# Basic 101

## Course Overview

The value proposition of Dataiku revolves around its ability to democratize AI and streamline the process of AI project development and deployment. Here are the key aspects of Dataiku's value proposition based on the provided information:

**1. Democratizing AI with Dataiku**

Dataiku aims to make AI accessible and usable for everyone in an organization, not just data scientists or IT professionals. It enables organizations to integrate AI into everyday business processes, thereby enhancing decision-making and driving exceptional business outcomes.

* **Systemized Approach**: Dataiku provides a structured approach that balances rationality with creativity, individual efforts with collective collaboration, and routine tasks with ambitious projects. This approach helps organizations harness the full potential of AI while managing complexity effectively.

**2. Centralizing AI Initiatives**

Dataiku serves as a centralized platform for AI initiatives, spanning from initial data exploration to the deployment of AI models in production.

* **Unifying Teams**: It brings together business, data, and IT teams, allowing them to collaborate seamlessly on AI projects. Each team member can contribute their expertise, ensuring a holistic approach to AI development.
* **Upskilling**: Dataiku empowers business analysts and domain experts with visual tools that simplify data handling and AI model development. This democratizes the creation of AI applications across the organization.
* **Single Platform**: Projects can be developed, tested, and deployed in a unified environment, streamlining the entire AI lifecycle.

**3. Streamlining Path to Production AI**

Dataiku facilitates the transition of AI projects from design to production with efficiency and reliability.

* **Balancing Customization and Reusability**: It allows teams to balance custom code with reusable components and standard frameworks, ensuring that AI projects are production-ready.
* **Automation**: Dataiku automates both the design and production phases, reducing repetitive tasks and enhancing project quality and reliability.
* **Deployment**: Projects can be deployed to production environments quickly and efficiently, leveraging elastic cloud infrastructure for scalability.

**4. Managing & Governing Projects at Scale**

Dataiku provides robust capabilities for managing and governing AI projects across the organization.

* **Built-in Governance**: It ensures transparency and portability across teams by documenting project goals, critical decisions, and models. This helps in maintaining consistency and compliance with organizational standards.
* **Lifecycle Management**: Dataiku supports the entire lifecycle of data and AI projects, from development to production, even with limited resources.
* **Operational Risk Management**: It helps organizations manage operational risks associated with AI projects, ensuring compliance with legal and regulatory requirements.

## Discover the Interface

### Concept | Dataiku Cloud Launchpad

The Dataiku Launchpad serves as the administrative hub for users accessing Dataiku, particularly in Dataiku Cloud environments. Here’s a detailed overview and key concepts related to the Launchpad:

**Overview of Dataiku Launchpad**

1. **Access and Administration**:
   * **Access**: Dataiku Cloud users access Dataiku via the Launchpad (<https://launchpad-dku.app.dataiku.io/>). Users of self-managed instances manage functions through the Administration page.
   * **Administrative Functions**: Admins manage configurations and settings through the Launchpad, ensuring smooth operation and updates.
2. **Spaces in Dataiku**:
   * **Definition**: Spaces are configurable instances within Dataiku, each running a specific version of the software. They are independent, allowing actions in one space (e.g., project creation, job running) without affecting others.
   * **Management**: Users manage spaces through the Launchpad’s Overview panel, ensuring each space is activated and configured appropriately.
   * **Design Node**: Spaces include a Design Node instance, the starting point for AI lifecycle tasks like data preparation, modeling, and deployment.
3. **Space Add-ons**:
   * **Extensions**: Spaces may have optional extensions like Solutions (accelerators for business use cases), platform enhancements (Automation, API nodes), integrations (Spark, Git, R), scenario reporters (Email, Slack), and plugins (reusable components).
   * **Connections and Code Environments**: Spaces also feature connections to data sources/storage and custom code environments (Python/R packages).
4. **Monitoring and Administration**:
   * **Audit Trail**: Tracks user access within a space, enhancing security and compliance.
   * **Usage & Monitoring**: Provides real-time visualization of tasks and computational resources, optimizing efficiency.
   * **Administrative Settings**: Manage users, profiles, groups, permissions, and space settings (rename, support access, maintenance).
5. **Next Steps**:
   * **Exploring Dataiku**: After familiarizing with Launchpad, users proceed to the Design home to utilize Dataiku’s features fully, starting with the Design Node.

Spaces

In Dataiku, "Spaces" refer to organizational units within the platform where users can organize and manage projects, datasets, models, and other assets. Spaces provide a structured way to partition and manage resources based on teams, departments, or specific projects within an organization. Here’s a detailed explanation of what Spaces are and how they function within Dataiku:

**Key Features of Spaces in Dataiku:**

1. **Organizational Structure**:
   * **Hierarchical Organization**: Spaces allow for a hierarchical organization of projects and resources. You can create multiple levels of Spaces to reflect different organizational units or project categories.
2. **Access Control and Permissions**:
   * **Granular Permissions**: Each Space can have its own set of access control and permissions. This means you can define who can view, edit, or administer resources within each Space, ensuring data security and governance.
3. **Resource Management**:
   * **Centralized Management**: Within each Space, you can manage projects, datasets, connections, recipes (data preparation steps), models, notebooks (for code development), and other assets specific to that Space.
4. **Collaboration**:
   * **Team Collaboration**: Spaces facilitate collaboration among teams working on different projects or within different departments. Users within the same Space can share and collaborate on resources seamlessly.
5. **Isolation and Segregation**:
   * **Data Isolation**: Spaces provide a level of isolation between different projects or departments, allowing organizations to manage sensitive data separately while maintaining a unified platform.
6. **Project Visibility**:
   * **Visibility and Organization**: Spaces help organize and categorize projects, making it easier for users to locate and access relevant resources quickly. This organizational structure improves efficiency and reduces confusion.

