# Table of Contents

**GETTING STARTED** .............................................................................................................. 4
- Welcome to Jet Stream ................................................................................................. 4
  - User Roles and Permissions .................................................................................. 4
    - Admin User ........................................................................................................ 4
    - Jet Stream Data User ......................................................................................... 4
- Login ............................................................................................................................. 4

**NAVIGATING THE JET STREAM ADMIN INTERFACE** .......................................................... 5
- Jet Stream Administrator Home Page ....................................................................... 5
- Jet Stream Data Template Management .................................................................. 5
- Jet Stream User Roles and Permissions in Admin App ............................................. 6
- Jet Stream Data Management User Interface for Delphix Administrators ............... 6

**JET STREAM CONCEPTS** .................................................................................................... 8
- Data Sources .................................................................................................................. 8
- Data Templates ................................................................................................................ 8
- Data Containers ............................................................................................................... 8
- Jet Stream Data Flow ..................................................................................................... 8

**UNDERSTANDING JET STREAM DATA TEMPLATES** .......................................................... 9
- Jet Stream Data Templates: An Overview ................................................................... 9
- Jet Stream Data Template Activities .......................................................................... 9
  - Creating a Data Template ....................................................................................... 10
  - Managing Data Template Notes ............................................................................. 11
  - Editing a Data Template’s Name ............................................................................. 12
  - Deleting a Data Template ....................................................................................... 12

**UNDERSTANDING HOW TO MANAGE DATA TEMPLATE DETAILS** ................................ 14
- Viewing and Working with the Data Template Details Page ..................................... 14
  - Summary .................................................................................................................. 14
  - Sources ..................................................................................................................... 15
  - Containers .................................................................................................................. 15
  - Properties .................................................................................................................. 16
  - Bookmarks ................................................................................................................ 16
  - Capacity ..................................................................................................................... 17

**UNDERSTANDING JET STREAM USER MANAGEMENT** ................................................... 18
- Jet Stream User Management Activities ..................................................................... 18
  - Creating a Jet Stream User ....................................................................................... 18
  - Assigning a Jet Stream User to a Data Container ................................................... 19
- User Details Page .......................................................................................................... 20

**UNDERSTANDING JET STREAM DATA CONTAINERS** ..................................................... 21
- Jet Stream Data Container Overview ......................................................................... 21
  - Refresh ...................................................................................................................... 21
  - Restore ..................................................................................................................... 21
  - Reset ........................................................................................................................ 21
  - Branch ...................................................................................................................... 21
  - Activate .................................................................................................................... 21
  - Bookmark ................................................................................................................ 22
  - Share ......................................................................................................................... 22
Getting Started

Welcome to Jet Stream
The Delphix agile data platform has greatly improved the speed at which end users can get the data that they need. While end users reap the benefits, they do not typically interact with the Delphix Engine directly, nor are they necessarily even aware that they are using it. End users most commonly file tickets for data management operations and wait for the tickets to be serviced by their IT organization. Delphix data management workflows allow database administrators (DBAs) to respond to these tickets much more quickly and reliably, but DBAs are often overloaded, and resolving high-priority issues takes precedence over requests from users. Requiring interactions between users and IT for every data operation is inefficient and can lead to unwanted delays.

The goal of Jet Stream is to create a clear separation of IT infrastructure and data management. As with the current Delphix platform, IT administrators and DBAs continue to control decisions about how resources such as virtual databases (VDBs) and vFiles are allocated. However, with Jet Stream, administrators can also assign these resources directly to a user. A Jet Stream user has the ability to control what data these resources should make available, even though the details of the physical resources are hidden from them. This separation of roles empowers Jet Stream users to get the data they need, when they need it, while providing administrators with the controls to ensure resources are accounted for appropriately.

User Roles and Permissions
Jet Stream has two types of users:

Admin User
Admin users have full access to all report data and can configure Jet Stream. Additionally, they can use the Delphix data platform to add/delete Delphix Engines, add/delete reports, add/delete users, change tunable settings, add/delete tags, and create and assign data templates and containers.

Jet Stream Data User
Jet Stream data users have access to production data provided in a data container. The data container provides these users with a playground in which to work with data using the Self-Service Toolbar.

