

Getting Started with CopyStorm/Restore

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This document contains common recipes for restoring Salesforce data using CopyStorm/Restore. Once the common recipes are grasped, you will be ready for any type of restore.

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Executive Summary

To use CopyStorm/Restore effectively, an understanding of how common restore tasks should be approached is important. This document will provide the knowledge you need.

The intended audience are people who will use CopyStorm/Restore on a regular basis.

The Basic Sandbox Recipe

The most common use case for CopyStorm/Restore is to populate a Salesforce sandbox with a subset of production data. The basic recipe for this task is almost always the same:

- Enter Salesforce and CopyStorm backup credentials.
- Decide which record type should drive the restore.
 - Example: Pick 5000 Accounts and their related Contacts, Opportunities, and Cases. In this case the record type “Account” will drive the restore.
 - Example: Pick the 500 highest value Opportunities and the related Accounts, Contacts, and Quotes. In this case the record type “Opportunity” will drive the restore.
- Open the “Restore Set Editor” tab and define the record selection rule for the record type that will drive the restore.
- Choose all related lists to restore for the record type that is driving the restore.
- Choose all related lists for record type that were selected in the previous step. Repeat until all relationships to be restored have been selected.
- Run the restore.

A shorter version of this recipe is:

- Enter Credentials.
- Choose the records that should drive the restore.
- Choose the related lists that should be restored. Repeat until all have been selected.
- Run the restore.

The next few sections show concrete examples of this recipe.

Example: Restore Accounts and Related Data

In this example we restore 500 random accounts and associated Contacts, Attachments, and Cases.

Step 1: Enter Credentials

The first step is to enter the credentials of the Salesforce to restore and the CopyStorm database containing a backup.

The screenshot displays the 'CopyStorm/Restore' application window. The 'Database' dropdown is set to 'PostgreSQL'. The 'Advanced' tab is selected, showing options for restoring a CopyStorm database to Salesforce. The interface is divided into two main sections: 'Salesforce Options' and 'PostgreSQL Options'.

Salesforce Options:

- Instance Type: Production
- Username: greg@capstorm.com.csrdemo5
- Password: [Redacted]
- Security Token: [Redacted]
- Alternate Host: capstorm-csrdemo5.my.salesforce.com

PostgreSQL Options:

- Connection String: //database-postgresql.local/CSRDemo5
- Username: root
- Password: [Redacted]
- Schema (Optional): [Redacted]

At the bottom of each section are buttons for 'Test Salesforce Connection' and 'Test PostgreSQL Connection'. Two yellow boxes highlight the 'Salesforce Credentials' and 'Database Credentials' sections.

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Step 2: Select the Accounts to Drive the Restore

In this case, choose 500 random Accounts.

The screenshot shows the 'CopyStorm/Restore' application interface. The 'Database' dropdown is set to 'PostgreSQL'. The 'Main' tab is selected, and the 'Account Restore Rules' section is active. The 'Select' dropdown is set to 'Common'. The 'Which Records' dropdown is set to 'Random'. The 'Restore Type' is set to 'Insert' and 'Update'. The 'Record Match Policy' is set to 'Salesforce Id'. The 'Random' section shows '# of Records' set to '500'. The 'Record Filter' section shows 'Selecting Randomly From All Records'. The 'Specify Actions for Reference Fields' section shows 'CreatedById', 'LastModifiedById', 'MasterRecordId', and 'OwnerId' all set to 'Use Default'. The 'Fields to Restore' section shows 'AccountSource', 'AnnualRevenue', 'BillingCity', 'BillingCountry', 'BillingGeocodeAccuracy', and 'BillingLatitude' all checked. The 'Related Lists to Restore' section shows a list of related records with checkboxes.

1. Click on Account

2. Choose the "Random" Selector.

3. Limit the # of Accounts to 500

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Step 3: Select Related Lists to Restore

In this step tell CopyStorm/Restore to include all Contacts, Opportunities, and Cases for each restored Contact. We do this by clicking on the respective check boxes in the Account's *Related Lists to Restore* section. As each check box is selected, the corresponding table will automatically be selected in the list of tables on the left. The **(ref)** marker next to a table means that only records referenced by another record will be restored.

File Help

Database PostgreSQL

Main Global Parameters Advanced Restore Set Editor Migration Setup Restore Plan Restore Tracker Database Meta Data Notifications Notes License

Select: Common Select... Clear

Account Restore Rules

Select the Records to be Restored

Which Records: Random

Restore Type: ☒ Insert ☒ Update

Record Match Policy: Salesforce Id

Max # Per Update:

Salesforce Writers:

Random Constraint T... Filter # of Records 500 Seed Use Deleted Reco..

Record Filter - Click on the filter to Edit

Selecting Randomly From All Records

Click Here To Edit

(ref) means that only Cases referenced by a restored Account will be restored.

Click on Related Lists to Restore. Each Selection causes a table on the left to be selected by (ref). You can choose direct children, grandchildren, etc. to any depth required.

Related Lists to Restore

Selected Collapse Expand Select All Clear

Asset (Asset.Account ID)

Attachment (Attachment.Parent ID)

Case (Case.Account ID)

CollaborationGroupRecord (Group Record.Record ID)

Contact (Contact.Account ID)

ContactRequest (Contact Request.Related To ID)

ContentDocumentLink (Content Document Link.Linked Entity ID)

Contract (Contract.Account ID)

DuplicateRecordItem (Duplicate Record Item.Record ID)

EmailMessage (Email Message.Related To ID)

EntitySubscription (Entity Subscription.Parent ID)

Event (Event.Related To ID)

FeedComment (Feed Comment.Parent ID)

FeedItem (Feed Item.Parent ID)

Note (Note.Parent ID)

Opportunity (Opportunity.Account ID)

Advanced Field Options (0)

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Step 4: Look at the Restore Plan

We want you to look at a Restore Plan at least one time. The reason is to see all the steps and the dependency analysis that would be required if the same process was attempted using Data Loader (even in this simply 8 table case).

