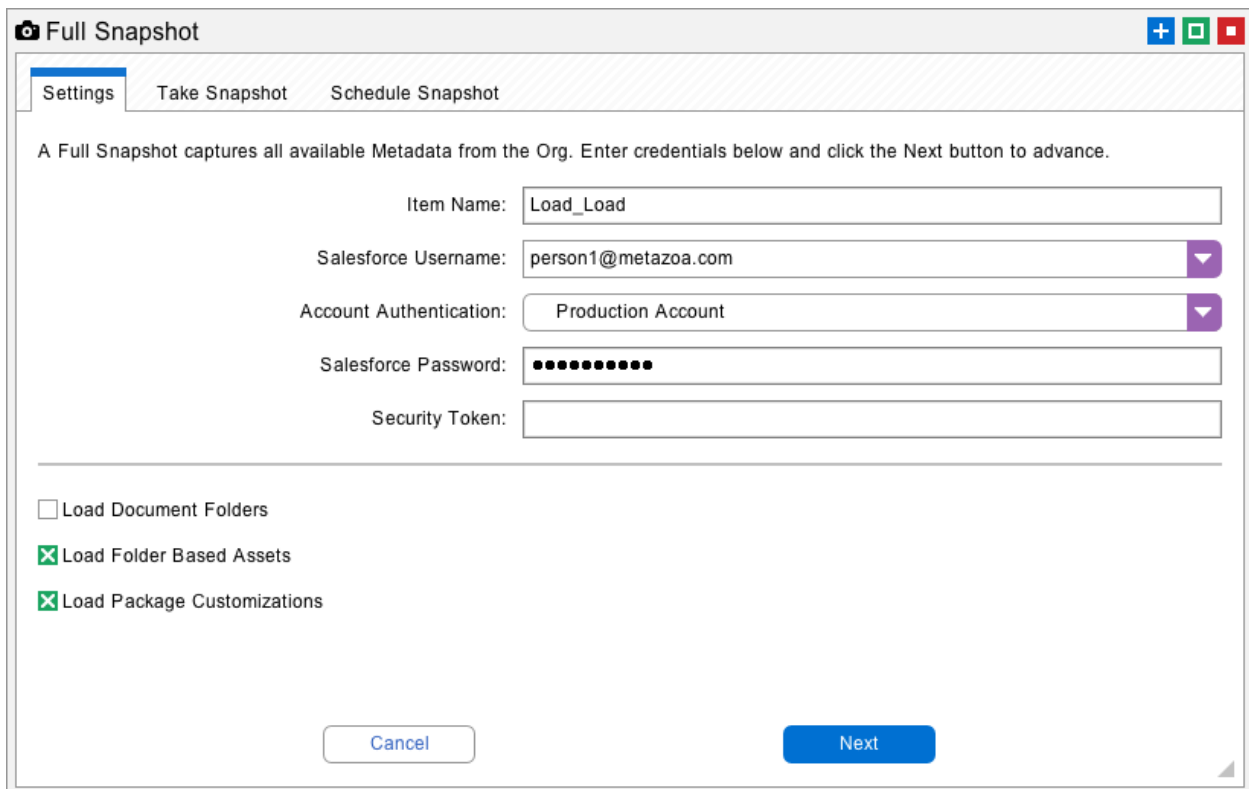# Troubleshooting
Snapshot Retrieval

Our Snapshot product can retrieve, analyze, and deploy over 300 different metadata types. We have special capabilities to circumvent the metadata API limits on the number of assets and the size of each download. Snapshot divides the retrieval into multiple parallel transactions and then stitches everything back together again on the desktop. This is much better coverage than comparable administrative toolsets that focus on a specific subset of metadata assets for DevOps or some other purpose.

A potential downside of this capability is that some orgs have millions of metadata assets. The Salesforce metadata API can take a long time to download these assets, and the resulting snapshot can be many gigabytes in size. We have developed various strategies to deal with this situation. This technical note explains how to troubleshoot metadata retrieval issues and download just what you need for reporting and deployment in a reasonable amount of time.

Full Snapshot

When you right-click a snapshot item on the workspace there is an option to take a **Full Snapshot**. This interface is rather simple and attempts to grab most of the metadata in the org. There are three options for snapshot retrieval. The **Load Document Folders** option should normally be off. Documents are potentially huge in size and rarely helpful. The option to **Load Folder Based Assets** can be used to load Reports, Dashboards, and Email Templates. They are also potentially huge in size, and you might not need them. The option to **Load Package Customizations** will include the unpackaged assets associated with Managed Packages. These assets often take up half the size of the snapshot. Managed assets cannot be changed, so you might not need to retrieve all that information.

Partial Snapshot

When you right-click a snapshot item on the workspace there is also an option to take a **Partial Snapshot**. This interface has more options to control what metadata is retrieved. You can select assets on each tab, and on the **Take Snapshot** tab you can customize the asset groups that will be created. There is a button on this tab to automatically calculate the asset groups. You can save a **Snapshot Limits File** that can be used on the first screen to restore all your selections. The next section talks about the **Asset Number Report** that can help decide what assets can be skipped.

Asset Number Report

On the **Take Snapshot Tab** there is an **Asset Number Report** button. This button will generate a report that shows the number of all the managed and unmanaged assets in the org, including folder-based assets. This information is extremely useful for figuring out where you can cut corners on metadata retrieval. Here are some of the assets that are often skipped:

Managed Assets

Managed assets often take up half the size of the snapshot. Managed assets cannot be changed, so you might not need to retrieve that information. If you need to see the unpackaged assets for a particular package, that can be selected in the **Partial Snapshot** interface.

