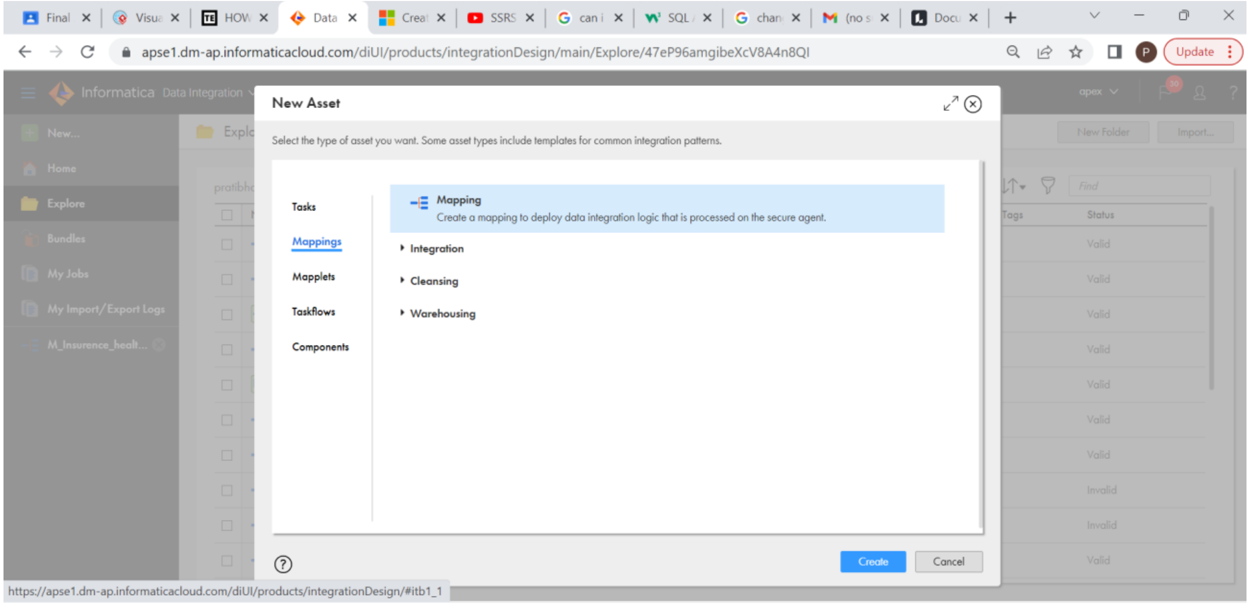
# Module 4 IICS:

## Make connection to different data source

### Solution:

step1: click on new and choose the mapping as shown below and click create



apse1.dm-ap.informaticacloud.com/diUI/products/integrationDesign/main/Explore/47eP96amgibeXcV8A4n8QI

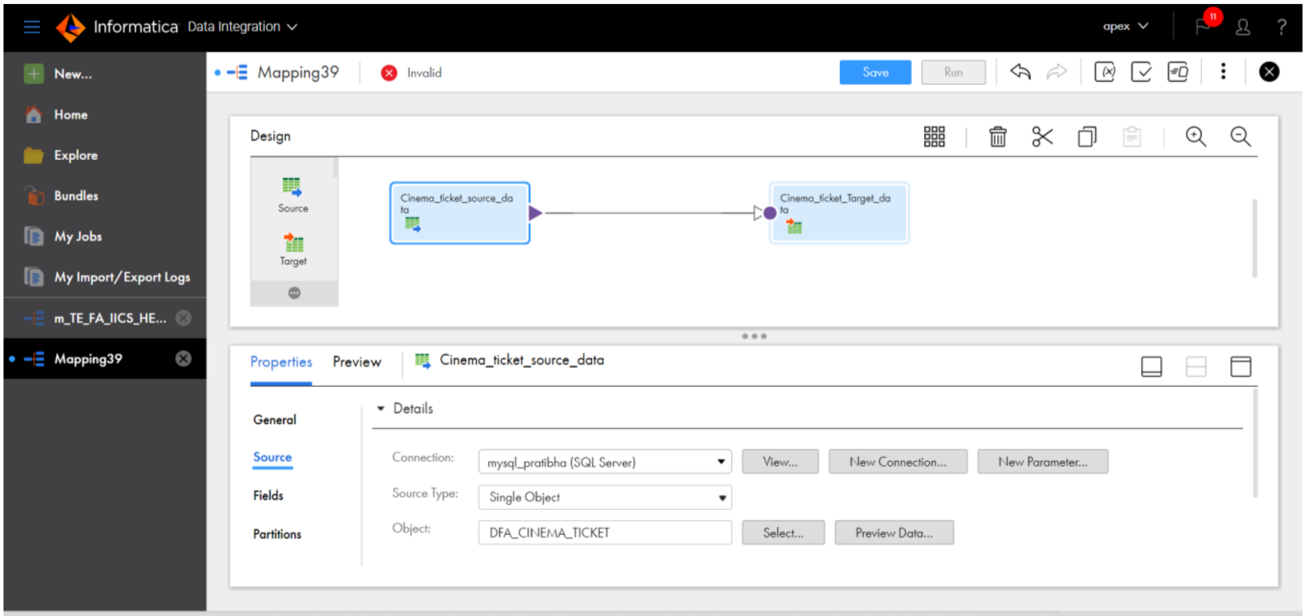
New Asset

Select the type of asset you want. Some asset types include templates for common integration patterns.

Mapping
Create a mapping to deploy data integration logic that is processed on the secure agent.

https://apse1.dm-ap.informaticacloud.com/diUI/products/integrationDesign/#itb1_1

Step2: click on sourcce and select the connection



Mapping39 Invalid

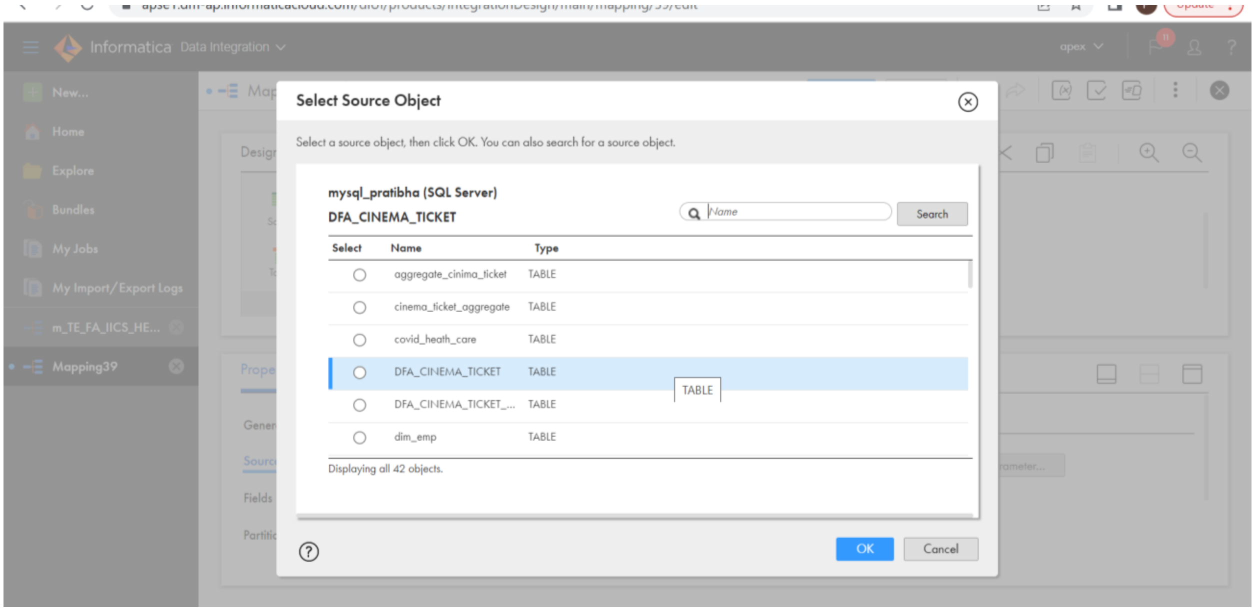
Cinema_ticket_source_data

Connection: mysql_pratibha (SQL Server)

Source Type: Single Object

Object: DFA_CINEMA_TICKET

Step3: Click on object seect the tabel



Select Source Object

Select a source object, then click OK. You can also search for a source object.

mysql_pratibha (SQL Server)

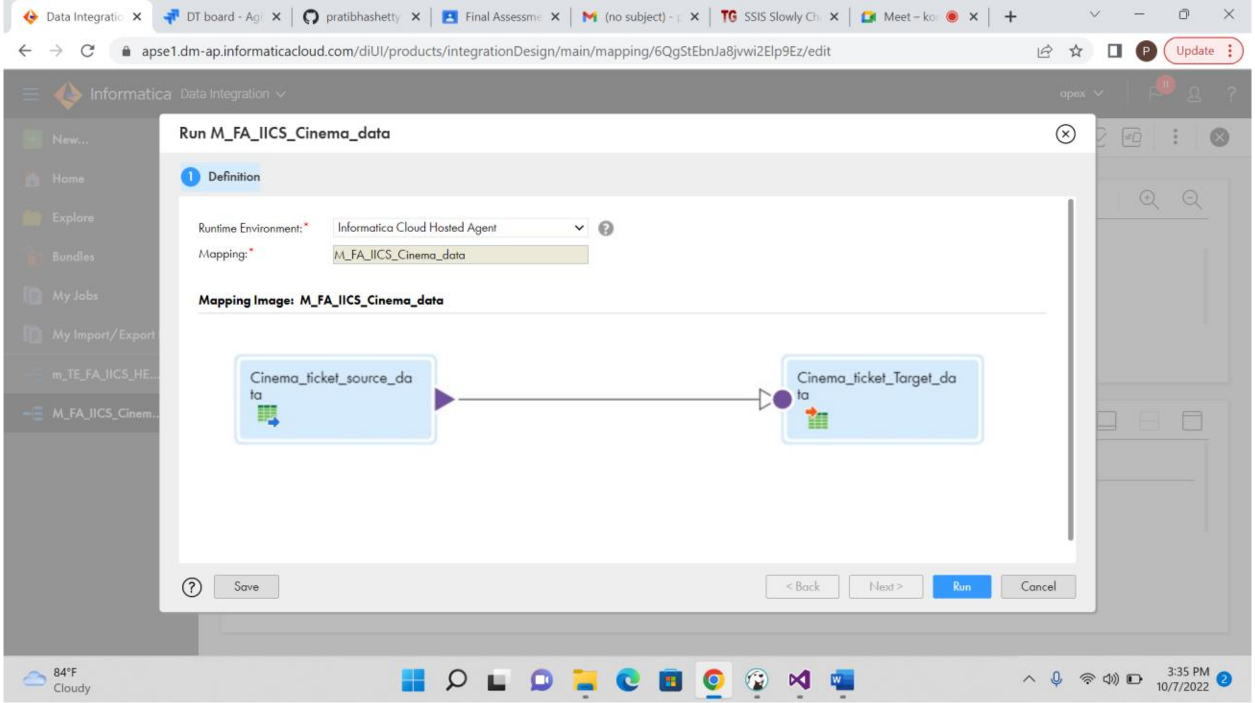
DFA_CINEMA_TICKET

| Select | Name | Type |
|---|---|---|
| ○ | aggregate_cinima_ticket | TABLE |
| ○ | cinema_ticket_aggregate | TABLE |
| ○ | covid_heath_care | TABLE |
| ○ | DFA_CINEMA_TICKET | TABLE |
| ○ | DFA_CINEMA_TICKET_... | TABLE |
| ○ | dim_emp | TABLE |

Displaying all 42 objects.

