



Informatica® Cloud Application Integration  
October 2023

# Asset Management

Informatica Cloud Application Integration Asset Management  
October 2023

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Publication Date: 2023-12-11

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# Preface

Use *Asset Management* to learn how to set up, organize, and perform other actions on folders and assets.

# CHAPTER 1

## Project and Asset Management

Use the **Explore** page to work with your Informatica Intelligent Cloud Services<sup>SM</sup> projects and assets.

### [Finding projects and assets on the Explore page](#)

Use any of the following methods to find your projects and assets on the **Explore** page:

- Explore by projects and folders. View all projects or select a particular project.
- Explore by asset types. View all assets or view assets of a particular type.
- Explore by tags. View assets associated with a particular tag.
- Search for projects or assets. To search all projects, folders, and assets in the organization, view the **Explore** page by **All Projects** and then enter a name or description in the Find box. Or, to narrow your search, filter the **Explore** page by **All Assets**, select a specific asset type, or a specific project or folder, and then enter a name or description in the **Find** box.
- Sort the search results. Sort the **Explore** page by name, creation date, last update date, description, or type. When you sort by type, the Explore page groups assets by asset type. It does not list the asset types in alphabetical order.

The following characters cannot be used on the # ? ' | { } " ^ & [ ] / \ page:

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

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

### [Viewing project, folder, and asset details on the Explore page](#)

The following table describes the project, folder, and asset properties that you can view on the **Explore** page:

Property	Description
Name	Name of the project, folder, or asset.
Type	Type of the object. For example: Project, Folder, Taskflow, Mapping, or Mapplet.
Updated On	Date and time when the project, folder, or asset was last updated.
Updated By	Name of the user who last updated the project, folder, or asset. This property is not displayed by default. To view the property, right-click the header row and select <b>Updated By</b> . This property is not available if you select <b>All Tags</b> in the <b>Explore</b> page.

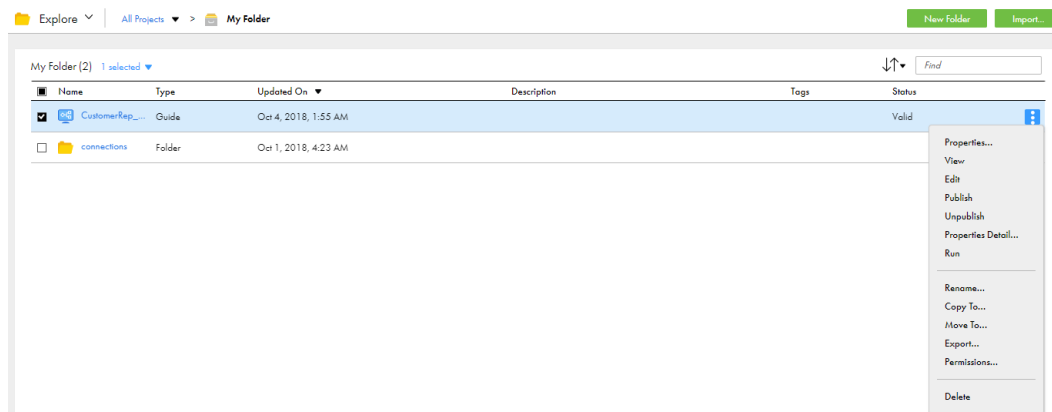
Property	Description
Created On	Date and time when the project, folder, or asset was created. This property is not displayed by default. To view the property, right-click the header row and select <b>Created On</b> . This property is not available if you select <b>All Tags</b> in the <b>Explore</b> page.
Created By	Name of the user who created the project, folder, or asset. This property is not displayed by default. To view the property, right-click the header row and select <b>Created By</b> . This property is not available if you select <b>All Tags</b> in the <b>Explore</b> page.
Location	Location where the project, folder, or asset is available.
Description	Description of the project, folder, or asset.
Tags	Tag that is assigned to the asset.
Status	Indicates whether the asset is valid. This property displays one of the following values: <ul style="list-style-type: none"> <li>- Valid. The asset does not contain any validation error.</li> <li>- Invalid. The asset contains validation errors.</li> </ul>
Published	Indicates whether the asset is published. This property is available if you view the <b>Explore</b> page by selecting the <b>Asset Types</b> option. This property is not displayed by default. To view the property, right-click the header row and select <b>Published</b> . This property displays one of the following values: <ul style="list-style-type: none"> <li>- Published</li> <li>- Unpublished</li> <li>- Outdated</li> </ul> This property is blank for assets that cannot be published. For example, this property is blank for process objects, mappings, and mapping tasks.
Published On	Date and time when the asset was published. This property is available if you view the <b>Explore</b> page by selecting the <b>Asset Types</b> option. This property is not displayed by default. To view the property, right-click the header row and select <b>Published On</b> . This property is blank for assets that cannot be published. For example, this property is blank for process objects, mappings, and mapping tasks.

## Working with projects and assets on the Explore page

Perform actions on projects and assets from the **Explore** page.

To see what actions you can perform on a project or asset, in the row that contains the project or asset, click the **Actions** icon.

