



Informatica® Mass Ingestion
January 2023

Asset Management

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Preface

Use *Asset Management* to learn how to manage Mass Ingestion assets such as projects, folders, and database ingestion and streaming ingestion tasks. Learn how to configure asset permissions, manage asset versions, and tag and migrate assets.

CHAPTER 1

Asset Management

You can manage Mass Ingestion assets such as projects, folders, and ingestion tasks from the **Explore** page.

You can perform the following management tasks depending on your user role and permissions:

- Edit ingestion tasks.
- Copy projects, folders, and ingestion tasks.
- Move folders and ingestion tasks.
- Rename projects, folders, and ingestion tasks.
- Delete projects, folders, and ingestion tasks.
- Apply tags so you can filter assets on the **Explore** page.
- Configure user permissions for projects, folders, or assets.
- Use source control to manage versions of projects, folders, and tasks.
- Migrate assets between organizations.

Editing ingestion tasks

You can edit an ingestion task from the **Explore** page.

1. In Mass Ingestion, open the **Explore** page.
2. If a list of projects is displayed, select the project or project folder that contains the ingestion task that you want to edit.
3. In the list of tasks, select the row for the ingestion task that you want to edit.
4. In the Actions menu for the selected row, click **Edit**.

The **Definition** page of the task wizard appears in edit mode.

5. Edit the available fields on the **Definition**, **Source**, **Target**, and **Runtime Options** pages.

For a database ingestion task, the following considerations apply:

- You can edit any properties that are available for editing and then redeploy the associated job. If you need to edit a connection or property that is not available, first undeploy the associated job. Then edit the task and deploy the task again to create a new job instance.
- If you change the name of a task that has been deployed, the associated job name remains the same as the original task name. If you want the job name to match the updated task name, undeploy the job and then deploy the task again to generate a new job that has a matching name.

- If you change the rules for renaming target tables for a deployed database ingestion task, the associated job creates new target tables and performs an initial load of data to these tables. If the job is for a combined initial and incremental load, after the initial load is complete, the job begins propagating data changes to the target.

Note: The database ingestion job does not drop or truncate the original target tables based on the old renaming rules.

6. When you are finished, click **Save**.

Copying projects, folders, and tasks

You can copy projects, folders, and tasks on the **Explore** page. You might want to copy an object to use as a template, or you might want to create a backup copy.

When you copy a project, the new project contains all of the folders and tasks that were in the original project. Similarly, when you copy a folder, the new folder contains all of the tasks that were in the original folder.

When you copy a task within the folder where the task exists, you have the option to keep both tasks or cancel the operation. When you copy a task into a different folder that contains a task with the same name, you have the option to keep both tasks, overwrite the task in the folder, or cancel the operation. If you choose to keep both tasks, Informatica Intelligent Cloud Services appends the new task name with "Copy x" where x is the sequential copy number.

Note: To avoid naming conflicts with duplicate tasks, rename assets with a "Copy x" suffix.

1. On the **Explore** page, navigate to the object that you want to copy.
2. In the list of assets, select one or more rows for the objects that you want to copy. Then perform one of the following actions:
 - If you selected a single asset row, in the Actions menu for the row, click **Copy To**. Alternatively, right-click the row and click **Copy To**.
 - If you selected multiple asset rows, right-click a highlighted row and click **Copy To** to copy all of the assets.
3. Browse to the new location and click **Select**.

Moving folders and tasks

You can move folders and tasks on the **Explore** page.

1. On the **Explore** page, navigate to the folder or task that you want to move.
2. In the list of assets, select one or more rows for the ingestion tasks or folders that you want to copy. Then perform one of the following actions:
 - If you selected a single row, in the Actions menu for the row, click **Move To**. Alternatively, right-click the row and click **Move To**.
 - If you selected multiple rows, right-click a highlighted row and click **Move To** to copy all of the assets.
3. Browse to the new location and click **Select**.

Renaming projects and folders

You can rename projects and folders.

You can't use the following characters:

? ' | { } " ^ & [] / \

Do not use these characters in project, folder, asset, or tag names.

1. On the **Explore** page, navigate to the project or folder that you want to rename.
2. In the row that contains the project or folder, click **Actions** and select **Properties**.
3. Enter the new name and click **Save**.

You cannot use special characters in a name or use the same name as another object that is in the same folder.

Renaming database ingestion tasks

You can rename database ingestion tasks.

You can't use the following characters:

? ' | { } " ^ & [] / \

Do not use these characters in project, folder, asset, or tag names.

1. On the **Explore** page, select the row for the ingestion task that you want to rename.
2. In the Actions menu for the selected row, click **Edit**.
The **Definition** page of the task wizard appears in edit mode.
3. In the **Name** field, enter the new name and click **Save**.

If you rename a database ingestion task, the task name and job name will no longer be synchronized. If you want the task name to correspond to the job name, undeploy the job and then deploy the task again. Any log history will be lost.

Renaming file ingestion tasks

You can rename file ingestion tasks.

You can't use the following characters:

? ' | { } " ^ & [] / \

Do not use these characters in project, folder, asset, or tag names.

1. On the **Explore** page, navigate to the task that you want to rename.
2. To rename a task, in the row that contains the task, click **Actions** and select **Rename**.
3. Enter the new name and click **Save**.

You cannot use special characters in a name or use the same name of another task that is in the same folder.

Renaming streaming ingestion tasks

You can rename streaming ingestion tasks.

You can't use the following characters:

? ' | { } " ^ & [] / \

Do not use these characters in project, folder, asset, or tag names.

1. On the **Explore** page, navigate to the task that you want to rename.
2. To rename a task, in the row that contains the task, click **Actions** and select **Rename**.
3. Enter the new name and click **Save**.

You cannot use special characters in a name or use the same name as another task that is in the same folder.

