

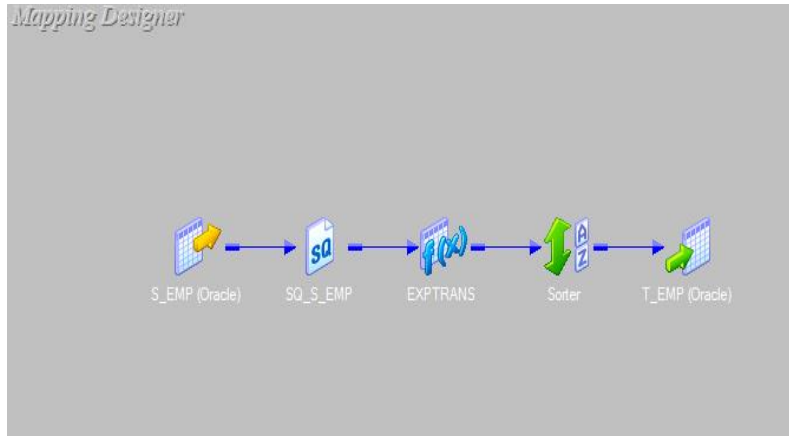
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Sorter Transformation

Designer Window

Design Mapping



Create Transformation

Edit Transformations

Transformation Ports Properties Metadata Extensions

Select transformation: **Sorter**

Transformation type: **Sorter**

	Port Name	Datatype	Prec	Scale	I	O	Key	Direction
1	EMPLOYEE_ID	decimal	6	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Ascending
2	E_NAME	nstring	45	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Ascending
3	SALARY	decimal	8	2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Ascending
4	DEPARTMENT_ID	decimal	4	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Ascending

Workflow Manager

Design Workflow



Configure connection

Edit Tasks

General Properties Config Object Mapping Components Metadata Extensions

Select task: **s_Sorter**

Task type: **Session**

Sources

Instance	Readers
SQ_S_EMP	Relational Reader

Connections

Type	Value	Connections
SQ_S_EMP - DB Connection	Oracle_Src	DB Connection

Properties

Attribute	Value
S_EMP - Source	
Owner Name	
Source Table Name	
SQ_S_EMP - Source Qualifier	
User Defined Join	

OK Cancel Apply Help

Workflow Monitor

Run Properties

ETL QA wf_Sorter s_Sorter

20-02-2024 19:27:31 20-02-2024 19:27:38 Succeeded

20-02-2024 19:27:31 20-02-2024 19:27:33 Succeeded

Gantt Chart Task View

s_Sorter [20-02-2024 19:27:31]

Task Details

Source/Target Statistics

Transformation Name	Node	Applied Rows	Affected Rows	Rejected Rows	Throughput (Rows/Sec)	Throughput (Bytes/Sec)	Bytes
SQL_S_EMP	node01	109	109	0	109	7630	7630
T_EMP	node01	109	109	0	109	7630	7630

Session Logs

SESSION LOAD SUMMARY

INFO 20-02-2024 19:27:33 node01 DIRECTOR TM_6252 Source Load Summary:

INFO 20-02-2024 19:27:33 node01 DIRECTOR CMN_1740 Table: [SQ_S_EMP] (Instance Name: [SQ_S_EMP])

Output Rows [109], Affected Rows [109], Applied Rows [109], Rejected Rows [0]

INFO 20-02-2024 19:27:33 node01 DIRECTOR TM_6253 Target Load Summary:

INFO 20-02-2024 19:27:33 node01 DIRECTOR CMN_1740 Table: [T_EMP] (Instance Name: [T_EMP])

Output Rows [109], Affected Rows [109], Applied Rows [109], Rejected Rows [0]

INFO 20-02-2024 19:27:33 node01 DIRECTOR TM_6023 *****

INFO 20-02-2024 19:27:33 node01 DIRECTOR TM_6020 Session [s_Sorter] completed at [Tue Feb 20 19:27:33 2024]

Source Vs Target

Source

Worksheet Query Builder

select count(*) from s_emp;

Query Result x

SQL All Rows Fetched: 1 in 0.006 seconds

COUNT(*)
1 109

Target

Welcome Page x HR x CORE x

Worksheet Query Builder

select count(*) from t_emp;

Query Result x

SQL All Rows Fetched: 1 in 0.031 seconds

COUNT(*)
1 109

Data is Sorted

Worksheet Query Builder

select * from t_emp;

Query Result x

SQL Fetched 50 rows in 0.015 seconds

EMPLOYEE_ID	E_NAME	S
1	100 StevenKing	
2	101 NeenaKochhar	
3	102 LexDe Haan	
4	103 AlexanderHunold	
5	104 BruceErnst	
6	105 DavidAustin	
7	106 ValliPataballa	
8	107 DianaLorentz	
9	108 NancyGreenberg	
10	109 DanielFaviet	

Design and Development

- Import source and target details to the Designer
- Design Mapping from source to target with necessary transformation
- Expression transformation used to transform data in to the necessary format
- Sorter transformation is used to input the data of a column in ascending or Descending order.
- Select the keys of a column to sort in ascending or descending.

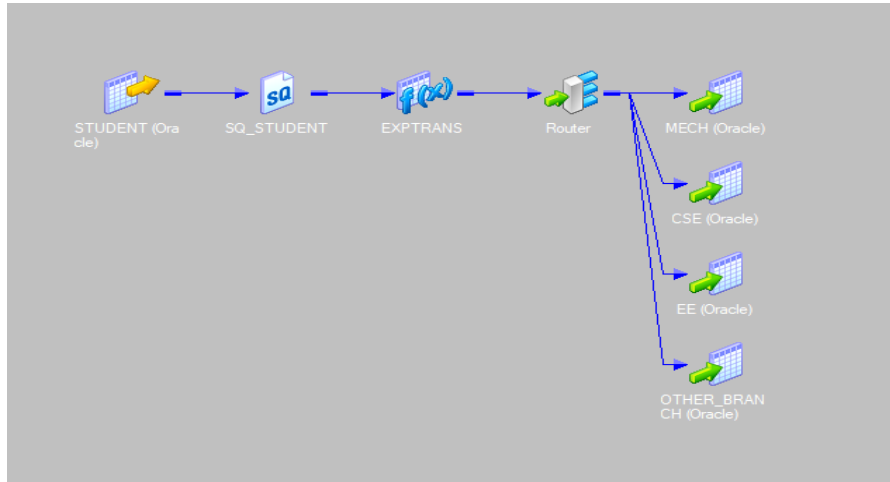
Data Validation

- Check Run properties and session logs for the detailed report
- Validate source and target with necessary SQL Queries
- Check Whether the data is sorted in the Target Tables

Router Transformation

Designer Window

Design Mapping



Create Transformation

Edit Transformations

Transformation | Ports | Properties | Groups | Metadata Extensions

Select transformation: Router

Transformation type: Router

Group Name	Group Filter Condition
MECH	BRANCH = 'Mech'
CSE	BRANCH = 'CSE'
EE	BRANCH = 'EE'
DEFAULT1	

Description:

OK Cancel Apply Help

Workflow Manager

Design Workflow



Configure connection

Edit Tasks

General | Properties | Config Object | Mapping | Components | Metadata Extensions

Select task: s_Router

Task type: Session

Start Page
Connections
Memory Properties
Files, Directories and Com
Sources
SQ_STUDENT
Targets
MECH
CSE
EE
OTHER_BRANCH
Transformations
Router
EXPTRANS

Writers

Instance	Writers
MECH	Relational Writer
CSE	Relational Writer
EE	Relational Writer
OTHER_BRANCH	Relational Writer

Connections

Type	Value	Connections
MECH - DB Connection	Oracle_Tgt	DB Connection
CSE - DB Connection	Oracle_Tgt	DB Connection
EE - DB Connection	Oracle_Tgt	DB Connection

Properties

Attribute	Value
MECH - Relational Writer	
Target load type	Normal
Insert	<input checked="" type="checkbox"/>
Update as Update	<input checked="" type="checkbox"/>
Update as Insert	<input type="checkbox"/>

MECH - Relational Writer

OK Cancel Apply Help

Workflow Monitor

Run Properties

Repositories	Workflow Run	Start Time	Completion Time	Status
rep	wf_Router	21-02-2024 11:34:08	21-02-2024 11:34:12	Succeeded
is	s_Router	21-02-2024 11:34:09	21-02-2024 11:34:10	Succeeded
	wf_Router	21-02-2024 11:33:16	21-02-2024 11:33:19	Succeeded
	s_Router	21-02-2024 11:33:16	21-02-2024 11:33:18	Succeeded

Properties

s_Router [21-02-2024 11:34:09]					
Task Details					
Source/Target Statistics					
Transformation Name	Node	Applied Rows	Affected Rows	Rejected Rows	Throughp
CSE	node01	10	10	0	10
EE	node01	9	9	0	9
MECH	node01	8	8	0	8
OTHER_BRANCH	node01	9	9	0	9
SQ_STUDENT	node01	36	36	0	36