**Practical Use Cases:**

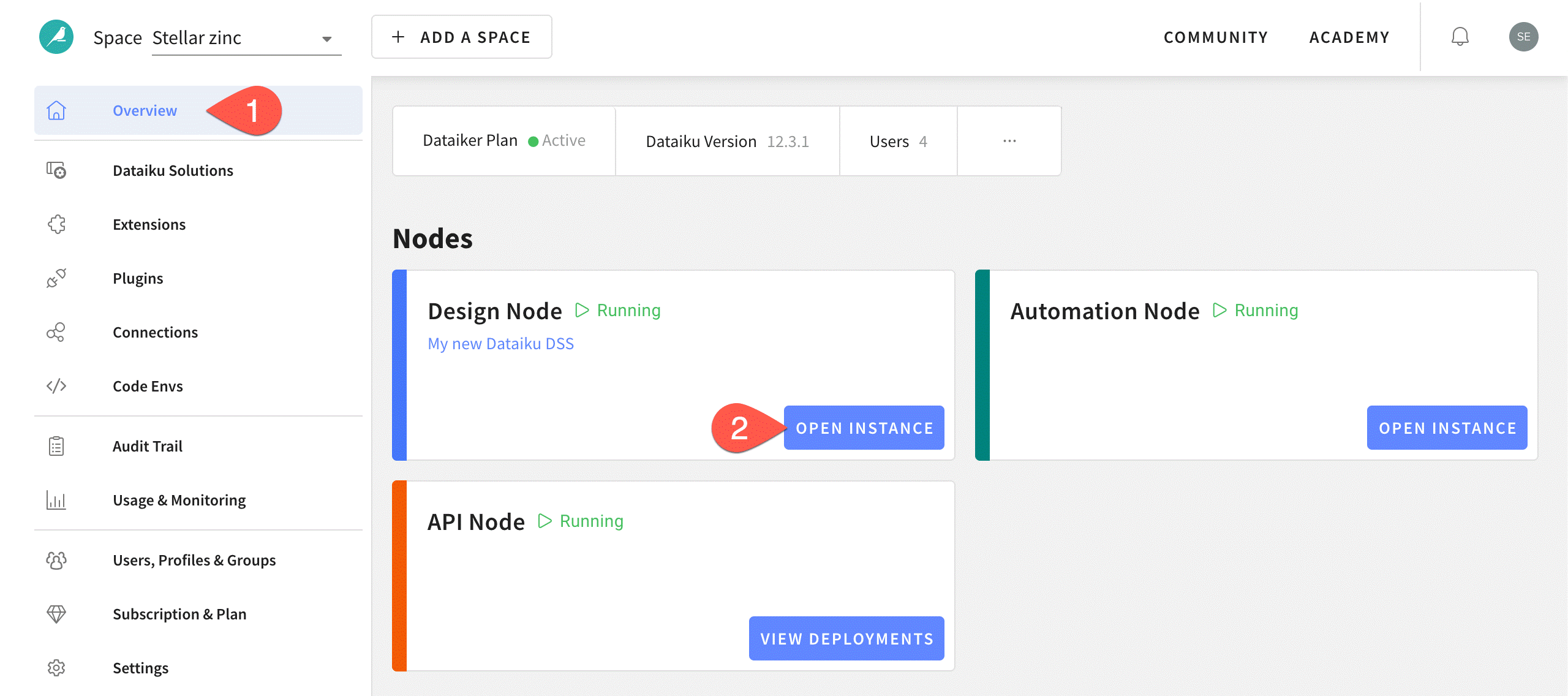
* **Departmental Spaces**: Organizations can create Spaces for each department (e.g., Marketing, Finance, IT) to manage projects and data specific to their functions.
* **Project-Based Spaces**: Spaces can also be created for specific projects or initiatives, allowing teams to collaborate effectively within dedicated environments.
* **Security and Compliance**: Spaces help enforce data access and compliance policies by restricting access to sensitive data based on Space-level permissions.

**Conclusion:**

Spaces in Dataiku provide a flexible and scalable way to organize, manage, and collaborate on data science and AI projects within an organization. They enhance efficiency, security, and collaboration by structuring resources into logical units that align with organizational goals and workflows. By leveraging Spaces, organizations can effectively manage their data and AI initiatives while maintaining governance and compliance standards.

To get started:

1. Make sure the space is turned on from the **Overview** panel.
2. Once the space is active, you can open the **Design Node** instance.

[](https://academy-content.dataiku.com/latest/_images/launchpad.png)

Tip

Dataiku offers multiple nodes for different kinds of tasks in the AI lifecycle, but it all starts in the Design node!

**Space add-ons**

A space is more than just a specific version of the core Dataiku platform. A space may also have several optional extensions or features installed on top. These could be:

| **Add-on** | **Description** |
| --- | --- |
| Solutions | [Solutions](https://academy-content.dataiku.com/latest/cloud-add-ons/solutions/index.html?opals=true) are installable accelerators that leverage Dataiku to answer business problems and use cases. |
| Extensions | Extensions include a variety of platform enhancements such as additional nodes for production tasks (Automation, API, Govern), integrations for Spark, Git and R, scenario reporters (Email, Slack, Microsoft Teams), etc. |
| Plugins | [Plugins](https://academy-content.dataiku.com/latest/cloud-add-ons/plugins/index.html?opals=true) are packages of reusable components that extend the functionality of Dataiku. |
| Connections | [Connections](https://academy-content.dataiku.com/latest/cloud-connections/data-connections/index.html?opals=true) are read-only data sources and read/write data storage locations. |
| Code environments | [Code environments](https://doc.dataiku.com/dss/latest/code-envs/index.html) are custom lists of Python or R packages available to the space. |