Step 4: select the target table by clicking on target

Step5: Run the package



apse1.dm-ap.informaticacloud.com/diUI/products/integrationDesign/main/mapping/6QgStEbnJa8jvwi2Elp9Ez/edit

Run M_FA_IICS_Cinema_data

1 Definition

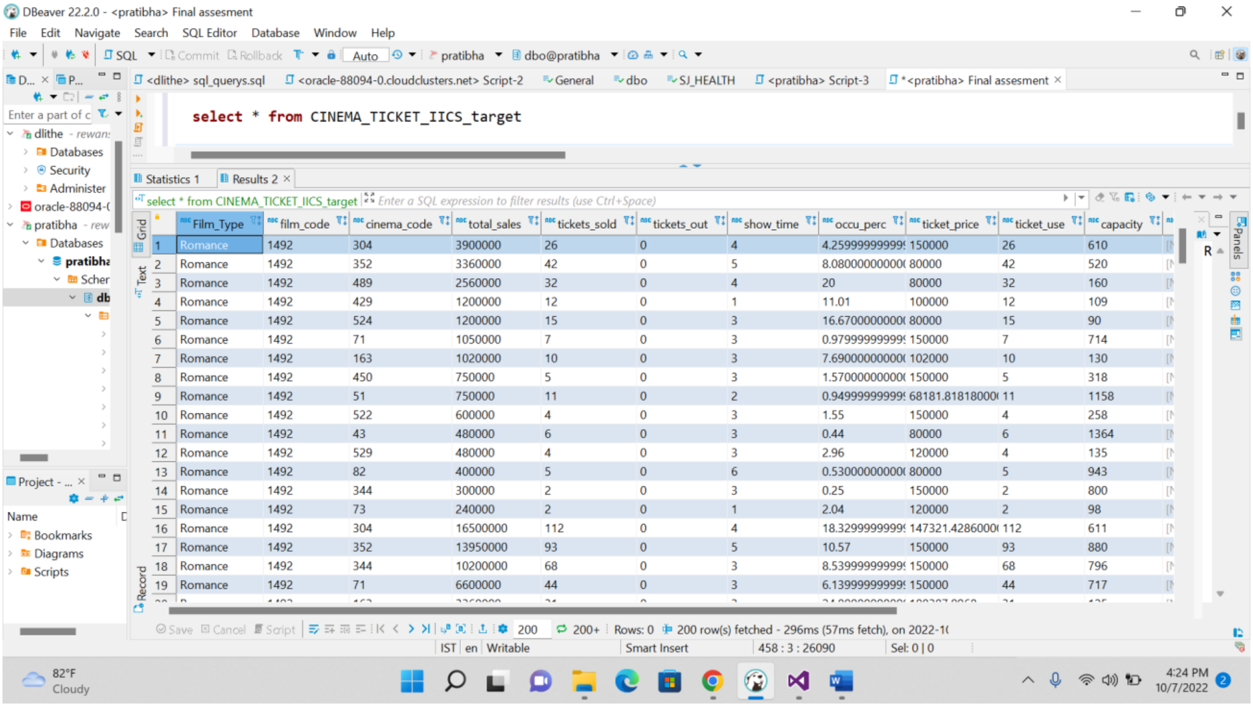
Runtime Environment:* Informatica Cloud Hosted Agent

Mapping:* M_FA_IICS_Cinema_data

Mapping Image: M_FA_IICS_Cinema_data

Step5: check the target table

Below snapshot of resulatant


DBeaver 22.2.0 - <pratibha> Final assesment
File Edit Navigate Search SQL Editor Database Window Help
<dlithe> sql_querys.sql
<oracle-88094-0.cloudclusters.net> Script-2
General
dbo
SJ_HEALTH
<pratibha> Script-3
*<pratibha> Final assesment
Statistics 1
Results 2

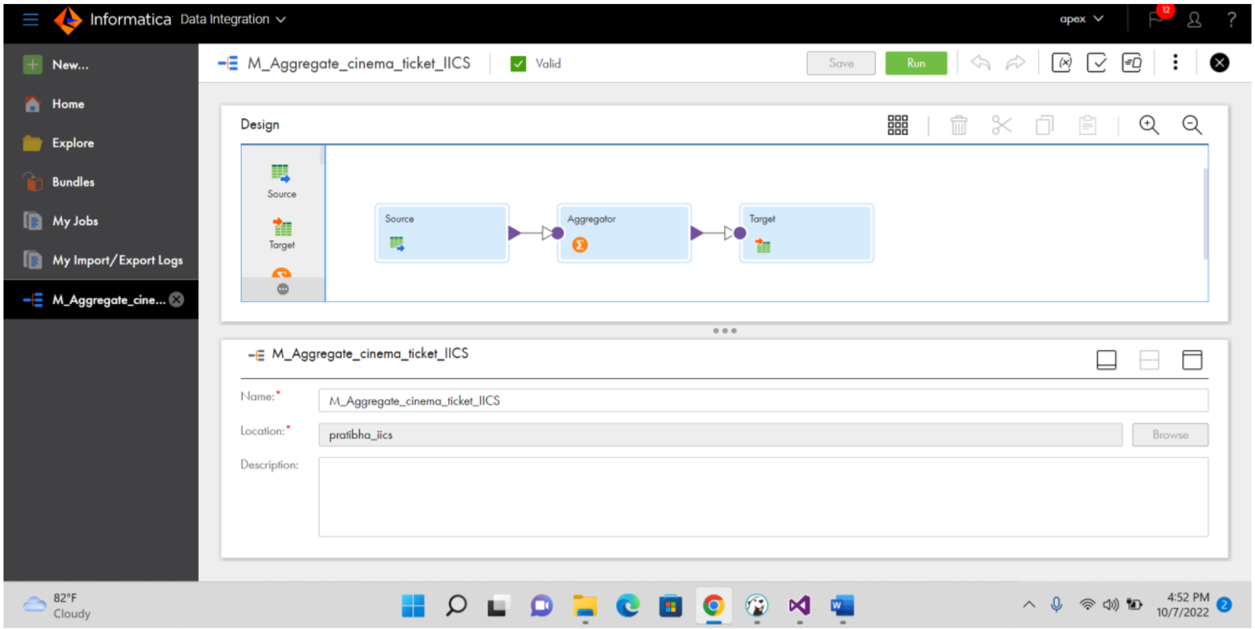
```
select * from CINEMA_TICKET_IICS_target
```

| | Film_Type | film_code | cinema_code | total_sales | tickets_sold | tickets_out | show_time | occu_perc | ticket_price | ticket_use | capacity |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Romance | 1492 | 304 | 3900000 | 26 | 0 | 4 | 4.25999999999 | 150000 | 26 | 610 |
| 2 | Romance | 1492 | 352 | 3360000 | 42 | 0 | 5 | 8.08000000000 | 80000 | 42 | 520 |
| 3 | Romance | 1492 | 489 | 2560000 | 32 | 0 | 4 | 20 | 80000 | 32 | 160 |
| 4 | Romance | 1492 | 429 | 1200000 | 12 | 0 | 1 | 11.01 | 100000 | 12 | 109 |
| 5 | Romance | 1492 | 524 | 1200000 | 15 | 0 | 3 | 16.6700000000 | 80000 | 15 | 90 |
| 6 | Romance | 1492 | 71 | 1050000 | 7 | 0 | 3 | 0.97999999999 | 150000 | 7 | 714 |
| 7 | Romance | 1492 | 163 | 1020000 | 10 | 0 | 3 | 7.69000000000 | 102000 | 10 | 130 |
| 8 | Romance | 1492 | 450 | 750000 | 5 | 0 | 3 | 1.57000000000 | 150000 | 5 | 318 |
| 9 | Romance | 1492 | 51 | 750000 | 11 | 0 | 2 | 0.94999999999 | 68181.8181800 | 11 | 1158 |
| 10 | Romance | 1492 | 522 | 600000 | 4 | 0 | 3 | 1.55 | 150000 | 4 | 258 |
| 11 | Romance | 1492 | 43 | 480000 | 6 | 0 | 3 | 0.44 | 80000 | 6 | 1364 |
| 12 | Romance | 1492 | 529 | 480000 | 4 | 0 | 3 | 2.96 | 120000 | 4 | 135 |
| 13 | Romance | 1492 | 82 | 400000 | 5 | 0 | 6 | 0.53000000000 | 80000 | 5 | 943 |
| 14 | Romance | 1492 | 344 | 300000 | 2 | 0 | 3 | 0.25 | 150000 | 2 | 800 |
| 15 | Romance | 1492 | 73 | 240000 | 2 | 0 | 1 | 2.04 | 120000 | 2 | 98 |
| 16 | Romance | 1492 | 304 | 16500000 | 112 | 0 | 4 | 18.3299999999 | 147321.428600 | 112 | 611 |
| 17 | Romance | 1492 | 352 | 13950000 | 93 | 0 | 5 | 10.57 | 150000 | 93 | 880 |
| 18 | Romance | 1492 | 344 | 10200000 | 68 | 0 | 3 | 8.53999999999 | 150000 | 68 | 796 |
| 19 | Romance | 1492 | 71 | 6600000 | 44 | 0 | 3 | 6.13999999999 | 150000 | 44 | 717 |

200 row(s) fetched - 296ms (57ms fetch), on 2022-1

## Create aggregate table based on the particular column

## Step1: make connection as shown in the below



M_Aggregate_cinema_ticket_IICS

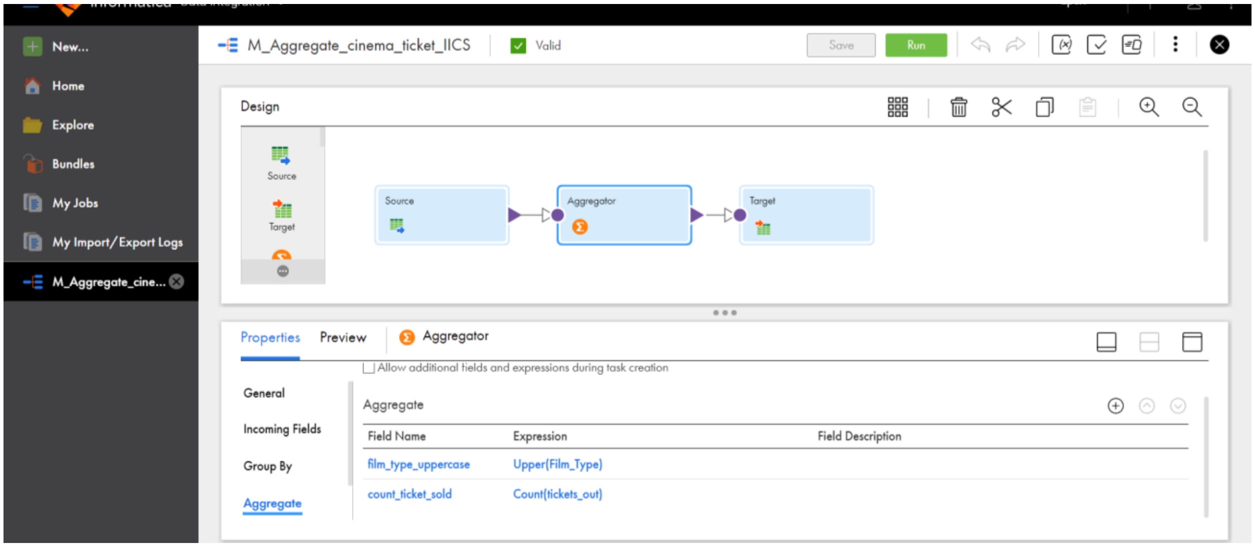
Name:* M_Aggregate_cinema_ticket_IICS

Location:* pratibha_iics Browse

Description:

Step2: click on aggregation

Step3: write the aggregation function as per the need

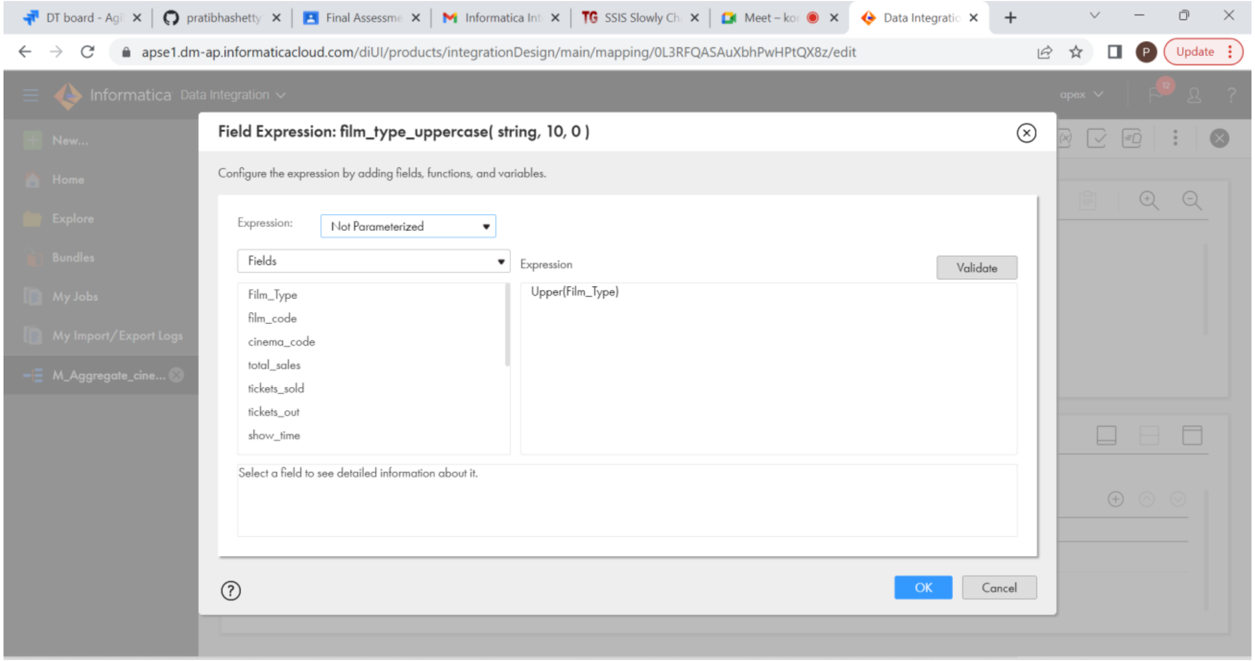


□ Allow additional fields and expressions during task creation

Aggregate

| Field Name | Expression | Field Description |
|---|---|---|
| film_type_uppercase | Upper(Film_Type) | |
| count_ticket_sold | Count(tickets_out) | |

Bellow snapshot shows the aggregation for upper case



Field Expression: film_type_uppercase( string, 10, 0 )

Configure the expression by adding fields, functions, and variables.

