role name

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(role)	None

**enabled**

Enabled setting

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(role)	None

**description**

Role description

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(role)	None

**links**

API link information

Data type	Cardinality	Parent element	Child element
Element	1..1	None	self previous next

### Example of request

```
GET /v3/domains/--domain-id--/groups/--group-id--/roles
X-Auth-Token: MIIIHgYJKoZIhvcNAQcCoIIIDzCCCAAsCAQExC . . .
```

### Example of response

```
{
  "roles": [
    {
      "id": "--admin-role-id--",
      "links": {
        "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/roles/--
admin-role-id--"
      },
      "name": "admin"
    },
    {
      "id": "--service-role-id--",
      "links": {
        "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/roles/--
service-role-id--"
      },
      "name": "service"
    },
    {
      "id": "--member-role-id--",
      "links": {
        "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/roles/--
member-role-id--"
      },
      "enabled": "True"
      "description": "Default role for project membership"
      "name": "_member_"
    }
  ],
  "links": {
    "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/domains/--domain-
id--/groups/--group-id--/roles",
    "previous": null,
    "next": null
  }
}
```

## 1.1.5.30 Check whether user has role on domain (HEAD /v3/domains/{domain\_id}/users/{user\_id}/roles/{role\_id})

Validates that the specified user has the specified role on the specified domain.

### Request headers

**Content-type**

Indicates the format of content defined in the MIME specification.  
Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

### **Accept**

Indicates the accept format defined in the MIME specification.  
Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

### **X-Auth-Token**

Valid authentication token

Data type	Cardinality
xsd:string	1..1

## **Request parameters**

---

### **domain\_id**

Domain ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

### **user\_id**

User ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

### **role\_id**

Role ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

## **Response headers**

---

### **HTTP status code**

Returns the HTTP status code of the request.  
One of the following values will be returned.

204:	Normal completion
400:	Invalid access (invalid parameter, etc.)

401:	Authentication error
403:	Cannot access (no privileges)
404:	No applicable resources
409:	Data conflict occurred
500:	Unexpected error
501:	Has not been implemented
503:	Cannot use service

Data type	Cardinality
int	1..1

### Vary

By setting or changing the following header, notification is given that expressions can be requested in a different file format.

X-Auth-Token

Data type	Cardinality
xsd:string	1..1

### Content-Length

Indicates the length of an entity in bytes.

Data type	Cardinality
int	1..1

### Date

Indicates the date when the request was created.

Data type	Cardinality
date	1..1

### Response elements

None

### Example of request

```
HEAD /v3/domains/--domain-id--/users/--user-id--/roles/--role-id--
X-Auth-Token: MIIIHgYJKoZIhvcNAQcGoIIIDzCCCAAsCAQExC . . .
```

### Example of response

```
HTTP/1.1 204 No Content
Vary: X-Auth-Token
Content-Length: 0
Date: Thu, 04 Sep 2014 7:04:08 AM GMT
```

### 1.1.5.31 Check whether group has role on domain (HEAD /v3/domains/{domain\_id}/groups/{group\_id}/roles/{role\_id})

Validates that the specified group has the specified role on the specified domain.

#### Request headers

##### **Content-type**

Indicates the format of content defined in the MIME specification.

Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

##### **Accept**

Indicates the accept format defined in the MIME specification.

Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

##### **X-Auth-Token**

Valid authentication token

Data type	Cardinality
xsd:string	1..1

#### Request parameters

##### **domain\_id**

Domain ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

##### **group\_id**

Group ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

##### **role\_id**

Role ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

## Response headers

---

### HTTP status code

Returns the HTTP status code of the request.

One of the following values will be returned.

204:	Normal completion
400:	Invalid access (invalid parameter, etc.)
401:	Authentication error
403:	Cannot access (no privileges)
404:	No applicable resources
409:	Data conflict occurred
500:	Unexpected error
501:	Has not been implemented
503:	Cannot use service

Data type	Cardinality
int	1..1

### Vary

By setting or changing the following header, notification is given that expressions can be requested in a different file format.

X-Auth-Token

Data type	Cardinality
xsd:string	1..1

### Content-Length

Indicates the length of an entity in bytes.

Data type	Cardinality
int	1..1

### Date

Indicates the date when the request was created.

Data type	Cardinality
date	1..1

## Response elements

---

None

## Example of request

---

```
HEAD /v3/domains/--domain-id--/groups/--group-id--/roles/--role-id--  
X-Auth-Token: MIIHgyJKoZIhvcNAQcCoIIIDzCCCAAsCAQExC . . .
```



## Example of response

```
HTTP/1.1 204 No Content
Vary: X-Auth-Token
Content-Length: 0
Date: Thu, 04 Sep 2014 10:00:05 AM GMT
```

## 1.1.5.32 Revoke role from user on domain (DELETE /v3/domains/{domain\_id}/users/{user\_id}/roles/{role\_id})

Revokes the specified role from the specified user on the specified domain.

Tokens of users that have had a role revoked will become invalid, so a new token will have to be obtained.

### Request headers

#### **Content-type**

Indicates the format of content defined in the MIME specification.

Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

#### **Accept**

Indicates the accept format defined in the MIME specification.

Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

#### **X-Auth-Token**

Valid authentication token

Data type	Cardinality
xsd:string	1..1

### Request parameters

#### **domain\_id**

Domain ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

#### **user\_id**

User ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

**role\_id**

Role ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

**Response headers****HTTP status code**

Returns the HTTP status code of the request.

One of the following values will be returned.

204:	Normal completion
400:	Invalid access (invalid parameter, etc.)
401:	Authentication error
403:	Cannot access (no privileges)
404:	No applicable resources
409:	Data conflict occurred
500:	Unexpected error
501:	Has not been implemented
503:	Cannot use service

Data type	Cardinality
int	1..1

**Vary**

By setting or changing the following header, notification is given that expressions can be requested in a different file format.

X-Auth-Token

Data type	Cardinality
xsd:string	1..1

**Content-Length**

Indicates the length of an entity in bytes.

Data type	Cardinality
int	1..1

**Date**

Indicates the date when the request was created.

Data type	Cardinality
date	1..1

## Response elements

---

None

## Example of request

---

```
DELETE /v3/domains/--domain-id--/users/--user-id--/roles/--role-id--  
X-Auth-Token: MIIHgyJKoZIhvcNAQcCoIIIDzCCCAAsCAQExC . . .
```

## Example of response

---

```
HTTP/1.1 204 No Content  
Vary: X-Auth-Token  
Content-Length: 0  
Date: Thu, 04 Sep 2014 7:12:09 AM GMT
```

## 1.1.5.33 Revoke role from group on domain (DELETE /v3/domains/{domain\_id}/groups/{group\_id}/roles/{role\_id})

---

Revokes the specified role from the specified group on the specified domain.

Tokens of users that belong to a group that has had a role revoked will become invalid, so a new token will have to be obtained.

### Request headers

---

#### **Content-type**

Indicates the format of content defined in the MIME specification.

Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

#### **Accept**

Indicates the accept format defined in the MIME specification.

Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

#### **X-Auth-Token**

Valid authentication token

Data type	Cardinality
xsd:string	1..1

### Request parameters

---

#### **domain\_id**

Domain ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

### **group\_id**

Group ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

### **role\_id**

Role ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

## **Response headers**

---

### **HTTP status code**

Returns the HTTP status code of the request.

One of the following values will be returned.

204:	Normal completion
400:	Invalid access (invalid parameter, etc.)
401:	Authentication error
403:	Cannot access (no privileges)
404:	No applicable resources
409:	Data conflict occurred
500:	Unexpected error
501:	Has not been implemented
503:	Cannot use service

Data type	Cardinality
int	1..1

### **Vary**

By setting or changing the following header, notification is given that expressions can be requested in a different file format.

X-Auth-Token

Data type	Cardinality
xsd:string	1..1

### **Content-Length**

Indicates the length of an entity in bytes.

Data type	Cardinality
int	1..1

### Date

Indicates the date when the request was created.

Data type	Cardinality
date	1..1

### Response elements

None

### Example of request

```
DELETE /v3/domains/--domain-id--/groups/--group-id--/roles/--role-id--
X-Auth-Token: MIIHgyJKoZIHvcNAQcCoIIIDzCCAsCAQExC . . .
```

### Example of response

```
HTTP/1.1 204 No Content
Vary: X-Auth-Token
Content-Length: 0
Date: Thu, 04 Sep 2014 10:04:00 AM GMT
```

## 1.1.5.34 Grant role to user on project (PUT /v3/projects/{project\_id}/users/{user\_id}/roles/{role\_id})

Grants the specified role to the specified user on the specified project.

Granting a role to a user for a specific project allows the user to access that project.

When a user is added, a member role is granted automatically to it so it can access the default project even if a role is not granted to it later.

The granted role will become effective after the token is obtained again.

### Request headers

#### Content-type

Indicates the format of content defined in the MIME specification.

Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

#### Accept

Indicates the accept format defined in the MIME specification.

Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

### **X-Auth-Token**

Valid authentication token

Data type	Cardinality
xsd:string	1..1

## **Request parameters**

---

### **project\_id**

ID of the project (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

### **user\_id**

User ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

### **role\_id**

Role ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

## **Response headers**

---

### **HTTP status code**

Returns the HTTP status code of the request.

One of the following values will be returned.

204:	Normal completion
400:	Invalid access (invalid parameter, etc.)
401:	Authentication error
403:	Cannot access (no privileges)
404:	No applicable resources
409:	Data conflict occurred
500:	Unexpected error
501:	Has not been implemented
503:	Cannot use service

Data type	Cardinality
int	1..1

### Vary

By setting or changing the following header, notification is given that expressions can be requested in a different file format.

X-Auth-Token

Data type	Cardinality
xsd:string	1..1

### Content-Length

Indicates the length of an entity in bytes.

Data type	Cardinality
int	1..1

### Date

Indicates the date when the request was created.

Data type	Cardinality
date	1..1

### Response elements

None

### Example of request

```
PUT /v3/projects/--project-id--/users/--user-id--/roles/--role-id--
X-Auth-Token: MIIIHgYJKoZIhvcNAQcCoIIIDzCCCAAsCAQExC . . .
```

### Example of response

```
HTTP/1.1 204 No Content
Vary: X-Auth-Token
Content-Length: 0
Date: Thu, 04 Sep 2014 10:16:23 AM GMT
```

## 1.1.5.35 Grant role to group on project (PUT /v3/projects/{project\_id}/groups/{group\_id}/roles/{role\_id})

Grants the specified role to the specified group on the specified project.

Granting a role to a group for a specific project allows users that belong to that group to access that project.

The granted role will become effective after the token is obtained again.

## Request headers

---

### **Content-type**

Indicates the format of content defined in the MIME specification.

Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

### **Accept**

Indicates the accept format defined in the MIME specification.

Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

### **X-Auth-Token**

Valid authentication token

Data type	Cardinality
xsd:string	1..1

## Request parameters

---

### **project\_id**

ID of the project (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

### **group\_id**

Group ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

### **role\_id**

Role ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

## Response headers

---

### **HTTP status code**

Returns the HTTP status code of the request.

One of the following values will be returned.



204:	Normal completion
400:	Invalid access (invalid parameter, etc.)
401:	Authentication error
403:	Cannot access (no privileges)
404:	No applicable resources
409:	Data conflict occurred
500:	Unexpected error
501:	Has not been implemented
503:	Cannot use service

Data type	Cardinality
int	1..1

### Vary

By setting or changing the following header, notification is given that expressions can be requested in a different file format.

X-Auth-Token

Data type	Cardinality
xsd:string	1..1

### Content-Length

Indicates the length of an entity in bytes.

Data type	Cardinality
int	1..1

### Date

Indicates the date when the request was created.

Data type	Cardinality
date	1..1

### Response elements

---

None

### Example of request

---

```
PUT /v3/projects/--project-id--/groups/--group-id--/roles/--role-id--
X-Auth-Token: MIIIHgYJKoZ1hvcNAQcGoIIIDzCCAsCAQExC . . .
```

### Example of response

---

```
HTTP/1.1 204 No Content
Vary: X-Auth-Token
```

## 1.1.5.36 List roles for user on project (GET /v3/projects/{project\_id}/users/{user\_id}/roles)

---

Lists roles for the specified user on the specified project.

### Request headers

---

#### **Content-type**

Indicates the format of content defined in the MIME specification.  
Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

#### **Accept**

Indicates the accept format defined in the MIME specification.  
Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

#### **X-Auth-Token**

Valid authentication token

Data type	Cardinality
xsd:string	1..1

### Request parameters

---

#### **project\_id**

ID of the project (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

#### **user\_id**

User ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

### Response headers

---

#### **HTTP status code**

Returns the HTTP status code of the request.

One of the following values will be returned.

200:	Normal completion
400:	Invalid access (invalid parameter, etc.)
401:	Authentication error
403:	Cannot access (no privileges)
404:	No applicable resources
409:	Data conflict occurred
500:	Unexpected error
501:	Has not been implemented
503:	Cannot use service

Data type	Cardinality
int	1..1

### **Vary**

By setting or changing the following header, notification is given that expressions can be requested in a different file format.

X-Auth-Token

Data type	Cardinality
xsd:string	1..1

### **Content-Type**

Indicates the format of content defined in the MIME specification.

application/json

Data type	Cardinality
xsd:string	1..1

### **Content-Length**

Indicates the length of an entity in bytes.

Data type	Cardinality
int	1..1

### **Date**

Indicates the date when the request was created.

Data type	Cardinality
date	1..1

## **Response elements**

---

### **roles**

roles object

Data type	Cardinality	Parent element	Child element
Element	1..1	None	(role)

### **(role)**

role object (object name is not displayed)

Data type	Cardinality	Parent element	Child element
Element	1..n	roles	id links name enabled description

### **id**

Role ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(role)	None

### **links**

Link information of role

Data type	Cardinality	Parent element	Child element
Element	1..1	(role)	self

### **name**

Role name

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(role)	None

### **enabled**

Enabled setting

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(role)	None

### **description**

Role description

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(role)	None

### **links**

API link information

Data type	Cardinality	Parent element	Child element
Element	1..1	None	self previous next

### Example of request

```
GET /v3/projects/--project-id-/users/--user-id-/roles
X-Auth-Token: MIIHgyJKoZIhvcNAQcCoIIIDzCCCAAsCAQExC . . .
```

### Example of response

```
{
  "roles": [
    {
      "id": "--role-id-",
      "links": {
        "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/roles/--
role-id-"
      },
      "name": "cpf_observer"
    }
  ],
  "links": {
    "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/projects/--project-
id-/users/--user-id-/roles",
    "previous": null,
    "next": null
  }
}
```

## 1.1.5.37 List roles for group on project (GET /v3/projects/{project\_id}/groups/{group\_id}/roles)

Lists roles for the specified group on the specified project.

### Request headers

#### Content-type

Indicates the format of content defined in the MIME specification.

Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

#### Accept

Indicates the accept format defined in the MIME specification.

Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

## X-Auth-Token

Valid authentication token

Data type	Cardinality
xsd:string	1..1

## Request parameters

---

### **project\_id**

ID of the project (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

### **group\_id**

Group ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

## Response headers

---

### **HTTP status code**

Returns the HTTP status code of the request.  
One of the following values will be returned.

200:	Normal completion
400:	Invalid access (invalid parameter, etc.)
401:	Authentication error
403:	Cannot access (no privileges)
404:	No applicable resources
409:	Data conflict occurred
500:	Unexpected error
501:	Has not been implemented
503:	Cannot use service

Data type	Cardinality
int	1..1

## Vary

By setting or changing the following header, notification is given that expressions can be requested in a different file format.

X-Auth-Token

Data type	Cardinality
xsd:string	1..1

### **Content-Type**

Indicates the format of content defined in the MIME specification.

application/json

Data type	Cardinality
xsd:string	1..1

### **Content-Length**

Indicates the length of an entity in bytes.

Data type	Cardinality
int	1..1

### **Date**

Indicates the date when the request was created.

Data type	Cardinality
date	1..1

## **Response elements**

---

### **roles**

roles object

Data type	Cardinality	Parent element	Child element
Element	1..1	None	(role)

### **(role)**

role object (object name is not displayed)

Data type	Cardinality	Parent element	Child element
Element	1..n	roles	id links name enabled description

### **id**

Role ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(role)	None

### **links**

Link information of role

Data type	Cardinality	Parent element	Child element
Element	1..1	(role)	self

### **name**

Role name

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(role)	None

### **enabled**

Enabled setting

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(role)	None

### **description**

Role description

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(role)	None

### **links**

API link information

Data type	Cardinality	Parent element	Child element
Element	1..1	None	self previous next

## **Example of request**

```
GET /v3/projects/--project-id-/groups/--group-id-/roles
X-Auth-Token: MIIHgyJKoZIhvcNAQcCoIIIDzCCCAAsCAQExC . . .
```

## **Example of response**

```
{
  "roles": [
    {
      "id": "--role-id--",
      "links": {
        "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/roles/--
role-id--"
      },
      "name": "--role-name--"
    },
    {
      "id": "--role-id--",
      "links": {
```



```

    "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/roles/--
role-id--"
  },
  "name": "--role-name--"
},
],
"links": {
  "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/projects/--
project_id--/groups/--group_id--/roles",
  "previous": null,
  "next": null
}
}

```

### 1.1.5.38 Check whether user has role on project (HEAD /v3/projects/{project\_id}/users/{user\_id}/roles/{role\_id})

Validates that the specified user has the specified role on the specified project.

#### Request headers

##### Content-type

Indicates the format of content defined in the MIME specification.

Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

##### Accept

Indicates the accept format defined in the MIME specification.

Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

##### X-Auth-Token

Valid authentication token

Data type	Cardinality
xsd:string	1..1

#### Request parameters

##### project\_id

ID of the project (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

##### user\_id

User ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

### **role\_id**

Role ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

## **Response headers**

### **HTTP status code**

Returns the HTTP status code of the request.

One of the following values will be returned.

204:	Normal completion
400:	Invalid access (invalid parameter, etc.)
401:	Authentication error
403:	Cannot access (no privileges)
404:	No applicable resources
409:	Data conflict occurred
500:	Unexpected error
501:	Has not been implemented
503:	Cannot use service

Data type	Cardinality
int	1..1

### **Vary**

By setting or changing the following header, notification is given that expressions can be requested in a different file format.

X-Auth-Token

Data type	Cardinality
xsd:string	1..1

### **Content-Length**

Indicates the length of an entity in bytes.

Data type	Cardinality
int	1..1

### **Date**

Indicates the date when the request was created.

Data type	Cardinality
date	1..1

### Response elements

None

### Example of request

```
HEAD /v3/projects/--project-id--/users/--user-id--/roles/--role-id--
X-Auth-Token: MIIHgyJKoZihvcNAQcCoIIIDzCCCAAsCAQExC . . .
```

### Example of response

```
HTTP/1.1 204 No Content
Vary: X-Auth-Token
Content-Length: 0
Date: Thu, 04 Sep 2014 11:52:11 AM GMT
```

## 1.1.5.39 Check whether group has role on project (HEAD /v3/projects/{project\_id}/groups/{group\_id}/roles/{role\_id})

Validates that the specified group has the specified role on the specified project.

### Request headers

#### Content-type

Indicates the format of content defined in the MIME specification.

Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

#### Accept

Indicates the accept format defined in the MIME specification.

Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

#### X-Auth-Token

Valid authentication token

Data type	Cardinality
xsd:string	1..1

## Request parameters

---

### **project\_id**

ID of the project (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

### **group\_id**

Group ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

### **role\_id**

Role ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

## Response headers

---

### **HTTP status code**

Returns the HTTP status code of the request.

One of the following values will be returned.

204:	Normal completion
400:	Invalid access (invalid parameter, etc.)
401:	Authentication error
403:	Cannot access (no privileges)
404:	No applicable resources
409:	Data conflict occurred
500:	Unexpected error
501:	Has not been implemented
503:	Cannot use service

Data type	Cardinality
int	1..1

### **Vary**

By setting or changing the following header, notification is given that expressions can be requested in a different file format.

X-Auth-Token

Data type	Cardinality
xsd:string	1..1

### **Content-Length**

Indicates the length of an entity in bytes.

Data type	Cardinality
int	1..1

### **Date**

Indicates the date when the request was created.

Data type	Cardinality
date	1..1

### **Response elements**

None

### **Example of request**

```
HEAD /v3/projects/--project-id--/groups/--group-id--/roles/--role-id--  
X-Auth-Token: MIIHgyJKoZihvcNAQcCoIIIDzCCCAAsCAQExC . . .
```

### **Example of response**

```
HTTP/1.1 204 No Content  
Vary: X-Auth-Token  
Content-Length: 0  
Date: Fri, 05 Sep 2014 6:53:57 AM GMT
```

## **1.1.5.40 Revoke role from user on project (DELETE /v3/projects/{project\_id}/users/{user\_id}/roles/{role\_id})**

Revokes the specified role from the specified user on the specified project.

Tokens of users that have had a role revoked will become invalid, so a new token will have to be obtained.

### **Request headers**

#### **Content-type**

Indicates the format of content defined in the MIME specification.

Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

#### **Accept**

Indicates the accept format defined in the MIME specification.

Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

### **X-Auth-Token**

Valid authentication token

Data type	Cardinality
xsd:string	1..1

## **Request parameters**

---

### **project\_id**

ID of the project (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

### **user\_id**

User ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

### **role\_id**

Role ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

## **Response headers**

---

### **HTTP status code**

Returns the HTTP status code of the request.

One of the following values will be returned.

204:	Normal completion
400:	Invalid access (invalid parameter, etc.)
401:	Authentication error
403:	Cannot access (no privileges)
404:	No applicable resources
409:	Data conflict occurred
500:	Unexpected error
501:	Has not been implemented
503:	Cannot use service

Data type	Cardinality
int	1..1

### Vary

By setting or changing the following header, notification is given that expressions can be requested in a different file format.

X-Auth-Token

Data type	Cardinality
xsd:string	1..1

### Content-Length

Indicates the length of an entity in bytes.

Data type	Cardinality
int	1..1

### Date

Indicates the date when the request was created.

