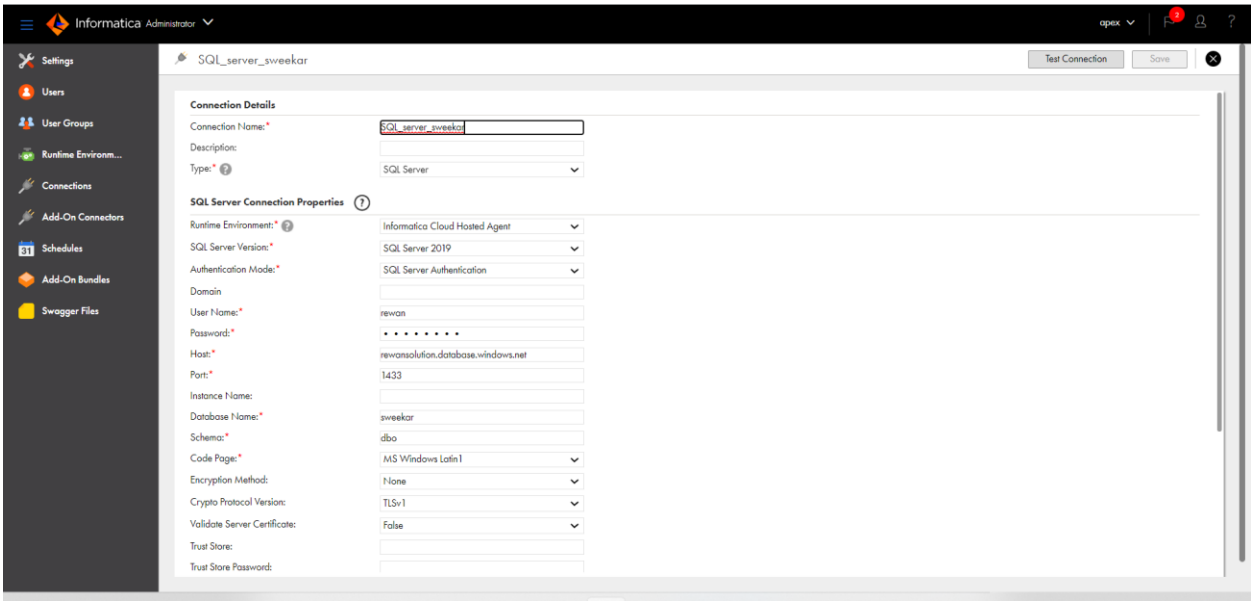
TIETOEVRY – DATABASE – FINAL ASSESSMENT

SWEEKAR K T/EI13047

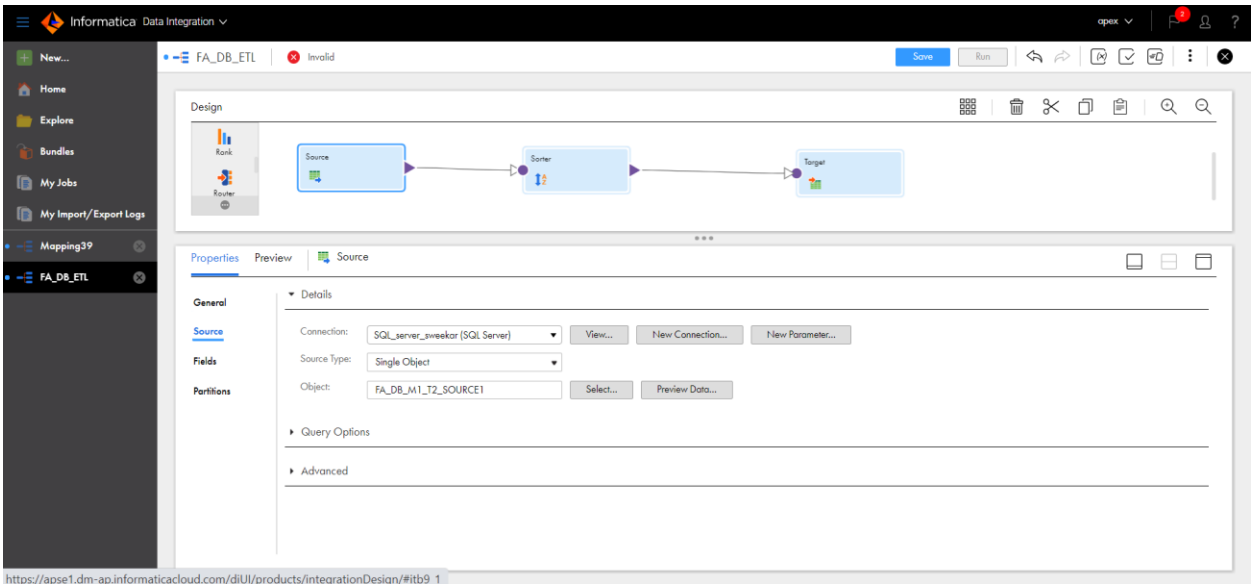
Module 4 IICS: 20 Points

Entry criteria: Transactions tables created in Module 1, task 2

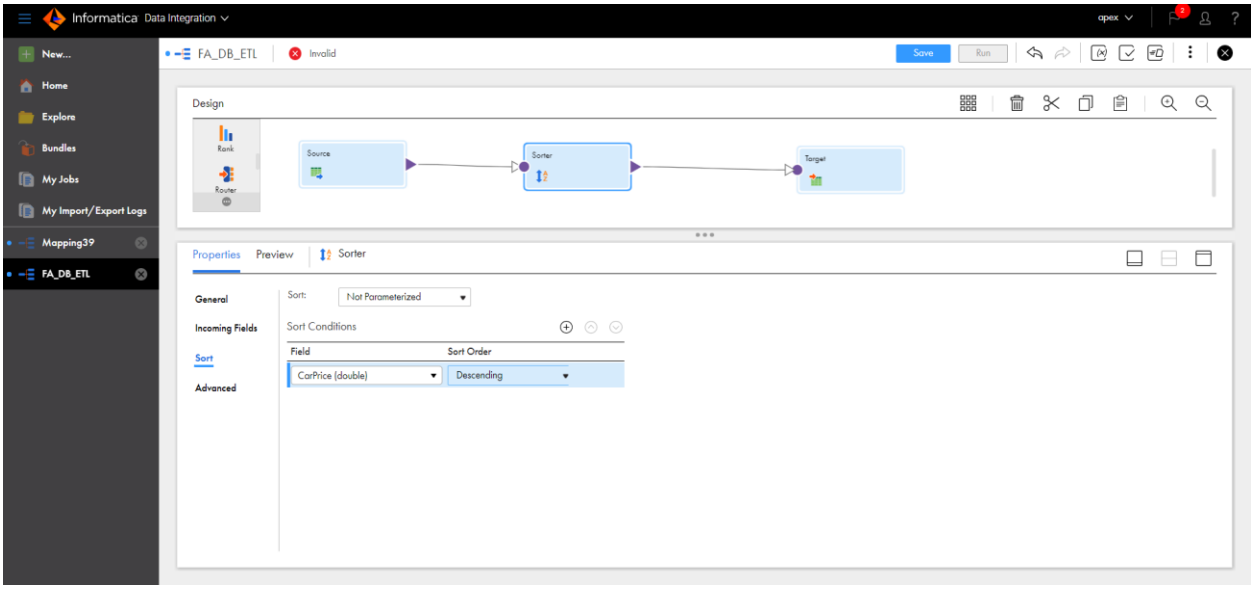
1. Make connection to different data source (Oracle DB, Flat file, SQL Server)



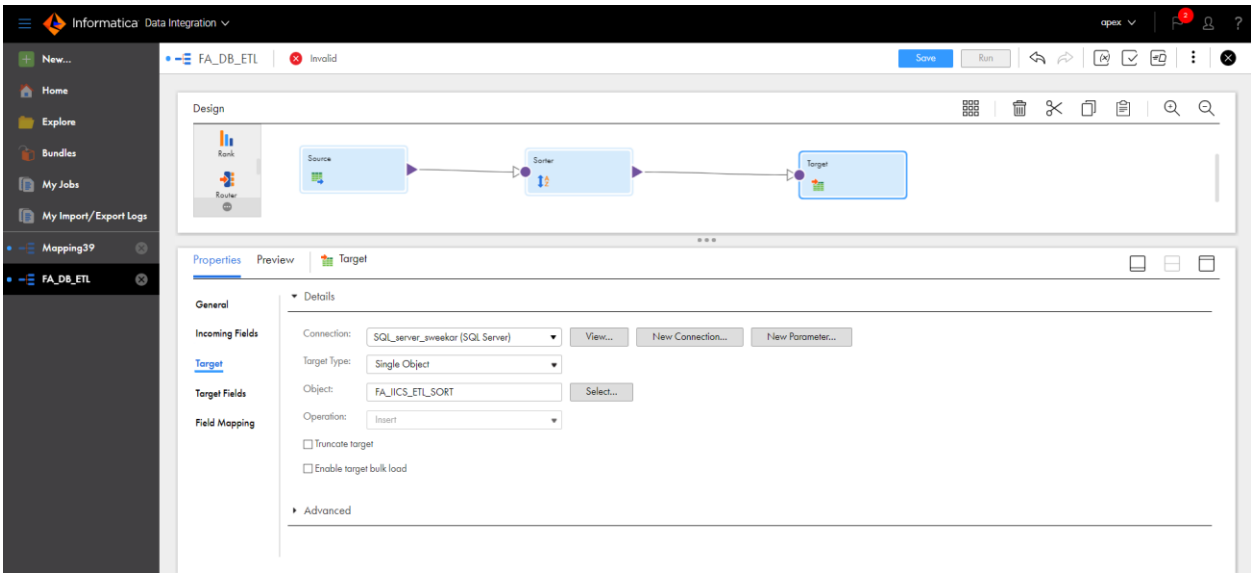
2. Extract

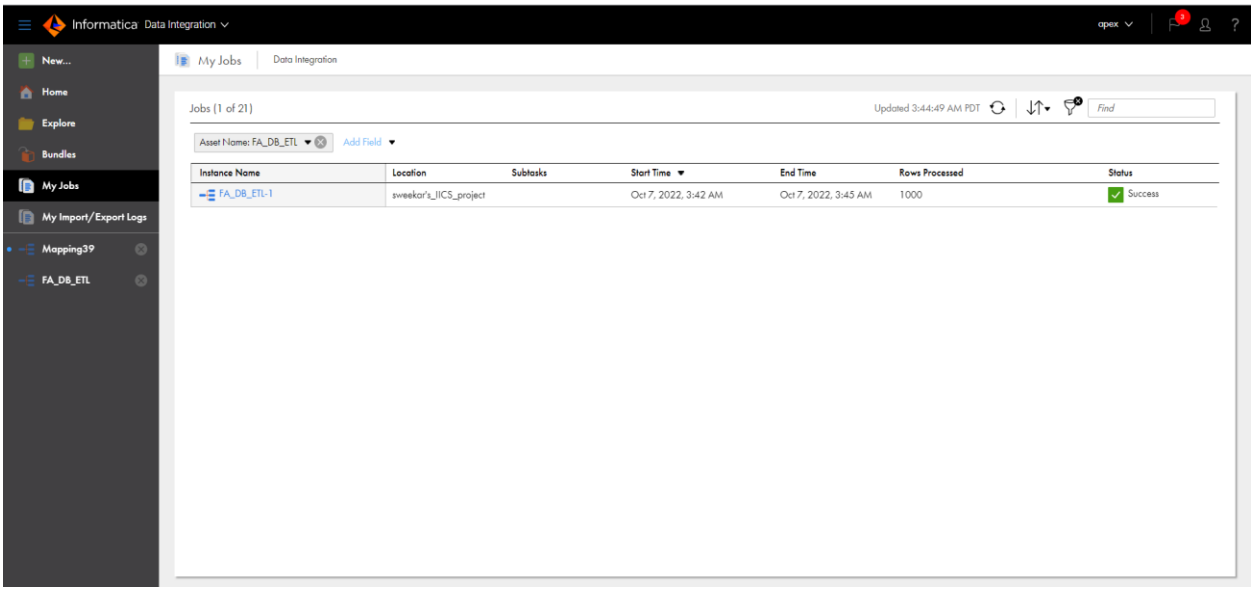


3. Transform



4. Load to new target system - SQL Server






```
SELECT * FROM FA_IICS_ETL_SORT;
```

Results 1 | Statistics 2

SELECT * FROM FA_IICS_ETL_SORT — Enter a SQL expression to filter results (use Ctrl+Space)

