

# OS-KSADM Extension

API v2.0 (Aug 29, 2011)

DRAFT



## OS-KSADM Extension

API v2.0 (2011-08-29)

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This document includes details on various operations supported by the OS-KSADM extensions on top of core keystone operations.

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# 1. About This Extension

Name	OpenStack KSADM Extension
Namespace	<a href="http://docs.openstack.org/identity/api/ext/OS-KSADM/v1.0">http://docs.openstack.org/identity/api/ext/OS-KSADM/v1.0</a>
Alias	OS-KSADM
Dependencies	Keystone - OpenStack Identity
Doc Link (PDF)	<a href="https://github.com/openstack/keystone/raw/master/keystone/content/admin/OS-KSADM-admin-devguide.pdf">https://github.com/openstack/keystone/raw/master/keystone/content/admin/OS-KSADM-admin-devguide.pdf</a>
Doc Link (WADL)	<a href="https://raw.github.com/openstack/keystone/master/keystone/content/admin/OS-KSADM-admin.wadl">https://raw.github.com/openstack/keystone/master/keystone/content/admin/OS-KSADM-admin.wadl</a>
Doc Link (XSD)	<a href="https://raw.github.com/openstack/keystone/master/keystone/content/common/xsd/OS-KSADM.xsd">https://raw.github.com/openstack/keystone/master/keystone/content/common/xsd/OS-KSADM.xsd</a>
Short Description	OpenStack KSADM Admin Extension to Keystone v2.0 API adds the capability to do CRUD on Users, Tenants, Roles and Services.

## 1.1. Document Change History

Revision Date	Summary of Changes
Sep. 09, 2011	<ul style="list-style-type: none"><li>• Initial release.</li></ul>



## 2. Extension Operations

Verb	URI	Description
User Operations		
GET	v2.0/users	List users.
POST	v2.0/users	Adds a user.
POST	v2.0/users/{userId}	Update a user.
DELETE	v2.0/users/{userId}	Delete a user.
GET	v2.0/users/{userId}/roles? serviceId=string	List all the global roles for a user.
PUT	v2.0/users/{userId}/roles/OS- KSADM/{roleId}	Adds a specific global role to a user.
GET	v2.0/users/{userId}/roles/OS- KSADM/{roleId}	Get information about a global role that belongs to a user.
DELETE	v2.0/users/{userId}/roles/OS- KSADM/{roleId}	Deletes a specific global role from a user.
POST	v2.0/users/{userId}/OS-KSADM/ credentials	Adds a credential to a user.
GET	v2.0/users/{userId}/OS-KSADM/ credentials?marker=string& limit=int	List credentials.
POST	v2.0/users/{userId}/OS-KSADM/ credentials/{credential-type}	Update credentials.
DELETE	v2.0/users/{userId}/OS-KSADM/ credentials/{credential-type}	Delete User credentials.
GET	v2.0/users/{userId}/OS-KSADM/ credentials/{credential-type}	Get user credentials.
Tenant Operations		
POST	v2.0/tenants	Creates a tenant.
POST	v2.0/tenants/{tenantId}	Updates a tenant.
DELETE	v2.0/tenants/{tenantId}	Deletes a tenant.
GET	v2.0/tenants/{tenantId}/users? marker=string&limit=int	Lists all the users for a tenant.
GET	v2.0/tenants/{tenantId}/users ?roleId=string&marker=string& limit=int	Lists all the users with a specific role for a tenant.
GET	v2.0/tenants/{tenantId}/OS-KSADM/ roles?marker=string&limit=int	Lists all the roles for a tenant.
PUT	v2.0/tenants/{tenantId}/users/ {userId}/roles/OS-KSADM/{roleId}	Adds a specific role to a user for a tenant.
DELETE	v2.0/tenants/{tenantId}/users/ {userId}/roles/OS-KSADM/{roleId}	Deletes a specific role from a user for a tenant.
Role Operations		
GET	v2.0/OS-KSADM/roles? serviceId=string&marker=string& limit=int	List roles.
POST	v2.0/OS-KSADM/roles	Add a Role.
GET	v2.0/OS-KSADM/roles/{roleId}	Get a role.
DELETE	v2.0/OS-KSADM/roles/{roleId}	Delete a role.
Service Operations		

Verb	URI	Description
GET	v2.0/OS-KSADM/services? marker=string&limit=int	List services.
POST	v2.0/OS-KSADM/services	Add a service.
GET	v2.0/OS-KSADM/services/{serviceId}	Get a service.
DELETE	v2.0/OS-KSADM/services/{serviceId}	Delete a service.

## 2.1. OS-KSADM Admin Extension API (Service Developer Operations)

Extension operations.