Data type	Cardinality
date	1..1

### Response elements

None

### Example of request

```
DELETE /v3/projects/--project-id--/users/--user-id--/roles/--role-id--
X-Auth-Token: MIIHgyJKoZIhvcNAQcCoIIIDzCCCAAsCAQExC . . .
```

### Example of response

```
HTTP/1.1 204 No Content
Vary: X-Auth-Token
Content-Length: 0
Date: Thu, 04 Sep 2014 11:54:03 AM GMT
```

## 1.1.5.41 Revoke role from group on project (DELETE /v3/projects/{project\_id}/groups/{group\_id}/roles/{role\_id})

Revokes the specified role from the specified group on the specified project.

Tokens of users that belong to a group that has had a role revoked will become invalid, so a new token will have to be obtained.

### Request headers

#### Content-type

Indicates the format of content defined in the MIME specification.  
Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

### **Accept**

Indicates the accept format defined in the MIME specification.  
Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

### **X-Auth-Token**

Valid authentication token

Data type	Cardinality
xsd:string	1..1

## **Request parameters**

---

### **project\_id**

ID of the project (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

### **group\_id**

Group ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

### **role\_id**

Role ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

## **Response headers**

---

### **HTTP status code**

Returns the HTTP status code of the request.  
One of the following values will be returned.

204:	Normal completion
400:	Invalid access (invalid parameter, etc.)



401:	Authentication error
403:	Cannot access (no privileges)
404:	No applicable resources
409:	Data conflict occurred
500:	Unexpected error
501:	Has not been implemented
503:	Cannot use service

Data type	Cardinality
int	1..1

### Vary

By setting or changing the following header, notification is given that expressions can be requested in a different file format.

X-Auth-Token

Data type	Cardinality
xsd:string	1..1

### Content-Length

Indicates the length of an entity in bytes.

Data type	Cardinality
int	1..1

### Date

Indicates the date when the request was created.

Data type	Cardinality
date	1..1

### Response elements

None

### Example of request

```
DELETE /v3/projects/--project-id--/groups/--group-id--/roles/--role-id--
X-Auth-Token: MIIIHgYJKoZlhcNAQcCoIIIDzCCCAAsCAQExC . . .
```

### Example of response

```
HTTP/1.1 204 No Content
Vary: X-Auth-Token
Content-Length: 0
Date: Fri, 05 Sep 2014 7:04:55 AM GMT
```

## 1.1.5.42 List role assignments (GET /v3/role\_assignments{?group.id,role.id,scope.domain.id,scope.project.id,user.id})

Lists role assignments.

### Request headers

#### **Content-type**

Indicates the format of content defined in the MIME specification.

Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

#### **Accept**

Indicates the accept format defined in the MIME specification.

Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

#### **X-Auth-Token**

Valid authentication token

Data type	Cardinality
xsd:string	1..1

### Request parameters

#### **group.id**

ID of the group

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	None	None

#### **role.id**

Role ID

When specifying a role ID to filter the results, it is necessary to also specify one of the following: domain ID, project ID, group ID, or user ID

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	xsd:string	0..1

#### **scope.domain.id**

Domain ID

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	xsd:string	0..1

**scope.project.id**

Project ID

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	xsd:string	0..1

**user.id**

User ID

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	xsd:string	0..1

**Response headers****HTTP status code**

Returns the HTTP status code of the request.

One of the following values will be returned.

200:	Normal completion
400:	Invalid access (invalid parameter, etc.)
401:	Authentication error
403:	Cannot access (no privileges)
404:	No applicable resources
409:	Data conflict occurred
500:	Unexpected error
501:	Has not been implemented
503:	Cannot use service

Data type	Cardinality
int	1..1

**Vary**

By setting or changing the following header, notification is given that expressions can be requested in a different file format.

X-Auth-Token

Data type	Cardinality
xsd:string	1..1

**Content-Type**

Indicates the format of content defined in the MIME specification.

application/json

Data type	Cardinality
xsd:string	1..1

### **Content-Length**

Indicates the length of an entity in bytes.

Data type	Cardinality
int	1..1

### **Date**

Indicates the date when the request was created.

Data type	Cardinality
date	1..1

## **Response elements**

---

### **role\_assignments**

role\_assignments object

Data type	Cardinality	Parent element	Child element
Element	1..1	None	(role_assignment)

### **(role\_assignment)**

role\_assignment object (object name is not displayed)

Data type	Cardinality	Parent element	Child element
Element	1..n	role_assignments	scope role user group links

### **scope**

scope object

Data type	Cardinality	Parent element	Child element
Element	1..1	(role_assignment)	project domain OS-INHERIT:inherited_to

### **project**

project object

Data type	Cardinality	Parent element	Child element
Element	0..1	scope	id

### **id**

Project ID

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	project	None

### **domain**

domain object

Data type	Cardinality	Parent element	Child element
Element	0..1	scope	id

### **id**

Project ID or domain ID

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	project, domain	None

### **OS-INHERIT:inherited\_to**

INHERIT assignment destination

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	scope	None

### **role**

role object

Data type	Cardinality	Parent element	Child element
Element	1..1	(role_assignment)	id

### **id**

Role ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	role	None

### **user**

user object

Data type	Cardinality	Parent element	Child element
Element	0..1	(role_assignment)	id

### **id**

User ID

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	user	None

### **group**

group object

Data type	Cardinality	Parent element	Child element
Element	0..1	(role_assignment)	id

### **id**

ID of the group

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	group	None

### **links**

links object

Data type	Cardinality	Parent element	Child element
Element	1..1	(role_assignment)	assignment membership

### **assignment**

Link information of assignment

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	links	None

### **membership**

Link information of membership

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	links	None

### **links**

Link information

Data type	Cardinality	Parent element	Child element
Element	1..1	None	self previous next

## Example of request

```
GET /v3/role_assignments?user.id=--user_id--  
X-Auth-Token: MIIHgyJKoZIhvcNAQcCoIIIDzCCCAAsCAQExC . . .
```

## Example of response

```
HTTP/1.1 200 OK
```

Vary: X-Auth-Token  
Content-Type: application/json  
Content-Length: 484693  
Date: Fri, 05 Sep 2014 09:00:51 GMT

```
{
  "role_assignments": [
    {
      "scope": {
        "project": {
          "id": "--project-id--"
        }
      },
      "role": {
        "id": "--role-id--"
      },
      "user": {
        "id": "--user-id--"
      },
      "links": {
        "assignment": "http://identity.cloud.global.fujitsu.com/v3/projects/--
project-id--/users/--user-id--/roles/--role-id--"
      }
    },
    . . .
    {
      "scope": {
        "project": {
          "id": "--project-id--"
        }
        "OS-INHERIT:inherited_to": "projects"
      },
      "role": {
        "id": "--role-id--"
      },
      "user": {
        "id": "--user-id--"
      },
      "links": {
        "assignment": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/OS-
INHERIT/domains/--domain-id--/groups/--group-id--/roles/--role-id--/inherited_to_projects",
        "membership": "http://identity:5000/v3/groups/--group-id--/users/--
user-id--"
      }
    }
  ],
  "links": {
    "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/groups/--group-id--/
users/--user-id--",
    "previous": null,
    "next": null
  }
}
```

### 1.1.5.43 Create trust (POST /v3/OS-TRUST/trusts)

---

Creates a trust.

#### Request headers

---

##### **Content-type**

Indicates the format of content defined in the MIME specification.

Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

### Accept

Indicates the accept format defined in the MIME specification.

Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

### X-Auth-Token

Valid authentication token

Data type	Cardinality
xsd:string	1..1

## Request parameters

---

### trust

trust object (required)

Data type	Cardinality	Parent element	Child element
Element	1..1	None	expires_at impersonation project_id roles trustee_user_id trustor_user_id

### expires\_at

Datetime for the trust expiry. (required)

Input format:

"YYYY-MM-DDThh:mm:ss.uuuuuuZ"  
 ("2015-02-27T18:30:59.999999Z")

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	trust	None

### impersonation

The impersonation flag (required)

Input value

- true: Authenticate using the trustor information
- false: Authenticate using the trustee information

Data type	Cardinality	Parent element	Child element
xsd:boolean	1..1	trust	None



**project\_id**

The project ID assigned to the role that is to be trusted (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	trust	None

**roles**

roles object (required)

Data type	Cardinality	Parent element	Child element
Element	1..1	trust	(role)

**(role)**

role object (object name is not displayed)

Data type	Cardinality	Parent element	Child element
Element	1..n	roles	name

**name**

The name of the role that is to be trusted (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(role)	None

**trustee\_user\_id**

The trustee user ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	trust	None

**trustor\_user\_id**

The trustor user ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	trust	None

**Response headers****HTTP status code**

Returns the HTTP status code of the request.

One of the following values will be returned.

201:	Normal completion
400:	Invalid access (invalid parameter, etc.)
401:	Authentication error
403:	Cannot access (no privileges)

404:	No applicable resources
409:	Data conflict occurred
500:	Unexpected error
501:	Has not been implemented
503:	Cannot use service

Data type	Cardinality
int	1..1

### Vary

By setting or changing the following header, notification is given that expressions can be requested in a different file format.

X-Auth-Token

Data type	Cardinality
xsd:string	1..1

### Content-Type

Indicates the format of content defined in the MIME specification.

application/json

Data type	Cardinality
xsd:string	1..1

### Content-Length

Indicates the length of an entity in bytes.

Data type	Cardinality
int	1..1

### Date

Indicates the date when the request was created.

Data type	Cardinality
date	1..1

## Response elements

---

### trust

trust object

Data type	Cardinality	Parent element	Child element
Element	1..1	None	expires_at impersonation project_id roles trustee_user_id trustor_user_id id remaining_uses role_links links

### **impersonation**

The impersonation settings

Data type	Cardinality	Parent element	Child element
xsd:boolean	1..1	trust	None

### **roles\_links**

Link information of trust role

Data type	Cardinality	Parent element	Child element
Element	1..1	trust	self previous next

### **trustor\_user\_id**

The trustor user ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	trust	None

### **links**

Link information of trust

Data type	Cardinality	Parent element	Child element
Element	1..1	trust	self

### **roles**

roles object

Data type	Cardinality	Parent element	Child element
Element	1..1	trust	(role)

### **(role)**

role object (object name is not displayed)

Data type	Cardinality	Parent element	Child element
Element	1..n	(roles)	id links name

### **id**

Role ID that is to be trusted

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(role)	None

### **links**

Link information of role

Data type	Cardinality	Parent element	Child element
Element	1..1	(role)	self

### **name**

Role name that is to be trusted

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(role)	None

### **remaining\_uses**

Number of times that the token still can be used

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	trust	None

### **expires\_at**

Trust expiry datetime

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	trust	None

### **trustee\_user\_id**

The trustee user ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	trust	None

### **project\_id**

The project ID assigned to the role that is to be trusted

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	trust	None

### id

Trust ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	trust	None

### Example of request

```
POST /v3/OS-TRUST/trusts
X-Auth-Token: MIIHgYJKoZIhvcNAQcCoIIIDzCCCAAsCAQExC . . .
```

```
{
  "trust": {
    "expires_at": "2015-02-27T18:30:59.999999Z",
    "impersonation": true,
    "project_id": "--project-id--",
    "roles": [
      {
        "name": "--role-name--"
      }
    ],
    "trustee_user_id": "--trustee-user-id--",
    "trustor_user_id": "--trustor-user-id--"
  }
}
```

### Example of response

```
{
  "trust": {
    "impersonation": true,
    "roles_links": {
      "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/OS-TRUST/trusts/--trust_id-/roles",
      "previous": null,
      "next": null
    },
    "trustor_user_id": "--trustor_user_id--",
    "links": {
      "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/OS-TRUST/trusts/--trust_id--"
    },
    "roles": [
      {
        "id": "--role_id--",
        "links": {
          "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/roles/--role_id--"
        },
        "name": "--role_name--"
      }
    ],
    "remaining_uses": 5,
    "expires_at": "2015-02-27T18:30:59.999999Z",
    "trustee_user_id": "--trustee_user_id--",
    "project_id": "--project_id--",
  }
}
```

```

    "id": "--trust_id--"
  }
}

```

### 1.1.5.44 List trusts (GET /v3/OS-TRUST/trusts{?trustee\_user\_id,trustor\_user\_id})

Lists trusts.

#### Request headers

##### **Content-type**

Indicates the format of content defined in the MIME specification.

Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

##### **Accept**

Indicates the accept format defined in the MIME specification.

Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

##### **X-Auth-Token**

Valid authentication token

Data type	Cardinality
xsd:string	1..1

#### Request parameters

##### **trustee\_user\_id**

The trustee user ID

It is necessary to specify either "trustee\_user\_id" or "trustor\_user\_id". However, this can only be specified by the operator user.

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	xsd:string	0..1

##### **trustor\_user\_id**

The trustor user ID

It is necessary to specify either "trustee\_user\_id" or "trustor\_user\_id". However, this can only be specified by the operator user.

Data type	Cardinality	Parent element	Child element
xsd:string	0..1	None	None

## Response headers

---

### **HTTP status code**

Returns the HTTP status code of the request.  
One of the following values will be returned.

200:	Normal completion
400:	Invalid access (invalid parameter, etc.)
401:	Authentication error
403:	Cannot access (no privileges)
404:	No applicable resources
409:	Data conflict occurred
500:	Unexpected error
501:	Has not been implemented
503:	Cannot use service

Data type	Cardinality
int	1..1

### **Vary**

By setting or changing the following header, notification is given that expressions can be requested in a different file format.

X-Auth-Token

Data type	Cardinality
xsd:string	1..1

### **Content-Type**

Indicates the format of content defined in the MIME specification.

application/json

Data type	Cardinality
xsd:string	1..1

### **Content-Length**

Indicates the length of an entity in bytes.

Data type	Cardinality
int	1..1

### **Date**

Indicates the date when the request was created.

Data type	Cardinality
date	1..1

## Response elements

### **links**

Link information

Data type	Cardinality	Parent element	Child element
Element	1..1	None	self previous next

### **trusts**

trusts object

Data type	Cardinality	Parent element	Child element
Element	1..1	None	(trust)

### **(trust)**

trust object (object name is not displayed)

Data type	Cardinality	Parent element	Child element
Element	1..n	trusts	impersonation trustor_user_id links remaining_uses expires_at trustee_user_id project_id id

### **impersonation**

The impersonation settings

Data type	Cardinality	Parent element	Child element
xsd:boolean	1..1	(trust)	None

### **trustor\_user\_id**

The trustor user ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(trust)	None

### **links**

Link information of trust

Data type	Cardinality	Parent element	Child element
Element	1..1	(trust)	self



### **remaining\_uses**

Number of times that the token still can be used

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(trust)	None

### **expires\_at**

Trust expiry datetime

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(trust)	None

### **trustee\_user\_id**

The trustee user ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(trust)	None

### **project\_id**

The project ID assigned to the role that is to be trusted

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(trust)	None

### **id**

Trust ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(trust)	None

## **Example of request**

```
GET /v3/OS-TRUST/trusts
X-Auth-Token: MIIHgyJKoZIhvcNAQcCoIIIDzCCCAAsCAQExC . . .
```

## **Example of response**

```
HTTP/1.1 200 OK
Vary: X-Auth-Token
Content-Type: application/json
Content-Length: 2042
Date: Fri, 05 Sep 2014 07:50:42 GMT

{
  "links": {
    "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/OS-TRUST/trusts",
    "previous": null,
    "next": null
  },
  "trusts": [
```

```

    {
      "impersonation": true,
      "trustor_user_id": "--trustor-user-id--",
      "links": {
        "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/OS-TRUST/
trusts"
      },
      "remaining_uses": null,
      "expires_at": "2015-02-27T18:30:59.000000Z",
      "trustee_user_id": "--trustee-user-id--",
      "project_id": "--project-id--",
      "id": "--trust-id--"
    },
    {
      "impersonation": true,
      "trustor_user_id": "--trustor-user-id--",
      "links": {
        "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/OS-TRUST/
trusts"
      },
      "remaining_uses": null,
      "expires_at": null,
      "trustee_user_id": "--trustee-user-id--",
      "project_id": "--project-id--",
      "id": "--trust-id--"
    }
  ]
}

```

### 1.1.5.45 Show trust (GET/v3/OS-TRUST/trusts/{trust\_id})

Shows the specified trust.

#### Request headers

##### Content-type

Indicates the format of content defined in the MIME specification.  
Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

##### Accept

Indicates the accept format defined in the MIME specification.  
Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

##### X-Auth-Token

Valid authentication token

Data type	Cardinality
xsd:string	1..1

## Request parameters

### **trust\_id**

Trust ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

## Response headers

### **HTTP status code**

Returns the HTTP status code of the request.

One of the following values will be returned.

200:	Normal completion
400:	Invalid access (invalid parameter, etc.)
401:	Authentication error
403:	Cannot access (no privileges)
404:	No applicable resources
409:	Data conflict occurred
500:	Unexpected error
501:	Has not been implemented
503:	Cannot use service

Data type	Cardinality
int	1..1

### **Vary**

By setting or changing the following header, notification is given that expressions can be requested in a different file format.

X-Auth-Token

Data type	Cardinality
xsd:string	1..1

### **Content-Type**

Indicates the format of content defined in the MIME specification.

application/json

Data type	Cardinality
xsd:string	1..1

### **Content-Length**

Indicates the length of an entity in bytes.

Data type	Cardinality
int	1..1

**Date**

Indicates the date when the request was created.

Data type	Cardinality
date	1..1

**Response elements****trust**

trust object

Data type	Cardinality	Parent element	Child element
Element	1..1	None	impersonation roles_links trustor_user_id links roles remaining_uses expires_at trustee_user_id project_id id

**impersonation**

The impersonation settings

Data type	Cardinality	Parent element	Child element
xsd:boolean	1..1	trust	None

**roles\_links**

Link information of trust role

Data type	Cardinality	Parent element	Child element
Element	1..1	trust	self previous next

**trustor\_user\_id**

The trustor user ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	trust	None

**links**

Link information of trust

Data type	Cardinality	Parent element	Child element
Element	1..1	trust	self

### **roles**

roles object

Data type	Cardinality	Parent element	Child element
Element	1..1	trust	id links name

### **id**

Role ID that is to be trusted

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	roles	None

### **links**

Link information of role

Data type	Cardinality	Parent element	Child element
Element	1..1	roles	self

### **name**

Role name that is to be trusted

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	roles	None

### **remaining\_uses**

Number of times that the token still can be used

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	trust	None

### **expires\_at**

Trust expiry datetime

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	trust	None

### **trustee\_user\_id**

The trustee user ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	trust	None

## project\_id

The project ID assigned to the role that is to be trusted

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	trust	None

## id

Trust ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	trust	None

## Example of request

```
GET /v3/OS-TRUST/trusts/--trust-id--
X-Auth-Token: MIIHgyJKoZIHvcNAQcCoIIIDzCCCAAsCAQExC . . .
```

## Example of response

```
HTTP/1.1 200 OK
Vary: X-Auth-Token
Content-Type: application/json
Content-Length: 714
Date: Fri, 05 Sep 2014 08:04:30 GMT

{
  "trust": {
    "impersonation": true,
    "roles_links": {
      "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/OS-TRUST/
trusts/--trust-id--/roles",
      "previous": null,
      "next": null
    },
    "trustor_user_id": "--trustor-user-id--",
    "links": {
      "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/OS-TRUST/
trusts/--trust-id--"
    },
    "roles": [
      {
        "id": "--role-id--",
        "links": {
          "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/roles/--
role-id--"
        },
        "name": "--role-name--"
      }
    ],
    "remaining_uses": null,
    "expires_at": "2015-02-27T18:30:59.999999Z",
    "trustee_user_id": "--trustee-user-id--",
    "project_id": "--project-id--",
    "id": "--trust-id--"
  }
}
```

## 1.1.5.46 Delete trust (DELETE /v3/OS-TRUST/trusts/{trust\_id})

---

Deletes the specified trust.

### Request headers

---

#### **Content-type**

Indicates the format of content defined in the MIME specification.

Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

#### **Accept**

Indicates the accept format defined in the MIME specification.

Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

#### **X-Auth-Token**

Valid authentication token

Data type	Cardinality
xsd:string	1..1

### Request parameters

---

#### **trust\_id**

Trust ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

### Response headers

---

#### **HTTP status code**

Returns the HTTP status code of the request.

One of the following values will be returned.

204:	Normal completion
400:	Invalid access (invalid parameter, etc.)
401:	Authentication error
403:	Cannot access (no privileges)
404:	No applicable resources
409:	Data conflict occurred
500:	Unexpected error

501: Has not been implemented  
503: Cannot use service

Data type	Cardinality
int	1..1

### **Vary**

By setting or changing the following header, notification is given that expressions can be requested in a different file format.

X-Auth-Token

Data type	Cardinality
xsd:string	1..1

### **Content-Length**

Indicates the length of an entity in bytes.

Data type	Cardinality
int	1..1

### **Date**

Indicates the date when the request was created.

Data type	Cardinality
date	1..1

### **Response elements**

---

None

### **Example of request**

---

```
DELETE /v3/OS-TRUST/trusts/--trust-id--  
X-Auth-Token: MIIHgyJKoZ1hvcNAQcGoIIIDzCCAsCAQExC . . .
```

### **Example of response**

---

```
HTTP/1.1 204 No Content  
Vary: X-Auth-Token  
Content-Length: 0  
Date: Fri, 05 Sep 2014 8:11:28 AM GMT
```

## **1.1.5.47 List trust roles (GET /v3/OS-TRUST/trusts/{trust\_id}/roles)**

---

Lists roles delegated by the specified trust.



## Request headers

---

### **Content-type**

Indicates the format of content defined in the MIME specification.

Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

### **Accept**

Indicates the accept format defined in the MIME specification.

Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

### **X-Auth-Token**

Valid authentication token

Data type	Cardinality
xsd:string	1..1

## Request parameters

---

### **trust\_id**

Trust ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

## Response headers

---

### **HTTP status code**

Returns the HTTP status code of the request.

One of the following values will be returned.

200:	Normal completion
400:	Invalid access (invalid parameter, etc.)
401:	Authentication error
403:	Cannot access (no privileges)
404:	No applicable resources
409:	Data conflict occurred
500:	Unexpected error
501:	Has not been implemented
503:	Cannot use service

Data type	Cardinality
int	1..1

### **Vary**

By setting or changing the following header, notification is given that expressions can be requested in a different file format.

X-Auth-Token

Data type	Cardinality
xsd:string	1..1

### **Content-Type**

Indicates the format of content defined in the MIME specification.

application/json

Data type	Cardinality
xsd:string	1..1

### **Content-Length**

Indicates the length of an entity in bytes.

