

Internship : Business intelligence

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ALEXIS DE RIVOYRE

Introduction

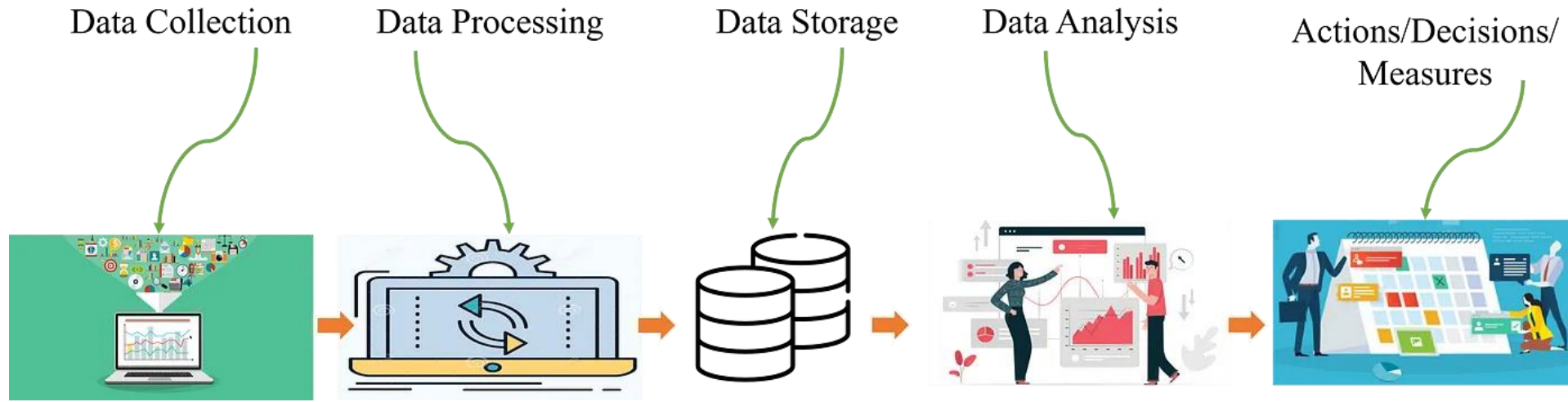
Atos



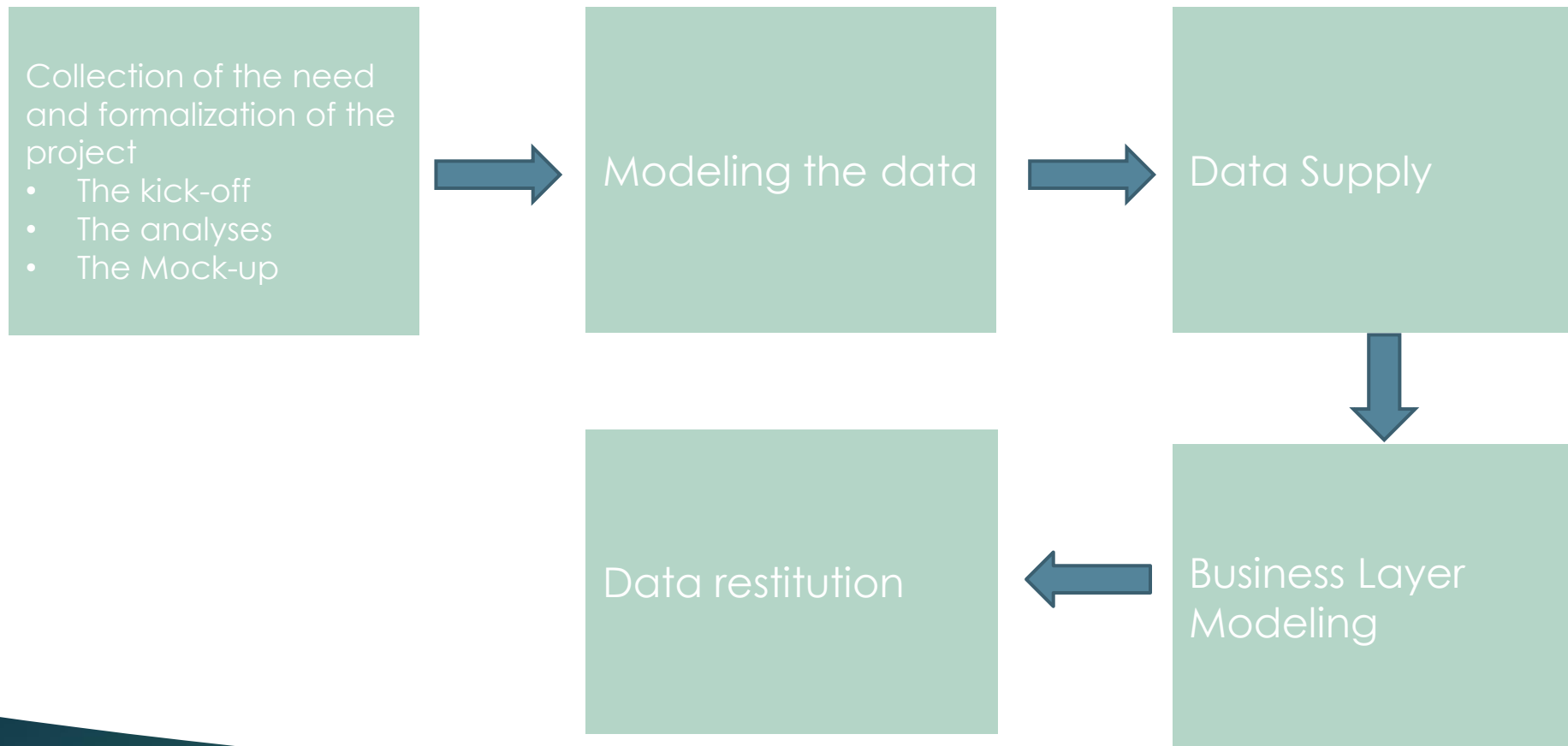
Introduction

- Modelling and detailed design from expression of the customer needs
- Development of data Integration flow and development of dashboard and steering
- Unit and Integration tests
- Support for requests and corrective actions

Goal of this Internship



Business Intelligence



Main Stages of a BI Project

Operating mode and Tools

SUIVI TICKETS TMA									
Recherche multicritère									
Lots									
Tickets BI									
À prendre en compte TMA	À évaluer	À planifier	En cours	Livrés	Suspendus	Terminés	En cours (TMA)	Récapitulatif Ouverts	Recherche
Suivi des lots									
Numero	Priorité	Application	Respo ES.	Groupe ES.	Lot Maint.	Date de Réception	Date Souhaitée ↑		
S173063	3	Plateforme Informatica	BORDE Laurent			18/04/2023 08:22	21/04/2023		
S175850	3	Socle commun FR	BORDE Laurent			09/06/2023 11:43	16/06/2023		
S176867	3	Socle commun FR	BORDE Laurent			27/06/2023 17:17	27/06/2023		
I194364	2	Socle commun FR	BORDE Laurent			06/03/2023 14:33			

TPAM – Operating mode

breakdown service commitment	Type of request	Processing times	Maximum lead times
Priority 1 " blocking "	Incident	4 hours on working days	1.5 working days
	Service	4 hours on working days	1.5 working days
	Change	2 days	5 days
Priority 2 " major "	Incident	Time limit fixed by the parties	Time limit fixed by the parties
	Service	Time limit fixed by the parties	Time limit fixed by the parties
	Change	Time limit fixed by the parties	Time limit fixed by the parties
Priority 3 " minors "	Incident	Time limit fixed by the parties	Time limit fixed by the parties
	Service	Time limit fixed by the parties	Time limit fixed by the parties
	Change	Time limit fixed by the parties	Time limit fixed by the parties