**Table 2.1. Authentication Header**

Header Type	Name	Value
HTTP/1.1 Request	X-Auth-Token	txfa8426a08eaf

The following calls are supported by OS-KSADM-admin Extension:

Verb	URI	Description
User Operations		
GET	v2.0/users	List users.
POST	v2.0/users	Adds a user.
POST	v2.0/users/{userId}	Update a user.
DELETE	v2.0/users/{userId}	Delete a user.
GET	v2.0/users/{userId}/roles? serviceId=string	List all the global roles for a user.
PUT	v2.0/users/{userId}/roles/OS- KSADM/{roleId}	Adds a specific global role to a user.
GET	v2.0/users/{userId}/roles/OS- KSADM/{roleId}	Get information about a global role that belongs to a user.
DELETE	v2.0/users/{userId}/roles/OS- KSADM/{roleId}	Deletes a specific global role from a user.
POST	v2.0/users/{userId}/OS-KSADM/ credentials	Adds a credential to a user.
GET	v2.0/users/{userId}/OS-KSADM/ credentials?marker=string& limit=int	List credentials.
POST	v2.0/users/{userId}/OS-KSADM/ credentials/{credential-type}	Update credentials.
DELETE	v2.0/users/{userId}/OS-KSADM/ credentials/{credential-type}	Delete User credentials.
GET	v2.0/users/{userId}/OS-KSADM/ credentials/{credential-type}	Get user credentials.
Tenant Operations		
POST	v2.0/tenants	Creates a tenant.
POST	v2.0/tenants/{tenantId}	Updates a tenant.
DELETE	v2.0/tenants/{tenantId}	Deletes a tenant.
GET	v2.0/tenants/{tenantId}/users? marker=string&limit=int	Lists all the users for a tenant.

Verb	URI	Description
GET	v2.0/tenants/{tenantId}/users? roleId=string&marker=string& limit=int	Lists all the users with a specific role for a tenant.
GET	v2.0/tenants/{tenantId}/OS-KSADM/ roles?marker=string&limit=int	Lists all the roles for a tenant.
PUT	v2.0/tenants/{tenantId}/users/ {userId}/roles/OS-KSADM/{roleId}	Adds a specific role to a user for a tenant.
DELETE	v2.0/tenants/{tenantId}/users/ {userId}/roles/OS-KSADM/{roleId}	Deletes a specific role from a user for a tenant.
Role Operations		
GET	v2.0/OS-KSADM/roles? serviceId=string&marker=string& limit=int	List roles.
POST	v2.0/OS-KSADM/roles	Add a Role.
GET	v2.0/OS-KSADM/roles/{roleId}	Get a role.
DELETE	v2.0/OS-KSADM/roles/{roleId}	Delete a role.
Service Operations		
GET	v2.0/OS-KSADM/services? marker=string&limit=int	List services.
POST	v2.0/OS-KSADM/services	Add a service.
GET	v2.0/OS-KSADM/services/{serviceId}	Get a service.
DELETE	v2.0/OS-KSADM/services/{serviceId}	Delete a service.

### 2.1.1. User Operations

Verb	URI	Description
GET	v2.0/users	List users.
POST	v2.0/users	Adds a user.
POST	v2.0/users/{userId}	Update a user.
DELETE	v2.0/users/{userId}	Delete a user.
GET	v2.0/users/{userId}/roles? serviceId=string	List all the global roles for a user.
PUT	v2.0/users/{userId}/roles/OS- KSADM/{roleId}	Adds a specific global role to a user.
GET	v2.0/users/{userId}/roles/OS- KSADM/{roleId}	Get information about a global role that belongs to a user.
DELETE	v2.0/users/{userId}/roles/OS- KSADM/{roleId}	Deletes a specific global role from a user.
POST	v2.0/users/{userId}/OS-KSADM/ credentials	Adds a credential to a user.
GET	v2.0/users/{userId}/OS-KSADM/ credentials?marker=string& limit=int	List credentials.
POST	v2.0/users/{userId}/OS-KSADM/ credentials/{credential-type}	Update credentials.
DELETE	v2.0/users/{userId}/OS-KSADM/ credentials/{credential-type}	Delete User credentials.
GET	v2.0/users/{userId}/OS-KSADM/ credentials/{credential-type}	Get user credentials.

### 2.1.1.1. List users

Verb	URI	Description
GET	v2.0/users	List users.

Normal Response Code(s): 200, 203

Error Response Code(s): identityFault (400, 500, ...), badRequest (400), unauthorized (401), forbidden (403), badMethod (405), overLimit (413), serviceUnavailable (503), itemNotFound (404)

List users.

**Table 2.2. List users Request Parameters**

Name	Style	Description
X-Auth-Token	header	You need a valid admin token for access. String. Required.

This operation does not require a request body.

#### Example 2.1. List users Response: XML

```
<?xml version="1.0" encoding="UTF-8"?>
<users xmlns="http://docs.openstack.org/identity/api/v2.0">
  <user xmlns="http://docs.openstack.org/identity/api/v2.0"
    enabled="true" email="john.smith@example.org"
    username="jqsmith" id="u1000"/>
  <user xmlns="http://docs.openstack.org/identity/api/v2.0"
    enabled="true" email="john.smith@example.org"
    username="jqsmith" id="u1001"/>
</users>
```

#### Example 2.2. List users Response: JSON

```
{
  "users": [{
    "id": "u1000",
    "username": "jqsmith",
    "email": "john.smith@example.org",
    "enabled": true
  },
  {
    "id": "u1001",
    "username": "jqsmith",
    "email": "john.smith@example.org",
    "enabled": true
  }
],
  "users_links": []
}
```

### 2.1.1.2. Add user

Verb	URI	Description
POST	v2.0/users	Adds a user.

Normal Response Code(s): 201

Error Response Code(s): identityFault (400, 500, ...), badRequest (400), unauthorized (401), forbidden (403), badMethod (405), overLimit (413), serviceUnavailable (503), itemNotFound (404), badMediaType (415)

Adds a user.

**Table 2.3. Add user Request Parameters**

Name	Style	Description
X-Auth-Token	header	You need a valid admin token for access. String. Required.