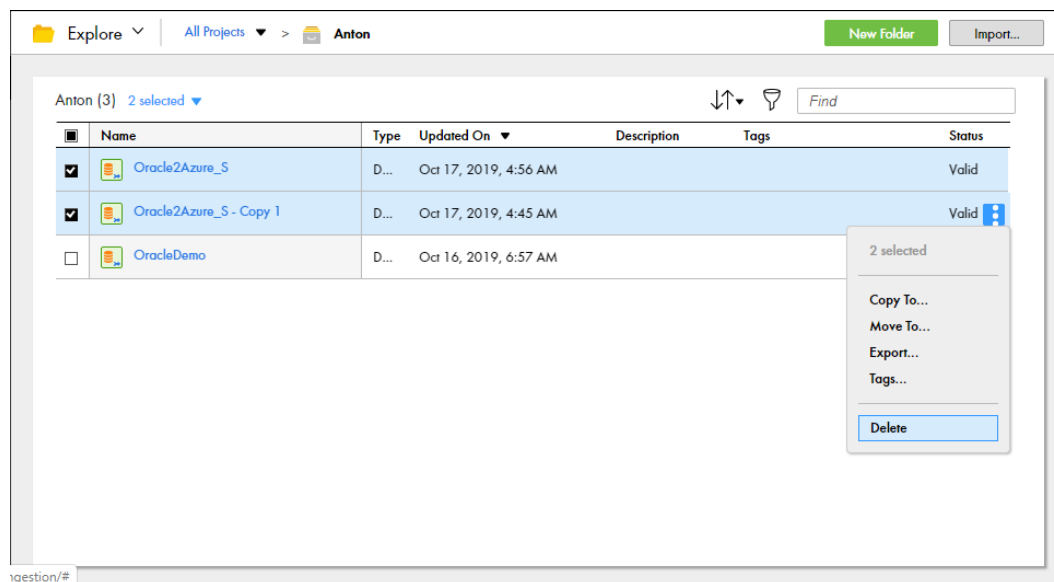
Deleting projects, folders, and tasks

You can delete a project, folder, or task if you no longer need it. However, before you delete it, verify that no users in the organization plan to use it. You cannot retrieve projects, folders, or tasks after you delete them.

You cannot delete an asset in the following situations:

- The asset is a task that is associated with a deployed job.
Note: In Mass Ingestion Databases, if you undeploy the job, you can then delete the task.
- The asset is a folder that contains tasks.

Delete a project, folder, or task from the **Explore** page, as shown in the following image:



1. To delete a project, folder, or task, on the **Explore** page, navigate to the object that you want to delete.
2. In the list of assets, select one or more rows for the ingestion tasks or folders that you want to delete. Then perform one of the following actions:

- If you selected a single row, in the Actions menu for the row, click **Delete**. Alternatively, right-click the row and click **Delete**.
- If you selected multiple rows, right-click a highlighted row and click **Delete** to delete all of the objects.

A confirmation message appears.

3. Click **Delete** again.

The selected objects are permanently deleted. You cannot use them again.

Tags

A tag is an asset property that you can use to group assets. Create tags to filter for assets that share a common attribute on the **Explore** page.

For example, each of your organization's assets includes a tag that identifies the regional office that manages the asset. You want to view all of the assets that the Southwest regional office manages. On the **Explore** page, you explore by tag and then click the SW Region tag.

The following image shows this configuration:

Explore ▾ | All Tags ▾ > SW Region

SW Region (2)					
<input type="checkbox"/>	Name	Description	Type	Location	Updated On
<input type="checkbox"/>	m_RegionTotalNew		Mapping	Accounts\Febuary2018	Mar 29, 2018, 6:06 PM
<input type="checkbox"/>	m_TotalMonthly		Mapping	Accounts\Febuary2018	Mar 29, 2018, 6:06 PM

You can assign tags to all asset types. An asset can have up to 64 tags.

You can find all of the assets that have a particular tag using one of the following methods:

- Click the name of the tag in the **Tags** column, in any row.
- Explore by tag, and then in the list of tags that shows on the page, click the name of the tag.

The following image shows an **Explore** page that lists all the tags created for the organization:

Explore ▾ | All Tags ▾

All Tags (3)			
<input type="checkbox"/>	Name	Asset Count	Updated On
<input type="checkbox"/>	NE Region	1	Mar 29, 2018, 6:44 PM
<input type="checkbox"/>	NW Region	2	Mar 29, 2018, 7:29 PM
<input type="checkbox"/>	SW Region	2	Mar 29, 2018, 6:48 PM

Creating tags

Use an asset's **Properties** dialog box to create and assign tags for that asset or to create tags to be available for future use.

Perform the following steps to create multiple tags without assigning them to an asset:

1. On the **Explore** page, browse by asset type.
2. In a row that contains an asset, click **Actions** and select **Properties**.

3. In the **Tags** field, enter the name of a tag that you want to create, and then press Enter.
A tag can have a maximum of 255 characters.
You can't use the following characters in project, folder, asset, or tag names:
? ' | { } " ^ & [] / \
4. Continue to enter the desired tags. Press Enter after each tag name to add it to the tag list.

5. After you have entered the tags, delete the tags from the **Tags** field so that the asset does not become associated with the tags. The tags will still appear in the list of available tags.
6. Click **Save**.

Assigning tags to an ingestion task

After you define an ingestion task, you can assign tags to the task. You can then filter the tasks on the **Explore** page based on one or more tag names.

1. In Mass Ingestion, open the **Explore** page.
2. If a list of projects is displayed, select the project or project folder that contains the ingestion task to which you want to assign one or more tags.
3. In the **All Assets** or **All Assets > ingestion task type** view, select the row for the ingestion task.
4. In the Actions menu for the selected row, click **Properties**. Alternatively, right-click the row and select **Properties**.

The **Properties** dialog box for the task appears.

5. In the **Tags** list, select one or more existing tags or enter a new tag name.
6. Click **Save**.

After you assign tags to ingestion tasks, you can find all ingestion tasks that have a particular tag name from the **Explore** page. Click **Explore > Tags**. Then in the list of tags, click a tag name to see a list of the tasks with that tag. You can drill down on a task name to see the task details.

Alternatively, in a list of task assets, click a tag name in the **Tags** column.

Editing and deleting tags

You can edit or delete a tag on the **Explore** page.

Edit a tag name or description in the tag properties. When you edit a tag, the properties for associated assets update as well. For example, if your m_sales asset has the NorthWest tag and you change the name of the tag to NW, the name of the tag changes to NW in the m_sales asset properties.

If you delete a tag, the tag no longer appears in the asset properties.

