DREAMFACTORY SOFTWARE INC

Snapshot User Guide

Product Usage and Best Practices Guide

By DreamFactory Technical Services

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dreamfactory

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Introduction

This document sets out a series of recommendations designed to improve the user experience of the Snapshot application. This document provides description and step by step instructions for all the features of the application, in addition to adding a number of resources aimed to assist you accomplish maximum results.

Snapshot is a tool, which focuses on assisting Salesforce System Administrator manage the schema in their Orgs. Snapshot focuses on two primary issues including: change and release management of Salesforce.com organizations. Snapshot allows System Administrators to:

- Capture comprehensive Snapshots for versioning and change management
- Easily view, compare, manage, log and report on all changes and deployments made to multiple Salesforce Orgs
- Easily perform profile comparison and deployment to multiple Salesforce Orgs
- Audit and Compliance management
- View and identify all relationships within the Org
- Advanced Documentation and Reporting
- Manage all of the customizations made to your Org including: apex code, custom objects, page layouts, workflows and profiles to name a few

Snapshot supports version 35 (Winter 16) of the Force.com Metadata API. Snapshot also provides documentation and advanced reporting tools that address audit and compliance requirements for Salesforce Orgs. In order to use Snapshot, you must have a Salesforce Enterprise or Unlimited Edition account. Snapshot does not work with the Salesforce Professional or Group Editions as the Force.com Metadata API has yet to support these editions.

Snapshot has been divided into five components, making it easier for you to manage all aspects of your deployment release train. These five components include:

1. **Asset Snapshot** – The Asset Snapshot allows you to view, compare, edit, deploy and report all of the object metadata, profile metadata, page layouts, apex code, workflows, Folder Based Assets and more. The goal of the Asset Snapshot is to assist you reduce the time spent on deployment release trains. To accomplish this, Snapshot provides a number of resources including: Individual Subset and Individual Sub Element push (e.g., fields, record types, workflows, etc…), Asset Comparison, Job List, Folder Based Asset Push, Search and Relationship Palettes, Relationship Matrix, Automated Asset Snapshot capture and Deployment and a number of comprehensive reporting tools (Data Dictionary). Users can also edit object and profile metadata using the Snapshot Studio tool. All of these features are discussed in detail later in this document. Another tool contained in Snapshot is the Administrative Permissions (Governance) which enables Admins to dictate push permissions to all other Admins. The Asset Snapshot currently supports version 30 of the Force.com Metadata API and is the recommended component to perform all deployments.

2. **Profile Snapshot** – The Profile Snapshot allows you to view, compare and deploy all of the profile metadata. The Profile Snapshot displays the following areas of functionality: Field Level Security, Application Visibility, Object Permissions, Tab Visibility, Record Type Visibility, Field

Level Exceptions, Apex Class and Page Accesses and Layout Assignments in an easy to read matrix. Users can also schedule the creation of a Profile Snapshot if desired. The Profile Snapshot currently supports version 35 of the Force.com Metadata API. The Profile Snapshot should be used primarily for comparison and deployment or profile metadata.

3. **Object Snapshot** – The Object Snapshot allows you to view, compare and deploy all custom fields from Standard Objects and Custom Objects in your Salesforce Org. The Object Snapshot displays these objects on three levels: object, field and field attribute level. It also allows you to deploy both complete objects and individual fields using the push feature. Users can also report on Field and Picklist usage through the Object Field Usage and Object Picklist Usage reports. These reports can be used to assist Admins in cleaning up their Org. Users can schedule the creation of an Object Snapshot if desired. The Object Snapshot currently supports version 30 of the Force.com Metadata API. The Object Snapshot should be used for Org comparison and for reporting on Field and Picklist Usage.

4. **Object Relationship View -** The Object Relationship View [Entity Relationship Diagram] provides a graphical view of all master detail and lookup relationships between the Objects in your Org. It allows you to navigate easily through the relationship hierarchy. Yellow arrows designate Lookup Relationships between the objects, while red arrows, designate Master Detail Relationships between the object.

5. **Snapshot Administrative Logger** – The Snapshot Administrative Logger allows users to track and report on all transactions made within your Salesforce Org. The Administrative Logger creates records for all changes made while using Snapshot and then provides the ability to use one of 14 pre-built reports and dashboards to monitor all changes. The Administrative Logger feature is accessible by clicking on the Snapshot Pushes. If you do not see the Snapshot Pushes tab please contact DreamFactory Support for assistance.

Note:
You must have either Salesforce Enterprise or Salesforce Unlimited Edition to utilize Snapshot. Plus, you must have at least “Modify All Data,” “Customize Application,” and “API Enabled” permissions in your User Profile to use Snapshot.

Architecture Overview

The Snapshot application uses DreamFactory Software's runtime client which can be downloaded from our website. The client player implements a security sandbox that protects local files, other documents, and private network assets. When the Snapshot tab is clicked, the secure DreamFactory player is launched and then the Snapshot application is downloaded by the player.

Once the rich application is downloaded into the secure DreamFactory player, the current Salesforce.com session ID is supplied through the Custom Link as a URL parameter. The embedded client application uses the session ID to communicate directly with salesforce.com using pure XML web services. No other servers are involved. Once you download the rich application from our website, the process is complete and in turn, DreamFactory does not host any of your data. Your private data, username, password, and session ID are not transferred anywhere other than back and forth to salesforce.com. Your session ID is used for communicating directly with Salesforce while our application is running. Your private Salesforce data is not transmitted, duplicated, or cached in any other server or database. All communication is conducted directly through an encrypted Secure Sockets Layer (SSL) pipeline with the salesforce.com SAS 70 certified servers that store your data.

Since Snapshot use salesforce.com directly, and so it is completely limited by the current profile settings and visibility limitations as defined by the salesforce.com administrator. When a user logs into Salesforce and navigates Snapshot, all the settings for that user are transferred through the session ID to the data accessed by Snapshot. There is no way for a DreamFactory application to "see" things that the user cannot otherwise access through the salesforce.com HTML interface.

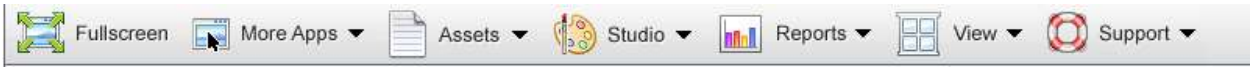
Asset Snapshot

Definition of an Asset Snapshot

The Asset Snapshot allows you to view, compare, deploy and report all of the object metadata, profile metadata, page layouts, apex code, workflows, Folder Based Assets and more. The goal of the Asset Snapshot is to assist you reduce the time spent on deployment release trains. To accomplish this, Snapshot provides a number of resources including: Individual Subset and Individual Sub Element push (e.g., fields, record types, workflows, etc…), Asset Comparison, Job List, Folder Based Asset Push, Search and Relationship Palettes, Relationship Matrix, Automated Asset Snapshot and a number of comprehensive reporting tools (Data Dictionary). All of these features are discussed in detail later in this document. Another tool contained in Snapshot is the Administrative Permissions (Governance) which enables Admins to dictate push permissions to all other Admins. The Asset Snapshot currently supports version 35 of the Force.com Metadata API and is the recommended component to perform all deployments.

Note:
It is a recommended Best Practice to utilize the Asset Snapshot to perform all deployments.

The Asset Snapshot is divided into six menus each containing different pieces of functionality including:

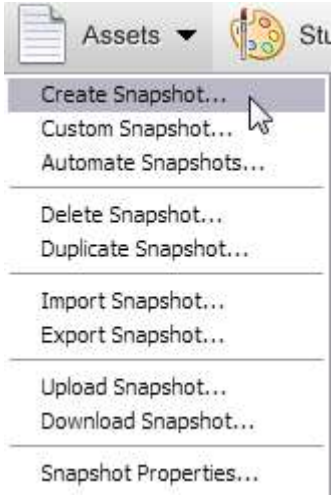


Full Screen - The Full Screen menu allows you to expand the display into a Full Screen mode.

More Apps – The second menu allows you to maneuver between DreamFactory applications.

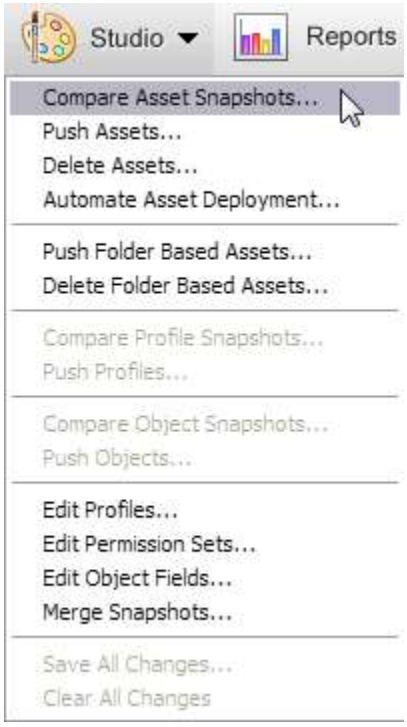
Assets – The Assets menu provides users with the following options to choose from:

- Create Snapshot – This option allows users to create a new Asset Snapshot
- Custom Snapshot – This option allows users to create a new Asset Snapshot using a packaged zip file or place limits using a package.xml file.
- Automate Snapshots – This option allows users to Automate the capture of an Asset Snapshot
- Duplicate Snapshot – This option allows users to duplicate existing Asset Snapshots
- Delete Snapshot – This option allows users to delete an existing Asset Snapshot
- Import Asset Snapshot – This option allows users to import Asset Snapshots
- Export Asset Snapshot – This option allows users to export Asset Snapshots
- Upload Snapshot – This option allows users to upload their snapshots to a salesforce Content library
- Download Snapshot – This option allows users to download their snapshots from a salesforce Content library
- Snapshot Properties – This option allows users to view the Asset Snapshot Properties



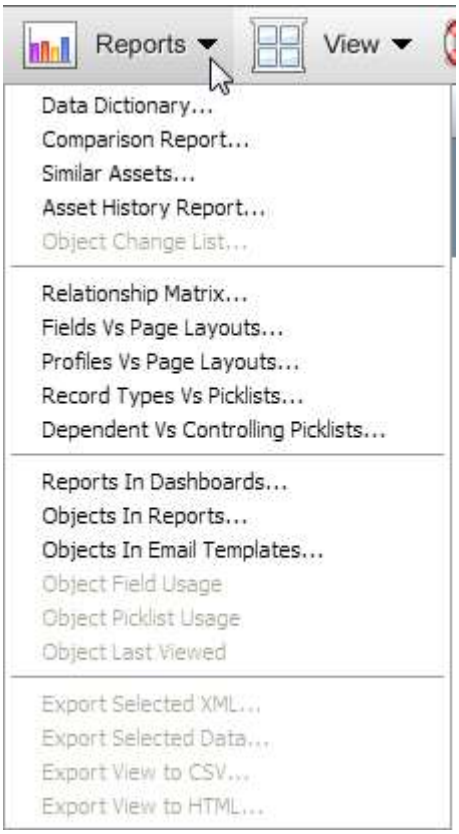
Studio – The Studio menu provides access to editing tools including:

- Compare Assets – This option allows users to compare multiple Asset Snapshots
- Push Assets – This option allows users to push/deploy multiple assets between Orgs
- Delete Assets – This option allows users to delete multiple assets between Orgs
- Automate Asset Deployment – This option allows users to schedule an Automated Asset Push
- Push Folder Based Assets – This option allows users to push/deploy Folder Based Assets
- Delete Folder Based Assets – This option allows users to delete Folder Based Assets
- Edit Profiles – This option allows users to edit profile metadata
- Edit Permission Sets – This option allows users to edit the permission sets metadata
- Edit Objects – This option allows users to edit Object metadata (fields)
- Merge Snapshots – This option allows users to merge sections of a snapshot



Reports – The Reports menu provides you with the following options to choose from:

- Data Dictionary – This option allows you to generate a report displaying all properties, field and relationships for all of the metadata in your Org
- Comparison Report – This option allows you to generate comparison reports
- Similar Assets – This option allows you to compare similar assets within the same snapshot
- Asset History Report – This option allows you to see when assets were created, last modified and by whom
- Relationship Matrix – This option allows you to generate a Relationship Matrix that displays the relationships between multiple asset types
- Fields vs Page Layouts – This option allows you to generate a matrix that charts the fields that are displayed in each Page Layout. This report can be exported out to CSV file format.
- Profiles vs Page Layouts – This option allows you to view what Profiles have visibility to what Page Layouts and can be exported out in a CSV file format
- Record Types vs Picklist – This option allows you to report on all Record Types and related picklist list values that are tied to selected fields and extract in a CSV file format
- Dependent vs Controlling Picklist – This option allows you to report on all Controlling and Dependent picklists tied to selected fields and extract in a CSV file format
- Reports in Dashboards – This option allows you to report on what Reports are used in which Dashboards and extract the information in a CSV file format
- Objects in Reports – This matrix allows you to see if certain fields are referenced in reports
- Objects in Email Templates - This matrix allows you to see if certain fields are referenced in email templates

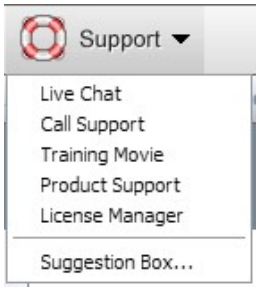


View – The View menu provides access to the following options:

- Switch Storage Folder – This option allows users to switch between folders where the snapshots are stored
- Switch Salesforce Account – This option allows users to log into other Salesforce Orgs
- Administrative Session Reports – This option opens a dialog that checks to see if the Snapshot Logger package has been installed
- Administrative Permissions – This option allows users to see the Snapshot Governance tool
- Asset Snapshot View – This option opens the Asset Snapshot
- Profile Snapshot View - This option opens the Profile Snapshot
- Object Relationship View - This option opens the Object Relationship View
- Object Snapshot View – This option opens the Object Snapshot
- Hide All Palettes – This option allows users to hide any open palettes
- Show Search Palette – This option opens the Search Palette
- Show Relationship Palette - This option opens the Relationship Palette
- Show Welcome Screen – This option allows users to show the Snapshot welcome screen
- Hide Welcome Screen – This option allows users to hide the Snapshot welcome screen
- Print Screen – This option allows users to select printing options

Support – The Support menu provides access to the following support options:

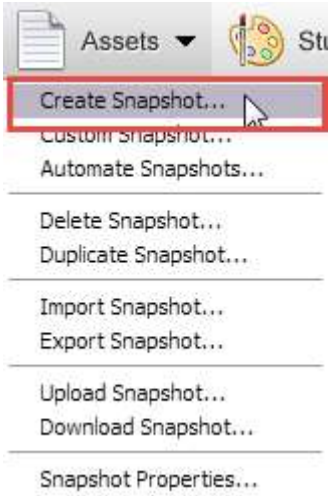
- Live Chat – Selecting this option will initiate a Live Chat with a DreamFactory Success Engineer.
- Call Support – Selecting this option will populate the Call Support Phone Number
- Training Movie – Selecting this option will open a new window and launch the Snapshot Movie.
- Product Support – Selecting this option will open the Snapshot support page on DreamFactory.com
- License Manager – Selecting this option will open the Snapshot License Manager
- Suggestion Box – Selecting this option will open the Suggestion Box where you can submit a feature request, a question or a problem or bug.


Support
Live Chat
Call Support
Training Movie
Product Support
License Manager
Suggestion Box...

Creating an Asset Snapshot

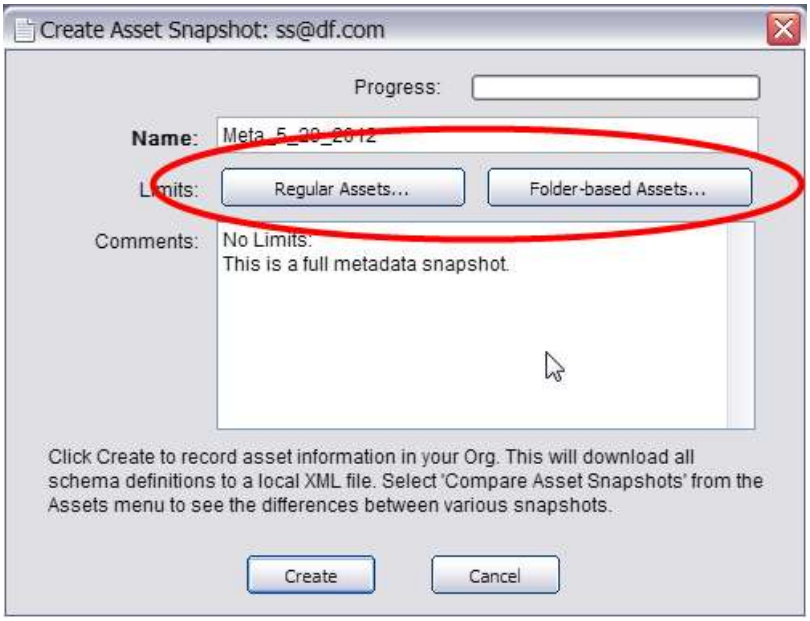
The first option under the Assets menu is **Create Snapshot**. Here users can easily capture a snapshot of all or a selected amount of the metadata in their Org.

To create an Asset Snapshot simply click on the **Assets** menu and select the **Create Snapshot** command.

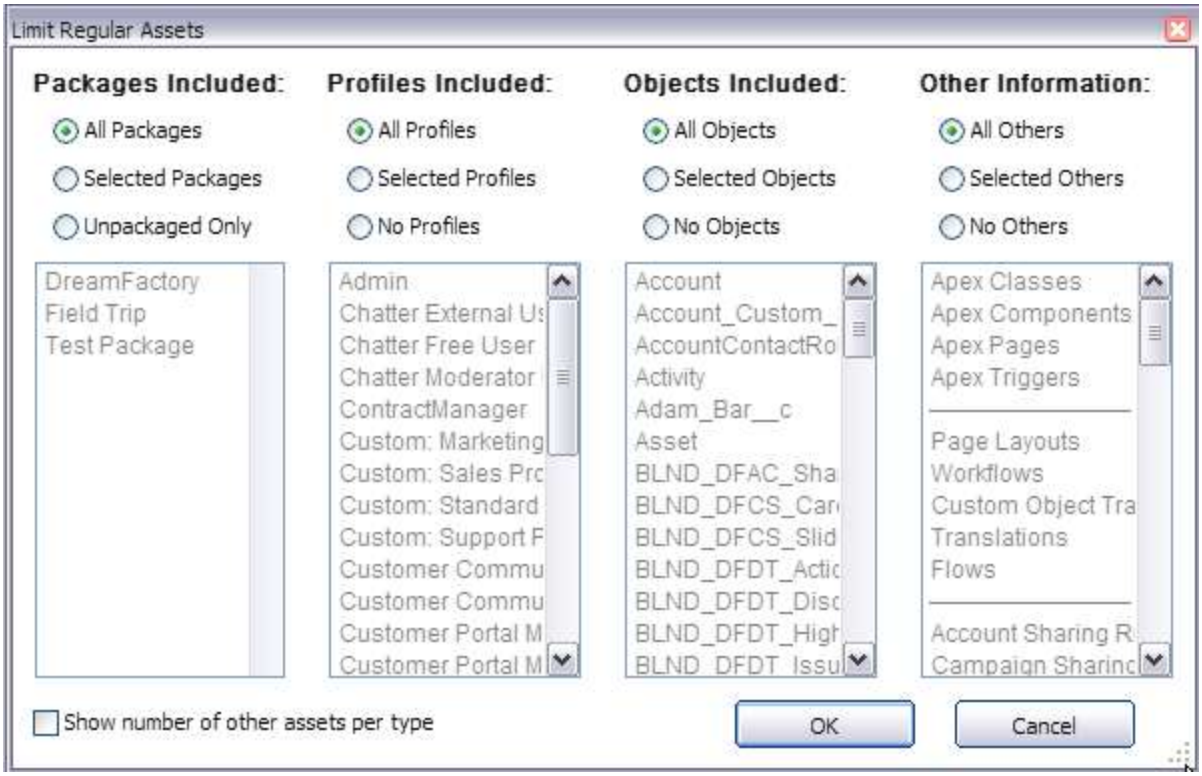


Upon selecting the **Create Snapshot** command, the "Create Snapshot" dialog will appear. The **Create Asset Snapshot** dialog provides you with the ability to either create a full Snapshot thus capturing all of the Assets in that org; or you can limit the contents of the Asset Snapshot. This is highly recommended if you have a reasonably complex Org configuration (e.g., many custom profiles and custom objects and/or a large number of users). Asset Snapshots are XML files that can be extremely large for complex Organizations. For example, if you only need to push two profiles to another Org, then you could select only those profiles when you create the Asset Snapshot.

You can limit different sections of your snapshot by using the two buttons – **Regular Assets…** and **Folder-based Assets…**. The **Regular Assets…** button is used to limit regular assets like profiles, objects, apex etc. The **Folder-based Assets…** is used to limit folder based assets like reports, dashboards, email templates etc.



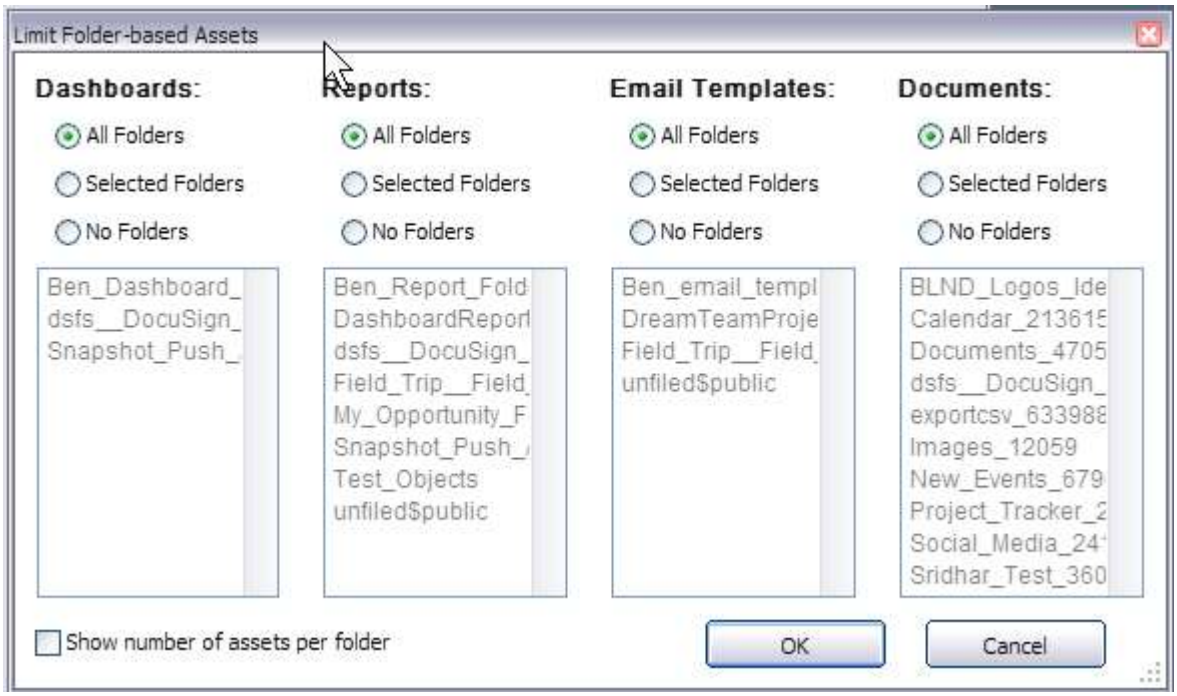
To limit the regular assets captured in the Asset Snapshot, simply click on the button titled **Regular Assets….** Once selected, the **Limit Regular Assets** dialog will appear.



Here, users can select from the following metadata options to include in the Snapshot:

- **Packages** – (All Packages or Unpackaged Data) All Packages includes information about applications you've installed. Check Unpackaged Data if you're not pushing custom applications
- **Profiles Included** - Select All, Individual or No Profiles that you want to push
- **Objects Included** - Select All, Individual or No Objects that you want to push
- **Other Information –** Check this option to include Apex Classes, Apex Components, Apex Pages, Apex Triggers, Page Layouts, Workflows, Custom Object Translations, Translations, Flows, Sharing Rules, Groups, Permission Sets, Settings, Approval Process, Home Page Layouts, Home Page Components, Queues, Report Types, Resources (static resources), Roles, Scontrols, and so on.

To limit the folder-based assets, simply click the button titled **Limit Folder-based Assets…**. Once clicked, the **Limit Folder-based Assets** dialog appears.

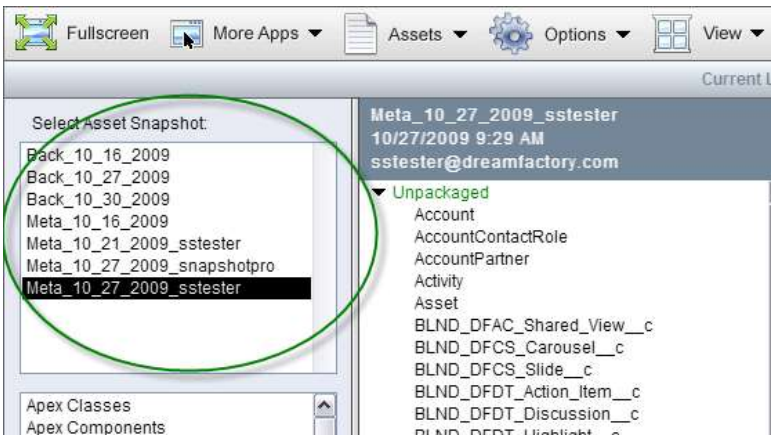


Here is where you can select from the following metadata options to include in the Snapshot:

- **Dashboards** - Select All, Individual or No Dashboard folders that you want to push
- **Reports** - Select All, Individual or No Report folders that you want to push
- **Email Templates** - Select All, Individual or No Email Template folders that you want to push
- **Documents** - Select All, Individual or No Document folders that you want to push

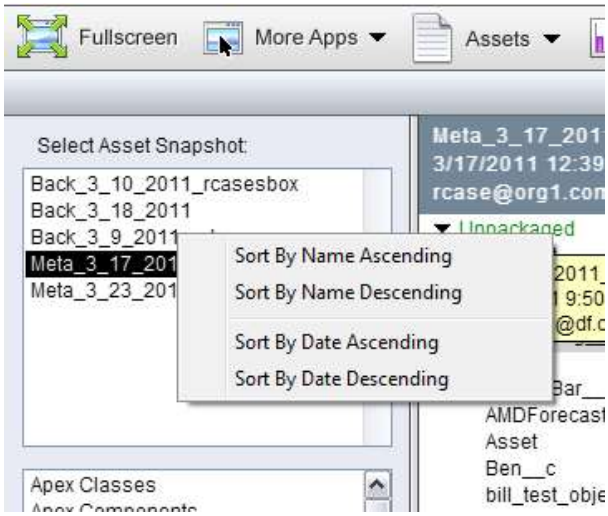
You can check the **Show number of assets per folder** checkbox to see the number of assets in each folder before selecting the appropriate folders.

Once created, the Snapshot will be populated in the **Select Asset Snapshot** box in the top left corner of the dialog box for easy access.



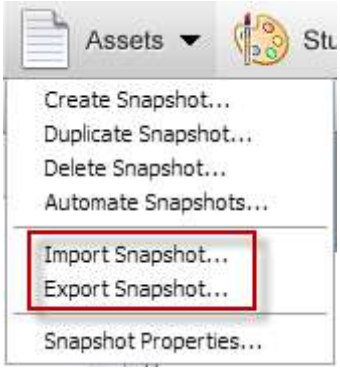
Users also have the ability to sort the list of Snapshots by right clicking in the Select Snapshot box in the top left corner of the screen. Users can select from the following sorting options:

- Sort By Name Ascending
- Sort By Name Descending
- Sort By Date Ascending
- Sort By Date Descending



Note:
If you want to take a Snapshot of a different Org, you will need to Switch Salesforce Account options. Please reference the Switch Salesforce Account section of the User Guide.

All Snapshots are stored locally on your computer and can be easily shared with other users by using the **Export Asset Snapshot…** command located in the **Assets** menu. Once you have exported the Snapshot out, simply email the Snapshot to the other user; who must then use the **Import Asset Snapshot…** command to import the file into their Org.

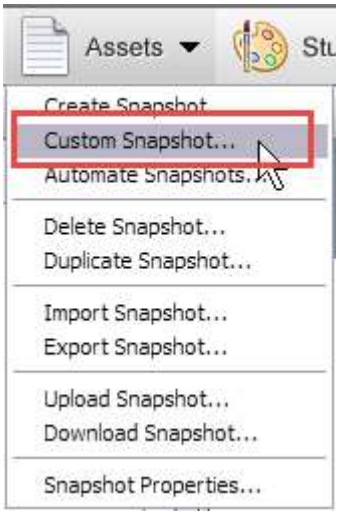


Snapshots can be easily replicated using the **Duplicate Snapshot…** menu item. Unnecessary snapshots can be deleted using the **Delete Snapshot…** feature. To use either of these features, you will need to select a snapshot from the **Select Asset Snapshot…** box on the left.

Creating a Custom Asset Snapshot

Instead of creating a regular Asset Snapshot using the **Create Asset SnapShot** menu item, you can customize the snapshot creation process in two ways. You can create a snapshot using a prepackaged ZIP file or discover metadata assets using a package.xml. This is useful for a few different scenarios including providing comparison and reporting capabilities for users who store their metadata in content management repositories or for those who need to pinpoint the list of metadata to backup etc.

To customize the snapshot creation, click the **Assets** menu and choose the **Custom Snapshot…** command.

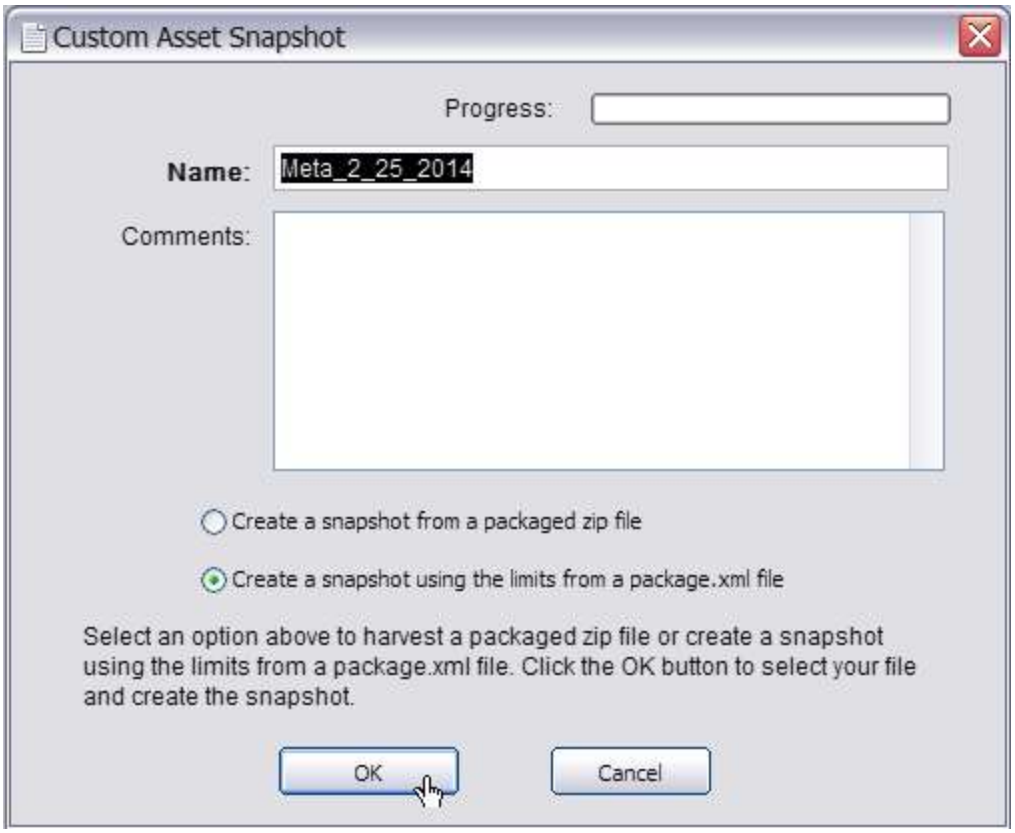


Upon selecting the **Custom Snapshot…** command, the **Custom Asset Snapshot** dialog box pops open. You can customize the snapshot name, add some comments as part of the snapshot creation process. You can choose to create the snapshot based on a pre-created ZIP file or provide fine grain limits on the metadata assets discovered by SnapShot. If you already have metadata backed up in a ZIP file (using a tool like ANT), choose the **Create a snapshot from a packaged zip file** option. If you would like metadata discovered from the logged in Org but you want to place more granular limits, choose the **Create a snapshot using the limits from a package.xml file** option.

Note

When you use the pre-packaged zip file option, the **Created** property is set to current date/ time and the **Username** property is set to "unknown".

When you use the package.xml file option, please ensure that you are already logged into the Org that you are trying to snapshot. To switch to the correct Org, please refer to the Switching Salesforce Accounts section.



Once you have chosen the right options, please click the **OK** button to initiate the snapshot creation. Click the **Cancel** option to close the dialog and revert back to the main view.

Automated Asset Snapshot

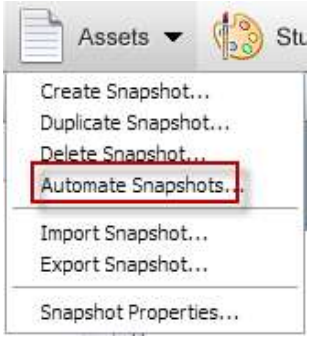
Snapshot also provides the ability to automate Asset Snapshots. This feature allows you to schedule an automated Snapshot creation for Assets. In addition, you can now dictate where the automated Snapshots are stored, as well as the frequency of the automated Snapshot.

In order to utilize this feature, you must leave this application running on the computer without sleeping (screen savers or sleep mode) and with a robust internet connection for the automated Snapshot to work.

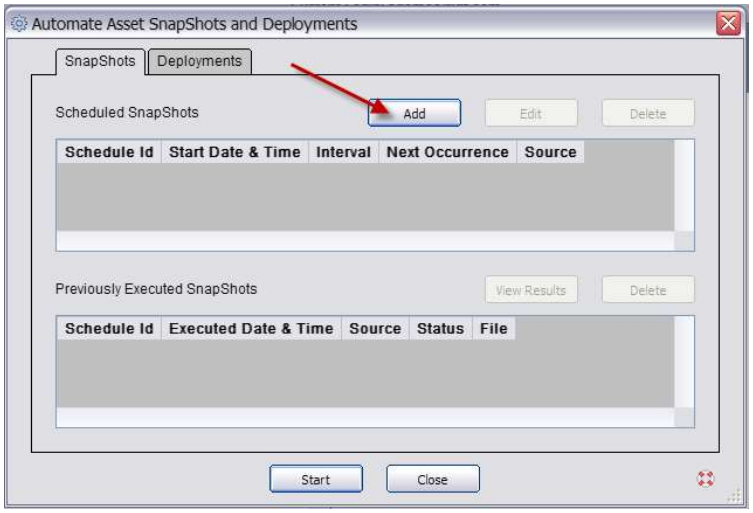
> **Note:**
> This is a key feature to help implement disaster recovery scenarios for salesforce.com by taking regular backups of Org configuration.

To schedule an Automated Snapshot simply follow the steps below:

1. Click on the **Assets** menu and select **Automate Snapshots**



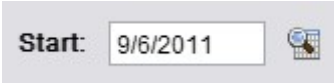
2. Once the dialog opens, click on the **Add** button.



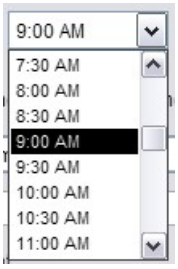
3. The Schedule Asset Snapshot dialog box will appear.

4. Next, select the following criteria for Step 1:

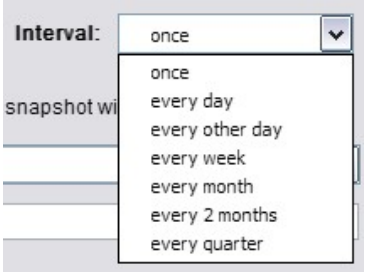
Start – Here the user can select the date they want to schedule the Asset snapshot capture



Time increment – Here the user can schedule the time of the snapshot capture. Users can select from any of the 30 minute increments to schedule the snapshot, or type a more accurate time in the text field.

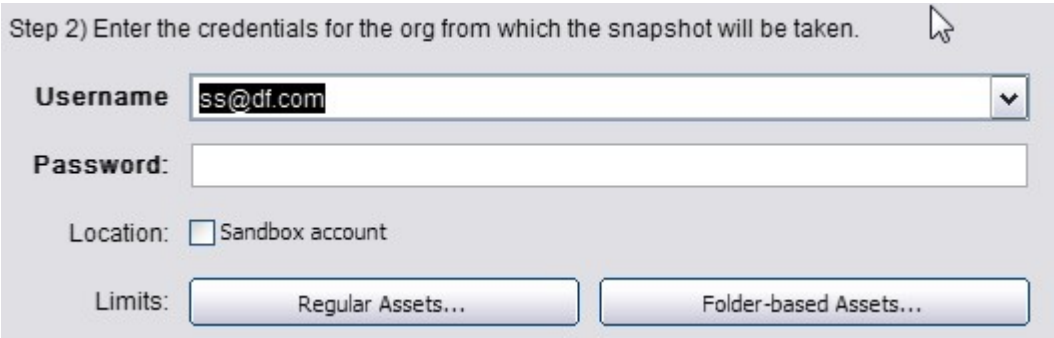


Interval – Here the user can select the frequency of the Asset snapshot capture

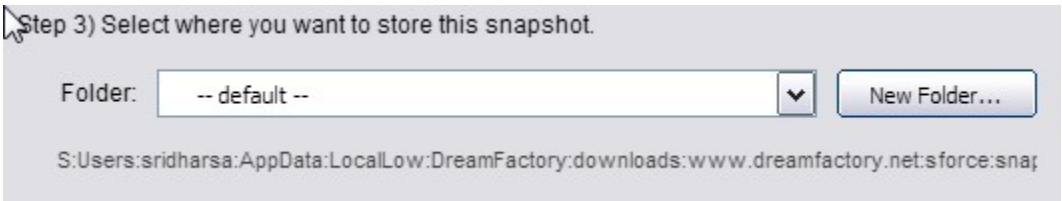


5. Next, the user must log into the Org that they want to be captured.

Note:
The user has the ability to schedule a complete Asset snapshot, or they can limit the contents by clicking on the **Regular Assets**… and/ or the **F**older-based **Assets**… buttons and selecting the desired contents of the org.

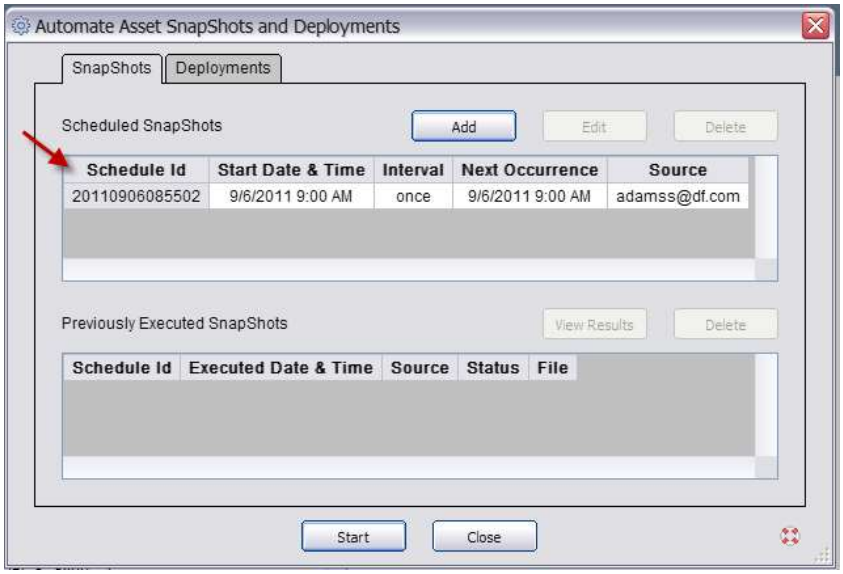


6. The user can then select a folder location to store the snapshots captured. By default the "DreamFactory" default folder is used. You can use the **New Folder** button to create a new folder below the SnapShot folder structure to store the snapshots there.



7. The last step is to click the save button

8. Once the automated snapshot has been scheduled, it will appear in the Schedule Snapshots box on the snapshots tab. Here the user can see the Schedule ID, Start Date & Time, Interval, Next Occurrence and Source.



9. Once the snapshot capture is run, the transaction will be populated in the Previously Executed Snapshots box on the bottom. Users can then select the transaction and then click on the View Results button to see any errors that resulted from the capture attempt. They can also delete this entry by clicking on the delete button.

Note:
Deleting this entry only deletes the record of the capture, not the captured snapshot file itself, which resides in the selected storage folder.

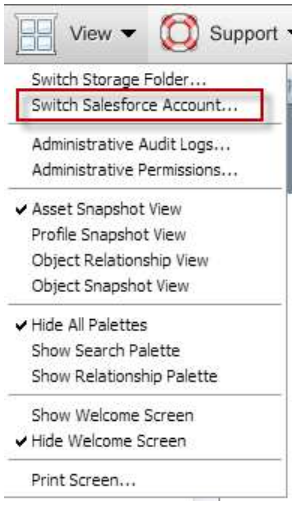
Switching Salesforce Accounts

To assist in managing changes in multiple Orgs, Snapshot allows you to log into any Salesforce Org that you have access directly from the interface. Snapshot allows you to log into any Production, Sandbox or Developer Orgs that you have access to.

Note:
It is recommended that Snapshot be installed in your Production Org, and then to use the **Switch Salesforce Account** feature to target and capture snapshots of other Orgs.

To log into a different Org, follow the instructions below:

1. Click on the **View** menu

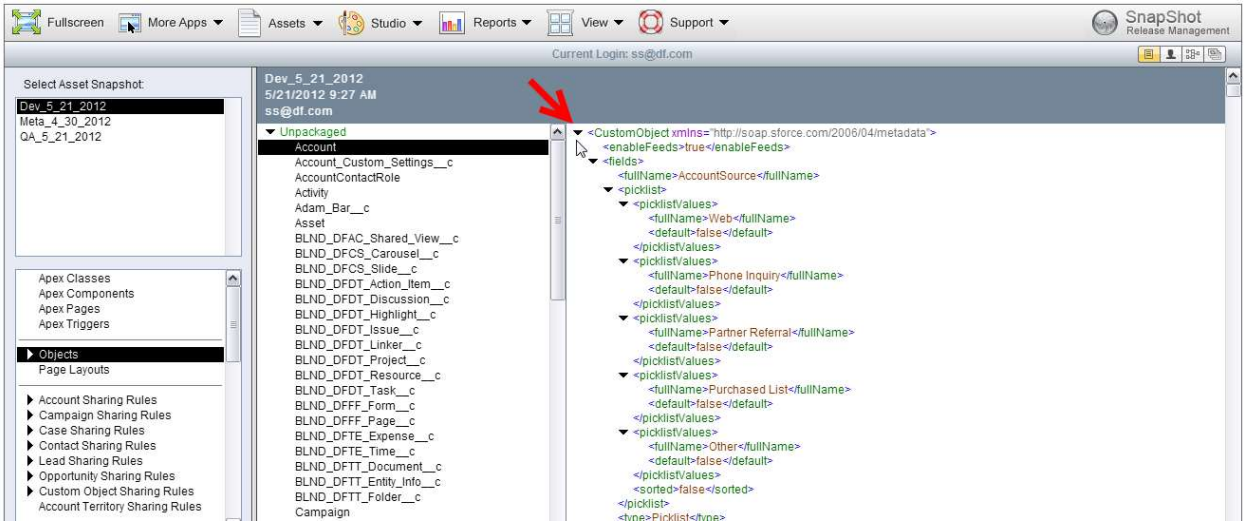


2. Select the **Switch Salesforce Account** command from the **View** menu. The **Switch Salesforce Account** dialog will appear prompting you to log into a different Salesforce Account.

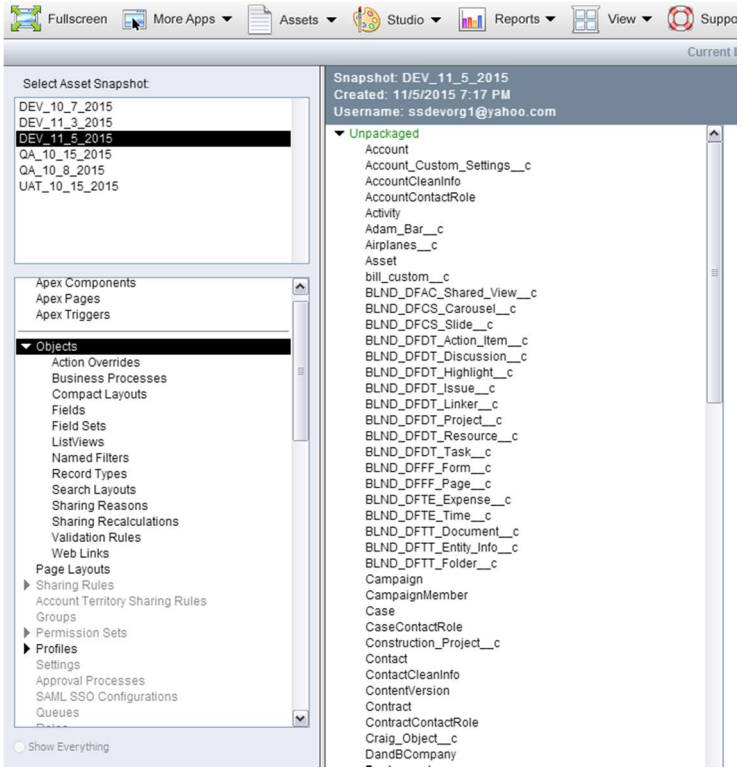
Note:
If you are logging into a Sandbox make sure to check the Sandbox account checkbox at the bottom of the login area.

The Asset Snapshot View

The initial view displayed once an Asset Snapshot is created is the Asset Snapshot View. The Asset Snapshot View allows you to select specific assets in your Org and then look at the XML metadata of those assets.

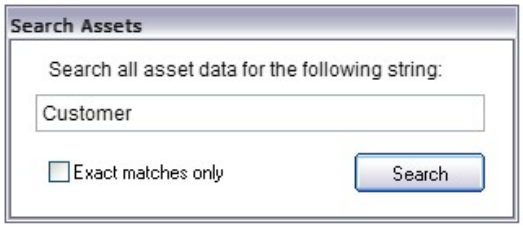


Users now have the ability to see what percentage of the Asset Snapshot is compiled by individual Assets. By hovering over a particular Asset in the Asset list on the left hand side, users can easily see what percentage of the Asset Snapshot is comprised of Objects, or Page Layouts, etc…

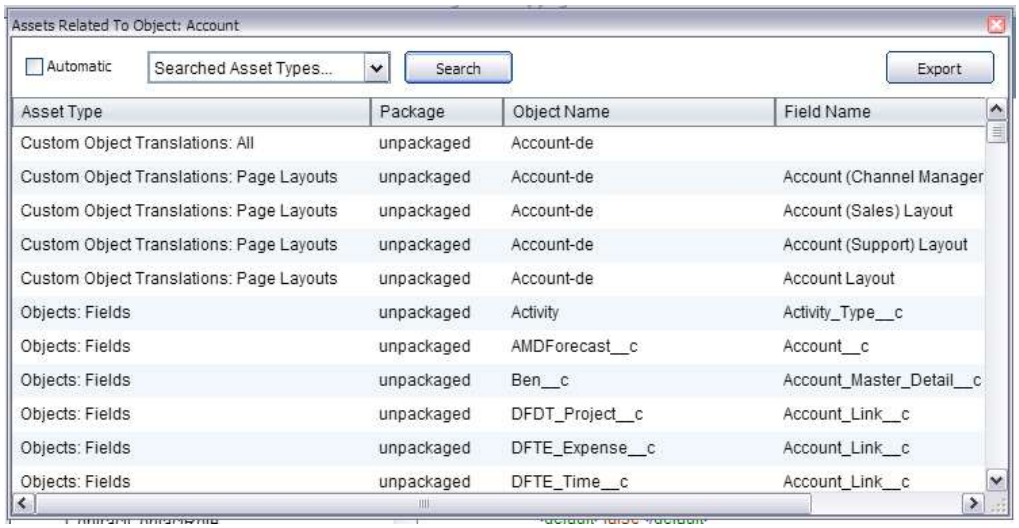


In addition to the Asset View, Snapshot provides two other features that enable you to search for specific Asset information. Located in the **View** menu, these two features include the **Search Palette** and the **Relationship Palette**.

Search Palette - The first feature is the Search Palette. The Search Palette allows you to search for specific asset strings through the Search Assets box. To search for specific assets, simply type the asset string into the Search Assets dialog box and then click the **Search** button to scan all of the XML to locate the asset or its sub element. Continue to click the **Search** button until you find the asset or sub element that you are looking for.

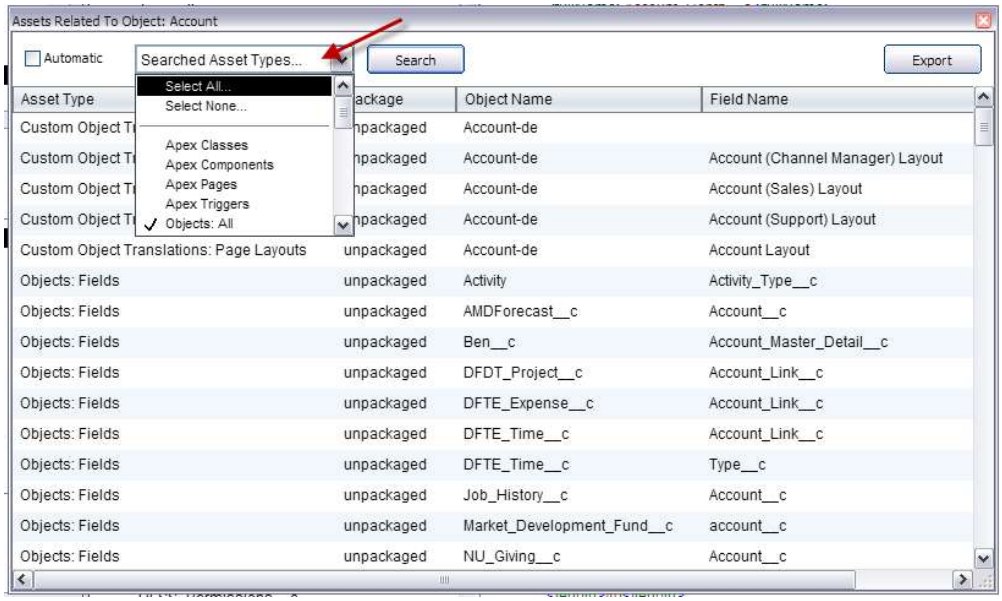


Relationship Palette - The second feature is the Relationship Palette. The Relationship Palette allows you to view all of the relationships attributed to the selected Asset.

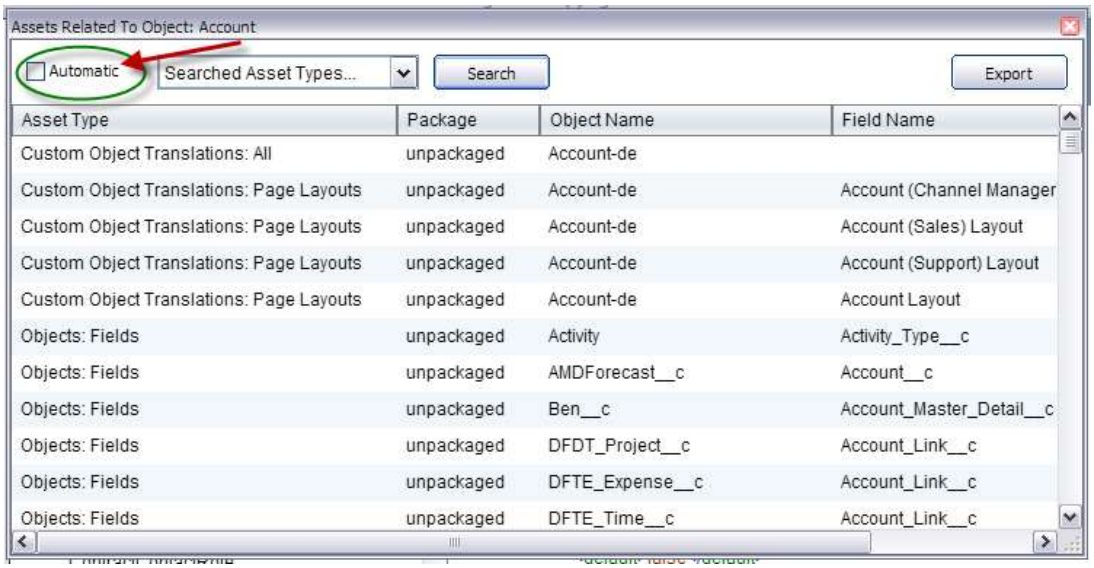


Asset Type	Package	Object Name	Field Name
Custom Object Translations: All	unpackaged	Account-de	
Custom Object Translations: Page Layouts	unpackaged	Account-de	Account (Channel Manager
Custom Object Translations: Page Layouts	unpackaged	Account-de	Account (Sales) Layout
Custom Object Translations: Page Layouts	unpackaged	Account-de	Account (Support) Layout
Custom Object Translations: Page Layouts	unpackaged	Account-de	Account Layout
Objects: Fields	unpackaged	Activity	Activity_Type__c
Objects: Fields	unpackaged	AMDForecast__c	Account__c
Objects: Fields	unpackaged	Ben__c	Account_Master_Detail__c
Objects: Fields	unpackaged	DFDT_Project__c	Account_Link__c
Objects: Fields	unpackaged	DFTE_Expense__c	Account_Link__c
Objects: Fields	unpackaged	DFTE_Time__c	Account_Link__c

Once selected, the Assets Related To <Selected Asset> dialog box will appear. Here is where you can select which Asset Types you want to see relationships tied to the selected Asset from the Searched Asset Types drop down menu.



You also have the ability to dictate whether you want the Relationship Palette to automatically refresh by checking the box in the top left corner titled **Automatic**. To manually refresh, uncheck this checkbox and click the **Search** button.



In addition, the Relationship Palette allows you to easily export the relationship information to a CSV file by clicking on the **Export** button in the top right corner.

Comparing Asset Snapshots

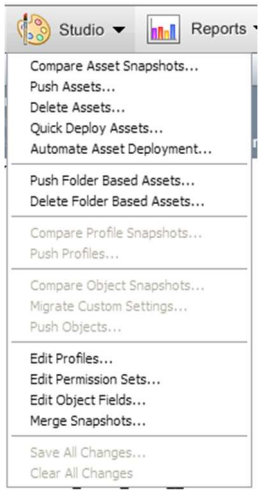
One of the key features of the Asset Snapshot is the ability to compare multiple Asset snapshots. You can compare Asset snapshots to view changes made to an Org over time or between two similar Orgs. You can also drilldown on the high level differences displayed to see low level XML differences.

> **Best Practice:**
> Comparing two Asset snapshots before attempting a deployment is a recommended Best Practice.

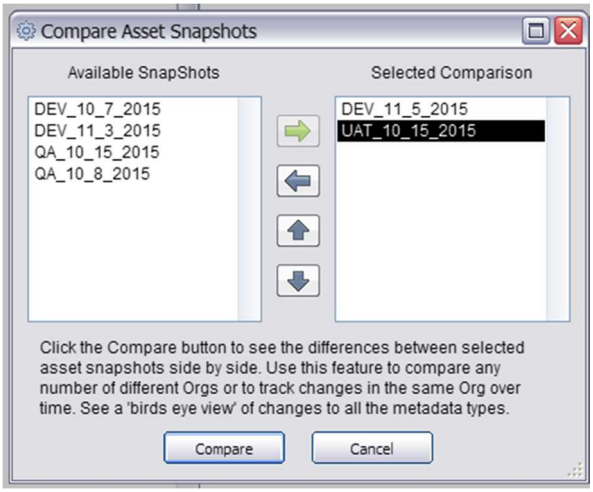
To compare Asset snapshots, simply follow the instructions below:

1. Select the Asset snapshot that you want to compare from the box on the left hand side.

2. Click on the **Studio** menu and select **Compare Assets…**. The **Compare Assets…** dialog box will appear allowing you to select the snapshots you want compare.

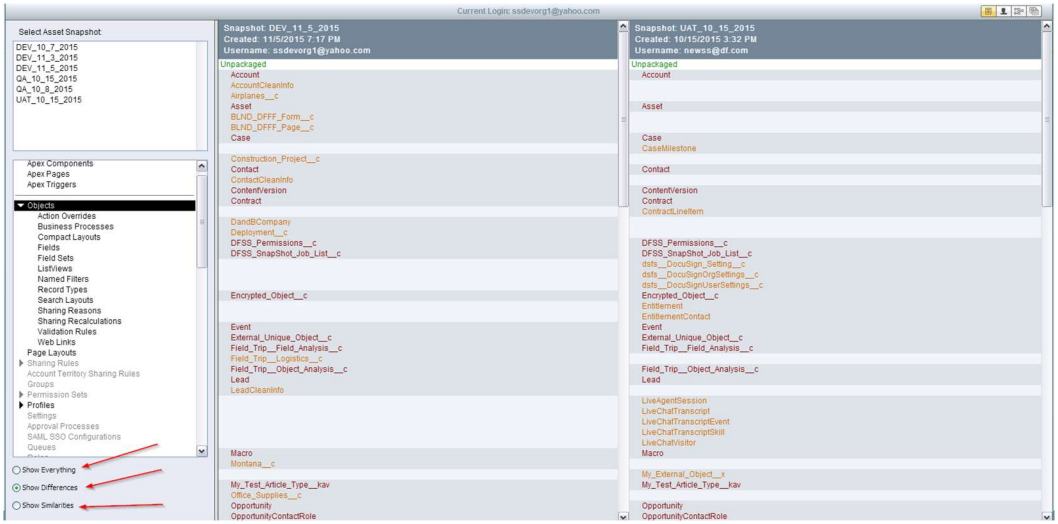


3. Select the snapshots you want to compare and click the green arrow to move it to the **Selected Comparison** list. Then click the **Compare** button.

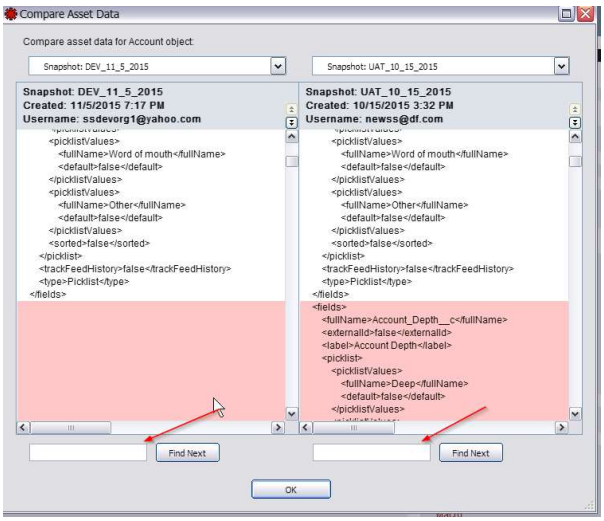


Once you click the compare button, the selected snapshots will appear side by side. The items that have been updated are displayed in red, new items (available on one org but not on the other) are displayed in orange and similar assets are displayed in black. All package names are displayed in green.

To switch to other Asset Types, simply click on the select Asset Type from the left hand navigation panel. In addition, you have the ability to select if you want to view differences only, similarities only or everything by choosing the appropriate radio button on the left hand side.



You have the ability to drill down and view the low level differences between the two orgs in an XML format. To drill down, simply click on the entity you want to drill down on in the list view and then a new dialog box will open displaying the XML of both orgs and all differences displayed in pink. You can skip to the next difference by clicking on the double arrow button on the top of both boxes or by typing in the search boxes at the bottom.



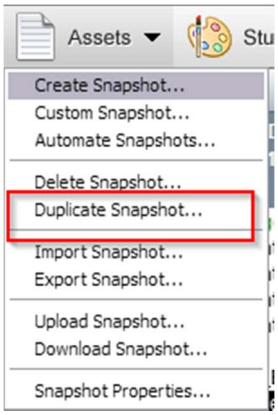
Note:
You can document the differences using the Comparison Report (available under the Reports menu). This is a productivity feature that is designed to reduce the effort involved in tracking deployment items.

Snapshot Studio

The Snapshot Studio is a set of tools that allows users to make edits and changes to metadata directly inside Snapshot. Located in the Asset and Profile Snapshot Views, the **Snapshot Studio** menu provides users with the ability to edit the following metadata:

- Edit Object Fields
- Edit Profiles
- Edit Permission Sets

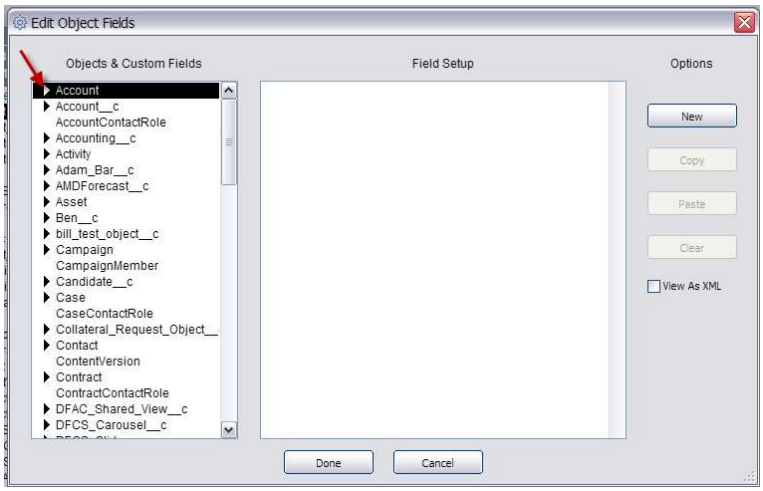
Prior to performing any edits, the asset snapshot allows users to either use an existing snapshot, or create a duplicate snapshot to make the edits to. The **Duplicate Snapshot…** option is located in the **Asset** menu.



Duplicating an asset snapshot allows users to make edits to a copy of an existing snapshot without disturbing the original asset snapshot. Once the user selects the duplicate option, the new snapshot will have the word Copy added to the end of the naming convention. The name of the Snapshot is editable at this point as well. This next section provides additional details regarding each of options listed above.

Edit Object Fields

The Objects Fields option will allow users to create, update, copy and paste individual fields on existing objects in the selected snapshot. Once selected, the **Edit Object Fields** dialog will appear (see screen shot below). Here users can select the field from the desired Object by clicking on the black arrow immediately to the left of the Object.



Once the arrow is clicked, a list of all of the fields in that Object will appear. To edit a particular field simply select the field from the box on the left. Once selected, the field attributes will appear in the box on the right.

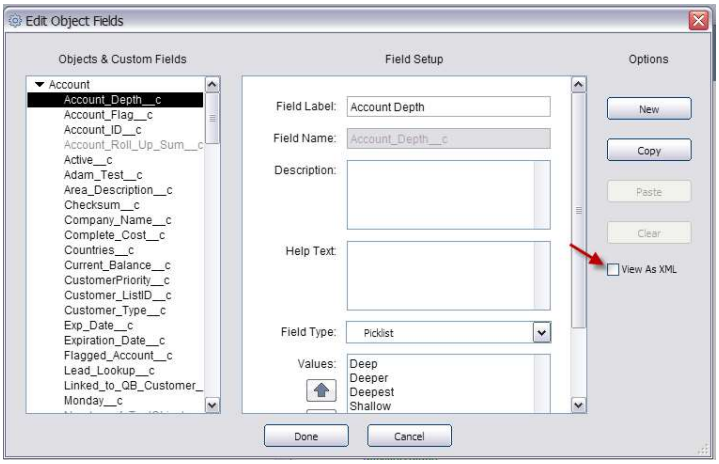
Here users can do any of the following:

1. Edit the field attributes by adding a description or help text, or add picklist values

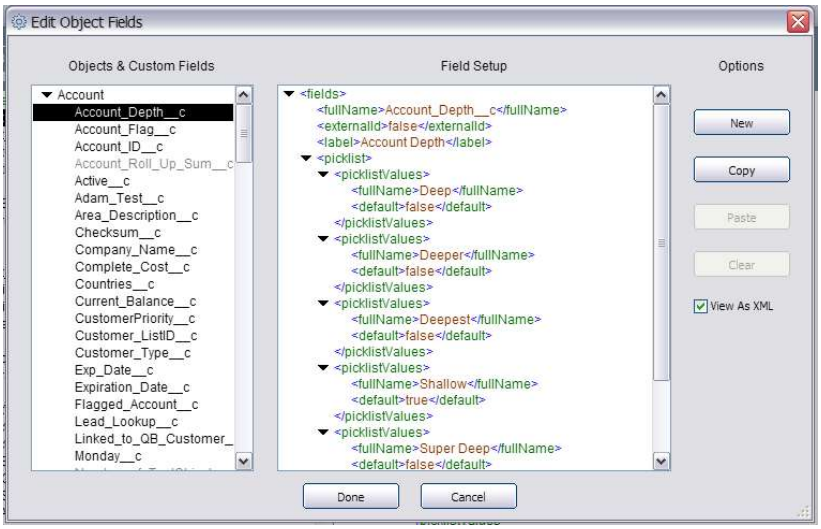
2. Users can modify the Field Type by clicking on the drop down menu next to Field Type

3. Users can also copy the field and paste it on a different Object

4. Lastly, users can click the **New** button on the right and create a completely new field on this object



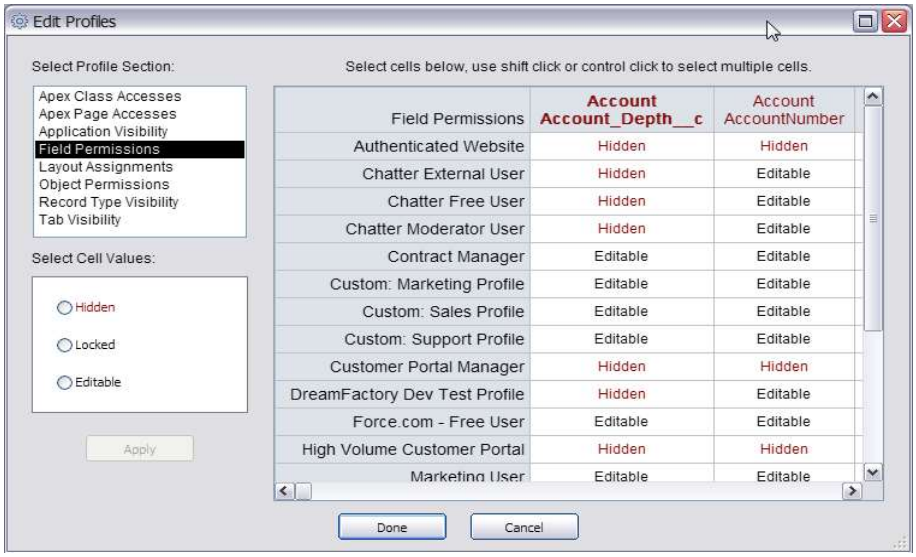
Field attributes can be viewed in the current view, or if desired, users can also view the field attribute as XML by checking the box that says **View As XML** on the right side of the dialog. The **View As XML** option is currently read-only.



Edit Profiles

The Edit Profiles option allows users to edit profile metadata directly within Snapshot. Once selected, users can edit profile metadata from any of the following metadata options:

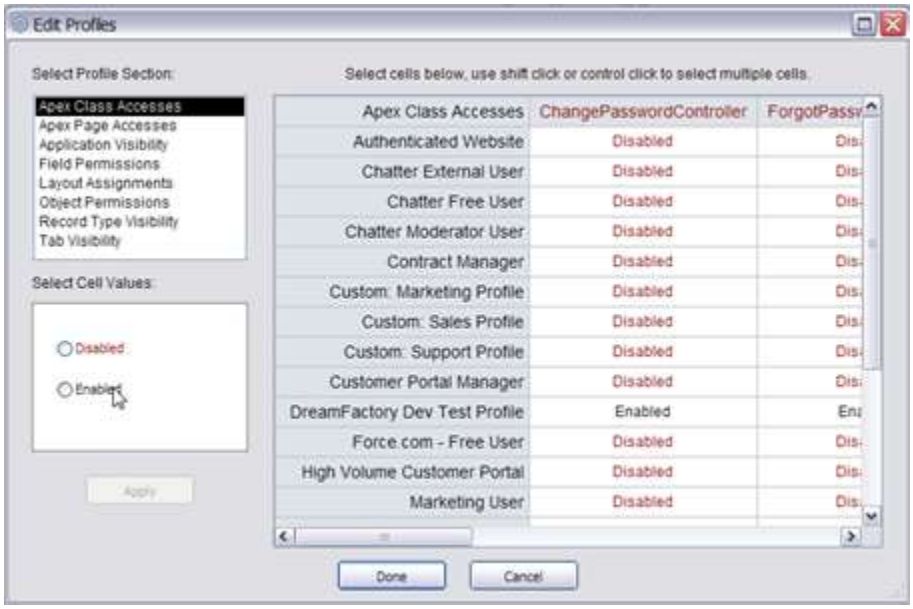
1. Apex Class Accesses
2. Apex Page Accesses
3. Application Visibility
4. Field Permissions
5. Layout Assignments
6. Object Permissions
7. Record Type Visibility
8. Tab Visibility
9. User Permissions
10. Custom Permissions



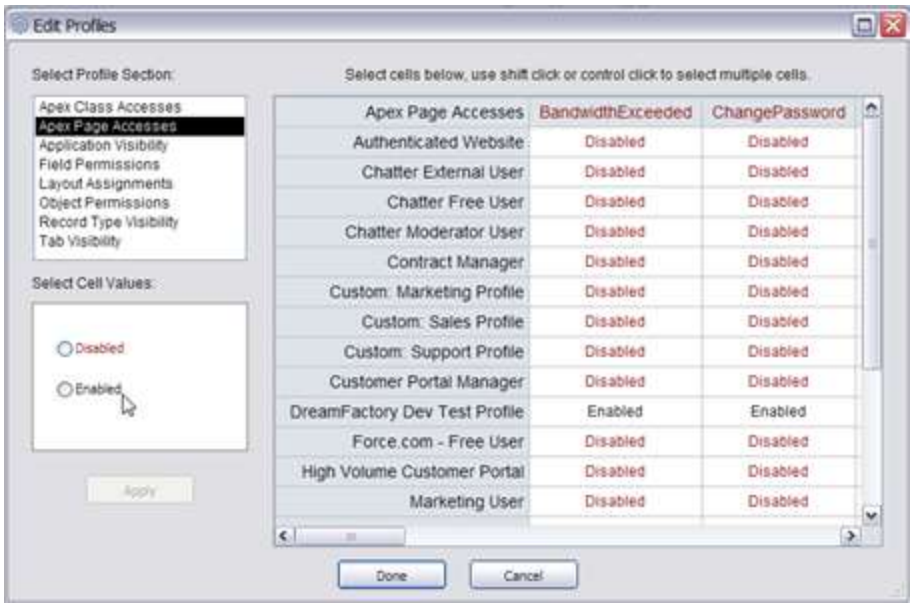
Note:
All updates made to a profile using the **Edit Profiles** feature are made to the snapshot and not directly to the Org itself. These changes need to be migrated to the originating Org to implement the changes made. This design decision was made deliberately to ensure users have the ability to compare against a duplicate snapshot to ensure that they have made the right changes. This decision also helps users migrates the changes made to multiple Orgs bringing them all up to par with very little effort.

Below is a description of the editing capabilities for each of the Profile Metadata options listed above.

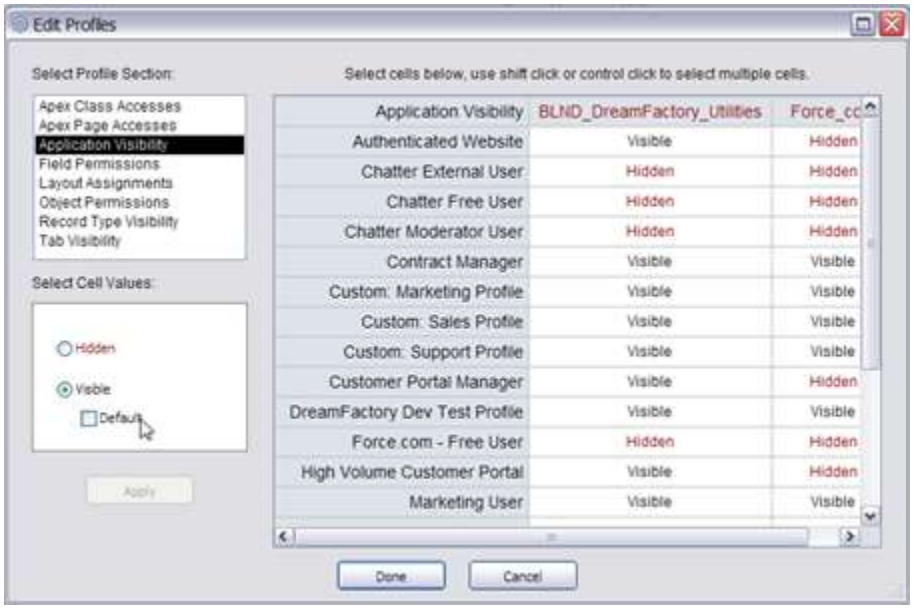
1. **Apex Class Accesses** – For Apex Classes, users will be able to either Disable or Enable the selected Apex Class for the appropriate Profile.



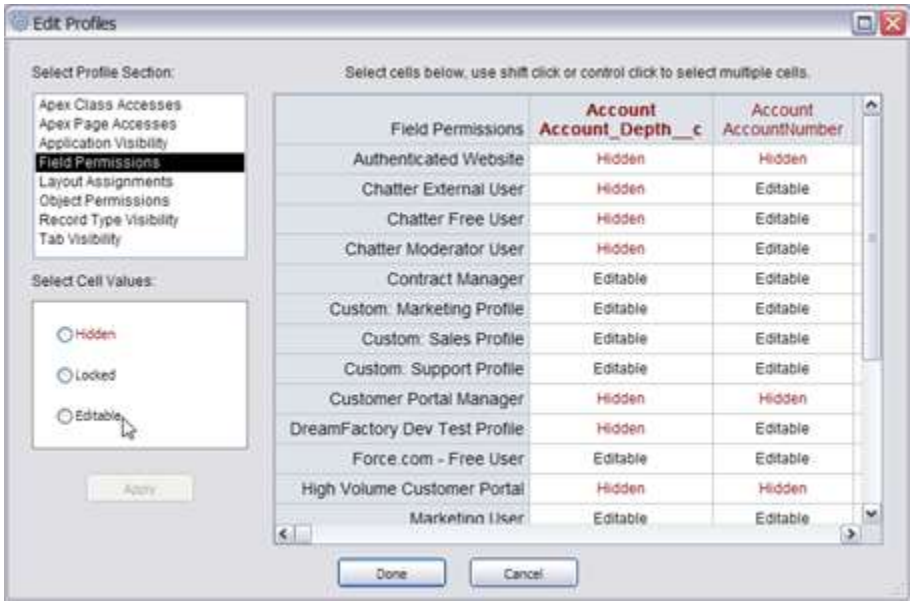
2. **Apex Page Accesses** – For Apex Pages, users will be able to either Disable or Enable the selected Apex Page for the appropriate Profile.



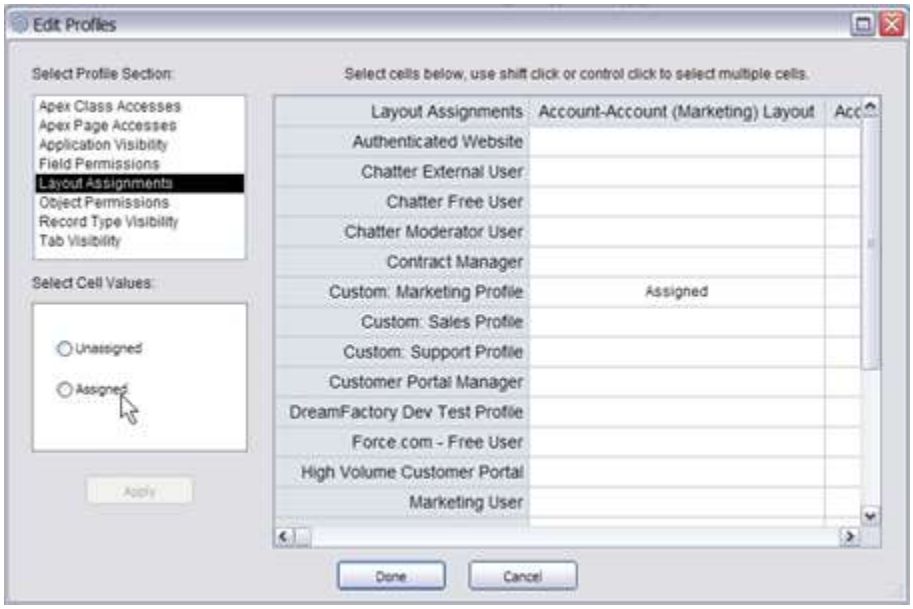
3. **Application Visibility** – For Application Visibility, users will be able to edit which Applications are hidden or visible for all profiles. Users can also set the value as a Default if they want to. This matrix is only for Custom Applications.



