

Cloudera Data Catalog Top Use Cases

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The Cloudera logo is displayed in a bold, orange, sans-serif font. The word "CLOUDERA" is written in all caps, with a stylized 'E' that has three horizontal bars.

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Contents

Search overview.....	4
Launching profilers in Compute Cluster enabled environments.....	6
Launching profilers in VM based environments.....	11
Configuring the Activity Profiler.....	14
Configuring the Ranger Audit Profiler.....	17
Configuring the Data Compliance profiler.....	18
Configuring the Cluster Sensitivity Profiler.....	24
Configuring the Statistics Collector profiler.....	26
Configuring the Hive Column Profiler.....	32
Atlas tag management.....	36
Creating tag rules in compute cluster environments.....	38
Creating tag rules in VM based environments.....	43

Search overview

On the Cloudera Data Catalog **Search** page, select a data lake and enter a search string in the search box to view all the assets with details that contain the search string.

When you enter the search terms in **Search**, you are looking up names, types, descriptions, and other metadata collected by Cloudera Data Catalog. The search index includes metadata (not data) about your environment and cluster data assets and operations. You can make the search more powerful by associating your own information (business metadata) to the stored assets.

Accessing data lakes

Users have access to the lakes based on the permissions that are granted. You can choose the available lake by selecting the appropriate radio button.

The screenshot shows the Cloudera Data Catalog Search interface. A sidebar on the left contains navigation links. The main content area has a search bar and a 'Data Lakes' dropdown menu that is currently open, showing three options: 'dc-qe-edl-env-v1', '-env-v1', and '-env-v2'. Below the dropdown, there are filter buttons for 'Type', 'Owner', 'Entity Tag', and 'Glossary Terms', along with a 'Clear All' button. On the right, there are buttons for 'Atlas', 'Ranger', 'Refresh', 'Download CSV', and 'Delete Profiler'. The main table displays search results with columns: Name, Created On, Owner, Source, and Action. The table lists various assets including 'HBase Namespace', 'HBase Table', and several 'HBase Column Family' entries.

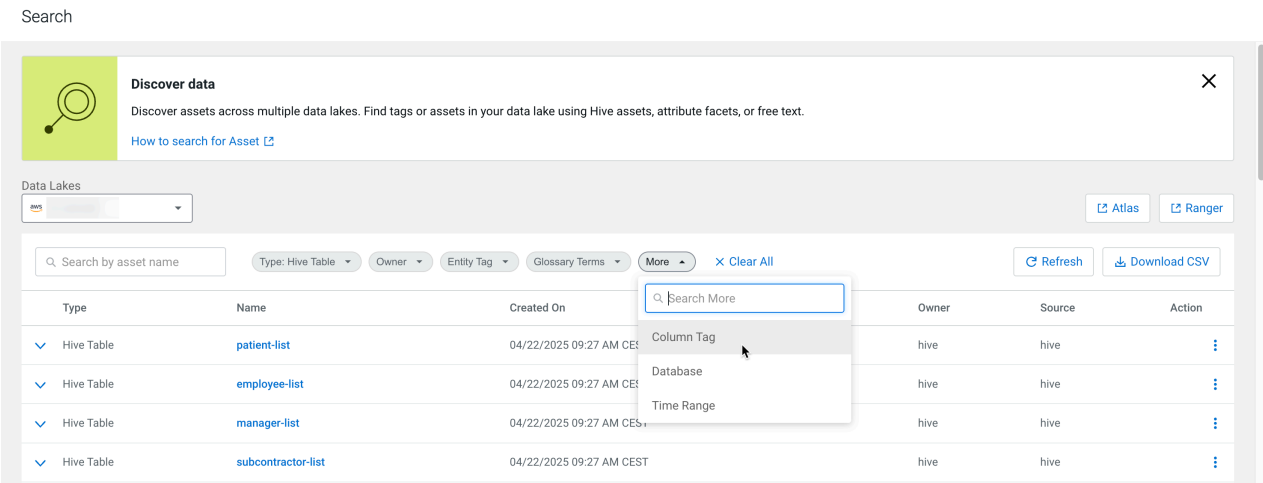


Note:

- You can search the assets of one data lake at a time.
- For the selected data lake, click the Atlas and Ranger links to go to the respective base cluster services in a new browser tab.

Using search filters

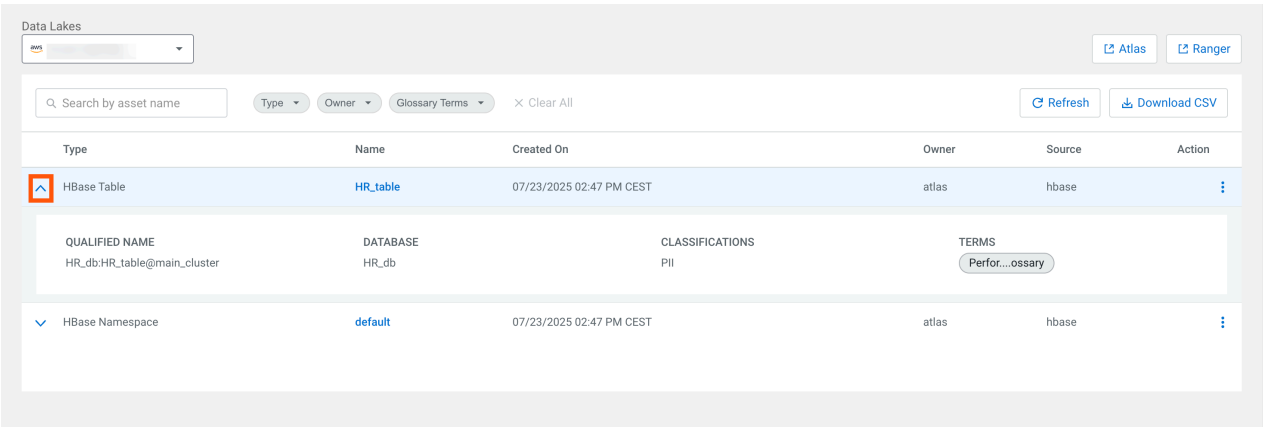
Use the search filter to fine-tune your results. By selecting a type, additional filter options become available and irrelevant filters are hidden. For example, after selecting Hive Table, the Column Tag, Database and Time Range filters are shown under More.



Viewing Asset Details

Clicking the icon for a search result shows the most important data about an asset:

- Qualified name:** - Qualified names are a unique identifier in Cloudera Data Catalog, identifying the asset with its context.
- A Hive table has the following qualified name patterns: *DATABASE_NAME.TABLE_NAME@CLUSTER_NAME*
- Database**
- Classifications** (Atlas tags)
- Terms**



Clicking the Name of the entity will open its **Asset Details**.

Downloading search results as CSV files

You can also download the search result for the current query with the selected data lake. The feature allows you to download up to 10000 rows for the current search query.

The CSV file format does not conform to any specific order or continuation in the downloaded results. For example, a user can download 10000 assets and later downloads the results for the same query again, then the downloaded CSV files may not contain the search results in the same order as it was downloaded previously.

Click Download CSV to start your download:

Related Information

[Datasets overview](#)

[Filters](#)

[Integrating Cloudera Data Catalog with AWS Glue Data Catalog](#)

[Prerequisites for accessing Hue tables and databases](#)

[Searching for assets using Atlas glossaries](#)

[Additional search options for asset types](#)

[Accessing tables based on Ranger policies](#)

[Viewing Data Asset details](#)

Launching profilers in Compute Cluster enabled environments

In Compute Cluster enabled environments, after you set up the Kubernetes profiler node group, the Profiler Launcher Service (PLS) keeps checking the availability of the node group automatically. Once the node group is ready, the PLS provisions the selected profilers by starting CRON jobs in the Kubernetes node groups.