Login
1. Access Jet Stream by opening a web browser and using the IP address or DNS qualified host name.
2. Login with the Delphix Admin User ID and Password provided for you.
Navigating the Jet Stream Admin Interface

The following screenshots provide a roadmap for how to navigate the primary screens and places a user will go within the Jet Stream Admin Interface. The interface includes screens such as the Jet Stream Administrator Home Page, Jet Stream Data Platform Management, Jet Stream Users and Permissions, and the Data User Management Interface.

Jet Stream Administrator Home Page

The Jet Stream Administrator Home Page is the home page of Jet Stream once an admin user has selected Jet Stream in the Admin App user log in dropdown menu. On this page you can add and view existing data templates and data containers. You can also view users, whom you can then assign to data containers that you create from existing data templates.

Jet Stream Data Template Management

The Jet Stream Data Template Management page contains a view panel of 6 tiles on the left-hand side of the screen. Each tile reports on a variety of useful information, such as user activity, data sources, data capacity, specific details about data containers, and data templates. They also help you navigate to areas where you can complete specific tasks, such as creating a new template or container, working with data timeflows, assigning users to containers, and bookmarking important points in time.
Jet Stream User Roles and Permissions in Admin App

The **Jet Stream User Roles and Permissions Page** is found under **Resources-Users** in the Admin App. Here you can add new Jet Stream users by selecting the Jet Stream users only in the **user details** box, as seen in the screenshot below.

Jet Stream Data Management User Interface for Delphix Administrators

The **Jet Stream Data Management User Interface** is the only interface to which Jet Stream data users have access and with which they interact. The user interface is the environment in which a data user works with data in an assigned data container, using data sources from a data template.

The user interface is divided into two work areas. The upper half allows the user a workspace to complete tasks using self-service operations. The lower half provides users with a summary of important details about the data container and offers bookmark management.
For more details about how to use this interface, please refer to the Jet Stream Data User Guide. The screenshot below illustrates the data user interface.
Jet Stream Concepts

Data Sources
A data source in Delphix can represent a database, an application, or a set of unstructured files. Delphix administrators configure the Delphix Engine to link to data sources, which pulls the data of these sources into Delphix. The Delphix Engine will periodically pull in new changes to the data, based on a specific policy. This, in turn, begins building a custom timeline for each data source. Additionally, the Delphix Engine can rapidly provision new data sources that are space-efficient copies, allowing users to work in parallel without impacting each other.

Data Templates
Data templates are the backbone of the Jet Stream data container. They are created by you, the Delphix administrator, and consist of the data sources users need in order to manage their data playground and their testing and/or development environments. Data templates serve as the parent for a set of data containers that the administrator assigns to Jet Stream users. Additionally, data templates enforce the boundaries for how data is shared. Data can only be shared directly with other users whose containers were created from the same parent data template.

Data Containers
A Jet Stream data container allows data users to access and manage their data in powerful ways. Their data can consist of your application binaries, supporting information, and even the entire database(s) that underlie it.

The Jet Stream data container allows users to:
- Undo any changes to their application data in seconds or minutes
- Have immediate access to any version of their data over the course of their project
- Share their data with other people on their team, without needing to relinquish control of their own container
- Refresh their data from production data without waiting for an overworked DBA

A Jet Stream data container consists of one or more data sources, such as databases, application binaries, or other application data. The user controls the data made available by these data sources. Just like data sources in a template, changes that the user makes will be tracked, providing the user with their own data history.

The Jet Stream Data Container Interface lets users view the details and status of their data container and its associated data sources, as well as manipulating which data is in those sources. The Data Container Interface includes a section called the Data Container Report Panel, which displays details about each source, including the connection information needed to access it - for example, the java database connectivity (JDBC) string for a database. This connection of information is persistent and stable for the life of the data container, regardless of what data the resources are hosting.

Jet Stream Data Flow
The Jet Stream data flow diagram below demonstrates how a Jet Stream data user accesses data sources. Data sources are connected to a Delphix Engine, which is controlled by the Delphix administrator. The Delphix administrator will connect all data sources that developers and quality assurance (QA) teams need to a Jet
Understanding Data Templates

Understanding Jet Stream Data Templates

Jet Stream Data Templates: An Overview
A Jet Stream data template represents a collection of data sources that you can provision to a Jet Stream user. A data source can be a dSource, a VDB, or vFiles. These sources can be used in multiple data templates. Once you have created a data template, the set of data sources associated with it is fixed; you cannot add data sources to an existing template, nor can you remove data sources from it. In addition to data sources, you can define the set of metadata that is relevant for a given template -- for example, notes, descriptions, names for sources that are relevant to an end user, and other configuration details. Once you have created the template, it provides a stencil for provisioning data containers. This, in turn, enables Jet Stream users to have self-service access to a space-efficient copy of the data sources defined in the data template.