Bulky Assets

Check your Asset Number Report for metadata types that have thousands of assets. Do you really need them? Metadata assets that can often be skipped include Static Resources, Custom Metadata, Content Assets and Custom Object Translations.

Folder Based Assets

The folder-based assets include Documents, Reports, Dashboards, and Email Templates. In some orgs there can be a boatload of folder-based assets. If you aren't deploying them or running reports on them then they can be skipped.

Profiles

One of the largest asset types is the Profile. If there are a lot of Profiles and Custom Objects, then the Profiles can be very large in size, especially the Field Permissions. There is a section below that talks about capturing Profile information. Profiles are essential for security reporting, but if you can do without then skip them.

Append Snapshot

Another time saver worth mentioning is the **Append Snapshot** interface. This allows you to grab individual assets and add them to an existing snapshot. You can also update existing assets. Appending a few assets is usually faster than taking an entire new snapshot.

Capturing Profiles

Profiles are essential for security reporting but can be gigantic in size. If an org has 30,000 Custom Fields and 400 Profiles, then there will be 12 million Field Permissions that take up almost 3 GB of data. Retrieving Profile metadata can be tricky. Profiles are entangled with other metadata asset types. For example, if you retrieve just Profiles and Apex Classes, then you will only get Class Access permission data. Here are the entangled types for Profiles, below. This information can help you capture the desired permissions in the Profile metadata type.
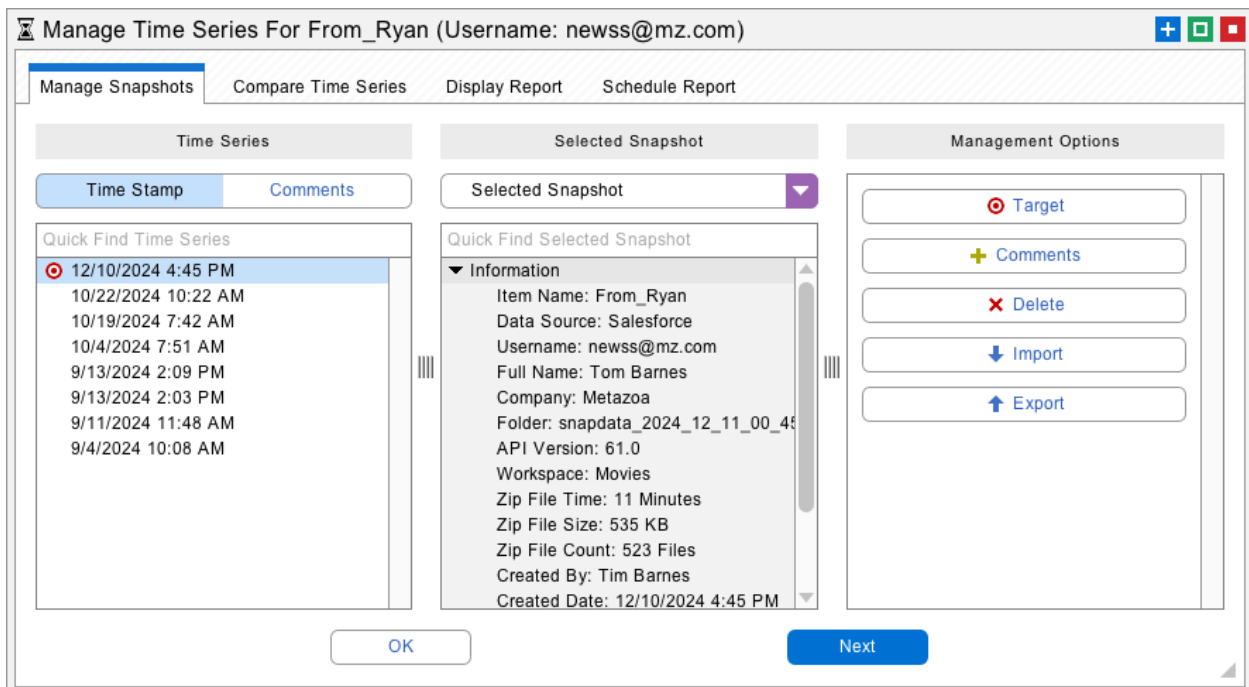
- Apex Classes
- Apex Pages
- Custom Applications
- Custom Tabs
- Custom Objects
- Custom Permissions
- Page Layouts
- External Data Sources
- Flow Definitions

Scheduled Snapshots

The last tab of the **Full Snapshot** and **Partial Snapshot** interfaces can schedule a snapshot to happen at any time or as a recurring event. Scheduling can be very helpful if the snapshot is taking a long time to complete. The Salesforce API also usually runs faster outside of peak business hours. Some customers set up a Virtual Machine to take periodic snapshots for one or many orgs. You can also create reports, conduct org monitoring, and automate workflows with scheduling.

Shared Snapshots

The **Manage Time Series** interface will display all the snapshots taken over time for the selected workspace item. You can import and export snapshot files from this interface. This works well with scheduled snapshots. You can create them at night and import them as needed. Snapshot files can be saved as local files or as Salesforce Content Documents in the License Org used for collaboration.

Session Timeout

Lastly, be sure that the administrative Salesforce user you have logged into Snapshot with has a high value for the Session Timeout. This value can range between 15 minutes and 24 hours. Some long running reports and activities in Snapshot can potentially run past a short timeout value. In this situation the Session ID can become stale and trigger an error. Change the Session Timeout settings here:

Setup | Security Controls | Session Settings