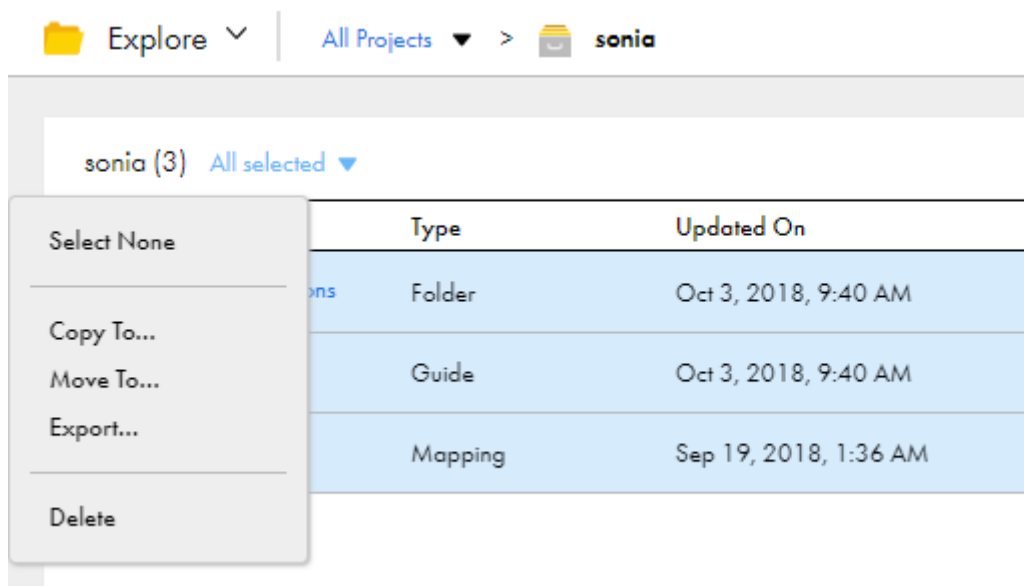
The following image shows the **Actions** icon on the **Explore** page:



The Actions menu lists the actions you can perform based on your user role privileges and the permissions specified for the selected asset. For example, your user role might have privileges to view and run tasks but not to delete tasks. You might not have permission to run a particular task because of the permissions set by the creator of the task.

To perform an action on multiple objects at one time, select the check box to the left of each object, and then use the Selection menu to choose the action.

The following image shows the selection menu:



## Working with assets from other Informatica Intelligent Cloud Services

If your organization has assets that belong to different services, you can view them on the **Explore** page.

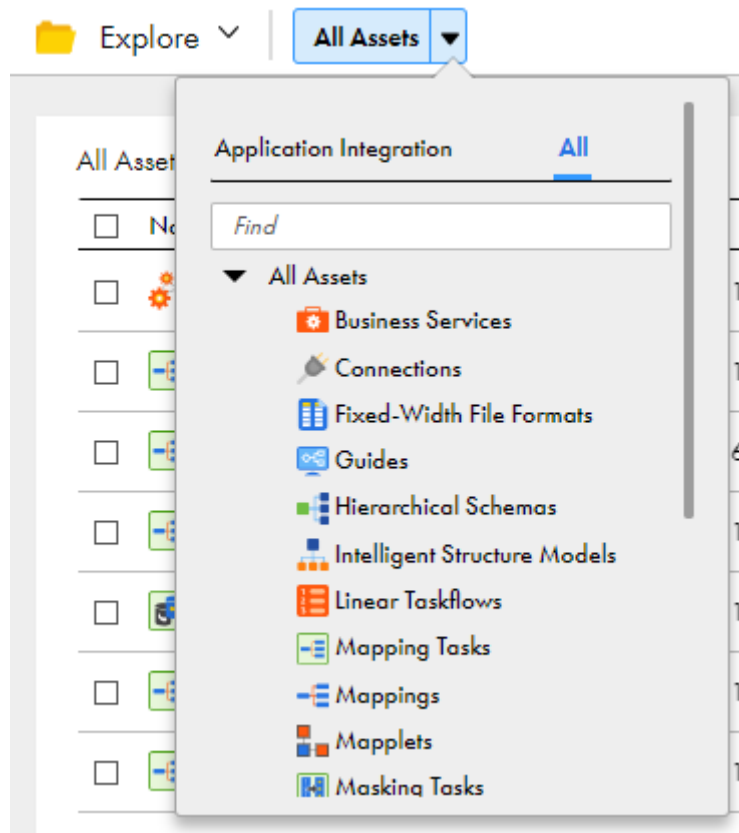
By default, you see Application Integration assets.

To view assets from other services, perform the following steps:

1. On the **Explore** page, go to **Explore > Explore By > Asset Types**.
2. In the **All Assets** list, select **All**.

The following image shows the **All** tab of the **All Assets** list:





If you run a Data Integration asset from the Explore page, the Data Integration service opens in a new window. The asset runs in the read-only mode.

If you select a Data Integration asset on the Explore page, the Data Integration service opens in a new window. The asset appears in the editable mode.

## Copying projects, folders, and assets

You can copy projects, folders, and assets 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 objects, Informatica Intelligent Cloud Services retains child elements in the following instances:

- When you copy a project, the new project contains all of the folders and assets that were in the original project. Similarly, when you copy a folder, the new folder contains all of the assets that were in the original folder.
- When you copy assets or a folder containing assets to another location, the assets retain their references to dependent objects.

For example, a folder in the Customers project contains the m\_cust and the mt\_ca\_cust assets. The mt\_ca\_cust asset requires the m\_cust asset. If you copy the mt\_ca\_cust asset to a folder in the Customers\_ca\_upsell project, the mt\_ca\_cust asset in the Customers\_ca\_upsell project still references the m\_cust asset in the Customers project.

