

# Employee Data Processing: Two-Phase Approach

This presentation outlines a two-task data processing initiative to extract, transform, and load employee data, culminating in a departmental performance summary.



# 1.Employee Detail Load (Base Layer)

### Objective

Extract and load detailed employee performance and compensation data from HR source tables into TGT\_EMPLOYEE\_DETAIL.

### Deliverables

Mapping: m\_EMPLOYEE\_DETAIL\_LOAD  
Session: s\_EMPLOYEE\_DETAIL\_LOAD  
Workflow: wf\_EMPLOYEE\_DETAIL\_LOAD  
Validation: Target row count = 72

- Source Tables & Joins

We integrate data from four key HR tables to build a comprehensive employee profile.



These tables are logically inner joined using department, job, and location relationships.

- # Source Qualifier (SQ\_EMPLOYEES)

The Source Qualifier performs initial data filtering and joining:

- Inner join EMPLOYEES, DEPARTMENTS, JOBS, LOCATIONS.
- Filter employees hired within the last 25 years (300 months).
- Exclude all departments related to 'Sales'.

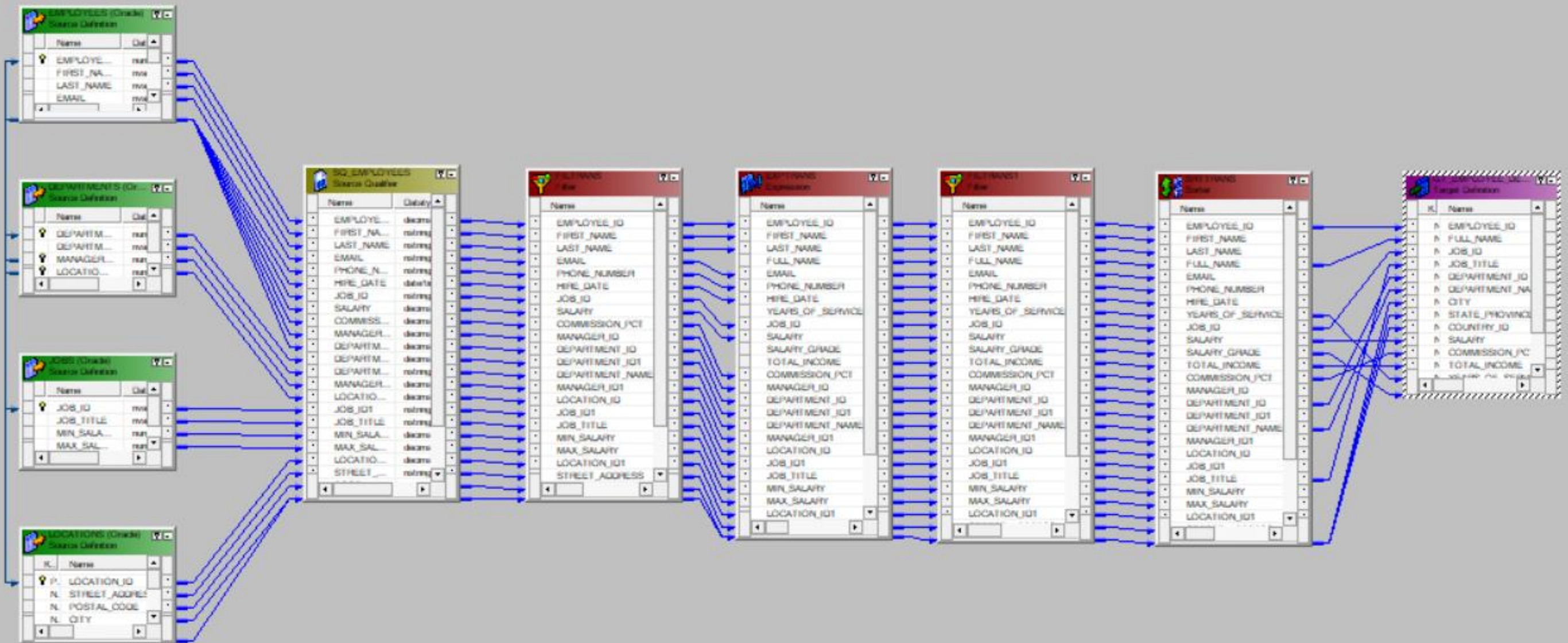
- # Expression Transformation (EXP\_CALC)

Calculated columns enhance employee data for better analysis.