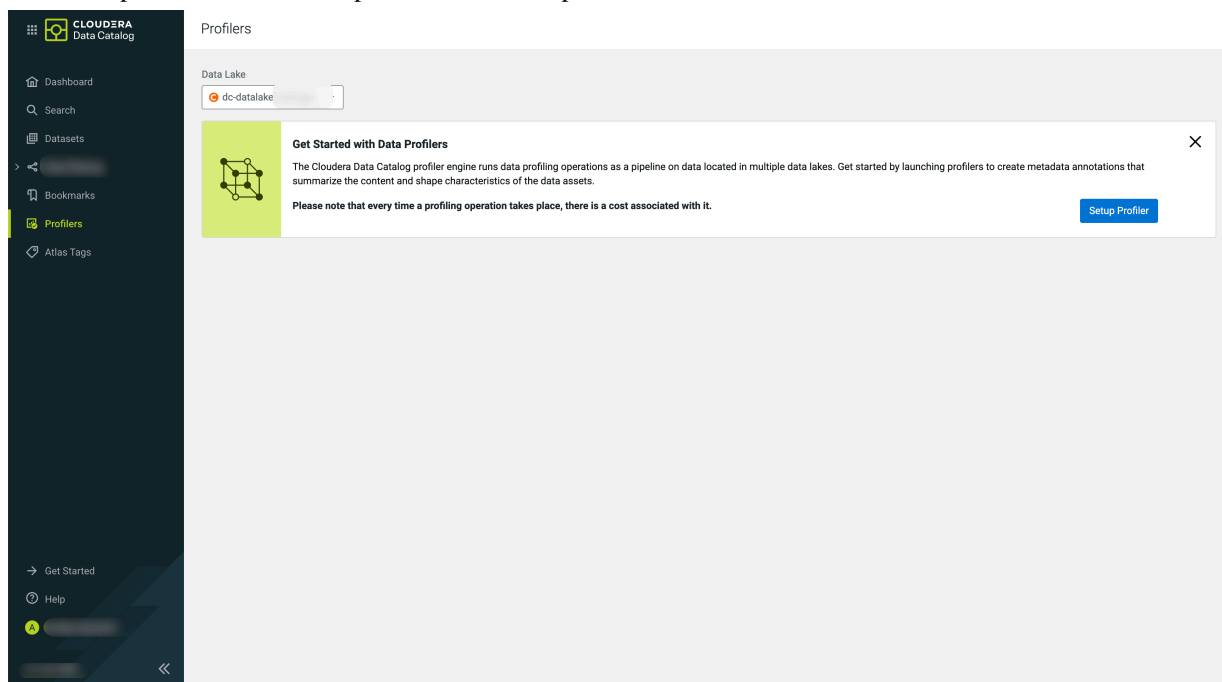


Note: You must be a Power User to launch a profiler cluster.

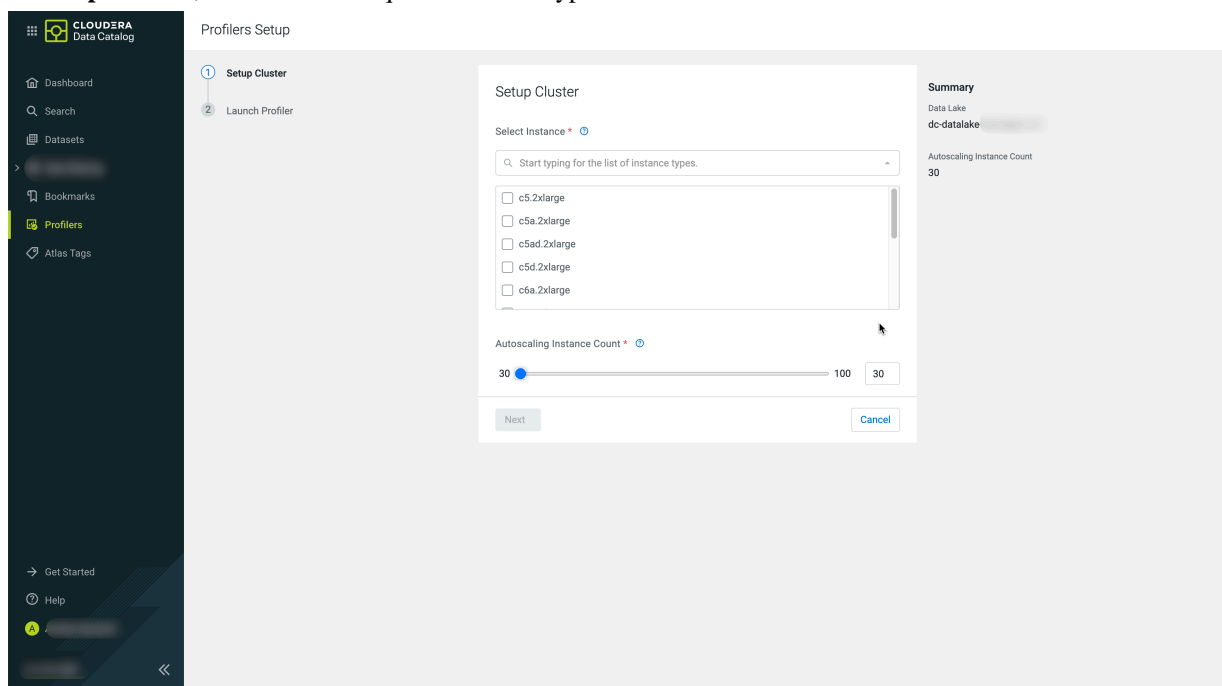
How to launch the profiler for Compute Cluster enabled environments

1. On the **Profilers** page, select the data lake from which you want to launch the profiler cluster.

2. Click Setup Profiler, to start the profiler cluster setup.



3. In **Setup Cluster**, search for the required instance types:

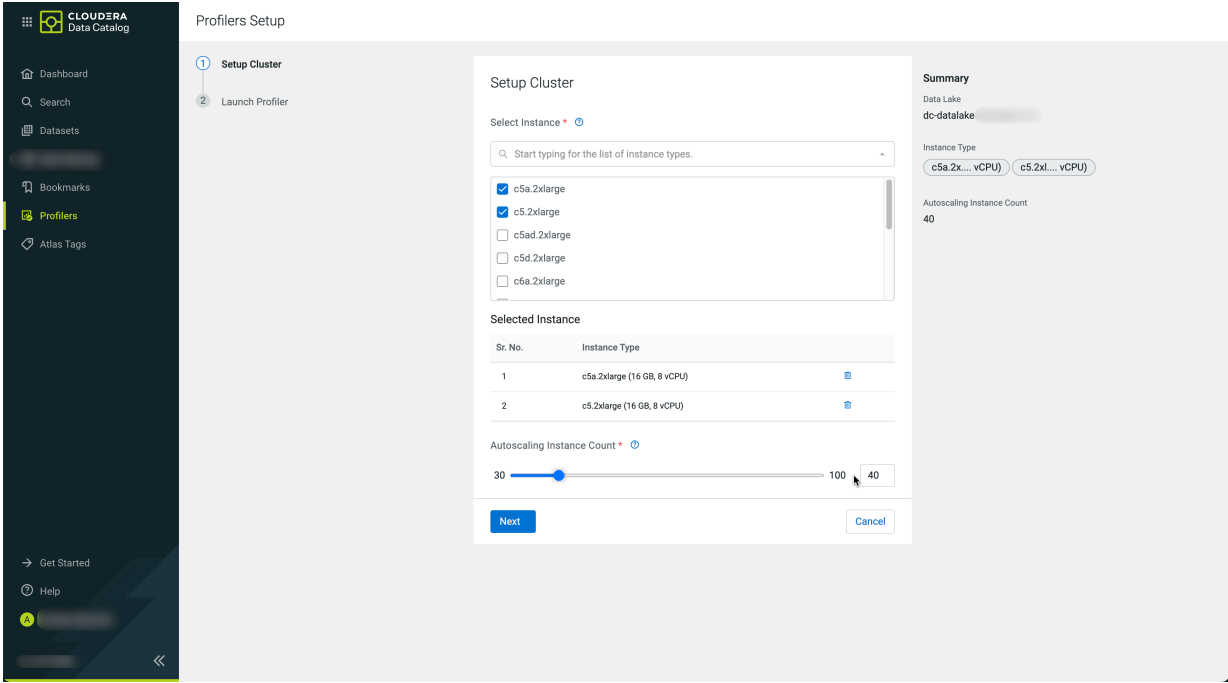


The available instance types depend on the cloud provider of the underlying environment. Choose from them based on your performance and cost requirements.



Note: For more information, see [Amazon EC2 Instance types](#) or [Azure Virtual Machine series](#).

4. Select your required instances and set the Autoscaling instance count to define maximum number of workers. The underlying Apache Spark service will manage the actual number of used instances based on workload.



5. Click Next.

6. Select the necessary profilers to be launched.



Note: Profilers can be launched later as well. Also, their configuration can be changed after launching them.

Profilers Setup

✓ Setup Cluster

2 Launch Profiler

Launch Profiler

Activity Profiler

Monitor how your data is being used and who it's used by.

Profiler Configuration :

WORKER MEM LIMIT:

4G

NUM WORKERS:

4

THREAD PER WORKER:

3

CRON EXPRESSION:

0 0 ***

Data Compliance Profiler

Ensure your data is compliant by keeping track of sensitive data types.

Profiler Configuration :

WORKER MEM LIMIT:

11G

NUM WORKERS:

10

THREAD PER WORKER:

3

CRON EXPRESSION:

0 0 ***

LAST RUN:

Over a period of 2 days

Table Statistics Profiler

Understand the shape of your data with columnar metrics.

Profiler Configuration :

WORKER MEM LIMIT:

11G

NUM WORKERS:

10

THREAD PER WORKER:

3

CRON EXPRESSION:

0 0 ***

LAST RUN:

Over a period of 2 days

< Previous

Start Setup

Cancel

Summary

Data Lake

dc-datalake-l

Instance Type

c5a.2x... vCPU

c5.2xl... vCPU

Autoscaling Instance Count

40

Profilers

Activity

Data C...liance

Table ...istics

7. Once the cluster is ready to accept Kubernetes profiler jobs, you can start the individual profilers by clicking Launch. If the profiler jobs were scheduled earlier, they will be automatically assigned to the finished Kubernetes node group.