FileHelp

CopyStorm/Restore

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DatabasePostgreSQL

MainGlobal ParametersAdvancedRestore Set EditorMigration SetupRestore PlanRestoreTracker DatabaseMeta DataNotificationsNotesLicense

Restore Execution Plan

This tab displays information about the execution plan that will be used by the Restore operation.

- The *Restore Order* tab lists tables in the order they will be written to Salesforce.
- The *Candidate Scan Order* tab lists the order in tables will be searched for potential restore candidates in the CopyStorm database.
- The *Restore Order Detail* tab lists the tables in the order they will be restored plus any tables that are pre-requisites but later in the plan
- The *Dependency Detail* tab lists the tables in the order they will be restored, tables that are pre-requisites but later in the plan, and all related tables.

Restore OrderCandidate Scan OrderRestore Order DetailDependency DetailOverrides

Table Dependency Detail

In addition to listing tables in the order they will be written to Salesforce, the full dependency relationships between tables and the decisions made to break circular dependencies between tables are also shown. For each table there are four extra columns:

- *All Required* lists all tables that are required to be restored before the listed table.
- *All Nillable* lists all tables that are optional but will ideally be restored before the listed table.
- *Required Prerequisite(s)* indicates required tables that are not restored earlier in the list.
- *Nillable Prerequisite(s)* indicates optional tables that are not restored earlier in the list.

Order	Table	All Required	All Nillable	Required Prerequisite(s)	Nillable Prerequisite(s)
1	Account				
2	Contact	Account			
3	Asset	Account Contact			
4	Case		Account Contact		
5	Opportunity	Account	Contact		
6	Note	Account Asset Contact Opportunity			
7	OpportunityContactRole	Contact Opportunity			
8	OpportunityLineItem	Opportunity			

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Step 5: Restore Data

This step is easy but may take some time. Switch to the Restore tab and click on one of two buttons.

- The *Estimate Size* button will calculate the total number of records that could be restored. All of the records may not be restored if the restore is not necessary (e.g. the timestamp in the backup and in Salesforce is the same).
- The *Start Restore* button starts the restore.

The screenshot shows the CopyStorm/Restore application interface. The top navigation bar includes 'File' and 'Help'. The main header is 'CopyStorm/Restore By CAPSTORM'. Below this is a 'Database' dropdown set to 'PostgreSQL'. A series of tabs are visible: 'Main', 'Global Parameters', 'Advanced', 'Restore Set Editor', 'Migration Setup', 'Restore Plan', 'Restore', 'Tracker Database', 'Meta Data', 'Notifications', 'Notes', and 'License'. The 'Restore' tab is active, showing a table with columns: Stage, Table Name, #Candidates, #Inserts, #Updates, #Ref Updates, #Restored, #Skipped, #Errors, Start Time, and Elapsed Time. The table lists several tables in a 'Waiting' state, all with zero records. A callout box points to the table with the text: 'Real time progress about the restore will appear in this table.' Below the table are two buttons: 'Estimate Size' and 'Start Restore'. A callout box points to the 'Estimate Size' button with the text: 'Estimate the # of records to restore. This is step is optional.' Another callout box points to the 'Start Restore' button with the text: 'Start the restore.' The bottom status bar shows '17' and '101m/128m'. The footer contains the copyright notice: 'Copyright (c) 2013-2019 CAPSTORM (www.capsorm.com)'.

Stage	Table Name	#Candidates	#Inserts	#Updates	#Ref Updates	#Restored	#Skipped	#Errors	Start Time	Elapsed Time
Waiting	Account	0	0	0	0	0	0	0		
Waiting	Asset	0	0	0	0	0	0	0		
Waiting	Case	0	0	0	0	0	0	0		
Waiting	Contact	0	0	0	0	0	0	0		
Waiting	Note ^(Less Common)	0	0	0	0	0	0	0		
Waiting	Opportunity						0	0		
Waiting	OpportunityContactRole ^(Less Common)						0	0		
Waiting	OpportunityLineItem ^(Less Common)						0	0		

API Calls: 12, Candidates: 0

Elapsed Time:

Estimate Size Start Restore

17 101m/128m

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After the restore completes, the buttons at the bottom change to:

- Re-scan Candidates – reevaluates the restore looking for additional restore candidates. This feature is useful when you change the rules.
- Resume Restore – continues the restore from where it was canceled or stopped. A CopyStorm/Restore job remembers where it was in the restore process no matter how it stops.
- Restart Restore – forgets all restore history and starts the restore over again. This is useful when an existing CopyStorm/Restore configuration is being used on a new empty sandbox.

File Help

CopyStorm/Restore

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Database PostgreSQL

Main Global Parameters Advanced Restore Set Editor Migration Setup Restore Plan Restore Tracker Database Meta Data Notifications Notes License

API Calls: 84, Candidates: 1,558, Restored: 1,558 Elapsed Time: 56.41s

Stage	Table Name	#Candidates	#Inserts	#Updates	#Ref Updates	#Restored	#Skipped	#Errors	Start Time	Elapsed Time
Finished	Account	101	101	0	1	101	0	0	17:09:05	6.310s
Finished	Asset	15	15	0	0	15	0	0	17:09:17	2.800s
Finished	Case	767	767	0	0	767	0	0	17:09:19	20.281s
Finished	Contact	336	336	0	1	336	0	0	17:09:10	8.291s
Finished	Note (Less Common)	1	1	0	0	1	0	0	17:09:50	1.494s
Finished	Opportunity	294	294	0	0	294	0	0	17:09:39	11.292s
Finished	OpportunityContactRole (Less Common)	38	38	0	0	38	0	0	17:09:51	2.12s
Finished	OpportunityLineItem (Less Common)	6	6	0	0	6	0	0	17:09:52	3.864s

17:09:56 : Finished 75m/131m

Re-scan Candidates Estimate MBytes Resume Restore Restart Restore

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Congratulations. Now you understand the basic CopyStorm/Recipe.