	ProductID	CarMaker	CarModel	CarColor	CarModelYear	CarPrice	CustomerID	CustomerName	Gender
1	1,955	GMC	Canyon	Orange	2,008	799,454.24	60505-3780	Ade Mityashev	Male
2	5,103	Saab	[NULL]	Aquamarine	1,989	798,837.47	52959-880	Sonya Briscam	Female
3	8,159	Ford	Mustang	Maroon	1,994	798,765.11	52959-144	Gunther Stubbs	Male
4	492	Subaru	Justy	Crimson	1,988	798,573.59	54868-5732	Archer Landsborough	Male
5	885	BMW	5 Series	Goldenrod	1,994	798,206.16	61727-303	Sascha Rallinshaw	Male
6	2,169	Mercedes-Benz	CL-Class	Crimson	2,004	798,192.93	42411-043	Marta Collens	Female
7	4,849	Dodge	Ram 2500	Turquoise	2,007	798,141.78	37808-230	Bonita Veracruysse	Female
8	9,955	Mitsubishi	Diamante	Turquoise	2,000	797,965.14	47682-903	Lane Boreham	Male

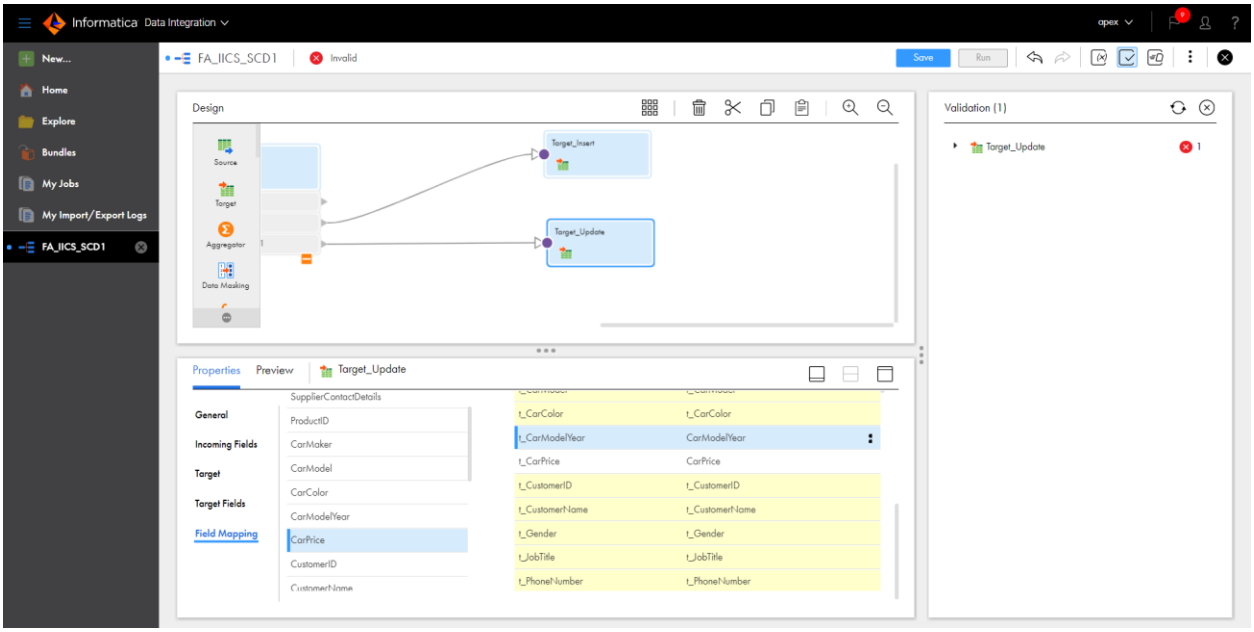
Grid | Text | Record | Panels

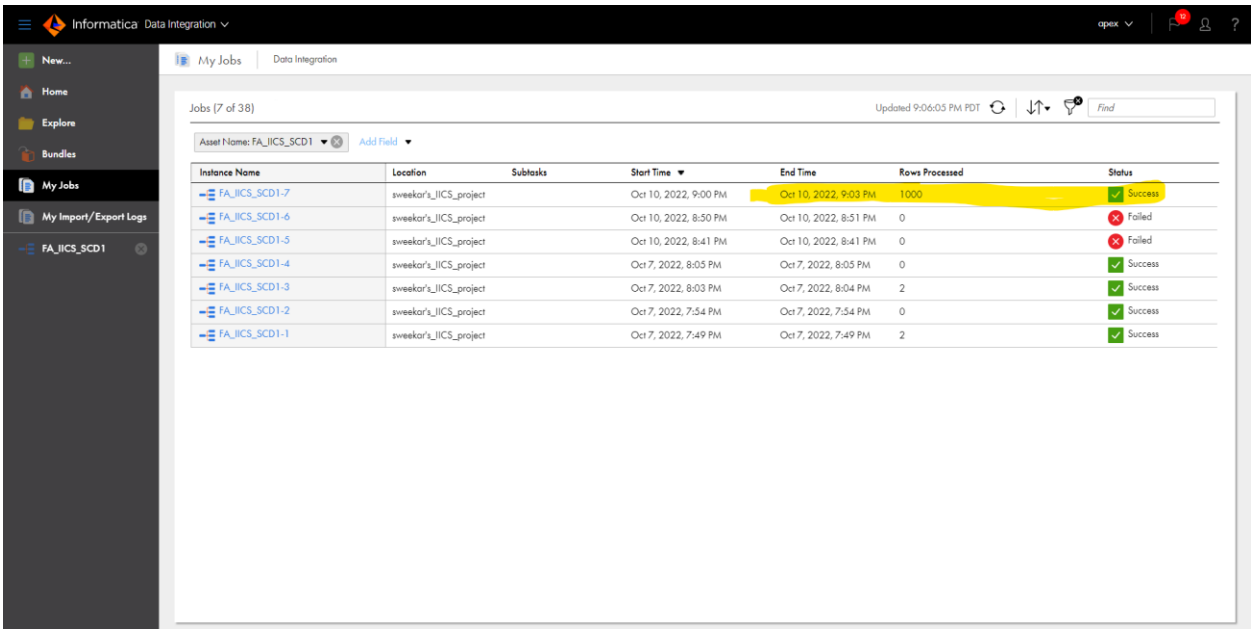
Save | Cancel | Script | 200 | 200+ | Rows: 1 | 200 row(s) fetched - 260ms (130ms fetch), on 2022-

IST | en | Writable | Smart Insert | 106 : 31 : 2606 | Sel: 0 | 0

5. Perform SCD 1 & SCD2 dimension table modelling

SCD 1





```
SELECT * FROM FA_DB_M4_SCD1_TGT ;
```

Results 1 | Results 2

SELECT * FROM FA_DB_M4_SCD1_TGT — Enter a SQL expression to filter results (use Ctrl+Space)

	rContactDetails	t_ProductID	t_CarMaker	t_CarModel	t_CarColor	t_CarModelYear	t_CarPrice	t_CustomerID	t_CustomerNam
1	8	8,893	Dodge	Ram 2500	Goldenrod	2,007	521,963.45	60760-224	Louie Hinsche
2	0	9,444	Toyota	Tundra	Crimson	2,010	672,222.04	67457-594	Alexandros Manue
3	2	253	GMC	Savana 1500	Crimson	2,011	504,465.72	58411-135	Alvie Weighell
4	2	1,283	Volkswagen	Cabriolet	Fuscia	1,990	646,077.11	0591-5307	Flint Gunston
5	8	8,905	Mercury	Mariner	Teal	2,009	699,890.24	51655-189	Alyssa Filpi
6	8	8,877	Toyota	Land Cruiser	Crimson	2,005	694,373.94	65811-0001	Wiatt Piche
7	8	101	Subaru	Impreza	Indigo	1,999	546,977.55	31722-328	Findlay Alberti
8	0	8,854	BMW	X6	Purple	2,013	528,353.8	54162-018	Ottilie Wittman
9	9	9,043	Mitsubishi	Galant	Orange	2,011	706,964.35	44911-0060	Kirsten Calvey
10	3	492	Subaru	Justy	Crimson	1,988	798,573.59	54868-5732	Archer Landsborou

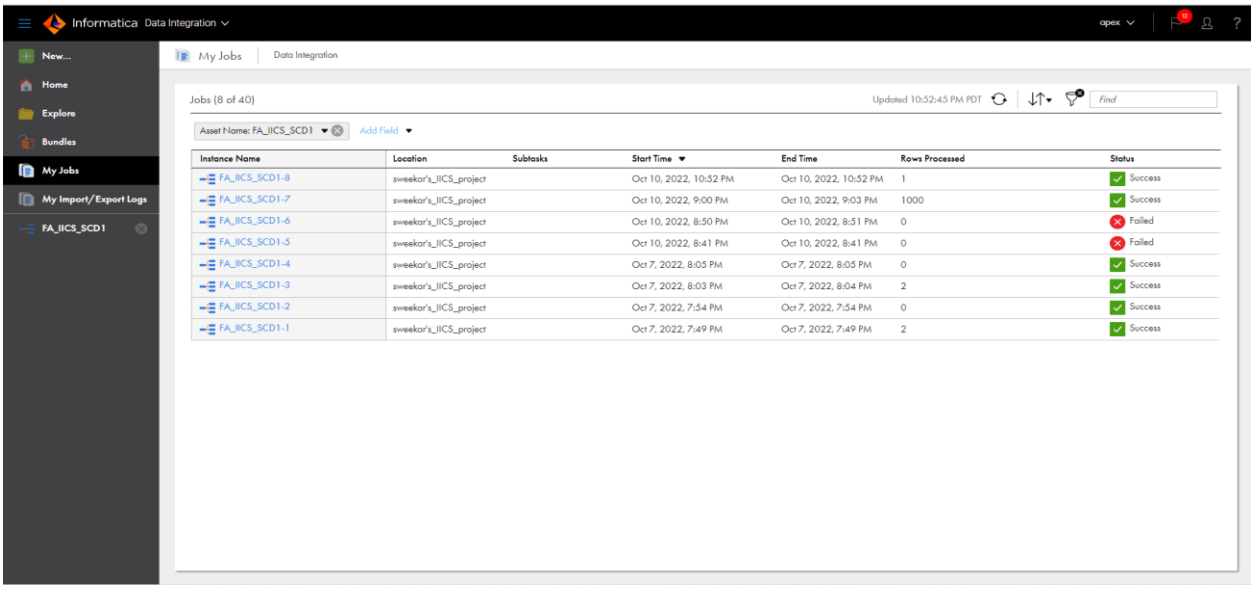
```
SELECT * FROM FA_DS7_CAR_SALES;

UPDATE FA_DS7_CAR_SALES
SET CarPrice=522222
WHERE SupplierID =1;
```