#### Example 2.3. Add user Request: XML

```
<?xml version="1.0" encoding="UTF-8"?>
<user xmlns="http://docs.openstack.org/identity/api/v2.0"
  enabled="true" email="john.smith@example.org"
  username="jqsmith"/>
```

#### Example 2.4. Add user Request: JSON

```
{
  "user": {
    "username": "jqsmith",
    "email": "john.smith@example.org",
    "enabled": true
  }
}
```

#### Example 2.5. Add user Response: XML

```
<?xml version="1.0" encoding="UTF-8"?>
<user xmlns="http://docs.openstack.org/identity/api/v2.0"
  enabled="true" email="john.smith@example.org"
  username="jqsmith" id="u1000"/>
```

#### Example 2.6. Add user Response: JSON

```
{
  "user": {
    "id": "u1000",
    "username": "jqsmith",
    "email": "john.smith@example.org",
    "enabled": true
  }
}
```

### 2.1.1.3. Update user

Verb	URI	Description
POST	v2.0/users/{userId}	Update a user.

Normal Response Code(s): 200

Error Response Code(s): identityFault (400, 500, ...), badRequest (400), unauthorized (401), forbidden (403), badMethod (405), overLimit (413), serviceUnavailable (503), badMediaType (415), itemNotFound (404)

Update a user.

**Table 2.4. Update user Request Parameters**

Name	Style	Description
X-Auth-Token	header	You need a valid admin token for access. String. Required.
userId	template	String.

#### Example 2.7. Update user Request: XML

```
<?xml version="1.0" encoding="UTF-8"?>
<user xmlns="http://docs.openstack.org/identity/api/v2.0"
  enabled="true" email="john.smith@example.org"
  username="jqsmith" id="u1000"/>
```

#### Example 2.8. Update user Request: JSON

```
{
  "user": {
    "id": "u1000",
    "username": "jqsmith",
    "email": "john.smith@example.org",
    "enabled": true
  }
}
```

#### Example 2.9. Update user Response: XML

```
<?xml version="1.0" encoding="UTF-8"?>
<user xmlns="http://docs.openstack.org/identity/api/v2.0"
  enabled="true" email="john.smith@example.org"
  username="jqsmith" id="u1000"/>
```

#### Example 2.10. Update user Response: JSON

```
{
  "user": {
    "id": "u1000",
    "username": "jqsmith",
    "email": "john.smith@example.org",
    "enabled": true
  }
}
```

#### 2.1.1.4. Delete user

Verb	URI	Description
DELETE	v2.0/users/{userId}	Delete a user.

Normal Response Code(s): 204

Error Response Code(s): identityFault (400, 500, ...), badRequest (400), unauthorized (401), forbidden (403), badMethod (405), overLimit (413), serviceUnavailable (503), itemNotFound (404)

Delete a user.

**Table 2.5. Delete user Request Parameters**

Name	Style	Description
X-Auth-Token	header	You need a valid admin token for access. String. Required.
userId	template	String.

This operation does not require a request body and does not return a response body.

### 2.1.1.5. List Global Roles for a User

Verb	URI	Description
GET	v2.0/users/{userId}/roles? serviceId=string	List all the global roles for a user.

Normal Response Code(s): 200, 203

Error Response Code(s): identityFault (400, 500, ...), badRequest (400), unauthorized (401), forbidden (403), badMethod (405), overLimit (413), serviceUnavailable (503), itemNotFound (404)

List all the global roles for a user.

**Table 2.6. List Global Roles for a User Request Parameters**

Name	Style	Description
X-Auth-Token	header	You need a valid admin token for access. String. Required.
serviceId	query	String. Optional.
userId	template	String.

#### Example 2.11. List Global Roles for a User Response: XML

```
<?xml version="1.0" encoding="UTF-8"?>
<roles xmlns="http://docs.openstack.org/identity/api/v2.0">
  <role id="123" name="Admin" description="All Access" />
  <role id="234" name="Guest" description="Guest Access" />
</roles>
```

#### Example 2.12. List Global Roles for a User Response: JSON

```
{
  "roles": [{
    "id": "123",
    "name": "compute:admin",
    "description": "Nova Administrator",
  }],
  "roles_links": []
}
```



### 2.1.1.6. Add Global roles to a user.

Verb	URI	Description
PUT	v2.0/users/{userId}/roles/OS-KSADM/{roleId}	Adds a specific global role to a user.

Normal Response Code(s): 201

Error Response Code(s): identityFault (400, 500, ...), badRequest (400), unauthorized (401), forbidden (403), badMethod (405), overLimit (413), serviceUnavailable (503), badMediaType (415), itemNotFound (404)

Adds a specific global role to a user.

**Table 2.7. Add Global roles to a user. Request Parameters**

Name	Style	Description
X-Auth-Token	header	You need a valid admin token for access. String. Required.
userId	template	String.
roleId	template	String.

This operation does not require a request body and does not return a response body.

### 2.1.1.7. Get user Role

Verb	URI	Description
GET	v2.0/users/{userId}/roles/OS-KSADM/{roleId}	Get information about a global role that belongs to a user.

Normal Response Code(s): 200, 203

Error Response Code(s): identityFault (400, 500, ...), badRequest (400), unauthorized (401), forbidden (403), badMethod (405), overLimit (413), serviceUnavailable (503), badMediaType (415), itemNotFound (404)

Get information about a global role that belongs to a user.