Time for a quiz.

- We forgot restore Solutions and Leads. How can this done?

Answer

The process is simple:

1. Open the Restore Set Editor tab.
2. Click on the checkbox next to the Solution table.
3. Click on the checkbox next to the Lead table.
4. Open the Restore Tab
5. Click on Re-scan Candidates to force CopyStorm/Restore to reevaluate the restore rules.
6. Click on the Resume Restore button.

Screen Shots of the process follows.

Database PostgreSQL

Main Global Parameters Advanced Restore Set Editor Migration Setup Restore Plan Restore Tracker Database Meta Data Notifications Notes License

Select: Common Selected Clear

- ☒ Account
- ☒ Asset (ref)
- ☐ Campaign
- ☒ CapstormEmailTemplate__c (Custom) (ref)
- ☒ CapstormQuoteTemplate__c (Custom) (ref)
- ☒ Case (ref)
- ☒ Contact (ref)
- ☐ Contract
- ☒ Lead
- ☒ Note (Less Common) (ref)
- ☒ Opportunity (ref)
- ☒ OpportunityContactRole (Less Common) (ref)
- ☒ OpportunityLineItem (Less Common) (ref)
- ☐ Quote
- ☐ Solution

Lead Restore Rules

Select the Records to be Restored

Which Records: All

Restore Type: ☒ Insert ☒ Update

Record Match Policy: Salesforce Id

Max # Per Update:

Salesforce Writers:

Skip Salesforce Id Check: ☐

All

Restore all Lead records from your Copy Storm database to Salesforce.

☐ Include Deleted Records

Specify Actions for Reference Fields

Field Name	If Referenced Record is Not Found
<input checked="" type="checkbox"/> ConvertedAccountId (Account)	Set to Null
<input checked="" type="checkbox"/> ConvertedContactId (Contact)	Set to Null
<input checked="" type="checkbox"/> ConvertedOpportunityId (Opportunity)	Set to Null
<input checked="" type="checkbox"/> CreatedById (User)	Use Default
<input checked="" type="checkbox"/> IndividualId (Individual)	Set to Null
<input checked="" type="checkbox"/> LastModifiedById (User)	Use Default
<input checked="" type="checkbox"/> MasterRecordId (Lead)	Set to Null
<input checked="" type="checkbox"/> OwnerId (User)	Use Default

Related Lists to Restore

- Selected Collapse Expand Select All Clear
- ☐ Attachment (Attachment Parent ID)
 - ☐ CollaborationGroupRecord (Group Record Record ID)
 - ☐ ContactRequest (Contact Request Requestor ID)
 - ☐ ContentDocumentLink (Content Document Link Linked Entity ID)
 - ☐ DuplicateRecordItem (Duplicate Record Item Record ID)
 - ☐ EmailMessageRelation (Email Message Relation Relation ID)
 - ☐ Entity Subscription (Entity Subscription Parent ID)
 - ☐ Event (Event Name ID)
 - ☐ FeedComment (Feed Comment Parent ID)
 - ☐ FeedItem (Feed Item Parent ID)
 - ☐ LeadShare (Lead Share Lead ID)
 - ☐ ListEmailIndividualRecipient (List Email Individual Recipient Recipient ID)
 - ☐ Note (Note Parent ID)
 - ☐ ProductDownload__c (Product Download Lead)
 - ☐ RecordAction (Record Action Parent Record ID)
 - ☐ SFGA__Ad_Group__c (A.G Group Lead)
 - ☐ SFGA__Google_Campaign__c (Google Campaign Lead)
 - ☐ SFGA__Keyword__c (Keyword Lead)
 - ☐ SFGA__Search_Phrase__c (Search Phrase Lead)
 - ☐ SFGA__Text_Ad__c (Text A.G Lead)
 - ☐ SocialPersona (Social Persona Parent ID)
 - ☐ Task (Task Name ID)
 - ☐ TopicAssignment (Topic Assignment Entity ID)
 - ☐ UserEmailPreferredPerson (User Email Preferred Person Person Record ID)

Click on Lead to add it to the restore set.
Optionally, adjust what properties of Leads are restored.

- ☒ Closed_Reason__c
- ☒ Company (Required)
- ☒ Company_Role__c
- ☒ Country
- ☒ Description
- ☒ DoNotContact__c (Required)
- ☒ DownloadIPCompany__c
- ☒ Download_Date__c
- ☒ Download_IP__c

Advanced Field Options (0)

Second step, choose the Solution table.

FileHelp

CopyStorm/Restore

DatabasePostgreSQL

MainGlobal ParametersAdvancedRestore Set EditorMigration SetupRestore PlanRestoreTracker DatabaseMeta DataNotificationsNotesLicense

Select:CommonSelectedClear

☒ Account

☒ Asset (ref)

☐ Campaign

☒ CapstormEmailTemplate__c (Custom) (ref)

☒ CapstormQuoteTemplate__c (Custom) (ref)

☒ Case (ref)

☒ Contact (ref)

☐ Contract

☒ Lead

☒ Note (Less Common) (ref)

☒ Opportunity (ref)

☒ OpportunityContactRole (Less Common) (ref)

☒ OpportunityLineItem (Less Common) (ref)

☐ Quote

☒ Solution

Solution Restore Rules

Select the Records to be Restored

Which Records:All

Restore Type:☒ Insert☒ Update

Record Match Policy:Salesforce Id

Max # Per Update:

Salesforce Writers:

Skip Salesforce Id Check:

All

Restore all Solution records from your Copy Storm database to Salesforce.

