

API Integrations Cheat Sheet

SALESFORCE.COM



ABOUT

Salesforce is the CRM market leader helping organizations collect and Analyze customer data. When your application is either generating or Accessing customer data, it's vital that you build an integration to connect your app to Salesforce CRM.

This integration is especially valuable if you're looking to access customers / accounts, contacts / leads, opportunity, sales revenue data back in your app.

AUDIENCE

This guide is for **APP DEVELOPERS** building integrations to your product and CRM System Administrators who are setting up new users from another application.

How to think like a Sales Rep for an API integration.



LEARN

ABOUT THE ENDPOINT

Salesforce has two APIs = REST & SOAP - supporting JSON across all endpoints. There are very few limitations when working with Salesforce. It has a very robust query language (SOQL). It is also consistent in its naming conventions (upper camel case with all resources and fields).

Although they are building out REST capabilities, the SOAP APIs has more complete functionality.

www.salesforce.com/us/developer/docs/api/ and www.salesforce.com/us/developer/docs/api_rest/

SIGN UP

GET IN THERE. TRY IT OUT.

Get a trial account for a developer sandbox. You can sign up for a free, 30-day trial of the developer environment here:

developer.salesforce.com/signup

AUTHENTICATE

DETERMINE MECHANISMS

Salesforce has two different mechanisms: OAuth2, and session based authentication. OAuth 2 is becoming standard, and is great when individual users are connecting into Salesforce. Session based authentication is used when you're looking to authenticate an administrator account into your application.

www.salesforce.com/us/developer/docs/api_rest/Content/quickstart_oauth.htm

Here is a high-level view of typical OAuth 2 workflow:

cloud-elements.com/using-oauth-cloud-elements-platform/

DISCOVER & SELECT

Salesforce has a method to discover all of the data objects in an instance. You can also discover all of the fields that belong to a given object, as well as their data types and the access permissions on that field (readable, writable).

Salesforce will often be the master for customer data in many companies, which can lead to 100+ data objects. The most popular are Account, Opportunity, Lead and Contact.

Data about percent that use custom fields and objects. See reverse side for handling.

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RESPONSE TIME

Planned maintenance nearly every weekend, but besides that, great up-time.

GOTCH-YA'S

When querying SFDC using SOQL, you cannot put single quotes around any date/time fields.

KEY LEARNING

If you have more than two custom fields in your object, then you are limited to a max page size of 200.

BULK UPLOADS

Salesforce uses batch uploads to help with large payload efforts.

API Usage Limits:
http://help.salesforce.com/HTViewHelpDoc?id=integrate_api_rate_limiting.htm

CUSTOM DATA

Salesforce supports custom objects and custom fields. All CRUD operations are supported with custom objects, as well as search. Based on the Salesforce edition you have, there are some constraints to number of custom objects and fields that an instance can have. Learn more here:

<https://developer.salesforce.com/forums/ForumsMain?id=906F00000008jyIIAA>

SEARCH & QUERY

Salesforce search capability is extremely robust. Using the Salesforce query language (SOQL) you can run almost full SQL queries on any object in your system.

It even gives the ability to 'explain' the SOQL query you're using so you can see what it's doing in Salesforce and why it's, potentially, performing slowly.

Below are some example queries, exercising many of SOQL's features:

- Select Id, Name from Opportunity where
- LastModifiedDate < 2014-04-05 and Status='Open'
- Select count(Email) from Contact where CreatedDate > 2014-04-01
- CreatedDate < 2014-05-01 limit 100 offset 0

PERFORMANCE

Overall, the API performs fairly well. It's not the fastest API out there, but some of this is because many times you're working with large objects, so that can slow things down somewhat in your application.

EVENTS

SYNCHRONIZATION

Salesforce support event synchronization using custom Apex triggers. You can have any event that occurs in your Salesforce instance trigger an external HTTP call. You can also add triggers to send emails when a certain event occurs in Salesforce.

Webhook API Makes a HTTP POST Request:

developer.salesforce.com/forums/ForumsMain?id=906F00000009AtaIAE