

Ultimate Guide to

Sandbox Seeding in Salesforce

Best practices and pitfalls to avoid



Contents

3	Introduction
3	What You'll Learn in This Guide
4	Why Use Salesforce Sandboxes?
4	Reduce Development Errors
4	Realistically Test New Apps or Integrations
4	Safely Train Users
5	Salesforce Sandbox Refresher
5	Four Types of Salesforce Sandboxes
5	Sandboxes Available per Edition
6	How Sandboxes Are Used
6	Developer and Developer Pro Sandboxes
6	Partial Copy Sandbox
6	Full Copy Sandbox
7	Top 5 Data Seeding Challenges
7	Maintaining Parent-Child Relationships
7	Filtering and Refining Test Data and Attachments
8	Seeding On-Demand
9	Protecting Confidential Data
9	Keeping Data Consistent Across Orgs
10	Typical Approaches to Seeding
11	Sandbox Refresh
11	Sandbox Cloning
12	Data Loader
12	Automated AppExchange Partner Solutions
13	Dramatically Simplify Sandbox Seeding with Own
14	Why Own Accelerate?
15	Frequently Asked Questions

Introduction

Look around. Think about all your different stakeholders. More likely than not, you don't have enough developers to keep pace with the demands of the business. The question forward thinking technology leaders are trying to answer is how do you increase the pace of innovation given current resources?

To narrow this gap, many companies have turned to Salesforce® as their development platform of choice. Using a wide array of services ranging from low-code to pro-code, they can accelerate the delivery of new workflows, automation, and reimagined customer experiences. According to IDC, companies who made the switch to Salesforce developed 60% more apps per year and got their releases out the door 69% faster.

But loose processes coupled with immature platforms can hinder your Salesforce. No Salesforce Platform Owner wants to look incompetent after a messy data disruption. Being on the hook to clean up the mess only adds to the pressure.

That's why companies use Salesforce Sandboxes and Own Company.

What You'll Learn in This Guide

- Why sandboxes are essential to catching bugs
- The different types of sandboxes and how they work
- Pros and cons of different types of sandboxes
- Top challenges that make sandbox seeding more complicated than most anticipate
- Typical approaches to sandbox seeding, along with pros and cons for each
- How adding Own helps you innovate faster, with less risk

Why Use Salesforce Sandboxes?

One way to balance the desire to release new features fast with the risk of preventable errors in production is to work in sandboxes. These complement Salesforce by allowing you to stage changes first for streamlined development, testing, and training.



Reduce Development Errors

Whether you're customizing your quote-to-cash process or building a customer portal, early detection of errors is critical. Sandboxes provide a safe place to create and refine enhancements without worrying about corrupting live production data, exposing confidential data, or impacting your users' day-to-day activities.



Realistically Test New Apps or Integrations

Sandboxes allow you to run various tests using actual data before pushing new updates to production. You can perform integration testing, performance testing, load testing, and user acceptance testing (UAT). That way, you minimize the risk of time-consuming bugs making it into production.



Safely Train Users

Sandboxes provide an environment where you can train people on new workflows and features before they're released into production, ensuring a smooth rollout.



Companies spend 30x more to fix bugs released into production."

NATIONAL INSTITUTE OF STANDARD TECHNOLOGY (NIST)

Salesforce Sandbox Refresher

Four Types of Salesforce Sandboxes



Developer Sandbox

- 200 MB
- 1 day permissible refresh interval
- Metadata only



Developer Pro Sandbox

- 1 GB
- 1 day permissible refresh interval
- Metadata only



Partial Copy Sandbox

- 5 GB
- 5 days permissible refresh interval
- Metadata and only a fraction of production data



Full Copy Sandbox

- Same as production org
- 29 days permissible refresh interval
- Metadata and all of your production data

Sandboxes Available per Edition

Sandbox Type	Fee to Salesforce	Essentials	Professional	Enterprise	Unlimited
Developer Sandbox	Free		✓	✓	✓
Developer Pro Sandbox	5% of net spend		✓	✓	✓
Partial Copy Sandbox	20% of net spend			✓	✓
Full Copy Sandbox	30% of net spend			✓	✓

How Sandboxes Are Used



Developer and Developer Pro Sandboxes

Developer sandbox environments are intended for coding and testing by a single developer to provide an environment in which changes under active development can be isolated until they are ready to be shared. Because Developer Pro sandboxes provide increased file and data storage, they can be used for additional tasks such as data load, integration testing and user training.

