Mastering Data Movement: Exploring the Power of Informatica Ingress and Egress Jobs

Data Sheet | LumenData

Step-by-step guide to performing Data Ingress and Data Egress job using IDMC services.

PRODUCT REQUIREMENT:

Data Integration, Business 360(The User must have required privileges to access the mentioned services in IICS).

INGRESS JOB:

In IICS, the term "ingress job" refers to a specific type of job that is responsible for extracting data from external sources and loading it into a Business 360 Data store. The ingress job focuses on the initial movement of data into the target environment.

STEPS PERFORMED FOR THE INGRESS JOB ARE:

- Mapping
- Mapping Task
- Task flow

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MAPPING:

Mapping in IICS represents the flow of data from a source to a target system, including any necessary transformations along the way. Mappings are created and configured using the Cloud Data Integration module.

Mapping consists of the following components:

Source(s):
These are the systems or sources from which the data is extracted. In IICS, sources can include databases, files, applications, web services, or any other supported data sources.

Transformations:
Transformations define the operations and rules applied to the data as it moves through the mapping. IICS provides a wide range of built-in transformations such as filters, aggregators, joiners, lookups, expressions, and more. These transformations enable data manipulation, cleansing, enrichment, and aggregation.
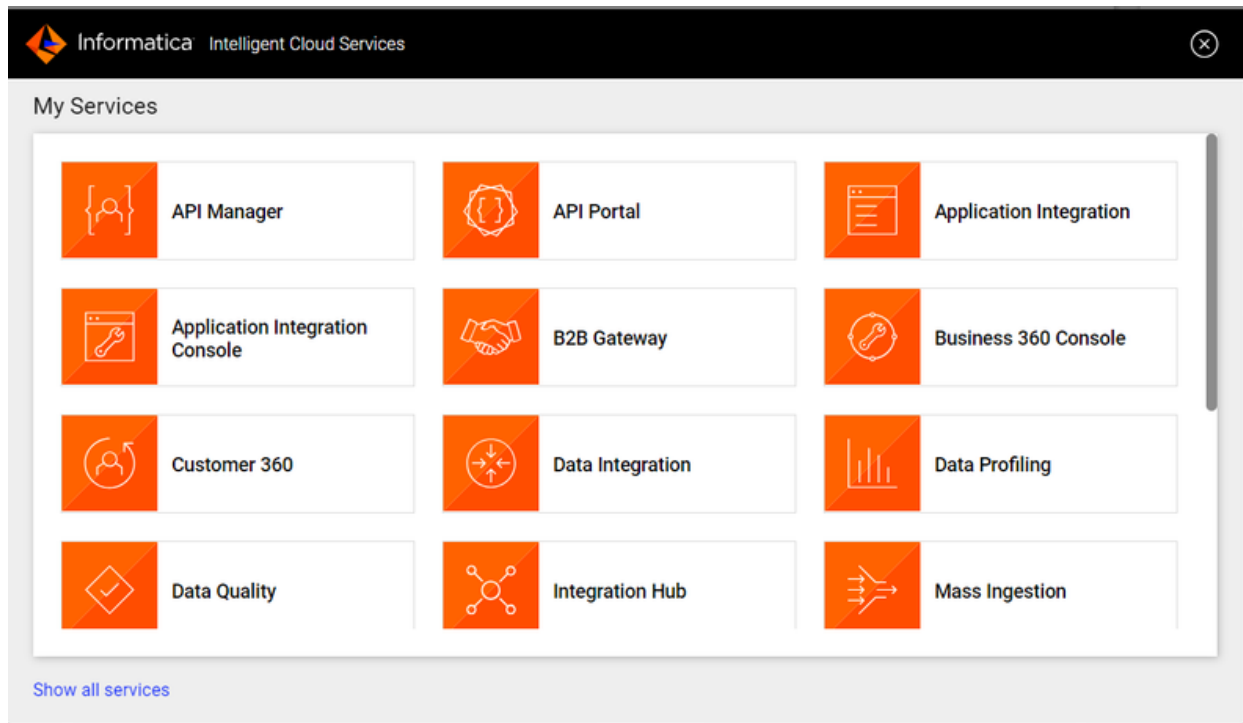
Target(s):
Targets represent the destination systems where the transformed data is loaded or delivered. Targets can include databases, data warehouses, applications, files, or other supported data destinations.

Connections:
Connections define the connection details and credentials required to access the source and target systems.
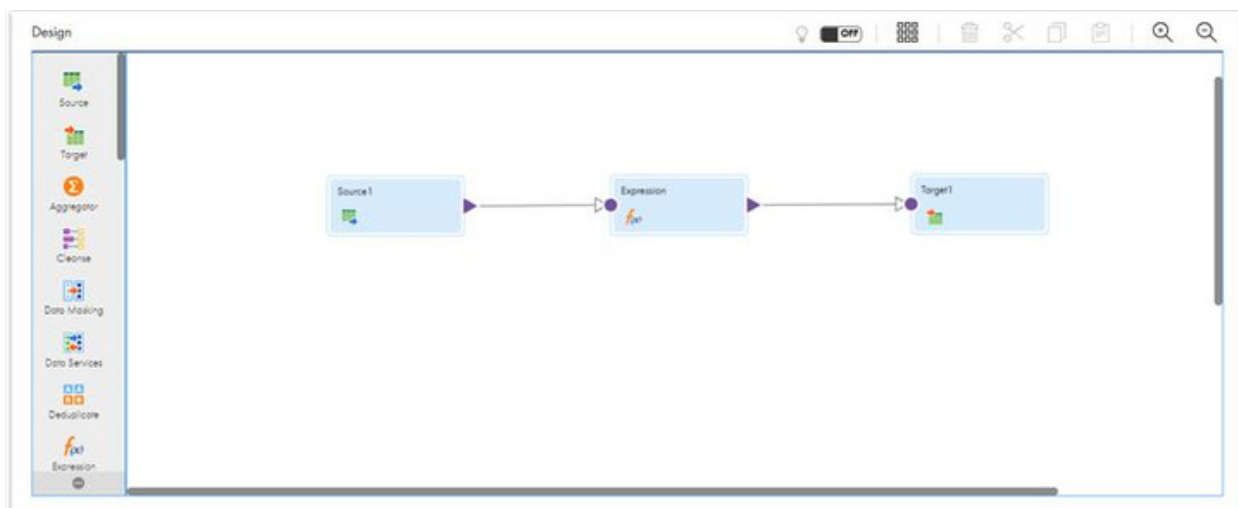
STEP-BY-STEP PROCESS FOR MAPPING:

1. Open Data integration service from my services.

2. Go to 'New' and click on 'Mappings'.

3. Select source and add the required source connection and the object. Here you can use the required transformation to transform the data. Select the target and specify the connection and operation.

4. Add In-out parameter and specify the jobInstanceID.

5. Save the mapping.

JOBINSTANCEID:

In IICS, the "Job Instance ID" refers to a unique identifier assigned to a specific instance of a job execution that involves a mapping.

When you execute a mapping in IICS, it creates a job instance for that execution. Each job instance is assigned a unique Job Instance ID to distinguish it from other executions.

The Job Instance ID can be useful for tracking and monitoring the execution of mappings within IICS. It allows you to identify and reference specific instances of job executions for troubleshooting, auditing, or reporting purposes.

MAPPING TASK:

In Informatica Intelligent Cloud Services (IICS), a "mapping task" refers to a specific type of task that is used to execute a mapping within a workflow. The mapping task allows you to include a mapping as a step in a broader workflow and orchestrate the execution of the mapping along with other tasks or processes.