Results 1 | Results 2

SELECT * FROM FA_DS7_CAR_SALES — Enter a SQL expression to filter results (use Ctrl+Space)

	upplierContactDetails	ProductID	CarMaker	CarModel	CarColor	CarModelYear	CarPrice	CustomerID	CustomerName	
1	57-6028	8,893	Dodge	Ram 2500	Goldenrod	2,007	522,222	60760-224	Louie Hinsche	M
2	64-4060	9,444	Toyota	Tundra	Crimson	2,010	672,222.04	67457-594	Alexandros Manuel	M
3	19-1802	253	GMC	Savana 1500	Crimson	2,011	504,465.72	58411-135	Alvie Weighell	M
4	15-3112	1,283	Volkswagen	Cabriolet	Fuscia	1,990	646,077.11	0591-5307	Flint Gunston	M
5	23-6788	8,905	Mercury	Mariner	Teal	2,009	699,890.24	51655-189	Alyssa Filpi	F
6	57-0118	8,877	Toyota	Land Cruiser	Crimson	2,005	694,373.94	65811-0001	Wiatt Piche	M
7	97-2408	101	Subaru	Impreza	Indigo	1,999	546,977.55	31722-328	Findlay Alberti	M
8	69-6870	8,854	BMW	X6	Purple	2,013	528,353.8	54162-018	Ottilie Wittman	F
9	19-7839	9,043	Mitsubishi	Galant	Orange	2,011	706,964.35	44911-0060	Kirsten Calvey	F
10	55-4653	492	Subaru	Justy	Crimson	1,988	798,573.59	54868-5732	Archer Landsborough	M



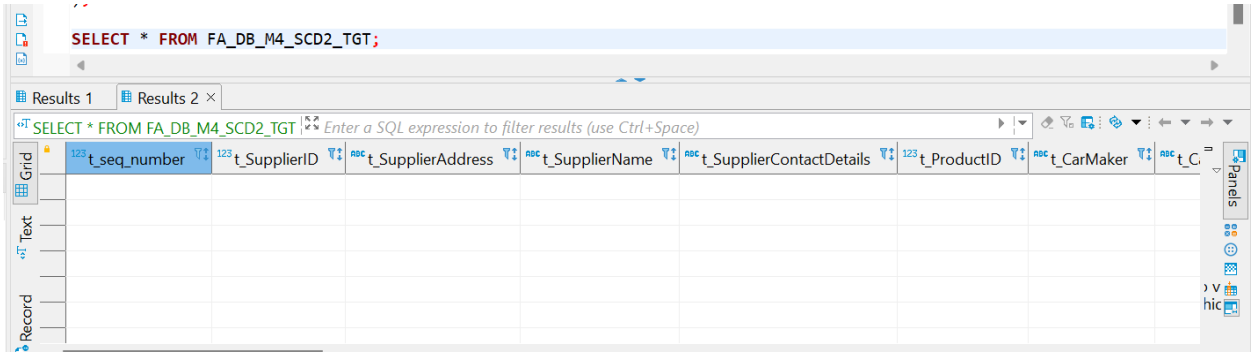

```
SELECT * FROM FA_DB_M4_SCD1_TGT WHERE t_SupplierID =1;
```

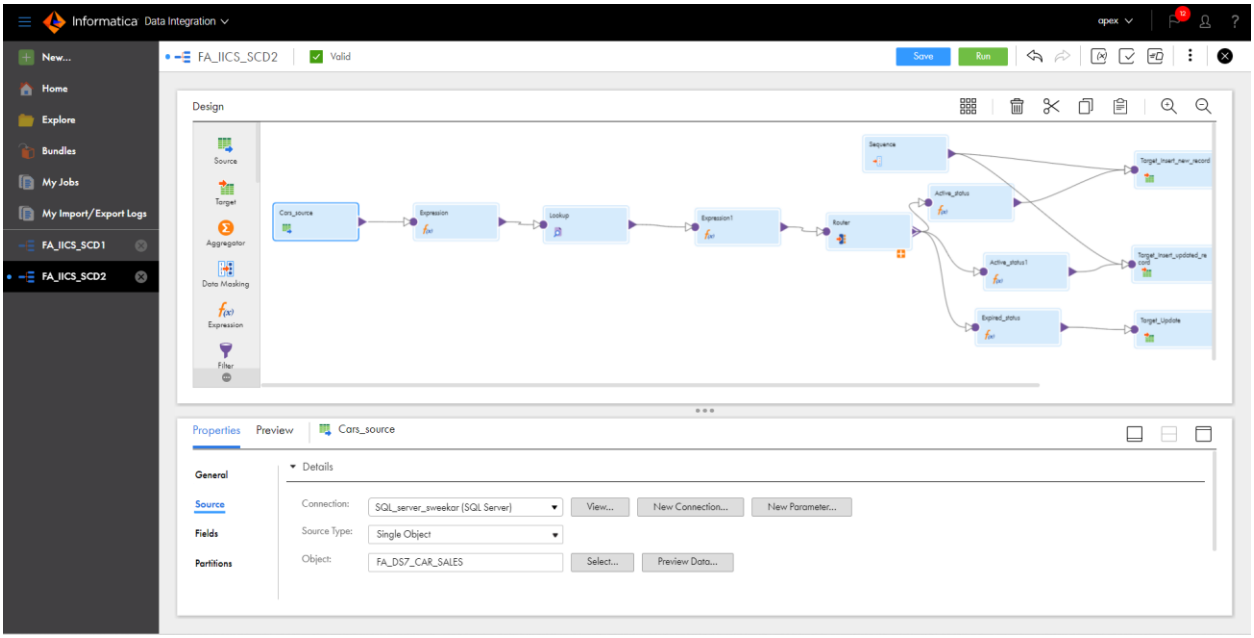
Results 1 | Results 2

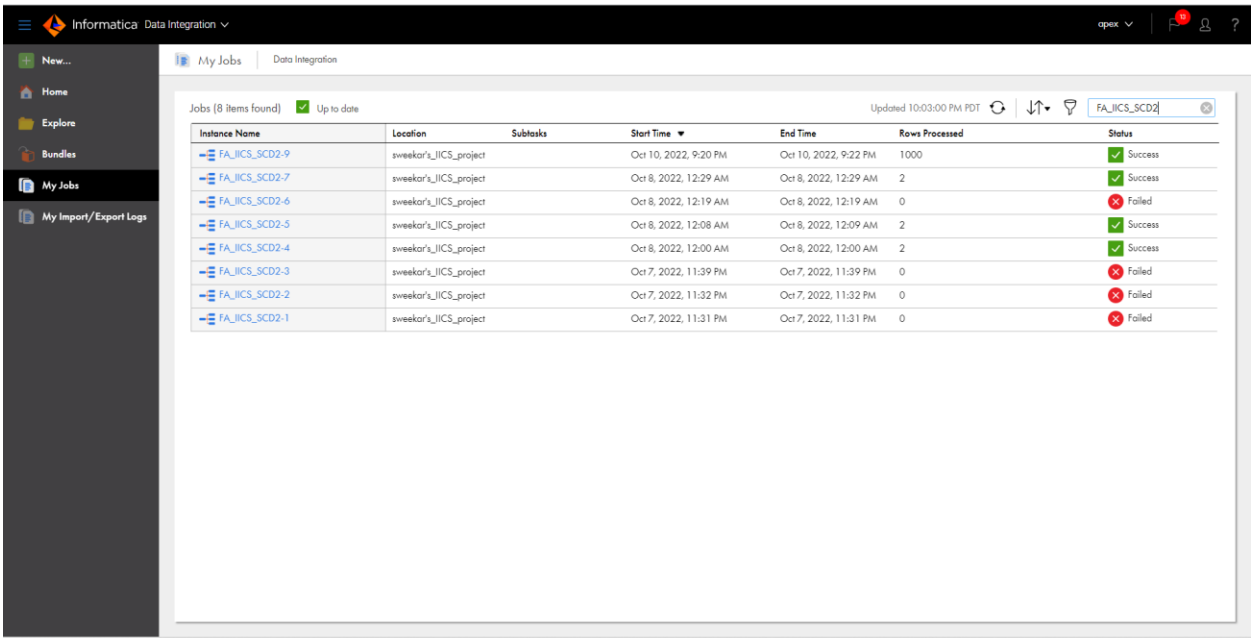
SELECT * FROM FA_DB_M4_SCD1_TGT WHEF — Enter a SQL expression to filter results (use Ctrl+Space)

	SupplierContactDetails	t_ProductID	t_CarMaker	t_CarModel	t_CarColor	t_CarModelYear	t_CarPrice	t_CustomerID	t_CustomerN
1	-57-6028	8,893	Dodge	Ram 2500	Goldenrod	2,007	522,222	60760-224	Louie Hinsche

SCD2


SELECT * FROM FA_DB_M4_SCD2_TGT;
Results 1
Results 2
SELECT * FROM FA_DB_M4_SCD2_TGT
Enter a SQL expression to filter results (use Ctrl+Space)
t_seq_number
t_SupplierID
t_SupplierAddress
t_SupplierName
t_SupplierContactDetails
t_ProductID
t_CarMaker
Grid
Text
Record
Panels


Informatica Data Integration
New...
Home
Explore
Bundles
My Jobs
My Import/Export Logs
FA_IICS_SCD1
FA_IICS_SCD2
FA_IICS_SCD2
Valid
Save
Run
Design
Source
Target
Aggregator
Data Masking
Expression
Filter
Properties
Preview
Cars_source
General
Source
Fields
Partitions
Details
Connection:
SQL_server_sweekar (SQL Server)
View...
New Connection...
New Parameter...
Source Type:
Single Object
Object:
FA_DS7_CAR_SALES
Select...
Preview Data...


Informatica Data Integration
New...
Home
Explore
Bundles
My Jobs
My Import/Export Logs
My Jobs
Data Integration
Jobs (8 items found)
Up to date
Updated 10:03:00 PM PDT
FA_IICS_SCD2
Instance Name
Location
Subtasks
Start Time
End Time
Rows Processed
Status
FA_IICS_SCD2-9 sweekar's_IICS_project Oct 10, 2022, 9:20 PM Oct 10, 2022, 9:22 PM 1000 Success
FA_IICS_SCD2-7 sweekar's_IICS_project Oct 8, 2022, 12:29 AM Oct 8, 2022, 12:29 AM 2 Success
FA_IICS_SCD2-6 sweekar's_IICS_project Oct 8, 2022, 12:19 AM Oct 8, 2022, 12:19 AM 0 Failed
FA_IICS_SCD2-5 sweekar's_IICS_project Oct 8, 2022, 12:08 AM Oct 8, 2022, 12:09 AM 2 Success
FA_IICS_SCD2-4 sweekar's_IICS_project Oct 8, 2022, 12:00 AM Oct 8, 2022, 12:00 AM 2 Success
FA_IICS_SCD2-3 sweekar's_IICS_project Oct 7, 2022, 11:39 PM Oct 7, 2022, 11:39 PM 0 Failed
FA_IICS_SCD2-2 sweekar's_IICS_project Oct 7, 2022, 11:32 PM Oct 7, 2022, 11:32 PM 0 Failed
FA_IICS_SCD2-1 sweekar's_IICS_project Oct 7, 2022, 11:31 PM Oct 7, 2022, 11:31 PM 0 Failed

```
SELECT * FROM FA_DB_M4_SCD2_TGT;
```

Results 1 | Results 2

SELECT * FROM FA_DB_M4_SCD2_TGT — Enter a SQL expression to filter results (use Ctrl+Space)

	PostalCode	t_Sales	t_Quantity	t_Discount	t_CreditCardType	t_CreditCard	t_CustomerFeedback	t_Checksum	t_status
1	99,522	744,796.41	1	0.83	diners-club-carte-blanc	0,408,000,000,000	Bad	4EE9998476	ACTIVE
2	56,398	794,773.17	1	0.79	jcb	9,220,000,000,000	Good	8FBFB80837	ACTIVE
3	60,674	968,244.9	1	0.28	jcb	7,160,000,000,000	Okay	5A20F8F6BC	ACTIVE
4	32,885	942,213.82	2	0.76	jcb	9,910,000,000,000	Very Bad	89D7E3D767	ACTIVE
5	48,232	879,519.57	1	0.5	china-unionpay	2,240,000,000,000	Bad	D7CD3DADD6	ACTIVE
6	31,136	947,785.4	2	0.39	laser	6,250,000,000,000	Good	E268D0A423	ACTIVE
7	2,208	883,836.81	2	0.79	diners-club-carte-blanc	0,528,100,000,000	Very Bad	0CA11E5C3B	ACTIVE
8	25,336	779,626.29	1	0.9	jcb	9,140,000,000,000	Bad	FD1627C3E2	ACTIVE
9	85,035	818,364.32	2	0.5	jcb	7,050,000,000,000	Okay	B48668FB29	ACTIVE
10	95,113	902,866.47	1	0.61	jcb	4,730,000,000,000	Very Bad	BBF762E3AE	ACTIVE