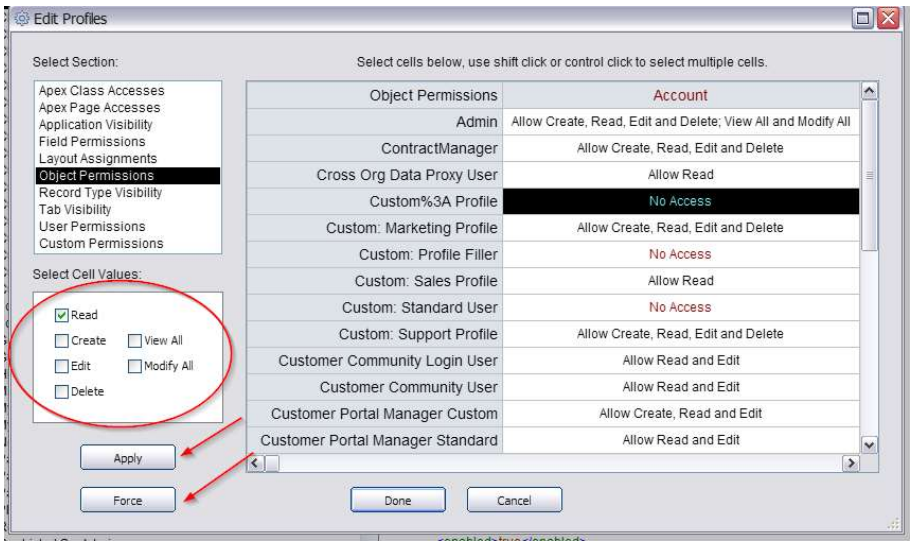
4. **Field Permissions** – For Field Permissions, users will be able to edit fields and dictate whether they are hidden, locked or editable.



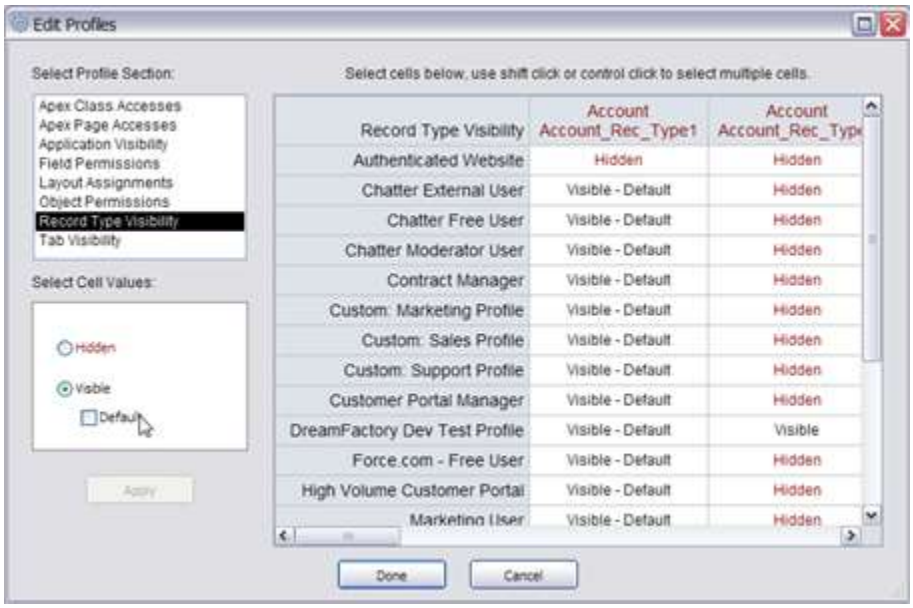
5. **Layout Assignments** – For Layout Assignments, users will be able to edit the existing layout assignments by assigning or un-assigning profiles to certain page layouts.



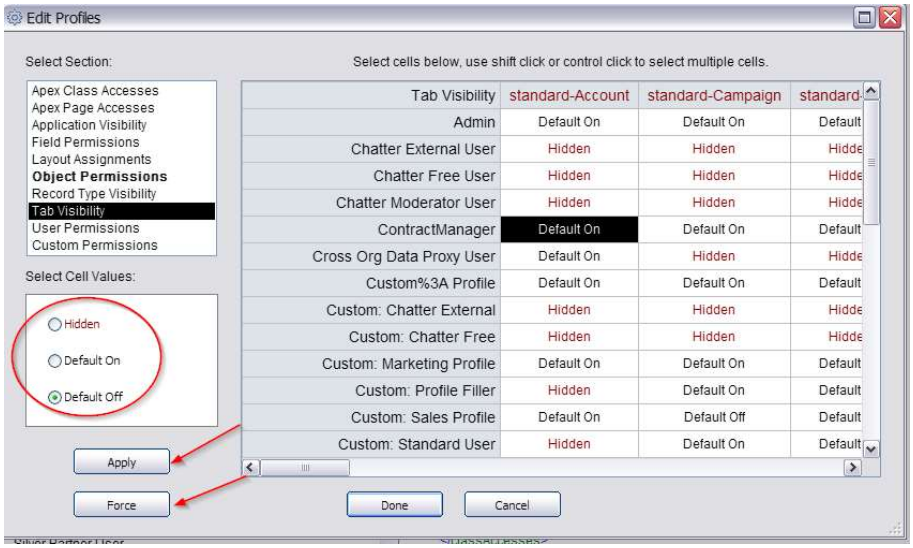
6. **Object Permissions** – For Object Permissions, users will be able to modify the CRUD rights for selected profiles. Users can select from Read, Edit, Create, Delete, View All and Modify All. Select the cell to be changed, and hit Apply. Utilizing the Force button will change all values to "No Acess". These values will be used when the Snapshot is pushed into the destination org. (Refer to the "Utilizing the Force Button" section for additional details).



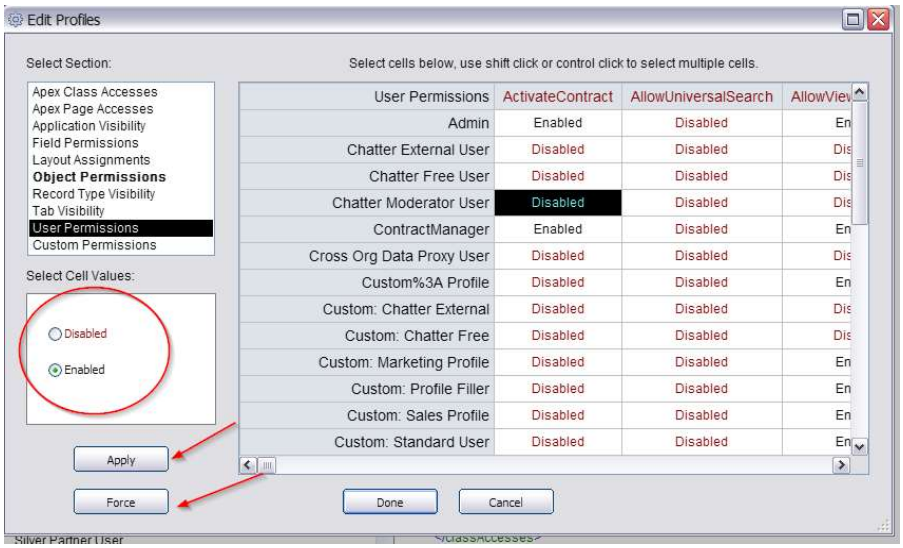
7. **Record Type Visibility** – For Record Type Visibility, users will be able to edit whether a record type is hidden or visible for selected profiles. Users can also dictate a default value if they prefer.



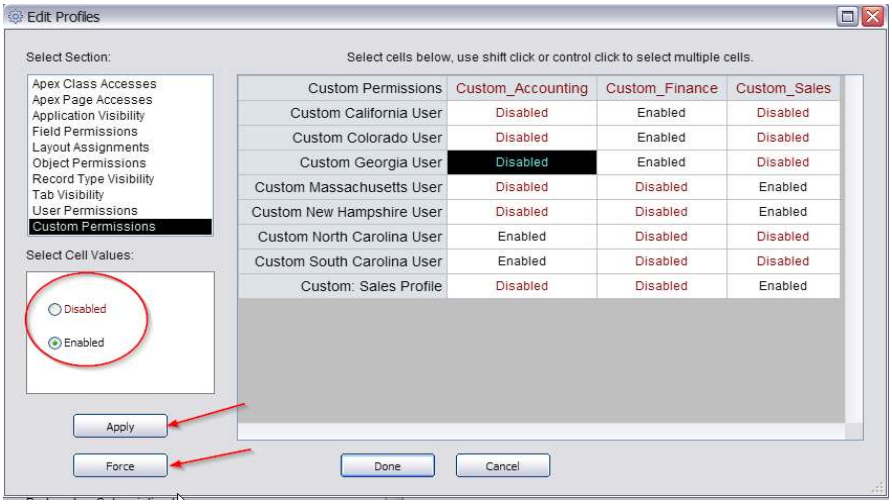
8. **Tab Visibility** – For Tab Visibility, users will be able to edit whether the tab is Hidden, Default On or Default Off for selected profiles. Select the cell to be changed, and hit Apply. Utilizing the Force button will change the selected cells' values to "Hidden." These values will be used when the Snapshot is pushed into the destination org. (Refer to the "Utilizing the Force Button" section for additional details).



9. **User Permissions-** For User Permissions, users will be able to edit whether a record type is Enabled or Disabled for selected profiles. Select the cell to be changed, and hit Apply. Utilizing the Force button will change the selected cell's value to "Hidden". These values will be used when the Snapshot is pushed into the destination org. (Refer to the "Utilizing the Force Button" section for additional details).



10. **Custom Permissions-** For Custom Permissions, users will be able to edit whether a record type is Enabled or Disabled for selected profiles. Select the cell to be changed, and hit Apply. Utilizing the Force button will change the selected cell's value to "Hidden." These values will be used when the Snapshot is pushed into the destination org. (Refer to the "Utilizing the Force Button" section for additional details).



Edit Permission Sets

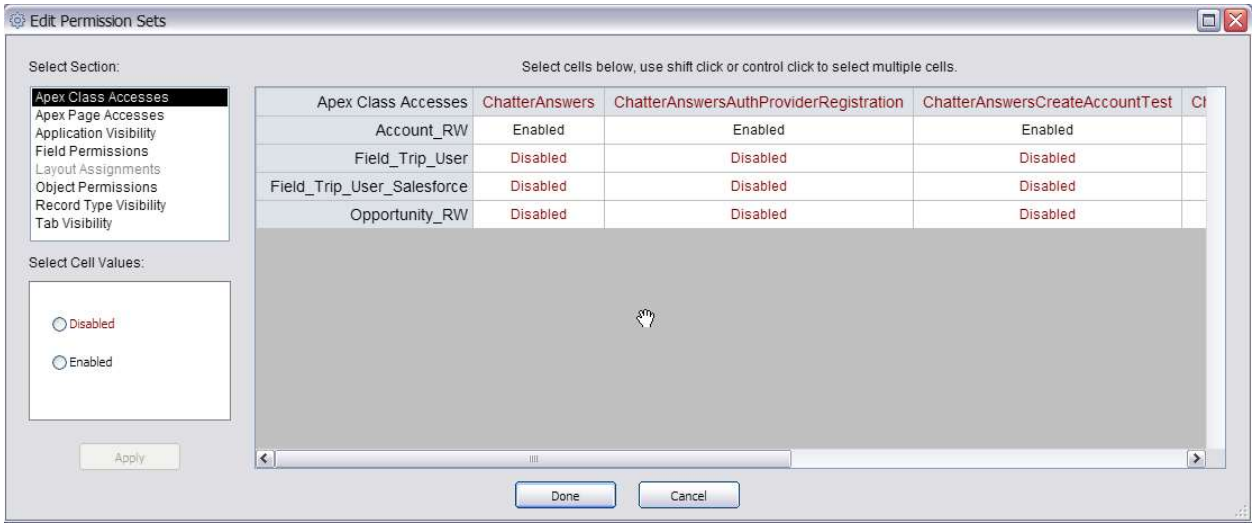
The Edit Permission Sets option allows users to edit permission sets metadata directly within Snapshot. Once selected, users can edit permission sets metadata from any of the following metadata options:

1. Apex Class Accesses
2. Apex Page Accesses
3. Application Visibility
4. Field Permissions
5. Object Permissions
6. Record Type Visibility
7. Tab Visibility
8. User Permissions
9. Custom Permissions

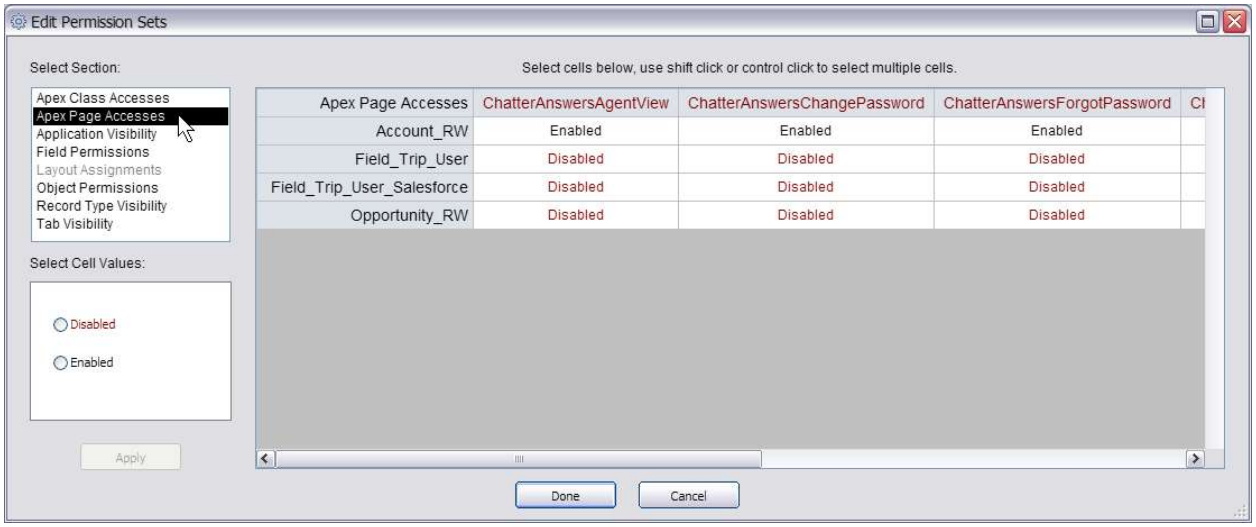
Note:
All updates made to a permission set using the **Edit Permission Set** feature are made to the snapshot and not directly to the Org itself. These changes need to be migrated to the originating Org to implement the changes made. This design decision was made deliberately to ensure users have the ability to compare against a duplicate snapshot to ensure that they have made the right changes. This decision also helps users migrates the changes made to multiple Orgs bringing them all up to par with very little effort.

Below is a description of the editing capabilities for each of the Permission Sets metadata options listed above.

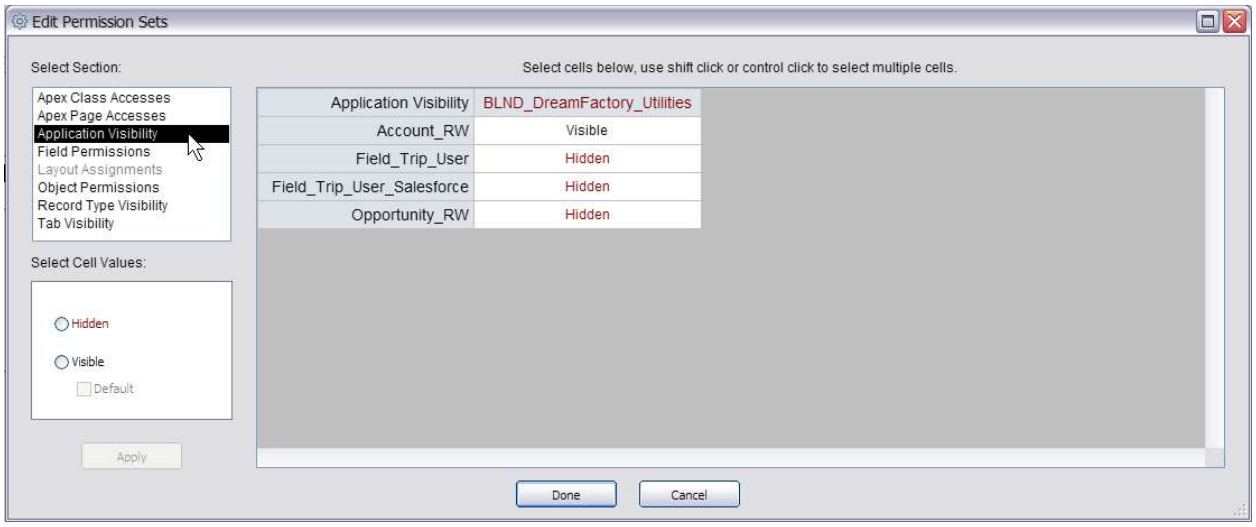
1. **Apex Class Accesses** – For Apex Classes, users will be able to either Disable or Enable the selected Apex Class for the appropriate Permission Set.



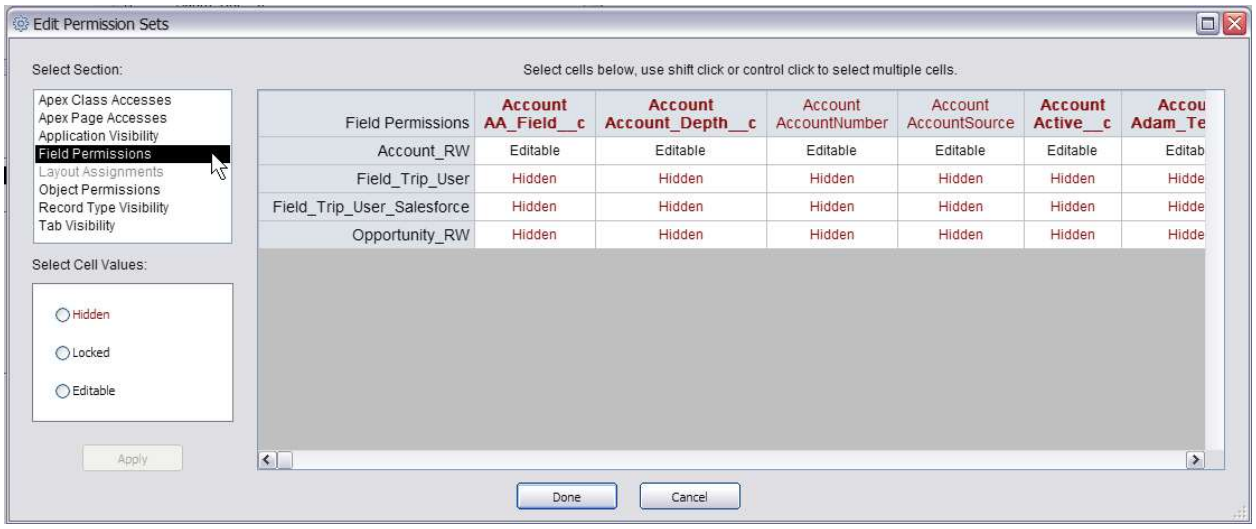
2. **Apex Page Accesses** – For Apex Pages, users will be able to either Disable or Enable the selected Apex Page for the appropriate Permission Set.



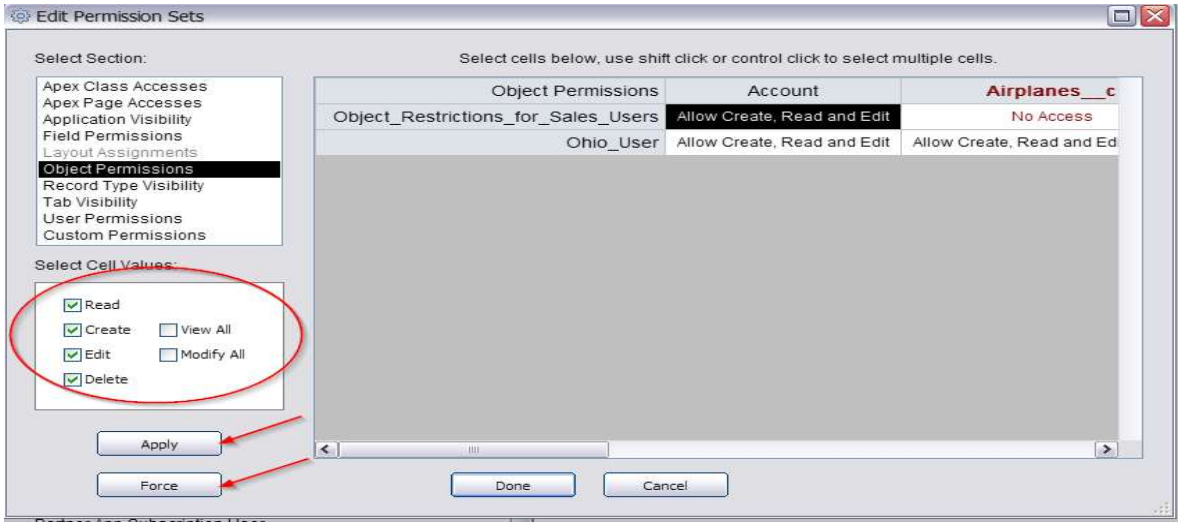
3. **Application Visibility** – For Application Visibility, users will be able to edit which Applications are hidden or visible for all permission sets. Users can also set the value as a Default if they want to. This matrix is only for Custom Applications.



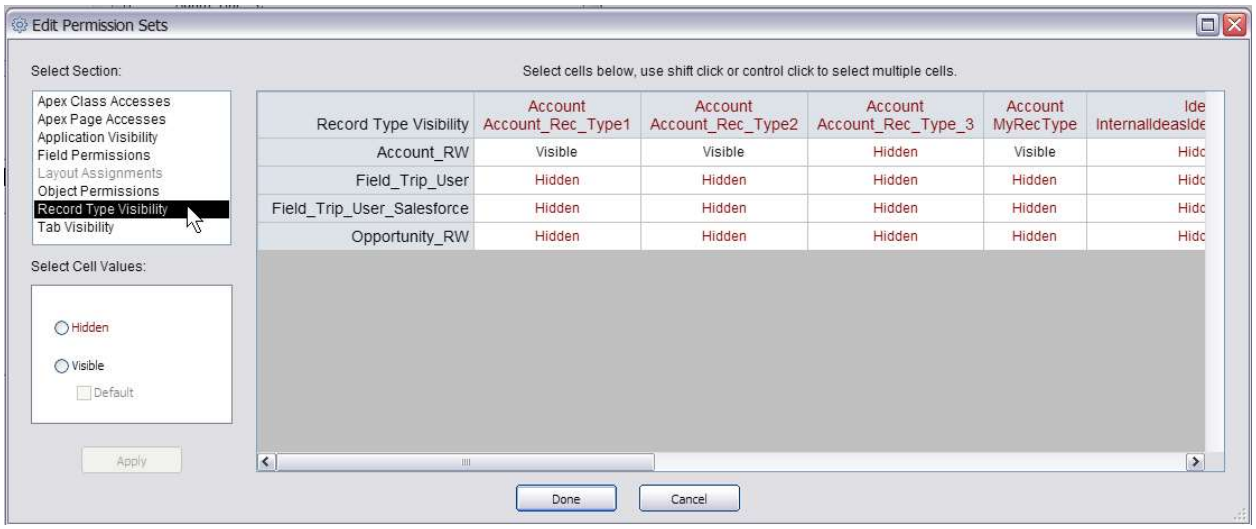
4. **Field Permissions** – For Field Permissions, users will be able to edit fields and dictate whether they are hidden, locked or editable.



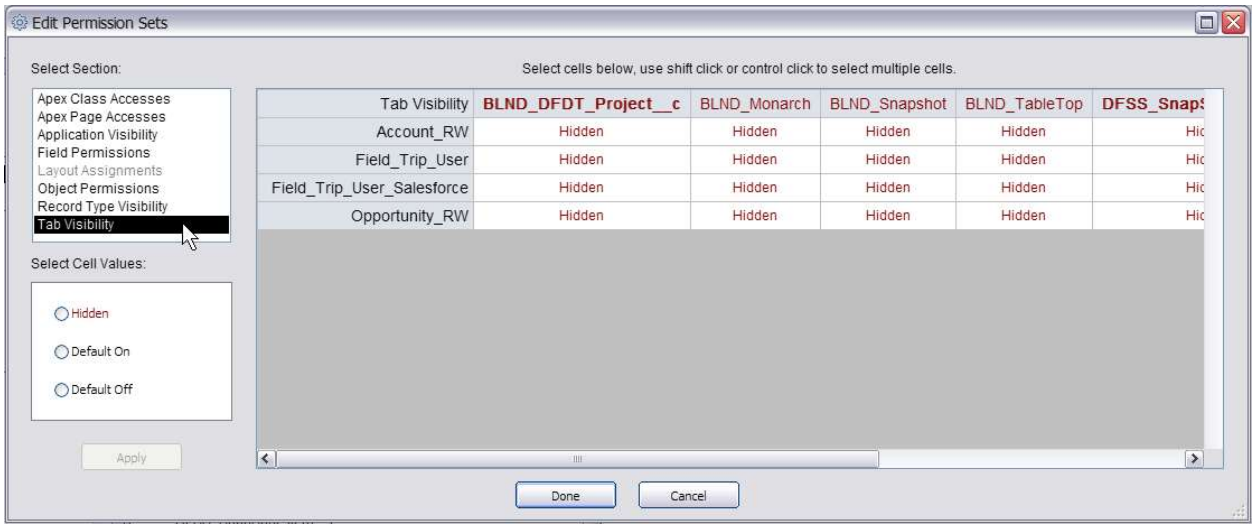
11. **Object Permissions** – For Object Permissions, users will be able to modify the CRUD rights for selected permission sets. Users can select from Read, Edit, Create, Delete, View All and Modify All. Select the cell to be changed, and hit Apply. Utilizing the Force button will change all selected cells to “No Acess”. These values will be used when the Snapshot is pushed into the destination org. (Refer to the “Utilizing the Force Button” section for additional details).



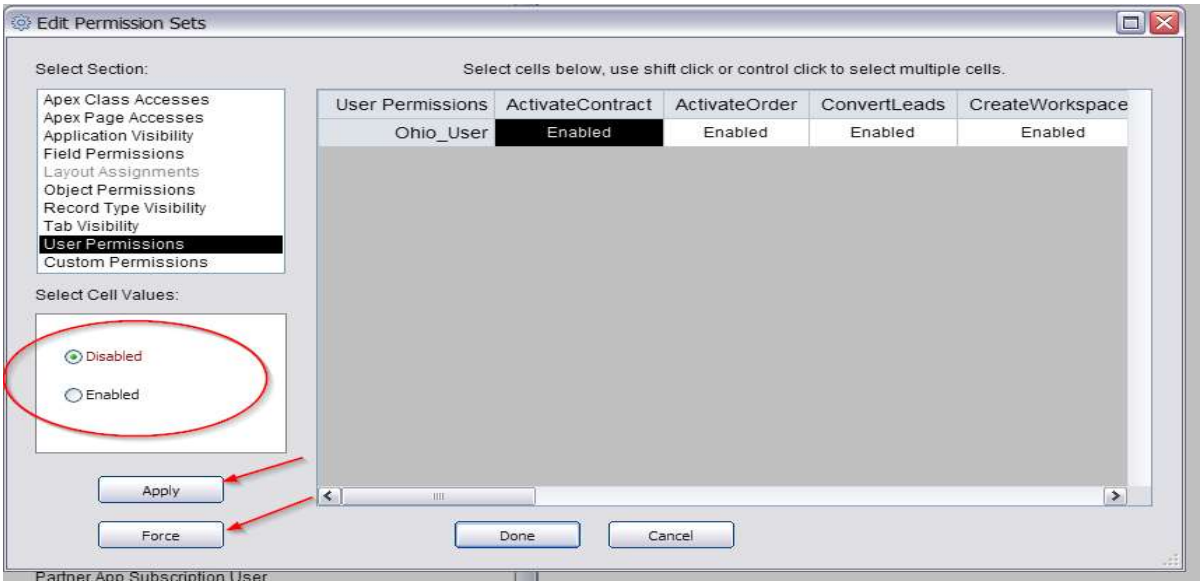
5. **Record Type Visibility** – For Record Type Visibility, users will be able to edit whether a record type is hidden or visible for selected permission sets. Users can also dictate a default value if they want to.



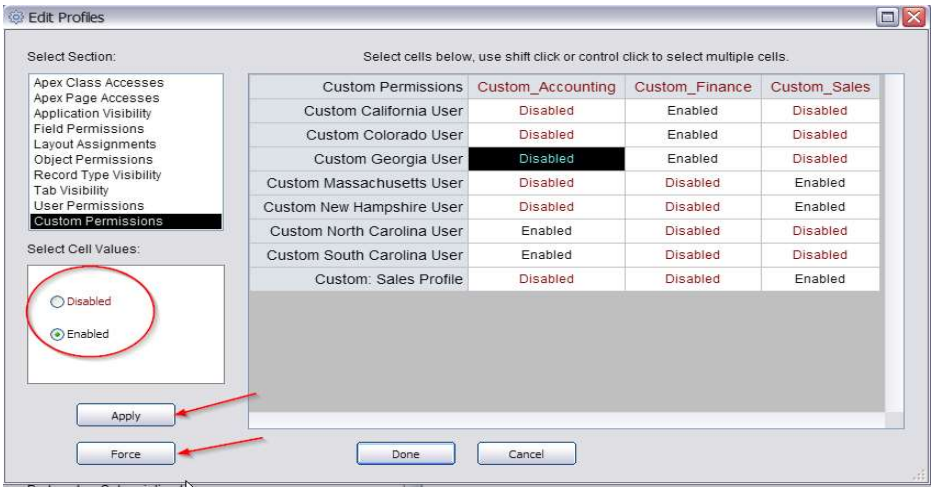
6. **Tab Visibility** – For Tab Visibility, users will be able to edit whether the tab is Hidden, Default On or, Default Off for selected permission sets. Utilizing the Force button will change all selected cells to “No Acess”. These values will be used when the Snapshot is pushed into the destination org. (Refer to the “Utilizing the Force Button” section for additional details).



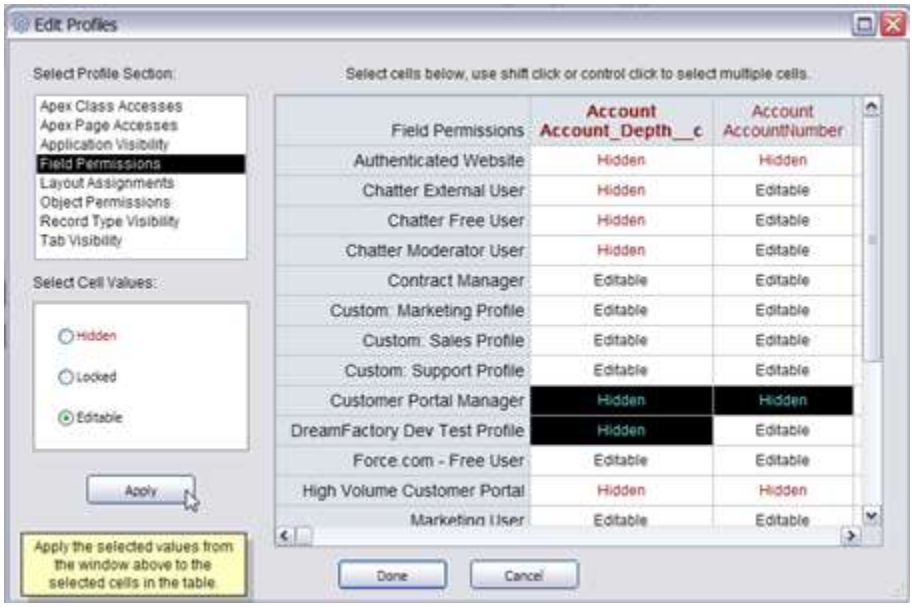
7. **User Permissions--** For Record Type Visibility, users will be able to edit whether a record type is Enabled or Disabled for selected permission sets. Select the cell to be changed, and hit Apply. Utilizing the Force button will change the selected cell's value to "Hidden". These values will be used when the Snapshot is pushed into the destination org. (Refer to the "Utilizing the Force Button" section for additional details).

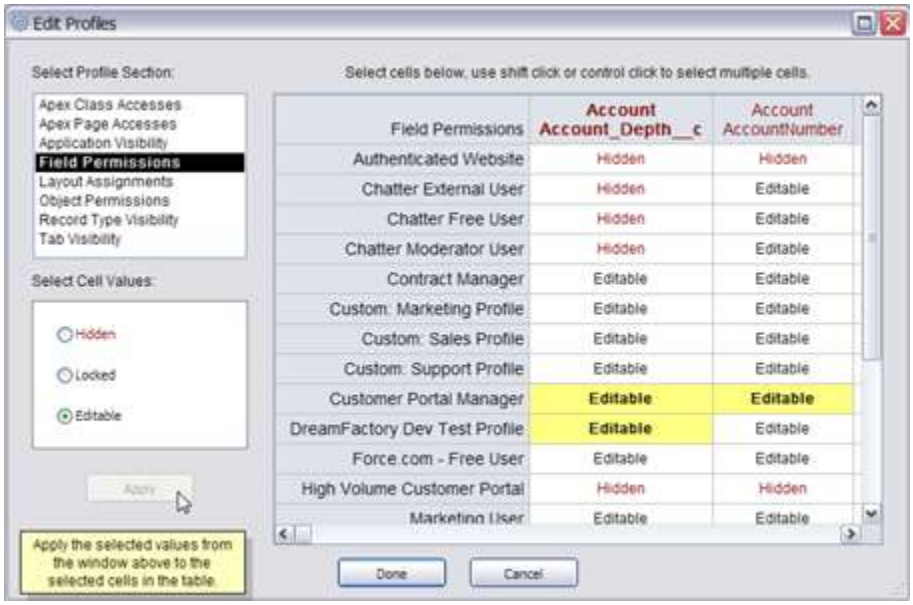


8. **Custom Permissions--** To make a change, the user must select the profiles or permission set and values that they want to change. The selected values will be highlighted in black. Selecting the row or column header selects the whole row or column. You can select multiple items by holding down the Ctrl or Shift keys. (Refer to the "Utilizing the Force Button" section for additional details).



Once an user makes a change, they must click the **Apply** button to apply the temporary changes. The metadata that was changed will be highlighted. Changed items show up with a yellow highlighted cell. These cells stay highlighted till you click **Done** or **Cancel** buttons.



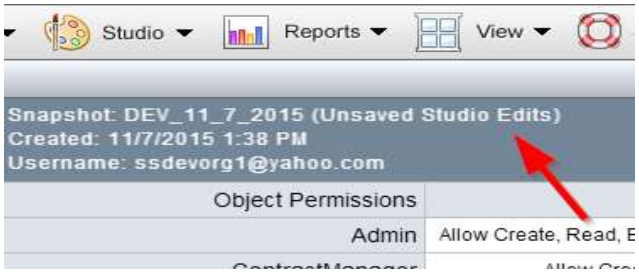


Once finished making all edits, all user has to do is simply click the **Done** button which will write the changes back to the snapshot that they are working with. Selecting the **Cancel** button discards all changes in the dialog.

If an edit has been made, the snapshot that the changes were made on will be bolded in the **Select Asset Snapshot** box. If the user hovers over the selected snapshot, they can see that there are unsaved Studio edits in the yellow dialog box. These edits can be used for deployment but are not persisted.

All changes made in either the Edit Object Fields or the Edit Profiles or Edit Permission Set options are temporarily made to the selected Snapshot. The user has the ability to either save the changes made or clear all changes.

If changes are pending, it is noted on the tab next the the snapshot name and date.



To save these changes, the user must click on the **Studio** menu and select **Save All Changes…** before exiting Snapshot. Users can also discard all changes using the **Clear All Changes** … feature.

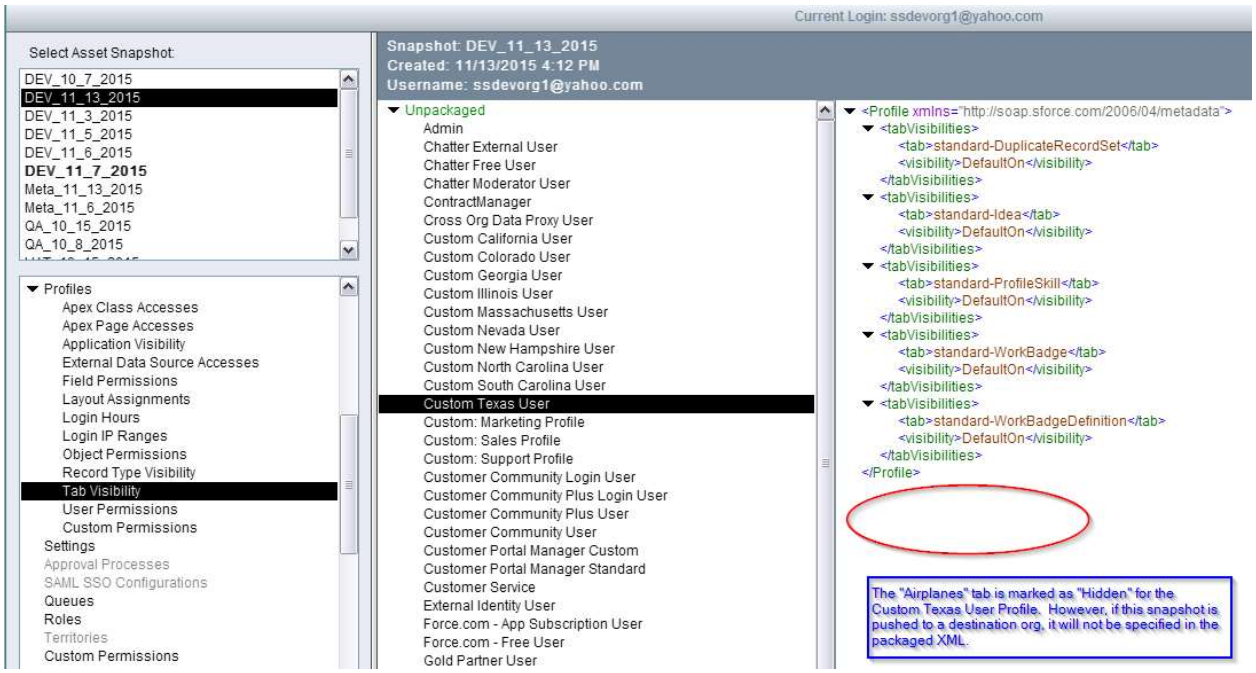
Note:
Please remember that all changes made or discarded affect only the snapshot on the local machine and does not affect the Org that the snapshot was created from. To implement these changes on the Org, you will need to push these changes to the originating Org using the Push Assets feature.

Utilizing the Force Button

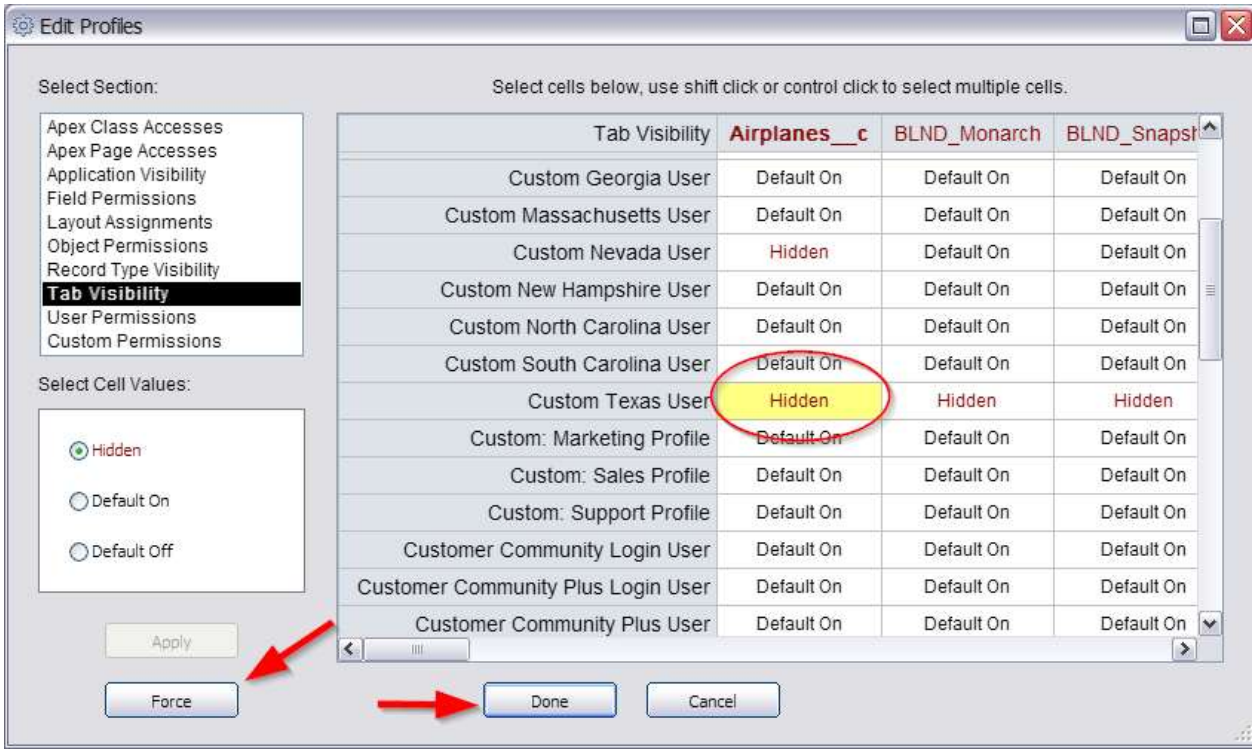
The "Force" button may be used when editing the Object Permissions, Tab Visibility, User Permissions, and Custom Permissions on Profiles and Permission Sets. By selecting this button, the SnapShot user will change the value on an Object to "No Access" for the selected Profile or Permission Set. For Tab Visibility, the force button will change the value of the Tab to "Hidden." For User Permissions, and Custom Permissions the selected value will be changed to "Disabled."

The Force button is designed to "force" the asset, and the value now associated with it, into the XML to be executed in a push. For example, If a snapshot is taken that includes an Object Permission, Tab, User Permission, or Custom Permission with the respective value of "No Access," "Hidden," or "Disabled," the XML captured will not display the asset. This limit of the Salesforce metadata API could create a problem during a profile push into a destination org. If the destination org has the same tab, and has a default setting for that tab as "Visible," for example, the profile could possibly inherit that value during the push. This is corrected with the Force button, which ensures that the XML is packaged correctly so the asset, and its value for the Profile, and or, Permission Set are pushed into the destination org.

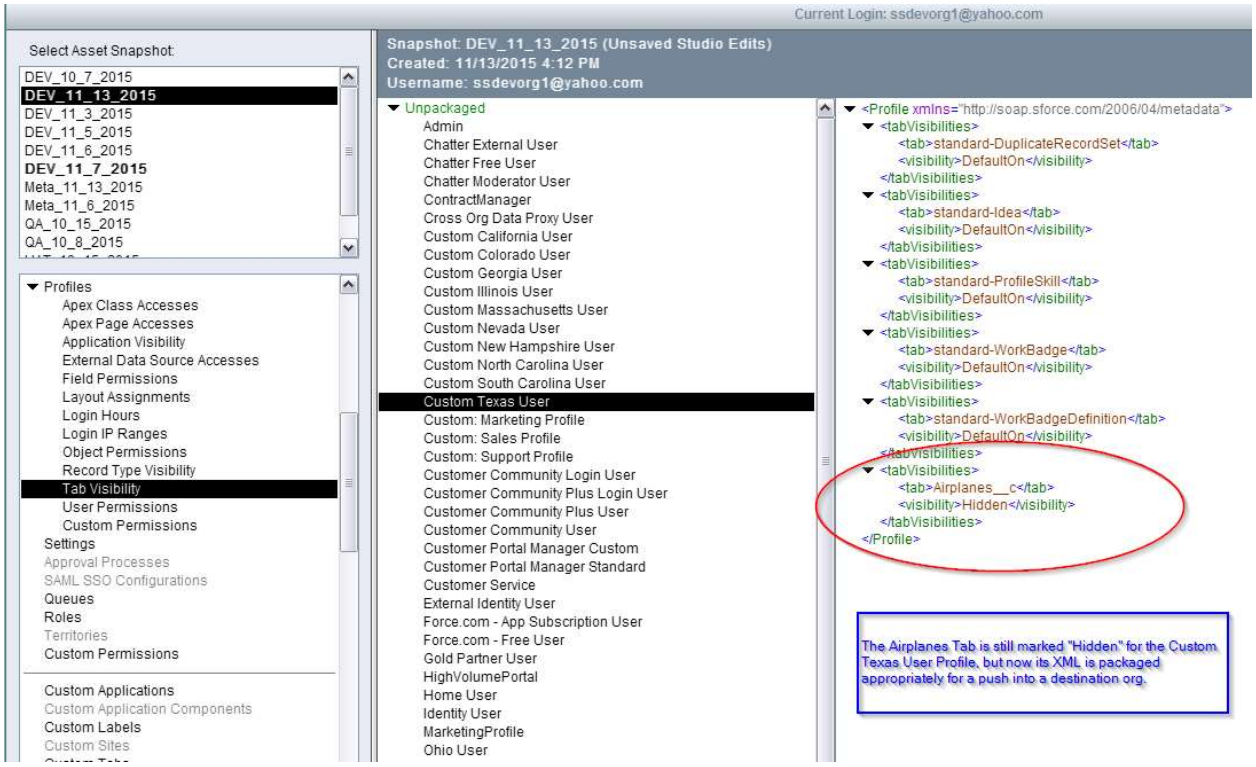
In the snapshot below, the selected profile does not have visibility to the Airplanes Tab. A limit of the Salesforce metadata API omits the entire tab from the snapshot and does not reference it as "hidden."



By editing the profile, the SnapShot user may select to edit tab visibility for the Airplanes tab. Clicking "Force" will force the value to "Hidden," as shown below.



Both the tab, and the selected value of "Hidden," are now visible in the XML as shown below, and will ensure that it is pushed into the destination org.



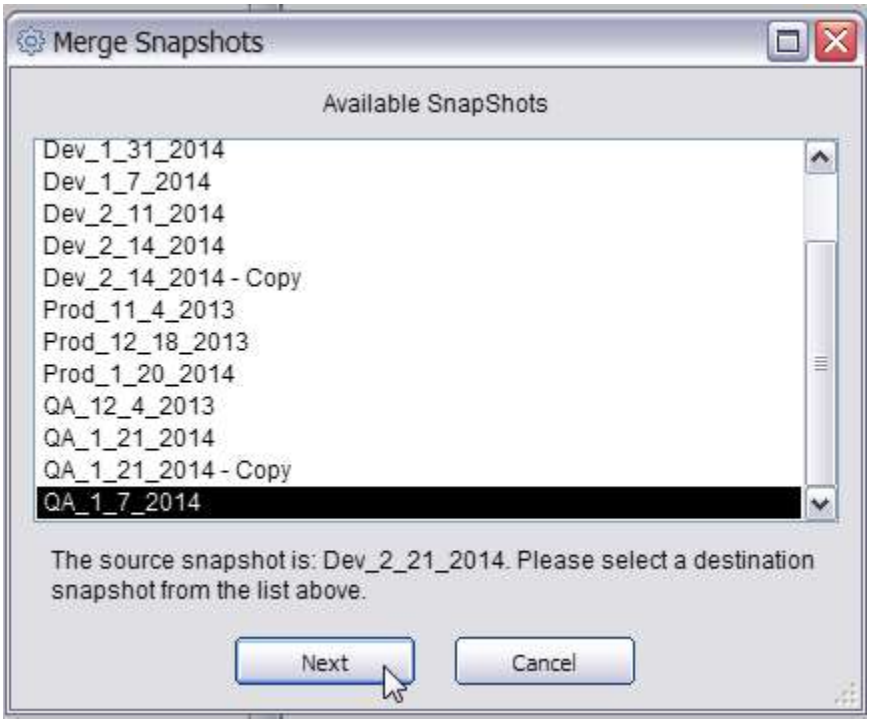
Merge Snapshots

You can merge individual metadata assets already backed up in snapshots using the **Merge Snapshot** feature. For example, this is a useful feature when you have parallel development tracks and you want to "bring back" production deployments or update your development Org without losing progress already made. This includes the capability to merge picklist values without editing metadata XML directly.

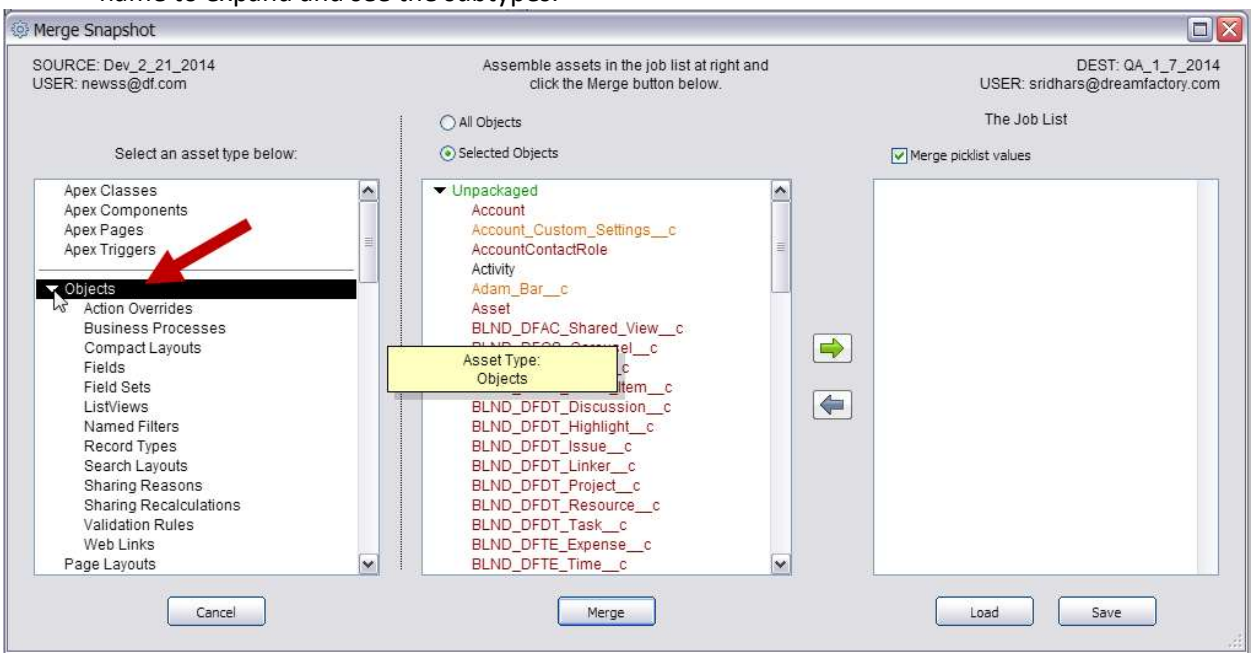
Here are the steps to merge snapshots:

1. Select the source snapshot.
2. Click on **Studio** and then choose the **Merge Snapshots…** command. This pops open the **Merge Snapshot** dialog with a list of destination snapshots.

3. Select the destination snapshot (the snapshot that you want to update) and click **Next**.

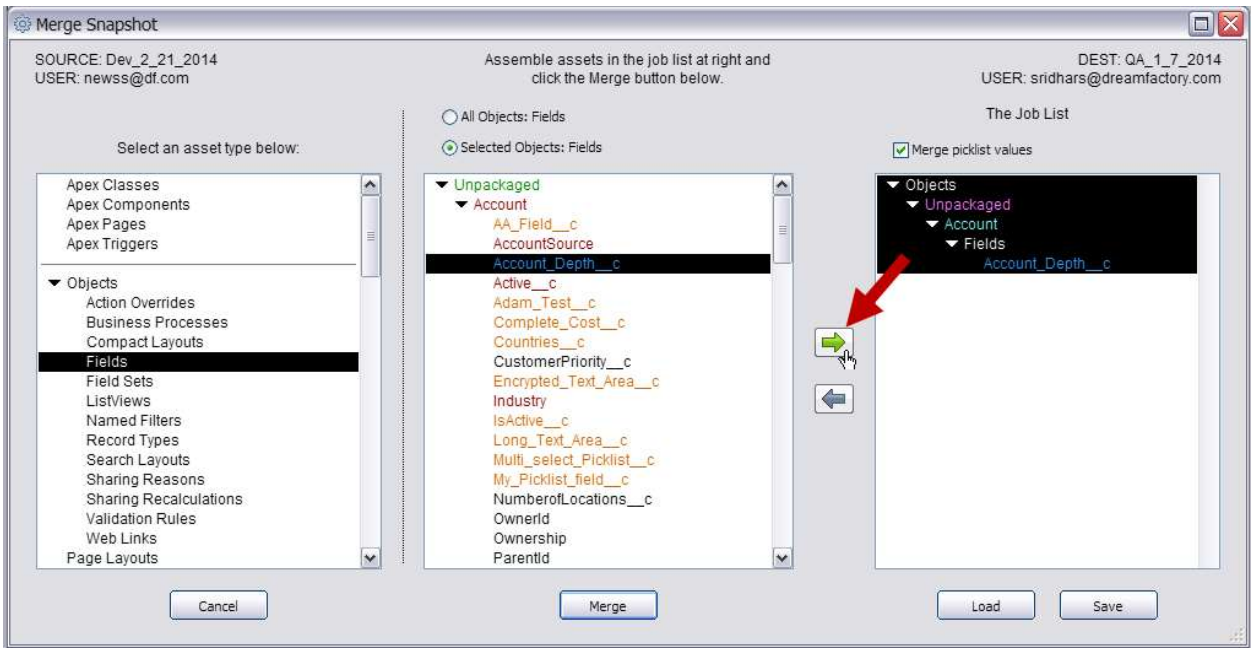


4. Clicking **Next** brings up the Merge Snapshot dialog. This dialog looks similar to the **Push Assets** wizard dialog. From the metadata type list on the left hand side, select the metadata asset that you want to merge. If available, you can also click on the arrow to the left of the metadata type name to expand and see the subtypes.

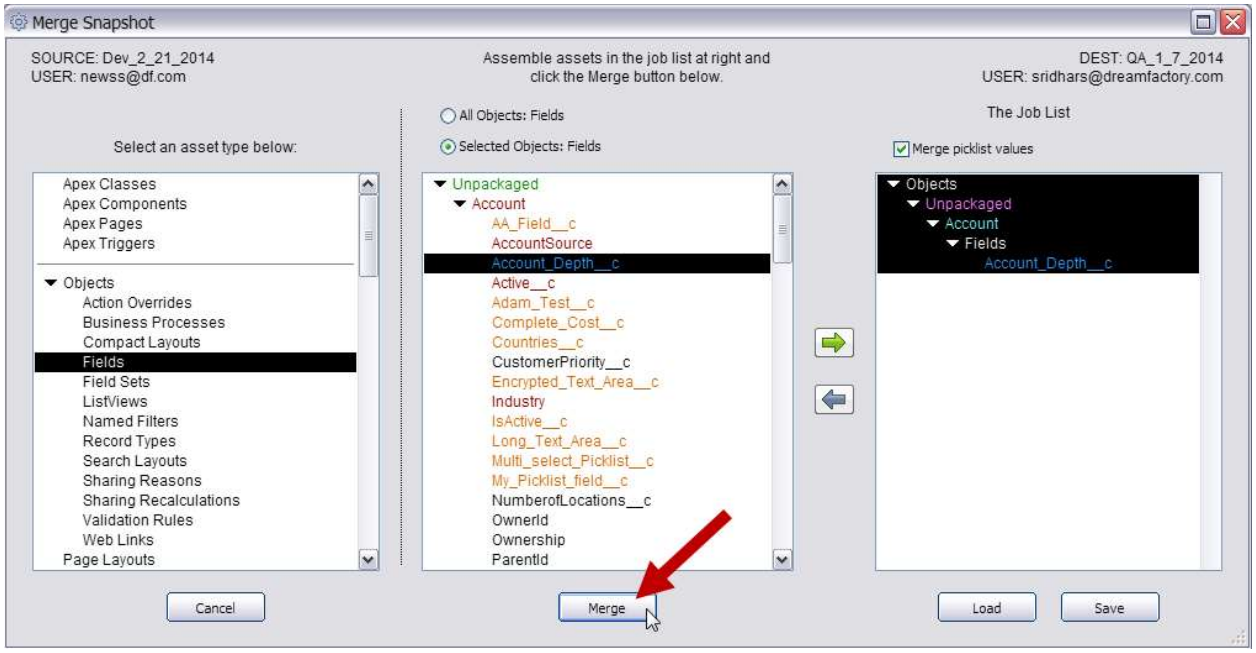


5. Select the metadata asset from the middle column and add it to the **Job List** using the green arrow between the middle and right hand side columns. You can also select sub assets by selecting a sub asset type in the left column and expanding the metadata asset in the middle

column (using the arrow provided to the right of the metadata asset) to reveal and select the sub-assets.



6. Once you have added all the items to merge into the destination snapshot, click the **Merge** button to execute the merge. This will close the **Merge SnapShot** dialog.



Note

The assets that are selected in the Job List are inserted into the destination snapshot – any existing asset is replaced with the metadata from the source and new assets are inserted into the destination. The only exception to the rule is picklist fields. You can choose to merge (retain existing and insert new)

values into the destination snapshot. To merge the picklist values, check the **Merge picklist values** checkbox provided right above the Job List.

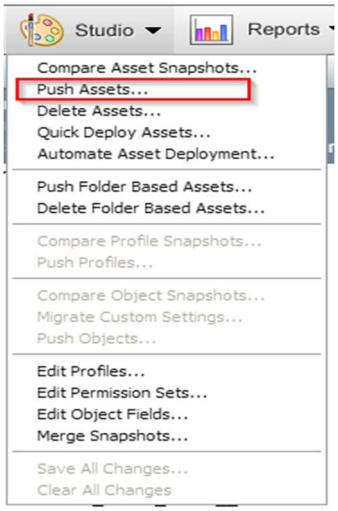
You can also save the Job List using the **Load** and **Save** buttons provided below the **Job List**.

Push Assets

The Push Assets feature allows you to select your desired assets and then deploy the selected assets (in the Job List) into the destination Org.

The Push Asset Snapshot is broken into convenient steps allowing you to easily select individual or multiple Assets. The Push Asset Snapshot allows you to mix and match Asset Types. In other words, you can select some Objects, and then add some Apex Triggers, Page Layouts, and Profiles and so on. The Push Asset Snapshot also contains a Job List where you can create a list of all of the Assets that you want to deploy and then simply push the entire list. The Push Asset Snapshot feature offers a number of different ways for you to create your job list that are described below. Users can also push individual subset elements from the Asset Push dialog if they want.

To access the Asset Snapshot, click on the **Studio** menu and select the **Push Assets…** command. You will need to select a snapshot from the **Select Asset Snapshot…** box from the left before invoking **Push Assets…** command.

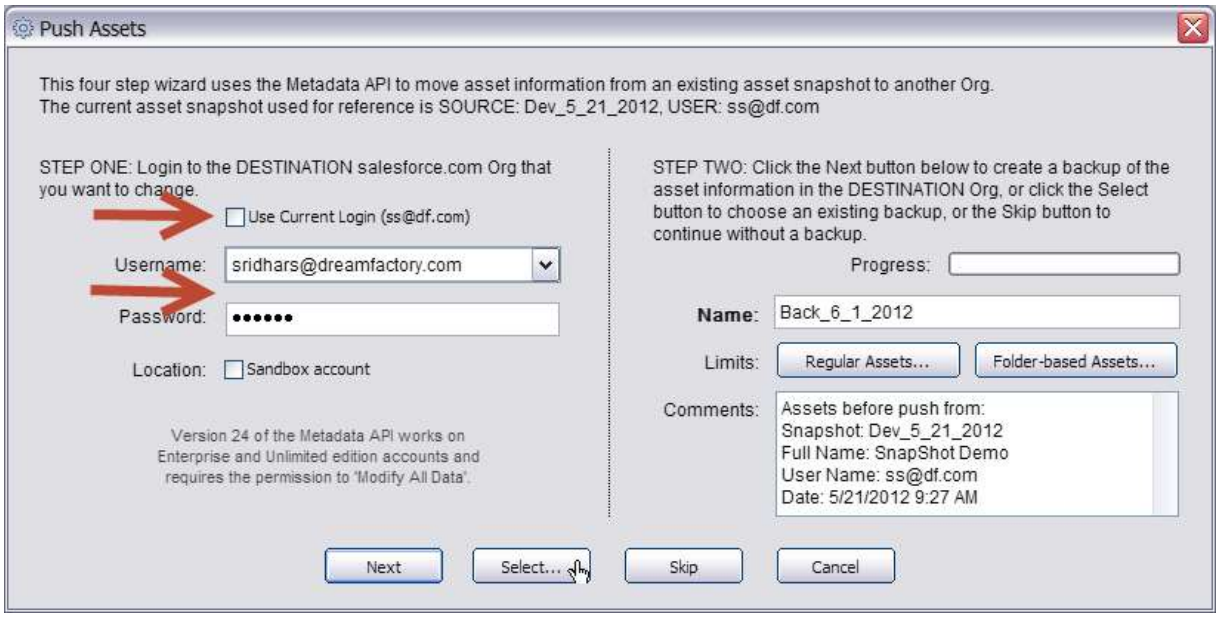


Note:
Push Assets… allows you to execute additive merges to your Org. To execute destructive changes, please use the **Delete Assets…** feature. They have similar cadence but the menu items have been separated out to reduce mistakes.

Assets like Apex Classes, Pages, Triggers etc. get replaced. Picklist values that are not part of the source are deactivated.

Once selected, the Push Assets three step wizard will appear. Below are step by step instructions on how to use the Push Assets feature.

1. Log into the Destination Org.



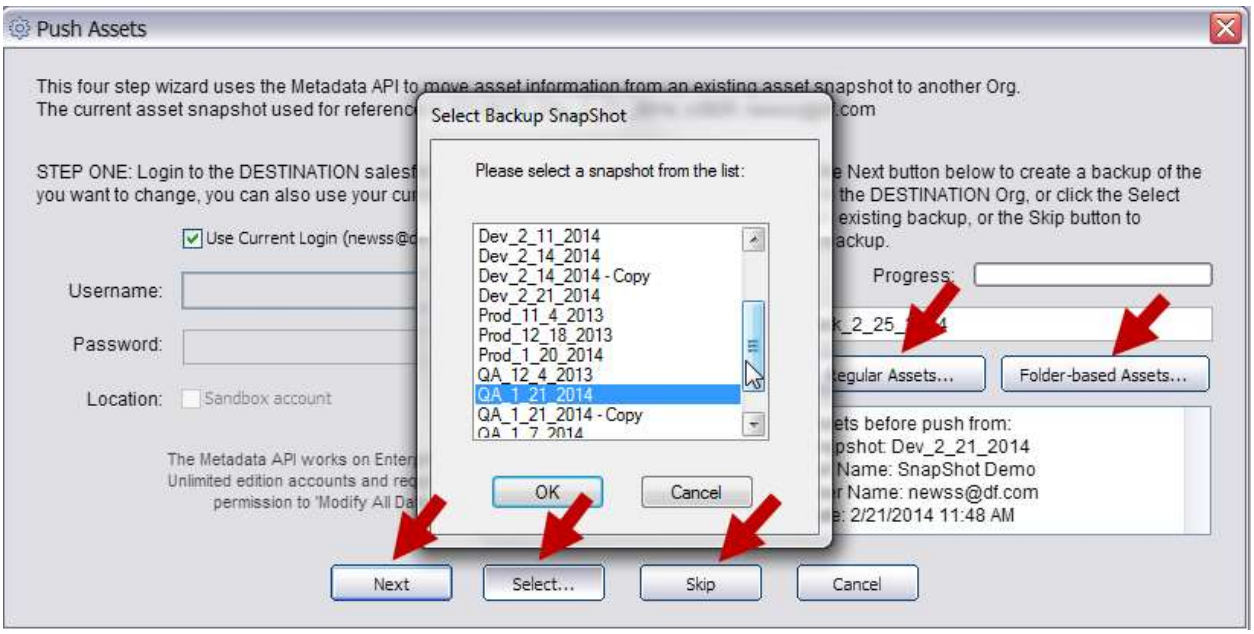
Note:
If you are logging into a sandbox, please check the check box next to Sandbox Account on the login screen.

You can also simply choose the already logged in Org by clicking the **Use Current Login (<username>)** checkbox.

2. Next, you can choose to create a backup Asset Snapshot of the destination Org (by clicking the **Next** button), or selecting an existing snapshot (by clicking the **Select** button), or skip the backup creation (by clicking the **Skip** button) and proceed to Step 3. Clicking the **Select** button will open the **Select Backup SnapShot** dialog with all the snapshots on your machine listed.

   Creating or selecting a backup Snapshot of the destination Org allows you to roll back any unwanted changes. It also allows you to see the differences between the Org before you select the deployment items.

   In addition, you also have the ability to limit the contents of the backup Asset Snapshot by simply clicking on the **Regular Assets…** and/ or the **Folder-based Assets…** button(s) and selecting the Assets you want to include. If you decide to create or choose a backup snapshot of the destination Org, any differences will be highlighted in red (updates) and orange (new in source) in the second column.

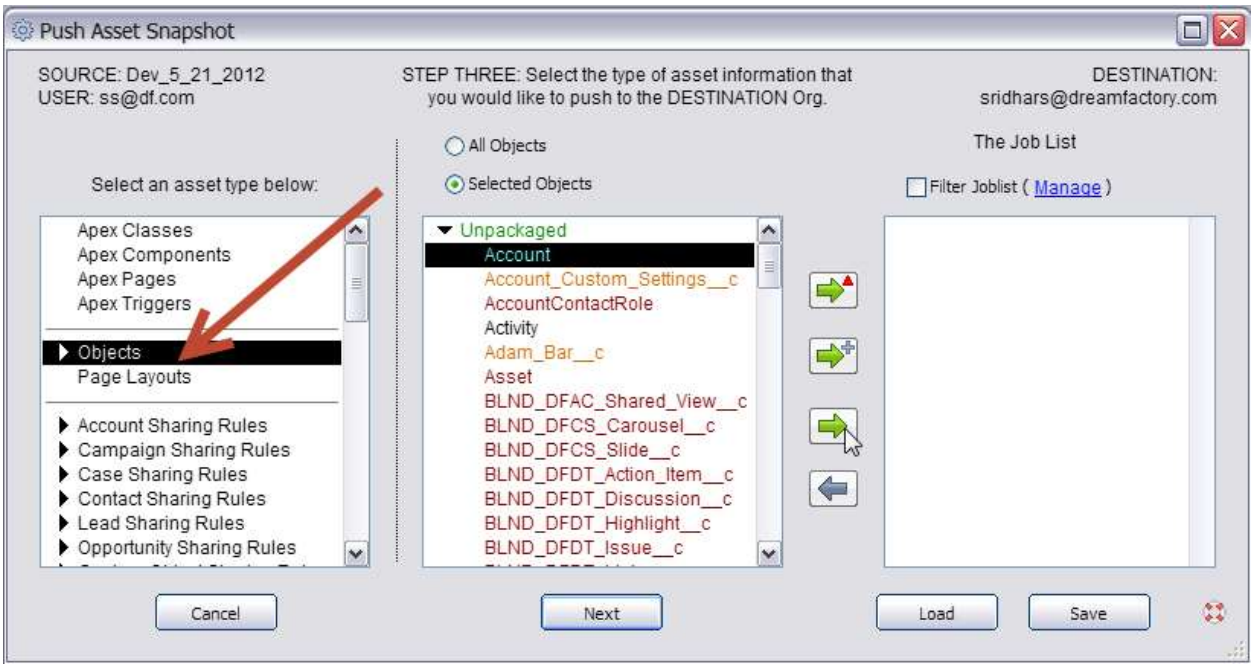


3. Once the Push Asset Snapshot dialog appears, you will notice that the dialog has been divided into the following three columns:

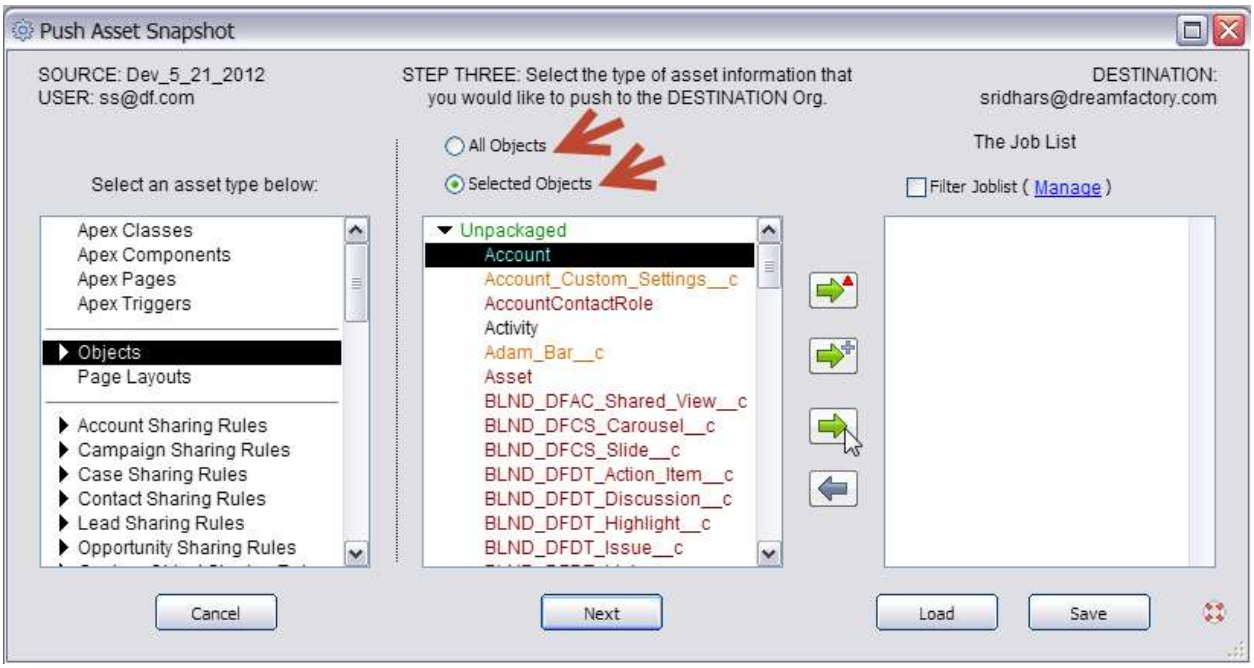
    - **Select asset below** – The first columns is a list of all of the Asset Types that can be deployed.
    - **Select All or Selected Assets** – The second column allows you to choose to deploy either **All** or a **Selected Assets** of that Asset Type. If you choose the **Selected Assets**, you are allowed to select one or more Assets (use Ctrl and Shift to multi-select Assets) to add to the Job List.
    - **Job List** – The third column is the Job List. The Job List displays the Assets that are going to be deployed as part of the user initiated push. The Job List is described in detail below.

    Below are step by step instructions how to use the Push Asset Snapshot feature.

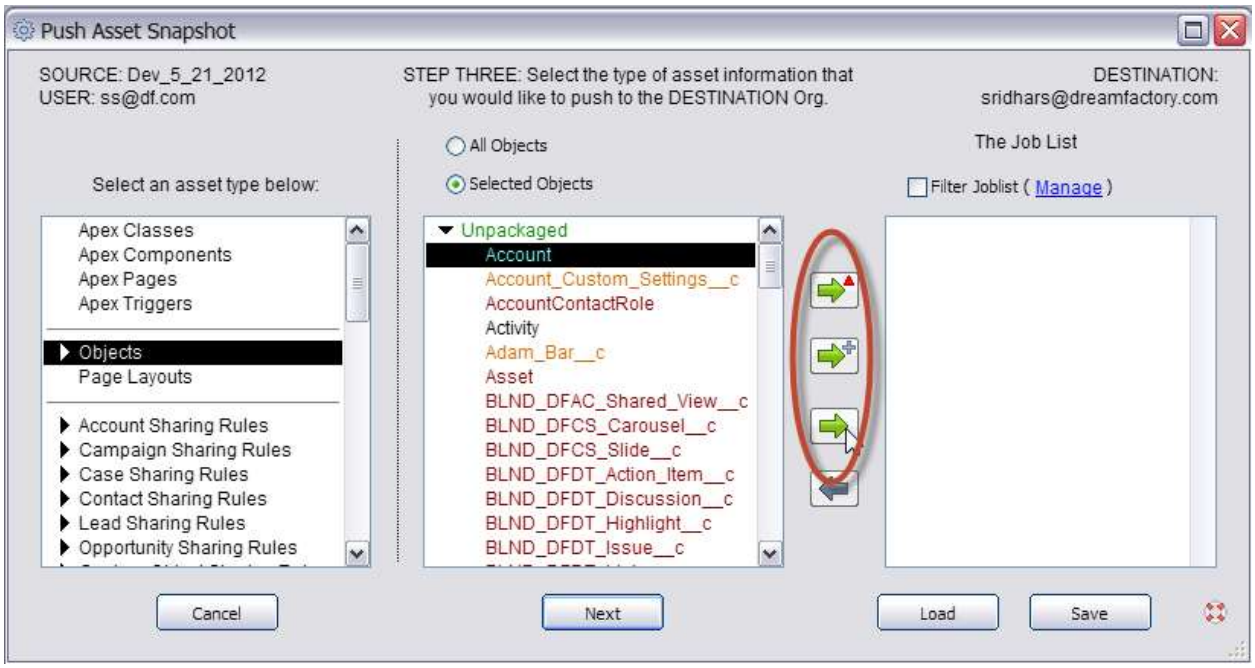
    1. Select the desired asset from the first column



2. Next, choose whether you want to include All or Selected <Assets> from the second column. You can select multiple elements by holding down the Ctrl or Shift keys.



3. Choose the appropriate Select Option to add these assets to the Job List.



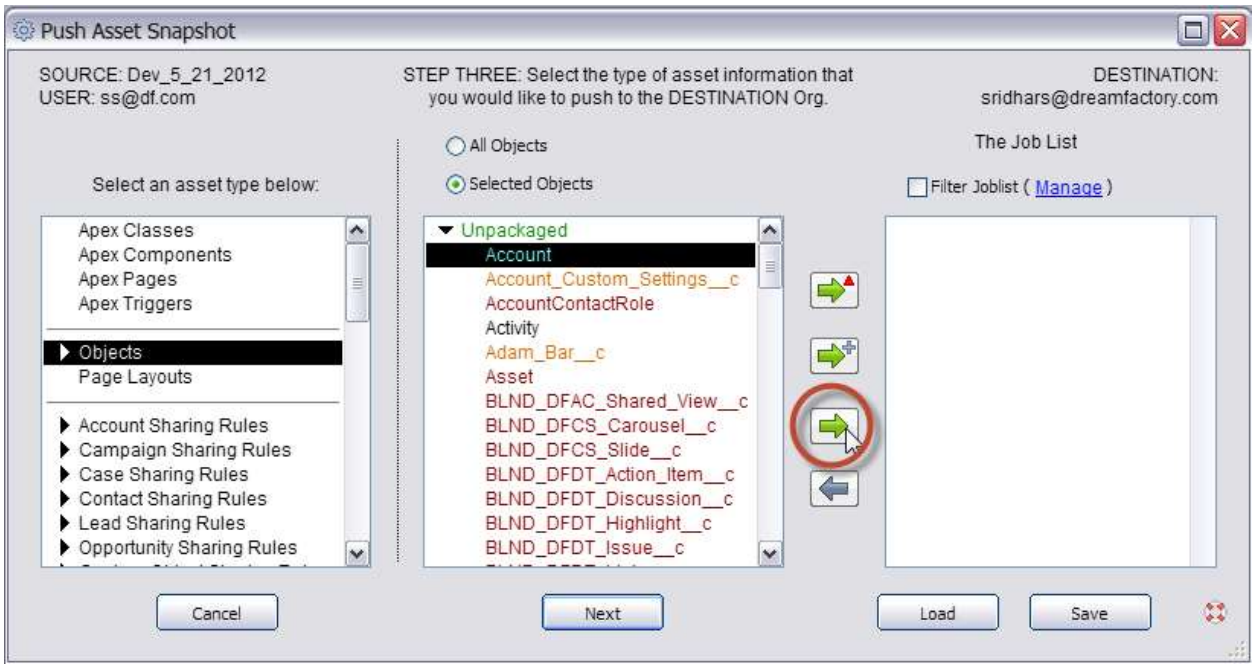
When adding the selected assets to the Job List, the Asset Snapshot provides three options to choose from including:

- Simple Select
- Super Select
- Delta Select

Simple Select

The Simple Select enables you to select assets manually and move them to the Job List. The Simple Select option only moves the selected asset(s) to the Job List.