Session Logs

SESSION LOAD SUMMARY					
INFO	21-02-2024 11:34:10	node01	DIRECTOR	TM_6252	Source Load Summary.
INFO	21-02-2024 11:34:10	node01	DIRECTOR	CMN_1740	Table: [SQ_STUDENT] (Instance Name: [SQ_STUDENT]) Output Rows [36], Affected Rows [36], Applied Rows [36], Rejected Rows [0]
INFO	21-02-2024 11:34:10	node01	DIRECTOR	TM_6253	Target Load Summary.
INFO	21-02-2024 11:34:10	node01	DIRECTOR	CMN_1740	Table: [MECH] (Instance Name: [MECH]) Output Rows [8], Affected Rows [8], Applied Rows [8], Rejected Rows [0]
INFO	21-02-2024 11:34:10	node01	DIRECTOR	CMN_1740	Table: [CSE] (Instance Name: [CSE]) Output Rows [10], Affected Rows [10], Applied Rows [10], Rejected Rows [0]
INFO	21-02-2024 11:34:10	node01	DIRECTOR	CMN_1740	Table: [EE] (Instance Name: [EE]) Output Rows [9], Affected Rows [9], Applied Rows [9], Rejected Rows [0]
INFO	21-02-2024 11:34:10	node01	DIRECTOR	CMN_1740	Table: [OTHER_BRANCH] (Instance Name: [OTHER_BRANCH]) Output Rows [9], Affected Rows [9], Applied Rows [9], Rejected Rows [0]
INFO	21-02-2024 11:34:10	node01	DIRECTOR	TM_6023	
INFO	21-02-2024 11:34:10	node01	DIRECTOR	TM_6020	Session [s_Router] completed at [Wed Feb 21 11:34:10 2024].

Source Vs Target

Source

Welcome Page		
HR	CORE	ADMIN
Worksheet Query Builder		
select branch, count(*) total from student group by branch;		
Query Result x		
SQL All Rows Fetched: 5 in 0.006 seconds		
BRANCH	TOTAL	
1 Mech	8	
2 CSE	10	
3 EE	9	
4 EC	8	
5 IT	1	

Target

Welcome Page		
HR	CORE	ADMIN
Worksheet Query Builder		
select count(*) from mech union all select count(*) from CSE union all select count(*) from EE union all select count(*) from other_branch		
Query Result x		
SQL All Rows Fetched: 4 in 0.006 seconds		
COUNT(*)		
1	8	
2	10	
3	9	
4	9	

Design and Development

- Import source and target details to the Designer
- Design Mapping from source to target with necessary transformation
- Router Transformation is used to Route the data according to the groups formed based on the condition specified

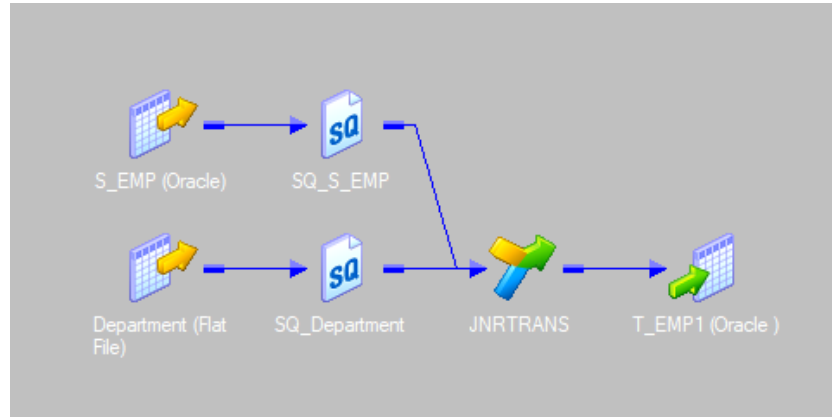
Data Validation

- Check Run properties and session logs for the detailed report
- Validate source and target with necessary SQL Queries
- Check all the target tables for data quality, completeness and correctness.

Joiner Transformation

Designer Window

Design Mapping



Create Transformation

Edit Transformations

Transformation | Ports | Properties | Condition | Metadata Extensions

Select transformation: JNRTRANS

Transformation type: Joiner

Transformation Attribute	Value
Cache Directory	SPMCacheDir
Join Condition	DEPARTMENT_ID1 = DEPARTMENT_ID
Join Type	Normal Join
Null ordering in master	Null Is Highest Value
Null ordering in detail	Null Is Highest Value
Tracing Level	Normal
Joiner Data Cache Size	Auto
Joiner Index Cache Size	Auto
Sorted Input	False
Master Sort Order	Auto
Transformation Scope	All Input

Cache Directory
Directory for caching master records

OK Cancel Apply Help

Workflow Manager

Design Workflow



Configure connection

Edit Tasks

General | Properties | Config Object | Mapping | Components | Metadata Extensions

Select task: s_m_Joiner

Task type: Session

Readers

Instance	Readers
SQ_S_EMP	Relational Reader
SQ_Department	File Reader

Connections

Type	Value	Connections
SQ_S_EMP - DB Connection	Relational	Oracle_Src
Department - Connection	None	Connection

Properties

Attribute	Value
S_EMP - Source	
Owner Name	
Source Table Name	
SQ_S_EMP - Source Qualifier	
User Defined Join	

S_EMP - Source

OK Cancel Apply Help

Workflow Monitor

Run Properties

The screenshot shows the 'Run Properties' window for the task 's_m_Joiner' [21-02-2024 12:04:10]. The 'Task Details' tab is selected, showing 'Source/Target Statistics'.

Transformation Name	Node	Applied Rows	Affected Rows	Rejected Rows	Throughput (Rows/Sec)
SQL SQ_Department	node01	27	27	0	27
SQL SQ_S_EMP	node01	109	109	0	109
T_EMP1	node01	108	108	0	108

Session Logs

SESSION LOAD SUMMARY

```

=====
INFO  21-02-2024 12:04:13  node01  DIRECTOR  TM_6252  Source Load Summary.
INFO  21-02-2024 12:04:13  node01  DIRECTOR  CMN_1740  Table: [SQ_S_EMP] (Instance Name: [SQ_S_EMP])
                                           Output Rows [109], Affected Rows [109], Applied Rows [109], Rejected Rows [0]
INFO  21-02-2024 12:04:13  node01  DIRECTOR  CMN_1740  Table: [SQ_Department] (Instance Name: [SQ_Department])
                                           Output Rows [27], Affected Rows [27], Applied Rows [27], Rejected Rows [0]
INFO  21-02-2024 12:04:13  node01  DIRECTOR  TM_6253  Target Load Summary.
INFO  21-02-2024 12:04:13  node01  DIRECTOR  CMN_1740  Table: [T_EMP1] (Instance Name: [T_EMP1])
                                           Output Rows [108], Affected Rows [108], Applied Rows [108], Rejected Rows [0]
INFO  21-02-2024 12:04:13  node01  DIRECTOR  TM_6023
                                           =====
INFO  21-02-2024 12:04:13  node01  DIRECTOR  TM_6020  Session [s_m_Joiner] completed at [Wed Feb 21 12:04:13 2024]
  
```

Source Vs Target

Source

Department(Flat File)

	DEPARTMI	DEPARTMENT_NAME
1		
2	10	Administration
3	20	Marketing
4	30	Purchasing
5	40	Human Resources
6	50	Shipping
7	60	IT
8	70	Public Relations
9	80	Sales
10	90	Executive
11	100	Finance
12	110	Accounting
13	120	Treasury
14	130	Corporate Tax
15	140	Capital And Credit

Relational Table

The screenshot shows the Query Builder interface with the query 'select * from s_emp'. The result shows 50 rows fetched in 0.017 seconds.

EMPLOYEE_ID	E_NAME	SALARY	DEPARTMENT_ID
1	198 DonaldOConnell	2600	50
2	199 DouglasGrant	2600	50
3	200 JenniferWhalen	4400	10
4	201 MichaelHartstein	13000	20
5	202 PatFay	6000	20
6	203 SusanMavris	6500	40

Target

The screenshot shows the Query Builder interface with the query 'select count(*) from t_emp1'. The result shows 1 row fetched in 0.005 seconds.

COUNT(*)	
1	108

Minus Query

The screenshot shows the Query Builder interface with the query 'select employee_id,e_name,department_id from hr.s_emp minus select employee_id,e_name,department_id from core.t_emp1'. The result shows 1 row fetched in 0.009 seconds.