Expression: Not Parameterized

Fields

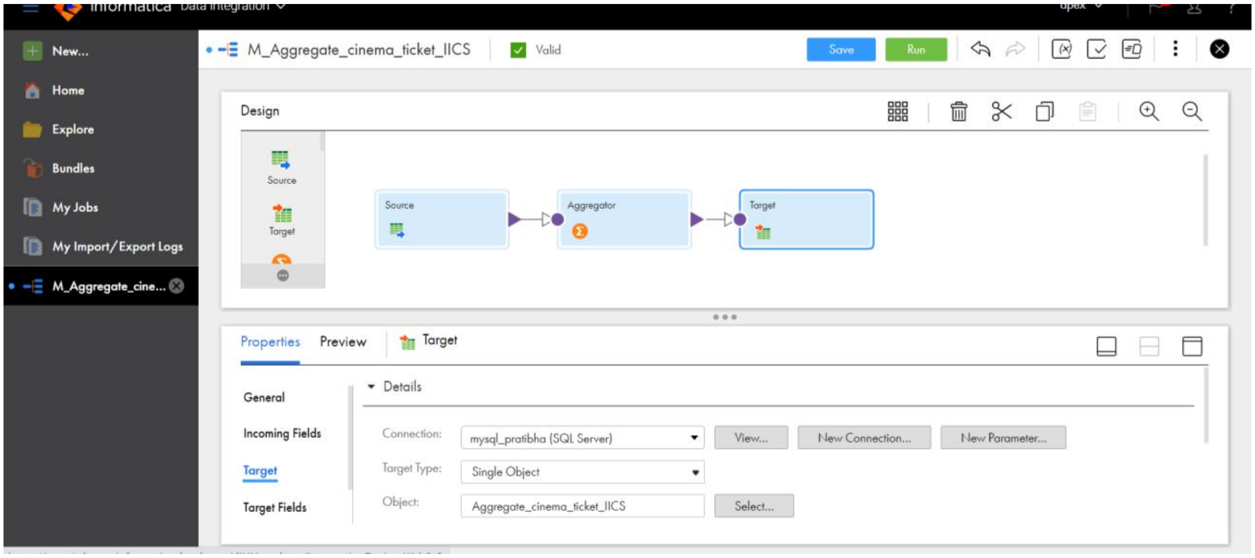
Film_Type
film_code
cinema_code
total_sales
tickets_sold
tickets_out
show_time

Expression

Upper(Film_Type)

Select a field to see detailed information about it.

Step4: choose the target table



M_Aggregate_cinema_ticket_IICS ✓ Valid

Target

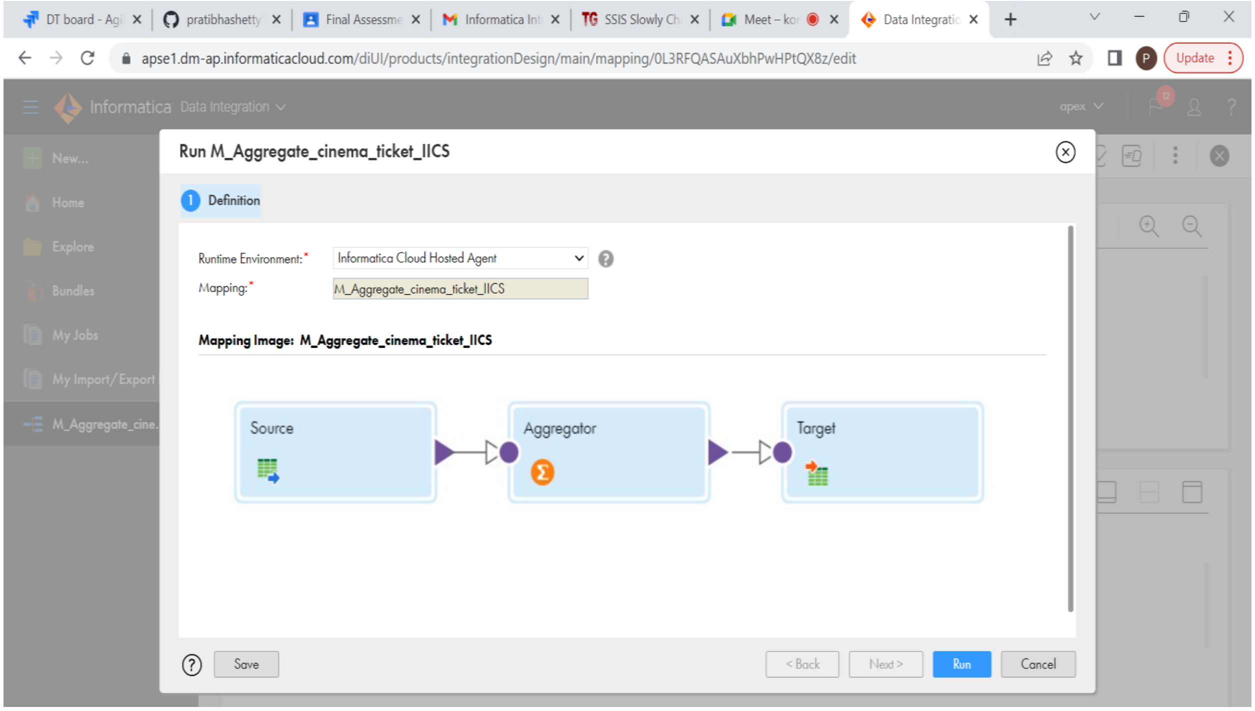
Details

Connection: mysql_pratibha (SQL Server)

Target Type: Single Object

Object: Aggregate_cinema_ticket_IICS

Step5: Run the mapping



apse1.dm-ap.informaticacloud.com/diUI/products/integrationDesign/main/mapping/0L3RFQASAuXbhPwHPtQX8z/edit

Run M_Aggregate_cinema_ticket_IICS

1 Definition

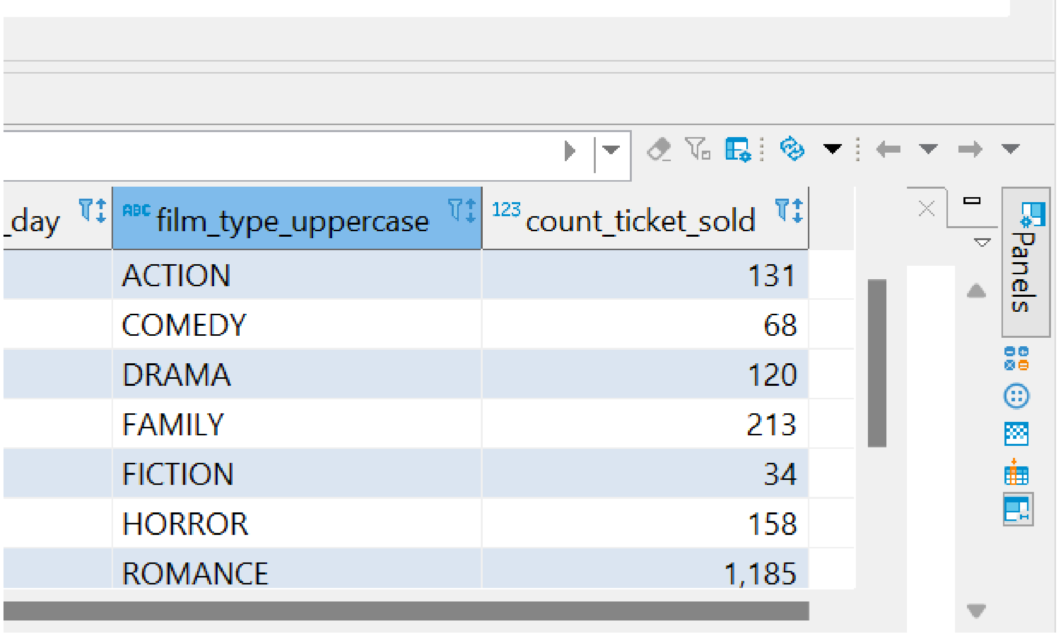
Runtime Environment:* Informatica Cloud Hosted Agent

Mapping:* M_Aggregate_cinema_ticket_IICS

Mapping Image: M_Aggregate_cinema_ticket_IICS

Step6: check the target table

Below snapshot shows the resultant table

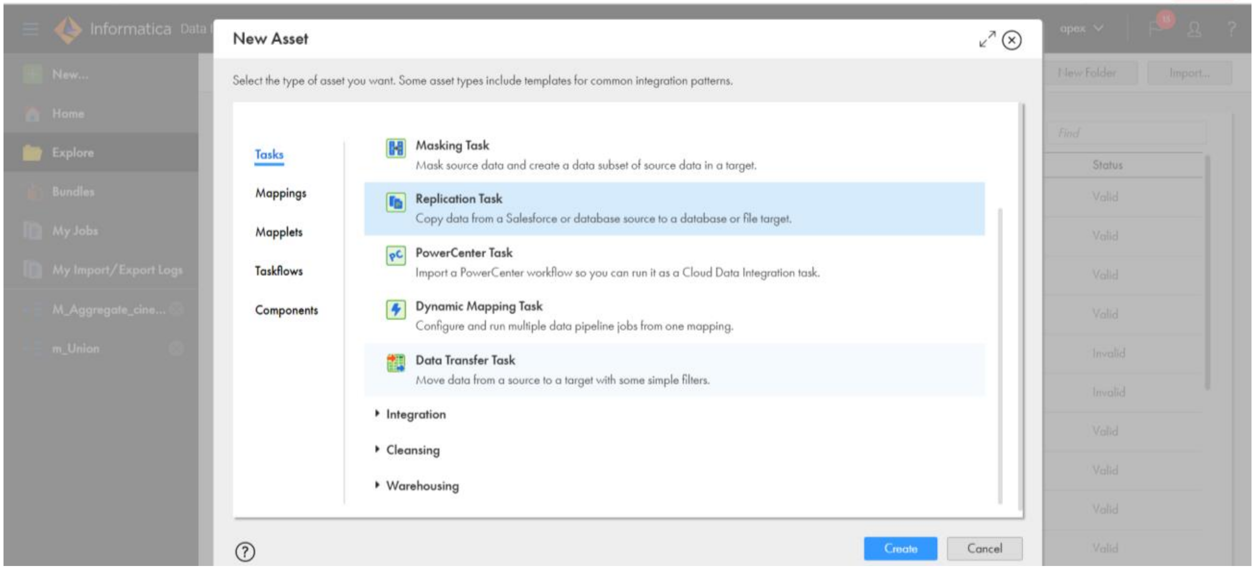


| _day | film_type_uppercase | count_ticket_sold |
|---|---|---|
| | ACTION | 131 |
| | COMEDY | 68 |
| | DRAMA | 120 |
| | FAMILY | 213 |
| | FICTION | 34 |
| | HORROR | 158 |
| | ROMANCE | 1,185 |

## Create data replication task

Step1: choose the Replication task

Step2: click on create



New Asset

Select the type of asset you want. Some asset types include templates for common integration patterns.

**Masking Task**
Mask source data and create a data subset of source data in a target.

**Replication Task**
Copy data from a Salesforce or database source to a database or file target.

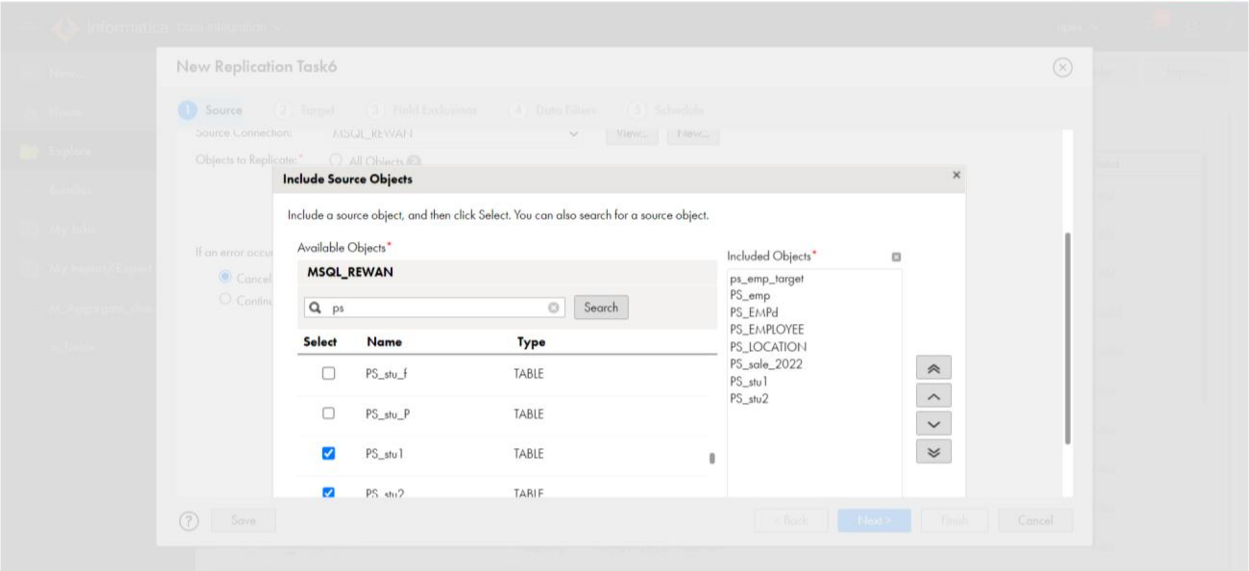
**PowerCenter Task**
Import a PowerCenter workflow so you can run it as a Cloud Data Integration task.

**Dynamic Mapping Task**
Configure and run multiple data pipeline jobs from one mapping.

**Data Transfer Task**
Move data from a source to a target with some simple filters.

Step3: select the source database

Step4: select the table which you have needed



New Replication Task6

Include Source Objects

Include a source object, and then click Select. You can also search for a source object.