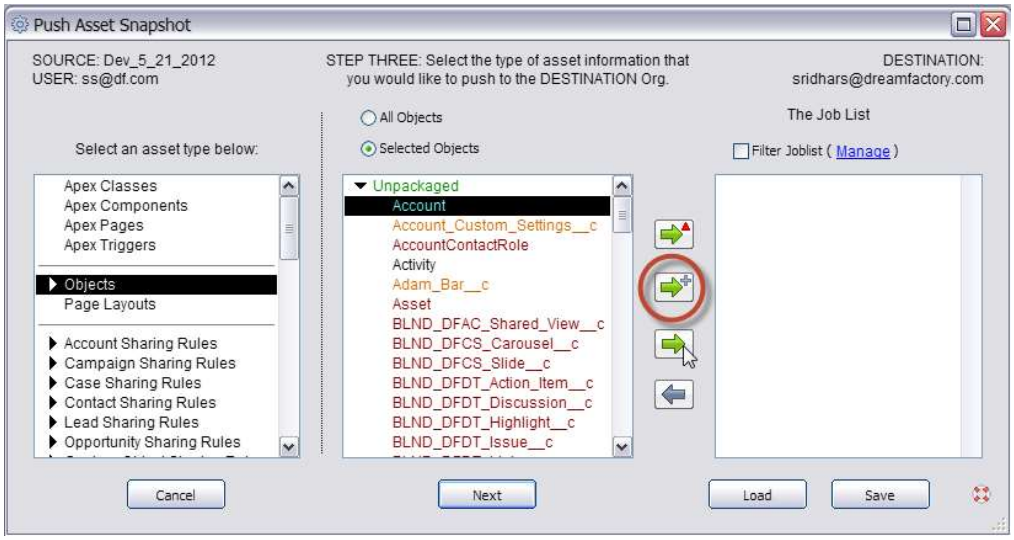
To use the Simple Select option, simply select the desired assets and then click the green arrow to add them to the Job List. Multiple assets can be selected by using the Ctrl and Shift keys.



Super Select

The Super Select enables you to select your desired assets and elements, in addition to a list of all referenced elements to the selected asset. Using the Super Select option will reduce the amount of time it takes to deploy assets, because it allows you to select the assets and all referenced assets simultaneously. It mitigates risk by ensuring that any related assets are not left out.

To use the Super Select option, simply selecting the desired asset(s) and then click the green arrow with the blue plus icon to add them to the Job List. Multiple components in each asset can be selected at a time by using the Ctrl and Shift keys.

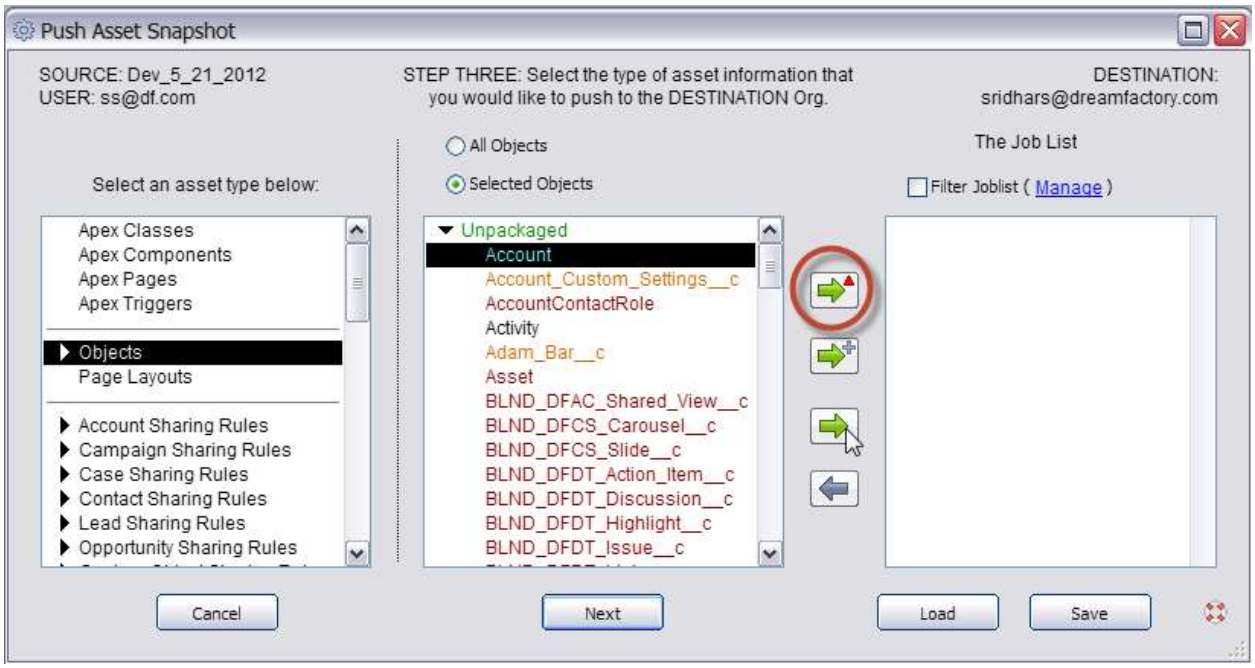


Once you have chosen your desired Asset and component(s) and then clicked on the Super Select button, Snapshot will then begin to compile a list of all of the relationships tied to the selected Asset. A dialog box displaying the Asset being searched will appear in the top left of the Push dialog box. The results of the Super Select will be displayed in the Job List.

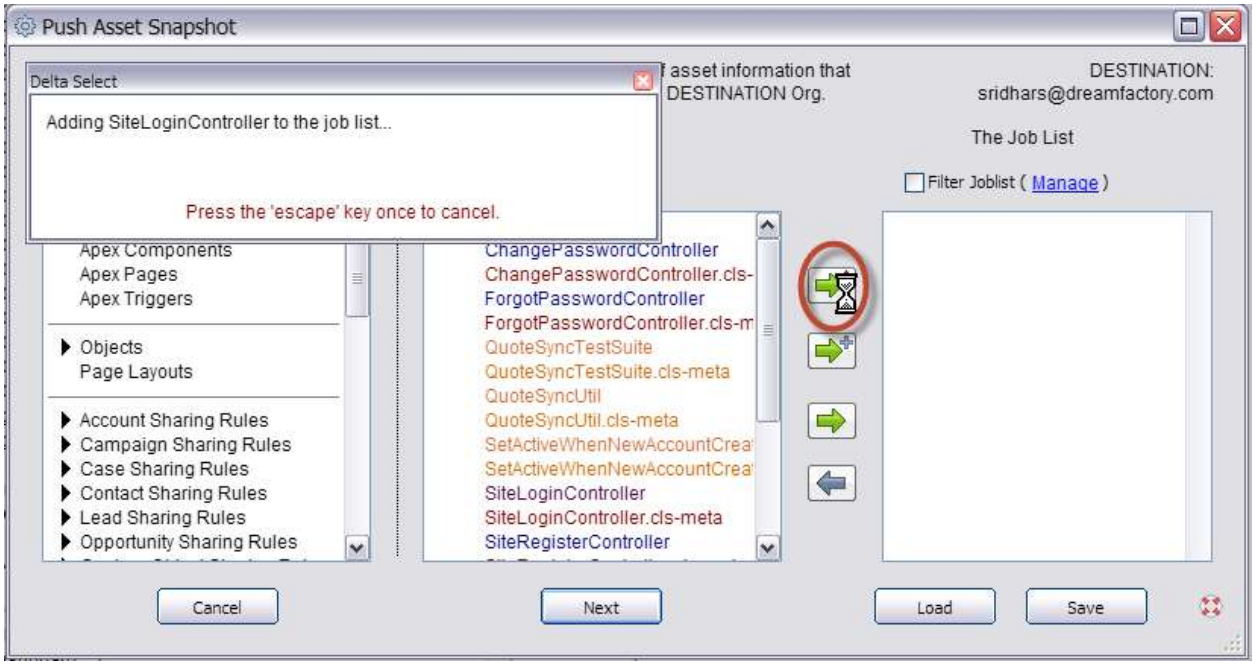
Delta Select

The Delta Select enables you to create a Job List consisting of solely the differences between the two Orgs. Using the Delta Select option will reduce the amount of time it takes to deploy these differences by simply creating a differences only Job List. It mitigates risk by ensuring that any asset that were updated or newly added are not left out.

Note:
The **Delta Select** option can be used only when a backup snapshot was created or selected.



Once the backup Snapshot has completed, the user will see all of the components that have differences displayed in red in the second column. Once the user has chosen their desired Asset and component(s) and then clicked on the Delta Select button, Snapshot will then begin to compile a list of all of the relationships tied to the selected Asset that are different between the two Orgs. A dialog box displaying the Asset being searched will appear in the top left of the Push dialog box. The results of the Delta Select will be displayed in the Job List.



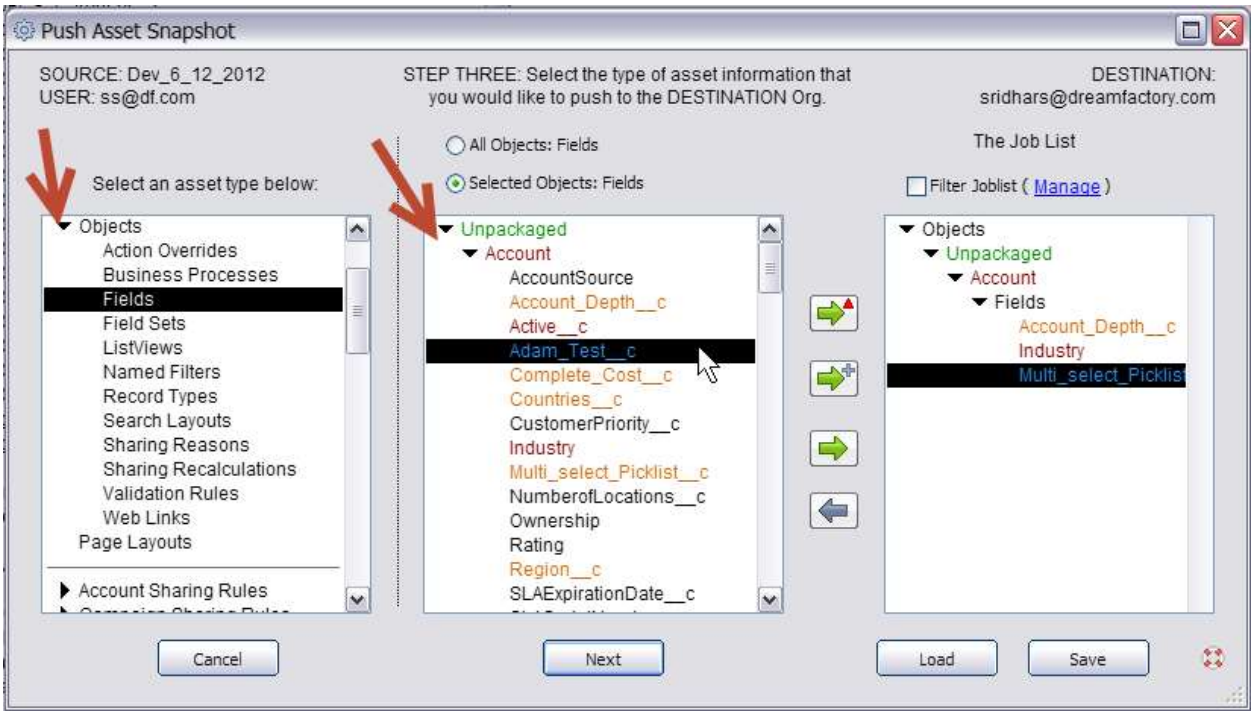
Note:
If you held the Control key down while clicking the **Delta Select** button (Ctrl-click), it will collate fine grain differences instead of selecting high level differences. For example, if there are 3 fields changed in the Account Object, if you clicked **Delta Select** button, it would select the entire Account Object. Instead, if you Ctrl-clicked the **Delta Select** button, it will list only the 3 changed fields in the **Job List**.

Pushing Individual Asset Subset Elements

Users can also push individual subsets and individual subset elements from the Asset Snapshot push dialog. If you want to push individual subset elements, simply follow the steps below:

1. Select the source snapshot and launch **Push Assets…** from **Studio** > **Push Assets…**
2. Log into the destination org.
3. Select or create a backup snapshot.
4. In the **Push Assets Snapshot** dialog, you can do partial deployments on any item that has a little black arrow to the left of the Asset Type listing.

Note:
If you want to deploy the entire asset, you can select the regular item (without drilling down into the asset).



Select the appropriate Asset Type (or sub-Asset) to list the related Assets in the center column.

5. If you selected a sub-Asset Type in the previous step, pick the Asset for which you want to select pieces off of and click on the black arrow to the left of that to expand the Asset. Select the Asset and add it to the Job List using the appropriate Select (Simple, Super and Delta).

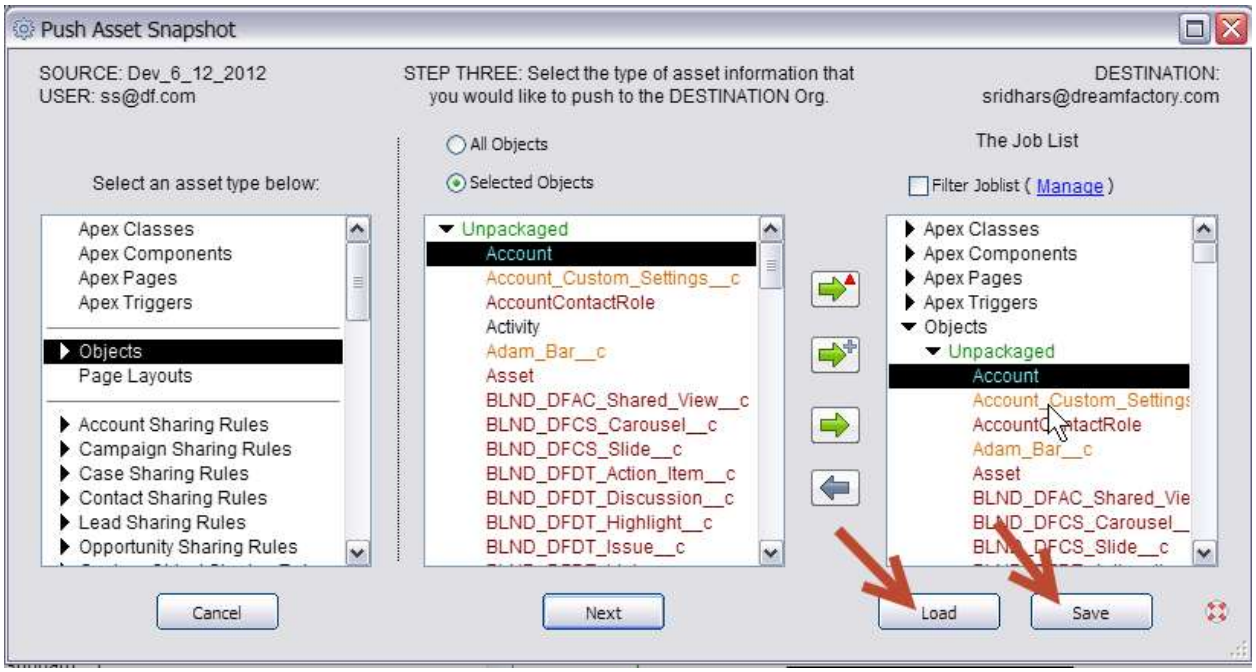
Note:
There is no black arrow displayed for regular Assets.

6. Once you have assembled your Job List, continue with the push following the steps documented later in this document.

Asset Job List

Another key feature of the Push Asset Snapshot is the Job List. The Job List allows you to create a list of all of the assets and elements that you want to deploy and then save it so it can be re-used for another deployment. A typical scenario is when you set the Job List for migrating assets from testing to staging, if you save the Job List, it can be reused when you migrate assets from staging to production. This mitigates the risk of adding unwanted or dropping needed assets to the Job List.

Note:
The Job List also enables the separation of duties between developers and deployment managers. The developers can create and save the Job List to be sent to the deployment managers. The deployment managers can simply Load the Job List and execute the deployment. This is commonly used to satisfy the SOX's separation of duties compliance requirements.

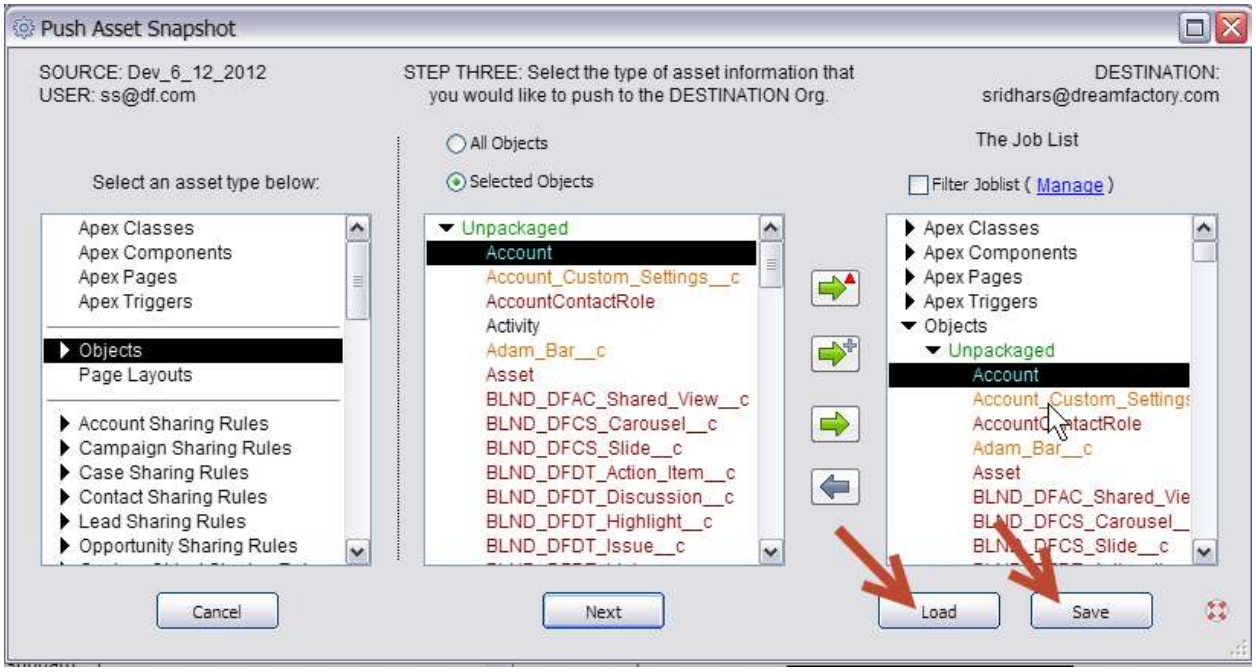


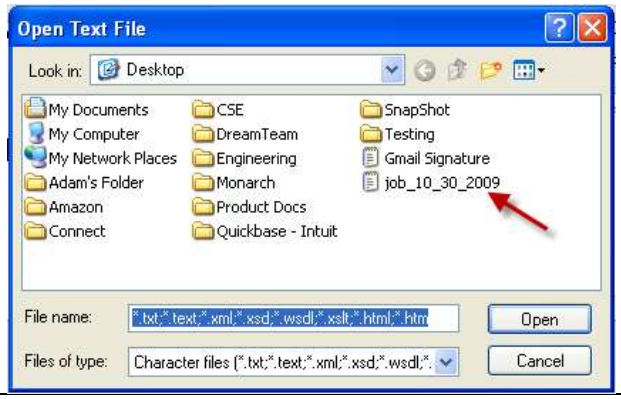
Save your Job List

To save your job list, simply click the **Save** button and **the Save Text File** dialog box will appear. Choose the folder you want to save it in. The job list is saved as a text file and can be stored either on your desktop or in a folder.

Reuse a Job List

When the user wants to reuse the job list, simply click the **Load** button, and the **Open Text File** dialog will appear. Locate the file and then click open and the job list will load back into the Push Asset Snapshot dialog.



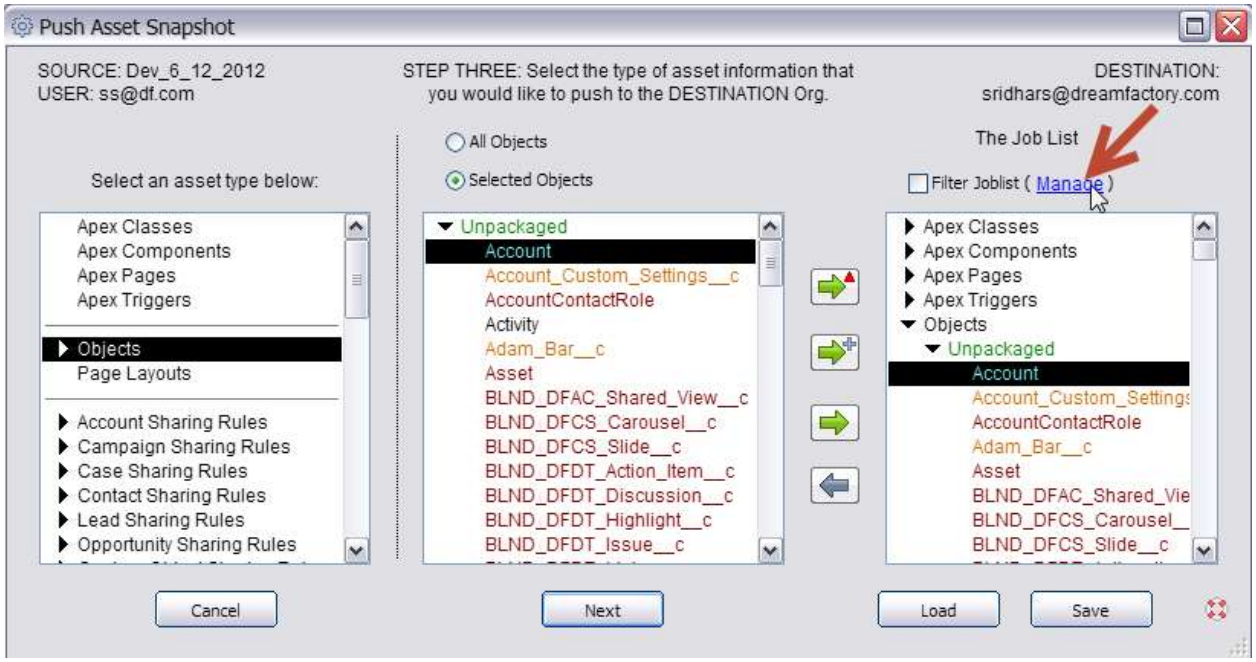


Note:
Assets are displayed alphabetically in the Job List. Snapshot will intelligently push all assets listed in the Job List in the proper order without the user having to organize the assets.

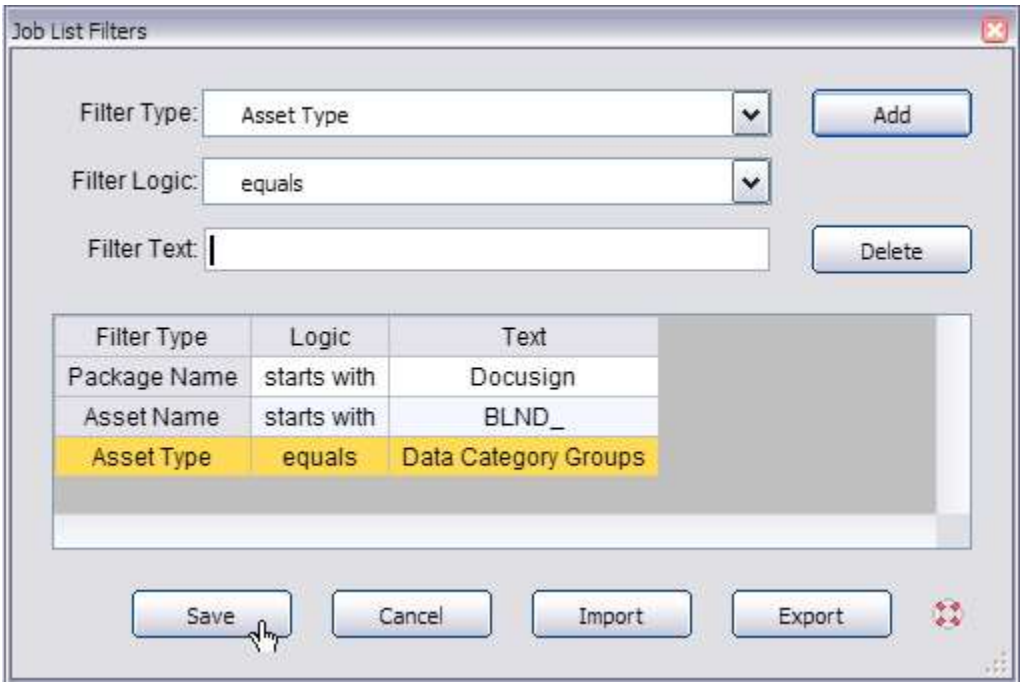
Note:
If you Ctrl-clicked the **Load** button instead of simply clicking the **Load** button, it will append any additional assets that are loaded from the newly selected job list file. This is useful for concatenating job lists from multiple sources into a single migration.

Filter Job List

When you use features like Super Select and Delta Select, the system could pick up managed package assets (or other undesired assets) for deployment. SnapShot offers you a way to filter out those assets automatically once the filter criteria has been set. The filter criteria can be set using the **Filter Job List**'s **Manage** option.

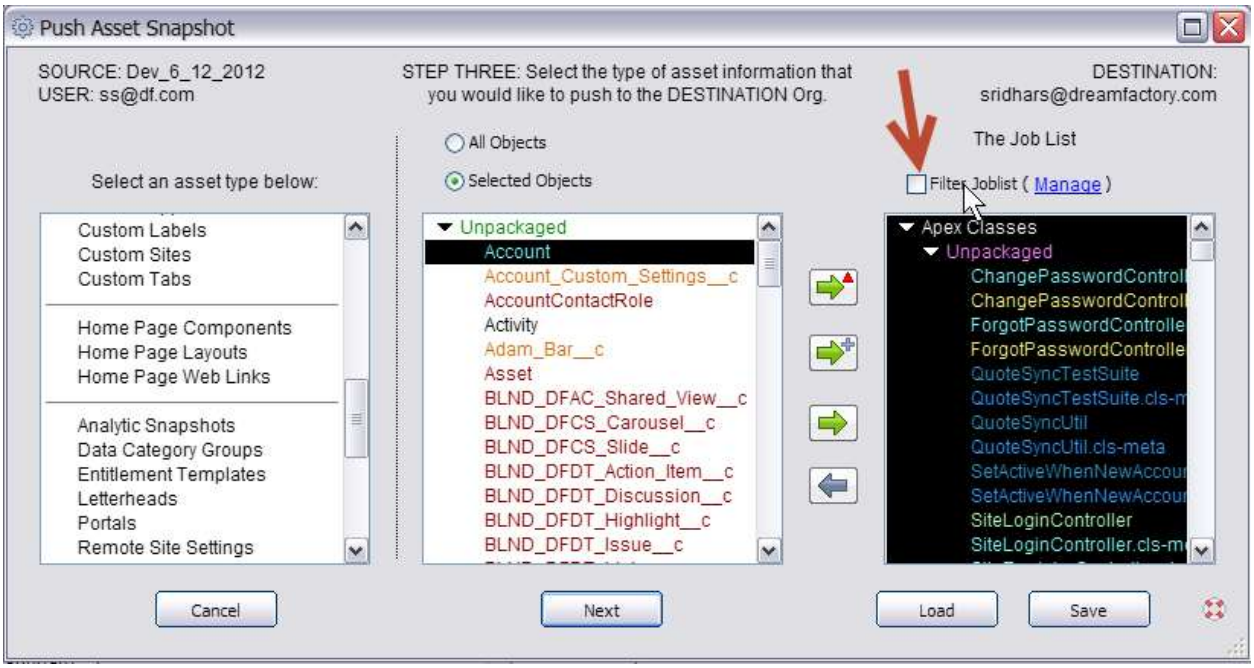


When you click the **Manage** link, the **Job List Filters** dialog pops open. This allows you to add filter types based upon **Package Name, Asset Type, and Asset Name.** For each of the options, you could set the filter logic to **equals, not equals, starts with** and **ends with**. With those selected, you can add the filter text and then click the **Add** button to add the filter criteria. You select existing filter criteria and delete them using the **Delete** button.

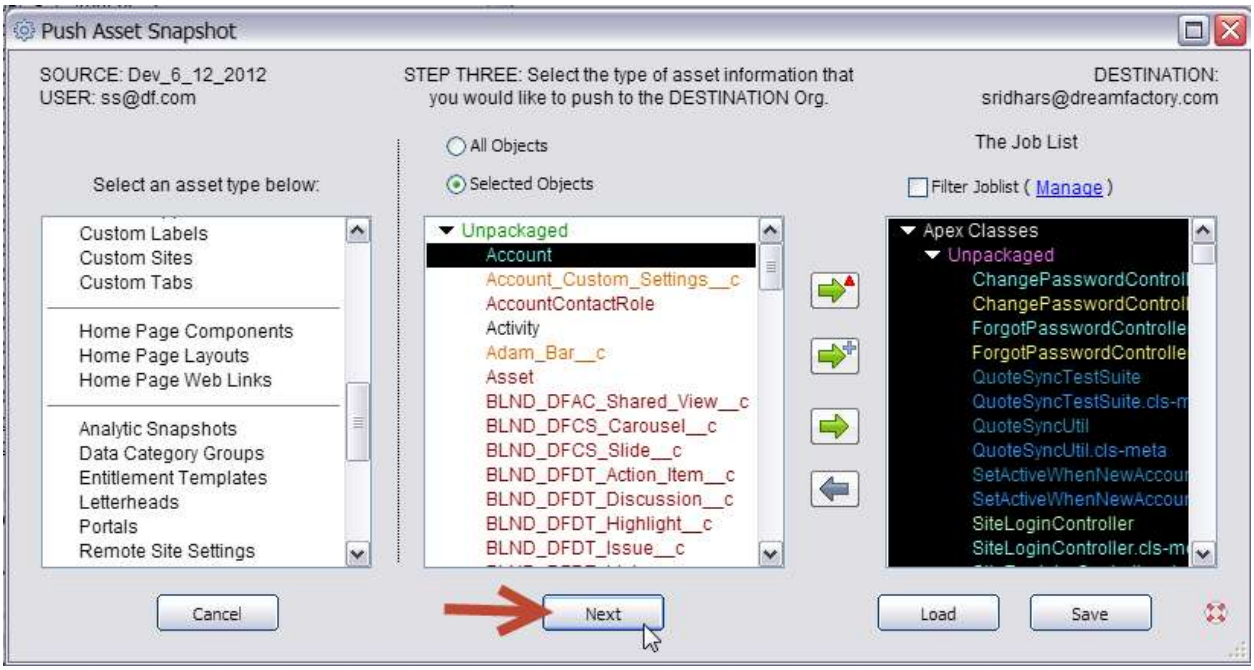


If you are happy with the changes made, you can **Save** the filters. You can discard the changes using the **Cancel** button. You can also import pre-created filters using the **Import** button or export displayed filters using the **Export** button.

Once you save the job list filters, you can enable them (or disable them) by checking (or unchecking) the **Filter Joblist** checkbox. This will dynamically apply or disable to filters and the changes are immediately reflected in the **Job List**.



Once you are happy with the **Job List**, please click the **Next** button to go to the next stage to simulate or execute the deployment.



Push Asset Snapshot Push Options

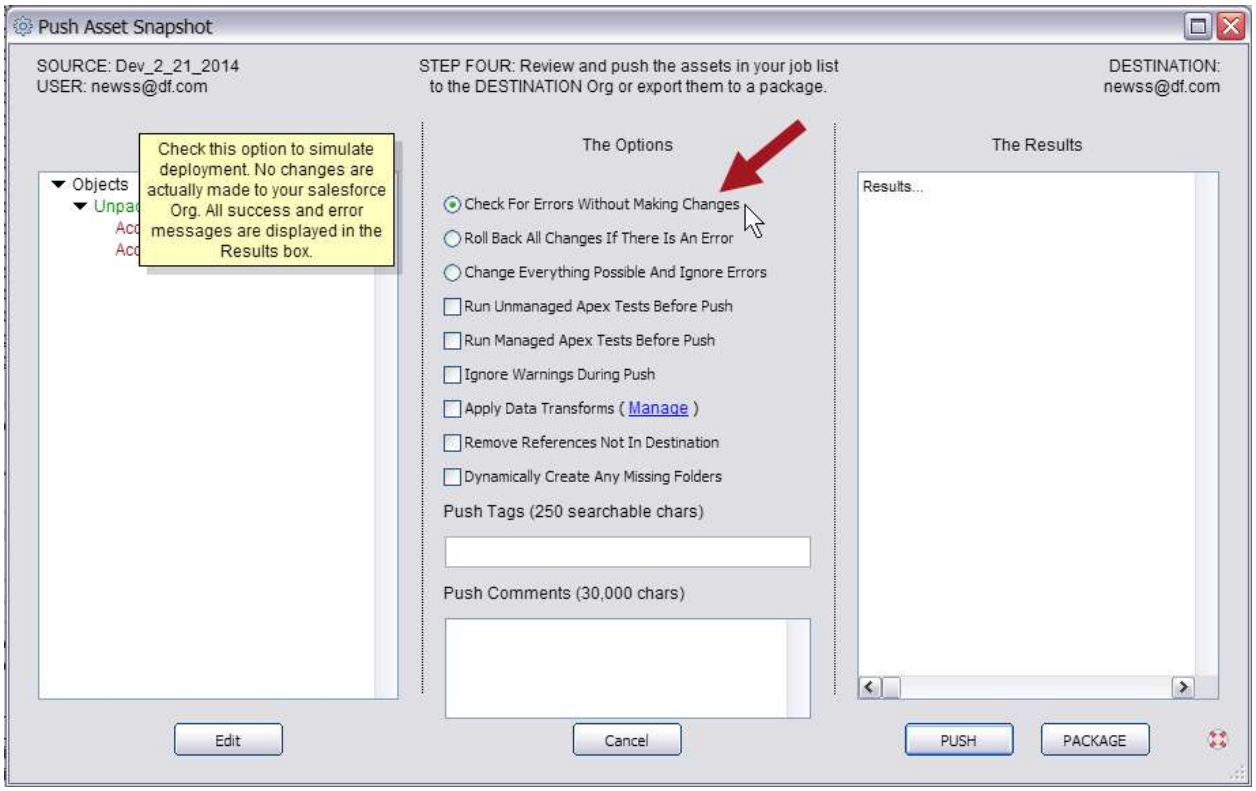
After you have created your Job List and are ready to proceed with your deployment, the next step is to select from one of the three push options. The Asset Snapshot provides the following three push options to assist you with your deployment.

- Check For Errors Without Making Changes
- Roll Back All Changes If There Is An Error
- Change Everything Possible And Ignore Errors

Check For Errors Without Making Changes

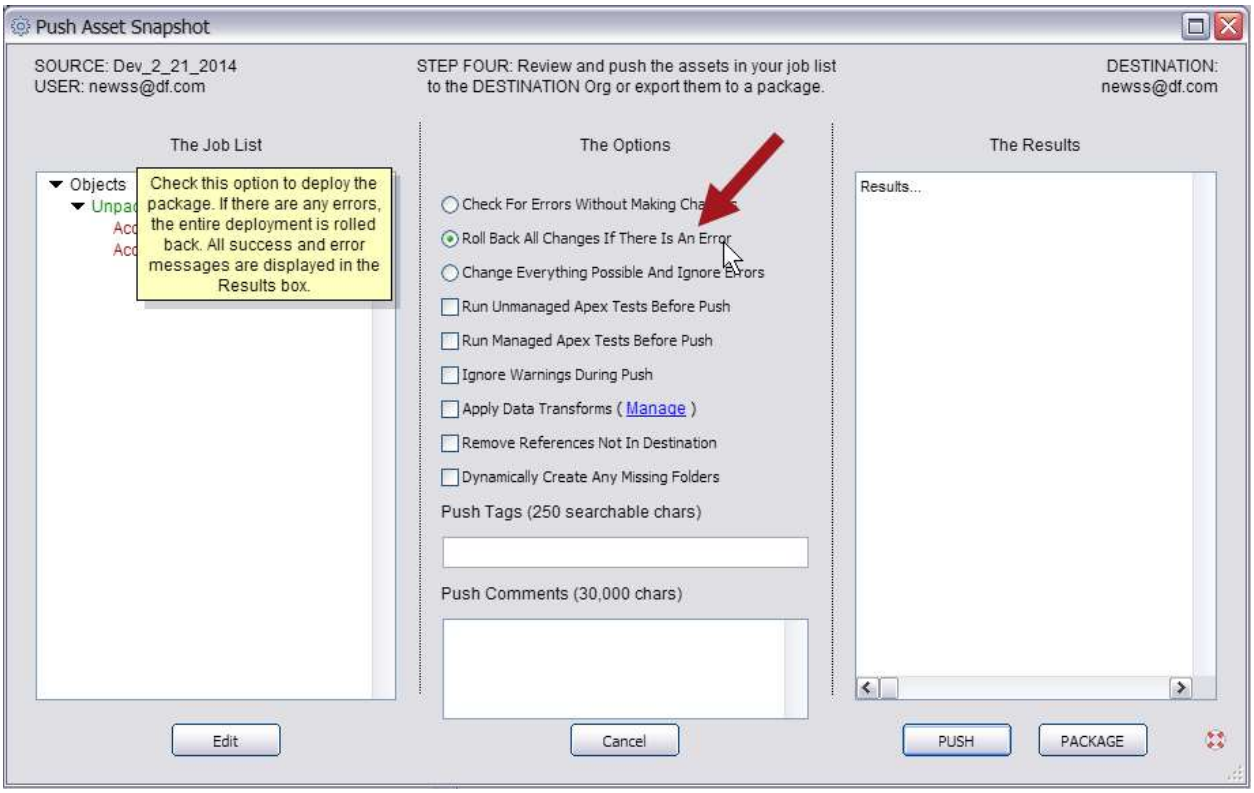
Check For Errors Without Making Changes simulates the actual push operation and returns errors, if any, that you would get if you actually performed a push. You can review the errors and rectify any configuration issues in and then try the entire push again (see important rules outlined in the Asset Push PreRequisites section below).

Best Practice:
Selecting the **Check For Errors Without Making Changes** push option is recommended as a Best Practice and should be used before performing the actual push.



Roll Back All Changes If There Is An Error

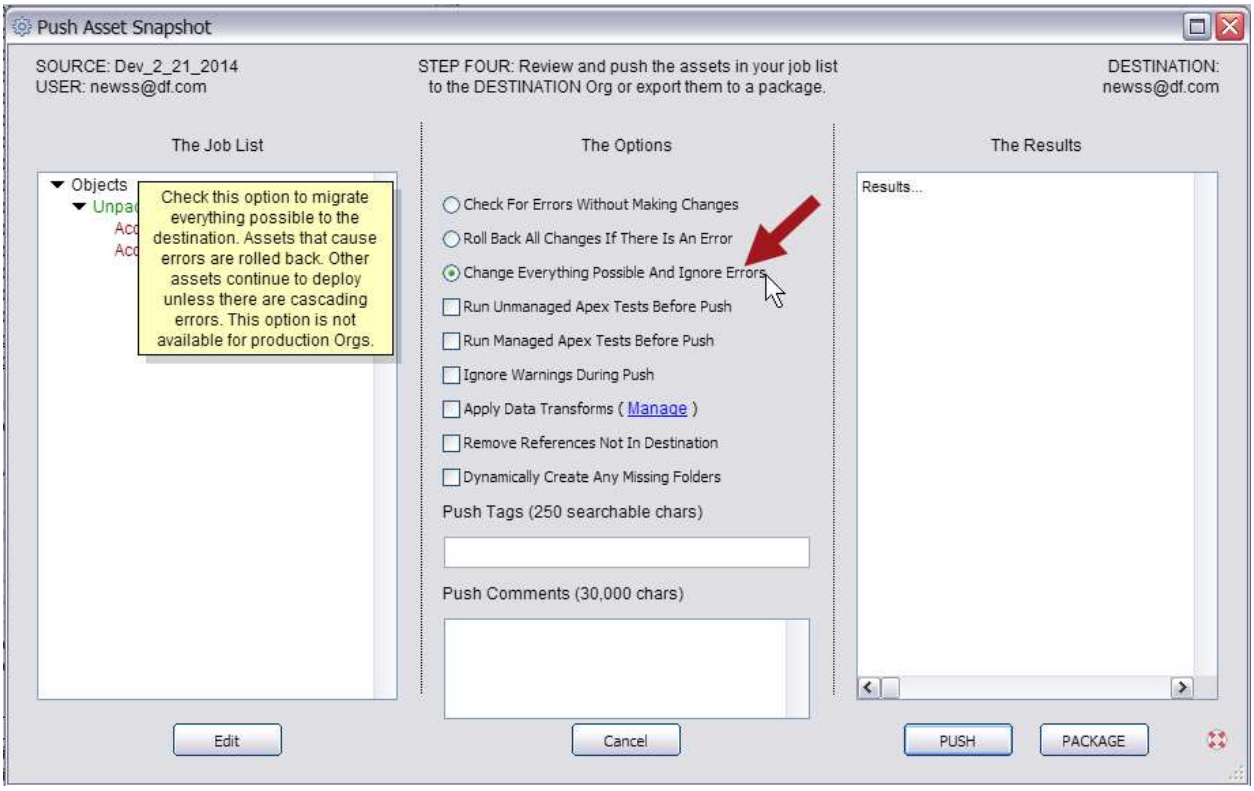
Roll Back All Changes If There Is An Error executes a transactional push of all selected items to the destination Org. If there are any errors reported, the entire transaction (push) is rolled back and no changes are made to the destination Org. You can review the errors and rectify configuration issues and then try the entire push again (see important rules outlined in the Asset Push Prerequisites section below). This push option is **required** when pushing to a Production Org.



Change Everything Possible and Ignore Errors

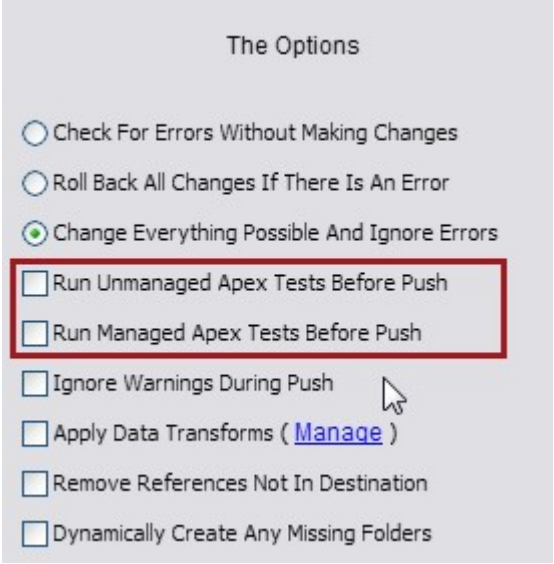
Push Everything Possible And Ignore Errors allows you to execute a best effort push to the destination Org. In other words, it ignores errors and continues pushing metadata (does not completely rollback a migration just because there is an error). Errors are still reported in the Results text area. You can review the errors and rectify configuration issues in the Destination Org and then try the push again (see important rules outlined in the **Asset Push Prerequisites** section below).

Note*:*
You can only use this option when pushing to a sandbox or to developer Org. If a user selects this option and then attempts to push to production they will get an error message indicating that Rollback is required. This is enforced by the salesforce Metadata API.



Run Apex Tests Before Push

In addition to the three push options detailed above, Snapshot has added a couple of options to run Apex tests before push. **Run Unmanaged Apex Tests Before Push** and **Run Managed Apex Tests Before Push** checkboxes are displayed directly beneath the three push options. These checkboxes allows you to decide whether you want to run Apex tests prior to the push and also allow you to choose if you want to execute Unmanaged Apex Tests only or run tests for the entire Org.

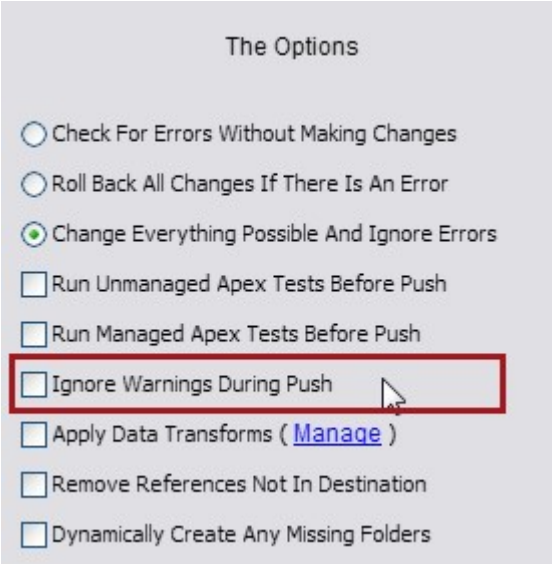


Note:
If you have selected the **Roll Back All Changes If There Is An Error** push option, SnapShot assumes that you are pushing to a production Org and can decide to execute the Apex tests to ensure Org integrity.

Best Practice
Consider a scenario where you leave this option unchecked and do a dry run of your Job List with your production Org before your release date. On your release date, when you execute a **Roll Back All Changes If There Is An Error** option, Snapshot will automatically execute the Apex tests. Depending on your Org set, this might lead to Apex error messages previously unknown. For this reason, we recommend at least having the **Run Unmanaged Apex Tests Before Push** checkbox always checked to ensure org integrity.

Ignore Warnings During Push

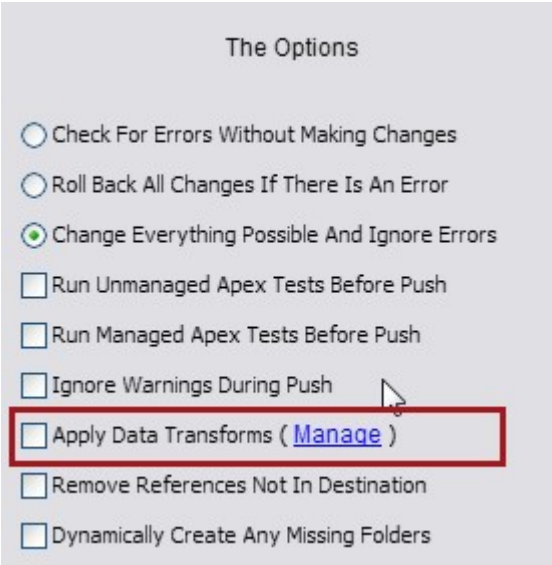
Salesforce Metadata API introduced the notion of warnings instead of errors in the recent past. By definition, warnings can be ignored and continued while executing deployments while errors are issues that cannot be ignored and hence will stop deployments. While we have not seen many warnings in the recent past, you can decide if this option might make sense for you.



Asset SnapShot Data Transforms

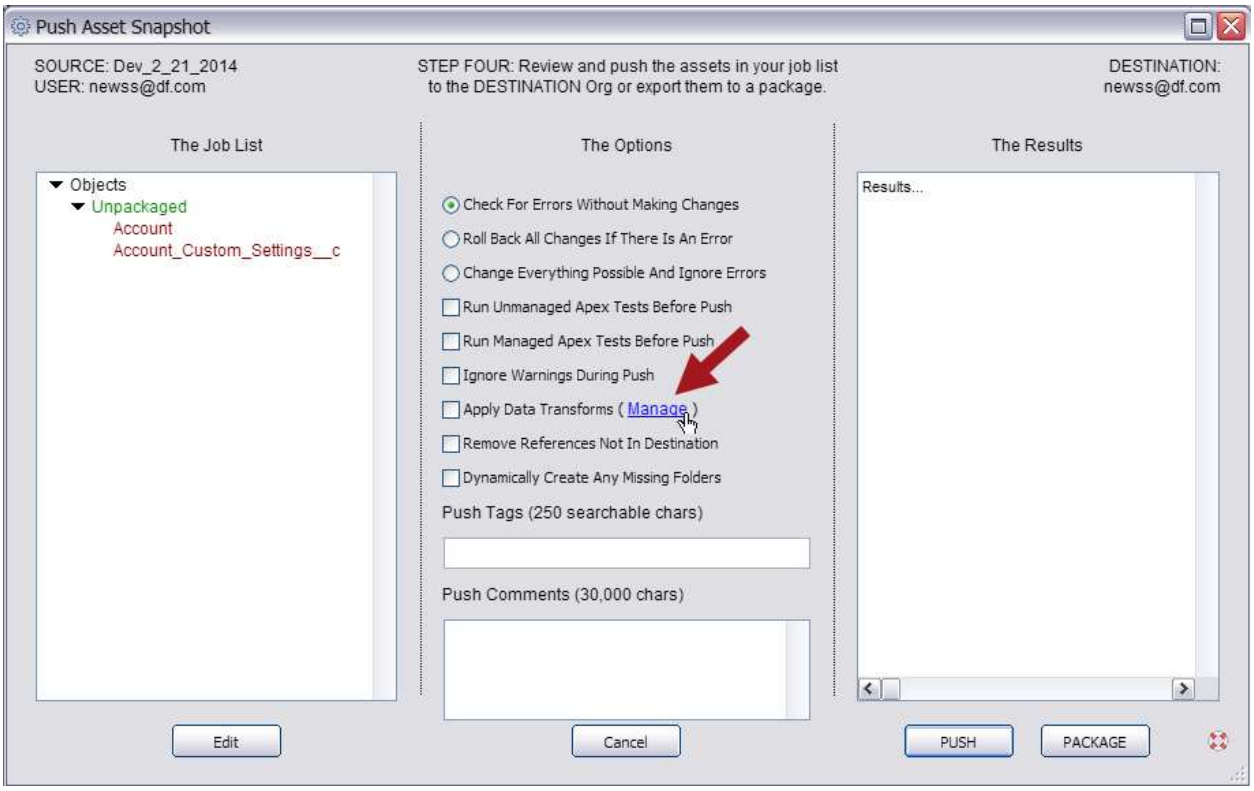
Data Transforms allows you to apply some transforms to the metadata before it executes (or simulates) the deployment. This is allowed for a few asset types that regularly needs configuration changes between sandbox.

For example, this function allows to change the username associated with an Email Alert Workflow Rule to change or remove the sandbox suffix before migrating to another sandbox or production Org.



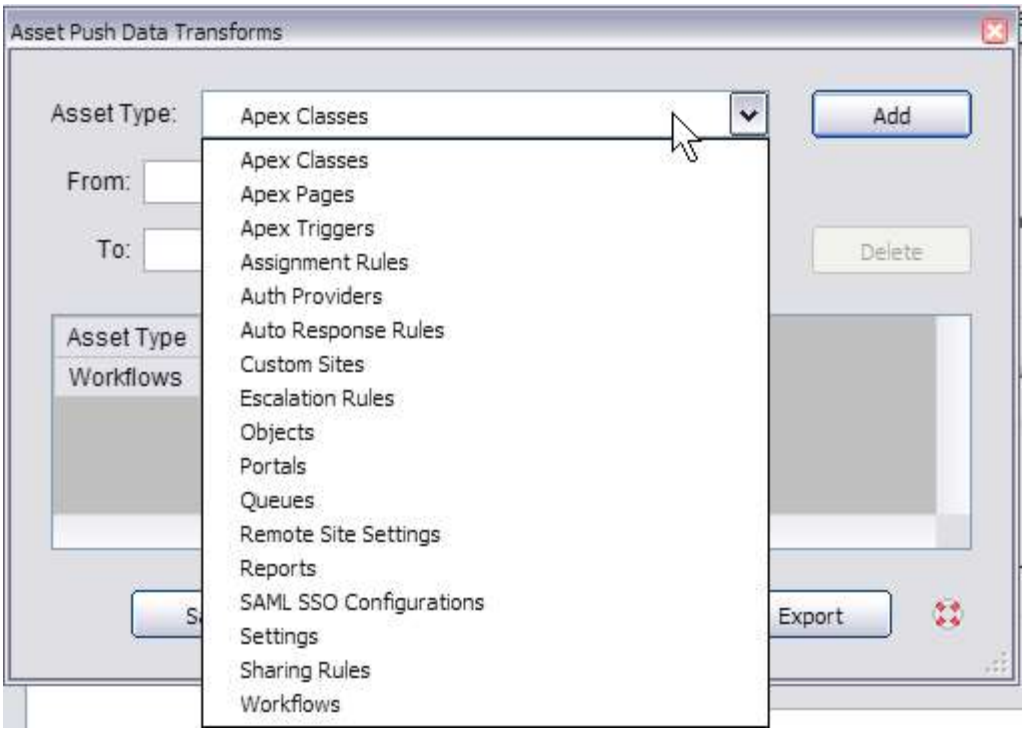
To add a Data Transforms function, follow the directions below:

1. In the **Push Asset SnapShot** dialog, check the checkbox titled **Apply Data Transforms.**
2. Click the blue hyperlink titled **Manage**.

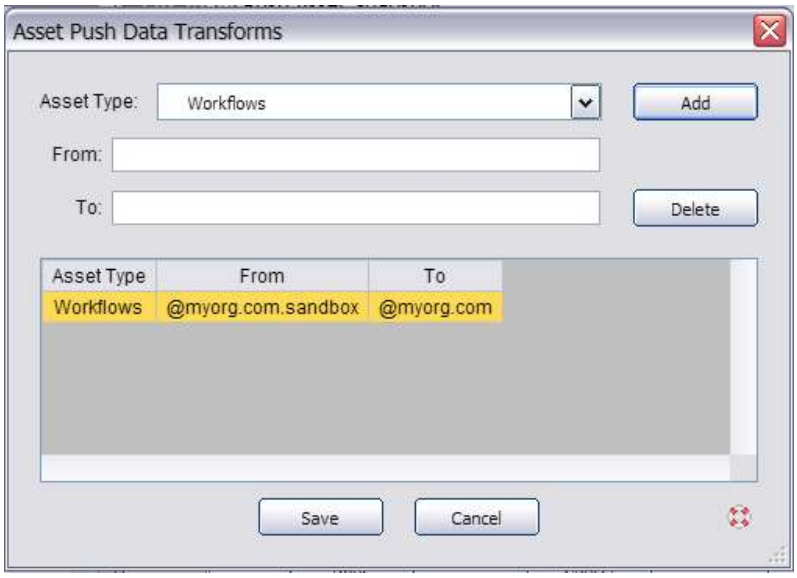


3. From the **Asset Push Data Transforms** dialog box that appears, users can select from the following Asset Types:

- Apex Classes
- Apex Pages
- Apex Triggers
- Assignment Rules
- Auth Providers
- Auto Response Rules
- Custom Sites
- Escalation Rules
- Objects
- Portals
- Queues
- Remote Site Settings
- Reports
- SAML SSO Configurations
- Setting
- Sharing Rules
- Workflows



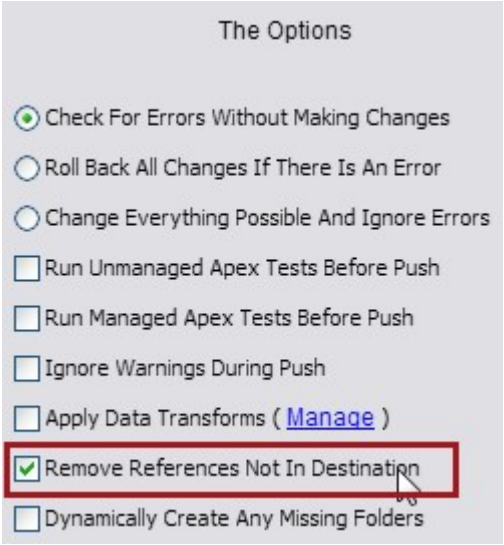
4. Simply type the text to match in the **From** box and the replacement text in the **To** box and click the **Add** button.



5. Click the **Save** button to save all the changes.

Remove References Not In Destination

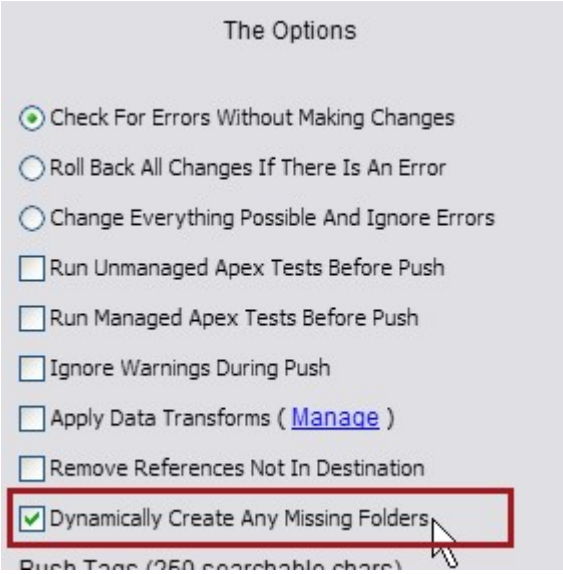
Selecting the **Remove References Not In Destination** option when performing an Asset push will remove any unnecessary references in Profiles, Permission Sets, Page Layouts and Record Types to assets that do not exist in the Destination Org or in the Job List. This way users have the ability to deploy these assets when other assets are not in the Destination.



The primary use case for this feature is the user is trying to push profile, permission set, page layouts and record type metadata, but does not want to sync environments (partial deployments). This feature will “clean” the metadata so that it does not include these specific assets in the deployment.

Dynamically Create Any Missing Folders

Asset Types like Reports, Dashboards, Email Templates and Documents are deployed into folders. If these folders are not already present in the destination, the deployment will fail. SnapShot provides an option to see which folders were created and which will fail (for lack of destination folder) during a push. Alternatively, you can always have this selected to create any folders that are missing and push without any errors thrown.



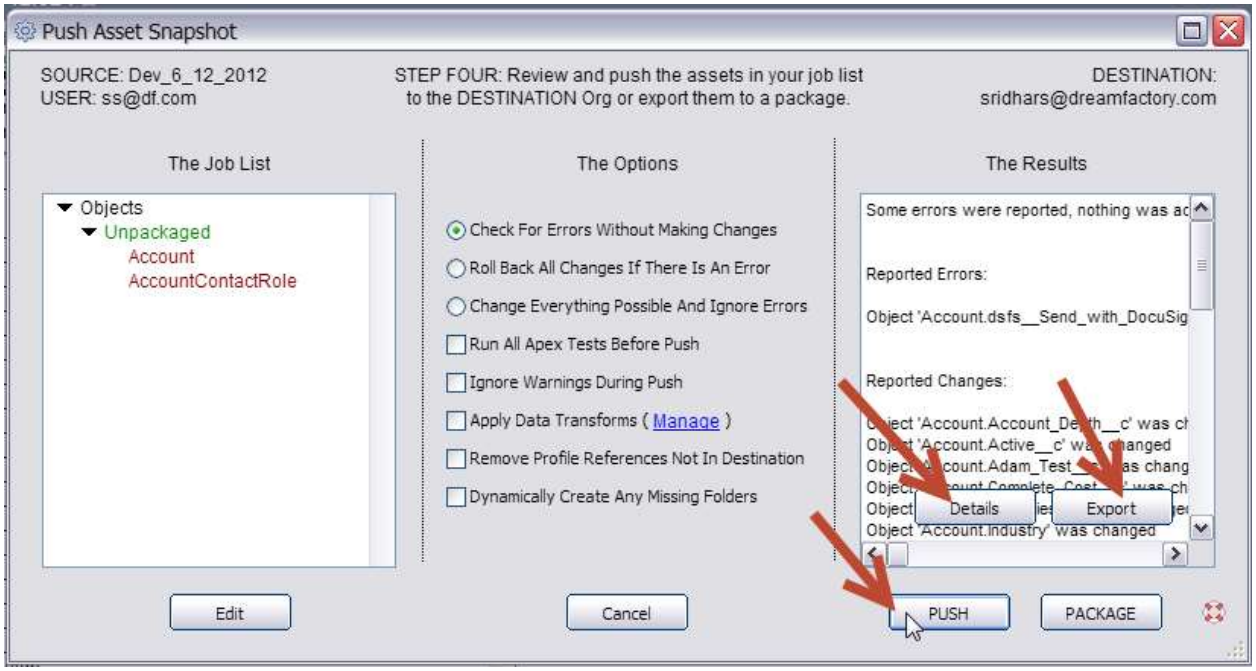
Asset SnapShot and Managed Packages

The Salesforce Metadata API does not currently support the ability to push Managed Packages. Snapshot has added new deployment messaging regarding Managed Packages to help explain this behaviour. Users can also use the Filter Job List option to filter out any managed package related assets.

Note:
If managed packages are migrated through SnapShot, you will see error messages return by the Metadata API.

Execute the Push

After choosing a Push Option (Check For Errors Without Making Changes, Roll Back All Changes If There Is An Error or Change Everything Possible and Ignore Errors) and any of the options as necessary, click the **Push** button to actually execute the migration from the selected source to the designated destination.



Once salesforce finishes the deployment (or when there is an error, whichever is earlier), you will see the response in a textual format. Hovering over the text messages will be two buttons namely:

1. Details – this option allows you to export the actual XML response from Salesforce's metadata API
2. Export – this option allows you to export the textual error messages.

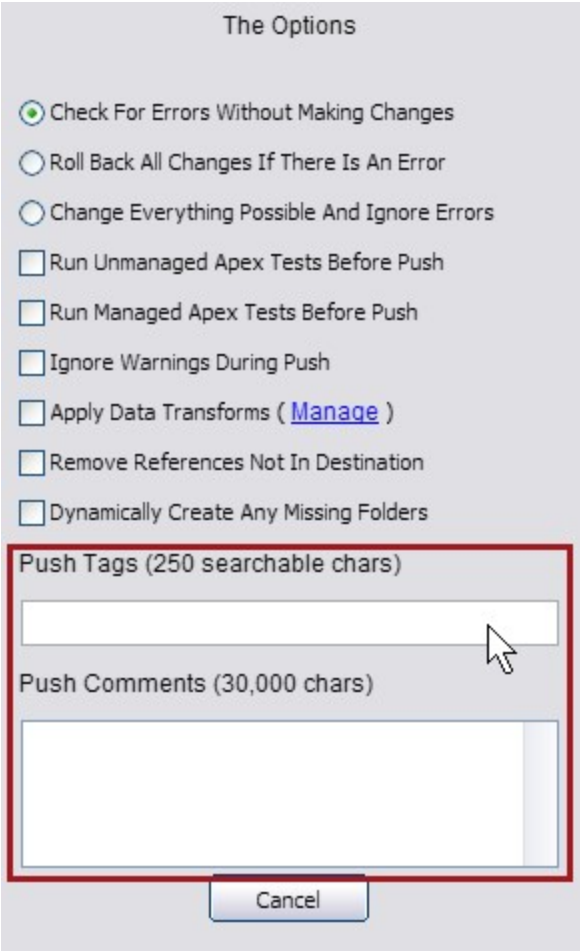
Note:
Please send these exported XML and Text files to the report when contacting customer support as that will hasten the resolution times significantly.

These exports give you an idea about how the migration fared and what worked or not.

Note:
Along with SnapShot, there are a couple of unmanaged custom Objects – SnapShot Push and SnapShot Items – installed. If the destination has these Objects installed, SnapShot can place a migration log detailed who, what, when and response message. These messages are generally used as audit logs to track changes to your salesforce Org and used as such for compliance reasons.

If you do not have SnapShot installed (or do not wish to install the full package), you can use the Administrator Session Reports for SnapShot package instead.

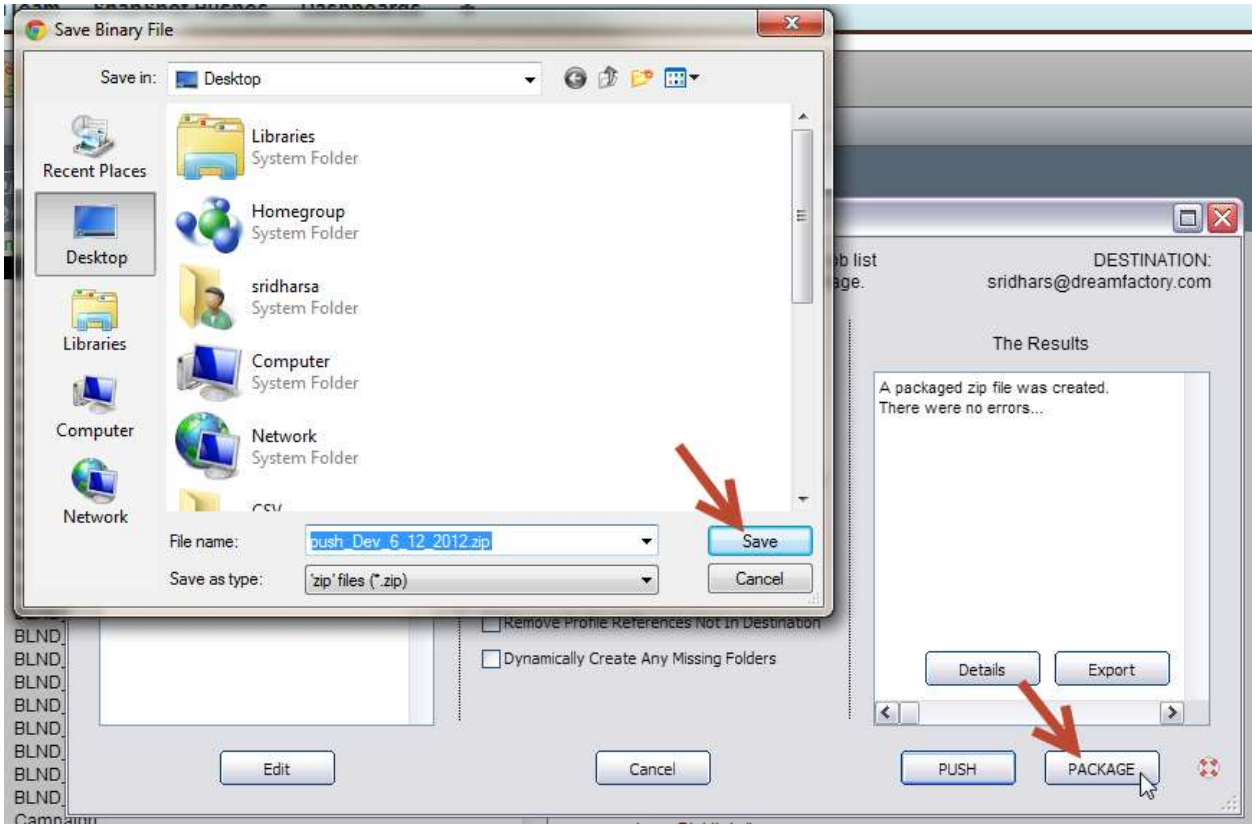
You can also add comments to these migration logs. These comments can be entered in the **Push Tags and/ or Push Comments** sections.



Package Zip File

Users can also save the selected assets in the **Asset Push** dialog as a package zip file. Once created, users can add this package zip file to a scheduled deployment using the Automated Asset Deployment feature.

To export this zip file out of SnapShot, simply click on the **Package** button located directly to the right of the **Push** button in **the Asset Push** dialog. Note, if this button is not visible on your push dialog, expand its width until it appears.



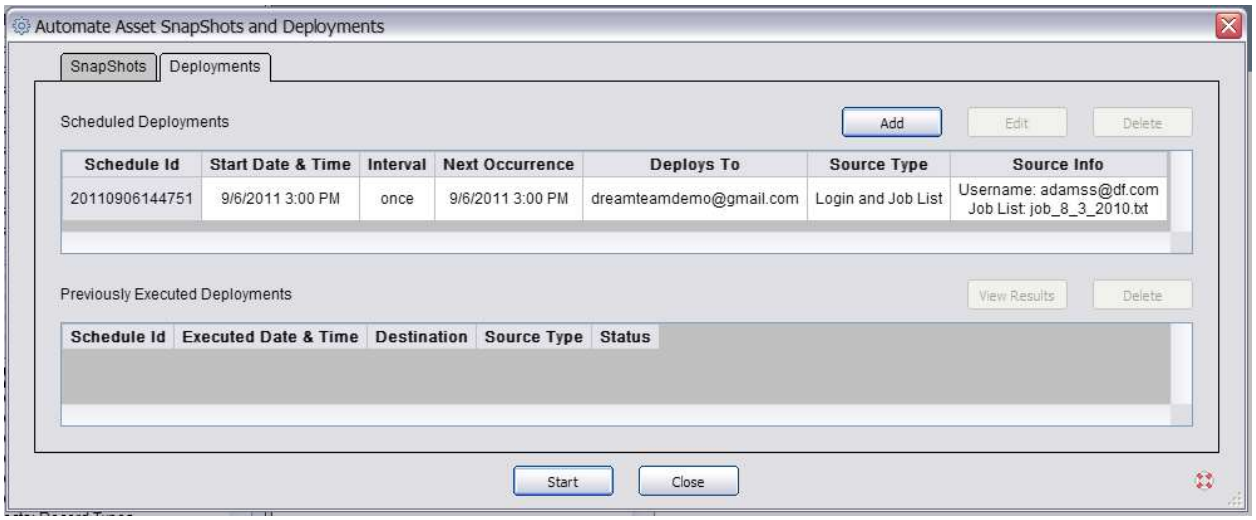
Automated Asset Deployment

SnapShot users have the ability to schedule automated Asset deployments. Users can easily schedule deployments of any or all assets.

To schedule an Automated Asset Deployment, follow the steps highlighted below:

1. Click on the **Studio** menu and select the **Automate Asset Deployment…** option.

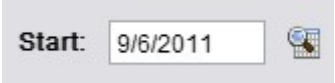
2. Once selected, **the Schedule Asset Deployment** dialog will appear. Here is where a user can see all scheduled deployments as well as schedule new deployments.



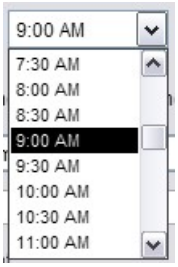
3. To schedule a new deployment, the user must complete the following steps:

Step 1: Select the start date and time and a recurring interval for the deployment. Here the user must select the following:

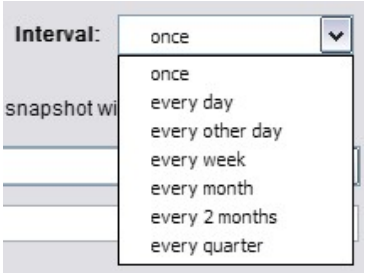
Start – Here the user can select the date they want to schedule the asset deployment.



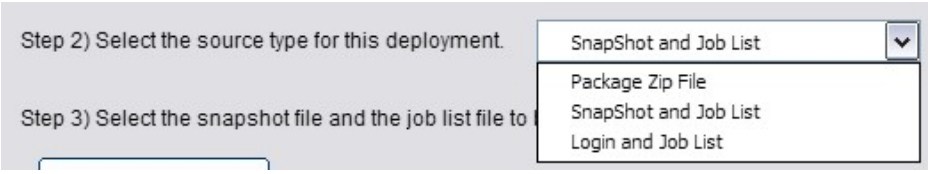
Time increment – Here the user can schedule the time of the asset deployment. Users can select from any of the 30 minute increments to schedule the snapshot.



Interval – Here the user can select the frequency of the Asset deployment



Step 2: The user must select from one of the following three options:



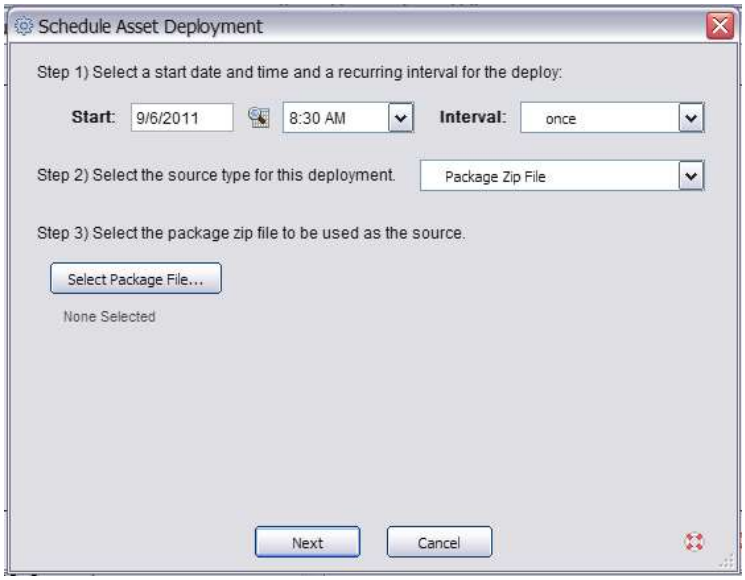
Package Zip File – Selecting this option allows users to use the Package Zip File that was created on a previous deployment as the Source. These package files are essentially ANT deployments package. So, this feature is designed for new users migrating from ANT deployments.

Snapshot and Job List – Selecting this option allows the user to select an existing Snapshot to be the Source and select an existing Job List.

Login and Job List – Selecting this option allows the user to log into the Source Org and select from an existing job list. You could use this option to help setup regular system integration setups where SnapShot can login to developer Orgs and migrate their changes to a system integration environment say, every Friday 9 PM.

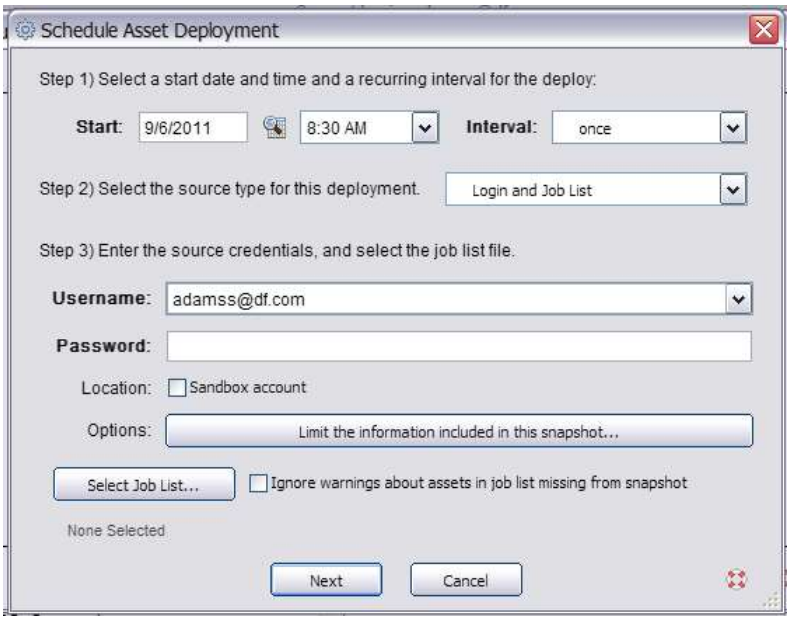
Step 3: Once the user has selected the appropriate option,

Package Zip File – To select the Package Zip File, simply click on the button and select the desired file.

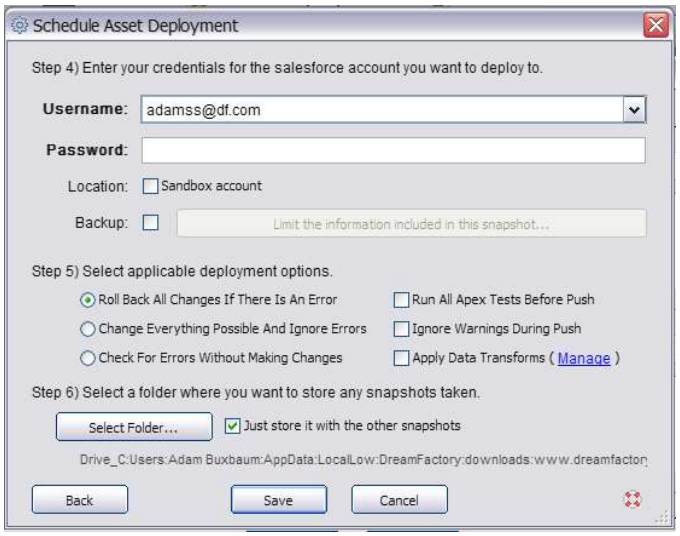


Snapshot and Job List – Here the user must first select the Snapshot they want to use as the Source Org and then select the Job List they want to use.

Login and Job List – Here is where the user logs into the org that they want to use for the Source and then select the appropriate Job List.



Step 4: Next the user must enter the login credentials for the Destination Org.