Jet Stream Data Template Activities
Data templates are managed by a Delphix admin. The admin can provision data containers from the data template and assign a data container to an end user. The admin can also create bookmarks on the data template timeline in order to mark meaningful points in time.

When creating a data template, it is important to consider the set of users who will own data containers provisioned from it. In Jet Stream, templates effectively define the boundaries of the data that users can share directly with each other. Only owners of data containers created from the same data template are able to share data using bookmarks.
Creating a Data Template

A data template consists of an arbitrary set of dSources, VDBs, and vFiles. These are created and managed in the Delphix Admin interface, and can be used in Jet Stream as data sources. You can use any data type supported by the Delphix Engine as a data source in Jet Stream. For more information, refer to the Linking/Provisioning documentation for the standard Delphix Engine. The following is an example of the many kinds of data sources you can use to create a data template.

To create a data template:

1. Select Jet Stream from the drop-down menu in the upper right-hand corner of the Delphix UI.

2. On the Mgmt Overview page, click Add Template.

This will send you to the Create Template page.
3. Enter a **Name** for the data template.
4. Optionally, enter a **description** for the data template.
5. Click **Add Data Source** to add data sources to the template.
   a. Use the drop-down menu to select the **source** you want to include. The drop-down menu will display all dSources in the system and all VDBs and vFiles that are not already assigned to a Jet Stream data container.
   b. Enter a Jet Stream-specific **name** for the data source.
   c. Optionally, enter a **description** in the Notes section. Jet Stream users see a copy of these notes in the data containers they own.
   d. Click **Add Data Source** to continue to add and configure more data sources to the data template. You can remove data sources using the **Delete** icon, highlighted below.

![Adding Data Sources to a Data Template, Version 1.0.0](image)

6. Click **Create** to finish creating the data template.

**Note:** Once you have created a template, you cannot change the set of data sources in it. Any vdb’s or dSources being used as data sources in Jet Stream will appear with a special badge in the Admin App.

![In use by Jet Stream](image) ![Not in use by Jet Stream](image)

**Managing Data Template Notes**
After you have created the data template, it will be visible from the **Management Overview** page under the **Data Templates** tab, which is the default tab.
Notes

- Each tile corresponds to a data template and contains high-level information about that data template. For instance, the number of child data containers is visible under the name of the container. Note that these graphs are not very interesting at the moment, because you have not created any data containers yet.
- You can sort and filter the data template tiles, making it easy to manage a large number of data templates in Jet Stream.

Editing a Data Template’s Name

1. Click the Edit icon next to the data template name.

2. Enter the new name.

3. Click the checkmark icon to confirm changes.

Deleting a Data Template
1. Select the **data template** you would like to delete.
2. Click the **Delete** icon in the lower right-hand corner of the tile.

![Data Template Details, Version 1.0.0](image)

**Note**: If there are any data containers provisioned from the data template, you must remove them before you can delete the data template. See instructions in the Managing Data Containers section of this guide.
Understanding How to Manage Data Template Details

Viewing and Working with the Data Template Details Page

1. In the Data Management Page, under the Templates Tab, Select and click the data template’s name.

This will direct you to the Data Template Details page. You can use this page to view and configure details of an individual data template. It consists of a number of tiles:

**Summary**
Use this tile to get an overview of the data template and its child data containers.

![JetStream Summary Details, Version 1.0.0](image)

**Notes**
- The graphs labeled **Operation Counts By Week** and **Container Data Age Distribution** give a sense of the amount of activity in the data template over time
- **Top Checkouts** shows at a glance which bookmarks have been used most frequently as part of a Restore or Branch operation
- **Top Users by Data Operations** shows at a glance which users are the most active in Jet Stream
Containers
Use this tile to create, view, and delete child data containers from this data template.

Sources
In this tile, you can view the data sources that this data template uses. Each data source has a Jet Stream user-visible name, a description, and a set of properties that consist of arbitrary key/value pairs. This information will be included in the data containers provisioned from this template.
Properties
Use this tile to edit the data template’s properties. Properties are arbitrary key/value pairs associated with the data template. These values will be propagated to all data containers provisioned from this template. This provides a way for you to annotate data templates and data containers with whatever information is relevant to their use case.