1. On the **Explore** page, browse by tags.
2. In the row that contains the tag, perform one of the following tasks:
 - To edit a tag, click **Actions** and select **Edit**. After you make your changes, click **Save**.
 - To delete a tag, click **Actions** and select **Delete**.

Asset dependencies

You can view object dependencies for an asset. You might want to view object dependencies before performing certain operations on an asset.

For example, you cannot delete an asset if another object depends on the asset. You must first delete the dependent objects and then delete the asset. You can find the dependent objects by viewing the asset dependencies.

You can view object dependencies for an asset on the **Explore** page. To view object dependencies for an asset, in the row that contains the asset, click **Actions** and select **Show Dependencies**. The **Dependencies** page opens showing the **Uses** tab by default.

The **Uses** tab lists the objects that the selected asset uses.

A Mass Ingestion service task uses connections and a runtime environment.

Note: If a database ingestion task was last saved prior to the Mass Ingestion Spring 2020 April release, you must save the task again before you try to view object dependencies for it the first time. You need to perform this action only once. If the Save button is not available, make a minor edit to the task

The **Used By** tab lists the objects that use the selected asset.

To drill down to the lowest level dependency, you can continue to show dependencies for each asset that appears on the **Dependencies** page. At the top of the **Dependencies** page, a breadcrumb shows the chain of dependencies.

The following image shows that the asset mt_FilterArchCustRecords is dependent on m_FilterCustRecords, which is dependent on FF_USW1PF:

mt_FilterArchCustRecords Dependencies

m_FilterCustRecords

FF_USW1PF

Uses

Used By

Uses (1)

Home

Type

Location

Updated By

Status

USW1PF

Runtime Environment

itay.m

If you have the appropriate permissions, you can perform actions on the **Dependencies** page such as viewing or deleting assets. To view or delete an asset, in the row that contains the asset, click **Actions** and select the action.

If you work with source controlled assets, you can view source control information such as the last pull time and the last check-in. To view source control information, you can add the following source control columns to the table:

- Last Pull Time
- Checked Out By
- Last Check in
- Git Hash

Configuring user permissions on an ingestion task

You can configure permissions for an ingestion task if you are assigned a user role that has the **Set Permission** privilege for the asset type of Mass Ingestion Databases Task or Mass Ingestion Streaming Task.

Typically, the organization administrator assigns user roles to specific users of the Mass Ingestion service.

1. In Mass Ingestion, open the **Explore** page and navigate to the row for the ingestion task for which you want to set permissions.
2. In the Actions menu for the row, select **Permissions**.

The **Permissions** dialog box lists the users and user groups that have permissions set on the task. Other users cannot access the task.

If the **Permissions** dialog box lists no users or user groups, no permissions are configured for the task. In this case, any user can access the task without permission restrictions.

3. To add a user to the users list and grant permissions on the task to that user, perform the following steps:
 - a. On the **Users** tab, click **Add**.
 - b. In the **Add User** dialog box, select a user and click **Add**.
 - c. In the **Permissions** dialog box, select the permissions on the task that you want to grant to the user.
 - d. Click **Save**.
4. To add a user group to the groups list and grant permissions on the task to that user group, perform the following steps:
 - a. On the **Groups** tab, click **Add**.
 - b. In the **Add Group** dialog box, select a group and click **Add**.

If no groups are listed, no user groups are defined.
 - c. In the **Permissions** dialog box, select the permissions on the task that you want to grant to the group.
 - d. Click **Save**.
5. To edit the permissions that are set for a listed user or user group, on the **Users** or **Groups** tab in the **Permissions** dialog box, select or clear the permission check boxes for the user or group. Then click **Save**.
6. To remove all of the permissions that you set for one or more users or user groups, on the **Users** or **Groups** tab in the **Permissions** dialog box, select the users or groups from which you want to remove all permissions. Then click **Remove** and click **Save**.

Asset migration

You can migrate Informatica Intelligent Cloud Services assets from one organization to another organization. To migrate assets, you export the assets from the source organization and then import the assets into the target organization.

You can import and export tasks and their dependent objects.

Note: If you want to export database ingestion tasks for which you cannot view object dependencies, you must save the tasks again before you try to export them. Otherwise, when you import the tasks into the target, any asset overrides that you specified for the import operation, such as an override connection or Secure Agent, will not be applied to the imported tasks. You need to perform this action only once for a task.

You can export single assets, groups of assets, or export all of the assets in a project. If you export a project or folder, the file structure remains intact so that when you perform the import in the target organization, you can duplicate the original structure.

To export or import assets in a sub-organization, log in to the sub-organization. If you have administrator privileges in the parent organization, you can also switch to the sub-organization and export or import assets.

Asset migration requirements

To migrate assets from one organization to another, the organizations and your user accounts in the organizations must meet certain requirements.

Ensure that you meet the following requirements:

- You have a user account in the source and target organizations with a role that has import and export privileges, such as the Admin or Designer role.
- The source and target organizations have the required license to import and export assets.
- The target organization has the required licenses for the assets that you want to import.
- The target organization uses the same version or a newer version of Informatica Intelligent Cloud Services. The versions might differ temporarily if the organizations aren't on the same POD (Point of Delivery) during an Informatica Intelligent Cloud Services upgrade.

Dependent objects

Dependent objects are assets that are required by other assets.

When you set up an export, you have the option to include or exclude dependent objects in the export file. The dependent objects must exist either in the export file or in the target organization, else the import fails.

You might want to include dependent objects if they do not exist in the target organization. Or, you might want to include dependent objects if you want to replace the dependent objects in the target organization with updated versions from the source organization. If you choose to include dependent objects, the export file includes dependent objects for all of the assets that you include in the export. When you configure the import, you can choose which dependent assets to import.

You might want to exclude an asset's dependent objects if the objects exist in the target organization and you do not want to replace them.

Note: Schedules are not dependent objects and are not included when you export assets that use them.

Runtime environments and connections

Runtime environments and connections are dependent objects.

If you configure an export to include dependent objects, you can use the source connections and runtime environments in the export file, or you can select connections and runtime environments in the target organization.

