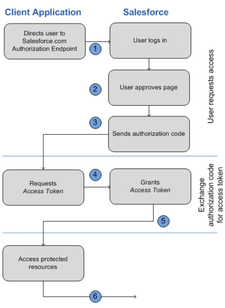
Web Server OAuth Authentication Flow

Typically this flow is used by web applications that can confidentially store the client secret. A critical aspect of the web server flow is that the application must be able to protect the consumer secret.

The following is the general flow. The individual step descriptions follow.



The following is a general description of the OAuth web-server flow.

1. To request authorization for a resource, the client application redirects the end user's browser to a web page hosted on the resource owner's authorization server. In this case, it is the Salesforce login page.
2. End users log in to Salesforce to authenticate themselves. Because the resource owner (Salesforce) hosts this web page and the end user interacts directly with the web page, the client web application never finds out the user's login credentials. The end user also grants authorization to the client application.
3. Salesforce sends the authorization code back to the client application using the specified callback URL.
4. After obtaining the authorization code, the client application passes back the authorization code to obtain an access token.
5. After validating the authorization code, Salesforce passes back a response token. If there was no error, the response token includes an access code, a refresh token, and additional information.
6. The protected resources are Connect REST API endpoints.

Using the Web Server Flow with Connect REST API and Salesforce

The following provides specific details for the OAuth Web-server flow when used with Salesforce and Connect REST API.

1. Direct the client's web browser to the page `https://login.instance_name/services/oauth2/authorize`, with the following request parameters.

Parameter	Description
`response_type`	Must be `code` for this authentication flow
`client_id`	The `Consumer Key` value from the connected app defined for this application
`redirect_uri`	The `Callback URL` value from the connected app defined for this application

You can also include the following optional request parameters.

Parameter	Description
`state`	Specifies URL-encoded state data to be returned in the callback URL after approval.
`immediate`	Determines whether the user is prompted for login and approval. Values are either `true` or `false`. Default is `false`. • If set to `true`, and if the user is logged in and has previously approved the application, the approval step is skipped. • If set to `true` and the user is not logged in or has not previously approved the application, the session is immediately terminated with the `immediate_unsuccessful` error code.
`display`	Indicates the type of web pages that is provided. Valid values are: • `page`–Full-page authorization screen. This is the default value if none is specified. • `popup`–Compact dialog optimized for modern web browser popup windows. • `touch`–mobile-optimized dialog designed for modern smartphones such as Android and iPhone. • `mobile`–mobile optimized dialog designed for less capable smartphones such as BlackBerry OS 5.

2. After successfully being logged in, the user is asked to authorize the application.

If the user has already authorized the application, this step is skipped.

3. After Salesforce confirms that the client application is authorized, the end user's web browser is redirected to the callback URL. The `redirect_uri` parameter, appended with the following values in its query string, specifies the callback URL.

Parameter	Description
`code`	The authorization code that is passed to get the access and refresh tokens
`state`	The state value that was passed in as part of the initial request, if applicable.

It is expected that the client application server hosts the `redirect_uri` web page.

4. The client application server must extract the authorization code and pass it in a request to Salesforce for an access token, using POST against this URL: `https://login.instance_name/services/oauth2/token` with the following query parameters.

Parameter	Description
`grant_type`	Value must be `authorization_code` for this flow.
`client_id`	Consumer key from the connected app definition.
`client_secret`	Consumer secret from the connected app definition. If a `client_secret` isn't required, and the connected app sends it in the authorization request, Salesforce attempts to validate it, anyway.
`redirect_uri`	URI to redirect the user to after approval. This URI must match the value in the `Callback URL` field in the connected app definition exactly, and is the same value sent by the initial redirect.
`code`	Authorization code obtained from the callback after approval.
`format`	Expected return format. This parameter is optional. The default is `json`. Values are: • `urlencoded` • `json` • `xml`

5. If this request is successful, the server returns a response body holding the following.

Parameters	Description
`access_token`	Session ID that you can use for making Connect REST API requests. This session ID cannot be used in the user interface. Treat this session ID like a user's session and diligently protect it.
`token_type`	Value is `Bearer` for all responses that include an access token.
`refresh_token`	Token that can be used in the future to obtain new access tokens (sessions). **Warning** This value is a secret. Treat it like the user's password and use appropriate measures to protect it.
`instance_url`	URL indicating the instance of the user's organization, for example, `https://instance_name`.
`id`	Identity URL that can be used to both identify the user and query for more information about the user. Can be used in an HTTP request to get more information about the end user.
`signature`	Base64-encoded HMAC-SHA256 signature signed with the `client_secret` (private key) containing the concatenated ID and `issued_at`. This signature can be used to verify that the identity URL was not modified since the server sent it.
`issued_at`	When the signature was created.