Replicate

User Guide

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Replicating Data & Metadata

Salesforce administrators and developers spend a lot of time setting up test environments and data for new workflows and code. Using Replicate, you can quickly create a fresh set of data and/or metadata in another organization or sandbox in just a few clicks.

For customers with Seeding, see more information in the Seeding User Guide.

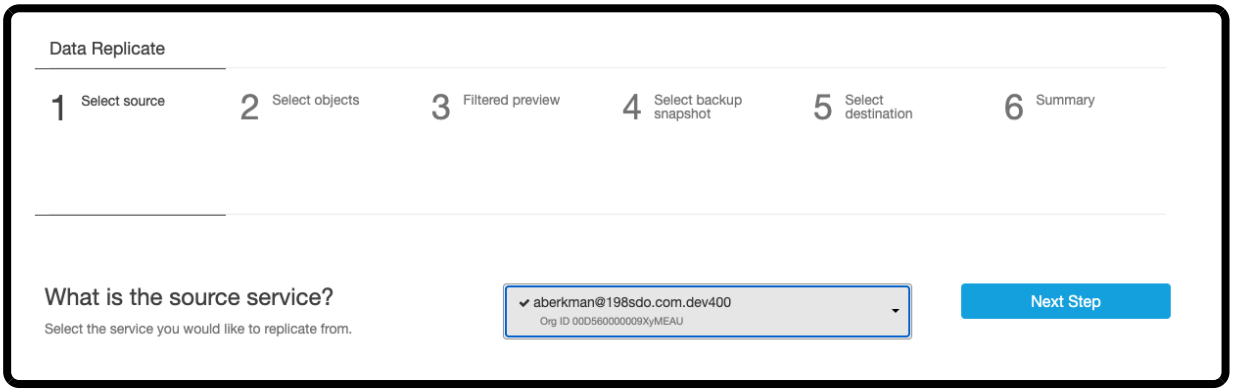
Data Replicate

Use the Data Replicate tool to replicate all your data (including attachments) or select a subset of objects, and filter by record count or SQL query. Automatically include a configurable number of child objects, anonymize your data, and select the backup from which to replicate. We will not delete any records from the destination Salesforce Org during the full-org or multiple parent object replication process.

Data replicate supports Production to Sandbox, or Sandbox to Sandbox.

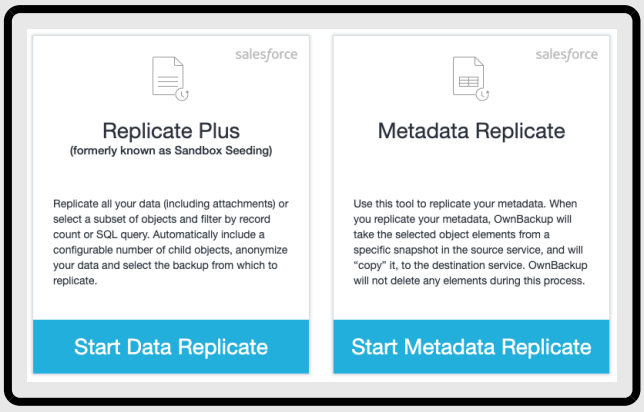
To replicate your data:

1. Sign in to your account.
2. Navigate to the Replicate tab.



NOTE

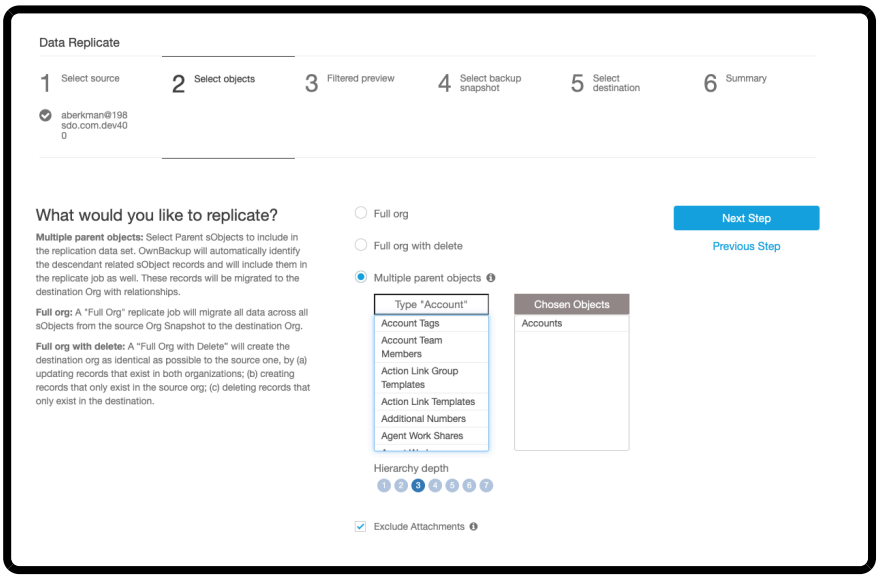
Replicate Plus customers will see the following:



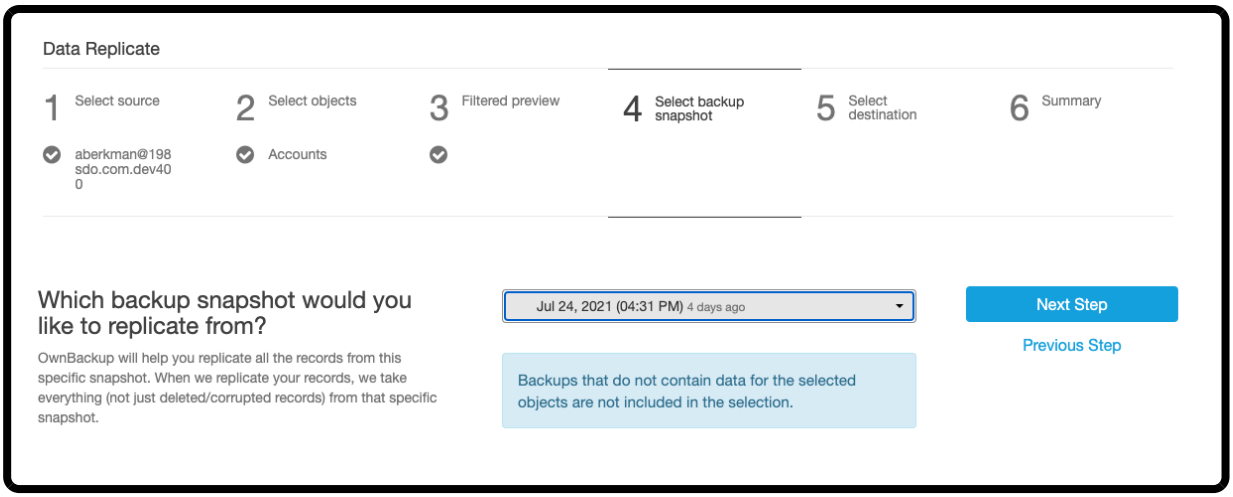
Click **Start Data Replicate**, and continue to Step 3 [4].

3. Select the source Salesforce Org from which you would like to replicate.

4. Click **Next Step**.

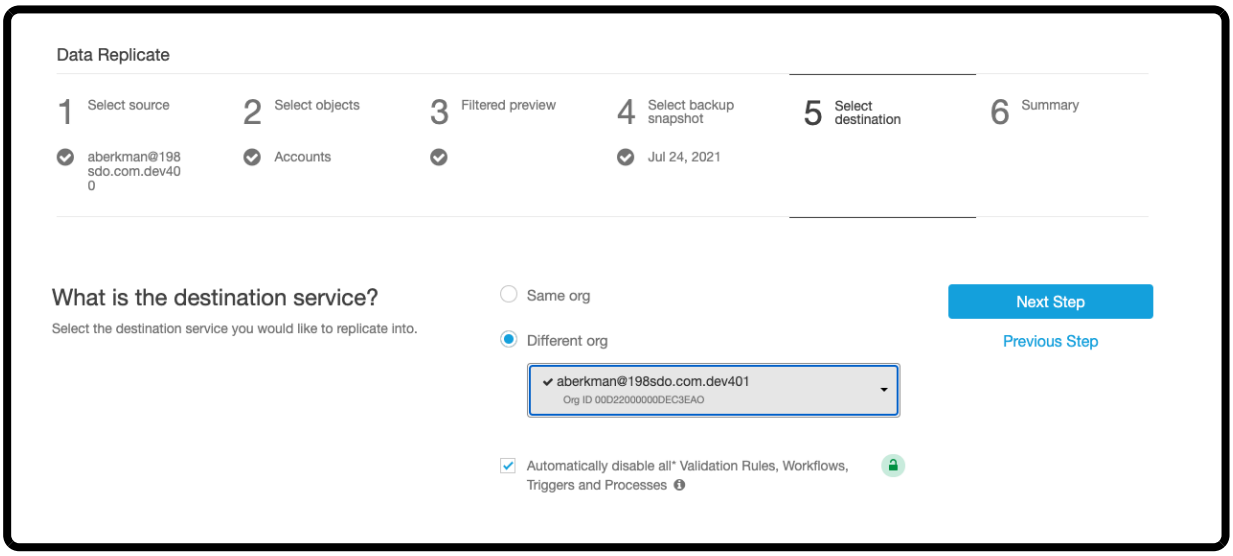


5. Select one of the following Replicate options:
   - **Full org**: We will migrate all data across all objects from the source Org snapshot to the destination Org.
   - **Full Org with delete**: Will create the destination org as identical as possible to the source one, by (a) updating records that exist in both organizations; (b) creating records that only exist in the source org; (c) deleting records that only exist in the destination.
   - **Multiple parent objects**: Select Parent objects to include in the replication data set. We will automatically identify the descendant related object records and will include them in the replicate job as well. The records will be migrated to the destination Org with relationships. Sandbox Seeding, (SBS) allows you to populate data sets from a Production/Sandbox Salesforce org to a secondary (Dev, Dev Pro and Partial) Sandbox org.
     - Select the hierarchy depth 1-7 (e.g., 1 = Accounts, 2 = Accounts + Contacts, 3 = Accounts, Contacts + Custom Object).
     - Select whether to exclude attachments.
       Use this option to automatically exclude all sObjects containing attachments from this job.
6. Click **Next Step**.