**Table 2.8. Get user Role Request Parameters**

Name	Style	Description
X-Auth-Token	header	You need a valid admin token for access. String. Required.
userId	template	String.
roleId	template	String.

This operation does not require a request body.

#### Example 2.13. Get user Role Response: XML

```
<?xml version="1.0" encoding="UTF-8"?>
<role xmlns="http://docs.openstack.org/identity/api/v2.0"
  id="123" name="Admin" description="All Access" />
```

#### Example 2.14. Get user Role Response: JSON

```
{
  "role": {
    "id": "123",
    "name": "Guest",
    "description": "Guest Access"
  }
}
```

### 2.1.1.8. Delete Global Roles on User.

Verb	URI	Description
DELETE	v2.0/users/{userId}/roles/OS-KSADM/{roleId}	Deletes a specific global role from a user.

Normal Response Code(s): 204

Error Response Code(s): identityFault (400, 500, ...), badRequest (400), unauthorized (401), forbidden (403), badMethod (405), overLimit (413), serviceUnavailable (503), itemNotFound (404)

Deletes a specific global role from a user.

**Table 2.9. Delete Global Roles on User. Request Parameters**

Name	Style	Description
X-Auth-Token	header	You need a valid admin token for access. String. Required.
userId	template	String.
roleId	template	String.

This operation does not require a request body and does not return a response body.

### 2.1.1.9. Add user Credential.

Verb	URI	Description
POST	v2.0/users/{userId}/OS-KSADM/credentials	Adds a credential to a user.

Normal Response Code(s): 201

Error Response Code(s): identityFault (400, 500, ...), badRequest (400), unauthorized (401), forbidden (403), badMethod (405), overLimit (413), serviceUnavailable (503), badMediaType (415), itemNotFound (404)

Adds a credential to a user.

**Table 2.10. Add user Credential. Request Parameters**

Name	Style	Description
X-Auth-Token	header	You need a valid admin token for access. String. Required.
userId	template	String.

#### Example 2.15. Add user Credential. Request: XML

```
<?xml version="1.0" encoding="UTF-8"?>
<passwordCredentials xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://docs.openstack.org/identity/api/v2.0" username="test_user"
  password="test" />
```

#### Example 2.16. Add user Credential. Request: JSON

```
{
  "passwordCredentials": {
    "username": "test_user",
    "password": "mypass"
  }
}
```

#### Example 2.17. Add user Credential. Response: XML

```
<?xml version="1.0" encoding="UTF-8"?>
<passwordCredentials xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://docs.openstack.org/identity/api/v2.0" username="test_user"
  password="test" />
```

#### Example 2.18. Add user Credential. Response: JSON

```
{
  "passwordCredentials": {
    "username": "test_user",
    "password": "mypass"
  }
}
```

### 2.1.1.10. List Credentials

Verb	URI	Description
GET	v2.0/users/{userId}/OS-KSADM/credentials?marker=string&limit=int	List credentials.

Normal Response Code(s): 200, 203

Error Response Code(s): identityFault (400, 500, ...), badRequest (400), unauthorized (401), forbidden (403), badMethod (405), overLimit (413), serviceUnavailable (503), itemNotFound (404)

List credentials.

**Table 2.11. List Credentials Request Parameters**

Name	Style	Description
X-Auth-Token	header	You need a valid admin token for access. String. Required.
marker	query	String. Optional.
limit	query	Int. Optional.
userId	template	String.

#### Example 2.19. List Credentials Response: XML

```
<?xml version="1.0" encoding="UTF-8"?>
<credentials xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://docs.openstack.org/identity/api/v2.0">
  <passwordCredentials username="test_user" password="test"/>
</credentials>
```

#### Example 2.20. List Credentials Response: JSON

```
{
  "credentials": [{
    "passwordCredentials": {
      "username": "test_user",
      "password": "mypass"
    }
  }],
  "credentials_links": []
}
```

### 2.1.1.11. Update user credential

Verb	URI	Description
POST	v2.0/users/{userId}/OS-KSADM/credentials/{credential-type}	Update credentials.

Normal Response Code(s): 200

Error Response Code(s): identityFault (400, 500, ...), badRequest (400), unauthorized (401), forbidden (403), badMethod (405), overLimit (413), serviceUnavailable (503), badMediaType (415), itemNotFound (404)

Update credentials.

**Table 2.12. Update user credential Request Parameters**

Name	Style	Description
X-Auth-Token	header	You need a valid admin token for access. String. Required.
userId	template	String.
credentialType	template	ExtensibleCredentialsType.

#### Example 2.21. Update user credential Request: XML

```
<?xml version="1.0" encoding="UTF-8"?>
<passwordCredentials xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://docs.openstack.org/identity/api/v2.0" username="test_user"
  password="test" />
```

#### Example 2.22. Update user credential Request: JSON

```
{
  "passwordCredentials": {
    "username": "test_user",
    "password": "mypass"
  }
}
```

#### Example 2.23. Update user credential Response: XML

```
<?xml version="1.0" encoding="UTF-8"?>
<passwordCredentials xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://docs.openstack.org/identity/api/v2.0" username="test_user"
  password="test" />
```

#### Example 2.24. Update user credential Response: JSON

```
{
  "passwordCredentials": {
    "username": "test_user",
    "password": "mypass"
  }
}
```



### 2.1.1.12. Delete user credential

Verb	URI	Description
DELETE	v2.0/users/{userId}/OS-KSADM/credentials/{credential-type}	Delete User credentials.