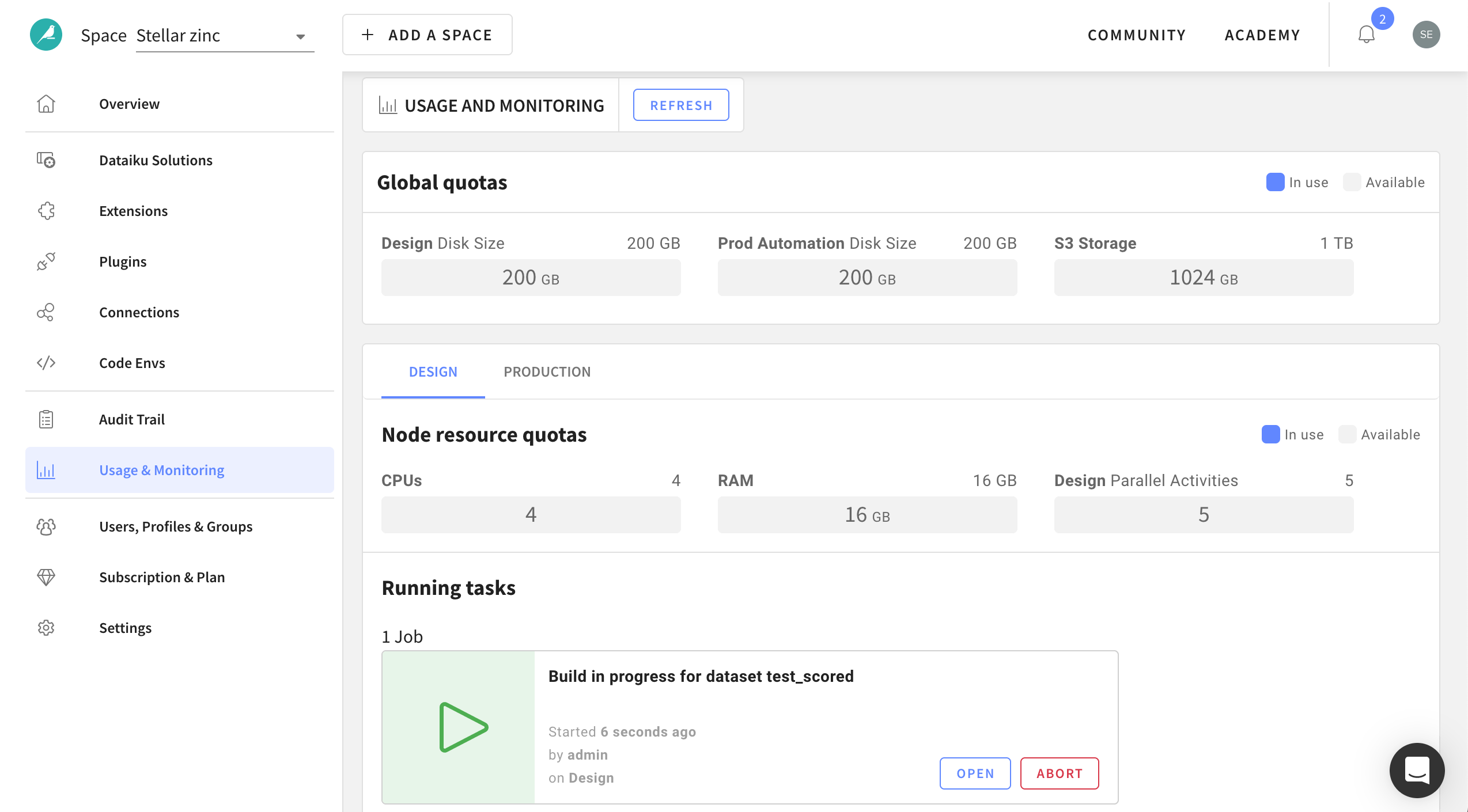
Tip

Recall that spaces are independent from each other. Accordingly, add-ons installed on one space are only available to that space.

**Space monitoring**

The homepage for a space also includes references for monitoring user activity:

| **Audit tool** | **Description** |
| --- | --- |
| Audit Trail | A record of who is accessing the space, when, and from where. |
| Usage & Monitoring | Visualizations of real-time running tasks and available computational resources. |

[](https://academy-content.dataiku.com/latest/_images/launchpad-usage1.png)

Note

For more information, see our resources on [Compute and Resource Quotas on Dataiku Cloud](https://academy-content.dataiku.com/latest/cloud-connections/quotas-compute/index.html?opals=true).

**Space administration**

You can also find basic administrative settings governing the space:

| **Administrative setting** | **Description** |
| --- | --- |
| Users, Profiles & Groups | Invite new users to share the space and manage permissions to govern collaboration.  For more information, see the [Users, Profiles & Groups](https://academy-content.dataiku.com/latest/cloud-space-management/users-roles-groups/index.html?opals=true) article. |
| Subscription & Plan | Details on your current Dataiku plan. |
| Settings | Rename your space; grant access to support; and perform space maintenance. |

**What’s next?**

Once you’ve taken a tour of the Launchpad, move on to the Design home to dive into what Dataiku has to offer.

#### Concept | Dataiku Design homepage

-> The Dataiku Design homepage is like the default page of a website. It’s where you land:

* When you sign in to your Dataiku design instance via your web browser, if you’re using a self-managed installation.
* When you open an instance from the Launchpad, if you’re using Dataiku Cloud.

It’s where you will be able to see shared projects if you are collaborating with colleagues or other users, and create new ones.

-> By default, projects appear at the top. And below, you will see additional sections, including:

* Workspaces
* Applications
* Project folders
* Wikis
* Dashboards

-> You can search for items using the Filter items box at the top of the screen. Or find recent and favorite items on the right sidebar.

-> Homepage customization

You can customize your homepage to fit the way you want to work. For example, you can configure your homepage so that project folders or dashboards display first or to make workspaces your default homepage.

To configure your homepage:

1. Visit your profile and settings in the upper right.
2. In Design homepage layout, arrange the sections in any order you choose.

Configurable Dataiku homepage profile settings.

-> Applications menu

The Applications menu is where you’ll find:

* Access to your workspaces, projects, applications, feature stores, wikis, etc.
* A searchable data catalog which indexes and details all project artifacts including datasets.
* Access to administration settings at the instance level for on-premise installation, including the management of the license, connections, security, code environments, etc.

Note

On Dataiku Cloud, the administration settings are accessible in the launchpad. There is no Administration menu in the Applications menu.

* A plugin library and possibility for developers to create custom plugins.

## Concept | Searching in Dataiku

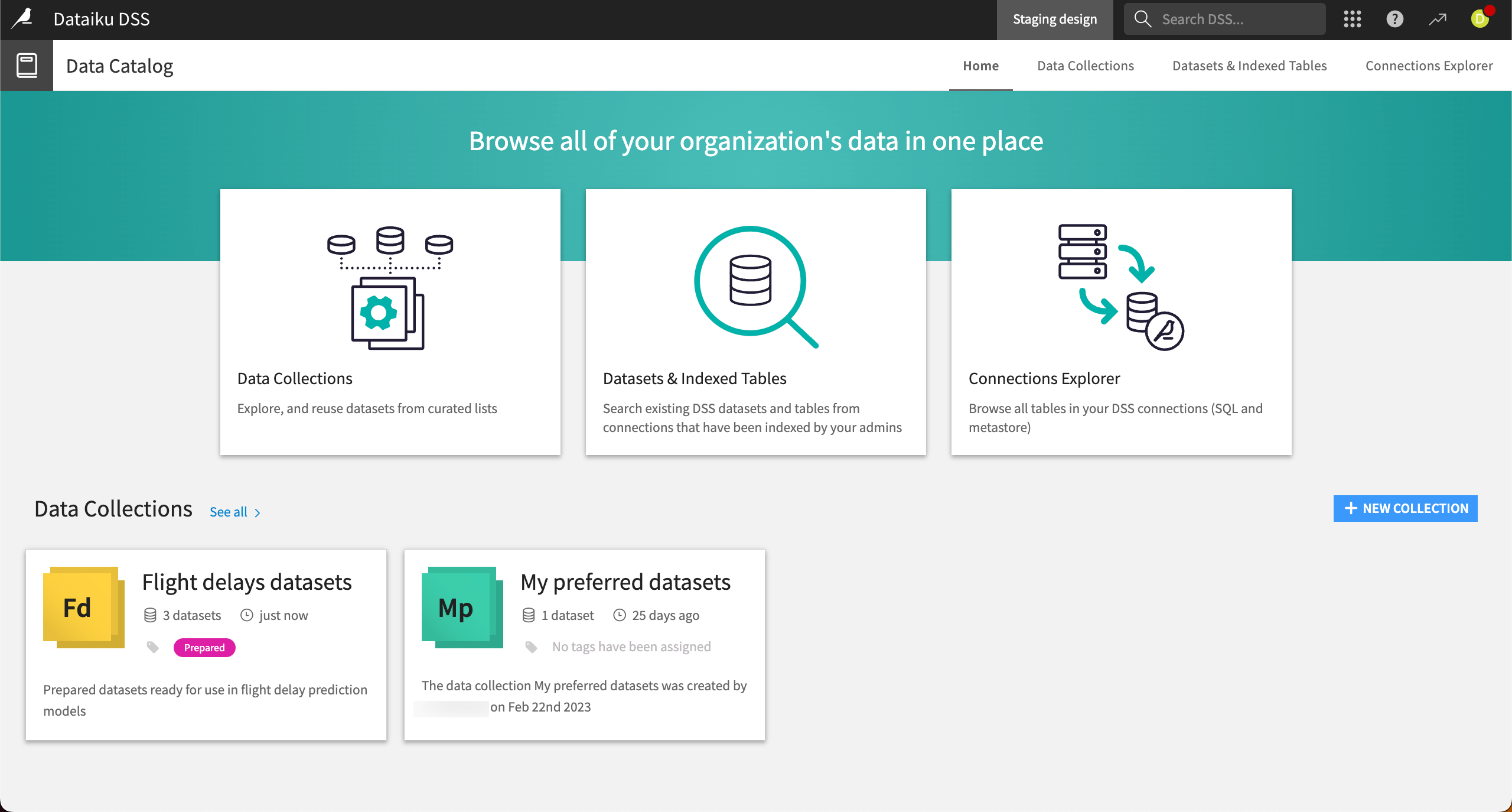
Dataiku provides multiple ways to search for online help, datasets, recipes, projects, and other Dataiku items.