Save | Cancel | Script | 200 | 200+ | Rows: 0 | 200 row(s) fetched - 276ms (106ms fetch), on 2022-

```
SELECT * FROM FA_DS7_CAR_SALES;

UPDATE FA_DS7_CAR_SALES
SET CarPrice=522222
WHERE SupplierID =1;
```

Results 1 | Results 2

SELECT * FROM FA_DS7_CAR_SALES — Enter a SQL expression to filter results (use Ctrl+Space)

	upplierContactDetails	ProductID	CarMaker	CarModel	CarColor	CarModelYear	CarPrice	CustomerID	CustomerName	
1	57-6028	8,893	Dodge	Ram 2500	Goldenrod	2,007	522,222	60760-224	Louie Hinsche	M
2	64-4060	9,444	Toyota	Tundra	Crimson	2,010	672,222.04	67457-594	Alexandros Manuel	M
3	19-1802	253	GMC	Savana 1500	Crimson	2,011	504,465.72	58411-135	Alvie Weighell	M
4	15-3112	1,283	Volkswagen	Cabriolet	Fuscia	1,990	646,077.11	0591-5307	Flint Gunston	M
5	23-6788	8,905	Mercury	Mariner	Teal	2,009	699,890.24	51655-189	Alyssa Filpi	F
6	57-0118	8,877	Toyota	Land Cruiser	Crimson	2,005	694,373.94	65811-0001	Wiatt Piche	M
7	97-2408	101	Subaru	Impreza	Indigo	1,999	546,977.55	31722-328	Findlay Alberti	M
8	69-6870	8,854	BMW	X6	Purple	2,013	528,353.8	54162-018	Ottilie Wittman	F
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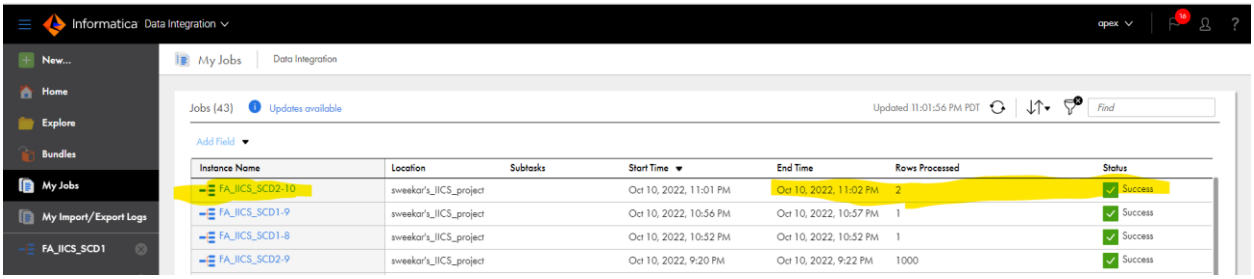
10	55-4653	492	Subaru	Justy	Crimson	1,988	798,573.59	54868-5732	Archer Landsborough	M



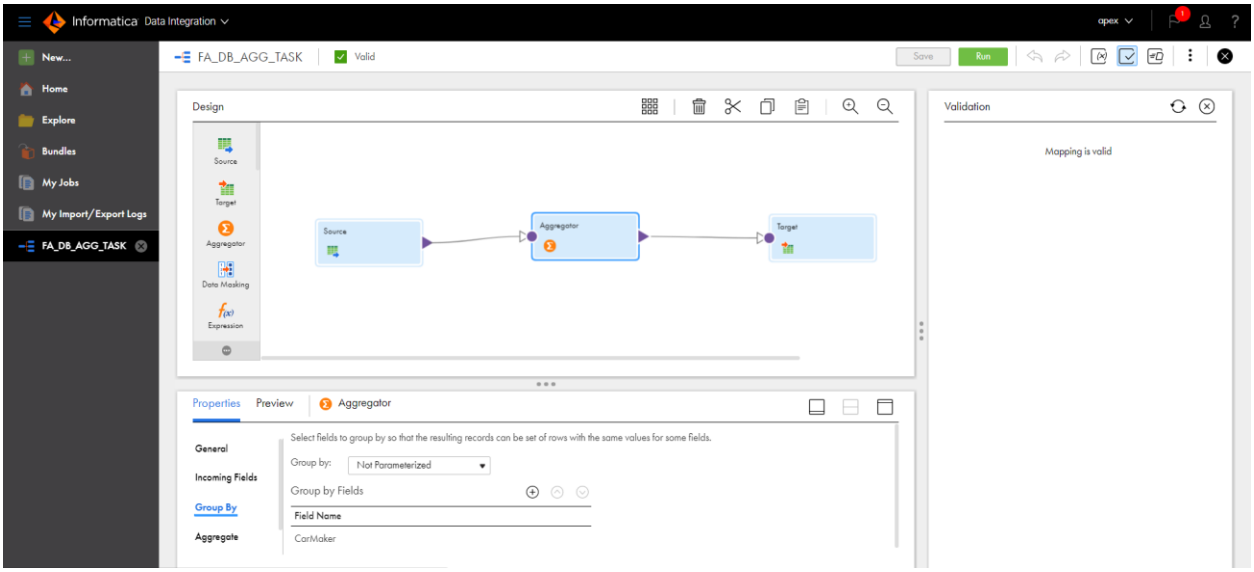

```
SELECT * FROM FA_DB_M4_SCD2_TGT;
SELECT * FROM FA_DB_M4_SCD2_TGT WHERE t_SupplierID =1;
```

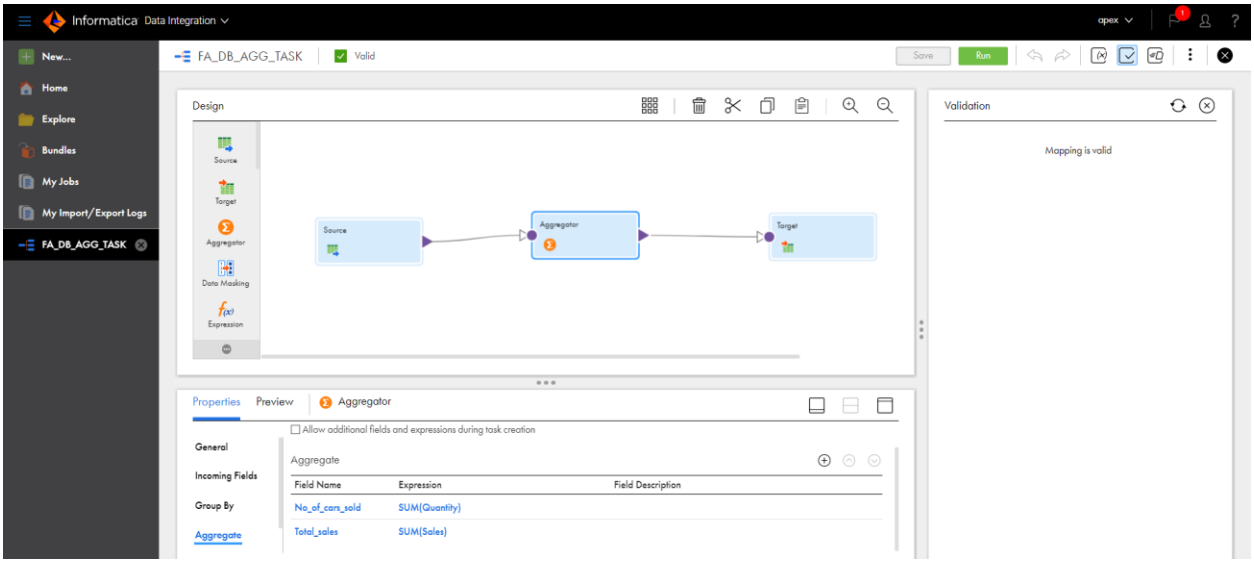
Results 1 | Results 2

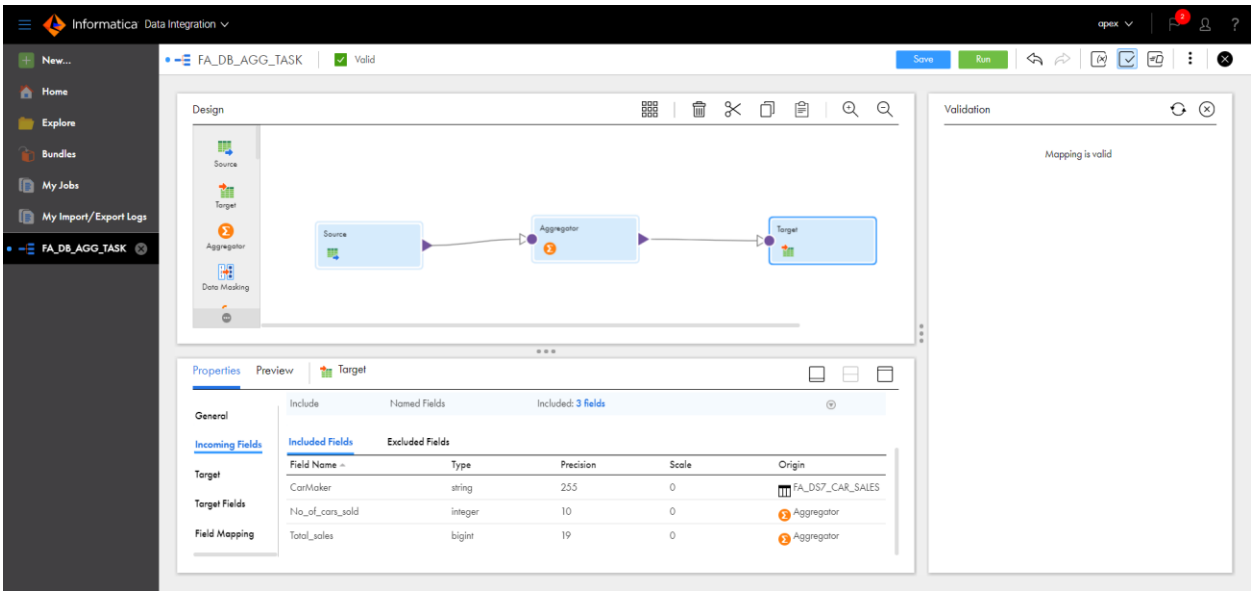
SELECT * FROM FA_DB_M4_SCD2_TGT WHEF — Enter a SQL expression to filter results (use Ctrl+Space)

	t_PostalCode	t_Sales	t_Quantity	t_Discount	t_CreditCardType	t_CreditCard	t_CustomerFeedback	t_Checksum	t_status
1	99,522	744,796.41	1	0.83	diners-club-carte-blanche	30,408,000,000,000	Bad	4EE9998476	EXPIRED
2	99,522	744,796.41	1	0.83	diners-club-carte-blanche	30,408,000,000,000	Bad	842369583A	ACTIVE

6. Create aggregate table based on the particular column (ex: Country code). Refer to the different data source from target system








```
SELECT * FROM FA_IICS_CarSales_AGG_TABLE;
```

Results 1 | Results 2

SELECT * FROM FA_IICS_CarSales_AGG_T/ | Enter a SQL expression to filter results (use Ctrl+Space)

