DATA MANAGEMENT / DATA MIGRATION

In Salesforce, the data can be managed by using

1. <u>Page Layouts</u>: Using page layout we can manage only one record at a time. i.e., we can perform the DML Operations on only one record.

2. <u>Apex Programming</u>: By using Apex Programming, we can perform all the DML Operations on the object records.

Each DML Statement in Apex programming can process maximum of 10,000 records at a time.

3. <u>Data Import Wizard</u>: Using Import wizard, we can perform Import Operations on our Salesforce Object Records. i.e., we can perform "Insert and Update" operations only.

It can process maximum of 50,000 Records at a time. We have to supply the input records to the Import Wizard in the form of ".CSV" file.

Data Import Wizard allows to process the records in all custom objects and only 5 standard objects- Account, Contact, Lead, Solution, and Campaign Member.

Click on "Setup" menu.

      1. Search for the option "Data Import Wizard" in Quick Find box.

      2. Click on "Launch Wizard" Button.

4. <u>Data Export</u>: Allows to export the records from one/more Salesforce Objects.

It supports to export the data from all Standard and Custom Objects inside the Organization.

We can export the Data either Manually/we can Schedule it.

Click on "Setup" menu.

      1. Search for the option "Data Export" in Quick Find Box.

      2. Click on "Export Now" button.

      3. Select the "Required Object Checkbox" to export.

      4. Click on "Export" button.

5. <u>Data Loader Tool</u>: Data Loader is an on-premise tool, provided by Salesforce to perform bulk imports and export operations on Salesforce Objects.

While Installing Data Loader, first Install "Open JDK 11" version or above into local device.

Data Loader allows to perform the operations on all Standard and Custom Objects.

It allows us to process maximum of 5 million records at a time.

Data Loader supports the "Partial Processing Mechanism" while processing the records.

Data Loader Generates 2 Output Files.

1. Success File: It contains all the record details which have been processed successfully.

2. Error File: It contains all the failed record details along with the reason for failure.

While processing the records, Data Loader supports "Batch Programming", where it will divide the records into various smaller pieces called as "Batches" and will process each Batch separately by using either "Apex API / Bulk API".

Apex API: Minimum Batch Size : 1

Maximum Batch Size : 2,000

Default Batch Size : 200

Bulk API: Minimum Batch Size : 1

Maximum Batch Size : 10,000

Default Batch Size : 2,000

Navigation:

Click on "Setup" menu.

1. Search for the Option "Data Loader" in Quick Find box.

2. Click on "Data Loader Tool" to download.

Login into Data Loader:

To login into Data Loader, we have the 2 types of Authentications.

1. OAuth Authentication: Requires "Access Token" to be get generated through Authorization Server.

2. Password Authentication: Requires the Salesforce Account User and Password along with "Security Token".

Generating Security Token

Go to Salesforce Org

1. Click on "Profile Icon" from top right corner.

2. Click on "My Settings" link.

4. Click on "Reset My Security Token" link.

5. Click on "Reset Security Token" button.

Observation: It will generate a Security Token and will send to the User Email Id automatically.

6. Login into the Email Account.

7. Open the Email received from Salesforce.

8. Copy the Security Token.

9. Use the Token along with Password, and Login into Data Loader.

Note: We can login into the Data Loader without using "Security Token" as below.

Step 1: Add the "Universal IP Address" inside the "User's Profile".

Click on "Setup" menu.

i. Search for the option "Users" in Quick Find box.

ii. Go to the "User" Record and Click on "Profile Name".

iii. Click on "Edit" button.

iv. Go to the Login IP Ranges Section.

v. Click on New button.

vi. Enter the IP Addresses as below.

Starting IP Address: 0.0.0.0

Ending IP Address: 255.255.255.255

vii. Click on "Save" button.

Step 2: Login into the Data Loader, by providing the Salesforce Account User Name and Password

Data loader supports the following 7 operations.

i. Export: By using this option, we can export either one or more or all records from Salesforce Object and store them to the local device in the form of a ".CSV" file.

We can Select the required fields to be get exported.

We can add one or more User Defined Conditions to filter the records.

ii. Export All: This option is used to export all the records inside the specified object along with the deleted records waiting inside the Recycle Bin.

We can differentiate the records by using "Is Deleted" field which is a Checkbox Datatype field available in all Standard and Custom Objects.

iii. Insert: By using this operation, we can insert either one/more records into the Salesforce Object at a time by supplying the input records in the form of ".CSV" file.

Once the Operation is done, it will generate 2 output files.

1. Success File

2. Error File

While inserting the records inside the object through Data Loader, we have to supply the values for all required fields.

iv.Update: We can update the existing records inside the object, by assigning the new values for the fields. While updating the records, we have to supply the "Record Id"

v.Upsert: By using this feature, we can perform both "Update and Insert" operations on the object records at a time by placing all the records inside a single CSV file.

Data Loader will differentiate the records based on "Record Id".

If the Record contains ID, then it will get updated to Object else it will insert the record into the object.

vi. Delete: By using this option, we can remove either one/more records from the object.

Records can be deleted from the object using "Record ID".

Deleted records will exist in Recycle Bin for 15 Days.

vii.Hard Delete: By using this option we can remove the records permanently from the salesforce object without moving to the Recycle Bin.

To perform the Hard Delete Operation, we need "Bulk API Hard Delete" permission inside the User Profile.