7. Select the snapshot. The snapshot will contain all the records you want to replicate, and not just deleted/corrupted records from that specific snapshot.

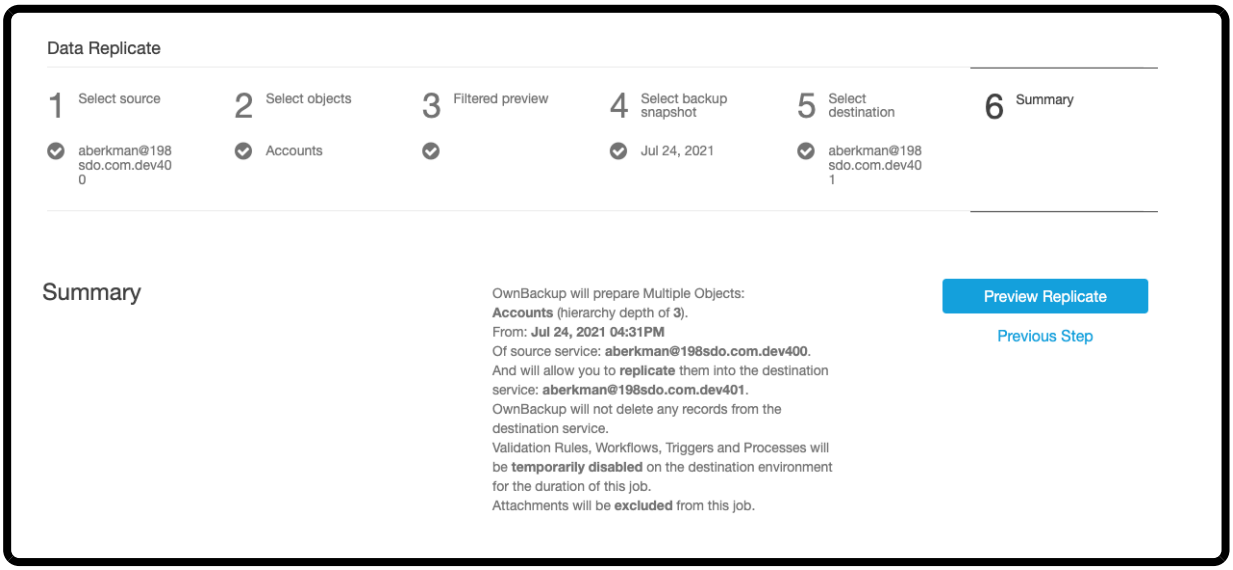
8. Click **Next Step**.



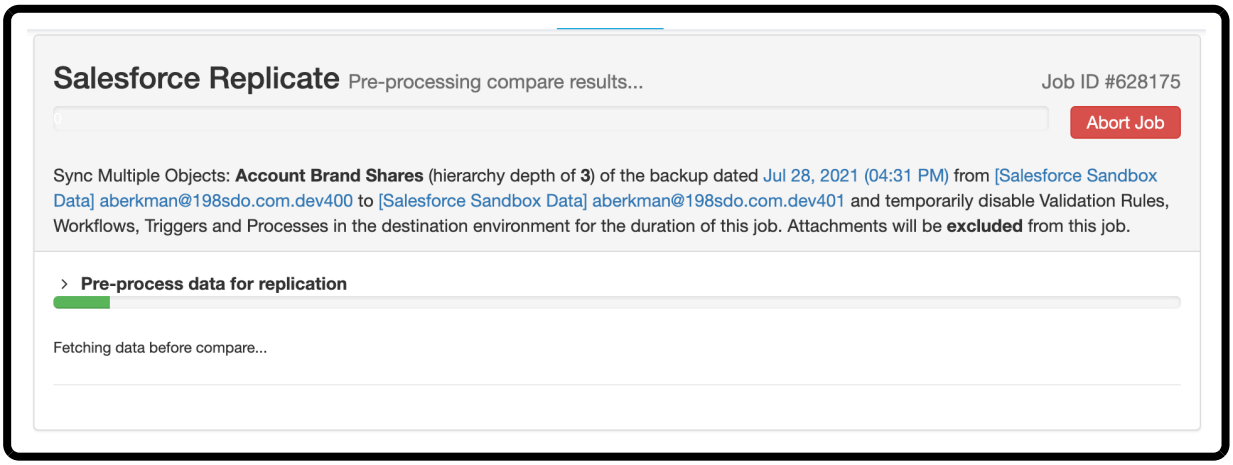
9. Select the destination service:
   - Select Same org if you want to replicate records into the same environment.

     NOTE
     If the option to select Same org is disabled, replication to Production is not allowed.

   - Select Different org if you want to replicate records into a sandbox.
   - Select whether to automatically disable all Validation Rules, Workflows, Triggers and Processes (Replicate Plus only).
     We will automatically disable all Validation Rules, Workflows, Triggers (except for triggers relating to managed packages) and Processes on the destination environment during the replicate job and automatically re-enable them upon job completion.
10. Click **Next Step**.



11. Review the details you selected, then click **Preview Replicate** to generate a complete preview. The Salesforce Replicate job begins and opens in the Jobs tab.



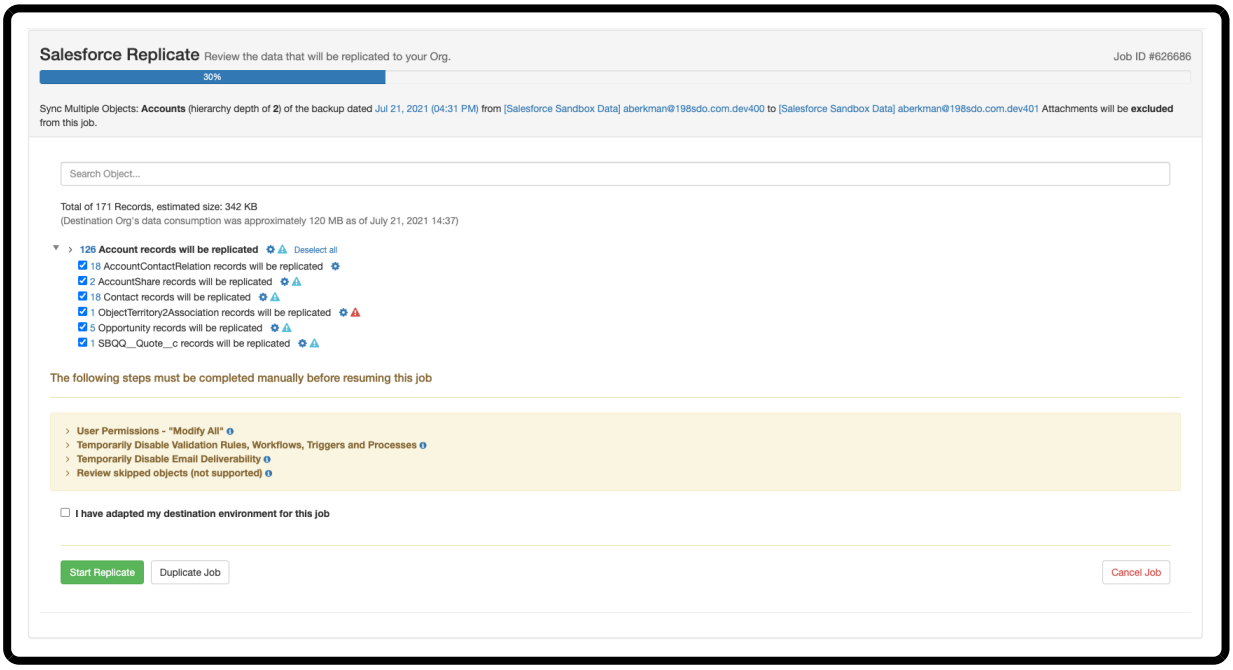
NOTE

Abort the replicate process by clicking the Abort Job. Once the replication of data to the destination has begun, changes made to the destination environment cannot be undone.

Once the initial processing of the data is complete the job preview results are displayed, and you will be presented with additional onscreen instructions.

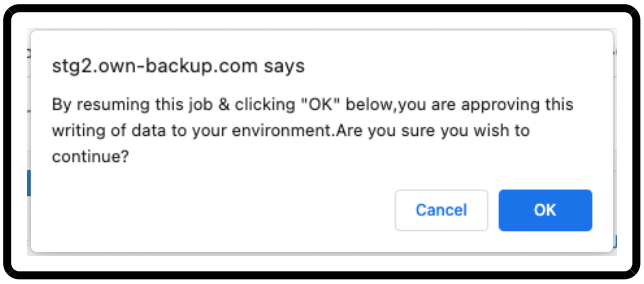
NOTE

Non-createable field records will be skipped during the replicate.