Normal Response Code(s): 204

Error Response Code(s): identityFault (400, 500, ...), badRequest (400), unauthorized (401), forbidden (403), badMethod (405), overLimit (413), serviceUnavailable (503), badMediaType (415), itemNotFound (404)

Delete User credentials.

**Table 2.13. Delete user credential Request Parameters**

Name	Style	Description
X-Auth-Token	header	You need a valid admin token for access. String. Required.
userId	template	String.
credentialType	template	ExtensibleCredentialsType.

This operation does not require a request body and does not return a response body.



### 2.1.1.13. Get user Credentials

Verb	URI	Description
GET	v2.0/users/{userId}/OS-KSADM/credentials/{credential-type}	Get user credentials.

Normal Response Code(s): 200, 203

Error Response Code(s): identityFault (400, 500, ...), badRequest (400), unauthorized (401), forbidden (403), badMethod (405), overLimit (413), serviceUnavailable (503), itemNotFound (404)

Get user credentials.

**Table 2.14. Get user Credentials Request Parameters**

Name	Style	Description
X-Auth-Token	header	You need a valid admin token for access. String. Required.
userId	template	String.
credentialType	template	ExtensibleCredentialsType.

This operation does not require a request body.

#### Example 2.25. Get user Credentials Response: XML

```
<?xml version="1.0" encoding="UTF-8"?>
<passwordCredentials xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://docs.openstack.org/identity/api/v2.0" username="test_user"
  password="test" />
```

#### Example 2.26. Get user Credentials Response: JSON

```
{
  "passwordCredentials": {
    "username": "test_user",
    "password": "mypass"
  }
}
```

## 2.1.2. Tenant Operations

Verb	URI	Description
POST	v2.0/tenants	Creates a tenant.
POST	v2.0/tenants/{tenantId}	Updates a tenant.
DELETE	v2.0/tenants/{tenantId}	Deletes a tenant.
GET	v2.0/tenants/{tenantId}/users?marker=string&limit=int	Lists all the users for a tenant.
GET	v2.0/tenants/{tenantId}/users?roleId=string&marker=string&limit=int	Lists all the users with a specific role for a tenant.
GET	v2.0/tenants/{tenantId}/OS-KSADM/roles?marker=string&limit=int	Lists all the roles for a tenant.

Verb	URI	Description
<b>PUT</b>	v2.0/tenants/{tenantId}/users/{userId}/roles/OS-KSADM/{roleId}	Adds a specific role to a user for a tenant.
<b>DELETE</b>	v2.0/tenants/{tenantId}/users/{userId}/roles/OS-KSADM/{roleId}	Deletes a specific role from a user for a tenant.

### 2.1.2.1. Add Tenant

Verb	URI	Description
POST	v2.0/tenants	Creates a tenant.

Normal Response Code(s): 201

Error Response Code(s): identityFault (400, 500, ...), badRequest (400), unauthorized (401), forbidden (403), badMethod (405), overLimit (413), serviceUnavailable (503), badMediaType (415)

This call creates a tenant.

**Table 2.15. Add Tenant Request Parameters**

Name	Style	Description
X-Auth-Token	header	You need a valid admin token for access. String. Required.

#### Example 2.27. Add Tenant Request: XML

```
<?xml version="1.0" encoding="UTF-8"?>
<tenant xmlns="http://docs.openstack.org/identity/api/v2.0"
  enabled="true" name="ACME Corp">
  <description>A description...</description>
</tenant>
```

#### Example 2.28. Add Tenant Request: JSON

```
{
  "tenant": {
    "name": "ACME corp",
    "description": "A description ...",
    "enabled": true
  }
}
```

#### Example 2.29. Add Tenant Response: XML

```
<?xml version="1.0" encoding="UTF-8"?>
<tenant xmlns="http://docs.openstack.org/identity/api/v2.0"
  enabled="true" id="1234" name="ACME Corp">
  <description>A description...</description>
</tenant>
```

#### Example 2.30. Add Tenant Response: JSON

```
{
  "tenant": {
    "id": "1234",
    "name": "ACME corp",
    "description": "A description ...",
    "enabled": true
  }
}
```

### 2.1.2.2. Update Tenant

Verb	URI	Description
POST	v2.0/tenants/{tenantId}	Updates a tenant.

Normal Response Code(s): 200

Error Response Code(s): identityFault (400, 500, ...), badRequest (400), unauthorized (401), forbidden (403), badMethod (405), overLimit (413), serviceUnavailable (503), itemNotFound (404), badMediaType (415)

This call updates a tenant.

**Table 2.16. Update Tenant Request Parameters**

Name	Style	Description
X-Auth-Token	header	You need a valid admin token for access. String. Required.
tenantId	template	String.

#### Example 2.31. Update Tenant Request: XML

```
<?xml version="1.0" encoding="UTF-8"?>
<tenant xmlns="http://docs.openstack.org/identity/api/v2.0"
  enabled="true" id="1234" name="ACME Corp">
  <description>A description...</description>
</tenant>
```

#### Example 2.32. Update Tenant Request: JSON

```
{
  "tenant": {
    "id": "1234",
    "name": "ACME corp",
    "description": "A description ...",
    "enabled": true
  }
}
```

#### Example 2.33. Update Tenant Response: XML

```
<?xml version="1.0" encoding="UTF-8"?>
<tenant xmlns="http://docs.openstack.org/identity/api/v2.0"
  enabled="true" id="1234" name="ACME Corp">
  <description>A description...</description>
</tenant>
```

#### Example 2.34. Update Tenant Response: JSON

```
{
  "tenant": {
    "id": "1234",
    "name": "ACME corp",
    "description": "A description ...",
    "enabled": true
  }
}
```

```
}  
}
```

### 2.1.2.3. Delete a Tenant

Verb	URI	Description
DELETE	v2.0/tenants/{tenantId}	Deletes a tenant.