EMPLOYEE_ID	E_NAME	DEPARTMENT_ID
1	178 KimberelyGrant	(null)

Design and Development

- Import source and target details to the Designer
- Design Mapping from source to target with necessary transformation
- Joiner Transformation is performed when data extracted from two different sources.
- Joining condition can be Normal join, Master outer/ Detail outer or Full outer join (inner, left, right, Full outer joins)
- Master Table – Less Records, Detail Table – More Records

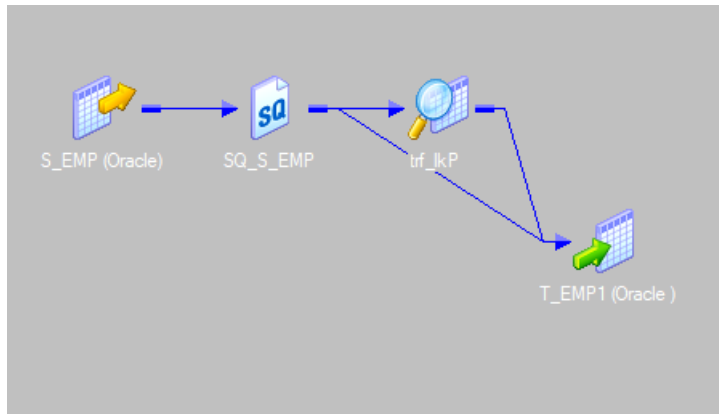
Data Validation

- Check Run properties and session logs for the detailed report
- Validate source and target with necessary SQL Queries
- Check all the target tables for data quality, completeness and correctness.
- Use Minus queries to check for truncation of data

Look up Transformation

Designer Window

Design Mapping



Create Transformation

Edit Transformations

Transformation | Ports | Properties | Condition | Metadata Extensions

Select transformation: trf_lkP

Transformation type: Lookup Procedure

Lookup Table Column	Operator	Transformation Port
DEPARTMENT_ID	=	DEPARTMENT_ID_src

OK Cancel Apply Help

Workflow Manager

Design Workflow



Configure connection

Edit Tasks

General | Properties | Config Object | Mapping | Components | Metadata Extensions

Select task: s_M_lookup

Task type: Session

Start Page
Connections
Memory Properties
Files, Directories and Com
Sources
Targets
Transformations
trf_lkP

Readers

Instance	Readers
SQL_S_EMP	Relational Reader

Connections

Type	Value	Connections
Relational	Oracle_Src	DB Connection

Properties

Attribute	Value
Owner Name	
Source Table Name	
Source Table Name	
User Defined Join	

S_EMP - Source

OK Cancel Apply Help

Workflow Monitor

Run Properties

Repositories: rep, is, Connect

Workflow Run

Task Name	Start Time	Completion Time	Status
wf_M_lookup	21-02-2024 13:52:33	21-02-2024 13:52:39	Succeeded
wf_M_lookup	21-02-2024 13:52:33	21-02-2024 13:52:35	Succeeded
s_M_lookup	21-02-2024 13:45:03	21-02-2024 13:45:08	Succeeded
wf_M_lookup	21-02-2024 13:45:03	21-02-2024 13:45:06	Succeeded

Task View

s_M_lookup [21-02-2024 13:52:33]

Task Details

Source/Target Statistics

Transformation Name	Node	Applied Rows	Affected Rows	Rejected Rows	Throughput (Rows/Sec)
SQ_S_EMP	node01	6	6	0	6
T_EMP1	node01	6	6	0	6

Session Logs

SESSION LOAD SUMMARY					
=====					
INFO	21-02-2024 13:52:35	node01	DIRECTOR	TM_6252	Source Load Summary.
INFO	21-02-2024 13:52:35	node01	DIRECTOR	CMN_1740	Table: [SQ_S_EMP] (Instance Name: [SQ_S_EMP])
Output Rows [6], Affected Rows [6], Applied Rows [6], Rejected Rows [0]					
INFO	21-02-2024 13:52:35	node01	DIRECTOR	TM_6253	Target Load Summary.
INFO	21-02-2024 13:52:35	node01	DIRECTOR	CMN_1740	Table: [T_EMP1] (Instance Name: [T_EMP1])
Output Rows [6], Affected Rows [6], Applied Rows [6], Rejected Rows [0]					
=====					
INFO	21-02-2024 13:52:35	node01	DIRECTOR	TM_6023	
=====					
INFO	21-02-2024 13:52:35	node01	DIRECTOR	TM_6020	Session [s_M_lookup] completed at [Wed Feb 21 13:52:35 2024].

Source Vs Target

Source

Source Table

Welcome Page | HR | CORE

Worksheet | Query Builder

select * from s_emp;

Query Result | Script Output | Query Result 1

SQL | All Rows Fetched: 6 in 0.001 seconds

EMPLOYEE_ID	E_NAME	SALARY	DEPARTMENT_ID
1	david	10000	10
2	david	10000	10
3	chad	10000	20
4	david	10000	30
5	david	10000	300
6	100 StevenKing	24000	90

Lookup Table

Welcome Page | HR | CORE

Worksheet | Query Builder

select * from departments;

Query Result | Script Output | Query Result 1

SQL | All Rows Fetched: 27 in 0.004 seconds

DEPARTMENT_ID	DEPARTMENT_NAME	MANAGER_ID	LOCATION_ID
1	10 Administration	200	1700
2	20 Marketing	201	1800
3	30 Purchasing	114	1700
4	40 Human Resources	203	2400
5	50 Shipping	121	1500
6	60 IT	103	1400
7	70 Public Relations	204	2700
8	80 Sales	145	2500
9	90 Executive	100	1700
10	100 Finance	108	1700
11	110 Accounting	205	1700
12	120 Treasury	(null)	1700
13	130 Corporate Tax	(null)	1700

Target

Welcome Page | HR | CORE

Worksheet | Query Builder

select * from t_emp1;

Query Result | Script Output | Query Result 1

SQL | All Rows Fetched: 6 in 0.005 seconds

EMPLOYEE_ID	E_NAME	DEPARTMENT_ID	DEPTNAME
1	david	10	Administration
2	david	10	Administration
3	chad	20	Marketing
4	david	30	Purchasing
5	david	300	(null)
6	100 StevenKing	90	Executive

Left Outer Join

Design and Development

- Import source and target details to the Designer
- Design Mapping from source to target with necessary transformation
- Lookup Transformation is performed on a lookup table, it can be connected or unconnected transformation.
- If Lookup is connected in the data flow, then it is connected. Or else it is unconnected. Connected LKP can return more than one column but unconnected Lookup returns only one column values
- Look up transformation by default provides Left outer join and it provides option with (<, >, =, =) operators while specifying joining condition

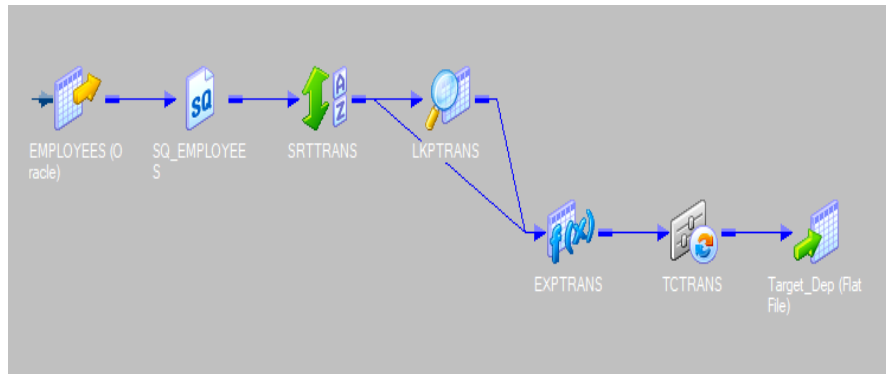
Data Validation

- Check Run properties and session logs for the detailed report
- Validate source and target with necessary SQL Queries
- Check Lookup column values for null values
- Check all the target tables for data quality, completeness and correctness.

Transaction Control Transformation

Designer Window

Design Mapping



Create Transformation

Edit Transformations

Transformation: EXPTRANS

Transformation type: Expression

Port	Port Name	Datatype	Prec	Scale	I	O	V	Expression
1	EMPLOYEE_ID	decimal	6	0				EMPLOYEE_ID
2	FIRST_NAME	nstring	20	0				FIRST_NAME
3	LAST_NAME	nstring	25	0				LAST_NAME
4	PHONE_NUMBER	nstring	20	0				PHONE_NUMBER
5	HIRE_DATE	date/time	29	9				HIRE_DATE
6	DEPARTMENT_NAME	nstring	30	0				DEPARTMENT_NAME
7	SALARY	decimal	8	2				SALARY
8	FileName	nstring	30	0				DEPARTMENT_NAME.csv
9	v_Dep_Change	string	30	0				if(v_Department_Prev = DEPA...
10	v_Department_Prev	nstring	30	0				DEPARTMENT_NAME
11	Dep_Change_Flag	string	10	0				v_Dep_Change

Default value:

Description:

OK Cancel Apply Help

Edit Transformations

Transformation: TCTrans

Transformation type: Transaction Control

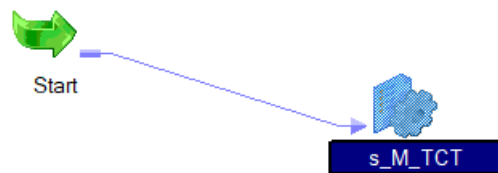
Transformation Attribute	Value
Transaction Control Condition	if (Dep_Change_Flag = 'Y', TC_COMMIT_BEFORE, TC_CONTINUE_TRANSACTION)
Tracing Level	Normal