Available Objects*

MSQL_REWAN

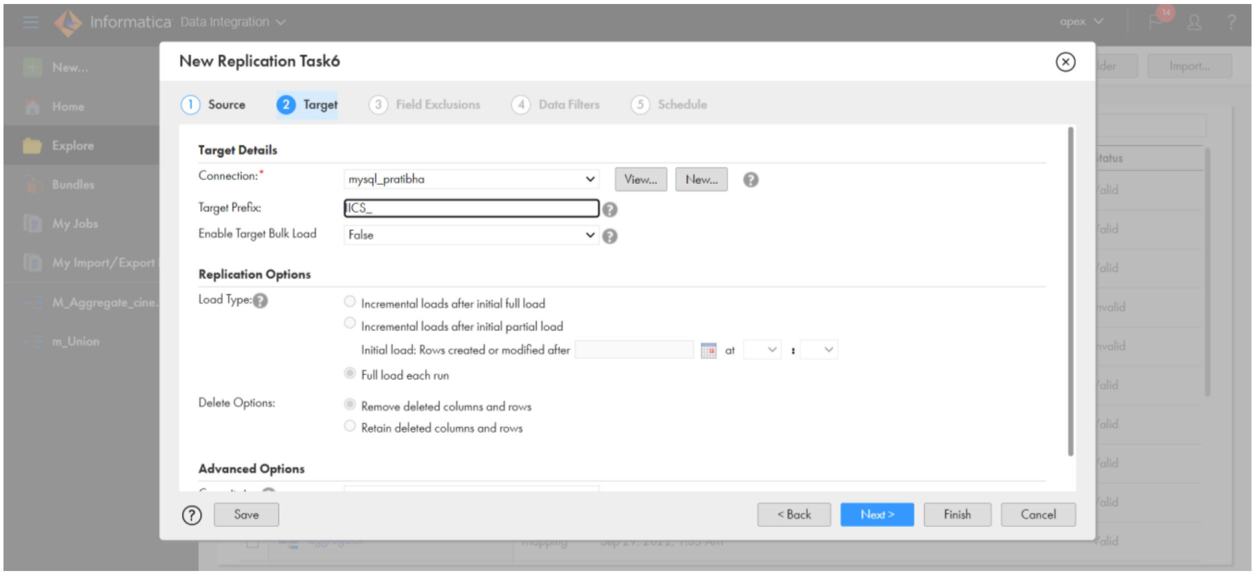
ps

| Select | Name | Type |
|---|---|---|
| ☐ | PS_stu_f | TABLE |
| ☐ | PS_stu_P | TABLE |
| ☑ | PS_stu1 | TABLE |
| ☑ | PS_stu2 | TABLE |

Included Objects*

ps_emp_target
PS_emp
PS_EMPd
PS_EMPLOYEE
PS_LOCATION
PS_sale_2022
PS_stu1
PS_stu2

Step5: Select the target database click on next



New Replication Task6

1 Source  2 Target  3 Field Exclusions  4 Data Filters  5 Schedule

**Target Details**

Connection:* mysql_pratibha

Target Prefix: ICS_

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

● Full load each run

Delete Options:

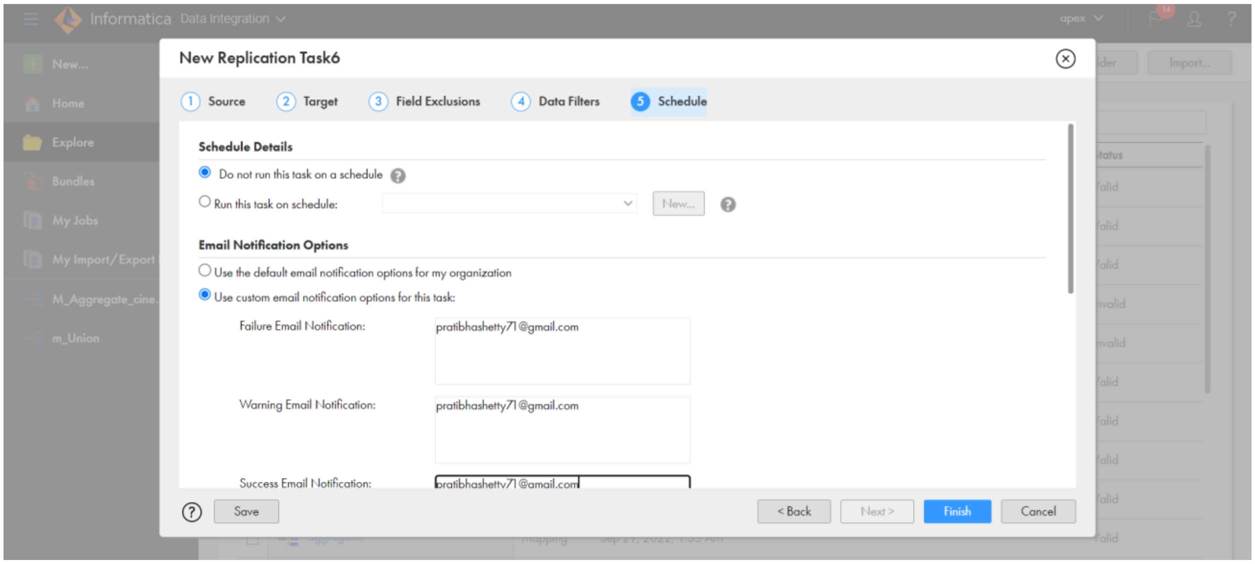
● Remove deleted columns and rows

○ Retain deleted columns and rows

**Advanced Options**

Step6: if you need notification mail give valid email id

Step7: click on finish



New Replication Task6

1 Source 2 Target 3 Field Exclusions 4 Data Filters 5 Schedule

**Schedule Details**

● Do not run this task on a schedule

○ Run this task on schedule:

**Email Notification Options**

○ Use the default email notification options for my organization

● Use custom email notification options for this task:

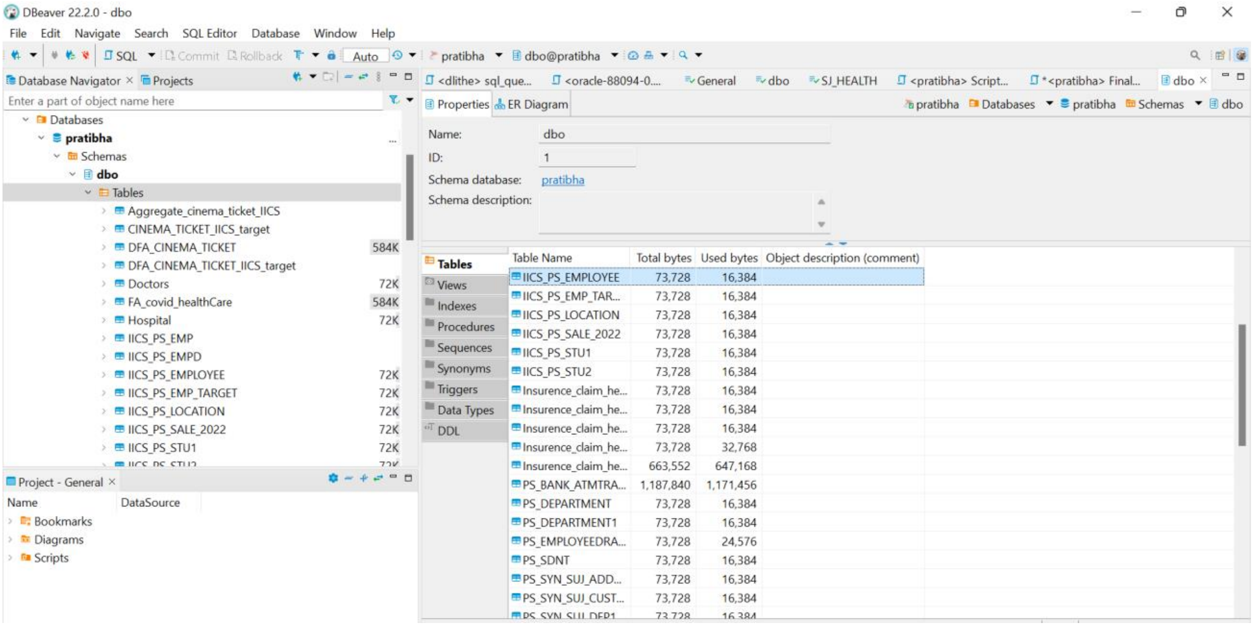
Failure Email Notification: pratibhashetty71@gmail.com

Warning Email Notification: pratibhashetty71@gmail.com

Success Email Notification: pratibhashetty71@gmail.com

Step8: check the target database

Below snapshot shows the replicate database



DBeaver 22.2.0 - dbo

Databases
- pratibha
  - Schemas
    - dbo
      - Tables
        - Aggregate_cinema_ticket_IICS
        - CINEMA_TICKET_IICS_target
        - DFA_CINEMA_TICKET 584K
        - DFA_CINEMA_TICKET_IICS_target
        - Doctors 72K
        - FA_covid_healthCare 584K
        - Hospital 72K
        - IICS_PS_EMP
        - IICS_PS_EMPD
        - IICS_PS_EMPLOYEE 72K
        - IICS_PS_EMP_TARGET 72K
        - IICS_PS_LOCATION 72K
        - IICS_PS_SALE_2022 72K
        - IICS_PS_STU1 72K

Name: dbo

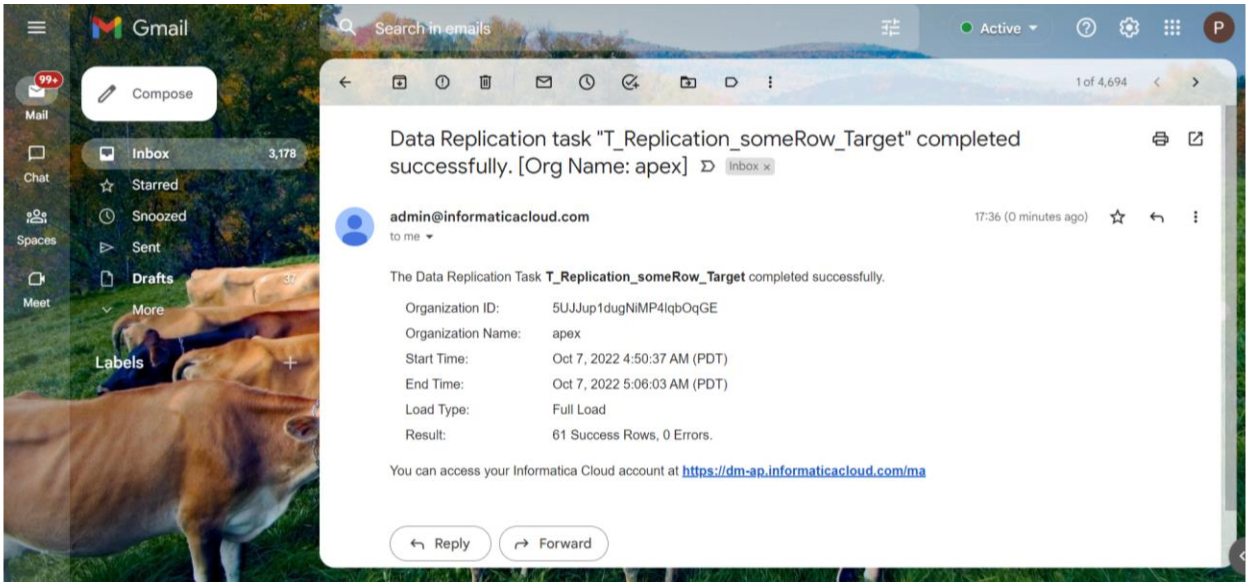
ID: 1

Schema database: pratibha

Schema description:

| Table Name | Total bytes | Used bytes | Object description (comment) |
|---|---|---|---|
| IICS_PS_EMPLOYEE | 73,728 | 16,384 | |
| IICS_PS_EMP_TAR... | 73,728 | 16,384 | |
| IICS_PS_LOCATION | 73,728 | 16,384 | |
| IICS_PS_SALE_2022 | 73,728 | 16,384 | |
| IICS_PS_STU1 | 73,728 | 16,384 | |
| IICS_PS_STU2 | 73,728 | 16,384 | |
| Insurence_claim_he... | 73,728 | 16,384 | |
| Insurence_claim_he... | 73,728 | 16,384 | |
| Insurence_claim_he... | 73,728 | 16,384 | |
| Insurence_claim_he... | 73,728 | 32,768 | |
| Insurence_claim_he... | 663,552 | 647,168 | |
| PS_BANK_ATMTRA... | 1,187,840 | 1,171,456 | |
| PS_DEPARTMENT | 73,728 | 16,384 | |
| PS_DEPARTMENT1 | 73,728 | 16,384 | |
| PS_EMPLOYEEDRA... | 73,728 | 24,576 | |
| PS_SDNT | 73,728 | 16,384 | |
| PS_SYN_SUJ_ADD... | 73,728 | 16,384 | |
| PS_SYN_SUJ_CUST... | 73,728 | 16,384 | |

Below snapshot shows the completed task



Data Replication task "T_Replication_someRow_Target" completed successfully. [Org Name: apex]

admin@informaticacloud.com
to me

17:36 (0 minutes ago)