If you configure an export to exclude dependent objects, be sure that a suitable connection and runtime environment for the assets exists in the target organization. If a dependent connection or runtime environment does not exist in the target organization, during the import operation you must select a connection or runtime environment in the target organization.

When you select a connection or runtime environment in the target organization during the import, the connector type and version must be the same as the connector type and version that the asset used in the source organization.

If the target organization has connections or runtime environments with the same name as those in the export file, Informatica Intelligent Cloud Services uses the connections or runtime environments that exist in the target organization. Informatica Intelligent Cloud Services does not overwrite the connections or runtime environments in the target organization.

Note: An export or import cannot include a Cloud Hosted Agent or shared agent. If an asset uses a Cloud Hosted Agent or a shared agent, you can select a runtime environment to use for the asset during import.

Schedules

You can migrate schedules from one organization to another organization. You might want to migrate a schedule if you migrate an asset that uses it.

When you export an asset that uses a saved schedule, the schedule is not included in the export file.

To migrate a schedule, you export the schedule from the source organization using Administrator and import the schedule into the target organization using the service that will use the schedule. For example, to migrate a schedule that's used for Data Integration mapping tasks, you export the schedule from the source organization using Administrator and import the schedule into the target organization using Data Integration.

For information about exporting schedules, see the Administrator help. For information about importing schedules, see ["Importing assets" on page 18](#).

Asset export

When you export assets, Informatica Intelligent Cloud Services creates an export ZIP file that contains the assets that you selected for export.

You can select individual assets to export, or you can select an entire project or folder. When you export a project or folder, the export file includes all of the assets in the project or folder.

To export an asset, you need the following privileges and permissions:

- Your user role must have privileges to export assets.
- You must have read permission on the asset.

Note: Informatica recommends that you include no more than 1000 objects in an export file.

Export Files

An export .zip file contains multiple subfolders and files.

When you open the export file, the following high-level structure is initially displayed:

<input type="checkbox"/> Name	Date modified	Type	Size
Explore	3/11/2020 2:59 PM	File folder	
SYS	3/11/2020 2:59 PM	File folder	
ContentsofExportPackage_VProject-1583954369675.csv	3/11/2020 7:20 PM	Microsoft Excel C...	1 KB
exportMetadata.v2.json	3/11/2020 7:20 PM	JSON File	7 KB
exportPackage.chksum	3/11/2020 7:20 PM	CHKSUM File	2 KB

Explore folder

The Explore folder contains a metadata .dat file for each exported task. If you export a project, a json file with metadata about the project also appears in the Explore folder, at the same level as the project folder. The following image shows an example for an exported project:

<input type="checkbox"/> Name	Date modified	Type	Size
VProject	3/11/2020 2:59 PM	File folder	
VProject.Project.json	3/11/2020 7:20 PM	JSON File	5 KB

Note: The Explore folder structure reflects how the objects appear on the source organization's **Explore** page.

Drill down on the project folder to view the .dat files that contain metadata for each task in the project:

<input type="checkbox"/> Name	Date modified	Type	Size
RPS_SI2.SIDataflow.dat	3/11/2020 7:20 PM	DAT File	2 KB
vp_ing2_incrementalb.DBMI_TASK.dat	3/11/2020 7:20 PM	DAT File	1 KB
vp_ing3_combined.DBMI_TASK.dat	3/11/2020 7:20 PM	DAT File	1 KB
vp_orazwhateverworks.DBMI_TASK.dat	3/11/2020 7:20 PM	DAT File	1 KB

An extension is appended to the .dat file names to indicate the asset type. The following table lists the Mass Ingestion asset types and their associated extensions:

Asset Type	Extension
database ingestion task	DBMI_TASK
streaming ingestion task	SIDataFlow

SYS folder

The SYS folder contains .zip files for the associated connections and Agent groups. The following image shows an example of the contents of the SYS folder:

<input type="checkbox"/> Name	Date modified	Type	Size
DEMO-Snowflake.Connection.zip	3/11/2020 7:20 PM	WinRAR ZIP archive	2 KB
GBW1PF0V4FSE.AgentGroup.zip	3/11/2020 7:20 PM	WinRAR ZIP archive	1 KB
mhredhat5.informatica.com.AgentGroup.zip	3/11/2020 7:20 PM	WinRAR ZIP archive	1 KB
MHV19PWXQA01.AgentGroup.zip	3/11/2020 7:20 PM	WinRAR ZIP archive	1 KB
mp_Kafka_jotunheim.Connection.zip	3/11/2020 7:20 PM	WinRAR ZIP archive	2 KB
<input type="checkbox"/> rao_ora18rh_rh5.Connection.zip	3/11/2020 7:20 PM	WinRAR ZIP archive	3 KB

Each .zip file contains a json file and a metadata file for the asset.

CSV file

The .csv file lists the objects in the export file. The following image is an example of a .csv file, as displayed as a spreadsheet in Excel, for an exported project, including database ingestion and streaming ingestion tasks and all dependent objects:

objectPath	objectName	objectType	id
/SYS	MHV19PWXQA01	AgentGroup	8mGSa2rWTCdjOO7AXzMJyk
/SYS	mhredhat5.informatica.com	AgentGroup	2mrI3AOINUPh9VIsWXvyQf
/Explore/VProject	vp_ing3_combined	DBMI_TASK	ay6A8Gek5gOcPHKLwmZ4KS
/SYS	rao_ora18rh_rh5	Connection	74Ah0AfpNVOI6D6e0zfGOR
/SYS	DEMO-Snowflake	Connection	7CcpypD9pIFb5ZgTYNZzq8
/Explore/VProject	RPS_SI2	SIDataflow	9mZmsWt8PSOg2mX0eIV6qY
/SYS	mp_Kafka_jotunheim	Connection	9dX4XEp8Swycz6XZRP5CI4
/Explore/VProject	vp_ing2_incrementalb	DBMI_TASK	64mhQOKB78VeJC4mAvARCT
/SYS	GBW1PF0V4FSE	AgentGroup	04OmYZTCxQEaZYfthOMi8v
/Explore	VProject	Project	bihoive8aAafGUdRSNJgw9

Exporting assets

You can select a single asset, multiple assets, or a project to export.