- Full Name => CONCAT first name + last name
- Total Income (Salary + Commission) => salary + salary\*commission  
If salary or commission null, please put 0
- Years of Service (based on Hire Date) => ROUND(MONTHS\_BETWEEN(SYSDATE, e.hire\_date)/12, 2)
- Salary Grade (High / Medium / Low) salary > 15000 THEN 'HIGH' - salary BETWEEN 8000 AND 15000 'MEDIUM' ELSE 'LOW'

- Mapping Designer

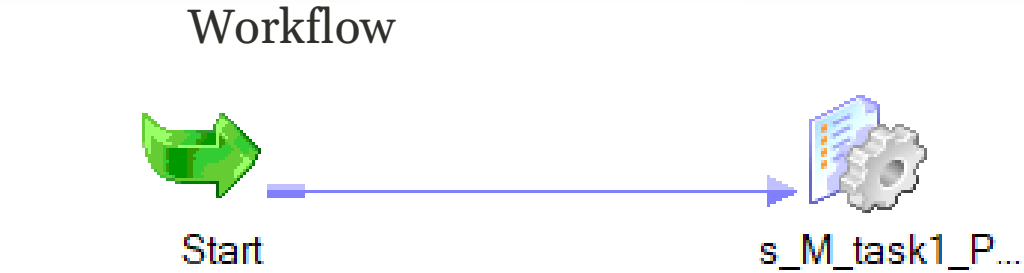
Mapping Designer



- Final Steps & Target Load

- Filter Transformation (FIL\_VALID): Exclude invalid or incomplete records (optional).
- Sorter Transformation (SRT\_ORDER): Sort by Department ID (ascending) and Salary (descending).
- Target: Load data into TGT\_EMPLOYEE\_DETAIL . Expected 72 records.

This ensures a clean, ordered, and detailed employee dataset.



Monitoring

Repository Edit View Tools Task Filters Help

Repositories

rep

is

Training

WF\_TASK1\_P...

Workflow Run

is

Training

WF\_TASK1\_Prj

WF\_TASK1\_Prj

s\_M\_task1...

Start Time

29/11/2025 3:38:20 am

29/11/2025 3:38:20 am

Completion Time

29/11/2025 3:38:28 am

29/11/2025 3:38:22 am

Status

Succeed...

Succeed...

Gantt Chart

Task View

Connected to the repository rep  
(is 29/11/2025 3:38:21 am) Task Update: WF\_TASK1\_Prj (Running) Start time: 29/11/2025 3:38:21 am  
(is 29/11/2025 3:38:21 am) Task Update: Start (Succeeded) Start time: 29/11/2025 3:38:21 am  
(is 29/11/2025 3:38:21 am) Task Update: s\_M\_task1\_Prj (Running) Start time: 29/11/2025 3:38:21 am  
(is 29/11/2025 3:38:21 am) Connected to the Integration Service is  
Integration Service is is running in normal mode.  
(is 29/11/2025 3:38:22 am) Task Update: s\_M\_task1\_Prj (Succeeded) Start time: 29/11/2025 3:38:22 am  
(is 29/11/2025 3:38:28 am) Task Update: WF\_TASK1\_Prj (Succeeded) Start time: 29/11/2025 3:38:28 am

s\_M\_task1\_Prj [29/11/2025 3:38:20 am]

Task Details

Attribute Name	Attribute Value
Version Number	1
Mapping Name	M_task1_Prj
Source Success Rows	106
Source Failed Rows	0
Target Success Rows	72
Target Failed Rows	0
Total Transformation Errors	0

Source/Target Statistics

Transformation Name	Node	Applied Rows	Affected Rows	Rejected Rows	Throughput (Rows/Sec)	Throughput (Bytes/Sec)	Bytes	Last Error Code	Last Error Message
GT_EMPLOYEE_D...	node01	72	72	0	72	31032	31032	0	No error
SQ_EMPLOYEES	node01	106	106	0	106	42506	42506	0	No error

Partition Details

Performance

Performance Counter	Counter Value
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# 2:Departmental Summary Report (Analytical Layer)

## Objective

Summarize employee performance by department using the TGT\_EMPLOYEE\_DETAIL table.

