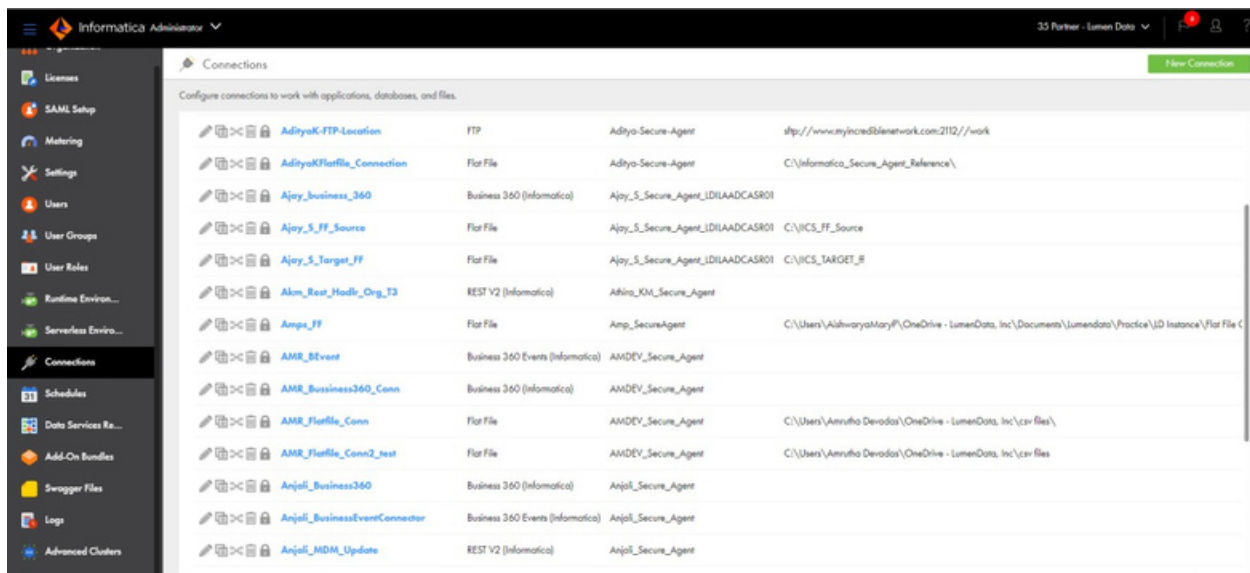


# Dynamically Generating Files from Snowflake in Informatica Intelligent Cloud Service

Data Sheet | LumenData

## Creating connections in IICS

- In IICS -> ADMINISTRATOR-> Run time environments. Create the runtime environment.
- Once the environment is created, make sure it is up and running.
- Now, create connections for FlatFile and Snowflake in Administrator.
- Click on 'new connection.'



The screenshot shows the Informatica Administrator interface. The left sidebar contains navigation options: Licenses, SAML Setup, Monitoring, Settings, Users, User Groups, User Roles, Runtime Environ..., Serverless Environ..., Connections (highlighted), Schedules, Data Services Re..., Add-On Bundles, Swagger Files, Logs, and Advanced Clusters. The main area is titled 'Connections' and contains a table of configured connections. A 'New Connection' button is visible in the top right corner of the table area.

Name	Type	Agent	URL/Path
AdityaK-FTP-Location	FTP	Aditya-Secure-Agent	ftp://www.myincrediblenetwork.com:2122//work
AdityaKFlatfile_Connection	Flat File	Aditya-Secure-Agent	C:\Informatica_Secure_Agent_Reference\
Ajay_business_360	Business 360 (Informatica)	Ajay_S_Secure_Agent_IDIUAADCASR01	
Ajay_S_FF_Source	Flat File	Ajay_S_Secure_Agent_IDIUAADCASR01	C:\IICS_FF_Source
Ajay_S_Target_FF	Flat File	Ajay_S_Secure_Agent_IDIUAADCASR01	C:\IICS_TARGET_FF
Aksh_Rest_Hoildr_Org_T3	REST V2 (Informatica)	Aksh_KM_Secure_Agent	
Amps_FF	Flat File	Amp_SecureAgent	C:\Users\AishwaryaMaryP\OneDrive - LumenData, Inc\Documents\Lumendata\Practica\ID Instance\Flat File C
AMR_BEvent	Business 360 Events (Informatica)	AMDEV_Secure_Agent	
AMR_Business360_Conn	Business 360 (Informatica)	AMDEV_Secure_Agent	
AMR_Flatfile_Conn	Flat File	AMDEV_Secure_Agent	C:\Users\Amrutha Devadas\OneDrive - LumenData, Inc\csw files\
AMR_Flatfile_Conn2_test	Flat File	AMDEV_Secure_Agent	C:\Users\Amrutha Devadas\OneDrive - LumenData, Inc\csw files
Anjali_Business360	Business 360 (Informatica)	Anjali_Secure_Agent	
Anjali_BusinessEventConnector	Business 360 Events (Informatica)	Anjali_Secure_Agent	
Anjali_MDM_Update	REST V2 (Informatica)	Anjali_Secure_Agent	

## To create a flat file connection in Informatica Intelligent Cloud Service (IICS), you can follow these steps:

**Log In:** Sign in to your IICS account.

**Navigation:** Go to the workspace where you want to create the flat file connection.

**Create Connection:** Click on "Connections" in the left navigation pane.

**New Connection:** Click the "+ New Connection" button.

**Choose Connection Type:** In the "Select Connection Type" screen, choose "File" or "Flat File," depending on the terminology used in your version of IICS.