Note: The readiness of the Kubernetes node group can be checked in Cloudera Management Console Environments <***YOUR_ENVIRONMENT***> Compute Clusters . The worker node group is created by the Liftie service. The expected setup time is around 15 to 30 minutes.

Profilers

Data Lake
dc-datalake-hydrogen... [Refresh](#)

Get Started with Data Profilers
The Cloudera Data Catalog profiler engine runs data profiling operations as a pipeline on data located in multiple data lakes. Get started by launching profilers to create metadata annotations that summarize the content and shape characteristics of the data assets. **Please note that every time you start a compute operation, there is a cost associated to it.**

Activity Profiler
Monitor how your data is being used and who it is used by. [Launch](#)

Data Compliance Profiler
Ensure your data is compliant by keeping track of sensitive data types. [Launch](#)

Statistics Collector Profiler
Understand the shape of your data with columnar metrics. [Launch](#)

Verifying the profiler cluster for Compute Cluster enabled environments

As a final step, you can verify that the node group is ready for the profiler jobs under the Cloudera Management Console Environments Compute Clusters Node Groups pane.

Environments / v2 / Compute Clusters

v2
cm.cdp.environments:us-west-1:9d74eee4-1cad-45d7-b645-7ccf9edbb73d:environment:38a40b34-89fb-4f75-a5fa-8a17b090a52e
US West (Oregon) - us-west-2

[Stop](#) [Actions](#)

Data Lake Details

NAME v2	NODES 2 0 0	SCALE Light Duty	QUICK LINKS Atlas Ranger Data Catalog
STATUS Running	STATUS REASON N/A	CRN ...	

Data Hubs Data Lake FreeIPA **Compute Clusters** Cluster Definitions Summary

1 Compute Clusters [Refresh](#)

[Add Compute Cluster](#)

Status	Name	CRN
Running	default-... compute-cluster Default Cluster	...

1 - 1 of 1 |< >| Items per page: 25

Launching profilers in VM based environments

In VM-based environments, you must first provision the Cloudera Data Hub to launch the profiler cluster to view the profiler results for your assets.



Note: You must be a Power User to launch a profiler cluster.

Profiler cluster in VM based environments

The Profiler Services supports enabling the High Availability (HA) feature.



Note: The profiler HA feature is under entitlement. Based on the entitlement, the HA functionality is supported on the Profiler cluster. Contact your Cloudera account representative to activate this feature in your Cloudera environment.



Attention: By default when you launch a profiler cluster, the instance type of the Master node will be the following based on the provider:

- AWS - m5.4xlarge
- Azure - Standard_D16_v3
- GCP - e2-standard-16

There are two types of Profiler Services:

- Profiler Manager
- Profiler Scheduler

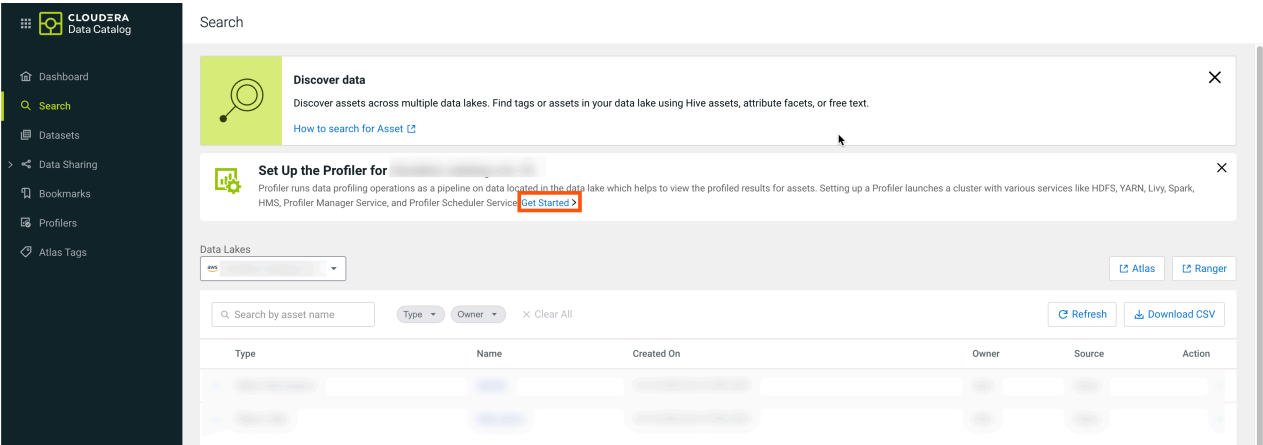
The Profiler Manager service consists of profiler administrators, metrics, and data discovery services. These three entities support HA. The HA feature supports Active-Active mode.



Important: The Profiler Scheduler service does not support the HA functionality.

How to launch the profiler cluster for VM based environments

On the **Search** page, select the data lake from which you want to launch the profiler cluster. Click the Get Started link to proceed.



Profiler Setup - [redacted]

Setting up the profiler enables the cluster to fetch the data related to the profiled assets. The profiled assets contain summarized information pertaining to Cluster Sensitivity Profiler, Ranger Audit Profiler, and Hive Column Profiler.

☐ **Enable High Availability**

The Profiler High Availability (HA) cluster provides failure resilience for several of the services, including Knox, HDFS, YARN, HMS, and Profiler Manager Service. Services that do not run in HA mode yet include Cloudera Manager, Livy, and Profiler Scheduler Service.

Setup Profiler

For setting up the profiler, you have the option to enable or disable the HA.

Profiler Setup -

Setting up the profiler enables the cluster to fetch the data related to the profiled assets. The profiled assets contain summarized information pertaining to Cluster Sensitivity Profiler, Ranger Audit Profiler, and Hive Column Profiler.


☒ Enable High Availability

The Profiler High Availability (HA) cluster provides failure resilience for several of the services, including Knox, HDFS, YARN, HMS, and Profiler Manager Service. Services that do not run in HA mode yet include Cloudera Manager, Livy, and Profiler Scheduler Service.


When enabled, the HA Profiler cluster provides greater resiliency and scalability by using more virtual machines that incur additional corresponding cloud provider costs.

Setup Profiler

Once you enable HA and click Setup Profiler, Cloudera Data Catalog processes the request and the profiler creation is in progress.

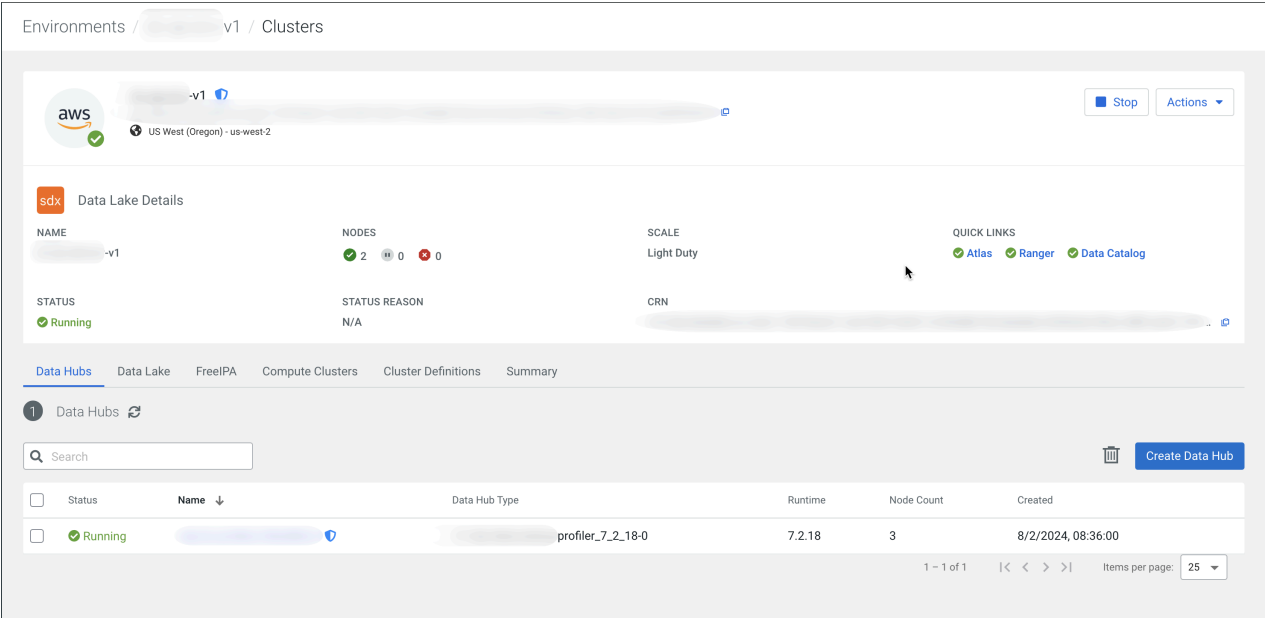
Profiler Cluster is being created						
	2619					Action
<input type="checkbox"/> Type	Name	Qualified Name	Created On	Owner	Source	
<input type="checkbox"/> Azure Container	container	abfs://container@sparktestingstorage...	-NA-	-NA-	adls	
<input type="checkbox"/> AWS S3 V2 Bucket	s3-extractor-test	s3a://s3-extractor-test@cm	-NA-	-NA-	aws	
<input type="checkbox"/> Hive Table	lounge	airline.lounge@cm	Mon Oct 04 2021	hrt_1	hive	

Later, a confirmation message appears that the profiler cluster is created.