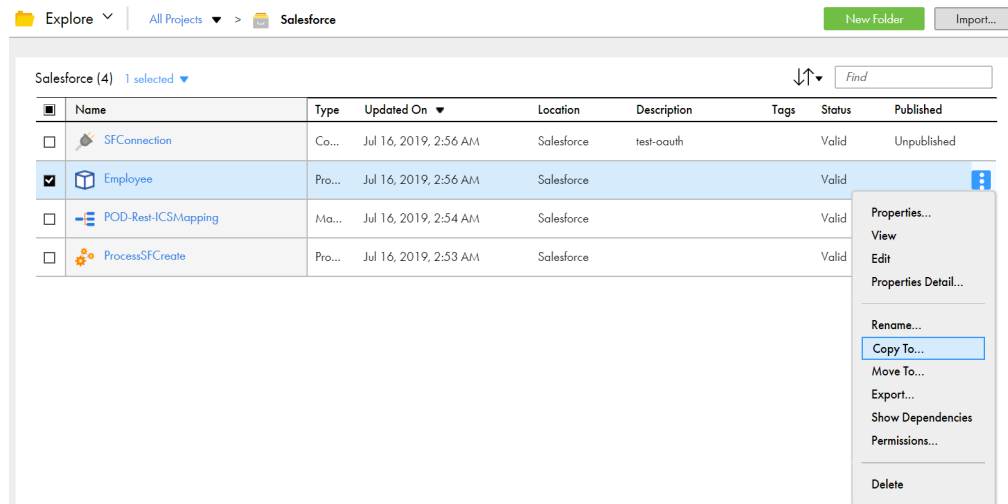
When you copy an asset within a folder, you can keep both assets. When you copy an asset into a different folder that contains an asset with the same name, you can overwrite the asset in the folder or keep both. If you choose to keep both assets, Informatica Intelligent Cloud Services appends the new asset name with "Copy x" where x is the sequential copy number.

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

When you copy an asset with a schedule, the schedule is removed from the copied asset.

Perform the following steps to copy an object:

1. On the **Explore** page, navigate to the object that you want to copy.
2. In the row that contains the object that you want to copy, click **Actions** and select **Copy To**.



3. Browse to the new location and click **Select**.

## Moving folders and assets

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

1. On the **Explore** page, navigate to the folder or assets that you want to move.
2. If your organization uses source control, check out the folder or assets that you want to move.  
If you want to move a folder, be sure to check out the folder and each of the assets within the folder.

- To move a folder or a single asset, in the row that contains the folder or asset, click **Actions** and select **Move To**, and then browse to the new location and click **Select**.

Salesforce (4) 1 selected

<input type="checkbox"/>	Name	Type	Updated On	Location	Description	Tags	Status	Published
<input type="checkbox"/>	SFConnection	Co...	Jul 16, 2019, 2:56 AM	Salesforce	test-outh		Valid	Unpublished
<input checked="" type="checkbox"/>	Employee	Pro...	Jul 16, 2019, 2:56 AM	Salesforce			Valid	
<input type="checkbox"/>	POD-Rest-ICSMMapping	Ma...	Jul 16, 2019, 2:54 AM	Salesforce			Valid	
<input type="checkbox"/>	ProcessSFCreate	Pro...	Jul 16, 2019, 2:53 AM	Salesforce			Valid	

- Properties...
- View
- Edit
- Properties Detail...
- Rename...
- Copy To...
- Move To...
- Export...
- Show Dependencies
- Permissions...
- Delete

## Renaming projects, folders, and assets

You can rename projects, folders, and assets without losing references to objects that they use.

For example, if an asset named mt\_ResolveClientList uses an asset named m\_RegionToMainList, you can rename the mt\_ResolveClientList asset to mt\_ClientList and it will still reference the m\_RegToMainList asset.

You can't use the following characters in project, folder, asset, or tag names:

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

- On the **Explore** page, navigate to the object that you want to rename.
- If your organization has enabled source control, check out the object that you want to rename.
- To rename an asset, in the row that contains the asset, click **Actions** and select **Rename**.
- To rename a project or folder, in the row that contains the project or folder, click **Actions** and select **Properties**.
- 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.

- If the object was checked out, check in the object so that the change is reflected in the Git repository.

## Deleting projects, folders, and assets

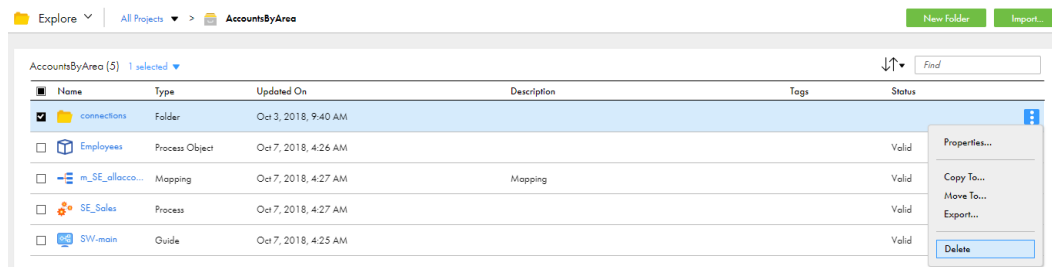
You can delete a project, folder, or asset if you no longer need it. However, before you delete it, verify that no users in the organization plan to use it. You cannot retrieve projects, folders, or assets after you delete them.

You cannot delete an asset in the following situations:

- The asset is a task that is currently running.

- The asset is a mapping that is currently running.
- The asset is used by another asset. You must first delete the dependencies of the asset before you can delete the asset.  
For example, if a connection is used by a process, you cannot delete the connection. You must either delete the process or update the process to use a different connection, and then delete the connection.  
For information about viewing asset dependencies, see [“Asset dependencies” on page 15](#).
- The asset has a cyclic dependency on other assets. You must delete all the assets simultaneously. For example, if Process A is used by Process B, Process B is used by Process C, and Process C is used by Process A, you cannot delete any of these processes individually. You must delete all of them simultaneously. Select all the processes, click **Actions**, and then select **Delete**.  
For information about viewing asset dependencies, see [“Asset dependencies” on page 15](#)
- The asset is a published asset. You must first unpublish the asset and then delete the asset.

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



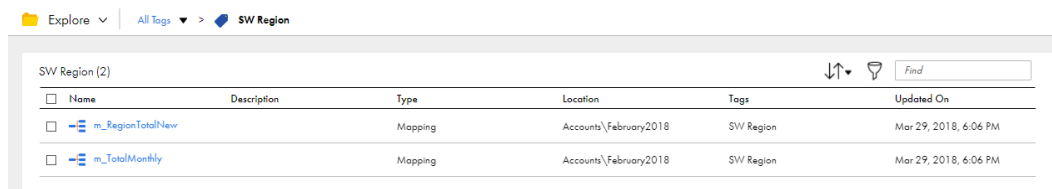
1. On the **Explore** page, navigate to the object that you want to delete.
2. If your organization enabled source control, check out the object that you want to delete.
3. In the row that contains the project, folder, or asset, click **Actions** and select **Delete**.
4. If the object was checked out, check in the object so that the change is reflected in the Git repository.