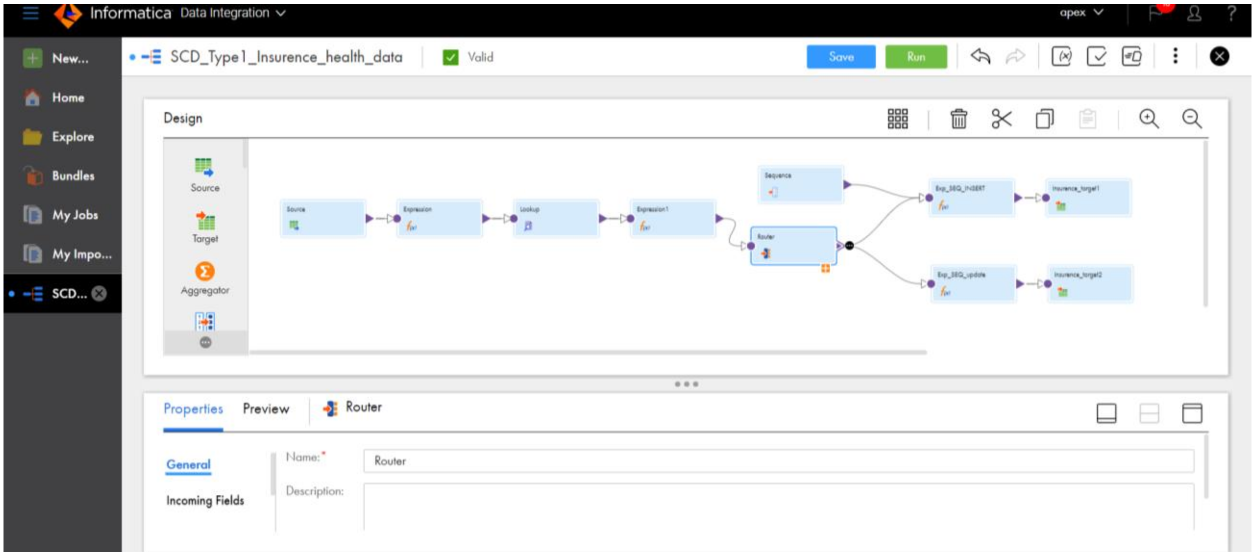
The Data Replication Task **T_Replication_someRow_Target** completed successfully.

| | |
|---|---|
| Organization ID: | 5UJJup1dugNiMP4lqbOqGE |
| Organization Name: | apex |
| Start Time: | Oct 7, 2022 4:50:37 AM (PDT) |
| End Time: | Oct 7, 2022 5:06:03 AM (PDT) |
| Load Type: | Full Load |
| Result: | 61 Success Rows, 0 Errors. |

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

## Perform SCD 1 & SCD2 dimension table modelling

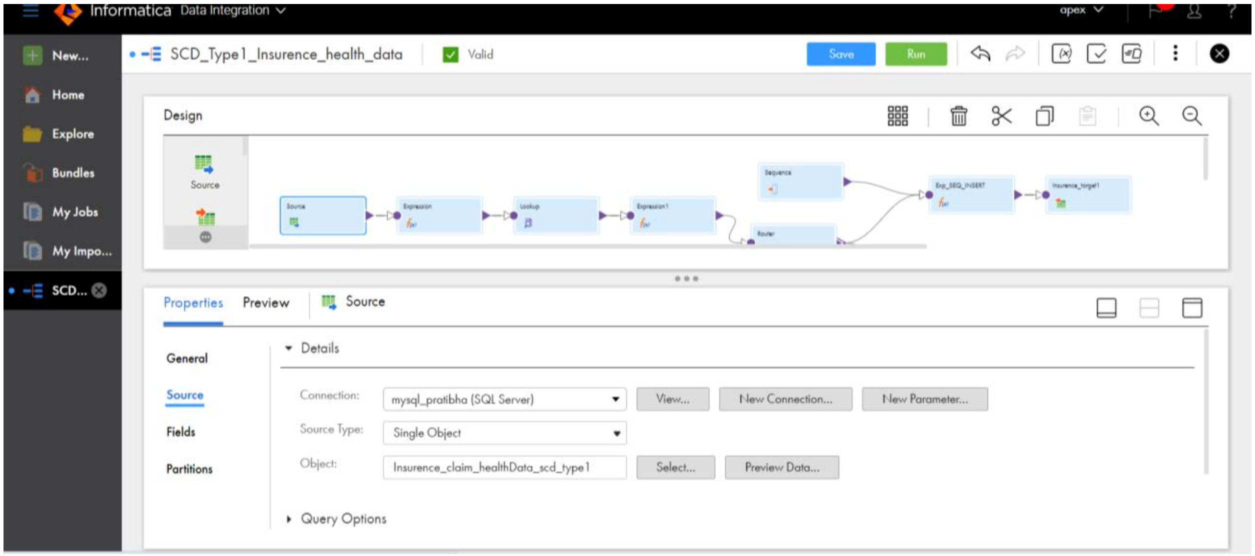
Step1: make connection as shown in the below



Name:* Router

Description:

Step2: click on source and select the source table



SCD_Type1_Insurence_health_data ☑ Valid

Source

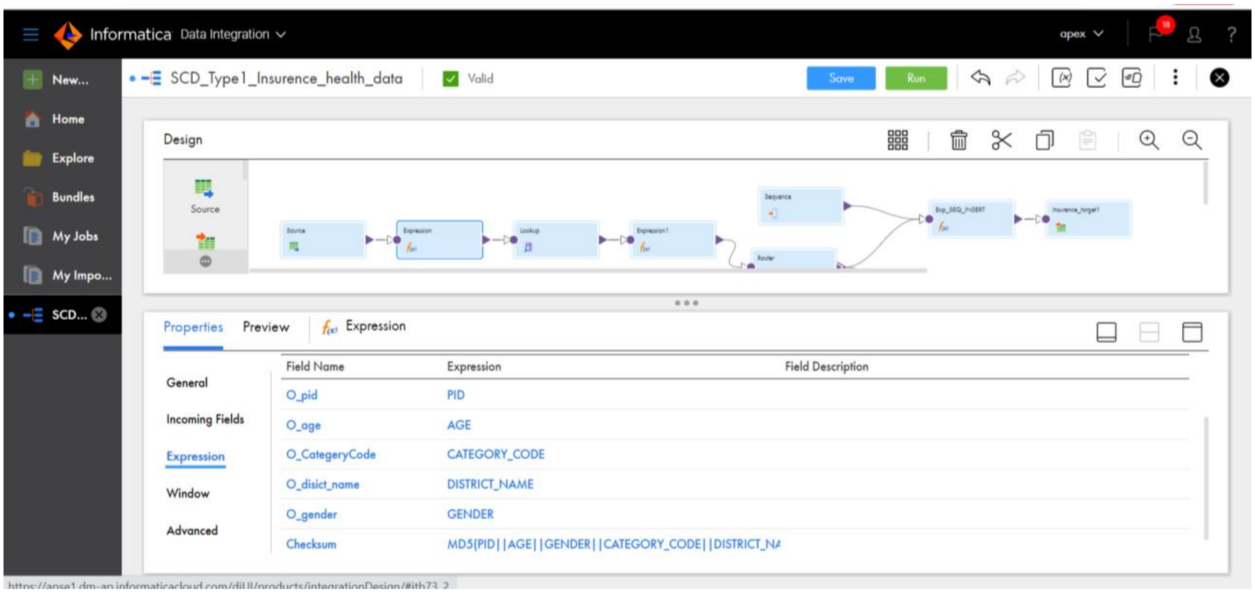
Details

Connection: mysql_pratibha (SQL Server)

Source Type: Single Object

Object: Insurence_claim_healthData_scd_type1

Step3: click on expression make expression as shown in the below

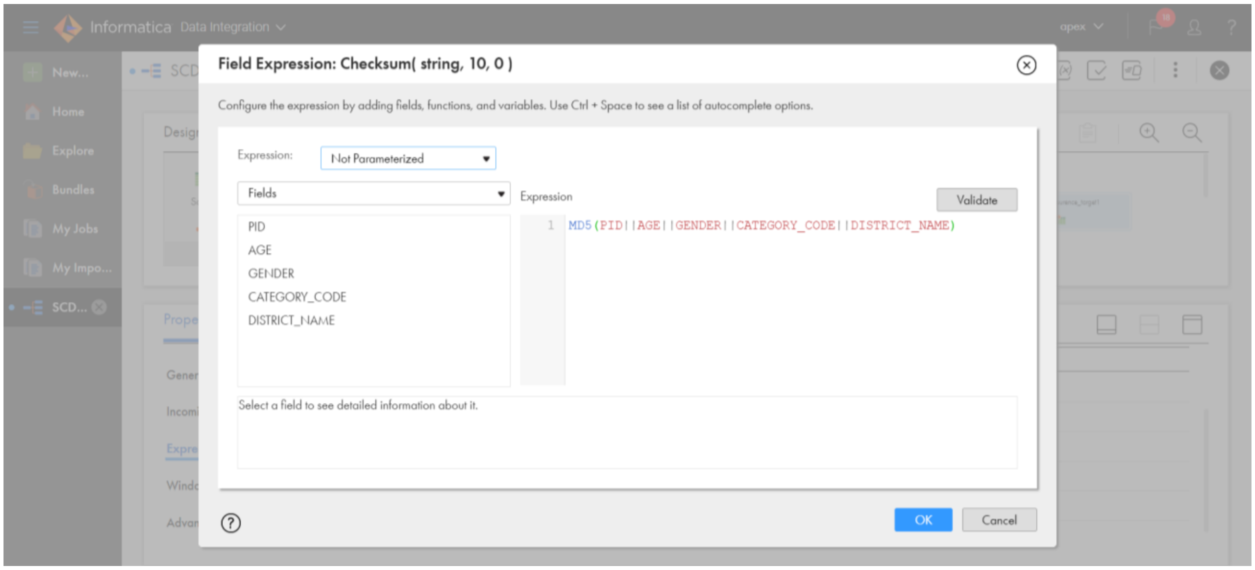


SCD_Type1_Insurence_health_data ☑ Valid

Expression

| Field Name | Expression | Field Description |
|---|---|---|
| O_pid | PID | |
| O_age | AGE | |
| O_CategeryCode | CATEGORY_CODE | |
| O_disict_name | DISTRICT_NAME | |
| O_gender | GENDER | |
| Checksum | MD5(PID\|\|AGE\|\|GENDER\|\|CATEGORY_CODE\|\|DISTRICT_NA | |

https://apse1.dm-ap.informaticacloud.com/diUI/products/integrationDesign/#ith73_2



**Field Expression: Checksum( string, 10, 0 )**

Configure the expression by adding fields, functions, and variables. Use Ctrl + Space to see a list of autocomplete options.

Expression: Not Parameterized

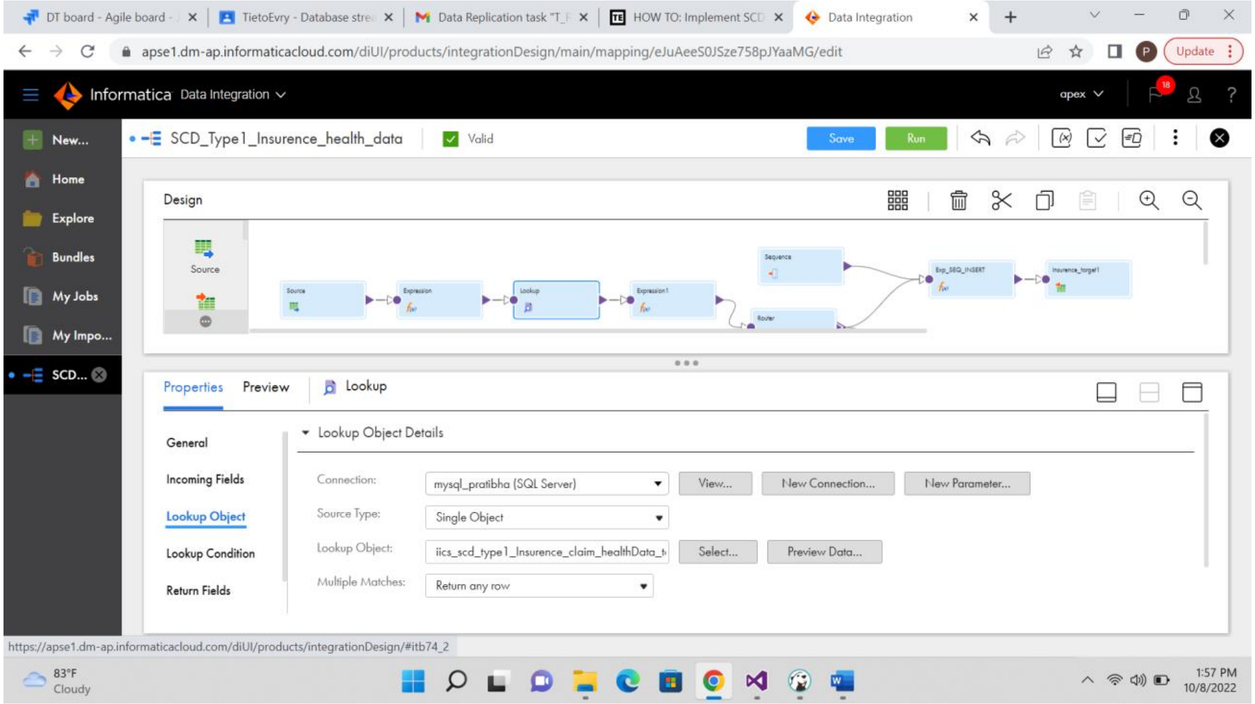
Fields: PID, AGE, GENDER, CATEGORY_CODE, DISTRICT_NAME

Expression:

```
MD5(PID||AGE||GENDER||CATEGORY_CODE||DISTRICT_NAME)
```

Select a field to see detailed information about it.