Partial Copy Sandbox

A Partial Copy sandbox is intended to be used for quality assurance tasks such as user acceptance testing, integration testing, and training.

Full Copy Sandbox

A Full Copy sandbox is intended to be used as a testing environment. Only Full Copy sandboxes support performance testing, load testing, and staging.

PRO TIP

If you want to get the most out your sandbox, it must be filled with quality data. Realistically testing configurations before production, reducing development errors, and training users safely requires production-like data in your sandbox.

Top 5 Data Seeding Challenges

Challenge #1

Maintaining Parent-Child Relationships

Accurate development and testing hinge on production-like data sets. Without replicating parent/child relationships in your sandbox, it will lack a critical element that impacts your app's real-world usage.

If your partial copy sandboxes include only a random sample of the production org's data, you won't have control over the included records or the relationships between them.

For example, let's say your Opportunities have "lookup" relationships rather than "master-detail" or "required lookup" relationships. That means some of your Accounts, Contacts, and Leads under Opportunities will be randomized, potentially leaving relevant companies, individuals, and prospective clients out of development, testing, and training scenarios.

PRO TIP

Sandbox refreshes won't pick up related records unless your Salesforce instance objects are associated with each other by a "master-detail relationship" or "required lookup."

Challenge #2

Filtering and Refining Test Data and Attachments

Seeding smaller sandboxes can feel like using a funnel to filter only red grains of sand from a giant dump truck of rainbow-colored sand. You'll end up buried in tons of irrelevant data. That means no matter how thorough your testing, irrelevant data will make it easy for bugs and errors to slip into production.

Why is it difficult to filter test data and attachments?

Similar to [recovering lost data with the Weekly Export .CSV files](#), filtering and refining data within .CSV files before seeding with Salesforce's Data Loader requires multiple steps.

1. Defining the required objects to replicate.
2. Exporting all .CSV files and preparing them for Data Loader processing.
3. Creating the external ID field used to map those records.
4. Preparing all of the records under each object for insertion into the sandbox.

You must also take extreme care to account for records with multiple parents, polymorphic fields, intra-object relationships, and attachments.

The decision to include or leave out attachments depends on the sandbox capacity. Developer and Developer Pro sandboxes only allow 200 MB and 1 GB of file storage, so you may not fit all of your attachments.

PRO TIP

When uploading Salesforce Files, include "ContentDocumentLink" and "ContentVersion" where appropriate.

⚠ Challenge #3

Seeding On-Demand

Even teams that successfully overcome the first two challenges might find themselves in a difficult situation when development cycles outpace their ability to refresh sandboxes, causing unavoidable discrepancies. You might spend days manipulating multiple .CSV files and pushing countless Data Loader uploads (an application used to bulk import or export data) to finally seed your sandbox with the perfect data — only to have new requirements identified partway through the project. You'll have to re-seed all over again.

This frustrating scenario is an unfortunate reality for many. If you don't find ways to tighten your seeding cycles, you'll end up with code that works in the Developer sandbox but breaks in QA environments.

Challenge #4

Protecting Confidential Data

Sandbox Anonymization is an essential practice every company should consider.

Since sandbox data is a subset of production data, it's likely to contain confidential information that several people could access during your development, testing, and training. Unauthorized access to personal information is a massive liability that many teams overlook when testing with real data.

Regulations such as GDPR and CCPA require companies to evaluate and report on their technical and organizational controls for compliance. In addition, industry-specific standards and regulations, such as PCI DSS and HIPAA, also include strict privacy and security requirements.

PRO TIP

Data anonymization is an especially important consideration when using third-party contracted developers.

Challenge #5

Keeping Data Consistent Across Orgs

Consistent data allows for faster development by preventing errors from slipping into a new environment. It's best practice to always compare your origin and destination environments both before and after each release.