## 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:



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

An asset can have tags that add up to a maximum of 512 characters. A tag can have a maximum of 255 characters

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:

Name	Asset Count	Description	Updated On
NE Region	1		Mar 29, 2018, 6:44 PM
NW Region	2		Mar 29, 2018, 7:29 PM
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.

**Properties** [Close]

Name: Accounts\_Archive

Description:

Tags: NW region x SW region x NE region x SE region

Save Cancel

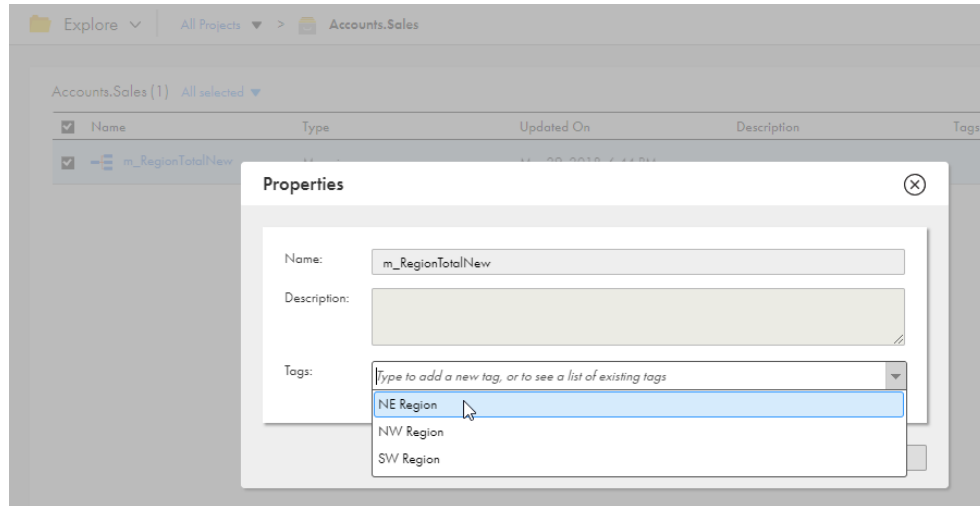
5. After you have entered the tags, delete the tags from the **Tags** field so that the asset does not become associated with the tags. The tags will still appear in the list of available tags.
6. Click **Save**.

## Assigning tags

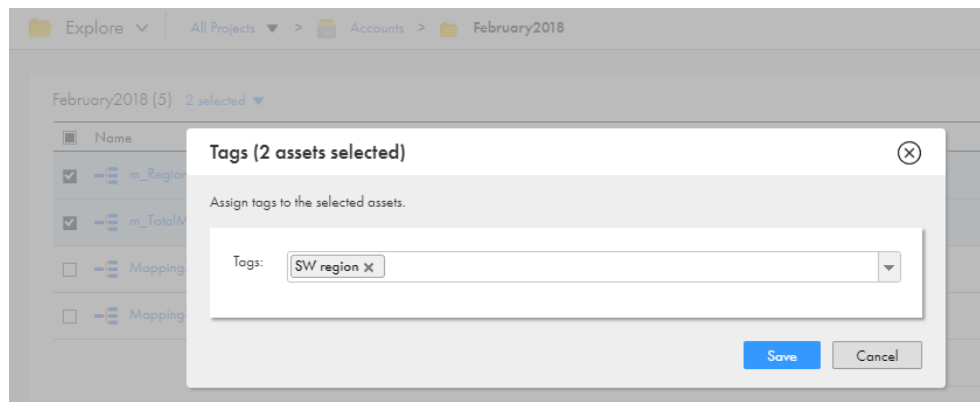
You can assign a tag to one asset at a time or assign a tag to multiple assets at the same time. You can also assign multiple tags to one asset.

When you assign tags to an asset, you can choose an existing tag or create a new one.

1. On the **Explore** page, navigate to the asset or assets.
2. Perform one of the following tasks depending on whether you want to assign tags to one asset or assign tags to multiple assets at the same time.
  - To assign tags to one asset, in the row that contains the asset, click **Actions** and select **Properties**.



- To assign tags to multiple assets at the same time, in the row for each asset, select the check box. After you have selected all of the assets, from the Selection menu, select **Tags**.



3. Select an existing tag or enter the name of a new tag.  
Continue adding tags or creating new tags until you have assigned all of the desired tags.
4. Click **Save**.

## 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 can't 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.

You can also view object dependencies for a process, guide, app connection, service connector, and process object from the corresponding asset designer page. Open the asset, click **Actions** and click **Show Dependencies**. The **Dependencies** page opens showing the **Uses** tab by default.

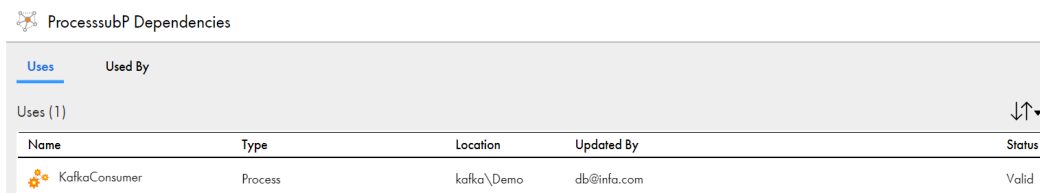
The **Uses** tab lists the objects that the selected asset uses.

For example, a process might use another process.

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

For example, a connection might be used by one or more processes.