The elements of a mapping task include:

Source Connections:
This element allows you to define the connections to the source systems from which data will be extracted for the mapping task. You can configure the connection details such as server, database, username, and password.

Target Connections:
The target connections element enables you to specify the connections to the target systems where the transformed data will be loaded or delivered. You can configure the connection details for the destination database, file system, application, or other supported targets.

Mapping Selection:
Within the mapping task, you can select the specific mapping that needs to be executed. You choose from the available mappings defined in the Mapping Designer of IICS.

Input and Output Parameters:
These elements allow you to define input and output parameters for the mapping task. Input parameters can be used to pass dynamic values to the mapping, while output parameters capture and retrieve result sets or values generated by the mapping.

Mapping Options:
This element provides various options and configurations related to the execution of the mapping task. You can set parameters such as commit interval, error handling, logging level, and other mapping-specific properties.

Dependencies:
The dependencies element allows you to establish dependencies between the mapping task and other tasks within the workflow. You can specify the order of execution and conditions that determine when the mapping task should run based on the completion of preceding tasks or other criteria.

Monitoring and Logging:
These elements provide monitoring capabilities to track the execution of the mapping task. You can monitor the progress, status, and performance of the mapping task during runtime. Additionally, logs and job run history capture details about the execution, including any error messages or warnings encountered.

STEP-BY-STEP PROCESS FOR MAPPING TASK:

1. Go to new → select task → mapping task
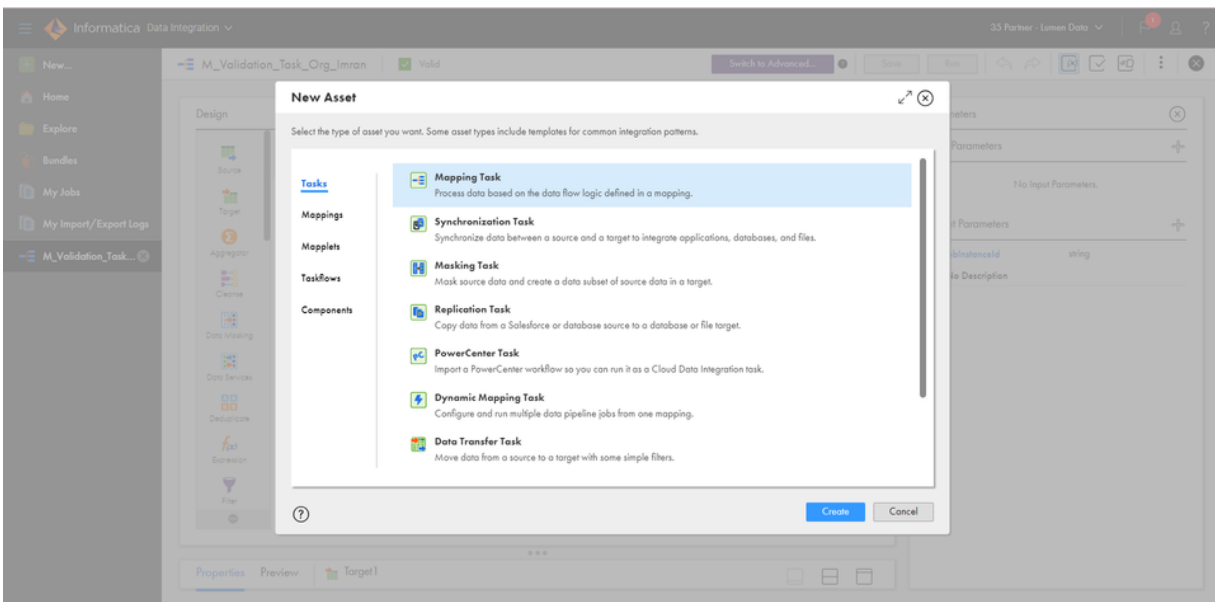
2. Click on the 'Create' and Assign the task name, Location, Runtime Environment ,and Mapping (which was created earlier).

3. After creating the mapping task, save it.

TASK FLOW:

In IICS, task flow refers to the sequence and dependencies of tasks within a workflow. Task flow determines the order in which tasks are executed and how they are interrelated.

A task flow consists of the following elements:

Task Dependencies:
Task dependencies determine the order of execution within the workflow.

Control Tasks:
Control tasks provide additional logic and decision-making capabilities within the workflow.

Task Assignment:
Task assignment defines which worker nodes or agent machines in the IICS environment are assigned to execute specific tasks. It also allows for parallel execution of tasks on different worker nodes to improve performance.

Task Input and Output:
Tasks within a workflow may have input and output dependencies with other tasks. Input dependencies refer to the data or results required by a task before it can start executing. Output dependencies represent the data or results produced by a task that is needed by subsequent tasks.

Error Handling and Retry:
You can configure error handling options for tasks, such as specifying the number of retries in case of failure, defining error actions, setting timeout periods, and enabling error notifications.
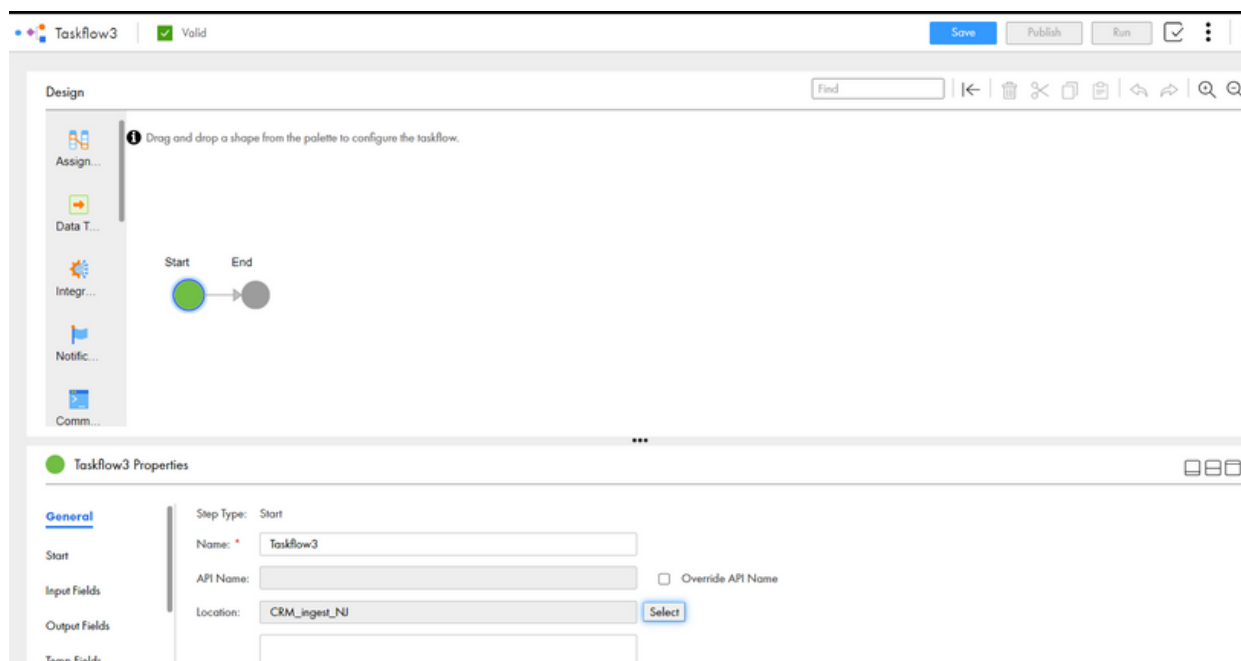
Monitoring and Logging:
You can monitor the progress, status, and performance of each task within the workflow. Monitoring and logging facilitate troubleshooting, auditing, and performance analysis.

