



## ***Simple Cloud Identity Management***

### ***SCIM User Manual***

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## **1/ introduction:**

What is SCIM?

The Simple Cloud Identity Management (SCIM) specification is a standard REST/JSON API to standardize user and group CRUD (create, read, update, delete). You can review the detailed specification at <http://www.simplecloud.info>.

The specification seeks to build upon experience with existing schemas and deployments, placing specific emphasis on simplicity of development and integration, while applying existing authentication, authorization, and privacy models. It's intent is to reduce the cost and complexity of user management operations by providing a common user schema and extension model, as well as binding documents to provide patterns for exchanging this schema using standard protocols. In essence, make it fast, cheap, and easy to move users in to, out of, and around the cloud.

## **2/Specification :**

SCIM is integrated as a service of oxTrust . To start operating with SCIM's web service , you will need to send a request to one of SCIM's endpoints , for example , if you want to add a user you need to send an HTTP request to this endpoint url :

<https://localhost:8080/oxTrust/seam/resource/restv1/Users/>

for bulk operations (adding modifying and deleting multiple users ) you have to send a request to the bulk endpoint

<https://localhost:8080/oxTrust/seam/resource/restv1/Bulk/>

for group operations:

<https://localhost:8080/oxTrust/seam/resource/restv1/Groups/>

You need to have a the right credentials and roles in order for you to access the endpoint example, which is for oxTrust means that you are a member of the Owner or Manager group specified in the organization entry.

Gluu's SCIM web service uses both Basic authentication and OAuth 2.0 authentication . for the Basic type of authentication you need to specify the user and password (base64 encoded) in the HTTP request HTTP header in order to be authenticated

Example :

```
POST
https://localhost:8080/oxTrust/seam/resource/restv1/Users/
Accept: application/json
Authorization: Basic bWlrZTpzZWNYZXQ=
```

For oAuth 2.0 authentication you need to request an access token via the SCIM client API in order for you to be able to get authenticated, the example below shows how an access token is sent to SCIM webservice as a header:

```
POST
https://localhost:8080/oxTrust/seam/resource/restv1/Users/
Accept: application/json
Authorization: Bearer 91732a27-fd00-487a-9dde-a6ed2fac6949
```

A user is represented in two formats, JSON and XML and you can specify what kind of format you want to use by indicating that in your HTTP request .

- For JSON:

```
Accept: application/json
```

- For XML

```
Accept: application/XML
```

- Example of JSON representation:

```
{ "schemas": [ "urn:scim:schemas:core:1.0" ], "id": "@!1111!0000!D4E7", "externalId": "john", "userName": "john", "name": { "givenName": "John", "familyName": "Smith", "middleName": "N/A", "honorificPrefix": "N/A", "honorificSuffix": "N/A" }, "displayName": "John Smith", "nickName": "Sensei", "profileUrl": "http://www.gluu.org/", "emails": [ { "value": "john@gluu.org", "type": "work", "primary": "true" }, { "value": "john2@gluu.org", "type": "home", "primary": "false" } ], "addresses": [ { "type": "work", "streetAddress": "621 East 6th Street Suite 200", "locality": "Austin", "region": "TX", "postalCode": "78701", "country": "US", "formatted": "621 East 6th Street Suite 200 Austin, TX 78701 US", "primary": "true" } ], "phoneNumbers": [ { "value": "646-234-5678", "type": "work" } ], "ims": [ { "value": "nynyjohn", "type": "Skype" } ], "photos": [ { "value": "http://www.gluu.org/wp-content/themes/SaaS-II/images/logo.png", "type": "gluu photo" } ], "userType": "CEO", "title": "CEO", "preferredLanguage": "en-us", "locale": "en_US", "timezone": "America/Chicago", "active": "true", "password": "Hidden for Privacy Reasons", "groups": [ { "display": "Gluu Manager Group", "value": "@!1111!0003!B2C6" }, { "display": "Gluu Owner Group", "value": "@!1111!0003!D9B4" } ], "roles": [ { "value": "Owner" } ], "entitlements": [ { "value": "full access" } ], "x509Certificates": [ { "value": "MIIDQzCCAqygAwIBAgICEAAwDQYJKoZIhvcNAQEFBQAwTjELMAkGA1UEBhMCVVMxEzARBgNVBAgMCkNhbmG1mb3JuaWEeXFDASBgNVBAoMC2V4YW1wbGUuY29tMRQwEgYDVQQLDAtleGFtcGxlLmNvbTAeFw0xMTEwMjIwMzFaFw0xMjEwMDQwNjI0MzFaMAH8xCzAJBgNVBAYTA1VTRMRWEQYDVQQIDApDYWxpZm9ybmlhMRQwEgYDVQQKDAtleGFtcGxlLmNvbTEhMB8GA1UEAwYyTXMuIEJhcmJhcmEgSiBkZW5zZW4gSULJMSIwIAYJKoZIhvcNAQkBFhNiamVuc2VuQGV4YW1wbGUuY29tMIIBIjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgKCAQEAE7Kr+Dcds/JQ5GwejJFcBIP682X3xpjis56AK02bc1FLgzdLI8auoR+cC9/Vrh5t66HkQIOdA4unHh0AaZ4xL5PhVbXIPMB5vAPKpzz5iPSi8xO8SL7I7SDhcBVJhqVqr3Hg1lEG6UC1DdHO7nkLuwXq8HcISKkbT5WFTVfFzZidPl8HZ7DhXkZIRtJwBweq4bvm3hM1Os7UQH05ZS6cVDgweKNwdLLrT5likSQG3DYrl+ft781UQRiQxgwqCfXEuDiinPh0kkvIi5jivVu1Z9Qiw1YEdRbLJ4zJQBmDrSGTMYn4lRc2HgHO4DqB/bnMVorHB0CC6AV1QoFK4GPelLwIDAQABo3sweTAJBgNVHRMEAjAAMCwGCWCGSAGG+EIBDQQLFh1PcGVuU1NMIEdlbmVyYXRlZCBZDZlZC0wZDQYJKoZIhvcNAQEFBQADgYEAA81SsFnOdYJtNg5Tcq+/ByEDrBgnusx0jloUhByPMEVkoMZ3J7j1ZgI8rAbOkNngX8+pKfTiDz1RC4+dx8oU6Za+4NJXUj1L5CvV6BEYb1+QAEJwitTVvx/B/67g42/vzgAtoRUeDov1+GFIBZ+GNF/cAYKcMtGc2i97ZkJMo=" } ], "meta": { "created": "2010-01-23T04:56:22Z", "lastModified": "2011-05-13T04:42:34Z", "version": "W\\\\"b431af54f0671a2\\\"", "location": "http://localhost:8080/oxTrust/seam/resource/restv1/Users/@!1111!0000!D4E7" } }
```

- XML format Example

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?><User
xmlns="urn:scim:schemas:core:1.0"><id>@!1111!0000!D4E7</id><externalId>john
</externalId><userName>john
</userName><name><givenName>John</givenName><familyName>Smith</familyName><middleName>N/
A</middleName><honorificPrefix>N/A</honorificPrefix><honorificSuffix>N/A</honorificSuffi
x></name><displayName>John
Smith</displayName><nickName>Sensei</nickName><profileUrl>http://www.gluu.org/</profileU
rl><emails><email><value>john
@gluu.org</value><type>work</type><primary>true</primary></email><email><value>john
2@gluu.org</value><type>home</type><primary>false</primary></email></emails><addresses><
address><type>work</type><streetAddress>621 East 6th Street Suite
200</streetAddress><locality>Austin</locality><region>TX</region><postalCode>78701</post
alCode><country>US</country><formatted>621 East 6th Street Suite 200 Austin , TX 78701
US</formatted><primary>true</primary></address></addresses><PhoneNumbers><PhoneNumber><v
alue>646-234-
5678</value><type>work</type></PhoneNumber></PhoneNumbers><ims><im><value>nynyjohn
</value><type>Skype</type></im></ims><photos><photo><value>http://www.gluu.org/wp-
content/themes/SaaS-II/images/logo.png</value><type>gluu
photo</type></photo></photos><userType>CEO</userType><title>CEO</title><preferredLanguag
e>en-
us</preferredLanguage><locale>en_US</locale><timezone>America/Chicago</timezone><active>
true</active><password>Hidden for Privacy Reasons</password><groups><group><display>Gluu
Manager Group</display><value>@!1111!0003!B2C6</value></group><group><display>Gluu Owner
Group</display><value>@!1111!0003!D9B4</value></group></groups><roles><role><value>Owner
</value></role></roles><entitlements><entitlement><value>full
access</value></entitlement></entitlements><x509Certificates><x509Certificate><value>MII
DQzCCAqygAwIBAgICEAAwDQYJKoZIhvcNAQEFBQAwTjELMAkGA1UEBhMCVVMxEzARBgNVBAgMCkNhbgGlb3JuaWE
xZDASBgNVBAoMC2V4YW1wbGUuY29tMRQwEgYDVQDDAtleGFtcGxlLmNvbTAeFw0xMTEwMjIOMzFaFw0xMjE
wMDQwNjIOMzFa
MH8xCzAJBgNVBAYTA1VTMRMwEQYDVQQIDApDYWxpZm9ybmlhMRQwEgYDVQQKDAhleGFtcGxlLmNvbTEhMB8GA1UE
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8auoR+cC9/Vrh5t66HkQIOdA4unHh0AaZ4xL5PhVbXIPMB5vAPKpzz5iPSi8xO8SL7I7SDhcBVJhqVqr3Hg1lEG6
UC1DdHO7nkLuwXq8HcISKkbT5WFTVfFZzidPl8HZ7DhXkZIRtJwBweq4bvm3hM1Os7UQH05ZS6cVDgweKNwdLLrT
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hByPMEVkoMZ3J7j1ZgI8rAbOkNngX8+pKfTiDz1RC4+dx8oU6Za+4NJXUjllL5CvV6BEYb1+QAEJwittVvxB/A67g
42/vzgAtoRUeDov1+GFIBZ+GNF/cAYKcMtGcrs2i97ZkJMo=</value></x509Certificate></x509Certific
ates><meta><created>2010-01-23T04:56:22Z</created><lastModified>2011-05-
13T04:42:34Z</lastModified><version>W\"b43laf54f0671a2\"</version><location>htt
p://localhost:8080/oxTrust/seam/resource/restv1/Users/@!1111!0000!D4E7</location></meta>
</User>
```

### ***3/Examples***

In this section you will find some examples of the operations that you can accomplish using SCIM.

### 3-1/ Adding a user

In this example we will try to add a user in JSON and XML format:

- JSON request
- Header