Profiler Cluster is provisioned successfully						
	2619					Action
<input type="checkbox"/> Type	Name	Qualified Name	Created On	Owner	Source	
<input type="checkbox"/> Azure Container	container	abfs://container@sparktestingstorage...	-NA-	-NA-	adls	
<input type="checkbox"/> AWS S3 V2 Bucket	s3-extractor-test	s3a://s3-extractor-test@cm	-NA-	-NA-	aws	
<input type="checkbox"/> Hive Table	lounge	airline.lounge@cm	Mon Oct 04 2021	hrt_1	hive	

Next, you can verify the profiler cluster creation under Cloudera Management Console Environments Data Hubs pane.

The newly created profiler cluster looks like the following in Cloudera Management Console:



Configuring the Activity Profiler

Configure the scheduling and the available resources for your profiler.

Procedure

- 1. Go to **Profilers** and select your data lake.
- 2. Go to **Profilers Activity Profiler Profiler Details Configuration All Configurations**

3. Select a schedule to run profiler using either UNIX Cron Expression or the Basic scheduler.



Note: Both the Basic and Cron Expression scheduler (Unix in Compute Cluster enabled environments cron jobs) use the UTC timezone instead of the local timezone of the user.

Figure 1: Profiler schedule with cron expression

Profiler Configuration

Schedule *

☐ Basic ☒ Cron Expression ?

The CRON expression for the profiling job will run according to UTC time zone. A sample expression is [30 7 * * *] for running jobs at 07:30(am) everyday.

Cron Expression *

5 10 * * *

Figure 2: Profiler schedule with natural language

Profiler Configuration

Schedule *

☒ Basic ☐ Cron Expression ?

At 40 minute of 15 hours on every day of every month on every day of week

Maximum number of executors * ?

4

Maximum cores per executor * ?

3

Executor memory limit in GBs * ?

4G

Save

Cancel



Note:

Compute Cluster based profilers might hang if the underlying AWS cloud provider environment cannot provide the necessary memory for the executor instances. In this case, reconfigure your executors with 4-5 GB memory in Profiler Details Configuration .

4. Continue with resource settings:

a) Set the Maximum number of executors

Indicates the number of processes that are used by the distributed computing framework. The recommended value is at least four executors.

b) Set the Maximum cores per executor

Indicates the maximum number of cores that can be allocated to an executor.

c) Set the Executor memory limit in GBs

Maximum number of executors * 

Maximum cores per Executor * 

Executor memory limit in GBs * 

5. Click Save to apply the configuration changes to the selected profiler.

Configuring the Ranger Audit Profiler

In addition to the generic configuration, there are additional parameters for the Ranger Audit Profiler that can be optionally edited.

Procedure

- 1. Go to **Profilers** and select your data lake.
- 2. Go to **Profilers Configs** .
- 3. Select Ranger Audit Profiler.
The **Detail** page is displayed.
- 4.



Use the toggle button to enable or disable the profiler.

- 5. Select a schedule to run the profiler using a quartz cron expression.



Note: Quartz CRON jobs (in VM-based environments) use the UTC timezone instead of the local timezone of the user.

Detail

Ranger Audit Profiler

Data Lake: dc-env1

With the Ranger audit Profiler, you can view who has accessed which data from a forensic audit or compliance perspective, visualize access patterns, and identify anomalies in access patterns.

Active

Schedule*

0 */30 * ? * *

^ Advanced Options

Number of Executors*

1

Executor Cores*

1

Executor Memory (in GB)*

1

Driver Core*

1

Driver Memory (in GB)*

1

Save

Cancel

6. Continue with the resource settings.

- In **Advanced Options**, set the following:

- Number of Executors - Enter the number of executors to launch for running this profiler.
- Executor Cores - Enter the number of cores to be used for each executor.
- Executor Memory - Enter the amount of memory in GB to be used per executor process.
- Driver Cores - Enter the number of cores to be used for the driver process.
- Driver Memory - Enter the memory to be used for the driver processes.



Note: For more information, see [Configuring SPARK on YARN Applications](#) and [Tuning Resource Allocation](#).

7. Click Save to apply the configuration changes to the selected profiler.

Configuring the Data Compliance profiler

You can configure the scheduling and the available resources for your profiler.

Procedure

1. Go to **Profilers** and select your data lake.
2. Go to **Profilers Data Compliance Profiler Details Configuration All Configurations**
3. Select a schedule to run profiler using either UNIX Cron Expression or the Basic scheduler.



Note: Both the Basic and Cron Expression scheduler (Unix in Compute Cluster enabled environments cron jobs) use the UTC timezone instead of the local timezone of the user.

Figure 3: Profiler schedule with cron expression

Profiler Configuration

Schedule *

☐ Basic ☒ Cron Expression ?

The CRON expression for the profiling job will run according to UTC time zone. A sample expression is [30 7 ***] for running jobs at 07:30(am) everyday.

Cron Expression *

5 10 ***

Figure 4: Profiler schedule with natural language

Profiler Configuration

Schedule *

☒ Basic ☐ Cron Expression ?

At 10 minute of 10 hours on every day of every month on every day of week

☒ Incremental Profiling *

☒ Last Run Check *

Incremental profiling processes only the data that has changed since the last job. Currently, Iceberg tables are supported.

4. Select Incremental Profiling when needed.

Using Incremental Profiling can decrease the compute resources and the time needed for the profiling job by processing only the information (only Iceberg tables) updated or added since previous job.

Using Incremental Profiling, you can refine the results from the Last Run Check. Incremental Profiling checks the data (rows) in assets, while Last Run Check filters complete assets.

5. Select Last Run Check and set a period in Day Range if needed.

**Note:**

The Last Run Check enables profilers to avoid profiling the same asset on each scheduled run.

If you have scheduled a cron job, for example set to start in about an hour, and have enabled the Last Run Check configuration for two days, this setup ensures that the job scheduler filters out any asset which was already profiled in the last two days.

If the Last Run Check configuration is disabled, assets will be picked up for profiling as per the job cron schedule, honoring the asset filter rules.

The Last Run Check precedes Incremental Profiling.

6. Continue with resource settings:

a) Set the Maximum number of executors

Indicates the number of processes that are used by the distributed computing framework. The recommended value is at least 10 executors.

b) Set the Maximum cores per executor

Indicates the maximum number of cores that can be allocated to an executor.

c) Set the Executor memory limit in GBs

Maximum number of executors * 

Maximum cores per Executor * 

Executor memory limit in GBs * 

**Note:**



Compute Cluster based profilers might hang if the underlying AWS cloud provider environment cannot provide the necessary memory for the executor instances. In this case, reconfigure your executors with 4-5 GB memory in Profiler Details Configuration .

7. Click Save to apply the configuration changes to the selected profiler.

8. Add **Asset Filtering Rules** as needed to customize the selection and deselection of assets which the profiler profiles.

**Note:**

- Profiler configurations apply to both scheduled and on-demand profiler jobs.
- Asset filtering rules apply to assets, such as tables, and not to complete databases.
- Multiple asset filtering rules are evaluated together as if connected by the OR operator.
- In Compute Cluster environments, you cannot enable conflicting Allow and Deny list rules at the same time. Enabling conflicting rules results in an error message.

 Request to create profiler asset filter rule failed. One or more rules with the same condition already exist in your Allow or Deny list. In case it is in the other list, you can disable the rule from that list and retry. 

a) Set your **Deny List** and **Allow-list**.

The profiler will skip profiling assets that meet any criteria in the **Deny List** and will include assets that meet any criteria in the **Allow List**.

1. Click Add New Rule to define new rules.
2. Use the radio buttons to define your new rule for the Allow or Deny List.
3. Select the key from the drop-down list and the relevant operator. You can select from the following:

Key	Operator
Database name	<ul style="list-style-type: none"> • equals • starts with • ends with
Name (of asset)	<ul style="list-style-type: none"> • equals
Owner (of asset)	<ul style="list-style-type: none"> • contains • starts with • ends with

Key	Operator
Creation date ¹	<ul style="list-style-type: none">greater thanless than



Note: **Name** refers here to the actual name of the asset and not to its **Qualified Name**.

- 4. Enter the value corresponding to the key. For example, you can enter a string as mentioned in the previous example.
- 5. Click Add Rule. Once a rule is added (enabled by default), you can toggle the state of the new rule to enable it or disable it as needed.