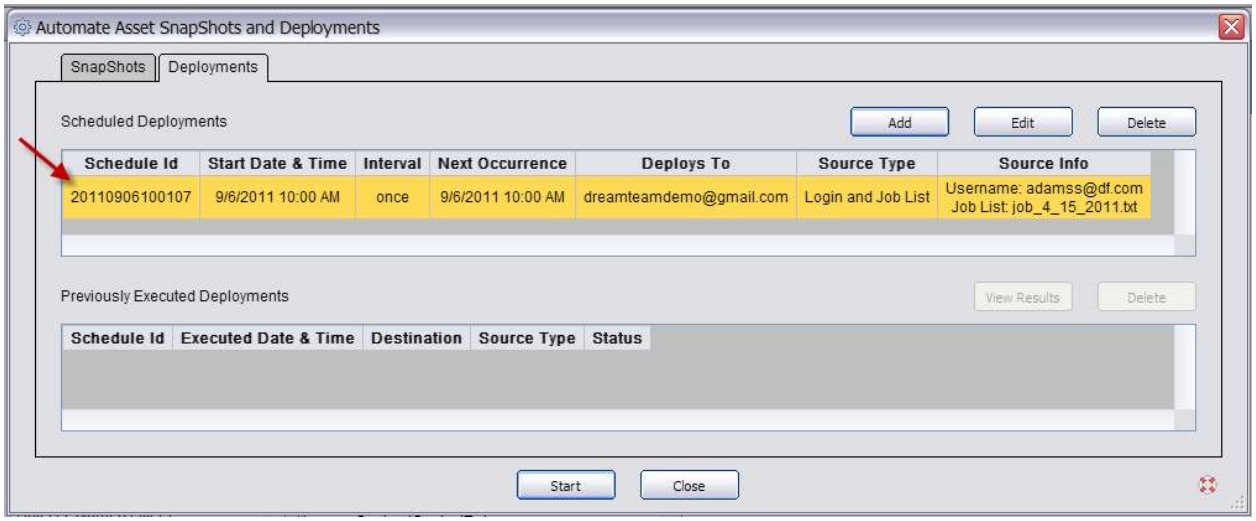


Step 5: After the user had logged into the Destination Org, they must select the desired push option. These push options are identical to the standard push options in the Asset push dialog.

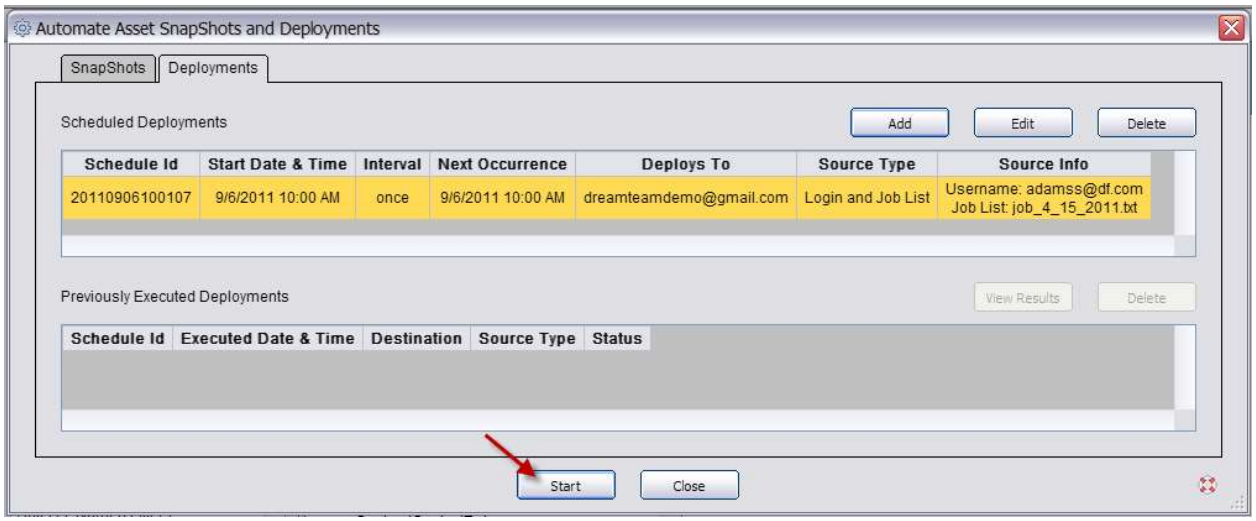
Step 6: Here the user can select the folder that they want to store any snapshots that are taken.

Step 7: Click the Save button once completed

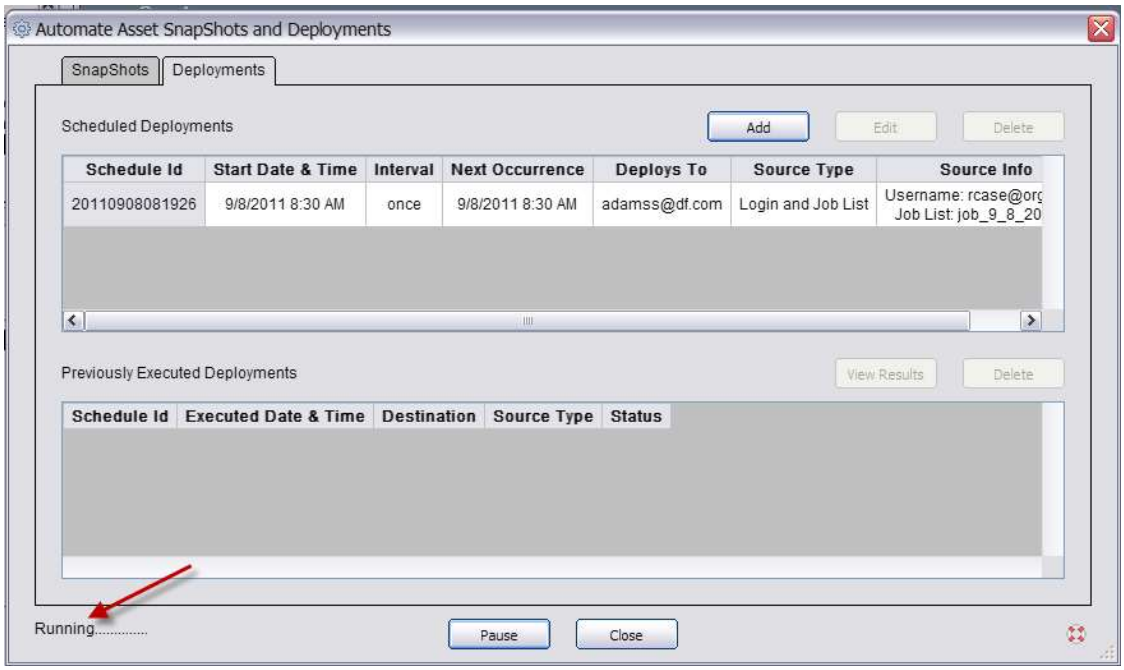
4. Once the automated deployment has been scheduled, it will appear in the Schedule Deployments box on the Deployments tab. Here the user can see the Schedule ID, Start Date & Time, Interval, Next Occurrence, Deploys To, Source Type and Source Info.



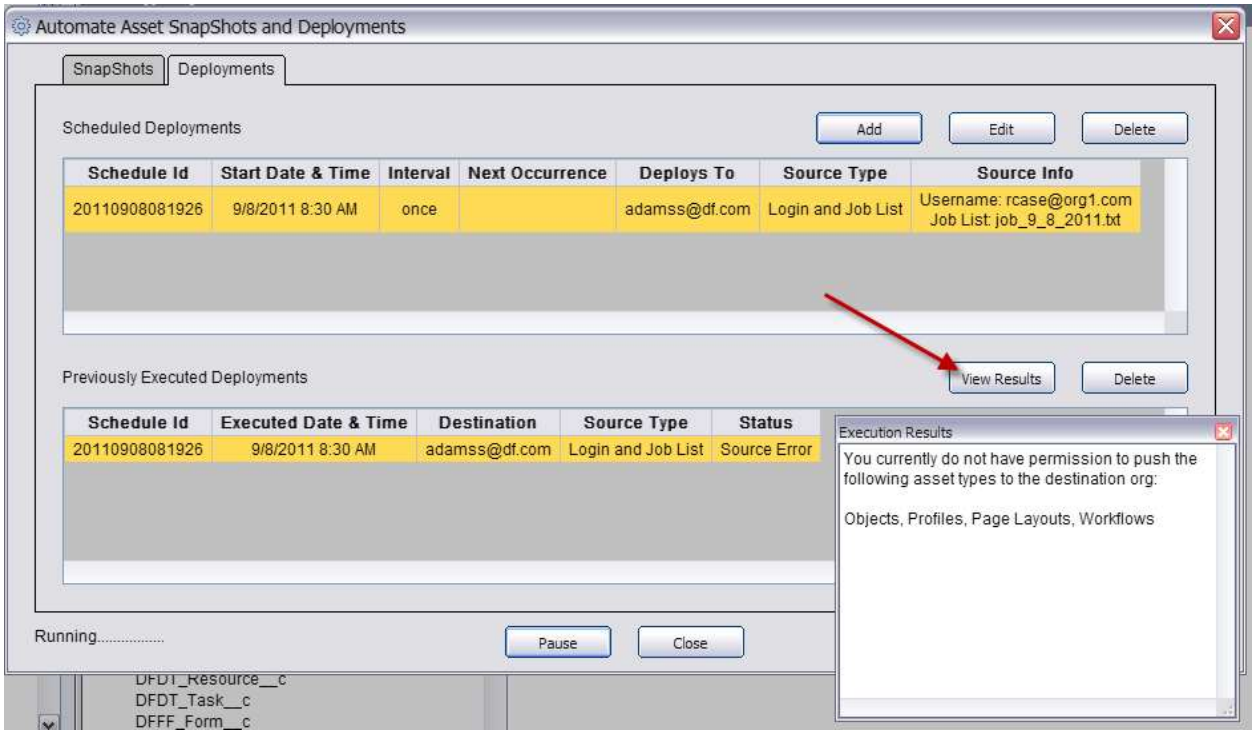
5. To initiate the automated deployment the user must click the **Start** button at the bottom.



6. Once initiated, users can see the status in the bottom left corner of the dialog.



7. Once the automated snapshot deployment is complete, the transaction will be populated in the Previously Executed Snapshots box on the bottom. Users can then select the transaction and then click on the View Results button to the results of the push in a pop up screen.

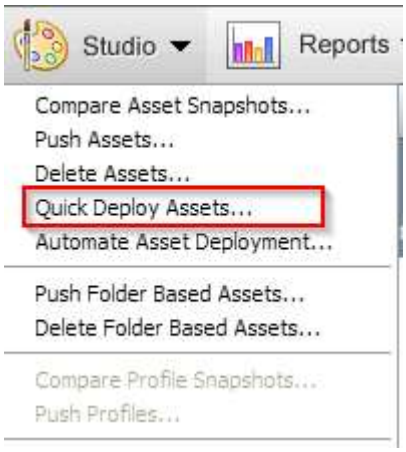


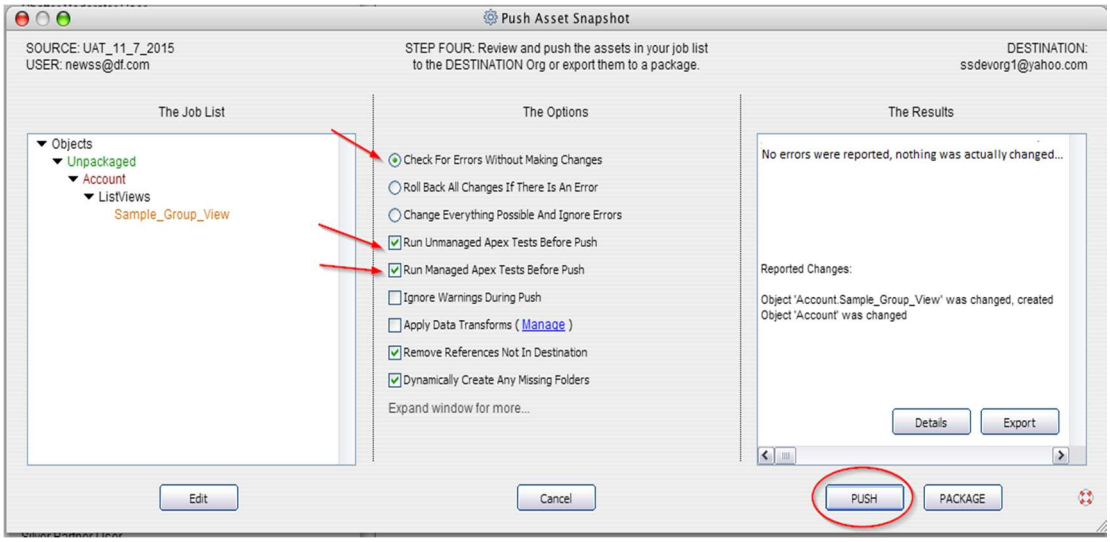
Users can also delete this entry by clicking on the delete button.

Note:
Deleting this entry only deletes the record of the capture, not the captured snapshot file itself, which resides in the selected storage folder.

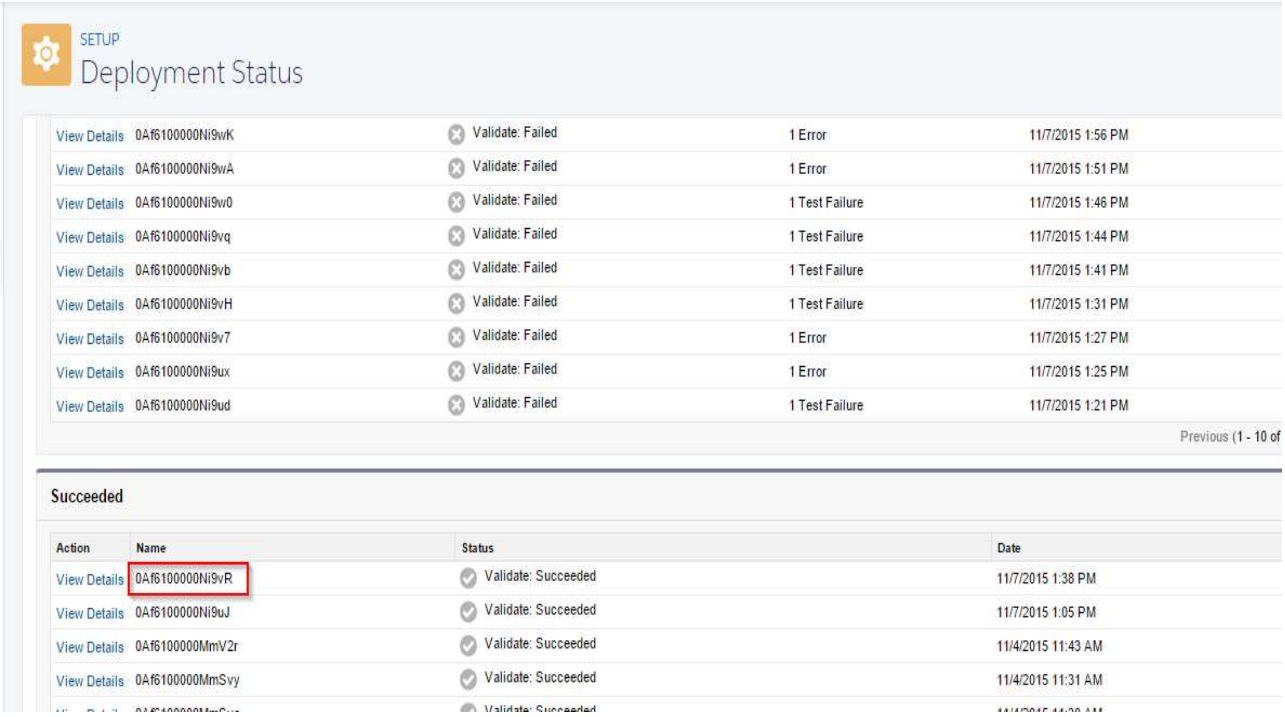
Quick Deploy Assets

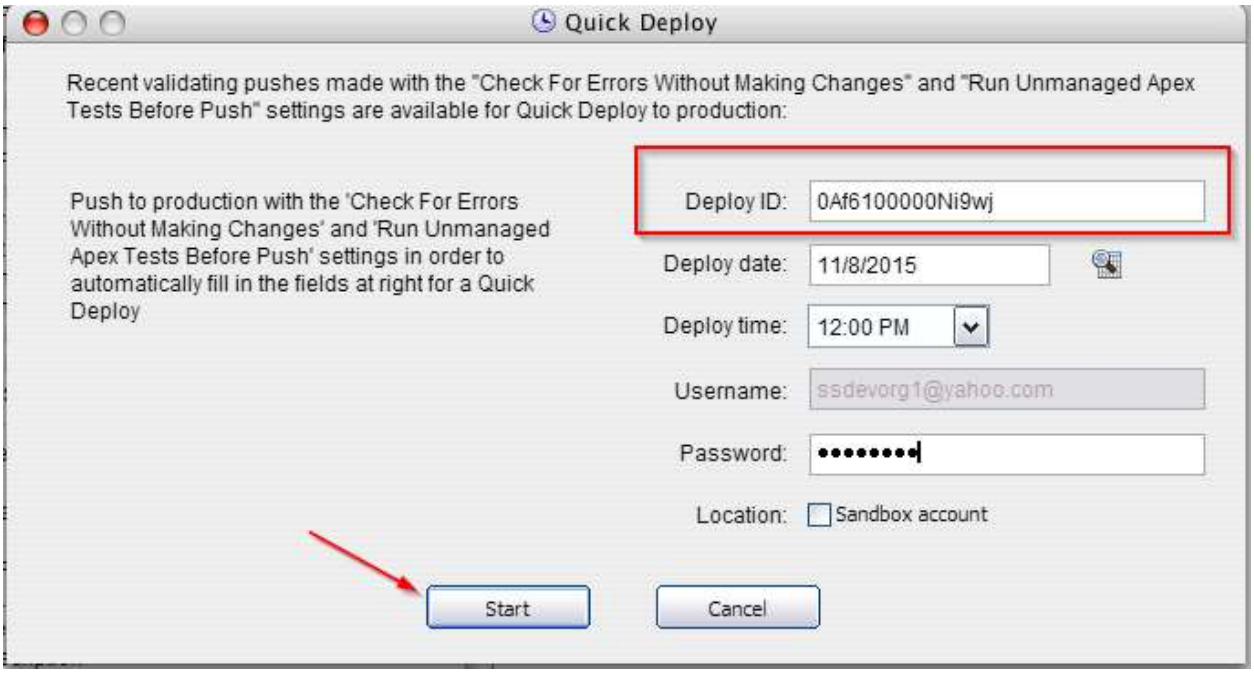
SnapShot users can utilize the Quick Deploy Assets feature to schedule a time to complete a deployment based on an earlier validating push.





Once a validating push has been made, the SnapShot user may retrieve the Deploy ID from the Deployment Status in the SFDC setup. The user may copy the Name (Deploy ID) and paste it into the Quick Deploy window.





The SnapShot user may now schedule a Quick Deploy for the date and time of their preference. After entering the credentials, the user will then select Start. As with a Scheduled Asset Deployment, or Scheduled SnapShot.

Note:
The SnapShot user's machine must be powered on and out of sleep mode at the time of the execution.

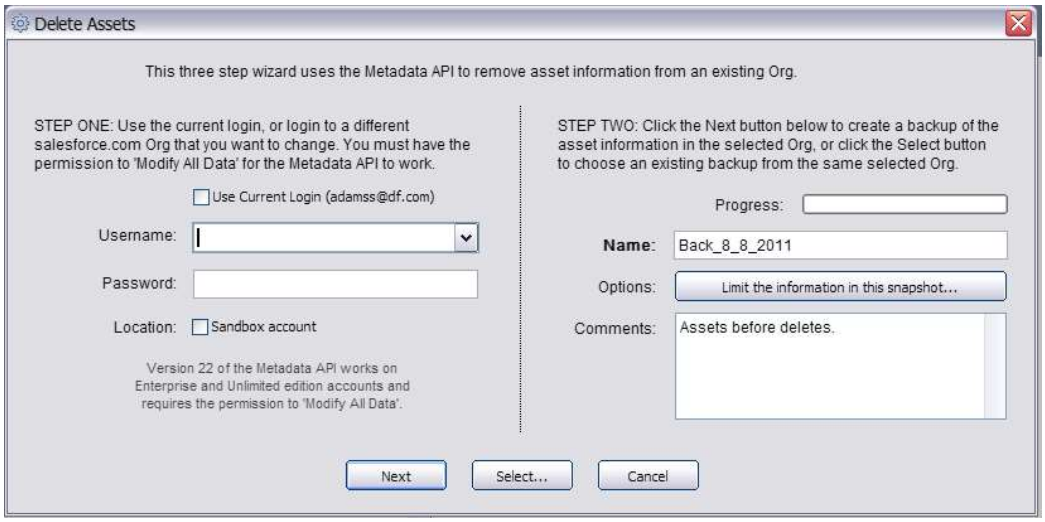
Delete Assets

Snapshot users have the ability to delete selected assets directly in the tool. This feature allows users to easily delete multiple assets from their Org, directly in the Asset Snapshot. This feature is accessible through the **Studio** menu.

To access the **Delete Asset…** feature:

1. Click on the **Studio** menu and select the **Delete Assets…** command

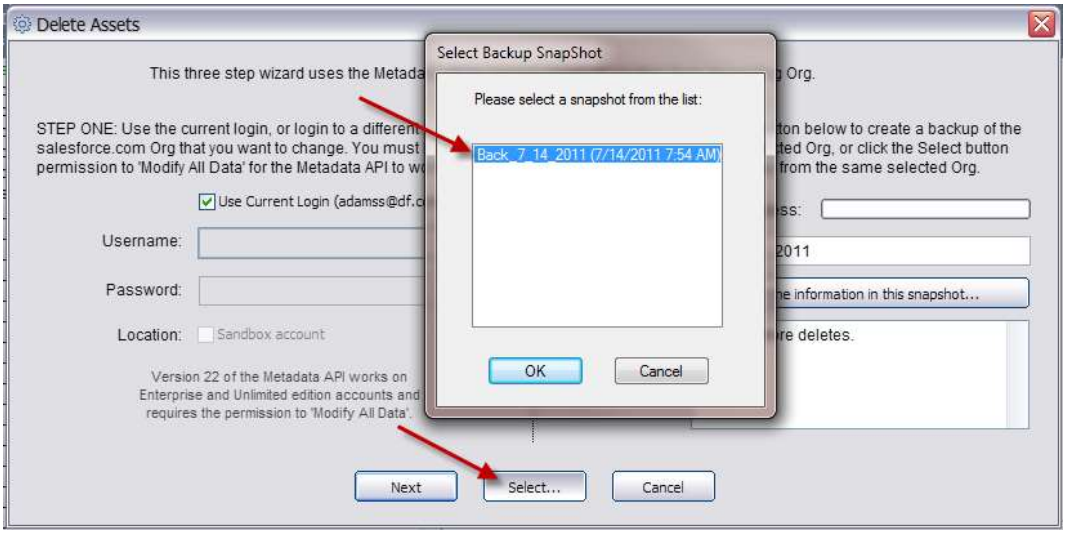
2. Once selected, the **Delete Assets…** login dialog box will appear. Similar in appearance to the **Push Assets** login screen, here users can either login to the Org that they want to delete assets from, or use the current login. If the user wants to use the Current Login, they must check the check box above the login boxes and everything else will be grayed out.



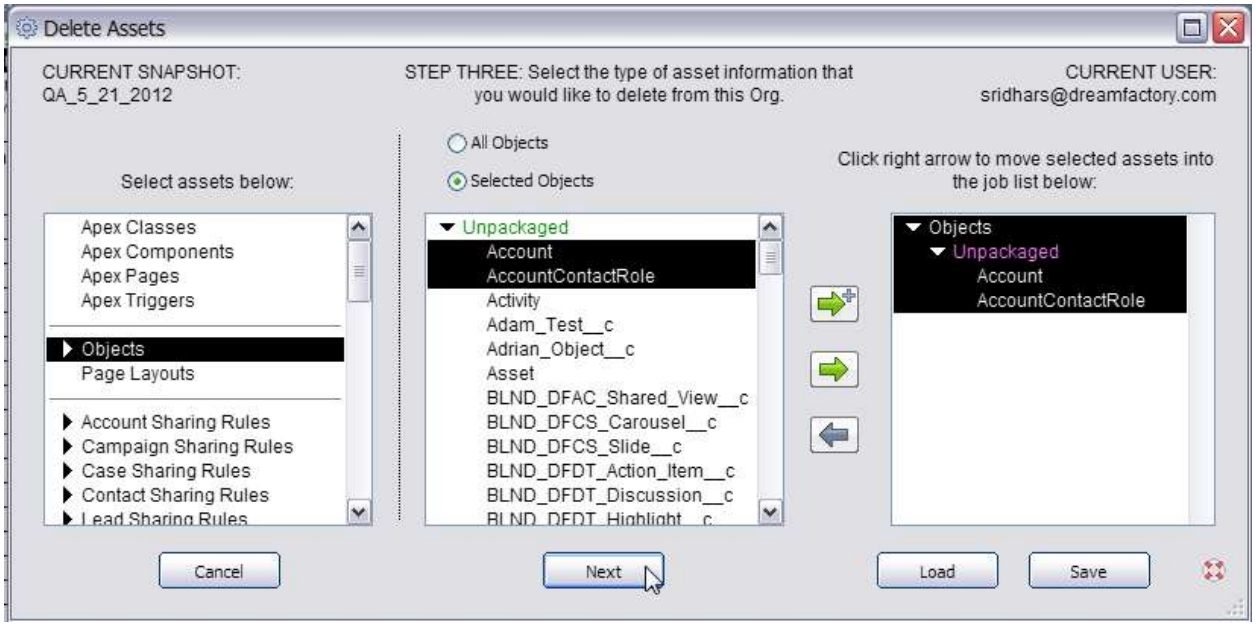
3. Once the user chooses their login option, they are prompted to either capture a backup snapshot of the destination org or select from a previously taken backup snapshot of the destination Org.

   Note: *Users can restrict the contents of the backup snapshot if they wish by clicking on the Limit the information in this snapshot button.*

   If the user decides to use an existing backup snapshot, they must click the select button and then select the backup snapshot from the Select Backup Snapshot dialog box.



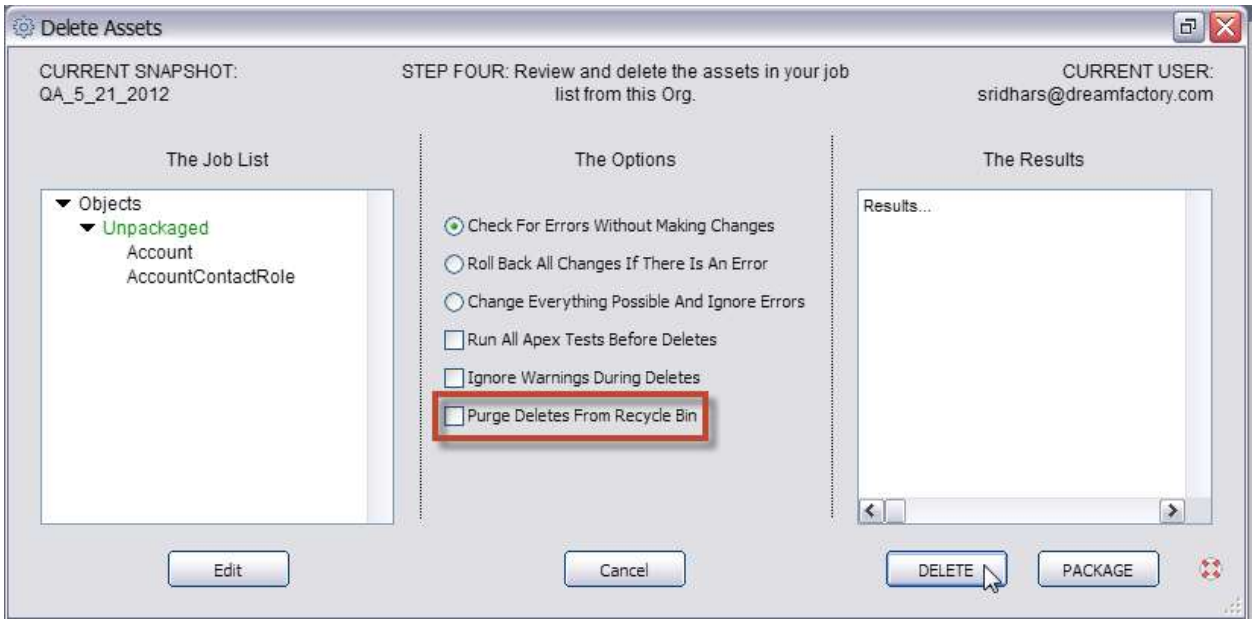
4. Once the user has taken the backup snapshot, the Delete Assets dialog box will appear. Similar in appearance of the Push Asset snapshot dialog, the user must select the assets that they want to delete and then add them to the job list. Once added, they can save the job list as usual.



Note: *Profiles and Custom Object Translations sub-elements have been removed from the dialog due to the Metadata API not supporting the ability to remove these sub- elements.*

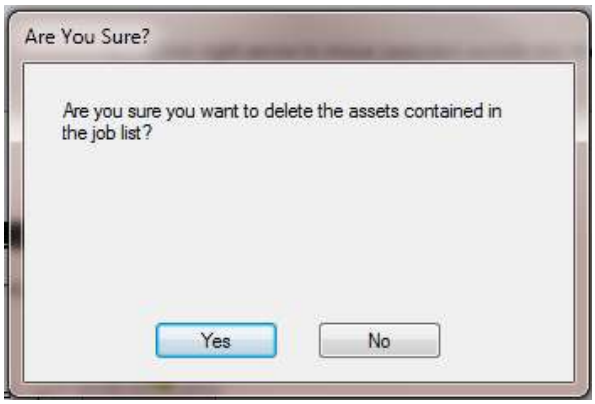
5. Click **Next** once you are ready with the Job List to open the last screen in the **Delete Assets** wizard. This screen allows you to pick the push options.

   The push options are similar to the Push Asset Snapshot dialog except for deleting instead of pushing. One additional push option was added replacing the Data transform option. Now, users can purge deletes from Recycle Bin if they wish.



The refence to the Recycle Bin is relating to the Salesforce metadata recycle bin (different from the standard Recycle Bin which refers to data). Selecting this option will permanently delete the asset from your Org. If a user deletes a field but does not select the Purge Deletes option, they will be able to see the deleted field underneath the custom field section in the Custom Object details in Salesforce setup.

6. Click the **DELETE** button to start deleting Assets. Prior to performing an actual push to delete the select assets, you will be prompted to confirm that you are sure that they want to delete the selected assets by clicking yes on the **Are You Sure** pop up dialog.



7. Once the user clicks the Yes button, the selected asset will be deleted.

Note:
All deletes are captures in the Snapshot Administrative Logger feature similar to the push results. In addition, Delete Assets also assumes the same push permissions as the Push Asset Snapshot permissions.

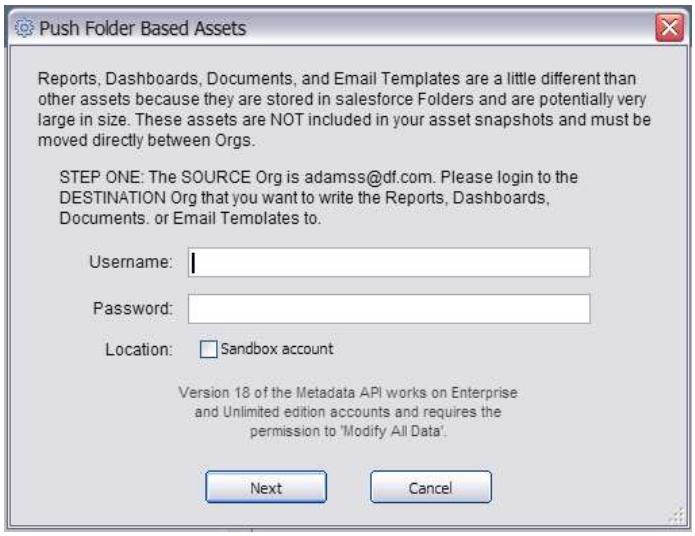
Push Folder Based Assets

In addition to the main stream Assets mentioned above, Snapshot also allows you to push Folder Based Assets including: Reports, Dashboards, Documents and Email Templates. Folder Based Assets are different from regular Assets because they are stored in Salesforce Folders and are potentially very large in size.

> **Note:**
> Folder Based Assets are currently included as part of your regular Assets SnapShot capture and deployment process. So, you can effectively consider Folder Based Asset to be deprecated.

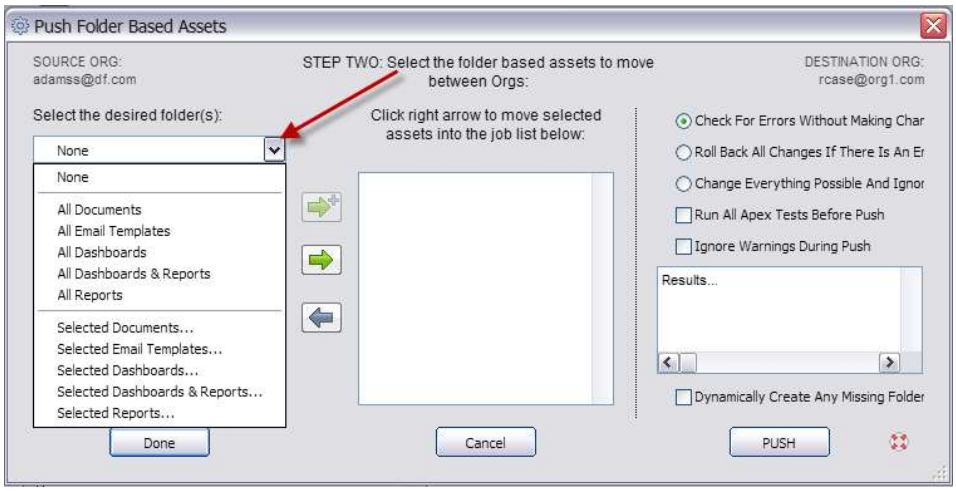
To push any of these elements, select the **Push Folder Based Assets** command from the **Studio** menu and then follow the steps below:

1. Once selected, you will automatically be logged into the Source Org, similar to the regular **Asset Push** login. All you have to do is log into the desired Destination Org.

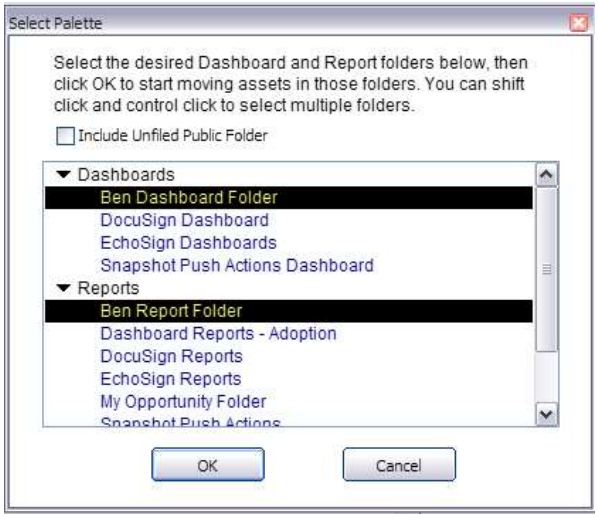


Note:
If you are logging into a Sandbox you must check the box next to **Sandbox Account**.

2. Once logged in, you can select **All Reports**, **b**, All Dashboards, **All Email Templates** and **Dashboards and Reports**, or you can choose **Selected Reports**, **Selected Documents**, **Selected Dashboards**, **Selected Email Templates** or **Selected Dashboards and Reports**from the drop down menu.

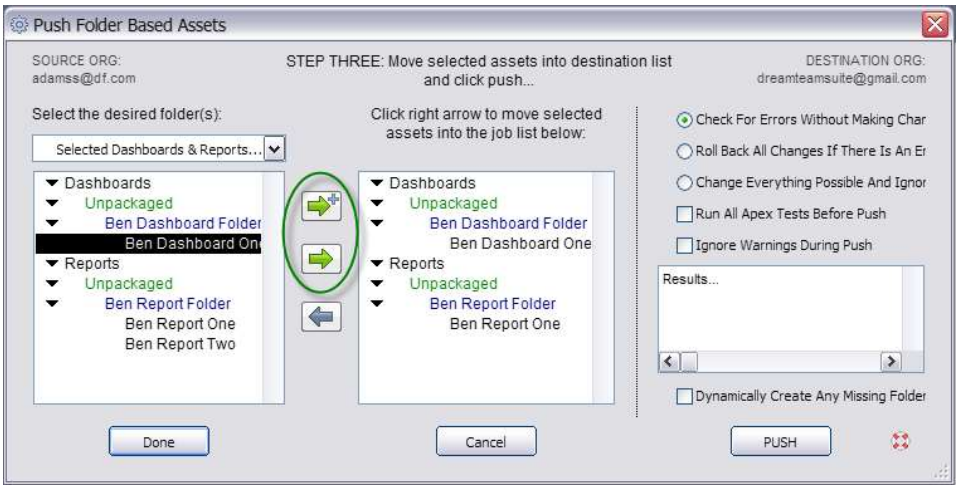


If you choose one of the **Selected Assets**, the **Select Palette** dialog box will appear. Here you can choose from the specific folders. In addition, you can discover an **unfiled public** folders by checking the checkbox. If you decide to select the **Dashboards & Reports** option, once selected, the **Select** palette will appear where you can select the folders that contain the assets that you want to deploy.



Once you have made your selection, Snapshot will continue to log into the Source Org and populate the Source Org box with the selected **Folder Based Asset**.

3. Next, you can select which element you want to push to the Destination Org and then click on the green arrow and move them over to the Destination box.

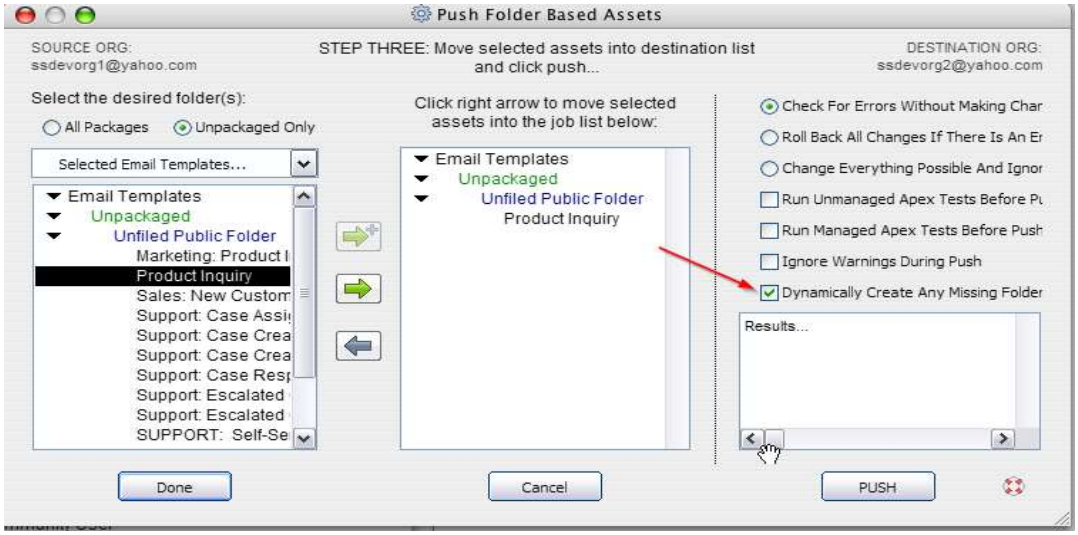


You can also use the new **Super Select** arrow (the one with the '+') if you want to automatically move any reports associated with those dashboards to the push job list. Otherwise, use the normal right arrow to manually select which reports to include in the push job list. The **Super Select** option is only active when choosing the **Dashboards & Reports** option.

When using the **Super Select** option, if the dashboards selected contain reports that are in folders that have not been loaded, then you will receive the following message indicating the required folders needed.

Note:
If you strictly select a report and not a dashboard from the Select Palette displayed above and then select the Super Select, all your will see are the reports and not the dashboards in the dialog box.

4. Once you have added the **Folder Based Assets** you want to push to the Destination Org box, select the appropriate push option. You can also check a box located directly beneath the Results box which will instruct Snapshot to **Dynamically Create Any Missing Folders** for you.

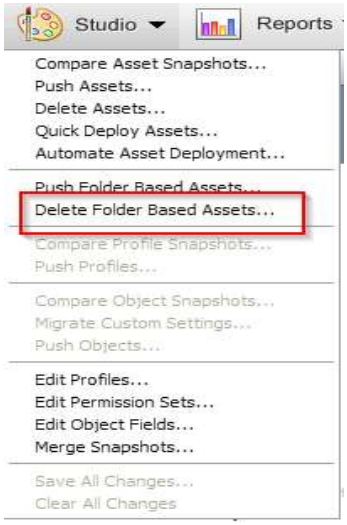


Delete Folder Based Assets

Snapshot users have the ability to delete selected folder based assets directly in the tool. This feature allows users to easily delete multiple Folder Based Assets from their Org, directly in the Asset Snapshot. This feature is accessible through the **Studio** menu.

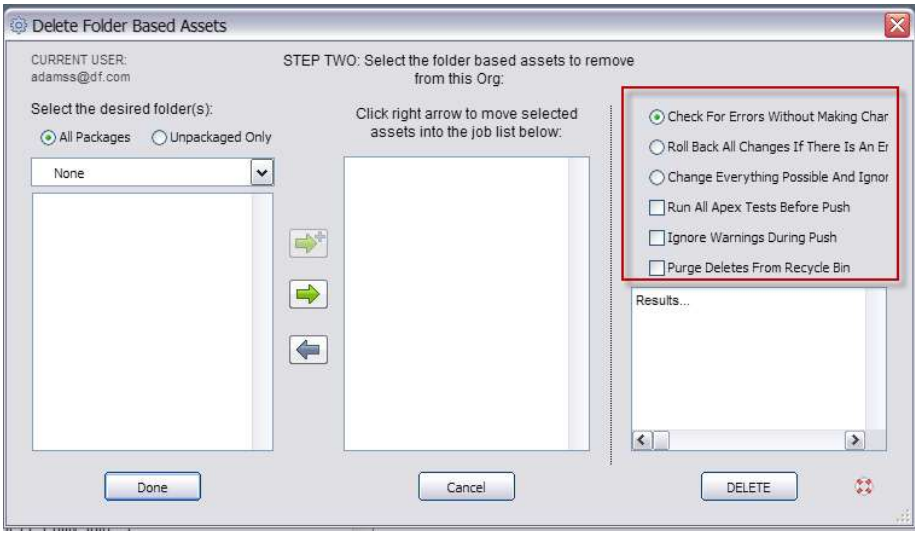
To access the **Delete Folder Based Asset** feature:

1. Click on the **Studio** menu and select the **Delete Folder Based Assets** command

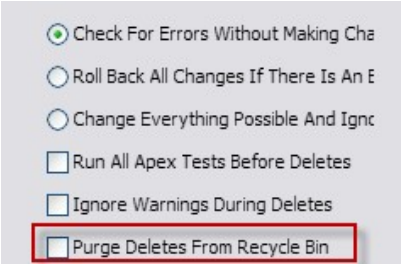


2. Once selected, the **Delete Folder Based Assets** login dialog box will appear. Similar in appearance to the **Push Asset Snapshot** login screen, here users can either login to the Org that they want to delete assets from, or use the current login. If the user wants to use the current login, they must check the check box above the login boxes and everything else will be grayed out. Click **Next** to login.

3. Once the user has logged in to the **Delete Folder Based Assets** dialog, the **Delete Folder Based Assets** dialog box will appear. Similar in appearance of the **Push Folder Based Asset** snapshot dialog, the user must select the assets that they want to delete and then add that selected asset to the destination box.



The push options are similar to the **Delete Assets** dialog except for deleting instead of pushing. One additional push option was added replacing the **Data Transform** option. Now, users can purge deletes from Recycle Bin if they wish.



4. Prior to performing an actual push to delete the select assets, users will be prompted to confirm the are sure that they want to delete the selected assets by clicking yes on the **Are You Sure** pop up dialog.

5. Once the user clicks the **Yes** button, the selected asset will be deleted.

Note:
All deletes are captures in the **Snapshot Administrative Logger** feature similar to the push results. In addition, **Delete Folder Based Assets** also assumes the same push permissions as the **Push Asset Snapshot** permissions.

Asset Push Prerequisites

In order to accomplish the maximum results when using the Push Asset and Folder Based Asset features, you must ensure that all Asset Push prerequisites are met prior to commencing the push. The list below details these Asset Push Prerequisites.

Apex Classes – You must push Apex Classes first prior to pushing Apex Components, Page and Triggers.

Note:
When pushing Apex Classes, you must ensure that your test code meets salesforce's code coverage requirements – set to 75% currently. Otherwise you will receive an appropriate salesforce error message.

Apex Components – You must push Apex Classes first prior to pushing Apex Components. The Source code that is returned from the API is returned in two pieces (Class and associated Meta file). Therefore, when pushing Apex Components, you must select both entries when pushing.

Apex Pages – You must push Apex Classes first prior to pushing Apex Pages. The Source code that is returned from the API is returned in two pieces (Class and associated Meta file). Therefore when pushing Apex Pages, you must select both entries when pushing.

Apex Triggers – You must push Apex Classes first prior to pushing Apex Triggers.

Note:
When pushing Apex Triggers, you must ensure that your test code meets salesforce's code coverage requirements – set to 75% currently. Otherwise you will receive an appropriate salesforce error message.

Objects: All – Selecting this Asset will include the following components in the push:

- **Objects: Action Overrides**
- **Objects: Business Processes**
- **Objects: Fields**
- **Objects: Field Sets**
- **Objects: Named Filters**
- **Objects: List Views**
- **Objects: Record Types**
- **Objects: Search Layouts**
- **Objects: Sharing Reasons**
- **Objects: Sharing Recalculations**
- **Objects: Validation Rules**
- **Objects: Weblinks**
- **Objects: Page Layouts**

Profiles All – Selecting this Asset will include the following components in the push:

- **Profiles: Apex Class Accesses**

Profiles: Apex Page Accesses
Profiles: Application Visibility
Profiles: Field Permissions
Profiles: Layout Assignments
Profiles: Login IP Ranges
Profiles: Object Permissions
Profiles: Record Type Visibility
Profiles: Tab Visibility
Profiles: User Permissions
Profiles: Custom Permissions
Profiles: Settings

Custom Object Translations: All – Selecting this Asset will include the following components in the push: You must push Translations and Custom Objects prior to pushing Custom Object Translations.
Custom Object Translations: Case Values
Custom Object Translations: Fields
Custom Object Translations: Page Layouts
Custom Object Translations: Named Filters
Custom Object Translations: Record Types
Custom Object Translations: Sharing Reasons
Custom Object Translations: Validation Rules
Custom Object Translations: Weblinks
Custom Object Translations: Workflow Tasks

Custom Applications – All Custom Labels and Custom Tabs must be pushed first.
Custom Labels – There are no prerequisites required for this Asset.
Custom Sites – All Custom Sites must be registered with Salesforce prior to pushing.

Home Page Components – Home Page Web Links must be pushed first.
Home Page Layouts – Home Page Components must be pushed first.
Home Page Web Links – There are no prerequisites for this Asset.

Analytic Snapshots – Reports and Custom Object that holds the Snapshot data must be pushed first in the Folder Based Asset push feature.
Data Category Groups - There are no prerequisites for this Asset.
Entitlement Templates – Entitlement Templates must be turned on in the SFDC Org.
Letterheads – Any Documents that are part of this Letterhead needs to be migrated first.
Page Layouts – Push Objects: All option first then push all S-Controls and Apex before migrating Page Layouts.
Report Types – Objects: All must be pushed first.
Portals - There are no prerequisites for this Asset.
Remote Site Settings - There are no prerequisites for this Asset.
Static Resources – Apex Classes must be pushed first.
Scontrols – Apex Classes must be pushed first.
Translations – Translations must be turned on in the SFDC Org prior to pushing translations.

Workflows: All – Objects: All, Letterheads and Email Templates must be pushed prior to pushing Workflows.
Workflows: Alerts
Workflows: Field Updates
Workflows: Outbound Messages
Workflows: Rules
Workflows: Tasks

Folder Based Assets
Reports – Objects: All and Report Types must be pushed first.
Dashboards – Reports must be pushed first.
Documents – There are no prerequisites required for this Folder Based Asset
Email Templates – Apex Classes, Apex Triggers and Objects: All must be pushed first.

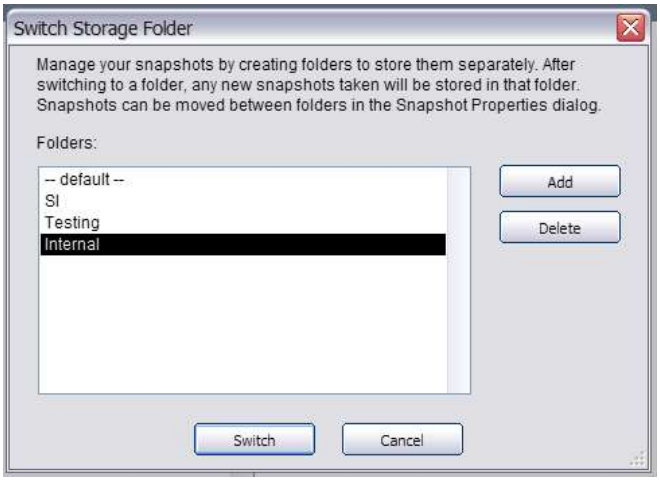
Switch Storage Folder

The **View** menu now contains a new option titled **Switch Storage Folder** which allows users to manage snapshots by creating folders to store them separately. After switching to a folder, any new snapshots taken will be stored in that selected folder. Snapshots can be easily moved between folders in the **Snapshot Properties** dialog.

To access the **Switch Storage Folder** feature, follow the directions below:

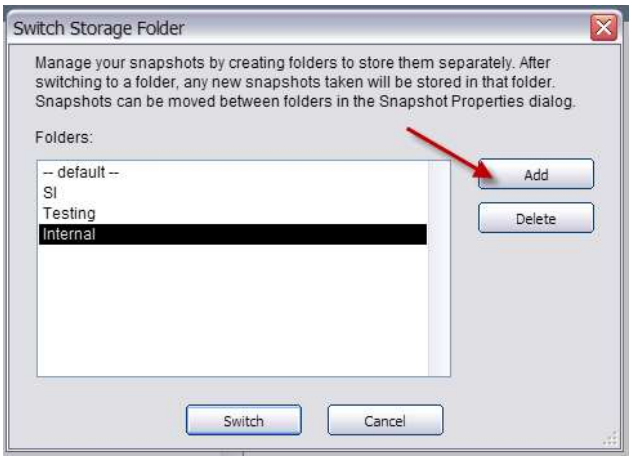
1. Click on the **View** menu and select the **Switch Storage Folder** option

2. Once selected, the **Switch Storage Folder** dialog will appear. Here users can add new folders, switch between folders or delete folders.

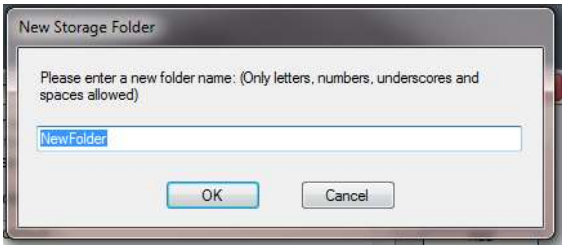


Here a user can either select the default storage folder, select a different folder and also create new folders.

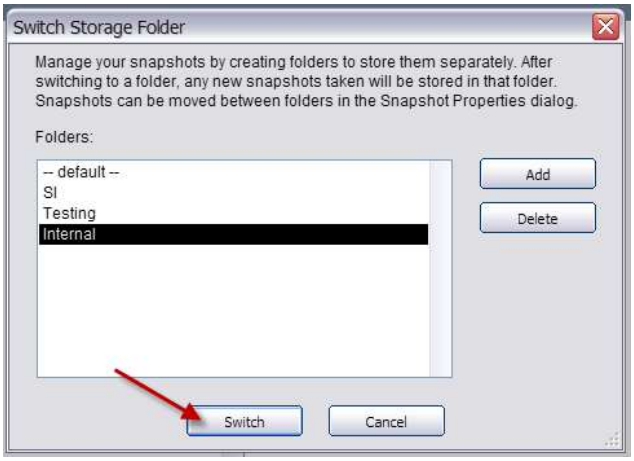
3. To create a folder click on the **Add** button.



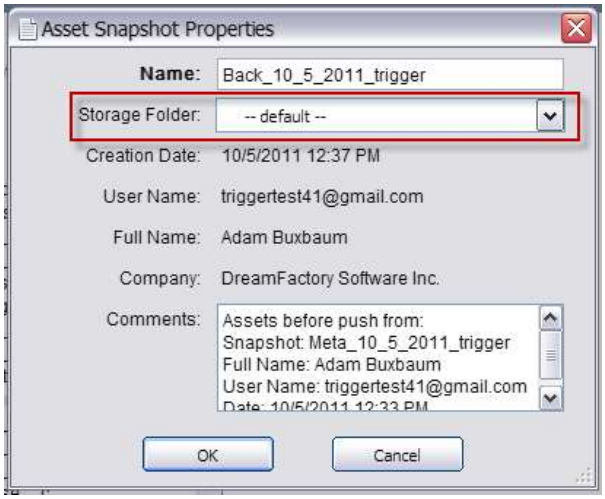
Once selected the **New Storage Folder** dialog will appear. Here the user can give the new storage folder a name and click **OK**.



4. Once multiple folders have been created, users can easily switch between folders by selecting the desired folder and then clicking the **Switch** button. Once clicked, the folder in the top left corner of the Snapshot screen will display only the snapshots stored in the selected folder.

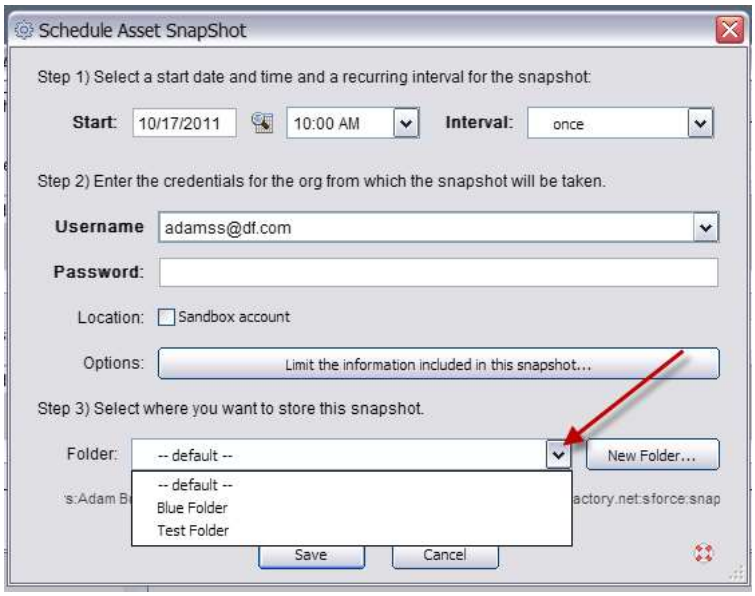


Users can see what folder has been selected by going to the Snapshot Properties in the **Assets** menu.



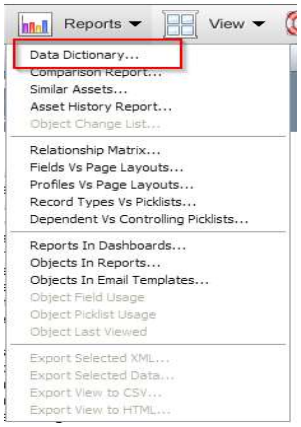
Users can easily move snapshots to different storage folders in the Snapshot Properties dialog by clicking on the drop down menu and selecting the desired folder.

Users also can select one of these new folders when creating automated snapshots as well if desired.



Data Dictionary

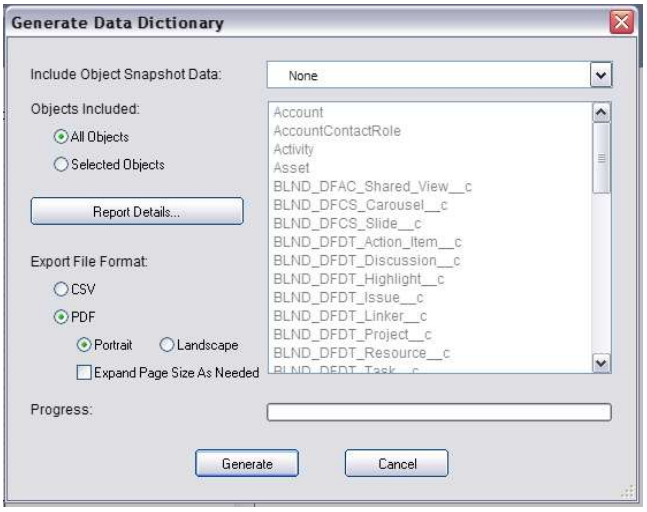
The Data Dictionary is a robust reporting tool that allows you to create a list of all Objects, Fields and all attributed Relationships that exist in your Org and then export that list out either in a CSV or PDF format.



To create a Data Dictionary, simply follow the instructions below:

1. Click on the **Data Dictionary…** command from the **Reports** menu.

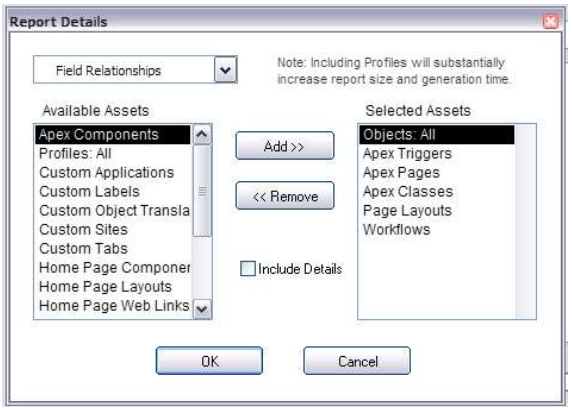
2. Once selected, the dialog box below will appear. You have the ability to add Standard Objects to the Data Dictionary. To add Standard Objects, simply click on the drop down menu at the top of the dialog box and select the appropriate Object Snapshot that you want to include in the Data Dictionary.



Note:
The user ID's must be identical in order for the Object Snapshot to be appear in this drop down menu.

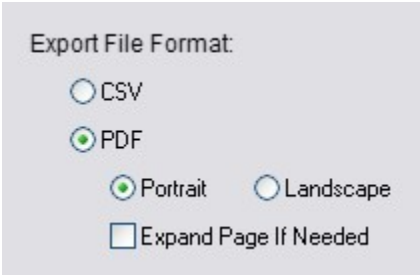
3. Once you have added the Object Snapshot to the dialog, you must then select the objects you want from the Asset Snapshot.

4. Next, click on the **Report Details** button to choose what criteria you to report on. The **Report Detail** dialog allows you to choose from the following categories: **Object Properties**, **Field Properties**, **Object Relationships** and **Field Relationships**.



To add properties and relationships, simply select the desired property or relationship from the Available Properties/Asset box and click the green arrow to move it to the Selected Properties/Asset box. You can also reorder these properties and relationships by clicking on the Move Up or Move Down buttons. When finished click OK. In addition, you can include details in the Object & Field relationships, by checking the Include Details box.

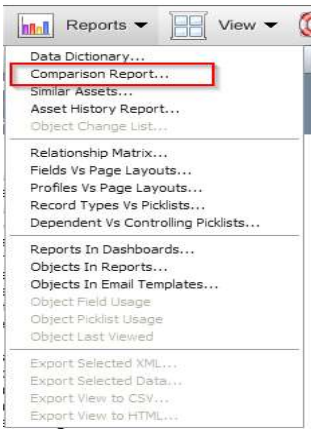
5. Next choose which Export File Format you want. The Data Dictionary can be exported out in either a PDF format or a CSV file format. If you select PDF, you can choose between portrait and landscape display, and also check the Expand Page Size as Needed box to capture all desired data.



6. Once you have selected your criteria click the OK button to create the file.

Comparison Report

The Comparison Report has been added to Snapshot to allow you to export the results of the Asset Comparison. Located in the Reports menu, the Comparison Report can be exported out of Snapshot in a CSV, HTML and PDF file format.

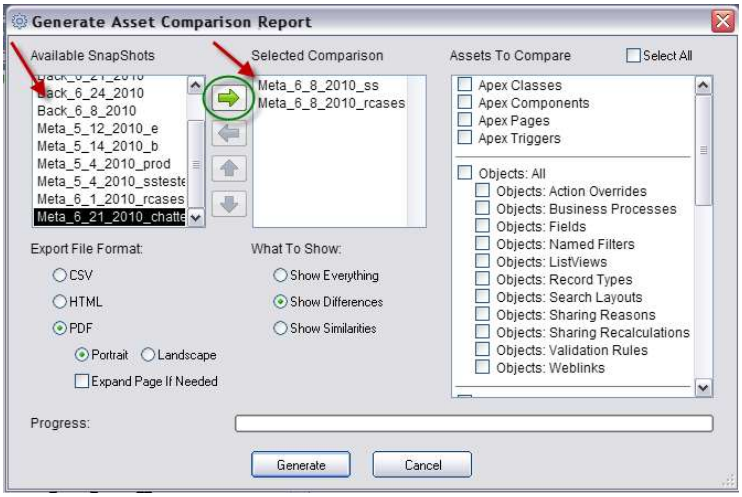


To create a Comparison Report, simply follow the step by step instructions below.

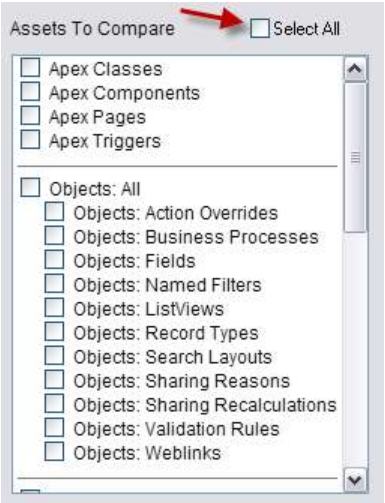
1. Select the Comparison Report option from the Reports menu

2. Once selected the Comparison Report dialog box will appear. Here you must:

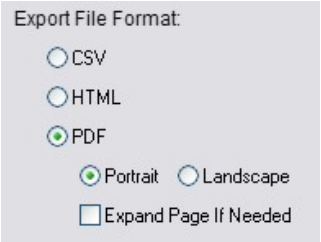
   A. Select which Snapshots you want to generate the report from the Available Snapshots box and then click the green arrow to move the selected Snapshot to the Selected Comparison box



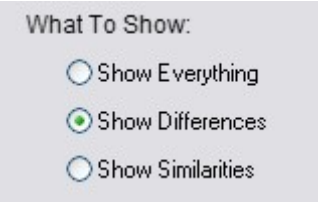
B. Select the Assets that you want to compare of the box on the right. Note: you can select All Assets by checking the box in the top right corner



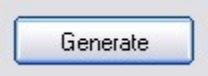
C. Once you have selected the Snapshots that you want to compare and the Assets that you want to report on, you must next choose the file format you want to export the report in. The three File Format options include:



D. Next you must select what you want to display in the report. The three options available include:



E. Once you have selected all of your desired criteria, simply click the Generate Button on the bottom of the dialog to run the report.



Similar Assets Report

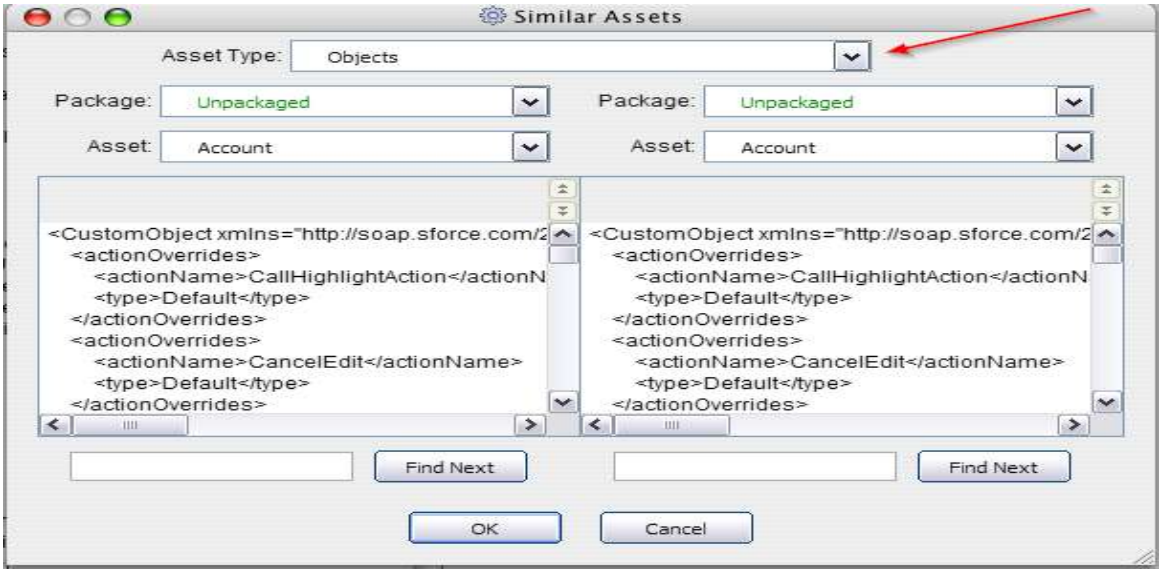
The Similar Assets Report allows the SnapShot user to select assets of like type from a single snapshot for side by side comparison.

To Create a Similar Assets Report, simply follow the step by step directions below.

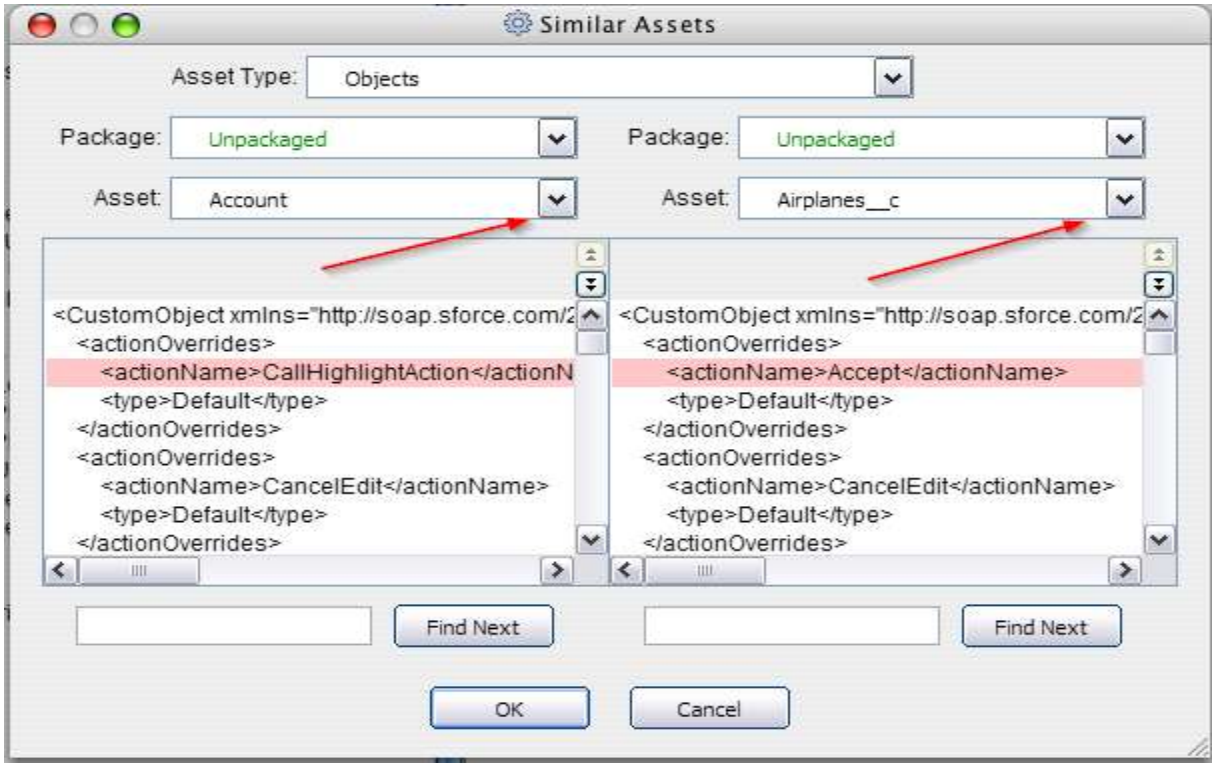
1. Select the Similar Assets Report option from the Reports Menu.

2. Once selected, the Similar Assets Report dialog box will appear. Here you must:

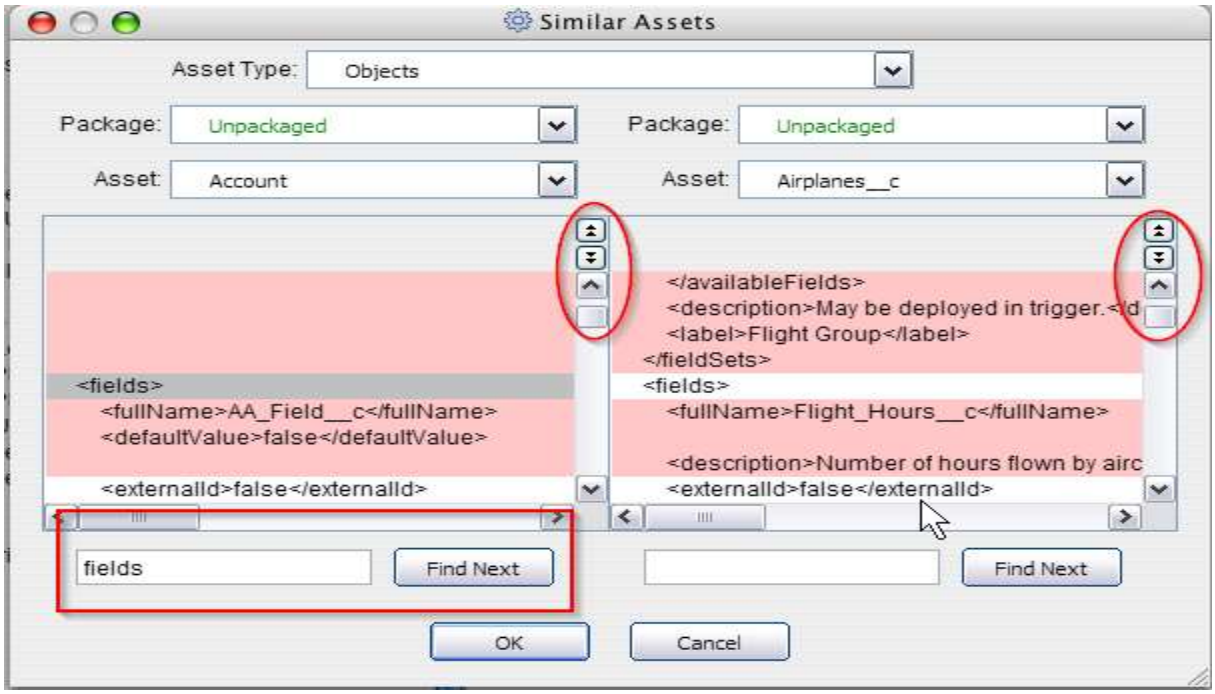
   A. Select the Asset Type to be compared.



B. Select the Individual Assets for comparison.



C. The SnapShot user may now use the scroll tools, or the search box to identify the next set of differences.



Asset History Report

The Asset History Report is the newest report added to the Asset Snapshot Reports menu. The Asset History Report allows you to see when assets were created, last modified and by whom.

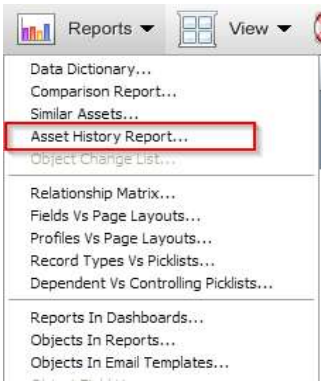
Note: All Assets that are grayed out are not able to be displayed due to the fact that they are not support by the Salesforce Metadata API. In addition, all standard objects and standard workflows are not currently support due to a Salesforce Metadata API limitation.

The Asset properties that can be viewed in this report are the following: (* signifies the default properties)

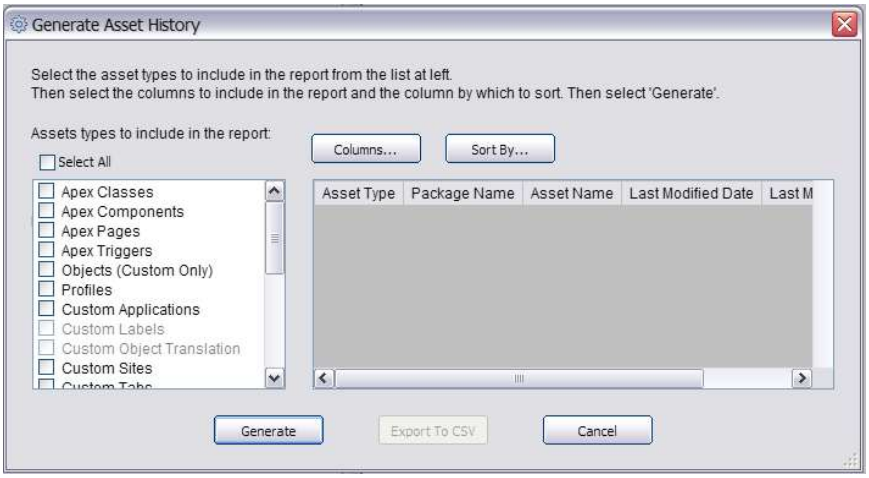
Asset Type* - This field indicates what type of asset has been selected.
Package Name* - This field indicates what package, if any, the asset is part of; otherwise this value is "unpackaged".
Asset Name* - This field is the name of the selected asset.
Last Modified By Id – This field displays the Id of the user who last modified the asset.
Last Modified Date*- This field displays the date and time the asset was last modified.
Last Modified By Name* - This field displays the name of the user who made the last modification of the selected asset.
Created By Id – This field displays the Id of the user that created the asset.
Created By Name – This field lists the name of the user who created the asset.
Created Date – This field displays the date and time that the asset was created.
Id – Id is an identifier that Salesforce assigns to every asset, not the record ID (some asset types can be listed by using this ID).
Managed State – The Managed State is the Salesforce state of Managed Packages. Assets that are not part of a package will be displayed as unmanaged, while those that are part of a package will show their Managed State as either unmanaged, installed, etc.

To access the Asset History Report, simply follow the directions below.

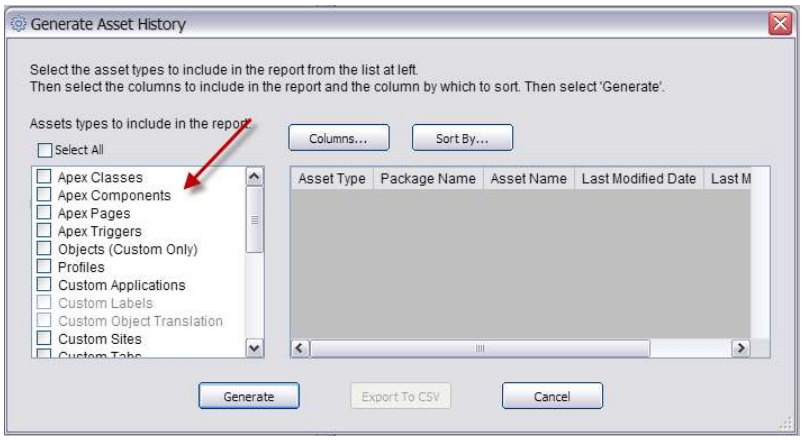
1. Click on the Reports menu and select the Asset History Report option.



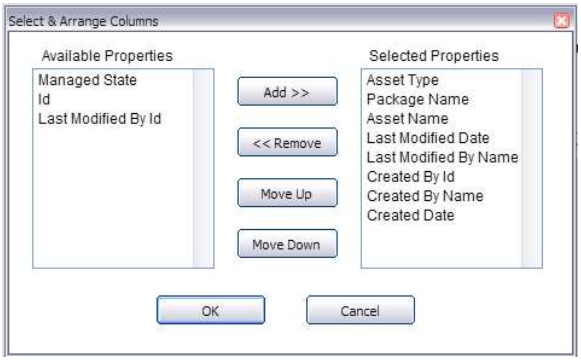
2. Once selected, the Generate Asset History dialog box will appear. This is where you select your desired asset types and displayed columns and how the report should be sorted.



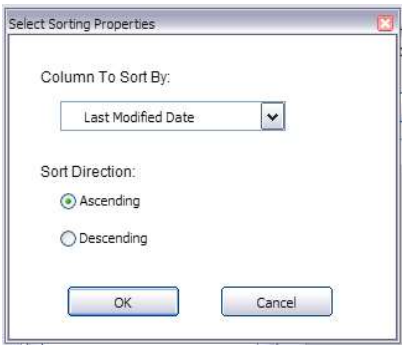
3. Next, select either an individual or multiple assets by checking the box on the left hand side of the dialog.