```
POST
https://localhost:8080/oxTrust/seam/resource/restv1/Users/
Accept: application/json
Authorization: Bearer 91732a27-fd00-487a-9dde-a6ed2fac6949
```

- Request content

```
{ "schemas": [ "urn:scim:schemas:core:1.0" ], "externalId": "john ", "userName": "john", "name": { "givenName": "John", "familyName": "Smith", "middleName": "N/A", "honorificPrefix": "N/A", "honorificSuffix": "N/A" }, "displayName": "John Smith", "nickName": "Sensei", "profileUrl": "http://www.gluu.org/", "emails": [ { "value": "john @gluu.org", "type": "work", "primary": "true" }, { "value": "john 2@gluu.org", "type": "home", "primary": "false" } ], "addresses": [ { "type": "work", "streetAddress": "621 East 6th Street Suite 200", "locality": "Austin", "region": "TX", "postalCode": "78701", "country": "US", "formatted": "621 East 6th Street Suite 200 Austin , TX 78701 US", "primary": "true" } ], "phoneNumbers": [ { "value": "646-234-5678", "type": "work" } ], "ims": [ { "value": "nynyjohn", "type": "Skype" } ], "photos": [ { "value": "http://www.gluu.org/wp-content/themes/SaaS-II/images/logo.png", "type": "gluu photo" } ], "userType": "CEO", "title": "CEO", "preferredLanguage": "en-us", "locale": "en_US", "timezone": "America/Chicago", "active": "true", "password": "secret", "groups": [ { "display": "Gluu Manager Group", "value": "@!1111!0003!B2C6" }, { "display": "Gluu Owner Group", "value": "@!1111!0003!D9B4" } ], "roles": [ { "value": "Owner" } ], "entitlements": [ { "value": "full access" } ], "x509Certificates": [ { "value": "MIIDQzCCAqygAwIBAgICEAAwDQYJKoZIhvcNAQEFBQAwtTjELMAkGA1UEBhMCVVMxEzARBgNVBAgMCkNhbgGlm3JuaWExFDASBgNVBAoMC2V4YW1wbGUuY29tMRQwEgYDVQQDDAtleGFtcGxlLmNvbTAeFw0xMTEwMjIwMzZaFw0xMTEwMjIwMzZaMH8xCzAJBgNVBAYTAlVTMRMEQYDVQQIDApDYWxpZm9ybmlhMRQwEgYDVQQKDAtleGFtcGxlLmNvbTEhMB8GA1UEAwwYTXMuIEJhcmJhcmEgSiBKZW5zZW4gSULJMSIwIAYJKoZIhvcNAQkBFhNiamVuc2VuQGV4YW1wbGUuY29tMIIIBIjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgKCAQEAA7Kr+Dcds/JQ5GwejJfCBIP682X3xpjis56AK02bc1FLgzdLI8auoR+cC9/Vrh5t66HkQIOdA4unHh0AaZ4xL5PhVbXIPMB5vAPKpzz5iPSi8x08SL7I7SDhcBVJhqVqr3Hg1lEG6UCLDdHO7nkLuwXq8HcISKkbT5WFTVfFZzidPl8HZ7DhXkZIRtJwBweq4bvm3hM1Os7UQH05ZS6cVDgweKNwdLLrT5likSQG3DYrl+ft781UQRIqxgwgCfXEuDiinPh0kkvIi5jivVulZ9QiwlyEdRbLJ4zJQBmDrSGTMYn4lRc2HgHO4DqB/bnMVorHB0CC6AV1QoFK4GPe1LwIDAQABo3sweTAJBgNVHRMEAjAAMCwGCWCGSAGG+EIBDQQfFh1PcGVuU1NMIEdlbmVyYXRlZCBZJ0aWZpY2F0ZTAZBgNVHQ4EFgQU8pD0U0vsZIsaA16lL8En8bx0F/gwHwYDVR0jBBgwFoAUdGeKitcaF7gnzsNwDx708kqaVt0wDQYJKoZIhvcNAQEFBQADgYEAA81SsFnOdYJtNg5Tcq+/ByEDrBgnusx0jloUhByPMEVkoMZ3J7j1ZgI8rAbOkNngX8+pKfTiDz1RC4+dx8oU6Za+4NJXUj1L5CvV6BEYb1+QAEJwitTVvxB/A67g42/vzgAtoRUeDovl+GFIBZ+GNF/cAYKcMtGcrs2i97ZkJMo=" } ], "meta": { "created": "2010-01-23T04:56:22Z", "lastModified": "2011-05-13T04:42:34Z", "version": "W\\\\"b431af54f0671a2\\\"", "location": "http://localhost:8080/oxTrust/seam/resource/restv1/Users/@!1111!0000!D4E7" } }
```

- JSON response
- header

```
201 CREATED
Server: Apache-Coyote/1.1
Location:
https://localhost:8080/oxTrust/seam/resource/restv1/Users/@!1111!0000!D4E
7
Content-Type: application/json
```

- response Content

```
{ "schemas": [ "urn:scim:schemas:core:1.0"], "id": "@!1111!0000!D4E7", "externalId": "john", "userName": "john", "name": { "givenName": "John", "familyName": "Smith", "middleName": "N/A", "honorificPrefix": "N/A", "honorificSuffix": "N/A"}, "displayName": "John Smith", "nickName": "Sensei", "profileUrl": "http://www.gluu.org/", "emails": [{ "value": "john@gluu.org", "type": "work", "primary": "true"}, {"value": "john2@gluu.org", "type": "home", "primary": "false"}], "addresses": [{"type": "work", "streetAddress": "621 East 6th Street Suite 200", "locality": "Austin", "region": "TX", "postalCode": "78701", "country": "US", "formatted": "621 East 6th Street Suite 200 Austin , TX 78701 US", "primary": "true"}], "phoneNumbers": [{"value": "646-234-5678", "type": "work"}], "ims": [{"value": "nynyjohn", "type": "Skype"}], "photos": [{"value": "http://www.gluu.org/wp-content/themes/SaaS-II/images/logo.png", "type": "gluu photo"}], "userType": "CEO", "title": "CEO", "preferredLanguage": "en-us", "locale": "en_US", "timezone": "America/Chicago", "active": "true", "password": "Hidden for Privacy Reasons", "groups": [{"display": "Gluu Manager Group", "value": "@!1111!0003!B2C6"}, {"display": "Gluu Owner Group", "value": "@!1111!0003!D9B4"}], "roles": [{"value": "Owner"}], "entitlements": [{"value": "full access"}], "x509Certificates": [{"value": "MIIDQzCCAqygAwIBAgICEAAwDQYJKoZIhvcNAQEFBQAwtTjELMAkGA1UEBhMCVVMxEzARBgNVBAgMCKNhbgLmb3JuaWEeFDASBgNVBAoMC2V4YW1wbGUyY29tMRQwEgYDVQQDDAtleGFtcGxlLmNvbTAeFw0xMTEwMjIwMzFaFw0xMjEwMDQwNjIwMzFaMH8xCzAJBgNVBAYTA1VTMRMwEQYDVQQIDAplDYWxpZm9ybmlhMRQwEgYDVQQKDAtleGFtcGxlLmNvbTEhMB8GA1UEAwwYTXYMuIEJhcmJhcmEgSiBKZW5zZW4gSULJMSIwIAYJKoZIhvcNAQkBFBhNiamVuc2VuQGv4YW1wbGUyY29tMIIBIjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgKCAQEAE7Kr+Dcds/JQ5GweJfFcBiP682X3xpjis56AK02bclFLgzdLI8auoR+cC9/Vrh5t66HkQIOda4unHh0AaZ4xL5PhVbXIPMB5vAPKpzz5iPSi8xO8SL7I7SDhcBVJhgVqr3Hg1LEG6UClDdHO7nkLuwxq8HCISKkbT5WFtVFfZzidPl8HZ7DhXkZIRtJwBweq4bvbm3hM1Os7UQH05ZS6cVDgweKNwdLLrT5likSQG3DYrl+ft781UQRlqxgwqCfXEuDiinPh0kkviI5jivVu1Z9QiwlYEdrBLJ4zJBmDrSGTMyn4lRc2HgHO4Dqb/bnMVorHB0CC6AV1QoFK4GPelLwIDAQABosweTAJBgNVHRMEAjaAMCWGCWCSSAGG+EIBDQQfFhlPcGVuU1NMIEdlbmVyYXRlc2BDZXXJ0awZPy2F0ZTAdBgNVHQ4EFgQU8pD0U0vsZIsaA16lL8En8bxOF/gwHwYDVR0jBBgwFoAUdGeKitcaF7gnzsNwDx708kqaVt0wDQYJKoZIhvcNAQEFBQADgYEAA81SsFnOdYJtNg5Tcq+/ByEDrBgnusx0jloUhByPMEVkoMZ3J7jlZgI8rAbOkNngX8+pKFtiDz1RC4+dx8ouU6Za+4NJXuJlL5CvV6BEYbl+QAEJwitTVvxB/A67g42/vzgAtoRUeDov1+GFibZ+GNF/cAYKcMTGcrs2i97zkJM=}"]}, {"meta": {"created": "2010-01-23T04:56:22Z", "lastModified": "2011-05-13T04:42:34Z", "version": "W\\\\"b43laf54f0671a2\\\"", "location": "http://localhost:8080/oxTrust/seam/resource/restv1/Users/@!1111!0000!D4E7"}}}]}
```



- XML request

- Header