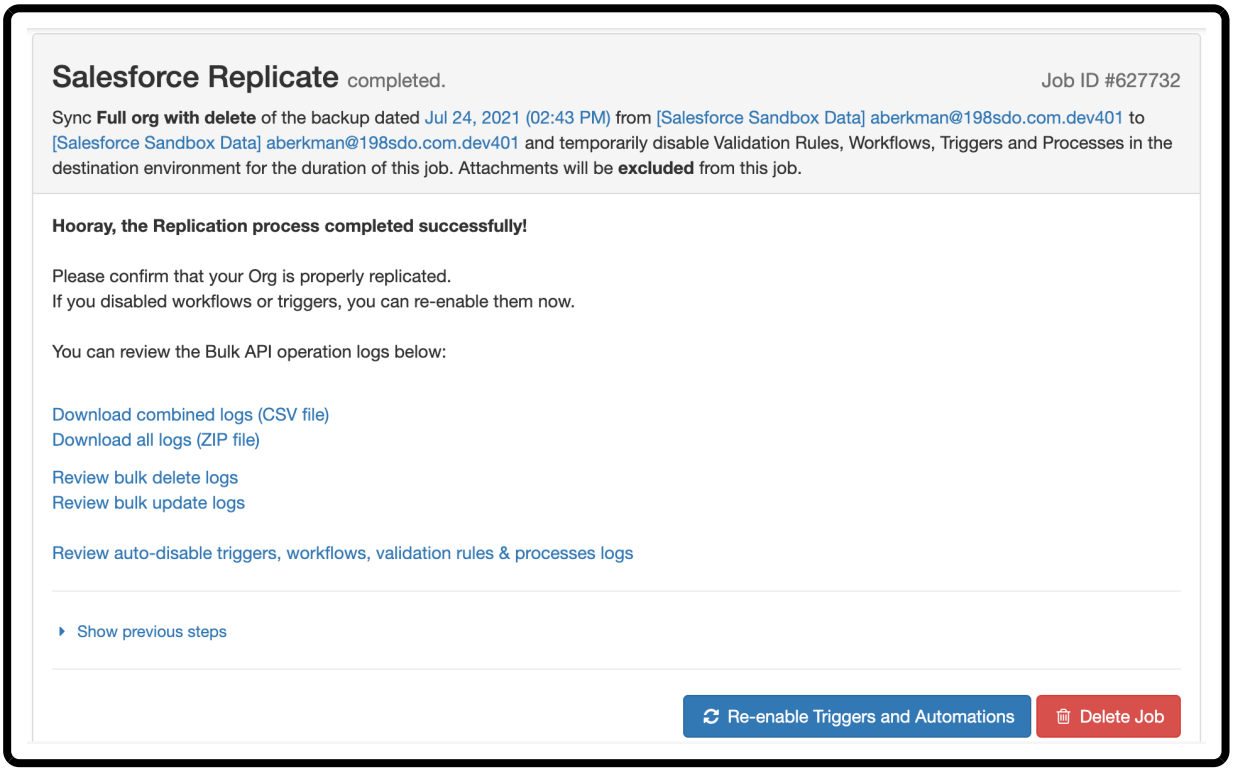


> **NOTE**
> If you update a preview in the advanced options , you will need to click **Update Preview**, or **Start Replicate Without Preview** to continue the replicate process.

12. Check the **I have adapted my Salesforce environment for this job** checkbox when you are ready, then click **Start Replicate**. The confirmation message is displayed.

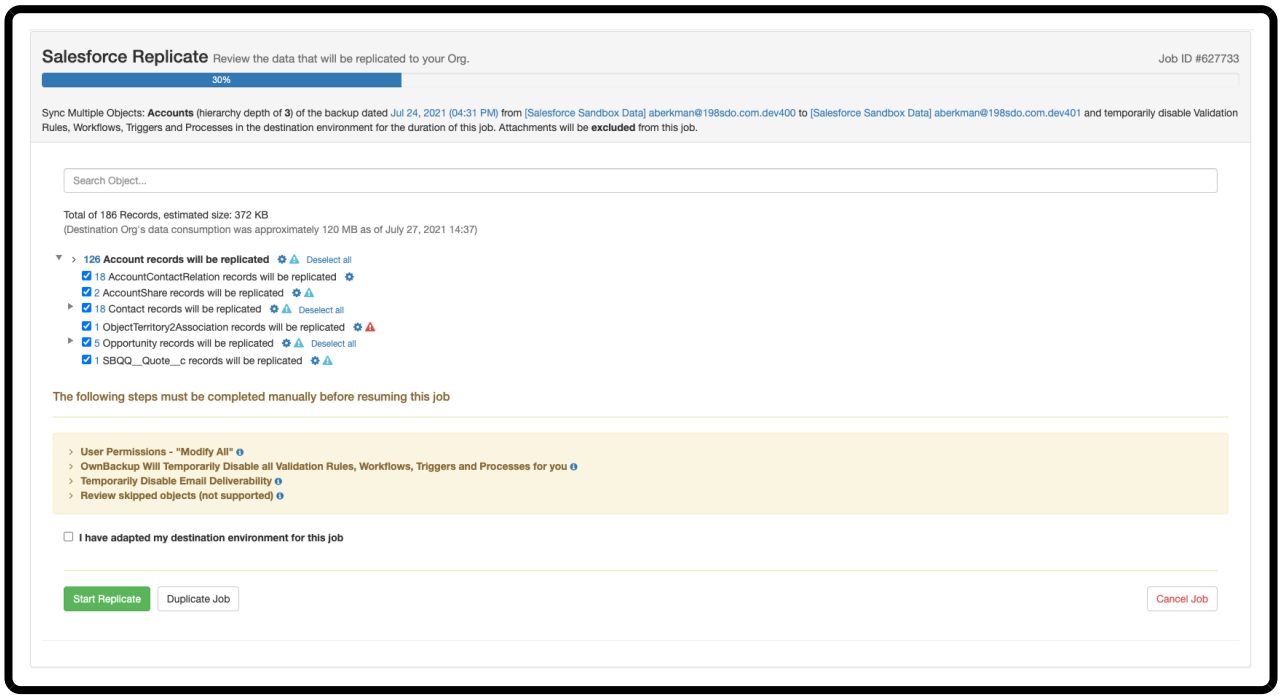


13. Click **OK**. The replicate data process begins, when it is completed it appears as follows:



Job Preview Results

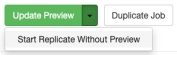
When replicating data, you can review the details you selected, and the data to be replicated in the Job Preview Results.



The results contain the following information:

- The option to search for the objects. As you type, the options automatically filter.
- List of records that will be replicated.
- The status of the records:
  - : Indicates the object and its records will be created, but without the missing data, due to a ‘non required’ missing referenced object relationship. You may either include the additional objects or change the hierarchy depth.
  - : A required relationship for the object to succeed. Record inserts will fail without the missing information.

> **NOTE**
> In order to include the referenced items, you will need to create a new job.

  - : Additional options available to filter your data.
  - Deselect all.
- Additional manual on-screen instructions.
- Updated Preview 

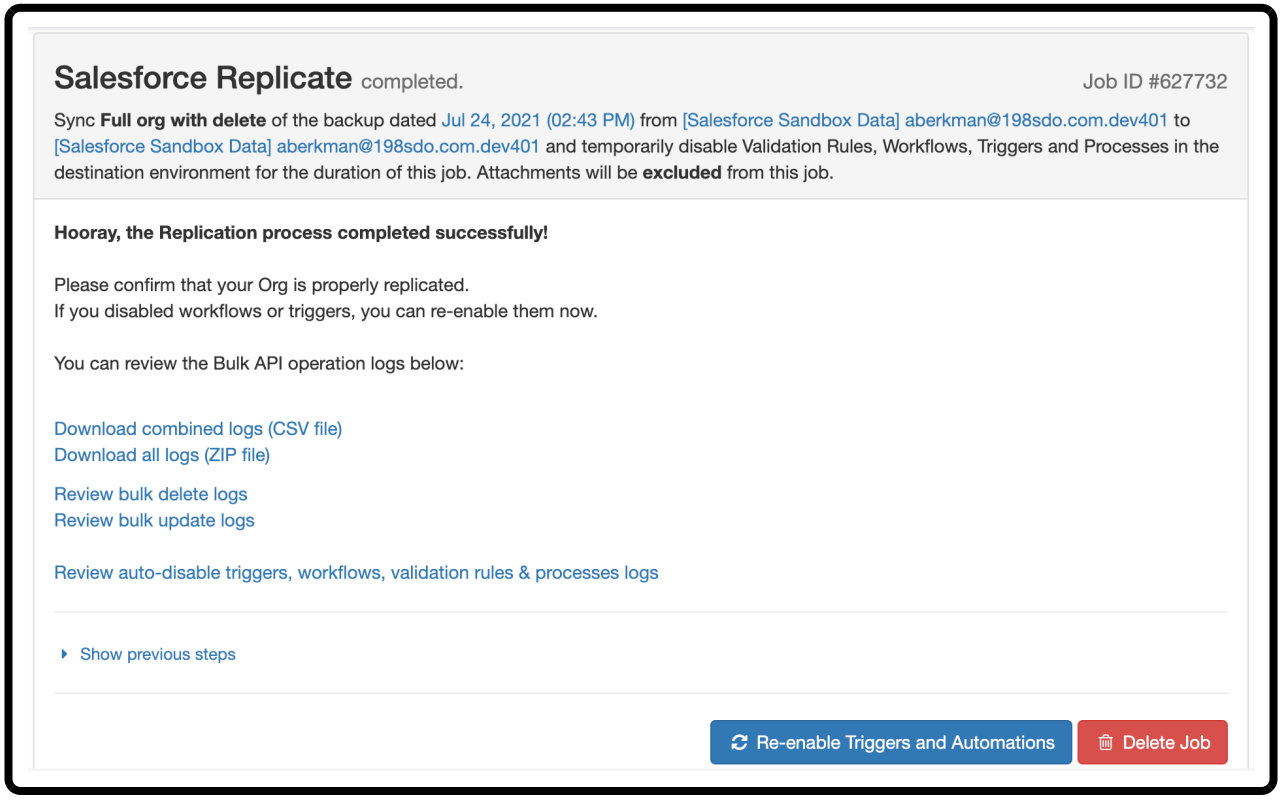
: This option is only visible when changes have been made to the replicate job preview.
- Start Replicate

: Begin the replicate process.
- Duplicate Job

: Duplicate the job.
- Cancel Job

: Cancel the job.