**Connection Name:** Give your connection a name that describes its purpose or the type of flat file you're connecting to.

**Connection Properties:** Fill in the connection properties like the file path, format, delimiter, and any other necessary details. These properties will vary depending on the specifics of your flat file.

**Test Connection:** After filling in the properties, it's good practice to test the connection to ensure it's working correctly.

**Save:** Finally, click the "Save" or "Create" button to save your flat file connection

Ajay\_S\_FF\_Source

✔ The test for this connection was successful.

**Connection Details**

Connection Name: *	Ajay_S_Flat_File
Description:	for_practice
Type: * ?	Flat File ▼

**Flat File Connection Properties**

Runtime Environment: * ?	Ajay_S_Secure_Agent_LDILAADCASR01 ▼
Directory: *	C:\IICS_FF_Source <input type="button" value="Browse..."/>
Date Format: *	MM/dd/yyyy HH:mm:ss ▼
Code Page: *	MS Windows Latin1 ▼

**To create a Snowflake connection in Informatica Intelligent Cloud Service (IICS), you can follow these steps:**

**Log In:** Sign in to your IICS account.

**Navigation:** Go to the workspace where you want to create the Snowflake connection.

**Create Connection:** Click on "Connections" in the left navigation pane.

**New Connection:** Click the "+ New Connection" button.

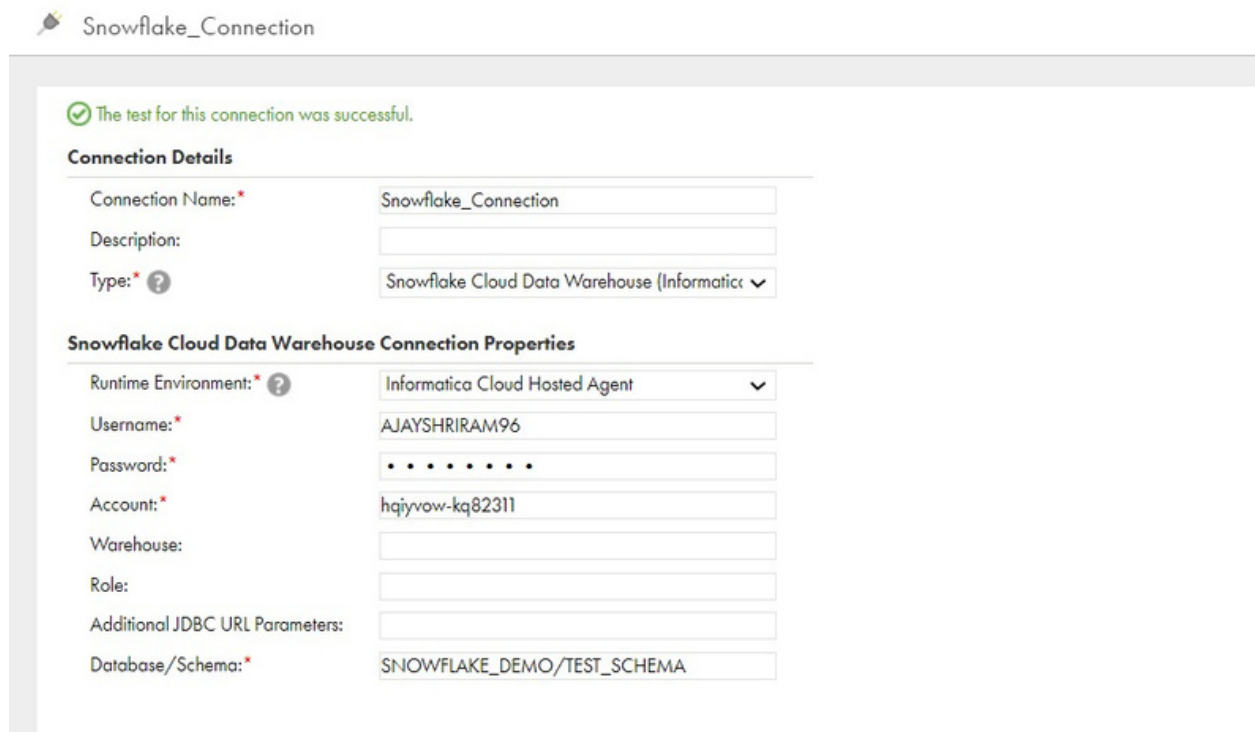
**Choose Connection Type:** In the "Select Connection Type" screen, search for or select "Snowflake" as the connection type.

**Connection Name:** Give your connection a name that describes its purpose or identifies the Snowflake database you're connecting to.

**Connection Properties:** Fill in the connection properties specific to your Snowflake instance. These properties typically include details such as the account name, user credentials, and warehouse information.

**Test Connection:** After filling in the properties, it's advisable to test the connection to ensure it's working correctly. This step helps verify that you can establish a connection to your Snowflake database.