```
POST
https://localhost:8080/oxTrust/seam/resource/restv1/Users/
Accept: application/XML
Authorization: Bearer 91732a27-fd00-487a-9dde-a6ed2fac6949
```

- Request Content

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?><User
xmlns="urn:scim:schemas:core:1.0"><externalId>mike</externalId><userName>mike</userName>
<name><givenName>John</givenName><familyName>Smith</familyName><middleName>N/A</middleName>
<honorificPrefix>N/A</honorificPrefix><honorificSuffix>N/A</honorificSuffix></name><display
Name>John
Smith</displayName><nickName>Sensei</nickName><profileUrl>http://www.gluu.org/</profileU
rl><emails><email><value>mike@gluu.org</value><type>work</type><primary>true</primary></
email><email><value>mike2@gluu.org</value><type>home</type><primary>false</primary></ema
il></emails><addresses><address><type>work</type><streetAddress>621 East 6th Street
Suite
200</streetAddress><locality>Austin</locality><region>TX</region><postalCode>78701</post
alCode><country>US</country><formatted>621 East 6th Street Suite 200 Austin , TX 78701
US</formatted><primary>true</primary></address></addresses><PhoneNumbers><PhoneNumber><v
alue>646-234-
5678</value><type>work</type></PhoneNumber></PhoneNumbers><ims><im><value>nynymike</valu
e><type>Skype</type></im></ims><photos><photo><value>http://www.gluu.org/wp-
content/themes/SaaS-II/images/logo.png</value><type>gluu
photo</type></photo></photos><userType>CEO</userType><title>CEO</title><preferredLanguag
e>en-
us</preferredLanguage><locale>en_US</locale><timezone>America/Chicago</timezone><active>
true</active><password>secret</password><groups><group><display>Gluu Manager
Group</display><value>@!1111!0003!B2C6</value></group><group><display>Gluu Owner
Group</display><value>@!1111!0003!D9B4</value></group></groups><roles><role><value>Owner
</value></role></roles><entitlements><entitlement><value>full
access</value></entitlement></entitlements><x509Certificates><x509Certificate><value>MII
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wMDQwNjIOMzFa
MH8xCzAJBgNVBAYTA1VTMRMwEQYDVQQIDApDYWxpZm9ybmlhMRQwEgYDVQQKDAtleGFtcGxlLmNvbTEhMB8GA1UE
AwwYTXMuIEJhcmJhcmEgSiBkZW5zZW4gSULJMSIwIAYJKoZIhvcNAQkBFhNiamVuc2VuQGV4YW1wbGUuY29tMII
IjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgKCAQEAA7Kr+Dcds/JQ5GwejJFcbIP682X3xpjis56AK02bclFLgzdLI
8auoR+cC9/Vrh5t66HkQIOdA4unHh0AaZ4xL5PhVbXIPMB5vAPKpzz5iPSi8x08SL7I7SDhcBVJhqVqr3Hg1LEG6
UCldDdHO7nkLuwXq8HcISKkbT5WFTVfFZZidPl8HZ7DhXkZIRtJwBweq4bvm3hM1Os7UQH05ZS6cVDgweKNwdLLrT
5likSQG3DYrl+ft781UQRIqxgwqCfXEuDiinPh0kkvIi5jivVu1Z9QiwlyEdRbLJ4zJQBmDrSGTMYn4lRc2HgHO4
DqB/bnMVorHB0CC6AV1QoFK4GPelLwIDAQAB03sweTAJBgNVHRMEAjAAMCwGCWGSAGG+EIBDQQfFh1PcGVuU1NM
IEdlbmVyYXRlZCBZJ0aWZpY2F0ZTAdBgNVHQ4EFgQU8pd0U0vsZIsaA16lL8En8bx0F/gwHwYDVR0jBBgwFoAU
dGeKitcaF7gnzsNwDx708kqaVt0wDQYJKoZIhvcNAQEFBQAQADgYEAA81SsFnOdYJtNg5Tcq+/ByEDrBgnusx0jloU
hByPMEVkoMZ3J7j1ZgI8rAbOkNngX8+pKfTiDz1RC4+dx8oU6Za+4NJXUj1L5CvV6BEYb1+QAEJwitTVvxB/A67g
42/vzgAtoRueDov1+GFIBZ+GNF/cAYKcMtGcrs2i97ZkJMo=</value></x509Certificate></x509Certific
ates><meta><created>2010-01-23T04:56:22Z</created><lastModified>2011-05-
13T04:42:34Z</lastModified><version>W\&quot;b431af54f0671a2&quot;</version><location>htt
p://localhost:8080/oxTrust/seam/resource/restv1/Users/@!1111!0000!D4E7</location></meta>
</User>
```

- XML response
- Header

```
201 CREATED
Server: Apache-Coyote/1.1
Location:
https://localhost:8080/oxTrust/seam/resource/restv1/Users/@!1111!0000!D4E7
Content-Type: application/XML
```

- Response Content

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?><User xmlns="urn:scim:schemas:core:1.0"><id>@!1111!0000!D4E7</id><externalId>mike</externalId><userName>mike</userName><name><givenName>John</givenName><familyName>Smith</familyName><middleName>N/A</middleName><honorificPrefix>N/A</honorificPrefix><honorificSuffix>N/A</honorificSuffix></name><displayName>John Smith</displayName><nickName>Sensei</nickName><profileUrl>http://www.gluu.org/</profileUrl><emails><email><value>mike@gluu.org</value><type>work</type><primary>>true</primary></email><email><value>mike2@gluu.org</value><type>home</type><primary>>false</primary></email></emails><addresses><address><type>work</type><streetAddress>621 East 6th Street Suite 200</streetAddress><locality>Austin</locality><region>TX</region><postalCode>78701</postalCode><country>US</country><formatted>621 East 6th Street Suite 200 Austin , TX 78701 US</formatted><primary>true</primary></address></addresses><PhoneNumbers><PhoneNumber><value>646-234-5678</value><type>work</type></PhoneNumber></PhoneNumbers><ims><im><value>nynymike</value><type>Skype</type></im></ims><photos><photo><value>http://www.gluu.org/wp-content/themes/SaaS-II/images/logo.png</value><type>gluu photo</type></photo></photos><userType>CEO</userType><title>CEO</title><preferredLanguage>en-us</preferredLanguage><locale>en_US</locale><timezone>America/Chicago</timezone><active>true</active><password>Hiden for Privacy Reasons</password><groups><group><display>Gluu Manager Group</display><value>@!1111!0003!B2C6</value></group><group><display>Gluu Owner Group</display><value>@!1111!0003!D9B4</value></group></groups><roles><role><value>Owner</value></role></roles><entitlements><entitlement><value>full access</value></entitlement></entitlements><x509Certificate><value>MII DQzCCAqygAwIBAgICEAAwDQYJKoZIhvcNAQEFBQAwtjELMAkGA1UEBhMCVVMxEzARBgNVBAgMCkNhbmGlmb3JuaWEwFDASBgNVBAoMCM2V4YW1wbGUyY29tMRQwEgYDVQQDDAtleGFtcGx1LmNvbTAeFw0xMTEwMjIwMDZFaWMDQwNjIOMzFaMH8xCzAJBgNVBAYTAlVTMRMwEQYDVQQIDApDYWxpZm9ybmlhMRQwEgYDVQQKDAtleGFtcGx1LmNvbTEhMB8GA1UEAwwYXTMuIEJhcmlhcmEgS1BKZW5zZW4gSUlJMSIwIAYJKoZIhvcNAQkBfHNiamVuc2VuQGv4YW1wbGUyY29tMIIBIjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgKCAQEAF7Kr+Dcds/JQ5GwejJFcBIP682X3xpjis56AK02bc1FLgzdLI8auoR+cC9/Vrh5t66HkQIOda4unHhOAAZ4xL5PhVbXIPMB5vAPKpzziPSi8xO8SL7I7SDhcBVJhqVqr3HgllEG6UClddHO7nkLuwXq8HcISKkbT5WFtVFfZZidPl8HZ7DhXkZIRtJwBweq4bvm3hm1Os7UQH05ZS6cVDgweKNwdLLrT5likSQG3DYrl+ft781UQRiQxgwqCfXEuDiinPh0kkvIi5jiivVulZ9QiwlYedRbLJ4zJQBmDrSGTMyn4lRc2HgHO4DqB/bnMVorHB0CC6AV1QoFK4GPelLwIDAQABo3sweTAJBGNVHRMEAjaAMCWGCWCAGSAGG+EIBDQQFfPh1PcGVuU1NMIEDlbmVyYXRlZCBDZXJ0aWZpY2F0ZTAdbGNNVHQ4EFgQU8pdOU0vsZIsaA16lL8En8bx0F/gwHwYDVR0jBBgwFoAUdGeKitcaF7gnzsNwDx708kqaVtOwDQYJKoZIhvcNAQEFBQAQdgYEAA81SsFnOdYJtNg5Tcq+/ByEDrBgnusx0jloUhByPMEVkoMZ3J7jlZgi8rAbOkNngX8+pKfTiDzlRC4+dx8ou6Za+4NJXuJlL5CvV6BEYbl+QAEJwitTVvxB/A67g42/vzgAtoRUeDovl+GFibZ+GNF/cAYKcMtGcrs2i97ZkJMo=</value></x509Certificate></x509Certificates><meta><created>2010-01-23T04:56:22Z</created><lastModified>2011-05-13T04:42:34Z</lastModified><version>W'&b43laf54f0671a2'</version><location>http://localhost:8080/oxTrust/seam/resource/restv1/Users/@!1111!0000!D4E7</location></meta></User>
```

### 3-2/Getting a user

- JSON request
- header

```
GET
https://localhost:8080/oxTrust/seam/resource/restv1/Users/@!1111!0000!D4E7
Accept: application/json
Authorization: Bearer 91732a27-fd00-487a-9dde-a6ed2fac6949
```

- JSON response
- header

```
200 OK
Server: Apache-Coyote/1.1
Location:
https://localhost:8080/oxTrust/seam/resource/restv1/Users/@!1111!0000!D4E7
Content-Type: application/json
```

- Response Content