Control Condition - TCTrans (Expression)

if (Dep_Change_Flag = 'Y', TC_COMMIT_BEFORE, TC_CONTINUE_TRANSACTION)

Workflow Manager

Design Workflow



Configure connection

Edit Tasks

Select task: s_M_TCT

Task type: Session

Properties: M_TCT_SRTTRANS

Attribute	Value
Sorter Cache Size	Auto
Case Sensitive	<input checked="" type="checkbox"/>
Tracing Level	Normal
Null Treated Low	<input type="checkbox"/>
Transformation Scope	All Input
Work Directory	\$PMTempDir

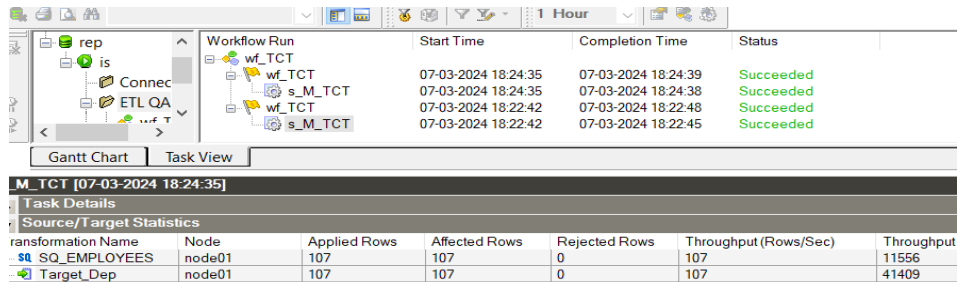
Sorter Cache Size

The maximum amount of memory that can be used by sorter transformation

OK Cancel Apply Help

Workflow Monitor

Run Properties



The screenshot shows the 'Run Properties' window for a workflow run. It includes a Gantt chart and a table of run details. The table has columns for Start Time, Completion Time, and Status. The status for all runs is 'Succeeded'.

Workflow Run	Start Time	Completion Time	Status
wf_TCT	07-03-2024 18:24:35	07-03-2024 18:24:39	Succeeded
s_M_TCT	07-03-2024 18:24:35	07-03-2024 18:24:38	Succeeded
wf_TCT	07-03-2024 18:22:42	07-03-2024 18:22:48	Succeeded
s_M_TCT	07-03-2024 18:22:42	07-03-2024 18:22:45	Succeeded

Below the table, there is a 'Task Details' section for the task 'M_TCT [07-03-2024 18:24:35]'. It shows 'Source/Target Statistics' for the transformation 'SQ_EMPLOYEES' and 'Target_Dep'.

Transformation Name	Node	Applied Rows	Affected Rows	Rejected Rows	Throughput (Rows/Sec)	Throughput
SQ_EMPLOYEES	node01	107	107	0	107	11556
Target_Dep	node01	107	107	0	107	41409

Session Logs

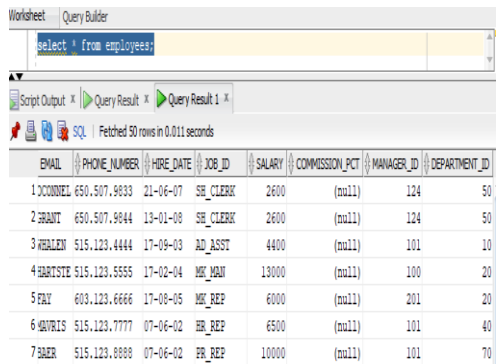
SESSION LOAD SUMMARY

INFO	07-03-2024 18:24:38	node01	DIRECTOR	TM_6252	Source Load Summary
INFO	07-03-2024 18:24:38	node01	DIRECTOR	CMN_1740	Table: [SQ_EMPLOYEES] (Instance Name: [SQ_EMPLOYEES]) Output Rows [107], Affected Rows [107], Rejected Rows [0]
INFO	07-03-2024 18:24:38	node01	DIRECTOR	TM_6253	Target Load Summary
INFO	07-03-2024 18:24:38	node01	DIRECTOR	CMN_1740	Table: [Target_Dep] (Instance Name: [Target_Dep]) Output Rows [107], Affected Rows [107], Rejected Rows [0]
INFO	07-03-2024 18:24:38	node01	DIRECTOR	TM_6023	
INFO	07-03-2024 18:24:38	node01	DIRECTOR	TM_6020	Session [s_M_TCT] completed at [Thu Mar 07 18:24:38 2024]

Source Vs Target

Source

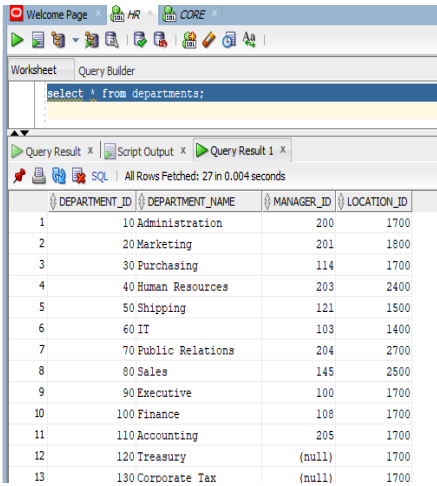
Source Table



The screenshot shows a 'Query Builder' window with a SQL query: 'select * from employees;'. Below the query, there is a table of results with columns: EMAIL, PHONE_NUMBER, HIRE_DATE, JOB_ID, SALARY, COMMISSION_PCT, MANAGER_ID, and DEPARTMENT_ID.

EMAIL	PHONE_NUMBER	HIRE_DATE	JOB_ID	SALARY	COMMISSION_PCT	MANAGER_ID	DEPARTMENT_ID
1 JOUNEEL	650.507.9893	21-06-07	SH_CLERK	2600	(null)	124	50
2 BRANT	650.507.9844	13-01-08	SH_CLERK	2600	(null)	124	50
3 REALEN	515.123.4444	17-09-03	AD_ASST	4400	(null)	101	10
4 BARTISTE	515.123.5555	17-02-04	MR_MAN	13000	(null)	100	20
5 FAY	603.123.6666	17-08-05	MR_REP	6000	(null)	201	20
6 VANVRS	515.123.7777	07-06-02	HR_REP	6500	(null)	101	40
7 BHER	515.123.8888	07-06-02	PR_REP	10000	(null)	101	70

Lookup Table



The screenshot shows a 'Query Builder' window with a SQL query: 'select * from departments;'. Below the query, there is a table of results with columns: DEPARTMENT_ID, DEPARTMENT_NAME, MANAGER_ID, and LOCATION_ID.

DEPARTMENT_ID	DEPARTMENT_NAME	MANAGER_ID	LOCATION_ID
1	10 Administration	200	1700
2	20 Marketing	201	1800
3	30 Purchasing	114	1700
4	40 Human Resources	203	2400
5	50 Shipping	121	1500
6	60 IT	103	1400
7	70 Public Relations	204	2700
8	80 Sales	145	2500
9	90 Executive	100	1700
10	100 Finance	108	1700
11	110 Accounting	205	1700
12	120 Treasury	(null)	1700
13	130 Corporate Tax	(null)	1700

Target

	07-03-2024 06:24 PM	Microsoft Excel C...	1 KB
Accounting	07-03-2024 06:24 PM	Microsoft Excel C...	1 KB
Administration	07-03-2024 06:24 PM	Microsoft Excel C...	1 KB
Executive	07-03-2024 06:24 PM	Microsoft Excel C...	1 KB
Finance	07-03-2024 06:24 PM	Microsoft Excel C...	1 KB
Human Resources	07-03-2024 06:24 PM	Microsoft Excel C...	1 KB
IT	07-03-2024 06:24 PM	Microsoft Excel C...	1 KB
Marketing	07-03-2024 06:24 PM	Microsoft Excel C...	1 KB
Public Relations	07-03-2024 06:24 PM	Microsoft Excel C...	1 KB
Purchasing	07-03-2024 06:24 PM	Microsoft Excel C...	1 KB
Sales	07-03-2024 06:24 PM	Microsoft Excel C...	3 KB
Shipping	07-03-2024 06:24 PM	Microsoft Excel C...	4 KB
tctrans11.bad	07-03-2024 06:24 PM	BAD File	0 KB
tctrans11	07-03-2024 06:24 PM	OUT File	1 KB

Design and Development

- Import source and target details to the Designer
- Design Mapping from source to target with necessary transformation
- Lookup Transformation is performed on a lookup table, to get the department names.
- TCT (Transaction control transformation) is used to get the File names extracted based upon the department name. Separate target files need not be mapped. Based on the file name feature in the flat file. Files will be saved dynamically. TCT Commands helps to achieve this requirement.
- Transaction control Commands: (TC_Continue_Transaction, TC_Commit_Before, TC_Commit_After, TC_Rollback_Before, TC_Rollback_After)

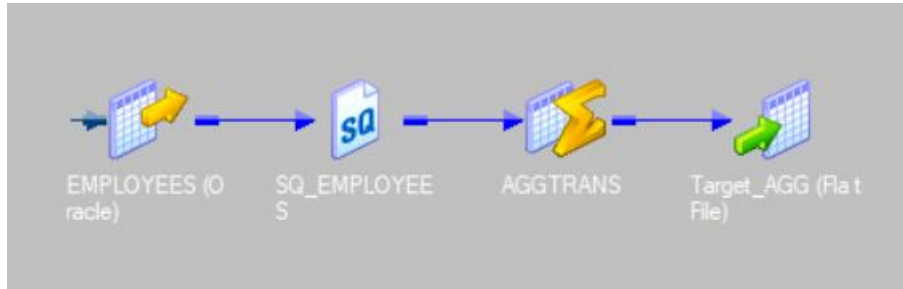
Data Validation

- Check Run properties and session logs for the detailed report
- Validate source and target with necessary SQL Queries
- Check all the target files for data quality, completeness and correctness.