Bookmarks
Use this tile to create and manage bookmarks on the data template. A bookmark represents a given point in time that is protected against retention. Bookmarks created on a data template are visible to all of the data containers provisioned from it. For more details, refer to the Bookmarks section in the Jet Stream Data User Guide.
Capacity
Use this tile to get information about the storage associated with the data template and its child containers.
Understanding Jet Stream User Management

Jet Stream User Management Activities
This document describes the process of creating a Jet Stream user and assigning that user to a data container. It also provides an overview of the Jet Stream User Details page.

Creating a Jet Stream User
Follow the same process when creating a new user or modifying an existing Delphix user. Jet Stream users do not have access to the existing admin UI, and they can only access the Jet Stream Data Container page for containers they own.

1. From the Admin App, select Manage -> Users.

2. Click Add User.
   a. To make an existing user a Jet Stream user, select the user from the list.
3. Enter the appropriate information.
4. Select the JS-Only User checkbox.

5. Press Save.

The user is now a Jet Stream user! This means that the user can now login to the Jet Stream user interface, and you can make the user the owner of a data container.

Notes
- Jet Stream users will only be able to access the Jet Stream Data Management page. They will not be able to access the other portions of the Jet Stream interface, nor the Admin App.
A Delphix admin user cannot be made a JS-Only User. However, admins can still use Jet Stream and own a data container. Admins are also able to manage all data containers. A user who owns one or more data containers cannot be deleted. You cannot revoke a user’s JS-Only role if they own any data containers.

Assigning a Jet Stream User to a Data Container
This section describes how to assign a Jet Stream user (created in the previous section) to a data container. Making a Jet Stream user the owner of a data container allows them to perform operations such as Refresh on that data container. Jet Stream users cannot see or manipulate data containers that they do not own. You can either assign a user when creating a new data container, or modify the owner of an existing data container.

Case 1: Data Container Creation
1. On the Create Data Container page, select the desired owner from the drop-down owner menu.

Case 2: Changing the Owner of an Existing Data Container
1. On the Management Overview page, select the data template from which the data container was provisioned.
2. Click the Containers tile in the left-hand panel.
3. Click the Edit icon next to the name of the data container’s owner.
4. Select the desired owner from the drop-down list.
   a. To remove the current owner, select <None> from the list.
5. When you are finished editing, click the checkmark to the right.

The user you selected is now the owner of the data container and can perform operations on that data container.

Note
Understanding Jet Stream User Management

- A data container can only have a single owner at a time.

User Details Page
This section provides an overview of the Jet Stream User Details page. This page displays graphs related to the user’s Jet Stream activity, as well as a list of all of the data containers that the user owns.

1. On the Management Overview page, click the Users tab.

2. Select the name of the desired user to go to their User Details page.
   The user details page looks like this:

   The Operation Counts By Week graph shows the aggregate of all Jet Stream operations performed by this user on all of their containers. The Container Age Distribution graph shows the average time since a data operation was performed on all of the user’s containers. Each container that the user owns will appear in the Containers section.
Understanding Jet Stream Data Containers

Jet Stream Data Container Overview

Data containers are provisioned from data templates by administrators and assigned to a Jet Stream user. A data container represents a socket that is capable of making any data within the data template accessible. The Jet Stream user controls what data they want to access. Jet Stream users have effectively been provisioned a set of "physical" resources, such as a database on a host that consumes some set of resources. A data container is comprised of a VDB or vFiles provisioned from each source in the data template from which it is created. The data container manages these VDBs, and the data operations performed on a data container will only impact these VDBs. Data containers represent the separation between IT infrastructure and end users. IT determines the set of VDBs or vFiles to allocate to a data container, and Jet Stream users determine the data that they want accessible in the containers allocated to them.

Data containers can be used to access any data within a single data template, but not across templates. Jet Stream users have the ability to populate the data within their data container from any point in time on the data template, the data container's history, or shared bookmarks from other data containers. Although operations are all accomplished by performing timeflow operations on the underlying VDBs, the data containers hide the VDBs and their underlying properties from Jet Stream users. None of the data container operations require provisioning additional VDBs; everything is accomplished using the resources assigned when the data container is created.

Refresh

This is the same basic concept as Refresh in VDBs today. In Jet Stream, Refresh will update the data on the active branch of a user's data container. The user will then have the latest data in the sources of the data template from which the container was provisioned.