**Data Catalog**[#](https://academy-content.dataiku.com/latest/getting-started/dataiku-ui/concept-search-in-dataiku.html?opals=true" \l "data-catalog" \o "Link to this heading" \t "_blank)

The **Data Catalog**, accessible from the Applications menu, is the recommended way to search for datasets in Dataiku.

In it, you can:

* Find curated data collections.
* View information about datasets.
* Reuse them in your own projects.
* Import tables from external connections.

[](https://academy-content.dataiku.com/latest/_images/data-catalog1.png)

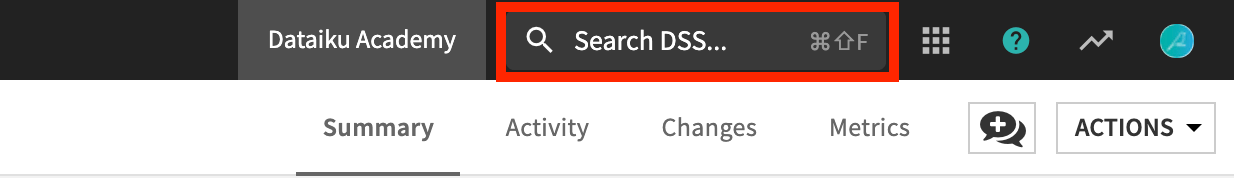
See also

For more information, see:

* The [Concept | Data Catalog](https://academy-content.dataiku.com/latest/collaboration/sharing-projects-assets/concept-data-catalog.html?opals=true) article in the Knowledge Base.
* The [Data Catalog](https://doc.dataiku.com/dss/latest/data-catalog/index.html) article in the reference documentation.

**-> Global Search**

On the top right of your Dataiku instance, the **Global Search** bar enables you to quickly find and navigate to many different types of Dataiku elements. It searches across several sources including help pages and Dataiku items like datasets and recipes, screens and settings within the product.

[](https://academy-content.dataiku.com/latest/_images/kb-global-search-ui.png)

**Using autocompletion**

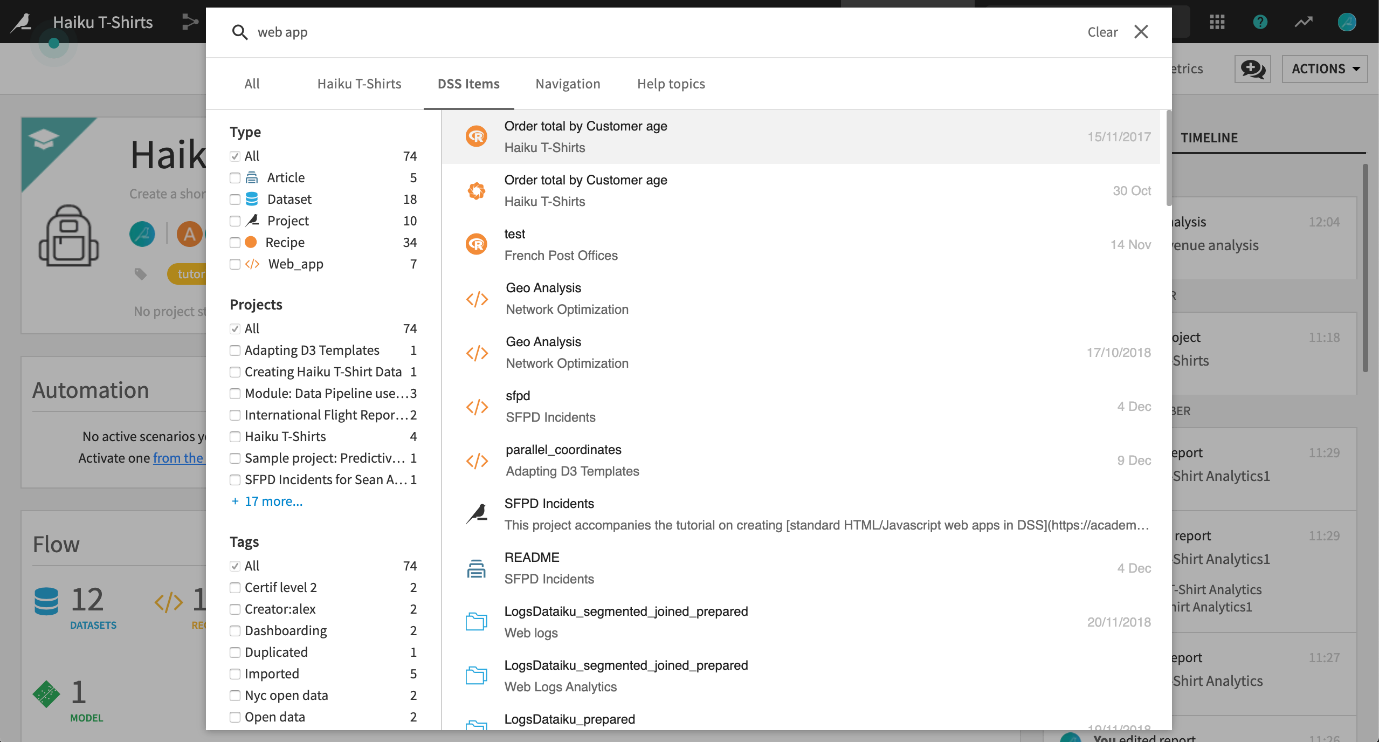
Start typing your search term, and Dataiku begins searching for matches across several sources, including:

* The data catalog.
* The documentation (reference documentation, knowledge base, developer guide, Dataiku blog).
* Community posts.
* The history of recently accessed items.
* An index of screens and settings.