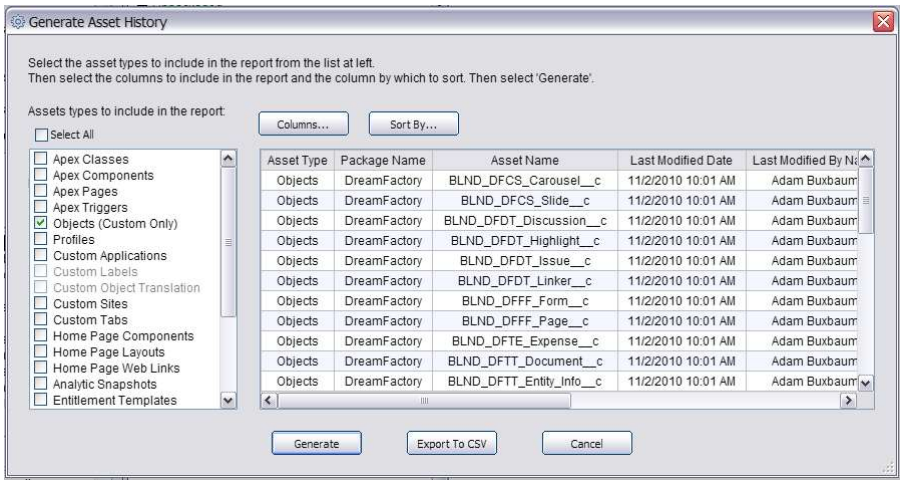
4. After you have selected your desired assets, click on the Columns button to select the columns you would like to display information for. You can also arrange the columns in your desired order by using the Move Up and Move Down buttons.



You can also select from multiple sorting properties by clicking on the Sort By button located next to the Columns button at the top.



Once you have selected all of your properties, click the Generate button at the bottom and the dialog box will populate with the Asset History Information for the selected asset(s). You can also export the results out to a CSV by clicking on the Export To CSV button at the bottom of the dialog.



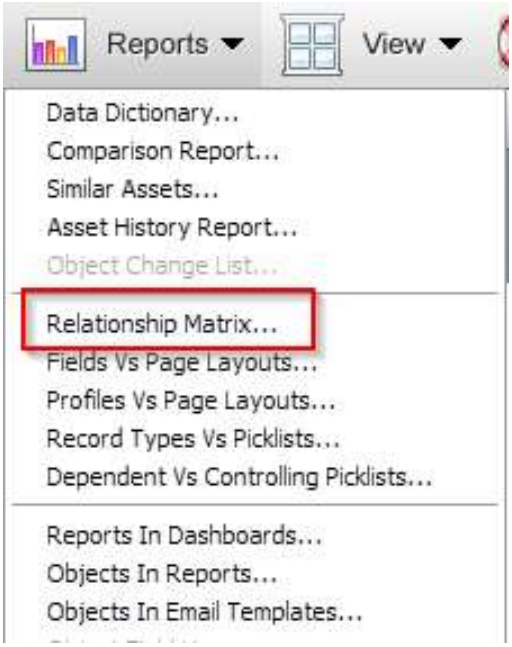
Relationship Matrix

Snapshot offers another resource that enables you to look at the existing relationships that are in your Org. Accessible through the Reports menu, The Relationship Matrix allows you to easily find relationships between two Asset Types and then report on those relationships.

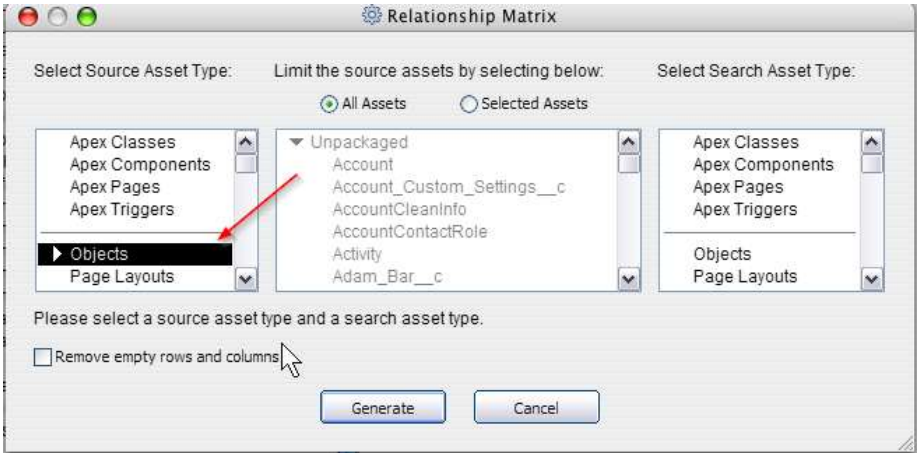
To access the Relationship Matrix, follow the instructions below:

1. Go to the Asset Snapshot

2. Click on the Reports menu and select the Relationship Matrix command.

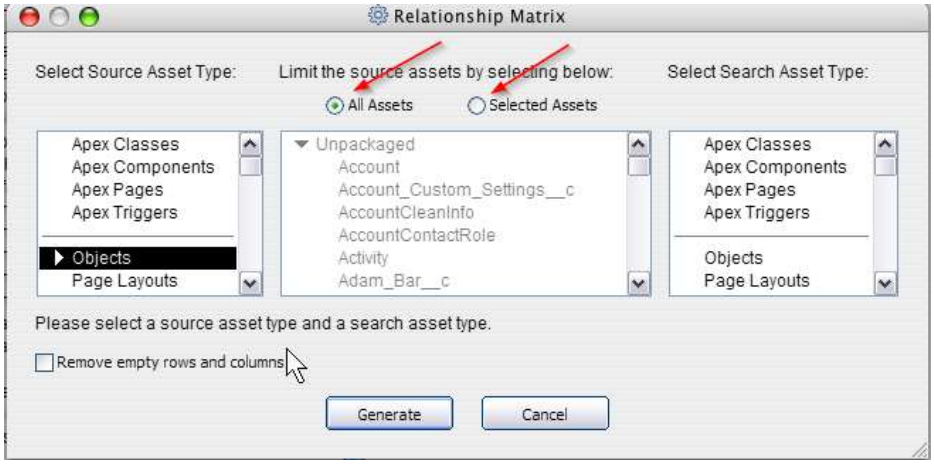


3. Once selected, the Generate Relationship Matrix dialog box will appear. First you want to select Source Asset Type that you want to search for.

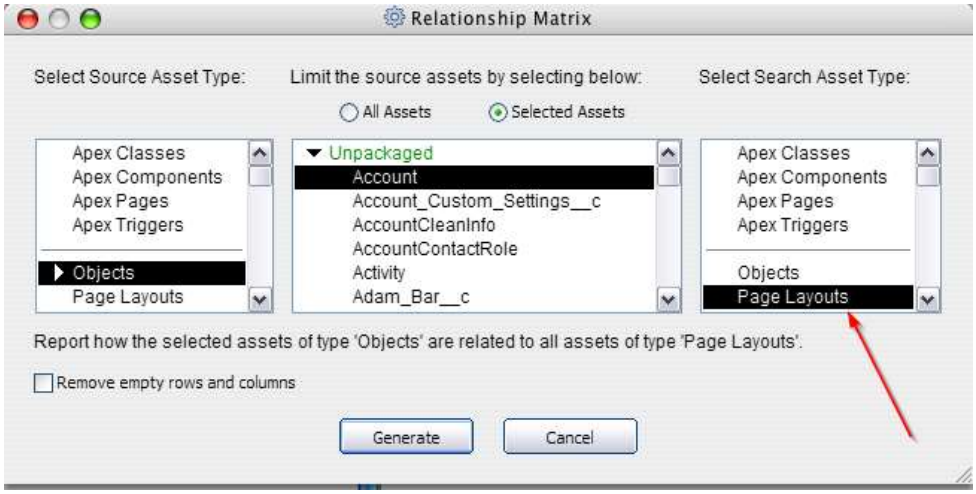


4. You have the ability to limit the source assets by selecting either “All Assets” or “Selected Assets” for a subset of the assets of that type.

Note: To access sub-elements of Objects and Profiles, select a subset of assets from the middle column either by clicking on the list or clicking the “Selected Assets” radio button. If subsets are not selected, it will strictly show the selected Source Asset Type.



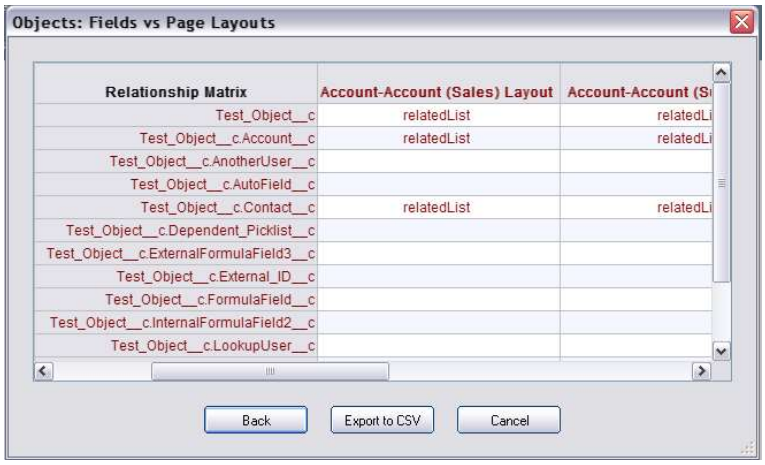
5. Then you want to select the Asset Type that will be searched through from the third column.



6. Once you have selected your desired criteria, simply click the Generate button.

Note: The check box in the bottom left that states “Remove empty rows and columns”, when checked will remove all rows and columns where no relationships are found in the matrix.

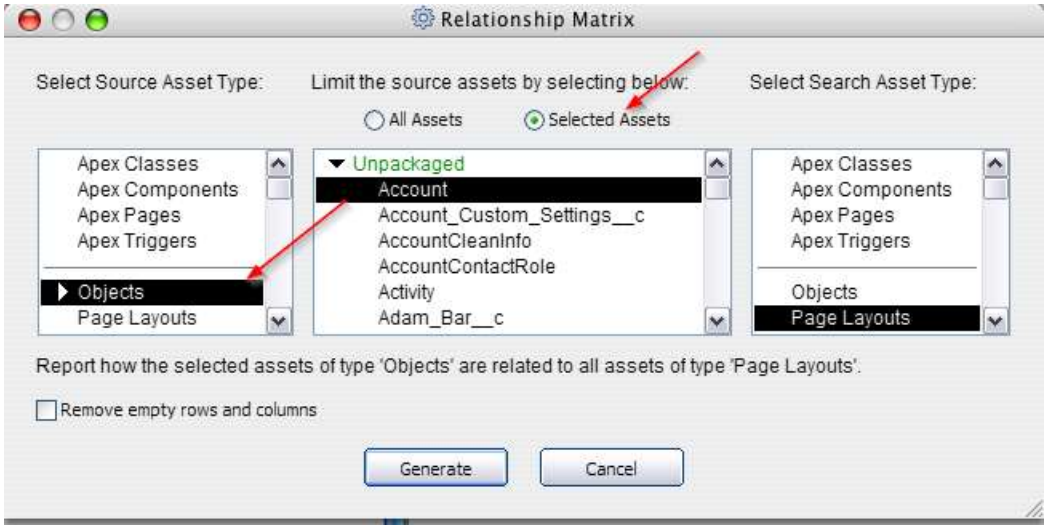
7. Once you have clicked the Generate button, the dialog below will appear. The source (searched for) criteria that you selected will be listed in the left column of the dialog, while the searched criteria that you selected will be listed in the right column of the dialog.



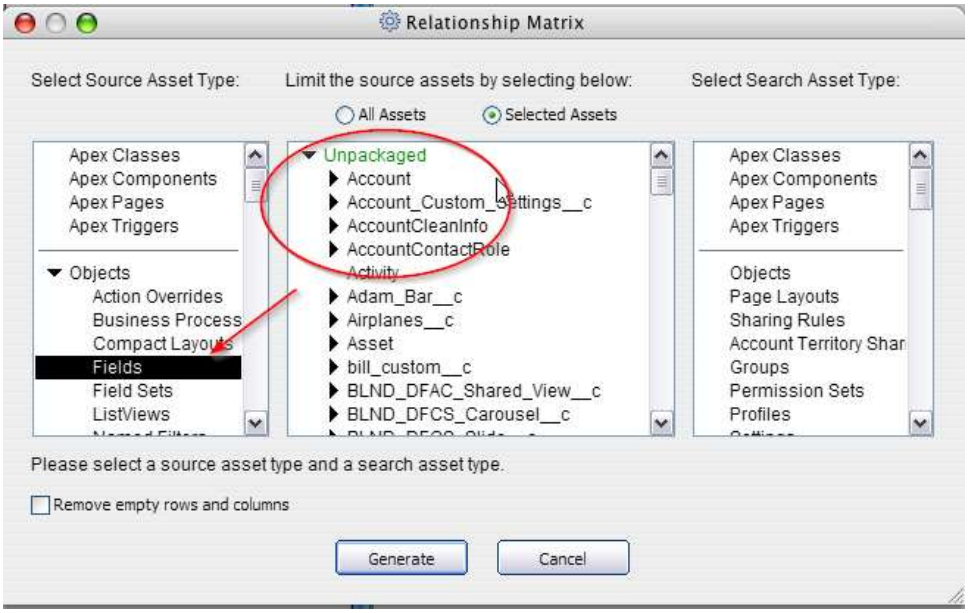
Users can also access individual subset elements in the Relationship Matrix. For example, to view the fields on the Case object, follow the directions below:

1. Click on the Reports menu and select the Relationship Matrix

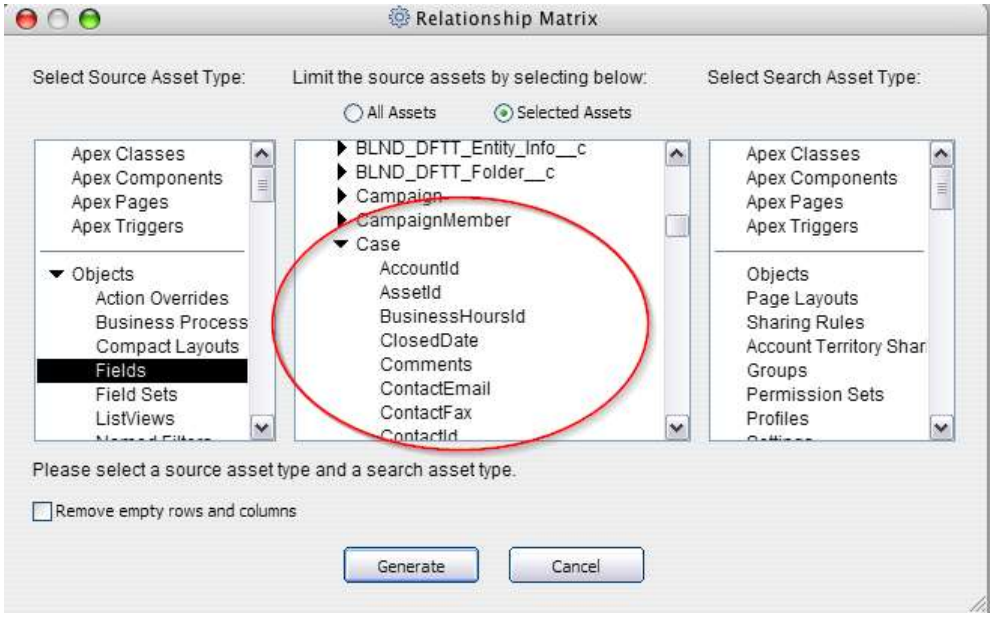
2. Next, Click on Objects: All from the first columns, and then the Selected Assets radio button in the middle column and the list of objects will open up.



3. Next, click on Objects: Fields from the first column and then you will see little black arrows next to each object that has fields.



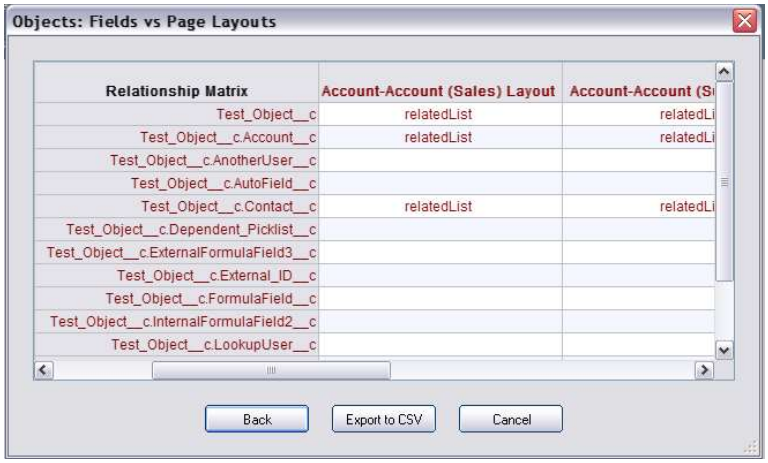
4. Click on the arrow next to the Case objec t and all of the fields on the Case object will appear.



5. Select the fields that you want to view the relationships for and then select the second Asset Type from the third column and click the Generate button.

In the screen shot below, the relationship matrix is displaying how Objects: Fields are related to Page Layouts. Within the matrix table, the Page Layouts are displayed on the top, while the objects and the fields are displayed on the left hand side. The results of the search are displayed in the middle of the

table. If a relationship exists, both the Source Asset Type and the Search Asset Type will be highlighted in red with the results populated in the matrix table.



At the bottom of the matrix are the following three buttons:

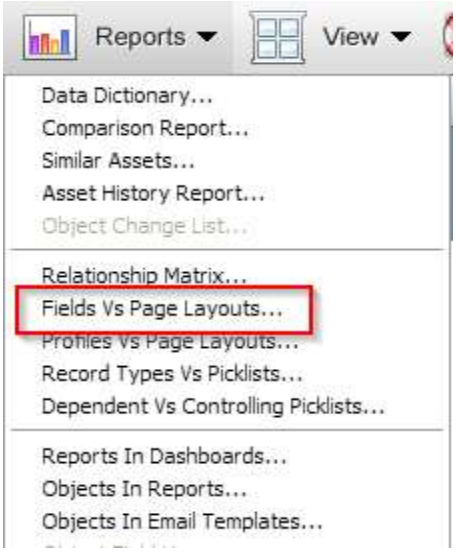
- **Back** – Selecting this option will bring you back to the initial relationship matrix configuration screen where you can search for more Asset relationships.
- **Export to CSV**- Selecting this option allows you to export the matrix to a CSV file.
- **Cancel** – Selecting this option will close the dialog box.

Below are some common examples of common relationship searches.

1. Page Layouts by Fields - To see used/ unused fields.
2. Workflows by Fields - To see used/ unused fields.
3. Apex Triggers by Fields - To see used/ unused fields.
4. Apex Pages by Apex Components - To see used/ unused components in a Page.
5. Custom Sites by Apex Pages.
6. Custom Applications by Custom Tab
7. Home Page Layouts by Home Page Components.
8. Home Page Components by Home Page Web Links

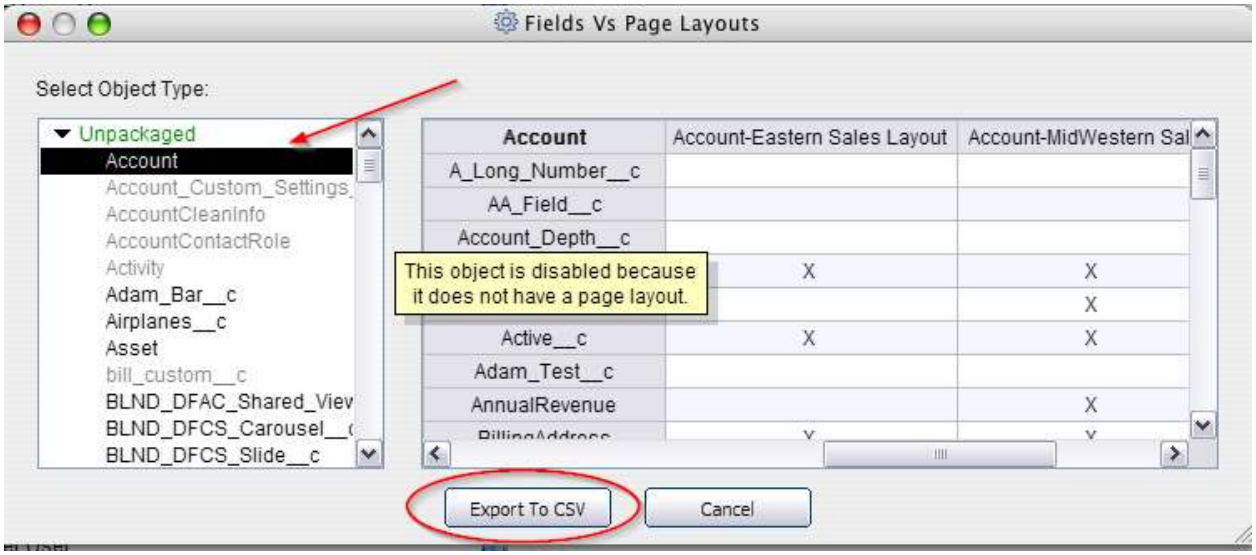
Fields Vs Page Layouts

The Fields Vs Page Layouts report allows the SnapShot user to generate a Fields/Page Layouts comparison for selected object types. This report can also be exported and saved as a CSV file.



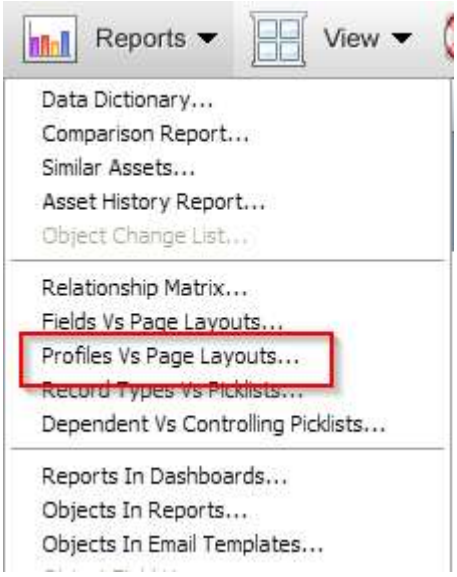
To generate this report, simply follow the instructions below.

1. Select the Fields Vs Page Layouts Report from the dropdown menu.
2. Once selected, the SnapShot user may choose which object fields they wish to view, and may see the relationship in the window to the right. These results can also be exported and saved as a CSV file.



Profiles Vs Page Layouts

The Profiles Vs Page Layouts report allows the SnapShot user to generate a Profiles/Page Layouts comparison for selected object types. This report can also be exported and saved as a CSV file.

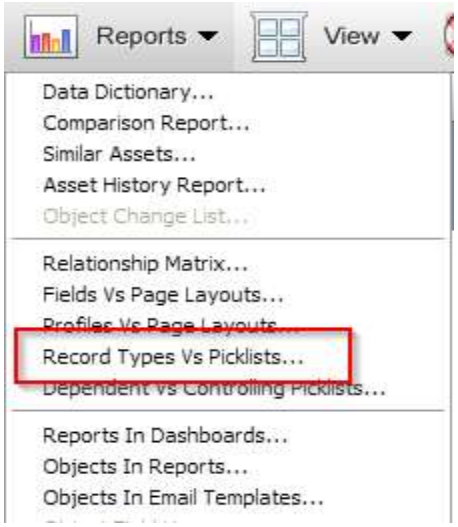


To generate this report, simply follow the instructions below.

1. Select the Profiles Vs Page Layouts Report from the dropdown menu.
2. Once selected, the SnapShot user may choose which profiles they wish to view, and may see the relationship in the window to the right. These results can also be exported and saved as a CSV file.

Record Types Vs Picklists

The Record Type Picklist Matrix allows you to view all Record Types and related picklist values tied to a selected object field. Located in the Reports menu, the Record Type Picklist Matrix can be exported out of Snapshot in a CSV file format.



To generate the Record Type Picklist Matrix simply follow the directions below.

1. Select the Record Type Picklist Matrix command

2. Once selected, the Record Type Picklist Report dialog will appear. Here is where you can see a list of all of the Objects in the left hand navigation box. Simply select the desired object and then in the middle of the dialog box, you will see the selected object with the fields on that object beneath it in the first column. The row headers displays the record types tied to the select object, while underneath the record types will display the pick values of the picklists tied to the appropriate record type.

   Note: If an object is grayed out it means that there are no record types tied to that object that contain a picklist.

Profiles vs. Page Layouts

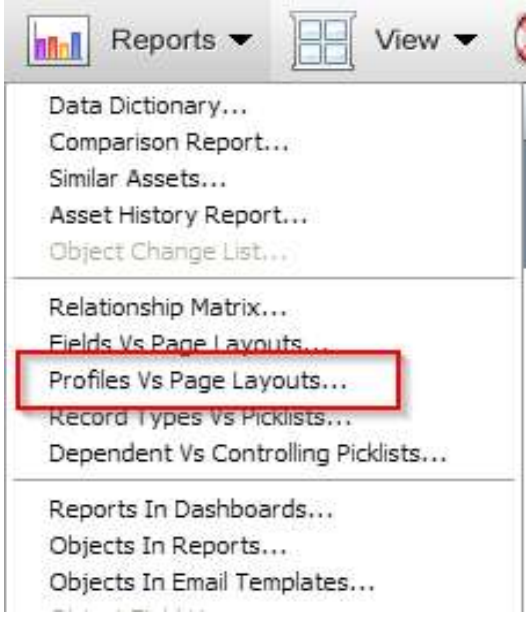
The Profiles vs. Page Layout report allows users to view which profiles have visibility to which page layout. The Profiles vs. Page Layout report is located in the Asset SnapShot. This matrix report can be saved and exported in a CSV format.

To access the Profiles vs. Page Layout report, follow the instructions below:

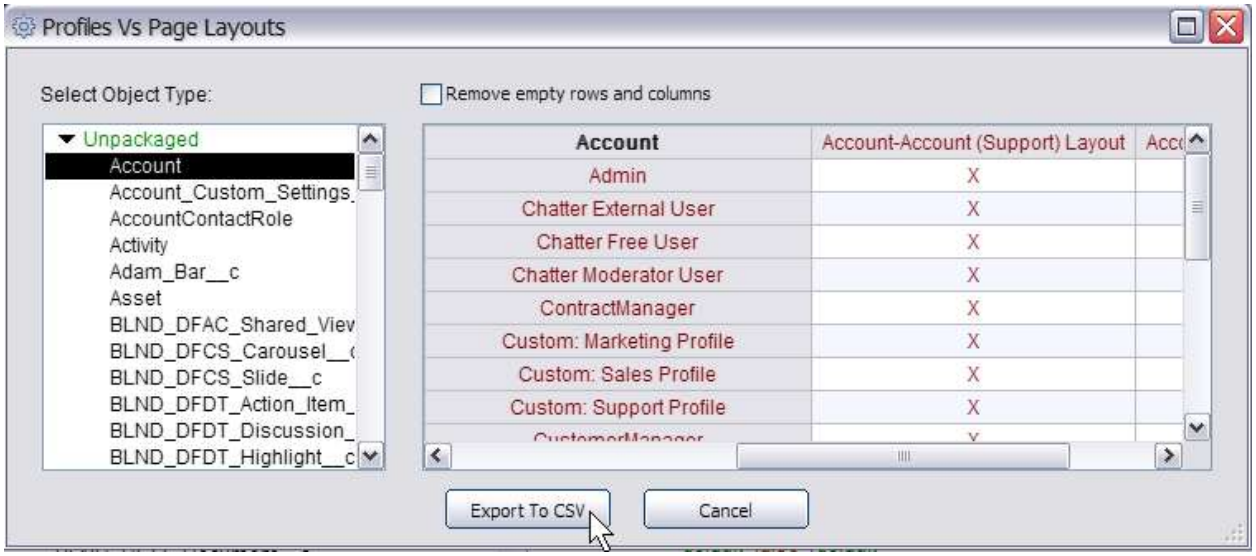
A. Go to the Asset Snapshot

B. Click on the Reports menu

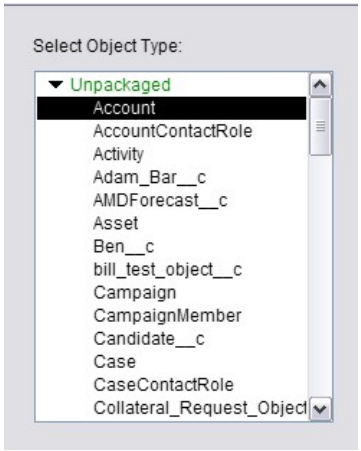
C. Select the Profiles vs. Page Layout report option



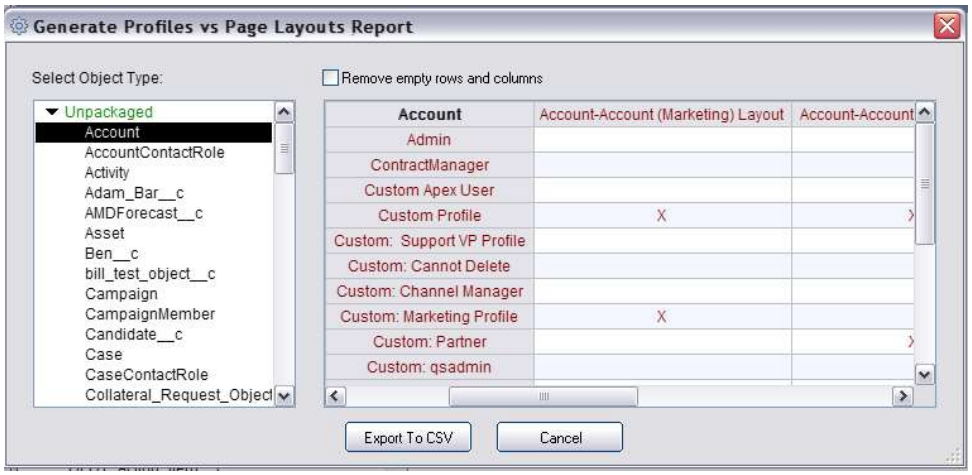
D. Once selected, the Generate Profiles vs. Page Layout report dialog box will appear.



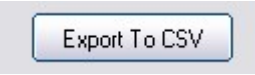
E. First select an object from the list on the left side of the dialog box.



F. To populate the matrix, simply select an Object from the left hand box. Once selected, a list of the Profiles will be displayed on the left while the Object Page Layouts will be listed on the top. Simply scroll across to see what profiles have visibility rights to which page layout.

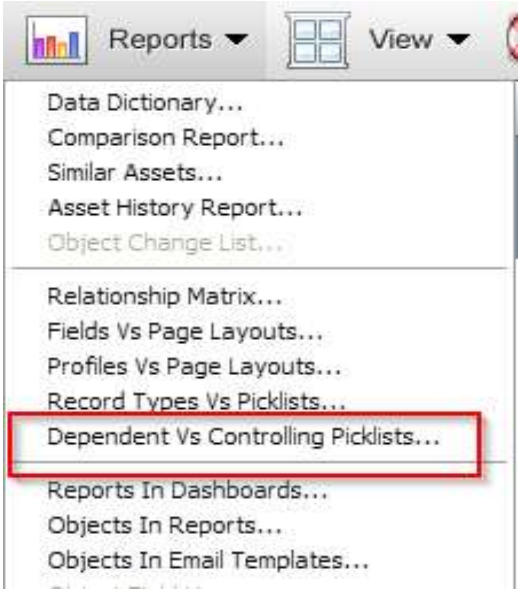


G. You can also export the results out to a CSV file by clicking on the Export To CSV button on the bottom of the dialog box.



Dependent Vs Controlling Picklists

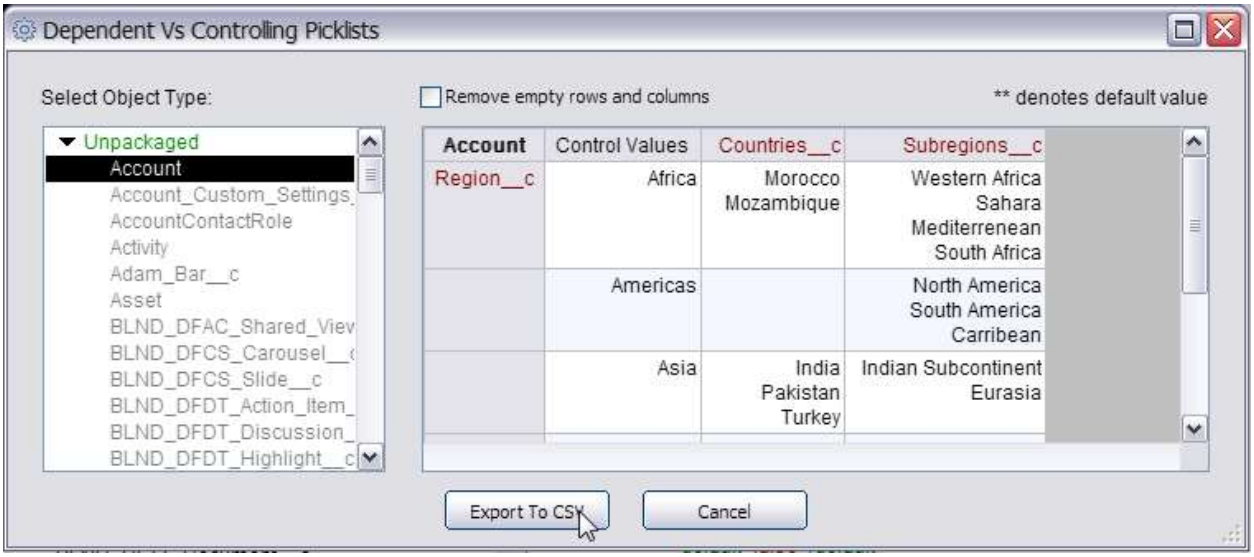
The Dependent Vs Controlling Picklists report allows you to view all controlling picklists and their related dependent picklists tied to a selected object field. Located in the Reports menu, the Dependent Vs Controlling Picklists report can be exported out of Snapshot in a CSV file format.



To generate the Dependent Vs Controlling Picklists report, simply follow the directions below.

1. Select the Dependent Vs Controlling Picklists report command

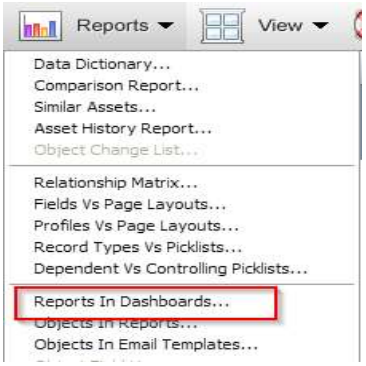
2. Once selected, the Dependent Vs Controlling Picklists dialog will appear. Here is where you will initially see a list of objects on the left. Then in the main dialog box, you will see the object and field that has the controlling picklist and dependent picklists tied to them.



Reports in Dashboards

Through the Reports in Dashboards Report, users can see what Reports are referenced in Dashboards. To access this report, follow the instructions below:

1. Go to the Asset SnapShot
2. Select the Reports and Dashboards report from the Reports menu



3. Once selected, the Dashboards vs. Reports Matrix will appear. Here you select the Dashboards and the Reports that you want to analyze from the appropriate drop down menus. The results will appear in the box in the middle.

4. You can also export the results out to a CSV file by clicking on the Export to CSV button at the bottom of the dialog box.

Objects in Reports

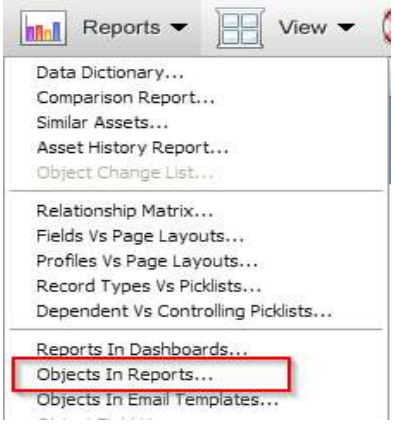
Snapshot allows users to view fields that are referenced within a Report. This will allow users to be able to assess the impact if fields or reports were removed from the Org. This matrix can be saved in a CSV format.

To access the Objects in Reports Matrix, follow the instructions below:

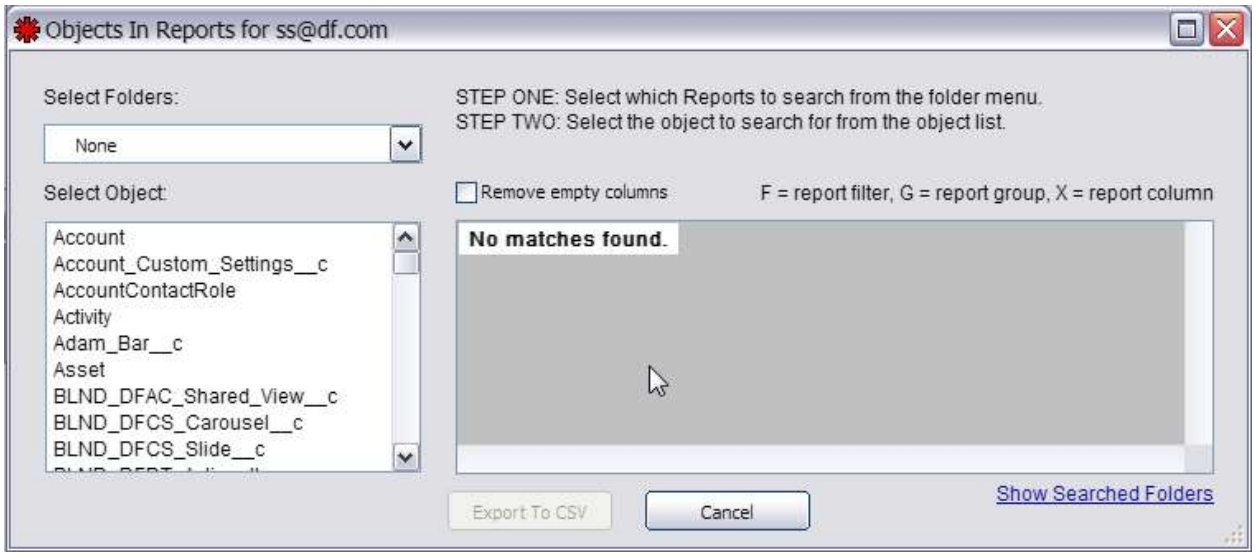
A. Go to the Asset Snapshot

B. Click on the Reports menu

C. Select the Objects in Reports option



D. Once selected, the Objects vs. Report will appear. Here is where users can select certain objects and see what reports certain fields are referenced in.



E. To use the report, please follow the steps detailed below:

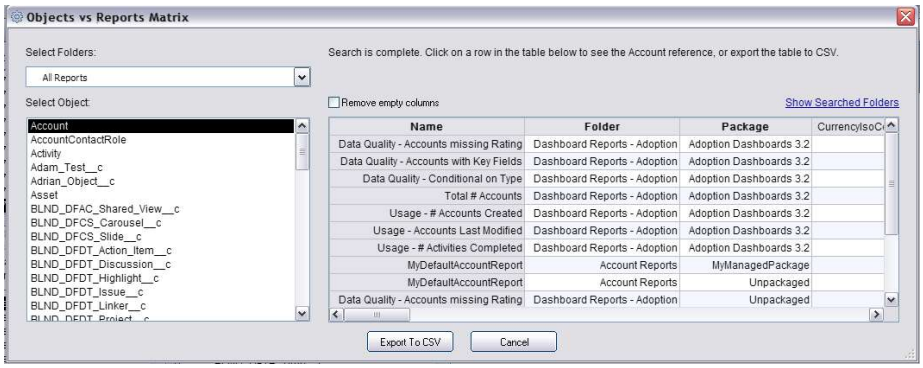
1. Select which Reports to search from by simply clicking on the folder menu. Once selected Snapshot will then log into the Org to access the selected folders.

2. Once selected a list of all Objects in your Org will appear in the left hand panel. Users will also see a box that contains multiple columns. These columns include:

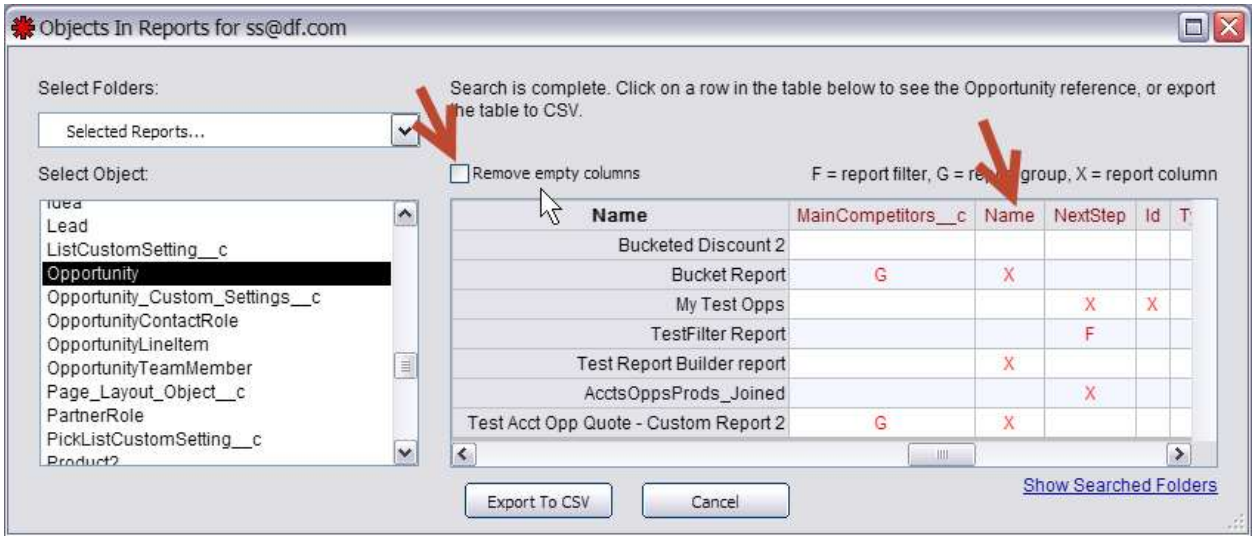
   Name: The Name column displays the name of the Report

   Folder: The Folder column displays the name of the Folder that the report is saved in,

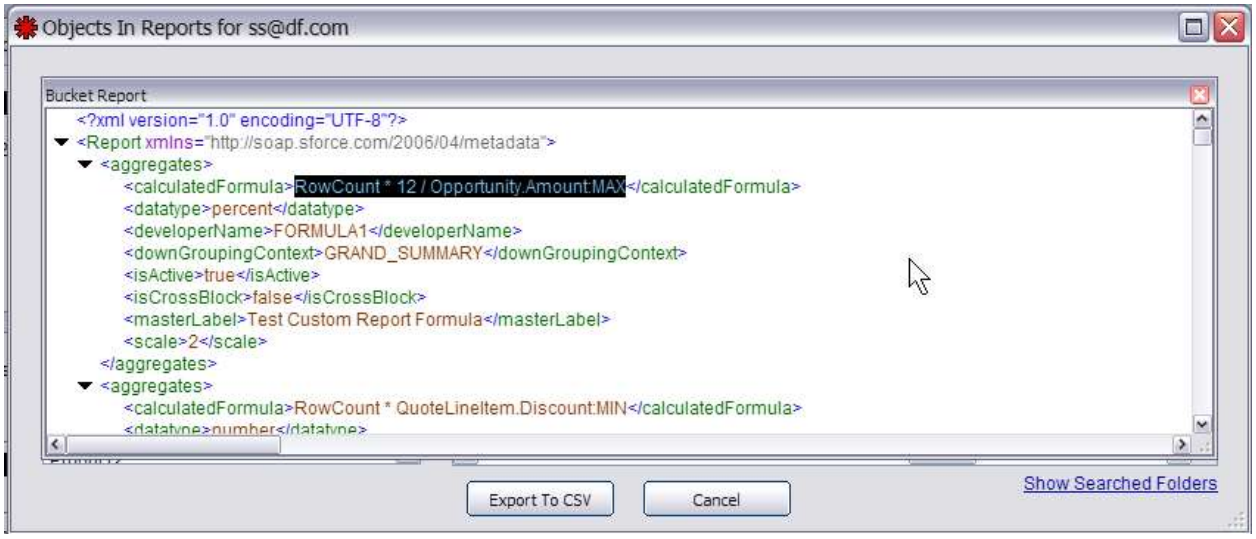
   Package: The Package column displays whether the folder is part of a package or not.



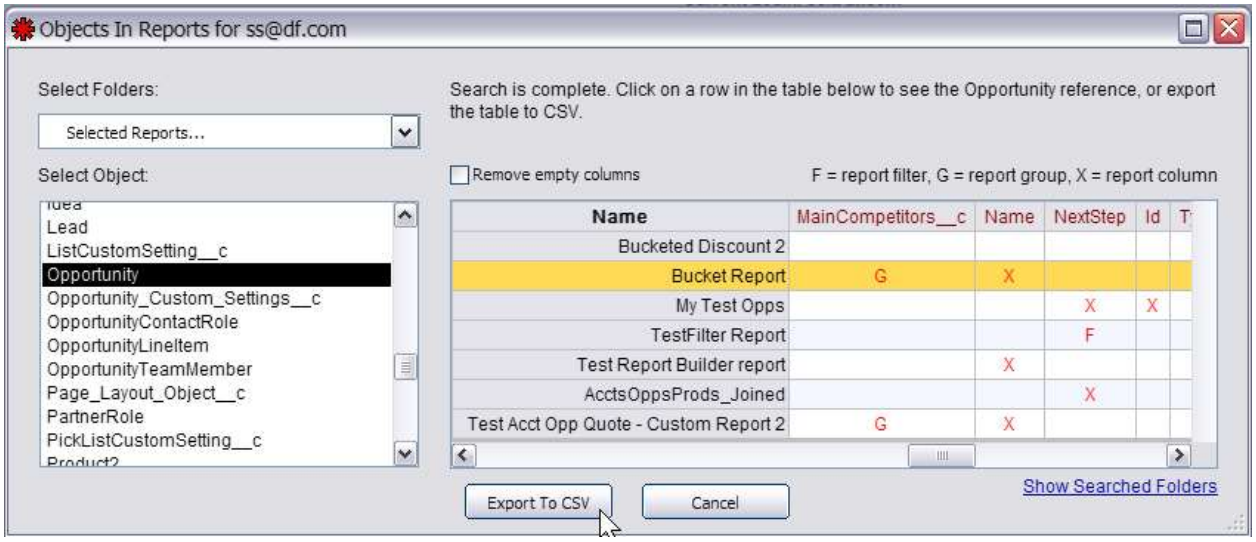
3. Once the user selects their desired object, the columns of the box will populate displaying a red X next to the appropriate report. The number of X's displayed in the column equates to the number of times that field is referenced in that report. There is also a check box located in the top left of the box that allows users to remove any empty columns displaying on those fields have references.



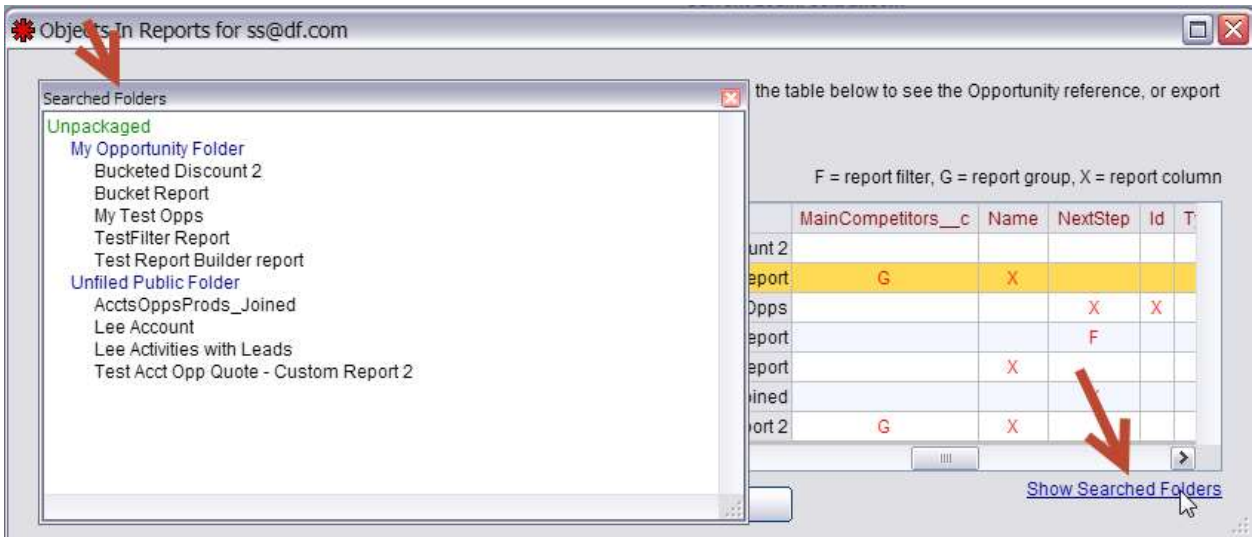
4. By clicking on a red X, a dialog box will appear displaying the raw XML of that report with the desired field highlighted.



5. The results of the matrix can also be exported out to a csv file by clicking on the Export To CSV button.



6. In addition, if the user clicks on the Show Searched Folders link on the right side of the dialog box, a small dialog box will appear displaying all of the folders that were searched to obtain the matrix results.



Objects in Email Templates

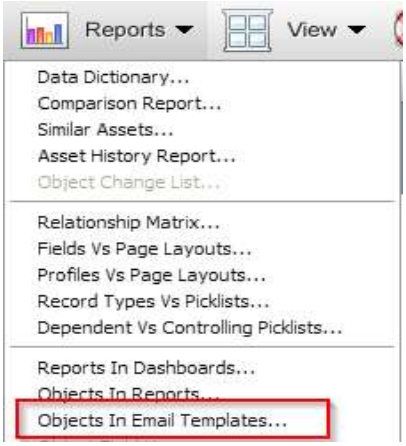
TableTop allows users to view fields that are referenced within a Report. This will allow users to be able to assess the impact if fields or reports were removed from the Org.

To access Objects in Email Templates, follow the instructions below:

A. Go to the Asset Snapshot

B. Click on the Reports menu

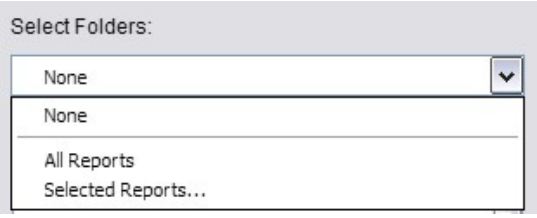
C. Select the Objects in Email Templates option



D. Once selected, the Objects vs. Email Templates will appear. Here is where users can select certain objects and see what email templates certain fields are referenced in.

E. To use the matrix, follow the steps detailed below:

1. Select which Email Templates to search from by simply clicking on the folder menu. Once selected Snapshot will then log into the Org to access the selected folders.



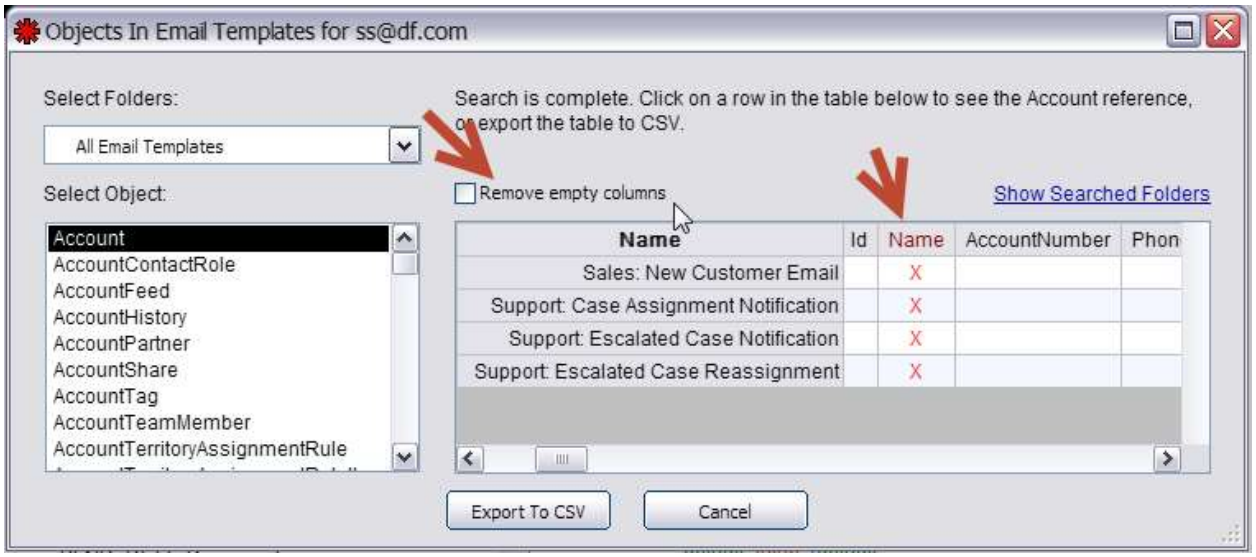
2. Once selected a list of all Objects in your Org will appear in the left hand panel. Users will also see a box that contains multiple columns. These columns include:

Name: The Name column displays the name of the Email Template

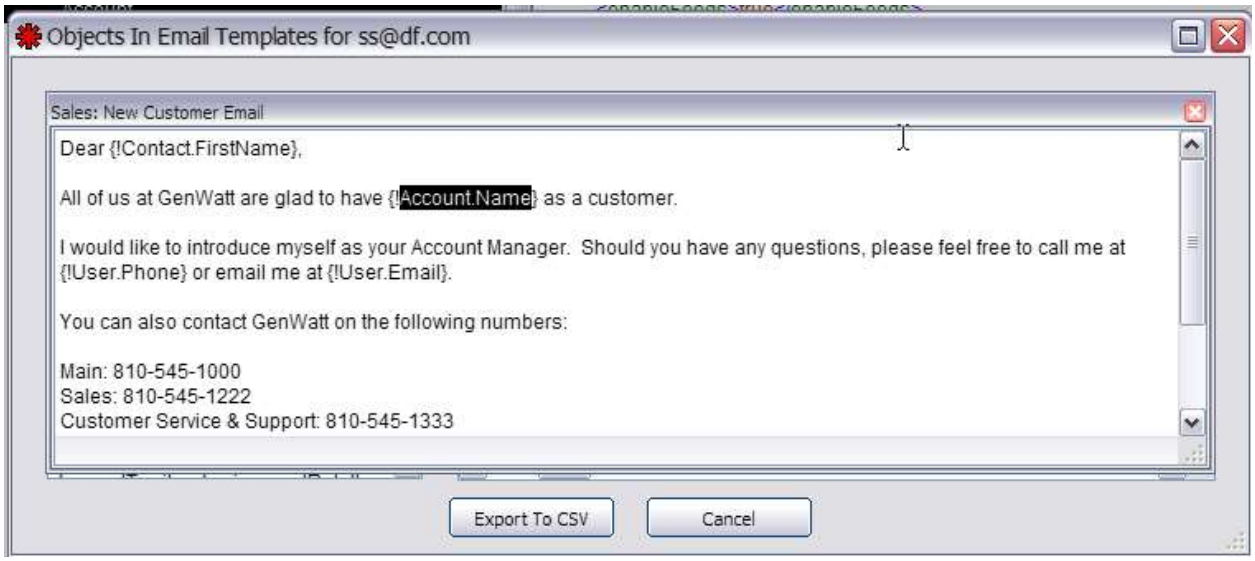
Folder: The Folder column displays the name of the Folder that the email template is saved in

Package: The Package column displays whether the folder is part of a package or not.

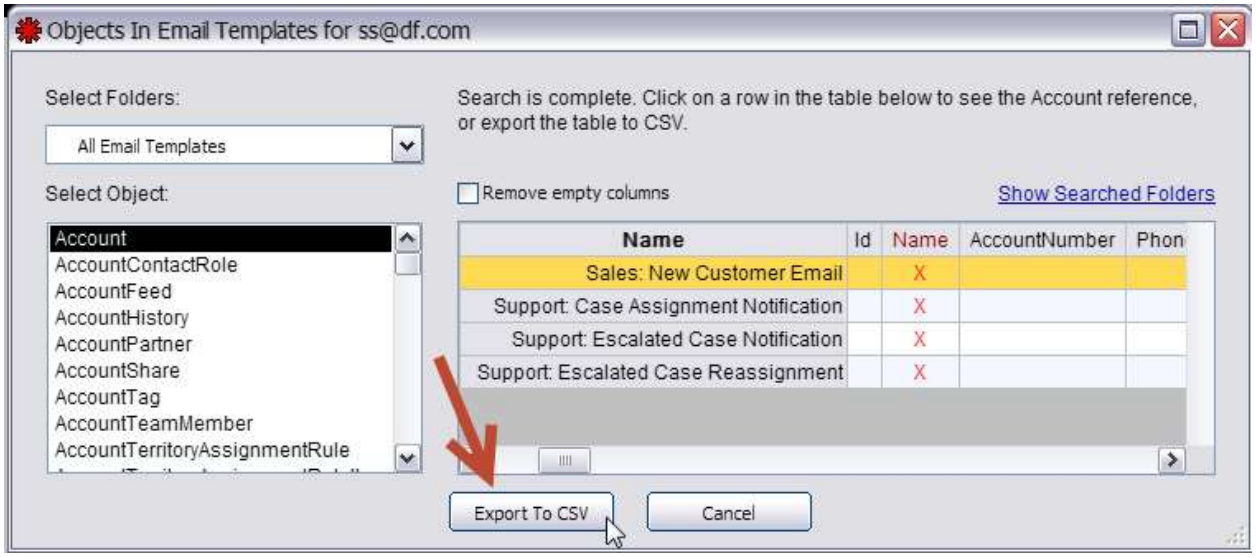
3. Once the user selects their desired object, the columns of the box will populate displaying a red X next to the appropriate email template. The number of X's displayed in the column equates to the number of times that field is referenced in that email template. There is also a check box located in the top left of the box that allows users to remove any empty columns displaying on those fields have references.



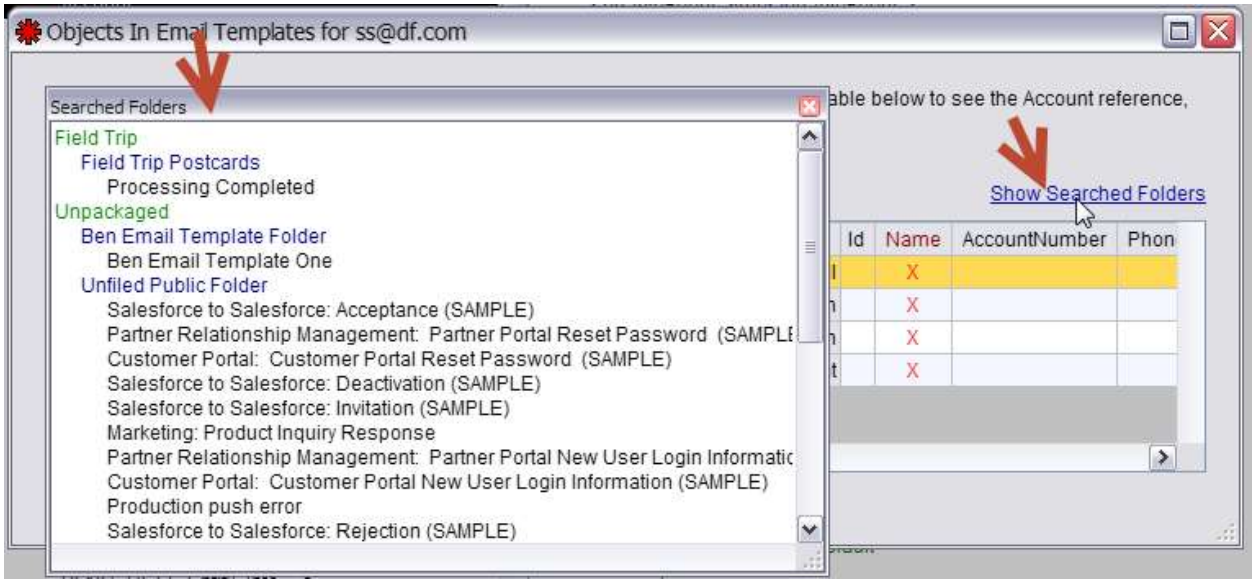
4. By clicking on a red X, a dialog box will appear displaying the raw XML of that email template with the desired field highlighted.



5. The results of the matrix can also be exported out to a csv file by clicking on the Export To CSV button.



6. In addition, if the user clicks on the Show Searched Folders link on the right side of the dialog box, a small dialog box will appear displaying all of the folders that were searched to obtain the matrix results.



Profile Snapshot

Definition of a Profile Snapshot

The Profile Snapshot allows you to view, compare and deploy all of the profile metadata. The Profile Snapshot displays the following areas of functionality: Field Level Security, Application Visibility, Object Permissions, Tab Visibility, Record Type Visibility, Field Level Exceptions and Layout Assignments in an easy to read matrix. In addition, the Push Profile Snapshot feature will create new profiles and profile metadata in your Destination Org for you. The Profile Snapshot has been upgraded to support version 35 of the Salesforce Metadata API. The Profile Snapshot should be used for comparison and deployment. The goal of the Profile Snapshot is to assist you reduce the time spent on creating and maintaining profiles in your Org. The Profile Snapshot allows you to create and merge profile metadata settings with one click.

Similar to Asset Snapshots, Profile Snapshots are stored locally on your computer. The Profile Snapshot serves two purposes. A Profile Snapshot is a specific metadata API request that pulls all metadata available from Salesforce. This API call is different than the API call used in the Object Snapshot discussed in the earlier in this document (the API call used for Object Snapshots only returns information about objects and fields).

The Profile Snapshot is divided into seven menus each containing different pieces of functionality including:

Full Screen - The Full Screen menu allows you to expand the display into a Full Screen mode providing additional screen space to work with.

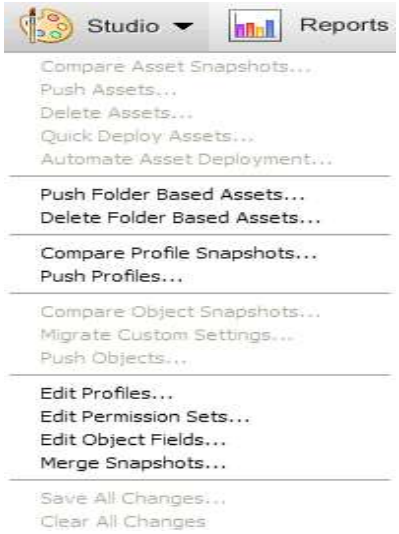
More Apps – The second menu allows you to maneuver between several DreamFactory applications.

Profiles – The Profiles menu provides users with the following options to choose from:

- Create Snapshot – This option allows users to create a Profile Snapshot
- Custom SnapShot—This option allows users to create a Profile Snapshot from an existing Package.xml or a packaged zip file
- Automate Snapshots – This option allows users to Automate Profile Snapshots
- Duplicate Snapshot – This option allows users to duplicate snapshots
- Delete Snapshot – This option allows users to delete an existing Profile Snapshot
- Import Snapshot—This option allows users to import snapshot metadata from an XML text file
- Export Snapshot—This option allows users to export snapshot metadata to an XML text file
- Upload Snapshot—This option allows users to upload snapshot metadata to Salesforce.com content library
- Download Snapshot— This option allows users to download snapshot metadata from Salesforce.com content library
- Snapshot Properties—This option allows users to view the properties and change the name of a snapshot

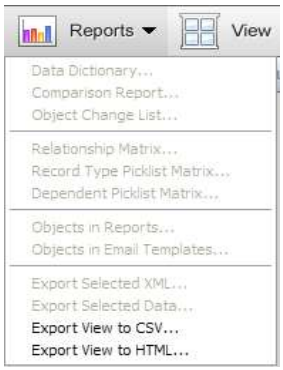
Studio – The Studio menu provides access to editing tools including:

- Push Folder Based Assets – This option allows users to deploy Folder Based Assets
- Delete Folder Based Assets – This option allows users to delete Folder Based Assets
- Compare Profile Snapshots – This option allows users to compare Profile Snapshots
- Push Profiles – This option allows users to push a Profile Snapshot
- Edit Profiles – This option allows you to edit profile metadata
- Edit Permission Sets – This option allows you to edit permission sets within the snapshot
- Edit Object Fields—This option allows you to edit object fields within the snapshot
- Merge Snapshots—This option allows you to merge assets from a selected snapshot into the current snapshot



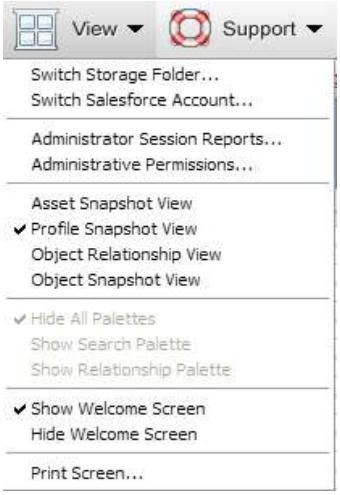
Reports – The Reports menu provides users with the following options to choose from:

- Export View to CSV – This option allows users to export the current view to a CSV file
- Export View to HTML – This option allows users to export the current view to a HTML file



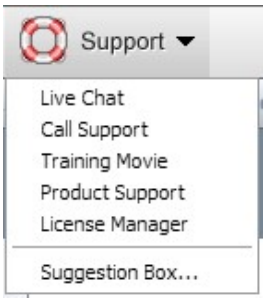
View – The View menu provides access to the following options:

- Switch Storage Folder – This option allows users to switch Asset storage folders
- Switch Salesforce Account – This option allows users to log into other Salesforce Orgs
- Administrator Session Reports – This option opens a dialog that checks to see if the Snapshot Logger package has been installed
- Administrative Permissions – This option allows users to see the Snapshot Governance tool
- Asset Snapshot View – This option opens the Asset Snapshot
- Profile Snapshot View - This option opens the Profile Snapshot
- Object Relationship View—This option shows parent and child links between entities.
- Object Snapshot View—This option displays the objects and fields from saved snaphsots
- Show Welcome Screen – This option allows users to show the Snapshot welcome screen
- Hide Welcome Screen – This option allows users to hide the Snapshot welcome screen
- Print Screen – This option allows users to select printing options



Support – The Support menu provides access to the following support options:

- Live Chat – Selecting this option will initiate a Live Chat with a DreamFactory Success Engineer.
- Call Support – Selecting this option will populate a dialog box with the Call Support Number
- Training Movie – Selecting this option will open a new window and show the Snapshot Movie.
- Product Support – Selecting this option will open the Snapshot support page on DreamFactory.com
- License Manager – Selecting this option will open the Snapshot License Manager
- Suggestion Box – Selecting this option will open the Suggestion Box where you can submit a feature request, a question or a problem or bug.



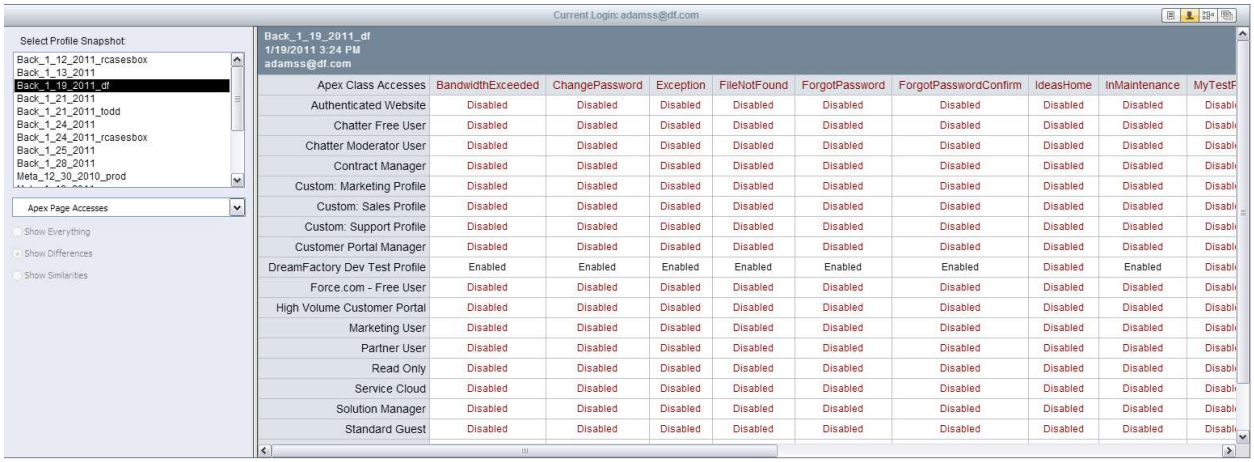
Profile Metadata Components

The Profile Snapshot enables users to view the following Profile metadata:

Apex Class Accesses – Displays Apex class accessibility information by user profile

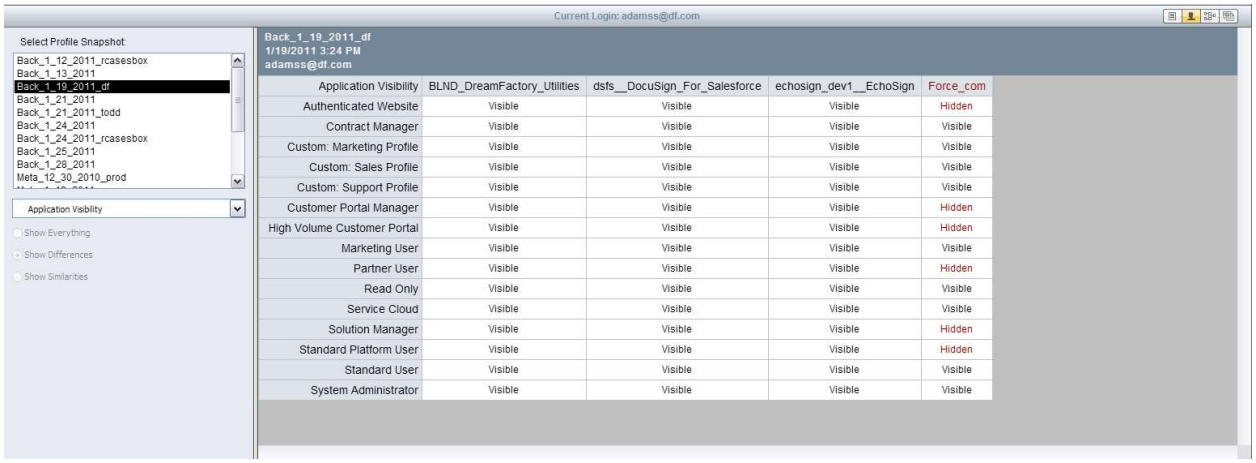
Apex Class Accesses	ChangePasswordController	ForgotPasswordController	SetActiveWhenNewAccountCreates_Test	SiteLoginController	SiteRegisterController	startHe
Authenticated Website	Disabled	Disabled	Disabled	Disabled	Disabled	Di
Chatter Free User	Disabled	Disabled	Disabled	Disabled	Disabled	Di
Chatter Moderator User	Disabled	Disabled	Disabled	Disabled	Disabled	Di
Contract Manager	Disabled	Disabled	Disabled	Disabled	Disabled	Di
Custom: Marketing Profile	Disabled	Disabled	Disabled	Disabled	Disabled	Di
Custom: Sales Profile	Disabled	Disabled	Disabled	Disabled	Disabled	Di
Custom: Support Profile	Disabled	Disabled	Disabled	Disabled	Disabled	Di
Customer Portal Manager	Disabled	Disabled	Disabled	Disabled	Disabled	Di
DreamFactory Dev Test Profile	Disabled	Disabled	Disabled	Disabled	Disabled	Di
Force.com - Free User	Disabled	Disabled	Disabled	Disabled	Disabled	Di
High Volume Customer Portal	Disabled	Disabled	Disabled	Disabled	Disabled	Di
Marketing User	Disabled	Disabled	Disabled	Disabled	Disabled	Di
Partner User	Disabled	Disabled	Disabled	Disabled	Disabled	Di
Read Only	Disabled	Disabled	Disabled	Disabled	Disabled	Di
Service Cloud	Disabled	Disabled	Disabled	Disabled	Disabled	Di
Solution Manager	Disabled	Disabled	Disabled	Disabled	Disabled	Di
Standard Guest	Disabled	Disabled	Disabled	Disabled	Disabled	Di

Apex Page Accesses - Displays Apex class accessibility information by user profile



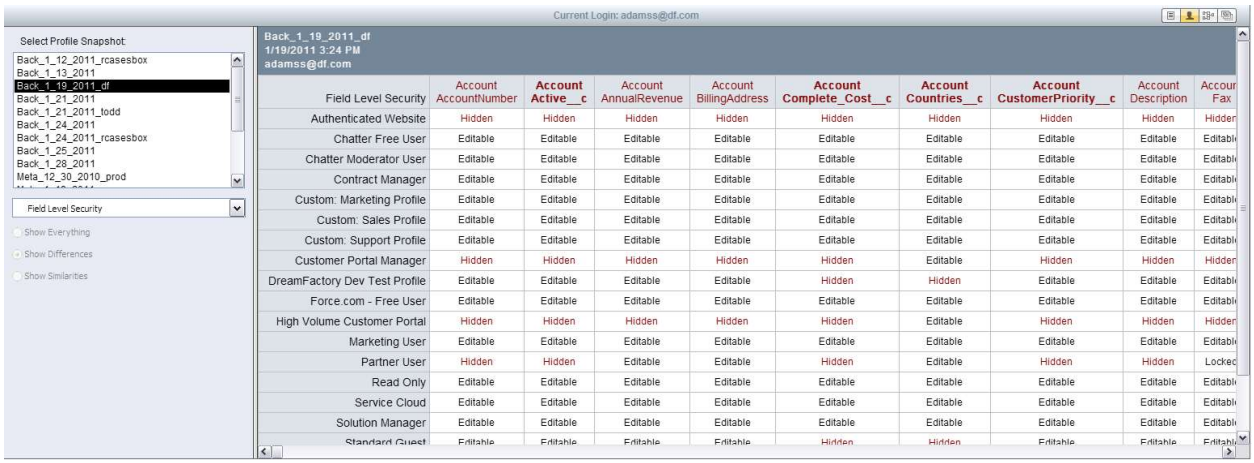
Apex Class Accesses	BandwidthExceeded	ChangePassword	Exception	FileNotFound	ForgotPassword	ForgotPasswordConfirm	IdeasHome	InMaintenance	MyTestF
Authenticated Website	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabl
Chatter Free User	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabl
Chatter Moderator User	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabl
Contract Manager	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabl
Custom: Marketing Profile	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabl
Custom: Sales Profile	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabl
Custom: Support Profile	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabl
Customer Portal Manager	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabl
DreamFactory Dev Test Profile	Enabled	Enabled	Enabled	Enabled	Enabled	Enabled	Disabled	Enabled	Disabl
Force.com - Free User	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabl
High Volume Customer Portal	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabl
Marketing User	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabl
Partner User	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabl
Read Only	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabl
Service Cloud	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabl
Solution Manager	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabl
Standard Guest	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabl

Application Visibility - Displays application visibility information by user profile.