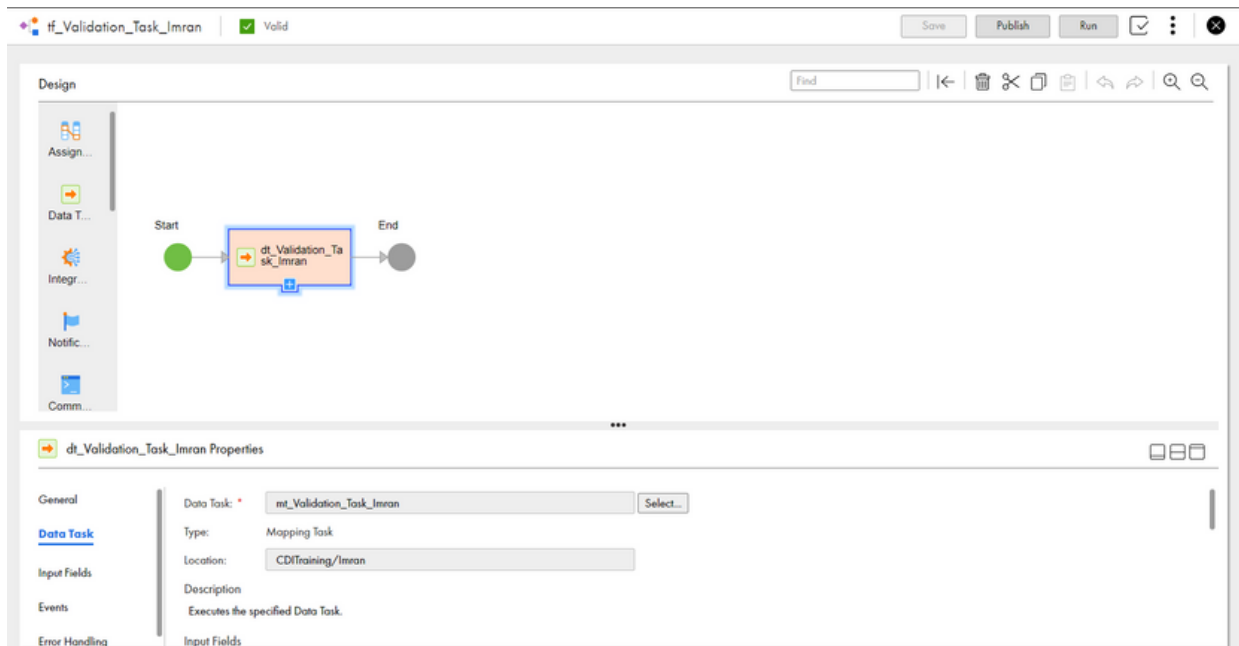## STEP-BY-STEP PROCESS FOR TASK FLOW:
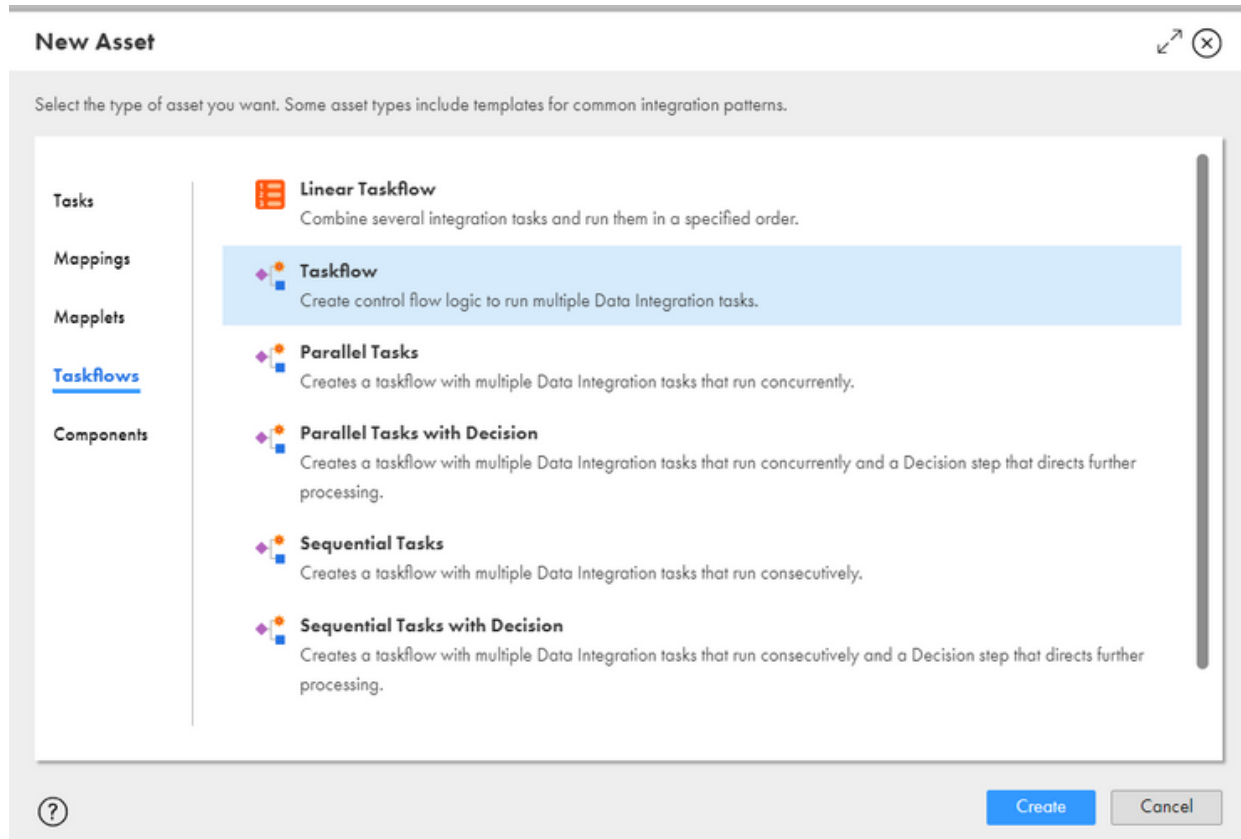
1. Go to new → select Taskflows → Taskflow (create).