**Save:** Finally, click the "Save" or "Create" button to save your Snowflake connection



The screenshot displays the 'Snowflake\_Connection' configuration window. At the top, a green checkmark indicates 'The test for this connection was successful.' Below this, the 'Connection Details' section includes fields for 'Connection Name' (Snowflake\_Connection), 'Description', 'Type' (Snowflake Cloud Data Warehouse (Informatic)), and 'Runtime Environment' (Informatica Cloud Hosted Agent). The 'Snowflake Cloud Data Warehouse Connection Properties' section contains fields for 'Username' (AJAYSHRIRAM96), 'Password' (masked with dots), 'Account' (hqiyvow-kq82311), 'Warehouse', 'Role', 'Additional JDBC URL Parameters', and 'Database/Schema' (SNOWFLAKE\_DEMO/TEST\_SCHEMA).

"We have established connections for both FlatFile and Snowflake in Informatica Intelligent Cloud Service (IICS)."

To create a table in Snowflake that can be used for storing dynamic file data

```
SNOWFLAKE_DEMO.TEST_SCHEMA ▾ Settings ▾

1  create or replace TABLE EMPLOYEE (
2      ID NUMBER(38,0),
3      ORGANIZATION_ID VARCHAR(10),
4      NAME VARCHAR(100),
5      WEBSITE VARCHAR(100),
6      COUNTRY VARCHAR(50),
7      DESCRIPTION VARCHAR(100),
8      FOUNDED NUMBER(38,0),
9      INDUSTRY VARCHAR(20),
10     NUMBER_OF_EMPLOYEES NUMBER(38,0),
11     MANAGER_ID NUMBER(38,0),
12     DEPARTMENT_ID NUMBER(38,0)
13 );
14
```

From the provided query, you can create a sample table header for the "EMPLOYEE" table with the given column specifications. This header describes the structure of the "EMPLOYEE" table, including the column names and their respective data types and lengths

## The INSERT INTO query is used in SQL (Structured Query Language) to insert new records or rows into a database table:

**INSERT INTO** employee (Index, "Organization Id", Name, Website, Country, Description, Founded, Industry, "Number of Employees", Manager\_ID, Department\_ID)

### VALUES

(1, 'FAB0d41d5b5d22c', 'Ferrell LLC', 'https://price.net/', 'Papua New Guinea', 'Horizontal empowering knowledgebase', 1990, 'Plastics', 3498, 124, 50),

(2, '6A7EdDEA9FaDC52', 'Mckinney, Riley and Day', 'http://www.hall-buchanan.info/', 'Finland', 'Usercentric system-worthy leverage', 2015, 'Glass / Ceramics / Concrete', 4952, 124, 50),

(3, '0bFED1ADAE4bcC1', 'Hester Ltd', 'http://sullivan-reed.com/', 'China', 'Switchable scalable moratorium', 1971, 'Public Safety', 5287, 101, 10),

(4, '2bFC1Be8a4ce42f', 'Holder-Sellers', 'https://becker.com/', 'Turkmenistan', 'De-engineered systemic artificial intelligence', 2004, 'Automotive', 921, 100, 20),

(5, '9eE8A6a4Eb96C24', 'Mayer Group', 'http://www.brewer.com/', 'Mauritius', 'Synchronized needsbased challenge', 1991, 'Transportation', 7870, 201, 20);

In this way we can create around 50 to 60 rows.

After creating the 'Employee' table in Snowflake using the provided SQL query, you can preview the data by executing the following SQL query: SELECT \* FROM Employee;

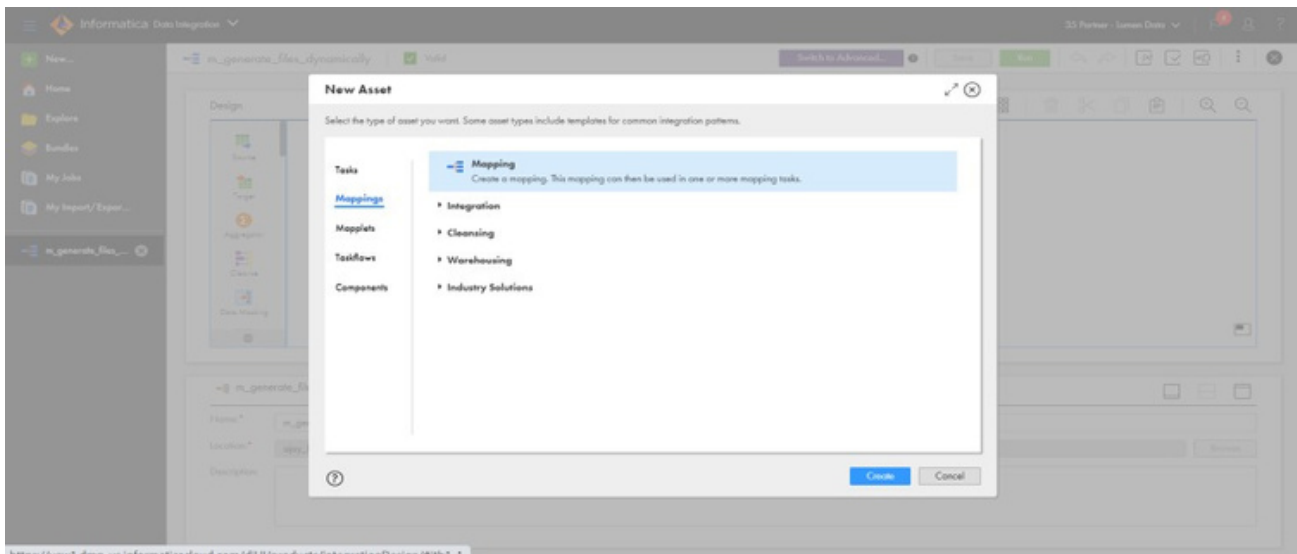
Once the table is created, it will appear as follows..