## Deliverables

Mapping: m\_DEPT\_SUMMARY\_LOADSession:

s\_DEPT\_SUMMARY\_LOADWorkflow:

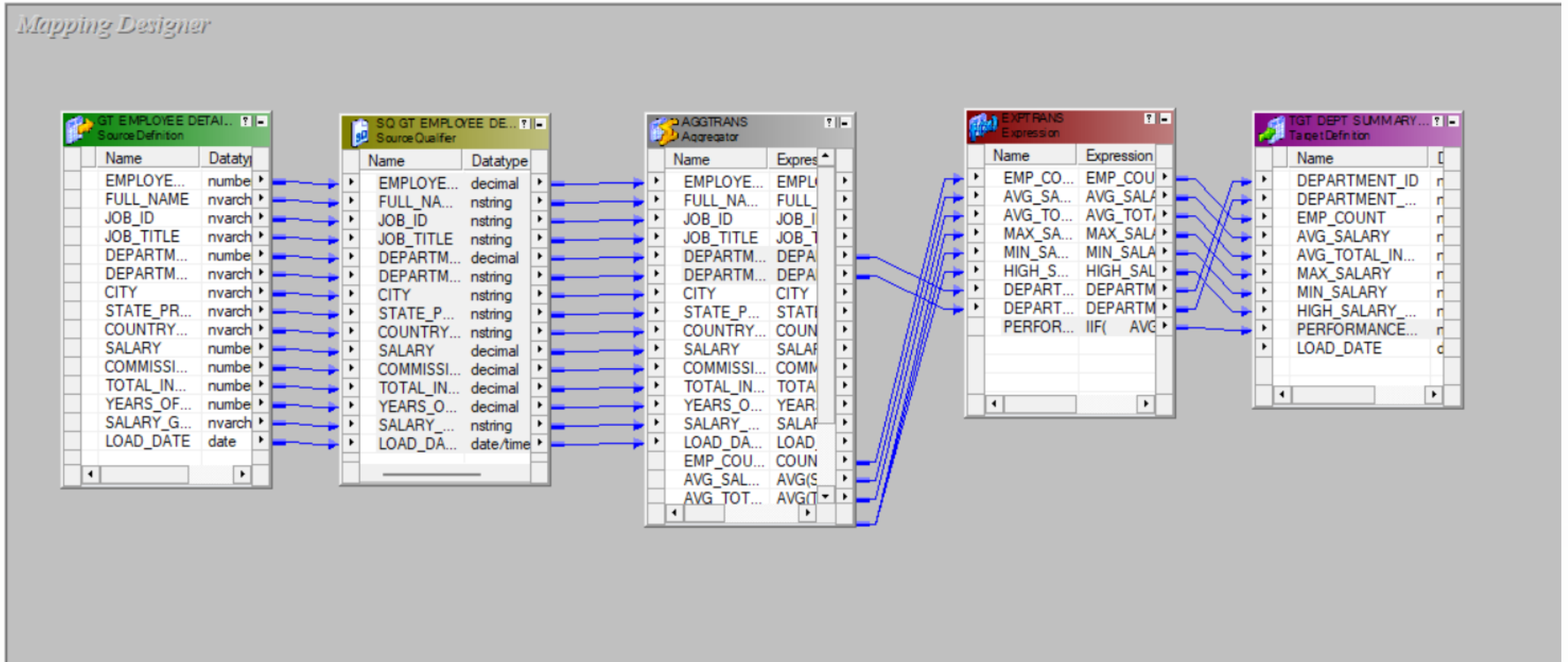
wf\_DEPT\_SUMMARY\_LOADValidation: Row count = number of departments (10-12).

## • Aggregator Transformation (AGG\_DEPT\_SUM)

Group data by Department ID and Name to create key departmental metrics.

- 1.EMP\_COUNT
- 2.AVG\_SALARY
- 3.MAX\_SALARY
- 4.AVG\_TOTAL\_INCOME
- 5.MIN\_SALARY
- 6.HIGH\_SALARY\_COUNT

- Mapping Designer



# • Expression Transformation & Target

## Department Performance Level

- "Top" if `AVG_TOTAL_INCOME > 12000`
- "Average" if `8000 <= AVG_TOTAL_INCOME <= 12000`
- "Low" otherwise

This derived field categorizes departmental performance.