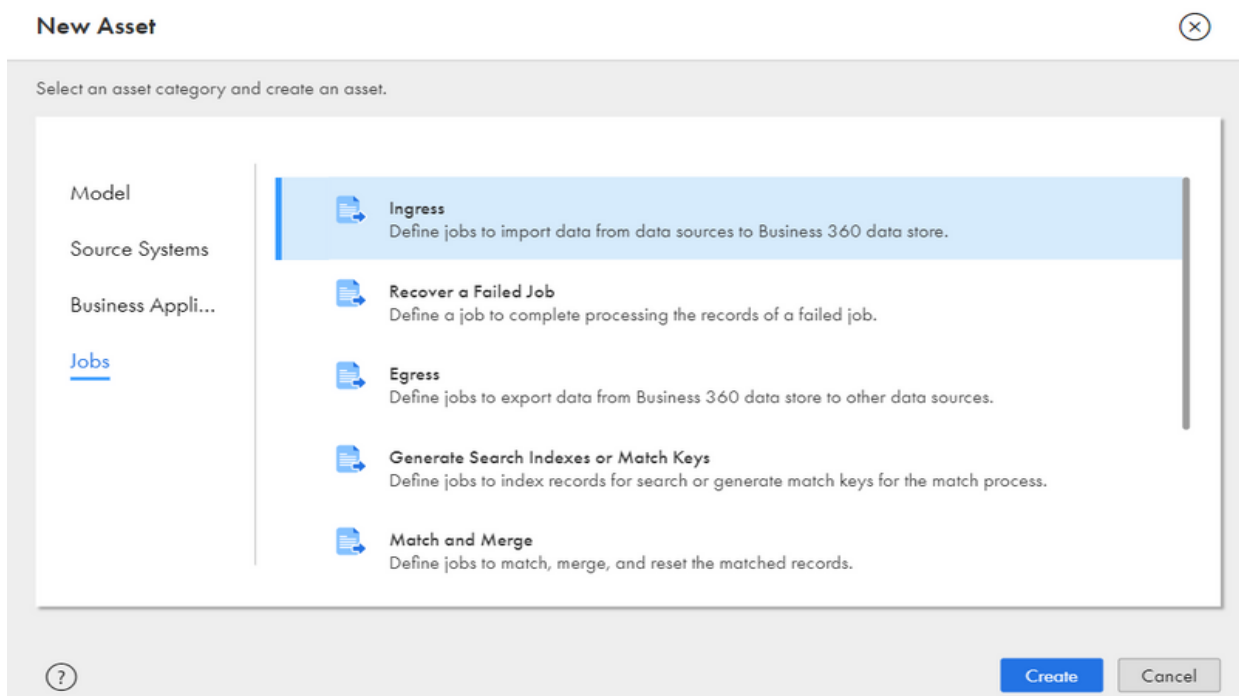2. Once you create the taskflow, Start and End objects will be displayed.

3. Add the Data integration task from the palette (drag and drop) and select the required mapping task assign it to the data task. Save and publish the taskflow.
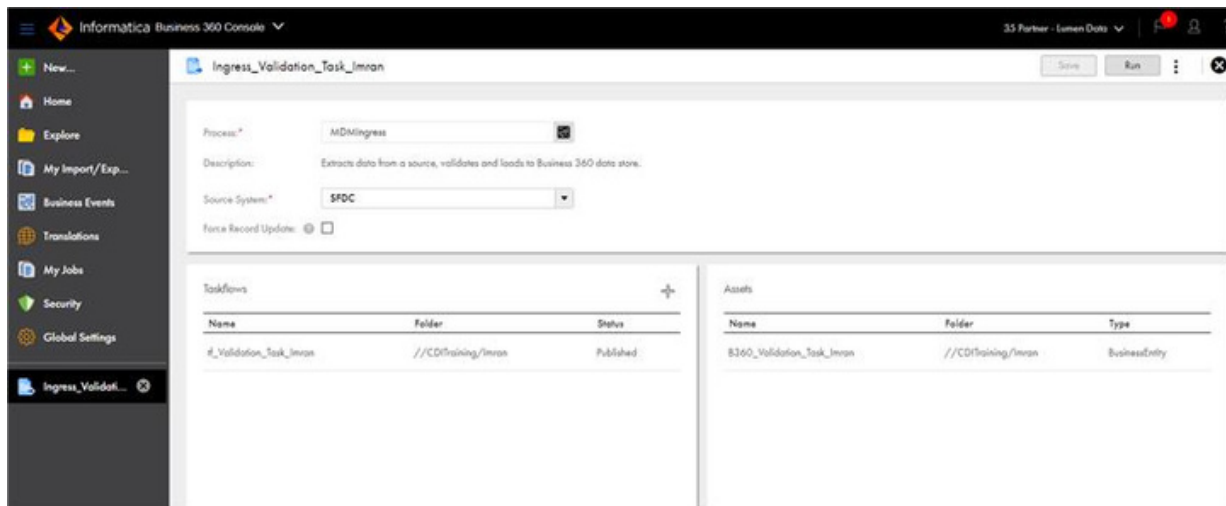

STEP-BY-STEP PROCESS FOR INGRESS JOB:

1. Go to services → select Business 360 console → New → Jobs → Ingress job (create).

2. After creating the ingress job, assign a name to a job, select the source system, then add the taskflow and run the ingress job.

3. You can check the status of the ingress job in "My Jobs" from the left palette

EGRESS JOB:

An egress job specifically focuses on the extraction or movement of data from an Business 360 Data store. This could involve retrieving data from various sources, transforming it if necessary, and then delivering it to a target system or destination. The target system could be a database, a file system, a data warehouse, an application, or any other external entity where the data needs to be stored or processed.

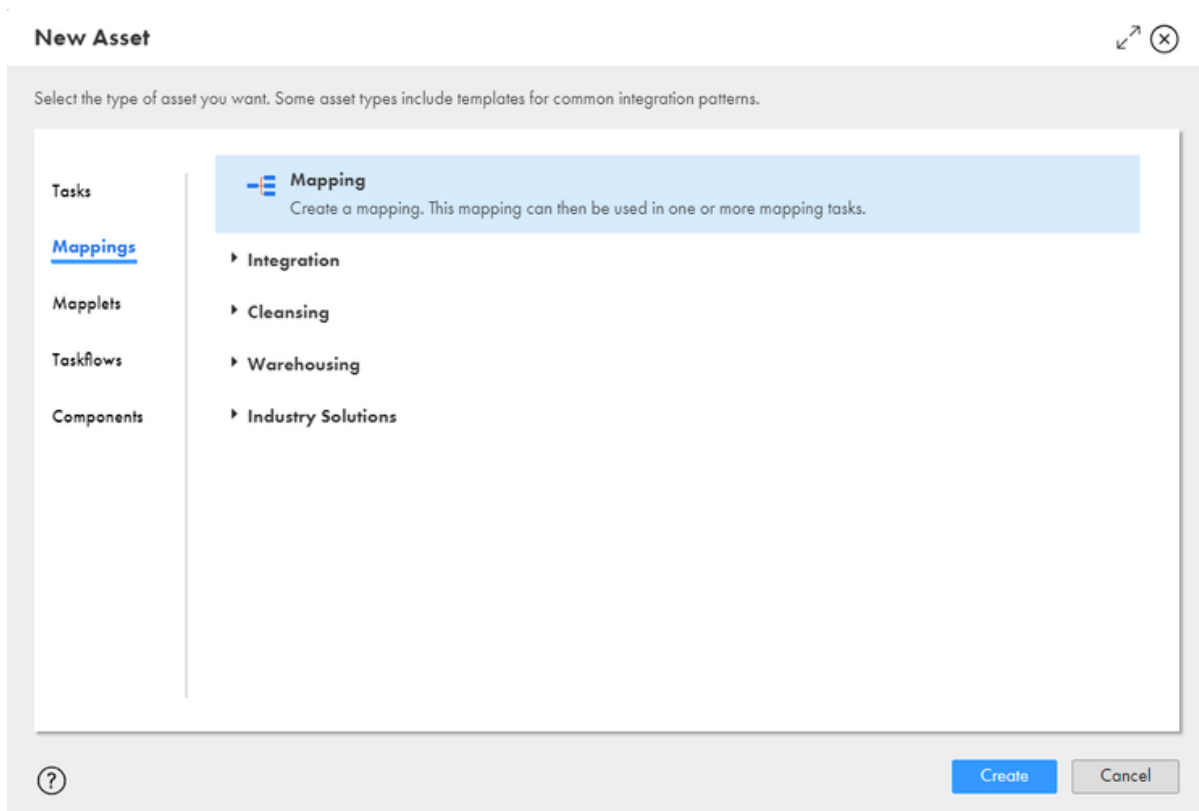## STEPS PERFORMED FOR EGRESS JOB ARE:

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- Mapping Task
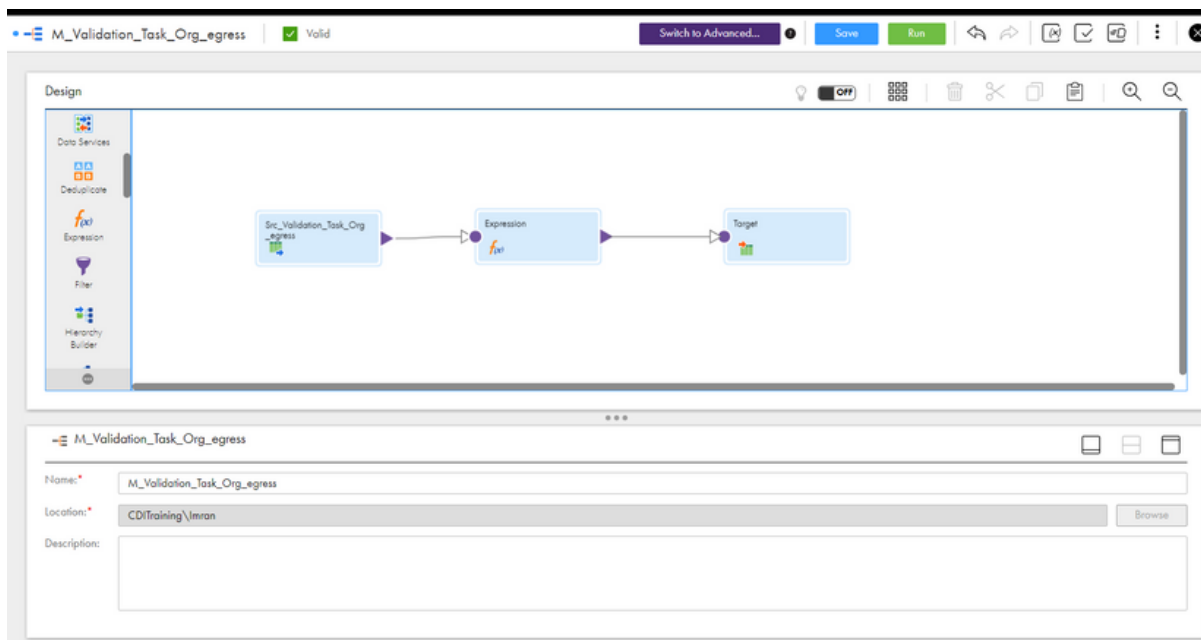- Task flow

STEP-BY-STEP PROCESS FOR MAPPING

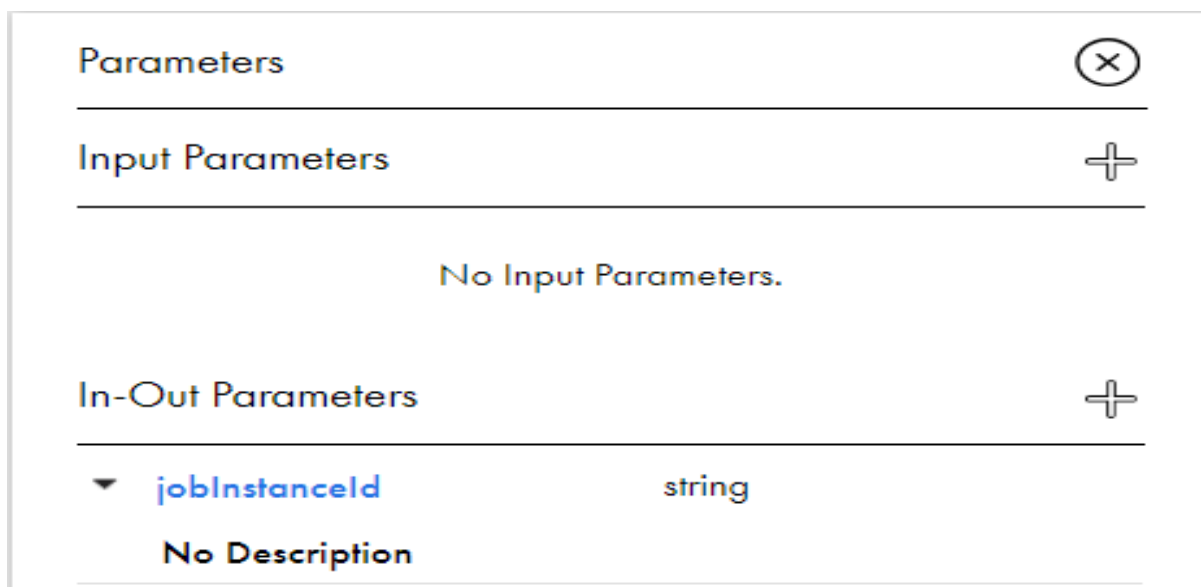1. Open Data integration service from 'my services.'
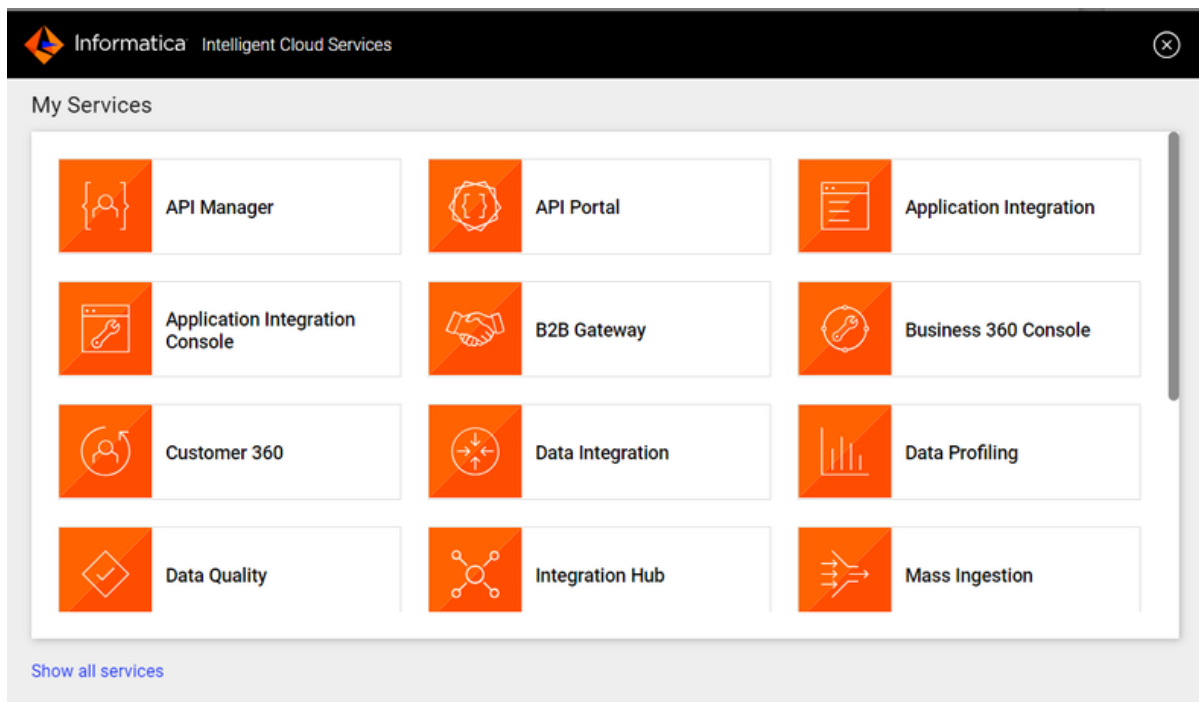
2. Go to 'New' and click on 'Mappings'.