Aggregator Transformation

Designer Window

Design Mapping



Create Transformation

Edit Transformations

Transformation: AGGTRANS
Transformation type: Aggregator

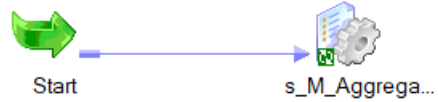
	Port Name	Datatype	Prec	Scale	I	O	V	Expression	GroupBy
1	DEPARTMENT_ID	decimal	4	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	DEPARTMENT_ID	<input checked="" type="checkbox"/>
2	SALARY	decimal	8	2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
3	Max_Salary	decimal	10	0	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	MAX(SALARY)	<input type="checkbox"/>
4	Min_Salary	decimal	10	0	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	MIN(SALARY)	<input type="checkbox"/>
5	Total_employees	string	10	0	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	count(DEPARTMENT_ID)	<input type="checkbox"/>

Default value:

Description:

Workflow Manager

Design Workflow



Configure connection

Edit Tasks

Select task: s_M_Aggregator
Task type: Session (Reusable)

Start Page

Configure Mapping

To configure connections, select the **Connections** node in the tree in the Transformations view.

To edit the reader/writer properties of a source/target, select the **Sources** or the **Targets** node in the tree.

To edit the partitions, go to the **Partitions** tab and select a transformation from the tree.

OK Cancel Apply Help

Workflow Monitor

Run Properties

The screenshot shows the Workflow Monitor interface. The top pane displays a workflow diagram with tasks: wf_M_Aggregator, wf_M_Aggregator, and s_M_Aggregator. The bottom pane shows the 'Task Details' for 's_M_Aggregator [08-03-2024 12:11:40]'. The 'Source/Target Statistics' table is as follows:

Transformation Name	Node	Applied Rows	Affected Rows	Rejected Rows	Throughput (Rows/Sec)
sq_EMPLOYEES	node01	107	107	0	107
Target_AGG	node01	11	11	0	11

Session Logs

SESSION LOAD SUMMARY					
=====					
INFO	08-03-2024 12:11:45	node01	DIRECTOR	TM_6252	Source Load Summary.
INFO	08-03-2024 12:11:45	node01	DIRECTOR	CMN_1740	Table: [SQ_EMPLOYEES] (Instance Name: [SQ_EMPLOYEES])
Output Rows [107], Affected Rows [107], Applied Rows [107], Rejected Rows [0]					
INFO	08-03-2024 12:11:45	node01	DIRECTOR	TM_6253	Target Load Summary
INFO	08-03-2024 12:11:45	node01	DIRECTOR	CMN_1740	Table: [Target_Agg] (Instance Name: [Target_AGG])
Output Rows [11], Affected Rows [11], Applied Rows [11], Rejected Rows [0]					
INFO	08-03-2024 12:11:45	node01	DIRECTOR	TM_6023	
=====					

Source Vs Target

Source

The screenshot shows the SQL Query Builder interface. The query is:

```
select
  department_id, count(*) as Total,
  max(salary),
  Min(salary)
from employees
group by department_id
```

The 'Query Result' pane shows the following data:

DEPARTMENT_ID	TOTAL	MAX(SALARY)	MIN(SALARY)
1	50	45	8200
2	10	2	7000
3	20	2	13000
4	40	1	6500
5	70	1	10000
6	110	2	12008
7	90	3	24000
8	60	5	9000
9	100	6	12008
10	30	6	11000
11	80	34	14000

Target

#DEPARTM	Max_Salar	Min_Salar	Total_employees
10	7000	4400	2
20	13000	6000	2
30	11000	2500	6
40	6500	6500	1
50	8200	2100	45
60	9000	4200	5
80	14000	6100	34
100	12008	6900	6
70	10000	10000	1
90	24000	17000	3
110	12008	8300	2

Design and Development

- Import source and target details to the Designer
- Design Mapping from source to target with necessary transformation
- Aggregator Transformation is used to Group data and perform aggregator functions on the data

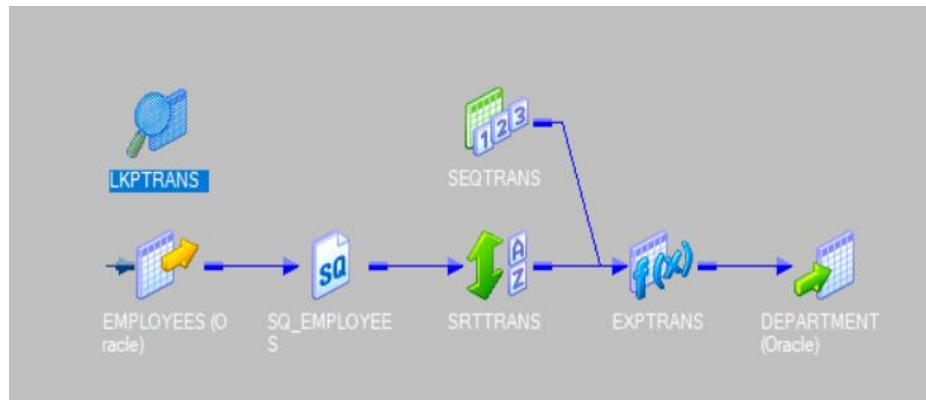
Data Validation

- Check Run properties and session logs for the detailed report
- Validate source and target with necessary SQL Queries
- Check all the target files for data quality, completeness and correctness.

Sequence Generator Transformation

Designer Window

Design Mapping



Create Transformation

Edit Transformations

Transformation | Ports | Properties | Metadata Extensions

Select transformation: **SEQTRANS**

Transformation type: Sequence

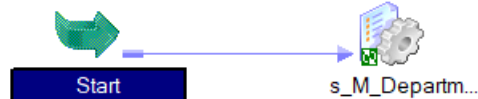
Transformation Attribute	Value
Start Value	1
Increment By	1
End Value	9223372036854775807
Current Value	1
Cycle	<input type="checkbox"/>
Number of Cached Values	0
Reset	<input checked="" type="checkbox"/>
Tracing Level	Normal

Start Value
First value generated for the sequence

OK Cancel Apply Help

Workflow Manager

Design Workflow



Configure connection

Edit Tasks

General | Properties | Config Object | Mapping | Components | Metadata Extensions

Select task: **s_M_Department_seq_Generator**

Task type: Session (Reusable)

Start Page

Configure Mapping

To configure connections, select the **Connections** node in the tree in the Transformations view.

To edit the reader/writer properties of a source/target, select the **Sources** or the **Targets** node in the tree.

To edit the partitions, go to the **Partitions** tab and select a transformation from the tree.

Transformations tree:

- Start Page
- Connections
- Memory Properties
- Files, Directories and Com
- Sources
 - SQ_EMPLOYEES
- Targets
 - DEPARTMENT
- Transformations
 - LKPTRANS
 - SEQTRANS
 - EXPTRANS
 - SRTTRANS

Transformations view tabs: Transformations | Partitions

OK Cancel Apply Help

Workflow Monitor

Run Properties

Workflow Run

Start Time	Completion Time	Status
08-03-2024 12:54:21	08-03-2024 12:54:30	Succeeded
08-03-2024 12:54:22	08-03-2024 12:54:28	Succeeded

Gantt Chart Task View

s_M_Department_seq_Generator [08-03-2024 12:54:22]

Task Details

Source/Target Statistics

Transformation Name	Node	Applied Rows	Affected Rows	Rejected Rows	Throughput (Rows/Sec)	Throughput
DEPARTMENT	node01	11	11	0	3	423
SQ_EMPLOYEES	node01	107	107	0	107	856

Session Logs

SESSION LOAD SUMMARY					

INFO	08-03-2024 12:54:28	node01	DIRECTOR	TM_6252	Source Load Summary.
INFO	08-03-2024 12:54:28	node01	DIRECTOR	CMN_1740	Table: [SQ_EMPLOYEES] (Instance Name: [SQ_EMPLOYEES])
Output Rows [107], Affected Rows [107], Applied Rows [107], Rejected Rows [0]					
INFO	08-03-2024 12:54:28	node01	DIRECTOR	TM_6253	Target Load Summary.
INFO	08-03-2024 12:54:28	node01	DIRECTOR	CMN_1740	Table: [DEPARTMENT] (Instance Name: [DEPARTMENT])
Output Rows [11], Affected Rows [11], Applied Rows [11], Rejected Rows [0]					
INFO	08-03-2024 12:54:28	node01	DIRECTOR	TM_6023	

INFO	08-03-2024 12:54:28	node01	DIRECTOR	TM_6020	Session [s_M_Department_seq_Generator] completed at [Fri Mar 08 12:54:28 2024].