Replicate Results



The results contain the following information:

- Status of the Replication process.
- You can review the Bulk API operations logs using the following options:
  - Download combined logs (CSV file)
  - Download all logs (ZIP file)
  - Review bulk delete logs
  - Review bulk update logs
  - Review auto-disable triggers, workflows, validation rules & processes logs
- Show previous steps.
- Re-enable Triggers and Automations.
- Delete the Job.

Re-enable Triggers and Automations

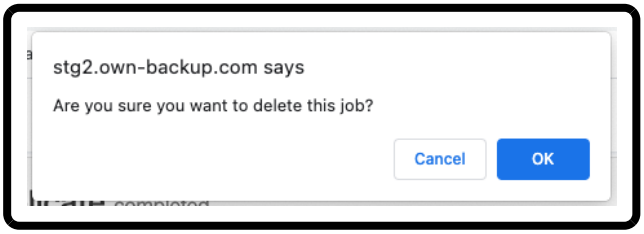
On the summary of the replicate job, click **Re-enable Triggers and Automations** to re-activate Automations that have been disabled during the job but were not activated successfully.

The results appear as follows:

Delete Job

Once the replicate job is complete, you can delete the restore job directly from the Results page.

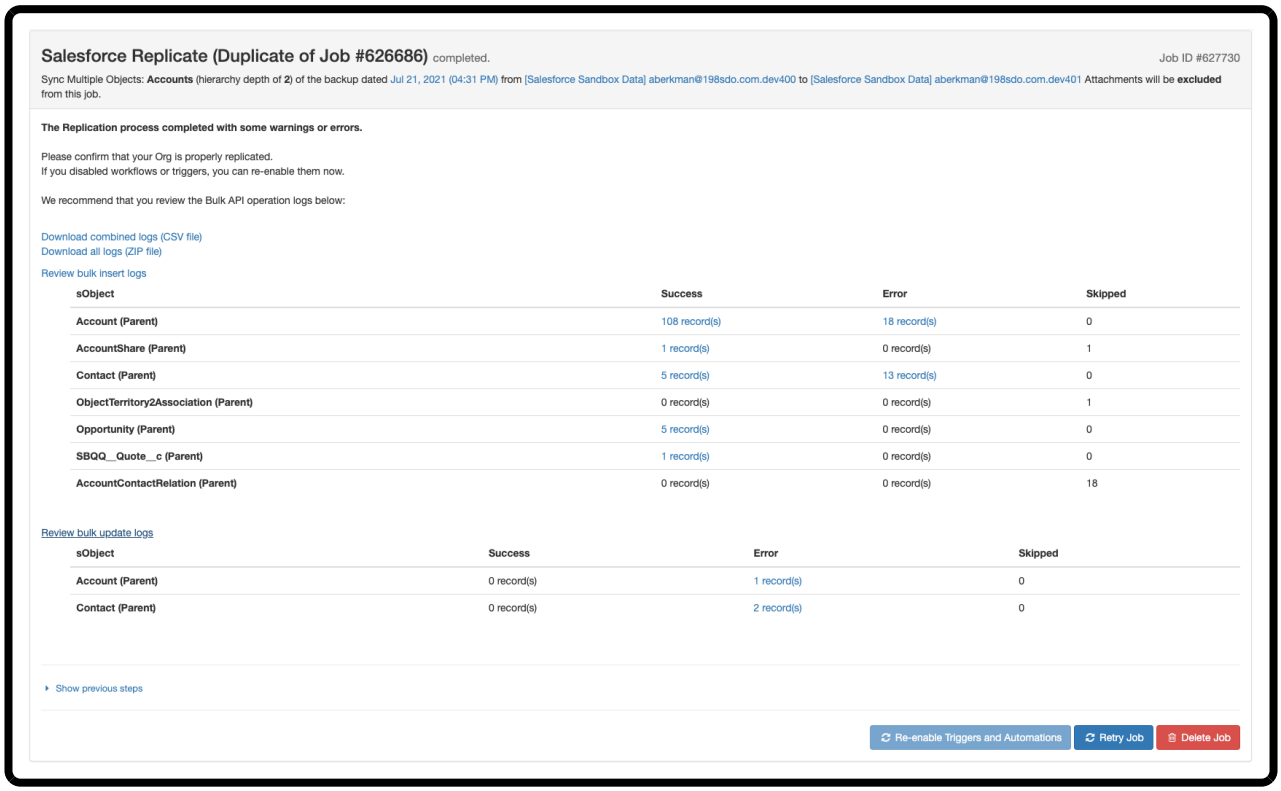
1. Click **Delete Job** at the bottom right of the results. The delete job message is displayed.



2. Click **OK**.

Retry Job

After any Data Replicate job (Multi-Parent or Full Org) has completed, if errors are present, you can review the bulk insert and bulk update logs to better understand why the errors occurred.



Once the errors are reviewed, and the environment has been adjusted to solve the errors, you can retry the restore job directly from the Results page. To begin a Retry, click **Retry Job** button at the bottom right of the results.During the Retry, We will re-run the Replicate Job originally initiated.

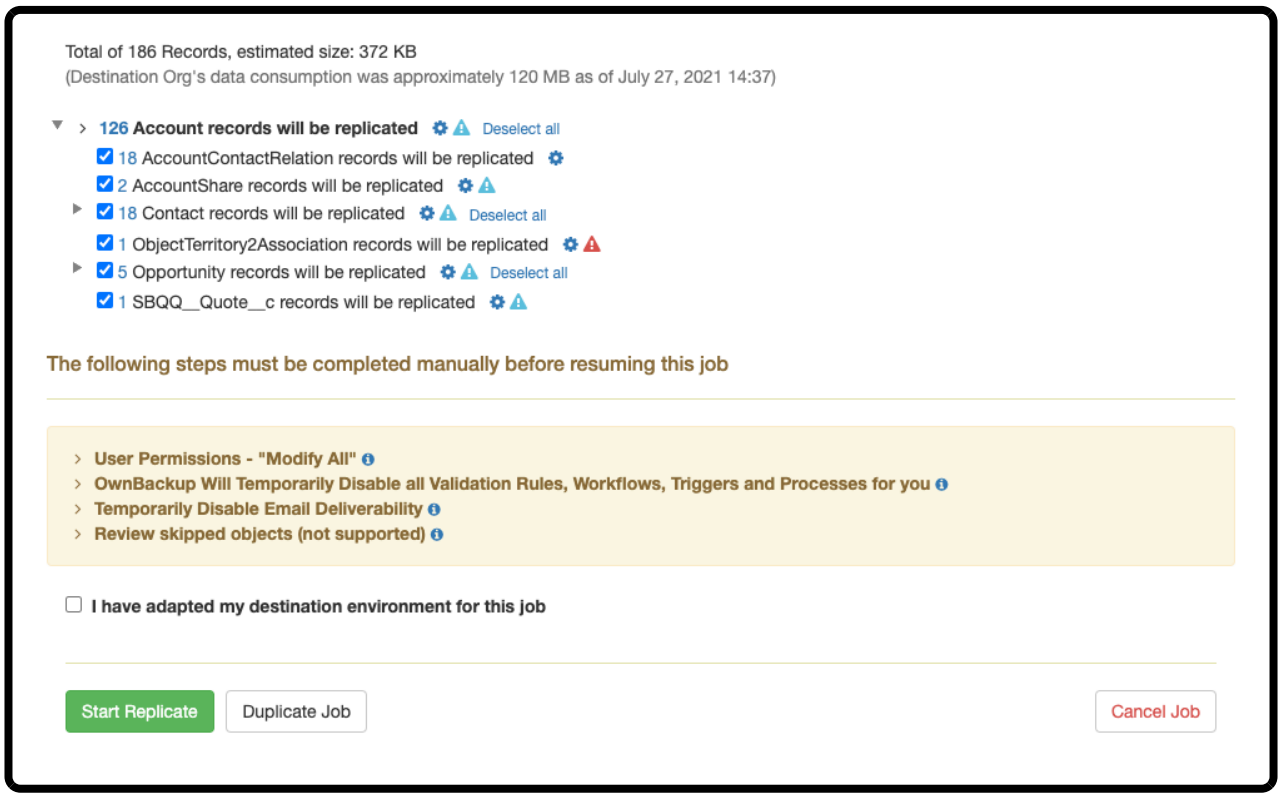
NOTE

Any records that were successfully inserted in the original Restore Job will be skipped, will not be updated and no duplicates will be created.