New Rule

☒ Allow ☐ Deny

Database Name

equals

airline_operations

Creation Date

greater than

1 days ago

⊕ [Add Row]

Add Rule

Cancel



Note: You can check the list of assets impacted by your rule by clicking > Affected Assets.

Deny List

Status	Condition	Last Modified On	Updated By	Action
	Database Name starts with airline_operations	09/30/2025 06:25 PM CEST	csso_aszuromi	<div><div>Affected Assets</div><div>Edit</div><div>Delete</div></div>

Figure 5: Affected Assets in Asset Filtering Rules configuration

¹ By Creation Date, Greater than 7 days means an asset older than seven days. Less than 7 days means an asset younger than seven days.



Affected Assets

Assets affected by **Database Name starts with airline_operations**

- [airline_operations.route_performance_archive_hive@cm](#)
- [airline_operations.raw_bookings@cm](#)
- [airline_operations.dim_aircraft@cm](#)
- [airline_operations.stg_flight_manifests@cm](#)
- [airline_operations.enriched_flight_data@cm](#)
- [airline_operations.agg_route_performance@cm](#)

Job Summary shows the asset filtering rules applied for the particular profiling job:

Profilers Details

Home / Profilers / Profilers Details

Statistics Collector Profiler

RECENT JOB ID

RGFFDQAH

TOTAL JOBS

8

TOTAL PROFILED ASSETS

9

LAST RUN

09/30/2025 06:39 PM CEST

Job History

Configuration

Search by Job Id

Status

Time Range

Job Type

Clear All

The Job History shows the profiling jobs started in the last 30 days by default.

Status	Job Id	Job Type	Started On
✓	RGFFDQAH	Scheduled	09/30/2025 06:39 PM CEST
✓	NMJUQP9I	Scheduled	09/30/2025 06:33 PM CEST
✓	KXRVJP6S	Scheduled	09/30/2025 05:42 PM CEST
✓	7UUJVWG6	Scheduled	09/30/2025 05:30 PM CEST
✓	JRCQNBZQ	Scheduled	09/30/2025 05:22 PM CEST
✓	36B6SSCP	Scheduled	09/30/2025 05:10 PM CEST
✓	6XDKRX80	Scheduled	09/30/2025 12:16 PM CEST
✓	AQNTVACQ	Scheduled	09/30/2025 12:07 PM CEST

Job Summary

Details

Profiled Assets

Asset Filtering Rules

Search allow or deny rules

Allow List

Rule ID	Condition
1152	Name starts with "airlines_new"

Deny List

Rule ID	Condition
1154	Database Name starts with "airline_operations"

Close

Configuring the Cluster Sensitivity Profiler

In addition to the generic configuration, there are additional parameters for the Cluster Sensitivity Profiler that can be optionally edited.

Before you begin

You need the DataCatalogCspRuleManager role, to create, to deploy new Custom Sensitivity Profiler rules, to create new regex expressions, and to run validations on newly created rules.

Procedure

- 1. Go to **Profilers** and select your data lake.
 - 2. Go to **Profilers Configs** .
 - 3. Select Cluster Sensitivity Profiler.
- The **Detail** page is displayed which contains the following sections:

Detail

Cluster Sensitivity Profiler

Data Lake: **dc-env1**

The Cluster Sensitivity Profiler automatically performs context and content inspection to detect various types of sensitive data. It also suggests suitable classifications or tags based on the type of sensitive content detected or discovered.

☒ Active

Schedule*

0 20 *** ?

Last Run Check*

☒

2 Days

Sample Data Size *

Number of Rows

100

Advanced Options

Number of Executors*

1

Executor Cores*

1

Executor Memory (in GB)*


1

Driver Core*

1

Driver Memory (in GB)*

1

- 4.  to enable or disable the profiler.
 - 5. Select a schedule to run the profiler. This is implemented as a quartz cron expression.
- For more information, see [Understanding the Cron Expression generator](#).

6. Select Last Run Check and set a period if needed.



Note:

The Last Run Check enables profilers to avoid profiling the same asset on each scheduled run.

If you have scheduled a cron job, for example set to start in about an hour, and have enabled the Last Run Check configuration for two days, this setup ensures that the job scheduler filters out any asset which was already profiled in the last two days.

If the Last Run Check configuration is disabled, assets will be picked up for profiling as per the job cron schedule, honoring the asset filter rules.

7. Set the sample settings for VM-based environments:

- a. Select the **Sample Data Size**.

1. From the drop down, select the type of sample data size.
2. Enter the value based on the previously selected type.

8. Continue with the resource settings.

- a. In **Advanced Options**, set the following:

- Number of Executors - Enter the number of executors to launch for running this profiler.
- Executor Cores - Enter the number of cores to be used for each executor.
- Executor Memory - Enter the amount of memory in GB to be used per executor process.
- Driver Cores - Enter the number of cores to be used for the driver process.
- Driver Memory - Enter the memory to be used for the driver processes.



Note: For more information, see [Configuring SPARK on YARN Applications](#) and [Tuning Resource Allocation](#).

9. Click Save to apply the configuration changes to the selected profiler.

10. Add **Asset Filter Rules** as needed to customize the selection and deselection of assets which the profiler profiles.



Note:

- Profiler configurations apply to both scheduled and on-demand profiler jobs.
- Asset filtering rules apply to assets, such as tables, and not to complete databases.
- Multiple asset filtering rules are evaluated together as if connected by the OR operator.
- In VM based environments, Deny lists are prioritized over Allow lists.

For example adding a regular expression for a database to the Deny list and adding a regular expression for a table within the first database to the Allow list will result in both entities filtered out. On the other hand, you can include all entities except one from a database by adding the database to the Allow list. Then, add the particular entity from the database to the Deny List.

- a) Set your **Deny List** and **Allow-list**.

The profiler will skip profiling assets that meet any criteria in the **Deny List** and will include assets that meet any criteria in the **Allow List**.

1. Select the **Deny-list** or **Allow List** tab.
2. Click Add New to define new rules.
3. Select the key from the drop-down list and the relevant operator. You can select from the following:

Key	Operator
Database name	<ul style="list-style-type: none"> • equals • starts with • ends with

Key	Operator
Name (of asset)	<ul style="list-style-type: none"> • equals • contains • starts with • ends with
Owner (of asset)	
Creation date ²	<ul style="list-style-type: none"> • greater than • less than



Note: **Name** refers here to the actual name of the asset and not to its **Qualified Name**.

4. Enter the value corresponding to the key. For example, you can enter a string as mentioned in the previous example.
5. Click Add Rule. Once a rule is added (enabled by default), you can toggle the state of the new rule to enable it or disable it as needed.

New Rule



☒ Allow ☐ Deny

Database Name ▼	equals ▼	airline_operations	
Creation Date ▼	greater than ▼	1 days ago ▼	

[⊕ \[Add Row\]](#)

Add Rule

Cancel

Configuring the Statistics Collector profiler

You can configure the scheduling and the available resources for your profiler.

Procedure

1. Go to **Profilers** and select your data lake.

² By Creation Date, Greater than 7 days means an asset older than seven days. Less than 7 days means an asset younger than seven days.

2. Select a schedule to run profiler using either UNIX Cron Expression or the Basic scheduler



Note: Both the Basic and Cron Expression scheduler (Unix in Compute Cluster enabled environments cron jobs) use the UTC timezone instead of the local timezone of the user.

Figure 6: Profiler schedule with cron expression

Profiler Configuration

Schedule *

☐ Basic ☒ Cron Expression ?

The CRON expression for the profiling job will run according to UTC time zone. A sample expression is [30 7 * * *] for running jobs at 07:30(am) everyday.

Cron Expression *

5 10 * * *

Figure 7: Profiler schedule with natural language

Profiler Configuration

Schedule *

☒ Basic ☐ Cron Expression ?

At 10 minute of 10 hours on every day of every month on every day of week

☒ Incremental Profiling *

☒ Last Run Check *

Incremental profiling processes only the data that has changed since the last job. Currently, Iceberg tables are supported.

3. Select Incremental Profiling when needed.

Using Incremental Profiling can decrease the compute resources and the time needed for the profiling job by processing only the information (only Iceberg tables) updated or added since previous job.

Using Incremental Profiling, you can refine the results from the Last Run Check. Incremental Profiling checks the data (rows) in assets, while Last Run Check filters complete assets.



Note: By Statistics Collector Profilers, the profiler compares the aggregated metrics between old and newly added data. Depending on the differences, this can slightly skew results. It is highly recommended to process the complete dataset time to time for the most accurate results.

4. Select Last Run Check and set a period in Day Range if needed.



Note:

The Last Run Check enables profilers to avoid profiling the same asset on each scheduled run.

If you have scheduled a cron job, for example set to start in about an hour, and have enabled the Last Run Check configuration for two days, this setup ensures that the job scheduler filters out any asset which was already profiled in the last two days.

If the Last Run Check configuration is disabled, assets will be picked up for profiling as per the job cron schedule, honoring the asset filter rules.

The Last Run Check precedes Incremental Profiling.