Data type	Cardinality
int	1..1

### **Date**

Indicates the date when the request was created.

Data type	Cardinality
date	1..1

## **Response elements**

---

### **links**

Link information

Data type	Cardinality	Parent element	Child element
Element	1..1	None	self previous next

### **roles**

roles object

Data type	Cardinality	Parent element	Child element
Element	1..1	None	(role)

### **(role)**

role object (object name is not displayed)

Data type	Cardinality	Parent element	Child element
Element	1..n	roles	id links name

### **id**

Role ID that is to be trusted

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(role)	None

### **links**

Link information of role

Data type	Cardinality	Parent element	Child element
Element	1..1	(role)	self

### **name**

Role name that is to be trusted

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	(role)	None

## Example of request

```
GET /v3/OS-TRUST/trusts/--trust-id--/roles
X-Auth-Token: MIIHgyJKoZIHvcNAQcCoIIIDzCCCAAsCAQExC . . .
```

## Example of response

```
HTTP/1.1 200 OK
Vary: X-Auth-Token
Content-Type: application/json
Content-Length: 302
Date: Fri, 05 Sep 2014 08:15:12 GMT

{
  "links": {
    "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/OS-TRUST/trusts/--
trust-id--/roles",
    "previous": null,
    "next": null
  },
  "roles": [
    {
      "id": "--role-id--",
      "links": {
        "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/roles/--
role-id--"
      }
    }
  ]
}
```

```

    },
    "name": "--role-name--"
  ]
}

```

### 1.1.5.48 Show trust role (GET /v3/OS-TRUST/trusts/{trust\_id}/roles/{role\_id})

Shows the specified role of the specified trust.

#### Request headers

##### **Content-type**

Indicates the format of content defined in the MIME specification.  
Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

##### **Accept**

Indicates the accept format defined in the MIME specification.  
Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

##### **X-Auth-Token**

Valid authentication token

Data type	Cardinality
xsd:string	1..1

#### Request parameters

##### **trust\_id**

Trust ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

##### **role\_id**

Role ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

## Response headers

---

### **HTTP status code**

Returns the HTTP status code of the request.

One of the following values will be returned.

200:	Normal completion
400:	Invalid access (invalid parameter, etc.)
401:	Authentication error
403:	Cannot access (no privileges)
404:	No applicable resources
409:	Data conflict occurred
500:	Unexpected error
501:	Has not been implemented
503:	Cannot use service

Data type	Cardinality
int	1..1

### **Vary**

By setting or changing the following header, notification is given that expressions can be requested in a different file format.

X-Auth-Token

Data type	Cardinality
xsd:string	1..1

### **Content-Type**

Indicates the format of content defined in the MIME specification.

application/json

Data type	Cardinality
xsd:string	1..1

### **Content-Length**

Indicates the length of an entity in bytes.

Data type	Cardinality
int	1..1

### **Date**

Indicates the date when the request was created.

Data type	Cardinality
date	1..1

## Response elements

### role

role object

Data type	Cardinality	Parent element	Child element
Element	1..1	None	id links name

### id

Role ID that is to be trusted

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	role	None

### links

Link information of role

Data type	Cardinality	Parent element	Child element
Element	1..1	role	self

### name

Role name that is to be trusted

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	role	None

## Example of request

```
GET /v3/OS-TRUST/trusts/--trust_id--/roles/--role-id--  
X-Auth-Token: MIIHgyJKoZIhvcNAQcCoIIIDzCCCAAsCAQExC . . .
```

## Example of response

```
HTTP/1.1 200 OK  
Vary: X-Auth-Token  
Content-Type: application/json  
Content-Length: 302  
Date: Fri, 05 Sep 2014 08:15:12 GMT  
  
{  
  "role": {  
    "id": "--role-id--",  
    "links": {  
      "self": "http://identity.jp-east-1.cloud.global.fujitsu.com/v3/roles/--role-  
id--"  
    },  
    "name": "--role-name--"  
  }  
}
```

## 1.1.5.49 Acquisition of user authentication method information (GET /v3/users/{user\_id}/auth\_type)

---

Acquires authentication method information.

Acquires authentication method information related to a specified user.

### Request headers

---

#### **X-Auth-Token**

Valid authentication token

Data type	Cardinality
xsd:string	1..1

### Request parameters

---

#### **user\_id**

User ID (required)

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

### Response headers

---

#### **HTTP status code**

Returns the HTTP status code of the request.

One of the following values will be returned.

200:	Normal completion
400:	Invalid access (invalid parameter, etc.)
401:	Authentication error
403:	Cannot access (no privileges)
404:	No applicable resources
413:	overLimit
500:	Unexpected error
501:	Has not been implemented
503:	Cannot use service

Data type	Cardinality
int	1..1

### Response elements

---

#### **user**

user object

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	auth_type

## auth\_type

Authentication method

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

### Example of response

```
{
  "user": {
    "auth_type": "password"
  }
}
```

## 1.1.5.50 Inter-regional synchronization confirmation (GET /v3/synchronous\_regions{?domain\_id,region\_id})

Confirms the state of synchronization between regions in use.

Confirms the state of synchronization of the global resources of all regions used by a specified domain.

This can be executed by contractors and global administrators.

It can also be executed by users assigned policy roles through custom role assignment.

Even if only one region is used, it is output as a used region.

### Request headers

#### Content-type

Indicates the format of content defined in the MIME specification.

Specify application/json. (required)

Data type	Cardinality
xsd:string	1..1

#### Accept

Indicates the accept format defined in the MIME specification.

Specify application/json. (optional)

Data type	Cardinality
xsd:string	1..1

#### X-Auth-Token

Valid authentication token

Data type	Cardinality
xsd:string	1..1



## Request parameters

---

### **{domain\_id}**

Domain ID

\* Required for contractors and global administrators

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

### **{region\_id}**

Region ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	auth_type

## Response headers

---

### **HTTP status code**

Returns the HTTP status code of the request.

One of the following values will be returned.

200:	Normal completion
401:	The token is invalid.
403:	Authority to execute the requested action not possessed.
404:	The specified domain_id was not found.
404:	The specified region_id was not found.
500:	An internal error occurred.
504:	The processing was not completed within a certain period of time.

Data type	Cardinality
int	1..1

### **regions**

Region object

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	region_id status domain_id

### **region\_id**

Region ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

### **status**

Synchronized state

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

### **domain\_id**

Domain ID

Data type	Cardinality	Parent element	Child element
xsd:string	1..1	None	None

### Example of response

[Response when an organization subscribing to the eastern Japan region implements this API without applying for use of the region]

```
{
  "regions": [
    {
      "status": "ready",
      "region_id": "jp-east-1",
      "domain_id": "--domain-id--"
    }
  ],
  "links": {
    "self": "http://identity.gls.cloud.global.fujitsu.com/v3/synchronous_regions",
    "previous": null,
    "next": null
  }
}
```

---

# Part 2: Key Management

---

Topics:

- [Key Management](#)

## 2.1 Key Management

---

### 2.1.1 API list

---

Item	API	Description
1	GET /v1/{tenant_id}/secrets List key metadata	Lists key metadata
2	GET /v1/{tenant_id}/secrets/{resource_id} Retrieve key metadata	Retrieves the specified key metadata
3	POST /v1/{tenant_id}/secrets Create key metadata	Creates key metadata
4	DELETE /v1/{tenant_id}/secrets/{resource_id} Delete key metadata	Deletes the specified key metadata
5	GET /v1/{tenant_id}/containers List key metadata containers	Lists key metadata containers
6	GET /v1/{tenant_id}/containers/{resource_id} Retrieve key metadata container	Retrieves the specified key metadata container
7	POST /v1/{tenant_id}/containers Create key metadata container	Creates key metadata container
8	DELETE /v1/{tenant_id}/containers/{resource_id} Delete key metadata container	Deletes the specified key metadata container

### 2.1.2 General requirements

---

This section describes general requirements to use this API.

- Unless otherwise stated, the request parameters must be sent by using HTTP GET or HTTP PUT.

### 2.1.3 API details

---

#### 2.1.3.1 List key metadata (GET /v1/{tenant\_id}/secrets)

---

Lists key metadata.

{tenant\_id}: Project ID used to retrieve key metadata

##### Request headers

---

###### **X-Auth-Token**

Specify the authentication token.

Data type	Cardinality
String	1..1

## Request parameters

---

### **limit**

Maximum number of resources to return in the response (the default is 10)

Data type	Cardinality
int	0..1

### **offset**

Starting index of resources to be listed (the default is 0)

Data type	Cardinality
int	0..1

## Request body

---

None

## Response headers

---

### **Status**

The following error codes can be returned for the request.

One of the following values will be returned.

200:	Normal completion
401:	Authentication error (no authentication token, incorrect authentication token, etc.)
400:	Invalid access (invalid parameter, etc.)
403:	Cannot access (no privileges)
404:	No applicable resources
500:	Unexpected error

Data type	Cardinality
int	1..1

## Response elements

---

### **secrets**

Envelope of key metadata list

Data type	Cardinality	Parent element	Child element
Element	1..1	None	(secret)

### **(secret) Element name is not displayed in JSON**

Envelope of key metadata

Data type	Cardinality	Parent element	Child element
Element	0..*	secrets	name status algorithm mode bit_length content_types expiration secret_ref updated created

### **name**

Key name

Data type	Cardinality	Parent element	Child element
String	1..1	(secret)	None

### **status**

Key status

Data type	Cardinality	Parent element	Child element
Enum(ACTIVE,ERROR)	1..1	(secret)	None

### **algorithm**

Algorithm used to generate the key

Data type	Cardinality	Parent element	Child element
String	1..1	(secret)	None

### **mode**

Mode of algorithm associated with the key

Data type	Cardinality	Parent element	Child element
String	1..1	(secret)	None

### **bit\_length**

Bit range of the key

Data type	Cardinality	Parent element	Child element
int	1..1	(secret)	None

### **content\_types**

Accept header value required for browsing the payload

Data type	Cardinality	Parent element	Child element
String	0..1	(secret)	None

### **expiration**

Key expiry datetime Value is returned in ISO-8601 format. When the expiry datetime is reached, the key is automatically deleted. If set to null, the key will not expiry (it will not be deleted automatically)

Data type	Cardinality	Parent element	Child element
String	1..1	(secret)	None

### **secret\_ref**

Key metadata resource URI

Data type	Cardinality	Parent element	Child element
String	1..1	(secret)	None

### **updated**

Timestamp (UTC) of last update

Data type	Cardinality	Parent element	Child element
datetime	1..1	(secret)	None

### **created**

Timestamp (UTC) of creation

Data type	Cardinality	Parent element	Child element
datetime	1..1	(secret)	None

### **total**

Number of key metadata records registered for the project

Data type	Cardinality	Parent element	Child element
int	1..1	None	None

### **previous**

The previous key metadata resource offset information in the retrieved key metadata list

Data type	Cardinality	Parent element	Child element
String	0..1	None	None

### **next**

The next key metadata resource offset information in the retrieved key metadata list

Data type	Cardinality	Parent element	Child element
String	0..1	None	None

## Example of request

```
GET /v1/a759452216fd41cf8ee5aba321cfbd49/secrets?limit=2&offset=3
X-Auth-Token: "JpZC161CJjM2VINzA4YTZhZTIOZGRmOTJjMdc4 . . ."
```

## Example of response

```
Status Code: 200 OK
Content-Length: 2446
Content-Type: application/json; charset=UTF-8
```

```
{
  "secrets": [
    {
      "status": "ACTIVE",
      "secret_ref": "http://<host>:9311/v1/a759452216fd41cf8ee5aba321cfbd49/
secrets/82b63ed0-3ec7-4f3c-93b6-dde9a3c81b99",
      "updated": "2014-07-15T06:04:23.502093",
      "name": "key1",
      "algorithm": null,
      "created": "2014-07-15T06:04:23.490168",
      "content_types": {
        "default": "text/plain"
      },
      "mode": null,
      "bit_length": null,
      "expiration": "2015-02-28T19:14:44.180394"
    },
    {
      "total": 20,
      "next": "http://<host>:9311/v1/a759452216fd41cf8ee5aba321cfbd49/secrets?limit=1&offset=3,
      "previous": "http://<host>:9311/v1/a759452216fd41cf8ee5aba321cfbd49/secrets?
limit=1&offset=1"
    }
  ]
}
```

### 2.1.3.2 Retrieve key metadata (GET /v1/{tenant\_id}/secrets/{resource\_id})

Retrieves the specified key metadata.

{tenant\_id}: Project ID used to retrieve key metadata

{resource\_id}: Resource ID of the key metadata to be retrieved

#### Request headers

##### X-Auth-Token

Specify the authentication token.

Data type	Cardinality
String	1..1

##### Accept

Specify the format to return the key metadata.

text/plain, application/octet-stream, or application/json.

- Accept: text/plain

The payload value will be returned in plain text format.



However, if the key metadata was registered using "payload\_content\_type": "application/octet-stream", the error code 406 will be returned and it will not be possible to reference the information.

- Accept: application/octet-stream  
The payload value will be returned decrypted in base64 format.
- Accept: application/json  
The metadata of the specified secret will be returned

Data type	Cardinality
String	1..1

### Request parameters

---

None

### Request body

---

None

### Response headers

---

#### Status

The following error codes can be returned for the request.

One of the following values will be returned.

200:	Normal completion
401:	Authentication error (no authentication token, incorrect authentication token, etc.)
400:	Invalid access (invalid parameter, etc.)
403:	Cannot access (no privileges)
404:	No applicable resources
406:	An unsupported Accept was specified
500:	Unexpected error

Data type	Cardinality
int	1..1

### Response elements

---

#### **(secret) Element name is not displayed in JSON**

Envelope of key metadata

Accept: Only returned if "application/json" was specified in the request

Data type	Cardinality	Parent element	Child element
Element	0..1	secrets	name status algorithm mode bit_length content_types expiration secret_ref updated created

### **name**

Key name

Data type	Cardinality	Parent element	Child element
String	1..1	(secret)	None

### **status**

Key status

Data type	Cardinality	Parent element	Child element
Enum(ACTIVE,ERROR)	1..1	(secret)	None

### **algorithm**

Algorithm used to generate the key

Data type	Cardinality	Parent element	Child element
String	1..1	(secret)	None

### **mode**

Mode of algorithm associated with the key

Data type	Cardinality	Parent element	Child element
String	1..1	(secret)	None

### **bit\_length**

Bit range of the key

Data type	Cardinality	Parent element	Child element
int	1..1	(secret)	None

### **content\_types**

Accept header value required for browsing the payload

Data type	Cardinality	Parent element	Child element
String	0..1	(secret)	None

### **expiration**

Key expiry datetime Value is returned in ISO-8601 format. When the expiry datetime is reached, the key is automatically deleted. If set to null, the key will not expiry (it will not be deleted automatically)

Data type	Cardinality	Parent element	Child element
String	1..1	(secret)	None

### **secret\_ref**

Key metadata resource URI

Data type	Cardinality	Parent element	Child element
String	1..1	(secret)	None

### **updated**

Timestamp (UTC) of last update

Data type	Cardinality	Parent element	Child element
datetime	1..1	(secret)	None

### **created**

Timestamp (UTC) of creation

Data type	Cardinality	Parent element	Child element
datetime	1..1	(secret)	None

### **payload**

Registered key metadata payload

Accept: text/plain or Accept: Only returned if "application/octet-stream" was specified in the request

Data type	Cardinality	Parent element	Child element
String	0..1	None	None

### **Example of request**

```
GET /v1/a759452216fd41cf8ee5aba321cfbd49/secrets/96e86d87-6602-4b99-ae41-5b737fe1288d
X-Auth-Token: "JpZC161CJjM2VINzA4YTZhZT10ZGRmOTJjMdc4 . . ."
Accept: "text/plain"
```

### **Example of response**

- Accept: application/json

```
Status Code: 200 OK
Content-Length: 377
Content-Type: application/json; charset=UTF-8
```

```
{
  "status": "ACTIVE",
  "secret_ref": "http://<host>:9311/v1/a759452216fd41cf8ee5aba321cfbd49/
secrets/96e86d87-6602-4b99-ae41-5b737fe1288d",
  "updated": "2014-07-15T06:17:08.082912",
  "name": "key1",
  "algorithm": "aes",
  "created": "2014-07-15T06:17:08.070916",
  "content_types": {
    "default": "text/plain"
  },
  "mode": "cbc",
  "bit_length": 256,
  "expiration": "2015-02-28T19:14:44.180394"
}
```

- Accept: text/plain

```
Status Code: 200 OK
Content-Length: 1626
Content-Type: text/plain; charset=UTF-8
```

```
-----BEGIN XXXX-----MIIEow . . . Rwg7Jp-----END XXXX-----
```

- Accept: application/octet-stream

```
Status Code: 200 OK
Content-Length: 1626
Content-Type: text/plain; charset=UTF-8
```

```
If "payload_content_type": "text/plain" was specified during registration:
-----BEGIN XXXX-----MIIEow . . . Rwg7Jp-----END XXXX-----
```

```
If "payload_content_type": "application/octet-stream" and "payload_content_encoding":
"base64" were specified during registration:
}??}ZG=lu?^axwM)198?}???? (binary data of decrypted payload in PEM format)
```

### 2.1.3.3 Create key metadata (POST /v1/{tenant\_id}/secrets)

Creates key metadata.

{tenant\_id}: Project ID used to register key metadata

#### Request headers

##### X-Auth-Token

Specify the authentication token.

Data type	Cardinality
String	1..1

##### Content-Type

Specify the request body type.

Valid values: application/json

Data type	Cardinality
String	1..1

## Request parameters

---

None

## Request body

---

### **name**

Key name

Valid characters: Halfwidth alphanumeric characters and halfwidth symbols

Number of characters: 1 to 255

If omitted, the resource ID of the key metadata is used

Data type	Cardinality
String	0..1

### **expiration**

Key expiry datetime Value is returned in ISO-8601 format. When the expiry datetime is reached, the key is automatically deleted. If omitted, null is used, and the information will not be deleted automatically.

Format: YYYY-MM-DDThh:mm:ss.SSSSSSData type

Data type	Cardinality
datetime	0..1

### **payload**

Payload of the key metadata to be registered.

While payload is optional, if it is specified, a null string cannot be used. To escape line feeds, specify "\n".

Line feeds can be specified as is.

Example: "-----BEGIN XXXX-----"

> MIIeowIBAAKCAQEAuyWf1R49q5ccq60LoJ1MHf0IQ"

>-----END XXXX-----"

If "text/plain" is specified for payload\_content\_type, the value must meet the following conditions:

- It must include a segment beginning with "-----BEGIN XXX-----" and ending in "-----END XXX-----"
- The segment beginning with "-----BEGIN XXX-----" and ending in "-----END XXX-----", only the following characters are valid:
  - Up to 64 characters per line
  - A-Z, a-z, 0-9, +/=

Number of characters: Unlimited (the actual limit is the number of bytes for Body)

Data type	Cardinality
String	0..1

### **payload\_content\_type**

Format to use in the response for the key information payload

This is required if "payload" is specified

Valid values: "text/plain", "text/plain;charset=utf-8", "text/plain; charset=utf-8", "application/octet-stream"

Data type	Cardinality
Enum("text/plain", "text/plain; charset=utf-8", "text/plain; charset=utf-8", "application/octet-stream")	0..1

### **payload\_content\_encoding**

Encryption format

This item cannot be specified if any of the following are specified for payload\_content\_type: "text/plain", "text/plain;charset=utf-8", "text/plain; charset=utf-8"

This item is required if "application/octet-stream" is specified for payload\_content\_type

Valid value: base64

Data type	Cardinality
Enum(base64)	0..1

## **Response headers**

---

### **Status**

The following error codes can be returned for the request.

One of the following values will be returned.

201:	Normal completion
401:	Authentication error (no authentication token, incorrect authentication token, etc.)
400:	Invalid access (invalid parameter, etc.)
403:	Cannot access (no privileges)
404:	No applicable resources
413:	The key metadata exceeds 10000 bytes
415:	An unsupported Content-Type was specified
500:	Unexpected error

Data type	Cardinality
int	1..1

## **Response elements**

---

### **secret\_ref**

Resource URI allocated to the registered key metadata

Data type	Cardinality	Parent element	Child element
String	1..1	None	None

## Example of request

---

```
POST /v1/a759452216fd41cf8ee5aba321cfbd49/secrets
X-Auth-Token: "JpZCI6ICJjM2VINzA4YTZhZTI0ZGRmOTJjMDc4 . . ."
Content-Type: "application/json"
Body:
{
  "name": "key1",
  "expiration": "2015-02-28T19:14:44.180394",
  "payload": "-----BEGIN XXXX-----MIIEow . . . Rwg7Jp-----END XXXX-----",
  "payload_content_type": "text/plain",
  "payload_content_encoding": "base64"
}
```

## Example of response

---

```
Status Code: 201 Created
Content-Length: 118
Content-Type: application/json; charset=UTF-8
Location: http://<host>:9311/ a759452216fd41cf8ee5aba321cfbd49/secrets/a417d40d-cec7-4129-a5ad-afaac6fab603

{"secret_ref": "http://<host>:9311/v1/ a759452216fd41cf8ee5aba321cfbd49/secrets/a417d40d-cec7-4129-a5ad-afaac6fab603"}
```

## 2.1.3.4 Delete key metadata (DELETE /v1/{tenant\_id}/secrets/{resource\_id})

---

Deletes the specified key metadata.

{tenant\_id}: Project ID used to delete the key metadata

{resource\_id}: Resource ID of the key metadata to be deleted

### Request headers

---

#### X-Auth-Token

Specify the authentication token.

Data type	Cardinality
String	1..1

### Request parameters

---

None

### Request body

---

None

### Response headers

---

#### Status

The following error codes can be returned for the request.

One of the following values will be returned.

204: Normal completion

401:	Authentication error (no authentication token, incorrect authentication token, etc.)
400:	Invalid access (invalid parameter, etc.)
403:	Cannot access (no privileges)
404:	No applicable resources
500:	Unexpected error

Data type	Cardinality
int	1..1

## Response elements

None

## Example of request

```
DELETE /v1/a759452216fd41cf8ee5aba321cfbd49/secrets/a417d40d-cec7-4129-a5ad-
afaac6fab603
X-Auth-Token: "1b1551c5008c42899daa8fcc699f2631"
```

## Example of response

```
Status Code: 204 No content
Content-Length: 0
```

## 2.1.3.5 List key metadata containers (GET /v1/{tenant\_id}/containers)

Lists key metadata containers.