However, this presents a significant challenge. Without a tool to compare your data and metadata, the only way to uncover differences before and after deployment is to download and compare large numbers of .CSV files in Excel using V-Lookup — a process that's so painful that most teams don't even bother.

Typical Approaches to Seeding

As the challenges in the previous chapter demonstrate, it's best to seed sandboxes that precisely mirror your production environment. So naturally, the next question is, how can we populate the data and metadata we need into our sandbox environments? Let's review four possible approaches.

	Pro	Cons
Sandbox Refresh	· Takes minutes for small orgs · Data and metadata for Full & Partial sandboxes · Included for free	· Takes days-weeks for large orgs · Only metadata for Developer & Developer Pro · No version history · Limited frequency
Sandbox Cloning	· Replicate existing sandbox · Can use same data within different sandboxes · Included for free	· Must seed ideal data set prior · Post-clone changes left out
Data Loader	· Can partially automate with command line · Included for free	· Manual process · Time-consuming · Prone to errors · Requires careful planning
Automated AppExchange Partner Solutions	· Speed seeding by 6-8x with templates · Data and metadata for Partial Copy, Developer, & Developer Pro sandboxes · Seed ideal data sets on demand · Replicate from sandbox or production	· Additional cost

Approach #1

Sandbox Refresh

One option Salesforce offers to customers is to **refresh** a Full Copy or Partial copy sandbox by updating the sandbox's data and metadata from its source org. Keep in mind that refreshing a Developer or Developer Pro sandbox only updates the metadata. Still, if the sandbox is a clone, the refresh process will update its data and metadata.

During the refresh process, Salesforce marks the new org as the current version and flags your old org for deletion. At some future point in time (usually about two days), the system permanently deletes the org's old version from the database.

It's also good to know that Salesforce limits the frequency of refreshes based on the type of sandbox you're using, and refreshes occur in a queued fashion. Your refresh time will depend on your instance's size, any customization to your org, how much data it contains, the number of objects and configuration choices, and server load. If timed correctly, it can take only a few minutes to refresh a small sandbox, but if you're attempting to refresh a large org during peak hours, it can take days or even weeks.

Approach #2

Sandbox Cloning

With cloning, Salesforce enables you to create a sandbox by **replicating an existing sandbox** rather than using your production org as a source. This approach is best to use once your ideal data set is ready. It allows multiple users to work on identical sandboxes without interfering with each others' work.

PRO TIP

Once you have a relevant data set that's appropriately sized and structured, cloning can be a quick and simple way to seed a new sandbox.

Approach #3

Data Loader

As a client application for the bulk import or export of data, [Salesforce's Data Loader](#) allows you to bulk import or export records as .CSV files via a user interface, as well as to Insert, Update, Upsert (upload new records and update existing records at the same time), Delete, or Export records as .CSV files. You can use the Data Loader command line to move data to or from any relational database.

However, building an Excel spreadsheet with exported data from production and then using it to populate a sandbox requires a multi-step process prone to errors. It's also challenging to recreate relationships when your records have multiple parents, intra-object relationships, or attachments.

PRO TIP

When using Data Loader, be prepared to set aside a couple of extra weeks to fully replicate the necessary objects and their dependencies.

Approach #4



Recommended

Automated AppExchange Partner Solutions

Not all methods of populating sandboxes are equal. The first three strategies we reviewed often add time to the development process, delaying your go-live. And remember that sandboxes are only as valuable as the data they contain. Populating them with perfectly sized, relevant data sets is an arduous task. On the other hand, automated seeding solutions from the [Salesforce AppExchange](#) make it easier to identify coding errors before you release code so that you can innovate quickly.

PRO TIP

When evaluating AppExchange solutions, carefully consider the effort required for implementation and what other customers say about the ongoing service they receive.

Dramatically Simplify Sandbox Seeding with Own

Own Accelerate is the perfect complement to Salesforce sandboxes. Whether you're a power admin or sophisticated development organization, it should be easy to check alignment, fine-tune, and automate data seeding for Salesforce.