**Filtering a global search**

After entering your search keywords, you can view and filter results in three categories.

| **Tab name** | **Description** |
| --- | --- |
| DSS items | Within **DSS items**, you can filter by type of items — such as dataset, insights, projects, recipes, and statistics worksheets — or by projects, tags, or users. |
| Navigation | In **Navigation**, you can view administrative settings such as plugins. |
| Help topics | In **Help topics**, you can find and filter reference documentation, tutorials, and other resources. |

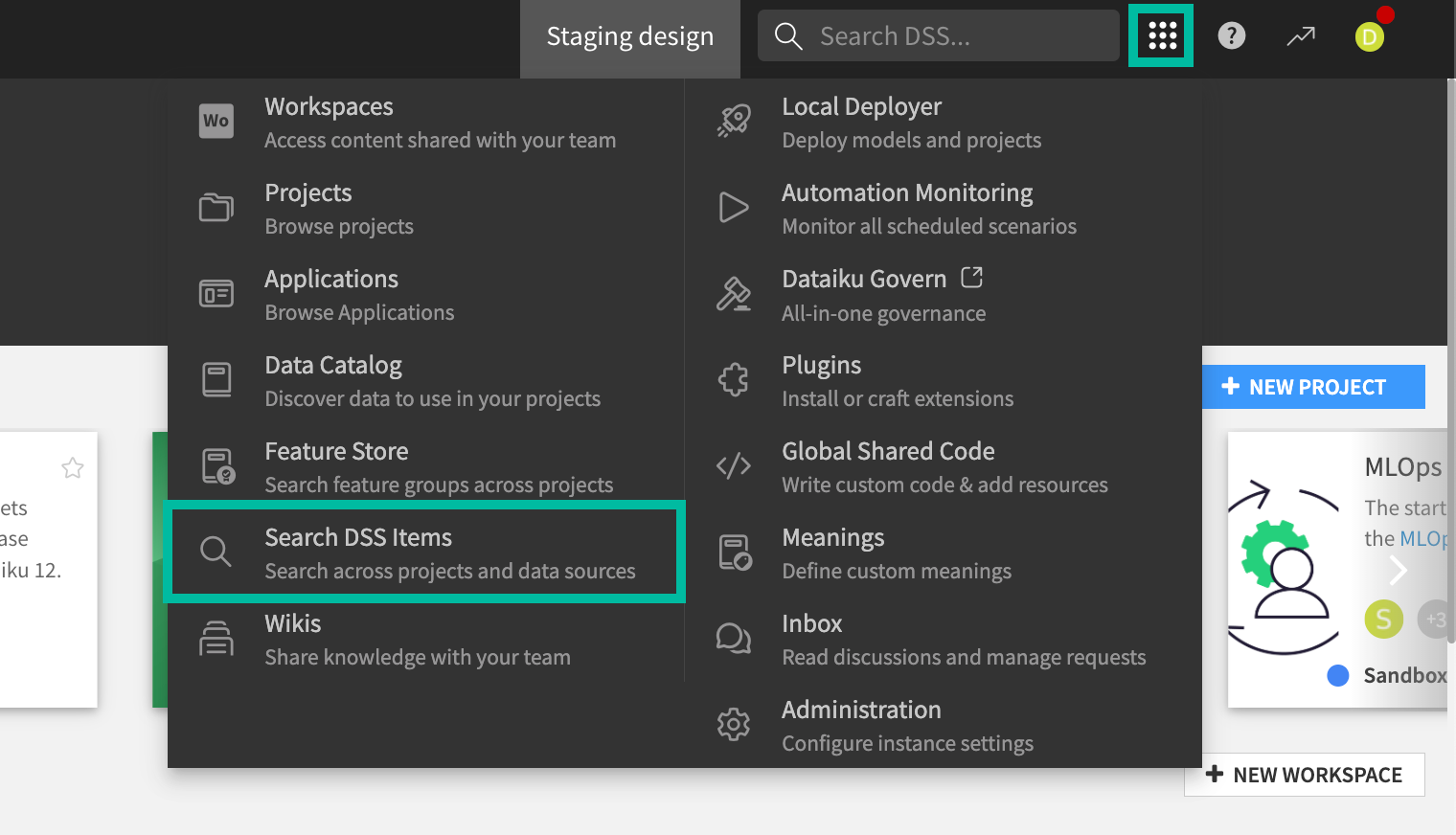
[](https://academy-content.dataiku.com/latest/_images/kb-global-search-tabs.png)

*Searching for “webapp” returns Dataiku items from the current project or elsewhere on the instance, along with relevant help resources.*