ID	ORGANIZATION_ID	NAME	WEBSITE	COUNTRY	DESCRIPTION	FOUNDED	INDUSTRY	NUMBER_OF_EMPLOYEES	MANAGER_ID	DEPARTMENT_ID
1	FAB0d41d5b5d22c	Ferrell LLC	<a href="https://price.ne">https://price.ne</a>	Papua New Guin	Horizontal empoweri	1,990	Plastics	3,498	124	50
2	6A7EdDEA9FaDC52	Mckinney, Ri	<a href="http://www.hall">http://www.hall</a>	Finland	User-centric system	2,015	Glass / Ceramics	4,952	124	50
3	0bFED1ADAE4bcC1	Hester Ltd	<a href="http://sullivan-r">http://sullivan-r</a>	China	Switchable scalable	1,971	Public Safety	5,287	101	10
4	2bFC1Be8a4ce42f	Holder-Selle	<a href="https://becker.c">https://becker.c</a>	Turkmenistan	De-engineered syste	2,004	Automotive	921	100	20
5	9eE8A6a4Eb96C24	Mayer Group	<a href="http://www.bre">http://www.bre</a>	Mauritius	Synchronized needs	1,991	Transportation	7,870	201	20
6	cc757116fe1C085	Henry-Thom	<a href="http://morse.ne">http://morse.ne</a>	Bahamas	Face-to-face well-m	1,992	Primary / Second	4,914	101	40
7	219233e8aFF1BC3	Hansen-Ever	<a href="https://www.kis">https://www.kis</a>	Pakistan	Seamless disinterme	2,018	Publishing Indust	7,832	101	70
8	ccc93DCFB1a31CD	Mcintosh-Mc	<a href="https://www.br">https://www.br</a>	Heard Island and	Centralized attitude-	1,970	Import / Export	4,389	101	110
9	0b4F93aA06ED03e	Carr Inc	<a href="http://roas.com">http://roas.com</a>	Kuwait	Distributed impactfu	1,996	Plastics	8,167	205	110
10	738b5aDe0B1C6A5	Gaines Inc	<a href="http://sandoyal">http://sandoyal</a>	Uzbekistan	Multi-lateral scalable	1,997	Outsourcing / Off	9,698	101	90
11	AE61b8Ffebc476	Kidd Group	<a href="http://www.lyo">http://www.lyo</a>	Bouvet Island (Bi	Proactive foreground	2,001	Primary / Second	7,473	100	90
12	eb3B7D06cCcd609	Crane-Clark	<a href="https://www.sa">https://www.sa</a>	Denmark	Front-line clear-think	2,014	Food / Beverage	9,011	100	90
13	8D0c29189c9798B	Keller, Camp	<a href="https://www.ga">https://www.ga</a>	Liberia	Ameliorated director	2,020	Museums / Institi	2,862	102	60
14	D2c91cc03CA394c	Glover-Pope	<a href="http://www.silv">http://www.silv</a>	United Arab Emir	Perservering context	2,013	Medical Practice	9,079	103	60
15	C8AC1eaf9C036F4	Pacheco-Spi	<a href="https://aquib.r.c">https://aquib.r.c</a>	Sweden	Secured logistical sy	1,984	Maritime	769	103	60
16	b5D10A147a8Afe	Hodges-Ayere	<a href="http://www.arcl">http://www.arcl</a>	Honduras	Future-proofed rad	1,990	Facilities Service	8,508	103	60
17	68139e5C4De03B4	Bowers, Gue	<a href="http://www.can">http://www.can</a>	Uganda	De-engineered trans	1,972	Primary / Second	6,986	103	60
18	5c2EffeIdba2Bdf	Mckenzie-M	<a href="http://montoya">http://montoya</a>	Hong Kong	Reverse-engineered	1,998	Investment Mana	4,589	101	100
19	ba179f19F7925f5	Branch-Mani	<a href="http://www.boz">http://www.boz</a>	Botswana	Adaptive intangible f	1,999	Architecture / Pl	7,961	108	100
20	c1Ce9B350BAc6Bd	Weiss and Sc	<a href="https://barrett.c">https://barrett.c</a>	Korea	Sharable optimal fun	2,011	Plastics	5,984	108	100
21	8de40AC4e6EaCa4	Velez, Payne	<a href="http://burton.cc">http://burton.cc</a>	Luxembourg	Mandatory coherent	1,986	Wholesale	5,010	108	100
22	Aad86a4F038F52d	Harrell LLC	<a href="http://www.frv">http://www.frv</a>	Guadeloupe	Reverse-engineered	2,013	Aviation	2,044	101	30
23	e33b8f7b6Db7DAb	Camecho, H	<a href="http://fleming.c">http://fleming.c</a>	Tajikistan	Monitored attitude-c	1,992	Investment Mana	1,448	101	30
24	F8f4Fe6cAC76f2e	Mercer and C	<a href="http://www.mci">http://www.mci</a>	Dominica	Profit-focused incr	1,990	Electrical	3,385	201	50
25	Ab21f44DE29e8b	Haynes-Schr	<a href="https://www.bo">https://www.bo</a>	Norfolk Island	Virtual optimizing de	1,995	Environmental Se	8,523	201	50