```
{
  "schemas": [
    {
      "urn": "scim:schemas:core:1.0",
      "id": "@!1111!0000!D4E7",
      "externalId": "mike",
      "userName": "mike",
      "name": {
        "givenName": "John",
        "familyName": "Smith",
        "middleName": "N/A",
        "honorificPrefix": "N/A",
        "honorificSuffix": "N/A",
        "displayName": "John Smith",
        "nickName": "Sensei",
        "profileUrl": "http://www.gluu.org/",
        "emails": [
          {
            "value": "mike@gluu.org",
            "type": "work",
            "primary": "true"
          },
          {
            "value": "mike2@gluu.org",
            "type": "home",
            "primary": "false"
          }
        ],
        "addresses": [
          {
            "type": "work",
            "streetAddress": "621 East 6th Street Suite 200",
            "locality": "Austin",
            "region": "TX",
            "postalCode": "78701",
            "country": "US",
            "formatted": "621 East 6th Street Suite 200 Austin, TX 78701 US",
            "primary": "true"
          }
        ],
        "phoneNumbers": [
          {
            "value": "646-234-5678",
            "type": "work"
          }
        ],
        "ims": [
          {
            "value": "nynymike",
            "type": "Skype"
          }
        ],
        "photos": [
          {
            "value": "http://www.gluu.org/wp-content/themes/SaaS-II/images/logo.png",
            "type": "gluu photo"
          }
        ],
        "userType": "CEO",
        "title": "CEO",
        "preferredLanguage": "en-us",
        "locale": "en_US",
        "timezone": "America/Chicago",
        "active": "true",
        "password": "Hidden for Privacy Reasons",
        "groups": [
          {
            "display": "Gluu Manager Group",
            "value": "@!1111!0003!B2C6",
            "display": "Gluu Owner Group",
            "value": "@!1111!0003!D9B4"
          }
        ],
        "roles": [
          {
            "value": "Owner"
          }
        ],
        "entitlements": [
          {
            "value": "full access"
          }
        ],
        "x509Certificates": [
          {
            "value": "MIIDQzCCAqygAwIBAgICEAAwDQYJKoZIhvcNAQEFBQAwTjELMAkGA1UEBhMCVVMxEzARBgNVBAGMCkNhbmB3JuaWEeFDASBgNVBAoMC2V4YW1wbGUuY29tMRQwEgYDVQDDAtleGFtcGx1LmNvbTAeFw0xMTEwMjIwMzFaFw0xMjEwMDQwNjIwMzFaMH8xCzAJBgNVBAYTALVTMRMwEQYDVQIDApDYWxpZm9ybmlhMRQwEgYDVQKDAtleGFtcGx1LmNvbTEhMB8GA1UEAwwYTXMuIEJhcmJhcmEgSiBkZW5zZW4gSULJMSIwIAYJKoZIhvcNAQkBFhNiamVuc2VuQGV4YW1wbGUuY29tMIIBIjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgKCAQEAA7Kr+Dcds/JQ5GwejJFcBIP682X3xpjis56AK02bc1FLgzdLI8auoR+cC9/Vrh5t66HkQIOdA4unHh0AaZ4xL5PhVbXIPMB5vAPKpzz5iPSi8x08SL7I7SDhcBVJhqVqr3HgllEG6UC1DdHO7nkLuwXq8HcISKkbT5WFTVfFZzidPl8HZ7DhXkZIRtJwBweq4bvm3hM1Os7UQH05ZS6cVDgweKNwdLLrT5likSQG3DYrl+ft781UQRIqxgwgCfXEUdiinPh0kkvIi5jivVulZ9QiwlyEdRbLJ4zJQBmDrSGTMYn4lRc2HgHO4Dqb/bnMVorHB0CC6AV1QoFK4GPelLwIDAQABo3sweTAJBGNVHRMEAjAAMCwGCWCGSAGG+EIBDQDQfFh1PcGVuU1NMIEdlbmVYXRlZCBZDZXJ0aWZpY2F0ZTADBgNVHQ4EFgQU8pD0U0vsZIsaA16lL8En8bx0F/gwHwYDVR0jBBGwFoAUdGeKitcaF7gnzsNwDx708kqaVt0wDQYJKoZIhvcNAQEFBQADgYEAA81SsFnOdYJtNg5Tcq+/ByEDrBgnusx0jloUhByPMEVkoMZ3J7j1ZgI8rAbOkNngX8+pKfTiDz1RC4+dx8oU6Za+4NJXUj1L5CvV6BEYb1+QAEJwittTVvxB/A67g42/vzgAtoRUeDovl+GFIBZ+GNF/cAYKcMtGcrs2i97ZkJMo="
          }
        ],
        "meta": {
          "created": "2010-01-23T04:56:22Z",
          "lastModified": "2011-05-13T04:42:34Z",
          "version": "W\\\\"b431af54f0671a2\\\"",
          "location": "http://localhost:8080/oxTrust/seam/resource/restv1/Users/@!1111!0000!D4E7"
        }
      }
    ]
  }
}
```

- XML request
- header

```
GET
https://localhost:8080/oxTrust/seam/resource/restv1/Users/@!1111!0000!D4E7
Accept: application/json
Authorization: Bearer 91732a27-fd00-487a-9dde-a6ed2fac6949
```

- XML response
- header

```
200 OK
Server: Apache-Coyote/1.1
Location:
https://localhost:8080/oxTrust/seam/resource/restv1/Users/@!1111!0000!D4E7
Content-Type: application/XML
```

- Response content

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?><User
xmlns="urn:scim:schemas:core:1.0"><id>@!1111!0000!D4E7</id><externalId>mike</externalId>
<userName>mike</userName><name><givenName>John</givenName><familyName>Smith</familyName>
<middleName>N/A</middleName><honorificPrefix>N/A</honorificPrefix><honorificSuffix>N/A</
honorificSuffix></name><displayName>John
Smith</displayName><nickName>Sensei</nickName><profileUrl>http://www.gluu.org/</profileU
rl><emails><email><value>mike@gluu.org</value><type>work</type><primary>true</primary></
email><email><value>mike2@gluu.org</value><type>home</type><primary>false</primary></ema
il></emails><addresses><address><type>work</type><streetAddress>621 East 6th Street
Suite
200</streetAddress><locality>Austin</locality><region>TX</region><postalCode>78701</post
alCode><country>US</country><formatted>621 East 6th Street Suite 200 Austin , TX 78701
US</formatted><primary>true</primary></address></addresses><PhoneNumbers><PhoneNumber><v
alue>646-234-
5678</value><type>work</type></PhoneNumber></PhoneNumbers><ims><im><value>nynymike</valu
e><type>Skype</type></im></ims><photos><photo><value>http://www.gluu.org/wp-
content/themes/SaaS-II/images/logo.png</value><type>gluu
photo</type></photo></photos><userType>CEO</userType><title>CEO</title><preferredLanguag
e>en-
us</preferredLanguage><locale>en_US</locale><timezone>America/Chicago</timezone><active>
true</active><password>Hiden for Privacy Reasons</password><groups><group><display>Gluu
Manager Group</display><value>@!1111!0003!B2C6</value></group><group><display>Gluu Owner
Group</display><value>@!1111!0003!D9B4</value></group></groups><roles><role><value>Owner
</value></role></roles><entitlements><entitlement><value>full
access</value></entitlement></entitlements><x509Certificates><x509Certificate><value>MII
DQzCCAqygAwIBAgICEAAwDQYJKoZIhvcNAQEFBQAwtjELMAkGA1UEBhMCVVMxEzARBgNVBAgMCkNhbm3JuaWE
xPDASBgNVBAoMCMC2V4YW1wbGUuY29tMRQwEgYDVQDDAtleGFtcGx1LmNvbTAeFw0xMTEwMjI0MzFaFw0xMjE
wMDQwNjI0MzFa
MH8xCzAJBgNVBAYTA1VTRMRMwEQYDVQQIDApDYWxpZm9ybmlhMRQwEgYDVQQKDAtleGFtcGx1LmNvbTEhMB8GA1UE
AwwYTXMuIEJhcmJhcmEgSiBkZW5zZW4gSULJMSIwIAYJKoZIhvcNAQkBFhNiamVuc2VuQGV4YW1wbGUuY29tMIIB
IjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgKCAQEAE7Kr+Dcds/JQ5GwejJfCfBIP682X3xpjis56AK02bc1FLgzdLI
8auoR+cC9/Vrh5t66HkQIOdA4unHh0AaZ4xL5PhVbXIPMB5vAPKpzz5iPSi8x08SL7I7SDhcBVJhqVqr3HgllEG6
UC1DdHO7nkLuwXq8HcISKkbT5WFTVfFzZidPl8H27DhXkZIRtJwBweq4bvm3hM1Os7UQH05ZS6cVDgweKNwdLLrT
5likSQG3DYrl+ft781UQRIqxgwgqCfXEuDiinPh0kkvIi5jivVulZ9Qiw1YEdRbLJ4zJQBmDrSGTMyn4lRc2HgHO4
DqB/bnMVorHB0CC6AV1QoFK4GPelLwIDAQABO3sweTAJBgNVHRMEAjAAMCwGCWCGSAGG+EIBDQQfFh1PcGVuU1NM
IEdlbmVyYXRlZCBZDZJ0aWZpY2F0ZTAuBgNVHQ4EFgQU8pD0U0vsZIsaA16lL8En8bx0F/gwHwYDVR0jBBgwFoAU
dGeKitcaF7gnzsNwDx708kqaVt0wDQYJKoZIhvcNAQEFBQAQdgYEAAs1SsFnOdYJtNg5Tcq+/ByEDrBgnusx0jloU
hByPMEVkoMZ3J7j1ZgI8rAbOkNngX8+pKftiDz1RC4+dx8oU6Za+4NJXUj1L5CvV6BEYb1+QAEJwitTVvxB/A67g
42/vzgAtoRUeDovl+GFibZ+GNF/cAYKcMtGcrs2i97ZkJMo=</value></x509Certificate></x509Certific
ates><meta><created>2010-01-23T04:56:22Z</created><lastModified>2011-05-
13T04:42:34Z</lastModified><version>W'&b43laf54f0671a2&quot;</version><location>htt
p://localhost:8080/oxTrust/seam/resource/restv1/Users/@!1111!0000!D4E7</location></meta>
</User>
```

### 3-3/Modifying a user

- JSON request
- header

```
PUT
https://localhost:8080/oxTrust/seam/resource/restv1/Users/@!1111!0000!D4E7
Accept: application/json
Authorization: Bearer 91732a27-fd00-487a-9dde-a6ed2fac6949
```

- Request content

```
{"schemas":["urn:scim:schemas:core:1.0"],"externalId":"mike24","password":"Qb587QBJ"}
```

- JSON response
- Header

```
200 OK
Server: Apache-Coyote/1.1
Location:
https://localhost:8080/oxTrust/seam/resource/restv1/Users/@!1111!0000!D4E7
Content-Type: application/json
```