☐ Include Deleted Records

Specify Actions for Reference Fields

Field Name	If Referenced Record is Not Found
<input checked="" type="checkbox"/> CreatedById (User)	Use Default
<input checked="" type="checkbox"/> LastModifiedById (User)	Use Default
<input checked="" type="checkbox"/> OwnerId (User)	Use Default

Fields to Restore

☐ SelectedInvertClear

☒ IsPublished (Required)

☐ PublishedInPublicKb (Required)

☐ Name (Required)

Advanced Field Options (0)

Related Lists to Restore

☐ SelectedCollapseExpandSelect AllClear

☐ Attachment (Attachment Parent ID)

☐ CaseSolution (Case Solution, Solution ID)

☐ ContentDocumentLink (Content Document Link, Linked Entity ID)

☐ EmailMessage (Email Message, Related To ID)

☐ EntitySubscription (Entity Subscription, Parent ID)

☐ Event (Event, Related To ID)

☐ FeedComment (Feed Comment, Parent ID)

☐ FeedItem (Feed Item, Parent ID)

☐ Task (Task, Related To ID)

☐ TopicAssignment (Topic Assignment, Entity ID)

Click on Solution to add it to the restore set.
Optionally, adjust what properties of Solution are restored.

Next steps: rescan for candidates and resume the restore.

The screenshot shows the CopyStorm/Restore application window. The title bar indicates the path: C:\Users\greg\Desktop\CSRestoreDemoTalk\RestoreDemoData.copyStormRestore. The interface includes a menu bar (File, Help), a database selector (SQL Server), and a tabbed interface with tabs for Main, Global Parameters, Restore Set Editor, Restore Plan, Restore, Tracker Database, and License. The 'Restore' tab is active, displaying a table of Salesforce transactions. The table has columns for Stage, Table Name, #Candidates, #Inserts, #Updates, #Ref Updates, #Restored, #Skipped, #Errors, Start Time, and Elapsed Time. The table shows 72 transactions in the 'CandidatesReady' stage. A callout box points to the 'Lead' row, stating: '2. The system found 44 leads that could be restored.' Another callout box points to the 'Re-scan Candidates' button, stating: '1. Click here to reevaluate the restore rules.' A third callout box points to the 'Resume Restore' button, stating: '3. Click here to restore the newly found leads.' The status bar at the bottom shows '14:22:39 : Finished' and '22m/123m'.

Stage	Table Name	#Candidates	#Inserts	#Updates	#Ref Updates	#Restored	#Skipped	#Errors	Start Time	Elapsed Time
CandidatesReady	Account	0	0	0	0	0	0	0		
CandidatesReady	Asset	0	0	0	0	0	0	0		
CandidatesReady	Case	0	0	0	0	0	0	0		
CandidatesReady	Contact	0	0	0	0	0	0	0		
CandidatesReady	Lead	44	0	0	0	0	0	0		
CandidatesReady	Note (Less Common)	0	0	0	0	0	0	0		
CandidatesReady	Opportunity	0	0	0	0	0	0	0		
CandidatesReady	OpportunityContactRole (Less Common)	0	0	0	0	0	0	0		

1. Click here to reevaluate the restore rules.

2. The system found 44 leads that could be restored.

3. Click here to restore the newly found leads.

14:22:39 : Finished 22m/123m

Re-scan Candidates Resume Restore Restart Restore

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The final screen shot is boring – it shows that 22 leads were restored.

Step 6: Save your Restore Plan

It is almost always wise to save your CopyStorm/Restore configuration to a file.

- A saved configuration can be used later as a starting point for a similar restore.
- A saved configuration can be used later to restore a new empty sandbox.

The procedure is what you expect – File/Save or File/SaveAs on the application menu bar.

Example: Restore Accounts with Largest Opportunities

Recent high value data is often what is wanted in a sandbox. For example, if a new feature is for the Senior VP of Sales then best data for demonstrating the new feature would be the big deals of the past six months – the Senior VP would be certain to recognize them. This example will show how to build this data set.

Almost any CopyStorm backup table can be used to drive a CopyStorm/Restore job. Most often a table like Account is selected – but this not required. In this example the Opportunity table is used to drive restore.

Step 1: Find Largest Opportunities

In this step we build a filter which will find all opportunities larger than \$25 million (these should interest a Senior VP of Sales). There are two steps:

- Select the Opportunity table
- Select Opportunity records base on a filter.

File Help

Database PostgreSQL

Main Global Parameters Advanced Restore Set Editor Migration Setup Restore Plan Restore Tracker Database Meta Data Notifications Notes License

Select: Common Selected Clear

Opportunity Restore Rules

Select the Records to be Restored

Which Records: Filter

Restore Type: ☒ Insert ☒ Update

Policy: Salesforce Id

Record Filter - Click on the filter to Edit

Currently Selecting All Records

Click Here To Edit

1. Choose Filter

Specify Actions for Reference Fields

Field Name	If Referen
<input checked="" type="checkbox"/> AccountId(Account)	Create R
<input checked="" type="checkbox"/> CampaignId(Campaign)	Set to Nu

Skip Salesforce Id Check: ☐

Fields to Restore

☐ Selected Invert Clear

<input checked="" type="checkbox"/> Amount
<input checked="" type="checkbox"/> CloseDate (Required)
<input checked="" type="checkbox"/> ClosedLostDetails__c
<input checked="" type="checkbox"/> ClosedLostReason__c

Advanced Field Options (0)

Related Lists to Restore

- ☐ Attachm
- ☐ Collabor
- ☐ ContactRequest (Contact Request Related To ID)
- ☐ ContentDocumentLink (Content Document Link Related Entity ID)
- ☐ EmailMessage (Email Message Related To ID)
- ☐ Entity Subscription (Entity Subscription Parent ID)
- ☐ Event (Event Related To ID)
- ☐ FeedComment (Feed Comment Parent ID)
- ☐ FeedItem (Feed Item Parent ID)
- ☐ Note (Note Parent ID)

2. Click to define the filter.

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The filter setup looks like:

Edit Filter For Opportunity

Opportunity records matching this filter will be restored.