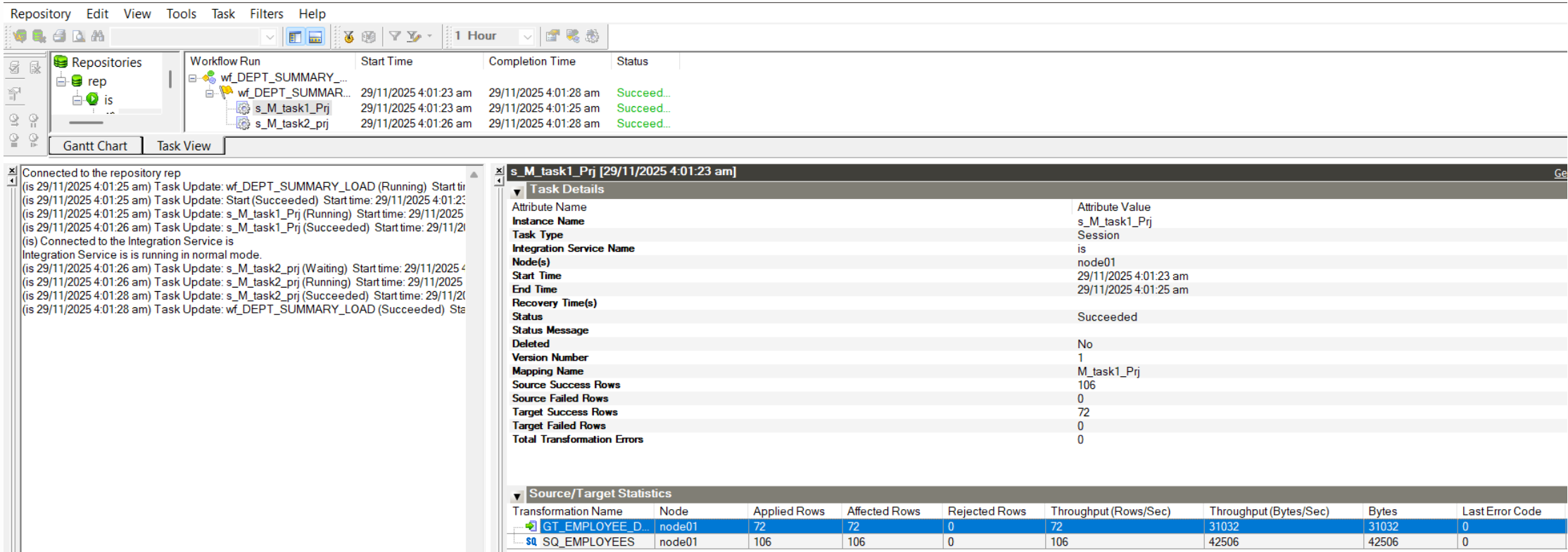
## Target: TGT\_DEPT\_SUMMARY

Load one record per department into the new target table.

### • Workflow



- Monitoring



- Output

	DEPARTMENT_ID	DEPARTMENT_NAME	EMP_COUNT	AVG_SALARY	AVG_TOTAL_INCOME	MAX_SALARY	MIN_SALARY	HIGH_SALARY_COUNT	PERFORMANCE_LEVEL	LOAD_DATE
1	10	Administration	4	4400	4400	4400	4400	0	LOW	(null)
2	20	Marketing	8	9500	9500	13000	6000	0	Average	(null)
3	30	Purchasing	24	4150	4150	11000	2500	0	LOW	(null)
4	40	Human Resources	4	6500	6500	6500	6500	0	LOW	(null)
5	50	Shipping	180	3475.56	3475.56	8200	2100	0	LOW	(null)
6	60	IT	20	5760	5760	9000	4200	0	LOW	(null)
7	100	Finance	24	8601.33	8601.33	12008	6900	0	Average	(null)
8	70	Public Relations	4	10000	10000	10000	10000	0	Average	(null)
9	90	Executive	12	19333.33	19333.33	24000	17000	12	TOP	(null)
10	110	Accounting	8	10154	10154	12008	8300	0	Average	(null)

Thank You