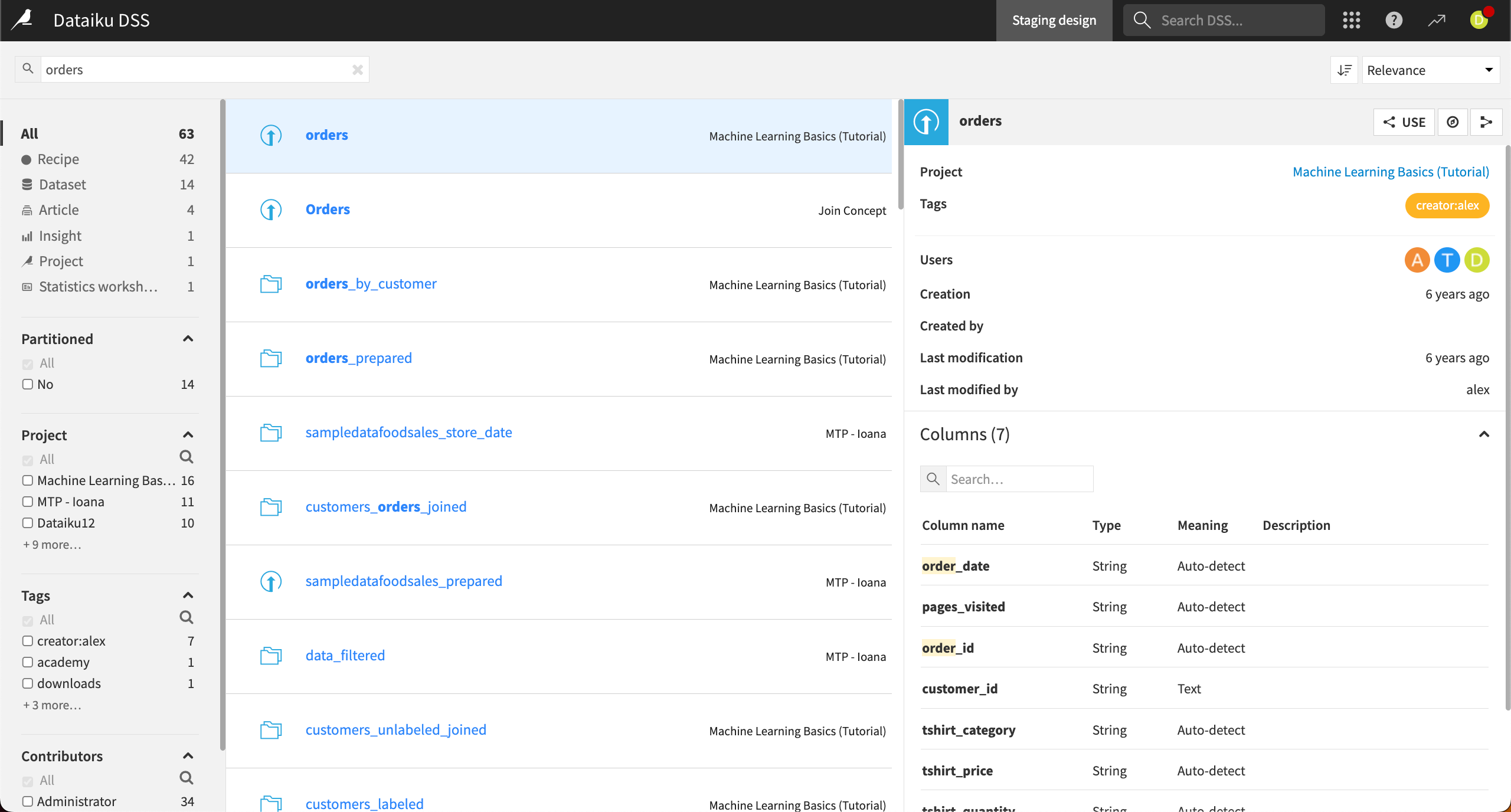
Clicking on a result takes you directly to it.

**-> Search DSS Items**

**Search DSS Items**, found in the Applications menu, is another way to search across projects and data sources in Dataiku. This page allows you to explore DSS items in further detail than you can through the Global Search bar.

[](https://academy-content.dataiku.com/latest/_images/search-dss-items-menu.png)

To manage search results, you can sort or apply filters by type of item, associated projects, tags, and contributors. Select any item to view details such as projects, tags, and schema. Click on an item name to go directly to that item.

[](https://academy-content.dataiku.com/latest/_images/search-dss-items.png)

Create the Project

### Concept | Project

The project is your command center. It contains all your work on a specific activity. For example, a project can include datasets, recipes, models, discussions, and dashboards.

Projects are created from the homepage and can be organized into project folders. You can do things like:

* Check the project’s overall status.
* View recent user activity.
* View contributors.
* Check off items on a to-do list.

Project commands include duplicating, exporting, and even deleting a project (if your access level permits it).

### Tutorial | Create your first project

In this tutorial, we’ll cover much of what you need to familiarize yourself with Dataiku projects

-> Objectives

In this tutorial, you will:

* Create a Dataiku project.
* Explore the project homepage.
* Prerequisites

To complete this tutorial, you’ll need the following:

A Dataiku instance (version 9.0 and above).

Note

If you do not already have access, there are two ways to get started. From the Dataiku website, you can:

1. Start a 14 day free trial of Dataiku Cloud.
2. Install the free edition.

Create your project

Let’s get started! The first step is to create a new Dataiku project.

1. From the Dataiku homepage, click +New Project > DSS tutorials > Core Designer > Basics 101. This action creates the starter project for you with a project ID (e.g. “DKU\_TUTORIAL\_BASICS\_101”) unique to your instance.
2. Explore the project homepage to discover the different tabs and features available on it.

Important

You cannot change the project ID once it is created in Dataiku. If you want a project with a different ID, you can duplicate the project and specify a new ID for the duplicate project.

What’s next?

You now have a project, but no data in it. Acquiring some data will be covered in the next tutorial!

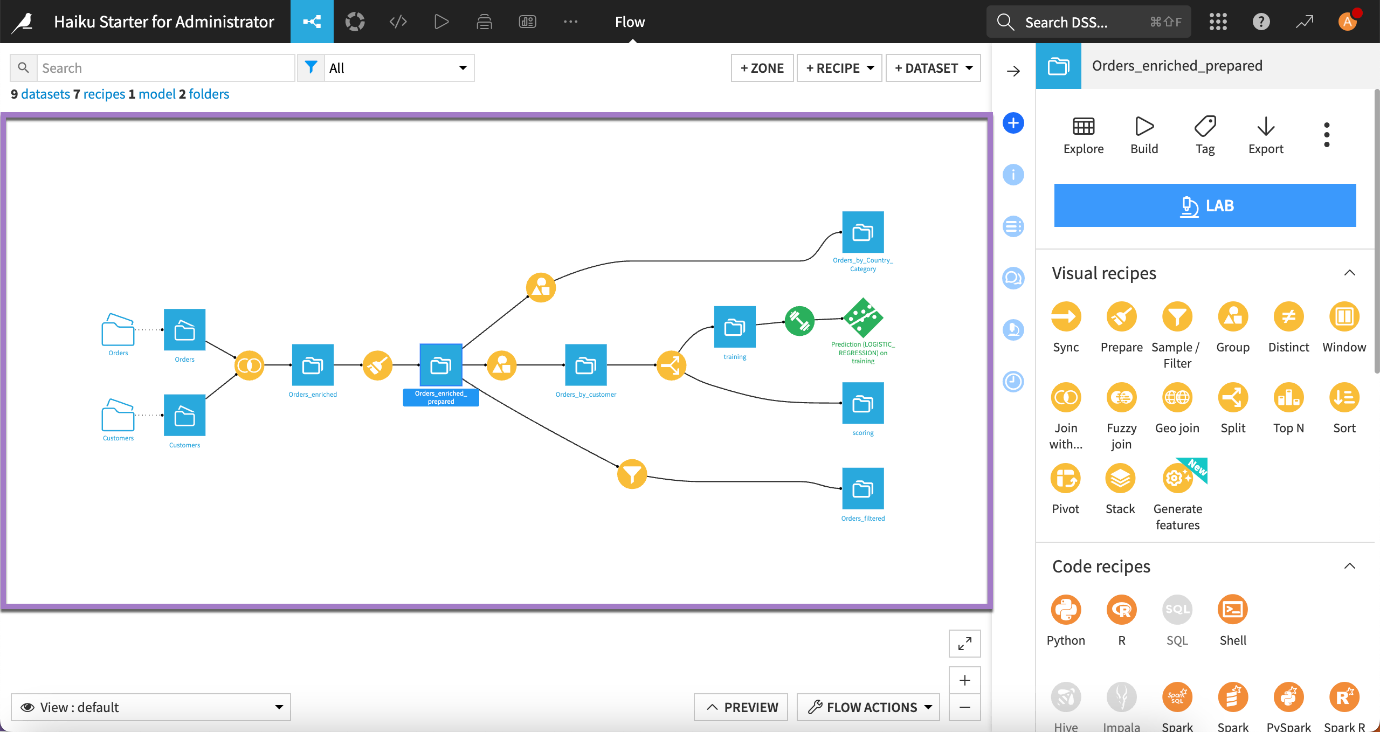
### Concept | Flow

In Dataiku, the **Flow** is the visual representation of how data, recipes, and models work together to move data through an analytical pipeline.