Source Vs Target

Source

Worksheet Query Builder

```
select distinct department_name from employees e, departments d
where e.department_id = d.department_id
```

Script Output x Query Result x Query Result 1 x

SQL | All Rows Fetched: 11 in 0.01 seconds

DEPARTMENT_N...
1 Accounting
2 Administration
3 Executive
4 Finance
5 Human Resources
6 IT
7 Marketing
8 Public Relations
9 Purchasing
10 Sales
11 Shipping

Target

Worksheet Query Builder

```
select * from department;
```

Script Output x Query Result x

SQL | All Rows Fetched: 11 in 0.004 seconds

DEPT_ID	DEPT_NAME	CREATE_DATE	UPDATE_DATE
1	1 Accounting	08-03-24	08-03-24
2	2 Administration	08-03-24	08-03-24
3	3 Executive	08-03-24	08-03-24
4	4 Finance	08-03-24	08-03-24
5	5 Human Resources	08-03-24	08-03-24
6	6 IT	08-03-24	08-03-24
7	7 Marketing	08-03-24	08-03-24
8	8 Public Relations	08-03-24	08-03-24
9	9 Purchasing	08-03-24	08-03-24
10	10 Sales	08-03-24	08-03-24
11	11 Shipping	08-03-24	08-03-24

Design and Development

- Import source and target details to the Designer
- Design Mapping from source to target with necessary transformation
- Sorter Transformation is used to get the distinct values in a column.
- Aggregator Transformation will also give unique values in a column
- Unconnected Lookup Transformation is used to get the Department_Name from Department_ID
- Sequence generator is used to generate a integer numbers to a row with incremental values

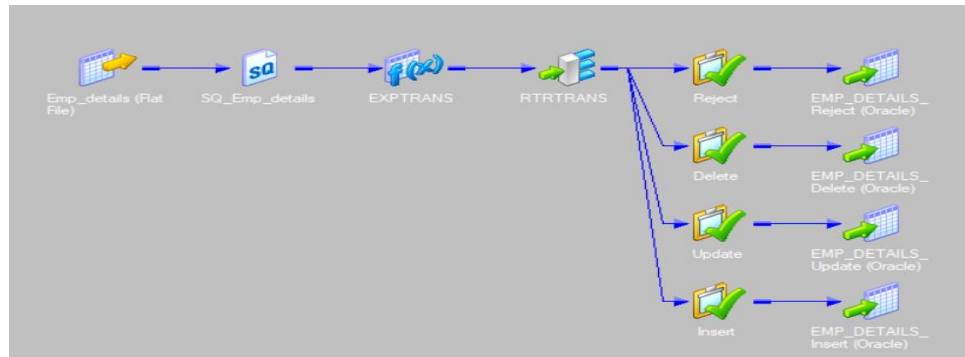
Data Validation

- Check Run properties and session logs for the detailed report
- Validate source and target with necessary SQL Queries
- Check all the target files for data quality, completeness and correctness.

Update Strategy Transformation

Designer Window

Design Mapping



Create Transformation

Edit Transformations

Transformation | Ports | Properties | Groups | Metadata Extensions

Select transformation: RTRTRANS

Transformation type: Router

Group Name	Group Filter Condition
Insert	IN(Eid,4,5,6)
Update	Eid = 2
Delete	Eid = 1
Reject	isnull(Designation)
DEFAULT1	

Edit Transformations

Transformation | Ports | Properties | Metadata Extensions

Select transformation: Delete

Transformation type: Update Strategy

Transformation Attribute	Value
Update Strategy Expression	DD_DELETE
Forward Rejected Rows	<input checked="" type="checkbox"/>
Tracing Level	Normal

Workflow Manager

Design Workflow



Configure connection

Edit Tasks

General | Properties | Config Object | Mapping | Components | Metadata Extensions

Select task: s_M_Update_Strategy

Task type: Session (Reusable)

Start Page

Configure Mapping

To configure connections, select the **Connections** node in the tree in the Transformations view.

To edit the reader/writer properties of a source/target, select the **Sources** or the **Targets** node in the tree.

To edit the partitions, go to the **Partitions** tab and select a transformation from the tree.

OK Cancel Apply Help

Workflow Monitor

Run Properties

Repositories

rep

Workflow Run

wf_M_Update_Strategy

wf_M_Update_Strate...

s_M_Update_Str...

Start Time

09-03-2024 14:09:47

Completion Time

09-03-2024 14:09:53

Status

Succeeded

09-03-2024 14:09:47

09-03-2024 14:09:50

Succeeded

Gantt Chart

Task View

s_M_Update_Strategy [09-03-2024 14:09:47]

Task Details

Source/Target Statistics

Transformation Name	Node	Applied Rows	Affected Rows	Rejected Rows	Throughput (Rows/Sec)	Throughput (Byt)
EMP_DETAILS_De...	node01	1	0	0	0	0
EMP_DETAILS_Ins...	node01	3	3	0	3	192
EMP_DETAILS_Re...	node01	0	0	1	0	0
EMP_DETAILS_Up...	node01	1	0	0	0	0
SQL_Emp_details	node01	6	6	0	6	204

Session Logs

SESSION LOG SUMMARY						

INFO	09-03-2024 14:09:49	node01	DIRECTOR	TM_6252	Source Load Summary.	
INFO	09-03-2024 14:09:49	node01	DIRECTOR	CMN_1740	Table: [SQ_Emp_details] (Instance Name: [SQ_Emp_details])	
					Output Rows [6], Affected Rows [6], Applied Rows [6], Rejected Rows [0]	
INFO	09-03-2024 14:09:49	node01	DIRECTOR	TM_6253	Target Load Summary.	
INFO	09-03-2024 14:09:49	node01	DIRECTOR	CMN_1740	Table: [EMP_DETAILS] (Instance Name: [EMP_DETAILS_Insert])	
					Output Rows [3], Affected Rows [3], Applied Rows [3], Rejected Rows [0]	
INFO	09-03-2024 14:09:49	node01	DIRECTOR	CMN_1740	Table: [EMP_DETAILS] (Instance Name: [EMP_DETAILS_Update])	
					Output Rows [1], Affected Rows [0], Applied Rows [1], Rejected Rows [0]	
INFO	09-03-2024 14:09:49	node01	DIRECTOR	CMN_1740	Table: [EMP_DETAILS] (Instance Name: [EMP_DETAILS_Delete])	
					Output Rows [1], Affected Rows [0], Applied Rows [1], Rejected Rows [0]	
INFO	09-03-2024 14:09:49	node01	DIRECTOR	CMN_1740	Table: [EMP_DETAILS] (Instance Name: [EMP_DETAILS_Reject])	
					Output Rows [0], Affected Rows [0], Applied Rows [0], Rejected Rows [1]	
INFO	09-03-2024 14:09:49	node01	DIRECTOR	TM_6023		

Source Vs Target

Source

A	B	C	D	E
Eid	Name	Salary	Designation	
1	Rithik	100	QA	
2	Aish	200	Developer	
3	Abishek	300		
4	Sonu	400	BA	
5	Sunny	500	DA	
6	Dhoni	600	Developer	

Target

Before

select * from emp_details;						
Script Output x Query Result x						
SQL All Rows Fetched: 2 in 0.002 seconds						
EMPID	NAME	SALARY	DESIGNATION	CREATE_DATE	UPDATE_DATE	
1	1 Rithik	200	QA	08-03-24	(null)	
2	2 Aish	0	Developer	08-03-24	(null)	

After

select * from emp_details;						
Script Output x Query Result x						
SQL All Rows Fetched: 4 in 0.003 seconds						
EMPID	NAME	SALARY	DESIGNATION	CREATE_DATE	UPDATE_DATE	
1	4 Sonu	400	BA	09-03-24	(null)	
2	5 Sunny	500	DA	09-03-24	(null)	
3	6 Dhoni	600	Developer	09-03-24	(null)	
4	2 Aish	200	Developer	08-03-24	09-03-24	

Design and Development

- Import source and target details to the Designer
- Design Mapping from source to target with necessary transformation
- Update Strategy is used to perform DML Operations. These commands are used (DD_Insert, DD_Update, DD_Delete, DD_Reject)
- Make use of necessary Commands as per the requirement.