{tenant\_id}: Project ID used to retrieve a key metadata container

## Request headers

### X-Auth-Token

Specify the authentication token.

Data type	Cardinality
String	1..1

## Request parameters

### limit

Maximum number of resources to return in the response (the default is 10)

Data type	Cardinality
int	0..1

### offset



Starting index of resources to be listed (the default is 0)

Data type	Cardinality
int	0..1

## Request body

None

## Response headers

### Status

The following error codes can be returned for the request.

One of the following values will be returned.

200:	Normal completion
401:	Authentication error (no authentication token, incorrect authentication token, etc.)
400:	Invalid access (invalid parameter, etc.)
403:	Cannot access (no privileges)
404:	No applicable resources
500:	Unexpected error

Data type	Cardinality
int	1..1

## Response elements

### containers

Envelope of key metadata container list

Data type	Cardinality	Parent element	Child element
Element	1..1	None	(container)

### (container)

Envelope of key metadata container

Data type	Cardinality	Parent element	Child element
Element	0..*	containers	status updated name secret_refs

### status

Status of key metadata container

Data type	Cardinality	Parent element	Child element
Enum(ACTIVE,ERROR)	1..1	(container)	None

**updated**

Timestamp (UTC) of last update

Data type	Cardinality	Parent element	Child element
datetime	1..1	(container)	None

**name**

Name of key metadata container

Data type	Cardinality	Parent element	Child element
String	1..1	(container)	None

**created**

Timestamp (UTC) of creation

Data type	Cardinality	Parent element	Child element
datetime	1..1	(container)	None

**container\_ref**

Key metadata container resource URI

Data type	Cardinality	Parent element	Child element
String	1..1	(container)	None

**secret\_refs**

Envelope of key metadata list registered in the key information container

Data type	Cardinality	Parent element	Child element
Element	1..1	None	(secret_ref_env)

**(secret\_ref\_env)**

Envelope of key metadata registered in the key information container

Data type	Cardinality	Parent element	Child element
Element	0..3	secret_refs	name secret_ref

**name**

The name of the key information for the key information container in which the key is registered

Data type	Cardinality	Parent element	Child element
String	1..1	(secret_ref_env)	None

**secret\_ref**

URI of the key metadata registered in the key information container

Data type	Cardinality	Parent element	Child element
String	1..1	(secret_ref_env)	None

### **total**

Number of key metadata containers registered for a project

Data type	Cardinality	Parent element	Child element
int	1..1	None	None

### **previous**

The previous key metadata container resource offset information in the retrieved key metadata container list

Data type	Cardinality	Parent element	Child element
String	0..1	None	None

### **next**

The next key metadata container resource offset in the retrieved key metadata container list

Data type	Cardinality	Parent element	Child element
String	0..1	None	None

## Example of request

```
GET /v1/a759452216fd41cf8ee5aba321cfbd49/containers?limit=1&offset=2
X-Auth-Token: "JpZC16ICJm2VINzA4YTZhZTI0ZGRmOTJjMdc4 . . ."
```

## Example of response

```
Status Code: 200 OK
Content-Length: 647
Content-Type: application/json; charset=UTF-8
```

```
{
  "total": 4,
  "next": "http://<host>:9311/v1/a759452216fd41cf8ee5aba321cfbd49/containers?
limit=1&offset=3",
  "containers": [
    {
      "status": "ACTIVE",
      "updated": "2014-07-18T04:41:34.245613",
      "name": "container1",
      "secret_refs": [
        {
          "secret_id": "82b63ed0-3ec7-4f3c-93b6-dde9a3c81b99",
          "name": "private_key"
        },
        {
          "secret_id": "e2c1ef34-2dac-4e77-8f20-3cd6386f9d87",
          "name": "intermediates"
        },
        {
          "secret_id": "e74530eb-0835-471a-ae05-392132ebce65",
```

```

    "name": "certificate"
  }
],
"created": "2014-07-18T04:41:34.245607",
"container_ref": "http://<host>:9311/v1/a759452216fd41cf8ee5aba321cfbd49/containers/
ce0b7fcc-5963-47ba-bf44-3936e7b38381",
"type": "certificate"
}
],
"previous": "http://<host>:9311/v1/a759452216fd41cf8ee5aba321cfbd49/containers?
limit=1&offset=1"
}

```

### 2.1.3.6 Retrieve key metadata container (GET /v1/{tenant\_id}/containers/{resource\_id})

---

Retrieves the specified key metadata container.

{tenant\_id}: Project ID used to retrieve a key metadata container

{resource\_id}: Resource ID of the key metadata container to be retrieved

#### Request headers

---

##### X-Auth-Token

Specify the authentication token.

Data type	Cardinality
String	1..1

#### Request parameters

---

None

#### Request body

---

None

#### Response headers

---

##### Status

The following error codes can be returned for the request.

One of the following values will be returned.

200:	Normal completion
401:	Authentication error (no authentication token, incorrect authentication token, etc.)
400:	Invalid access (invalid parameter, etc.)
403:	Cannot access (no privileges)
404:	No applicable resources
500:	Unexpected error

Data type	Cardinality
int	1..1

## Response elements

### **status**

Status of key metadata container

Data type	Cardinality	Parent element	Child element
Enum(ACTIVE,ERROR)	1..1	None	None

### **updated**

Timestamp (UTC) of last update

Data type	Cardinality	Parent element	Child element
datetime	1..1	None	None

### **name**

Name of key metadata container

Data type	Cardinality	Parent element	Child element
String	1..1	None	None

### **created**

Timestamp (UTC) of creation

Data type	Cardinality	Parent element	Child element
datetime	1..1	None	None

### **container\_ref**

Key metadata container resource URI

Data type	Cardinality	Parent element	Child element
String	1..1	None	None

### **secret\_refs**

Envelope of key metadata list registered in the key information container

Data type	Cardinality	Parent element	Child element
Element	1..1	None	(secret_ref_env)

### **(secret\_ref\_env)**

Envelope of key metadata registered in the key information container

Data type	Cardinality	Parent element	Child element
Element	0..3	secret_refs	name secret_ref

### **name**

The name of the key information for the key information container in which the key is registered

Data type	Cardinality	Parent element	Child element
String	1..1	(secret_ref_env)	None

### **secret\_ref**

URI of the key metadata registered in the key information container

Data type	Cardinality	Parent element	Child element
String	1..1	(secret_ref_env)	None

### Example of request

```
GET /v1/a759452216fd41cf8ee5aba321cfbd49/containers/81d1dc32-019e-4caf-b04e-49471f4f3aaf
X-Auth-Token: "JpZCI6ICJm2VINzA4YTZhZTI0ZGRmOTJjMDC4 . . ."
```

### Example of response

```
Status Code: 200 OK
Content-Length: 647
Content-Type: application/json; charset=UTF-8
```

```
{
  "status": "ACTIVE",
  "updated": "2014-08-01T08:04:25.038787",
  "name": "container1",
  "secret_refs": [
    {
      "secret_ref": "http://<host>:9311/v1/a759452216fd41cf8ee5aba321cfbd49/
secrets/087cf096-3947-4a54-8968-7b021cfe8196",
      "name": "private_key"
    },
    {
      "secret_ref": "http://<host>:9311/v1/a759452216fd41cf8ee5aba321cfbd49/
secrets/4bbcf05f-d15d-444c-ae9f-799746349a9f",
      "name": "certificate"
    },
    {
      "secret_ref": "http://<host>:9311/v1/a759452216fd41cf8ee5aba321cfbd49/
secrets/8573540e-ad7c-467a-a196-43cf6b5c3468",
      "name": "intermediates"
    }
  ],
  "created": "2014-08-01T08:04:25.038781",
  "container_ref": "http://<host>:9311/v1/a759452216fd41cf8ee5aba321cfbd49/
containers/81d1dc32-019e-4caf-b04e-49471f4f3aaf",
  "type": "certificate"
}
```

## 2.1.3.7 Create key metadata container (POST /v1/{tenant\_id}/containers)

Creates key metadata container.

{tenant\_id}: Project ID used to register a key metadata container

## Request headers

### X-Auth-Token

Specify the authentication token.

Data type	Cardinality
String	1..1

### Content-Type

Specify the request body type.

Valid values: application/json

Data type	Cardinality
String	1..1

## Request parameters

None

## Request body

### name

Name of key metadata container

Data type	Cardinality
String	0..1

### type

Type of key metadata container

Valid values: certificate, generic



CAUTION

The following fixed values must be specified for the key information container used when creating an SSL-VPN V2 connection.

- type: It is necessary to specify "generic".
- name: It is necessary to specify "ca", "server\_certificate", "server\_key", and "dh".

When the above is not specified, creation of the SSL-VPN V2 connection will fail.

No error will occur during registration of the key information container, but after creation of the SSL-VPN V2 connection, the status of the SSL-VPN V2 connection will be ERROR.

Data type	Cardinality
Enum(certificate, generic)	1..1

### secret\_refs

Envelope of key metadata list to be registered in the key metadata container

Includes (secret\_ref\_env)

Data type	Cardinality
Element	0..1

### **(secret\_ref\_env)**

Envelope of key metadata to be registered in the key metadata container

Includes name and secret\_ref

Data type	Cardinality
Element	0..3

### **name**

Name of key metadata to be registered in the key metadata container

Valid values:

- If type is certificate  
certificate, intermediates, private\_key
- If type is generic  
Any value

However,

- Valid characters: Halfwidth alphanumeric characters and halfwidth symbols
- Number of characters: 1 to 255
- If omitted, null will be used

Data type	Cardinality
If type is certificate Enum(certificate, intermediates, private_key)	If type is certificate 1..1
If type is generic: String	If type is generic 0..1

### **secret\_ref**

URI of the key metadata to be registered in the key metadata container

Data type	Cardinality
String	1..1

## **Response headers**

---

### **Status**

The following error codes can be returned for the request.

One of the following values will be returned.

201:	Normal completion
401:	Authentication error (no authentication token, incorrect authentication token, etc.)
400:	Invalid access (invalid parameter, etc.)
403:	Cannot access (no privileges)
404:	No applicable resources
415:	An unsupported Content-Type was specified
500:	Unexpected error



Data type	Cardinality
int	1..1

## Response elements

### container\_ref

URI of the registered key metadata container

Data type	Cardinality	Parent element	Child element
String	1..1	None	None

## Example of request

```
POST /v1/a759452216fd41cf8ee5aba321cfbd49/containers
X-Auth-Token: "JpZCI6ICJm2VINzA4YTZhZTI0ZGRmOTJjMdc4 . . ."
Content-Type: "application/json"
Body:
{
  "name": "container1",
  "type": "certificate",
  "secret_refs": [
    {
      "name": "private_key",
      "secret_ref": "http://<host>:9311/v1/a759452216fd41cf8ee5aba321cfbd49/
secrets/087cf096-3947-4a54-8968-7b021cfe8196"
    },
    {
      "name": "certificate",
      "secret_ref": "http://<host>:9311/v1/a759452216fd41cf8ee5aba321cfbd49/secrets/4bbc05f-
d15d-444c-ae9f-799746349a9f"
    },
    {
      "name": "intermediates",
      "secret_ref": "http://<host>:9311/v1/a759452216fd41cf8ee5aba321cfbd49/secrets/8573540e-
ad7c-467a-a196-43cf6b5c3468"
    }
  ]
}
```

## Example of response

```
Status Code: 201 Created
Content-Length: 123
Content-Type: application/json; charset=UTF-8
Location: http://<host>:9311/ a759452216fd41cf8ee5aba321cfbd49/containers/a5330b02-
ee46-4883-b8ea-4359925ebbf2

{"container_ref": "http://<host>:9311/v1/ a759452216fd41cf8ee5aba321cfbd49/containers/
a5330b02-ee46-4883-b8ea-4359925ebbf2"}
```

## 2.1.3.8 Delete key metadata container (DELETE /v1/{tenant\_id}/containers/{resource\_id})

Deletes the specified key metadata container.

{tenant\_id}: Project ID used to delete a key metadata container

{resource\_id}: Resource ID of the key metadata container to be deleted

## Request headers

---

### X-Auth-Token

Specify the authentication token.

Data type	Cardinality
String	1..1

## Request parameters

---

None

## Request body

---

None

## Response headers

---

### Status

The following error codes can be returned for the request.

One of the following values will be returned.

204:	Normal completion
401:	Authentication error (no authentication token, incorrect authentication token, etc.)
400:	Invalid access (invalid parameter, etc.)
403:	Cannot access (no privileges)
404:	No applicable resources
500:	Unexpected error

Data type	Cardinality
int	1..1

## Response elements

---

None

## Example of request

---

```
DELETE /v1/a759452216fd41cf8ee5aba321cfbd49/containers/ a5330b02-ee46-4883-  
b8ea-4359925ebbf2  
X-Auth-Token: "JpZCI6ICJjM2VINzA4YTZhZTI0ZGRmOTJjMDC4 . . ."
```

## Example of response

---

```
Status Code: 204 No content  
Content-Length: 0
```

---

# Part 3: Software Management

---

Topics:

- [Software Management](#)

# 3.1 Software Management

---

## 3.1.1 API list

---

Item	API	Description
1	PUT /v1.0/software_support Register/update details on supported software	Registers details (instance ID, software ID, support ID) on a supported software, or updates a support ID that has already been registered.
2	GET /v1.0/software_support Retrieve details on a supported software	Retrieves details on all supported software.

## 3.1.2 General requirements

---

This section describes general requirements to use this API.

- Unless otherwise stated, the request parameters must be sent by using HTTP GET or HTTP PUT.

## 3.1.3 API details

---

### 3.1.3.1 Register/update details on supported software (PUT / v1.0/software\_support)

---

Registers details (instance ID, software ID, support ID) on a supported software, or updates a support ID that has already been registered.

A change prohibition period has been set internally for registered support IDs. This refers to the period during which it is not possible to change a support ID from supported (spt\_24h, spt\_daytime) to not supported (nosupport) or limited support (spt\_limited).

This API determines whether changes to the support ID are allowed, based on the items below. If support ID cannot currently be changed, the 400 Bad Request error message will be returned.

1. Datetime (UTC) of execution of this API
2. Datetime (UTC) of the software registration (this information is returned by GET /v1.0/software\_support in the UpdateDate field)

3. Change prohibition period

Formula: (1) - (2) >= (3)

#### Request headers

---

##### **X-Auth-Token**

Specify the authentication token.

Data type	Cardinality
String	1..1

##### **Content-Type**

Specify "Application/xml".

Data type	Cardinality
String	1..1

## Request elements

### **SupportSoftwares**

Details on all supported software (root element)

Data type	Cardinality	Parent element	Child element
String	1..1	None	SupportSoftware

### **SupportSoftware**

Details on a retrieved supported software

Data type	Cardinality	Parent element	Child element
String	1..n	SupportSoftwares	InstanceID SoftwareID SupportID

### **InstanceID**

Instance ID

Data type	Cardinality	Parent element	Child element
String	1..1	SupportSoftware	None

### **SoftwareID**

Software ID

Refer to the "[Table 1: SoftwareID and SupportID values](#)" table below for details on the valid values.

Data type	Cardinality	Parent element	Child element
String	1..1	SupportSoftware	None

### **SupportID**

Support ID

Refer to the "[Table 1: SoftwareID and SupportID values](#)" table below for details on the valid values.

Data type	Cardinality	Parent element	Child element
String	1..1	String	1..1

When changing support, it is necessary to specify the following values for SoftwareID and SupportID.

**Table 1: SoftwareID and SupportID values**

SoftwareID	SupportID	Initial setting	Remarks
W2k8R2SE	nosupport	B	Windows Server 2008 SE R2 SP1 64-bit Japanese version (no support for OS delivery service/virtual server import service)
	spt_daytime		Windows Server 2008 SE R2 SP1 64-bit Japanese version daytime support (support for OS delivery service/virtual server import service)
	spt_24h		Windows Server 2008 SE R2 SP1 64-bit Japanese version 24-hour support (support for OS delivery service/virtual server import service)
W2k8R2EE	nosupport	B	Windows Server 2008 EE R2 SP1 64-bit Japanese version (no support for OS delivery service/virtual server import service)
	spt_daytime		Windows Server 2008 EE R2 SP1 64-bit Japanese version daytime support (support for OS delivery service/virtual server import service)
	spt_24h		Windows Server 2008 EE R2 SP1 64-bit Japanese version 24-hour support (support for OS delivery service/virtual server import service)
W2k12R2SE	nosupport	B	Windows Server 2012 SE R2 64-bit Japanese version (no support for OS delivery service/virtual server import service)
	spt_daytime		Windows Server 2012 SE 64-bit Japanese version daytime support (support for OS delivery service/virtual server import service)
	spt_24h		Windows Server 2012 SE R2 64-bit Japanese version 24-hour support (support for OS delivery service/virtual server import service)
W2k12SE	nosupport	B	Windows Server 2012 SE 64-bit Japanese version (no support for OS delivery service/virtual server import service)
	spt_daytime		Windows Server 2012 SE 64-bit Japanese version daytime support (support for OS delivery service/virtual server import service)
	spt_24h		Windows Server 2012 SE 64-bit Japanese version 24-hour support (support for OS delivery service/virtual server import service)
W2k16SE	nosupport	B	Windows Server 2016 SE 64-bit Japanese version (no support for OS delivery service)
	spt_daytime		Windows Server 2016 SE 64-bit Japanese version daytime support (support for OS delivery service)
	spt_24h		Windows Server 2016 SE 64-bit Japanese version 24-hour support (support for OS delivery service)
RHEL	spt_daytime		Red Hat Enterprise Linux x.x 64-bit English version daytime support (support for OS delivery service) *Common to all versions and levels
	spt_24h		Red Hat Enterprise Linux x.x 64-bit English version 24-hour support (support for OS delivery service) *Common to all versions and levels

SoftwareID	SupportID	Initial setting	Remarks
	spt_limited	B	Red Hat Enterprise Linux x.x 64-bit English version (support limited to OS delivery service) * Common to all versions and levels
RHEL	spt_daytime	B	Red Hat Enterprise Linux x.x 64-bit English version daytime support (support for virtual server import service) *Common to all versions and levels
	spt_24h		Red Hat Enterprise Linux x.x 64-bit English version 24-hour support (support for virtual server import service) *Common to all versions and levels
MSSQL2K8SE	nosupport	B	SQL Server 2008 SE 64-bit Japanese version (no support for software delivery service)
	spt_daytime		SQL Server 2008 SE 64-bit Japanese version daytime support (support for software delivery service)
	spt_24h		SQL Server 2008 SE 64-bit Japanese version 24-hour support (support for software delivery service)
MSSQL2K8R2SE	nosupport	B	SQL Server 2008 R2 SE 64-bit Japanese version (no support for software delivery service)
	spt_daytime		SQL Server 2008 R2 SE 64-bit Japanese version daytime support (support for software delivery service)
	spt_24h		SQL Server 2008 R2 SE 64-bit Japanese version 24-hour support (support for software delivery service)
MSSQL2K14SE	nosupport	B	SQL Server 2014 SE 64-bit Japanese version (no support for software delivery service)
	spt_daytime		SQL Server 2014 SE 64-bit Japanese version daytime support (support for software delivery service)
	spt_24h		SQL Server 2014 SE 64-bit Japanese version 24-hour support (support for software delivery service)
MSSQL2K14EE	nosupport	B	SQL Server 2014 EE 64-bit Japanese version (no support for software delivery service)
	spt_24h		SQL Server 2014 EE 64-bit Japanese version 24-hour support (support for software delivery service)
MSSQL2K16SE	nosupport	B	SQL Server 2016 SE 64-bit Japanese version (no support for software delivery service)
	spt_daytime		SQL Server 2016 SE 64-bit Japanese version daytime support (support for software delivery service)
	spt_24h		SQL Server 2016 SE 64-bit Japanese version 24-hour support (support for software delivery service)

## Request parameters

None

## Response headers

### Content-Type

Returns "Application/xml".

Data type	Cardinality
String	1..1

## Response elements

### SupportSoftwares

Details on all supported software (root element)

Data type	Cardinality	Parent element	Child element
String	1..1	None	SupportSoftware

### SupportSoftware

Details on a retrieved supported software

Data type	Cardinality	Parent element	Child element
String	1..n	SupportSoftwares	TenantID RegionID InstanceID Image ID SoftwareID SupportID UpdateDate

### TenantID

Project ID

The project ID to which the user belongs.

Data type	Cardinality	Parent element	Child element
String	1..1	SupportSoftware	None

### RegionID

Region ID

The region ID for which details on the software was registered/updated.

Data type	Cardinality	Parent element	Child element
String	1..1	SupportSoftware	None

### InstanceID



Instance ID

Data type	Cardinality	Parent element	Child element
String	1..1	SupportSoftware	None

### **Image ID**

Image ID

The image ID linked to the instance ID.

Data type	Cardinality	Parent element	Child element
String	1..1	SupportSoftware	None

### **SoftwareID**

Software ID

Data type	Cardinality	Parent element	Child element
String	1..1	SupportSoftware	None

### **SupportID**

Support ID

Data type	Cardinality	Parent element	Child element
String	1..1	SupportSoftware	None

### **UpdateDate**

Update date

The datetime (UTC) of registration of details on the software or of the change from not supported (nosupport) or limited support (spt\_limited) to supported (spt\_24h, spt\_daytime).

