Salesforce Source

- Modes
- Installation
- Configuration (Registry v3.2.0 or later)
- Configuration (Registry v3.1.0)
- Understanding API Usage
- See Also

The Salesforce Organizational Identity Source Plugin is designed to integrate with Salesforce via the Force.com REST API. The Salesforce OIS Plugin is available in Registry v3.1.0 and later.

Modes

Org Identity Source Mode	Support
Manual Search and Linking	Supported
Enrollment, Authenticated	Not supported
Enrollment, Claim	Not supported
Enrollment, Search	Supported
Enrollment, Select	Supported

Org Identity Sync Mode	Support
Full	Not supported
Query	Supported (changelist)
Update	Supported
Manual	Supported

Installation

This is a non-core plugin, see Installing and Enabling Registry Plugins for more information.

> The Plugin may be used to connect to either production or sandbox environments.

Configuration (Registry v3.2.0 or later)

1. If you already have a Salesforce Server defined with the appropriate configuration (perhaps for use with the Salesforce Provisioning Plugin) you can reuse it instead of defining a new one. Skip to step 6.
2. Add a new Server, via *Servers* > *Add a New Server*
    a. Set the server type to *OAuth2*.
    b. After the configuration has been saved, a Redirect URI will be available via the server configuration page. Keep this handy for the next step.
3. In another browser tab or window, login to Salesforce. Add a new Connected App via *Setup* > *Quick Links* > *Manage Apps*. Click the *New* button in the *Connected Apps* section.
    a. Set the *Connected App Name* and *Contact Email*.
    b. Under *API,* tick Enable OAuth Settings.
    c. Set the *Callback URL* to the URI provided in step 1, above.
    d. Added at least these two *OAuth Scopes*:
        i. *Access and manage your data (api)*
        ii. *Perform requests on your behalf at anytime (refresh_token, offline_access)*
    e. Click *Save*. (You may need to scroll up to see the confirmation message.)
    f. On the next page, a *Consumer Key* and *Consumer Secret* will be made available. Keep these handy for the next step.
4. Return to the OAuth2 Server configuration and complete the configuration.
    a. *Server URL*: The base URL of your Salesforce instance with `/services/oauth2` appended, eg https://test.salesforce.com/services/oauth2
        i. The plugin will work with either the generic service name (test.salesforce.com) or a specific instance (cs123.salesforce.com), but note that Salesforce periodically migrates customers to new instances (in Salesforce terms, an *instance refresh*). In such an event, when configured with the generic service name the plugin should detect the new instance automatically, though it may be necessary to obtain a new token (described below).

    b. *Client ID*: The Consumer Key obtained in step 2.
    c. *Client Secret*: The Consumer Secret obtained in step 2.
    d. *Access Token Grant Type*: Authorization Code
    e. *Scope*: (Leave blank)
    f. Click *Save*.
5. Return to the Salesforce Connected App configuration page, click the *Manage* button at the top, then click the *Edit Policies* button. Update the policies as follows:
    a. *Permitted Users*: All users may self-authorize
    b. *IP Relaxation*: Relax IP restrictions
        i. ℹ️ You may instead be able to set *Trusted IP Range for OAuth Web server flow* from the Connected App's main configuration page.
    c. *Refresh Token Policy*: Refresh token is valid until revoked
    d. Click *Save*.
6. Add a new Organizational Identity Source, via *Configuration* > *Organizational Identity Sources* > *Add Organizational Identity Source.*

    a. Set the Plugin type to *SalesforceSource*.
    b. ⚠️ Because searching by email (eg: if configured as an Enrollment Source) uses the general search interface (meaning other fields can match, not just email address), *Email Mismatch Mode* should probably be set to *Ignore*.
    c. For information about other configuration options, see Organizational Identity Sources.
    d. Click *Add*.
7. From the Salesforce Source configuration page, complete the configuration.
    a. *Server*: Select the OAuth2 server created in step 1
    b. *Instance URL*: This can be left blank, as it will be automatically determined
    c. Select which objects you would like to be searched.
        i. ⚠️ If you do not select either *Search Contacts* or *Search Users*, then all objects will be searched. Such a configuration is not recommended.
        ii. ⚠️ Changes made to custom object records in Salesforce will *not* be automatically detected by Registry OIS sync processes. If changes are made to these records without changes to the corresponding Contact or User records, a manual sync will be required to update the record in Registry.
    b. Click *Save*.
8. Finally, return to the OAuth2 Server configuration to obtain an OAuth token.
    a. The configuration should indicate that the Access Token is "Not Set", and there should now be a button "Obtain New Token".
    b. Upon clicking that button, you will be taken to the Salesforce login page. Log in as a sufficiently authorized user.
    c. After successful login, you should be returned to the OAuth2 Server configuration page, and the Access Token should now be "Set".
    d. ℹ️ Should it ever be necessary to obtain a new token (eg: if the administrator who performed the initial setup no longer has a valid Salesforce account), simply return to the configuration page and click the "Obtain New Token" button again.

