

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_LOADSession:
s_EMPLOYEE_DETAIL_LOADWorkflow:
wf_EMPLOYEE_DETAIL_LOADValidation: 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'.

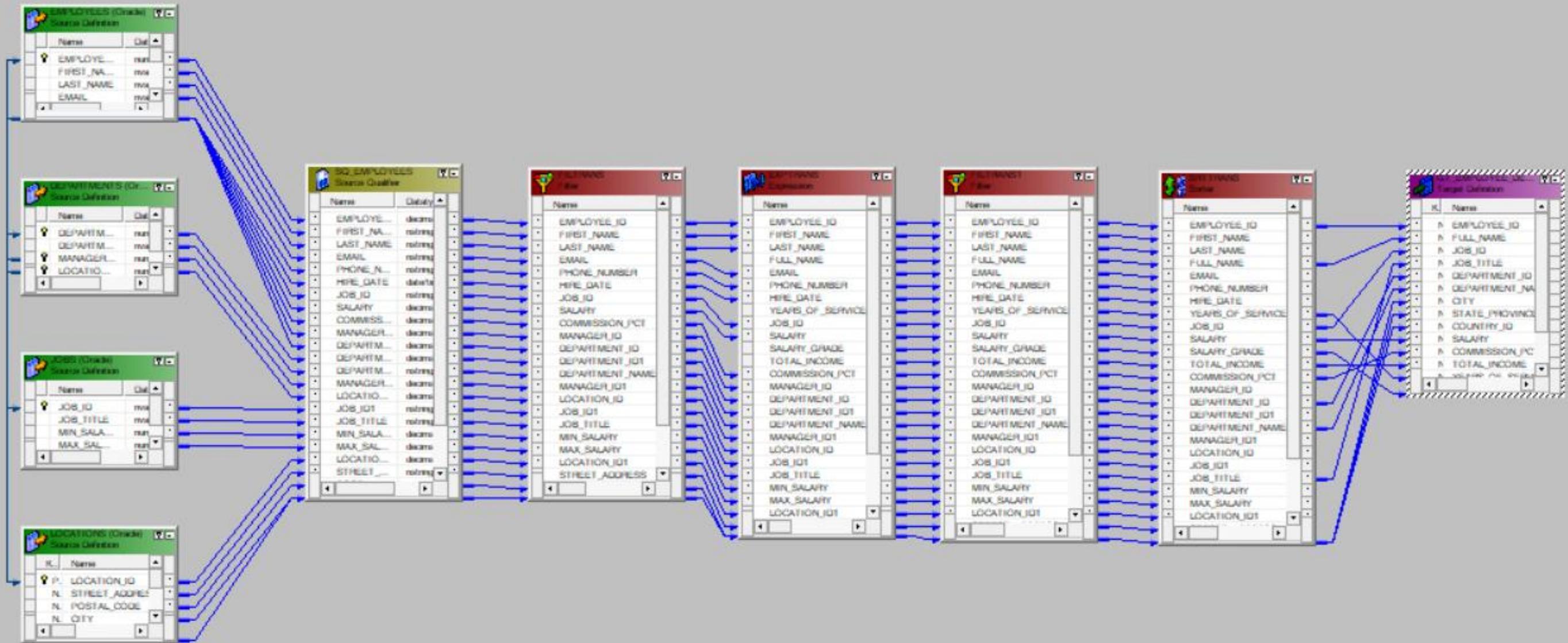
• Expression Transformation (EXP_CALC)

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.

Workflow



Monitoring

The screenshot shows the Informatica Monitoring interface with the following details:

- Workflow Run:** A tree view showing a successful run named "Training" under "WF_TASK1_Prj".
- Task Details:** A table showing the results of the task "s_M_task1_Prj" from 29/11/2025 3:38:20 am.

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:** A table comparing transformation and source 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 errors
SQ_EMPLOYEES	node01	106	106	0	106	42506	42506	0	No errors

2: Departmental Summary Report (Analytical Layer)

Objective

Summarize employee performance by department using the `TGT_EMPLOYEE_DETAIL` table.

Deliverables

Mapping: `m_DEPT_SUMMARY_LOAD`
Session: `s_DEPT_SUMMARY_LOAD`
Workflow: `wf_DEPT_SUMMARY_LOAD`
Validation: Row count = number of departments (10-12).