Duplicate Data Replicate

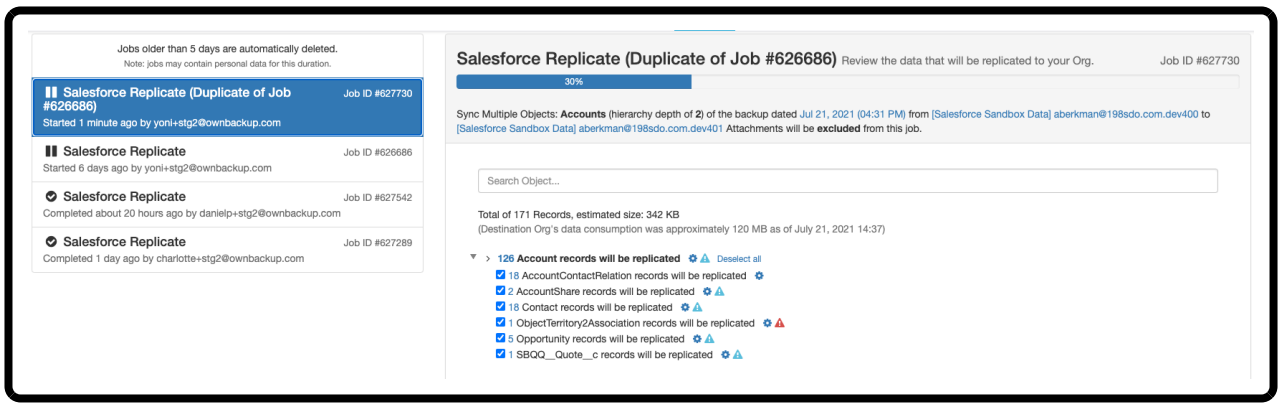
Once the initial processing of the data is complete, or after updating a preview, you can duplicate the actual job.

This job can be saved as a template for future replications, to avoid going through the preview process and quickly export the same dataset. This also gives you the ability to try different SQL queries to better refine your dataset.



To begin duplicating a job, click the **Duplicate Job** button at the bottom left of the results page. The duplicate job appears on the left-hand side of the page as "**Salesforce Replication (Duplicate of Job #******)**.

The Job number is automatically generated to reference the original replicate job.



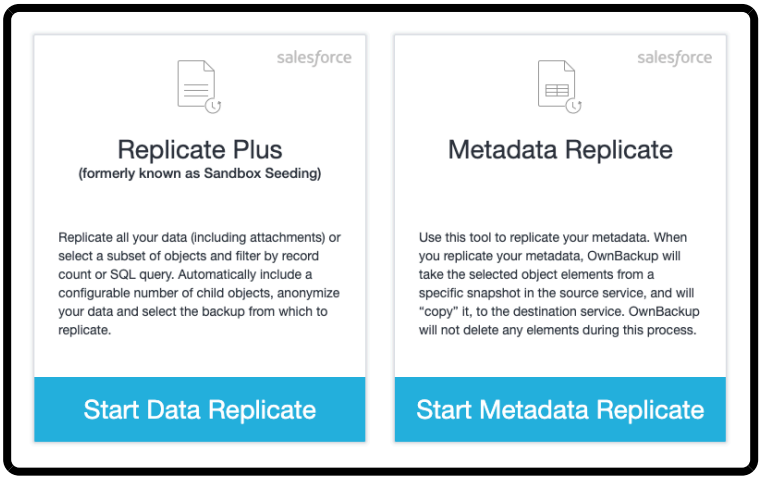
Metadata Replicate

Use the Metadata Replicate tool to replicate your metadata. When you replicate metadata, we will take the selected object elements from a specific snapshot in the source service to the destination service, and will 'copy' it, to the destination service. We will not delete any elements during this process.

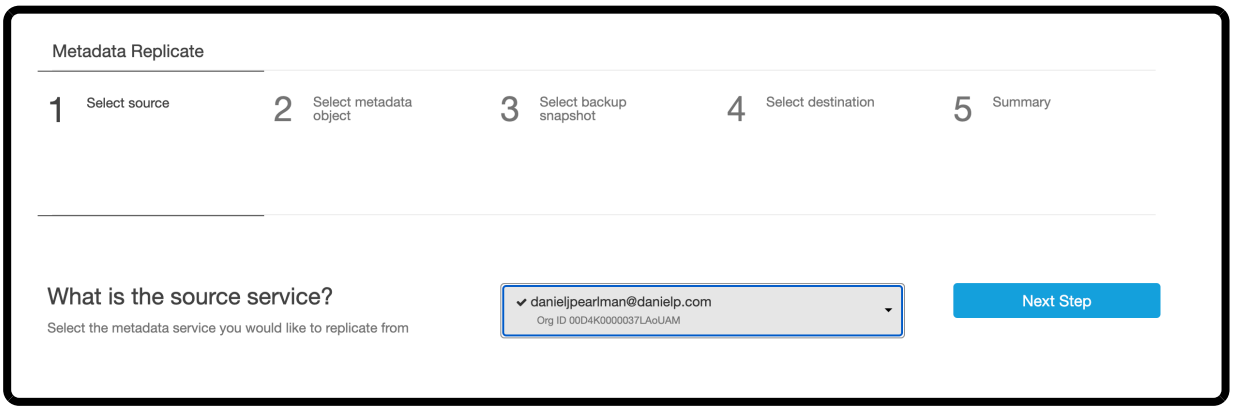
Metadata replicate supports Production to Sandbox, Sandbox to Sandbox, and Production to Production.

To replicate your metadata:

1. Sign in to your account.
2. Navigate to the Replicate tab.

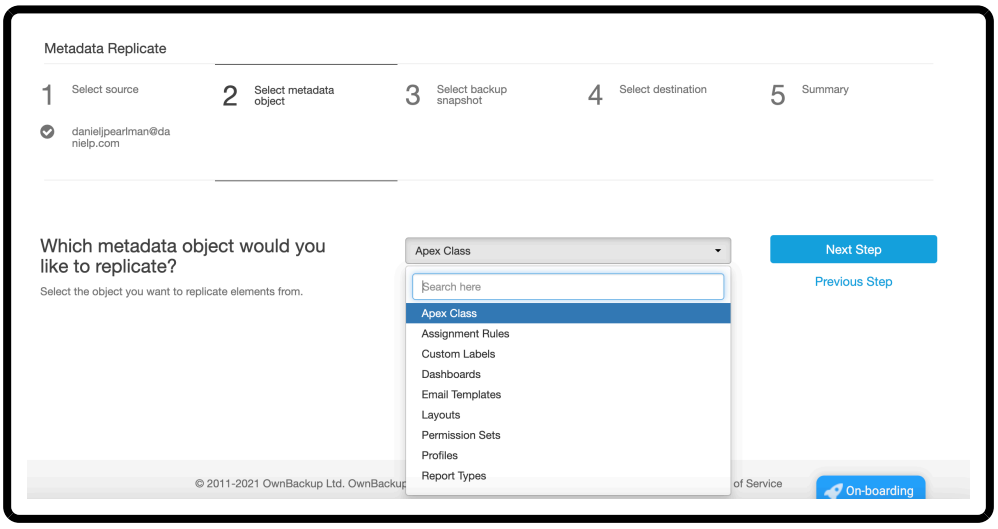


3. Click **Start Metadata Replicate**.

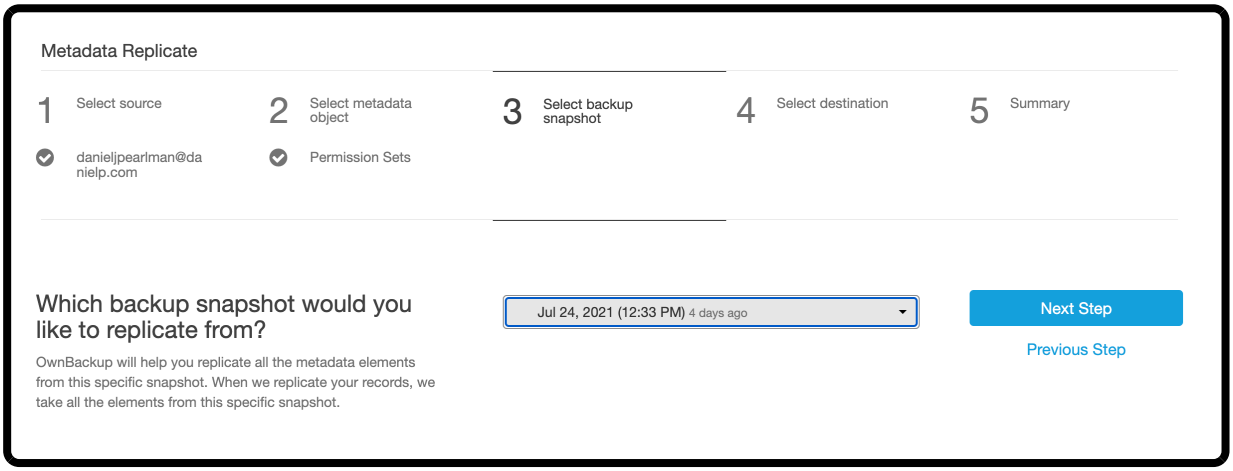


4. Select the source Salesforce Org from which you would like to replicate.

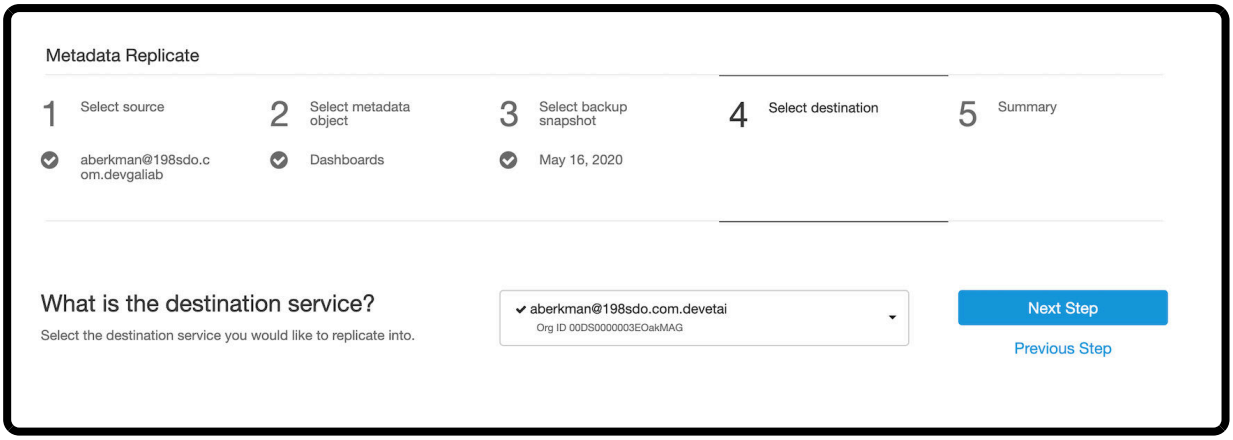
5. Click **Next Step**.



6. Choose the metadata object that you want to replicate elements from. You can type in the object rather than scrolling to search.
   - You may restore one of these objects: Apex Class, Assignment Rules, CustomLabels, Dashboards, Email Templates, Layouts, Permission Sets, Profiles, Report Types,Reports and Workflows. For any other metadata object you need to restore, please refer to our metadata deployment guide using Workbench.
7. Click **Next Step**.

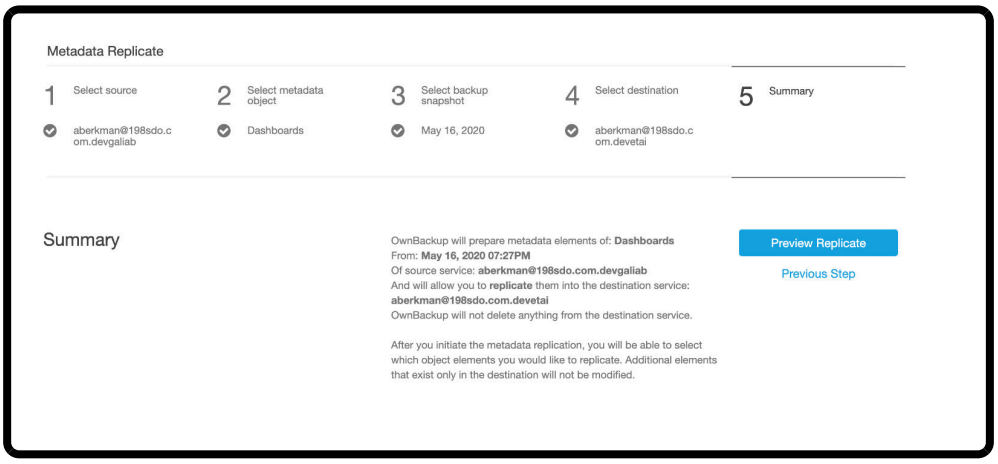


8. Select the snapshot. The snapshot will contain all the elements from this specific snapshot.
9. Click **Next Step**.



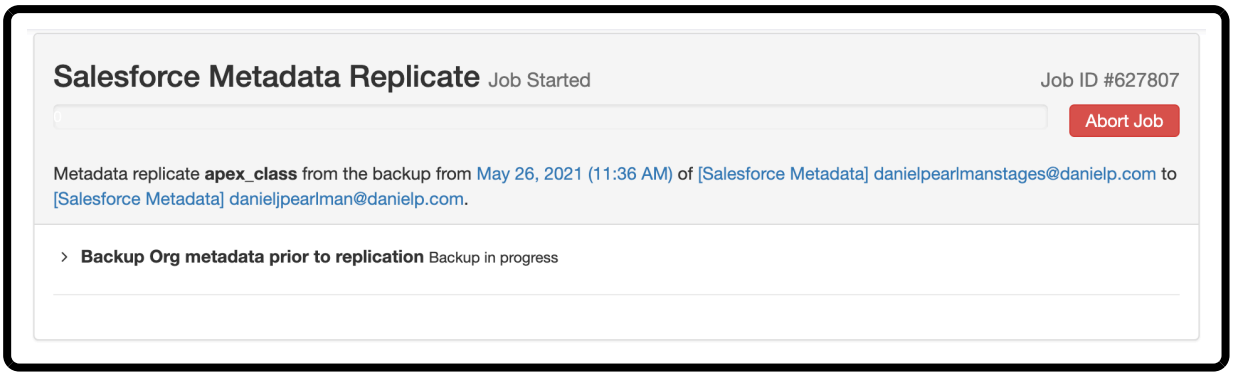
10. Select the destination service you would like to replicate into.

11. Click **Next Step**.

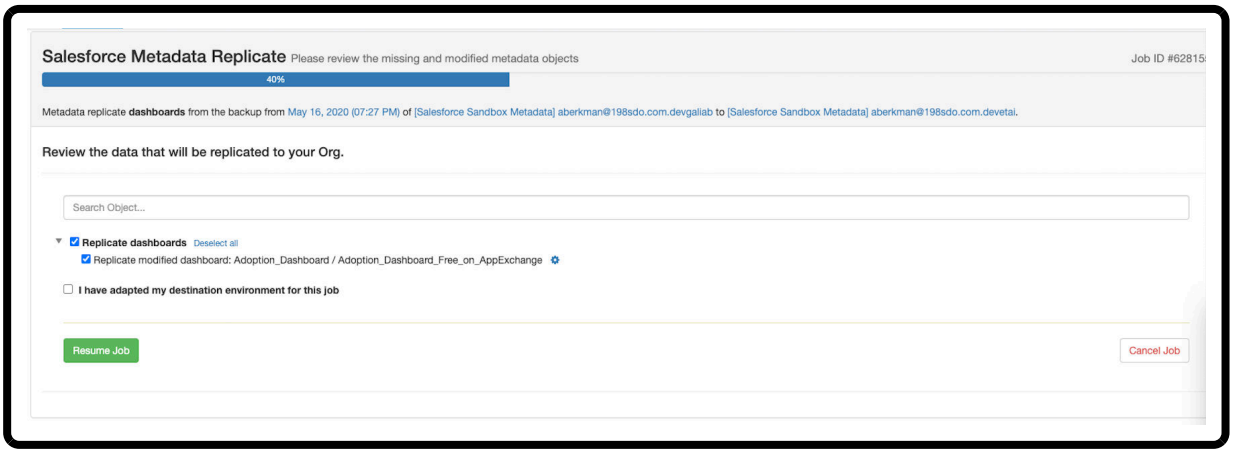


NOTE
Once you click on “Preview Replicate”, a backup for the destination is automatically initiated.

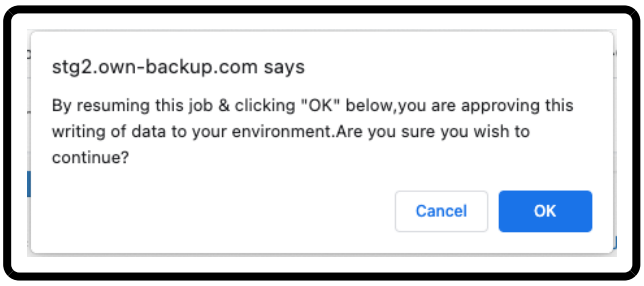
12. Review the details you selected, then click **Preview Replicate** to generate a complete preview. The Salesforce MetadataReplicate job begins and opens in the Jobs tab.



Once the initial processing of the data is complete the job preview results are displayed, and you will be presented with additional onscreen instructions.



13. Check the **I have adapted my Salesforce environment for this job** checkbox when you are ready, then click **Resume Job**. The confirmation message is displayed.