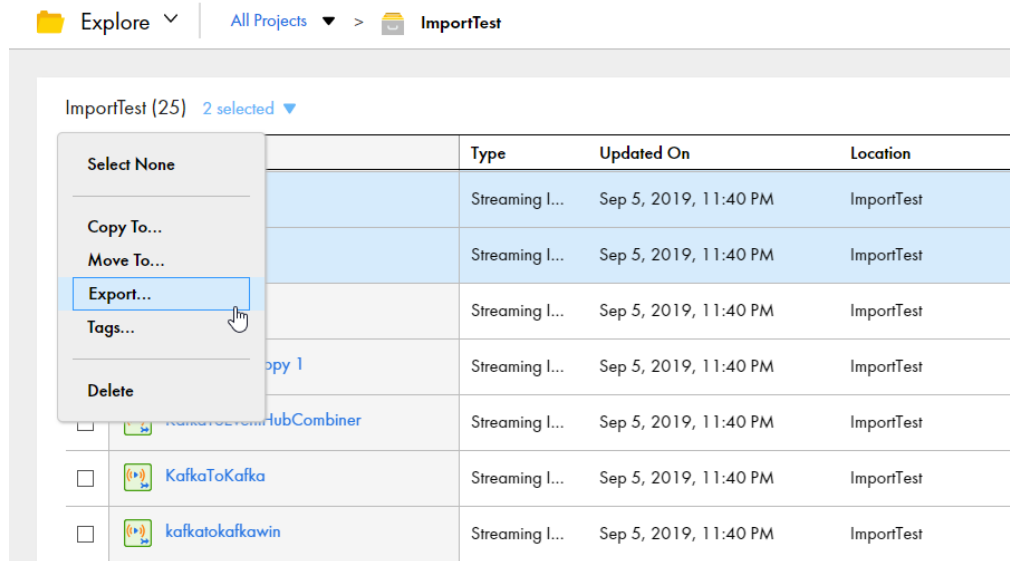
To include multiple assets, you can either select each asset within a folder or select a project or folder to export all of its assets. If you export a project, during import you can import the entire project or import only the assets that you select.

1. Log in to the source organization.
2. On the **Explore** page, navigate to the assets that you want to export.
3. Select the assets that you want to export.

To export a single asset or project, select the asset or project, and then click **Actions** and select **Export**.

To export multiple assets, select the check box to the left of each asset to export. Or, select the check box for each project or folder that contains the assets to export. From the Actions menu, select **Export**.

The following image shows the selection menu with multiple assets selected:



4. On the **Export Assets** page, change the job name or leave the default.
5. Select whether to include dependent objects for the assets.
6. Click **Export**.
7. To see the progress of the job, select **My Import/Export Logs** from the navigation bar and then select **Export** from the menu at the top of the page. Click the name of the log to open the log details page.

Asset import

You can import all of the assets in an export file or select the assets that you want to import.

When you import assets, you specify the following information:

- The assets in the export file that you want to import and the projects in which to import them.
- Whether to overwrite assets in the target project with assets in the export file when there is a name conflict.
- The connections and runtime environments to use for the imported assets.

To import an asset, you need the following privileges and permissions:

- Your user role must have privileges to import assets.
- If you import an asset into the target project as a new asset, you must have create, update, and read permissions on the asset.
- If you overwrite an asset in the target project, you must have update and read permissions on the asset.

Additionally, to overwrite a source-controlled asset in the target project, you must have the asset checked out.

The **Import Assets** page lists the assets that are in the export file. You can select which assets you want to import, and then specify which project to import the assets to. You can accept the default project, which is the same project name as the source project, or you can select a different project. If the project does not exist in the target organization, Informatica Intelligent Cloud Services creates it.

Asset name conflicts

You can specify how Informatica Intelligent Cloud Services handles asset name conflicts when the export file contains assets with the same name as assets in the target project. You can choose whether to overwrite the assets in the target project or use the existing assets in the target project.

To see how the import handles any asset name conflicts before you start the import job, you can test the import on the **Import Assets** page before you import the assets. The import action displays in the **Status** column for each asset. You can filter the list of assets by asset name, asset type, or status.

The following image shows a list of assets and the import action to be performed when overwriting existing assets is enabled:

The screenshot shows the 'Import Assets' page. At the top, there are 'Test' and 'Import' buttons. Below the header, there's a section for 'Select Import File' with a filename input field containing 'DataIngestion-Import-Example.zip' and a 'Choose File...' button. The next section is 'Specify Import Job Details', which includes a 'Job Name' input field with 'etstreject1 - Copy 2-1567692535909' and a checkbox for 'Overwrite existing assets, excluding connections and runtime environments' which is checked. The final section is 'Select Assets', which displays a table of assets. The table has columns for Name, Dependencies, Type, Location, Description, and Status. One asset is listed: 'etstreject...' with a status of 'Overwrite existing o...'.

Name	Dependencies	Type	Location	Description	Status
etstreject...	0	Streaming Inge...	Jyothy		Overwrite existing o...

If the target organization has connections or runtime environments with the same name as those in the export file, Data Ingestion uses the connections or runtime environments that exist in the target organization. Data Ingestion does not overwrite the connections or runtime environments in the target organization.

Runtime environment and connection selection

If the export file contains dependent objects, the target connection and runtime environment fields show the connection and runtime environments from the export file as the default. You can accept the default or select a different connection or runtime environment.

If the export file doesn't include dependent objects and the connections or runtime environments that are used by the assets in the export file don't exist in the target organization, you must select a target connection or runtime environment.

When you select a connection or runtime environment that exists in the target organization, the connector type and version must be the same as the connector type and version that the asset used in the source organization.

Importing assets

Import assets from an Informatica Intelligent Cloud Services export file.

1. Log in to the target organization.
2. On the **Explore** page, navigate to **All Projects** and click **Import**.
3. On the **Import Assets** page, navigate to the export file and click **Open**, or drag the zip file from the Downloads folder in Windows.

The **Import Assets** page lists the assets in the file.

4. Optionally, change the import job name.
5. Choose whether to overwrite existing assets with the assets in the import.
 - If you choose to overwrite existing assets, when an asset has the same name as an asset in the target project, the asset replaces the existing asset in the target project.
 - If you do not choose this option, if an asset with the same name exists in the target project, the asset is not imported.
6. Select the assets to import.