Normal Response Code(s): 204

Error Response Code(s): identityFault (400, 500, ...), badRequest (400), unauthorized (401), forbidden (403), badMethod (405), overLimit (413), serviceUnavailable (503), itemNotFound (404)

This call deletes a tenant.

**Table 2.17. Delete a Tenant Request Parameters**

Name	Style	Description
X-Auth-Token	header	You need a valid admin token for access. String. Required.
tenantId	template	String.

This operation does not require a request body and does not return a response body.

### 2.1.2.4. List users for a Tenant.

Verb	URI	Description
GET	v2.0/tenants/{tenantId}/users? marker=string&limit=int	Lists all the users for a tenant.

Normal Response Code(s): 200, 203

Error Response Code(s): identityFault (400, 500, ...), badRequest (400), unauthorized (401), forbidden (403), badMethod (405), overLimit (413), serviceUnavailable (503), itemNotFound (404)

Lists all the users for a tenant.

**Table 2.18. List users for a Tenant. Request Parameters**

Name	Style	Description
X-Auth-Token	header	You need a valid admin token for access. String. Required.
marker	query	String. Optional.
limit	query	Int. Optional.
tenantId	template	String.

#### Example 2.35. List users for a Tenant. Response: XML

```
<?xml version="1.0" encoding="UTF-8"?>
<users xmlns="http://docs.openstack.org/identity/api/v2.0">
  <user xmlns="http://docs.openstack.org/identity/api/v2.0"
    enabled="true" email="john.smith@example.org"
    username="jqsmith" id="u1000"/>
  <user xmlns="http://docs.openstack.org/identity/api/v2.0"
    enabled="true" email="john.smith@example.org"
    username="jqsmith" id="u1001"/>
</users>
```

#### Example 2.36. List users for a Tenant. Response: JSON

```
{
  "users": [{
    "id": "u1000",
    "username": "jqsmith",
    "email": "john.smith@example.org",
    "enabled": true
  },
  {
    "id": "u1001",
    "username": "jqsmith",
    "email": "john.smith@example.org",
    "enabled": true
  }
],
  "users_links": []
}
```

### 2.1.2.5. List user with role for tenant.

Verb	URI	Description
GET	v2.0/tenants/{tenantId}/users ?roleId=string&marker=string& limit=int	Lists all the users with a specific role for a tenant.

Normal Response Code(s): 200, 203

Error Response Code(s): identityFault (400, 500, ...), badRequest (400), unauthorized (401), forbidden (403), badMethod (405), overLimit (413), serviceUnavailable (503), itemNotFound (404)

Lists all the users with a specific role for a tenant.

**Table 2.19. List user with role for tenant. Request Parameters**

Name	Style	Description
X-Auth-Token	header	You need a valid admin token for access. String. Required.
roleId	query	String. Required.
marker	query	String. Optional.
limit	query	Int. Optional.
tenantId	template	String.

#### Example 2.37. List user with role for tenant. Response: XML

```
<?xml version="1.0" encoding="UTF-8"?>
<users xmlns="http://docs.openstack.org/identity/api/v2.0">
  <user xmlns="http://docs.openstack.org/identity/api/v2.0"
    enabled="true" email="john.smith@example.org"
    username="jqsmith" id="u1000"/>
  <user xmlns="http://docs.openstack.org/identity/api/v2.0"
    enabled="true" email="john.smith@example.org"
    username="jqsmith" id="u1001"/>
</users>
```

#### Example 2.38. List user with role for tenant. Response: JSON

```
{
  "users": [{
    "id": "u1000",
    "username": "jqsmith",
    "email": "john.smith@example.org",
    "enabled": true
  },
  {
    "id": "u1001",
    "username": "jqsmith",
    "email": "john.smith@example.org",
    "enabled": true
  }
],
  "users_links": []
}
```





### 2.1.2.6. List roles for a Tenant.

Verb	URI	Description
GET	v2.0/tenants/{tenantId}/OS-KSADM/roles?marker= <i>string</i> &limit= <i>int</i>	Lists all the roles for a tenant.

Normal Response Code(s): 200, 203

Error Response Code(s): identityFault (400, 500, ...), badRequest (400), unauthorized (401), forbidden (403), badMethod (405), overLimit (413), serviceUnavailable (503), itemNotFound (404)

Lists all the roles for a tenant.

**Table 2.20. List roles for a Tenant. Request Parameters**

Name	Style	Description
X-Auth-Token	header	You need a valid admin token for access. String. Required.
marker	query	String. Optional.
limit	query	Int. Optional.
tenantId	template	String.

#### Example 2.39. List roles for a Tenant. Response: XML

```
<?xml version="1.0" encoding="UTF-8"?>
<roles xmlns="http://docs.openstack.org/identity/api/v2.0">
  <role id="123" name="Admin" description="All Access" />
  <role id="234" name="Guest" description="Guest Access" />
</roles>
```

#### Example 2.40. List roles for a Tenant. Response: JSON

```
{
  "roles": [{
    "id": "123",
    "name": "compute:admin",
    "description": "Nova Administrator",
  }],
  "roles_links": []
}
```

### 2.1.2.7. Add roles to a user on a tenant.

Verb	URI	Description
PUT	v2.0/tenants/{tenantId}/users/{userId}/roles/OS-KSADM/{roleId}	Adds a specific role to a user for a tenant.