Step4: click on lookup and select the object(target table)



apse1.dm-ap.informaticacloud.com/diUI/products/integrationDesign/main/mapping/eJuAeeS0JSze758pJYaaMG/edit

SCD_Type1_Insurence_health_data ✓ Valid

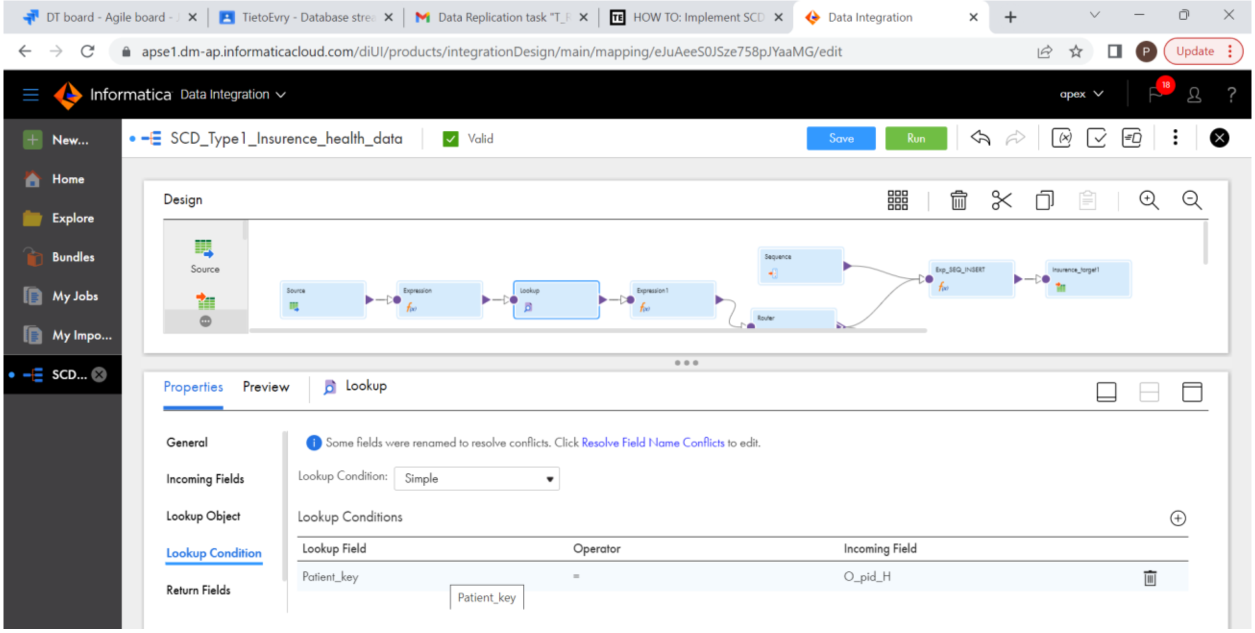
Design: Source → Expression → Lookup → Expression1 → Router; Sequence → Exp_SEQ_INSERT → Insurence_target1

Properties — Lookup

Lookup Object Details

| | |
|---|---|
| Connection: | mysql_pratibha (SQL Server) |
| Source Type: | Single Object |
| Lookup Object: | iics_scd_type1_Insurence_claim_healthData_t |
| Multiple Matches: | Return any row |

Step5: Under Lookup Condition tab, select the condition based on employee id fields from source and lookup objects as shown below.



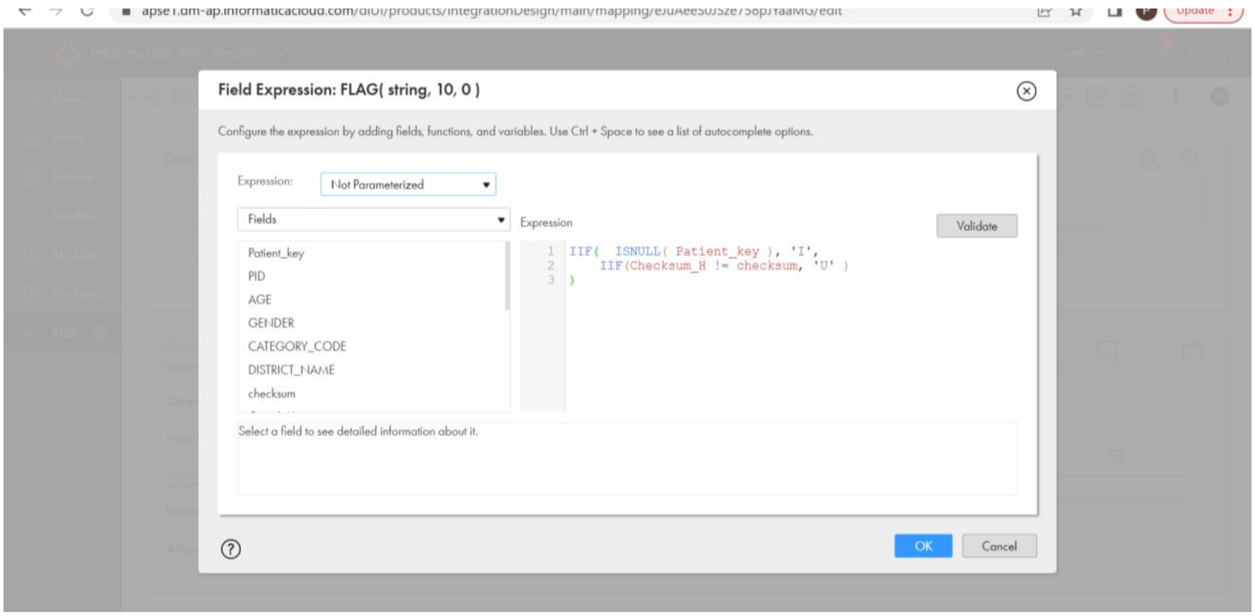
Some fields were renamed to resolve conflicts. Click Resolve Field Name Conflicts to edit.

Lookup Condition: Simple

Lookup Conditions

| Lookup Field | Operator | Incoming Field |
|---|---|---|
| Patient_key | = | O_pid_H |

Step6: Pass the data from Lookup to an Expression transformation and create an output field Flag and assign the below field expression to flag the records


apse1.dm-ap.informaticacloud.com/diUI/products/integrationDesign/main/mapping/eJuAeeS0JSze758pJYaaMG/edit
Update
Fields
Patient_key
PID
AGE
GENDER
CATEGORY_CODE
DISTRICT_NAME
checksum
Validate
OK
Cancel

Field Expression: FLAG( string, 10, 0 )

Configure the expression by adding fields, functions, and variables. Use Ctrl + Space to see a list of autocomplete options.

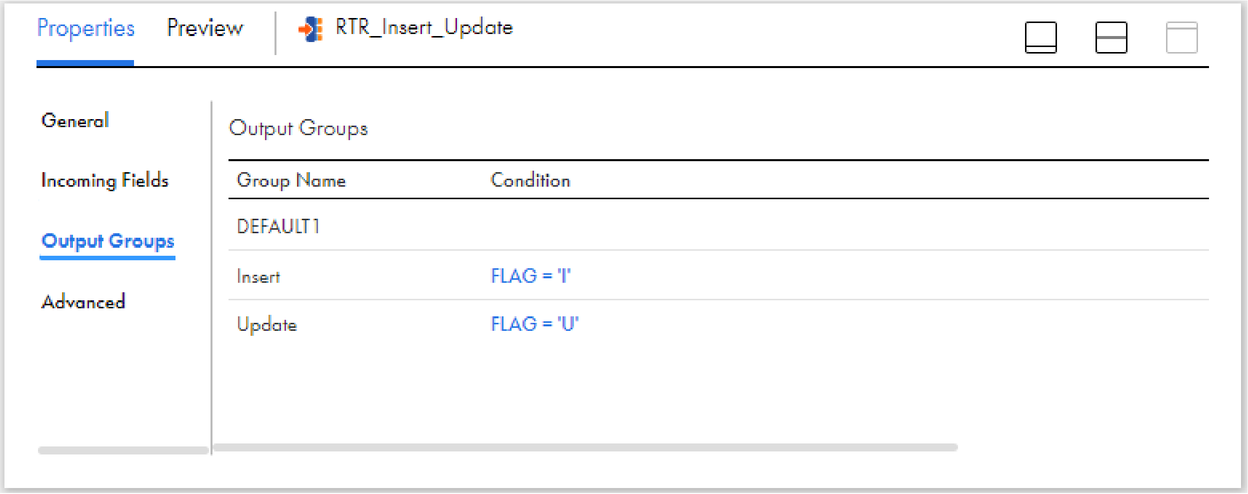
Expression: Not Parameterized

Expression

```
IIF(  ISNULL( Patient_key ), 'I',
    IIF(Checksum_H != checksum, 'U' )
)
```

Select a field to see detailed information about it.

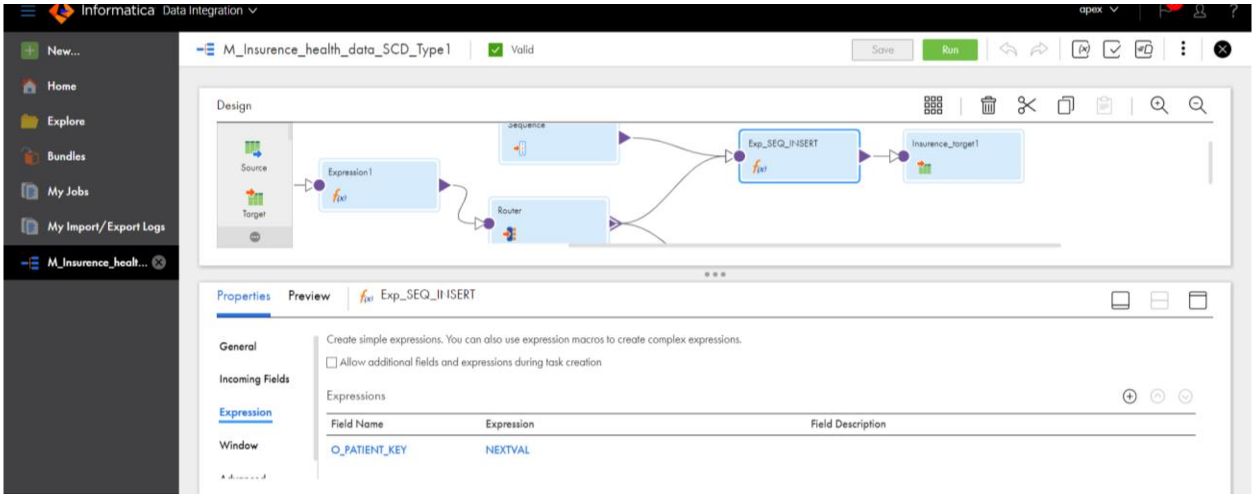
Step8: Create two output groups in the Router transformation to route the date to two different targets based on the flag value for Insert (Flag='I') and Update (Flag='U') operations as shown below.



Output Groups

| Group Name | Condition |
|---|---|
| DEFAULT1 | |
| Insert | FLAG = 'I' |
| Update | FLAG = 'U' |

Step 8: Configure Sequence Generator for generating Surrogate Keys



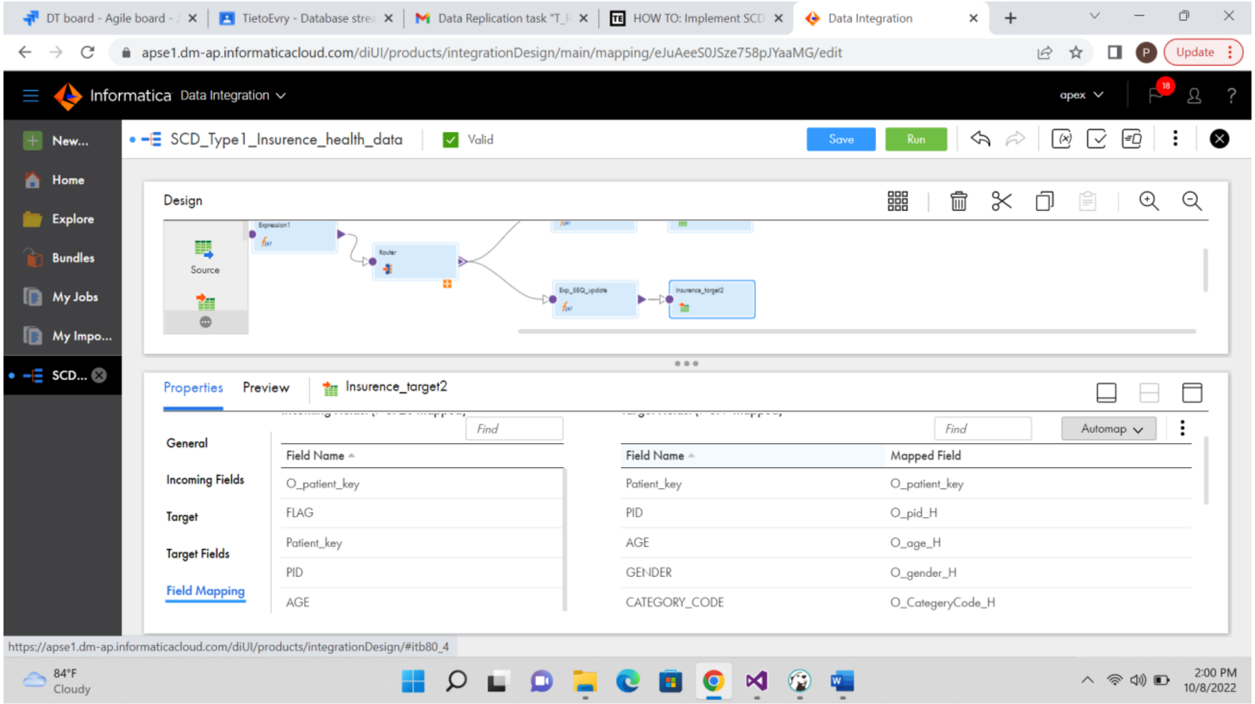
Create simple expressions. You can also use expression macros to create complex expressions.