14. Click **OK**. The replicate data process begins, when it is completed it appears as follows:

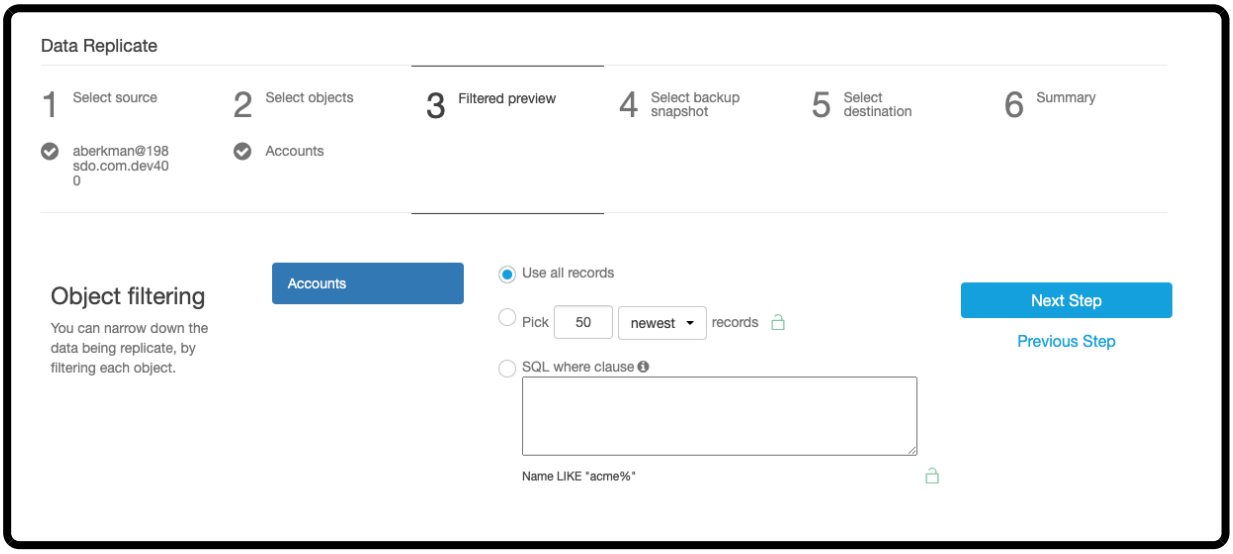
Sandbox Seeding

Sandbox Seeding will make replicating your data even more seamless. Follow the same steps as you would for standard replication. However, there are some notable enhancements which make Sandbox Seeding more powerful:

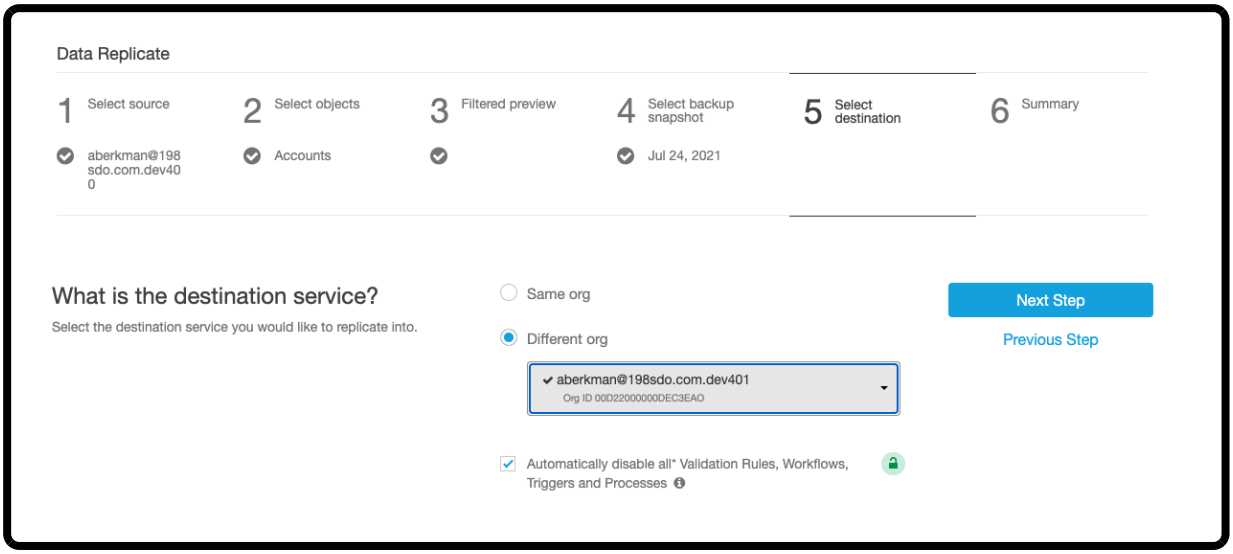
Object Filtering

If Multiple Parent Objects is selected, you will be given the option to pre-filter each of the selected objects, in the following ways:

1. Specify a number of records based on newest/oldest/random (Replicate Plus only).
2. Filter the data with specific criteria via the SQL where clause (Replicate Plus only).

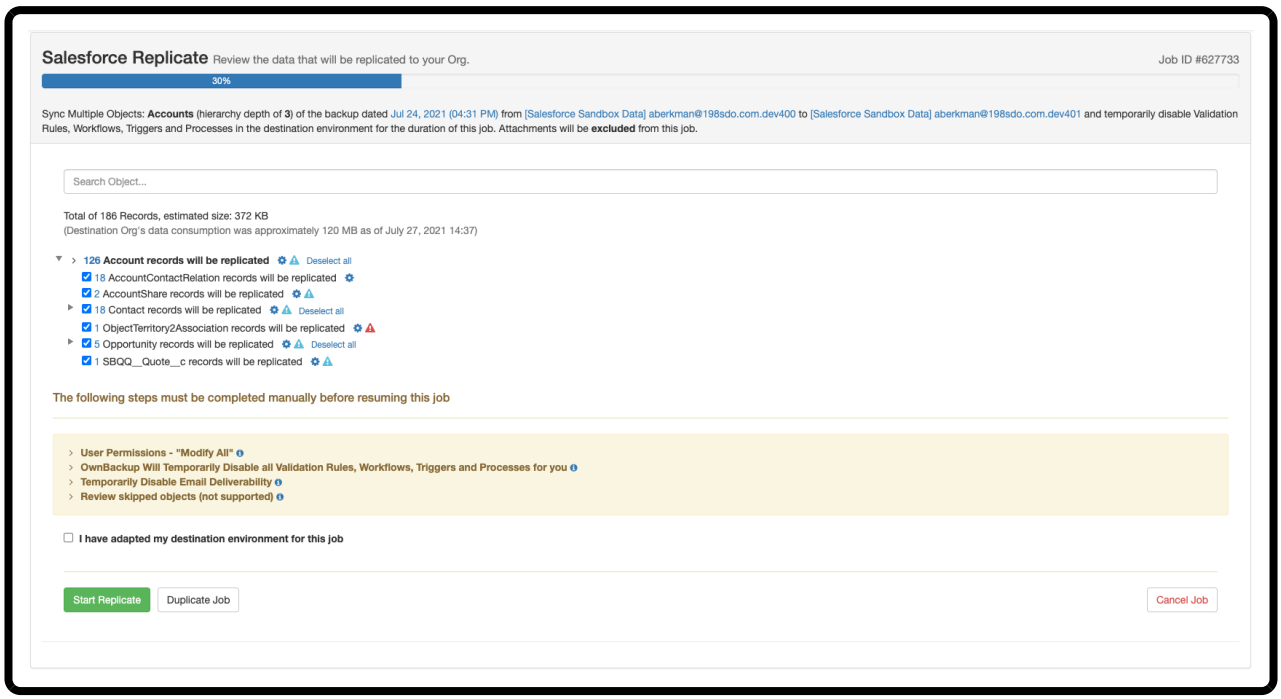


3. Automatically disable all Validation Rules, Workflows, and Triggers (Replicate Plus only).

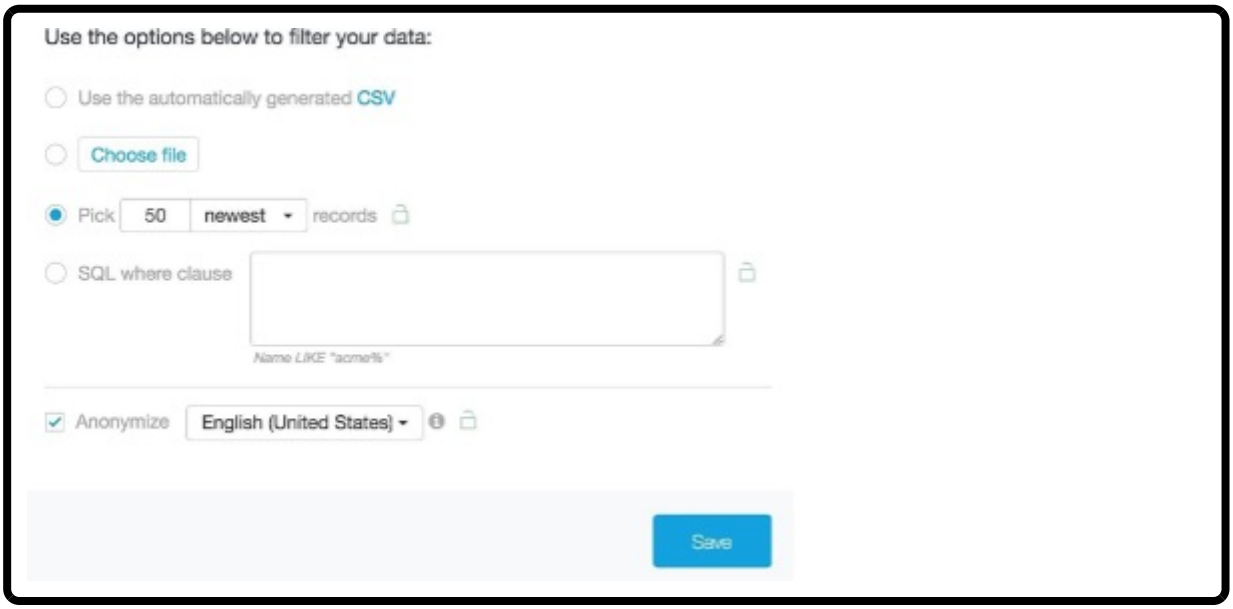


Customized Data Sets

Once the Replicate Job Preview tree is ready, you can customize your data sets at the Parent AND Child level.