Normal Response Code(s): 201

Error Response Code(s): identityFault (400, 500, ...), badRequest (400), unauthorized (401), forbidden (403), badMethod (405), overLimit (413), serviceUnavailable (503), badMediaType (415), itemNotFound (404)

Adds a specific role to a user for a tenant.

**Table 2.21. Add roles to a user on a tenant. Request Parameters**

Name	Style	Description
X-Auth-Token	header	You need a valid admin token for access. String. Required.
tenantId	template	String.
userId	template	String.
roleId	template	String.

This operation does not require a request body and does not return a response body.

### 2.1.2.8. Delete roles from a user on tenant.

Verb	URI	Description
<b>DELETE</b>	v2.0/tenants/{tenantId}/users/{userId}/roles/OS-KSADM/{roleId}	Deletes a specific role from a user for a tenant.

Normal Response Code(s): 204

Error Response Code(s): identityFault (400, 500, ...), badRequest (400), unauthorized (401), forbidden (403), badMethod (405), overLimit (413), serviceUnavailable (503), itemNotFound (404)

Deletes a specific role from a user for a tenant.

**Table 2.22. Delete roles from a user on tenant. Request Parameters**

Name	Style	Description
X-Auth-Token	header	You need a valid admin token for access. String. Required.
tenantId	template	String.
userId	template	String.
roleId	template	String.

This operation does not require a request body and does not return a response body.

### 2.1.3. Role Operations

Verb	URI	Description
<b>GET</b>	v2.0/OS-KSADM/roles? serviceId=string&marker=string& limit=int	List roles.
<b>POST</b>	v2.0/OS-KSADM/roles	Add a Role.
<b>GET</b>	v2.0/OS-KSADM/roles/{roleId}	Get a role.
<b>DELETE</b>	v2.0/OS-KSADM/roles/{roleId}	Delete a role.

### 2.1.3.1. List Roles

Verb	URI	Description
GET	v2.0/OS-KSADM/roles? serviceId=string&marker=string& limit=int	List roles.

Normal Response Code(s): 200, 203

Error Response Code(s): identityFault (400, 500, ...), badRequest (400), unauthorized (401), forbidden (403), badMethod (405), overLimit (413), serviceUnavailable (503), itemNotFound (404)

List roles.

**Table 2.23. List Roles Request Parameters**

Name	Style	Description
X-Auth-Token	header	You need a valid admin token for access. String. Required.
serviceId	query	String. Optional.
marker	query	String. Optional.
limit	query	Int. Optional.

#### Example 2.41. List Roles Response: XML

```
<?xml version="1.0" encoding="UTF-8"?>
<roles xmlns="http://docs.openstack.org/identity/api/v2.0">
  <role id="123" name="Admin" description="All Access" />
  <role id="234" name="Guest" description="Guest Access" />
</roles>
```

#### Example 2.42. List Roles Response: JSON

```
{
  "roles": [{
    "id": "123",
    "name": "compute:admin",
    "description": "Nova Administrator",
  }],
  "roles_links": []
}
```

### 2.1.3.2. Add Role

Verb	URI	Description
POST	v2.0/OS-KSADM/roles	Add a Role.

Normal Response Code(s): 201

Error Response Code(s): identityFault (400, 500, ...), badRequest (400), unauthorized (401), forbidden (403), badMethod (405), overLimit (413), serviceUnavailable (503), badMediaType (415), itemNotFound (404)

Add a Role.

**Table 2.24. Add Role Request Parameters**

Name	Style	Description
X-Auth-Token	header	You need a valid admin token for access. String. Required.

#### Example 2.43. Add Role Request: XML

```
<?xml version="1.0" encoding="UTF-8"?>
<role xmlns="http://docs.openstack.org/identity/api/v2.0"
  id="123" name="Admin" description="All Access" />
```

#### Example 2.44. Add Role Request: JSON

```
{
  "role": {
    "id": "123",
    "name": "Guest",
    "description": "Guest Access"
  }
}
```

#### Example 2.45. Add Role Response: XML

```
<?xml version="1.0" encoding="UTF-8"?>
<role xmlns="http://docs.openstack.org/identity/api/v2.0"
  id="123" name="Admin" description="All Access" />
```

#### Example 2.46. Add Role Response: JSON

```
{
  "role": {
    "id": "123",
    "name": "Guest",
    "description": "Guest Access"
  }
}
```

### 2.1.3.3. Get Role

Verb	URI	Description
GET	v2.0/OS-KSADM/roles/{roleId}	Get a role.

Normal Response Code(s): 200, 203

Error Response Code(s): identityFault (400, 500, ...), badRequest (400), unauthorized (401), forbidden (403), badMethod (405), overLimit (413), serviceUnavailable (503), badMediaType (415), itemNotFound (404)

Get a role.

**Table 2.25. Get Role Request Parameters**

Name	Style	Description
X-Auth-Token	header	You need a valid admin token for access. String. Required.
roleId	template	String.

This operation does not require a request body.

### 2.1.3.4. Delete Role

Verb	URI	Description
DELETE	v2.0/OS-KSADM/roles/{roleId}	Delete a role.