Note

Dataiku positions the different items dynamically, in an optimized way. You cannot change the layout manually.

From the initial data to the final output, the Flow in Dataiku allows you to trace the dependencies among the different items and becomes a visual narrative of your data’s journey.

[](https://academy-content.dataiku.com/latest/_images/flow1.png)

**-**

**> Improving the Flow readability**

Sometimes, the Flow can be quite complex, which can impact readability.

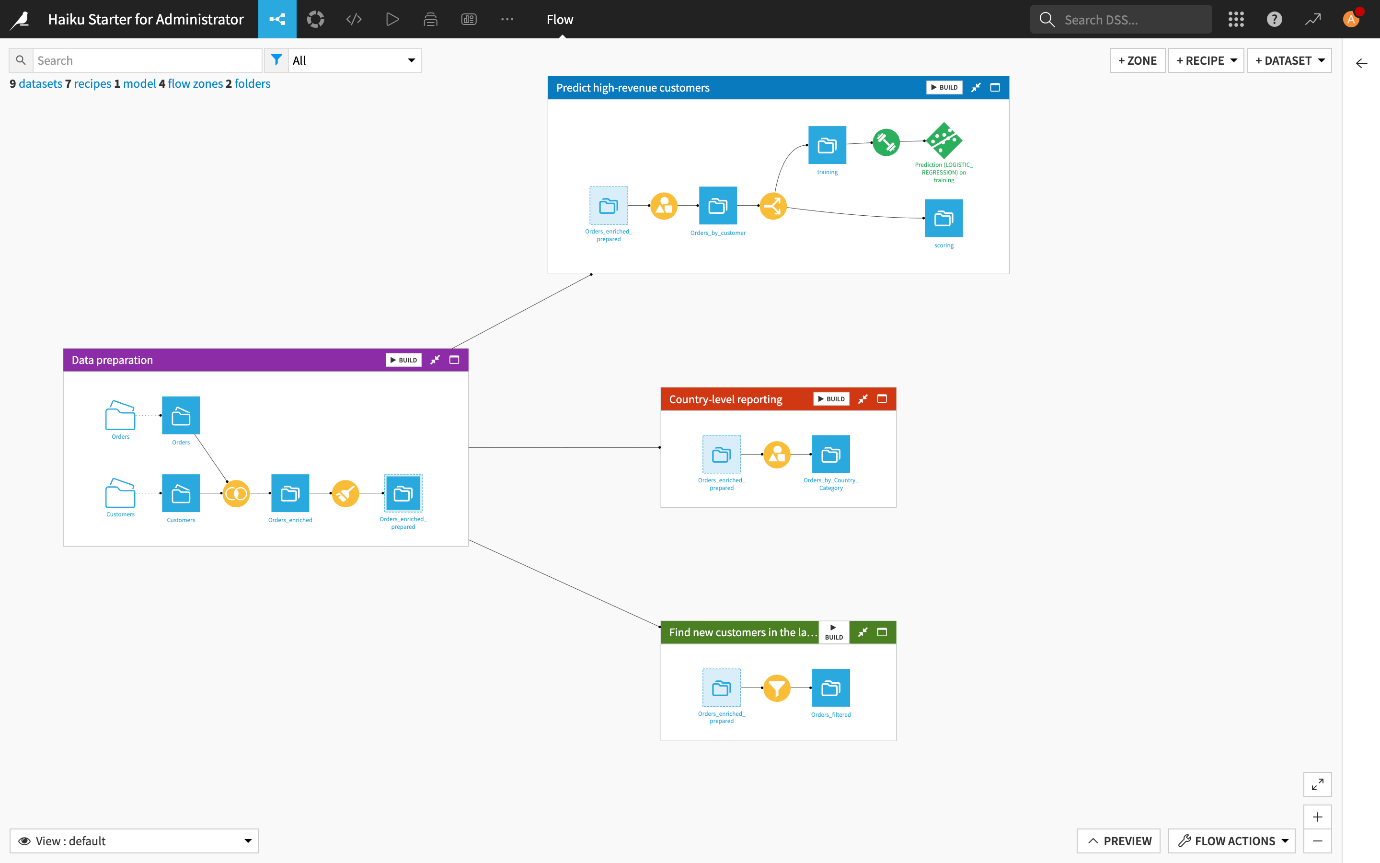
In such cases, for more clarity, you can use Flow zones, tags and filters.

**-> Using Flow zones**

By default, a Flow is displayed in a single zone.