Data type	Cardinality	Parent element	Child element
String	1..1	SupportSoftware	None

## Example of request

```
PUT
/v1.0/software_support
X-Auth-Token: MIIZuwYJKoZIhvcNAQc . . .
Content-Type: application/xml

<SupportSoftwares>
  <SupportSoftware>
    <InstanceID>instance1</InstanceID>
    <SoftwareID>ws2012</SoftwareID>
    <SupportID>nosupport</SupportID>
  </SupportSoftware>
  <SupportSoftware>
    <InstanceID>instance1</InstanceID>
    <SoftwareID>sq2012</SoftwareID>
    <SupportID>spt_24h</SupportID>
  </SupportSoftware>
</SupportSoftwares>
```

## Example of response

```
HTTP/1.1 200 OK
Date: Fri, 11 Sep 2015 05:27:35 GMT
Content-Length: 5000
Content-Type: application/xml

<?xml version="1.0" encoding="UTF-8"?>
<SupportSoftwares>
  <SupportSoftware>
    <TenantID>tenant1</TenantID>
    <RegionID>jp-east-1</RegionID>
    <InstanceID>instance1</InstanceID>
    <ImageID>image1</ImageID>
    <SoftwareID>ws2012</SoftwareID>
  <SupportID>nosupport</SupportID>
  <UpdateDate>2015-09-11</UpdateDate>
</SupportSoftware>
<SupportSoftware>
  <TenantID>tenant1</TenantID>
  <RegionID>jp-east-1</RegionID>
  <InstanceID>instance1</InstanceID>
  <ImageID>image1</ImageID>
  <SoftwareID>sq2012</SoftwareID>
<SupportID>spt_24h</SupportID>
  <UpdateDate>2015-09-11</UpdateDate>
</SupportSoftware>
</SupportSoftwares>
```

### 3.1.3.2 Retrieve details on supported software (GET /v1.0/software\_support)

Retrieves details on all supported software.

#### Request headers

##### **X-Auth-Token**

Specify the authentication token.

Data type	Cardinality
String	1..1

#### Request parameters

##### **TenantID**

Specify the project ID.

Only the project ID to which the user belongs can be specified (the project ID is included in the authentication token). An error will be returned if a project ID that the user does not belong to is specified.

If omitted, the project ID that the user belongs to will be targeted.

Data type	Cardinality
String	0..1

##### **InstanceID**

Specify the instance ID.  
If omitted, all instance IDs will be targeted.

Data type	Cardinality
String	0..1

### **SoftwareID**

Specify the software ID.  
If omitted, all Software IDs will be targeted.  
SoftwareID is required if InstanceID is specified. An error will be returned if SoftwareID is specified but InstanceID is not.

Data type	Cardinality
String	0..1

### **SupportID**

Specify the support ID.  
If omitted, all support IDs will be targeted.  
SupportID is required if SoftwareID is specified. An error will be returned if SupportID is specified but SoftwareID is not.

Data type	Cardinality
String	0..1

## **Response headers**

---

### **Content-Type**

Returns "Application/xml".

Data type	Cardinality
String	1..1

## **Response elements**

---

### **SupportSoftwares**

Details on all supported software (root element)

Data type	Cardinality	Parent element	Child element
String	1..1	None	SupportSoftware

### **SupportSoftware**

Details on a retrieved supported software  
Note: This tag is not displayed if the following condition is met:  
If no details exist under the target SupportSoftware

Data type	Cardinality	Parent element	Child element
String	0..n	SupportSoftwares	TenantID InstanceID Image ID SoftwareID SupportID UpdateDate

### **TenantID**

Tenant ID

Note: If the SupportSoftware tag is not displayed, this tag is not displayed either.

Data type	Cardinality	Parent element	Child element
String	0..1	SupportSoftware	None

### **InstanceID**

Instance ID

Note: If the SupportSoftware tag is not displayed, this tag is not displayed either.

Data type	Cardinality	Parent element	Child element
String	0..1	SupportSoftware	None

### **Image ID**

Image ID

Note: If the SupportSoftware tag is not displayed, this tag is not displayed either.

Data type	Cardinality	Parent element	Child element
String	0..1	SupportSoftware	None

### **SoftwareID**

Software ID

Note: If the SupportSoftware tag is not displayed, this tag is not displayed either.

Data type	Cardinality	Parent element	Child element
String	0..1	SupportSoftware	None

### **SupportID**

Support ID

Note: If the SupportSoftware tag is not displayed, this tag is not displayed either.

Data type	Cardinality	Parent element	Child element
String	0..1	SupportSoftware	None

### **UpdateDate**

Update date

Note: If the SupportSoftware tag is not displayed, this tag is not displayed either.

Data type	Cardinality	Parent element	Child element
String	0..1	SupportSoftware	None

## Example of request

```
GET
/v1.0/software_support?TenantID=tenant1&InstanceID=instance1
X-Auth-Token:MIIZuwYJKoZIHvcNAQc . . .
```

## Example of response

### **When details on supported software exist:**

```
HTTP/1.1 200 OK
Date: Sun, 31 Aug 2014 00:00:00 GMT
Content-Length: 5000
Content-Type: application/xml

<?xml version="1.0" encoding="UTF-8"?>
<SupportSoftwares>
  <SupportSoftware>
    <TenantID>tenant1</TenantID>
    <InstanceID>instance1</InstanceID>
    <ImageID>image1</ImageID>
    <SoftwareID>RHEL</SoftwareID>
    <SupportID>nosupport</SupportID>
    <UpdateDate>2014. 8. 31</UpdateDate>
  </SupportSoftware>
  <SupportSoftware>
    <TenantID>tenant1</TenantID>
    <InstanceID>instance1</InstanceID>
    <ImageID>RHEL</ImageID>
    <SoftwareID>sq2012</SoftwareID>
    <SupportID>spt_24h</SupportID>
    <UpdateDate>2014. 8. 31</UpdateDate>
  </SupportSoftware>
  <SupportSoftware>
    <TenantID>tenant1</TenantID>
    <InstanceID>instance1</InstanceID>
    <ImageID>RHEL</ImageID>
    <SoftwareID>sq2012</SoftwareID>
    <SupportID>spt_daytime</SupportID>
    <UpdateDate>2014. 8. 31</UpdateDate>
  </SupportSoftware>
</SupportSoftwares>
```

### **When details on supported software do not exist:**

```
HTTP/1.1 200 OK
Date: Sun, 31 Aug 2014 00:00:00 GMT
Content-Length: 5000
Content-Type: application/xml

<?xml version="1.0" encoding="UTF-8"?>
<SupportSoftwares/>
```

---

# Part 4: Monitoring Service

---

Topics:

- [Monitoring Service](#)

## 4.1 Monitoring Service

---

### 4.1.1 API list

---

Item	API	Description
1	GET /v2/meters List meters	Lists meters, based on the specified query.
2	GET /v2/meters/{meter_name} List samples for meter	Lists samples for the specified meter.
3	POST /v2/meters/{meter_name} Add samples to meter	Add samples to the specified meter.
4	GET /v2/meters/{meter_name}/statistics Show meter statistics	Retrieves sample statistics for samples of the specified meter based on the specified query.
5	GET /v2/alarms List alarms	Lists alarms, based on the specified query.
6	POST /v2/alarms Create alarm	Creates an alarm.
7	GET /v2/alarms/{alarm_id} Show alarm details	Show details on the specified alarm.
8	PUT /v2/alarms/{alarm_id} Update alarm	Updates the specified alarm.
9	DELETE /v2/alarms/{alarm_id} Delete alarm	Deletes the specified alarm.
10	GET /v2/alarms/{alarm_id}/state Show alarm state	Shows the state of the specified alarm.
11	PUT /v2/alarms/{alarm_id}/state Update alarm state	Sets the state of the specified alarm.
12	GET /v2/alarms/{alarm_id}/history Show alarm history	Show the history of the specified alarm, based on the specified query.
13	GET /v2/resources List resources	Lists resources, based on the specified query.
14	GET /v2/resources/{resource_id} Show resource details	Shows details on the specified resource.

For details on the permissions and prohibitions of API access in each preset role, refer to "[IaaS API Reference \(API/Preset roles correspondence table\)](#)".

### 4.1.2 Glossary

---

Term	Description
meter	<p>A resource measurement item (such as performance information). These items comprise name, unit, and type. The following three types are available:</p> <p>cumulative: Value that increases in proportion to time (cumulative value).</p> <p>gauge: Fluctuating value. Value that fluctuates according to the time (discrete value, fluctuating value).</p> <p>delta: Value for which the amount of change is obtained at each collection interval, in regard to values that are always increasing or decreasing (variation).</p>
alarm	Threshold value setting for meters. Actions can be set for threshold conditions.
sample	Time-series data associated with a meters. Sample data is stored for two weeks, and earlier samples are deleted automatically.
Resource	Measurement targets. (examples: instances, volumes and images)
Source	Information showing the collection source of the measurement data. The default meter source is "fcx".

### 4.1.3 General requirements

If a value in the request parameter contains a character that cannot be used as is in the URL, it must be encoded using UTF-8.

### 4.1.4 Common API items

The following lists request header information common to the APIs.

#### Request headers

##### **X-Auth-Token**

Specifies authentication tokens.

Data type	Cardinality
String	1..1

##### **Content-Type**

Specify the following if the POST or PUT method is used:

"application/json"



Data type	Cardinality
String	0..1

## 4.1.5 Common API error codes

---

The following lists error information common to the APIs.

### Status

The following error codes can be returned for the request.

400:	An invalid parameter was specified, or there is an error in the JSON data format specified in the request body.
401:	Authentication error. An authentication token does not exist or contains an error.
404:	A URL that does not exist or an incorrect URL was specified.
500:	Service internal error.
503:	The service cannot be used temporarily.
504:	Processing was not completed within a certain period (one minute).

Data type	Cardinality
int	1..1

The following error information is returned:

### Response headers

---

#### Content-Length

Request length excluding the header (in bytes).

Data type	Cardinality
String	1..1

#### Content-Type

Type of contents.

text/plain:	If the status is 401.
application/json:	If the status is not 401.

Data type	Cardinality
String	1..1

#### Date

Datetime of the response.

Data type	Cardinality
String	1..1

### **WWW-Authenticate**

URL of the authentication service (only output for authentication errors).

Data type	Cardinality
String	0..1

## **Response elements**

### **error\_message**

Container for error information.

Data type	Cardinality	Parent element	Child element
Element	1..1	None	debuginfo faultcode faultstring

### **debuginfo**

Debug information.

Data type	Cardinality	Parent element	Child element
String	1..1	error_message	None

### **faultcode**

Error code.

Data type	Cardinality	Parent element	Child element
String	1..1	error_message	None

### **faultstring**

Error message.

Data type	Cardinality	Parent element	Child element
String	1..1	error_message	None

## **Example of response**

```
{
  "error_message": {
    "debuginfo": null,
    "faultcode": "Client",
    "faultstring": "Invalid input for field/attribute limit. Value: 'a'. unable to
convert to int"
  }
}
```

## 4.1.6 API details

---

### 4.1.6.1 List meters (GET /v2/meters)

---

Lists meters, based on the specified query.

#### Request headers

---

Refer to "[Common API items](#)".

#### Request parameters

---

##### **q.field**

Specifies the following fields for query.

- resource\_id: ID of the resource.
- source: Source meter.
- user\_id: ID of the user that created the meter.

If omitted, all meters will be targeted.

Data type	Cardinality
String	0..10

##### **q.op**

Specifies the comparison operator described below.

- If q.field is "resource\_id":
  - eq: Equal to
- If q.field is "source":
  - eq: Equal to
- If q.field is user\_id:
  - eq: Equal to

If omitted, "eq" is used.

Data type	Cardinality
String	0..10

##### **q.value**

Query data value.

Specifies the following data value targeted for comparison.

- If q.field is "resource\_id":
  - Resource ID
- If q.field is "source":
  - Source
- If q.field is user\_id:
  - User ID

Valid characters: Fullwidth characters, halfwidth alphanumeric characters and halfwidth symbols

Number of characters: 1 to 255

Data type	Cardinality
String	0..10

### limit

Maximum number of meters to retrieve.

Range: 1 to 1440

If omitted, "1440" is used.

Data type	Cardinality
Int	0..1

### offset

Number of meters to offset.

If omitted, "0" is used.

Data type	Cardinality
Int	0..1

## Response headers

### Status

If normal, the following status is returned.

200: Normal completion

Refer to "[Common API error codes](#)" if the state is error.

Data type	Cardinality
Int	1..1

## Response elements

List (in JSON format) of meters based on the specified query.

Refer to "[type Meter](#)" for details.

## Example of request

Example 1: List all meters.

```
curl -H 'X-Auth-Token: ImFkbWluVVJMIjogImh0dHA6Ly8xMC4x . . .' ¥  
'https://telemetry.jp-east-1.cloud.global.fujitsu.com/v2/meters'
```

Example 2: List the meters concerning the specified user and resource.

```
curl -H 'X-Auth-Token: ImFkbWluVVJMIjogImh0dHA6Ly8xMC4x . . .' ¥  
'https://telemetry.jp-east-1.cloud.global.fujitsu.com/v2/meters?q.field=  
user_id&q.op=eq&q.value=0382c98eaf574d1ab5751a3e938b744d&q.field=  
resource_id&q.op=eq&q.value=my_resource'
```

## Example of response

```
[  
  {  
    "meter_id": "ZGVtb19yZXNvdXJjZTAwMytoZXNObWVOZXIwMDU=¥n",  
    "name": "my_meter",
```

```

    "project_id": "610678ac162147c4a5e838190a80994e",
    "resource_id": "my_resource",
    "source": "89b0b9f21b414cd39354a1b8056aef87:my_source",
    "type": "gauge",
    "unit": "test",
    "user_id": "0382c98eaf574d1ab5751a3e938b744d"
  },
  {
    "meter_id": "ZGVtb19yZXNvdXJzTAwMyt0ZXN0bWV0ZXIwMDY=¥n",
    "name": "my_meter",
    "project_id": "610678ac162147c4a5e838190a80994e",
    "resource_id": "my_resource2",
    "source": "89b0b9f21b414cd39354a1b8056aef87:my_source",
    "type": "gauge",
    "unit": "test",
    "user_id": "0382c98eaf574d1ab5751a3e938b744d"
  }
]

```

## 4.1.6.2 List samples for meter (GET /v2/meters/{meter\_name})

Lists samples for the specified meter.

{meter\_name}: Name of the meter from which to retrieve samples.

### Request headers

Refer to ["Common API items"](#).

### Request parameters

#### q.field

Specifies the following fields for query.

- resource\_id: ID of the resource.
- source: Source meter.
- timestamp: Datetime of the sample.
  - If timestamp is omitted, the following will be used: "current time - 1 day <= timestamp < current time".
  - If only the start time is specified, the following will be used for end datetime: "start datetime + 1 day > timestamp".
  - If only the end time is specified, the following will be used for start datetime: "end datetime - 1 day <= timestamp".
- user\_id: ID of the user that created the meter.

If omitted, all samples will be targeted.

Data type	Cardinality
String	0..10

#### q.op

Specifies the comparison operator described below.

- If q.field is "resource\_id":
  - eq: Equal to
- If q.field is "source":
  - eq: Equal to
- If q.field is "timestamp":
  - gt: Greater than
  - ge: Greater than or equal to

lt: Less than

le: Less than or equal to

If omitted, "eq" is used.

Data type	Cardinality
String	0..10

### **q.value**

Specifies the following data value targeted for comparison.

- If q.field is "resource\_id":  
Resource ID
- If q.field is "source":  
Source
- If q.field is "timestamp":  
Datetime (YYYY-MM-DDThh:mm:ss)

Valid characters: Fullwidth characters, halfwidth alphanumeric characters and halfwidth symbols

Number of characters: 1 to 255

Data type	Cardinality
String	0..10

### **limit**

Maximum number of samples to retrieve.

Range: 1 to 1440

If omitted, "1440" is used.

Data type	Cardinality
Int	0..1

### **offset**

Number of sample to offset.

If omitted, "0" is used.

Data type	Cardinality
Int	0..1

## **Response headers**

---

### **Status**

If normal, the following status is returned.

200: Normal completion

Refer to "[Common API error codes](#)" if the state is error.

Data type	Cardinality
Int	1..1

## Response elements

---

List (in JSON format) of the samples based on the specified query.  
Refer to "[type OldSample](#)" for details.

## Example of request

---

Example 1: List samples within the specified time range.

```
curl -H 'X-Auth-Token: ImFkbWluVGVJMIjogImh0dHA6Ly8xMC4x . . .' ¥  
'https://telemetry.jp-east-1.cloud.global.fujitsu.com/v2/meters/my_meter?  
q.field=timestamp&q.op=gt&q.value=2014-10-22T00:00:00&q.field=timestamp&  
q.op=lt&q.value=2014-10-23T00:00:00'
```

Example 2: List samples concerning the specified resource.

```
curl -H 'X-Auth-Token: ImFkbWluVGVJMIjogImh0dHA6Ly8xMC4x . . .' ¥  
'https://telemetry.jp-east-1.cloud.global.fujitsu.com/v2/meters/my_meter?  
q.field=resource_id&q.op=eq&q.value=my_resource'
```

## Example of response

---

```
[  
  {  
    "counter_name": "my_meter",  
    "counter_type": "gauge",  
    "counter_unit": "%",  
    "counter_volume": 0.0,  
    "project_id": "bc835c72f50b48c89ad7ee8a89806bb1",  
    "recorded_at": "2014-10-22T00:02:50.171418",  
    "resource_id": "my_resource",  
    "resource_metadata": {  
      "my_metadata": "test",  
    },  
    "source": "bc835c72f50b48c89ad7ee8a89806bb1:my_source",  
    "timestamp": "2014-10-22T00:02:49",  
    "user_id": "22fa5e38788d40988b8aa28e749f7a84"  
  },  
  {  
    "counter_name": "my_meter",  
    "counter_type": "gauge",  
    "counter_unit": "%",  
    "counter_volume": 10.0,  
    "project_id": "bc835c72f50b48c89ad7ee8a89806bb1",  
    "recorded_at": "2014-10-22T00:01:12.511325",  
    "resource_id": "my_resource",  
    "resource_metadata": {  
      "my_metadata": "test",  
    },  
    "source": "bc835c72f50b48c89ad7ee8a89806bb1:my_source",  
    "timestamp": "2014-10-22T00:01:12",  
    "user_id": "22fa5e38788d40988b8aa28e749f7a84"  
  },  
]
```

### 4.1.6.3 Add samples to meter (POST /v2/meters/{meter\_name})

---

Adds samples to the specified meter.

{meter\_name}: Name of the meter to which to add samples. Note that the specified value cannot start with "fx.(dot)".



Alarm evaluation (threshold monitoring) is performed in accordance with the monitoring interval (60 seconds) specified for the monitoring service. Therefore, depending on the timing of when a sample is added, it may become a target for alarm evaluation only in the next monitoring interval, not the current one.

## Request headers

---

Refer to ["Common API items"](#).

## Request parameters

---

None.

## Request body

---

Specifies a list of samples to be added in JSON format.

Up to 20 samples can be specified at once (the meter names must all be the same).

Also, the meter name specified for {meterName} must match the name specified for counter\_name in Request body.

Refer to ["type OldSample"](#) for details.

## Response headers

---

### Status

If normal, the following status is returned.

201: Normal completion

Refer to ["Common API error codes"](#) if the state is error.

Data type	Cardinality
Int	1..1

## Response elements

---

List (in JSON format) of the samples added.

Refer to ["type OldSample"](#) for details.

## Example of request

---

Example: Add a sample to meter "my\_meter".

```
curl -X POST -H 'Content-Type: application/json' ¥  
-H 'X-Auth-Token: ImFkbWluVWJMIjogImh0dHA6Ly8xMC4x . . .' ¥  
-d requestBody "https://telemetry.jp-east-1.cloud.global.fujitsu.com/v2/meters/my_meter"
```

Request body (JSON format)

```
[  
  {  
    "counter_name": "my_meter",  
    "counter_type": "gauge",  
    "counter_unit": "instance",  
    "counter_volume": 2.0,  
    "resource_id": "my_resource",  
    "resource_metadata": {  
      "my_metadata": "test",  
      "my_metadata2": "test2"  
    }  
  },  
]
```



```
    "source": "my_source",
    "timestamp": "2014-06-12T07:01:07.428799"
  }
]
```

### Example of response

```
[
  {
    "counter_name": "my_meter",
    "counter_type": "gauge",
    "counter_unit": "instance",
    "counter_volume": 2.0,
    "message_id": "5a016f38-5b39-11e4-9966-fa163e0aad81",
    "project_id": "39bd0d0341484a1a88f8ecdb1b21311c",
    "resource_id": "my_resource",
    "resource_metadata": {
      "my_metadata": "test",
      "my_metadata2": "test2"
    },
    "source": "39bd0d0341484a1a88f8ecdb1b21311c:my_source",
    "timestamp": "2014-06-12T07:01:07.428799",
    "user_id": "9953aae1953a4caab3cc278e3018cf68"
  }
]
```

## 4.1.6.4 Show meter statistics (GET /v2/meters/{meter\_name}/statistics)

Computes and lists statistics for samples in the specified time range.  
{meter\_name}: Name of the meter from which to retrieve samples.

### Request headers

Refer to ["Common API items"](#).

### Request parameters

#### q.field

Specifies the following fields for query.

- resource\_id: ID of the resource.
- source: Source meter.
- timestamp: Aggregation start/end time
  - If timestamp is omitted, the search conditions are set with "timestamp >= *currentTime* - (period x 1440)" (\*1) as the aggregation start time, and "timestamp < *currentTime*" as the aggregation end time (when the period is 60 (seconds), the range will be up to one day).
  - If only the aggregation start time is specified for timestamp, the search conditions are set with the following as the aggregation end time: "*aggregationStartTime* + (period x 1440) > timestamp" (\*1).
  - If only the aggregation end time is specified for timestamp, the search conditions are set with the following as the aggregation start time: "*aggregationEndTime* - (period x 1440) <= timestamp" (\*1).
  - An error will occur if the range (seconds) of the aggregation start and end times for timestamp is larger than the (period x 1440) value.
- \*1: If the (period x 1440) value is more than 1209600 (two weeks), it will be handled as 1209600.

- user\_id: ID of the user that created the meter.

If omitted, the aggregate results of all samples of the specified meter will be output.

Data type	Cardinality
String	0..10

### **q.op**

Specifies the comparison operator described below.

- If q.field is "resource\_id":  
eq: Equal to
- If q.field is "source":  
eq: Equal to
- If q.field is "timestamp":  
gt: Greater than  
ge: Greater than or equal to  
lt: Less than  
le: Less than or equal to
- If q.field is user\_id:  
eq: Equal to

If omitted, "eq" is used.

Data type	Cardinality
String	0..10

### **q.value**

Specifies the following data value targeted for comparison.

- If q.field is "resource\_id":  
Resource ID
- If q.field is "source":  
Source
- If q.field is "timestamp":  
Datetime (YYYY-MM-DDThh:mm:ss)
- If q.field is user\_id:  
User ID

Valid characters: Fullwidth characters, halfwidth alphanumeric characters and halfwidth symbols

Number of characters: 1 to 255

Data type	Cardinality
String	0..10

### **groupby**

Specifies the following field if aggregating by field.