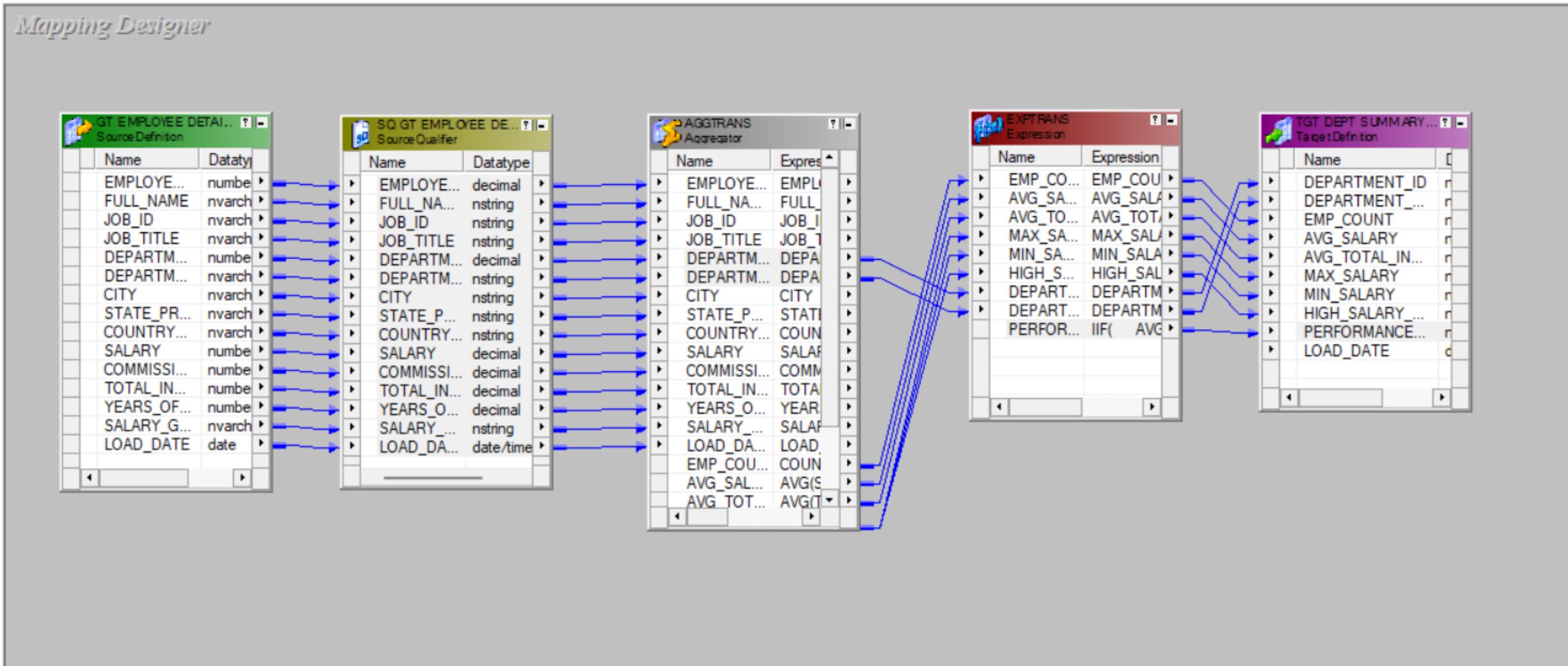
- **Aggregator Transformation (AGG_DEPT_SUM)**

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

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

The screenshot shows the Informatica PowerCenter Monitoring interface. At the top, there's a navigation bar with Repository, Edit, View, Tools, Task, Filters, and Help. Below the navigation bar is a toolbar with various icons. A time filter dropdown is set to '1 Hour'. The main area displays a 'Workflow Run' tree under 'Repositories'. The root node is 'rep', which contains 'wf_DEPT_SUMMARY...' and 'is'. 'wf_DEPT_SUMMARY...' has two children: 's_M_task1_Pnj' and 's_M_task2_pnj'. Both tasks have a status of 'Succeeded...'. The 'Task View' tab is selected. On the left, a log window shows several task updates. On the right, the 'Task Details' pane is open for 's_M_task1_Pnj'. It shows the task was started at 29/11/2025 4:01:23 am and completed at 29/11/2025 4:01:28 am. The 'Status' is 'Succeeded'. The 'Source/Target Statistics' section shows two transformations: 'GT_EMPLOYEE_D...' and 'SQ_EMPLOYEES', both running on 'node01'. The 'GT_EMPLOYEE_D...' transformation processed 72 applied rows, 72 affected rows, and 0 rejected rows, with a throughput of 31032 rows/sec. The 'SQ_EMPLOYEES' transformation processed 106 applied rows, 106 affected rows, and 0 rejected rows, with a throughput of 42506 rows/sec.

• 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