☒ Show API Names

Combining Operators

- AND
- OR
- NOT

Filter:

Table: Opportunity

Amount > "250000000"
CreatedDate > 2018-03-01 Click to Edit

1. The filter was built by dragging columns from the list on the left and then entering criteria.

2. Click on the preview button to validate the filter.

Show: Queried Fields Show At Least 10 Records Refresh Preview Show Query

Query finished with 32 records found.

Id	Name	Amount	Created
0065B00000AArzmQAD	Relate world knowledge Calgary Flames fight computer.	715179903.78	2018-05
0065B00000AArznQAD	Calgary Flames foot forget idea than Calgary Flames.	909683721.82	2018-05
0065B00000AArzqQAD	Washington Capitals outside you hope strong Washington Capitals.	610495928.94	2018-05
0065B00000AArzSQAT	Force cost of not Denver Broncos stand.	991741675.72	2018-05
0065B00000AArzTQAT	Book believe successful office fill stock.	862167477.98	2018-05
0065B00000AArzUQAT	Suddenly environmental ahead about growth whether.	336454159.35	2018-05
0065B00000AAs0aQAD	Look soldier with fund so cold.	515493609.66	2018-05
0065B00000AAs0dQAD	Mission Mrs its wait eye Philadelphia Phillies.	883720689.82	2018-05
0065B00000AAs0EQAT	Even couple seem generation Columbus Blue Jackets member.	511184262.84	2018-05
0065B00000AAs0gQAD	Fast by special head position energy.	402944819.52	2018-05
0065B00000AAs0HQAT	Later far everything Nashville Titans method Nashville Titans.	360545313.27	2018-05
0065B00000AAs0IQAT	Night Nashville Titans travel cover begin knowledge.	367463721.66	2018-05
0065B00000AAs0SQAT	Reduce daughter heart drug law New York Rangers.	485772932.22	2018-05
0065B00000AAs14QAD	Mother arrive yard someone Miami Marlins maintain.	256912713.67	2018-05
0065B00000AAs1aQAD	Good Charlotte Bobcats ability Charlotte Bobcats Mrs whether.	355892643.42	2018-05
0065B00000AAs1AQAT	Eat after probably plan buy final.	607120183.39	2018-05

Save Cancel

The final setup of the opportunity rule looks like:

Database PostgreSQL

Main Global Parameters Advanced Restore Set Editor Migration Setup Restore Plan Restore Tracker Database Meta Data Notifications Notes License

Select: Common Selected Clear

☒ Account (ref)
☐ Asset
☐ Campaign
☐ Case
☐ Contact
☐ Contract
☐ Lead
☒ Opportunity
☐ Quote
☐ Solution

Opportunity Restore Rules

Select the Records to be Restored

Which Records: Filter
Restore Type: ☒ Insert ☒ Update
Record Match Policy: Salesforce Id
Max # Per Update:
Salesforce Writers:
Skip Salesforce Id Check: ☐

Record Filter - Click on the filter to Edit
Amount > "250000000"
CreateDate > 2018-03-01

Select these opportunities

Specify Actions for Reference Fields

Field Name	If Referen
<input checked="" type="checkbox"/> AccountId (Account)	Create R
	Set to Nu

☐ Selected Invert Clear

☒ Amount
☒ CloseDate (Required)
☒ ClosedLostDetails__c
☒ ClosedLostReason__c

Advanced Field Options (0)

Related Lists to Restore

☐ Selected Collapse Expand Select All Clear

- ☐ Attachment (Attachment.Parent ID)
- ☐ CollaborationGroupRecord (Group Record.Record ID)
- ☐ ContactRequest (Contact Request.Related To ID)
- ☐ ContentDocumentLink (Content Document Link.Linked Entity ID)
- ☐ EmailMessage (Email Message.Related To ID)
- ☐ Entity Subscription (Entity Subscription.Parent ID)
- ☐ Event (Event.Related To ID)
- ☐ FeedComment (Feed Comment.Parent ID)
- ☐ FeedItem (Feed Item.Parent ID)
- ☐ Note (Note.Parent ID)

Of course, you can select other lists related to Opportunities

The Last Step: Restore Data

This step is exactly the same as the Restore Data step for the first basic example. The screen shots are omitted.

Example: Restore Accounts and a Limited # of Cases

Sometimes there are more related records than really need to be restored. Here is a real-life example:

Capstorm support worked with a client that had a single customer with 250,000 support cases. The customer wanted restore a few thousand accounts along with their corresponding cases to a sandbox. However, restoring just 50 cases per account was ideal – 250,000 would be waste of space and time.

This example shows how to limit the number of records restored in a related list.

Step 1: Choose Accounts and Related Cases

The screenshot displays the CopyStorm/Restore application interface. The top navigation bar includes 'File', 'Help', and 'Database' (set to PostgreSQL). The main menu contains tabs for 'Main', 'Global Parameters', 'Advanced', 'Restore Set Editor', 'Migration Setup', 'Restore Plan', 'Restore', 'Tracker Database', 'Meta Data', 'Notifications', 'Notes', and 'License'. The 'Advanced' tab is active, showing the 'Account Restore Rules' configuration.

1. Select Account: A callout points to the 'Select' dropdown in the left sidebar, which is set to 'Common'. Below it, the 'Account' checkbox is selected.

2. Select 500 Random Accounts: A callout points to the 'Random' section where 'Constraint Type' is set to 'Filter' and '# of Records' is set to 500. A link 'Selecting Randomly From All Records' is also visible.

3. Select Related Cases: A callout points to the 'Related' list on the right, where the 'Case' checkbox is selected.

The 'Specify Actions for Reference Fields' section shows 'CreatedById' and 'LastModifiedById' with 'Use Default' actions. The 'Fields to Restore' section includes 'BillingCity' and 'BillingCountry'. The 'Advanced Field Options (0)' section is at the bottom.

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Step 2: Limit Which Cases Will Be Restored

In this step, in addition to limiting cases to those owned by restored parents we add the following additional constraints:

- No more than 50 cases will be restored account.
- No more than 20,000 cases will be restored in total.
- Only cases created on or after 1-Jan-2014 will be selected.