- resource\_id
- user\_id

If omitted, aggregation will not be performed by field.

Data type	Cardinality
String	0..1

### period

Specifies the aggregation interval (seconds).

Range: 60 to 1209600 (can only be specified in multiples of 60)

If omitted, the aggregate results of all samples of the specified range are output.

Data type	Cardinality
int	0..1

### aggregate.func

Specifies the following aggregation functions.

- avg: average value
- count: number of samples
- max: maximum value
- min: minimum value
- sum: total value

If omitted, the results of all aggregation functions will be output.

Data type	Cardinality
String	0..10

## Response headers

---

### Status

If normal, the following status is returned.

200: Normal completion

Refer to "[Common API error codes](#)" if the state is error.

Data type	Cardinality
Int	1..1

## Response elements

---

Returns a list of aggregation results in JSON format.

Refer to "[type Statistics](#)" for details.

## Example of request

---

Example 1: Specify the datetime of the sample and the user ID for "groupby", and retrieve statistics by user within a specific time range.

```
curl -H 'X-Auth-Token: ImFkbWluVGVJMIjogImh0dHA6Ly8xMC4x . . .' ¥  
'https://telemetry.jp-east-1.cloud.global.fujitsu.com/v2/meters/my_meter/statistics?  
groupby=user_id&q.field=timestamp&q.op=gt&q.value=2014-10-22T00:00:00&  
q.field=timestamp&q.op=lt&q.value=2014-10-23T00:00:00'
```

Example 2: Specify the aggregation interval and aggregation function, and retrieve the maximum and minimum values on an hourly basis.

```
curl -H 'X-Auth-Token: ImFkbWluVGVJMIjogImh0dHA6Ly8xMC4x . . .' ¥
```

```
'https://telemetry.jp-east-1.cloud.global.fujitsu.com/v2/meters/my_meter/statistics?
period=3600&aggregate.func=max&aggregate.func=min'
```

## Example of response

---

```
[
  {
    "avg": 0.041790414908881302,
    "count": 1716,
    "duration": 89950.0,
    "duration_end": "2014-10-23T00:59:22",
    "duration_start": "2014-10-22T00:00:12",
    "groupby": {
      "user_id": "f2ee0c983abf4c65aa44b3328b8a484f"
    },
    "max": 0.314285714285714,
    "min": 0.0172413793103448,
    "period": 0,
    "period_end": "2014-10-23T00:59:22",
    "period_start": "2014-10-22T00:00:12",
    "sum": 71.712351983640303,
    "unit": "%"
  },
  {
    "avg": 0.048886882955332202,
    "count": 905,
    "duration": 89858.0,
    "duration_end": "2014-10-23T00:59:05",
    "duration_start": "2014-10-22T00:01:27",
    "groupby": {
      "user_id": "0d6293fbdf8948f090b8195bebd8ee8b"
    },
    "max": 0.36956521739130399,
    "min": 0.0280373831775701,
    "period": 0,
    "period_end": "2014-10-23T00:59:05",
    "period_start": "2014-10-22T00:01:27",
    "sum": 44.242629074575603,
    "unit": "%"
  }
]
```

## 4.1.6.5 List alarms (GET /v2/alarms)

---

Lists alarms, based on the specified query.

### Request headers

---

Refer to "[Common API items](#)".

### Request parameters

---

#### **q.field**

Specifies the following fields for query.

- alarm\_id: ID of the alarm
- enabled: Enable/disable alarm evaluation
- name: Name of the alarm
- user\_id: The ID of the user that created the alarm

If omitted, all of the targeted alarms are output.

Data type	Cardinality
String	0..10

### **q.op**

Specifies the comparison operator described below.

- If q.field is alarm\_id:  
eq: Equal to
- If q.field is enabled:  
eq: Equal to
- If q.field is name:  
eq: Equal to
- If q.field is user\_id:  
eq: Equal to

If omitted, "eq" is used.

Data type	Cardinality
String	0..10

### **q.value**

Specifies the following data value targeted for comparison.

- If q.field is alarm\_id:  
Alarm ID
- If q.field is enabled:  
true: Enabled  
false: Disabled
- If q.field is name:  
Alarm name
- If q.field is user\_id:  
User ID

Valid characters: Fullwidth characters, halfwidth alphanumeric characters and halfwidth symbols

Number of characters: 1 to 255

Data type	Cardinality
String	0..10

### **limit**

Maximum number of alarms to retrieve.

Range: 1 to 1440

If omitted, "1440" is used.

Data type	Cardinality
Int	0..1

### **offset**

Number of alarm items to offset.

If omitted, "0" is used.

Data type	Cardinality
Int	0..1

## Response headers

### Status

If normal, the following status is returned.

200: Normal completion

Refer to "[Common API error codes](#)" if the state is error.

Data type	Cardinality
Int	1..1

## Response elements

List (in JSON format) of the alarms based on the specified query.

Refer to "[type Alarm](#)" for details.

## Example of request

Example 1: List alarms.

```
curl -H 'X-Auth-Token: ImFkbWluVVJMIjogImh0dHA6Ly8xMC4x . . .' ¥
'https://telemetry.jp-east-1.cloud.global.fujitsu.com/v2/alarms'
```

Example 2: List alarms with alarm evaluation enabled.

```
curl -H 'X-Auth-Token: ImFkbWluVVJMIjogImh0dHA6Ly8xMC4x . . .' ¥
'https://telemetry.jp-east-1.cloud.global.fujitsu.com/v2/alarms?
q.field=enabled&q.value=true'
```

## Example of response

```
[
  {
    "alarm_actions": [],
    "alarm_id": "55c6a768-e8ab-487b-b724-892b0ad4fc2a",
    "description": "testAlarm",
    "enabled": true,
    "insufficient_data_actions": [],
    "name": "my_alarm",
    "ok_actions": [],
    "project_id": "39bd0d0341484a1a88f8ecdb1b21311c",
    "repeat_actions": false,
    "severity": "low",
    "state": "insufficient data",
    "state_timestamp": "2014-10-22T05:20:46.795969",
    "threshold_rule": {
      "comparison_operator": "gt",
      "evaluation_periods": 1,
      "exclude_outliers": false,
      "meter_name": "my_meter",
      "period": 120,
      "query": [],
      "statistic": "avg",
```

```

    "threshold": 0.0
  },
  "time_constraints": [],
  "timestamp": "2014-10-22T05:15:54.954117",
  "type": "threshold",
  "user_id": "9953aae1953a4caab3cc278e3018cf68"
}
]

```

## 4.1.6.6 Create alarm (POST /v2/alarms)

Creates an alarm.



Alarm evaluation (threshold monitoring) is performed in accordance with the monitoring interval (60 seconds) specified for the monitoring service. Therefore, depending on the timing of when an alarm is created, it may be evaluated only in the next monitoring cycle, not the current one.

### Request headers

Refer to "[Common API items](#)".

### Request parameters

None.

### Request body

Specifies information (in JSON format) on the alarm to be created.

Refer to "[type Alarm](#)" for details.

### Response headers

#### Status

If normal, the following status is returned.

201: Normal completion

If an error occurs, the following status code is returned in addition to "[Common API error codes](#)".

409: An alarm with the same name already exists

Data type	Cardinality
Int	1..1

### Response elements

Returns information (in JSON format) on the created alarm.

Refer to "[type Alarm](#)" for details.

### Example of request

For example, register an alarm followed by email transmission in an alarm status.

```

curl -X POST -H "Content-Type: application/json" ¥
-H "X-Auth-Token: ImFkbWluVVJMIjogImh0dHA6Ly8xMC4x . . ." ¥
-d requestBody "https://telemetry.jp-east-1.cloud.global.fujitsu.com/v2/alarms"

```

Request body (JSON format)

```
{
```

```

"alarm_actions": [
  {"service": "mail", "action": "send", "parameters": {} }],
"name": "my_alarm",
"repeat_actions": false,
"threshold_rule": {
  "meter_name": "my_meter",
  "threshold": 99.0
},
"type": "threshold"
}

```

## Example of response

```

{
  "alarm_actions": [
    {"service": "mail", "action": "send", "parameters": {} }],
  "alarm_id": "8aa66462-e17b-480f-9493-909ffdb2179e",
  "description": "Alarm when cpu_util is eq a avg of 99.0 over 60 seconds",
  "enabled": true,
  "insufficient_data_actions": [],
  "name": "my_alarm",
  "ok_actions": [],
  "project_id": "22ef168c58d94872a66c90d74297136a",
  "repeat_actions": false,
  "severity": "low",
  "state": "insufficient data",
  "state_timestamp": "2014-10-22T08:42:23.817799",
  "threshold_rule": {
    "comparison_operator": "eq",
    "evaluation_periods": 1,
    "exclude_outliers": false,
    "meter_name": "my_meter",
    "period": 60,
    "query": [],
    "statistic": "avg",
    "threshold": 99.0
  },
  "time_constraints": [],
  "timestamp": "2014-10-22T08:42:23.817799",
  "type": "threshold",
  "user_id": "13d97e9c31454563b8aa78b0b2e92385"
}

```

### 4.1.6.7 Show alarm details (GET /v2/alarms/{alarm\_id})

Show details on the specified alarm.

{alarm\_id}: ID of the alarm

#### Request headers

Refer to ["Common API items"](#).

#### Request parameters

None.

#### Response headers

##### Status

If normal, the following status is returned.



200: Normal completion

Refer to "[Common API error codes](#)" if the state is error.

Data type	Cardinality
Int	1..1

## Response elements

Information (in JSON format) on the specified alarm.

Refer to "[type Alarm](#)" for details.

## Example of request

Example: Show information on the specified alarm.

```
curl -H 'X-Auth-Token: ImFkbWluVWJMIjogImh0dHA6Ly8xMC4x . . .' ¥
' https://telemetry.jp-east-1.cloud.global.fujitsu.com/v2/
alarms/801bad91-1176-4143-8448-0f83ea755c88'
```

## Example of response

```
{
  "alarm_actions": [
    { "service": "mail", "action": "send", "parameters": {} }
  ],
  "alarm_id": "801bad91-1176-4143-8448-0f83ea755c88",
  "description": "Alarm when cpu_util is eq a avg of 99.0 over 60 seconds",
  "enabled": true,
  "insufficient_data_actions": [],
  "name": "my_alarm",
  "ok_actions": [],
  "project_id": "22ef168c58d94872a66c90d74297136a",
  "repeat_actions": false,
  "severity": "low",
  "state": "insufficient data",
  "state_timestamp": "2014-10-22T08:39:10.896493",
  "threshold_rule": {
    "comparison_operator": "eq",
    "evaluation_periods": 1,
    "exclude_outliers": false,
    "meter_name": "my_meter",
    "period": 60,
    "query": [],
    "statistic": "avg",
    "threshold": 99.0
  },
  "time_constraints": [],
  "timestamp": "2014-10-22T08:39:10.896493",
  "type": "threshold",
  "user_id": "13d97e9c31454563b8aa78b0b2e92385"
}
```

### 4.1.6.8 Update alarm (PUT /v2/alarms/{alarm\_id})

Updates the specified alarm.

{alarm\_id}: ID of the alarm.

## Request headers

---

Refer to ["Common API items"](#).

## Request parameters

---

None.

## Request body

---

Information (in JSON format) on the updated alarm.

The required fields ("name", "type", "threshold\_rule", "meter\_name", and "threshold") cannot be omitted. If other fields are omitted, the default values are set.

Refer to ["type Alarm"](#) for details.

## Response headers

---

### Status

If normal, the following status is returned.

200: Normal completion

Refer to ["Common API error codes"](#) if the state is error.

Data type	Cardinality
Int	1..1

## Response elements

---

Information (in JSON format) on the updated alarm.

Refer to ["type Alarm"](#) for details.

## Example of request

---

Example: Update the target alarm evaluation from "enabled" to "disabled".

```
curl -X PUT -H 'Content-Type: application/json' ¥  
-H 'X-Auth-Token: InFkbWluVVJMIjogImh0dHA6Ly8xMC4x . . . ' ¥  
-d requestBody 'https://telemetry.jp-east-1.cloud.global.fujitsu.com/v2/alarms/8278b049-  
ca2b-4e05-99c9-641c0b692edd'
```

Request body (JSON format)

```
{  
  "enabled": false,  
  "name": "my_alarm",  
  "threshold_rule": {  
    "comparison_operator": "gt",  
    "meter_name": "my_meter",  
    "threshold": 0.0  
  },  
  "type": "threshold"  
}
```

## Example of response

---

```
{  
  "alarm_actions": [],  
  "alarm_id": "8278b049-ca2b-4e05-99c9-641c0b692edd",  
  "description": "Alarm when my_meter is gt a avg of 0.0 over 60 seconds",  
  "enabled": false,  
  "insufficient_data_actions": [],
```

```

"name": "my_alarm",
"ok_actions": [],
"project_id": "39bd0d0341484a1a88f8ecdb1b21311c",
"repeat_actions": false,
"severity": "low",
"state": "insufficient data",
"state_timestamp": "2014-10-24T08:43:30.682976",
"threshold_rule": {
  "comparison_operator": "gt",
  "evaluation_periods": 1,
  "exclude_outliers": false,
  "meter_name": "my_meter",
  "period": 60,
  "query": [],
  "statistic": "avg",
  "threshold": 0.0
},
"time_constraints": [],
"timestamp": "2014-10-24T08:51:14.940014",
"type": "threshold",
"user_id": "9953aae1953a4caab3cc278e3018cf68"
}

```

#### 4.1.6.9 Delete alarm (DELETE /v2/alarms/{alarm\_id})

Deletes the specified alarm.  
{alarm\_id}: ID of the alarm.

##### Request headers

Refer to ["Common API items"](#).

##### Request parameters

None.

##### Response headers

###### Status

If normal, the following status is returned.

204: Normal completion

Refer to ["Common API error codes"](#) if the state is error.

Data type	Cardinality
Int	1..1

##### Response elements

None.

##### Example of request

Example: Delete the specified alarm.

```

curl -X DELETE -H "Content-Type: application/json" ¥
-H "X-Auth-Token: ImFkbWluVVJMIjogImh0dHA6Ly8xMC4x . . ." ¥
'https://telemetry.jp-east-1.cloud.global.fujitsu.com/v2/
alarms/801bad91-1176-4143-8448-0f83ea755c88'

```

### Example of response

---

None.

## 4.1.6.10 Show alarm state (GET /v2/alarms/{alarm\_id}/state)

---

Shows the state of the specified alarm.

{alarm\_id}: ID of the alarm.

### Request headers

---

Refer to "[Common API items](#)".

### Request parameters

---

None.

### Response headers

---

#### Status

If normal, the following status is returned.

200: Normal completion

Refer to "[Common API error codes](#)" if the state is error.

Data type	Cardinality
Int	1..1

### Response elements

---

#### None

State of the current alarm. One of the following values is used.

- ok
- insufficient data
- alarm

Data type	Cardinality	Parent element	Child element
Enum	1..1	None	None

### Example of request

---

Example: Show the state of the specified alarm.

```
curl -H 'X-Auth-Token: ImFkbWluVVJMIjogImh0dHA6Ly8xMC4x . . . ' ¥  
'https://telemetry.jp-east-1.cloud.global.fujitsu.com/v2/alarms/078af3e0-c197-44cc-  
b6b6-85de5ee5d548/state'
```

### Example of response

---

```
"alarm"
```

## 4.1.6.11 Update alarm state (PUT /v2/alarms/{alarm\_id}/state)

---

Sets the state of the specified alarm.

{alarm\_id}: ID of the alarm.

## Request headers

---

Refer to "[Common API items](#)".

## Request parameters

---

None.

## Request body

---

### state

Sets the state of the specified alarm.

- ok
- insufficient data
- alarm

It is necessary to enclose the value with double quotation marks ("").

Data type	Cardinality
Enum	1..1

## Response headers

---

### Status

If normal, the following status is returned.

200: Normal completion

Refer to "[Common API error codes](#)" if the state is error.

Data type	Cardinality
Int	1..1

## Response elements

---

### None

State of the updated alarm. One of the following states will be returned.

- ok
- insufficient data
- alarm

Data type	Cardinality	Parent element	Child element
Enum	1..1	None	None

## Example of request

---

Example: Update the state of the specified alarm to "alarm".

```
curl -X PUT -H 'X-Auth-Token: ImFkbWluVVJMIjogImh0dHA6Ly8xMC4x . . .' ¥  
-H 'Content-Type: application/json' -d '{"alarm": "alarm"}' ¥  
'https://telemetry.jp-east-1.cloud.global.fujitsu.com/v2/alarms/078af3e0-c197-44cc-  
b6b6-85de5ee5d548/state'
```

## Example of response

```
"alarm"
```

### 4.1.6.12 Show alarm history (GET /v2/alarms/{alarm\_id}/history)

Shows the history of the specified alarm, based on the specified query.

{alarm\_id}: ID of the alarm.

#### Request headers

Refer to "[Common API items](#)".

#### Request parameters

##### q.field

Specifies the following fields for query.

- timestamp: Datetime of the alarm history
- type: The type of alarm history

If omitted, the entire history of the specified alarm is output.

Data type	Cardinality
String	0..10

##### q.op

Specifies the comparison operator described below.

- If q.field is "timestamp":
  - gt: Greater than
  - ge: Greater than or equal to
  - lt: Less than
  - le: Less than or equal to
- If q.field is "type":
  - eq: Equal to

If omitted, "eq" is used.

Data type	Cardinality
String	0..10

##### q.value

Specifies the following data value targeted for comparison.

- If q.field is "timestamp":
  - Datetime (YYYY-MM-DDThh:mm:ss)
- If q.field is "type":
  - creation
  - rule change
  - state transition
  - deletion
  - action

Data type	Cardinality
String	0..10

### limit

Specifies the maximum number of alarm histories to retrieve.

Range: 1 to 1440

If omitted, "1440" is used.

Data type	Cardinality
Int	0..1

### offset

Specifies the number of alarm history offset items to retrieve.

If omitted, "0" is used.

Data type	Cardinality
Int	0..1

## Response headers

### Status

If normal, the following status is returned.

200: Normal completion

Refer to "[Common API error codes](#)" if the state is error.

Data type	Cardinality
Int	1..1

## Response elements

List (in JSON format) of the history of the specified alarm, based on the specified query.

Refer to "[type AlarmChange](#)" for details.

## Example of request

Example 1: Show the history of the specified alarm.

```
curl -H 'X-Auth-Token: ImFkbWluVGVJMIjogImh0dHA6Ly8xMC4x . . .' ¥
'https://telemetry.jp-east-1.cloud.global.fujitsu.com/v2/alarms/55c6a768-e8ab-487b-
b724-892b0ad4fc2a/history'
```

Example 2: Show the history of the specified alarm within the specified time range.

```
curl -H 'X-Auth-Token: ImFkbWluVGVJMIjogImh0dHA6Ly8xMC4x . . .' ¥
'https://telemetry.jp-east-1.cloud.global.fujitsu.com/v2/alarms/
55c6a768-e8ab-487b-b724-892b0ad4fc2a/history?q.field=timestamp&q.op=
gt&q.value=2014-10-22T00:00:00&q.field=timestamp&q.op=lt&q.value=
2014-10-24T00:00:00'
```

## Example of response

```
[
  {
    "alarm_id": "55c6a768-e8ab-487b-b724-892b0ad4fc2a",
    "detail": "{¥"state¥": ¥"alarm¥"}",
    "event_id": "0c83ea48-d2c0-4cf9-8e54-fbebc463c313",
    "on_behalf_of": "39bd0d0341484a1a88f8ecdb1b21311c",
    "project_id": "39bd0d0341484a1a88f8ecdb1b21311c",
    "timestamp": "2014-10-22T05:16:47.683476",
    "type": "state transition",
    "user_id": "9953aae1953a4caab3cc278e3018cf68"
  },
  {
    "alarm_id": "55c6a768-e8ab-487b-b724-892b0ad4fc2a",
    "detail": "{¥"alarm_actions¥": [], ¥"user_id¥":
¥"9953aae1953a4caab3cc278e3018cf68¥", ¥"name¥": ¥"my_alarm¥", ¥"state¥": ¥"insufficient
data¥", ¥"timestamp¥": ¥"2014-10-22T05:15:54.954117¥", ¥"enabled¥": true,
¥"state_timestamp¥": ¥"2014-10-22T05:15:54.954117¥", ¥"rule¥": {¥"meter_name¥":
¥"my_meter¥", ¥"evaluation_periods¥": 1, ¥"period¥": 120, ¥"statistic¥": ¥"avg¥",
¥"threshold¥": 0.0, ¥"query¥": [], ¥"comparison_operator¥": ¥"gt¥", ¥"exclude_outliers
¥": false}, ¥"alarm_id¥": ¥"55c6a768-e8ab-487b-b724-892b0ad4fc2a¥", ¥"time_constraints
¥": [], ¥"insufficient_data_actions¥": [], ¥"repeat_actions¥": false, ¥"ok_actions¥":
[], ¥"project_id¥": ¥"39bd0d0341484a1a88f8ecdb1b21311c¥", ¥"type¥": ¥"threshold¥",
¥"description¥": ¥"testAlarm¥"}",
    "event_id": "5846db80-b465-40c1-a158-e4a178ceb0ed",
    "on_behalf_of": "39bd0d0341484a1a88f8ecdb1b21311c",
    "project_id": "39bd0d0341484a1a88f8ecdb1b21311c",
    "timestamp": "2014-10-22T05:15:54.954117",
    "type": "creation",
    "user_id": "9953aae1953a4caab3cc278e3018cf68"
  }
]
```

### 4.1.6.13 List resources (GET /v2/resources)

Lists resources, based on the specified query.

#### Request headers

Refer to ["Common API items"](#).

#### Request parameters

##### q.field

Specifies the following fields for query.

- resource\_id: ID of the resource.
- source: Source meter.
- user\_id: ID of the user that created the meter.

If omitted, all resources are retrieved.

Data type	Cardinality
String	0..10

##### q.op

Specifies the comparison operator described below.

- If q.field is "resource\_id":
  - eq: Equal to
- If q.field is "source":



eq: Equal to

- If q.field is user\_id:

eq: Equal to

If omitted, "eq" is used.

Data type	Cardinality
String	0..10

### **q.value**

Query data value.