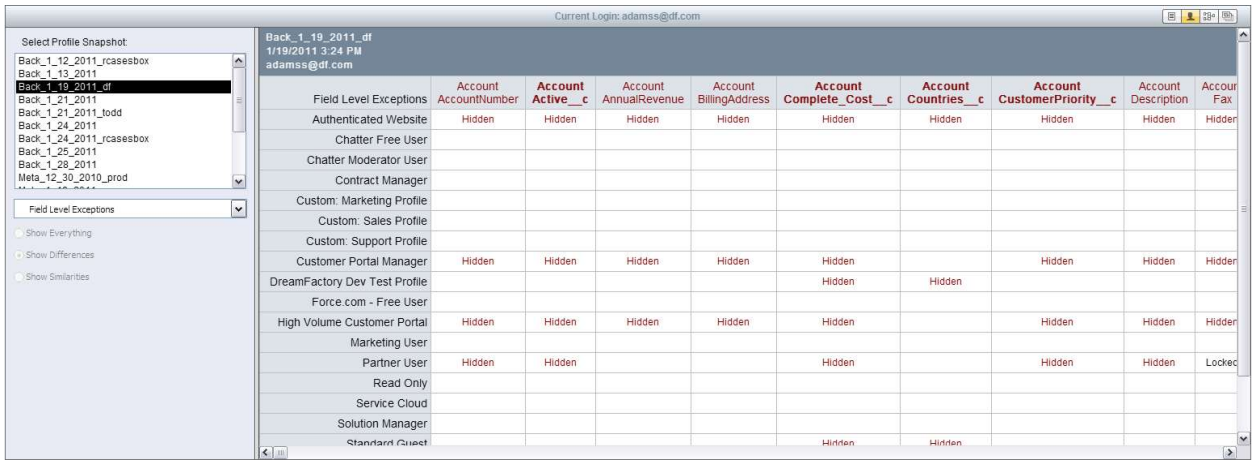
Application Visibility	BLND_DreamFactory_Utilities	dsfs__DocuSign_For_Salesforce	echosign_dev1__EchoSign	Force_com
Authenticated Website	Visible	Visible	Visible	Hidden
Contract Manager	Visible	Visible	Visible	Visible
Custom: Marketing Profile	Visible	Visible	Visible	Visible
Custom: Sales Profile	Visible	Visible	Visible	Visible
Custom: Support Profile	Visible	Visible	Visible	Visible
Customer Portal Manager	Visible	Visible	Visible	Hidden
High Volume Customer Portal	Visible	Visible	Visible	Hidden
Marketing User	Visible	Visible	Visible	Visible
Partner User	Visible	Visible	Visible	Hidden
Read Only	Visible	Visible	Visible	Visible
Service Cloud	Visible	Visible	Visible	Visible
Solution Manager	Visible	Visible	Visible	Hidden
Standard Platform User	Visible	Visible	Visible	Hidden
Standard User	Visible	Visible	Visible	Visible
System Administrator	Visible	Visible	Visible	Visible

Field Permissions - Displays Field Level Security information for all fields as hidden, editable or locked



Field Level Security	Account AccountNumber	Account Active__c	Account AnnualRevenue	Account BillingAddress	Account Complete_Cost__c	Account Countries__c	Account CustomerPriority__c	Account Description	Accour Fax
Authenticated Website	Hidden	Hidden	Hidden	Hidden	Hidden	Hidden	Hidden	Hidden	Hidder
Chatter Free User	Editable	Editable	Editable	Editable	Editable	Editable	Editable	Editable	Editabl
Chatter Moderator User	Editable	Editable	Editable	Editable	Editable	Editable	Editable	Editable	Editabl
Contract Manager	Editable	Editable	Editable	Editable	Editable	Editable	Editable	Editable	Editabl
Custom: Marketing Profile	Editable	Editable	Editable	Editable	Editable	Editable	Editable	Editable	Editabl
Custom: Sales Profile	Editable	Editable	Editable	Editable	Editable	Editable	Editable	Editable	Editabl
Custom: Support Profile	Editable	Editable	Editable	Editable	Editable	Editable	Editable	Editable	Editabl
Customer Portal Manager	Hidden	Hidden	Hidden	Hidden	Hidden	Editable	Hidden	Hidden	Hidder
DreamFactory Dev Test Profile	Editable	Editable	Editable	Editable	Hidden	Hidden	Editable	Editable	Editabl
Force.com - Free User	Editable	Editable	Editable	Editable	Editable	Editable	Editable	Editable	Editabl
High Volume Customer Portal	Hidden	Hidden	Hidden	Hidden	Hidden	Editable	Hidden	Hidden	Hidder
Marketing User	Editable	Editable	Editable	Editable	Editable	Editable	Editable	Editable	Editabl
Partner User	Hidden	Hidden	Editable	Editable	Hidden	Editable	Hidden	Hidden	Locked
Read Only	Editable	Editable	Editable	Editable	Editable	Editable	Editable	Editable	Editabl
Service Cloud	Editable	Editable	Editable	Editable	Editable	Editable	Editable	Editable	Editabl
Solution Manager	Editable	Editable	Editable	Editable	Editable	Editable	Editable	Editable	Editabl
Standard Guest	Editable	Editable	Editable	Editable	Hidden	Hidden	Editable	Editable	Editabl

Field Exceptions - Displays the Field Level Security information for non-editable fields

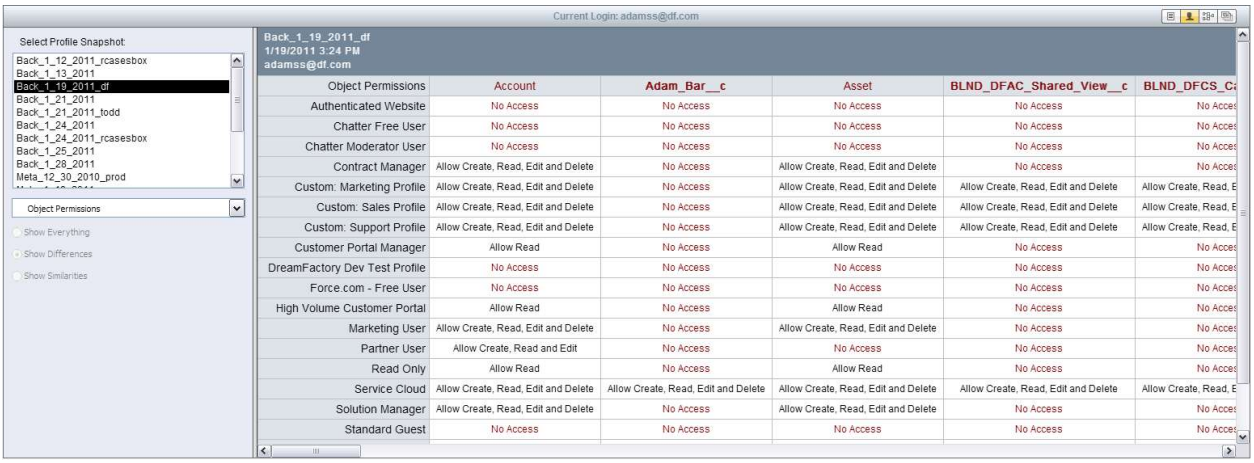


Field Level Exceptions	Account AccountNumber	Account Active__c	Account AnnualRevenue	Account BillingAddress	Account Complete_Cost__c	Account Countries__c	Account CustomerPriority__c	Account Description	Accour Fax
Authenticated Website	Hidden	Hidden	Hidden	Hidden	Hidden	Hidden	Hidden	Hidden	Hidder
Chatter Free User									
Chatter Moderator User									
Contract Manager									
Custom: Marketing Profile									
Custom: Sales Profile									
Custom: Support Profile									
Customer Portal Manager	Hidden	Hidden	Hidden	Hidden	Hidden		Hidden	Hidden	Hidder
DreamFactory Dev Test Profile					Hidden	Hidden			
Force.com - Free User									
High Volume Customer Portal	Hidden	Hidden	Hidden	Hidden	Hidden		Hidden	Hidden	Hidder
Marketing User									
Partner User	Hidden	Hidden			Hidden		Hidden	Hidden	Locked
Read Only									
Service Cloud									
Solution Manager									
Standard Guest					Hidden	Hidden			

Layout Assignments - Displays Page Layout assignment information by user profile

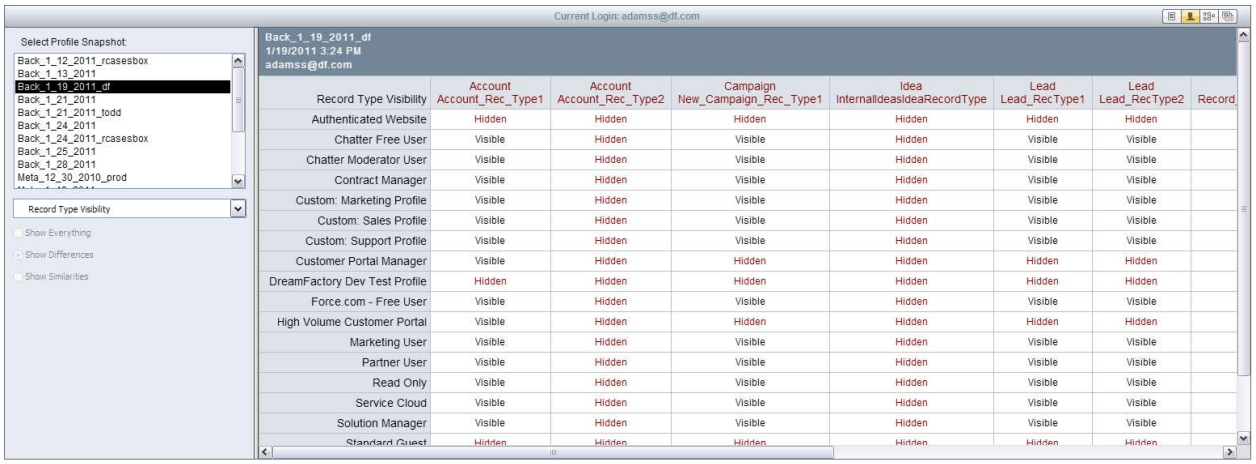
Layout Assignments	Account-Account (Support) Layout	Account-Account Layout	Adam_Bar__c-Adam Bar Layout	Asset-Asset Layout	BLND_DFAC_Shared_View__c-Dre
Authenticated Website		Assigned	Assigned	Assigned	Assign
Chatter Free User	Assigned	Assigned	Assigned	Assigned	Assign
Chatter Moderator User	Assigned	Assigned	Assigned	Assigned	Assign
Contract Manager	Assigned	Assigned	Assigned	Assigned	Assign
Custom: Marketing Profile	Assigned	Assigned	Assigned	Assigned	Assign
Custom: Sales Profile	Assigned	Assigned	Assigned	Assigned	Assign
Custom: Support Profile	Assigned	Assigned	Assigned	Assigned	Assign
Customer Portal Manager	Assigned	Assigned	Assigned	Assigned	Assign
DreamFactory Dev Test Profile		Assigned	Assigned	Assigned	Assign
Force.com - Free User	Assigned	Assigned	Assigned	Assigned	Assign
High Volume Customer Portal	Assigned	Assigned	Assigned	Assigned	Assign
Marketing User	Assigned	Assigned	Assigned	Assigned	Assign
Partner User	Assigned	Assigned	Assigned	Assigned	Assign
Read Only	Assigned	Assigned	Assigned	Assigned	Assign
Service Cloud	Assigned	Assigned	Assigned	Assigned	Assign
Solution Manager	Assigned	Assigned	Assigned	Assigned	Assign
Standard Guest		Assigned	Assigned	Assigned	Assign

Object Permissions - Displays object create, read, update and delete permissions by user profile



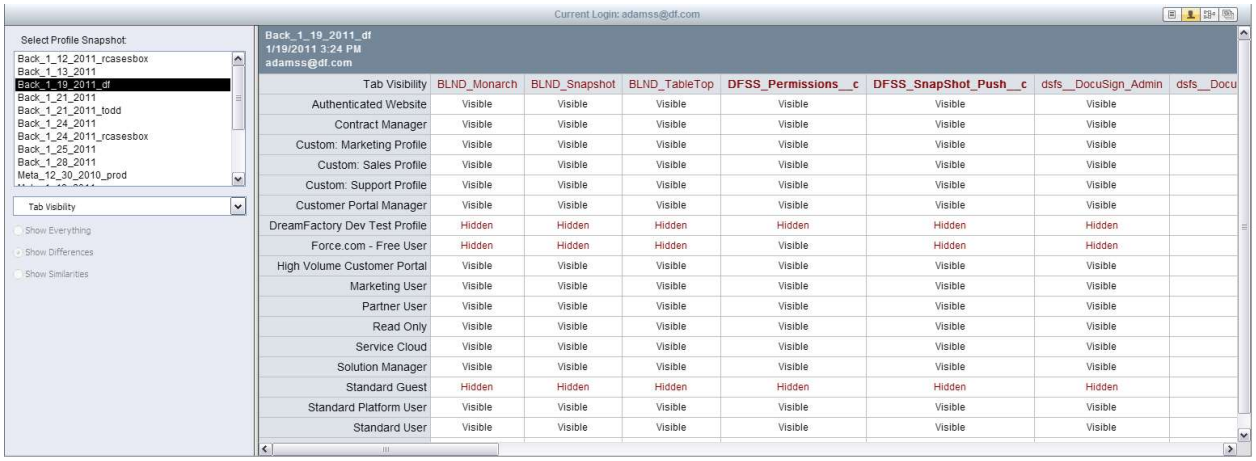
Object Permissions	Account	Adam_Bar__c	Asset	BLND_DFAC_Shared_View__c	BLND_DFCS_Ca
Authenticated Website	No Access	No Access	No Access	No Access	No Acces
Chatter Free User	No Access	No Access	No Access	No Access	No Acces
Chatter Moderator User	No Access	No Access	No Access	No Access	No Acces
Contract Manager	Allow Create, Read, Edit and Delete	No Access	Allow Create, Read, Edit and Delete	No Access	No Acces
Custom: Marketing Profile	Allow Create, Read, Edit and Delete	No Access	Allow Create, Read, Edit and Delete	Allow Create, Read, Edit and Delete	Allow Create, Read, E
Custom: Sales Profile	Allow Create, Read, Edit and Delete	No Access	Allow Create, Read, Edit and Delete	Allow Create, Read, Edit and Delete	Allow Create, Read, E
Custom: Support Profile	Allow Create, Read, Edit and Delete	No Access	Allow Create, Read, Edit and Delete	Allow Create, Read, Edit and Delete	Allow Create, Read, E
Customer Portal Manager	Allow Read	No Access	Allow Read	No Access	No Acces
DreamFactory Dev Test Profile	No Access	No Access	No Access	No Access	No Acces
Force.com - Free User	No Access	No Access	No Access	No Access	No Acces
High Volume Customer Portal	Allow Read	No Access	Allow Read	No Access	No Acces
Marketing User	Allow Create, Read, Edit and Delete	No Access	Allow Create, Read, Edit and Delete	No Access	No Acces
Partner User	Allow Create, Read and Edit	No Access	No Access	No Access	No Acces
Read Only	Allow Read	No Access	Allow Read	No Access	No Acces
Service Cloud	Allow Create, Read, Edit and Delete	Allow Create, Read, Edit and Delete	Allow Create, Read, Edit and Delete	Allow Create, Read, Edit and Delete	Allow Create, Read, E
Solution Manager	Allow Create, Read, Edit and Delete	No Access	Allow Create, Read, Edit and Delete	No Access	No Acces
Standard Guest	No Access	No Access	No Access	No Access	No Acces

Record Type Visibility - Displays Record Type Visibility information by user profile



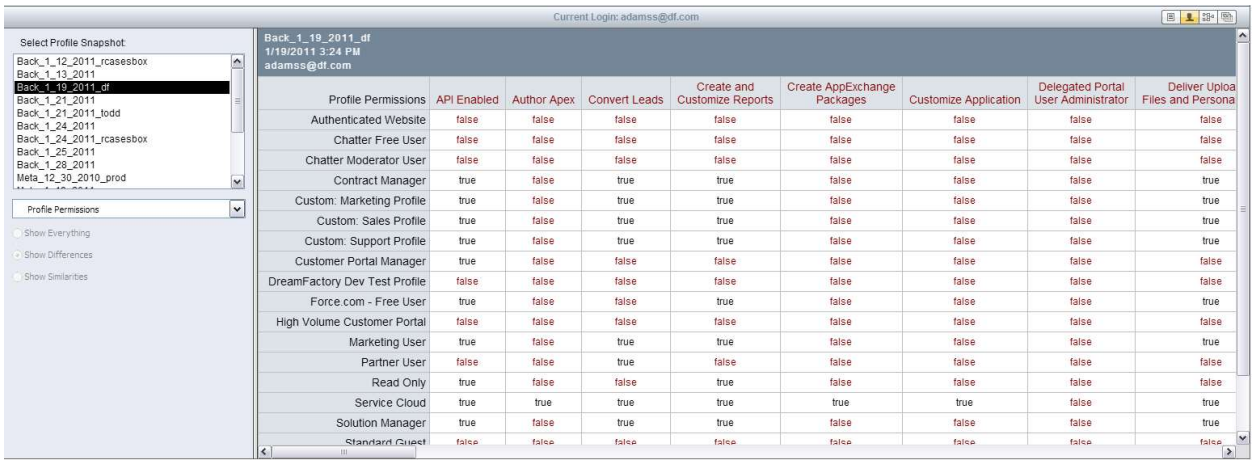
Record Type Visibility	Account Account_Rec_Type1	Account Account_Rec_Type2	Campaign New_Campaign_Rec_Type1	Idea InternalIdeasIdeaRecordType	Lead Lead_RecType1	Lead Lead_RecType2	Record_
Authenticated Website	Hidden	Hidden	Hidden	Hidden	Hidden	Hidden	
Chatter Free User	Visible	Hidden	Visible	Hidden	Visible	Visible	
Chatter Moderator User	Visible	Hidden	Visible	Hidden	Visible	Visible	
Contract Manager	Visible	Hidden	Visible	Hidden	Visible	Visible	
Custom: Marketing Profile	Visible	Hidden	Visible	Hidden	Visible	Visible	
Custom: Sales Profile	Visible	Hidden	Visible	Hidden	Visible	Visible	
Custom: Support Profile	Visible	Hidden	Visible	Hidden	Visible	Visible	
Customer Portal Manager	Visible	Hidden	Hidden	Hidden	Hidden	Hidden	
DreamFactory Dev Test Profile	Hidden	Hidden	Hidden	Hidden	Hidden	Hidden	
Force.com - Free User	Visible	Hidden	Visible	Hidden	Visible	Visible	
High Volume Customer Portal	Visible	Hidden	Hidden	Hidden	Hidden	Hidden	
Marketing User	Visible	Hidden	Visible	Hidden	Visible	Visible	
Partner User	Visible	Hidden	Visible	Hidden	Visible	Visible	
Read Only	Visible	Hidden	Visible	Hidden	Visible	Visible	
Service Cloud	Visible	Hidden	Visible	Hidden	Visible	Visible	
Solution Manager	Visible	Hidden	Visible	Hidden	Visible	Visible	
Standard Guest	Hidden	Hidden	Hidden	Hidden	Hidden	Hidden	

Tab Visibility - Displays Tab Visibility information by user profile



Tab Visibility	BLND_Monarch	BLND_Snapshot	BLND_TableTop	DFSS_Permissions__c	DFSS_SnapShot_Push__c	dsfs__DocuSign_Admin	dsfs__Docu
Authenticated Website	Visible	Visible	Visible	Visible	Visible	Visible	
Contract Manager	Visible	Visible	Visible	Visible	Visible	Visible	
Custom: Marketing Profile	Visible	Visible	Visible	Visible	Visible	Visible	
Custom: Sales Profile	Visible	Visible	Visible	Visible	Visible	Visible	
Custom: Support Profile	Visible	Visible	Visible	Visible	Visible	Visible	
Customer Portal Manager	Visible	Visible	Visible	Visible	Visible	Visible	
DreamFactory Dev Test Profile	Hidden	Hidden	Hidden	Hidden	Hidden	Hidden	
Force.com - Free User	Hidden	Hidden	Hidden	Visible	Hidden	Hidden	
High Volume Customer Portal	Visible	Visible	Visible	Visible	Visible	Visible	
Marketing User	Visible	Visible	Visible	Visible	Visible	Visible	
Partner User	Visible	Visible	Visible	Visible	Visible	Visible	
Read Only	Visible	Visible	Visible	Visible	Visible	Visible	
Service Cloud	Visible	Visible	Visible	Visible	Visible	Visible	
Solution Manager	Visible	Visible	Visible	Visible	Visible	Visible	
Standard Guest	Hidden	Hidden	Hidden	Hidden	Hidden	Hidden	
Standard Platform User	Visible	Visible	Visible	Visible	Visible	Visible	
Standard User	Visible	Visible	Visible	Visible	Visible	Visible	

User Permissions - Displays all of the various user permissions by user profile



Profile Permissions	API Enabled	Author Apex	Convert Leads	Create and Customize Reports	Create AppExchange Packages	Customize Application	Delegated Portal User Administrator	Deliver Uploa Files and Persona
Authenticated Website	false	false	false	false	false	false	false	false
Chatter Free User	false	false	false	false	false	false	false	false
Chatter Moderator User	false	false	false	false	false	false	false	false
Contract Manager	true	false	true	true	false	false	false	true
Custom: Marketing Profile	true	false	true	true	false	false	false	true
Custom: Sales Profile	true	false	true	true	false	false	false	true
Custom: Support Profile	true	false	true	true	false	false	false	true
Customer Portal Manager	true	false	false	false	false	false	false	false
DreamFactory Dev Test Profile	false	false	false	false	false	false	false	false
Force.com - Free User	true	false	false	true	false	false	false	true
High Volume Customer Portal	false	false	false	false	false	false	false	false
Marketing User	true	false	true	true	false	false	false	true
Partner User	false	false	true	false	false	false	false	false
Read Only	true	false	false	true	false	false	false	false
Service Cloud	true	true	true	true	true	true	false	true
Solution Manager	true	false	true	true	false	false	false	true
Standard Guest	false	false	false	false	false	false	false	false

Custom Permissions – Displays the various custom permissions assigned to each profile.

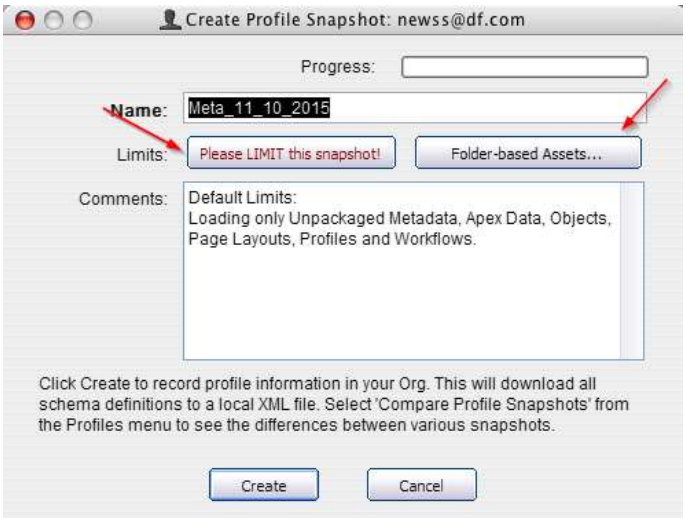
Custom Permissions	Custom_Accounting	Custom_Finance	Custom_Sales
Custom California User	Disabled	Enabled	Disabled
Custom Colorado User	Disabled	Enabled	Disabled
Custom Georgia User	Disabled	Enabled	Disabled
Custom Massachusetts User	Disabled	Disabled	Enabled
Custom New Hampshire User	Disabled	Disabled	Enabled
Custom North Carolina User	Enabled	Disabled	Disabled
Custom South Carolina User	Enabled	Disabled	Disabled
Custom: Sales Profile	Disabled	Disabled	Enabled

Creating a Profile Snapshot

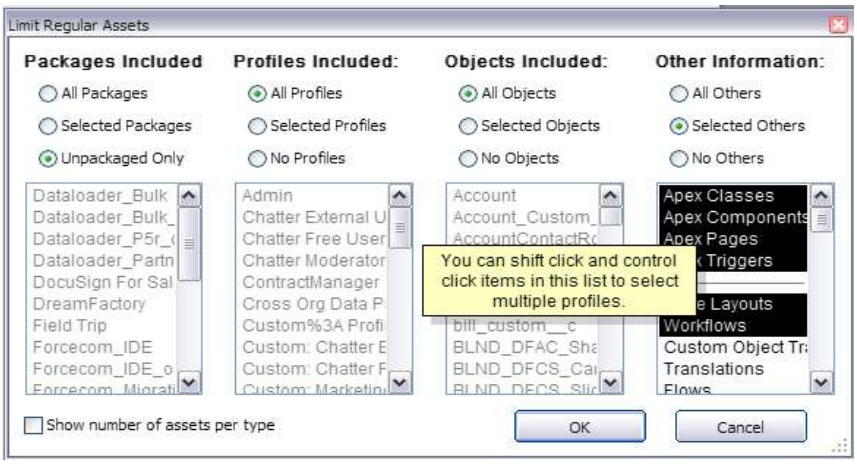
To create a Profile Snapshot click on the Profiles menu and select the Create Snapshot command.

Upon selecting the Profile Snapshot command, the "Create Snapshot" dialog will appear. The Create Snapshot dialog provides you with the ability to either create a full Snapshot thus capturing all of the Profiles in that org; or you can limit the contents of the Profile Snapshot. This is highly recommended if you have a reasonably complex Org configuration (e.g., many custom profiles and custom objects and/or a large number of users). Profile Snapshots are XML files that can be extremely large for complex Organizations. For example, if you only need to push two profiles to another Org, then you could select only those profiles when you create the Profile Snapshot.

To limit the metadata captured in the Profile Snapshot, simply click on the button titled "*Please LIMIT this snapshot, and or, Folder based Assets*".



Once selected, the Limit Snapshot Information dialog will appear.



Here is where you can select from the following metadata options to include in the Snapshot:

- **Packages Included** - Select All, Individual or Unpackaged Only that you want to push
- **Profiles Included—**Select All, Individual or "No Profiles" that you want to push
- **Objects Included** - Select All, Individual or "No Objects" that you want to push
- **Other Information—**Select All, Individual or "No Others" that you want to push. Other Information includes (As ordered in SnaphShot):
- Apex Classes
- Apex Components
- Apex Pages
- Apex Triggers
- Page Layouts
- Workflows
- Custom Object Translations
- Translations
- Flows
- Sharing Rules
- Account Territory Sharing Rules
- Groups
- Permission Sets
- Settings
- Approval Processes
- External Data Sources
- SAML SSO Configurations
- Queues
- Roles
- Territories
- Custom Applications

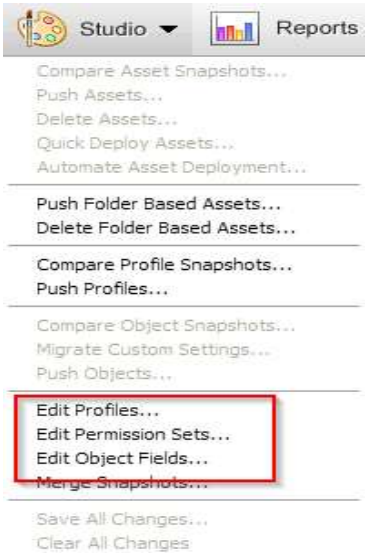
- Connected Apps
- Custom Application Components
- Custom Labels
- Custom Sites
- Custom Tabs
- Home Page Components
- Home Page Layouts
- Home Page Weblinks
- Analytic Snaphsots
- Data Category Groups
- Entitlement Templates
- Letterheads
- Portals
- Remote Site Settings
- Report Types
- S controls
- Static Resources
- Assignment Rules
- Auth Providers
- Auto Response Rules
- Call Centers
- Communities
- Escalation Rules
- Milestone Types
- LiveAgent Chat Configuration
- LiveAgent Buttons
- LiveChat Deployments
- Skills
- Networks
- Quick Actions
- Post Templates
- App Menus
- Sharing Sets
- Site Dot Com
- Custom Permissions
- Flexible Pages

Note:
User assignments are not captured via the metadata API and therefore cannot be pushed only viewed.

Snapshot Studio

The Snapshot Studio is a tool that allows users to make edits and changes to Objects Fields and Profile Metadata directly inside Snapshot. Located on the Profile Snapshot, the Snapshot Studio menu provides users with the ability to edit the following metadata:

A. Edit Profiles
B. Edit Permission Sets
C. Edit Object Fields



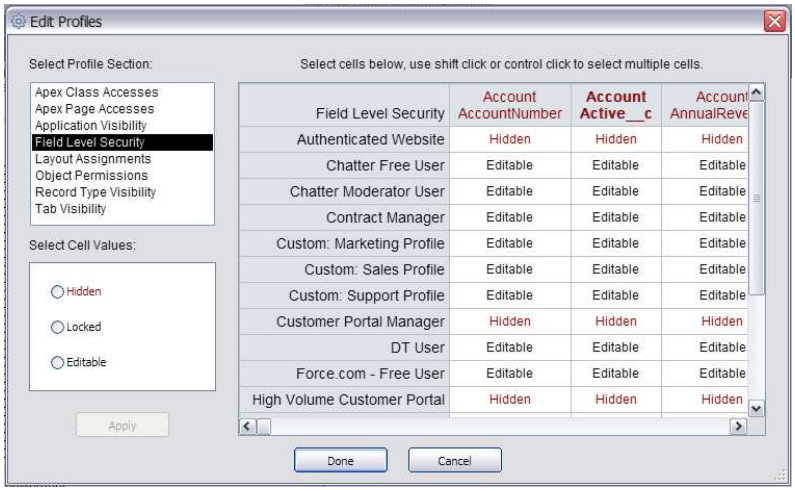
Prior to performing any edits, the asset snapshot allows users to either use an existing snapshot, or create a duplicate snapshot to make the edits to. The Duplicate Snapshot option is located in the Profiles menu.

Duplicating an asset snapshot allows users to make edits to a copy of an existing snapshot without disturbing the original asset snapshot. Once the user selects the duplicate option, the new snapshot will have the word Copy added to the end of the naming convention. The name of the Snapshot is editable at this point as well. This next section provides additional details regarding each of options listed above.

Edit Profiles

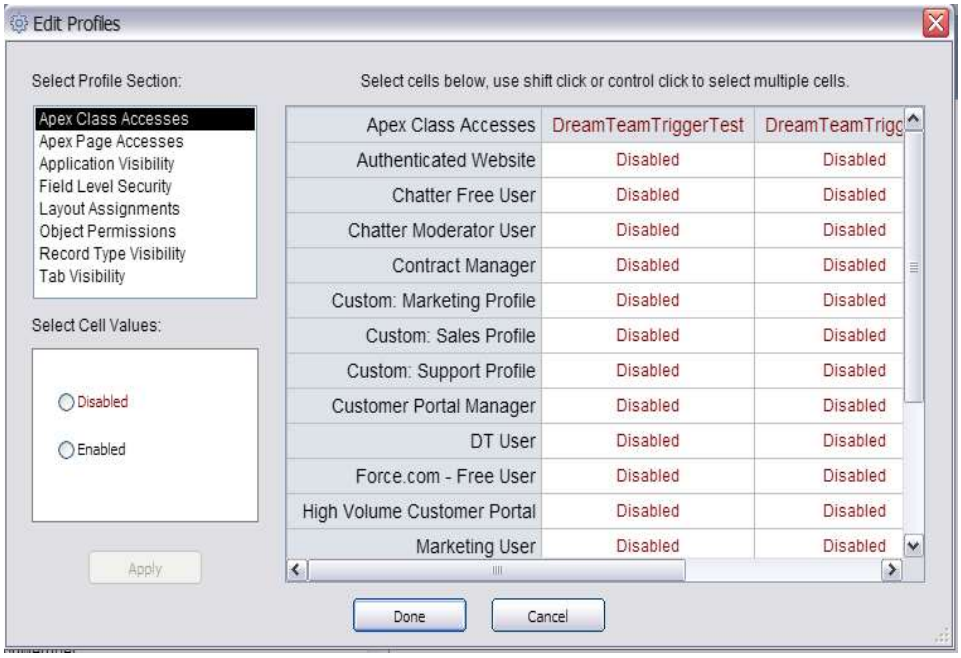
The Edit Profiles option allows users to edit profile metadata directly within Snapshot. Once selected, users can edit profile metadata from any of the following metadata options:

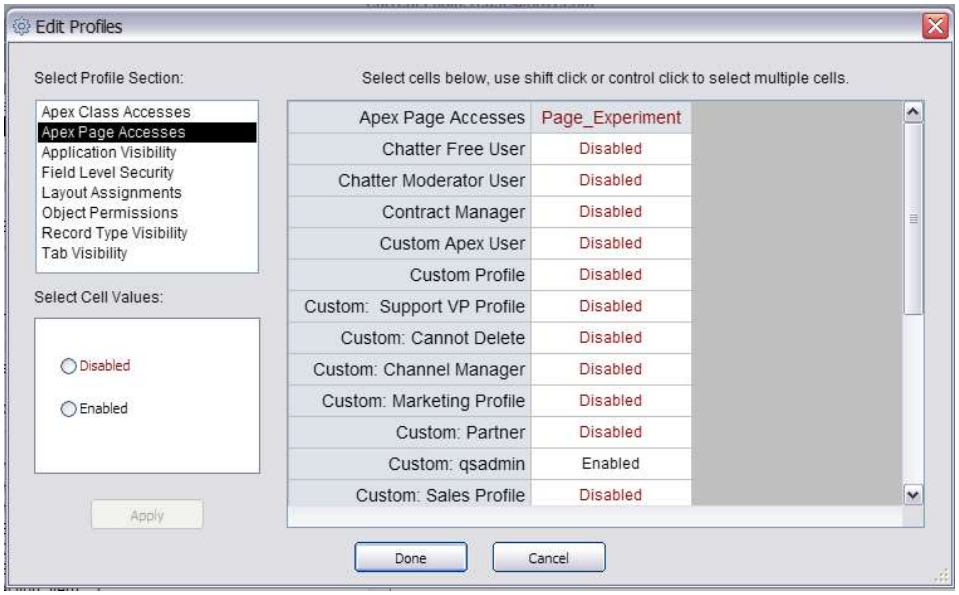
Apex Class Accesses
Apex Page Accesses
Application Visibility
Field Permissions
Layout Assignments
Object Permissions
Record Type Visibility
Tab Visibility
User Permissions
Custom Permissions



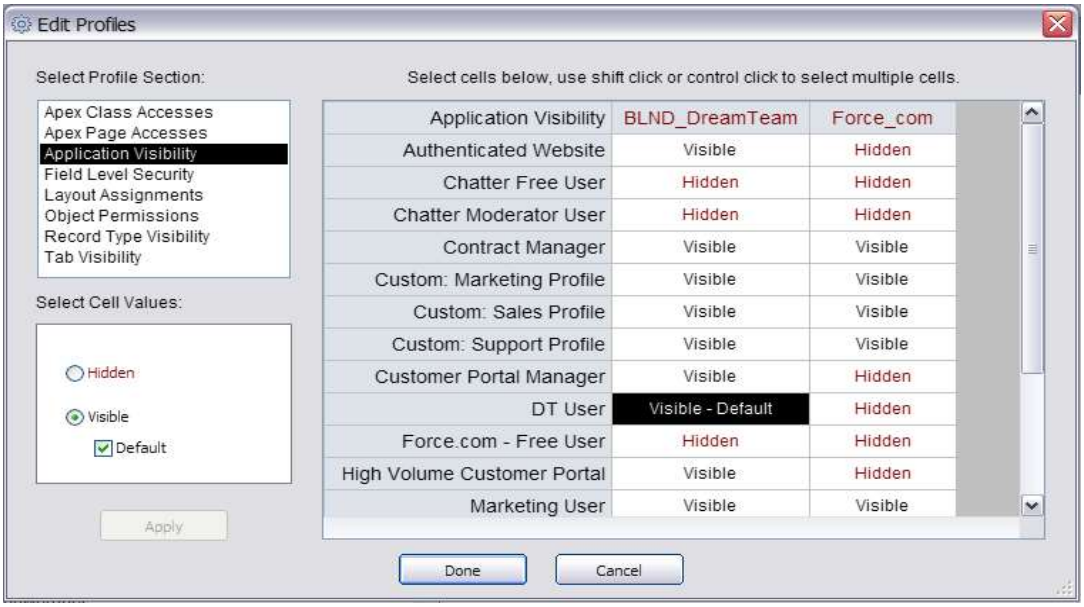
Below is a description of the editing capabilities for each of the Profile Metadata options listed above.

Apex Class & Apex Page Accesses – For both Apex Class and Apex Page Accessed, users will be able to either Disable or Enable the listed Apex Class or Page.

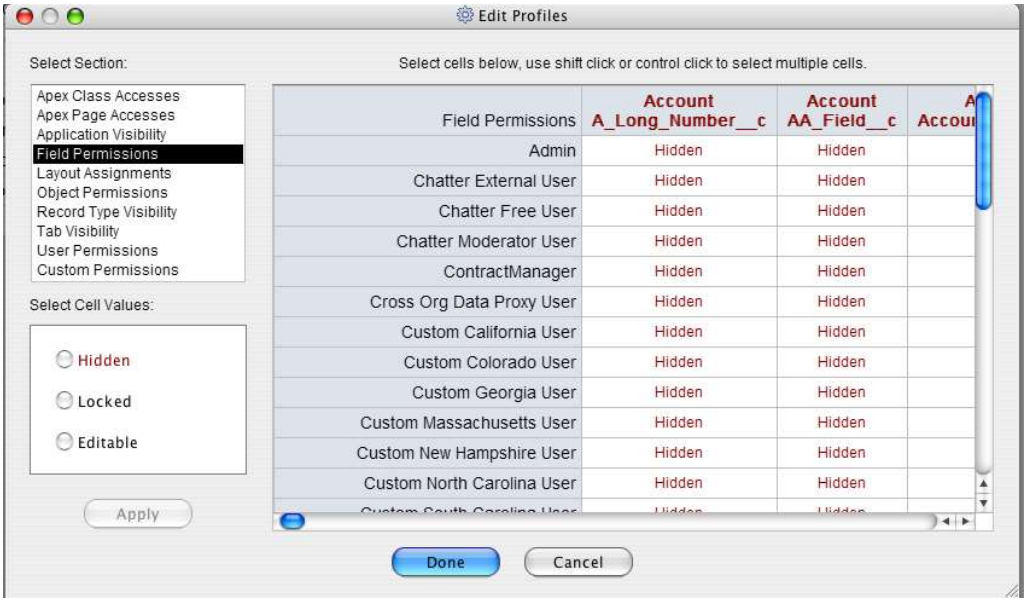




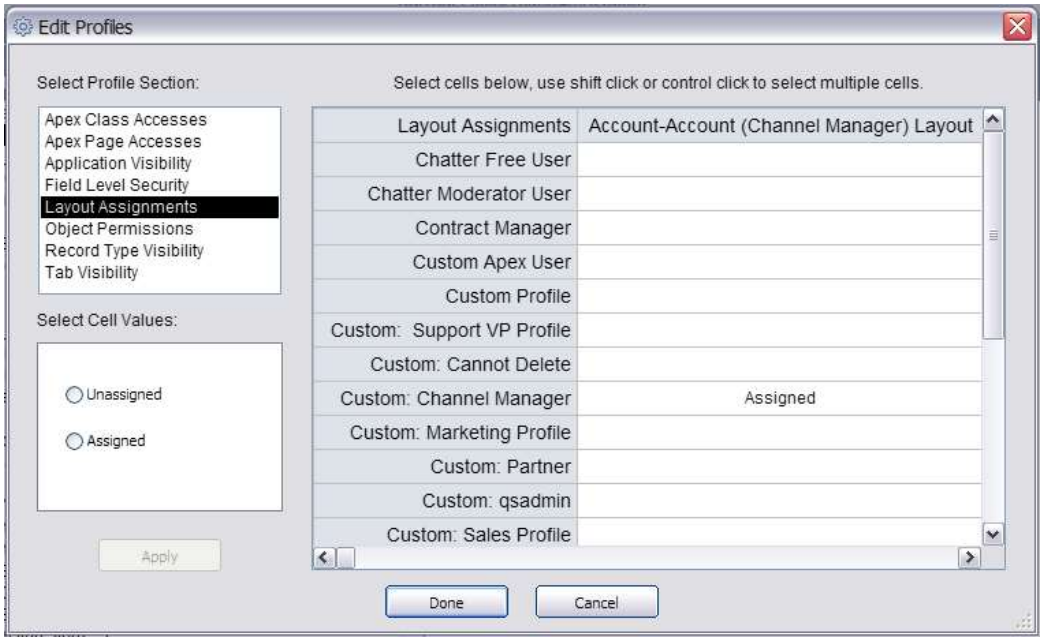
Application Visibility – For Application Visibility, users will be able to edit which Applications are hidden or visible for all profiles. Users can also set the value as a default if they prefer. This matrix is only for Custom Applications.



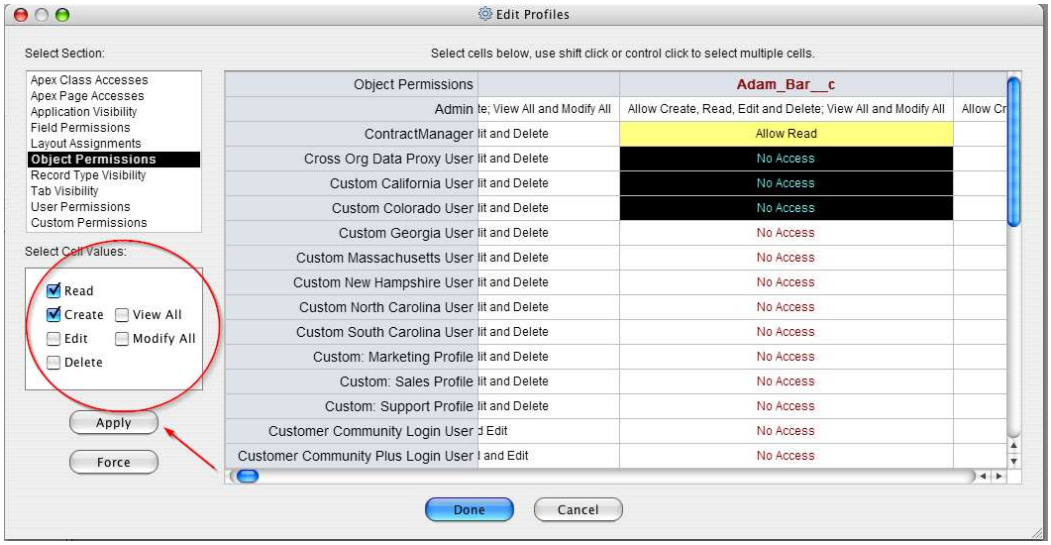
Field Permissions – For Field Permissions, users will be able to edit all fields and dictate whether they are hidden, locked or editable.



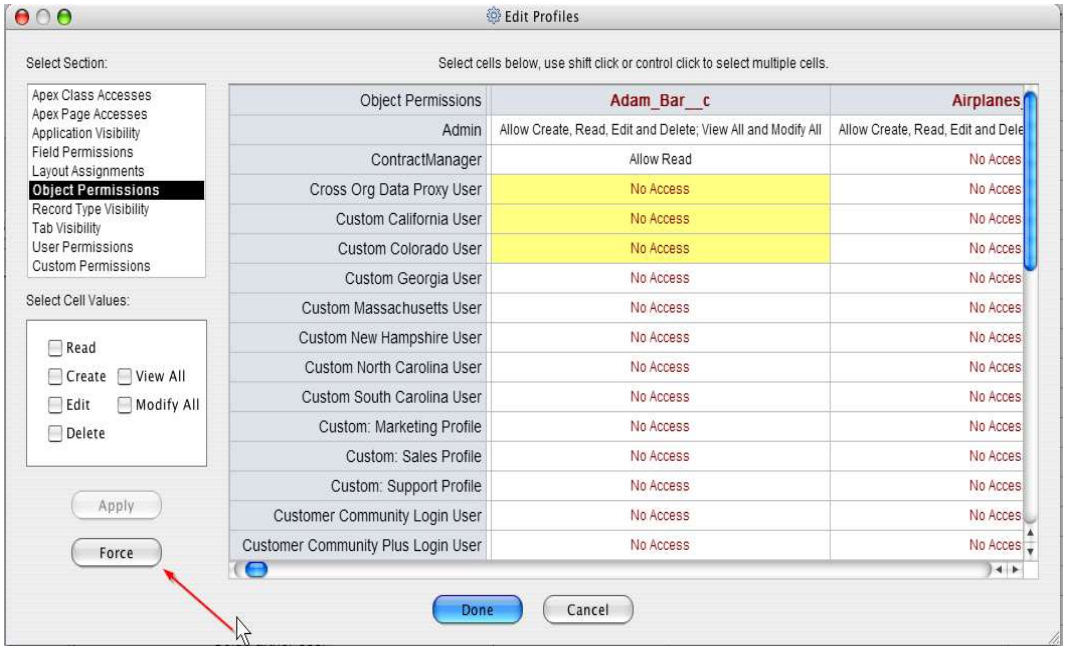
Layout Assignments – For Layout Assignments, users will be able to edit the existing layout assignments by assigning or un-assigning profiles to certain page layouts.



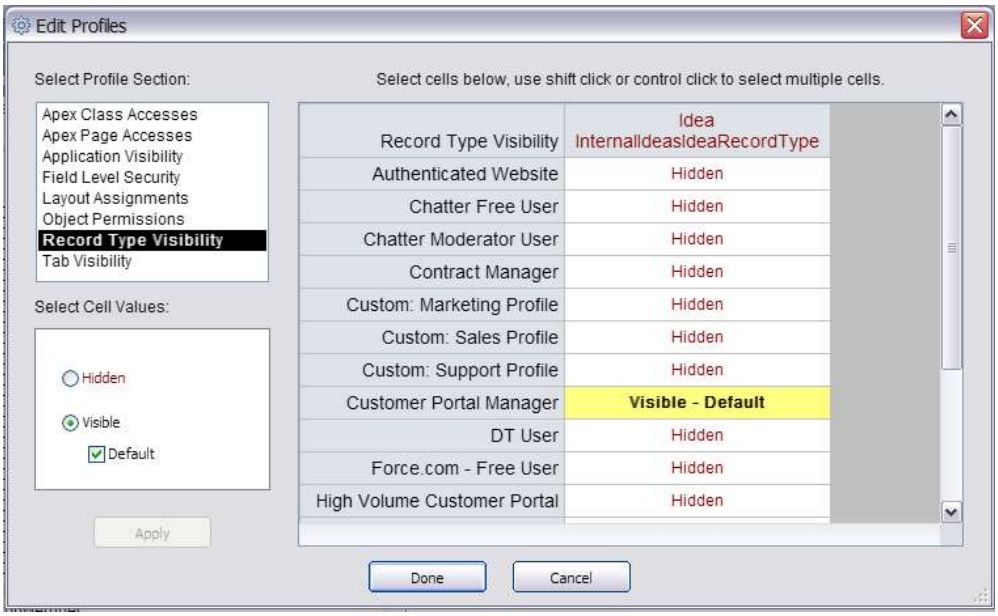
Object Permissions – For Object Permissions, users will be able to modify the CRUD rights for selected profiles. Users can select from Read, Edit, Create, Delete, View All and Modify All. After selecting a cell, or multiple cells with a ctrl click, users may change the permissions where circled below, and by clicking "Apply."



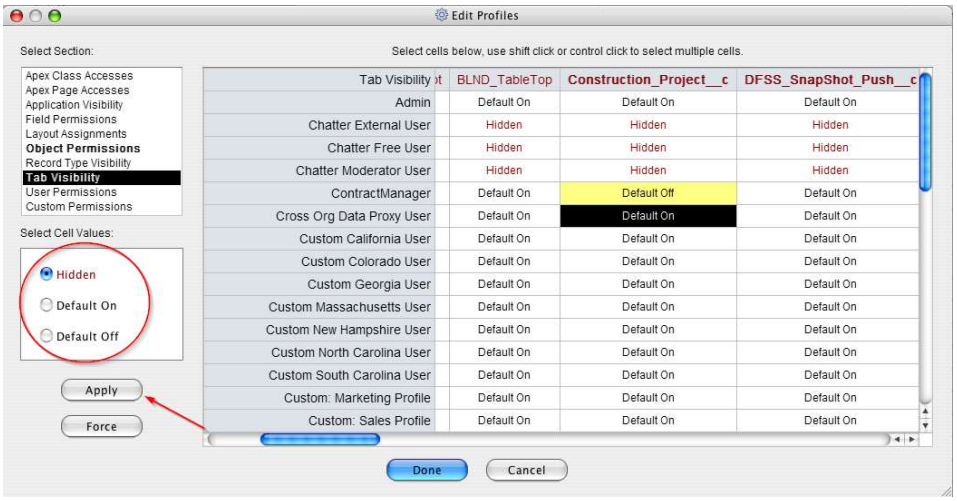
Users may also click the “Force” button to force all selected cells to the “No Access” value. Please refer to the section “Utilizing the Force Button” for additional details.



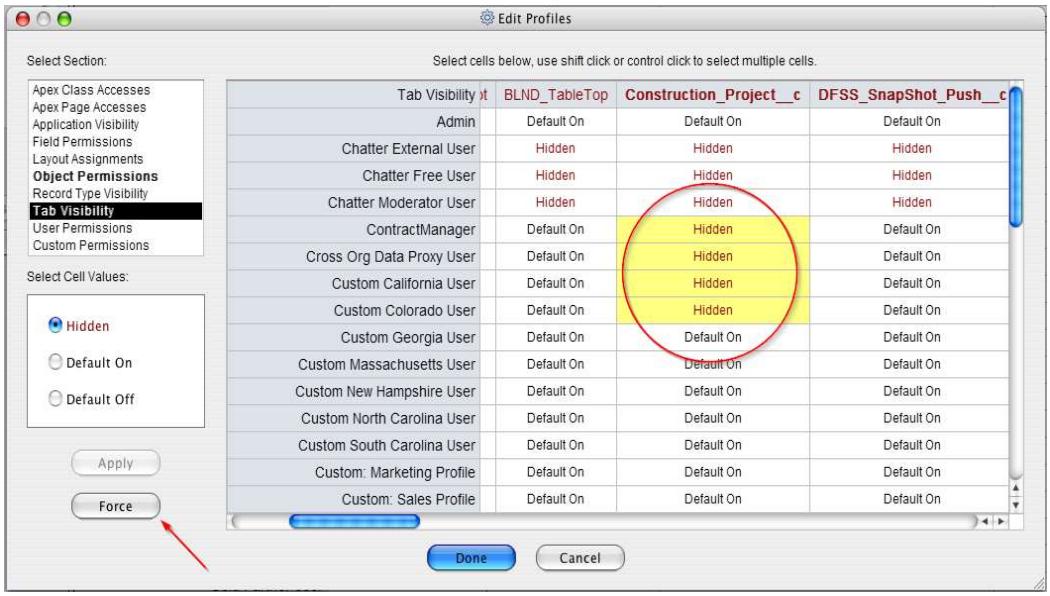
Record Type Visibility – For Record Type Visibility, users will be able to edit whether a record type is hidden or visible for selected profiles. Users can also dictate a default value if they want to.



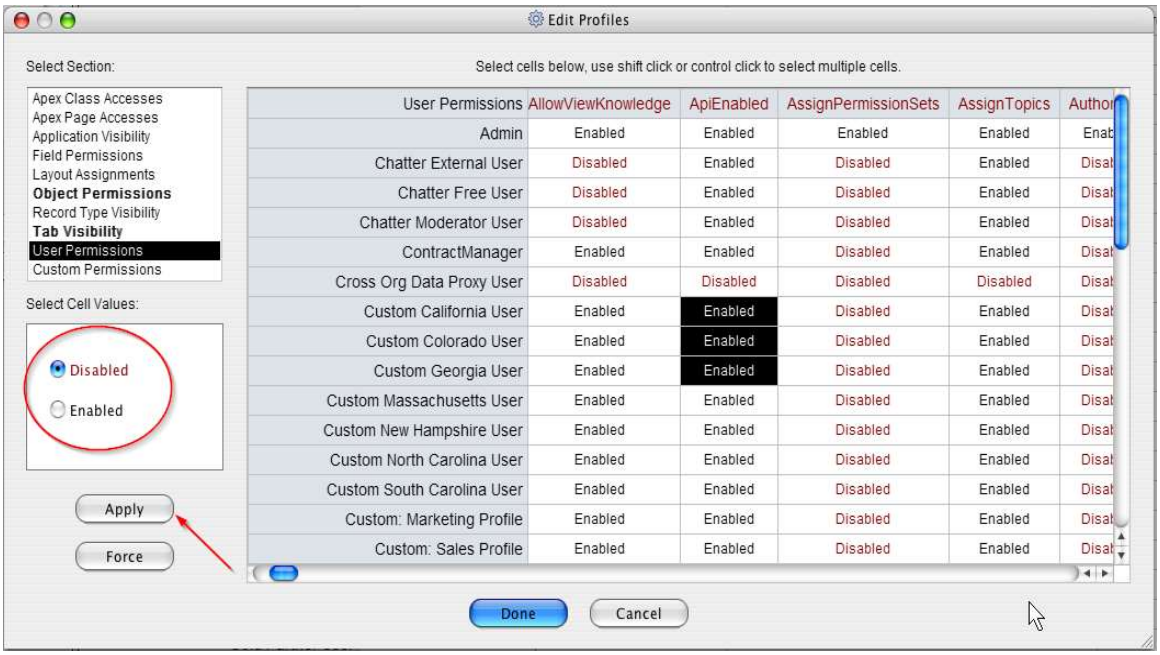
Tab Visibility – For Tab Visibility, users will be able to edit whether the tab is Hidden, Default On or Default Off for selected profiles. After selecting a cell, or multiple cells with a ctrl click, users may change the permissions where circled below, and by clicking "Apply."



Users may also use the "Force" button to change all selected values to "Hidden." Please refer to the section "Utilizing the Force Button" for additional details.

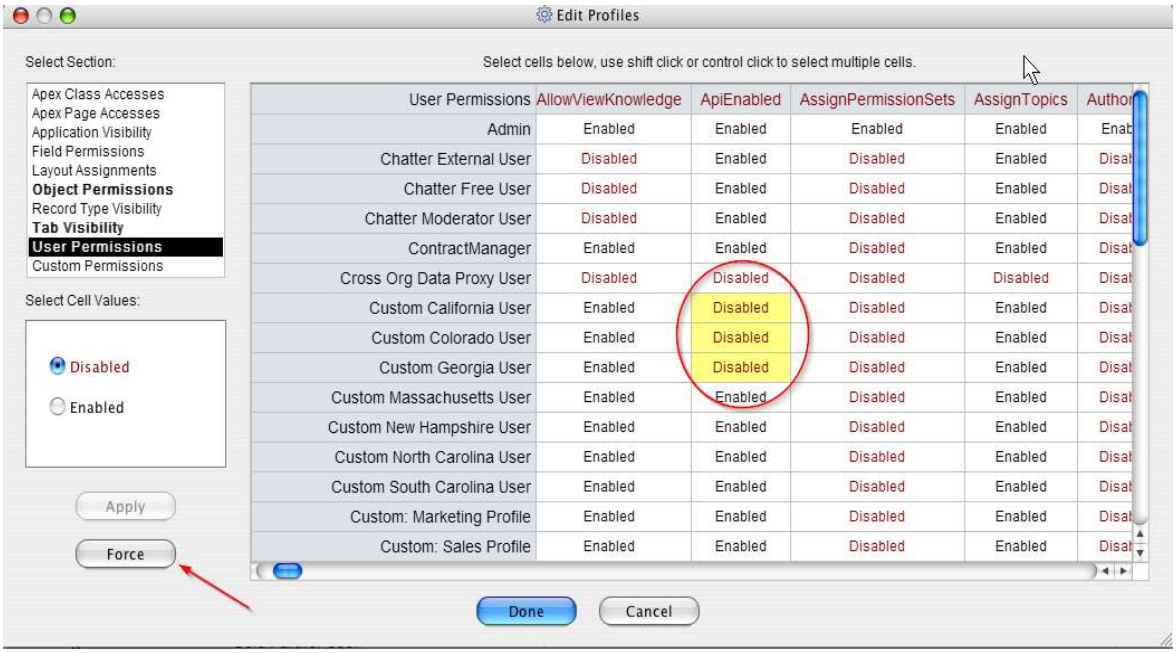


User Permissions—Snapshot users may edit whether various user permissions are enabled or disabled. By selecting the cell, or multiple cells with a ctrl click, selecting the appropriate value shown circled below and clicking "Apply."



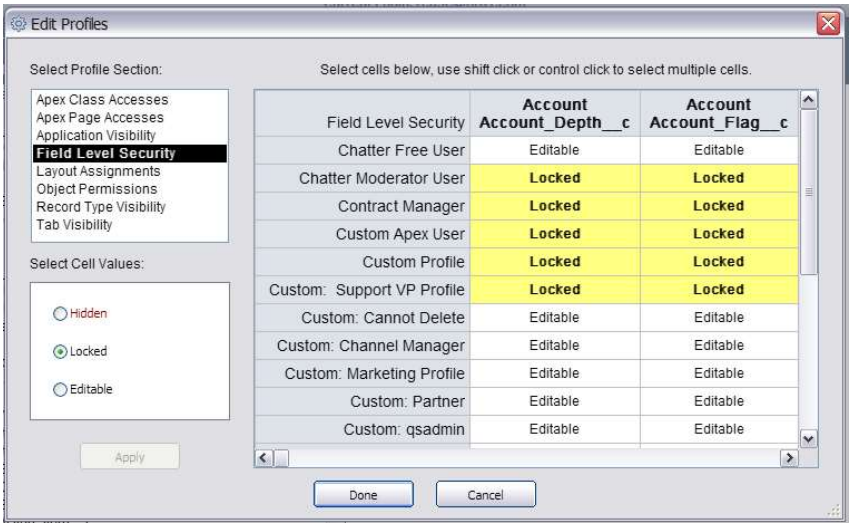
User Permissions	AllowViewKnowledge	ApiEnabled	AssignPermissionSets	AssignTopics	Author
Admin	Enabled	Enabled	Enabled	Enabled	Enab
Chatter External User	Disabled	Enabled	Disabled	Enabled	Disat
Chatter Free User	Disabled	Enabled	Disabled	Enabled	Disat
Chatter Moderator User	Disabled	Enabled	Disabled	Enabled	Disat
ContractManager	Enabled	Enabled	Disabled	Enabled	Disat
Cross Org Data Proxy User	Disabled	Disabled	Disabled	Disabled	Disat
Custom California User	Enabled	Enabled	Disabled	Enabled	Disat
Custom Colorado User	Enabled	Enabled	Disabled	Enabled	Disat
Custom Georgia User	Enabled	Enabled	Disabled	Enabled	Disat
Custom Massachusetts User	Enabled	Enabled	Disabled	Enabled	Disat
Custom New Hampshire User	Enabled	Enabled	Disabled	Enabled	Disat
Custom North Carolina User	Enabled	Enabled	Disabled	Enabled	Disat
Custom South Carolina User	Enabled	Enabled	Disabled	Enabled	Disat
Custom: Marketing Profile	Enabled	Enabled	Disabled	Enabled	Disat
Custom: Sales Profile	Enabled	Enabled	Disabled	Enabled	Disat

Users may also use the "Force" button to change all selected values to "Disabled." Please refer to the section "Utilizing the Force Button" for additional details.



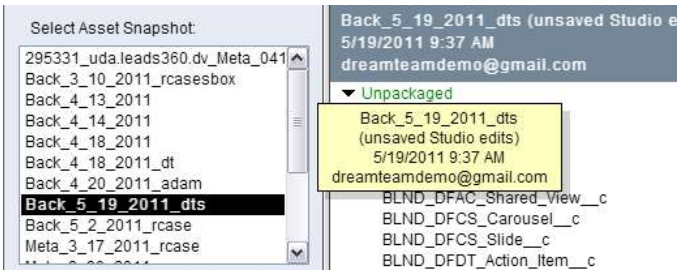
User Permissions	AllowViewKnowledge	ApiEnabled	AssignPermissionSets	AssignTopics	Author
Admin	Enabled	Enabled	Enabled	Enabled	Enab
Chatter External User	Disabled	Enabled	Disabled	Enabled	Disat
Chatter Free User	Disabled	Enabled	Disabled	Enabled	Disat
Chatter Moderator User	Disabled	Enabled	Disabled	Enabled	Disat
ContractManager	Enabled	Enabled	Disabled	Enabled	Disat
Cross Org Data Proxy User	Disabled	Disabled	Disabled	Disabled	Disat
Custom California User	Enabled	Disabled	Disabled	Enabled	Disat
Custom Colorado User	Enabled	Disabled	Disabled	Enabled	Disat
Custom Georgia User	Enabled	Disabled	Disabled	Enabled	Disat
Custom Massachusetts User	Enabled	Enabled	Disabled	Enabled	Disat
Custom New Hampshire User	Enabled	Enabled	Disabled	Enabled	Disat
Custom North Carolina User	Enabled	Enabled	Disabled	Enabled	Disat
Custom South Carolina User	Enabled	Enabled	Disabled	Enabled	Disat
Custom: Marketing Profile	Enabled	Enabled	Disabled	Enabled	Disat
Custom: Sales Profile	Enabled	Enabled	Disabled	Enabled	Disat

Once a user makes a change, they must click the Apply button to apply the temporary changes. The metadata that was changed will be highlighted.



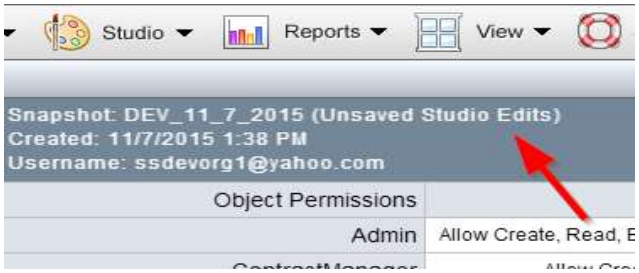
Once finished making all edits, all user has to do is simply click the 'Done' button which will write the changes back to the snapshot that they are working with. Selecting the 'Cancel' button throws all current changes in the dialog away.

If an edit has been made, the snapshot that the changes were made on will be bolded in the Select Asset Snapshot box. If the user hovers over the selected snapshot, they can see that there are unsaved Studio edits in the yellow dialog box. These edits can be used for deployment but are not officially saved to the snapshot.



All changes made in either the Edit Object Fields or the Edit Profiles options are temporarily made to the selected Snapshot. The user has the ability to either save the changes made or clear all changes.

If changes are pending, it is noted on the tab next the the snapshot name and date.



To save these changes, the user must click on the **Studio** menu and select **Save All Changes…** before exiting Snapshot. Users can also discard all changes using the **Clear All Changes** … feature.

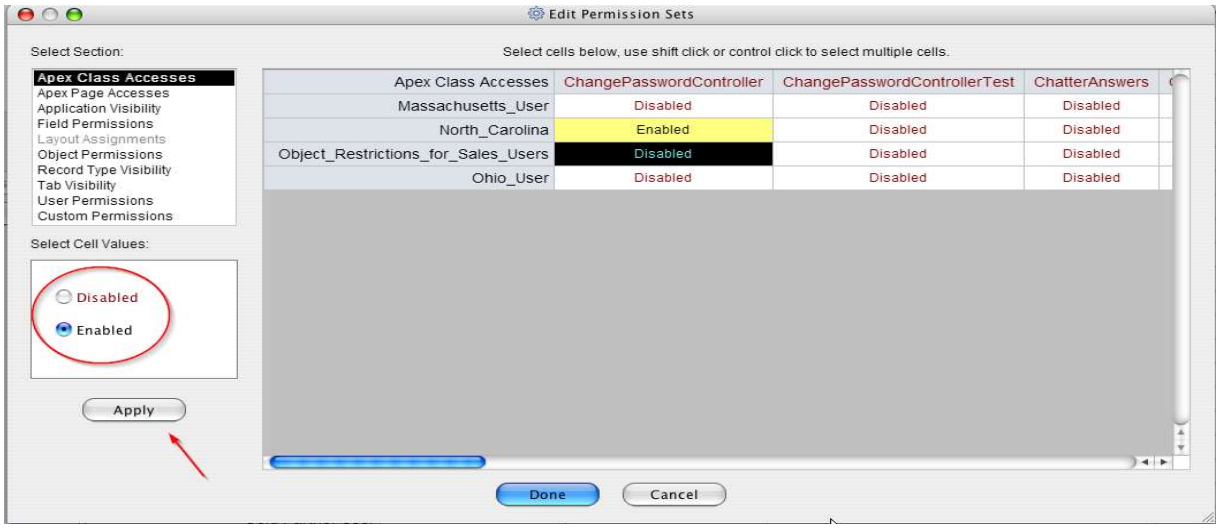
Note:
Please remember that all changes made or discarded affect only the snapshot on the local machine and does not affect the Org that the snapshot was created from. To implement these changes on the Org, you will need to push these changes to the originating Org using the Push Assets feature.

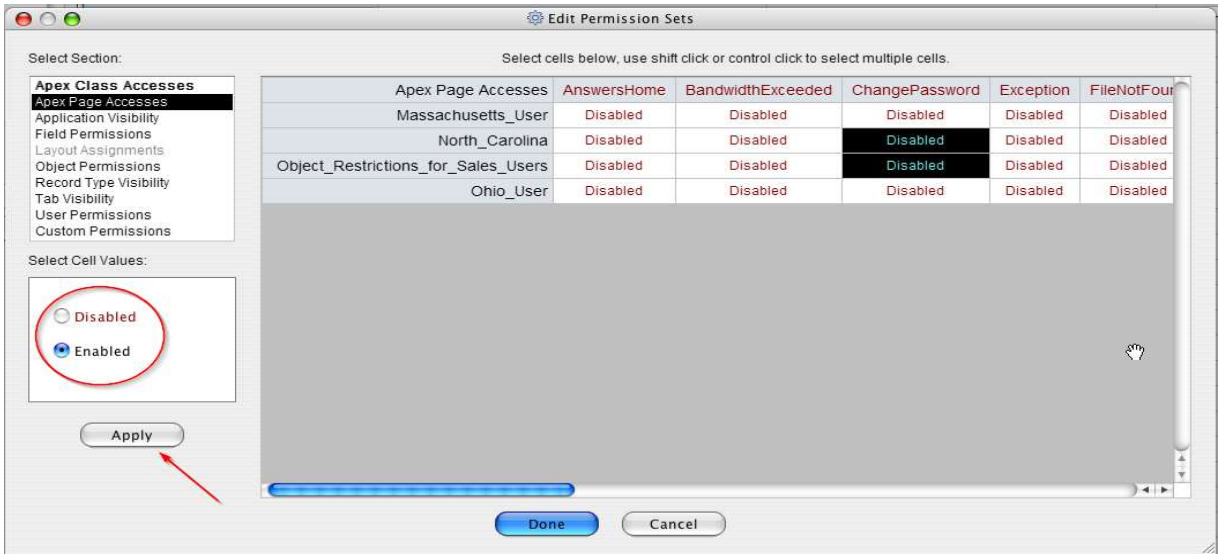
Edit Permission Sets

The Permission Sets option will allow users to change the permission settings for the following:

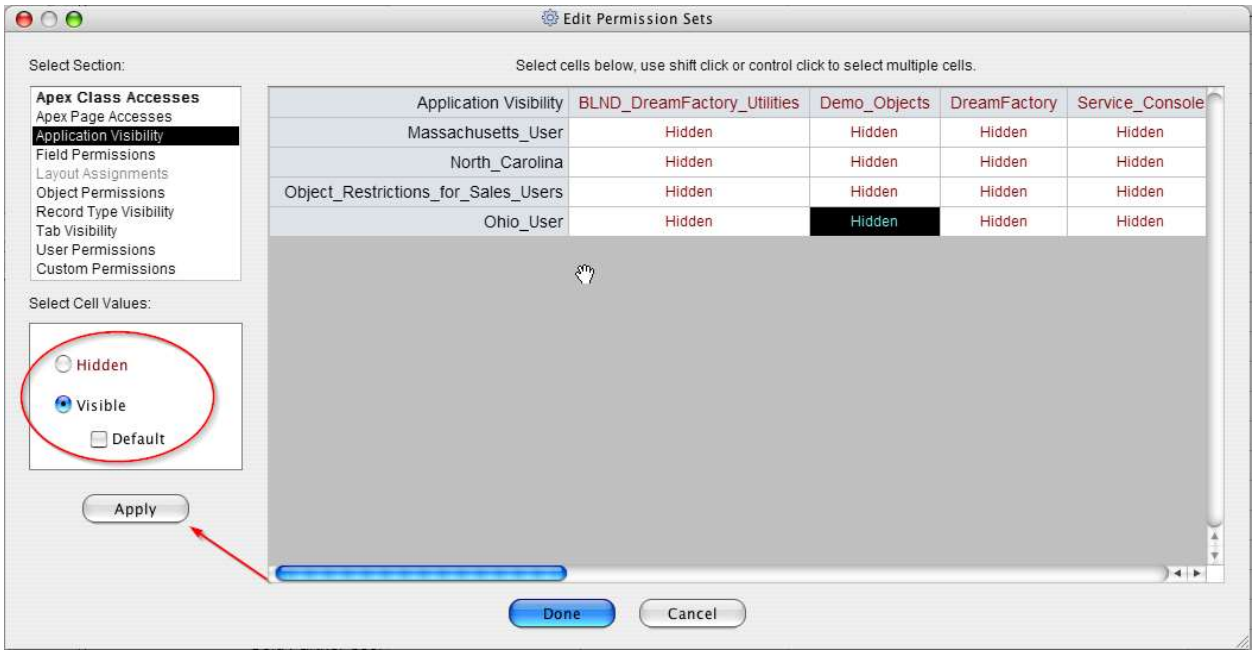
- Apex Class Access
- Apex Page Access
- Application Visibility
- Field Permissions
- Object Permissions
- Record Type Visibility
- Tab Visibility
- User Permissions
- Custom Permissions

Apex Class & Apex Page Access— For both, Apex Class and Apex Page Accessed, users will be able to either Disable or Enable the listed Apex Class or Page. By selecting the cell, or multiple cells with a ctrl click, selecting the appropriate value shown circled below and clicking "Apply."

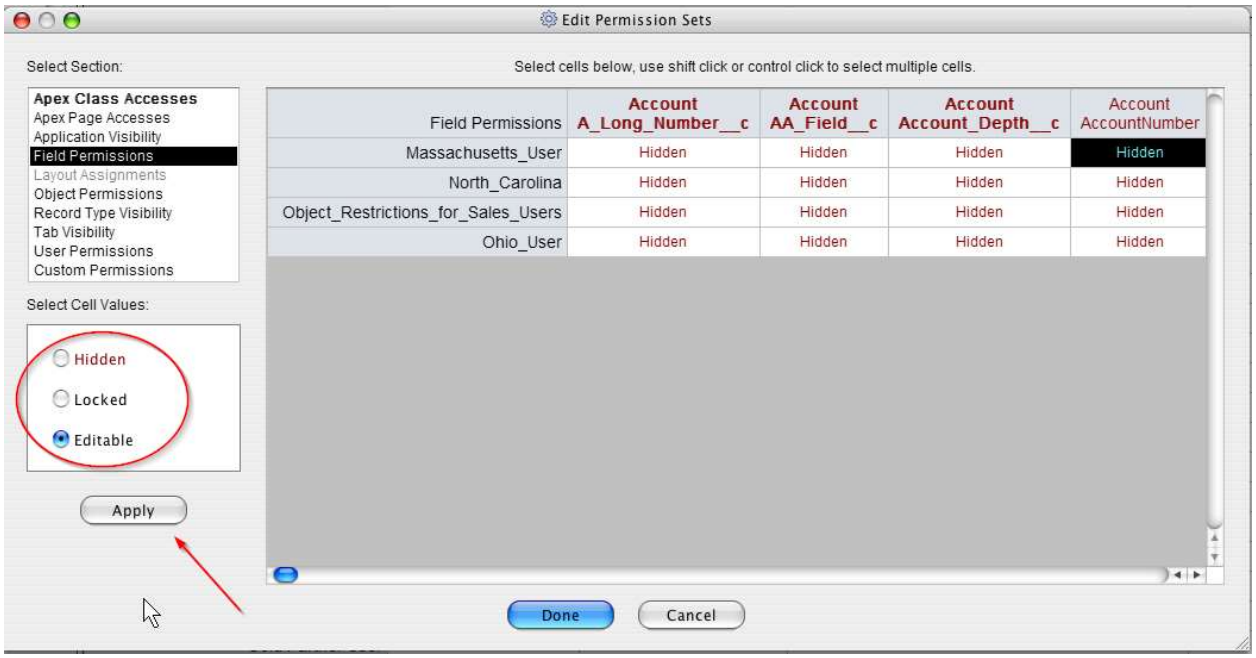




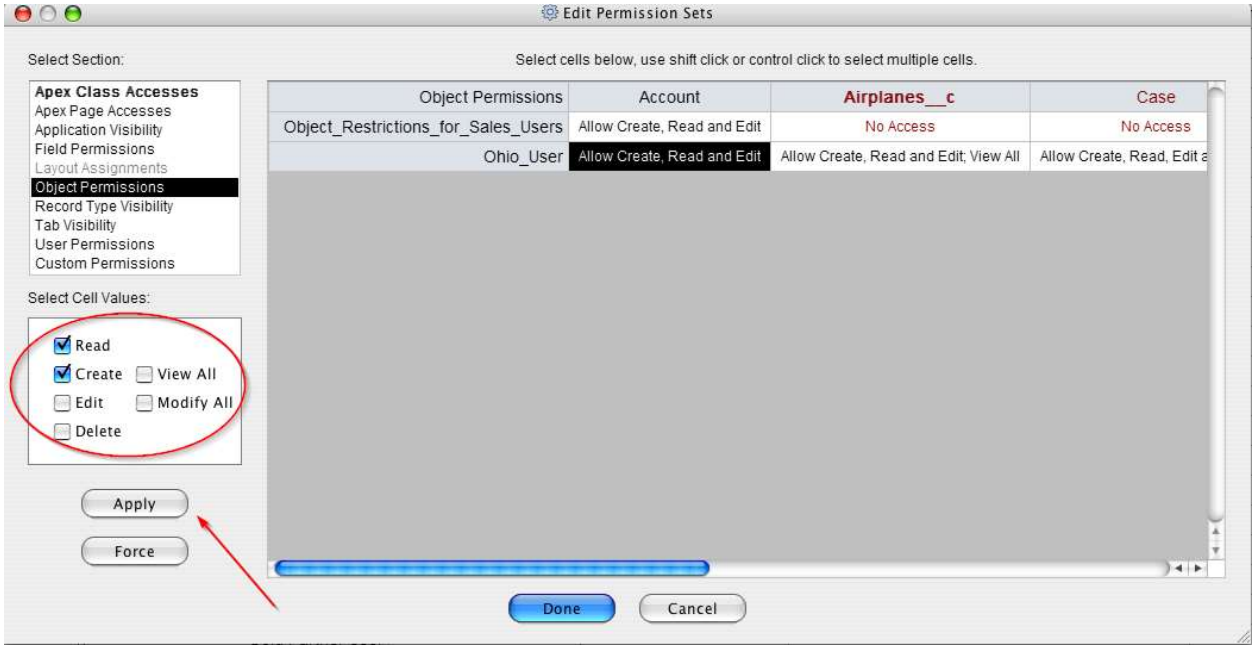
Application Visibility—Users may edit the visibility of Salesforce Apps by permission set. By selecting the cell, or multiple cells with a ctrl click, selecting the appropriate value shown circled below and clicking "Apply."



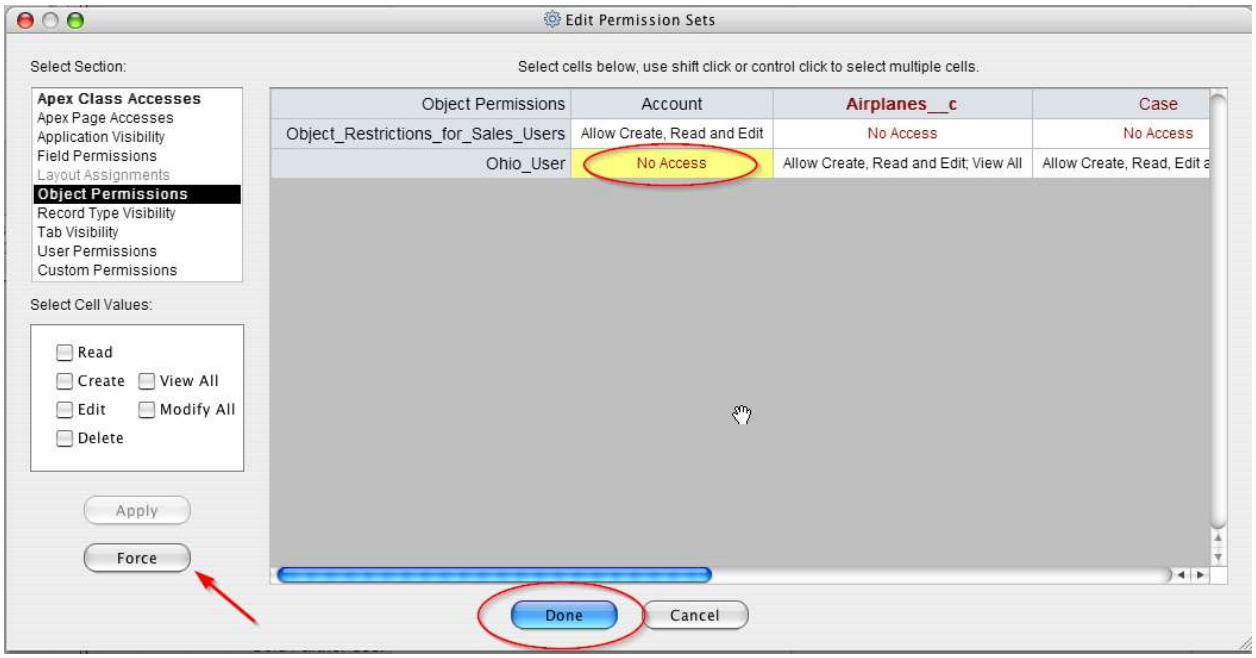
Field Permissions—Users may edit the visibility or editibility of fields by permission set. By selecting the cell, or multiple cells with a ctrl click, selecting the appropriate value shown circled below and clicking "Apply."