Restore

Restore allows a Jet Stream user to update the data on the active branch of their data container to any point in time on the data container, the data template from which the container was provisioned, or a bookmark. This operation effectively means, “Take me to the data at this time.”

Reset

Reset is a simplified version of Restore built to support the notion of “undo.” It allows a user to reset the state of their application container to the latest operation. This can be useful for testing workflows where, after each test, users want to reset the state of their environment.

Branch

A Jet Stream branch represents a logical timeline, effectively a task on which a user is working. Only one branch can be active at a time, but a user can use multiple branches to track logically separate tasks. Jet Stream branches do not require the allocation of a new VDB; instead, they are comprised of a collection of timeflows within a VDB.

Activate
This allows the user to select which branch they want to be active. Only a single branch within a data container can be active at a time.

**Bookmark**

This creates a semantic name for a point in time and prevents this data from being removed by the retention policy. Bookmarks can be annotated with tags to make them easier to search for. In addition to tags, bookmarks allow a user to enter a description of what the bookmark represents.

**Share**

Bookmarks can be shared, which allows them to be seen by users who own data containers that have been provisioned from the same data template. This allows users to share data, providing a way for other users to either restore their existing timeline or create a new branch from these shared points.

### Jet Stream Data Container Activities

#### Configuring Jet Stream Data Containers

A Jet Stream data container is comprised of a set of VDBs, where each VDB is a direct child of the dSource, VDB, or vFiles in the data template’s data sources. Jet Stream does not automatically provision VDBs when creating a data container; a Delphix admin must create the required VDBs via the existing Admin App. Once the data container has been created, these VDBs are managed exclusively through Jet Stream.

1. From the **Management Overview** page, select a **template** from which you want to create the data container.

   ![Jet Stream Management Overview for Templates, Version 1.0.0](image)

   This will take you to the Data Template Page.
2. Click **Add Container** in the upper right-hand corner of the screen.

![Jet Stream Details Panel and Dashboard. Version 1.0.0](image)

This will take you the **Create Data Container** page.

![Jet Stream Data Container Page, Version 1.0.0](image)

3. Enter information about the data container, such as the **Name** and **Description** (optional).
4. Select the **Owner** of the data container from the drop-down menu.
   a. **Note:** Any Delphix administrator is able to manage all containers, so the owner should be the end user. Refer to the User Management section in this guide for details.

5. Select the **VDBs** to use for this container’s data sources.
   a. The available VDBs have the following constraints:
      ● They have been provisioned from the dSources/VDBs belonging to the parent data template
      ● They are not already part of another Jet Stream data template or container

**Note:** If there are no VDBs that meet these constraints, you may see a message informing you that you do not have any compatible VDBs:
6. Click **Create**.

**Delete a Data Container**

By default, all data sources (VDBs and vFiles) in a Jet Stream Data Container are deleted as part of the Jet Stream Data Container deletion process.

When performing the Delete Container operation, you can uncheck the **Delete associated VDBs and vFiles** box in the dialog window to keep these data sources intact after the Data Container is deleted.

**Data Management Operations**

**Start a Data Container**

Starting a Data Container does the following:

- Starts the data sources
  - This means that each data source listed in the **Source Details** section of the **Data Container** page will start using CPU and network resources on the host system it is running.
- Puts a copy of the data from the active branch into those data sources

1. On the **Self-Service Toolbar**, click **Start**.

**Stop a Data Container**

Stopping a data container does the following:

- If not already done, copies the current data in the data sources into the active branch of the data container
- Shuts down the data sources
  - This means each data source listed in the **Source Details** section of the **Data Container** page will stop using CPU and network resources on the host system.

1. On the **Self-Service Toolbar**, click **Stop**.

Other operations on the data container, such as **Stop**, **Reset**, and **Refresh**, must be performed from the **Data Management** page:
Understanding Jet Stream Usage Management

Jet Stream Usage Management Dashboard Overview

Jet Stream data templates are comprised of dSources, VDBs, and vFiles. These data sources are controlled by the standard policies configured in the Admin App of the Delphix Engine. As with existing containers, space will be reclaimed by the retention policy over time. As retention cleans up historical data, users will no longer be able to use those points in time to restore or branch. In Jet Stream, an admin can create a bookmark on the data template timeline, which will prevent retention from cleaning up the data that a bookmark references.