Specifies the following data value targeted for comparison.

- If q.field is "resource\_id":

Resource ID

- If q.field is "source":

Source

- If q.field is user\_id:

User ID

Valid characters: Fullwidth characters, halfwidth alphanumeric characters and halfwidth symbols

Number of characters: 1 to 255

Data type	Cardinality
String	0..10

### **meter\_links**

Specifies whether to retrieve meter link.

- 0: Do not retrieve
- Other than 0: Retrieve

If omitted, "other than 0" (retrieve) is used.

Data type	Cardinality
Int	0..1

### **limit**

Maximum number of resources to retrieve.

Range: 1 to 1440

If omitted, "1440" is used.

Data type	Cardinality
Int	0..1

### **offset**

Number of resource items to offset.

If omitted, "0" is used.

Data type	Cardinality
Int	0..1

## Response headers

---

### Status

If normal, the following status is returned.

200: Normal completion

Refer to "[Common API error codes](#)" if the state is error.

Data type	Cardinality
Int	1..1

## Response elements

---

List (in JSON format) of the resources, based on the specified conditions.

Refer to "[type Resource](#)" for details.

## Example of request

---

Example 1: List all resources.

```
curl -H 'X-Auth-Token: ImFkbWluVVJMIjogImh0dHA6Ly8xMC4x . . .' ¥  
'https://telemetry.jp-east-1.cloud.global.fujitsu.com/v2/resources'
```

Example 2: .List only up to a certain number of resources.

```
curl -H 'X-Auth-Token: ImFkbWluVVJMIjogImh0dHA6Ly8xMC4x . . .' ¥  
'https://telemetry.jp-east-1.cloud.global.fujitsu.com/v2/resources?limit=100'
```

## Example of response

---

```
[  
  {  
    "links": [  
      {  
        "href": "https://telemetry.jp-east-1.cloud.global.fujitsu.com/v2/resources/  
bef3d406-a050-4854-821e-c3024d286e03",  
        "rel": "self"  
      }  
    ],  
    "project_id": "7c4f776d782049108a6255aaff940629",  
    "resource_id": "bef3d406-a050-4854-821e-c3024d286e03",  
    "source": "fcx",  
    "user_id": "bc880de0722e4c78b2cb5afd9838ad11"  
  },  
  {  
    "links": [  
      {  
        "href": "https://telemetry.jp-east-1.cloud.global.fujitsu.com/v2/resources/  
d4415484-a4c1-4f05-a910-e55cba5e4984",  
        "rel": "self"  
      }  
    ],  
    "project_id": "7c4f776d782049108a6255aaff940629",  
    "resource_id": "d4415484-a4c1-4f05-a910-e55cba5e4984",  
    "source": "fcx",  
    "user_id": "bc880de0722e4c78b2cb5afd9838ad11"  
  }  
]
```

## 4.1.6.14 Show resource details (GET /v2/resources/{resource\_id})

---

Shows details on the specified resource.  
{resource\_id}: ID of the target resource.

### Request headers

---

Refer to "[Common API items](#)".

### Request parameters

---

None.

### Response headers

---

#### Status

If normal, the following status is returned.

200: Normal completion

Refer to "[Common API error codes](#)" if the state is error.

Data type	Cardinality
Int	1..1

### Response elements

---

Information (in JSON format) on the specified alarm.

Refer to "[type Resource](#)" for details.

### Example of request

---

Example: Show details on the specified resource.

```
curl -H 'X-Auth-Token: ImFkbWluVVJMIjogImh0dHA6Ly8xMC4x . . . ' ¥  
'https://telemetry.jp-east-1.cloud.global.fujitsu.com/v2/resources/  
instance-00007e28-5082f0cb-4288-4779-b45c-666feb03c663-tapaaf7378c-f6'
```

### Example of response

---

```
{  
  "links": [  
    {  
      "href": "https://telemetry.jp-east-1.cloud.global.fujitsu.com/v2/resources/  
instance-00007e28-5082f0cb-4288-4779-b45c-666feb03c663-tapaaf7378c-f6",  
      "rel": "self"  
    },  
    {  
      "href": "https://telemetry.jp-east-1.cloud.global.fujitsu.com/v2/meters/  
fcx.compute.network.incoming.bytes.rate?  
q.field=resource_id&q.value=instance-00007e28-5082f0cb-4288-4779-b45c-666feb03c663-  
tapaaf7378c-f6",  
      "rel": "fcx.compute.network.incoming.bytes.rate"  
    },  
    {  
      "href": "https://telemetry.jp-east-1.cloud.global.fujitsu.com/v2/meters/  
fcx.compute.network.outgoing.bytes.rate?"br/>    }  
  ]  
}
```

```

q.field=resource_id&q.value=instance-00007e28-5082f0cb-4288-4779-b45c-666feb03c663-
tapaaf7378c-f6",
    "rel": "fcx.compute.network.outgoing.bytes.rate"
  },
  {
    "href": "https://telemetry.jp-east-1.cloud.global.fujitsu.com/v2/meters/
fcx.compute.network.incoming.bytes?
q.field=resource_id&q.value=instance-00007e28-5082f0cb-4288-4779-b45c-666feb03c663-
tapaaf7378c-f6",
    "rel": "fcx.compute.network.incoming.bytes"
  },
  {
    "href": "https://telemetry.jp-east-1.cloud.global.fujitsu.com/v2/meters/
fcx.compute.network.outgoing.bytes?
q.field=resource_id&q.value=instance-00007e28-5082f0cb-4288-4779-b45c-666feb03c663-
tapaaf7378c-f6",
    "rel": "fcx.compute.network.outgoing.bytes"
  }
],
"project_id": "7c4f776d782049108a6255aaff940629",
"resource_id": "instance-00007e28-5082f0cb-4288-4779-b45c-666feb03c663-tapaaf7378c-f6",
"source": "fcx",
"user_id": "bc880de0722e4c78b2cb5afd9838ad11"
}

```

## 4.1.7 Data type

---

### 4.1.7.1 type Meter

---

#### **meter\_id**

ID of the meter.

Data type	Cardinality	Parent element	Child element
String	1..1	None	None

#### **name**

Name of the meter.

Data type	Cardinality	Parent element	Child element
String	1..1	None	None

#### **project\_id**

ID of the project that owns the resource.

Data type	Cardinality	Parent element	Child element
String	1..1	None	None

#### **resource\_id**

ID of the resource.

Data type	Cardinality	Parent element	Child element
String	1..1	None	None

### **source**

Source of the resource.

Data type	Cardinality	Parent element	Child element
String	1..1	None	None

### **type**

Type of the meter.

- gauge: Discrete value, fluctuating value
- delta: Differential value
- cumulative: Cumulative value

Data type	Cardinality	Parent element	Child element
Enum	1..1	None	None

### **unit**

Unit of the meter.

Data type	Cardinality	Parent element	Child element
String	1..1	None	None

### **user\_id**

ID of the user who created the resource or the user who last updated the meter.

Data type	Cardinality	Parent element	Child element
String	1..1	None	None

## 4.1.7.2 type OldSample

---

### **counter\_name**

Name of the meter.

Valid characters: Fullwidth characters, halfwidth alphanumeric characters and halfwidth symbols

Number of characters: 1 to 255

Must be the same value as  $\{meterName\}$  specified in the URL during creation. Note that the specified value cannot start with "fcx. (dot)".

Data type	Cardinality	Parent element	Child element
String	1..1	None	None

### **counter\_type**

Type of the meter.

- gauge: Discrete value, fluctuating value
- delta: Differential value
- cumulative: Cumulative value

Data type	Cardinality	Parent element	Child element
Enum	1..1	None	None

**counter\_unit**

Unit of the meter.

Valid characters: Halfwidth alphanumeric characters and halfwidth symbols

Number of characters: 1 to 255

Data type	Cardinality	Parent element	Child element
String	1..1	None	None

**counter\_volume**

The actual measured value

Range: -1E+308 to +1E+308

Data type	Cardinality	Parent element	Child element
Float	1..1	None	None

**message\_id**

This item is not specified during creation of the sample.

Note that this item may not be returned or may be returned with null value.

Data type	Cardinality	Parent element	Child element
String	0..1	None	None

**project\_id**

ID of the project that owns the resource.

If omitted during creation of the sample, the project\_id of the user that executed the API is used.

Data type	Cardinality	Parent element	Child element
String	0..1	None	None

**recorded\_at**

Timestamp (UTC) of creation of the sample

Format: "YYYY-MM-DDThh:mm:ss.SSSSSS"

Even if this value is specified during creation of the sample, it will be ignored (a value is set automatically).

Data type	Cardinality	Parent element	Child element
Datetime	0..1	None	None

**resource\_id**

ID of the resource.

Valid characters: Fullwidth characters, halfwidth alphanumeric characters and halfwidth symbols

Number of characters: 1 to 255

Data type	Cardinality	Parent element	Child element
String	1..1	None	None

### **resource\_metadata**

Arbitrary metadata associated with the resource.

Contains multiple metadata key pairs in the following JSON format:

```
"{key1:value1, key2:value2, . . .}"
```

Valid characters: Fullwidth characters, halfwidth alphanumeric characters and halfwidth symbols

Number of characters: 1 to 255

Maximum number of metadata items that can be specified: 10

Key names containing more than one period (.) will be returned with the second and subsequent periods replaced with colons (:). If this is an issue, use another character such as underscore (\_) instead.

Data type	Cardinality	Parent element	Child element
dict(String,String)	0..1	None	None

### **source**

Source where the sample comes from.

Valid characters: Fullwidth characters, halfwidth alphanumeric characters and halfwidth symbols

Number of characters: 1 to 255

The value is recorded using the format below (where *project\_id* is the project\_id specified during creation of the sample).

```
"project_id:source"
```

If omitted during creation of the sample, this element will be recorded as "fcx".

Data type	Cardinality	Parent element	Child element
String	0..1	None	None

### **timestamp**

Timestamp (UTC) of measurement of the sample.

Format: "YYYY-MM-DDThh:mm:ss.SSS"

hh, mm, ss and SSS can be omitted.

If omitted, the time will become "0".

Example: If "2014-07-07T09:55" is specified, the timestamp becomes "2014-07-07T09:55:00.000".

The valid range is from two weeks beforehand to 2 hours afterward.

If omitted during creation of the sample, the value will be set automatically.

Data type	Cardinality	Parent element	Child element
Datetime	0..1	None	None

### **user\_id**

ID of the user who created the resource or the user who last updated the meter.

If omitted during creation of the sample, the ID of the user that executed the API is used.

Data type	Cardinality	Parent element	Child element
String	0..1	None	None

### 4.1.7.3 type Statistics

---

#### **aggregate**

Specified aggregate value.

This is only output when aggregate.func is specified in the request parameter.

Data type	Cardinality	Parent element	Child element
dict(String,Float)	0..1	None	None

#### **avg**

Average value of the aggregate result.

Data type	Cardinality	Parent element	Child element
Float	0..1	None	None

#### **count**

Number of samples in the aggregate result.

Data type	Cardinality	Parent element	Child element
int	0..1	None	None

#### **duration**

Difference in time between duration\_end and duration\_start (seconds).

Data type	Cardinality	Parent element	Child element
Float	0..1	None	None

#### **duration\_end**

Datetime (UTC) of the newest sample among the target samples.

Format: "YYYY-MM-DDThh:mm:ss"

Data type	Cardinality	Parent element	Child element
Datetime	0..1	None	None

#### **duration\_start**

Datetime (UTC) of the oldest sample among the target samples.

Format: "YYYY-MM-DDThh:mm:ss"

Data type	Cardinality	Parent element	Child element
Datetime	0..1	None	None

#### **groupby**

Field information of the aggregation group.

This is only output when groupby is specified in the request parameter.

Data type	Cardinality	Parent element	Child element
dict(String,String)	0..1	None	None



**max**

Maximum value of the aggregate result.

Data type	Cardinality	Parent element	Child element
Float	0..1	None	None

**min**

Minimum value of the aggregate result.

Data type	Cardinality	Parent element	Child element
Float	0..1	None	None

**period**

The value specified for period in the request parameter.

The difference in time (seconds) between the period end (period\_end) and period start (period\_start).

Data type	Cardinality	Parent element	Child element
int	0..1	None	None

**period\_end**

End datetime (UTC) of the aggregation period (period).

Format: "YYYY-MM-DDThh:mm:ss"

Data type	Cardinality	Parent element	Child element
Datetime	0..1	None	None

**period\_start**

Start datetime (UTC) of the aggregation period (period).

Format: "YYYY-MM-DDThh:mm:ss"

Data type	Cardinality	Parent element	Child element
Datetime	1..1	None	None

**sum**

Total value of the aggregate result.

Data type	Cardinality	Parent element	Child element
Float	0..1	None	None

**unit**

Unit of the aggregate result.

Data type	Cardinality	Parent element	Child element
String	0..1	None	None

## 4.1.7.4 type Alarm

- The alarm setting method for virtual server auto scaling and automatic recovery by scaling group (AutoScalingGroup) definition must be configured using a Heat template. Refer to the "Features Handbook" and the "Heat Template Specifications" for details.

### **alarm\_actions**

Actions to execute when the alarm state changes to "alarm".

Specify "[type AlarmAction](#)" in JSON format.

Maximum number of lists: 5

Example:

```
"{\\"service\\": \\"mail\\", \\"action\\": \\"send\\", \\"parameters\\": {}}
```

Refer to "[type AlarmAction](#)" for details.

Data type	Cardinality	Parent element	Child element
list(AlarmAction)	0..1	None	None

### **alarm\_id**

ID of the alarm.

Even if this value is specified, it will be ignored.

Data type	Cardinality	Parent element	Child element
String	0..1	None	None

### **combination\_rule**

Monitoring settings using a combination of other alarms.

This item is required when "combination" is specified for type.

"combination\_rule" and "threshold\_rule" are mutually exclusive.

Refer to "[type AlarmCombinationRule](#)" for details.

Data type	Cardinality	Parent element	Child element
AlarmCombinationRule	0..1	None	None

### **description**

Alarm description

Valid characters: Fullwidth characters, halfwidth alphanumeric characters and halfwidth symbols

Number of characters: 1 to 1023

If omitted during creation, a value based on the specified threshold\_rule or the content of the combination\_rule is used.

Data type	Cardinality	Parent element	Child element
String	0..1	None	None

### **enabled**

Enable/disable alarm evaluation.

- true: Enabled
- false: Disabled

If false, alarm evaluation (threshold value monitoring) will not be performed.

If omitted during creation, "true" is used.

Data type	Cardinality	Parent element	Child element
Boolean	0..1	None	None

### **insufficient\_data\_actions**

Actions to execute when the alarm state changes to "insufficient data".

Specify "[type AlarmAction](#)" in JSON format.

Maximum number of lists: 5

Example:

```
"{"service": "mail", "action": "send", "parameters": {}}"
```

Refer to "[type AlarmAction](#)" for details.

Data type	Cardinality	Parent element	Child element
list(AlarmAction)	0..1	None	None

### **name**

Alarm name.

Specify a unique value within the project to which the user that creates the alarm belongs.

Valid characters: Fullwidth characters, halfwidth alphanumeric characters and halfwidth symbols

Number of characters: 1 to 255

Data type	Cardinality	Parent element	Child element
String	1..1	None	None

### **ok\_actions**

Actions to execute when the alarm state changes to "ok"

Specify "[type AlarmAction](#)" in JSON format.

Maximum number of lists: 5

Example:

```
"{"service": "mail", "action": "send", "parameters": {}}"
```

Refer to "[type AlarmAction](#)" for details.

Data type	Cardinality	Parent element	Child element
list(AlarmAction)	0..1	None	None

### **project\_id**

Project ID

If omitted during creation, the project\_id of the user that executed the API is used.

Data type	Cardinality	Parent element	Child element
String	0..1	None	None

### **repeat\_actions**

Whether the actions should be re-executed.

Specify whether the actions should be re-executed on each alarm evaluation, even if the alarm state does not change.

- true: Re-execute the action
- false: Do not re-execute the action

If omitted during creation, "false" is used.

If "repeat\_actions" is set to true, actions may be executed on each alarm evaluation, depending on the alarm state. Be aware that a large volume of emails may be sent, particularly if an email send action is specified for the alarm.

If you want to change the value of "repeat\_actions" for each action, create each action as a separate alarm.

Data type	Cardinality	Parent element	Child element
Boolean	0..1	None	None

### **state**

Alarm state. One of the following values is used.

- ok
- insufficient data
- alarm

The alarm state immediately after creation is "insufficient data". The appropriate state is then set on the next alarm evaluation (approximately 1 minute).

Data type	Cardinality	Parent element	Child element
Enum	1..1	None	None

### **state\_timestamp**

The datetime (UTC) when the alarm state was last updated.

Format: "YYYY-MM-DDThh:mm:ss.SSSSSS"

Even if this value is specified, it will be ignored.

Data type	Cardinality	Parent element	Child element
Datetime	0..1	None	None

### **threshold\_rule**

Alarm threshold monitoring setting.

This item is required when "threshold" is specified for type.

"combination\_rule" and "threshold\_rule" are mutually exclusive.

Refer to "[type AlarmThresholdRule](#)" for details.

Data type	Cardinality	Parent element	Child element
AlarmThresholdRule	0..1	None	None

### **time\_constraints**

Sets the expiry period of alarm evaluation.

Refer to "[type AlarmTimeConstraint](#)" for details.

Data type	Cardinality	Parent element	Child element
AlarmTimeConstraint	0..1	None	None

### **timestamp**

Last update datetime of the alarm.

Format: "YYYY-MM-DDThh:mm:ss.SSSSSS"

Even if this value is specified, it will be ignored.

Data type	Cardinality	Parent element	Child element
Datetime	0..1	None	None

### **type**

Alarm type. Specify the following:

- threshold: Alarm triggered based on threshold value
- combination: Alarm comprising a combination of alarms

Data type	Cardinality	Parent element	Child element
Enum	1..1	None	None

### **user\_id**

ID of the user that created the alarm.

If omitted during creation, the ID of the user that executed the API is used.

Data type	Cardinality	Parent element	Child element
String	0..1	None	None

### **severity**

Severity of the alarm. Specify one of the following:

- low
- moderate
- critical

If omitted during creation, "low" is used.

This parameter is used to identify the alarm, and has no effect on operation of alarm evaluation (threshold monitoring).

Data type	Cardinality	Parent element	Child element
String	0..1	None	None

## **4.1.7.5 type AlarmAction**

---

- Trust token for executing actions

The trust token of the user executing the API is created during the API call for new alarm registration or alarm updating (only for the first-time execution as that user).

This trust token is used for the execution of actions and should not be deleted. The trust token will be created with the following values for their attributes (refer to the management API for details on the trust token):

- expires\_at: null
- impersonation: false
- project\_id: Project ID of the user that executed the API for creating an alarm or updating an alarm

- remaining\_uses: null
- trustee\_user\_id: User ID of the monitoring service (trustee)
- trustor\_user\_id: ID of the user (trustor) that executed the API for creating an alarm or updating an alarm

If this trust token is deleted by mistake, if the trust token trustor user (trustor\_user\_id) is deleted, or if the user role of the trust token trustor user (trustor\_user\_id) is changed or deleted, action execution results in an error.

In that event, re-create a trust token by executing the API for new alarm registration or alarm updating.

- Email recipients of email send actions  
Email recipients must be users assigned to the following roles in their own domain:
  - Contractor (cpf\_org\_manager)
  - Administrator (cpf\_admin)
- The alarm setting method for virtual server auto scaling and automatic recovery by scaling group (AutoScalingGroup) definition must be configured using a Heat template. Refer to the "Features Handbook" and the "Heat Template Specifications" for details.

### **service**

Specifies the target service of an action.

- compute: Compute
- mail: Email

Data type	Cardinality	Parent element	Child element
Enum	0..1	None	None

### **action**

Specifies the action to be executed.

The actions that can be specified differ for each service.

- If the service is compute:
  - stop: Stop the instance
  - terminate: Terminate the instance
- If the service is mail:
  - send: Send an email

Data type	Cardinality	Parent element	Child element
String	0..1	None	None

### **parameters**

Specifies the parameters of an action.

The content to be specified differs for each service.

- If the service is compute:
  - server\_id: ID of the target instance.
- If the service is mail:
  - Specify a null object ({} ) for the value.

Data type	Cardinality	Parent element	Child element
String	0..1	None	None

## 4.1.7.6 type AlarmThresholdRule

- The alarm setting method for virtual server auto scaling and automatic recovery by scaling group (AutoScalingGroup) definition must be configured using a Heat template. Refer to the "Features Handbook" and the "Heat Template Specifications" for details.

### **comparison\_operator**

Specifies the comparison operator to use against the sample value statistics and threshold value (if "gt" is specified, the comparison performed will be "statistic > threshold").

- eq: Equal to
- gt: Greater than
- ge: Greater than or equal to
- lt: Less than
- le: Less than or equal to

If omitted, "eq" is used.

Data type	Cardinality	Parent element	Child element
Enum	0..1	None	None

### **evaluation\_periods**

Number of periods for evaluating the threshold.

Range: 1 to "period" x evaluation\_periods <= 86400.

If omitted, "1" is used.

Data type	Cardinality	Parent element	Child element
int	0..1	None	None

### **exclude\_outliers**

Specifies whether to exclude sample data that lies outside a certain standard for alarm evaluation.

- true: Exclude
- false: Do not exclude

Find the standard deviation of the target sample data, and exclude sample data that lies more than two standard deviations outside the mean.

If omitted, "false" is used.

Data type	Cardinality	Parent element	Child element
Boolean	0..1	None	None

### **meter\_id**

Name of the meter for threshold monitoring.

Data type	Cardinality	Parent element	Child element
String	1..1	None	None

### **period**

Period for determining the threshold (seconds).

Range: 60 to period x evaluation\_periods <= 86400 (multiples of 60)

If omitted, 60 seconds is used.

Data type	Cardinality	Parent element	Child element
int	0..1	None	None

### **query**

Query setting for searching for samples to calculate the statistics.

Maximum number of lists: 10

"field": May contain the following values for the field to be used in the comparison:

- resource\_id: ID of the resource.
- source: Source meter.
- user\_id: ID of the user that created the meter.