Normal Response Code(s): 204

Error Response Code(s): identityFault (400, 500, ...), badRequest (400), unauthorized (401), forbidden (403), badMethod (405), overLimit (413), serviceUnavailable (503), itemNotFound (404)

Delete a role.

**Table 2.26. Delete Role Request Parameters**

Name	Style	Description
X-Auth-Token	header	You need a valid admin token for access. String. Required.
roleId	template	String.

This operation does not require a request body and does not return a response body.

### 2.1.4. Service Operations

Verb	URI	Description
GET	v2.0/OS-KSADM/services? marker=string&limit=int	List services.
POST	v2.0/OS-KSADM/services	Add a service.
GET	v2.0/OS-KSADM/services/{serviceId}	Get a service.
DELETE	v2.0/OS-KSADM/services/{serviceId}	Delete a service.



### 2.1.4.1. List Services

Verb	URI	Description
GET	v2.0/OS-KSADM/services? marker=string&limit=int	List services.

Normal Response Code(s): 200, 203

Error Response Code(s): identityFault (400, 500, ...), badRequest (400), unauthorized (401), forbidden (403), badMethod (405), overLimit (413), serviceUnavailable (503), itemNotFound (404)

List services.

**Table 2.27. List Services Request Parameters**

Name	Style	Description
X-Auth-Token	header	You need a valid admin token for access. String. Required.
marker	query	String. Optional.
limit	query	Int. Optional.

#### Example 2.47. List Services Response: XML

```
<?xml version="1.0" encoding="UTF-8"?>
<services xmlns="http://docs.openstack.org/identity/api/ext/OS-KSADM/v1.0">
  <service id="123" name="nova" type="compute" description="Openstack Compute Service" />
  <service id="234" name="glance" type="image" description="Openstack Image Service" />
</services>
```

#### Example 2.48. List Services Response: JSON

```
{
  "OS-KSADM:services": [{
    "id": "123",
    "name": "nova",
    "type": "compute",
    "description": "OpenStack Compute Service"
  },
  {
    "id": "234",
    "name": "glance",
    "type": "image",
    "description": "OpenStack Image Service"
  }
],
  "OS-KSADM:services_links": []
}
```

### 2.1.4.2. Add Service

Verb	URI	Description
POST	v2.0/OS-KSADM/services	Add a service.

Normal Response Code(s): 201

Error Response Code(s): identityFault (400, 500, ...), badRequest (400), unauthorized (401), forbidden (403), badMethod (405), overLimit (413), serviceUnavailable (503), badMediaType (415), itemNotFound (404)

Add a service.

**Table 2.28. Add Service Request Parameters**

Name	Style	Description
X-Auth-Token	header	You need a valid admin token for access. String. Required.

#### Example 2.49. Add Service Request: XML

```
<?xml version="1.0" encoding="UTF-8"?>

<service xmlns="http://docs.openstack.org/identity/api/ext/OS-KSADM/v1.0"
  id="123" name="nova" type="compute" description="OpenStack Compute Service" /
>
```

#### Example 2.50. Add Service Request: JSON

```
{
  "OS-KSADM:service":{
    "id":"123",
    "name":"nova",
    "type":"compute",
    "description":"OpenStack Compute Service"
  }
}
```

#### Example 2.51. Add Service Response: XML

```
<?xml version="1.0" encoding="UTF-8"?>

<service xmlns="http://docs.openstack.org/identity/api/ext/OS-KSADM/v1.0"
  id="123" name="nova" type="compute" description="OpenStack Compute Service" /
>
```

#### Example 2.52. Add Service Response: JSON

```
{
  "OS-KSADM:service":{
    "id":"123",
    "name":"nova",
    "type":"compute",
    "description":"OpenStack Compute Service"
  }
}
```



### 2.1.4.3. Get Service

Verb	URI	Description
GET	v2.0/OS-KSADM/services/{serviceId}	Get a service.

Normal Response Code(s): 200, 203

Error Response Code(s): identityFault (400, 500, ...), badRequest (400), unauthorized (401), forbidden (403), badMethod (405), overLimit (413), serviceUnavailable (503), itemNotFound (404)

Get a service.

**Table 2.29. Get Service Request Parameters**

Name	Style	Description
X-Auth-Token	header	You need a valid admin token for access. String. Required.
serviceId	template	Int.

This operation does not require a request body.

#### Example 2.53. Get Service Response: XML

```
<?xml version="1.0" encoding="UTF-8"?>
<service xmlns="http://docs.openstack.org/identity/api/ext/OS-KSADM/v1.0"
  id="123" name="nova" type="compute" description="OpenStack Compute Service" /
>
```

#### Example 2.54. Get Service Response: JSON

```
{
  "OS-KSADM:service":{
    "id":"123",
    "name":"nova",
    "type":"compute",
    "description":"OpenStack Compute Service"
  }
}
```

#### 2.1.4.4. Delete Service

Verb	URI	Description
DELETE	v2.0/OS-KSADM/services/{serviceId}	Delete a service.

Normal Response Code(s): 204

Error Response Code(s): identityFault (400, 500, ...), badRequest (400), unauthorized (401), forbidden (403), badMethod (405), overLimit (413), serviceUnavailable (503), itemNotFound (404)

Delete a service.

**Table 2.30. Delete Service Request Parameters**

Name	Style	Description
X-Auth-Token	header	You need a valid admin token for access. String. Required.
serviceId	template	Int.

This operation does not require a request body and does not return a response body.