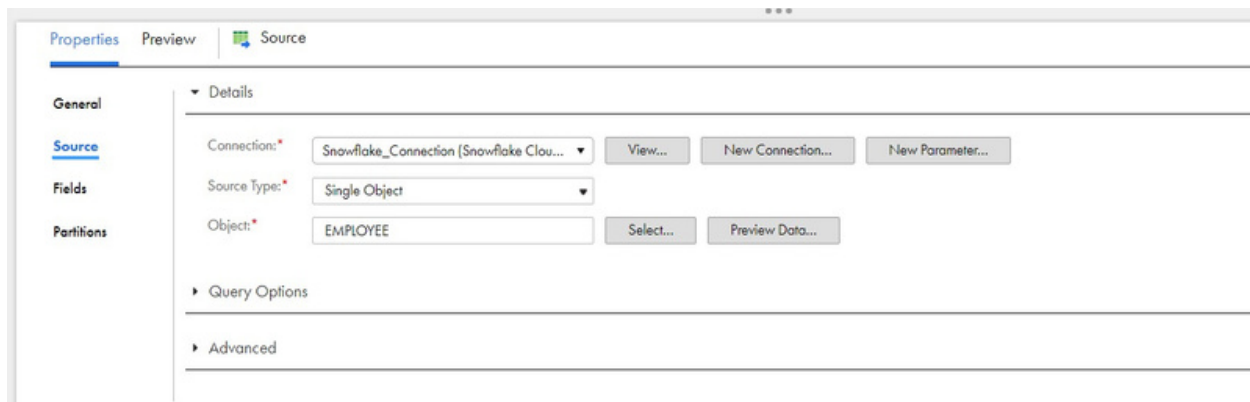
"Migrating data from Snowflake to create CSV files dynamically using Informatica Intelligent Cloud Service (IICS)."

**Aim of mapping** - Using Transaction control transformation mapping in the context of data integration is to control the manage the flow of data record based on a certain condition (DEPARTMENT\_ID) during data transformation. The mapping allows you to create files on-the-fly during data transformation. You can define the file format, naming conventions, and folder locations dynamically based on the data being processed.

As we have already created the connectors for FlatFile and Snowflake, we need to create a new mapping. Select IICS > Data Integration > New.

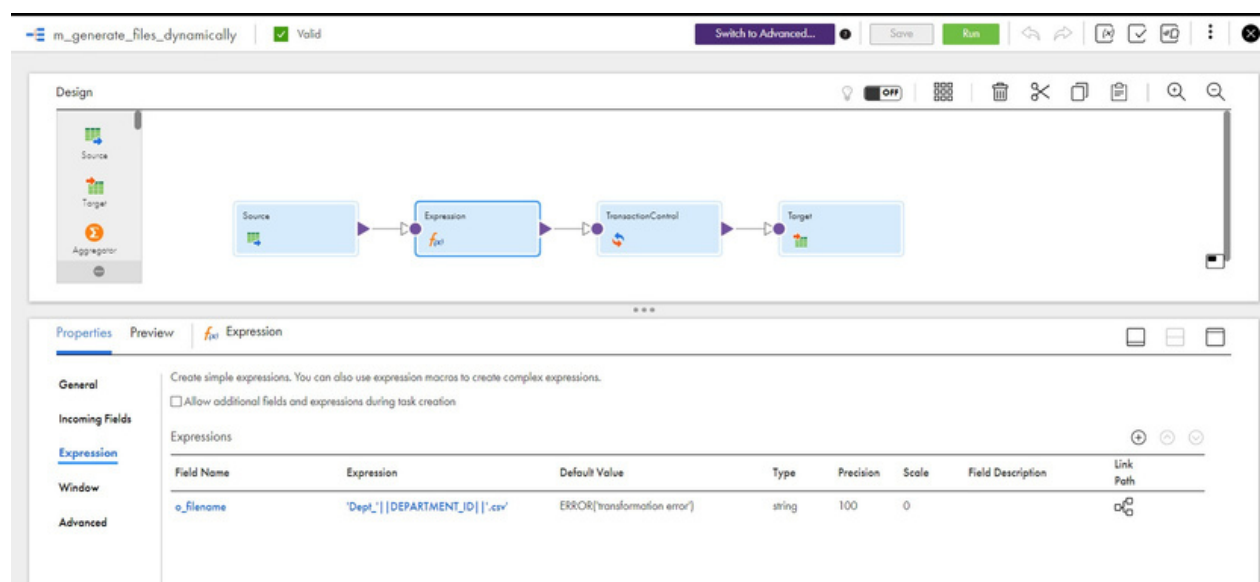


- Create new mapping under 'mapping' and rename it according to the job.
- Now select 'source' and fill in the details by selecting the view option.
- Fill in the connection details and the table name in the appropriate columns, as shown below



- Now, we use Expression Transformation.

We are utilizing an expression transformation to specify the desired filename through the creation of an output port.