3. Select source and add the required source connection and the object. Here, you can use the required transformation to transform the data. Select the target and specify the connection and operation.
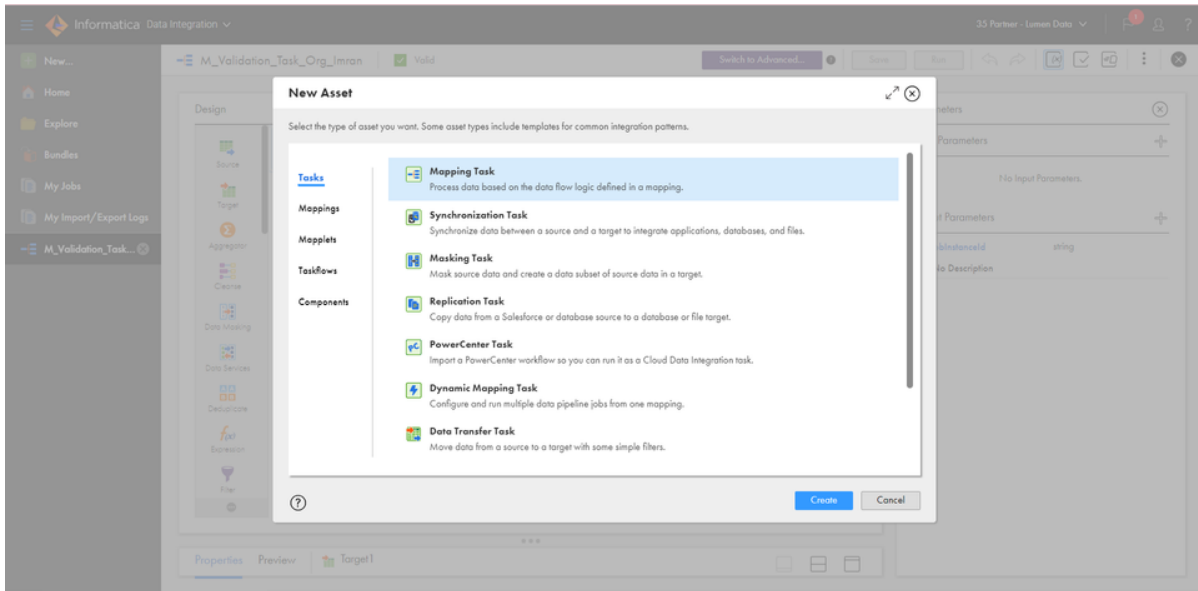

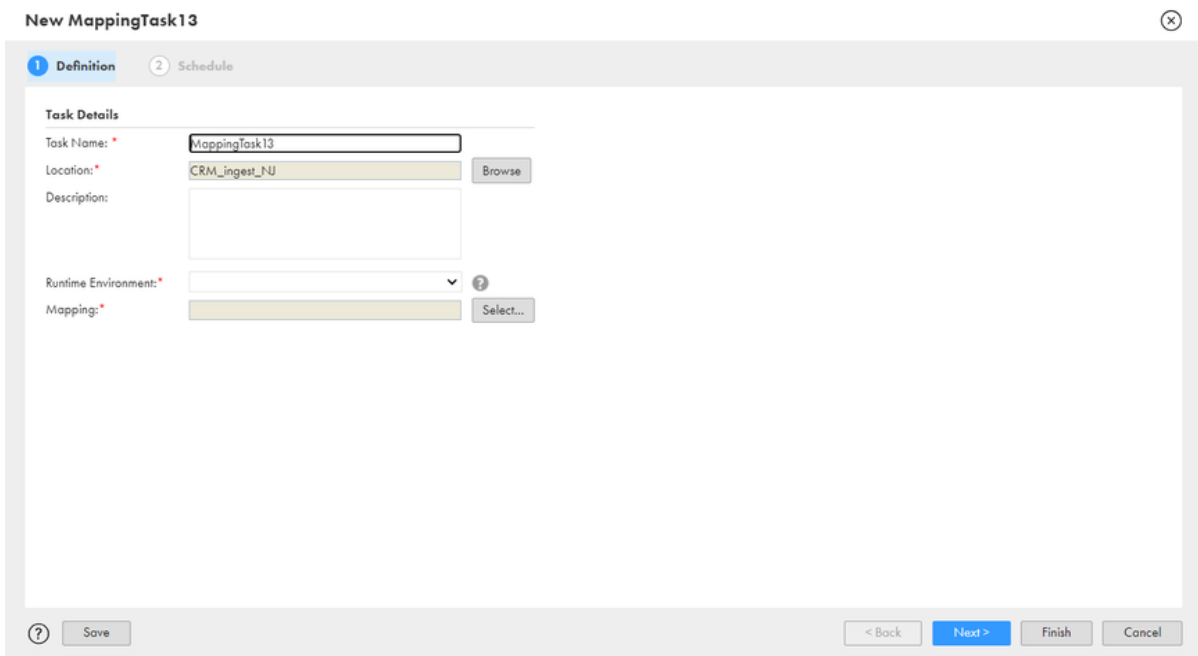**4. Add In-out parameter and specify the jobInstanceID.**
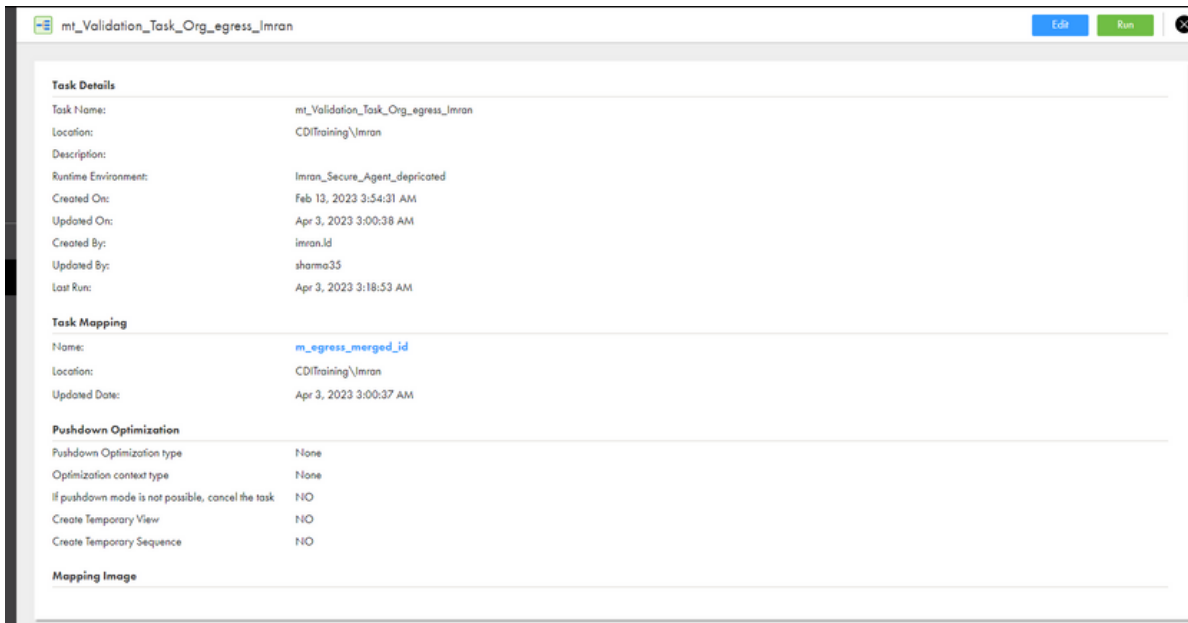
STEP-BY-STEP PROCESS FOR MAPPING TASK:

1. Go to new ➜ select task ➜ mapping task

2. Click on 'Create' and assign the task name, Location, Runtime Environment and Mapping (which was created earlier).
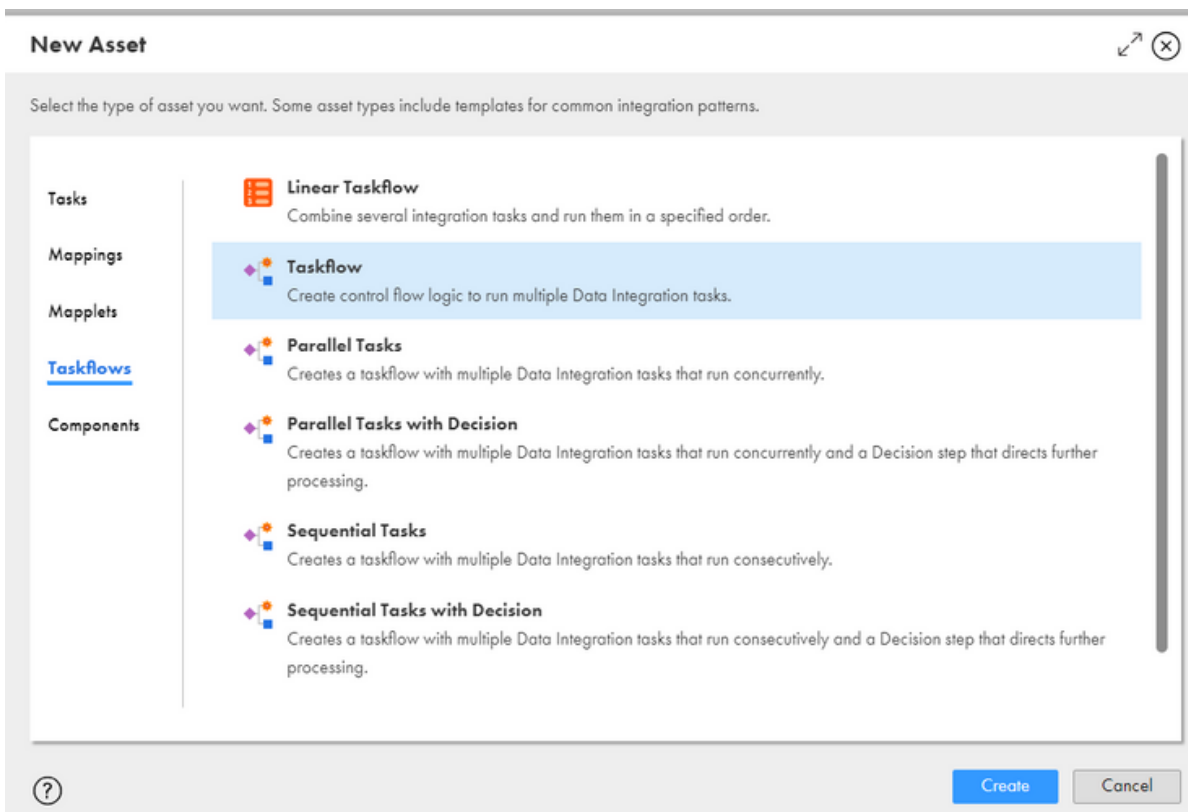
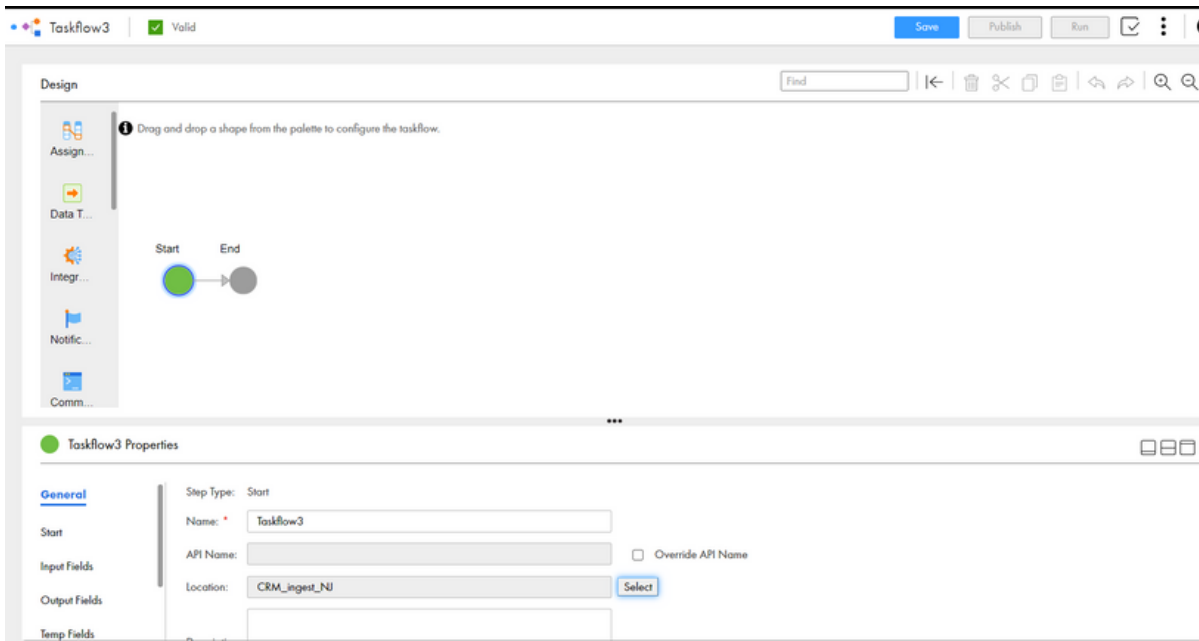**3. After creating the mapping task, save the mapping task.**