Note that each of the additional constraints are optional.

The screenshot shows the 'Case Restore Rules' configuration window in the CopyStorm/Restore application. The interface includes a sidebar with a list of entities (Account, Asset, Campaign, Case, Contact, Contract, Lead, Opportunity, Quote, Solution) and a main panel for configuring restore rules. Three yellow callout boxes highlight specific settings:

- No more than 50 Cases will be restored per Account.** This points to the 'Max # Per Parent' field, which is set to 50.
- No more than 20,000 Cases will be restored (from any source)** This points to the 'Max # Total' field, which is set to 20000.
- Only Cases create after 1-Jan-2014 will be considered.** This points to the 'Record Filter' field, which is set to 'CreatedDate > 2014-01-01'.

Step 3: Restore Data

This step is exactly the same as the Restore Data step for the first basic example. The screen shots are omitted.

Example: Restore Everything!

One of the first questions evaluators ask about CopyStorm/Restore is “How do I restore absolutely everything?” This section explains why this may not be such a good idea and shows how to do it.

Is this a Good Idea?

CopyStorm/Restore is designed to rapidly populate sandboxes with sample production data and to restore selected portions of a production database.

Let's look at sandboxes first. When a Salesforce sandbox is created it is initialized with quite a bit of data from the corresponding production system. Examples include:

- Pricebooks and Products
- Users and Profiles
- Apex Pages and Code
- Folders, Groups, Apex Jobs, Record Types
- Email Templates
- Triggers and validation rules

The point is that there are lot of “system type” tables that are not good restore candidates. It would be faster to do a daily developer sandbox refresh than a restore.

If you are restoring to a developer sandbox it likely that there is not enough space to do a complete restore. In most instances, you will be forced to do a selective restore just because of size constraints.

Overtime a Salesforce instance accumulates new validation rules and triggers. Since CopyStorm/Restore function just like 1000 data entry clerks rapidly entering data into Salesforce, all active validation rules and triggers will apply. Sometimes a few of them need to be disabled during a restore. For a complete restore, you may have to understand and disable a lot of them. This can quickly become a lot of unnecessary work to restore data you do not even need in a test sandbox.

Here is a delicate fact. The Salesforce API sometimes is less than truthful about what can be restored. CopyStorm/Restore determines what can be restored by querying the API. In practice this is rarely a problem, but you will see related errors when trying to restore everything.

Finally, an obvious fact – the amount of time it takes to do a CopyStorm/Restore is directly related to the number of records and relationships restored. The incremental benefit of a “complete” restore is usually not worth the extra time waiting when a targeted restore is all that is needed.

How to Do a Complete Restore

The procedure for a complete restore is fairly simple once you have read and understand the previous “Is this a Good Idea?” section.

Here is the recipe Capstorm recommends:

1. Select every Common table.
2. Select every Less Common Table
3. Select Custom tables that are not part of a managed package. Managed package tables may restore but they are outside of your (and CopyStorm/Restore's) control.
4. Select Uncommon tables carefully. Most likely you will select none of them.
5. Select System tables sparingly.

6. Select Attachments and Notes explicitly as Related Lists.
7. Restore Data

Step 1: Select Common Tables

File Help

Database: PostgreSQL

Main Global Parameters Advanced Restore Set E Meta Data Notifications Notes License

Select: Common Selected Clear

Solution Restore Rules

Select the Records to be Restored

Which Records: All

Restore Type: ☒ Insert ☒ Update

Record Match Policy: Salesforce Id

Max # Per Update:

Salesforce Writers:

Restore all Solution records from your Copy Storm database to Salesforce.

☐ Include Deleted Records

Click the checkbox next to each table name.

Fields to Restore

☒ LastModifiedById (Used)

☐ Use Default

☐ Use Default

☒ IsPublished (Required)

☒ IsPublishedInPublicKb (Required)

☒ SolutionName (Required)

☒ SolutionNote

Advanced Field Options (0)

Related Lists to Restore

☐ Selected Collapse Expand Select All Clear

☐ Attachment (Attachment.Parent ID)

☐ CaseSolution (Case Solution.Solution ID)

☐ ContentDocumentLink (Content Document Link Linked Entity ID)

☐ EmailMessage (Email Message.Related To ID)

☐ EntitySubscription (Entity Subscription.Parent ID)

☐ Event (Event.Related To ID)

☐ FeedComment (Feed Comment.Parent ID)