The expression 'Dept\_' || DEPARTMENT\_ID || '.csv' is a string concatenation expression used to create a new string by combining multiple smaller strings or values.

In this specific expression:

'Dept\_': This is a string literal that represents the prefix of the desired filename. It's a fixed part of the filename.



DEPARTMENT\_ID: This appears to be a variable or column name. The actual value of the DEPARTMENT\_ID variable or column will be inserted into the resulting string at this position.

'.csv': This is another string literal, representing the file extension. It's also a fixed part of the filename.

When you put all these parts together using the concatenation operator ||, you get a string that looks something like this:

If DEPARTMENT\_ID has the value, say, 123, then the resulting string would be 'Dept\_123.csv'.

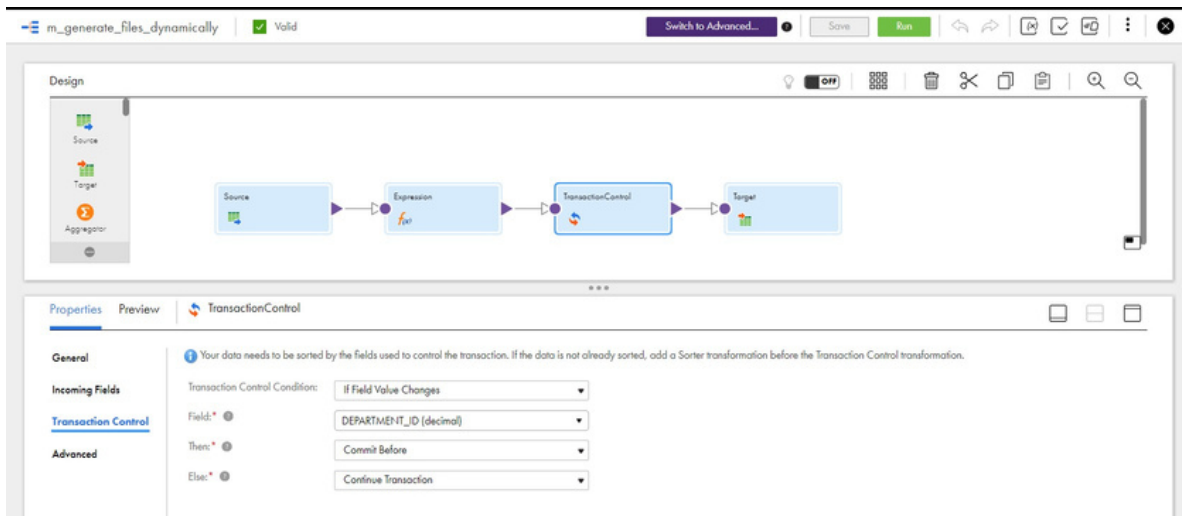
If DEPARTMENT\_ID has a different value, like 456, the resulting string would be 'Dept\_456.csv'.

So, the expression is used to dynamically generate filenames by combining a fixed prefix ('Dept\_'), the value of the DEPARTMENT\_ID, and a fixed file extension ('.csv'). This can be useful, for example, when you need to create separate files for different departments based on their IDs.

- Now, we use an Transaction Control Transformation

The Transaction Control transformation is an active transformation that commits or rolls back sets of rows during a mapping run. Use the Transaction Control transformation to commit or roll back transactions from transactional targets such as relational, XML, Amazon Redshift, and REST V2 targets. You can also use the transformation in a mapping to write data to a different flat file each time that Data Integration starts a new transaction.

In a Transaction Control transformation, a transaction is the row or set of rows bound by commit or roll back rows. A transaction can be based on a group of rows that are ordered on a common key, such as Department ID or order entry date. The number of rows in each transaction can vary.

