

## Non-Cloudera S3 to Cloudera S3

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# CLOUDERA

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## ReadyFlow overview: Non-CDP S3 to CDP S3

You can use the Non-CDP S3 to CDP S3 ReadyFlow to move data between a non-Cloudera managed source S3 location and a Cloudera managed destination S3 location.

This ReadyFlow consumes files from an external source S3 location and writes them to the destination Cloudera managed S3 location. You can specify the source and target locations. You can pick whether to preserve or ignore the folder hierarchy of the source files when writing to the destination path. The ReadyFlow polls the source bucket for new files by periodically listing its content.



**Note:** This ReadyFlow leverages Cloudera on cloud's centralized access control for cloud storage access. Make sure to either set up Ranger policies or an IDBroker mapping allowing your workload user access to the target S3 or ADLS location.

| Non-CDP S3 to CDP S3 ReadyFlow details |                            |
|--|----------------------------|
| Source                                 | External Amazon S3         |
| Source Format                          | Any                        |
| Destination                            | Cloudera managed Amazon S3 |
| Destination Format                     | Same as source             |

## Prerequisites

Learn how to collect the information you need to deploy the Non-CDP S3 to CDP S3 ReadyFlow, and meet other prerequisites.

### For your data ingest source

- You have the source S3 region, bucket, path, access key ID, and secret access key.
- You have access to the source S3 bucket.

### For Cloudera Data Flow

- You have enabled Cloudera Data Flow for an environment.

For information on how to enable Cloudera Data Flow for an environment, see [Enabling Cloudera Data Flow for an Environment](#).

- You have created a Machine User to use as the Cloudera Workload User.
- You have given the Cloudera Workload User the EnvironmentUser role.

1. From the Management Console, go to the environment for which Cloudera Data Flow is enabled.
2. From the Actions drop down, click Manage Access.
3. Identify the user you want to use as a Workload User.




**Note:**


The Cloudera Workload User can be a machine user or your own user name. It is best practice to create a dedicated Machine user for this.

4. Give that user EnvironmentUser role.
- You have synchronized your user to the Cloudera on cloud environment that you enabled for Cloudera Data Flow.

For information on how to synchronize your user to FreeIPA, see [Performing User Sync](#).

- You have granted your Cloudera user the DFCatalogAdmin and DFFlowAdmin roles to enable your user to add the ReadyFlow to the Catalog and deploy the flow definition.
  1. Give a user permission to add the ReadyFlow to the Catalog.
    - a. From the Management Console, click User Management.
    - b. Enter the name of the user or group you wish to authorize in the Search field.
    - c. Select the user or group from the list that displays.
    - d. Click Roles Update Roles .
    - e. From Update Roles, select DFCatalogAdmin and click Update.



**Note:** If the ReadyFlow is already in the Catalog, then you can give your user just the DFCatalogViewer role.
  2. Give your user or group permission to deploy flow definitions.
    - a. From the Management Console, click Environments to display the Environment List page.
    - b. Select the environment to which you want your user or group to deploy flow definitions.
    - c. Click Actions Manage Access to display the Environment Access page.
    - d. Enter the name of your user or group you wish to authorize in the Search field.
    - e. Select your user or group and click Update Roles.
    - f. Select DFFlowAdmin from the list of roles.
    - g. Click Update Roles.
  3. Give your user or group access to the Project where the ReadyFlow will be deployed.
    - a. Go to DataFlow Projects .
    - b. Select the project where you want to manage access rights and click  More Manage Access .
  4. Start typing the name of the user or group you want to add and select them from the list.
  5. Select the Resource Roles you want to grant.
  6. Click Update Roles.
  7. Click Synchronize Users.

### For your data ingest target

- You have the destination S3 path and bucket into which you want to ingest data.

- You have performed one of the following to configure access to the destination S3 bucket:

- You have configured access to S3 buckets with a RAZ enabled environment.

It is a best practice to enable RAZ to control access to your object store buckets. This allows you to use your Cloudera credentials to access S3 buckets, increases auditability, and makes object store data ingest workflows portable across cloud providers.

1. Ensure that Fine-grained access control is enabled for your Cloudera Data Flow environment.
2. From the Ranger UI, navigate to the S3 repository.
3. Create a policy to govern access to the S3 bucket and path used in your ingest workflow.



**Tip:**

The Path field must begin with a forward slash ( / ).

4. Add the machine user that you have created for your ingest workflow to the policy you just created.

For more information, see *Creating Ranger policy to use in RAZ-enabled AWS environment*.

- You have configured access to S3 buckets using ID Broker mapping.

If your environment is not RAZ-enabled, you can configure access to S3 buckets using ID Broker mapping.

1. Access IDBroker mappings.
  - a. To access IDBroker mappings in your environment, click **Actions Manage Access**.
  - b. Choose the IDBroker Mappings tab where you can provide mappings for users or groups and click **Edit**.
2. Add your Cloudera Workload User and the corresponding AWS role that provides write access to your folder in your S3 bucket to the **Current Mappings** section by clicking the blue + sign.



**Note:** You can get the AWS IAM role ARN from the Roles Summary page in AWS and can copy it into the IDBroker role field. The selected AWS IAM role must have a trust policy allowing IDBroker to assume this role.

3. Click **Save and Sync**.

### Related Concepts

[Required parameters](#)

## Required parameters

When deploying the Non-Cloudera S3 to Cloudera S3 ReadyFlow, you have to provide the following parameters. Use the information you collected in *Prerequisites*.

| Non-CDP S3 to S3 ReadyFlow configuration parameters |   |
|---|---|
| Parameter Name                                      | Description   |
| CDP Workload User                                   | Specify the Cloudera machine user or workload username that you want to use to authenticate to the object stores. Ensure this user has the appropriate access rights to the object store locations in Ranger or IDBroker. |
| CDP Workload User Password                          | Specify the password of the Cloudera machine user or workload user you are using to authenticate against the object stores (via IDBroker).  |
| Destination S3 Bucket                               | Specify the name of the destination (Cloudera managed) S3 bucket you want to write to.<br><br>The full path is constructed from:<br>s3a://#{Destination S3 Bucket}/#{Destination S3 Path}                                 |
| Destination S3 Path                                 | Specify the path within the destination bucket where you want to write to. Make sure that the path starts with "/".<br><br>The full path is constructed from:<br>s3a://#{Destination S3 Bucket}/#{Destination S3 Path}    |

| Non-CDP S3 to S3 ReadyFlow configuration parameters |   |
|---|---|
| Parameter Name                                      | Description   |
| Preserve S3 Prefix                                  | Specify whether to preserve or ignore the folder hierarchy of the source files. Set to "TRUE" to preserve folder hierarchy in the destination path. Set to "FALSE" to flatten the hierarchy and only keep the file in the destination path. |
| Source S3 Access Key ID                             | Specify the source (external) S3 access key ID.   |
| Source S3 Bucket                                    | Specify the name of the source (external) S3 bucket you want to read from.  |
| Source S3 Path                                      | Specify the name of the S3 path you want to read from.  |
| Source S3 Region                                    | Specify the AWS region in which your source (external) bucket was created.  |
| Source S3 Secret Access Key                         | Specify the source (external) S3 secret access key.   |

### Related Concepts

[Prerequisites](#)

### Related Information

[Deploying a ReadyFlow](#)