If the export file contains a project and you want to import the entire project, select all of the assets. Informatica Intelligent Cloud Services creates the project in the target organization.
7. Select the target project or accept the default.
8. Click **Test** to see the potential results of the import.

In the Select Assets area, the status for each asset shows the action that the service performs when you import the files.
9. If necessary, revise your selections to resolve any issues in the test results.
10. Click **Import**.

You can see the progress of the import on the **Import** tab of the **My Import/Export Logs** page. When the import process is complete, a message appears in **Notifications**. Click the link in the message to open the log details page and see the results of the import.

Post-import tasks

To complete the migration process you need to perform certain tasks based on the types of assets that you imported.

Perform the following tasks after you import assets:

- Configure connection passwords and security tokens. Informatica Intelligent Cloud Services does not include connection passwords and security tokens in imports for security reasons.

Source control

You can use a GitHub or Azure DevOps Git source control repository with Informatica Intelligent Cloud Services to manage and track changes made to Informatica Intelligent Cloud Services objects such as projects, folders, and assets.

You can use source control to enable version management for the Informatica Intelligent Cloud Services objects that appear on the **Explore** page, except for Data Integration bundles. You cannot apply source control to objects that don't appear on the **Explore** page such as runtime environments or connections. The source control repository structure mirrors the structure in the organization, with **Explore** as the top level directory.

Each time a user performs an action on an object that is source controlled, Informatica Intelligent Cloud Services logs the action. You can view source control logs in the Monitor service. For more information, see *Monitoring source control logs* in the Monitor help.

To use source control, the following prerequisites must be met:

- The organization has the appropriate Informatica Intelligent Cloud Services licenses to use source control.
- The organization administrator has configured a connection between the source control repository and the Informatica Intelligent Cloud Services organization.
- Your user role has privileges to use the Informatica Intelligent Cloud Services source control feature.
- You've entered your source control repository user credentials in Informatica Intelligent Cloud Services.

For information about configuring a connection between a GitHub or Azure DevOps Git source control repository and Informatica Intelligent Cloud Services, see the Administrator help.

Note: Informatica recommends that you include no more than 1000 objects in a container such as a project or folder when you use a source control repository with Informatica Intelligent Cloud Services.

Source control actions

You can perform the following actions on source-controlled objects such as projects, folders, and assets:

Pull an object.

Pull an object to add it to the organization or update a project with the version in the source control repository.

Check out an object.

Check out an object that you want to work on. When you check out an object, the object locks so that other users cannot make changes to it.

Check in an object.

Check in an object to add it to the source control repository or update the source control repository with the latest version of the object. When you check in an object, the lock releases.

Delete an object.

Delete an object from the organization and the source control repository. Before you can delete an object, you must check it out.

Restore an object version.

Restore an object to a previous version.

Undo a checkout.

Undo a checkout if you don't want to save the changes you made to the object. When you undo a checkout, the object reverts to the last source control version.

Unlink an object.

Unlink an object if you no longer want the object in the organization to stay in sync with the object in the source control repository.

Note: Some organizations do not have permission to update the source control repository. If your organization cannot update the repository, you can perform a pull action to get a specified version of the Informatica Intelligent Cloud Services objects. However, you cannot perform other source control actions such as checking out and checking in objects.

To check out, pull, unlink, or undo a checkout for an object, you must have update permissions on the object.

Source control and the Git repository

If you usually work directly in a Git source control repository, you might notice a few differences between using source control in Informatica Intelligent Cloud Services and working directly in the repository.

Note the following differences:

- A pull action in Informatica Intelligent Cloud Services is the same as a Git pull command. However, a pull in Informatica Intelligent Cloud Services cannot merge changes.
- A checkout action in Informatica Intelligent Cloud Services locks an object so that no one else can check it out or change it.
- A check-in action in Informatica Intelligent Cloud Services is the same as a Git commit command and push command combined. Use a check-in to add Informatica Intelligent Cloud Services objects to the source control repository and to commit changes to the repository.

Configuring repository access

To work with source controlled objects, specify your GitHub or Azure DevOps Git repository credentials in Informatica Intelligent Cloud Services.

Your credentials can include a user name and a personal access token.

If your administrator has configured the organization's repository for OAuth access, you can enable OAuth access instead of providing a personal access token.

Personal access tokens must be configured to enable full control of private repositories. For information about generating a personal access token, see the GitHub or Azure DevOps Git help.

In Informatica Intelligent Cloud Services, perform the following steps to configure access to the repository:

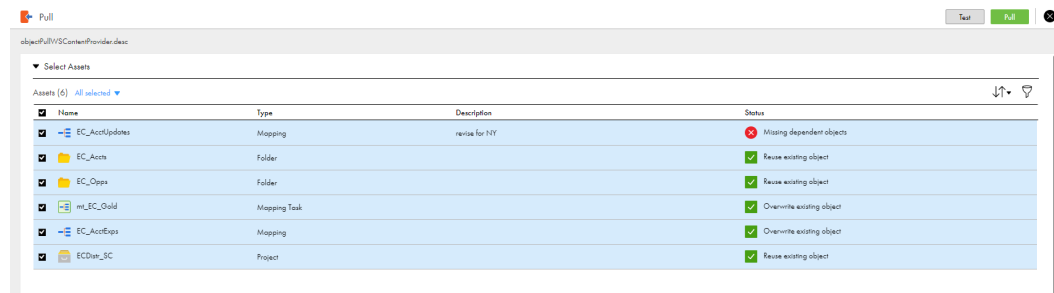
1. Click the **User** icon in the top right corner of the Informatica Intelligent Cloud Services window and then select **Settings**.
2. Perform one of the following tasks:
 - Enter your repository credentials. For GitHub, enter your user name and personal access token. For Azure DevOps Git, enter your personal access token.
 - Enable OAuth access to the repository. If you have not already authorized access, a Git access app appears. Select to authorize access for Informatica Intelligent Cloud Services.
3. Click **Save**.

Source control pulls

Pull an object to add it to the organization or replace the version of the object in the organization with the version in the source control repository. You can pull a project, folder, or an individual object that isn't checked out by another user.