- Response Content

```
{
  "schemas": ["urn:scim:schemas:core:1.0"],
  "id": "@!1111!0000!D4E7",
  "externalId": "mike24",
  "userName": "mike",
  "name": {
    "givenName": "John",
    "familyName": "Smith",
    "middleName": "N/A",
    "honorificPrefix": "N/A",
    "honorificSuffix": "N/A",
    "displayName": "John Smith",
    "nickName": "Sensei",
    "profileUrl": "http://www.gluu.org/",
    "emails": [
      {
        "value": "mike@gluu.org",
        "type": "work",
        "primary": "true"
      },
      {
        "value": "mike2@gluu.org",
        "type": "home",
        "primary": "false"
      }
    ],
    "addresses": [
      {
        "type": "work",
        "streetAddress": "621 East 6th Street Suite 200",
        "locality": "Austin",
        "region": "TX",
        "postalCode": "78701",
        "country": "US",
        "formatted": "621 East 6th Street Suite 200 Austin, TX 78701 US",
        "primary": "true"
      }
    ],
    "phoneNumbers": [
      {
        "value": "646-234-5678",
        "type": "work"
      }
    ],
    "ims": [
      {
        "value": "nynymike",
        "type": "Skype"
      }
    ],
    "photos": [
      {
        "value": "http://www.gluu.org/wp-content/themes/SaaS-II/images/logo.png",
        "type": "gluu photo"
      }
    ],
    "userType": "CEO",
    "title": "CEO",
    "preferredLanguage": "en-us",
    "locale": "en_US",
    "timezone": "America/Chicago",
    "active": "true",
    "password": "Hidden for Privacy Reasons",
    "groups": [
      {
        "display": "Gluu Manager Group",
        "value": "@!1111!0003!B2C6"
      },
      {
        "display": "Gluu Owner Group",
        "value": "@!1111!0003!D9B4"
      }
    ],
    "roles": [
      {
        "value": "Owner"
      }
    ],
    "entitlements": [
      {
        "value": "full access"
      }
    ],
    "x509Certificates": [
      {
        "value": "MIIDQzCCAqygAwIBAgICEAAwDQYJKoZIhvcNAQEFBQAwTjELMAkGA1UEBhMCVVMxExARBgNVBAgMCkNhbgGlb3JuaWEeFDASBgNVBAoMCM2V4YW1wbGUuY29tMRQwEgYDVQDDAtLleGFtcGxlLmNvbTAeFw0xMTEwMjIwMzFaFw0xMjEwMDQwNjIwMzFaMH8xCzAJBgNVBAYTAlVTMRMwEQYDVQQIDApDYWxpZm9ybmlhMRQwEgYDVQQKDAtleGFtcGxlLmNvbTEhMB8GA1UEAwwYTXMuIEJhcmJhcmEgSiBkZW5zZW4gSU1JMSIwIAYJKoZIhvcNAQkBFhNiamVuc2VuQGv4YW1wbGUuY29tMIIBIjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgKCAQEAA7Kr+Dcds/JQ5GwejJFcBIP682X3xpjis56AK02bc1FLgzdLI8auoR+cC9/Vrh5t66HkQIOdA4unHh0AaZ4xL5PhVbXIPMB5vAPKpzz5iPSi8x08SL7I7SDhcBVJhqVqr3Hg1lEG6UClddHO7nkLuwXq8HcISKkbT5WFTVfFZzidPl8HZ7DhXkZIRtJwBweq4bvm3hM1Os7UQH05ZS6cVDgweKNwdLLrT5likSQG3DYrl+ft781UQRIqxgwqCfXEuDiinPh0kkvIi5jivVu1Z9QiwlyEdRbLJ4zJQBmDrSGTMYn4lRc2HgHO4DqB/bnMVorHB0CC6AV1QoFK4GPelLwIDAQABO3sweTAJBgNVHRMEAjAAMCwGCWCGSAGG+EIBDQqFfhlPcGVuU1NMIEdlbmVyYXRlZCBkZDZlZC9aWZpY2F0ZTAeBgNVHQ4EFgQU8pD0U0vsZIsaA16lL8En8bx0F/gwHwYDVR0jBBGwFoAUdGeKitcaF7gnzsNwDx708kqaVt0wDQYJKoZIhvcNAQEFBQADgYEA81SsFnOdYJtNg5Tcq+/ByEDrBgnusx0jloUhByPMEVkoMZ3J7j1ZgI8rAbOkNngX8+pKfTiDz1RC4+dx8oU6Za+4NJXUj1L5CvV6BEYb1+QAEJwittTVvxB/A67g42/vzgAtoRUeDov1+GFIBZ+GNF/cAYKcMtGcrs2i97ZkJMo="
      }
    ],
    "meta": {
      "created": "2010-01-23T04:56:22Z",
      "lastModified": "2011-05-13T04:42:34Z",
      "version": "W\\\\"b431af54f0671a2\\\"",
      "location": "http://localhost:8080/oxTrust/seam/resource/restv1/Users/@!1111!0000!D4E7"
    }
  }
}
```

- XML request

- header

```
PUT
https://localhost:8080/oxTrust/seam/resource/restv1/Users/@!1111!0000!D4E7
Accept: application/XML
Authorization: Bearer 91732a27-fd00-487a-9dde-a6ed2fac6949
```

- Request Content

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?><User
xmlns="urn:scim:schemas:core:1.0"><externalId>mike26</externalId><password>Qb587QBJ</pas
sword></user>
```

- XML response

- header

```
200 OK
Server: Apache-Coyote/1.1
Location:
https://localhost:8080/oxTrust/seam/resource/restv1/Users/@!1111!0000!D4E7
Content-Type: application/XML
```



- Response Content

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?><User
xmlns="urn:scim:schemas:core:1.0"><id>@!1111!0000!D4E7</id><externalId>mike26</externalI
d><userName>mike</userName><name><givenName>John</givenName><familyName>Smith</familyNam
e><middleName>N/A</middleName><honorificPrefix>N/A</honorificPrefix><honorificSuffix>N/A
</honorificSuffix></name><displayName>John
Smith</displayName><nickName>Sensei</nickName><profileUrl>http://www.gluu.org/</profileU
rl><emails><email><value>mike@gluu.org</value><type>work</type><primary>true</primary></
email><email><value>mike2@gluu.org</value><type>home</type><primary>false</primary></ema
il></emails><addresses><address><type>work</type><streetAddress>621 East 6th Street
Suite
200</streetAddress><locality>Austin</locality><region>TX</region><postalCode>78701</post
alCode><country>US</country><formatted>621 East 6th Street Suite 200 Austin , TX 78701
US</formatted><primary>true</primary></address></addresses><PhoneNumbers><PhoneNumber><v
alue>646-234-
5678</value><type>work</type></PhoneNumber></PhoneNumbers><ims><im><value>nynymike</valu
e><type>Skype</type></im></ims><photos><photo><value>http://www.gluu.org/wp-
content/themes/SaaS-II/images/logo.png</value><type>gluu
photo</type></photo></photos><userType>CEO</userType><title>CEO</title><preferredLanguag
e>en-
us</preferredLanguage><locale>en_US</locale><timezone>America/Chicago</timezone><active>
true</active><password>Hiden for Privacy Reasons</password><groups><group><display>Gluu
Manager Group</display><value>@!1111!0003!B2C6</value></group><group><display>Gluu Owner
Group</display><value>@!1111!0003!D9B4</value></group></groups><roles><role><value>Owner
</value></role></roles><entitlements><entitlement><value>full
access</value></entitlement></entitlements><x509Certificates><x509Certificate><value>MII
DQzCCAqygAwIBAgICEAAwDQYJKoZIhvcNAQEFBQAwtJELMAkGA1UEBhMCVVMxEzARBgNVBAgMCkNhbmG1mb3JuaWE
xFDASBgNVBAoMCM2V4YW1wbGUuY29tMRQwEgYDVQQLDAtleGFtcGxlLmNvbTAeFw0xMTEwMjIwMzFa
wMDQwNjIOMzFa
MH8xCzAJBgNVBAYTA1VTMRMwEQYDVQQIDApDYWxpZm9ybmlhMRQwEgYDVQQKDAtleGFtcGxlLmNvbTEhMB8GA1UE
AwwYTXMuIEJhcmJhcmEgSiBkZW5zZW4gSU1JMSIwIAYJKoZIhvcNAQkBFhNiamVuc2VuQGv4YW1wbGUuY29tMIIB
IjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgKCAQEAE7Kr+Dcds/JQ5GwejJFcBIP682X3xpjis56AK02bc1FLgzdLI
8auoR+cC9/Vrh5t66HkQIOdA4unHh0AaZ4xL5PhVbXIPMB5vAPKpzz5iPSi8xO8SL7I7SDhcBVJhqVqr3Hg1LEG6
UC1DdHO7nkLuwXq8HcISKkbT5WFTVfFZzidP18HZ7DhXkZIRtJwBweq4bvm3hM1Os7UQH05ZS6cVDgweKNwdLLrT
51likSQG3DYrl+ft781UQRIqxgwgCfXEuDiinPh0kkvIi5jivVu1Z9QiwLYEdRbLJ4zJQBmDrSGTMYn4lRc2HgHO4
DqB/bnMVorHB0CC6AV1QoFK4GPe1LwIDAQABO3sweTAJBgNVHRMEAjAAMCwGCWCGSAGG+EIBDQQfFh1PcGVuU1NM
IEdlbmVyYXRlZCBZJ0aWZpY2F0ZTAZBgNVHQ4EFgQU8pD0U0vsZIsaA16lL8En8bx0F/gwHwYDVR0jBBgwFoAU
dGeKitcaF7gnzsNwDx708kqaVt0wDQYJKoZIhvcNAQEFBQAQdGyEAA81SsFnOdYJtNg5Tcq+/ByEDrBgnusx0jloU
hByPMEVkoMZ3J7j1ZgI8rAbOkNngX8+pKfTiDz1RC4+dx8oU6Za+4NJXUj1L5CvV6BEYb1+QAEJwitTVvxB/A67g
42/vzgAtoRUEdov1+GFIBZ+GNF/cAYKcMtGcrs2i97ZkJMo=</value></x509Certificate></x509Certific
ates><meta><created>2010-01-23T04:56:22Z</created><lastModified>2011-05-
13T04:42:34Z</lastModified><version>W\&quot;b43laf54f0671a2&quot;</version><location>htt
p://localhost:8080/oxTrust/seam/resource/restv1/Users/@!1111!0000!D4E7</location></meta>
</User>
```

### 3-4/Delete a user

- JSON header request

```
DELETE
https://localhost:8080/oxTrust/seam/resource/restv1/Users/@!1111!0000!D4E7
Accept: application/json
Authorization: Bearer 91732a27-fd00-487a-9dde-a6ed2fac6949
```

- JSON header response

```
HTTP/1.1 200 OK
```

- XML header request

```
DELETE
https://localhost:8080/oxTrust/seam/resource/restv1/Users/@!1111!0000!D4E7
Accept: application/XML
Authorization: Bearer 91732a27-fd00-487a-9dde-a6ed2fac6949
```

- XML header response

```
HTTP/1.1 200 OK
```

### 3-5/Bulk request

- JSON Request
- Header

```
POST https://localhost:8080/oxTrust/seam/resource/restv1/Bulk/  
Accept: application/json  
Authorization: Bearer 91732a27-fd00-487a-9dde-a6ed2fac6949
```