5. Continue with resource settings:

a) Set the Maximum number of executors

Indicates the number of workers that are used by the distributed computing framework. The recommended value is at least 10 executors.

b) Set the Maximum cores per executor

Indicates the maximum number of cores that can be allocated to an executor.

c) Set the Executor memory limit in GBs

Maximum number of executors * 

Maximum cores per Executor * 



Executor memory limit in GBs * 

6. Click Save to apply the configuration changes to the selected profiler.

7. Add **Asset Filtering Rules** as needed to customize the selection and deselection of assets which the profiler profiles.

**Note:**

- Profiler configurations apply to both scheduled and on-demand profiler jobs.
- Asset filtering rules apply to assets, such as tables, and not to complete databases.
- Multiple asset filtering rules are evaluated together as if connected by the OR operator.
- In Compute Cluster environments, you cannot enable conflicting Allow and Deny list rules at the same time. Enabling conflicting rules results in an error message.

 Request to create profiler asset filter rule failed. One or more rules with the same condition already exist in your Allow or Deny list. In case it is in the other list, you can disable the rule from that list and retry. 

- a) Set your **Deny List** and **Allow-list**.

The profiler will skip profiling assets that meet any criteria in the **Deny List** and will include assets that meet any criteria in the **Allow List**.

1. Click Add New Rule to define new rules.
2. Use the radio buttons to define your new rule for the Allow or Deny List.
3. Select the key from the drop-down list and the relevant operator. You can select from the following:

Key	Operator
Database name	<ul style="list-style-type: none"> • equals • starts with • ends with
Name (of asset)	<ul style="list-style-type: none"> • equals
Owner (of asset)	<ul style="list-style-type: none"> • contains • starts with • ends with

Key	Operator
Creation date ³	<ul style="list-style-type: none">greater thanless than



Note: **Name** refers here to the actual name of the asset and not to its **Qualified Name**.

- 4. Enter the value corresponding to the key. For example, you can enter a string as mentioned in the previous example.
- 5. Click Add Rule. Once a rule is added (enabled by default), you can toggle the state of the new rule to enable it or disable it as needed.

New Rule

☒ Allow ☐ Deny

Database Name

airline_operations

equals

greater than

Creation Date

1 days ago

✕

🗑

🗑

⊕ [Add Row]

Add Rule

Cancel



Note: You can check the list of assets impacted by your rule by clicking > Affected Assets.

Deny List

Status	Condition	Last Modified On	Updated By	Action
<input checked="" type="checkbox"/>	Database Name starts with airline_operations	09/30/2025 06:25 PM CEST	csso_aszuromi	<div>Affected Assets Edit Delete</div>

Figure 8: Affected Assets in Asset Filtering Rules configuration

³ By Creation Date, Greater than 7 days means an asset older than seven days. Less than 7 days means an asset younger than seven days.



Affected Assets

Assets affected by **Database Name starts with airline_operations**

- [airline_operations.route_performance_archive_hive@cm](#)
- [airline_operations.raw_bookings@cm](#)
- [airline_operations.dim_aircraft@cm](#)
- [airline_operations.stg_flight_manifests@cm](#)
- [airline_operations.enriched_flight_data@cm](#)
- [airline_operations.agg_route_performance@cm](#)

Job Summary shows the asset filtering rules applied for the particular profiling job:

Profilers Details

Profilers

Profilers Details

Statistics Collector Profiler

RECENT JOB ID

RGFFDQAH

TOTAL JOBS

8

TOTAL PROFILED ASSETS

9

LAST RUN

09/30/2025 06:39 PM CEST

Job History

Configuration

Search by Job Id

Status

Time Range

Job Type

Clear All

The Job History shows the profiling jobs started in the last 30 days by default.

Status	Job Id	Job Type	Started On
✓	RGFFDQAH	Scheduled	09/30/2025 06:39 PM CEST
✓	NMJUQP9I	Scheduled	09/30/2025 06:33 PM CEST
✓	KXRVJP6S	Scheduled	09/30/2025 05:42 PM CEST
✓	7UUJVWG6	Scheduled	09/30/2025 05:30 PM CEST
✓	JRCQNBZQ	Scheduled	09/30/2025 05:22 PM CEST
✓	36B6SSCP	Scheduled	09/30/2025 05:10 PM CEST
✓	6XDKRX80	Scheduled	09/30/2025 12:16 PM CEST
✓	AQNTVACQ	Scheduled	09/30/2025 12:07 PM CEST

Job Summary

Details

Profiled Assets

Asset Filtering Rules

Search allow or deny rules

Allow List

Rule ID	Condition
1152	Name starts with "airlines_new"

Deny List

Rule ID	Condition
1154	Database Name starts with "airline_operations"

Close

Configuring the Hive Column Profiler

In addition to the generic configuration, there are additional parameters for the Hive Column Profiler that can be optionally edited.

Procedure

1. Go to **Profilers** and select your data lake.
2. Go to **Profilers Configs**.

3. Select Hive Column Profiler.
The **Detail** page is displayed.

Detail

Hive Column Profiler

Data Lake: **dc-env1**

With the Hive Column Profiler, you can view the shape or distribution characteristics of the columnar data within a Hive table.

☒ Active

Schedule*

0 0 0/6 1/1 * ? *

Last Run Check*

☒

1 Day

Sample Data Size *

Sample Percentage

100

^ Advanced Options

Number of Executors*

1

?

Executor Cores*

1

?

Executor Memory (in GB)*

1

?

Driver Core*

1

?

Driver Memory (in GB)*

1

?

4.

☒ Active

Use the toggle button

to enable or disable the profiler.

5. Select a schedule to run the profiler. This is implemented as a quartz cron expression.



Note: Quartz CRON jobs (in VM-based environments) use the UTC timezone instead of the local timezone of the user.

For more information, see [Understanding the Cron Expression generator](#).

6. Select Last Run Check and set a period if needed.



Note:

The Last Run Check enables profilers to avoid profiling the same asset on each scheduled run.

If you have scheduled a cron job, for example set to start in about an hour, and have enabled the Last Run Check configuration for two days, this setup ensures that the job scheduler filters out any asset which was already profiled in the last two days.

If the Last Run Check configuration is disabled, assets will be picked up for profiling as per the job cron schedule, honoring the asset filter rules.

7. Set the sample settings:

- a. Select the **Sample Data Size**.

1. From the drop down, select the type of sample data size.
2. Enter the value based on the previously selected type.

8. Continue with the resource settings.

- a. In **Advanced Options**, set the following:

- Number of Executors - Enter the number of executors to launch for running this profiler.
- Executor Cores - Enter the number of cores to be used for each executor.
- Executor Memory - Enter the amount of memory in GB to be used per executor process.
- Driver Cores - Enter the number of cores to be used for the driver process.
- Driver Memory - Enter the memory to be used for the driver processes.



Note: For more information, see [Configuring SPARK on YARN Applications](#) and [Tuning Resource Allocation](#).

9. Click Save to apply the configuration changes to the selected profiler.

10. Add **Asset Filter Rules** as needed to customize the selection and deselection of assets which the profiler profiles.



Note:

- Profiler configurations apply to both scheduled and on-demand profiler jobs.
- Asset filtering rules apply to assets, such as tables, and not to complete databases.
- Multiple asset filtering rules are evaluated together as if connected by the OR operator.
- In VM based environments, Deny lists are prioritized over Allow lists.

For example adding a regular expression for a database to the Deny list and adding a regular expression for a table within the first database to the Allow list will result in both entities filtered out. On the other hand, you can include all entities except one from a database by adding the database to the Allow list. Then, add the particular entity from the database to the Deny List.

a) Set your **Deny List** and **Allow-list**.

The profiler will skip profiling assets that meet any criteria in the **Deny List** and will include assets that meet any criteria in the **Allow List**.

1. Select the **Deny-list** or **Allow List** tab.
2. Click Add New to define new rules.
3. Select the key from the drop-down list and the relevant operator. You can select from the following:

Key	Operator
Database name	<ul style="list-style-type: none"> • equals • starts with • ends with
Name (of asset)	<ul style="list-style-type: none"> • equals
Owner (of asset)	<ul style="list-style-type: none"> • contains • starts with • ends with

Key	Operator
Creation date ⁴	<ul style="list-style-type: none"> greater than less than



Note: **Name** refers here to the actual name of the asset and not to its **Qualified Name**.

4. Enter the value corresponding to the key. For example, you can enter a string as mentioned in the previous example.
5. Click Add Rule. Once a rule is added (enabled by default), you can toggle the state of the new rule to enable it or disable it as needed.