The following image shows the **Dependencies** page for a process with the **Uses** tab open:



ProcesssubP Dependencies

Uses Used By

Uses (1) ↓↑

Name	Type	Location	Updated By	Status
 KafkaConsumer	Process	kafka\Demo	db@infa.com	Valid

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`:



The screenshot shows a breadcrumb trail: `mt_FilterArchCustRecords Dependencies > m_FilterCustRecords > FF_USW1PF`. Below this is a table titled "Uses (1)" with columns: Name, Type, Location, Updated By, and Status. The table contains one row for `FF_USW1PF` with Type "Runtime Environment" and Updated By "lroy.mo".

Name	Type	Location	Updated By	Status
FF_USW1PF	Runtime Environment		lroy.mo	

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

## Permissions

Permissions determine the access rights that a user has for a Secure Agent, Secure Agent group, connection, schedule, or asset. Permissions add additional or custom security for an object. Permissions define which users and groups can read, update, delete, execute, and change permissions on the object.

To configure permissions on an object, you need the following licenses and privileges:

- To configure permissions at the project level for all assets in a project, your organization must have the Set/Unset Security Permissions at Project Level license.
- To configure permissions at the folder level for all assets in a folder, your organization must have the Set/Unset Security Permissions at Folder Level license.
- To configure permissions on individual assets, your organization must have the Fine Grained Security license.
- The role assigned to your user account or to a group in which you are a member must have the Set Permission privilege for the object type. For example, to configure permissions on a Secure Agent, you must be assigned a role that has the Set Permission privilege for Secure Agents.

To configure permissions on an object, navigate to the object and set the appropriate permissions. For example, you want only users in the Development Team user group to have access to assets in the Development Data folder. Navigate to the folder, edit the permissions, and grant the Development Team user group permissions on the folder.

Permissions apply to the objects that you configure but not to copies of the object. Therefore, when you copy or export an asset, the permissions are not copied or exported with the asset. For example, you export a mapping task in which only user `rjones` has execute permission. When you import the mapping task, the imported mapping has no permissions assigned to it. Therefore, any user with privileges to run mapping tasks can run the imported task.



You can configure the following permissions on an object:

Permission	Description
Read	Open and view the object. If the object is source controlled, this permission allows the user or group to pull or check out the object from the source control repository. You must have the read permission to access the integration hub connection to perform any operations. If you select a task, this permission also allows the user or group to use a connection or schedule in the task.
Update	Edit the object. If the object is source controlled, this permission allows the user or group to check in, check out, pull, unlink, or roll back the object. Requires read permission, which is automatically granted.
Delete	Delete the object.
Execute	Run the object. Applies to mappings, tasks, taskflows, and Cloud Integration Hub assets. Monitor, stop, and restart instances of the mapping, task, or taskflow.
Change permissions	Change the permissions that are assigned to the object.

**Note:** These permissions control permissions within Informatica Intelligent Cloud Services. They do not control operating system permissions, such as the ability to start, stop, or configure the Secure Agent on Windows or Linux.

## Rules and guidelines for permissions

Use the following rules and guidelines for permissions:

- When you configure permissions on an object, verify that the user or group to which you grant permissions is assigned a role with the appropriate privileges for the object type. For example, if you grant a user with the Service Consumer role Update privilege on a particular folder, the user cannot update the folder because the Service Consumer role does not have update privileges for folders.
- To edit an asset, the user must have read permission on all assets used within the asset. For example, when you assign a user Read and Update permissions on a synchronization task, verify that the user also has Read permission on the connections, mapplets, schedules, and saved queries that are used in the task.
- When a user edits a task, assets without Read permission are not displayed. To avoid unexpected results, the user should cancel all changes and avoid editing the task until the user is granted the appropriate Read permissions.
- When configuring a taskflow, a user needs Execute permission on all tasks to be added to the taskflow.
- To edit a taskflow, a user needs Execute permission on all tasks in the taskflow. Without Execute permission on all tasks, the user cannot save changes to the taskflow.
- To run a taskflow, a user needs Read and Execute permissions on taskflows.
- To monitor jobs or to stop a running job, a user needs Execute permission on the mapping, task, or taskflow.

- If you assign custom permissions to a Data Integration task and invoke the Data Integration task through an Application Integration process or a guide, you must complete either of the following tasks:
  - Give the Application Integration anonymous user permission to run the associated Data Integration asset.
  - Add the Application Integration anonymous user to a user group that has permission to run the associated Data Integration asset.

## Configuring permissions

You can configure permissions on an object if you are assigned a role with the Set Permission privilege for the object type. For example, to configure permissions on a folder, you must be assigned a role that has the Set Permission privilege for folders.

1. Navigate to the object for which you want to configure permissions.

For example:

- To configure permissions on a Secure Agent or Secure Agent group, in Administrator, select **Runtime Environments**.
- To configure permissions on a connection, in Administrator, select **Connections**.
- To configure permissions on a mapping, in Data Integration, open the project and folder that contain the mapping.

2. In the row that contains the object, either click **Actions** and select **Permissions**, or click the **Change Permission** icon.

The **Permissions** dialog box lists the users and groups that have permissions on the object.

If the **Permissions** dialog box lists no users or groups, then no permissions are configured for the object. Any user with appropriate privileges for the object type can access the object.

The following image shows the **Permissions** dialog box for a mapping:

m\_BostonCustomers Permissions

Click the tabs below to see what users and groups have access to this asset, or to modify the list and any associated permissions. Everyone except the following would have no access to the asset.

<input type="checkbox"/>	User Name	First Name	Last Name	Read	Update	Delete	Execute	Change Permissions
<input type="checkbox"/>	mclark	Melissa	Clark	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	ajones	Adam	Jones	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	dsmith	David	Smith	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Buttons: Add, Remove, Save, Cancel

3. To configure user permissions on the object:
  - a. Select **Users**.

- b. If the user does not appear in the **Users** list, click **Add**, and select a user.
- c. Enable or disable the appropriate permissions on the user.