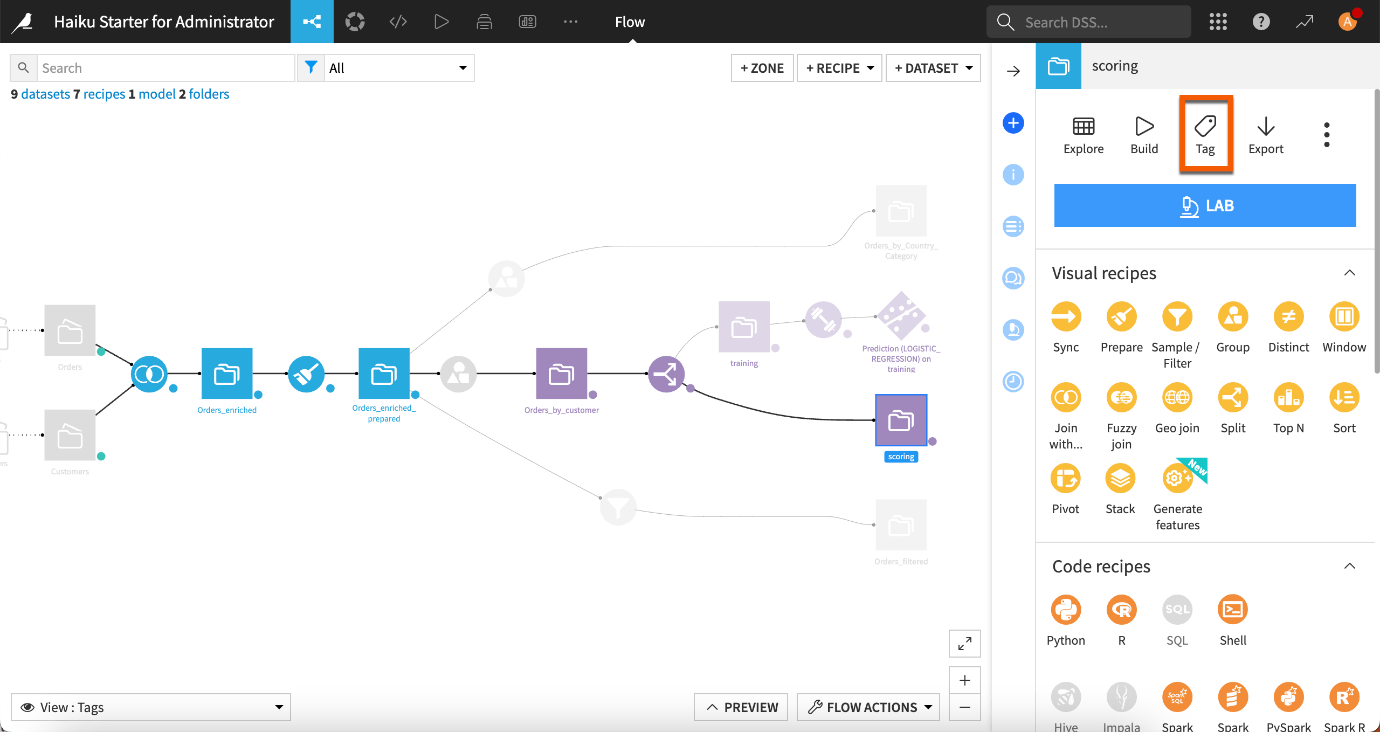
At any time, clicking the **+ Zone** button at the top right of the Flow allows you to add zones to the Flow in order to organize the objects.

For more information, see the [Tutorial | Flow zones](https://academy-content.dataiku.com/latest/getting-started/dataiku-ui/tutorial-flow-zones.html?opals=true) article.

[](https://academy-content.dataiku.com/latest/_images/flow-zones-02.png)

* **Tagging the Flow items**

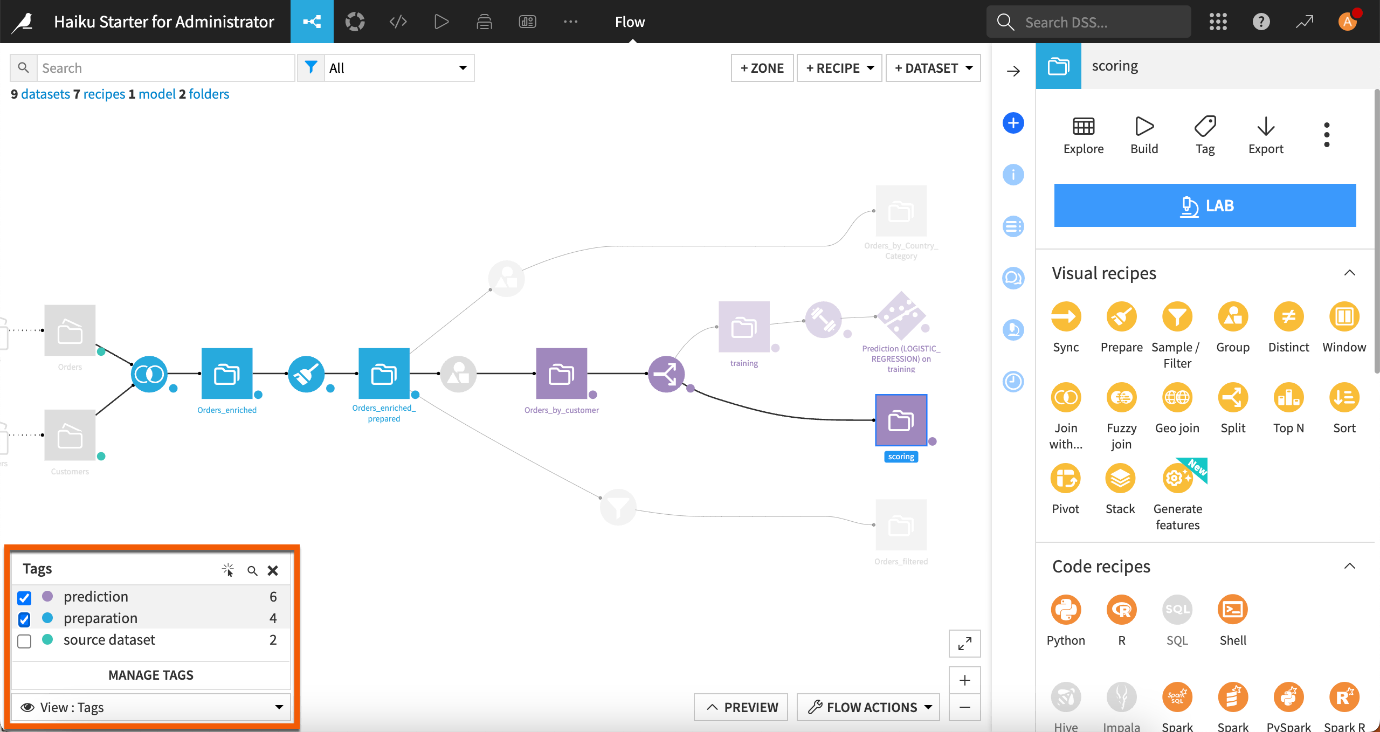
When there are too many objects on the screen, you can add tags to the different items of the Flow then use these tags to select which parts of the Flow to view. Tags can be based on attributes such as creator, purpose, status and so on.

[](https://academy-content.dataiku.com/latest/_images/tags-in-the-flow.png)

* **Filtering the Flow**

The View menu from the bottom left corner of your Flow lets you filter the Flow based on different elements such as Flow zones, tags, connections, recipe engines, the last modification date, etc.

For example, you can show or hide parts of the Flow by selecting or unselecting some tags to decrease the overall number of objects that appear on the screen.

[](https://academy-content.dataiku.com/latest/_images/filters-on-tags.png)

For more information, see the [Concept | Flow views](https://academy-content.dataiku.com/latest/getting-started/dataiku-ui/concept-flow-views.html?opals=true).

* **Building the Flow**

The **Flow Actions** dropdown at the bottom right of the Flow includes a **Build all** menu to build the entire Flow.

Yet, you can also right click on any item in the Flow and select the **Build** menu from there.

Keep in mind that the Flow in Dataiku has an awareness of the relationships and dependencies between datasets in your project. For example, if you make changes to a dataset or recipe, you may choose to dynamically rebuild dependent items upstream or downstream in your Flow to reflect the update.

For more information, see the [Concept | Build modes](https://academy-content.dataiku.com/latest/data-preparation/pipelines/concept-dataset-build-modes.html?opals=true) article.