- Request Content

```
{  
  "schemas": ["urn:scim:schemas:core:1.0"],  
  "Operations": [{"method": "POST", "path": "/Users",  
    "data": {"schemas": ["urn:scim:schemas:core:1.0"], "externalId": "bulk", "userName": "bulk", "name": {"givenName": "bulk", "familyName": "bulk", "middleName": "N/A", "honorificPrefix": "N/A", "honorificSuffix": "N/A"}, "displayName": "bulk", "nickName": "bulk", "profileUrl": "http://www.gluu.org/", "emails": [{"value": "bulk@gluu.org", "type": "work", "primary": "true"}, {"value": "bulk2@gluu.org", "type": "home", "primary": "false"}], "addresses": [{"type": "work", "streetAddress": "621 East 6th Street Suite 200", "locality": "Austin", "region": "TX", "postalCode": "78701", "country": "US", "formatted": "621 East 6th Street Suite 200 Austin, TX 78701 US", "primary": "true"}], "phoneNumbers": [{"value": "646-234-5678", "type": "work"}], "ims": [{"value": "nynymike", "type": "Skype"}], "photos": [{"value": "http://www.gluu.org/wp-content/themes/SaaS-II/images/logo.png", "type": "gluu photo"}], "userType": "CEO", "title": "CEO", "preferredLanguage": "en-us", "locale": "en_US", "timezone": "America/Chicago", "active": "true", "password": "secret", "groups": [{"display": "Gluu Manager Group", "value": "@!1111!0003!B2C6"}, {"display": "Gluu Owner Group", "value": "@!1111!0003!D9B4"}], "roles": [{"value": "Owner"}], "entitlements": [{"value": "full access"}], "x509Certificates": [{"value": "MIIDQzCCAqygAwIBAgICEAAwDQYJKoZIhvcNAQEFBQAwTjELMAkGA1UEBhMCVVMxEzARBgNVBAGMCkNhbmGmb3JuaWEeFDASBgNVBAoMC2V4YW1wbGUuY29tMRQwEgYDVQQDDAtleGFtcGx1LmNvbTAeFw0xMTEwMjIwMzFaFw0xMjEwMDQwNjI0MzFaMAH8xCzAJBgNVBAYTA1VTRMRWEQYDVQQIDApDYWxpZm9ybmlhMRQwEgYDVQQKDAtleGFtcGx1LmNvbTEhMB8GA1UEAwYyTXMuIEJhcmJhcmEgSiBkZW50ZW4gSULJMSIwIAYJKoZIhvcNAQkBFhNiamVuc2VuQGv4YW1wbGUuY29tMIIIBIjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgKCAQEAE7Kr+Dcds/JQ5GwejJFcbIP682X3xpjis56AK02bc1FLgzdLI8auoR+cC9/Vrh5t66HkQIOdA4unHh0AaZ4xL5PhVbXIPMB5vAPKpzz5iPSi8x08SL7I7SDhcBVJhqVqr3HgllEG6UCLdDhO7nkLuwXq8HcISKkbT5WFTVfFZzidPl8HZ7DhXkZIRtJwBweq4bvm3hM1Os7UQH05ZS6cVDgweKNwdLLrT51iksQG3DYrl+ft781UQRIqxgwqCfXEuDiinPh0kkvTi5jivVu1Z9QiwlyEdRbLJ4zJQBmDrSGTMYn4lRc2HgHO4DqB/bnMvorHB0CC6AV1QoFK4GPelLwIDAQABO3sweTAJBgNVHRMEAjAAMCwGCWCGSAGG+EIBDQQfFh1PcGVuU1NMIEdlbmVyYXRlZCBZDZlZC9wZjY2F0ZTAZBgNVHQ4EFgQU8pD0U0vsZIsaA16lL8En8bx0F/gwHwYDVR0jBBgwFoAUAUdGeKitcaF7gnzsNwDx708kqaVt0wDQYJKoZIhvcNAQEFBQADgYEAA81SsFnOdYJtNg5Tcq+/ByEDrBgnusx0jloUhByPMEVkoMZ3J7j1ZgI8rAbOkNngX8+pKfTiDz1RC4+dx8oU6Za+4NJXUj1L5CvV6BEYb1+QAEJwitTVvx/B67g42/vzgAtoRUeDovl+GFIBZ+GNF/cAYKcMtGcrs2i97ZkJo="}], "meta": {"created": "2010-01-23T04:56:22Z", "lastModified": "2011-05-13T04:42:34Z", "version": "W\\\\"b431af54f0671a2\\\"", "location": "http://localhost:8080/oxTrust/seam/resource/restv1/Users/@!1111!0000!D4E7"}}, {"bulkId": "onebunk"}, {"method": "PUT", "path": "/Users/@!1111!0000!C4C4", "version": "oneversion", "data": {"schemas": ["urn:scim:schemas:core:1.0"], "displayName": "bulk person", "externalId": "bulk"}}, {"method": "DELETE", "path": "/Users/@!1111!0000!C3C3", "version": "oneversion"}]}
```

- JSON response
- header

```
200 OK
Server: Apache-Coyote/1.1
Location: https://localhost:8080/oxTrust/seam/resource/restv1/Bulk/
Content-Type: application/json
```

- Response Content

```
{"schemas":["urn:scim:schemas:core:1.0"],"Operations":[{"method":"POST","location":"http://localhost:8080/oxTrust/seam/resource/restv1/Users/@!1111!0000!F8A1","version":"","status":{"description":"","code":"201"},"bulkId":"onebunk"}, {"method":"PUT","location":"http://localhost:8080/oxTrust/seam/resource/restv1/Users/@!1111!0000!C4C4","version":"oneversion","status":{"description":"","code":"200"},"bulkId":""}, {"method":"DELETE","location":"http://localhost:8080/oxTrust/seam/resource/restv1/Users/@!1111!0000!C3C3","version":"","status":{"description":"","code":"200"},"bulkId":""}]}
```

- XML request
- header

```
POST https://localhost:8080/oxTrust/seam/resource/restv1/Bulk/
Accept: application/XML
Authorization: Bearer 91732a27-fd00-487a-9dde-a6ed2fac6949
```

- Request Content

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?><Bulk
xmlns="urn:scim:schemas:core:1.0"><Operations><operation><bulkId>onebunk</bulkId><data><
externalId>bulk</externalId><userName>bulk</userName><name><givenName>bulk</givenName><f
amilyName>bulk</familyName><middleName>N/A</middleName><honorificPrefix>N/A</honorificPr
efix><honorificSuffix>N/A</honorificSuffix></name><displayName>bulk
bulk</displayName><nickName>bulk</nickName><profileUrl>http://www.gluu.org/</profileUrl>
<emails><email><value>bulk@gluu.org</value><type>work</type><primary>true</primary></ema
il><email><value>bulk2@gluu.org</value><type>home</type><primary>false</primary></email>
</emails><addresses><address><type>work</type><streetAddress>621 East 6th Street Suite
200</streetAddress><locality>Austin</locality><region>TX</region><postalCode>78701</post
alCode><country>US</country><formatted>621 East 6th Street Suite 200 Austin , TX 78701
US</formatted><primary>true</primary></address></addresses><PhoneNumbers><PhoneNumber><v
alue>646-234-
5678</value><type>work</type></PhoneNumber></PhoneNumbers><ims><im><value>nynymike</valu
e><type>Skype</type></im></ims><photos><photo><value>http://www.gluu.org/wp-
content/themes/SaaS-II/images/logo.png</value><type>gluu
photo</type></photo></photos><userType>CEO</userType><title>CEO</title><preferredLanguag
e>en-
us</preferredLanguage><locale>en_US</locale><timezone>America/Chicago</timezone><active>
true</active><password>secret</password><groups><group><display>Gluu Manager
Group</display><value>@!1111!0003!B2C6</value></group><group><display>Gluu Owner
Group</display><value>@!1111!0003!D9B4</value></group></groups><roles><role><value>Owner
</value></role></roles><entitlements><entitlement><value>full
access</value></entitlement></entitlements><x509Certificates><x509Certificate><value>MII
DQZCCAqygAwIBAgICEAAwDQYJKoZIhvcNAQEFBQAwTjELMAkGA1UEBhMCVVMxEzARBgNVBAGMCkNhbmGmb3JuaWE
xFDASBgNVBAoMC2V4YW1wbGUuYy29tMRQwEgYDVQQDDAtleGFtcGxlLmNvbTAeFw0xMTEwMjI0MzFaFw0xMjE
wMDQwNjI0MzFa
MH8xCzAJBgNVBAYTA1VTMRMwEQYDVQQIDApDYWxpZm9ybmlhMRQwEgYDVQQKDAtleGFtcGxlLmNvbTEhMB8GA1UE
AwwYTXMuIEJhcmJhcmEgSiBKZW5zZW4gSULJMSIwIAYJKoZIhvcNAQkBFhNiamVuc2VuQGV4YW1wbGUuYy29tMII
IjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgKCAQEA7Kr+Dcds/JQ5GwejJfCBIP682X3xpjis56AK02bclFLgzdLI
8auoR+cC9/Vrh5t66HkQIOda4unHh0AaZ4xL5PhVbXIPMB5vAPKpzz5iPSi8x08SL7I7SDhcBVJhqVqr3Hg1lEG6
UClddH07nkLuwXq8HcISKkbT5WFTVfFZzidPl8HZ7DhXkZIRtJwBweq4bvm3hMlOs7UQH05ZS6cVDgweKNwdLLrT
5likSQG3DYrl+ft781UQRIqxgwgCfXEuDiinPh0kkvIi5jivVulZ9Qiw1YEdRbLJ4zJQBmDrSGTMyn4lRc2HgHO4
DqB/bnMVorHB0CC6AV1QoFK4GPelLwIDAQABo3sweTAJBgNVHRMEAjAAMCwGCWCGSAGG+EIBDQQffh1PcGVuU1NM
IEdlbmVyYXRlZCBZJ0aWZpY2F0ZTAZBgNVHQ4EFgQU8pD0U0vsZIsaA16lL8En8bx0F/gwHwYDVR0jBBgwFoAU
dGeKitcaF7gnzsNwDx708kqaVt0wDQYJKoZIhvcNAQEFBQADgYEAA81SsFnOdYJtNg5Tcq+/ByEDrBgnusx0jloU
hByPMEVkoMZ3J7j1ZgI8rAbOkNngX8+pKfTiDz1RC4+dx8oU6Za+4NJXUj1L5CvV6BEYbl+QAEJwittVvxB/A67g
42/vzgAtoRUeDov1+GFIBZ+GNF/cAYKcMtGcrs2i97ZkJMo=
```

- XML Response
- Header