Jet Stream data containers are comprised of VDBs provisioned from the sources defined in the data template. Similar to VDBs in the existing Admin App, data containers’ VDBs will share blocks with the source from which they are provisioned. This prevents the referenced data on the source from being cleaned up by retention. Retention for these VDBs is controlled by the standard Delphix retention policies. As on templates, bookmarks in data containers will prevent storage from being reclaimed by retention. In addition, Jet Stream will ensure that the latest data on each Jet Stream branch is never removed.

The Usage pages of the data templates and data containers provide information that can help you understand how storage is being used, how to reclaim space, and how much space you are able to reclaim.

Where is the Usage information located?

Usage Overview is a top level page (along with Data Mgmt and Mgmt Overview pages) and it contains the space usage breakdowns by data templates and users.

Template Usage Details
You can locate the Usage tile at the bottom of the Jet Stream navigation sidebar, as seen in the image below. Usage summaries are available for Templates, Containers and Users. For example, when you click on the Usage tile on the Template Details page, the usage details you interact with will be in the context of the selected data template. The same is true when you are navigating the Data Management page for the data containers, and the User Details page for users.
Template Usage Overview

The Template Usage Overview page, seen in the image below, contains the usage breakdowns for Data Templates and Users. The interface is interactive and allows the user to visualize data by interacting with pie charts, bar graphs and tables. The pie chart contains the information about top 10 space consumers and the table at the bottom contains the information about all of the Templates/Users. The table found below the charts include category fields. You can find corresponding descriptions by hovering over the names of the fields in the table:

<table>
<thead>
<tr>
<th>Container</th>
<th>Unique</th>
<th>Shared (others data)</th>
<th>Shared (self data)</th>
<th>Unvirtualized</th>
</tr>
</thead>
<tbody>
<tr>
<td>Container 2</td>
<td>72.52MB</td>
<td>14.63MB</td>
<td>0B</td>
<td>1.62GB</td>
</tr>
<tr>
<td>Container 3</td>
<td>66.33MB</td>
<td>14.63MB</td>
<td>0B</td>
<td>1.62GB</td>
</tr>
</tbody>
</table>

Additionally, the table below allows you to sort, navigate and interact by clicking on the field category of interest. For example, to sort the table, you can click on the column header and it will sort on that value (e.g.
click on “Unvirtualized”). To **navigate** to a particular data template or user, you can click on either the pie slice or the name of the template in the table.

<table>
<thead>
<tr>
<th>Template</th>
<th>Total</th>
<th>Bookmarks</th>
<th>Containers</th>
<th>Unvirtualized</th>
</tr>
</thead>
<tbody>
<tr>
<td>Template 1</td>
<td>216.7MB</td>
<td></td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>Template 2</td>
<td>130.0MB</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Detailed descriptions for these field categories can be found below.

**Total** - The sum of the space used by the data containers provisioned from this data template and by the bookmarks created on this template. This is the space that will be freed up if the template is deleted.

**Containers** - The amount of space used by the data containers provisioned from this data template. This is the space that will be freed up if all of the data containers are deleted or purged.

**Bookmarks** - The amount of space used by the bookmarks on this data template. This is the space that will be freed up if all bookmarks on the template are deleted.

**Unvirtualized** - The amount of space that would be used by the data in this template (and child data containers) without Delphix virtualization.

The pie chart and table graphs are meant to help you analyze storage usage information.

**User Usage Overview**

The **User Usage Overview** screen provides graphical visualizations of space used by the Jet Stream users assigned to the data containers. The two category fields include the number of containers owned and the amount of space being referenced by a user.

Detailed descriptions for these field categories can be found below.
Referenced - The amount of space used by data containers that are owned by this user. This excludes the space that this user is sharing with other users.

Containers Owned - The number of data containers owned by this user.

Template Usage (Containers) Overview

The Template Usage Details page, as seen below, shows the space used by data containers provisioned from the template and the bookmarks created on the template.

The stacked bar graph shows information about the top 10 space users. The graph can be re-sorted based on the selected fields in the legend. For example, if you want to know which data containers are sharing the most data with others, you can un-select by clicking the “Shared (others data)” and “Unique” in the “Sort by” legend on the top-right as seen in the above image.

Sort by:
- Shared (others data)
- Shared (self data)
- Unique

Important Note: When the legend items are not selected, their corresponding colored boxes turn gray and the data is removed from the chart. The data and name will reappear when you re-select by click on the preferred greyed out category.