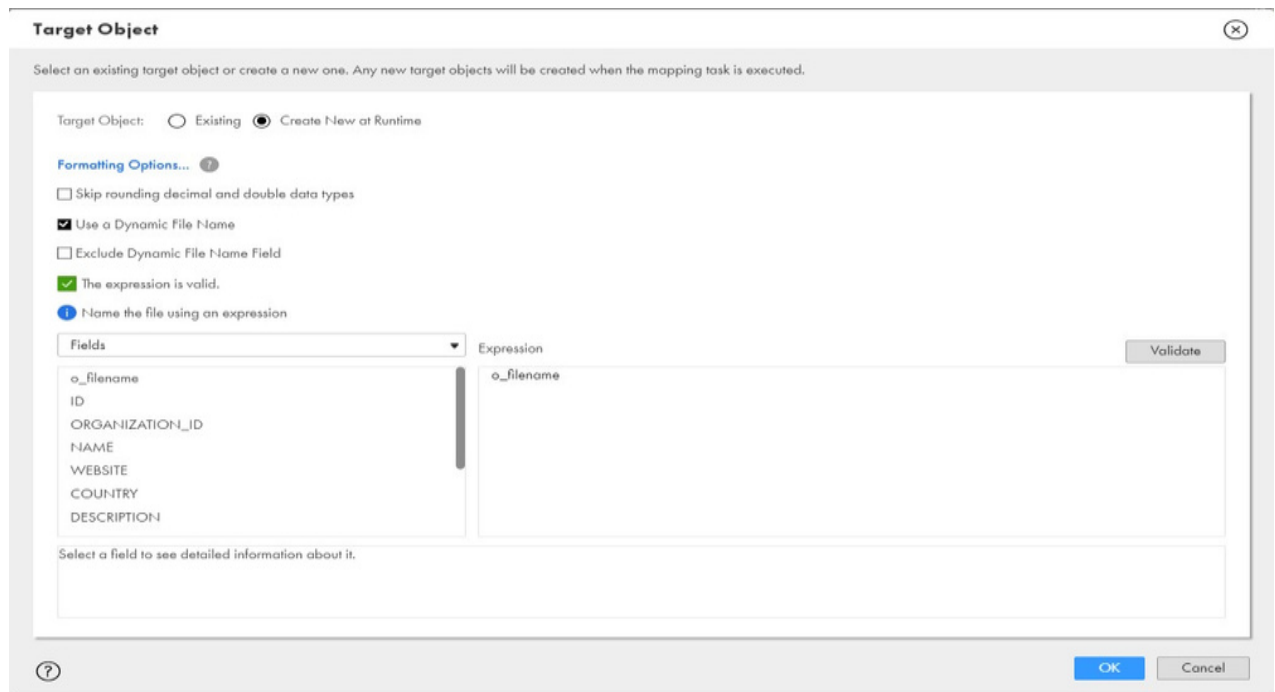
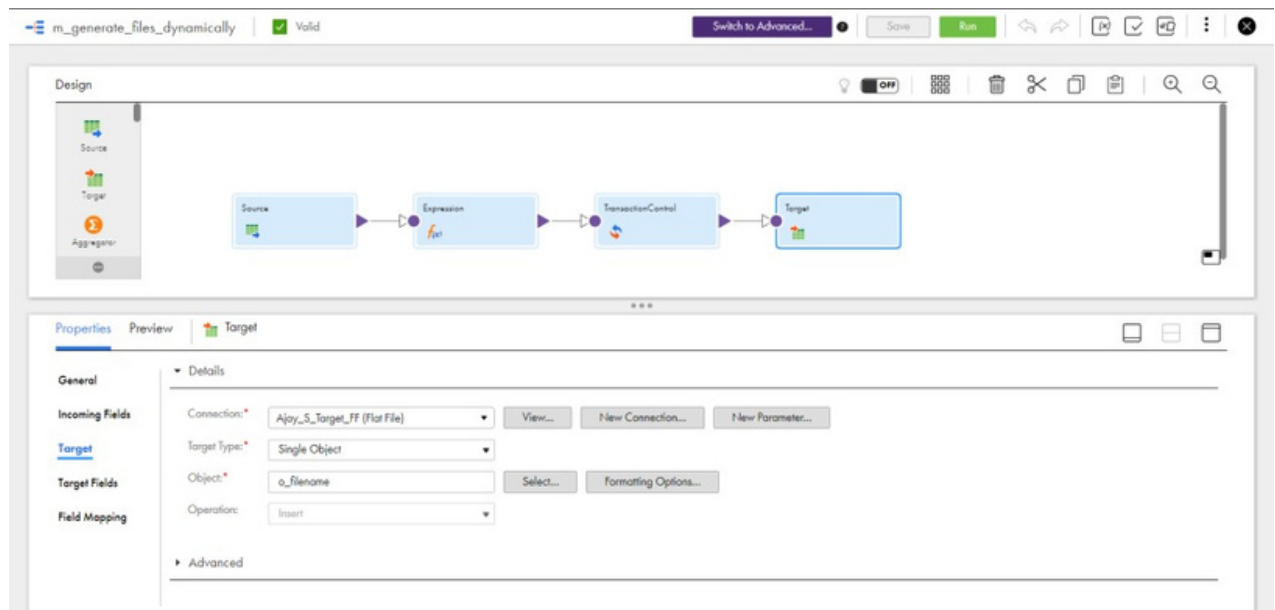


You define a transaction by specifying the transaction control condition in the transformation. Based on whether the condition is met, you can choose to commit rows, roll back rows, or continue processing data without changing the transaction boundaries.

When you run the mapping task, Data Integration evaluates the transaction control condition for each row that enters the transformation. When it evaluates a commit row, it commits all rows in the transaction to the targets. When Data Integration evaluates a roll back row, it rolls back all rows in the transaction from the targets

- Target transformation

Create the following transaction control condition to commit data when the Integration Service encounters a new Department ID.



Create a new file target at run time and specify a dynamic file name. Use the above expression for the target name to create a different target file for each Department ID Type

Mapping Status:

m\_generate\_files\_dynamically-2 Restart Refresh

**Job Properties**

Task Name: **m\_generate\_files\_dynamically**

Instance ID: 2

Task Type: Mapping

Started By: ajoy.kd through UI

Start Time: Sep 28, 2023 12:22:48 AM

End Time: Sep 28, 2023 12:23:47 AM

Duration: 59 seconds

Runtime Environment: Ajay\_S\_Secure\_Agent\_IDILAACASR01

Secure Agent: Ajay\_S\_Secure\_IDILAACASR01\_96

**Results**

Status: ✔ Success

Success Rows: 100

Errors: 0

Session Log: [Download Session Log](#)

**Individual Source/Target Results**

Name	Success Rows	Errors	Error Message	Actions
Source	100	0		
Target (o_filename)	100	0		

**Output** – The expected output is a dynamically generated file created during the transformation, with format, naming conventions. Folder location, and content determined based on the DEPARTMENT\_ID data being processed and the configuration in the Transaction Control Transaction mapping.