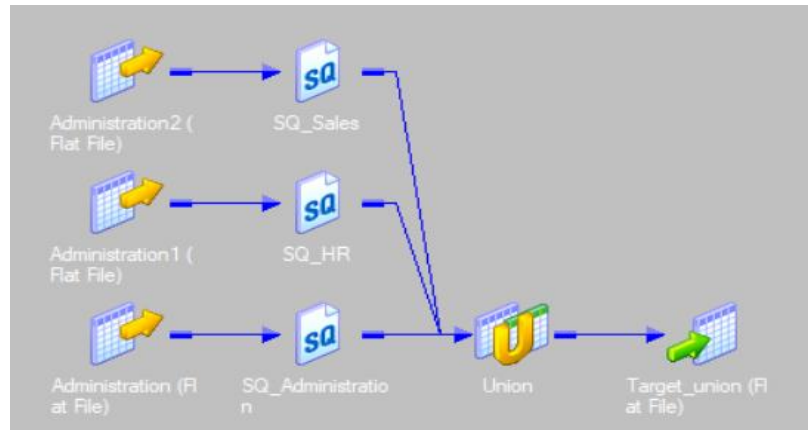
Data Validation

- Check Run properties and session logs for the detailed report
- Validate source and target with necessary SQL Queries
- Check Target for data quality, completeness and correctness.

Union Transformation

Designer Window

Design Mapping



Create Transformation

Transformation | Ports | Properties | Groups | Group Ports |

Transformation Name:

Transformation Type: Union Transform

	Input Group Name
1	Administration
2	HR
3	Sales

Workflow Manager

Design Workflow



Configure connection

Edit Tasks

General | Properties | Config Object | Mapping | Components | Metadata Extensions

Select task:

Task type: Session (Reusable)

- Start Page
- Connections
- Memory Properties
- Files, Directories and Com
- Sources
 - SQ SQ_Sales
 - SQ SQ_HR
 - SQ SQ_Administration
- Targets
 - Target_union
- Transformations
 - Union

Configure Mapping

To configure connections, select the [Connections](#) node in the tree in the Transformations view.

To edit the reader/writer properties of a source/target, select the [Sources](#) or the [Targets](#) node in the tree.

To edit the partitions, go to the [Partitions](#) tab and select a transformation from the tree.

OK Cancel Apply Help

Workflow Monitor

Run Properties

Repositories	Workflow Run	Start Time	Completion Time	Status
rep	wf_M_Union	09-03-2024 21:02:28	09-03-2024 21:02:36	Succeeded
	wf_M_Union	09-03-2024 21:02:28	09-03-2024 21:02:31	Succeeded
	s_M_Union			

Gantt Chart Task View

s_M_Union [09-03-2024 21:02:28]

Task Details

Source/Target Statistics

Transformation Name	Node	Applied Rows	Affected Rows	Rejected Rows	Throughput (Rows/Sec)
sq_SQ_Administration	node01	2	2	0	2
sq_SQ_HR	node01	1	1	0	1
sq_SQ_Sales	node01	34	34	0	34
Target_union	node01	37	37	0	37

Session Logs

SESSION LOAD SUMMARY					
=====					
INFO	09-03-2024 21:02:31	node01	DIRECTOR	TM_6252	Source Load Summary.
INFO	09-03-2024 21:02:31	node01	DIRECTOR	CMN_1740	Table: [SQ_HR] (Instance Name: [SQ_HR])
					Output Rows [1], Affected Rows [1], Applied Rows [1], Rejected Rows [0]
INFO	09-03-2024 21:02:31	node01	DIRECTOR	CMN_1740	Table: [SQ_Administration] (Instance Name: [SQ_Administration])
					Output Rows [2], Affected Rows [2], Applied Rows [2], Rejected Rows [0]
INFO	09-03-2024 21:02:31	node01	DIRECTOR	CMN_1740	Table: [SQ_Sales] (Instance Name: [SQ_Sales])
					Output Rows [34], Affected Rows [34], Applied Rows [34], Rejected Rows [0]
INFO	09-03-2024 21:02:31	node01	DIRECTOR	TM_6253	Target Load Summary.
INFO	09-03-2024 21:02:31	node01	DIRECTOR	CMN_1740	Table: [Target_Union] (Instance Name: [Target_union])
					Output Rows [37], Affected Rows [37], Applied Rows [37], Rejected Rows [0]
INFO	09-03-2024 21:02:31	node01	DIRECTOR	TM_6023	

Source Vs Target

Source

A1									
#EMPLOYEE_ID	FIRST_NAME	LAST_NAME	PHONE_NUMBER	HIRE_DATE	SALARY	DEPARTMENT_NAME			
1	200	Jennifer	Whalen	515.123.4567	09/17/2000	4400	Administration		
2	178	Kimberely	Grant	011.44.1643	05/24/2000	7000	Administration		
Administration									
1	203	Susan	Mavris	515.123.7890	06/07/2000	6500	Human Resources		
2	145	John	Russell	011.44.1342	10-01-2004	14000	Sales		
3	146	Karen	Partners	011.44.1342	01-05-2005	13500	Sales		
4	147	Alberto	Errazuriz	011.44.1342	03-10-2005	12000	Sales		
5	148	Gerald	Cambraut	011.44.1342	10/15/2000	11000	Sales		

Target

#EMPLOYEE_ID	FIRST_NAME	LAST_NAME	PHONE_NUMBER	HIRE_DATE	SALARY	DEPARTMENT_NAME
200	Jennifer	Whalen	515.123.4567	09/17/2003 00:00:00	4400	Administration
178	Kimberely	Grant	011.44.1643	05/24/2007 00:00:00	7000	Administration
203	Susan	Mavris	515.123.7890	06-07-2002 00:00:00	6500	Human Resource
145	John	Russel	011.44.1342	10-01-2004 00:00:00	14000	Sales
146	Karen	Partne	011.44.1342	01-05-2005 00:00:00	13500	Sales
147	Alberto	Errazu	011.44.1342	03-10-2005 00:00:00	12000	Sales

Design and Development

- Import source and target details to the Designer
- Design Mapping from source to target with necessary transformation
- Union Transformation is used to Merge the data from two different sources, it is necessary to have the same column fields Data types, Count and order.

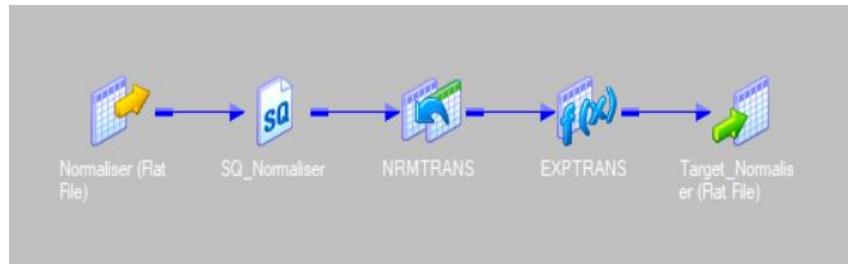
Data Validation

- Check Run properties and session logs for the detailed report
- Validate source and target
- Check all the target files for data quality, completeness and correctness.

Normaliser Transformation

Designer Window

Design Mapping



Create Transformation

Edit Transformations

Transformation: **NRMTRANS**
Transformation type: **Normalizer**

	Port	Name	Datatype	Prec	Scale	I	O	Sequence
2		Student_Name_in	string	10	0			
3		Marks_in1	decimal	10	0			
4		Marks_in2	decimal	10	0			
5		Marks_in3	decimal	10	0			
6		Marks_in4	decimal	10	0			
7		Marks_in5	decimal	10	0			
8		Id	decimal	10	0			
9		Student_Name	string	10	0			
10		Marks	decimal	10	0			
11		SK_Marks	bigint	19	0			1
12		GCID_Marks	integer	10	0			

```

iif(GCID_Marks = 1,'Kannada',
iif(GCID_Marks = 2,'Hindi',
iif(GCID_Marks = 3,'Maths',
iif(GCID_Marks = 4,'Science',
iif(GCID_Marks = 5,'English')))))
  
```

Workflow Manager

Design Workflow



Configure conn

Edit Tasks

General | Properties | Config Object | Mapping | Components | Metadata Extensions

Select task: **s_M_Normaliser**
Task type: **Session**

- Start Page
- Connections
- Memory Properties
- Files, Directories and Com
- Sources
 - SQ_Normaliser
- Targets
 - Target_Normaliser
- Transformations
 - NRMTRANS
 - EXPTRANS

Start Page

Configure Mapping

To configure connections, select the **Connections** node in the tree in the Transformations view.

To edit the reader/writer properties of a source/target, select the **Sources** or the **Targets** node in the tree.

To edit the partitions, go to the **Partitions** tab and select a transformation from the tree.