Before a pull takes place, you can review the potential results of the pull. You can cancel the action or select objects to exclude from the pull.

The following image shows a preview page with potential results in the **Status** column:



Name	Type	Description	Status
EC_AcctUpdates	Mapping	revise for NY	Missing dependent objects
EC_Accts	Folder		Reuse existing object
EC_Opex	Folder		Reuse existing object
m_EC_Gold	Mapping Task		Overwrite existing object
EC_AcctOps	Mapping		Overwrite existing object
ECDirv_SC	Project		Reuse existing object

You can also test the pull to see if any errors might occur. If any errors appear, you can exclude the objects from the pull or close the page to cancel the pull.

A pull doesn't include dependent objects. For example, in Data Integration, if you pull a mapping that uses a saved query, the pull doesn't include the saved query.

A pull doesn't change the state of pulled objects in the organization. For example, if an object was checked out before the pull, it remains checked out after the pull.

Consider the following rules and guidelines:

- If you want to pull an object that uses a connection or runtime environment, be sure that the organization includes a connection and runtime environment before you perform the pull. When you select an object that uses a connection or runtime environment, you can select a runtime environment and connection to use on the test page.
- Informatica Intelligent Cloud Services doesn't consider capitalization in object names. As a result, you can't pull a project that contains multiple assets that have the same name with different capitalization. For example, if you try to pull a project that contains an asset named "sales" and an asset named "SALES", you receive an error because a project or folder can't contain multiple assets with the same name.
- You can pull objects regardless of whether your organization can or cannot update the source control repository.

Project and folder pulls

You can pull one or more projects or folders.

A pull includes all of the objects within the project or folder. If an object in the project or folder is not source-controlled, the pull does not affect the object.

You specify the version of the objects that you want to pull. The versions of an object that you can select are based on the object's current location in Informatica Intelligent Cloud Services. For example, you check out version 5 of the m_customers object and move it to a project called NewCustomers. When you pull the object, the available versions do not include the versions of the object from the previous location.

A pull updates the project or folder in the organization to be identical to the selected version of the project or folder in the repository. For example, if you pull an older version of a project and the project in the organization contains objects that were added in later versions, the pull deletes the objects.

Pulling an object

Use the pull action to update the organization with objects in the source control repository.

To pull a single asset, you can select the asset and then click **Actions** and select **Pull**. To pull a project, folder, or multiple assets, perform the following steps:

1. On the **Explore** page, click **Pull from Git**.

2. Select the project that contains the objects you want to pull and click **Select**.
The preview page appears with a list of available versions of the object. If the pull is for multiple objects, the preview page lists all of the versions in the repository.
3. Select the version that you want to pull and click **Pull**.
4. On the preview page, review the actions in the **Status** column for each object. These actions occur when the pull action is performed.
5. To exclude any objects from the pull, clear the check box by the object name.
6. Click **Test** to see if errors might occur as a result of the pull action.
7. If the test is successful, click **Pull**.
The pull action generates a log showing details of this action. You can view the log on the **Source Control Logs** page in Monitor.

Checking out and checking in objects

Check out an object so you can make changes to it. Check in the object when you want to update the source control repository with your changes. You can also check in objects to add them to the source control repository.

When you check out an object, the object locks so that other users can't make changes to it. When you check in an object, a new version of the object is created in the source control repository.

If you check in an object that's in a folder or project that isn't source controlled, the folder or project becomes source controlled. An asset can't reside in a source control repository unless it's in a container such as a project or folder.

Note: The size of a check-in cannot exceed 50 MB.

Checking out an object

When you check out an object, the object is locked so that other users can't update it while you are making your changes.

You can check out individual objects, multiple objects, or a project or folder to check out all of the objects within the project or folder.

Before you check out an object, you might want to perform a pull to be sure you update the latest version of the object. For more information about the pull action, see ["Source control pulls" on page 21](#)

1. On the **Explore** page, navigate to the object you want to check out.
2. In the row that contains the object, click **Actions** and select **Check Out**.
3. If the checkout includes multiple objects, on the preview page, review the results in the **Status** column. If you want to exclude an object, clear the check box next to the object name.
4. Click **Check Out**.

Checking in an object

Check in an object to add the object to the source control repository or to update the source control repository with the latest version of the object in the organization.

If no changes were made to the object, the check-in isn't reflected in the source control history and a new version of the object isn't created in the source control repository.

Note: The size of a check-in cannot exceed 50 MB.

1. On the **Explore** page, navigate to the object you want to check in.
2. In the row that contains the object, click **Actions** and select **Check In**.
3. If the check-in includes multiple objects, on the preview page, review the results in the **Status** column. If you want to exclude an object, clear the check box next to the object name. If you want to cancel the action, close the page.
4. Add a summary and optionally, a description.
A summary is required and has a max length of 255 characters.
A description is optional and has a max length of 500 characters.
5. Click **OK**.

Deleting an object

To delete a source controlled object, you delete it from the organization and from the source control repository.

You must check out an object before you can delete it.

You can't delete an object that's checked out by another user or delete a project or folder recursively.

1. On the **Explore** page, navigate to the object that you want to delete.
2. On the row that contains the object, click **Actions** and then click **Delete**.
3. To confirm that you want to delete the asset from the organization, click **Delete**.
4. Add a summary that describes the reason for the delete action and optionally, a description.
A summary is required and has a max length of 255 characters.
A description is optional and has a max length of 500 characters.
5. To delete the object from the repository and complete the delete action, click **OK**.

Reverting to an older version

You might want to revert to a previous version of an object if you want to discard changes that were made to the object.

To revert to a previous version, perform a pull action and select the version that you want to restore in the organization.

If you revert the version of a project or folder and the project or folder in Informatica Intelligent Cloud Services contains objects that are not in the repository's project or folder, the pull action deletes the additional objects if they are source controlled. If the objects are not source controlled, the action doesn't delete the additional objects.

For more information about the pull action, see ["Source control pulls" on page 21](#).

Undoing a checkout

When you undo a checkout, the object reverts to the last version that was pulled. The object's version history will not include a record of the checkout and undo checkout actions. The undo checkout releases the lock so that the object is available for checkout.

You can undo the checkout of individual objects, multiple objects, or a project or folder in a single checkout action.