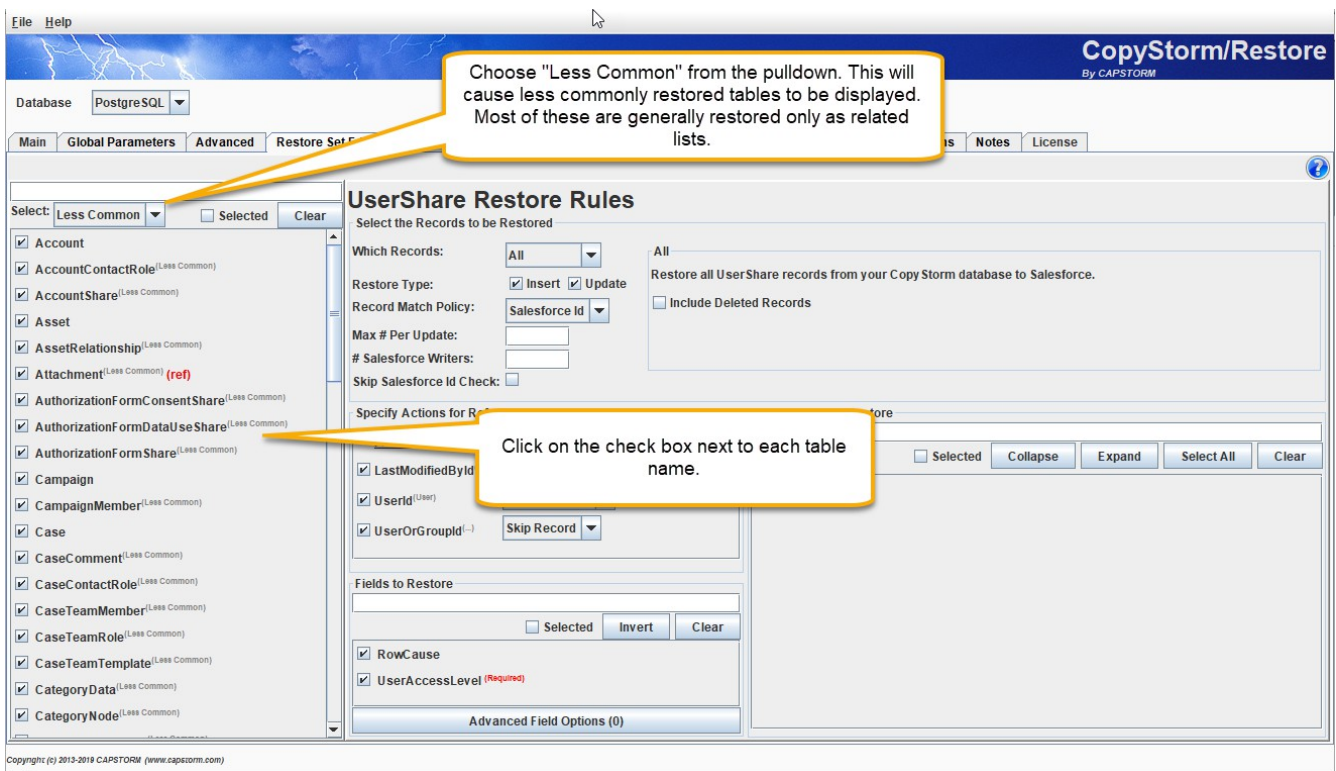
☐ FeedItem (Feed Item.Parent ID)

☐ Task (Task.Related To ID)

☐ TopicAssignment (Topic Assignment.Entity ID)

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Step 2: Select Less Common Tables



Step 3: Select Custom Tables.

At this point you know the procedure. Select "Custom" from the pull-down menu and click on the box next to each table.

Step 4: Select Uncommon Tables

Be very careful in this step. Many of the uncommon tables were restored by Salesforce when the sandbox was created. Restoring them again is usually not a good idea.

File Help

CopyStorm/Restore
By CAPSTORM

Database: PostgreSQL

Main Global Parameters Advanced **Restore Set Editor** Migration Setup Restore Plan Restore Tracker Database Meta Data Notifications Notes License

Select: Less Common Selected Clear

☒ Account
☒ AccountContactRole^(Less Common)
☒ AccountShare^(Less Common)
☒ Asset
☒ AssetRelationship^(Less Common)
☒ Attachment^(Less Common) (ref)
☒ AuthorizationFormConsentShare^(Less Common)
☒ AuthorizationFormDataUseShare^(Less Common)
☒ AuthorizationFormShare^(Less Common)
☒ Campaign
☒ CampaignMember^(Less Common)
☒ Case
☒ CaseComment^(Less Common)
☒ CaseContactRole^(Less Common)
☒ CaseTeamMember^(Less Common)
☒ CaseTeamRole^(Less Common)
☒ CaseTeamTemplate^(Less Common)
☒ CategoryData^(Less Common)
☒ CategoryNode^(Less Common)

UserShare Restore Rules

Select the Records to be Restored

Which Records: All
Restore Type: ☒ Insert ☒ Update
Record Match Policy: Salesforce Id
Max # Per Update:
Salesforce Writers:
Skip Salesforce Id Check: ☐

All
Restore all UserShare records from your Copy Storm database to Salesforce.
☐ Include Deleted Records

Specify Actions for Reference Fields

Field Name	If Referenced Record is Not Found
<input checked="" type="checkbox"/> LastModifiedById ^(User)	Use Default
<input checked="" type="checkbox"/> UserId ^(User)	Use Default
<input checked="" type="checkbox"/> UserOrGroupId ⁽⁻⁾	Skip Record

Fields to Restore

☐ Selected Invert Clear

☒ RowCause
☒ UserAccessLevel (Required)

Advanced Field Options (0)

Related Lists to Restore

☐ Selected Collapse Expand Select All Clear

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Step 5: Select System Tables

Be ultra cautious in this step. Almost every System table was populated by Salesforce when the sandbox was created. Restoring them again is usually not a good idea (and sometimes will not work because it will be blocked by the Salesforce API).

Step 6: Select Attachments and Notes

Attachments and Notes are special types of objects in Salesforce because their parent relationship is polymorphic. This means that the parent record of an Attachment can be almost any type of object.

CopyStorm/Restore has a special helper section on the Attachment Restore Rules editor to quickly select attachments as a related lists for all other selected objects.

File Help

CopyStorm/Restore
By CAPSTORM

Database: PostgreSQL

Main Global Parameters Advanced **Restore Set Editor** Migration Setup Restore Plan Restore Tracker Database Meta Data Notifications Notes License

Select: Less Common Selected Clear

☒ Account
☒ AccountContactRole (Less Common)
☒ AccountShare (Less Common)
☒ Asset
☒ AssetRelationship (Less Common)
☒ Attachment (Less Common) (ref)
☒ AuthorizationFormConsentShare (Less Common)
☒ AuthorizationFormDataUseShare (Less Common)
☒ AuthorizationFormShare (Less Common)
☒ Campaign
☒ CampaignMember (Less Common)
☒ Case
☒ CaseComment (Less Common)
☒ CaseContactRole (Less Common)
☒ CaseTeamMember (Less Common)
☒ CaseTeamRole (Less Common)
☒ CaseTeamTemplate (Less Common)
☒ CategoryData (Less Common)
☒ CategoryNode (Less Common)
☒ CollaborationGroup (Less Common)
☒ CollaborationGroupMember (Less Common)
☒ CollaborationGroupMemberRequest (Less Common)
☒ Contact
☒ ContactRequestShare (Less Common)
☒ ContentDistribution (Less Common)
☒ ContentDocument (Less Common)
☒ ContentDocumentLink (Less Common) (ref)
☒ ContentVersion (Less Common) (ref)