New Rule



☒ Allow ☐ Deny

Database Name ▼	equals ▼	airline_operations	
Creation Date ▼	greater than ▼	1 days ago ▼	

[⊕ \[Add Row\]](#)

Add Rule

Cancel

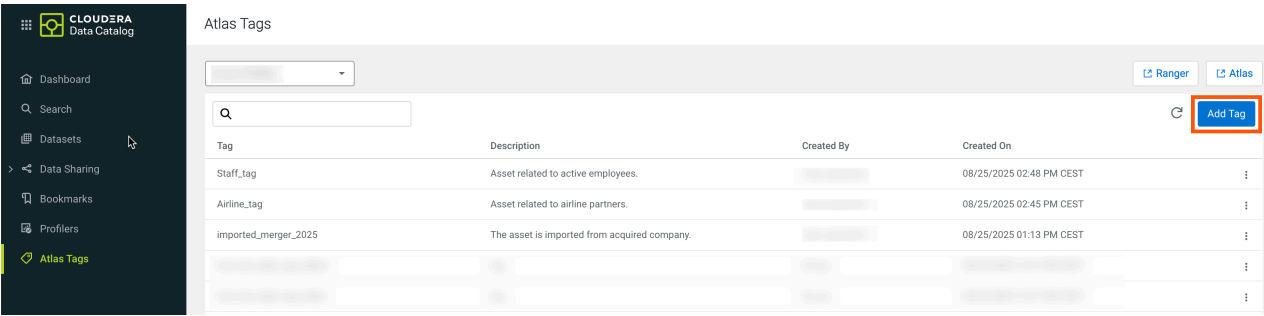
Atlas tag management

From the Atlas Tags menu, you can create, modify, and delete any of the Apache Atlas classifications to help data discovery and applying governance policies such as security and access control in Apache Ranger.


Creating Atlas tags

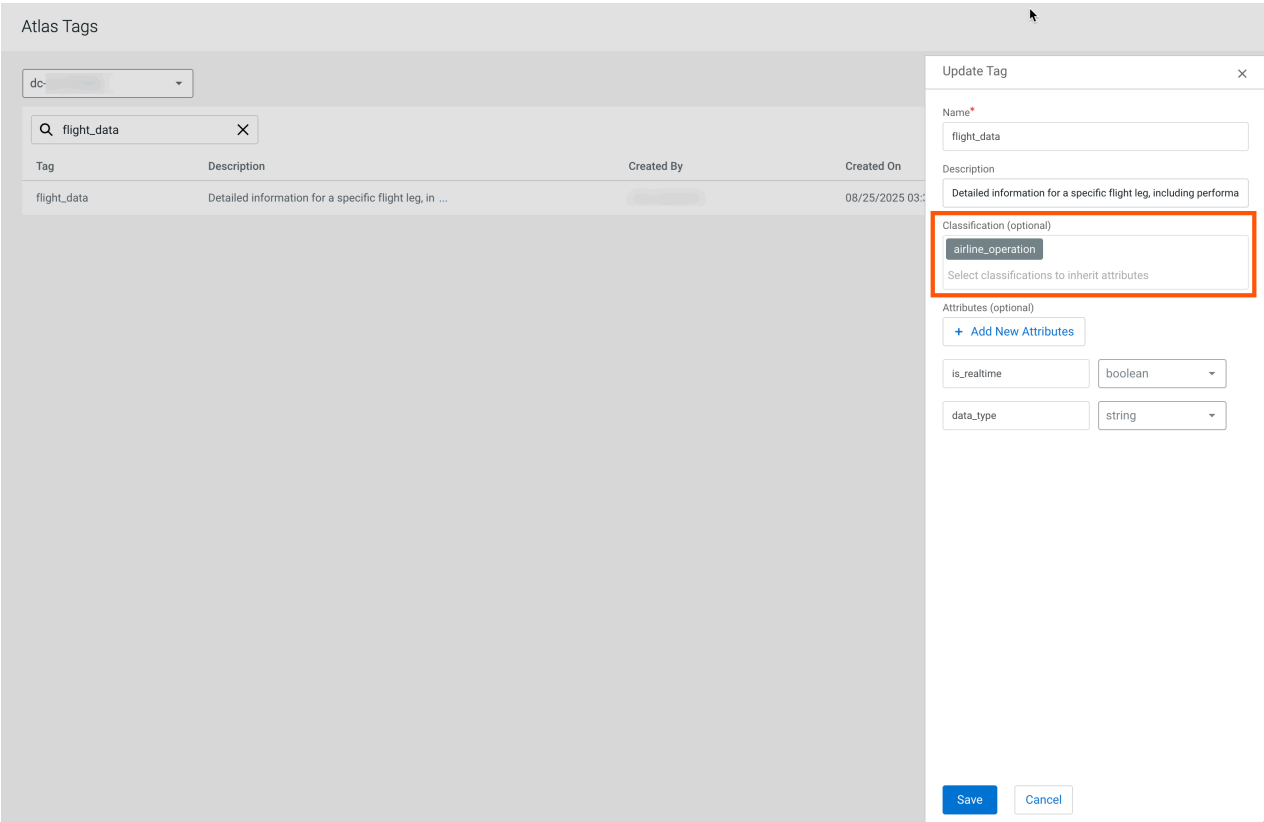
You can create a new Cloudera Data Catalog tag in the **Atlas Tags**, which are synced to Atlas. Click Add Tag to open the **Create a new tag** page.

⁴ By Creation Date, Greater than 7 days means an asset older than seven days. Less than 7 days means an asset younger than seven days.

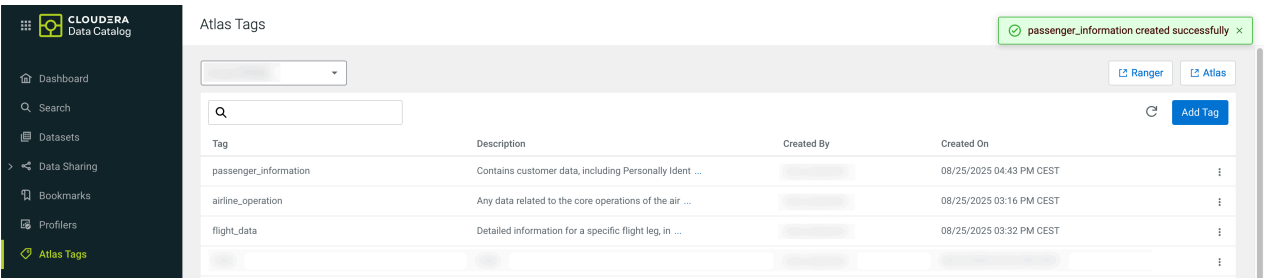


In **Create New Tag**, you can define the tag name, description and the "super-classification" from which the attributes are inherited for the sub-classification (or tag in Cloudera Data Catalog)

-  **Note:**
- Your classification still needs to be added to an asset in the **Search** or **Asset Details** menu.
 - The inherited attributes are shown in Atlas. In Cloudera Data Catalog, you can only see the super-classification.

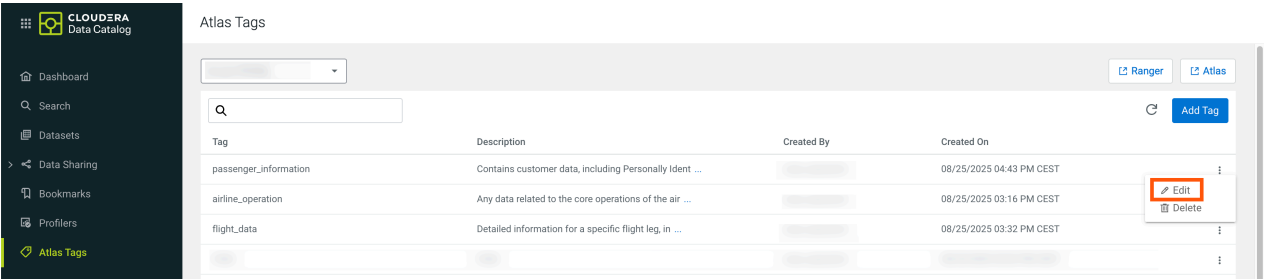


You can add or update Atlas tags. The created or updated tag is highlighted in the tag list as seen in the following diagram.



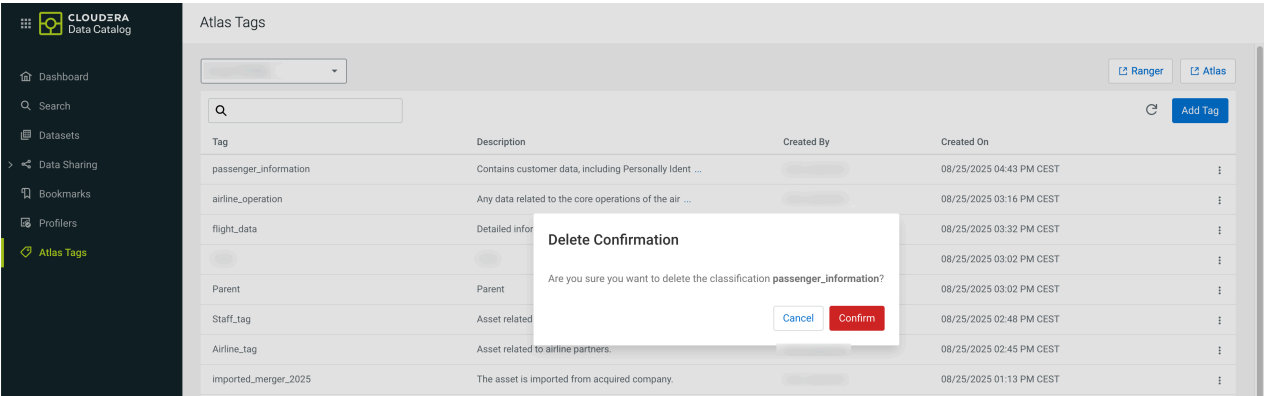
Editing Atlas tags

You can also edit or delete the Atlas tag as shown in the image. When you are editing the tag, you can only change the description or add new attributes.