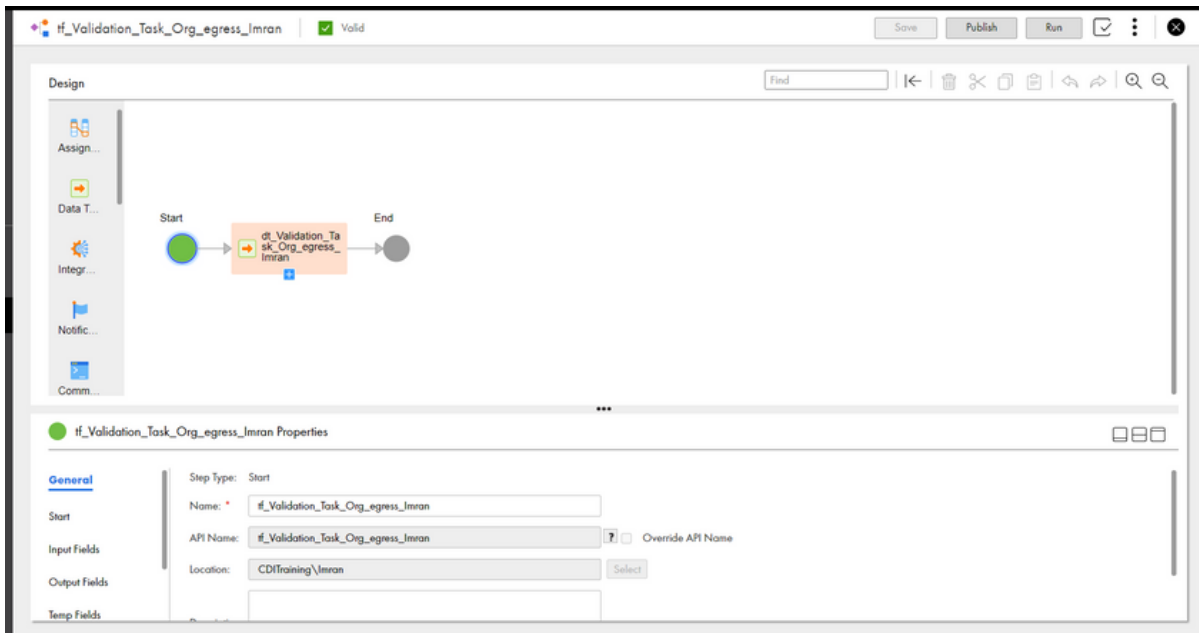
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1. Go to new ➔ select Taskflows ➔ Taskflow (create).

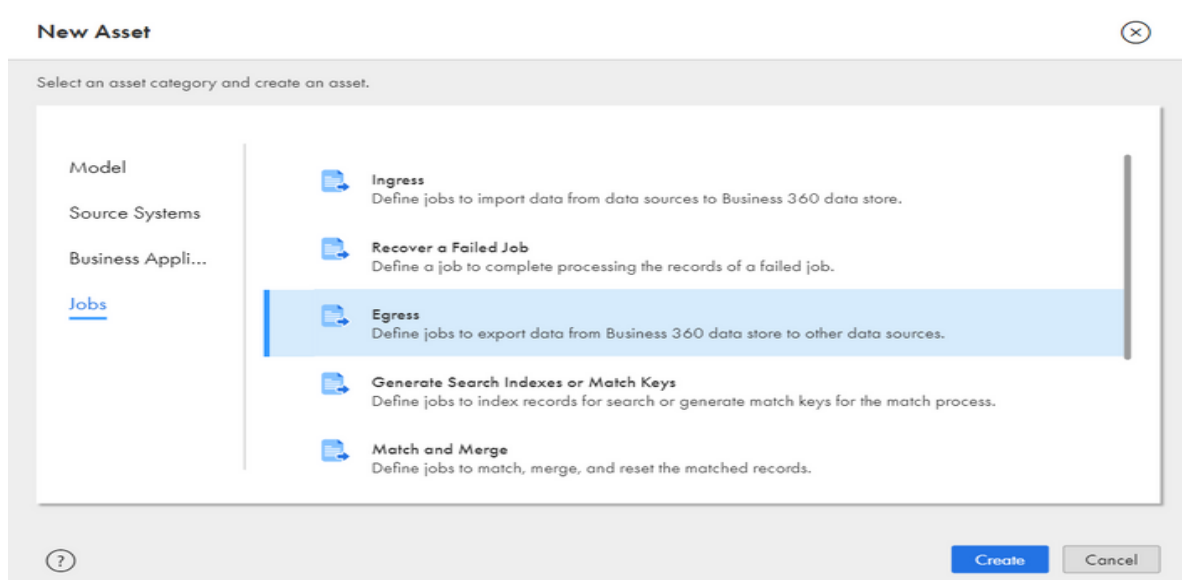**2. Once you create the taskflow, Start and End objects will be displayed.**

3. Add the Data integration task from the palette (drag and drop) and select the required mapping task. Assign it to the data task. Save and publish the taskflow
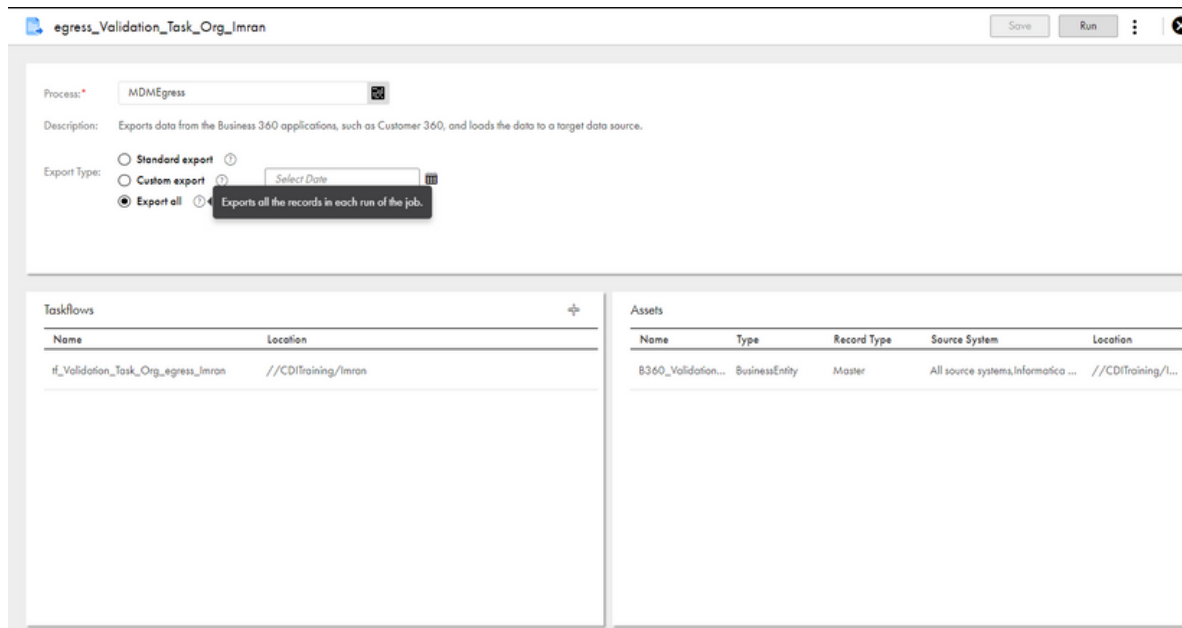
STEP-BY-STEP PROCESS FOR EGRESS JOB:

1. Go to services → select Business 360 console → New → Jobs → Egress job (create).

2. After creating the egress job, give a name to a job. Then add the taskflow and run the egress job.

3. You can check the status of the ingress job in "My Jobs" from the left palette.

ABOUT LUMENDATA:

LumenData is a leading provider of Enterprise Data Management, Cloud & Analytics solutions. We help businesses navigate their data visualization and analytics anxieties and enable them to accelerate their innovation journeys. Founded in 2008, with locations in multiple countries, LumenData is privileged to serve over 100 leading companies, including KwikTrip, Versant Health, US Food & Drug Administration, US Department of Labor, Cummins Engine, BCG, and others. LumenData is SOC2 certified and has instituted extensive controls to protect client data, including adherence to GDPR and CCPA regulations.

Get in touch to discuss how we can facilitate data-driven transformation for your organization.

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