**Note:** When you grant any user permissions on the object, Informatica Intelligent Cloud Services also adds you as a user with permissions on the object. This prevents you from losing access to the object when you configure permissions.

4. To configure user group permissions on the object:

- a. Select **Groups**.
- b. If the group does not appear in the **Groups** list, click **Add**, and select a group.
- c. Enable or disable the appropriate permissions on the group.

**Note:** When you grant any group permissions on the object, Informatica Intelligent Cloud Services also adds you as a user with permissions on the object. This prevents you from losing access to the object when you configure permissions.

5. To remove all permissions restrictions for the object, remove all users and groups from the **Permissions** dialog box.

When you remove all users and groups, any user with appropriate privileges for the object type can access the object.

6. Click **Save**.

## CHAPTER 2

# 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:

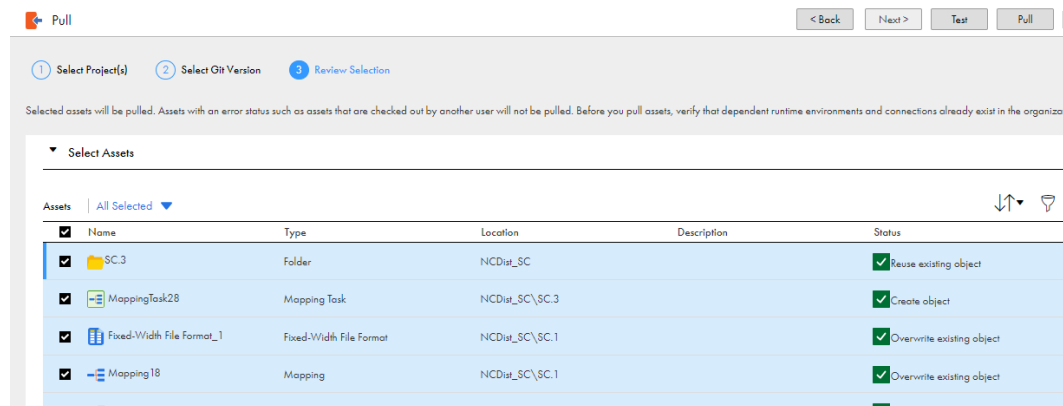
1. Click the **User** icon in the top right corner of the Informatica Intelligent Cloud Services window and then select **Settings**.
2. Perform one of the following tasks:
  - Enter your repository credentials. For GitHub, enter your user name and personal access token. For Azure DevOps Git, enter your 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:



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 all of the objects in a project or folder, or pull only the objects that changed in a particular commit hash.

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.

If you pull a project or folder, the pull doesn't affect any objects in the project or folder that aren't source-controlled.

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. You can pull a single asset, a project, or a folder. When you pull a project or folder, you can exclude any assets in the project or folder that you don't want to include in the pull.

To pull a project, folder, or single asset, perform the following steps:

1. To pull a project, on the **Explore** page, click **Pull from Git**. Select the project that contains the objects you want to pull and click **Next**.
2. To pull a single asset or folder, on the **Explore** page, select the asset or folder. Click **Actions** and select **Pull**.
3. Select the Git hash that you want to pull and click **Next**.
4. Review the list of assets. You can clear the check box for any of the assets that you don't want to include in the pull. By default, all of the assets are selected.
5. Review the actions in the **Status** column for each asset. These actions will occur when the pull action is performed.
6. If an asset requires a connection, select a target connection to use in the organization or accept the default.
 

**Note:** You can't create a new connection during the pull process.
7. If an asset requires a runtime environment, select a target runtime environment to use in the organization or accept the default.
 

**Note:** You can't create a new runtime environment during the pull process.
8. To publish assets after you pull them, select **Publish Application Integration assets after pull** and **Publish Taskflow(s) after pull** as required.
9. Optionally, click **Test** to see if errors might occur as a result of the pull action.

10. 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.

If you import assets into an organization that uses source control, the assets must be checked out so that they can be overwritten.

**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 22](#)

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.
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.
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 22](#).

## 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**.

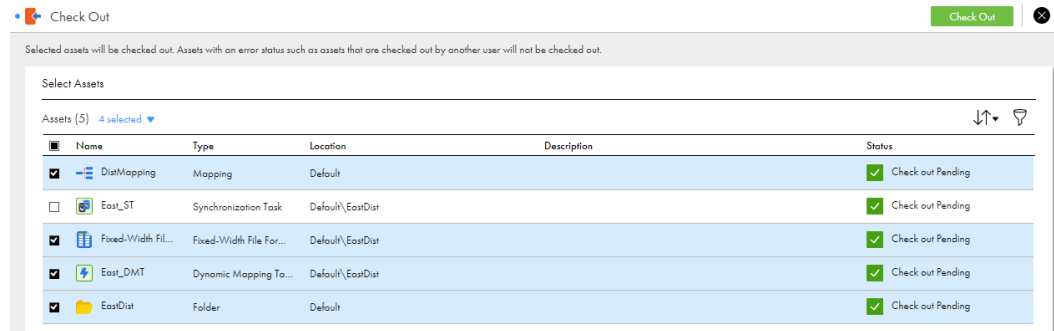
## Working with multiple objects

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 checkout action. The following image shows the preview page:



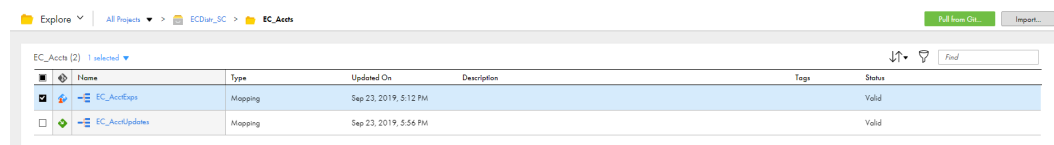
If you select multiple objects for a pull, the preview page lists all of the versions in the repository.