```
200 OK
Server: Apache-Coyote/1.1
Location: https://localhost:8080/oxTrust/seam/resource/restv1/Bulk/
Content-Type: application/XML
```

- Response Content

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?><Bulk
xmlns="urn:scim:schemas:core:1.0"><Operations><operation><bulkId>onebunk</bulkId><locati
on>http://localhost:8080/oxTrust/seam/resource/restv1/Users/@!1111!0000!D4E0</location><
method>POST</method><status><code>201</code><description></description></status><version
></version></operation><operation><bulkId></bulkId><location>http://localhost:8080/oxTru
st/seam/resource/restv1/Users/@!1111!0000!C4C4</location><method>PUT</method><status><co
de>200</code><description></description></status><version>oneversion</version></operatio
n><operation><bulkId></bulkId><location>http://localhost:8080/oxTrust/seam/resource/rest
v1/Users/@!1111!0000!C3C3</location><method>DELETE</method><status><code>200</code><desc
ription></description></status><version></version></operation></Operations></Bulk>
```

### ***3-6/Getting a list of users***

- JSON Request
- Header

```
GET https://localhost:8080/oxTrust/seam/resource/restv1/Users/  
Accept: application/json  
Authorization: Bearer 91732a27-fd00-487a-9dde-a6ed2fac6949
```

- JSON response
- header

```
200 OK  
Server: Apache-Coyote/1.1  
Location: https://localhost:8080/oxTrust/seam/resource/restv1/Users/  
Content-Type: application/json
```

- Response Content

```
{
  "totalResults":4,"schemas":["urn:scim:schemas:core:1.0"],"resources":[{"schemas":["urn:scim:schemas:core:1.0"],"id":"@!1111!0000!9711","externalId":"random","userName":"erik","name":{"givenName":"Erik","familyName":"Hartog","middleName":"N/A","honorificPrefix":"N/A","honorificSuffix":"N/A"},"displayName":"Erik Hartog","nickName":"Erik","profileUrl":"http://www.gluu.org/","emails":[{"value":"random@gluu.org","type":"work","primary":"true"}, {"value":"random2@gluu.org","type":"home","primary":"false"}],"addresses":[{"type":"work","streetAddress":"621 East 6th Street Suite 200","locality":"Austin","region":"TX","postalCode":"78701","country":"US","formatted":"621 East 6th Street Suite 200 Austin , TX 78701 US","primary":"true"}],"phoneNumbers":[{"value":"646-234-5678","type":"work"}],"ims":[{"value":"erikk","type":"Skype"}],"photos":[{"value":"http://www.gluu.org/wp-content/themes/SaaS-II/images/logo.png","type":"gluu photo"}],"userType":"user","title":"user","preferredLanguage":"en-us","locale":"en_US","timezone":"America/Chicago","active":"true","password":"Hidden for Privacy Reasons","groups":[{"display":"Gluu Manager Group","value":"@!1111!0003!B2C6"}, {"display":"Gluu Owner Group","value":"@!1111!0003!D9B4"}],"roles":[{"value":"user"}],"entitlements":[{"value":"limited access"}],"x509Certificates":[{"value":"MIIDQzCCAqygAwIBAgICEAAWdQYJKoZIhvcNAQEFBQAwTjELMAkGA1UEBhMCVVMxEzARBgNVBAgMCKNhbgGlb3JuaWEwEFDASBgNVBAoMC2V4YW1wbGUuY29tMRQwEgYDVQQLDAtleGFTcGx1LmNvbTAeFw0xMTEwMjIwNjIOMzFaFw0xMjEwMDQwNjIOMzFaMH8xCzAJBgNVBAYTAlVTMRMwEQYDVQIDApDYWxpZm9ybmlhMRQwEgYDVQQKDAtleGFTcGx1LmNvbTEhMB8GA1UEAwYTXMuIEJhcmJhcmEgSiBKZW5zZW4gSULJMSIwIAYJKoZIhvcNAQkBFhNiamVuc2VuQGV4YW1wbGUuY29tMIIBIjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgKCAQEAKr+Dcds/JQ5GwejJFcBIP682X3xpjis56AK02bclFLgzdLI8auoR+cC9/Vrh5t66HkQIOda4unHh0AaZ4xL5PhVbXIPMB5vAPKpzz5iPSi8xO8SL7I7SDhcBVJhqVqr3Hg1lEG6UCLdDhO7nkLuwXq8HcISKkbT5WFTvfFZzidPl8HZ7DhXkZIRtJwBweq4bvm3hM1Os7UQH05ZS6cVDgweKNwdLLrT51ikSQG3DYrl+ft781UQRIqxgwgCfXEuDiinPh0kkvIi5jivVulZ9QiwlyEDRbLJ4zJQBmDrSGTMYn4lRc2HgHO4DqB/bnMVorHB0CC6AV1QoFK4GPe1LwIDAQABo3sweTAJBgNVHRMEAIAAMCwGCWCGSAGG+EIBDQQLFh1PcGVuU1NMIEdlbmVyYXRlZCBZDZXJ0aWZpY2F0ZTAeBgNVHQ4EFgQU8pD0U0vsZIsaA16lL8En8bx0F/gwHwYDVR0jBBGwFoAUdGeKitcaF7gnzsNwDx708kqaVt0wDQYJKoZIhvcNAQEFBQADgYEAA81SsFnOdYJtNg5Tcq+/ByEDrBgnusx0jloUhByPMEVkoMZ3J7j1zgI8rAbOkNngX8+pKfTiDz1RC4+dx8oU6Za+4NJXUjlL5CvV6BEYb1+QAEJwitTVvxB/A67g42/vzgAtoRUeDov1+GFIBZ+GNF/cAYKcMtGcrs2i97ZkJMo="}], "meta":{"created":"2010-01-23T04:56:22Z","lastModified":"2011-05-13T04:42:34Z","version":"W\\\\"b431af54f0671a2\\\"", "location":"http://localhost:8080/oxTrust/seam/resource/restv1/Users/@!1111!0000!D4E7"}}, {"schemas":["urn:scim:schemas:core:1.0"],"id":"@!1111!0000!D4E7","externalId":"mike","userName":"mike","name":{"givenName":"John","familyName":"Smith","middleName":"N/A","honorificPrefix":"N/A","honorificSuffix":"N/A"},"displayName":"John Smith","nickName":"Sensei","profileUrl":"http://www.gluu.org/","emails":[{"value":"mike@gluu.org","type":"work","primary":"true"}, {"value":"mike2@gluu.org","type":"home","primary":"false"}],"addresses":[{"type":"work","streetAddress":"621 East 6th Street Suite 200","locality":"Austin","region":"TX","postalCode":"78701","country":"US","formatted":"621 East 6th Street Suite 200 Austin , TX 78701 US","primary":"true"}],"phoneNumbers":[{"value":"646-234-5678","type":"work"}],"ims":[{"value":"nynymike","type":"Skype"}],"photos":[{"value":"http://www.gluu.org/wp-content/themes/SaaS-II/images/logo.png","type":"gluu photo"}],"userType":"CEO","title":"CEO","preferredLanguage":"en-us","locale":"en_US","timezone":"America/Chicago","active":"true","password":"Hidden for Privacy Reasons","groups":[{"display":"Gluu Manager Group","value":"@!1111!0003!B2C6"}, {"display":"Gluu Owner Group","value":"@!1111!0003!D9B4"}],"roles":[{"value":"Owner"}], .....<the response is too long intentionally skipped some content for demo sake>....., "version":"W\\\\"b431af54f0671a2\\\"", "location":"http://localhost:8080/oxTrust/seam/resource/restv1/Users/@!1111!0000!D4E7"}]]}]
```



- XML request
- header

```
GET https://localhost:8080/oxTrust/seam/resource/restv1/Users/
Accept: application/XML
Authorization: Bearer 91732a27-fd00-487a-9dde-a6ed2fac6949
```

- XML response
- header

```
200 OK
Server: Apache-Coyote/1.1
Location: https://localhost:8080/oxTrust/seam/resource/restv1/Users/
Content-Type: application/XML
```

- Response Content

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?><Resources
xmlns="urn:scim:schemas:core:1.0"><totalResults>4</totalResults><Resources><Resource><id>
@!1111!0000!9711</id><externalId>random</externalId><userName>erik</userName><name><giv
enName>Erik</givenName><familyName>Hartog</familyName><middleName>N/A</middleName><honor
ificPrefix>N/A</honorificPrefix><honorificSuffix>N/A</honorificSuffix></name><displayNam
e>Erik
Hartog</displayName><nickName>Erik</nickName><profileUrl>http://www.gluu.org/</profileUr
l><emails><email><value>random@gluu.org</value><type>work</type><primary>true</primary><
/email><email><value>random2@gluu.org</value><type>home</type><primary>false</primary></
email></emails><addresses><address><type>work</type><streetAddress>621 East 6th Street
Suite
200</streetAddress><locality>Austin</locality><region>TX</region><postalCode>78701</post
alCode><country>US</country><formatted>621 East 6th Street Suite 200 Austin , TX 78701
US</formatted><primary>true</primary></address></addresses><PhoneNumbers><PhoneNumber><v
alue>646-234-
5678</value><type>work</type></PhoneNumber></PhoneNumbers><ims><im><value>erikk</value><
type>Skype</type></im></ims><photos><photo><value>http://www.gluu.org/wp-
content/themes/SaaS-II/images/logo.png</value><type>gluu
photo</type></photo></photos><userType>user</userType><title>user</title><preferredLangu
age>en-us</preferredLanguage><locale>en_US</locale><timezone>
.....< the response is too long
intentionally skipped some content for demo
sake>.....;.</version><location>http://localhos
t:8080/oxTrust/seam/resource/restv1/Users/@!1111!0000!D4E7</location></meta></Resource><
/Resources></Resources>
```

#### 4/SCIM-Client API

SCIM-Client API , is a tool Gluu developed to make the communication with a SCIM server an easy task, SCIM-Client API can be used to build an application that sends request and receives responses from a SCIM server seamlessly.

You can checkout SCIM-client from our SVN repository :

<https://svn.gluu.info/repository/openxdi/SCIM-Client/>

SCIM-client support both Basic and oAuth 2.0 authentication , below is an example on how to create a ScimClient instance

```
ScimClient client = ScimClient.oAuthInstance(userName, passWord,  
clientID,clientSecret, domainURL, oAuthDomain);
```

This will create an oAuth instance of ScimClient where: userName and passWord are the user credentials , clientID and clientSecret are oAuth client credentials , domainURL is the domain where SCIM client resides  
example : <http://localhost:8080/oxTrust/seam/resource/restv1>

oAuthDomain is the tokenURL example

<http://localhost:8080/oxauth/seam/resource/restv1/oxauth/token>

```
ScimClient client = ScimClient.basicInstance(userName, passWord,  
domainURL);
```

For the basic authentication you only need the user's credentials userName and passWord and the domain URL.

## 4-1/Adding an entity

In this example we will show you how to add a person or a group using SCIM-Client, SCIM-Client API comes with two methods to accomplish that , “createPerson” and “createPersonString” ,with createPerson method you pass the person you want to add as ScimPerson object and you specify the desired media type format “XML/JSON” and SCIM-client API will parse the ScimPerson object into XML or JSON and send your request, Same applies to groups , you can use createGroup with ScimGroup as a parameter or createGroupString.

You can also use createPesronString method and pass the person as an XML or JSON String.