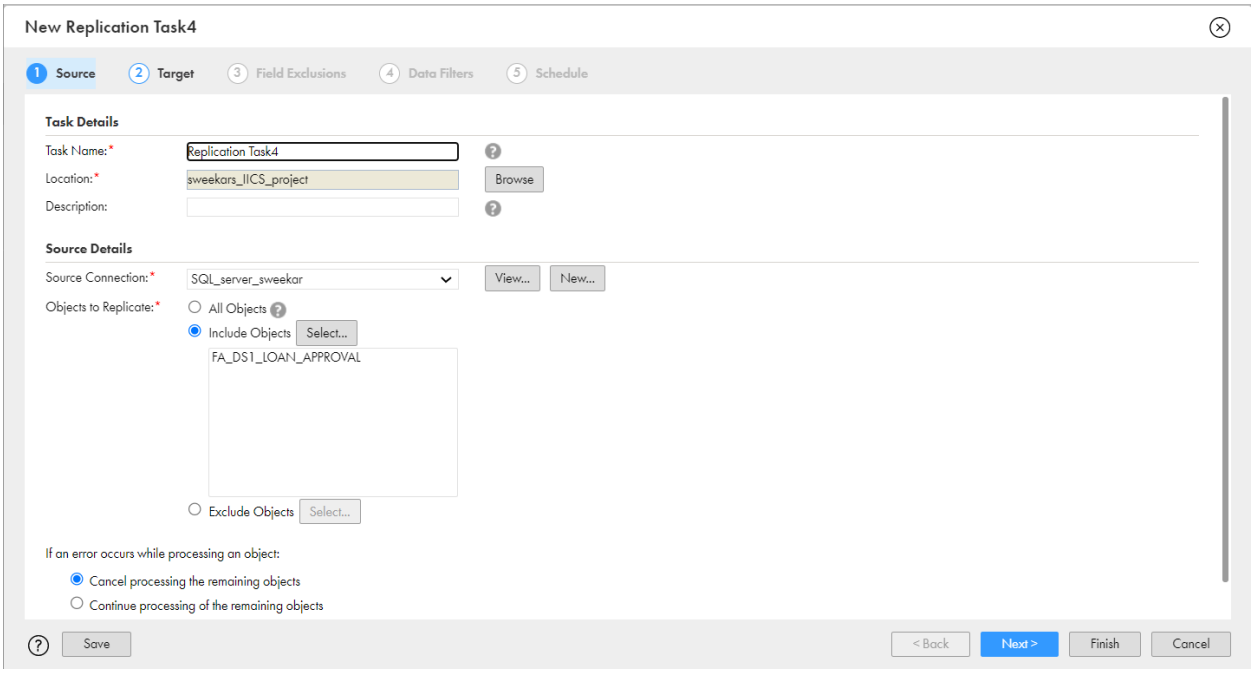
Grid | Text | Record | Panels

	CarMaker	No_of_cars_sold	Total_sales
1	Acura	16	9,687,663
2	Aston Martin	3	1,786,736
3	Audi	38	21,496,148
4	Austin	2	777,049
5	BMW	41	23,742,310
6	Bentley	9	5,232,775
7	Buick	58	34,876,573
8	Cadillac	28	15,278,309
9	Chevrolet	125	70,988,582
10	Chrysler	23	11,921,982
11	Citro姣示	2	853,729

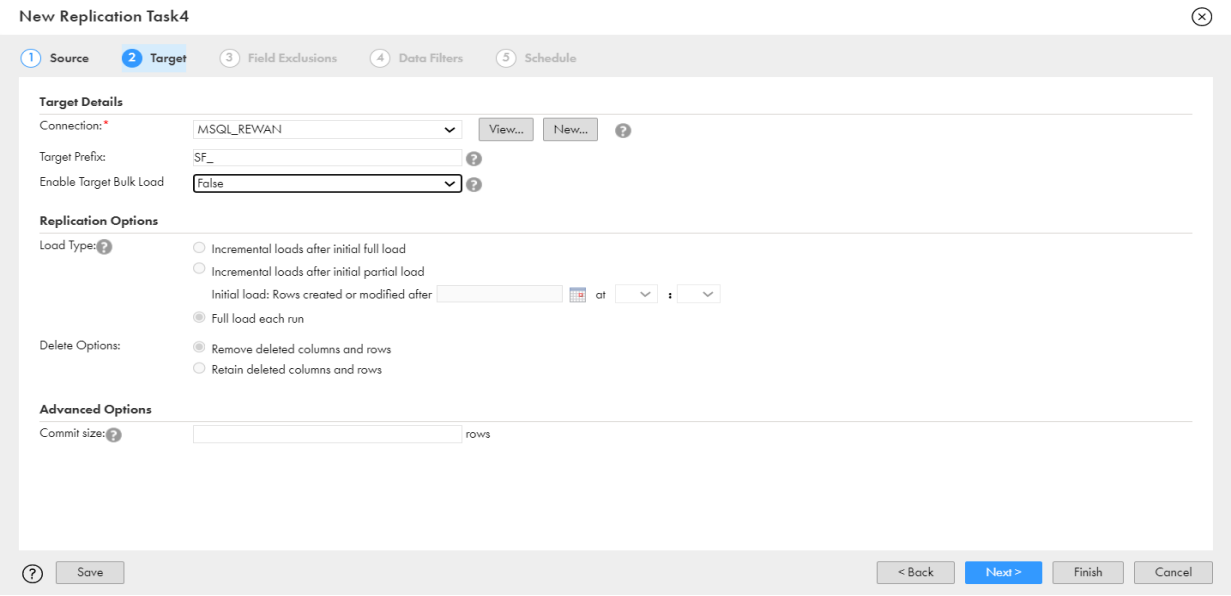
7. Create data replication task (single table and FULL DB).

I have considered that SBA National Banking has to share data related to the loan approved by different banks to a auditing company, **Replication task** can be used to do this.

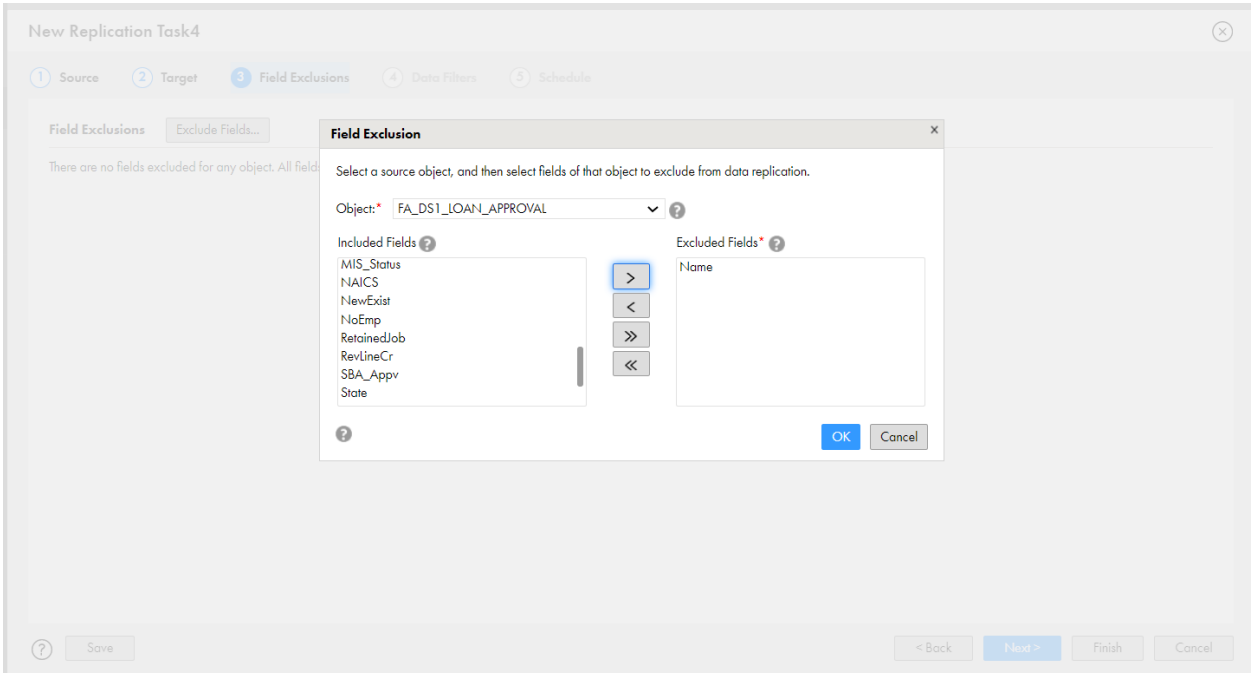
STEP 1: Select the source connection of the SBA National Banking and include the objects to be replicated.



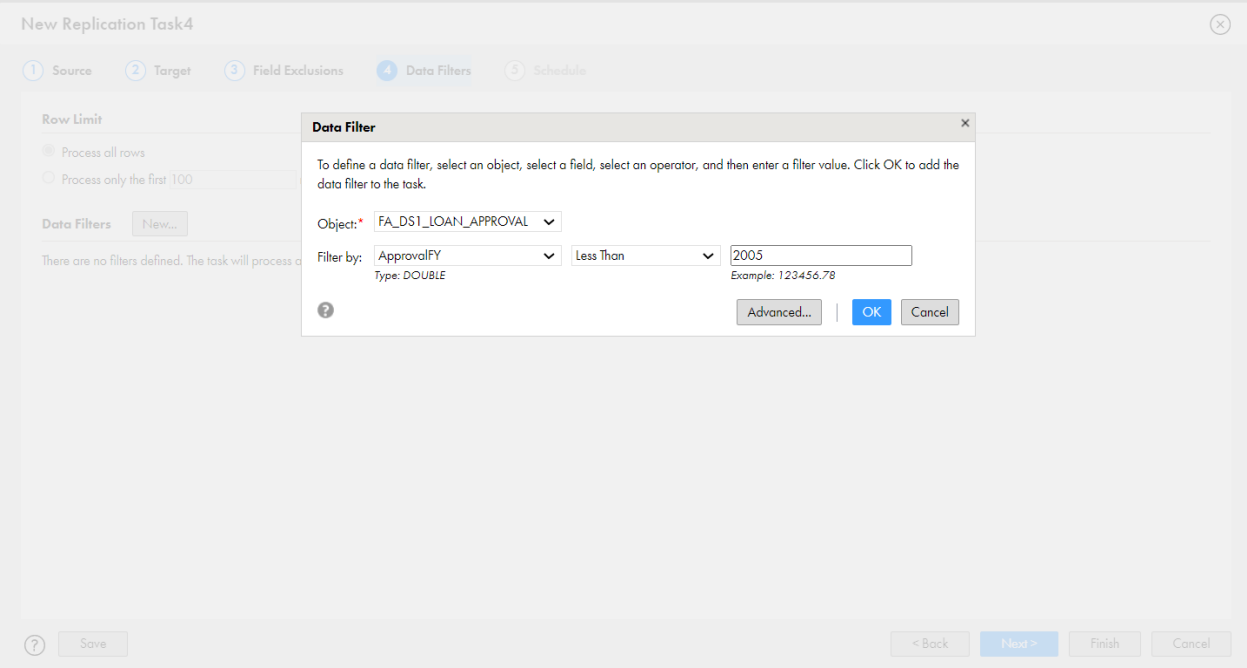
STEP 2: Make the target connection to the auditing company's database.