☐ Allow additional fields and expressions during task creation

Expressions

| Field Name | Expression | Field Description |
|---|---|---|
| O_PATIENT_KEY | NEXTVAL | |

Step9: Pass the data from expression to a target transformation. Select the dimension table as target object with ration defined as Insert.



SCD_Type1_Insurence_health_data ☑ Valid

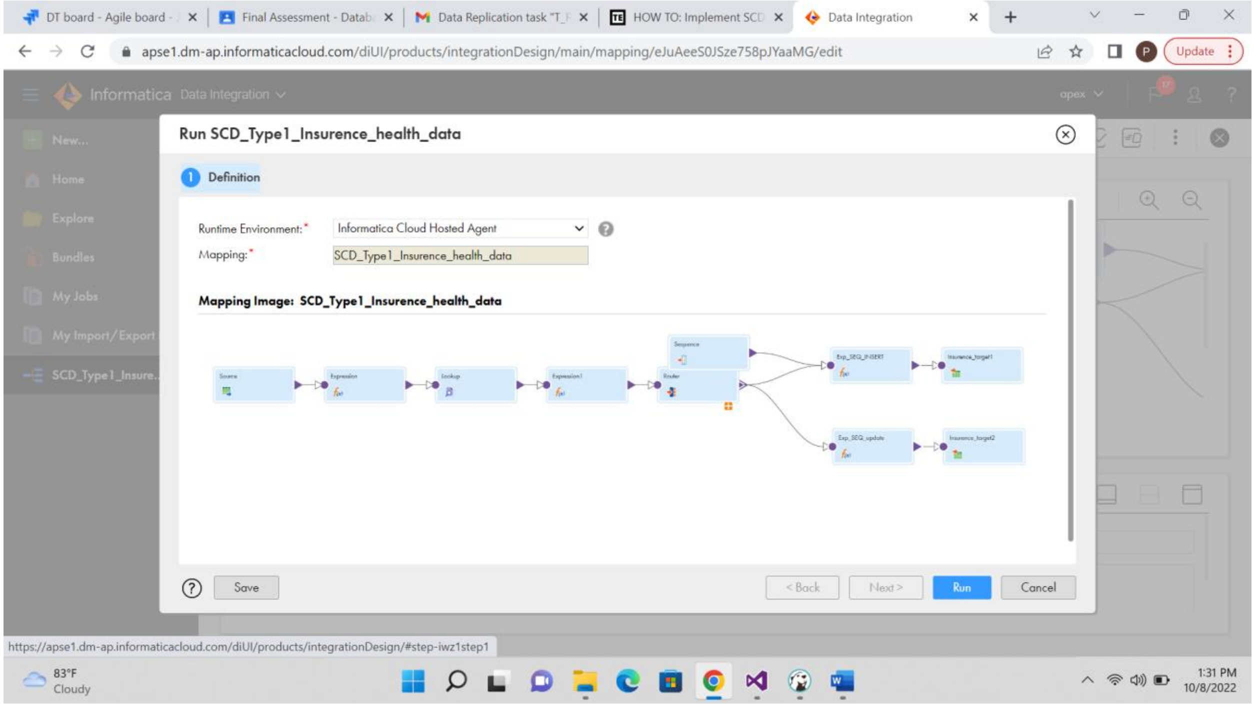
Properties | Preview | Insurence_target2

Field Mapping

| Field Name |
|---|
| O_patient_key |
| FLAG |
| Patient_key |
| PID |
| AGE |

| Field Name | Mapped Field |
|---|---|
| Patient_key | O_patient_key |
| PID | O_pid_H |
| AGE | O_age_H |
| GENDER | O_gender_H |
| CATEGORY_CODE | O_CategeryCode_H |

Step10: run the mapping



Run SCD_Type1_Insurence_health_data

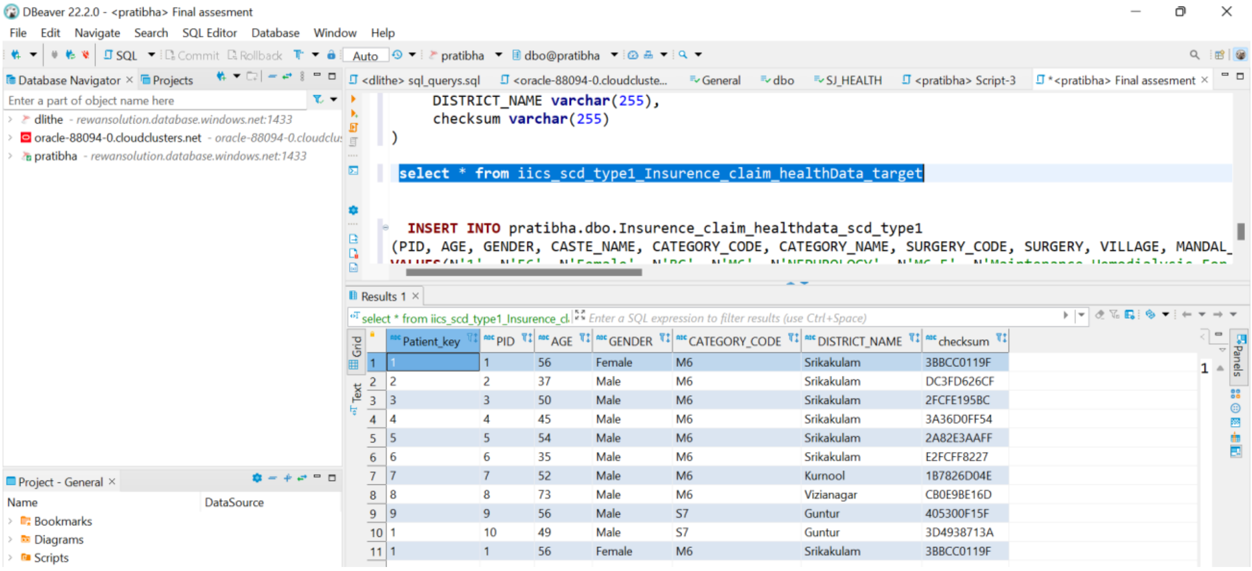
1 Definition

Runtime Environment:* Informatica Cloud Hosted Agent

Mapping:* SCD_Type1_Insurence_health_data

Mapping Image: SCD_Type1_Insurence_health_data

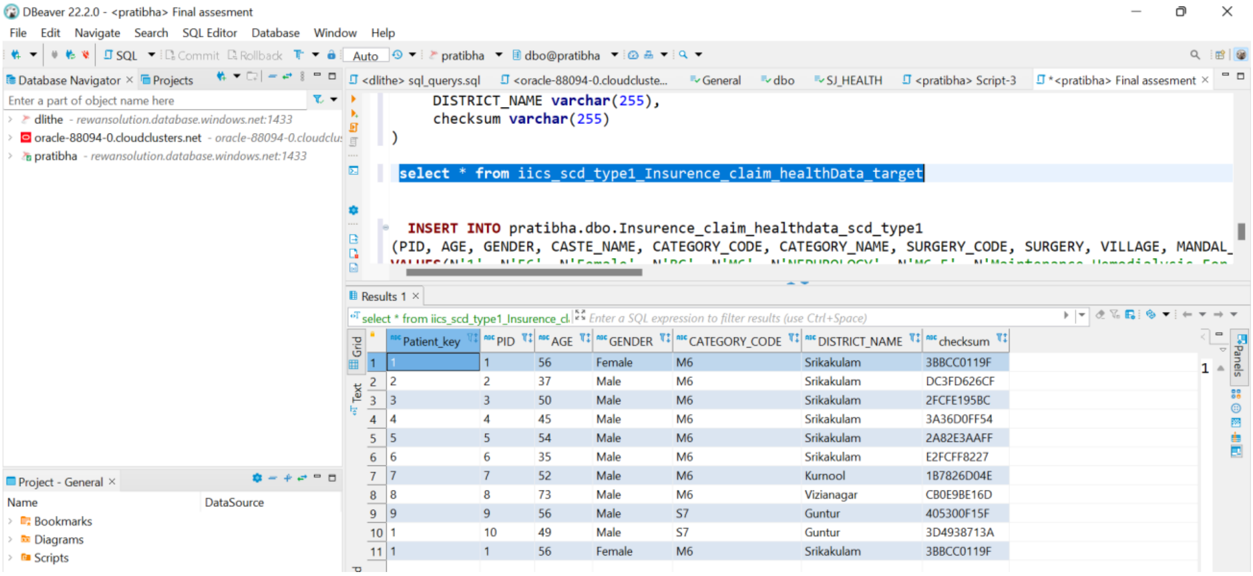
Step11: check the target tabel



```
    DISTRICT_NAME varchar(255),
    checksum varchar(255)
)

select * from iics_scd_type1_Insurence_claim_healthData_target

  INSERT INTO pratibha.dbo.Insurence_claim_healthdata_scd_type1
(PID, AGE, GENDER, CASTE_NAME, CATEGORY_CODE, CATEGORY_NAME, SURGERY_CODE, SURGERY, VILLAGE, MANDAL_
```

|  | Patient_key | PID | AGE | GENDER | CATEGORY_CODE | DISTRICT_NAME | checksum |
|---|---|---|---|---|---|---|---|
| 1 | 1 | 1 | 56 | Female | M6 | Srikakulam | 3BBCC0119F |
| 2 | 2 | 2 | 37 | Male | M6 | Srikakulam | DC3FD626CF |
| 3 | 3 | 3 | 50 | Male | M6 | Srikakulam | 2FCFE195BC |
| 4 | 4 | 4 | 45 | Male | M6 | Srikakulam | 3A36D0FF54 |
| 5 | 5 | 5 | 54 | Male | M6 | Srikakulam | 2A82E3AAFF |
| 6 | 6 | 6 | 35 | Male | M6 | Srikakulam | E2FCFF8227 |
| 7 | 7 | 7 | 52 | Male | M6 | Kurnool | 1B7826D04E |
| 8 | 8 | 8 | 73 | Male | M6 | Vizianagar | CB0E9BE16D |
| 9 | 9 | 9 | 56 | Male | S7 | Guntur | 405300F15F |
| 10 | 1 | 10 | 49 | Male | S7 | Guntur | 3D4938713A |
| 11 | 1 | 1 | 56 | Female | M6 | Srikakulam | 3BBCC0119F |

Insert and update the data in source table, changes also appears in the target table

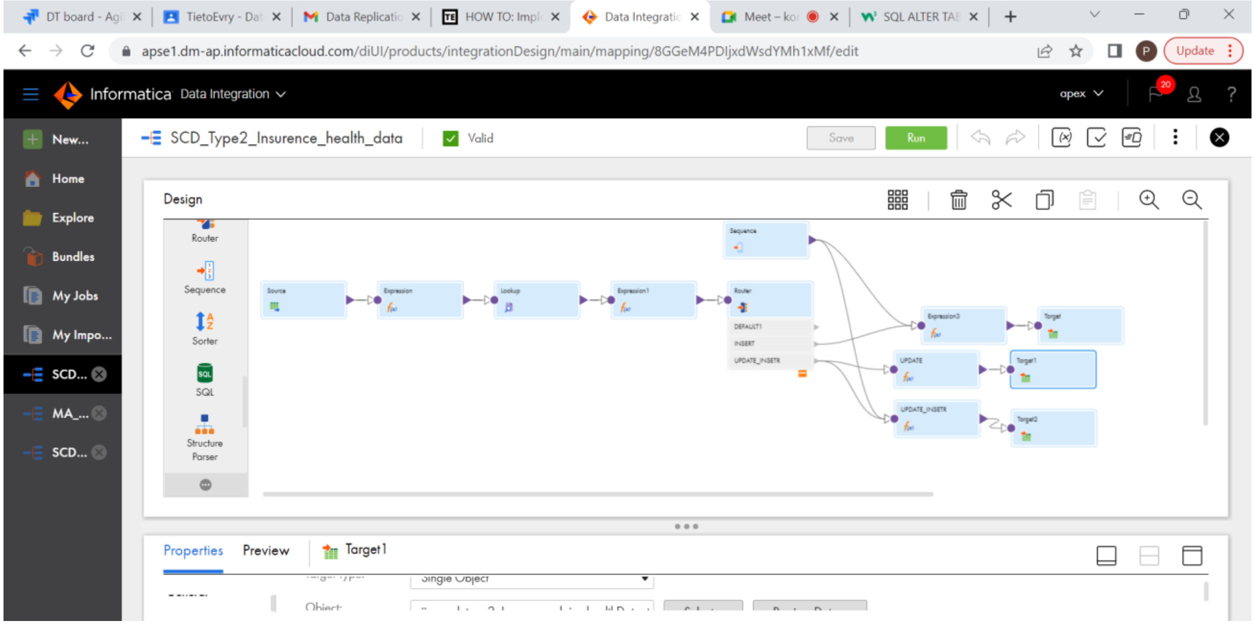


```
    DISTRICT_NAME varchar(255),
    checksum varchar(255)
)

select * from iics_scd_type1_Insurence_claim_healthData_target

  INSERT INTO pratibha.dbo.Insurence_claim_healthdata_scd_type1
(PID, AGE, GENDER, CASTE_NAME, CATEGORY_CODE, CATEGORY_NAME, SURGERY_CODE, SURGERY, VILLAGE, MANDAL_
```

|  | Patient_key | PID | AGE | GENDER | CATEGORY_CODE | DISTRICT_NAME | checksum |
|---|---|---|---|---|---|---|---|
| 1 | 1 | 1 | 56 | Female | M6 | Srikakulam | 3BBCC0119F |
| 2 | 2 | 2 | 37 | Male | M6 | Srikakulam | DC3FD626CF |
| 3 | 3 | 3 | 50 | Male | M6 | Srikakulam | 2FCFE195BC |
| 4 | 4 | 4 | 45 | Male | M6 | Srikakulam | 3A36D0FF54 |
| 5 | 5 | 5 | 54 | Male | M6 | Srikakulam | 2A82E3AAFF |
| 6 | 6 | 6 | 35 | Male | M6 | Srikakulam | E2FCFF8227 |
| 7 | 7 | 7 | 52 | Male | M6 | Kurnool | 1B7826D04E |
| 8 | 8 | 8 | 73 | Male | M6 | Vizianagar | CB0E9BE16D |
| 9 | 9 | 9 | 56 | Male | S7 | Guntur | 405300F15F |
| 10 | 1 | 10 | 49 | Male | S7 | Guntur | 3D4938713A |
| 11 | 1 | 1 | 56 | Female | M6 | Srikakulam | 3BBCC0119F |