```
ScimClient client = ScimClient.oAuthInstance(userName, passWord,
clientID,clientSecret, domainURL, oxAuthDomain);

ScimPerson person = new ScimPerson() ;

person.setUserName (String username );

person.setName.setGivenName(String firstName );

person.setName.setLastName(String lastName);

ScimResponse response = client.createPerson(person,
MediaType.APPLICATION_JSON);

response.getStatusCode() // this will give you the Status code

String result = response.getResponseBodyString(); // this will give
you Response body
```

In this 2<sup>nd</sup> example we will use createPersonString

```
ScimClient client = ScimClient.oAuthInstance(userName, passWord,
clientID,clientSecret, domainURL, oxAuthDomain);

ScimResponse response = client.createPersonString(String person,
MediaType.APPLICATION_JSON);

response.getStatusCode() // this will give you the Status code

String result = response.getResponseBodyString(); // this will give
you Response body
```

## 4-2/Modifying an entity

In this example we will show you how to modify a person or a group using SCIM-Client, SCIM-Client API comes with two methods to accomplish that , “updatePerson” and “updatePersonString” ,with updatePerson method you pass the person you want to update as ScimPerson object and his uid as a String and you specify the desired media type format “XML/JSON” and SCIM-client API will parse the ScimPerson object into XML or JSON and send your request, Same applies to groups , you can use createGroup with ScimGroup as a parameter or createGroupString.

You can also use createPersonString method and pass the person as an XML or JSON String.

```
ScimClient client = ScimClient.oAuthInstance(userName, passWord,
clientID,clientSecret, domainURL, oAuthDomain);

ScimResponse response = client.updatePersonString(String person,
String uid, MediaType.APPLICATION_JSON);

response.getStatusCode() // this will give you the Status code

String result = response.getResponseBodyString(); // this will give
you Response body
```

```
ScimClient client = ScimClient.oAuthInstance(userName, passWord,
clientID,clientSecret, domainURL, oAuthDomain);

ScimResponse response = client.updateGroupString(String group,
String id, MediaType.APPLICATION_JSON);

response.getStatusCode() // this will give you the Status code

String result = response.getResponseBodyString(); // this will give
you Response body
```

### 4-3/Deleting an entity

To delete an entity you simply pass it's ID as a String parameter into “deletePerson” or “deleteGroup” methods.

```
ScimClient client = ScimClient.oAuthInstance(userName, passWord,  
clientID,clientSecret, domainURL, oxAuthDomain);  
  
ScimResponse response = client.deletePerson(String uid);  
  
response.getStatusCode() // this will give you the Status code
```

```
ScimClient client = ScimClient.oAuthInstance(userName, passWord,  
clientID,clientSecret, domainURL, oxAuthDomain);  
  
ScimResponse response = client.deleteGroup(String id);  
  
response.getStatusCode() // this will give you the Status code
```

#### 4-4/Retrieving an entity

To retrieve a person or a group you can use “retrievePerson” or “retrieveGroup” method by passing the Entity’s id as a parameter and the desired media type.

```
ScimClient client = ScimClient.oAuthInstance(userName, passWord,
clientID,clientSecret, domainURL, oxAuthDomain);

ScimResponse response = client.retrievePerson(String uid,
MediaType.APPLICATION_JSON);

response.getStatusCode() // this will give you the Status code

String result = response.getResponseBodyString(); // this will give
you Response body
```

```
ScimClient client = ScimClient.oAuthInstance(userName, passWord,
clientID,clientSecret, domainURL, oxAuthDomain);

ScimResponse response = client.retrieveGroup(String id,
MediaType.APPLICATION_JSON);

response.getStatusCode() // this will give you the Status code

String result = response.getResponseBodyString(); // this will give
you Response body
```

## 4-5/Bulk operations

To use Bulk operation you pass the operation as a ScimBulkOperation object into “bulkOperation” method or as a JSON/XML string into “bulkOperationString” method and without forgetting to specify the desired media type.

```
ScimClient client = ScimClient.oAuthInstance(userName, passWord,
clientID,clientSecret, domainURL, oAuthDomain);

ScimResponse response = client.bulkOperationString(String operation,
MediaType.APPLICATION_JSON);

response.getStatusCode() // this will give you the Status code

String result = response.getResponseBodyString(); // this will give
you Response body
```

```
ScimClient client = ScimClient.oAuthInstance(userName, passWord,
clientID,clientSecret, domainURL, oAuthDomain);

ScimResponse response = client.bulkOperation(String operation,
ScimBulkOperation operation, MediaType.APPLICATION_JSON);

response.getStatusCode() // this will give you the Status code

String result = response.getResponseBodyString(); // this will give
you Response body
```

#### 4-6/oxAuth Client Creation

It's possible to create an oxAuth client dynamically using SCIM-Client , this option is available using the static method “create” method of the class “OxAuthClientCreator”, where “applicationName” is the name of the desired client, “registerUrl” is the client registration url example :

<http://localhost:8080/oxauth/seam/resource/restv1/oxauth/register>

and “redirectUris” is a space separated String containing the desired redirect urls.

```
CreationResult response = OxAuthClientCreator.create(
    applicationName, registerUrl, redirectUris);

response.getStatus(); // the status of the request 200 if successful
response.getClientId(); // the generated clientID
response.getClientSecret(); // the generated clientSecret
response.getExpiresAt(); // the expiration date of the client
```

#### 4-7/Bulk requests from Excel files

Excel spreadsheets are widely used by individuals and companies of different backgrounds , we at Gluu ,we thought about that , so we've embedded SCIM-client with methods that can help you turn an Excel file into a ScimBulkOperation object .

For that reason we made two methods available , one for generation bulk users request “ mapUsers” method and the other for generating bulk group requests “mapGroups” method , both methods takes the path to the “XLS” file as a parameter, methods are available at “ExcelMapper” class:

```
ScimBulkOperation usersOperation = ExcelMapper.mapUsers(excelFileLocationUsers);
ScimBulkOperation groupsOperation = ExcelMapper.mapGroups(excelFileLocationGroups);
```

You can download the Excel file models from here :

<https://svn.gluu.info/repository/openxdi/SCIM-Client/doc/SampleXLS/>

Excel files must follow the exact structure, the “Operation” cell defines the type of the operation ”Add,Update,delete” .

For groups you can always add more groups to the spreadsheet following the same structure.



## 5/SCIM Dynamic Custom Attributes

SCIM supports only a specific set of attributes and if we want to add any custom ones we would have to refactor the code every time we have a requirement for a new attribute, at Gluu, we thought of that and we came up with a dynamic way to add custom attributes to the person's representation.

All you have to do is to add this portion to your person's representation :

XML Example:

```
<customAttributes>
<name>oxTrustCustAttrA</name>
<values>
<value>some random value1</value>
<value>some random value2</value>
</values>
</customAttributes>
```

JSON Example:

```
"customAttributes":[{"name":"oxTrustCustAttrA","values":["some random value1","some random value2"]}]
```

Where “name” is the name of the LDAP attribute and “values” is its values , both single and multivalued attributes are supported , and custom attribute must be under “oxCustomAttributes” objectClass or they may be under the gluuPerson one , also in the “Attributes” LDAP node you will need to add an entry representation for the attribute , when “oxSCIMCustomAttribute” is set to true SCIM will look for that attribute in the person entry and if it has a value it will appear in the final result, when the attribute “oxMultivaluedAttribute” is set to true SCIM will know that this attribute is Multivalued , example:

```
dn: inum=@!1111!0005!8E7F,ou=attributes,o=@!1111,o=gluu
description: Sample custom attribute.
displayName: oxTrust Custom Attribute A
gluuAttributeEditType: admin
gluuAttributeName: oxTrustCustAttrA
gluuAttributeOrigin: oxCustomAttributes
gluuAttributePrivacyLevel: level3
gluuAttributeType: string
gluuAttributeViewType: admin
gluuStatus: active
inum: @!1111!0005!8E7F
objectClass: gluuAttribute
objectClass: top
oxMultivaluedAttribute: true
oxSCIMCustomAttribute: true
```

## 6/User search service

This service is used to lookup a person/user by a specific attribute search pattern , for example if you want to look for a person with the email ID [reda@gluu.org](mailto:reda@gluu.org) all you will have to do is to provide the service with the exact LDAP attribute name and the value you wish to look for as a content, and the service will return the person in question.

JSON Example:

```
POST
https://localhost:8080/oxTrust/seam/resource/restv1/Users/Search
Accept: application/json
Authorization: Basic bWlrZTpzZWNYZXQ=
```

Content :

```
{"attribute":"oxTrustCustAttrA","value":"some random value1"}
```

XML example

```
POST
https://localhost:8080/oxTrust/seam/resource/restv1/Users/Search
Accept: application/xml
Authorization: Basic bWlrZTpzZWNYZXQ=
```

Content :

```
<?xml version="1.0" encoding="UTF-8"
standalone="yes"?><SearchService
xmlns="urn:scim:schemas:core:1.0"><attribute>oxTrustCustAttrA
</attribute><value>some random value1</value></SearchService>
```

The result will be returned as a JSON or XML person as it would for a regular GET person operation.

You can use the SCIM-Client library as follows:

```
ScimClient client = ScimClient.oAuthInstance(userName, passWord,
clientID,clientSecret, domainURL, oAuthDomain);

ScimResponse response = client.personSearch(attribute,value
MediaType.APPLICATION_JSON);

response.getStatusCode() // this will give you the Status code

String result = response.getResponseBodyString(); // this will give
you Response body
```

Where attribute is the attribute name, and value is the value you're looking for.