"op": May contain the following operators to be used in the comparison:

- If field is the resource\_id:  
eq: Equal to
- If field is the source:  
eq: Equal to
- If field is the user\_id:  
eq: Equal to

"value": May contain the following values to be used in the comparison:

- If field is the resource\_id:  
Resource ID
- If field is the source:  
Source
- If field is the user\_id:  
User ID

Valid characters: Fullwidth characters, halfwidth alphanumeric characters and halfwidth symbols

Number of characters: 1 to 255

If the project of the user that issued the API for creation differs from the project specified using the "project\_id", the following will be inserted automatically:

```
{  
  "field": "project_id",  
  "value": "valueSpecifiedUsingProject_Id",  
  "op": "eq"  
}
```

By default, samples are searched for based only on the above project\_id as the searched field.

Refer to "[type Query](#)" for details.

Data type	Cardinality	Parent element	Child element
list(Query)	0..1	None	None

### **statistic**

Specifies the aggregation method to be used in the comparison against the threshold.

- avg: average value
- count: number of samples
- max: maximum value
- min: minimum value



- sum: total value

If omitted, "avg" is used.

Data type	Cardinality	Parent element	Child element
Enum	0..1	None	None

### **threshold**

Specifies the threshold.

Range: -1E+308 to +1E+308

Data type	Cardinality	Parent element	Child element
float	1..1	None	None

## 4.1.7.7 type AlarmCombinationRule

---

### **alarm\_ids**

List of alarm IDs to be combined.

Maximum number of lists: 5

Data type	Cardinality	Parent element	Child element
list(String)	1..1	None	None

### **operator**

Specifies the evaluation operator for the combination:

- or
- and

If omitted, "and" is used.

Data type	Cardinality	Parent element	Child element
Enum	0..1	None	None

## 4.1.7.8 type AlarmTimeConstraint

---

### **description**

Description of the time constraint.

Valid characters: Fullwidth characters, halfwidth alphanumeric characters and halfwidth symbols

Number of characters: 1 to 1023

If omitted during creation, a value based on the content of the specified start and duration is used.

Data type	Cardinality	Parent element	Child element
String	0..1	None	None

### **duration**

Duration (seconds) of the constraint.

The timeframe calculated by adding "duration" to the start datetime (specified in "start") becomes the alarm evaluation expiry period.

Range: 60 to 86400

Data type	Cardinality	Parent element	Child element
int	1..1	None	None

#### **name**

Name of the constraint.

Valid characters: Fullwidth characters, halfwidth alphanumeric characters and halfwidth symbols

Number of characters: 1 to 255

Data type	Cardinality	Parent element	Child element
String	1..1	None	None

#### **start**

Start datetime of the constraint, in cron format.

"Minutes hours days months day of week"

The range of each of the field values is as follows (refer to the cron format for details).

- Minutes: 0 to 59
- Hours: 0 to 23
- Days: 1 to 31
- Day of week: 0 to 7 (0, 7: Sunday, 1: Monday, . . . , 6: Saturday)

Example: If the start time is 8:50 daily:

"50 8 \* \* \*"

Data type	Cardinality	Parent element	Child element
cron	1..1	None	None

#### **timezone**

Time zone of the datetime specified in "start".

Specify a time zone prescribed by IANA.

Example: "Asia/Tokyo"

If omitted, "UTC" is used.

Data type	Cardinality	Parent element	Child element
Datetime	1..1	None	None

### 4.1.7.9 type AlarmChange

---

#### **alarm\_id**

ID of the alarm.

Data type	Cardinality	Parent element	Child element
String	0..1	None	None

#### **detail**

Details (in JSON format) of the change.

Refer to "Table 2: Details of the alarm history" below for details.

Data type	Cardinality	Parent element	Child element
String	0..1	None	None

**event\_id**

ID of the change event.

Data type	Cardinality	Parent element	Child element
String	0..1	None	None

**on\_behalf\_of**

ID of the project.

Data type	Cardinality	Parent element	Child element
cron	0..1	None	None

**project\_id**

ID of the project.

Data type	Cardinality	Parent element	Child element
String	0..1	None	None

**timestamp**

Change datetime of the alarm.

Format: "YYYY-MM-DDThh:mm:ss.SSSSSS"

Data type	Cardinality	Parent element	Child element
Datetime	0..1	None	None

**type**

Type of alarm history.

- creation: Create
- change: Change
- state transition: State transition
- deletion: Delete
- action: Action

Data type	Cardinality	Parent element	Child element
Enum	0..1	None	None

**user\_id**

ID of the user.

Data type	Cardinality	Parent element	Child element
String	0..1	None	None

**Table 2: Details of the alarm history**

type	Description
creation	Information (in JSON format) on a new alarm. Refer to " <a href="#">type Alarm</a> " for details (note that fields such as "threshold_rule" and "combination_rule" are changed to "rule").
change	Information (in JSON format) on a changed alarm. Refer to " <a href="#">type Alarm</a> " for details (note that fields such as "threshold_rule" and "combination_rule" are changed to "rule").
state transition	Value (in JSON format) of the "state" field of an alarm after transition.
deletion	Information (in JSON format) on a deleted alarm. Refer to " <a href="#">type Alarm</a> " for details (note that fields such as "threshold_rule" and "combination_rule" are changed to "rule").
action	Contain the following (in JSON format): <ul style="list-style-type: none"> <li>• action_state: Execution result of the action <ul style="list-style-type: none"> <li>• Succeeded: If the action was successful</li> <li>• Failed: If the action failed</li> </ul> </li> <li>• action: Information of the executed action</li> <li>• region: Region name</li> <li>• reason: Reason why the action was executed</li> <li>• alarm: Information on the alarm <ul style="list-style-type: none"> <li>• Refer to "<a href="#">type Alarm</a>" for details (note that fields such as "threshold_rule" and "combination_rule" are changed to "rule").</li> </ul> </li> <li>• previous: State of the alarm before transition</li> <li>• error: Error information of the action execution result (status code).</li> <li>• error_message: Error message of alarm execution (if action_state is "Failed").</li> </ul>

If action\_state is "Failed", check the relevant details based on the action service and value of "error":

**Table 3: Action execution errors**

Target service	error	Description	Action
autoscale	401	The user does not have the privileges to perform operations on the specified stack.	Create the alarm again as a user that has privileges to perform operations on the target stack.
	404	The specified stack or resource does not exist.	Check the stack ID, stack name, and resource name, and change them to the correct value if necessary.
	500	Internal error.	Contact Fujitsu technical support.
	503	The service cannot be used temporarily.	Contact Fujitsu technical support.

Target service	error	Description	Action
compute	401	The user does not have the privileges to perform operations on the specified instance.	Create the alarm again as a user that has privileges to perform operations on the target instance.
	404	The specified instance does not exist.	Check the specified instance ID, and change it to the correct value if necessary.
	500	Internal error.	Contact Fujitsu technical support.
	503	The service cannot be used temporarily.	Contact Fujitsu technical support.
queue	400	The specified queue does not exist.	Check the specified queue name, and change it to the correct value if necessary.
	403	The number of messages in the queue has reached the upper limit or the user does not have privileges to perform operations on the specified queue. <=Delete=>	If the number of messages in the queue has reached the upper limit, delete messages from the queue. If the user does not have privileges, create the alarm again as a user that has privileges to perform operations on the specified queue.
	500	Internal error.	Contact Fujitsu technical support.
	503	The service cannot be used temporarily.	Contact Fujitsu technical support.
mail	500	Internal error.	Contact Fujitsu technical support.
	503	The service cannot be used temporarily.	Contact Fujitsu technical support.

#### 4.1.7.10 type Query

##### **field**

Name of the field to be used in the query.

Data type	Cardinality	Parent element	Child element
String	1..1	None	None

##### **op**

Specifies the comparison operator described below.

- eq: Equal to
- gt: Greater than
- ge: Greater than or equal to
- lt: Less than
- le: Less than or equal to

If omitted, "eq" is used.

Data type	Cardinality	Parent element	Child element
Enum	0..1	None	None

#### **value**

Query data value.

Data type	Cardinality	Parent element	Child element
String	1..1	None	None

### 4.1.7.11 type Resource

---

#### **links**

List containing a self link and associated meter links.

Data type	Cardinality	Parent element	Child element
list(Link)	1..1	None	None

#### **project\_id**

ID of the project that owns the resource.

Data type	Cardinality	Parent element	Child element
String	1..1	None	None

#### **resource\_id**

ID of the resource.

Data type	Cardinality	Parent element	Child element
String	1..1	None	None

#### **source**

Source of the resource.

Data type	Cardinality	Parent element	Child element
String	1..1	None	None

#### **user\_id**

ID of the user who created the resource or the user who last updated the meter.

Data type	Cardinality	Parent element	Child element
String	1..1	None	None

### 4.1.7.12 type Link

---

#### **href**

URL of link.

Data type	Cardinality	Parent element	Child element
String	1..1	None	None

### rel

Name of link.

- self: Link to own resource
- *meterName*: Link to meter (sample)

Data type	Cardinality	Parent element	Child element
String	1..1	None	None

## 4.1.8 Note: How to troubleshoot alarm actions

---

### 4.1.8.1 Note: How to troubleshoot alarm actions

---

This section describes how to use the API to perform a check when an action specified for an alarm is not executed. Perform the check in the following order. The IDs and timeframes of the target alarms are necessary to perform the check.

1. Check the alarm history
2. Check the alarm details
3. Check the meter statistics

### 4.1.8.2 Check the alarm history

---

Execute the show alarm history API to check the action execution state of the alarm.

#### Example format

---

```
curl -s -H "X-Auth-Token: . . ." "https://telemetry.jp-east-1.cloud.global.fujitsu.com/v2/alarms/alarmId/history?q.field=timestamp&q.op=ge&q.value=startDatetime&q.field=timestamp&q.op=lt&q.value=endDatetime"
```

- Replace *alarmId* with the ID of the alarm.
- Specify the datetimes using the format "YYYY-MM-DDThh%3Amm%3Ass".
  - YYYY: Year, MM: Month, DD: Day, hh: Hour, mm: minutes, ss: seconds. The first half of the query concerns the start datetime, and the latter half concerns the end datetime (*startDatetime* <= timestamp < *endDatetime*). Specify the timeframe to be checked (in UTC).
  - "%3A" is the encoded value for ":". Specify it as is.
- Refer to "[Show alarm history \(GET /v2/alarms/{alarm\\_id}/history\)](#)" for details on the parameters.

#### Example of request

---

The example below retrieves the history entries for the alarm "2a5d914d-ac5c-474d-8550-58098f668a66" recorded on July 18, 2015 between 00:00:00 and 01:00:00(UTC):

```
curl -s -H "X-Auth-Token: . . ." "https://telemetry.jp-east-1.cloud.global.fujitsu.com/v2/alarms/2a5d914d-ac5c-474d-8550-58098f668a66/history?q.field=timestamp&q.op=ge&q.value=2015-07-18T00%3A00%3A00&q.field=timestamp&q.op="
```

lt&q. value=2015-07-18T01%3A00%3A00"

## Example of response

```
[
  {
    "alarm_id": "2a5d914d-ac5c-474d-8550-58098f668a66",
    "detail": "{\n  \"notification_resource\": \"\", \"region\": \"jp-east-1\", \"action_state\": \"Succeeded\", \"reason\": \"Remaining as alarm due to 1 samples outside threshold, most recent: 0.0\", \"error\": \"\", \"action\": \"http://orchestration-cfn.jp-east-1.internal.cloud.global.fujitsu.com/v1/signal/arn%3Aopenstack%3Aheat%3A%3Aacd1e2866ebda406bb16b8196022e2692%3Astacks%2Faz1_test_stack_vm%2F548ae98a-a0bc-43bd-aff5-a4146f783585%2Fresources%2Fscalein_policy?Timestamp=2015-07-17T05%3A34%3A21Z&SignatureMethod=HmacSHA256&AWSAccessKeyId=cab5efa3009b4f00817b354b0744601e&SignatureVersion=2&Signature=FKLe2NApryuVZUCybV%2F%2Ffmd21xw%2BYApUSridiKE5M%2FE%3D\", \"alarm\": {\n    \"alarm_actions\": [\n      \"http://orchestration-cfn.jp-east-1.internal.cloud.global.fujitsu.com/v1/signal/arn%3Aopenstack%3Aheat%3A%3Aacd1e2866ebda406bb16b8196022e2692%3Astacks%2Faz1_test_stack_vm%2F548ae98a-a0bc-43bd-aff5-a4146f783585%2Fresources%2Fscalein_policy?Timestamp=2015-07-17T05%3A34%3A21Z&SignatureMethod=HmacSHA256&AWSAccessKeyId=cab5efa3009b4f00817b354b0744601e&SignatureVersion=2&Signature=FKLe2NApryuVZUCybV%2F%2Ffmd21xw%2BYApUSridiKE5M%2FE%3D\"], \"ok_actions\": [], \"description\": \"Scale-in if the average CPU < 15% for 1 minutes\", \"state\": \"alarm\", \"timestamp\": \"2015-07-17T05:34:28.674867\", \"enabled\": true, \"state_timestamp\": \"2015-07-17T05:35:52.188434\", \"rule\": {\n      \"meter_name\": \"fcx.compute.cpu_util\", \"evaluation_periods\": 1, \"period\": 60, \"statistic\": \"avg\", \"threshold\": 15.0, \"query\": [\n        {\n          \"field\": \"metadata.user_metadata.groupname\", \"value\": \"az1_test_stack_vm3-auto_scaling_group-h5ve5jij5pbf\", \"op\": \"eq\"},\n        {\n          \"field\": \"project_id\", \"value\": \"c52b2f54d96a4c28ba9a318eae9c843c\", \"op\": \"eq\"}\n      ]}, \"comparison_operator\": \"lt\", \"exclude_outliers\": false}, \"alarm_id\": \"2a5d914d-ac5c-474d-8550-58098f668a66\", \"time_constraints\": [], \"insufficient_data_actions\": [], \"repeat_actions\": true, \"user_id\": \"2cc0568f5daf4ac694a49f3b32a42dfc\", \"project_id\": \"c52b2f54d96a4c28ba9a318eae9c843c\", \"type\": \"threshold\", \"name\": \"az1_test_stack_vm3-scalein_alarm-fzps2blpsiqi\", \"previous\": \"alarm\"},\n    \"event_id\": \"02c06d0e-f78d-463c-a775-c63b337e771d\", \"on_behalf_of\": \"c52b2f54d96a4c28ba9a318eae9c843c\", \"project_id\": \"c52b2f54d96a4c28ba9a318eae9c843c\", \"timestamp\": \"2015-07-18T00:01:00.182820\", \"type\": \"action\", \"user_id\": \"2cc0568f5daf4ac694a49f3b32a42dfc\"
  },
  ...
]
```

- The action execution history is shown for items with "action" set for the "type" value.
- If the "action" history exists, check the "action\_state" value inside the "detail" values.
  - If "action\_state" is "Succeeded", this indicates that the action was executed successfully.
  - If "action\_state" is "Failed", this indicates that the action was executed but ended in error. Check the "error" and "error\_message" values inside the "detail" values, then refer to [Table 3: Action execution errors](#) and address the error accordingly.
  - If the "action" history does not exist, the action has not been executed. Perform the steps below to check if the alarm threshold has been exceeded.

### 4.1.8.3 Check the alarm details

Execute the show alarm details API to check details of the alarm.



## Example format

---

```
curl -s -H "X-Auth-Token: . . ." "https://telemetry.jp-east-1.cloud.global.fujitsu.com/v2/alarms/alarmId"
```

- Replace *alarmId* with the ID of the alarm.
- Refer to ["Show alarm details \(GET /v2/alarms/{alarm\\_id}\)"](#) for details on the parameters.
- If the alarm does not exist (because it has already been deleted, for example), an error will occur.

## Example of request

---

The example below retrieves the details of the alarm "2a5d914d-ac5c-474d-8550-58098f668a66":

```
curl -s -H "X-Auth-Token: . . ." "https://telemetry.jp-east-1.cloud.global.fujitsu.com/v2/alarms/2a5d914d-ac5c-474d-8550-58098f668a66"
```

## Example of response

---

```
{
  "alarm_actions": [
    "http://orchestration-cfn.jp-east-1.internal.cloud.global.fujitsu.com/v1/signal/arn%3Aopenstack%3Aheat%3A%3Aacd1e2866ebda406bb16b8196022e2692%3Astacks%2Faz1_test_stack_vm3%2F548ae98a-a0bc-43bd-aff5-a4146f783585%2Fresources%2Fscaleout_policy?Timestamp=2015-07-17T05%3A34%3A21Z&SignatureMethod=HmacSHA256&AWSAccessKeyId=cab5efa3009b4f00817b354b0744601e&SignatureVersion=2&Signature=FKLe2NApryuVZUCybV%2F%2Ffmd21xw%2BYApUSr idiKE5M%2FE%3D"
  ],
  "alarm_id": "2a5d914d-ac5c-474d-8550-58098f668a66",
  "description": "Scale-out if the average CPU > 80% for 1 minutes",
  "enabled": true,
  "insufficient_data_actions": [],
  "name": "az1_test_stack_vm3-scalein_alarm-fzps2blpsiql",
  "ok_actions": [],
  "project_id": "c52b2f54d96a4c28ba9a318eae9c843c",
  "repeat_actions": true,
  "state": "alarm",
  "state_timestamp": "2015-07-29T00:14:13.832040",
  "threshold_rule": {
    "comparison_operator": "gt",
    "evaluation_periods": 1,
    "exclude_outliers": false,
    "meter_name": "fcx.compute.cpu_util",
    "period": 60,
    "query": [
      {
        "field": "metadata.user_metadata.groupname",
        "op": "eq",
        "value": "az1_test_stack_vm3-auto_scaling_group-h5ve5jjiy5pbf"
      },
      {
        "field": "project_id",
        "op": "eq",
        "value": "c52b2f54d96a4c28ba9a318eae9c843c"
      }
    ]
  },
  "statistic": "avg",
  "threshold": 80.0
},
"time_constraints": [],
"timestamp": "2015-07-17T05:34:28.674867",
```

```

    "type": "threshold",
    "user_id": "2cc0568f5daf4ac694a49f3b32a42dfc"
}

```

- Note the following:
  - "enabled": Indicates whether alarm evaluation is enabled. When set to "false", actions are not executed.
  - "alarm\_actions", "ok\_actions", "insufficient\_actions": Contain the actions to execute when the alarm transitions to the state. If the item is not set, no action is executed when the alarm transitions to the state.
  - "threshold\_rule": Contains the items below, which can be checked in the statistics of subsequent samples:
    - "comparison\_operator": Comparison operator to use against the threshold.
    - "meter\_name": Name of the meter for threshold monitoring.
    - "period": Statistic interval when retrieving statistics of a sample.
    - "query": Conditions to retrieve statistics from meter samples for threshold monitoring. The items "field", "op", "value" comprise one condition.
    - "statistics": Aggregation method used to compare against the threshold.
    - "threshold": Threshold value.

#### 4.1.8.4 Check the meter statistics

---

Execute the show meter statistics API to retrieve sample statistics, and check if the conditions exceed the threshold.

##### Example format

---

```

curl -s -H "X-Auth-Token: $TOKEN" "https://telemetry.jp-east-1.cloud.global.fujitsu.com/v2/meters/meterSpecifiedInThresholdRule/statistics?period=periodSpecifiedInThresholdRule&q.field=timestamp&q.op=ge&q.value=YYYY-MM-DDTh%3Amm%3Ass&q.field=timestamp&q.op=lt&q.value=YYYY-MM-DDTh%3Amm%3Ass&q.field=fieldSpecifiedInThresholdRule&q.op=opSpecifiedInThresholdRule&q.value=valueSpecifiedInThresholdRule"

```

- Specify the values of each item of "threshold\_rule" obtained when checking the alarm details.
- Specify the query ("q") fields "field", "op", and "value", for each condition in the threshold rule.
- Specify the datetimes using the format "YYYY-MM-DDTh%3Amm%3Ass".
  - YYYY: Year, MM: Month, DD: Day, hh: Hour, mm: minutes, ss: seconds. The first half of the query concerns the start datetime, and the latter half concerns the end datetime (*startDatetime* <= timestamp < *endDatetime*). Specify the timeframe to be checked (in UTC).
  - "%3A" is the encoded value for ":". Specify it as is.
- Refer to "[Show meter statistics \(GET /v2/meters/{meter\\_name}/statistics\)](#)" for details on the parameters.

##### Example of request

---

The example below retrieves meter statistics based on the parameters specified for the threshold alarm:

```

curl -s -H "X-Auth-Token: . . ." "https://telemetry.jp-east-1.cloud.global.fujitsu.com/v2/meters/fcx.compute.cpu_util/statistics?period=60&q.field=timestamp&q.op=ge&q.value=2015-07-18T00%3A00%3A00&q.field=timestamp&q.op=lt&q.value=2015-07-18T01%3A00%3A00&q.field=metadata.user_metadata.groupname&q.op=eq&q.value=az1_test_stack_vm3-auto_scaling_group-h5ve5jij5pbf"

```

## Example of response

```
[
  {
    "avg": 0.0,
    "count": 1,
    "duration": 0.0,
    "duration_end": "2015-07-18T00:14:49",
    "duration_start": "2015-07-18T00:14:49",
    "groupby": null,
    "max": 0.0,
    "min": 0.0,
    "period": 60,
    "period_end": "2015-07-18T00:01:00",
    "period_start": "2015-07-18T00:00:00",
    "sum": 0.0,
    "unit": "%"
  },
  . . .
  {
    "avg": 0.40000000000000002,
    "count": 1,
    "duration": 0.0,
    "duration_end": "2015-07-18T00:41:54",
    "duration_start": "2015-07-18T00:41:54",
    "groupby": null,
    "max": 0.40000000000000002,
    "min": 0.40000000000000002,
    "period": 60,
    "period_end": "2015-07-18T01:00:00",
    "period_start": "2015-07-18T00:59:00",
    "sum": 0.40000000000000002,
    "unit": "%"
  }
]
```

- Check if there are sample statistics that satisfy the threshold conditions (specified in "threshold" and "comparison\_operator" items of "threshold\_rule") of the alarm in the specified timeframe.

FUJITSU Cloud Service for OSS  
IaaS API Reference (Management Administration)  
Version 2.8  
Published Date December 2018  
All Rights Reserved, Copyright FUJITSU LIMITED 2015-2018

- The content of this document may be subject to change without prior notice.
- This document may not be reproduced without the written permission of Fujitsu Limited.