SCD2:

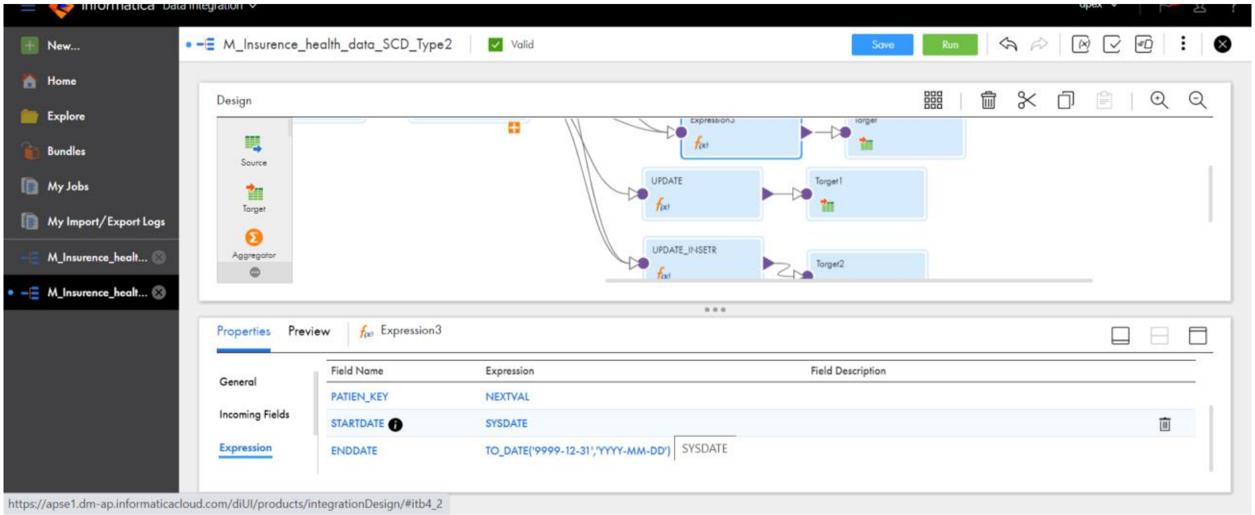
Step1:Do the connection as shown in the below



Step2: Follow the same steps which is followed in scd1 until router connection,

Step3: Make 3 outgoing connection in router

Step4: The following fields are created in the expression transformation linked from the sequence generator An output field O_PATIENT_KEY of type bigint and assign the field value as NEXTVAL coming from sequence generator. An output field O_START_DATE of type date/time and assign the system variable SYSDATE as value. An output field O_END_DATE of type date/time and assign the date value as ‘9999-12-31’.

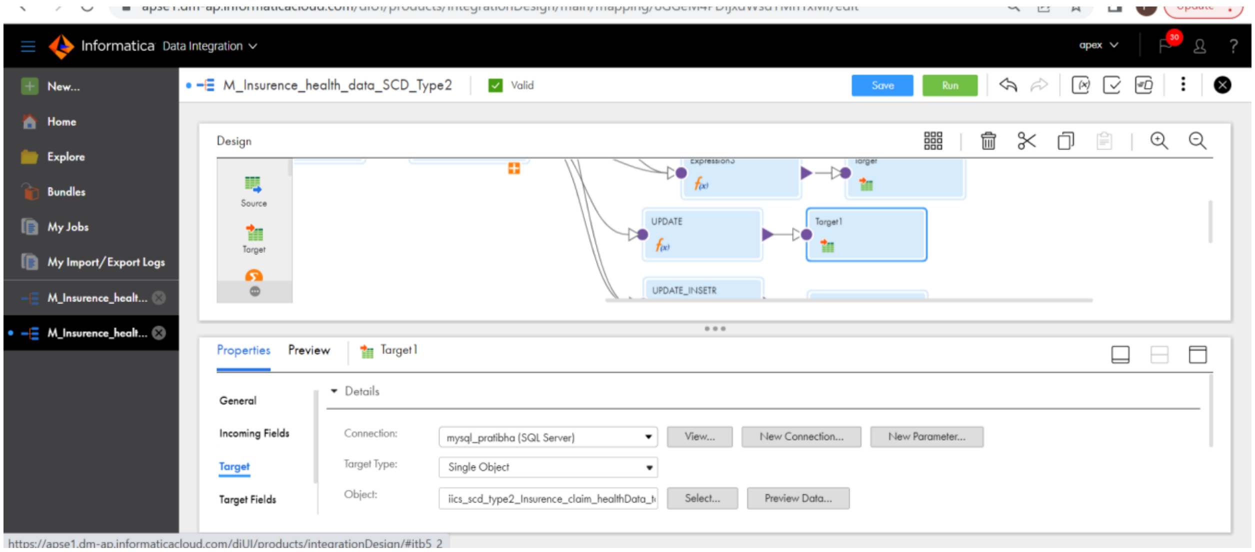


| Field Name | Expression | Field Description |
|---|---|---|
| PATIEN_KEY | NEXTVAL | |
| STARTDATE | SYSDATE | |
| ENDDATE | TO_DATE('9999-12-31','YYYY-MM-DD') | |

SYSDATE

https://apse1.dm-ap.informaticacloud.com/diUI/products/integrationDesign/#itb4_2

STEP5: Pass the data from expression configured in earlier step to a target transformation. Select the dimension table  target object with operation defined as Insert.



M_Insurence_health_data_SCD_Type2 ☑ Valid

Target1

Details

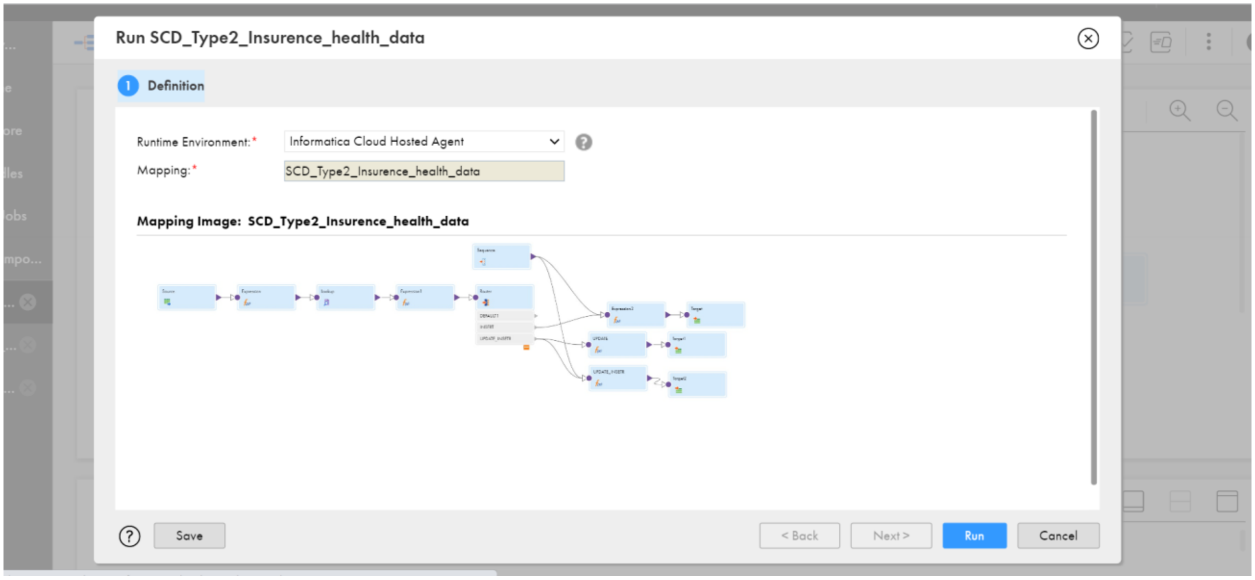
Connection: mysql_pratibha (SQL Server)

Target Type: Single Object

Object: iics_scd_type2_Insurence_claim_healthData_t

https://apse1.dm-ap.informaticacloud.com/diUI/products/integrationDesign/#itb5_2

Step6: run the package



Run SCD_Type2_Insurence_health_data

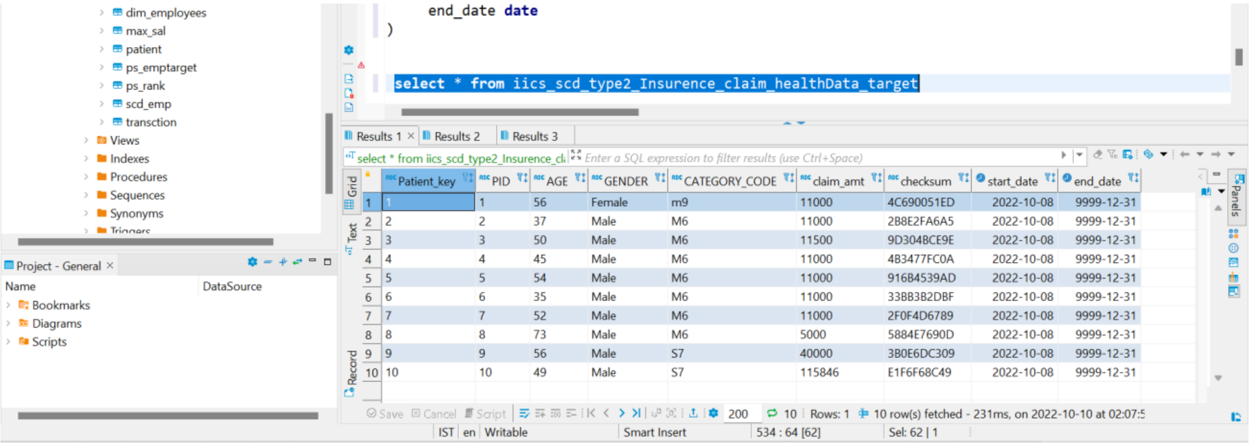
1 Definition

Runtime Environment:* Informatica Cloud Hosted Agent

Mapping:* SCD_Type2_Insurence_health_data

Mapping Image: SCD_Type2_Insurence_health_data

Check the target table



```
    end_date date
)

select * from iics_scd_type2_Insurence_claim_healthData_target
```

| | Patient_key | PID | AGE | GENDER | CATEGORY_CODE | claim_amt | checksum | start_date | end_date |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 1 | 56 | Female | m9 | 11000 | 4C690051ED | 2022-10-08 | 9999-12-31 |
| 2 | 2 | 2 | 37 | Male | M6 | 11000 | 2B8E2FA6A5 | 2022-10-08 | 9999-12-31 |
| 3 | 3 | 3 | 50 | Male | M6 | 11500 | 9D304BCE9E | 2022-10-08 | 9999-12-31 |
| 4 | 4 | 4 | 45 | Male | M6 | 11000 | 4B3477FC0A | 2022-10-08 | 9999-12-31 |
| 5 | 5 | 5 | 54 | Male | M6 | 11000 | 916B4539AD | 2022-10-08 | 9999-12-31 |
| 6 | 6 | 6 | 35 | Male | M6 | 11000 | 33BB3B2DBF | 2022-10-08 | 9999-12-31 |
| 7 | 7 | 7 | 52 | Male | M6 | 11000 | 2F0F4D6789 | 2022-10-08 | 9999-12-31 |
| 8 | 8 | 8 | 73 | Male | M6 | 5000 | 5884E7690D | 2022-10-08 | 9999-12-31 |
| 9 | 9 | 9 | 56 | Male | S7 | 40000 | 3B0E6DC309 | 2022-10-08 | 9999-12-31 |
| 10 | 10 | 10 | 49 | Male | S7 | 115846 | E1F6F68C49 | 2022-10-08 | 9999-12-31 |

200 10 Rows: 1 10 row(s) fetched - 231ms, on 2022-10-10 at 02:07:5

IST en Writable Smart Insert 534 : 64 [62] Sel: 62 | 1