Let's take a look at how it works:

- 
- Step #1** **Create a template**
It could be a new template, or you could clone and edit an existing template.
 - Step #2** **Define your test data**
Identify the root object and add any number of parents, children, or additional roots to include.
 - Step #3** **Filter records**
Refine results to hone the number of records or create a random, heterogeneous sample.
 - Step #4** **Optimize the size**
Monitor the seed data size at each step to ensure it will fit within the target sandbox destination.
 - Step #5** **Preview your data**
See the exact data that will be seeded to identify any necessary adjustments. Note that Own provides the option to anonymize sensitive data with Sandbox Anonymization.
 - Step #6** **Seed your data**
Select the destination (sandboxes or production) and choose from options to add, update, or clear and insert new records.
 - Step #7** **Reuse your templates**
Once you've created your ideal template, you can save it and reuse it to save time in your release cycles.

Why Own Accelerate?

Accelerate is an intuitive and powerful sandbox seeding solution for organizations that want to maximize their Salesforce platform for training, development, or testing. Salesforce administrators and developers can easily seed quality data to any sandbox with desired objects and records while maintaining all relationships and masking all sensitive information.

Replicate any environment

Seed perfectly sized, relevant data sets to Developer, Developer Pro or Partial Copy sandboxes from production orgs or other sandboxes.

Customize templates

Configure reusable templates and built-in filters to isolate perfect data sets to seed to any sandbox with an identical data structure.

Relationship integrity

Automatically maintain complex parent/child relationships without difficult and error-prone workarounds.

Continuously update

Update template filters in seconds to add or remove data based on new requirements then reseed to update the destination.

Manage seed size

Size data sets to fit within targets with filters and real-time counters to track the number of records included for each object type.

View sample data

Instantly preview a sample of the data that will be seeded for precision control of the desired data set.

Control automations

Disable pre-configured Salesforce validation rules, Apex triggers and other automations to keep them from running during the seeding process.

Sample for coverage

Create heterogeneous sets of records for specified objects to produce a range of permutations for developers.

Secure data

Apply custom templates to anonymize and protect sensitive information before it is seeded to its destination.

Seed with precision

Control what data is seeded for initial and subsequent projects with options to add all records or update incremental changes without creating duplicates.

Rapid time to value

An intuitive interface and dropdown menus backed with 24/7 support enable admins and developers to hit the ground running.

Reduce production errors

Mirror production environments in sandboxes for more effective development, testing and training.

Achieve faster release cycles

Leverage a singular tool to seed sandboxes and deploy Salesforce configurations to your production org, saving significant time on development release cycles.

Frequently Asked Questions

What is the implementation effort to get started with Own Accelerate?

Getting started with Own is as easy as logging in to Salesforce. Our intuitive interface and dropdown menus enable you to seed sandboxes in minutes. We'll provide onboarding, but you probably won't need it.

What are the top three business benefits?

→ **Faster release cycles**

Quickly create ideal development and testing environments in any sandbox with desired data in just a few clicks.

→ **Deliver higher-quality solutions**

Release code or configurations to Salesforce with fewer bugs and errors by developing on up-to-date seed data.

→ **Secure data**

Don't expose sensitive information in sandboxes. Anonymize sandbox data in your org with alternative, representational data.

How is it priced?

Please ask your sales rep for more details.

How does it stack up to other AppExchange solutions?

Own is the leading data platform trusted by thousands of organizations to protect and activate SaaS data to transform their businesses. Own empowers customers to ensure the availability, security and compliance of mission-critical data, while unlocking new ways to gain deeper insights faster.



Our seeding time went from 2-4 weeks to just 24 hours with Own Accelerate."

TARUN BAKHRU
IT MANAGER - CRM
AGCO



O W N Y O U R O W N D A T A

About Own

Own is the leading data platform trusted by thousands of organizations to protect and activate SaaS data to transform their businesses. Own empowers customers to ensure the availability, security and compliance of mission-critical data, while unlocking new ways to gain deeper insights faster. By partnering with some of the world's largest SaaS ecosystems such as Salesforce, ServiceNow and Microsoft Dynamics 365, Own enables customers around the world to truly own the data that powers their business.

It's their platform. It's your data. Own it.

Learn more at owndata.com