Configuration (Registry v3.1.0)

1. Add a new Organizational Identity Source, via *Configuration* > *Organizational Identity Sources* > *Add Organizational Identity Source.*

    a. Set the Plugin type to *SalesforceSource*.
    b. For information about other configuration options, see Organizational Identity Sources.
    c. Click *Add*.
    d. After the configuration has been saved, a Salesforce Redirect URI will be available. Keep this handy for the next step.

        i. ⚠️ Salesforce requires the use of HTTPS for the callback. Your Registry installation must be running under HTTPS.
2. In another browser tab or window, login to Salesforce. Add a new Connected App via *Setup* > *Quick Links* > *Manage Apps*. Click the *New* button in the *Connected Apps* section.
    a. Set the *Connected App Name* and *Contact Email*.
    b. Under *API,* tick Enable OAuth Settings.
    c. Set the *Callback URL* to the URI provided in step 1, above.
    d. Added at least these two *OAuth Scopes*:
        i. *Access and manage your data (api)*
        ii. *Perform requests on your behalf at anytime (refresh_token, offline_access)*
    e. Click *Save*. (You may need to scroll up to see the confirmation message.)
    f. On the next page, a *Consumer Key* and *Consumer Secret* will be made available. Keep these handy for the next step.
3. Return to the Organizational Identity Source configuration and complete the configuration.
    a. *Salesforce Base URL*: The base URL of your Salesforce instance, eg https://test.salesforce.com
        i. ℹ️ The plugin will work with either the generic service name (test.salesforce.com) or a specific instance (cs123.salesforce.com), but note that Salesforce periodically migrates customers to new instances (in Salesforce terms, an *instance refresh*). In such an event, when configured with the generic service name the plugin should detect the new instance automatically, though it may be necessary to obtain a new token (described below).
    b. *Client ID*: The Consumer Key obtained in step 2.
    c. *Client Secret*: The Consumer Secret obtained in step 2.
    d. Select which objects you would like to be searched.
        i. ⚠️ If you do not select either *Search Contacts* or *Search Users*, then all objects will be searched. Such a configuration is not recommended.
        ii. ⚠️ Changes made to custom object records in Salesforce will *not* be automatically detected by Registry OIS sync processes. If changes are made to these records without changes to the corresponding Contact or User records, a manual sync will be required to update the record in Registry.
    e. Click *Save*.
4. Return to the Salesforce Connected App configuration page, click the *Manage* button at the top, then click the *Edit Policies* button. Update the policies as follows:
    a. *Permitted Users*: All users may self-authorize
    b. *IP Relaxation*: Relax IP restrictions
        i. ℹ️ You may instead be able to set *Trusted IP Range for OAuth Web server flow* from the Connected App's main configuration page.

    c. *Refresh Token Policy*: Refresh token is valid until revoked
    d. Click *Save*.
5. Finally, return to the Organizational Identity Source configuration to obtain an OAuth token.
    a. The configuration should indicate that the Auth Token is "Not Set", and there should now be a button "Obtain New Token".
    b. Upon clicking that button, you will be taken to the Salesforce login page. Log in as a sufficiently authorized user.
    c. After successful login, you should be returned to the OIS configuration page, and the Auth Token should now be "Set".
    d. Should it ever be necessary to obtain a new token (eg: if the administrator who performed the initial setup no longer has a valid Salesforce account), simply return to the configuration page and click the "Obtain New Token" button again.

Understanding API Usage

The Salesforce API has request limits that vary according to the service tier and available licenses. Once the Organizational Identity Source configuration has been set up, a *View API Limits* button will become available to see the current API usage.

Note that the API call required to determine the current API limits counts against the API limit.

This documentation is intended to be a guide to understanding the approximate number of API calls that this plugin may make under various circumstances. It is not an exact formula, as there are various circumstances where additional calls must be made.

- A **search** operation, such as that performed via the web interface, consumes one API call plus one API call per search result (*r*) (= 1 + *r*).
- A **retrieve** operation, such as that performed to view an individual record from Salesforce, or a manual OIS sync, consumes one API call plus one API call per custom object (*c*) defined (= 1 + *c*).
    - As of Registry v3.2.0, if an Account ID is linked to the record, an additional API call is consumed to obtain the Account object (= 2 + c).
- An OIS sync in **update** mode consumes one API call plus, for each changed record (*d*), one API call plus one API call per custom object defined (*u* = 1 + (*d* * (1 + *c*)))
- An OIS sync in **query** mode consumes the calls required for **update** mode (*u*) plus, for each verified Email Address (*e*) attached to an Organizational Identity (less those already known if *Do Not Query for Known Email Addresses* is enabled), one API call plus, for each search result, one API call plus one API call per custom object defined (= *u* + *e* + (*r* * (1 + *c*))).

Cached Groupable Attributes

To reduce the number of API calls made, a cached copy of the available Groupable Attributes is maintained. To clear this cache manually (for example if new attributes become available), obtain a new Auth Token as described above.

See Also

- cm_salesforce_sources