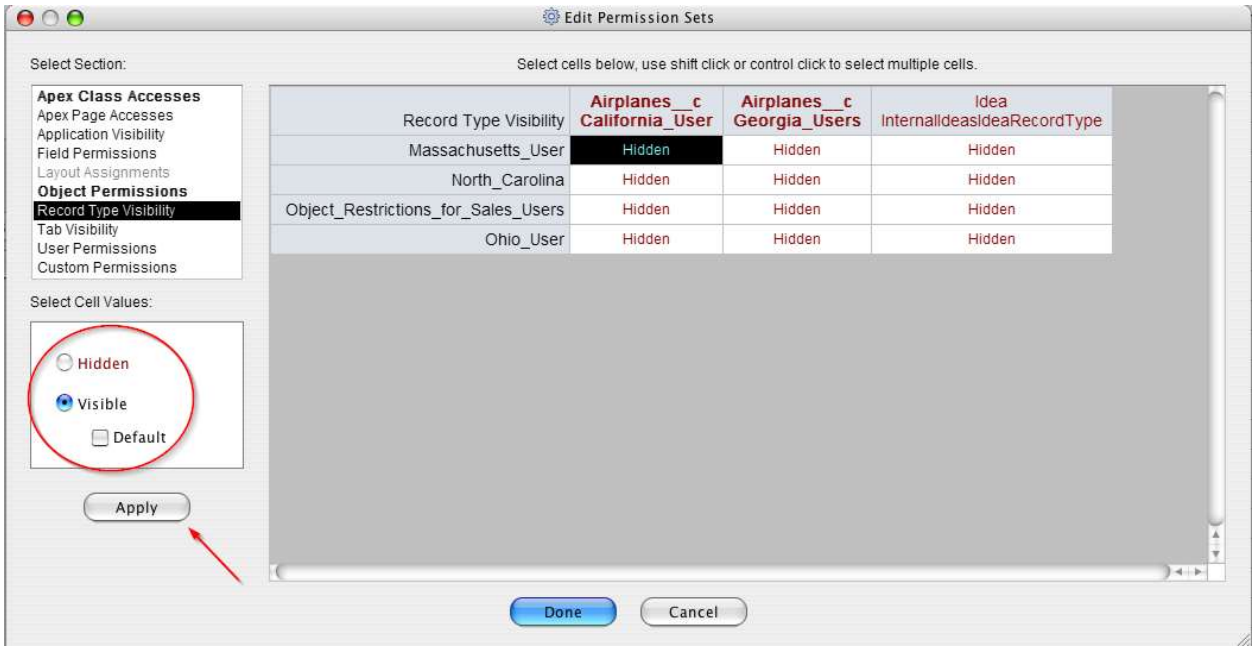
Object Permissions—Users may edit the object permissions by permission set. By selecting the cell, or multiple cells with a ctrl click, selecting the appropriate value shown circled below and clicking "Apply."



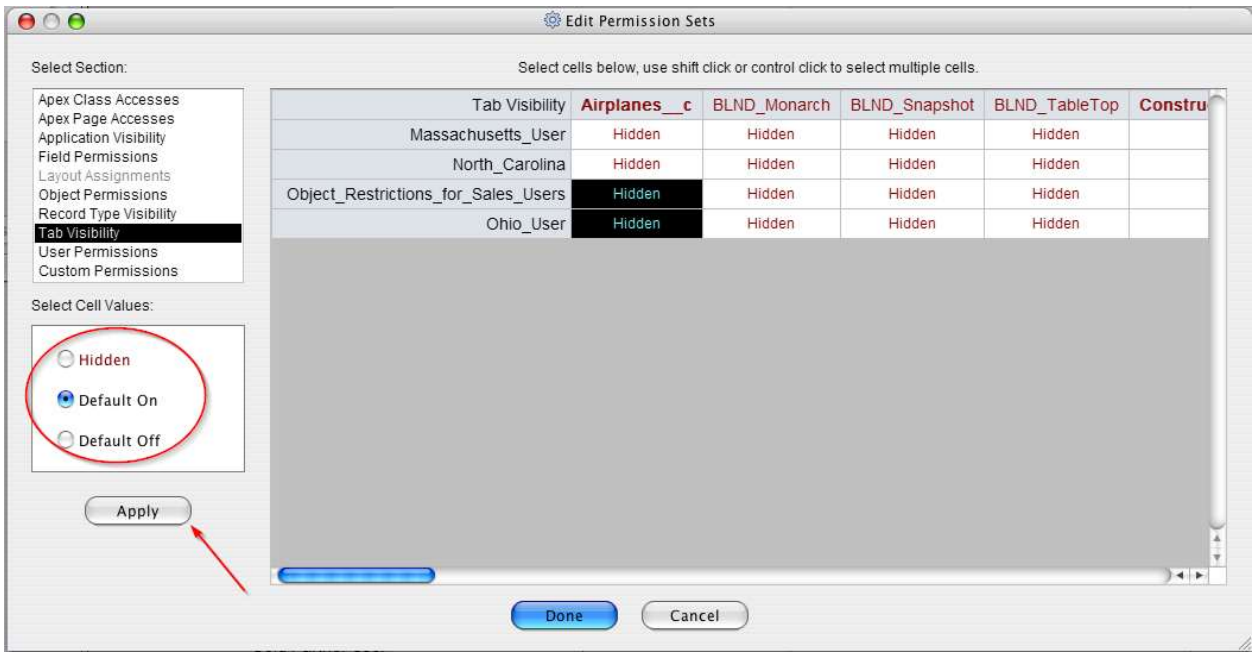
Users may select the "Force" button to change all permission sets to "No Access." Please refer to the section "Utilizing the Force Button" for additional details.



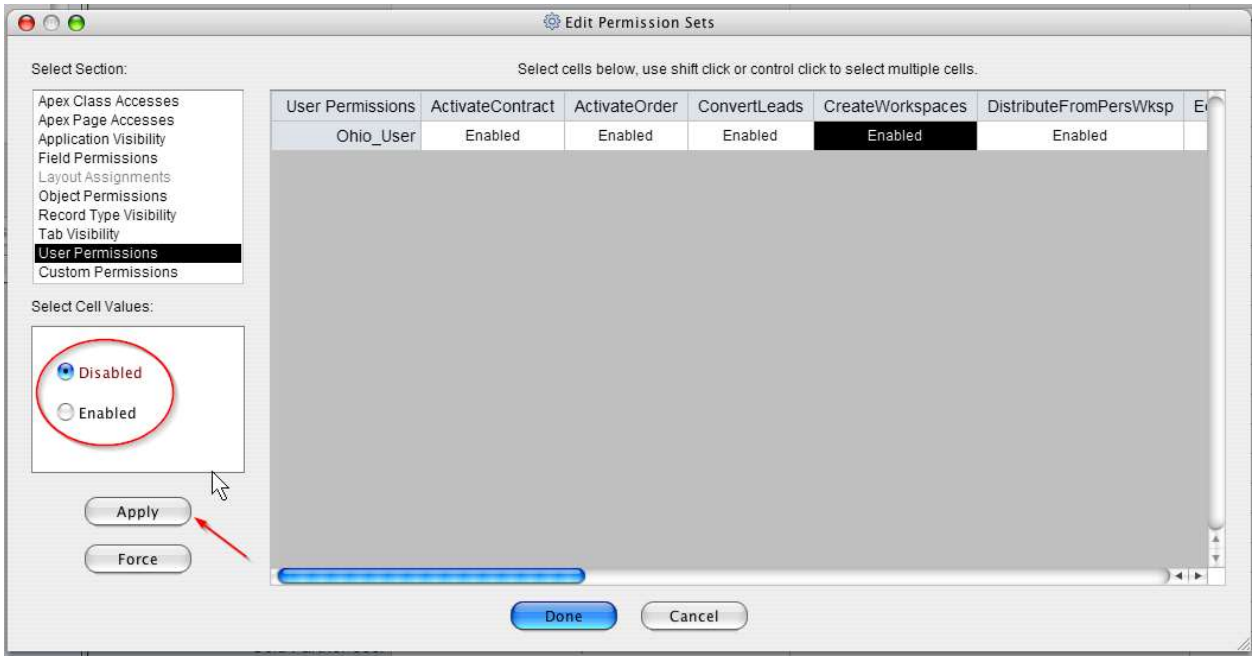
Record Type Visibility-- Users may edit record types by permission set. By selecting the cell, or multiple cells with a ctrl click, selecting the appropriate value shown circled below and clicking "Apply."



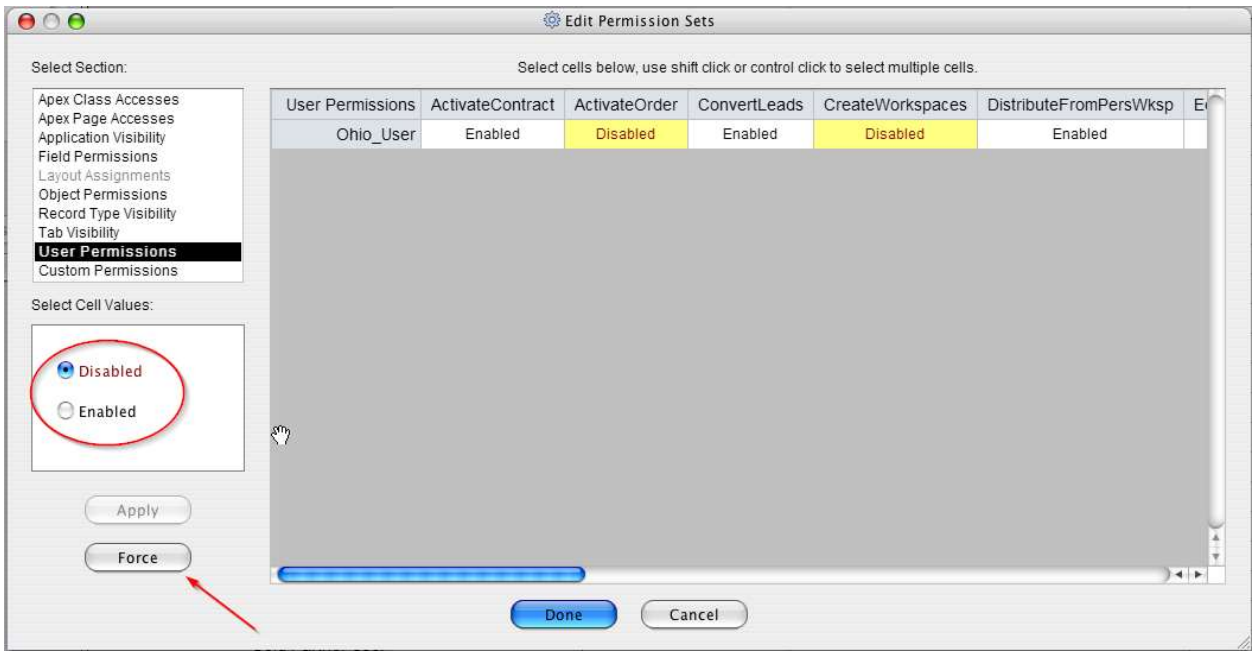
Tab Visibility-- Users may edit tab visibility by permission set. By selecting the cell, or multiple cells with a ctrl click, selecting the appropriate value shown circled below and clicking "Apply."



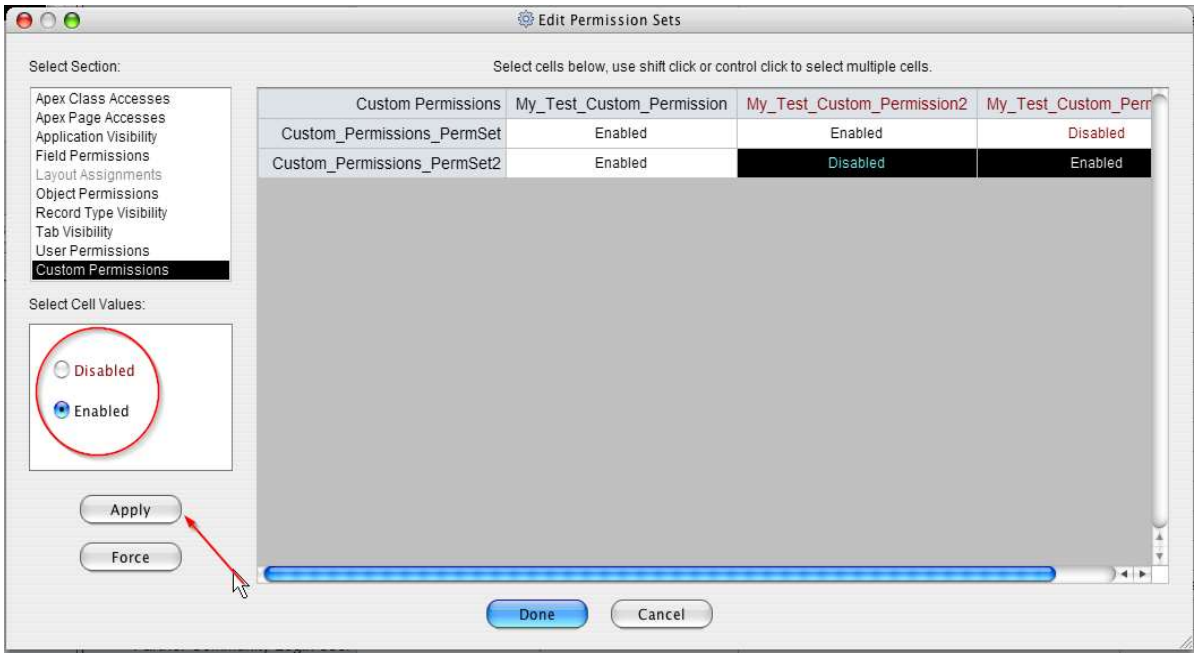
User Permissions-- Users may edit user permissions by permission set. By selecting the cell, or multiple cells with a ctrl click, selecting the appropriate value shown circled below and clicking "Apply."



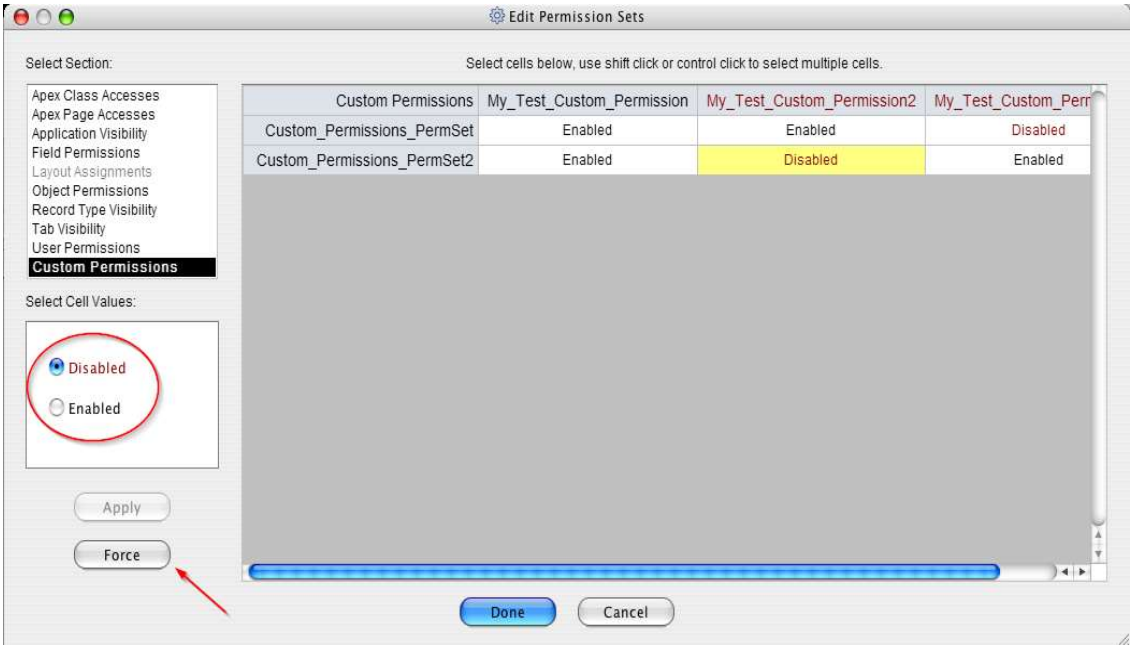
Users may also select the "Force" button to change all selected values to "Disabled." Please refer to the section "Utilizing the Force Button" for additional details.



Custom Permissions—Users may edit custom permissions by permission set. By selecting the cell, or multiple cells with a ctrl click, selecting the appropriate value shown circled below and clicking "Apply."



Users may utilize the “Force” button to change all selected values to “Disabled.” Please refer to the section “Utilizing the Force Button” for additional details.

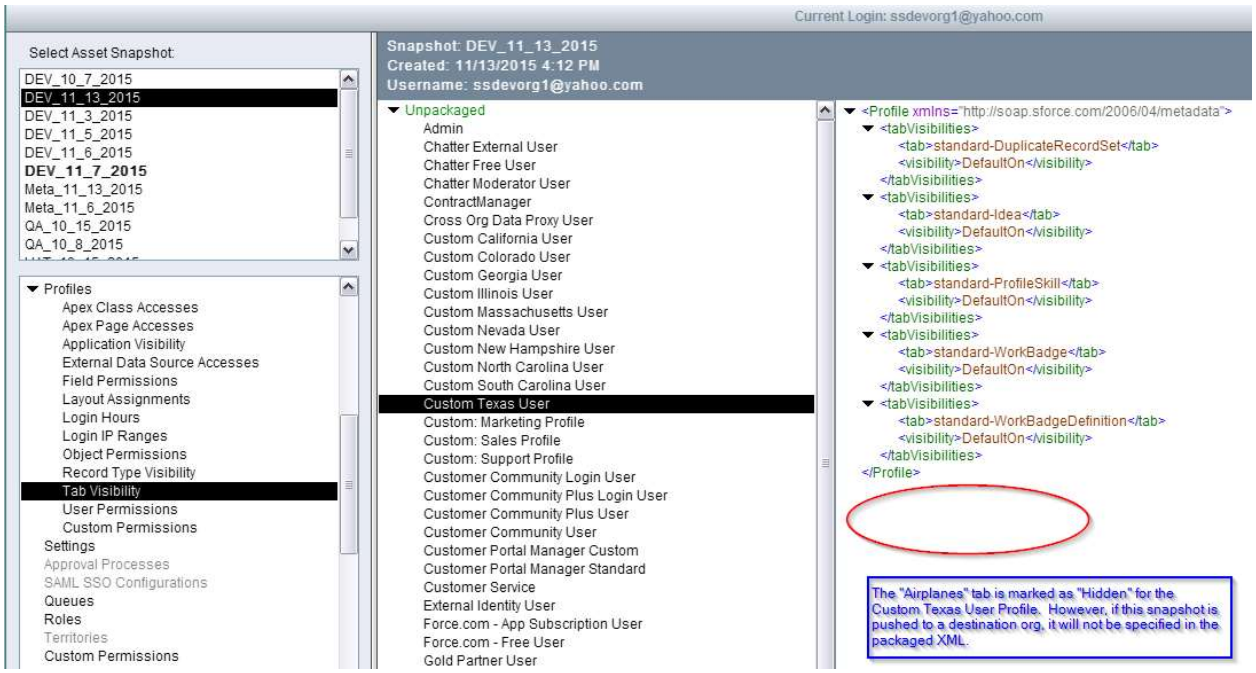


Utilizing the Force Button

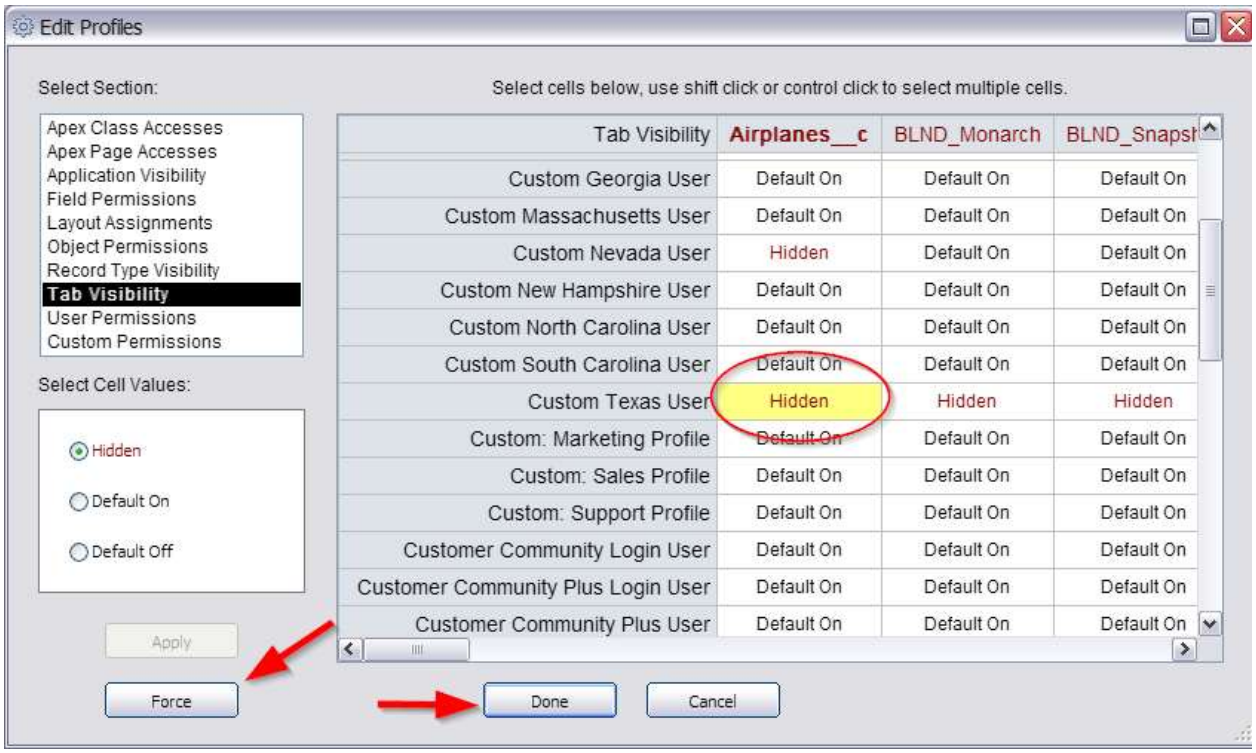
The “Force” button may be used when editing the Object Permissions, Tab Visibility, User Permissions, and Custom Permissions on Profiles and Permission Sets. By selecting this button, the SnapShot user will change the value on an Object to “No Access” for the selected Profile or Permission Set. For Tab Visibility, the force button will change the value of the Tab to “Hidden.” For User Permissions, and Custom Permissions the selected value will be changed to “Disabled.”

The Force button is designed to “force” the asset, and the value now associated with it, into the XML to be executed in a push. For example, If a snapshot is taken that includes an Object Permission, Tab, User Permission, or Custom Permission with the respective value of “No Access,” “Hidden,” or “Disabled,” the XML captured will not display the asset. This limit of the Salesforce metadata API could create a problem during a profile push into a destination org. If the destination org has the same tab, and has a default setting for that tab as “Visible,” for example, the profile could possibly inherit that value during the push. This is corrected with the Force button, which ensures that the XML is packaged correctly so the asset, and its value for the Profile, and or, Permission Set are pushed into the destination org.

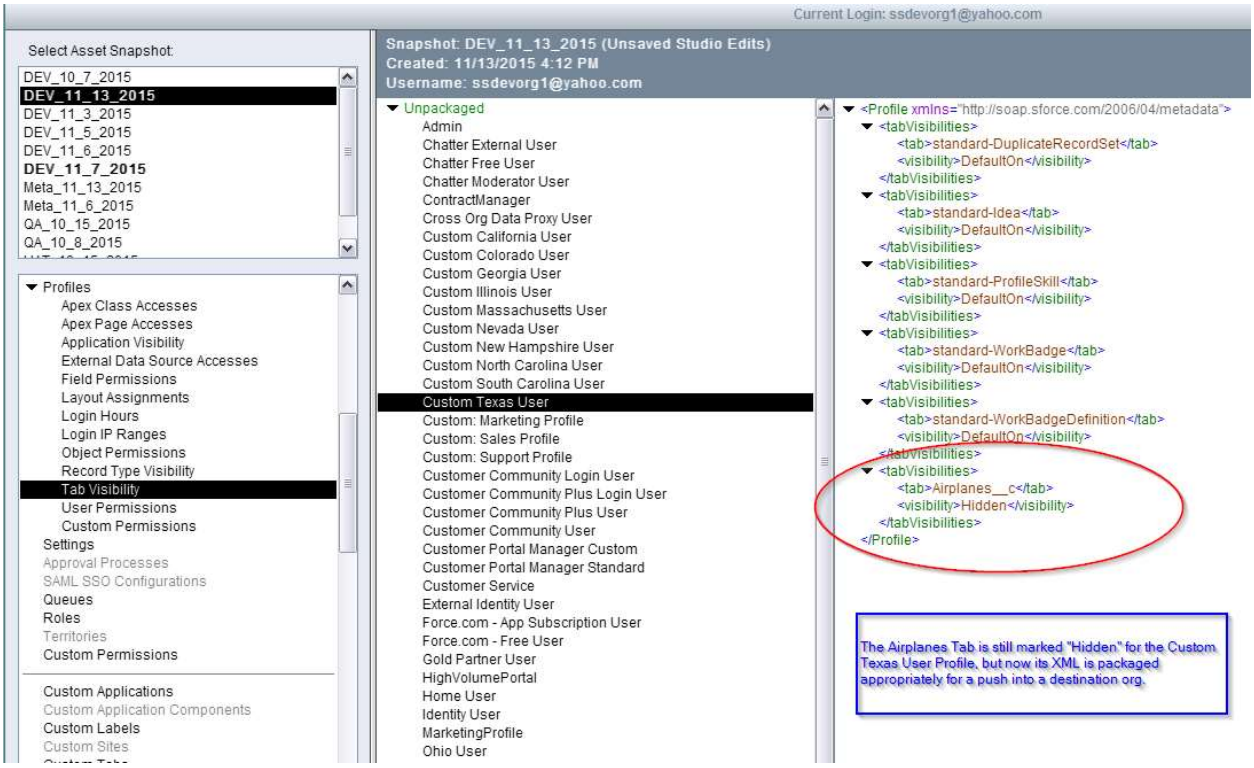
In the snapshot below, the selected profile does not have visibility to the Airplanes Tab. A limit of the Salesforce metadata API omits the entire tab from the snapshot and does not reference it as “hidden.”



By editing the profile, the SnapShot user may select to edit tab visibility for the Airplanes tab. Clicking "Force" will force the value to "Hidden," as shown below.

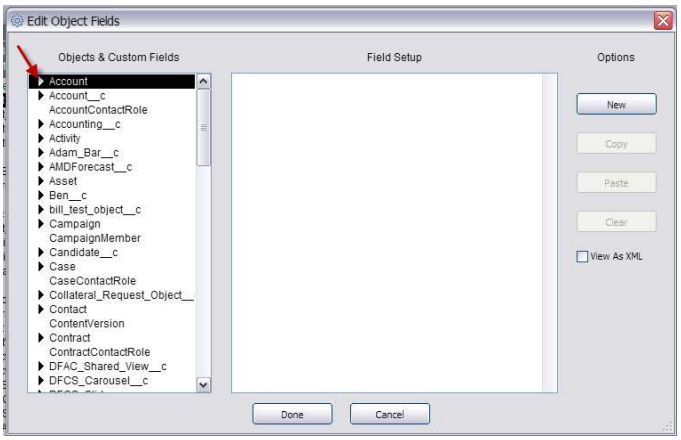


Both the tab, and the selected value of "Hidden," are now visible in the XML as shown below, and will ensure that it is pushed into the destination org.



Edit Object Fields

The Objects Fields option will allow users to create, update, copy and paste individual fields on existing objects in the selected snapshot. Once selected, the Edit Object Fields dialog will appear (see screen shot below). Here users can select the field from the desired Object by clicking on the black arrow immediately to the left of the Object.



Once the arrow is clicked, a list of all of the fields in that Object will appear. To edit a particular field simply select the field from the box on the left. Once selected, the field attributes will appear in the box on the right.

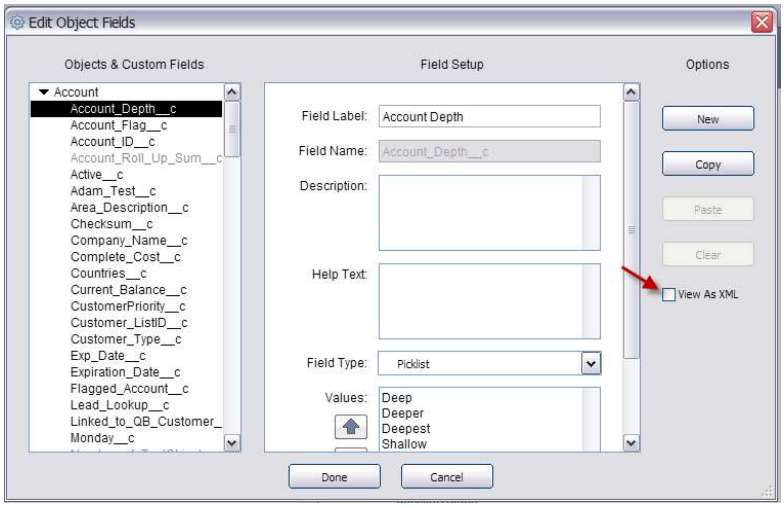
Here users can do any of the following:

1. Edit the field attributes by adding a description or help text, or add picklist values

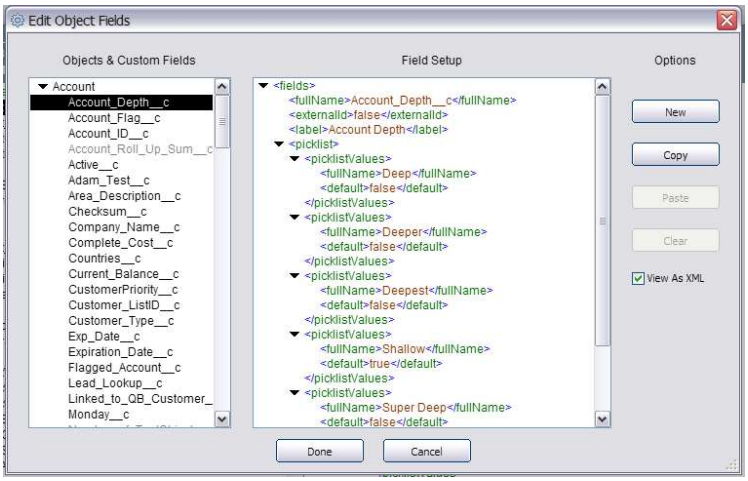
2. Users can modify the Field Type by clicking on the drop down menu next to Field Type

3. Users can also copy the field and paste it on a different Object

4. Lastly, users can click the New button on the right and create a completely new field on this object



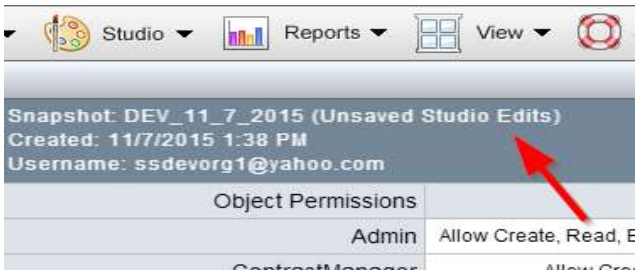
Field attributes can be viewed in the current view, or if desired, users can also view the field attribute as XML by checking the box that says “View As XML” on the right side of the dialog. The “View As XML” option is currently read-only.



To save these changes, the user must click on the Studio menu and select Save All Changes before exiting Snapshot. Users can also clear all changes from this menu as well.

All changes made are temporarily made to the selected Snapshot. The user has the ability to either save the changes made or clear all changes.

If changes are pending, it is noted on the tab next the the snapshot name and date.



To save these changes, the user must click on the **Studio** menu and select **Save All Changes…** before exiting Snapshot. Users can also discard all changes using the **Clear All Changes** … feature.

Note:
Please remember that all changes made or discarded affect only the snapshot on the local machine and does not affect the Org that the snapshot was created from. To implement these changes on the Org, you will need to push these changes to the originating Org using the Push Assets feature.

Automated Profile Snapshot

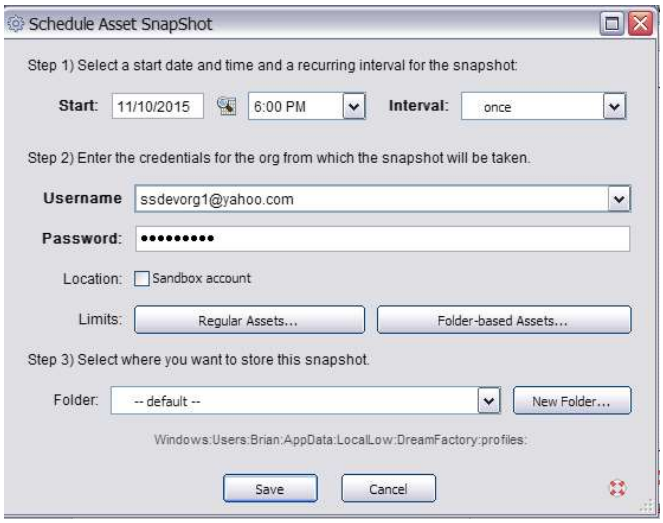
Snapshot also provides the ability to automate Asset and Profile Snapshots. This new feature allows you to schedule an automated Profile Snapshot. In addition, you can now dictate where the automated Snapshots are stored, as well as the frequency of the automated Snapshot.

In order to utilize this feature, you must leave this application running on the computer without sleeping (screen savers or sleep mode) and with a strong online internet connection for the automated Snapshot to work.

To schedule an Automated Profile Snapshot simply follow the directions below:

1. Click on the Profiles menu and select the Automate Snapshots command.

2. Once selected, the Automated Profile Snapshots dialog box will appear. Users must log in to the source org to schedule the snapshot.



3. Once you have logged in, you must then configure the following settings:

A. **Limit Contents of Snapshot** - Users can limit what is included in the Automated Profile Snapshot similar to how users can limit standard Profile Snapshots.

B. **Dictate Snapshot Storage Location** - Users can now dictate where they would like these automated Snapshots stored. They are able to store them in the standard Snapshot storage location (Snapshot folder within the DreamFactory folder) or they can choose to store the automated Snapshot elsewhere like on a server. The location of the storage location is displayed underneath the Select Folder button on the dialog box.

C. **Select the Frequency of Snapshot** – Users can also dictate the frequency of the automated Snapshot choosing from one of the following options:

Every Day
Every Other Day

Every Week
Every Month
Every 2 Months
Every Quarter

4. Once users have logged in and configured the settings, simply click the Start button to commence the automated Snapshot.

Comparing Profile Snapshots

Similar to the Asset Snapshot, you have the ability to compare multiple Profile Snapshots. Comparing multiple Profile Snapshots allows you to view the difference between the Orgs and identify the desired profiles and profile metadata to be pushed.

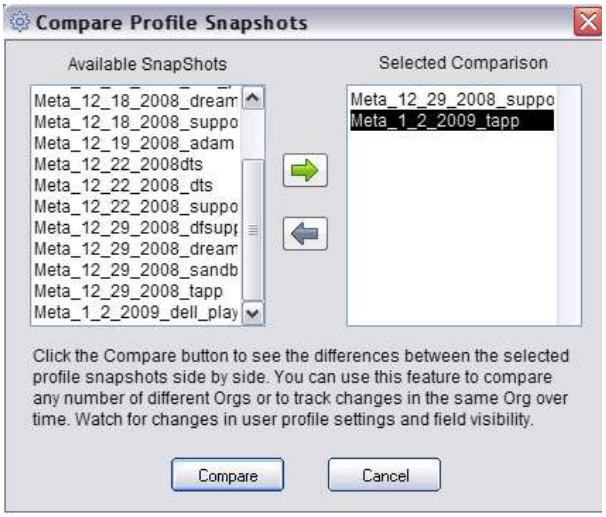
Best Practice
Comparing multiple Profile Snapshots is a recommended Best Practice before attempting a Profile deployment.

To compare multiple Snapshots simply follow the instructions below:

1. Select your initial Profile Snapshot

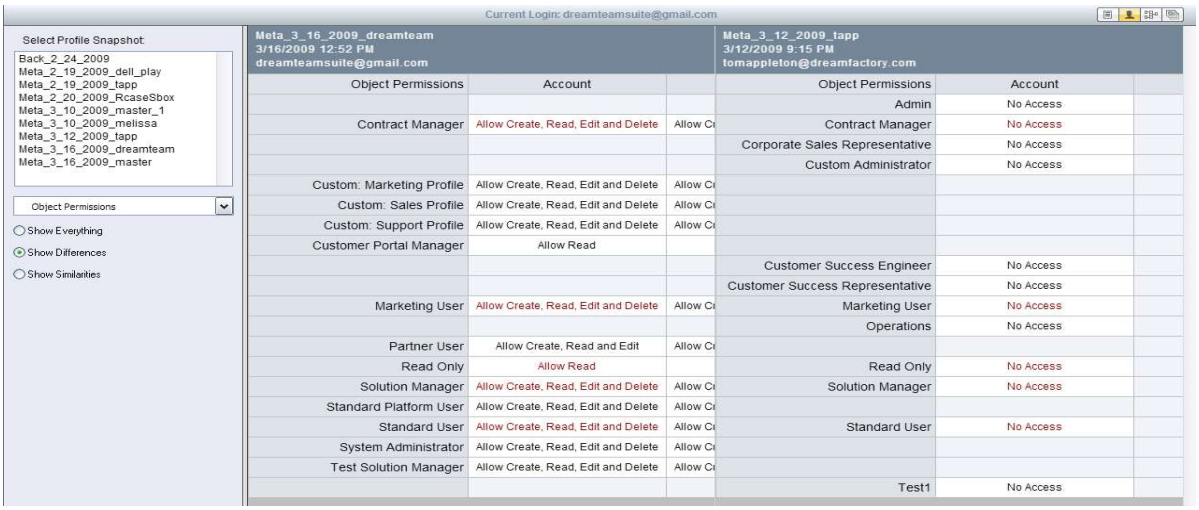
2. Select the Compare Profiles command from the Studio menu.

3. Upon selecting the Compare Profiles command, the Compare Profile Snapshots dialog box will appear. Simply select the Profile Snapshots that you want to compare from the Available Snapshots list and click the green arrow to move them over to the Selected Comparison list.



4. Click the Compare button to initiate the comparison.

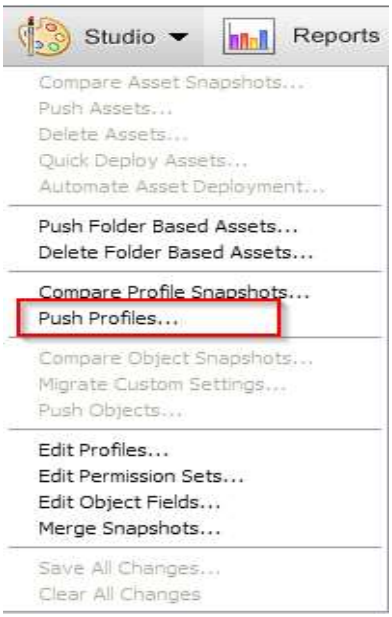
Once clicked, a matrix displaying the selected Snapshots side by side will appear with a list of the profiles on the left and the profile metadata on the right. The default view of the Profile Comparison is to display the differences only. However, you also have the ability to see everything or similarities only if you wish. You can select any of these options by clicking on one of the three radio buttons on the left hand side of the screen. All differences are displayed in red. All remaining metadata is displayed in black within the matrix.



Pushing a Profile Snapshot

One of the key features of the Profile Snapshot is the Push Profile Snapshot. The Push Profile Snapshot feature allows you to select your desired profile metadata and then deploy them into the Destination Org.

To access the Push Profiles, simply click on the Studio menu and select the Push Profiles command.

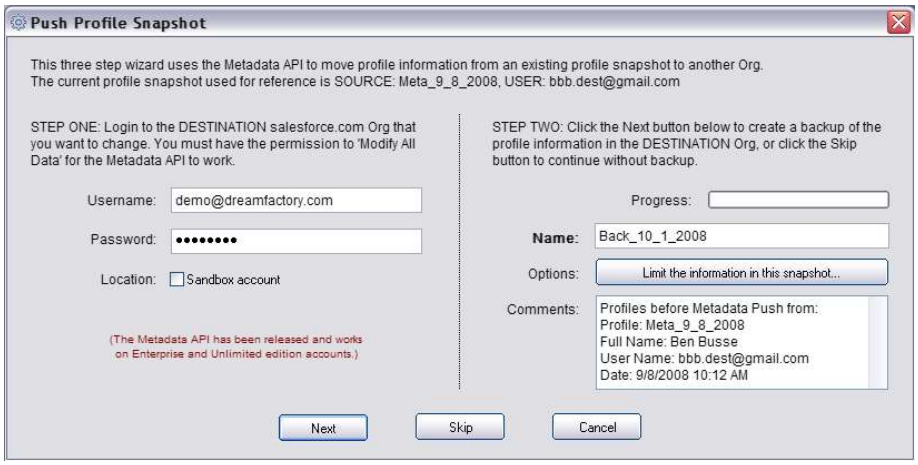


Once selected, the Push Profiles three step wizard will appear. Below are step by step instructions how to access and use the Push Profiles feature.

Note:
Profile and Asset Snapshots allow give you the option to choose to create a backup Snapshot of the destination Org if desired.

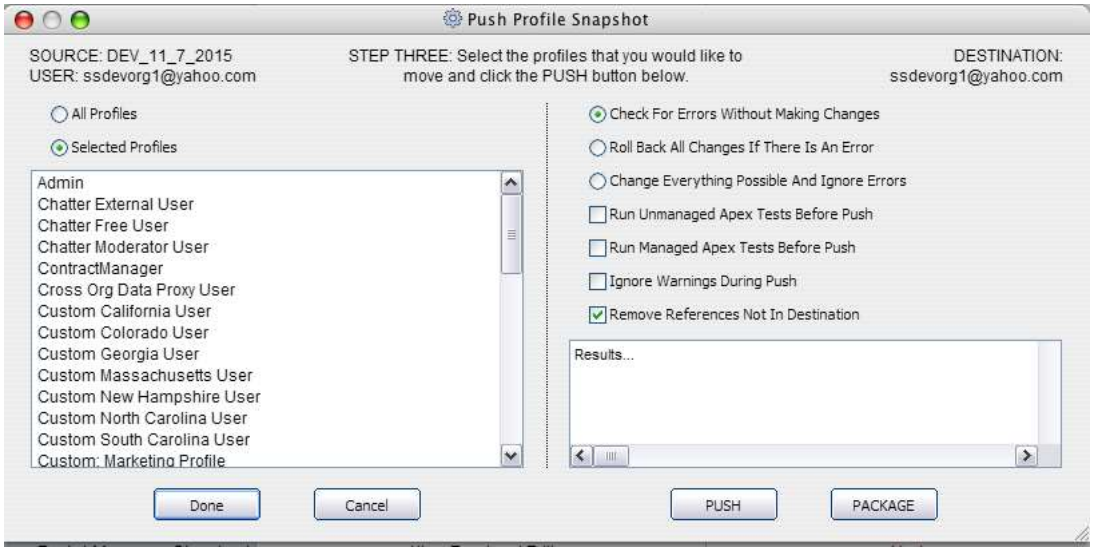
1. Log into your destination Org.

2. Choose if you want to create a backup Profile Snapshot or not. If you do not want to create a backup Snapshot, press the Skip button and continue on to Step 3. The Skip button is available only if you are pushing to a non-production (sandbox or developer) Org.



Note: If you are logging into a sandbox, please check the check box next to Sandbox Account on the login screen.

3. Next, select whether you want to include all profiles or just some profiles in the push.



4. After you have selected the criteria you want to push and are ready to proceed with your deployment, the next step is to select from one of the three push options. The Profile Snapshot provides same options as the Push Asset Snapshot including:

- Check For Errors Without Making Changes
- Roll Back All Changes If There Is An Error
- Change Everything Possible And Ignore Errors
- Run Unmanaged Apex Tests Before Push
- Run Managed Apex Tests Before Push
- Ignore Warnings During Push
- Remove References Not In Destination

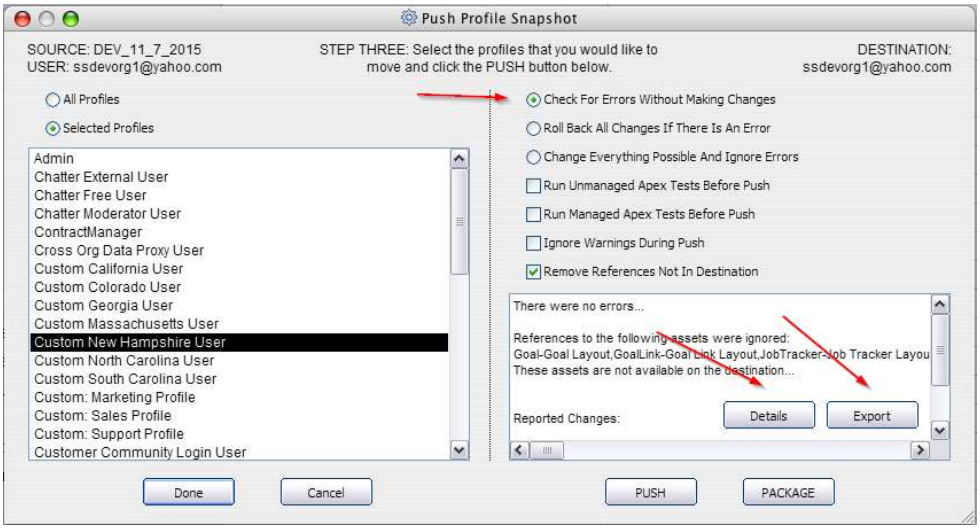
Check For Errors Without Making Changes

This simulates the actual push operation and returns any and all errors that you would get if you actually did a push you can review the errors and rectify configuration issues in the destination Org and then try the entire push again (see important rules outlined in the Profile Prerequisite section below).

Best Practice:
This push option is recommended as a Best Practice.

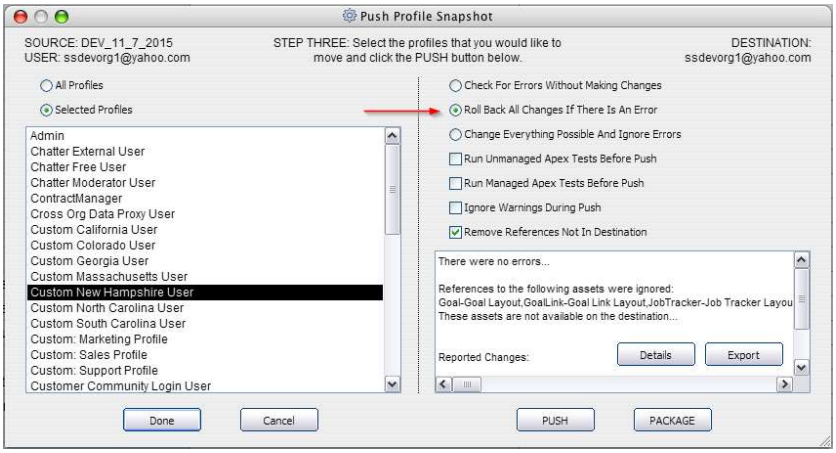
If errors occur you will be provided with two export options so you can review the errors. All you have to do is click on the option you want and generate the appropriate file. These two options include:

Details – this option allows you to export the actual response from Salesforce's metadata API
Export – this option allows you to export the textual error messages.



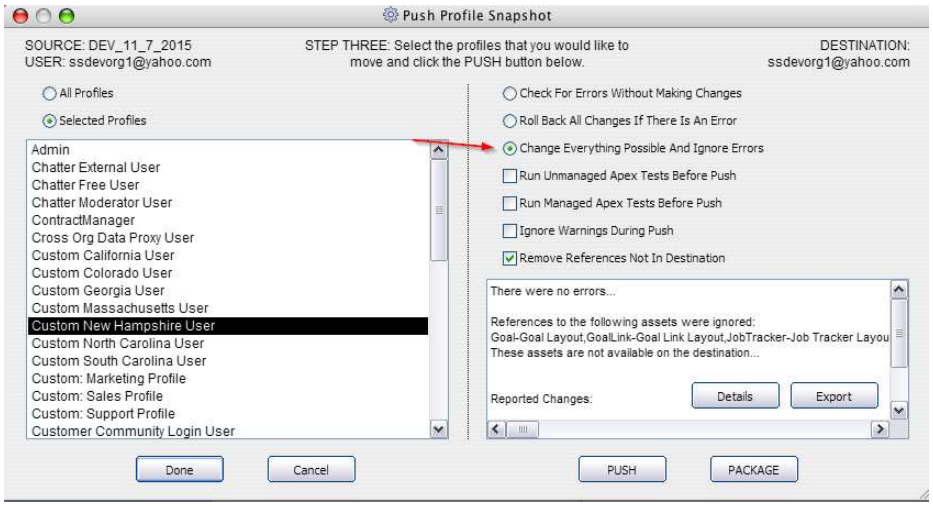
Roll Back All Changes If There Is An Error

This attempts a transactional push of all selected items to the Destination Org. If there are any errors reported, the entire transaction (push) is rolled back and no changes are made to the destination Org. You can review the errors and rectify configuration issues in the destination Org and then try the entire push again (see important rules outlined in the Profile Prerequisite section below). This push option is required when pushing to or from a Production Org.



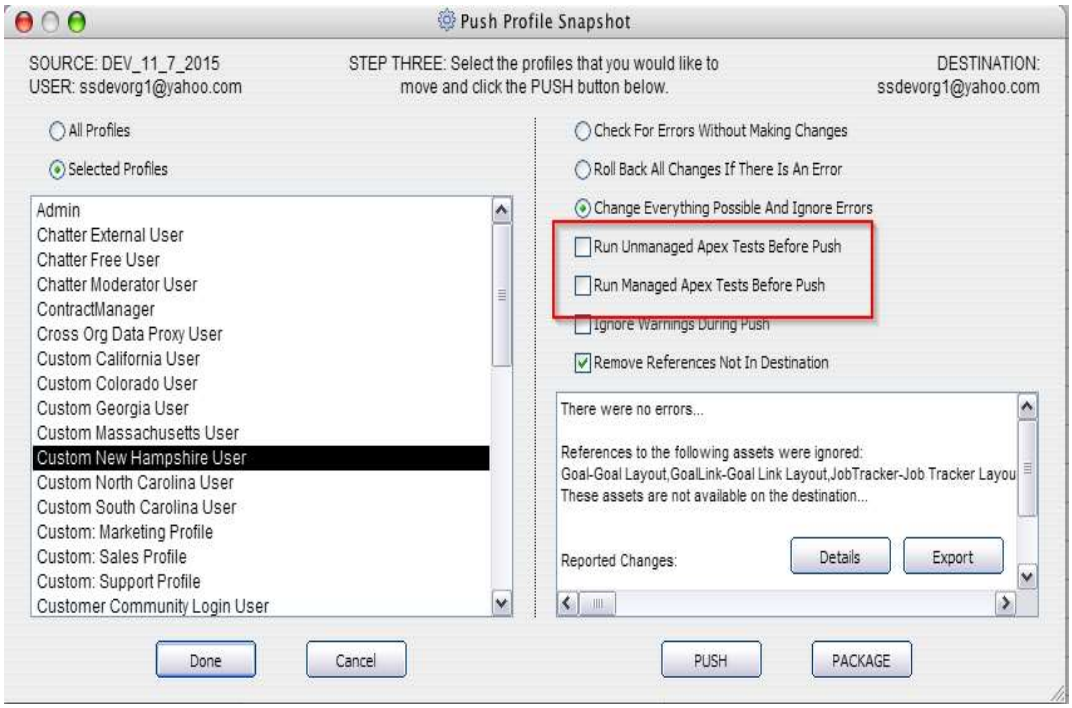
Change Everything Possible and Ignore Errors

This means go ahead and push whatever can be pushed successfully DESPITE any errors that are returned. For those Profile configurations that fail because of errors, you can review the errors and rectify configuration issues in the destination Org and then try the push again for those items that failed (see important rules outlined in the Profile Prerequisite section below).



Run Apex Tests Before Push

In addition to the three push options detailed above, Snapshot has added a couple of options to run Apex tests before push. **Run Unmanaged Apex Tests Before Push** and **Run Managed Apex Tests Before Push** checkboxes are displayed directly beneath the three push options. These checkboxes allows you to decide whether you want to run Apex tests prior to the push and also allow you to choose if you want to execute Unmanaged Apex Tests only or run tests for the entire Org.



Note:

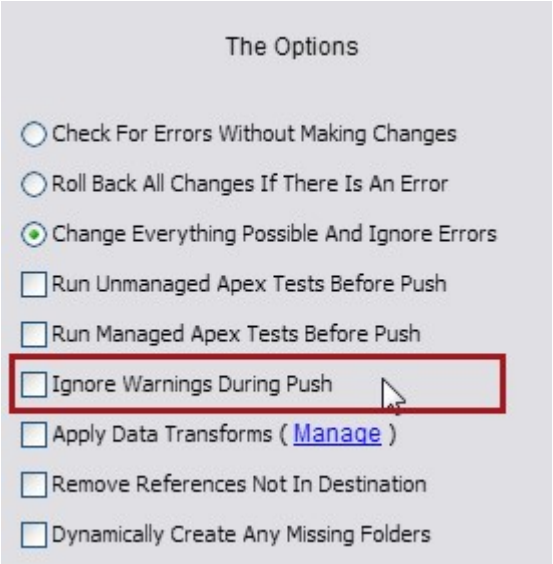
If you have selected the **Roll Back All Changes If There Is An Error** push option, SnapShot assumes that you are pushing to a production Org and can decide to execute the Apex tests to ensure Org integrity.

Best Practice

Consider a scenario where you leave this option unchecked and do a dry run of your Job List with your production Org before your release date. On your release date, when you execute a **Roll Back All Changes If There Is An Error** option, Snapshot will automatically execute the Apex tests. Depending on your Org set, this might lead to Apex error messages previously unknown. For this reason, we recommend at least having the **Run Unmanaged Apex Tests Before Push** checkbox always checked to ensure org integrity.

Ignore Warnings During Push

Salesforce Metadata API introduced the notion of warnings instead of errors in the recent past. By definition, warnings can be ignored and continued while executing deployments while errors are issues that cannot be ignored and hence will stop deployments. While we have not seen many warnings in the recent past, you can decide if this option might make sense for you.



Profile Push Perquisites

In order to accomplish the maximum results when using the Profile Push features, you must ensure that all Profile Push prerequisites are met prior to commencing the push. The list below details these Profile Push Prerequisites.

Apex Class Accesses – You must push Apex Classes prior to pushing Apex Class Accesses.

Apex Page Accesses - You must push Apex Pages prior to pushing Apex Page Accesses.

Tab Visibility - Tabs in the destination Org must be the same as those in the source Org. The metadata API will return errors when it cannot find missing tabs in the destination Org (e.g., if Tab 1 exists in the source Org but doesn't exist in the destination Org).

Object Permissions - Objects and fields in the destination Org must be identical to the source Org. **Therefore, you should always push objects BEFORE a Profile Snapshot push if the schema are not already identical in the Orgs.** The metadata API will return errors when it can't find missing objects and fields in the destination Org (e.g., if Object 1 exists in the source Org but doesn't exist in the destination Org).

Field Level Security – Similar to the prerequisite for Object Permissions. Objects and fields in the destination Org must be identical to the source Org. The metadata API will return errors when it cannot find expected objects and fields in the destination Org (e.g., if Object 1 exists in the source Org but doesn't exist in the destination Org).

Application Visibility - Applications installed in the destination Org must be the same as those installed in the source Org. The metadata API will return errors when it can't find missing applications in the destination Org (e.g., if Application 1 exists in the source Org but doesn't exist in the destination Org).

Record Type Visibility - Record Types in the destination Org must be the same as those in the source Org. The metadata API will return errors when it can't find missing record types in the destination Org (e.g., if Record Type 1 exists in the source Org but doesn't exist in the destination Org).

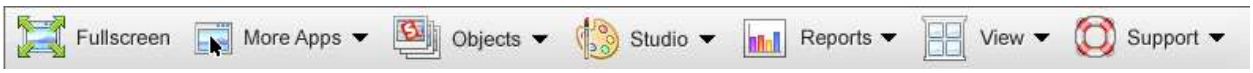
Layout Assignments – Layout Assignments in the destination Org must be the same as those in the source Org. The metadata API will return errors when it can't find missing layout assignments in the destination Org (e.g., if Layout Assignment 1 exists in the source Org but doesn't exist in the destination Org).

Object Snapshot

Definition of an Object Snapshot

The Object Snapshot allows you to view, compare and deploy all custom fields from Standard Objects and Custom Objects in your Salesforce Org. The Object Snapshot displays these objects on three levels: object, field and field attribute level. It also allows you to deploy both complete objects and individual fields using the push feature. The Object Snapshot currently supports version 35 of the Salesforce Metadata API. The Object Snapshot should be used for comparing the objects of multiple Orgs and deploying individual fields only.

The Object Snapshot is divided into seven menus each containing different pieces of functionality including:

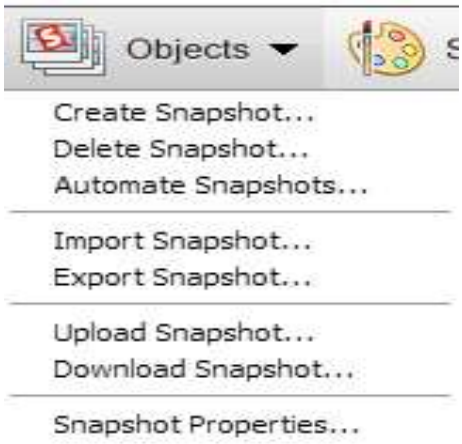


Full Screen - The Full Screen menu allows users to expand the display into a Full Screen mode providing additional screen space to work with.

More Apps – The second menu allows users to maneuver between several DreamFactory applications.

Objects – The Objects menu allows provides users with the following options to choose from:

- Create Snapshot – This option allows users to create an Object Snapshot
- Delete Snapshot – This option allows users to delete an existing Object Snapshot
- Automate Snapshots – This option allows users to create an Automated Object Snapshot
- Import Snapshot – This option allows users to import an Object Snapshot
- Export Snapshot – This option allows users to export an Object Snapshot
- Upload Snapshot—Upload snapshot metadata to SFDC content library
- Download Snapshot—Download snapshot data from SFDC content library
- Snapshot Properties – This option allows users to view the Object Snapshot Properties



Studio – The Studio menu provides users with the following options:

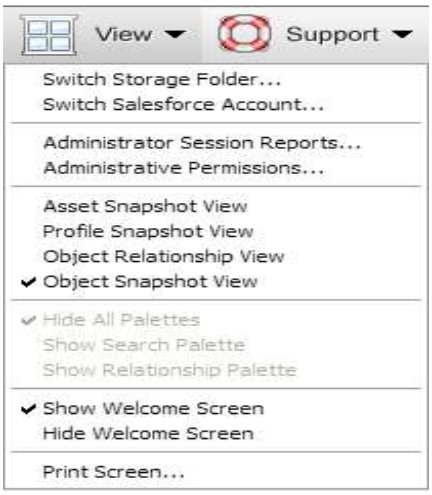
- Compare Object Snapshots – This option allows users to compare Object Snapshots
- Migrate Custom Settings—This option allows users to migrate the data for custom settings between orgs. All user and profile references are remapped.
- Push Object Snapshot – This option allows users to push an Object Snapshot

Reports – The Reports menu provides users with the following options to choose from:

- Object Change List – This option allows users to generate a list containing what custom entities need to be created, deleted or updated to enable the Source & Destination Orgs to be similar.
- Object Field Usage – This option allows users to view the usage of object fields in your Salesforce Org.
- Object Picklist Usage - This option allows users to view the usage of picklist values in your Salesforce Org.
- Object Last Viewed—This option allows users to view the the last time an object was accessed
- Export View to HTML – This option allows you to generate a report of the Object view

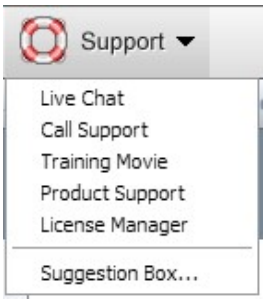
View – The View menu provides access to the following options:

- Switch Storage Folder – This option allows users to switch Asset storage folders
- Switch Salesforce Account – This option allows users to log into other Salesforce Orgs
- Administrator Session Reports – This option opens a dialog that checks to see if the Snapshot Logger package has been installed
- Administrative Permissions – This option allows users to see the Snapshot Governance tool
- Asset Snapshot View – This option opens the Asset Snapshot
- Profile Snapshot View - This option opens the Profile Snapshot
- Object Relationship View—This option shows the parent and child links between entities
- Object Snapshot View—This option displays the objects and fields from saved snapshots
- Show Welcome Screen – This option allows users to show the Snapshot welcome screen
- Hide Welcome Screen – This option allows users to hide the Snapshot welcome screen
- Print Screen – This option allows users to select printing options



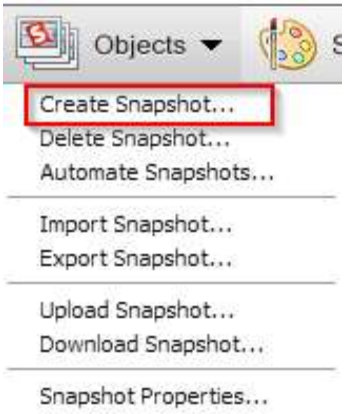
Support – The Support menu provides access to the following support options:

- Live Chat – Selecting this option will initiate a Live Chat with a DreamFactory Success Engineer.
- Call Support – Selecting this option will populate a dialog box with the Call Support Phone Number
- Training Movie – Selecting this option will open a new window and show the Snapshot Movie.
- Product Support – Selecting this option will open the Snapshot support page on DreamFactory.com
- License Manager – Selecting this option will open the Snapshot License Manager
- Suggestion Box – Selecting this option will open the Suggestion Box where you can submit a feature request, a question or a problem or bug.



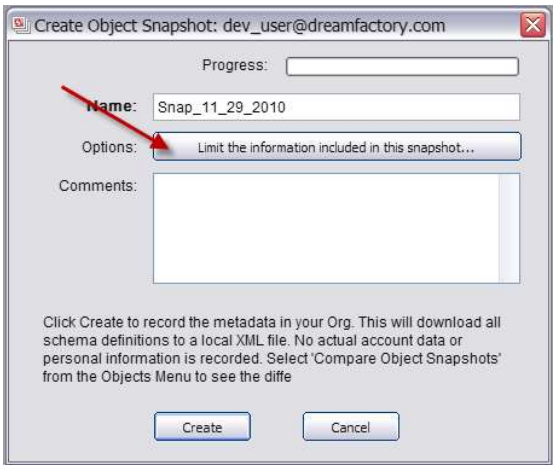
Creating an Object Snapshot

To create an Object Snapshot, click on the Objects menu and select Create Snapshot.

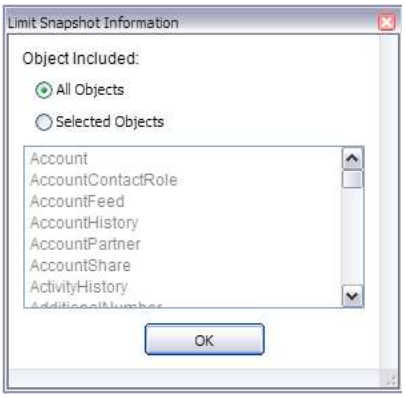


Upon selecting the Object Snapshot command, the "Create Snapshot" dialog will appear. The Create Snapshot dialog provides you with the ability to either create a full Object Snapshot thus capturing all of the Objects in that org; or you can limit the contents of the Object Snapshot.

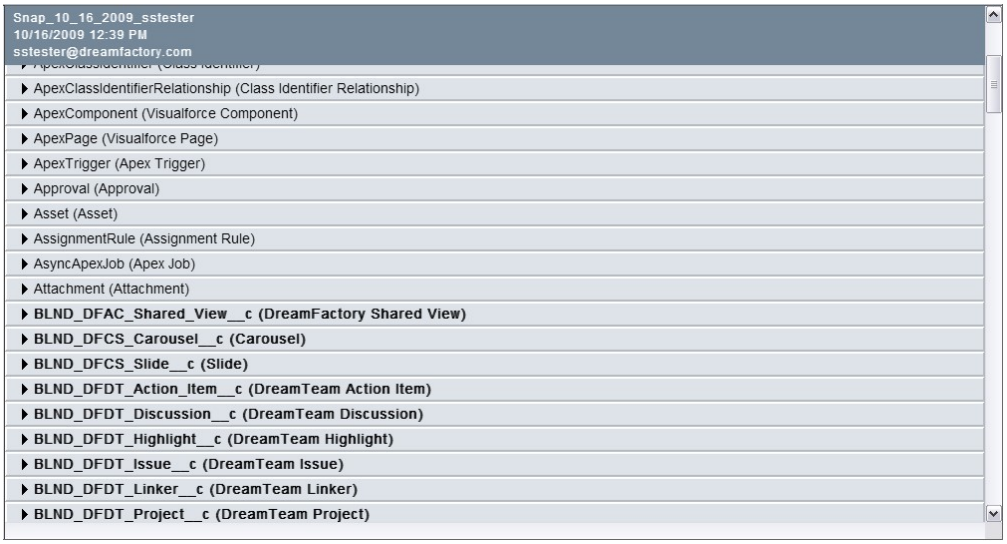
To limit the metadata captured in the Object Snapshot, simply click on the button titled "*Limit the information included in this Snapshot*".



Once you click the Limit the information included in this sanpshot, the Limit Snapshot Information dialog will appear wehere you can choose to incude all or select objects in the snapshot.

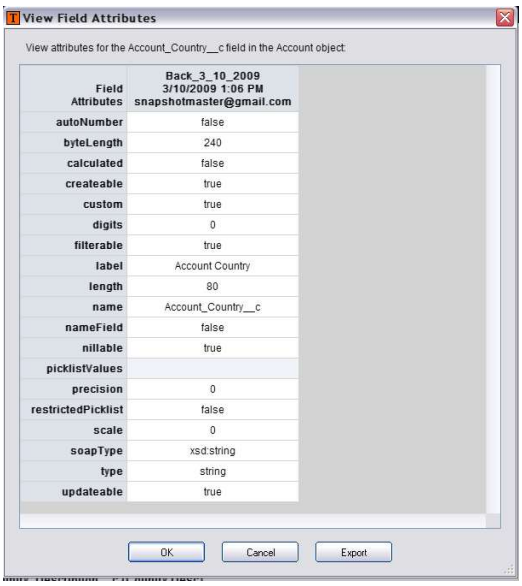


Upon creating an Object Snapshot, you will be able to see a list of all of the Objects (Standard and Custom) displayed in a column listed alphabetically. All custom objects will be displayed in bold.



You are also able to see the metadata of each Object by clicking on the black arrow next to the Object name.

In addition, if you double click on a specific field, you are able to view the field attributes of that field. You can export the field attributes to a csv file by clicking on the export button at the bottom.



Comparing Object Snapshots

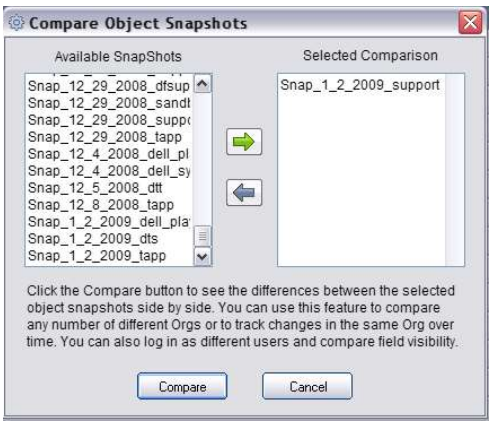
Comparing two Object Snapshots enables you to view any changes made to Objects in your Salesforce Org.

> **Best Practice:**
> Comparing two Object Snapshots before attempting a deployment is a recommended Best Practice.

To compare Object Snapshots, simply follow the instructions below:

1. Select the Compare Objects command from the Studio menu.

2. Upon selecting the Compare Objects command, the Compare Object Snapshots dialog box will appear. Simply select the Object Snapshots that you want to compare from the Available Snapshots list and click the green arrow to move them over to the Selected Comparison list.



Once clicked, a matrix displaying the selected Snapshots side by side. The default view of the Object Snapshot Comparison is to display the differences only. However, you also have the ability to see everything or similarities only if you wish. You can select any of these options by clicking on one of the three radio buttons on the left hand side of the screen. All differences are displayed in red. All remaining metadata is displayed in black within the matrix.

Object Comparison

Snap_1_2_2009_support 1/2/2009 12:16 PM dfsupportadam@gmail.com	Snap_1_2_2009_dts 1/2/2009 2:59 PM dreamteamsuite@gmail.com
Account (Account)	Account (Account)
AccountHistory (Account History)	AccountHistory (Account History)
	Adam_Bar__c (Adam Bar)
	Adam_Foo__c (Adam Foo)
	BLND_DFAC_Shared_View__c (DreamFactory Shared View)

Field Comparison

Snap_1_2_2009_support 1/2/2009 12:16 PM dfsupportadam@gmail.com	Snap_1_2_2009_dts 1/2/2009 2:59 PM dreamteamsuite@gmail.com
Account (Account)	Account (Account)
Account_Depth__c (Account Depth)	
Account_Roll_Up_Sum__c (Account Roll Up Sum)	
	autonumber_test__c (autonumber test)
	Checksum__c (Checksum)

Field Attributes Comparison

Compare Field Attributes

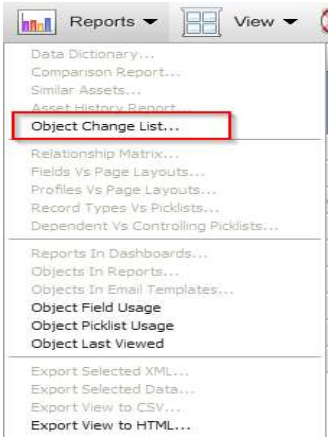
Compare attributes for the CurrencyIsoCode field in the Account object:

Field Attributes	Snap_3_11_2009_rcase 3/11/2009 11:47 AM rcase@org1.com	Snap_2_24_2009_sbox 2/24/2009 9:08 AM rcase@org1.com.rcasesbox
autoNumber	false	false
byteLength	9	9
calculated	false	false
createable	true	true
custom	false	false
digits	0	0
filterable	true	true
label	Account Currency	Account Currency
length	3	3
name	CurrencyIsoCode	CurrencyIsoCode
nameField	false	false
nillable	true	true
picklistValues	active=true, defaultValue=false, label=British Pound, value=GBP	active=true, defaultValue=false, label=British Pound, value=GBP
picklistValues	active=true, defaultValue=false, label=Euro, value=EUR	active=true, defaultValue=false, label=Euro, value=EUR
picklistValues	active=true, defaultValue=false, label=Japanese Yen, value=JPY	active=true, defaultValue=false, label=Japanese Yen, value=JPY
picklistValues	active=true, defaultValue=false, label=Swedish Krona, value=SEK	active=true, defaultValue=true, label=U.S. Dollar, value=USD
picklistValues	active=true, defaultValue=true, label=U.S. Dollar, value=USD	
precision	0	0
restrictedPicklist	true	true
scale	0	0
soapType	xsd:string	xsd:string
type	picklist	picklist
updateable	true	true

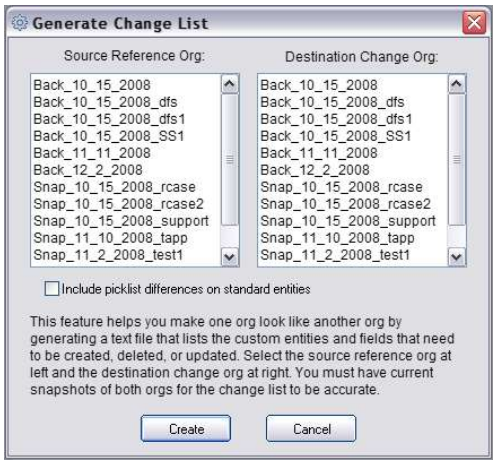
OK Cancel Export

Exporting / Reporting On Object Snapshots

To meet any documentation needs, you can generate a Change List or an HTML Report easily. To generate these reports, click on the Reports menu and select your desired report.



Generating a Change List report helps you make one Org look like another Org by generating a text file that lists the custom entities and fields that need to be created, deleted, or updated.



You can also generate an HTML Report which displays objects and fields that can be viewed in a web browser or imported into Excel.

Push Object Snapshot

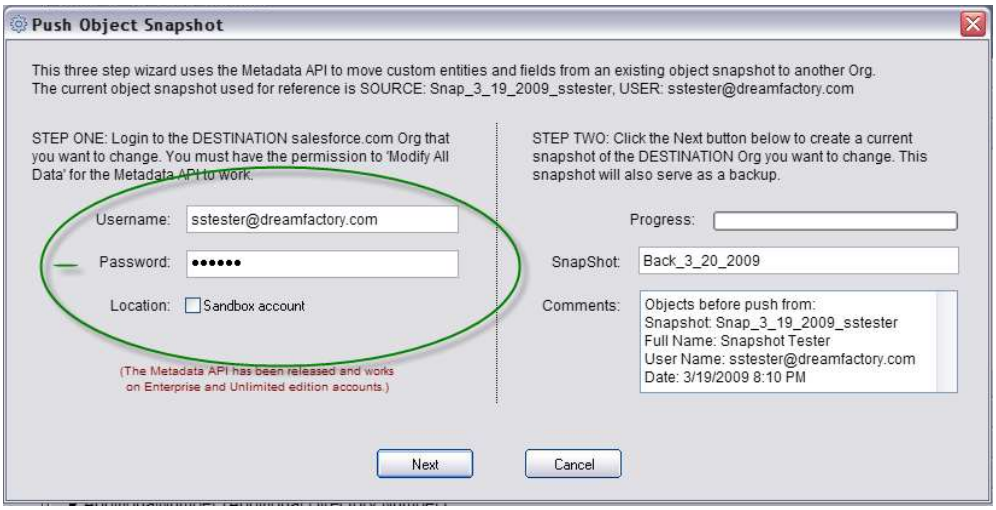
One of the key features of the Object Snapshot is the Push Object Snapshot. The Push Object Snapshot feature allows you to select either complete objects or individual fields and push then to your Destination Org. The Push Object Snapshot only allows you to push Custom Objects and the custom fields of Standard Objects. The Force.com Metadata API does not allow the ability to push standard fields. To access the Push Objects, simply click on the Studio menu and select the Push Objects command.

Once selected, the Push Objects 3 step wizard will appear. Below are step by step instructions how to access and use the Push Objects feature.

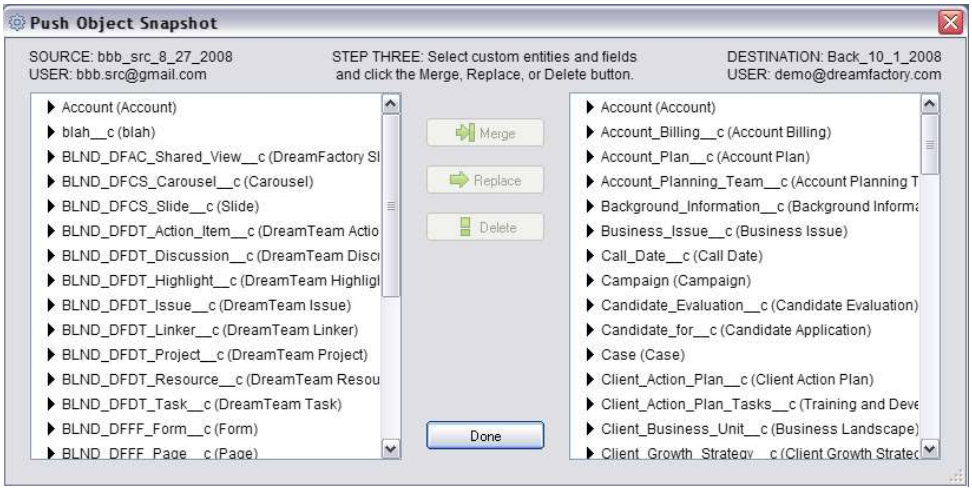
1. Log into the Destination Org.

Note:
If you are logging into a Sandbox make sure to check the Sandbox account checkbox at the bottom of the login area

2. The Object Snapshot requires you to create a mandatory back up Snapshot of the Destination Org. The backup serves as a failsafe measure to protect you from any unwanted changes that are made to your Org that may need to be rolled back.