**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.

## CHAPTER 3

# 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 the following types of assets:

- Processes
- Guides
- Connections
- Service Connectors
- Process Objects

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 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

The export file includes a spreadsheet that lists the objects within the file.

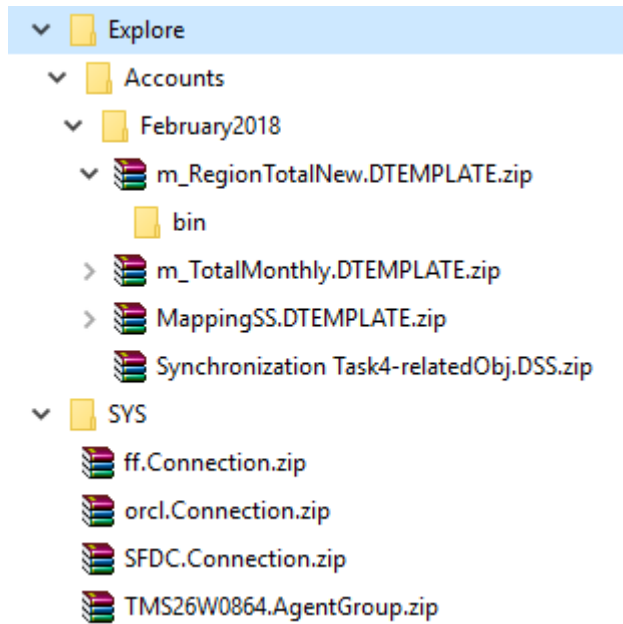
The following image is an example of an export spreadsheet:

	A	B	C	D
1	objectPath	objectName	objectType	id
2	/Explore/AccountsByArea/Mappings	Accounts_Archive	DTEMPLATE	7VLIQPISthYkHiBr6sSQMO
3	/Explore/AccountsByArea	Mappings	Folder	1rDmft2kePMeQNz6SmGaUg
4	/SYS	FlatFile3	Connection	6lh0UOiNgi1kcjJ2MMt7qQ
5	/SYS	USW1PF0WZ3NF	AgentGroup	aBhe8P8LvbXjREvNwfywII
6	/Explore	AccountsByArea	Project	5j0PyB0GjtseQ8YbmlqzMQ

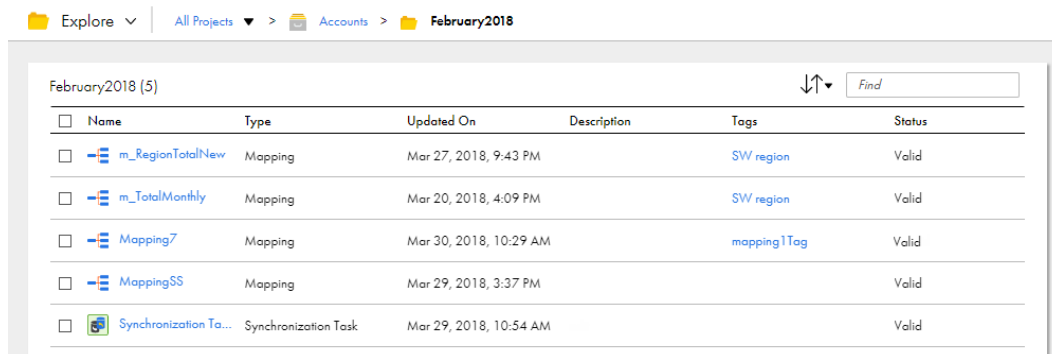
### Export file structure

The export file retains the file structure of the source organization's **Explore** page for projects, folders, and assets. Connections and runtime environments are located in the SYS folder.

The following image shows the contents of an export file:



The following image shows the same objects on the source organization's **Explore** page:



## Object names

Each asset is contained in a ZIP file along with its associated metadata and JSON file. The zip file includes the asset name appended by the asset type.

For example, a mapping with the name of m\_totals in the source organization has the name of m\_totals.DTEMPLATE in the export file. When you export the m\_totals mapping to the target organization, the asset has its original name of m\_totals.

The following table lists the asset types and the associated extension appended to Data Integration asset names:

Asset Type	Extension
Mapping	DTEMPLATE
Mapping (advanced mode)	ATSCALEDTEMPLATE
Mapping task	MTT
Replication task	DRS
Synchronization task	DSS
Masking task	DMASK
Linear taskflow	WORKFLOW
PowerCenter task	PCS
Mapplet	CUSTOM_FUNC
Saved query	CUSTOM_SOURCE
Visio template	TEMPLATE
Taskflow	TASKFLOW

## Exporting assets

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

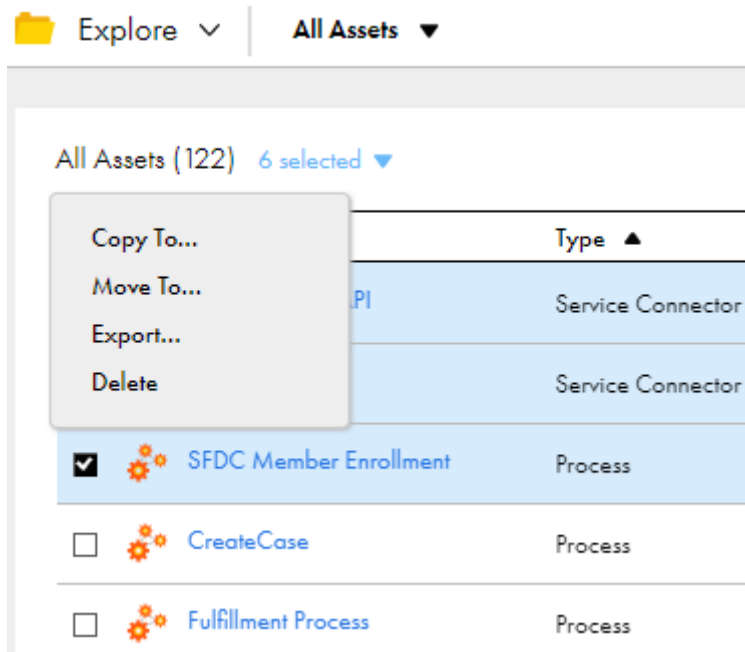
To include multiple assets, you can either select each asset within a folder or select a project or folder to export all of its assets. If you export a project, during import you can import the entire project or import only the assets that you select.