Transfer... | Partitions

Workflow Monitor

Run Properties

is

Connec

s_M_Normaliser

10-03-2024 13:22:01

10-03-2024 13:22:03

Succeeded

wf_M_Normaliser

10-03-2024 13:18:40

10-03-2024 13:18:43

Succeeded

s_M_Normaliser

10-03-2024 13:18:40

10-03-2024 13:18:42

Succeeded

Gantt Chart

Task View

s_M_Normaliser [10-03-2024 13:22:01]

Task Details

Source/Target Statistics

Transformation Name	Node	Applied Rows	Affected Rows	Rejected Rows	Throughput (Rows/Sec)
SQ_Normaliser	node01	2	2	0	2
Target_Normaliser	node01	10	10	0	10

Session Logs

SESSION LOAD SUMMARY

INFO10-03-2024 13:22:03node01DIRECTORTM_6252Source Load Summary.

INFO10-03-2024 13:22:03node01DIRECTORMN_1740Table: [SQ_Normaliser] (Instance Name: [SQ_Normaliser])
Output Rows [2], Affected Rows [2], Applied Rows [2], Rejected Rows [0]

INFO10-03-2024 13:22:03node01DIRECTORTM_6253Target Load Summary.

INFO10-03-2024 13:22:03node01DIRECTORMN_1740Table: [Target_Normaliser] (Instance Name: [Target_Normaliser])
Output Rows [10], Affected Rows [10], Applied Rows [10], Rejected Rows [0]

Source Vs Target

Source

A	B	C	D	E	F	G	H
Id	Student N	Kannada	Hindi	Maths	Science	English	
100	Charan	85	89	98	75	95	
101	Shreya	47	86	58	73	92	

Target

A	B	C	D
#Id	Student_Name	Subject	Marks
100	Charan	Kannada	85
100	Charan	Hindi	89
100	Charan	Maths	98
100	Charan	Science	75
100	Charan	English	95
101	Shreya	Kannada	47
101	Shreya	Hindi	86
101	Shreya	Maths	58
101	Shreya	Science	73
101	Shreya	English	92

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Design and Development

- Import source and target details to the Designer
- Design Mapping from source to target with necessary transformation
- Normaliser Transformation is used to UNPivot the table data. GCID (Generated Column ID) and GK (Generated Key) helps to transform the data.

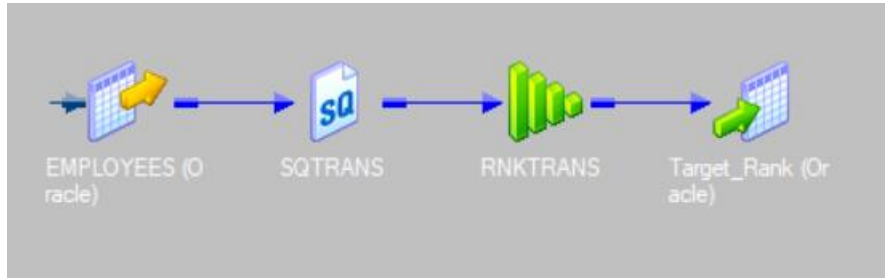
Data Validation

- Check Run properties and session logs for the detailed report
- Validate source and target
- Check target for data quality, completeness and correctness.

Rank Transformation

Designer Window

Design Mapping



Create Transformation

Edit Transformations

Transformation | Ports | Properties | Metadata Extensions

Select transformation: **RNKTRANS**

Transformation type: Rank

Transformation Attribute	Value
Cache Directory	\$PMCCacheDir
Top/Bottom	Top
Number of Ranks	1
Case Sensitive String Comparison	<input checked="" type="checkbox"/>
Tracing Level	Normal
Rank Data Cache Size	Auto
Rank Index Cache Size	Auto
Transformation Scope	All Input

Workflow Manager

Design Workflow



Configure connections

General | Properties | Config Object | Mapping | Components | Metadata Extensions

Select task: **s_M_Rank**

Task type: Session

Start Page

Configure Mapping

To configure connections, select the **Connections** node in the tree in the Transformations view.

To edit the reader/writer properties of a source/target, select the **Sources** or the **Targets** node in the tree.

To edit the partitions, go to the **Partitions** tab and select a transformation from the tree.

Transformations view tree:

- Start Page
- Connections
- Memory Properties
- Files, Directories and Com
- Sources
 - sa_SQTRANS
- Targets
 - Target_Rank
- Transformations
 - RNKTRANS

Workflow Monitor

Run Properties

Workflow Run					
	Start Time	Completion Time	Status		
wf_M_Rank	10-03-2024 16:41:12	10-03-2024 16:41:23	Succeeded		
s_M_Rank	10-03-2024 16:41:12	10-03-2024 16:41:20	Succeeded		

s_M_Rank [10-03-2024 16:41:12]					
Task Details					
Source/Target Statistics					
Transformation Name	Node	Applied Rows	Affected Rows	Rejected Rows	Throughput
SQTRANS	node01	107	107	0	107
Target_Rank	node01	11	11	0	11

Session Logs

SESSION LOAD SUMMARY					
INFO	10-03-2024 16:41:20	node01	DIRECTOR	TM_6252	Source Load Summary.
INFO	10-03-2024 16:41:20	node01	DIRECTOR	CMN_1740	Table: [SQTRANS] (Instance Name: [SQTRANS]) Output Rows [107], Affected Rows [107], Applied Rows [107], Rejected Rows [0]
INFO	10-03-2024 16:41:20	node01	DIRECTOR	TM_6253	Target Load Summary.
INFO	10-03-2024 16:41:20	node01	DIRECTOR	CMN_1740	Table: [Target_rank] (Instance Name: [Target_Rank]) Output Rows [11], Affected Rows [11], Applied Rows [11], Rejected Rows [0]
INFO	10-03-2024 16:41:20	node01	DIRECTOR	TM_6023	
INFO	10-03-2024 16:41:20	node01	DIRECTOR	TM_6020	Session [s_M_Rank] completed at [Sun Mar 10 16:41:20 2024].

Source Vs Target

Source

Worksheet						
Query Builder						
<pre> 1 with max_Dep_salary as 2 3 (select Department_id, max(salary) as salary 4 from employees 5 group by department_id) 6 7 select employee_id, first_name, last_name, hire_date, job_id, e.salary, e.Department_id 8 from employees e inner join max_Dep_salary d 9 on e.department_id = d.department_id 10 and e.salary = d.salary </pre>						
Script Output						
Query Result						
All Rows Fetched: 11 in 0.026 seconds						
EMPLOYEE_ID	FIRST_NAME	LAST_NAME	HIRE_DATE	JOB_ID	SALARY	DEPARTMENT_ID
1	201 Michael	Hartstein	17-02-04	MK_MAN	13000	20
2	203 Susan	Mavris	07-06-02	HR_REP	6500	40
3	204 Hermann	Baer	07-06-02	PR_REP	10000	70
4	205 Shelley	Higgins	07-06-02	AC_MGR	12008	110
5	100 Steven	King	17-06-03	AD_PRES	24000	90
6	103 Alexander	Hunold	03-01-06	IT_PROG	9000	60
7	108 Nancy	Greenberg	17-08-02	FI_MGR	12008	100
8	114 Den	Raphaely	07-12-02	PU_MAN	11000	30
9	121 Adam	Fripp	10-04-05	ST_MAN	8200	50
10	145 John	Russell	01-10-04	SA_MAN	14000	80
11	178 Kimberly	Grant	24-05-07	SA_REP	7000	10

Target

Query Result						
select * from target_rank;						
All Rows Fetched: 11 in 0.009 seconds						
EMPLOYEE_ID	FIRST_NAME	LAST_NAME	HIRE_DATE	JOB_ID	SALARY	DEPARTMENT_ID
1	178 Kimberly	Grant	24-05-07...	SA_REP	7000	10
2	201 Michael	Hartstein	17-02-04...	MK_MAN	13000	20
3	114 Den	Raphaely	07-12-02...	PU_MAN	11000	30
4	203 Susan	Mavris	07-06-02...	HR_REP	6500	40
5	121 Adam	Fripp	10-04-05...	ST_MAN	8200	50
6	103 Alexander	Hunold	03-01-06...	IT_PROG	9000	60
7	145 John	Russell	01-10-04...	SA_MAN	14000	80
8	108 Nancy	Greenberg	17-08-02...	FI_MGR	12008	100
9	204 Hermann	Baer	07-06-02...	PR_REP	10000	70
10	100 Steven	King	17-06-03...	AD_PRES	24000	90
11	205 Shelley	Higgins	07-06-02...	AC_MGR	12008	110

Design and Development

- Import source and target details to the Designer
- Design Mapping from source to target with necessary transformation
- Rank transformation is used to get the records based on the rank defined at the port level in Informatica Designer
- Bottom or Top options can be selected to get Ascending or Descending values

Data Validation

- Check Run properties and session logs for the detailed report
- Validate source and target
- Check target for data quality, completeness and correctness.