Attachment Restore Rules

Select the Records to be Restored

Which Records: Referenced
Restore Type: ☒ Insert ☒ Update
Record Match Policy: Salesforce Id
Max # Per Update: 1
Salesforce Writers:
Skip Salesforce Id Check: ☐

Referenced
Constraint Type: Filter Max # Per Parent Max # Total
Record Filter - Click on the filter to Edit
[Currently Selecting All Related Records](#)
[Click Here To Edit](#)

Specify Actions for Reference Fields

Field Name	If Referenced Record is Not Found
<input checked="" type="checkbox"/> CreatedById (User)	Use Default
<input checked="" type="checkbox"/> LastModifiedById (User)	Use Default
<input checked="" type="checkbox"/> OwnerId (User)	Use Default

Include Attachments Associated With...

☐ Selected Invert Clear

☒ Account
☒ Asset
☒ Campaign
☒ Case
☒ Contact

Fields to Restore

☐ Selected Invert Clear

☒ Body (Required)
☒ ContentType
☒ Description
☒ IsPrivate (Required)
☒ Name (Required)

Advanced Field Options (0)

Related Lists to Restore

☐ Selected Collapse Expand Select All Clear

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Step 7: Restore Data

This step is exactly the same as the Restore Data step for the first basic example. The screen shots are omitted.

How complex is this process? A quick look at the dependency analysis required to determine the order of the restores shows how difficult the task would be without a computer to help (and we did not even select all possible tables!)

Table Dependency Detail

In addition to listing tables in the order they will be written to Salesforce, the full dependency relationships between tables and the decisions made to break circular dependencies between tables are

also shown. For each table there are four extra columns:

- *All Required* lists all tables that are required to be restored before the listed table.
- *All Nillable* lists all tables that are optional but will ideally be restored before the listed table.
- *Required Prerequisite(s)* indicates required tables that are not restored earlier in the list.
- *Nillable Prerequisite(s)* indicates optional tables that are not restored earlier in the list.

Order	Table	All Required	All Nillable	Required Prerequisite(s)
1	Account			
2	AuthorizationFormConsentShare			
3	AuthorizationFormDataUseShare			
4	AuthorizationFormShare			
5	Campaign			
6	CaseTeamRole			
7	CaseTeamTemplate			
8	CategoryNode			
9	CollaborationGroup			
10	ContactRequestShare			
11	ContentWorkspacePermission			
12	DataUseLegalBasisShare			
13	DataUsePurposeShare			
14	Document			
15	FlowInterviewShare			
16	ForecastingShare			
17	ImageShare			
18	IndividualShare			
19	ListEmailShare			
20	MacroShare			
21	PromptActionShare			
22	QuickTextShare			
23	SocialPostShare			
24	Solution			
25	StreamingChannelShare			
26	TodayGoalShare			

27	UserEmailPreferredPersonShare			
28	UserProvisioningRequestShare			
29	UserShare			
30	AccountShare	Account		
31	CategoryData	CategoryNode Solution		
32	CollaborationGroupMember	CollaborationGroup		
33	CollaborationGroupMemberRequest	CollaborationGroup		
34	Contact	Account		
35	ContentWorkspace	ContentWorkspacePermission		
36	AccountContactRole	Account Contact		
37	Asset	Account Contact		
38	Case		Account Contact	
39	ContentWorkspaceMember	ContentWorkspace	ContentWorkspacePermission	
40	Contract	Account	Contact	
41	AssetRelationship	Asset		
42	CaseComment	Case		
43	CaseContactRole	Case Contact		
44	CaseTeamMember	Case CaseTeamRole Contact	CaseTeamTemplate	
45	ContractContactRole	Contact Contract		
46	ContentVersion	ContentWorkspaceMember	Account Asset AssetRelationship Campaign Case CollaborationGroup Contact ContentWorkspace Contract	

			Event Lead Opportunity Quote Solution Task	
47	ContentDocument		ContentVersion ContentWorkspace	
48	Opportunity	Account	Campaign Contact Quote	
49	Lead		Account Contact Opportunity	
50	OpportunityCompetitor	Opportunity		
51	OpportunityContactRole	Contact Opportunity		
52	OpportunityLineItem	Opportunity		
53	OpportunityShare	Opportunity		
54	Quote	Opportunity	Account Contact Contract	
55	CampaignMember	Campaign Contact Lead		
56	ContentDistribution	ContentVersion	Account Campaign Case Contact ContentDocument Lead Opportunity	
57	Event		Account Asset AssetRelationship Campaign Case Contact Contract Lead Opportunity Quote	

			Solution	
58	Note	Account Asset Contact Contract Lead Opportunity Quote		
59	QuoteDocument	ContentVersion Quote		
60	QuoteLineItem	Quote	OpportunityLineItem	
61	QuoteShare	Quote		
62	Task		Account Asset AssetRelationship Campaign Case Contact Contract Lead Opportunity Quote Solution	
63	Attachment	Account Asset Campaign Case Contact Contract Event Lead Opportunity Quote Solution Task		
64	ContentDocumentLink	Account Asset AssetRelationship Campaign Case CollaborationGroup Contact ContentDocument		

		ContentWorkspace Contract Event Lead Opportunity Quote Solution Task		
65	FeedItem	Account Asset AssetRelationship Campaign Case CollaborationGroup Contact ContentDocument Contract Event Lead Opportunity Quote Solution Task	ContentVersion	
66	Idea		IdeaComment	
67	IdeaComment	Idea		