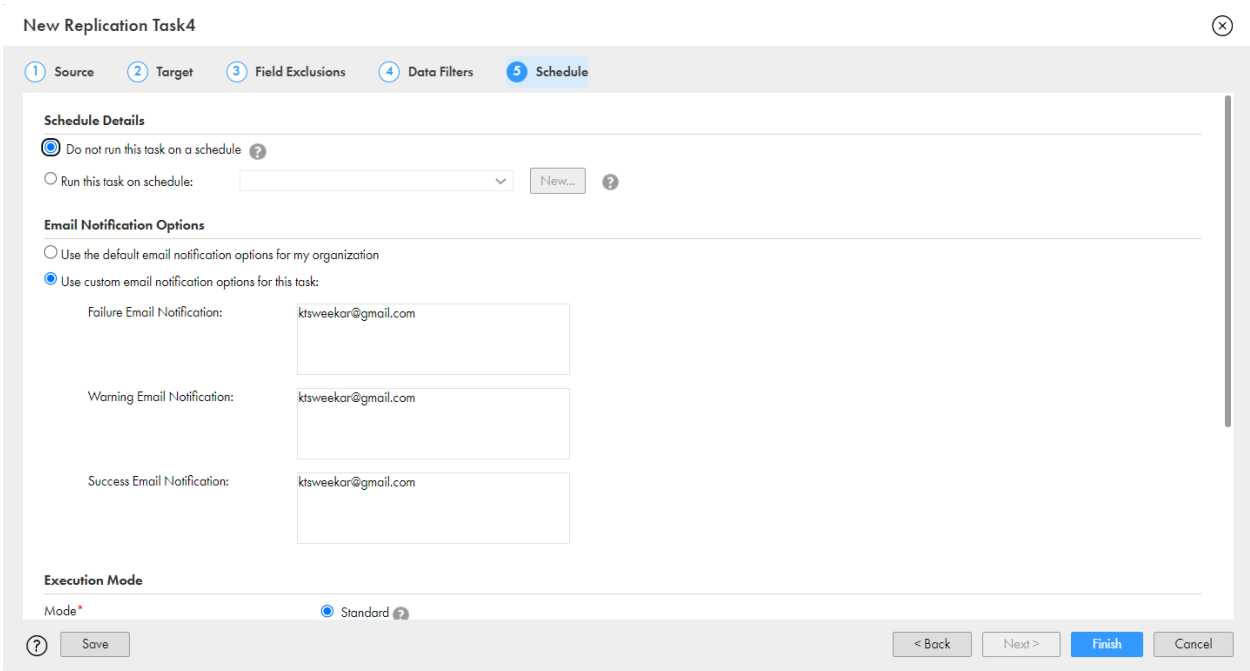
STEP 3: The name column in the table contains personal information of the customers and if there is a law that protects personal details from third party then the name column has to be excluded



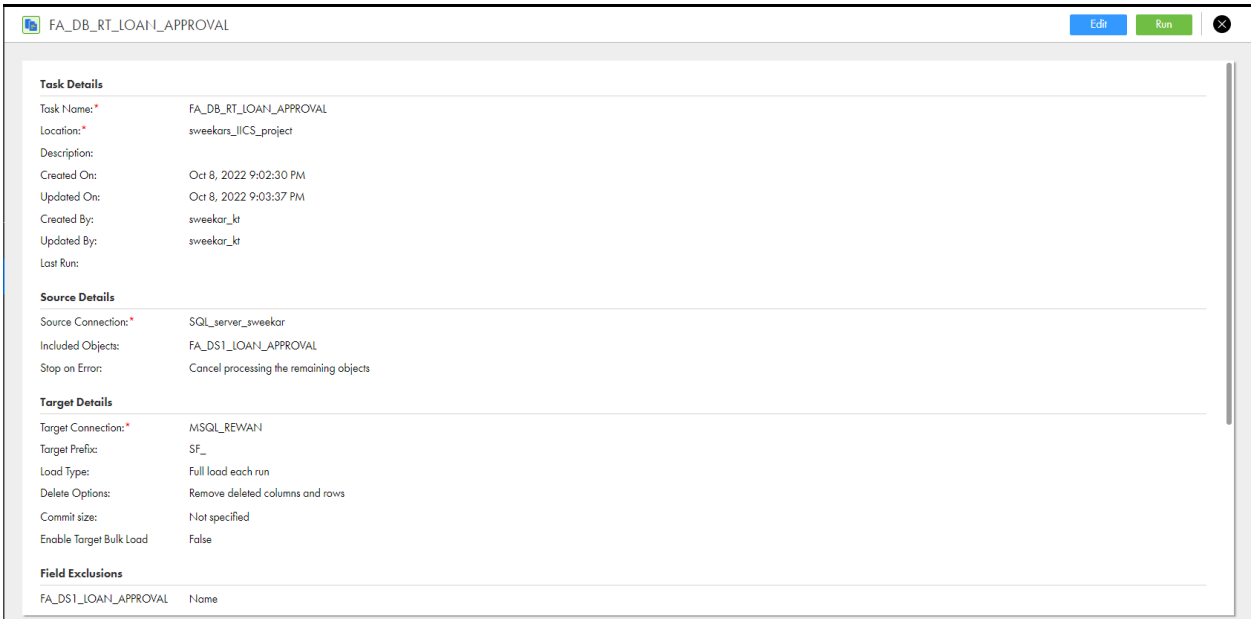
STEP 4: If the auditing company only has permission to audit the records before financial year 2005



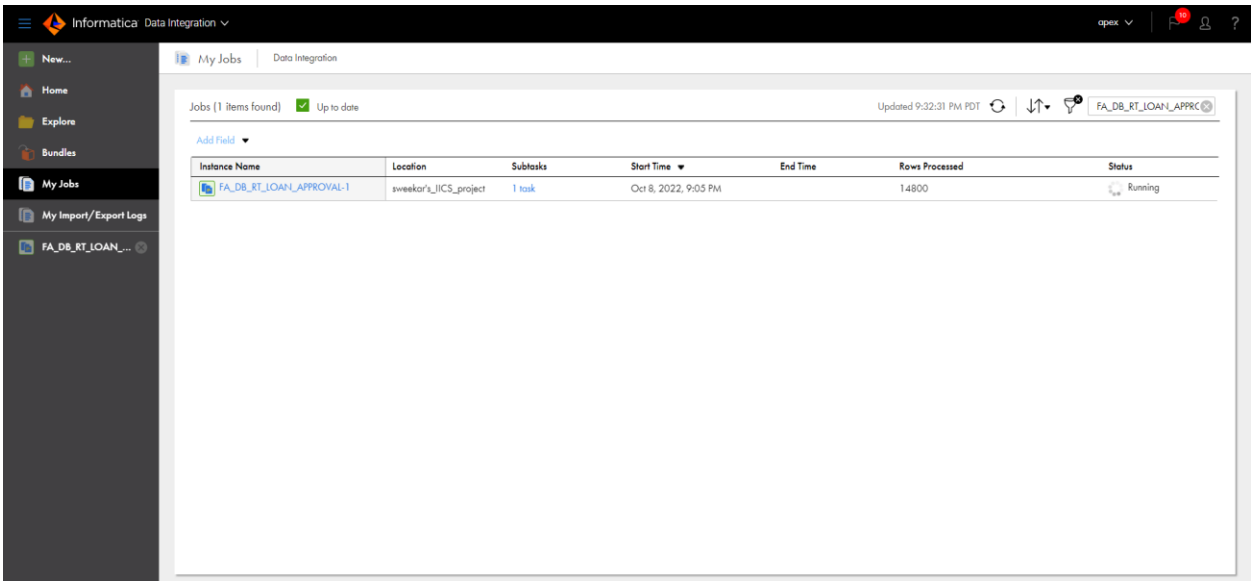
STEP 5: We can also schedule the task later in a specified time and we can also add Failure email notification/Warning email notification (For the team on the SBA National Banking team) and the Success email Notification (For both the teams on SBA National banking as well as the auditing company's side)



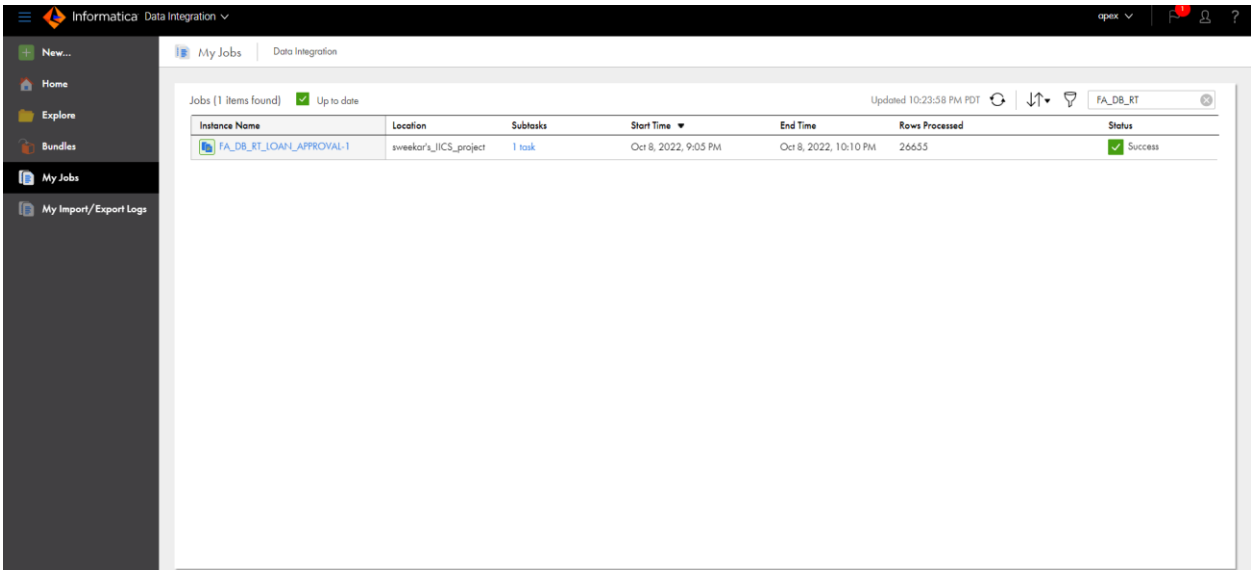
Renaming the task to FA_DB_RT_LOAN_APPROVAL(Final Assessment Replication task of loan approval)



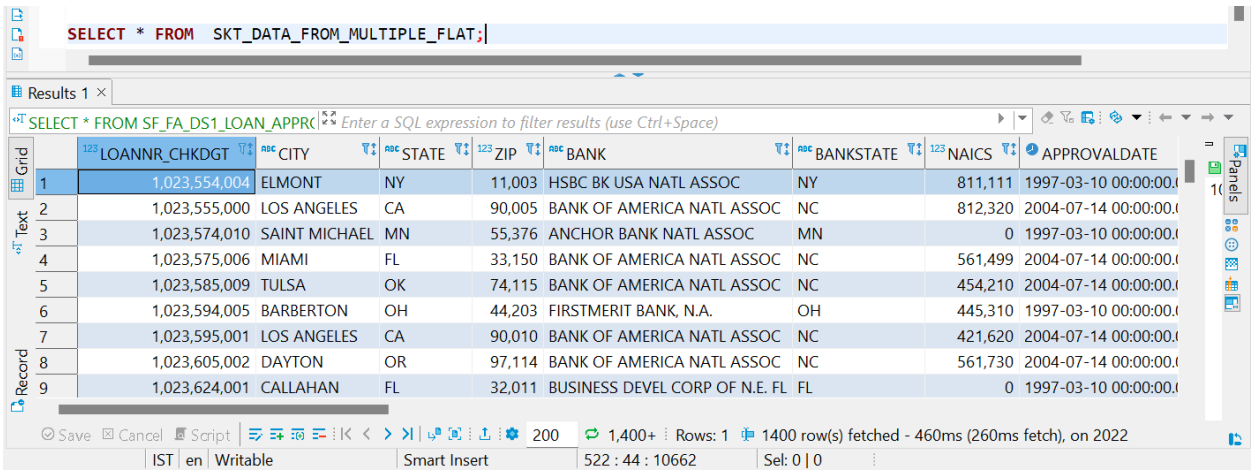
The replication task is being executed and the rows are getting processed.