Deleting Atlas tags

You can delete one Atlas tag at a time. A separate confirmation message appears for each deletion.



Related Information

[Propagated asset tagging](#)

[Creating tag rules in compute cluster environmentsin VM based environments](#)

Creating tag rules in compute cluster environments

With tag rules, you can apply Apache Atlas classifications to your assets based on regex expressions or similarity to a set of values in a table.

About this task

Procedure

- 1. To start applying tags, go to **Profilers** and select your data lake.
- 2. Go to Profilers Data Compliance Tag Rules .
- 3. Click + Create Tag Rule.

4. Name your tag rule and add a description to it in **General Information**.

Create Tag Rule

1 General Information

2 Configure Tag Rule

3 Test Tag Rule

4 Review

General Information

About

Tag Rule Name *

Test

Description *

test

Tags

In Atlas, your tags appear as classifications. Atlas classifications / Data Catalogs tags are synchronized between both services.

SELECT TAGS

Select tags to add them to your rule.

Search and select existing tags to apply.

Selected Parent Tags

Parent Tags

Children Tags

dp dp_HRV...ection dp_ukp...number +74

Selected Child Tags

Children Tags

Parent Tags

dp_HRV...ection dp

Data Pattern Type

☒ Regular Expression

Generate an expression manually or by file upload to create a data pattern.

☐ Single Column File Upload

Upload a file that contains all potential values for classification in a single column.

Next → Cancel

General Information

TAG RULE NAME

Test

DESCRIPTION

test

PARENT TAG

dp

Child TAG

dp_HRV...ection

5. Select the tags to be applied from the list of available tags synchronized from the list of Atlas classifications. If you select a child tag, its parent tag is also automatically selected. By default, if the child tag is applied to a column, the table receives the parent tag.

6. Select your **Data Pattern Type**:

Option

Regular Expression

You can upload a text file containing your regex expression or directly type it in the **Configure Tag Rule** page. The required format of the CSV file can be seen by clicking Download Sample Tag Rule.

Continue in step 7 on page 39.

Single Column File Upload

Upload a CSV file with values to be matched against the actual values in your tables. After uploading your file, continue with step 11 on page 40.

Creating regular expression based tag rule:

7. Define your regular expression for the table name.



Note: Cloudera recommends using PCRE2 compatible regular expressions. Non-compliant regular expressions may show reduced performance.

For more information, see [PCRE - Perl Compatible Regular Expressions](#).

8. When using **Column Level** regex expressions, you can define multiple expression for both of the following:

- Column Name
- Column Values

Create Tag Rule

The screenshot displays the 'Create Tag Rule' interface. On the left, a progress bar shows four steps: 1. General Information (active), 2. Configure Tag Rule, 3. Test Tag Rule, and 4. Review. The main area is titled 'General Information' and contains several sections:

- About:** Includes a 'Tag Rule Name' field with the value 'Test' and a 'Description' field with the value 'test'.
- Tags:** A section explaining that tags appear as classifications in Atlas and are synchronized between both services. It includes a 'SELECT TAGS' search bar and a 'Refresh Atlas Tag' button.
- Selected Parent Tags:** A table showing parent tags and their children. The parent tag 'dp' has three children: 'dp_HRV...action', 'dp_ukp...number', and '+74'.
- Selected Child Tags:** A table showing child tags and their parents. The child tag 'dp_HRV...action' has one parent: 'dp'.
- Data Pattern Type:** Two radio buttons are present: 'Regular Expression' (selected) and 'Single Column File Upload'.

At the bottom, there are 'Next' and 'Cancel' buttons. A sidebar on the right provides a summary of the rule configuration, including the tag rule name 'Test', description 'test', parent tag 'dp', and child tag 'dp_HRV...action'.



Note: Regular expressions matching the same type of entity (column name or value) have the OR logical relationship between them. When using multiple regular expressions of the same type (table name, column name or value), even if one of the regular expressions match, it is considered as a match.

9. Define the Column Value Weightage in percentage with the slider.

The remainder percentage is the column name weightage percentage. The results of the individual regex matches are weighted according to this setting before determining the final result confidence for applying the tag.



Note: A correctly formatted file is automatically processed by Cloudera Data Catalog. All details will be filled in this case.

Tag rule testing:

10. You can make a sanity check of your tag rule in **Test Tag Rule** by uploading a sample dataset in CSV format.




Note: A final test called "Dry Run" is still needed to be passed to enable your tag rule.


11. Review all your input before clicking Create Tag Rule.


a) Click Confirm to finalize your tag rule.


Your tag rule is created with **Status Disabled** (🔒) and the **Test Status** will be Test Pending.


12. Click  > Dry Run.

Profilers Details



Data Compliance Profiler 






TOTAL JOBS

75

TOTAL PROFILED ASSETS

 1219

LAST RUN

04/01/2025 10:15 PM CEST

NEXT RUN

04/01/2025 11:15 PM CEST

SCHEDULE FREQUENCY (UTC)

every hour at minute 15

Job History

Configuration

Tag Rules

Q Search by tag rule

Status









Associated Tag

Rule Type

Last Modified By

Clear All

Create Tag Rule

Status	Name	Parent Tags	Child Tags	Rule Type	Last Modified By	Modified On	Validation Status	Action
	test_aadhar_rule			Custom		04/01/2025 01:47 PM CEST	Dry Run Pending	<div><div></div><div>Edit</div><div>Dry Run</div><div>Delete</div><div></div></div>
	AUT_Passport_Detection			System	NA	01/13/2025 08:09 AM CEST	Validated	
	LVA_IBAN_Detection			System	NA	01/13/2025 08:09 AM CEST	Validated	

The **Dry Run Test** pane opens.

41

13. Click Run to start an on-demand dry run profiling job on up to 10 tables from your data.

>>

Dry Run Test

Test Connection with Catalog Data

customer

☒ test123.customer_iceberg

☐ test123.customer_parquet


Selected Assets

Sr. No.	Asset Name	
1	test123.customer_iceberg	

Start Run

Close

Your tag rule becomes VALIDATED after a successful dry run.

14. After the "Dry run" test was passed, click  > Enable to start your using your tag rule on your live data.

Creating tag rules in VM based environments

With tag rules, you can apply Apache Atlas classifications to your assets based on regex expressions.

About this task

Procedure

1. To start applying tags, go to **Profilers** and select your data lake.
2. Go to Profilers Tag Rules .
3. Click + New.
4. Name your tag rule and add a description to it.
5. Select the tags to be applied from the list of available tags synchronized from the list of Atlas classifications.
Multiple tags can be selected.

6. In **Column Name Expression**, select at least one regular expression to use a match it against for column names.
Select from the same regular expression you had created under the **Resources** pane.

Resources

▼ Regex



DeployRegex1669236475651

SampleRegex_1586378290804

DeployRegex1670015816812

SampleRegex_1.6183997393e+1

SampleRegex_1618318507327

DeployRegex1670618720012

SampleRegex_1.61840620023e+1



Note: You can select multiple expressions connected by AND, OR, NOT logical operators.

Tag Rules

Custom Rule

Name *

My test custom tag rule

Description

This is a test.

Tags *

this_is_test_tag x

Column Name Expression

Regex(Sales regex test) x

Column Value Expression

Regex(SampleRegex_1586378290804) OR Regex(SampleRegex_1586378290804) x

Save

Cancel

Save & Validate

Resources

Regex

DeployRegex1669236475651

SampleRegex_1586378290804

DeployRegex1670015816812

SampleRegex_1.6183997393e+1

SampleRegex_1618318507327

DeployRegex1670618720012

SampleRegex_1.61849620033e+

SampleRegex_1.58583859178e+

7. In **Column Value Expression**, select at least one regular expression to use a match it against for column names. The **Column Name Expression** matches are considered with a 15% weightage in the final score when calculating if the tag needs to be applied. The **Column Value Expression** matches receive the remaining 85% weightage. The column name expression results are binary (TRUE, FALSE), while by column value a certain ratio of all values can be matched.

8. Click Save & Validate.

46

9. Enter some sample data manually to check the validity of your regular expression, then click Submit Validation.

Data For Validation

Sample to test column name expression

sales_property

Sample to test column value expression

sales_property

Datalake where the validation will run

dc-profiler ▼

Close

Submit Validation

The status for the newly created regular expression validation is displayed on the **Tags Rules** tab. Once the validation is successful, you can deploy the rule.