3. The third step is where you choose which objects or fields you want to push.

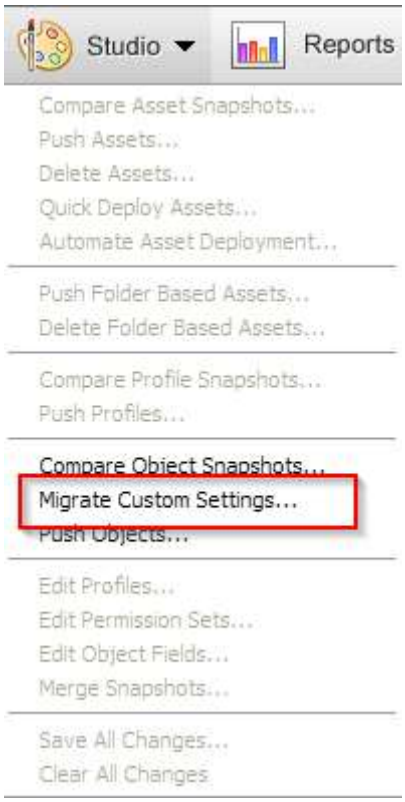


The Push Object Snapshot feature allows you to merge, create, replace or delete custom fields only. The Push Object Snapshot does not permit you to push any standard objects or fields due to a Salesforce limitation. The Object Snapshot allows you to push multiple fields from only one Object at a time.

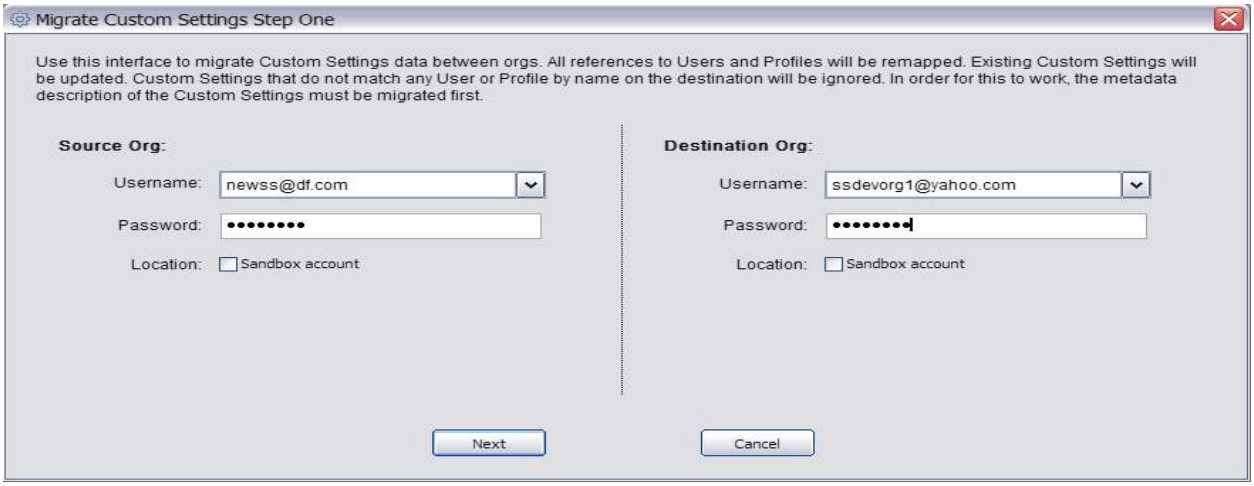
There are two push options on the Object Push dialog box. Merge Replace. All two push options are described below.

Migrate Custom Settings

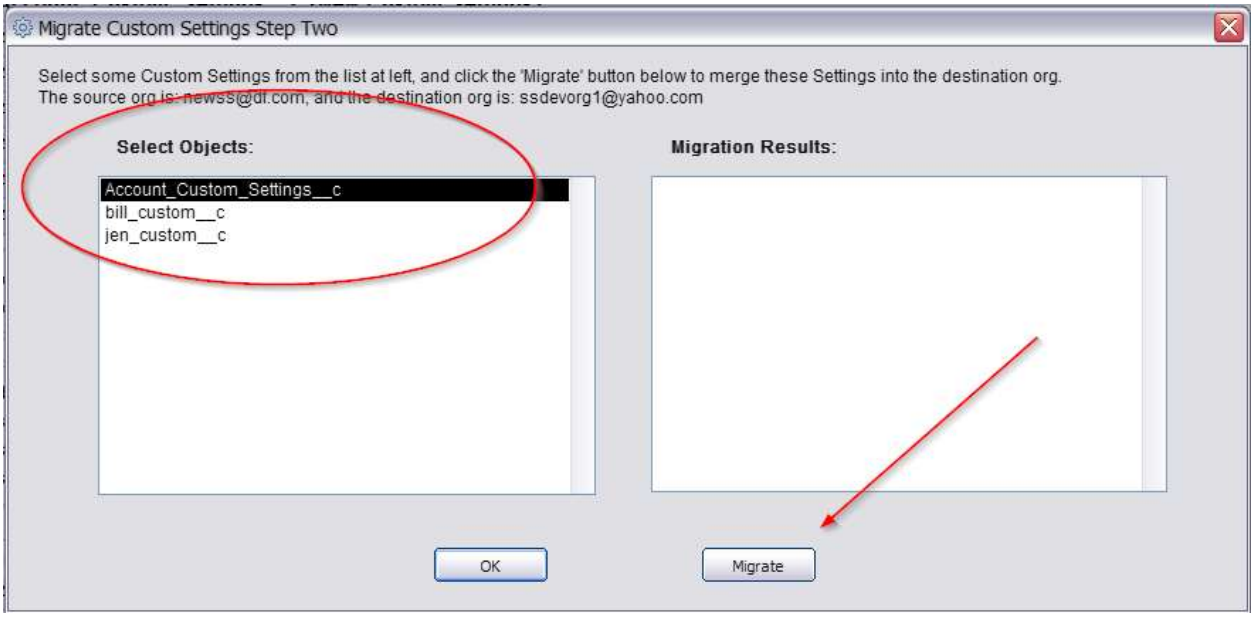
The Migrate Custom Settings option allows SnapShot users to migrate the data for custom settings between orgs. All user and profile references are remapped.



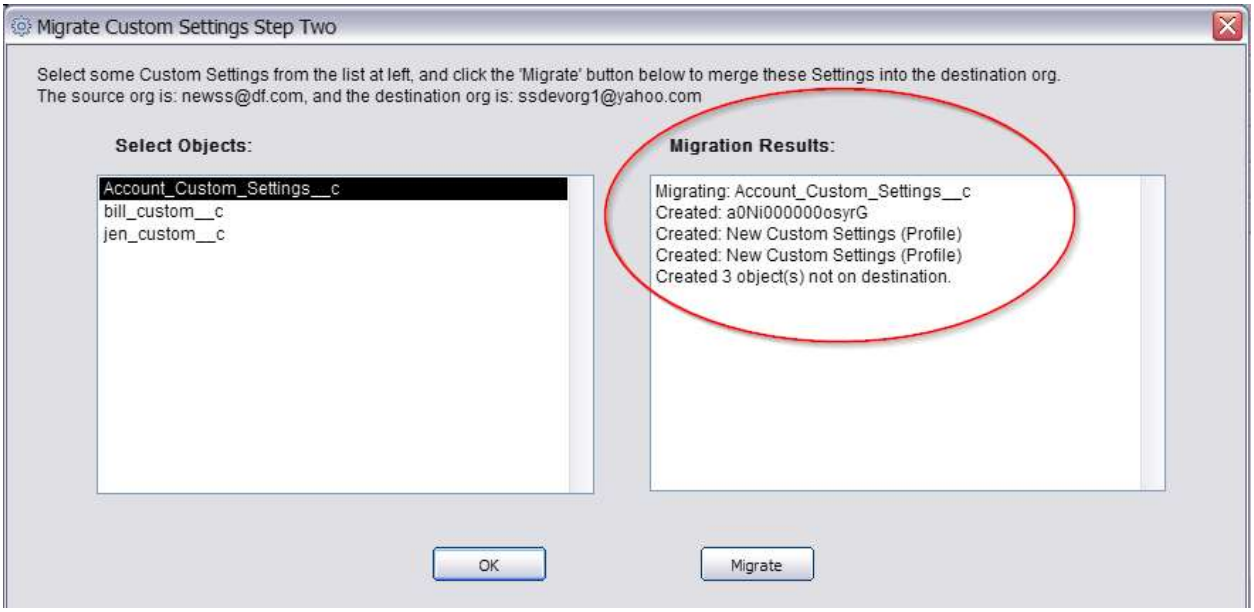
Begin by selecting the Migrate Custom Settings option from the Studio menu as shown above. Next, log in to the respective Source Org and Destination Org as shown below. Click to designate org as a Sandbox Account if necessary, then click "Next."



SnapShot will identify the Custom Settings in the source org that are available to migrate to the destination org and display them in the "Objects" column on the left. Click on the desired Custom Settings on the left. Next, click "Migrate" to begin the migration.



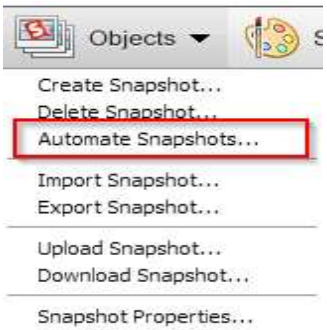
When complete, the Migration Results will be displayed in the right-hand column. Click "Ok" to close the window.

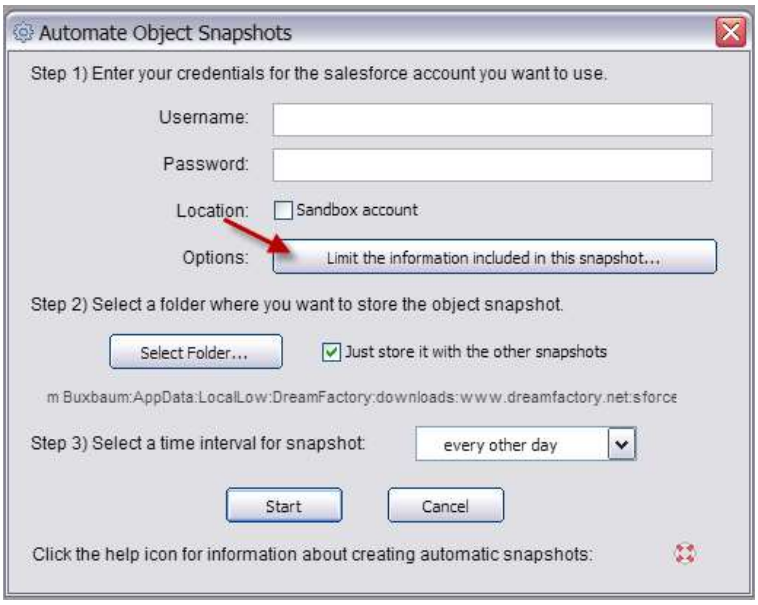


Automated Snapshot Creation

Snapshot allows you to create an Automated Snapshot of your Objects and dictate when you want to create this Snapshot. To access the Automate Snapshots feature, click on the Objects menu and select Automate Snapshots and then log into the desired Org and then select the appropriate criteria. This option only exists for the Object Snapshot. You have the ability to capture an entire Object SnapShot or a partial object snapshot.

Note:
In order to perform an Automated Snapshot your computer must have a strong online connection with no sleep features turned on.





Object Field and Picklist Value Usage Reports

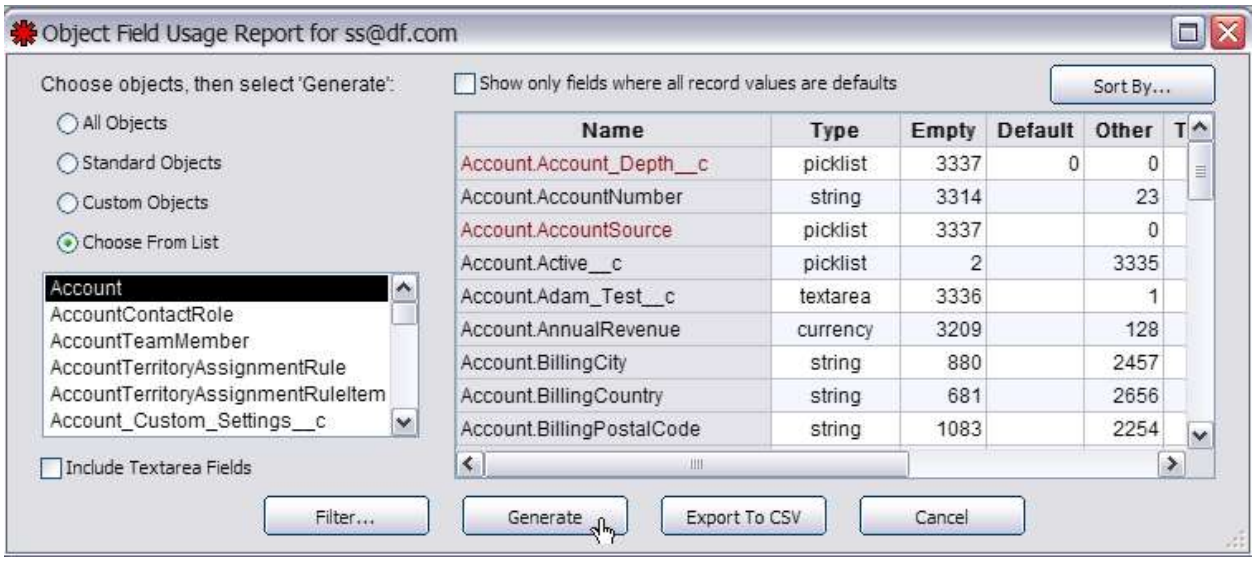
SnapShot has three reports for the Object Snapshot that allow users to view the usage of both object fields and object picklists in your Salesforce Org. A third report allows users to view the last time an object was used.

These two reports include:

A. Object Field Usage Report
B. Object Picklist Value Usage Report
C. Object Last Viewed Report

Object Field Usage Report

This report allows users to easily see what fields are being used in your Salesforce Org from a data perspective. This report will display a count of the records of where that field is set to the default value. The primary use case for this report is to locate objects and fields that are never used.



To use this report follow the steps below:

1. Click on the Reports menu and select the Object Field Usage report
2. Next, select which objects you want to include from one of the following four options:

   All Objects
   Standard Objects
   Custom Objects
   Choose From List

3. Once you have selected which objects you want to include, click the generate button. This will display all of the fields, regardless if they have been used or not. Once the generate button is clicked, a small dialog box displaying the fields that are being searched is displayed in the top left corner of the dialog.

Note:
Each time a request is submitted, Snapshot uses the metadata and webservices API. Thus, it is possible to exceed the API call limit when using this report.

4. Upon completion, the dialog box will display all of the fields from the selected objects broken into three columns.

Name – This column displays the object and field name

Type – This columns displays the field type. Examples of Types include: string, picklist, currency, datetime, date, multipicklist, url, textarea, reference, integer, double and phone to name a few.

Empty – This column displays the null value (fields that have never been set)

Default – This column displays the fields that have been set to the default values. (boolean will display false)

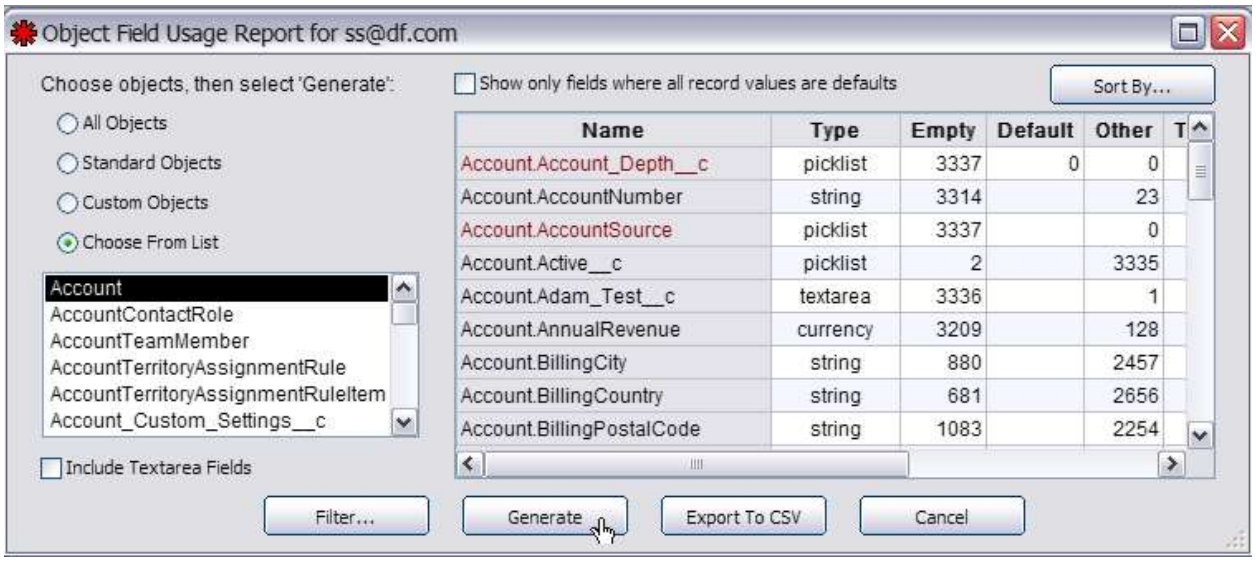
Other – This columns displays any values that have not been set to a default or are empty.

Total – This columns displays the total amount of records.

Empty % - This column displays the number in the Empty column divided by the Total column

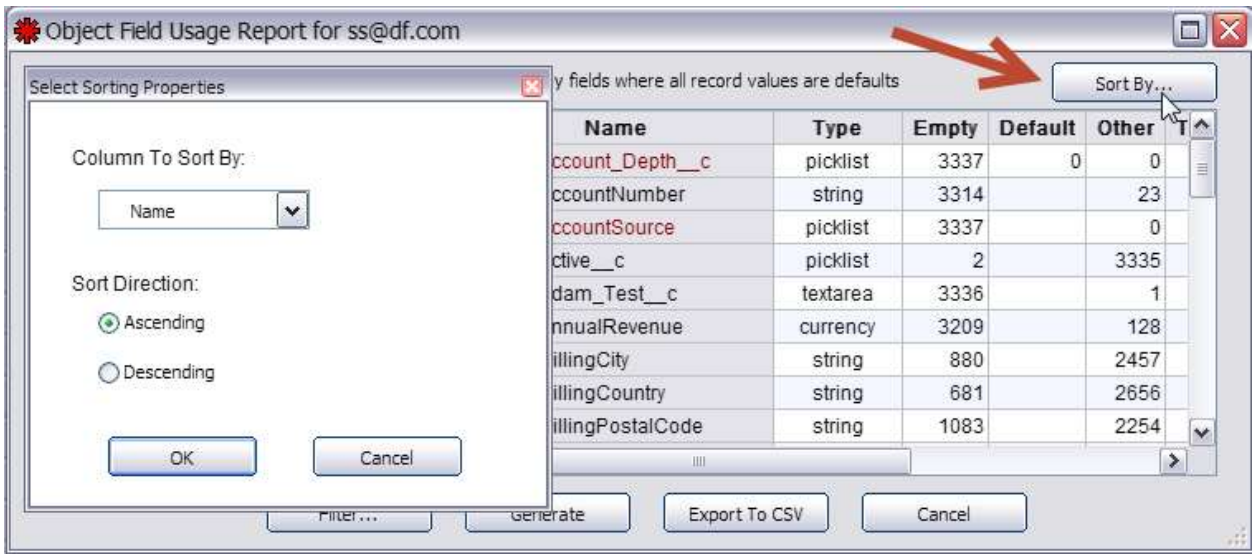
Deafult % - This columns displays the number in the Default column divided by the Total column

Other % - This columns displays the number in the Other column divided by the Total column

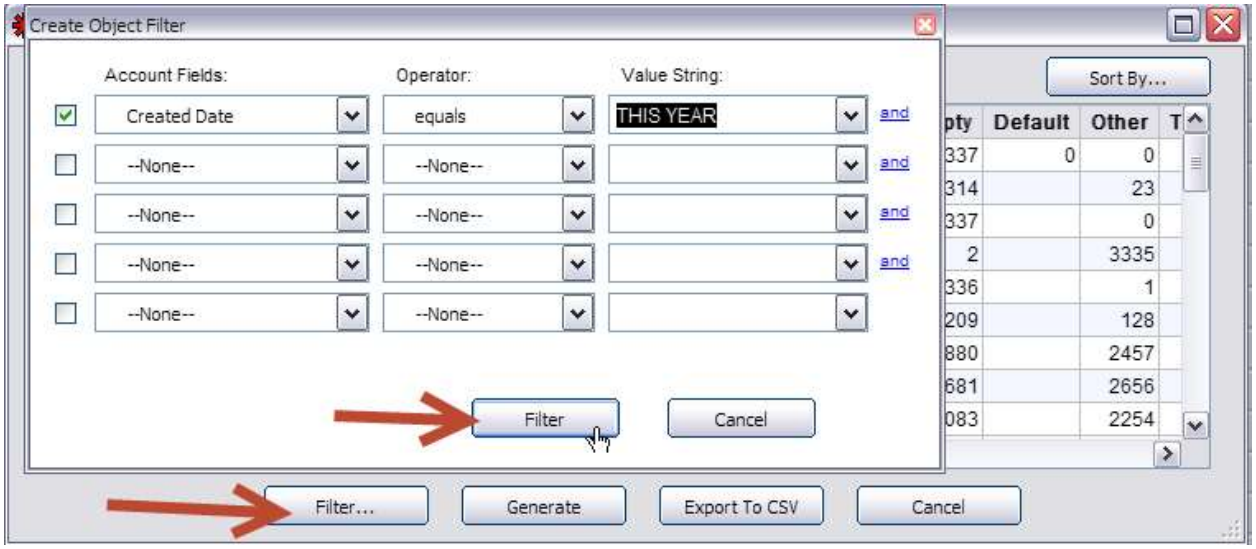


If you want to include only those fields where all record values are equal to the default value, simply check the Show only fields where all record values are defaults check box located right above the results matrix.

Users can also sort the results of the Object Usage Report by clicking on the Sort By button in the top right cornerand then selecting the desired sorting option.

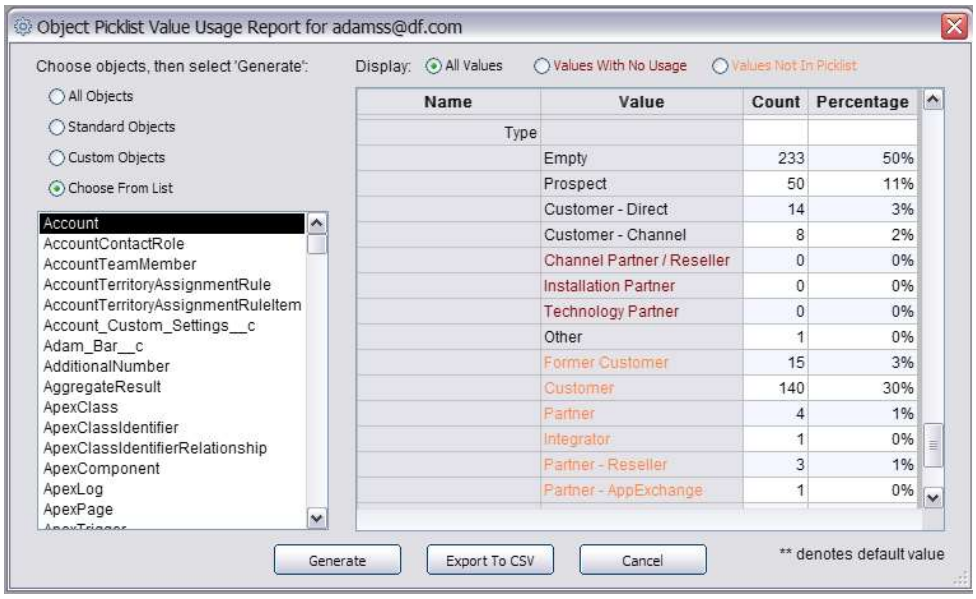


You can narrow down the dataset that the report crunches through by clicking the **Filter** button and entering a filter criteria. This is useful for evaluating fields only for a subset of the data, say Account created THIS YEAR etc.



Object Picklist Usage

This report allows users to easily view what picklist fields and picklist values are being used, not used and no longer in the picklist. These values are all color coded which is explained in detail below. Users can select from the following options: All Objects, Standard Objects only, Custom Objects only or choose individual or multiple objects from a List of All Objects. Users can also select multiple objects if desired.



To use this report follow the steps below:

1. Click on the Reports menu and select the Object Picklist Value Usage report

2. Next, select which objects you want to include from one of the following four options:
   All Objects
   Standard Objects
   Custom Objects
   Choose From List

3. Once the user had selected which objects they want to include, click the generate button. This will display the total count of picklist fields, and the picklist values.

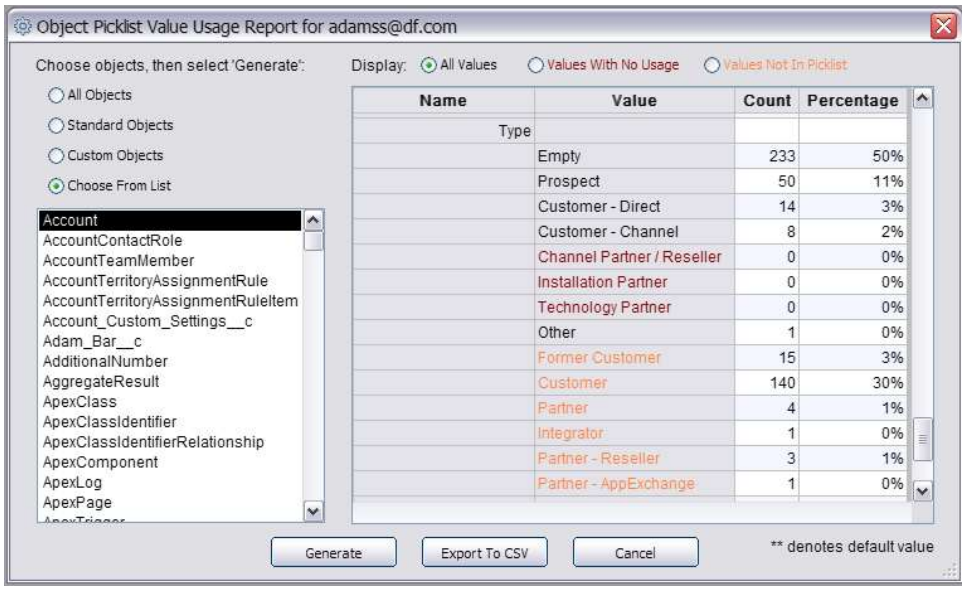
4. Upon completion, the dialog box will display all of the picklists from the selected object(s) in three columns.

   Name – This column displays the Total object Records and the picklist field name

   Value – This column displays the picklist values

   Count – This column displays the number of records where the fields are being used broken down by Object and by picklist value.

   Percentage – This column displays how many times this picklist value has been used divided by the total amount of records.

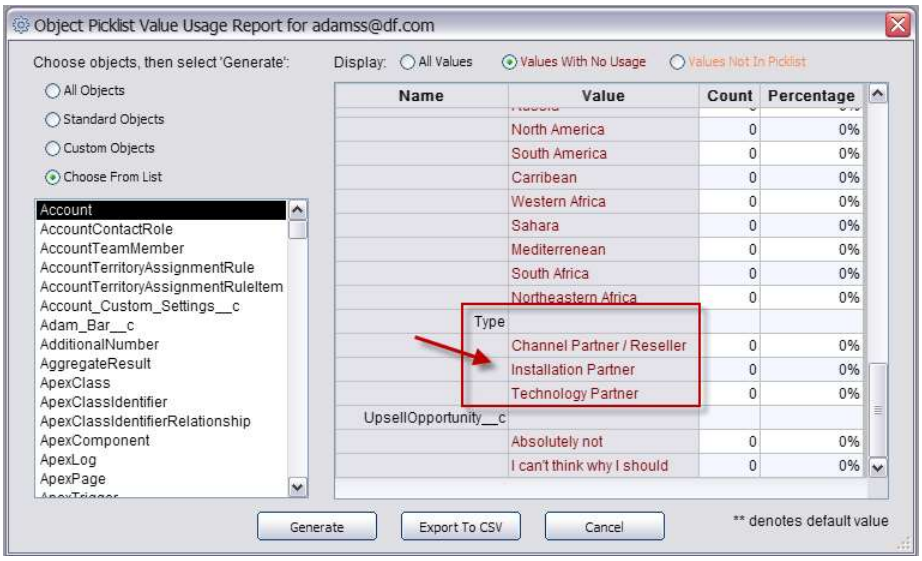


5. Users have been provided with three options to choose from when displaying the results. These three options include the following:

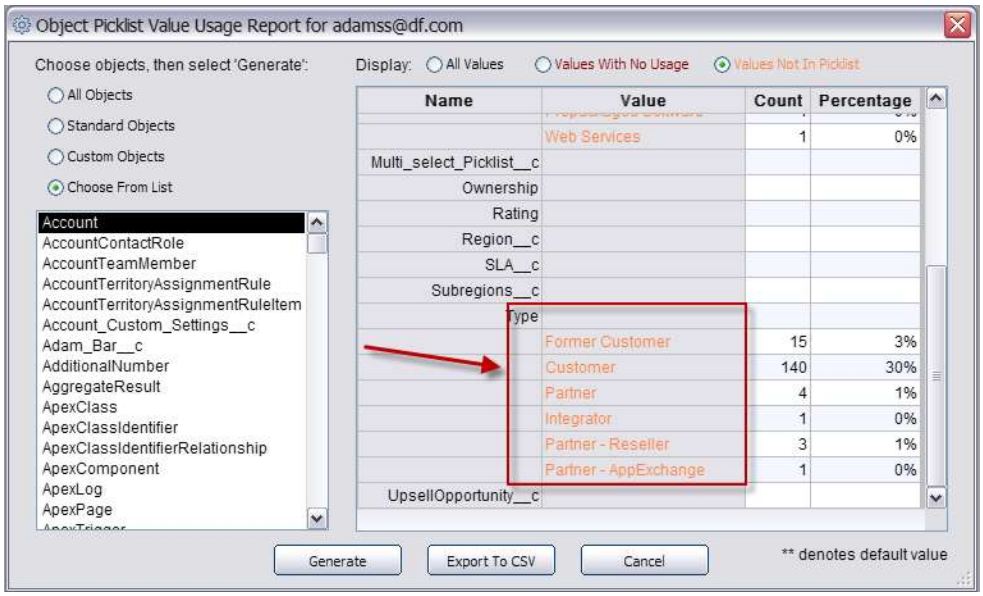
   All Values – All Values displays all of the picklist values tied to that picklist. These picklist values are displayed in the following three colors including:

   Black – Values displayed in black indicate the values that are being used.

   Red – Values displayed in red indicate values that are not being used.



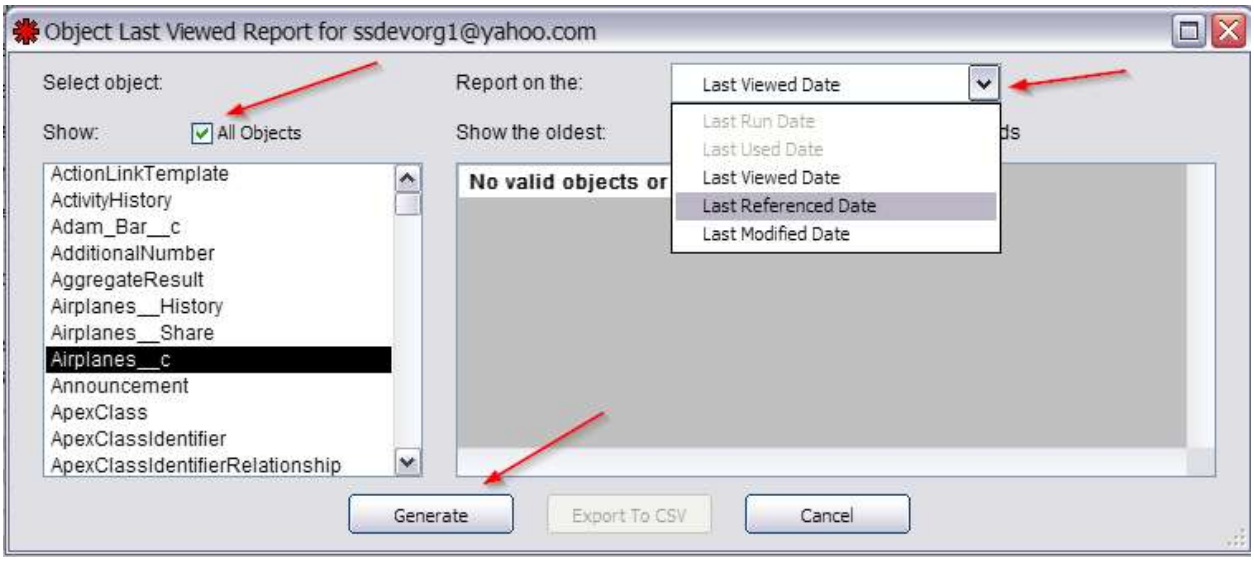
Orange – Values displayed in orange indicate values that are no longer in the picklist.

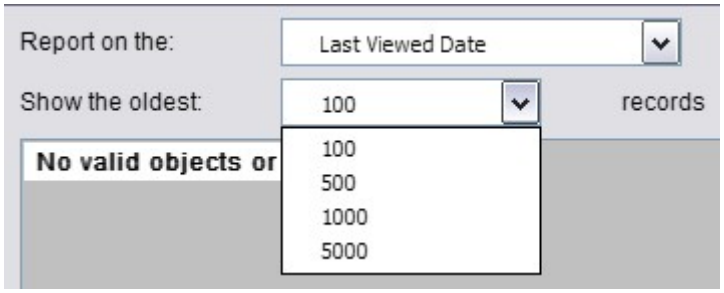


Object Last Viewed

This report allows the SnapShot user to find old objects that have not been used or viewed or referenced recently. The report can also be exported and saved as a CSV file. Upon selecting the Objects Last Viewed Report, the user may first search based on folder based assets as shown in the circle below.

Users may also select the “All Objects” check box to view all available objects. The user may also select to display the “Last Viewed Date,” “Last Referenced Date,” or “Last Modified Date.” Finally, users may select the number of returned records, and click “Generate” to create the report.



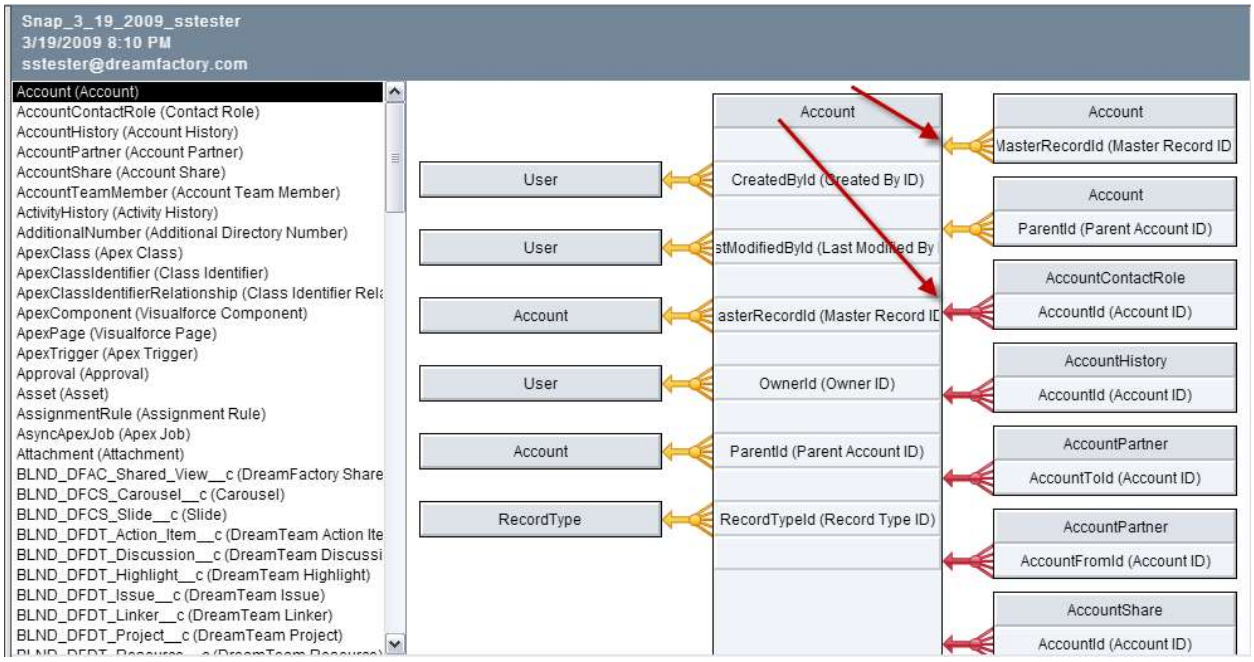


The report will display the results in the right hand column. Users may also click “Export to CSV” to save the report.


Object Last Viewed Report for newss@df.com
Select object:
Report on the:
Last Viewed Date
Show:
All Objects
Show the oldest:
100
records
AcceptedEventRelation
Account
AccountContactRole
AccountFeed
AccountHistory
AccountPartner
AccountShare
AccountTag
AccountTeamMember
Account_Custom_Settings__Tag
Account_Custom_Settings__c
Name
Last Viewed
Wifarer Inc.
United Oil & Gas, Singapore
United Oil & Gas, UK
Aspire Education Project
BlueShift Technologies
BSG Alliance Corp
First Data
Generate
Export To CSV
Cancel

Object Relationship View (Entity Relationship Diagram)

The next component is the Object Relationship View. The Object Relationship View is an Entity Relationship Diagram that allows users to view all of the active Master Detail and Lookup relationships between objects in your Org. The Object Relationship View displays all of the Master Detail Relationships as a red arrow and all Lookup Relationships as a yellow arrow.



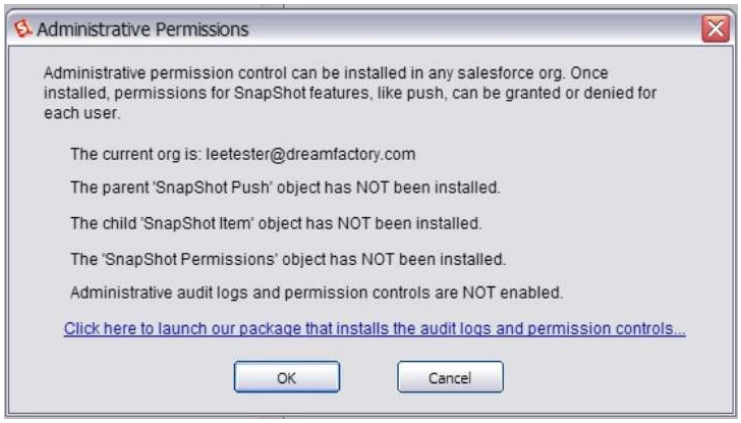
Snapshot Administrative Permissions

The SnapShot Administrative Permissions gives a system administrator the ability to assign push to each administrator in each Salesforce org. Once setup, these permissions are applied to each user when performing pushes via 'Asset Push', 'Folder Based Asset Push', 'Profile Push' and 'Object Push' operations. If pushes are attempted with asset types that the user does not have permissions for, a SnapShot administrative audit log entry is created detailing the attempt.

For any existing Snapshot user who does not have the Administrative Permissions setup in their Org, you can easily add this feature by following the steps below:

1. Click on the View menu

2. Once clicked, the following dialog will appear.

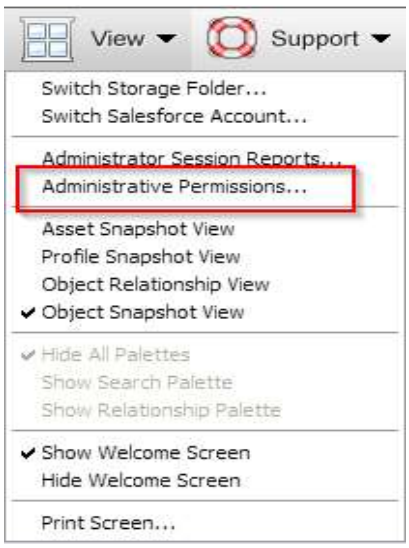


3. Click on the blue hyperlink at the bottom to install the private package. Clicking on this hyperlink will install the private package containing the Administrative audit logs and permission controls.

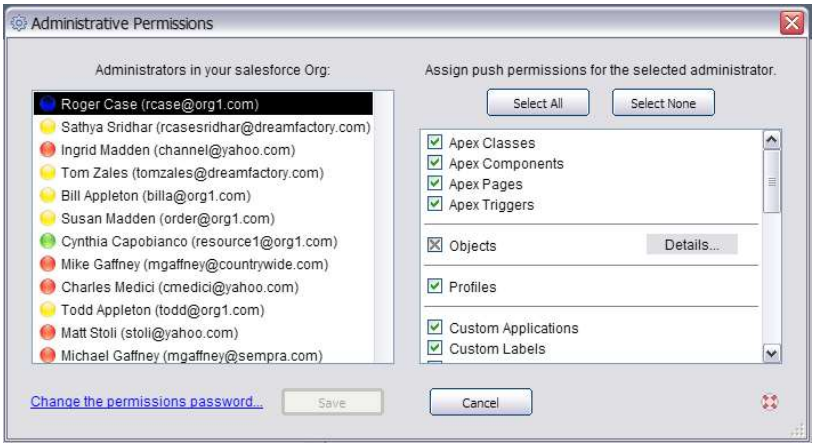
Using Snapshot Administrative Permissions

To access the Snapshot Administrative Permissions, simply follow the steps below:

1. Click on the View menu and select Administrative Permissions



2. Once selected, the Administrative Permissions dialog box will appear. Here you will see a list of the Administrators in your Salesforce Org on the left and a list of Assets on the right hand side.

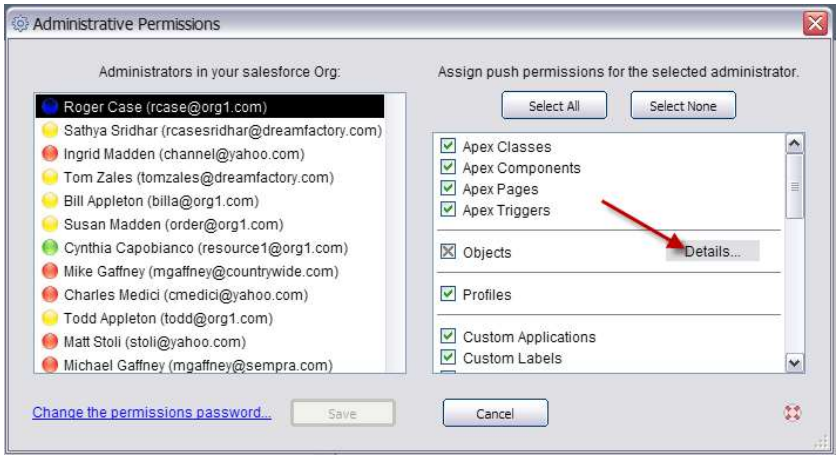


3. Simply select the desired administrator from the box on the left and then select the metadata you want to provide push access to from the box on the right. The user list at left contains all users that have 'Modify All Data', 'Customize Application', and 'API Enabled' selected in their profile assignment. Hovering over the individual Administrator will show you what level of permissions has been granted for that Admin. In addition, the color coded status icon left of each user's name indicates the current permission level.

   Red means the user is currently denied from pushing any assets via SnapShot interfaces.
   Yellow indicates the user is permitted to push some but not all asset types.
   Green indicates the user is permitted to push all asset types.

   Selecting one of the users in the list fills the asset type list at right with the current permissions granted. Modifications can be made to each user's list of permissions granted. Clicking the 'Save' button saves all modifications to all users in the list to the Salesforce org.

4. To select permissions simply check the checkbox to the left of the Asset name and then click the save button. Admins can click on the "Select All" and "Select None" buttons as well.

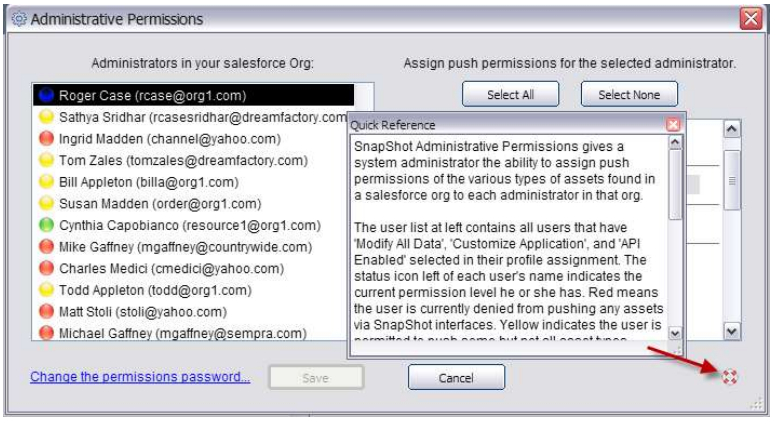


For the Object asset type, the admin can select the individual object assets as well. When selecting Objects, simply click on the Details option and the Select Allowed Objects dialog box will appear. Here you can choose all, none or select multiple objects that you want to provide push permission for.

The All New Objects check box on top of the Object dialog allows the admin to assign/deny a user permissions to push objects that do not exist on the destination. This setting is checked in the Object Snapshot and the Asset Snapshot push dialogs.

Administrative Permissions Password Protection Guidelines

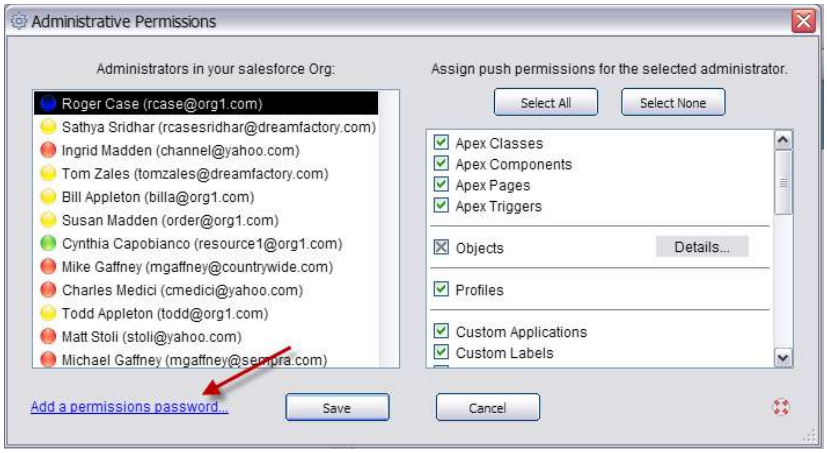
These push permissions all pertain to the Org that the Admin is pushing to. It is possible to have different permissions in each Org be it a production or sandbox. A Quick Reference Palette has been added in the bottom right corner of the dialog box in the form of a Life Preserver. This Quick Reference Palette provides additional clarification regarding the permissions dialog.



Users have the ability to add a password to this dialog to control the allocation of permissions or to make changes to exisiting permissions.

To add a password follow the steps below:

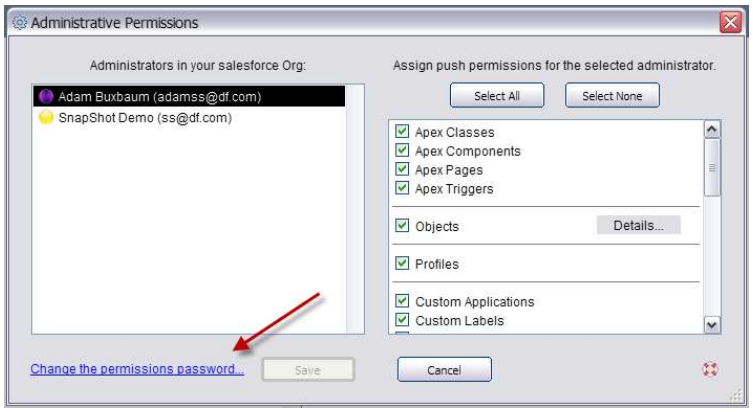
1. Click on the Add a permissions password hyperlink at the bottom of the dialog box



2. Next, the Administrative Password dialog box will appear. Here the user can create the desired password.

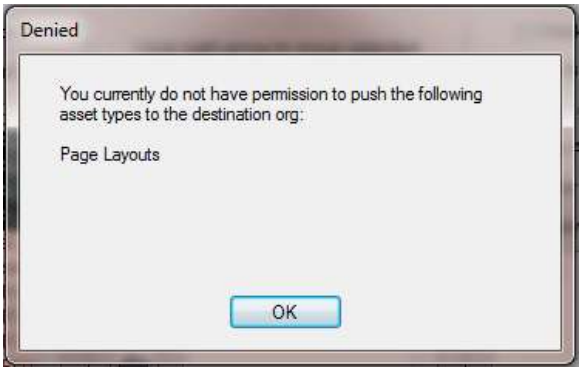
3. Click OK when done.

If an Admin wants to change the Admin permissions password, all they would have to do is click on the Change the permissions password hyperlink on the bottom left.



Once selected, the Administrative Password dialog box will appear prompting the user to enter the old and new administrative passwords. Click OK when done. To clear the existing password, enter the old password and leave the new password blank, then click OK.

If a user attempts to push Assets that they do not have permission to push they will receive and error message as displayed in the screen shot below.



Users are also able to monitor all push transactions using the Snapshot Administrative Logger feature which creates an audit trial for each transaction. In addition, there are a number of prebuilt reports and dashboards where users can track and monitor these transacations.

Snapshot Administrative Logger

The Snapshot Administrative Logger provides a comprehensive log of all administrator deployment activity during a Snapshot session and records the transactions. Using the standard Salesforce reports and dashboards, administrators can track changes to the Org by user, type, date, attempts, commits, and more. The Administrative Logger is a great tool for compliance, auditing and monitoring of changes in your Org. In addition, the Administrative Logger includes 14 pre-built reports and dashboards to make the reporting process easier.

The Administrative Logger tool enables System Administrators to capture all changes and transactions made to multiple Orgs through the Snapshot Pushes tab. By clicking on the Snapshot Pushes tab, you will immediately see a list of recent pushes in the dialog. Through the View drop down menu, you will be able to select from the following List Views to obtain your desired information:

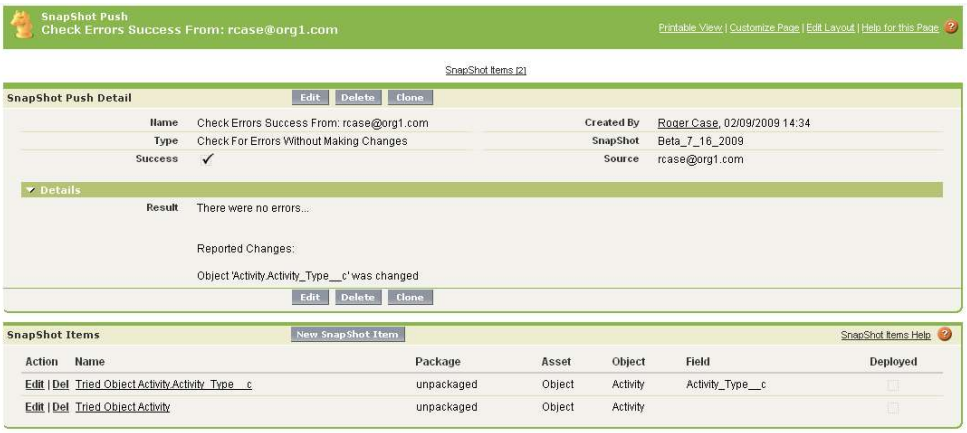
- **All Pushes**
- **All Successful Changes**
- **All Unsuccessful Changes**
- **Last Week's Changes**
- **This Week's Changes**
- **Today's Changes**
- **Today's Successful Changes**
- **Today's Unsuccessful Changes**

Once you have selected your desired view, a list of results will appear. To access specific information regarding this push, simply click on the desired record. After selecting the desired record, the Snapshot Push details screen will appear.

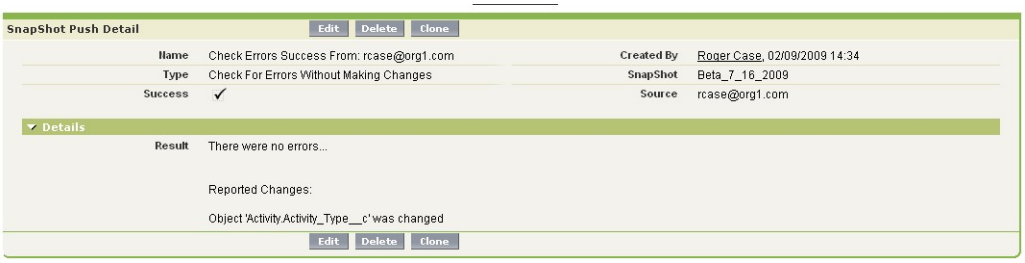
The Snapshot Push screen is split into two sections:

1. Snapshot Push Detail

2. Snapshot Items



1. Snapshot Push Detail - The Snapshot Push Detail section provides high level information about the push including:



Name – This field displays the name of the push record. The name combines the push option used with the username of the Source Org.

Type – This field displays the push option that used.

Created By – This field displays the name of the user, and the date and time of the push.

Snapshot – This field displays the name of the Snapshot used during the push.

Success – This checkbox indicates if the push was successful or not.

Source – This field displays the username of the Source Org.

Result – This field documents the results of the push.

2. Snapshot Items - The Snapshot Items section provides details information for each component pushed including:

SnapShot Items | New SnapShot Item | SnapShot Items Help

Action	Name	Package	Asset	Object	Field	Deployed
Edit | Del	Tried Object Activity.Activity_Type__c	unpackaged	Object	Activity	Activity_Type__c	
Edit | Del	Tried Object Activity	unpackaged	Object	Activity		

Action –This field provides the System Administrator with the ability to edit or delete the record.

Name – This field displays what the push attempted to accomplish. The name will display either Tried or Pushed before the field name.

Tried - Tried will be displayed if the Check For Errors Without Making Changes push option was selected

SnapShot Items | New SnapShot Item | SnapShot Items Help

Action	Name	Package	Asset	Object	Field	Deployed
Edit | Del	Tried Object Activity.Activity_Type__c	unpackaged	Object	Activity	Activity_Type__c	
Edit | Del	Tried Object Activity	unpackaged	Object	Activity		

Pushed - Pushed will be displayed if the actual field was pushed successfully.

SnapShot Items | New SnapShot Item | SnapShot Items Help

Action	Name	Package	Asset	Object	Field	Deployed
Edit | Del	Pushed Xml ServiceSupportReports	Dashboard for Service & Support 1.0	Xml	ServiceSupportReports		✓
Edit | Del	Pushed Report ServiceSupportReports/AgentCaseLoadbyType	Dashboard for Service & Support 1.0	Report	ServiceSupportReports/AgentCaseLoadbyType		✓

Package – This field is displayed if the field was part of a managed package or not. If the field was part of a managed package, the name of the managed package will be populated.

Asset – This field displays which Asset was pushed

Object – This field displays which Object was pushed

Field – This field displays the name of the field that was pushed.

Deployed – This checkbox indicates whether the field was deployed or not.

Reporting - To report on these logged transactions, simply go to either the Dashboards or Reports tabs and select from the pre-built options. You also have the ability to modify these reports or create your own reports and dashboards through the standard Salesforce reporting interface. The pre-built reports and dashboard include the following:

All Changes Made Today - Displays all changes made by any user today.

All Changes Made Today By User – Displays all changes made today grouped by user

All Successful Changes Made Today – Displays all successful pushes that happened today

All Successful Changes Today By User – Displays all successful pushes that happened today grouped by user

All Unsuccessful Changes Made Today – Displays all failed pushes that happened today

All Unsuccessful Changes Today By User – Displays all unsuccessful pushes that happened today grouped by user

Asset Pushes This Month By Success – Displays the deploy rate of Assets this month

Today's Changes by Type – Displays all changes made by any user today

Today's Changes With Details – Displays all changes made by any user today with field details

Usage: # of pushes this month by week – Displays # of pushes this month

Usage: # pushes this month by week by user – Displays number of pushes made this month this week

Usage: # of pushes this month by success – Displays the pushes grouped by success

Usage: # of pushes this month by type – Displays the pushes grouped by type

Usage: # pushes this month by week by src – Displays the number of pushes this month by week by source

Usage: Assets pushed by week – Displays the assets that were pushed this month by week

Snapshot Limitations and Constraints

As detailed above, SnapShot uses salesforce's metadata API to capture and migrate assets between salesforce Orgs. Thus, any limitations of the metadata API automatically become SnapShot's limitation as well.

Here is the link that details the limitations of salesforce's metadata API:

http://www.salesforce.com/us/developer/docs/api_meta/Content/meta_unsupported_types.htm

Common Push Scenarios

This section details the recommended steps to successfully push the following common push scenarios. These scenarios include:

Pushing Page Layouts

1. Create a Profile Snapshot
2. Select Asset Snapshot View from the View menu
3. Select Asset Snapshot Push
4. Log into Destination Org
5. Click Next to take a backup Asset Snapshot or click the skip button.
6. Select and push Objects: All
7. Select and push Scontrols
8. Select Page Layouts
9. Select either all or specific Page Layouts
10. Click the green arrow to add to job list
11. Select the Check for Errors without Making Changes as a preview of the push results. If an error occurs, go back and correct the error
12. Select from one of the other push options.

(**Note:** if pushing to a production Org you must choose Roll Back All Changes If There Is an Error)

13. Check the Destination Org to confirm that the Page Layout was pushed successfully

Apex Classes

1. Create an Asset Snapshot
2. Select the Push Asset Snapshot command from the Reports menu
3. Log into Destination Org
4. Decide whether to take a backup Asset Snapshot or click the skip button
5. Select Apex Classes from the Asset List
6. Select either All or individual Apex Classes that you want to move.
7. Select Check For Errors Without Making Changes and perform a simulated push. Make sure to also check the box that says Run All Apex Tests Before Push. If errors occur, you must resolve all errors prior to continuing with your deployment.
8. Select from one of the other push options.

(**Note:** if pushing to a production Org you must choose Roll Back All Changes If There Is an Error)

9. Check the Destination Org to confirm that the Apex Component were pushed successfully

Apex Components

1. Create an Asset Snapshot
2. Select the Push Asset Snapshot command from the Reports menu
3. Log into Destination Org
4. Decide whether to take a backup Asset Snapshot or click the skip button
5. Select Apex Classes from the Asset List
6. Select the desired Apex Class(es) from the second column and then add to the Job List
7. Select Check For Errors Without Making Changes and perform a simulated push. Make sure to also check the box that says Run All Apex Tests Before Push.
8. Push the Apex Classes
9. Select Apex Components from the Asset list
10. Select either All or individual Apex Components that you want to move.
11. Add the selected Apex Components to the Job list by clicking on the green arrow
12. Select the Check for Errors without Making Changes as a preview of the push results. Make sure to also check the box that says Run All Apex Tests Before Push. If errors occur, you must resolve all errors prior to continuing with your deployment.
13. Select from one of the other push options.

(**Note:** if pushing to a production Org you must choose Roll Back All Changes If There Is an Error)

14. Check the Destination Org to confirm that the Apex Component were pushed successfully

Apex Pages

1. Create an Asset Snapshot
2. Select the Push Asset Snapshot command from the Reports menu
3. Log into Destination Org
4. Decide whether to take a backup Asset Snapshot or click the skip button
5. Select Apex Classes from the Asset List
6. Select the desired Apex Class(es) from the second column and then add to the Job List
7. Select Check For Errors Without Making Changes and perform a simulated push. Make sure to also check the box that says Run All Apex Tests Before Push.
8. Push the Apex Classes
9. Select Apex Pages from the Asset list
10. Select either All or individual Apex Pages that you want to move.
11. Add the selected Apex Pages to the Job list by clicking on the green arrow
12. Select the Check for Errors without Making Changes perform a simulated push. Make sure to also check the box that says Run All Apex Tests Before Push. If errors occur, you must resolve all errors prior to continuing with your deployment.
13. Select from one of the other push options.

(**Note:** if pushing to a production Org you must choose Roll Back All Changes If There Is an Error)

14. Check the Destination Org to confirm that the Apex Pages were pushed successfully

Apex Triggers

1. Create an Asset Snapshot
2. Select the Push Asset Snapshot command from the Reports menu
3. Log into Destination Org
4. Decide whether to take a backup Asset Snapshot or click the skip button
5. Select Apex Classes from the Asset List
6. Select the desired Apex Class(es) from the second column and then add to the Job List
7. Select Check For Errors Without Making Changes and perform a simulated push. Make sure to also check the box that says Run All Apex Tests Before Push.
8. Push the Apex Classes
9. Select Apex Pages from the Asset list
10. Select either All or individual Apex Pages that you want to move.
11. Add the selected Apex Triggers to the Job list
12. Select the Check for Errors without Making Changes and perform the simulated push. Make sure to also check the box that says Run All Apex Tests Before Push. If errors occur, you must resolve all errors prior to continuing with your deployment.
13. Select from one of the push options.

(**Note:** if pushing to a production Org you must choose Roll Back All Changes If There Is an Error)

14. Check the Destination Org to confirm that the Apex Triggers were pushed successfully

Installation Instructions for DreamFactory Stand-Alone Executable

To install the new DreamFactory standalone executable (DreamFactory Player), follow the instructions detailed here.

DreamFactory Player

The DreamFactory Player, available from http://www.dreamfactory.com/force.com, has been updated to extend our 32 bit implementation to 64 bit support. The 64 bit player gives us an expanded address space and upgraded memory management. Translation: Faster processing that can handle larger snapshots and projects.

Installation

To install the new player, please follow these instructions:

1. Go to http://www.dreamfactory.com/force.com and scroll down to the **DreamFactory Player** section. This section give you multiple options to let you choose an appropriate player for you.
2. Click on an appropriate option and choose to save the file, if requested.
3. Double click the saved file and follow the installation instructions. At the end of the installation, click the **Close** button to close the installation wizard.

Launching SnapShot

To launch the new application, simply launch the **DreamFactory64** (or **DreamFactory32**, depending on what you installed) application. In Windows, this is available by going to **Start** > **All Programs** >**DreamFactory** > **DreamFactory64**. On Apple Macintosh, you would go to **Applications** > **DreamFactory64**. This brings up the DreamFactory Player.

What is the difference between the three push options on the Profile and Asset Snapshot Push?

The push options on the Profile and Asset Snapshot Push features are identical.

Why am I required to take a backup Snapshot before I use the Object Snapshot Push?

The backup Snapshot is required primarily as a failsafe measure in case you want to roll back any changes that have been made in error.

Do Salesforce Coverage Testing Rules apply when pushing Apex Classes?

Yes. When pushing Apex Classes and Triggers Salesforce requires you to have a certain code coverage % in order to push these Assets successfully. If you attempt to push these Assets and do not have the correct code coverage % you will receive the following error message:

Code coverage warning: Average test coverage across all Apex Classes and Triggers is 66% at least 75% test coverage is required

What characters are currently not supported by Salesforce Push API?

The list of characters below is currently not supported by the Salesforce API. If you have any of these characters in your Profile names, you must remove them to avoid receiving any errors.

/

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Can Picklists that are tied to Record Types be pushed?

Yes, picklists that are tied to Record Types can be pushed by Snapshot. For Example: I created a picklist and a Record Type on the Account Object. I then created an Object Snapshot and pushed the picklist first using the Object Snapshot push. Then I created an Asset Snapshot and clicked on the Asset View. I selected Record Types and Record Types Visibility and the Account Object for both. Then I pushed them from my source to my destination and the Picklist that was assigned to the Record Type in the source successfully pushed over to the destination.

What's the difference between an Object Snapshot and a Profile Snapshot?

An Object Snapshot captures information about your schema (objects and fields). It uses a different metadata API call than a Profile Snapshot. You can use Object Snapshots to browse objects and fields and selectively merge and replace individual fields or sets of fields between Orgs.

A Profile Snapshot captures information about all of your metadata (profiles, objects, fields, page layouts, workflow rules, etc.). You can use Profile Snapshots to browse and push profiles between Orgs. Additionally, you must take a Profile Snapshot to view all your metadata assets (profiles, objects, fields, page layouts, workflow rules, etc.) and to selectively push specific assets between Orgs.

How are objects and fields matched up in Object Snapshots?

Objects and fields are matched by API Name e.g., 'my_custom_field__c'

What does the Merge button do when pushing an Object Snapshot?

In the Object Snapshot push wizard, clicking the Merge button copies field characteristics for selected fields from the source Org and merges them to the destination Org. If the field does not already exist in the destination Org, a new field is created in the destination Org. If the field already exists in the destination Org, that field is updated with ALL the field properties defined in the source Org. Likewise, when you select an object and click merge you are creating new fields (for those fields on the selected object that do not exist in the destination Org) and updating ALL metadata properties for existing fields on the destination Org for the selected object.

What happens when I merge a custom picklist field?

The metadata API adds picklist values from the source but does not delete picklist values. For example, if a picklist field in the source Org has values 'one', 'two', 'three' and the same picklist field in the destination has values 'four', 'five', 'six', selecting merge will result in the values 'one', 'two', 'three', 'four', 'five', 'six' in the destination.

Will merging fields ever result in data loss, for example if a field type is changed during a push?

Data is never lost. If you change field properties in Salesforce Setup, the data on an existing record is retained. Likewise, when you merge a field using Snapshot (for example change a number field to a picklist and then merge), data for that field on all existing records is preserved. Only when a user

goes to the record in Salesforce and clicks to edit can the data be changed. For example, after merging a number field to be a picklist, the existing number field value on existing records will appear in the picklist and the user can change it to a picklist value and save. After saving, the number value is no longer recoverable for that particular record.

If you merge an object or field, will Snapshot notify you of other dependent objects and fields that also need to be included in the merge?

No. The Force.com Metadata API currently does not support this feature. Therefore, Snapshot doesn't support it.

What does Replace do when pushing an Object Snapshot?

In the Object Snapshot push wizard, clicking the Replace button clones the destination object to be an exact copy of the object in the source Org. The only difference between Merge and Replace is that Merge creates and updates fields on the destination Org object while Replace creates, updates and deletes fields on the destination Org object to create an exact copy of the source Org object.

Why can't I change the field type of a formula field to a non-formula field type?

Salesforce does not allow you to change formula fields to a non-formula field type.

Can I roll back and recover data if I accidentally replace an object when pushing an Object Snapshot?

Yes. Fields existing in the destination Org but NOT in the source Org will be deleted with the replace action. However, this is a "soft" delete i.e., exactly the same as manually deleting a field in Salesforce Setup. If you accidentally delete fields with a replace you can always go to Salesforce Setup in the destination Org and undelete the relevant fields. In Salesforce Setup you have 45 days to undelete and keep the existing data. Also, whenever you push objects a backup Snapshot of the destination schema is automatically created so you always have a record of the destination schema before the push occurred. You can always compare the pre-push and post-push Snapshots to isolate exactly what fields were created/updated/deleted and take corrective action as necessary.

Why don't I see standard objects and fields when I am pushing an Object Snapshot?

Standard objects exist in every Salesforce Org and are not part of the Metadata API. As a result, in the Snapshot Object Push interface the destination Org only displays standard objects with custom fields (custom fields in the destination can be updated from the same custom field in the source Org). In the case that the source Org has a standard object with custom field(s) and the same object in the destination Org has NO custom fields, the standard object is visible in the destination Org because custom fields can be created in the destination Org from the source Org for that standard object.

Can I push managed package fields installed in a standard object?

No. Managed package fields installed in a standard object cannot be pushed because these fields belong to the package namespace. Managed package fields have a double underscore prefix (e.g., ABC__fieldname_c).

When I try to push Profiles I keep getting error messages. What's going on?

You must ensure that the destination Org is not any missing applications, tabs, objects, fields and record types that exist in the source Org. You can use Snapshot to push all this metadata before you push your Profiles.

Do Profiles get created and deleted after a Profile push?

Profiles that exist in the source Org but not in the destination Org will get created and configured in the destination Org. Profiles that do not exist in the source Org but do exist in the destination Org will NOT be deleted in the push process. You can manually delete unwanted Profiles in the destination Org using Salesforce Setup.

Why are some profile names different in Profile Snapshot view than in Asset Snapshot view (e.g., Marketing User vs. Marketing Profile)?

For standard Salesforce objects, Profile Snapshot view converts the metadata API profile name to be more user-friendly. However, the Asset Snapshot displays the metadata API profile name unchanged because this is the generic low-level data actually reported by the metadata API. This is not as user friendly as the Profile view.

Can I access non-Sandbox and non-Production Orgs with Snapshot, for example a pre-release Org?

No. However, this feature could be implemented. Please let us know if this is a requirement for your release management process.

Can I push picklists on the Activity Object with Snapshot?

Yes. You are able to push the Activity Object using the Asset Snapshot.

How come Snapshot says that the object was updated yet when I go to the Destination Org no change was made?

This happens because there was no actual change made with that push. If you rollback no change is made. Salesforce only stamps last modified when a change has been made in the database. If you merge, but everything is already in sync that would also result in no change made thus Salesforce would not stamp a modification. As you know, Snapshot does not show last modified in its interface because the name of the person last modified is data, not meta-data. This is not returned with the meta-data that Snapshot requests from the API. Therefore for us to show last modified we would have to make service calls for every single piece of information in the Snapshot. We have opted not to do this for performance reasons.

Can Snapshot push Dependent Picklists?

Yes. Snapshot can push Dependent Picklists using the Asset Snapshot and selecting Objects: Fields.

Snapshot Glossary

The list below provides definitions for all of the elements that can be view, compared and deployed using the Snapshot application.

Apex Classes - An Apex class is a template or blueprint from which Apex objects are created. Classes consist of other classes, user-defined methods, variables, exception types, and static initialization code. Once successfully saved, class methods or variables can be invoked by other Apex scripts or through the Force.com Web Services API (or AJAX Toolkit) for methods that have been designated with the webServicekeyword.

Apex Components – An Apex Component encapsulates a common design pattern that can be reused in one or more Visualforce pages. It consists of:

- A set of Visualforce markup demarcated by the <apex:component> tag
- An optional component controller written in Apex that allows the component to perform additional logic, such as sorting items in a list, or calculating values

Apex Pages - Represents a Visualforce page. For more information, see "Visualforce Overview" in the Salesforce.com online help. This metadata type extends the MetadataWithContent component and shares its fields.

Apex Triggers - A trigger is an Apex script that executes before or after specific data manipulation language (DML) events occur, such as before object records are inserted into the database, or after records have been deleted. Triggers are stored as metadata in Salesforce.com. A list of all triggers in your organization is located at **Setup** | **Develop** | **Apex Triggers**. In addition to this list, triggers are associated and stored with specific objects.

Objects: All – This Asset component incorporates all of the objects and fields in your Salesforce Org, in addition to any related Business Processes, Named Filters, List Views, Record Types, Search Layouts, Sharing Reasons, Sharing Recalculations, Validation Rules and Weblinks.

Objects: Business Processes - The Business Process metadata type enables you to display different picklist values for users based on their profile. Multiple business processes allow you to track separate sales, support, and lead lifecycles. A sales, support, lead, or solution process is assigned to a record type. The record type determines the user profiles that are associated with the business process.

Objects: Named Filters - Represents the metadata associated with a lookup filter. Use this metadata type to create, update, or delete lookup filter definitions. It extends the Metadata metadata type and inherits its fullName field. You can also use this metadata type to work with customizations of lookup filters on standard fields.

Objects: List Views – Represents one or more list views associated with the object.

Objects: Record Types - Represents the metadata associated with a record type. Record types allow you to offer different business processes, picklist values, and page layouts to different users based on their profiles. For more information, see "Managing Record Types" in theSalesforce.com online help. Use this

metadata type to create, update, or delete record type definitions for a custom object. It extends the Metadata metadata type and inherits its fullName field.

Objects: Search Layouts – The Search Layout related list information for a custom object. Represents the metadata associated with the Search Layouts related list for a custom object.

Objects: Sharing Reasons - Apex managed sharing allows developers to use Apex to programmatically share custom objects. Only users with the "Modify All Data" permission can add or change the sharing on the custom object's record. The sharing access is maintained across record owner changes. A sharing reason is used to indicate why sharing was implemented for a custom object. For more information, see "Managing the Sharing Settings" in the Salesforce online help. Use Sharing Reason to create, update, or delete sharing reason definitions custom objects.

Objects: Sharing Recalculations - A list of custom sharing recalculations associated with the custom object. Developers can write Apex classes that recalculate the Apex managed sharing for a specific custom object.

Objects: Validation Rules - Represents a validation rule, which is used to verify that the data a user enters in a record is valid and can be saved. A validation rule contains a formula or expression that evaluates the data in one or more fields and returns a value of true or false. Validation rules also include an error message that your client application can display to the user when the rule returns a value of true due to invalid data. It extends the Metadata type and inherits its fullName field.

Objects: Weblinks - Represents a Weblink defined in a custom object. It extends the Metadata type and inherits its fullName field.

Profiles: All – This Asset component incorporates all of the Profiles in the Salesforce Org, in addition to the following Profile metadata: Application Visibility, Field Level Security, Layout Assignments, Object Permissions, Record Type Visibility and Tab Visibility.

Profiles: Application Visibility – Lists the application visibility for the selected profile.

Profiles: Field Level Security – Lists security settings for each field in the selected profile.

Profiles: Layout Assignments – Lists all page layouts assigned to the selected profile.
Profiles: Object Permissions – Lists read/create/delete/change permissions of all objects for the selected profile.

Profiles: Record Type Visibility – Lists all permitted record types for the selected profile.

Profiles: Tab Visibility – Lists the custom tabs and their visibility settings for the selected profile.

Custom Applications - An application is a list of tab references, with a description and a logo. Custom Applications represent a custom application. It extends the Metadata component and inherits its fullName field.

Custom Labels - This component allows you to create custom labels that can be localized for use in different languages, countries, and currencies. It extends the Metadata component and inherits its

fullName field. Custom labels are custom text values, up to 1,000 characters in length, which can be accessed from Apex classes or Visualforce pages.

Custom Object Translation - This component allows you to translate custom objects for a variety of languages. It extends the Metadata component and inherits its fullName field. The ability to translate component labels is a characteristic of the Translation Workbench.

Custom Sites - Force.com Sites enables you to create public websites and applications that are directly integrated with your Salesforce Org—without requiring users to log in with a username and password.

Custom Tabs - A custom tab is a user interface component displaying custom object data or other web content embedded in the application. When a tab displays a custom object, the tab name is the same as the custom object name; for page, s-control, or URL tabs, the name is arbitrary.

Home Page Components - Represents the metadata associated with a home page component. It extends the Metadata component and inherits its fullName field. Used to create, update, or delete home page component definitions.

Home Page Layouts - Represents the metadata associated with a home page layout. Home page layouts are stored in the homePageLayouts directory of the corresponding package directory. The extension is Home page Layout It extends the Metadata component and inherits its fullName field.

Static Resources - Static Resources allow you to upload content that you can reference in a Visualforce page, including archives (such as .zip and .jar files), images, style sheets, JavaScript, and other files.

Using a static resource is preferable to uploading a file to the Documents tab because:

- You can package a collection of related files into a directory hierarchy and upload that hierarchy as a .zip or .jar archive.
- You can reference a static resource in page markup by name using the $Resource global variable instead of hard-coding document IDs

Report Types - Used to retrieve or deploy a custom report type, custom report types allow you to build a framework to create and customize reports. Report Types represent the metadata associated with a custom report type. A report type extends the Metadata component and inherits its fullName field.

Analytic Snapshots - An analytic Snapshot enables users to run a tabular or summary report and save the results to fields on a custom object. With analytic Snapshots, users can map fields from a source report to the fields on a target object, and schedule when to run the report to load the custom object's fields with the report's data.

Letterheads - Represents formatting options for the letterhead in an email template. Letterheads define the look and feel of your HTML email templates. Your HTML email templates can inherit the logo, color, and text settings from a letterhead. For more information, see “Creating Letterheads” in the Salesforce.com online help. It extends the Metadata metadata type and inherits its fullNamefield.

Page Layouts – Page Layouts control the layout and organization of detail and edit pages. They also:

- Control which fields, related lists, and custom links users see, on detail and edit pages only

- Control which standard and custom buttons display on detail pages and related lists
- Determine whether fields are visible, read only, or required, on detail and edit pages only
- In Personal, Contact Manager, Group, and Professional Editions, control which fields users can access in related lists, list views, reports, Connect Offline, email and mail merge templates, custom links, and when synchronizing data or importing personal data

Portals – Snapshot now enables users to view and push customer and partner portal metadata.

Scontrols – Represents a Scontrol component, corresponding to an s-control in the Salesforce.com user interface. For more information, see "About S-Controls" in the Salesforce.com online help. This metadata type extends the MetadataWithContent component and shares its fields.

Translations – This metadata type allows you to work with translations for a variety of languages. The supported languages are listed in Language. It extends the Metadata metadata type and inherits its fullName field. The ability to translate component labels is part of the *Translation Workbench*. For more information, see "Setting Up Translation Workbench" in the Salesforce.com online help.

Workflows - Represents the metadata associated with a workflow rule. A workflow rule sets workflow actions into motion when its designated conditions are met. You can configure workflow actions to execute immediately when a record meets the conditions in your workflow rule, or set time triggers that execute the workflow actions on a specific day. For more information, see "Managing Workflow and Approvals" in the Salesforce.com online help.