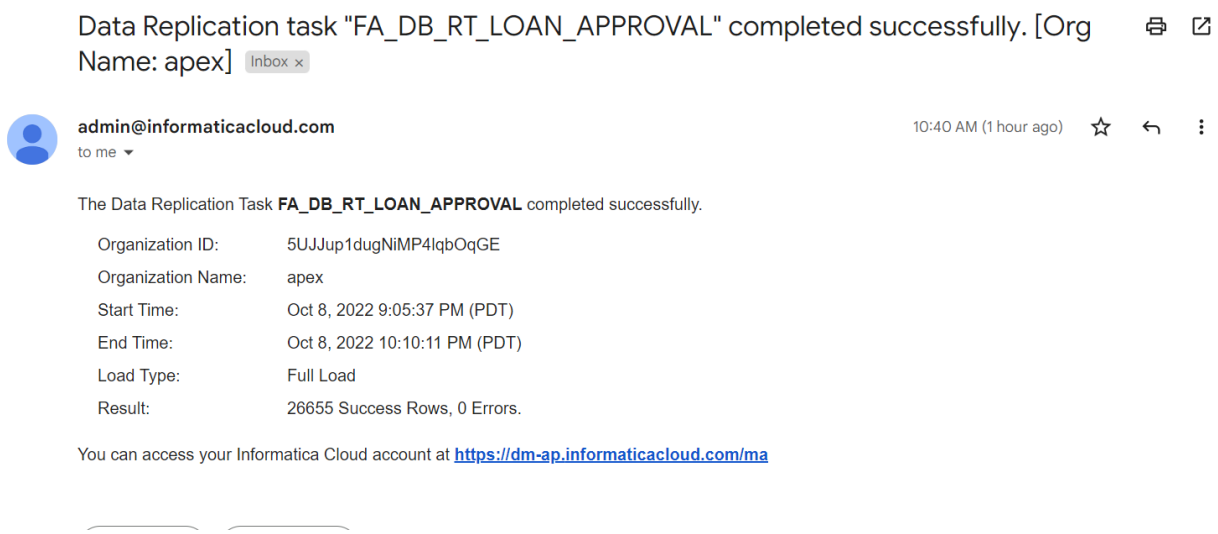
The replication task has got executed, as we can see 26655 were transferred to the target and it took around 1 hour 5 minutes to completely execute.



I verified in the target dataset that name column was not



I have also received the below mail informing me about the task completed successfully.



Data Replication task "FA_DB_RT_LOAN_APPROVAL" completed successfully. [Org Name: apex] Inbox ×

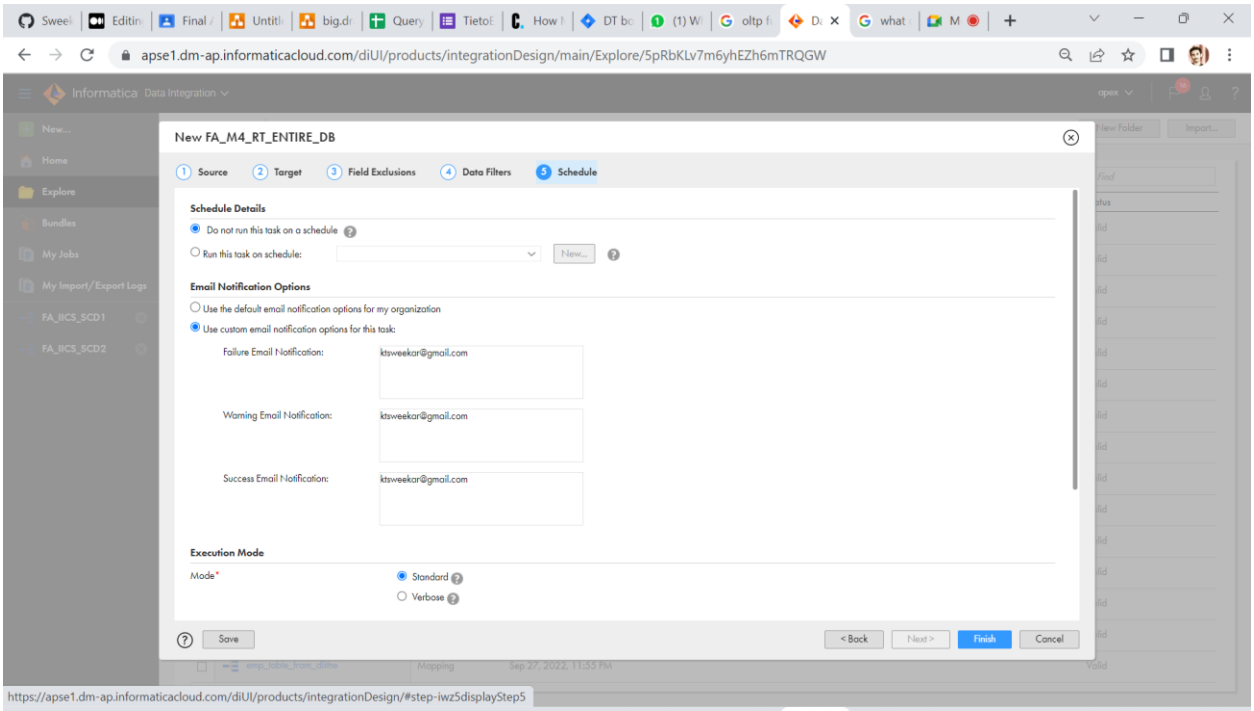
admin@informaticacloud.com 10:40 AM (1 hour ago)
to me

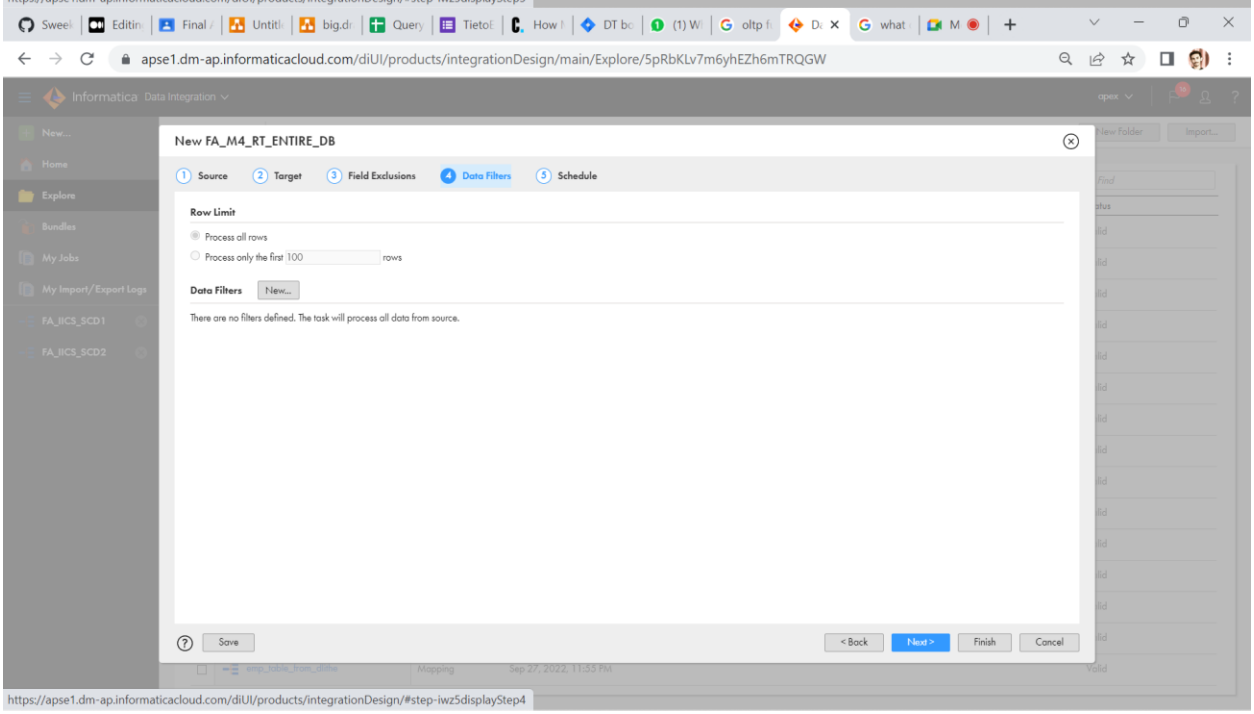
The Data Replication Task **FA_DB_RT_LOAN_APPROVAL** completed successfully.

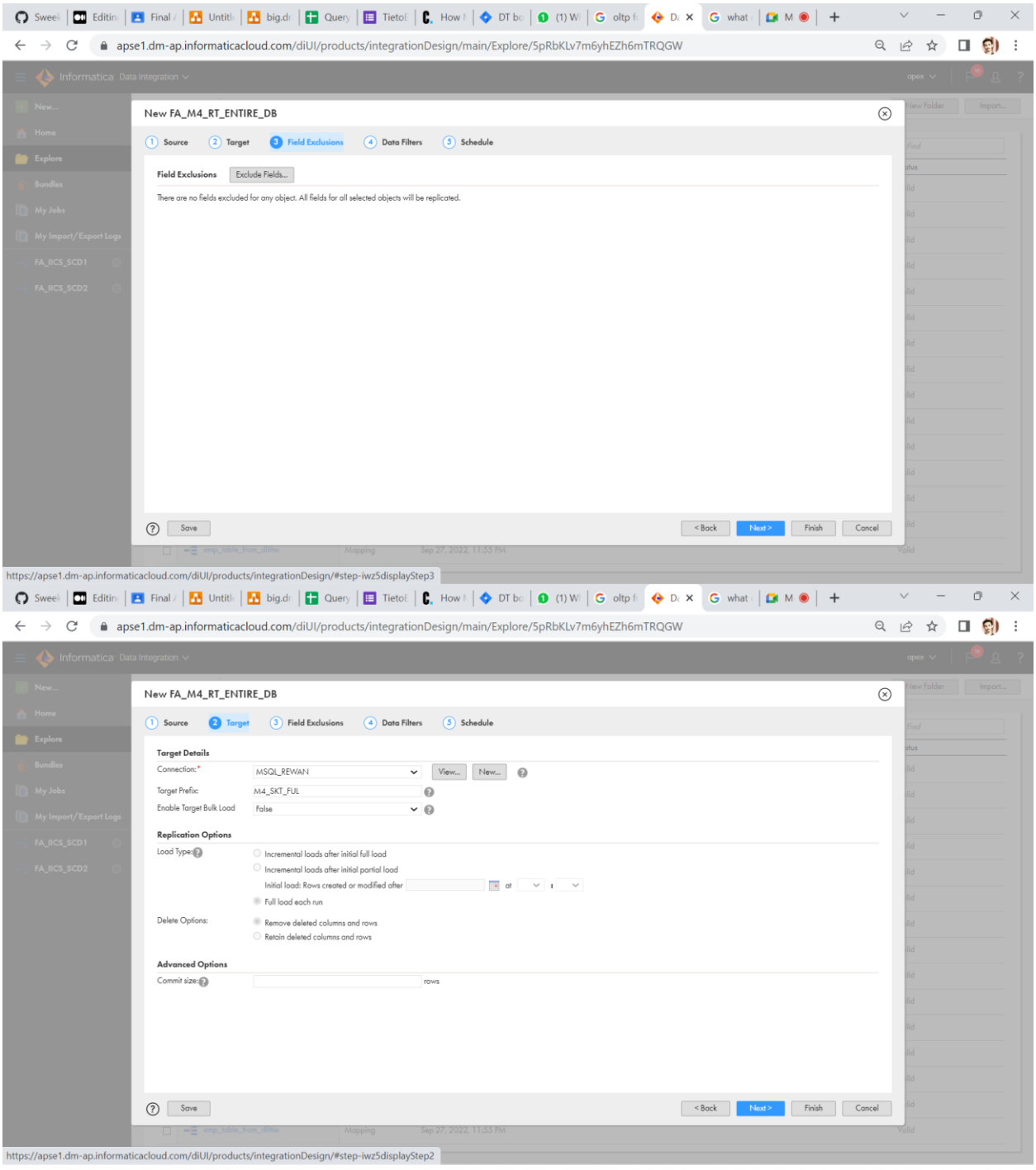
Organization ID:	5UJJup1dugNiMP4lqbOqGE
Organization Name:	apex
Start Time:	Oct 8, 2022 9:05:37 PM (PDT)
End Time:	Oct 8, 2022 10:10:11 PM (PDT)
Load Type:	Full Load
Result:	26655 Success Rows, 0 Errors.