You can undo the checkout of any object that you have checked out. You cannot undo the checkout of an object that has been checked out by another user unless you have the Admin role or your user role has the Force Undo Checkout feature privilege for the Administrator service.

If you undo the checkout of a project or folder, you can select which objects within the project or folder to include or exclude. By default, all of the objects are included.

Note: If an object was moved or renamed after it was checked out, undoing the checkout restores the object's name and location to its name and location before it was checked out.

1. On the **Explore** page, navigate to the object.
2. In the row that contains the object, click **Actions** and select **Undo Check Out**.
3. If the undo checkout includes a project or folder, on the preview page, select the objects within the project or folder to exclude from the undo checkout action.

Unlinking an object

You can unlink an object so that it's no longer source controlled.

Unlinking an object doesn't delete the object from the source control repository or the organization, but you can no longer update the repository for any changes you make to the object in the organization. If you decide to link the object in the future, you can check in the object to reestablish the link. If the name of the object or the path to the object has not changed, the checked in object becomes a new version of the object in the source control repository.

The object must be checked in before you can unlink it. You can unlink an object that's checked out by another user if you have the Admin role or your user role has the Force Undo Checkout feature privilege for the Administrator service.

You can't unlink a project or folder that contains source controlled objects. To unlink a project or folder, unlink each object within the project or folder first.

1. On the **Explore** page, navigate to the object that you want to unlink.
2. On the row that contains the object, click **Actions** and select **Unlink**.

Working with multiple objects

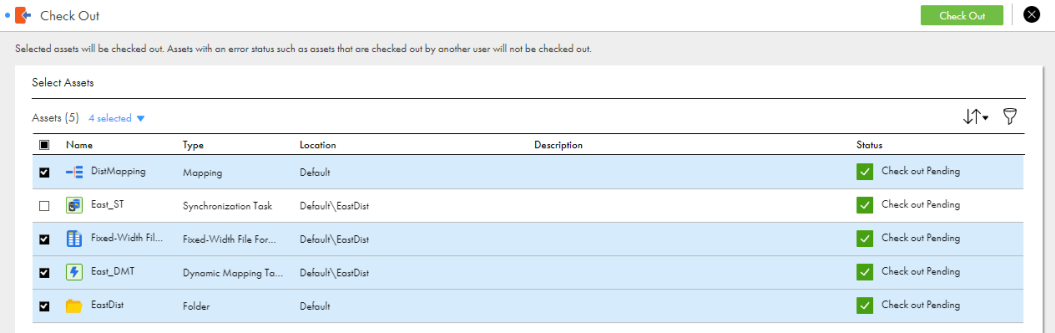
You can select multiple objects to check in, check out, undo checkout, pull, or unlink.

The total size of the selected objects cannot exceed 50 MB.

You can select a project or folder or select multiple objects within a project or folder. When you include a project or folder or multiple objects in a source control action, a preview page appears that shows you the expected results of the action if you proceed. If an object listed on the preview page is not source controlled, it will be ignored. If an object is checked out by another user or you do not have permission to update the object, the status on the preview page shows that the action will fail. You can opt to remove any of the objects before you continue.

For example, in the Default project, you select the EastDist folder and the DistMapping asset to check out. The preview page includes the DistMapping asset, the EastDist folder, and all of the objects in the EastDist

folder. You don't want to check out the East_ST asset so you clear its check box before you proceed with the check out action. The following image shows the preview page:



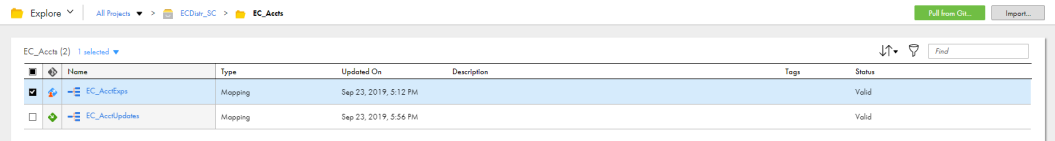
If you select multiple objects for a pull, the preview page lists all of the versions in the repository.

Note: You can't delete multiple objects in one transaction.

Viewing source control columns on the Explore page

If your organization has any objects that are source controlled, the **Explore** page displays an additional column that indicates whether an object is checked in, checked out, or is not source controlled.

In the following image, the blue and red icon indicates that the EC_AcctExps object is checked out:



Additional source control columns are available but are not displayed by default. You might want to customize the **Explore** page to show all of the source control-related columns. This way you can easily identify source controlled objects, and you can use the columns to filter and sort source controlled objects on the page.

You can add the following source control-related columns to the **Explore** page:

- Last Pull Time
- Checked Out By
- Last Check In
- Git Hash

To display these columns, right-click a column heading and select the columns that you want to add, as shown in the following image:



Source control best practices

To use source control effectively, use the following guidelines as best practices.

Adhere to the following guidelines as you develop and work with assets:

Guidelines for managing dependencies

Use the following guidelines to manage assets with dependencies:

- Create connections and runtime environments before you pull assets from the repository.
When required connections and runtime environments exist in the target organization, you can run tasks immediately after you pull them from the repository.
- Ensure that reusable assets such as mappings and components are present in the repository before you use them.
Informatica Intelligent Cloud Services does not allow you to save an asset such as a mapping task when the dependent mapping does not exist in the organization.

Guidelines for checking in and checking out assets

Use the following guidelines when you check in and check out assets:

- When you rename or move an asset, check out the asset's first-level dependent assets and include them in the same check-in.
For example, if you want to rename a mapping that a mapping task uses, and the mapping task is used in a taskflow, check out the mapping and the mapping task. You don't need to check out the taskflow. After you rename the mapping, check in the mapping and the mapping task in one check-in action.
- Enter comments when you check in assets.
When you check in assets, you might enter a release tag name in the **Summary** field and enter more descriptive comments in the **Description** field. When you do this, the **Git Summary** field in Informatica Intelligent Cloud Services shows the release tag that is associated with the asset.
- When you check in multiple assets at one time, limit the number of assets to 1000 or fewer.
Checking in more than 1000 assets at one time can degrade performance between Informatica Intelligent Cloud Services and the GitHub repository service.

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