Detailed descriptions for these field categories can be found below.

Unique - The amount of space that will be freed up if this data container is deleted. This assumes that the data container is deleted along with underlying data sources.
Shared (others data) - The amount of space that cannot be freed on the parent data template (or sibling data containers) because it is also being referenced by this data container due to restore or create branch operations. The snapshots on the template/sibling container are what use up the space.

Shared (self data) - The amount of space that cannot be freed on this data container because it is also being referenced by sibling data containers due to restore or create branch operations (via shared bookmarks.)

Unvirtualized - The amount of space that would be used by the data in this container without Delphix virtualization.

Template Usage (Bookmarks) Overview

As detailed in the image below, the Template Usage Details page provides the usage information about bookmarks created on a template. The primary categories of information include Unique, Shared (others data) and Shared (self data).

Detailed descriptions for these field categories can be found below.

Unique - The amount of space that will be freed if this bookmark is deleted.

Shared - The amount of space referenced by this bookmark that cannot be freed up by deleting this bookmark because it is also referenced by neighboring bookmarks or branches that have been created or restored from this bookmark.

Externally Referenced - The amount of space referenced by this bookmark that cannot be freed up by deleting this bookmark because it is also being referenced outside of Jet Stream (e.g. by retention policy.)

Container Usage (Branches) Overview

As detailed in the image below, the Container Usage Details page shows the usage information about the branches and bookmarks created on a container. The primary categories of information include Unique, Shared (others data) and Shared (self data).
Detailed descriptions for these field categories can be found below.

**Unique** - The amount of space that will be freed up if this branch is deleted.

**Shared (others data)** - The amount of space that cannot be freed on the parent data template (or sibling branches) because it is also being referenced by this branch due to restore or create branch operations. The snapshots on the template/sibling container are what use up the space.

**Shared (self data)** - The amount of space that cannot be freed on this branch because it is also being referenced by sibling data containers due to restore or create branch operations (via shared bookmarks.)
Understanding Branches

Branches Overview
You can organize data in the data container into task-specific groupings, called “branches.” For example, you can use a branch to group all the data you have used while addressing a particular bug, testing a new feature in an application, or exploring a business analytics scenario. By default, Jet Stream automatically creates the first branch of source data, in a data container. You can view the default branch and any additional branches in a specified data container that you create over time by clicking the Branch tab. Additionally, to the right of the default branch, you will see an interconnected branch timeline unique to whichever branch is currently active.

Using the Default Branch from a Data Template
As an Admin User you can get prior/historic dSource data into a container by clicking restore on the default branch from the data template screen of the Data Management Screen. For example, on October 1st, you create a VDB, data template, and data container. It's now October 13th. Since October 1st, there have been many updates to the source DB and separate updates to the VDB. To update data in the data container a user would select October 10nth on the default branch and click Restore. Clicking Restore will set the data state of the VDB for October 10nth. The data is not set to the historic dSource data because the dSource data is a different timef low from the VDB data. If a user wants data from the dSource on October 10nth, the user needs to access the Data Template branch, select October 10nth, and click Restore. To get a more in depth understanding for how to use branches in Jet Stream, please refer to the Jet Stream Data User Guide.

Understanding Bookmarks

Bookmarks Overview
Bookmarks are a way to mark and name a particular moment of data on a timeline. You can restore the active branch’s timeline to the moment of data marked with a bookmark. You can also share bookmarks with other Jet Stream users, which allows them to restore their own active branches to the moment of data in your container. The data represented by a bookmark is protected from retention, meaning it will not be deleted until the bookmark is deleted. Once created, you can easily locate a bookmark through one of the bookmark viewers in the interface. To understand how to use bookmarks in Jet Stream, please refer to the Jet Stream Data User Guide.

Using Bookmarks in Data Templates
An admin user can create a bookmark on a template that will then be propagated to all containers created from the template. Additionally, an admin user can create a bookmark on the master template timeline with the point of time you are interested in. The bookmark will always be saved from retention policies and a new branch can be created from this bookmark.
Resources
Access more resources at http://docs.delphix.com/display/DOCS41/Delphix+Engine+4.1+Documentation

Support
Ask the community for support at https://community.delphix.com/delphix. If you are seeing an issue that cannot be resolved with help from the community, file a support case as appropriate.