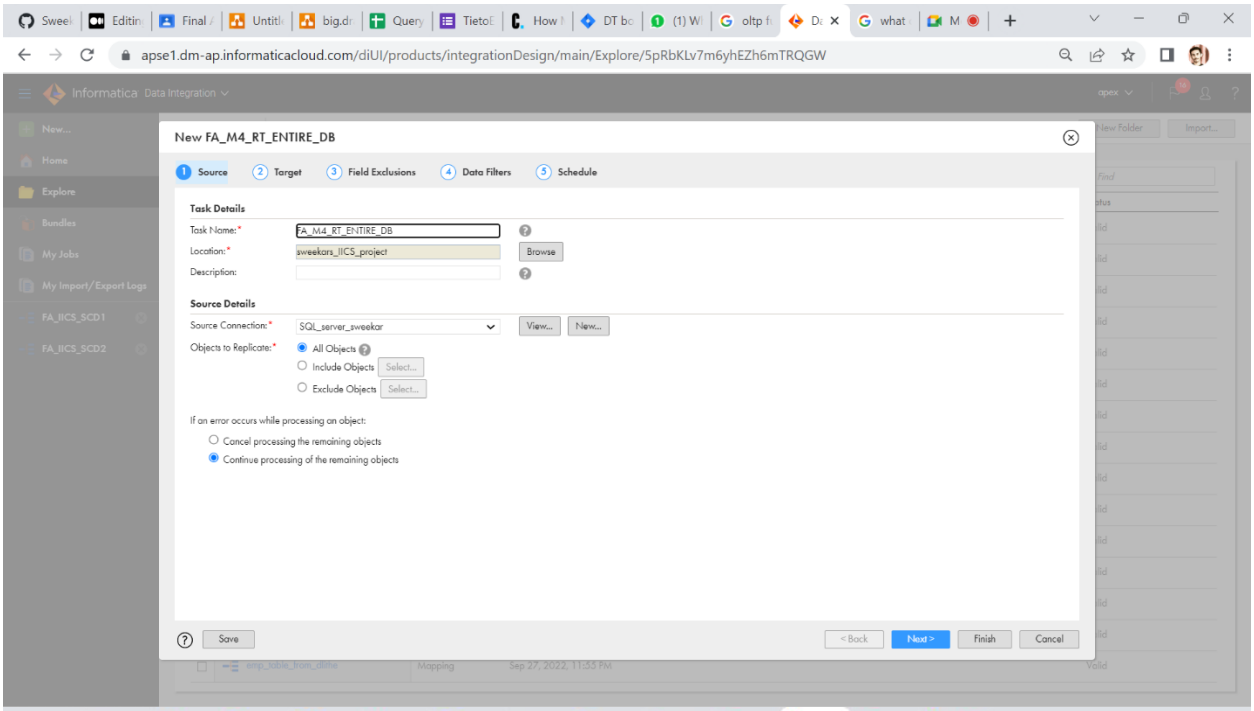
You can access your Informatica Cloud account at **https://dm-ap.informaticacloud.com/ma**

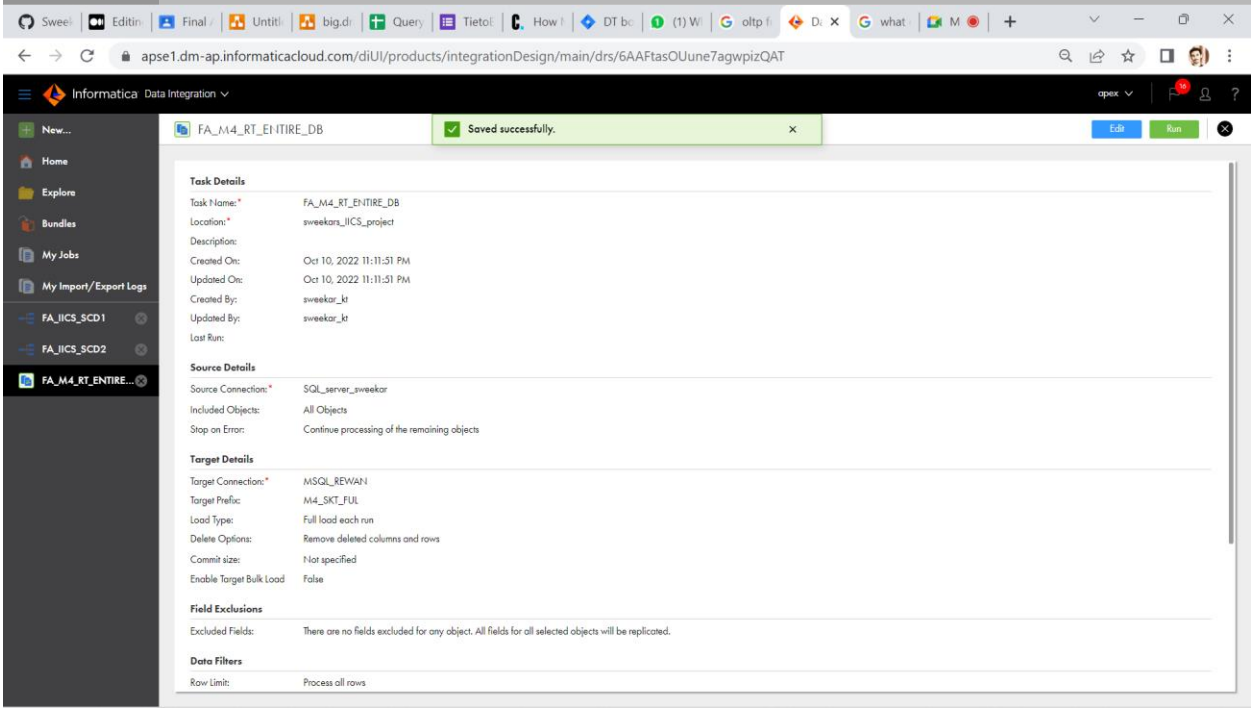
Replicating entire DB

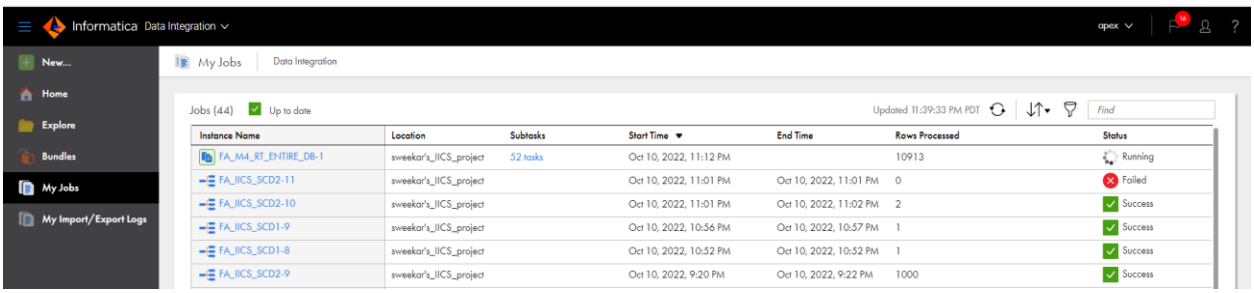





apse1.dm-ap.informaticacloud.com/diUI/products/integrationDesign/main/Explore/5pRbKLv7m6yhEZh6mTRQGW
Informatica Data Integration
New FA_M4_RT_ENTIRE_DB
1 Source
2 Target
3 Field Exclusions
4 Data Filters
5 Schedule
Field Exclusions
Exclude Fields...
There are no fields excluded for any object. All fields for all selected objects will be replicated.
Save
< Back
Next >
Finish
Cancel
https://apse1.dm-ap.informaticacloud.com/diUI/products/integrationDesign/#step-iwz5displayStep3
apse1.dm-ap.informaticacloud.com/diUI/products/integrationDesign/main/Explore/5pRbKLv7m6yhEZh6mTRQGW
Informatica Data Integration
New FA_M4_RT_ENTIRE_DB
1 Source
2 Target
3 Field Exclusions
4 Data Filters
5 Schedule
Target Details
Connection:*
MSQL_REWAN
View...
New...
Target Prefix
M4_SKT_FUL
Enable Target Bulk Load
False
Replication Options
Load Type:
Incremental loads after initial full load
Incremental loads after initial partial load
Initial load: Rows created or modified after
at
Full load each run
Delete Options:
Remove deleted columns and rows
Retain deleted columns and rows
Advanced Options
Commit size:
rows
Save
< Back
Next >
Finish
Cancel
https://apse1.dm-ap.informaticacloud.com/diUI/products/integrationDesign/#step-iwz5displayStep2


apse1.dm-ap.informaticacloud.com/diUI/products/integrationDesign/main/Explore/5pRbKLv7m6yhEZh6mTRQGW
Informatica Data Integration
New FA_M4_RT_ENTIRE_DB
1 Source
2 Target
3 Field Exclusions
4 Data Filters
5 Schedule
Task Details
Task Name:* FA_M4_RT_ENTIRE_DB
Location:* sweekars_IICS_project
Browse
Description:
Source Details
Source Connection:* SQL_server_sweekar
View...
New...
Objects to Replicate:* All Objects
Include Objects
Exclude Objects
Select...
If an error occurs while processing an object:
Cancel processing the remaining objects
Continue processing of the remaining objects
Save
< Back
Next >
Finish
Cancel


apse1.dm-ap.informaticacloud.com/diUI/products/integrationDesign/main/drs/6AAFtasOUune7agwpizQAT
Informatica Data Integration
FA_M4_RT_ENTIRE_DB
Saved successfully.
Edit
Run
New...
Home
Explore
Bundles
My Jobs
My Import/Export Logs
FA_IICS_SCD1
FA_IICS_SCD2
FA_M4_RT_ENTIRE...
Task Details
Task Name:* FA_M4_RT_ENTIRE_DB
Location:* sweekars_IICS_project
Description:
Created On: Oct 10, 2022 11:11:51 PM
Updated On: Oct 10, 2022 11:11:51 PM
Created By: sweekar_kt
Updated By: sweekar_kt
Last Run:
Source Details
Source Connection:* SQL_server_sweekar
Included Objects: All Objects
Stop on Error: Continue processing of the remaining objects
Target Details
Target Connection:* MSQL_REWAN
Target Prefix: M4_SKT_FUL
Load Type: Full load each run
Delete Options: Remove deleted columns and rows
Commit size: Not specified
Enable Target Bulk Load False
Field Exclusions
Excluded Fields: There are no fields excluded for any object. All fields for all selected objects will be replicated.
Data Filters
Row Limit: Process all rows


Informatica Data Integration
My Jobs
Data Integration
Jobs (44)
Up to date
Updated 11:39:33 PM PDT
Find
Instance Name
Location
Subtasks
Start Time
End Time
Rows Processed
Status
FA_M4_RT_ENTIRE_DB-1 sweekar's_IICS_project 52 tasks Oct 10, 2022, 11:12 PM 10913 Running
FA_IICS_SCD2-11 sweekar's_IICS_project Oct 10, 2022, 11:01 PM Oct 10, 2022, 11:01 PM 0 Failed
FA_IICS_SCD2-10 sweekar's_IICS_project Oct 10, 2022, 11:01 PM Oct 10, 2022, 11:02 PM 2 Success
FA_IICS_SCD1-9 sweekar's_IICS_project Oct 10, 2022, 10:56 PM Oct 10, 2022, 10:57 PM 1 Success
FA_IICS_SCD1-8 sweekar's_IICS_project Oct 10, 2022, 10:52 PM Oct 10, 2022, 10:52 PM 1 Success
FA_IICS_SCD2-9 sweekar's_IICS_project Oct 10, 2022, 9:20 PM Oct 10, 2022, 9:22 PM 1000 Success