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.
8. To download the export file, click **Download** next to the export job on the **My Import/Export Logs** 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.
- Whether to publish assets when you import them.

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.

**Note:** To overwrite a source-controlled asset in the target project, the asset must be checked out.

The target organization must have all of the required licenses for the assets being imported.



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.

You can publish assets when you import them.

## 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. If you want to publish assets when you import them, select **Publish Application Integration assets after import**.
9. 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.
10. If necessary, revise your selections to resolve any issues in the test results.
11. 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.

## Publishing imported assets

Use the **Publish Application Integration assets after import** option to publish most Application Integration assets when you import them.

The import file contains information on whether the asset was published to a Secure Agent or to Cloud Server in the source organization.

If the import file contains assets published to a Secure Agent in the source organization, Informatica Intelligent Cloud Services deploys the asset to the same Secure Agent in the target organization. If the target organization is not linked to the same Secure Agent, the publish fails and you see an error.

If the import file contains assets published to Cloud Server in the source organization, Informatica Intelligent Cloud Services publishes the asset to Cloud Server.

To publish connections and service connectors that require credentials, first enter the credentials and then publish the assets from the **Explore** page. If you use the **Publish Application Integration assets after import** option, you see an error because export files do not contain a password.

## 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:

- If required, recreate process schedules. Informatica Intelligent Cloud Services imports do not include schedule information.
- Configure connection passwords and security tokens. Informatica Intelligent Cloud Services does not include connection passwords and security tokens in imports for security reasons.

## Viewing import and export logs

To view properties for an import or export instance, click the **Import** or **Export** tab at the top of the **My Import/Export Logs** page. By default, this page lists the import and export instances that were started within the last 30 days.

The following image shows the **Export** tab of the **My Import/Export Logs** page:

Instance Name	Start Time	User Name	Start Method	Status
My Folder-1538584732016	Oct 3, 2018, 9:38 AM	sabraham	UI	Export completed suc...
sonia-1538393063517	Oct 1, 2018, 4:24 AM	sabraham	UI	Export completed suc...

To view detailed information about an import or export job, click the instance name.

The following image shows details of an export job:

Name	Type	Source Location	Description	Status
GoogleApigee...	Connection	My Folder\connections		Exported successfully
Guide1	Guide	My Folder		Exported successfully

You can also view import and export job details on the **Import/Export Logs** page of the Monitor service.

For more information about the properties available on the **My Import/Export Logs** page, see the *Monitoring imports and exports* section of the *Monitor* help.

# CHAPTER 4

## My Processes

The **My Processes** page lists all the processes that were invoked by the currently logged-in user. To open the **My Processes** page, in Application Integration, select **My Processes** from the left navigation bar.

On the **My Processes** page, you see a list of your process instances that are running or have been run, along with the process version. States can be Running, Suspended, Completed, or Faulted.

The following image shows a sample **My Processes** page:

ID	Name	Version	Start Date	End Date	Status
889738640132308992	._S2481158	1	2023/9/22 05:03:42.354 AM	2023/9/22 05:03:42.359 AM	Completed
889738636378402816	._S2481158	1	2023/9/22 05:03:41.459 AM	2023/9/22 05:03:41.476 AM	Completed
889738632880357376	._S2481158	1	2023/9/22 05:03:40.625 AM	2023/9/22 05:03:40.630 AM	Completed
889737831611541504	._S2481158	1	2023/9/22 05:00:34.357 AM	2023/9/22 05:00:34.377 AM	Completed
889737849157873664	._S2481158	1	2023/9/22 05:00:33.771 AM	2023/9/22 05:00:33.783 AM	Completed
889737846428712448	._S2481158	1	2023/9/22 05:00:33.168 AM	2023/9/22 05:00:33.174 AM	Completed
88973784393174976	._S2481158	1	2023/9/22 05:00:32.525 AM	2023/9/22 05:00:32.531 AM	Completed
889737841146753024	._S2481158	1	2023/9/22 05:00:31.861 AM	2023/9/22 05:00:31.867 AM	Completed
889737834104520704	._S2481158	1	2023/9/22 05:00:30.182 AM	2023/9/22 05:00:30.195 AM	Completed
889736521119592448	._S2481158	1	2023/9/22 04:55:17.142 AM	2023/9/22 04:55:17.149 AM	Completed

The **My Processes** page is a subset of the **Processes** page in Application Integration Console. On the **My Processes** page, you only see processes invoked by the currently logged-in user. On the **Processes** page in Application Integration Console, you see processes invoked by all users in the organization.

You can access the following pages from the **My Process** page:

### Process View Detail

Click a process ID to see the **Process View Detail** page. You can see a chronological list of process activities, the process as it appears in the designer, and detailed step information. You can also access the **Active Process Detail** page.

### Process Version Listing

Click a process name to see the **Process Version Listing** page. See the target namespace, the version name, version number, plan ID, online date, offline date, and deployed date.

### Deployed Process Version Details

Click a process version number to see the **Deployed Process Version Details** page. You can see the process version lifecycle, update a process version, and see your role and partner role details.

The **Start Date** and **End Date** fields use Coordinated Universal Time (UTC).

You can apply simple and advanced process filters to view the processes that you would like to monitor and analyze.

For more information, see *Monitor* in the Application Integration Console help.

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