Name	Date modified	Type	Size
Dept_10	9/26/2023 10:37 AM	Microsoft Excel Com...	1 KB
Dept_20	9/26/2023 10:37 AM	Microsoft Excel Com...	1 KB
Dept_30	9/26/2023 10:37 AM	Microsoft Excel Com...	1 KB
Dept_40	9/26/2023 10:37 AM	Microsoft Excel Com...	2 KB
Dept_50	9/26/2023 10:37 AM	Microsoft Excel Com...	5 KB
Dept_60	9/26/2023 10:37 AM	Microsoft Excel Com...	1 KB
Dept_70	9/26/2023 10:37 AM	Microsoft Excel Com...	1 KB
Dept_80	9/26/2023 10:37 AM	Microsoft Excel Com...	1 KB
Dept_90	9/26/2023 10:37 AM	Microsoft Excel Com...	1 KB
Dept_100	9/26/2023 10:37 AM	Microsoft Excel Com...	1 KB
Dept_110	9/26/2023 10:37 AM	Microsoft Excel Com...	2 KB
Dept_120	9/26/2023 10:37 AM	Microsoft Excel Com...	4 KB

ID	ORGANIZATION_ID	NAME	WEBSITE	COUNTRY	DESCRIPTION	FOUNDED	INDUSTRY	NUMBER_OF_EMPLOYEES	MANAGER_ID	DEPARTMENT_ID	o_filename
51	7D9F8FC51D8DAe3	Lawson and Sons	https://www.wong.com/	French Southern Territories	Compatible analyzing intranet	2021	Arts / Crafts	3527	125	10	Dept_10.csv
52	7dd18fb7c807b65	Mcquire, Mcconnell and Olsen	https://melton-briggs.com/	Korea	Profound client-server frame	1988	Printing	8445	125	10	Dept_10.csv
53	EF5855Fadcc8BFe	Charles-Phillips	https://bowman.com/	Cote d'Ivoire	Monitored client-server implementatio	2012	Mental Health Care	3450	125	10	Dept_10.csv

ID	ORGANIZATION_ID	NAME	WEBSITE	COUNTRY	DESCRIPTION	FOUNDED	INDUSTRY	NUMBER_OF_EMPLOYEES	MANAGER_ID	DEPARTMENT_ID	o_filename
63	D9ef3BC51D8DAe3	Poole, Cruz and Whitney	https://reed.info/	Reunion	Balanced analyzing groupware	1978	Marketing / Advertising / Sales	2992	129	40	Dept_40.csv
64	055fFE82D99580	Riley Ltd	https://wiley.com/	Brazil	Optional exuding superstructure	1986	Textiles	9315	129	40	Dept_40.csv
65	cf8e4dbAE1699da	Erickson, Andrews and Bailey	https://www.hobbs-grant.com/	Eritrea	Vision-oriented secondary project	2014	Consumer Electronics	7829	129	40	Dept_40.csv
66	fdfbeebad0Cd1	Wilkinson, Charles and Arroyo	http://hunter-mcfarland.com/	United States Virgin Islands	Assimilated 24/7 archive	1996	Building Materials	602	129	40	Dept_40.csv
67	5DCb8A5aSc030	Floyd Ltd	http://www.whitney.com/	Falkland Islands (Malvinas)	Function-based fault-tolerant concept	2017	Public Relations / PR	2911	129	40	Dept_40.csv
68	ce57DCbcfD6d618	Newman-Galloway	https://www.scott.com/	Luxembourg	Enhanced foreground collaboration	1987	Information Technology / IT	3934	129	40	Dept_40.csv
69	5aa0187cd929371	Frazier-Butler	https://www.daugherty-farley.info/	Northern Mariana Islands	Persistent interactive circuit	1972	Outsourcing / Offshoring	5130	129	40	Dept_40.csv

ID	ORGANIZATION_ID	NAME	WEBSITE	COUNTRY	DESCRIPTION	FOUNDED	INDUSTRY	NUMBER_OF_EMPLOYEES	MANAGER_ID	DEPARTMENT_ID	o_filename
70	902D7Ac8b6d476b	Newton Inc	https://www.richmond-manning.info/	Netherlands Antilles	Fundamental stable info-mediaries	1976	Military Industry	563	129	80	Dept_80.csv
71	32B89F4d939788	Duffy-Levy	https://www.potter.com/	Guernsey	Diverse exuding installation	1982	Wireless	6146	129	80	Dept_80.csv
72	adc80aFbE58bAe3	Wagner LLC	https://decker-esparza.com/	Uruguay	Reactive attitude-oriented toolset	1987	International Affairs	6874	129	80	Dept_80.csv
73	dfcA1c84A8B61Ac	Mccall-Holmes	http://www.dean.com/	Benin	Object-based value-added database	2009	Legal Services	696	129	80	Dept_80.csv
74	208044Ac2fe52f3	Massey LLC	https://frazier.biz/	Suriname	Configurable zero administration Graphical User Interface	1986	Accounting	5004	129	80	Dept_80.csv

## 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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