1. Click the advanced option icon ⚙ next to a parent sObject element.



2. Use the automatically generated CSV file.
3. Choose a file. Upload your own customized CSV file.
4. Pick a number of records based on newest/oldest/random (Replicate Plus only).
5. Filter the data with specific criteria via the **SQL where clause**. Use this option to perform advanced filtering. See here [22] for SQL examples. (Replicate Plus only).
6. Anonymize your data. See more details here [21]. (Replicate Plus only).
7. Click **Save** or any changes made will not be saved.

Data Anonymization

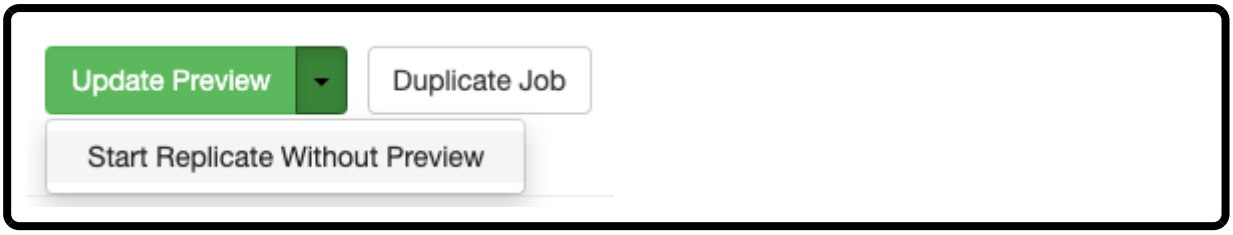
Anonymize your data so that other admins, developers, consultants, or users can run tests in their own sandbox without having access to the original sensitive data.

To maximize the data quality, a given value that is anonymized will be anonymized to the same value when encountered again on the same field type in the same Replicate Job, thus preserving the original distribution of values & data integrity.

For example, if in a certain Replicate Job, the Country field value was originally ‘Cuba’ and was anonymized to ‘Peru’, any future occurrences of ‘Cuba’ in a Country field for the duration of that Replication Job will remain ‘Peru’.

To anonymize your data:

1. Once the Replicate Job Preview tree is ready, click the advanced option icon ⚙ next to a parent sObject element.
2. Select the **Anonymize** checkbox.
3. Select the region from the drop-down list.
4. Click **Save**.
   The records in the selected step (for example 10 Tasks associated with Contacts) will only be anonymized upon clicking “Update Preview”.
5. Check the **I have adapted my Salesforce environment for this job** checkbox.
6. Click **Update Preview**, or **Start Replicate Without Preview**.



7. Click **Start Replicate** to push all previewed data directly to the destination Org.

SQL Examples for Querying Data

Use SQL statements to return a collection of records that match your criteria.

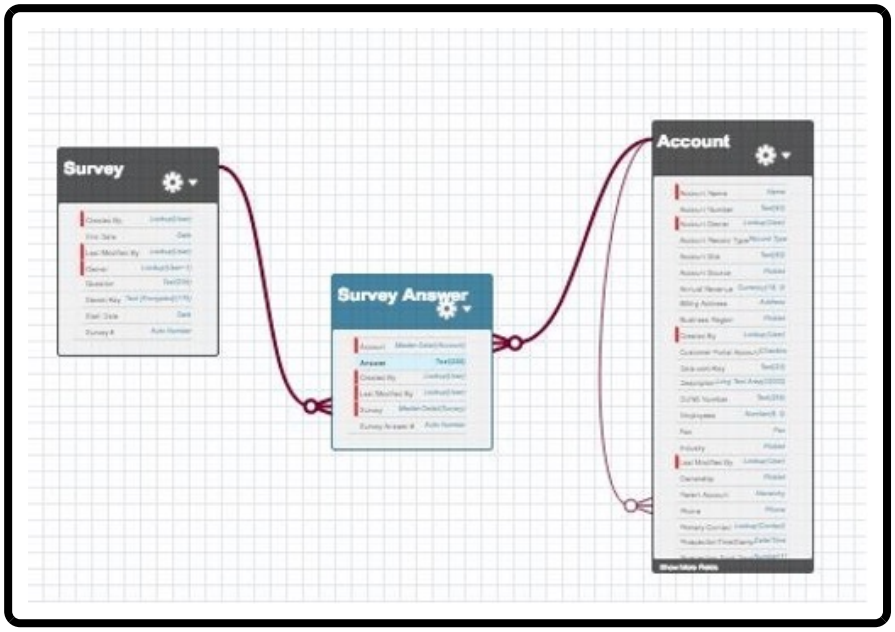
- Filter all Account records where the 'IsPartner' field is checked (case sensitive comparison):
  - `isPartner = 'true'`
  - Note that the IsPartner field on the Account object will be available only in Orgs where partner relationship management (partner portal) is enabled.
- Filter all Account records where the 'IsPartner' field is checked (case insensitive comparison):
  - `isPartner = 'TRUE' COLLATE NOCASE`
- Only keep records that have two specific Record Types:
  - `RecordTypeId in ('01235000001BJrlAAW', '01215000001BJrLAAW')`
- Only keep records that their name field contains the word 'acme':
  - `Name LIKE '%acme%'`
- Only keep records where a custom field (i.e., 'Value c') is empty:
  - `Value c = ''`
- Only keep records that have a value between 2 values (i.e., between 100 and 200):
  - `cast(Value__c as integer) > 100 AND cast(Value__c as integer) <= 200`
- Keep records that meet one of several conditions (Red, Blue or Green):
  - `Color IN ('Red', 'Blue', 'Green')`
  - Color = 'Red' OR 'Blue' OR 'Green'
- Keep records that must meet several conditions:
  - `Cast(Height as integer) > 15 AND cast(Width as integer) < 5 AND cast(Depth as integer) >= 10`
- Keep records that do not match:
  - `Country != 'USA'`
- Replicate Accounts based on a checkbox and bring the parent account of these accounts:
  - `WHERE CopyToDev__c = 'true' OR Id IN (SELECT ParentId FROM Account WHERE CopyToDev__c = 'true')`
- Only keep records that were created on a specific date (i.e. November 27, 2017):
  - `CreatedDate = '2017-11-27'`
- Only keep records that were NOT created on a specific date:
  - `CreatedDate != '2017-11-27'`
- Find all records added after a specific date:
  - `CreatedDate > '2019-09-16T00:00:00.000Z'`

NOTE

You will need to update the date above to whichever date is applicable.

- Replicate a subset of record for each RecordType, for example 5 records of each of my 3 Accounts RecordType:
  - `Id IN (SELECT Id FROM Account WHERE RecordTypeId='A' LIMIT 5) OR Id IN (SELECT Id FROM Account WHERE RecordTypeId='B' LIMIT 5)`
  - `Id IN (SELECT Id FROM Account WHERE RecordTypeId='C' LIMIT 5)`
- Filter a Parent Object based on a Child Object Record:
  - `Id in (SELECT FieldName c FROM ParentObject$ChildObject)`
  - For example, if you want to filter Account based on the Opportunity use: Id in (SELECT AccountId FROM Account$Opportunity)
- In self-lookup relationships, replicate only the Tier 2 records and their associated Tier 1 records:
  - `(ParentId != '') OR (Id IN (SELECT ParentId FROM Account))`
  - For example, if Account has a self-lookup to Account, replicate only Accounts with a Parent Account and also the associated Parent Accounts.

- Filter a list of Account and select all the child Account related to them automatically:
  - `(Id IN ('0010n00000y54IrAAI', '0010n00000y54JaAAI')) OR (ParentId IN ('0010n00000y54IrAAI', '0010n00000y54JaAAI'))`
- Replicate a subset of records where we have 2 Parents and related Junction Object:
  - To illustrate that example, let's consider we have Account and Survey as Parent object and an object called Survey_Answer that is our Junction Object.



  - On the Replicate Job, select Account and Survey
  - Click the advanced option icon next to Account and select a subset of data you would like to use.
  - Click the advanced option icon next to the Parent Object Survey and run the following query: `Id in (SELECT Survey c FROM Account$Survey_Answer c)`
  - Click the advanced option icon of Survey_Answer (Under the object Survey) and run the query: `Id in (Select Id from Account$Survey_Answer c)`

Comparison Operators

Operator	Definition/Explanation
=	Equals
!=	Not equals
<	Less than
<=	Less than or equal to
>	Greater than
>=	Greater than or equal to
LIKE	Like
IN	In
NOT IN	Not In

Considerations and Limitations

- Field names are case insensitive, so (IsPartner = ispartner).
- When using the 'IN' operator with record IDs, you must use the 18-char version (not the 15 char) v When using the 'LIKE' operator with records IDs, you can use the 15-char format, because this looks for a partial match.
- The '%%' operator is case insensitive.
- When using arithmetic operators, make sure to convert/cast the values to the proper format first. You can also convert real numbers to 'real'.
- Any logical expression is permitted, and you can mix/match them with parenthesis as needed.
- You can NOT do nested queries; your query only applies to the object you apply the query to.
- References to other objects is not allowed.
- Dates are stored as a string in this format (example): "2015-11-27T16:54:37.000+0000"; use the LIKE operator to search based on date/time fields.
- Use COLLATE NOCASE for case insensitive comparisons.
- In SFDC, checkbox values are stored as 'true' or 'false' (all lowercase). Excel autoconverts Boolean fields to all uppercase (true = TRUE). Use the lowercase version or COLLATE NOCASE when comparing Boolean checkbox fields.

Additional Resources

Users are supported by the Backup and Restore experts of the Support department and an online knowledge base for self-serve information.

Please do not hesitate to contact our Support team from your account or via email at Support@owndata.com.