TPAM – Operating mode



Oracle SQL
developer



POWER AMC

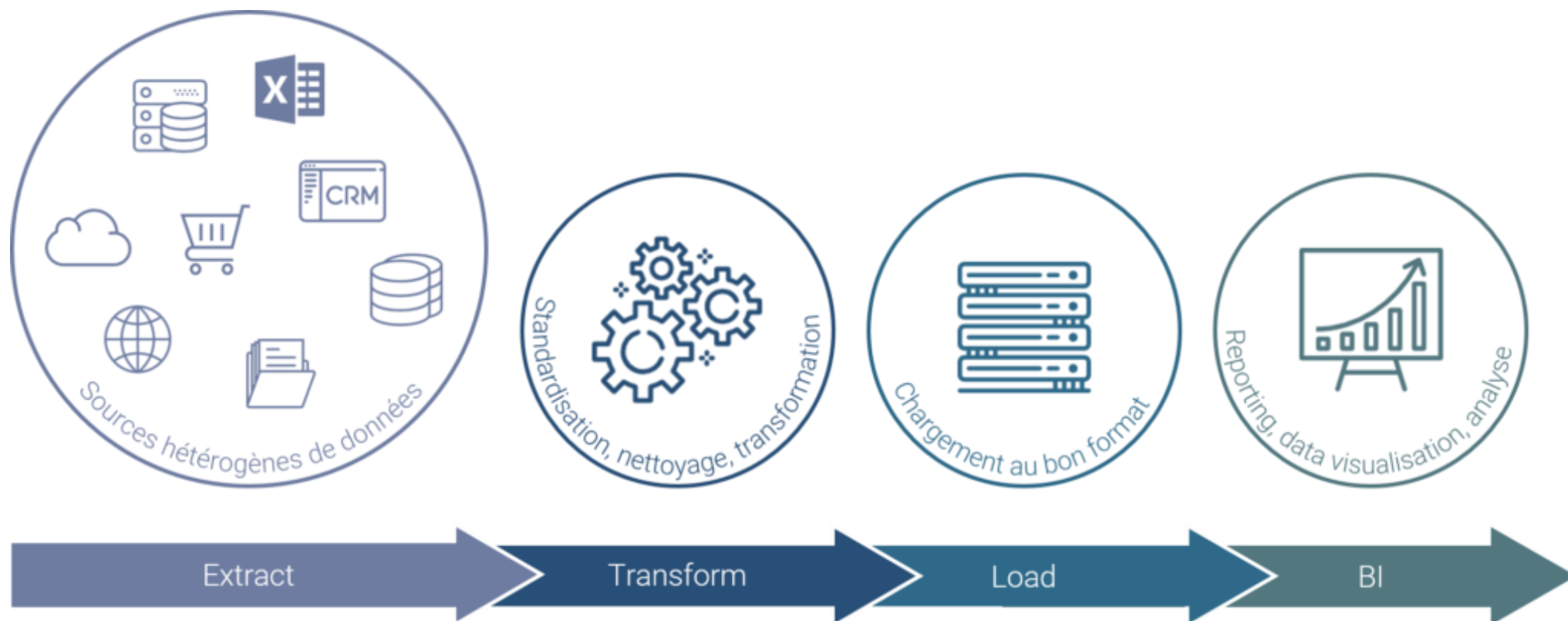


FileZilla

Tools & software

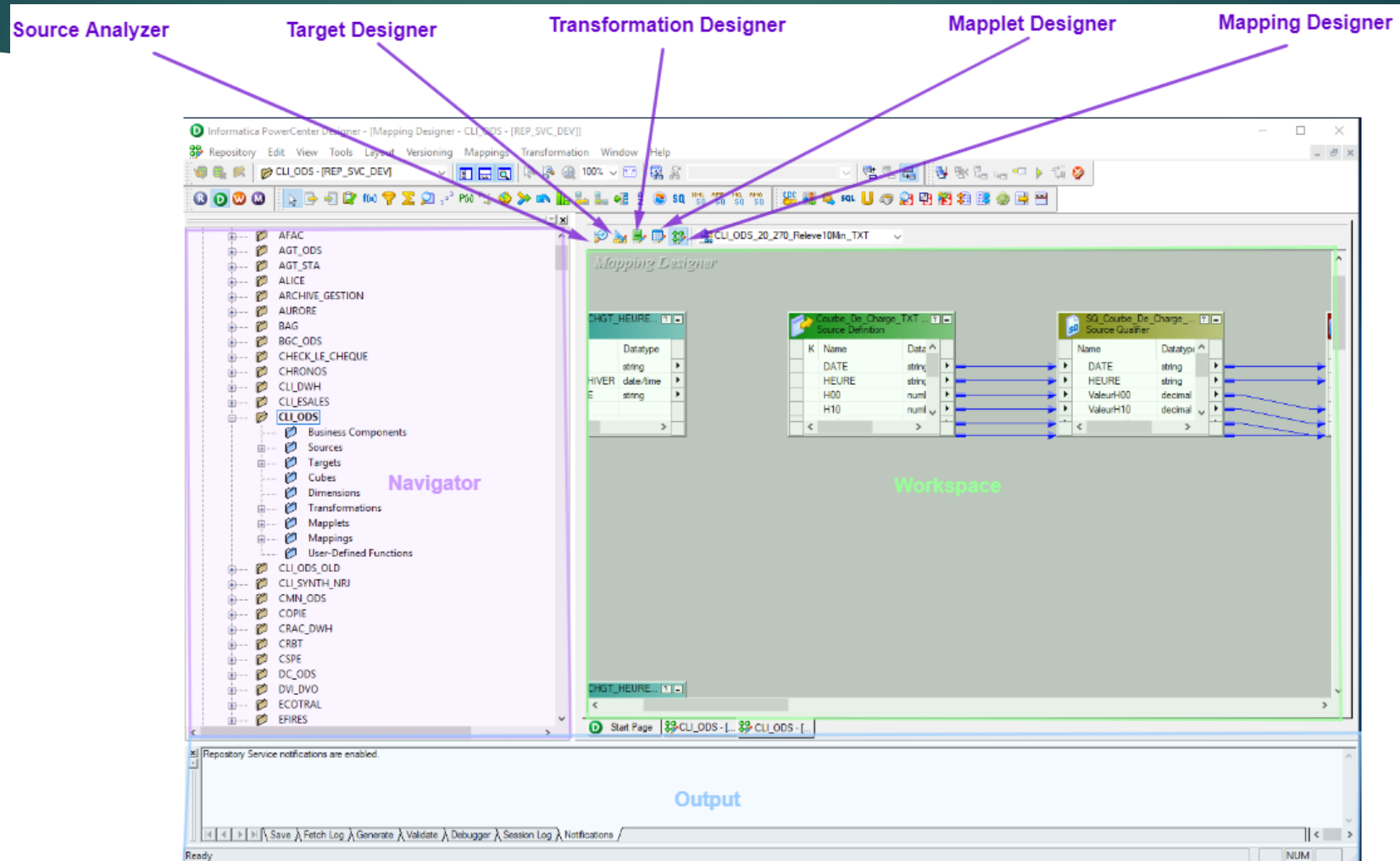
Informatica PowerCenter

ETL Process



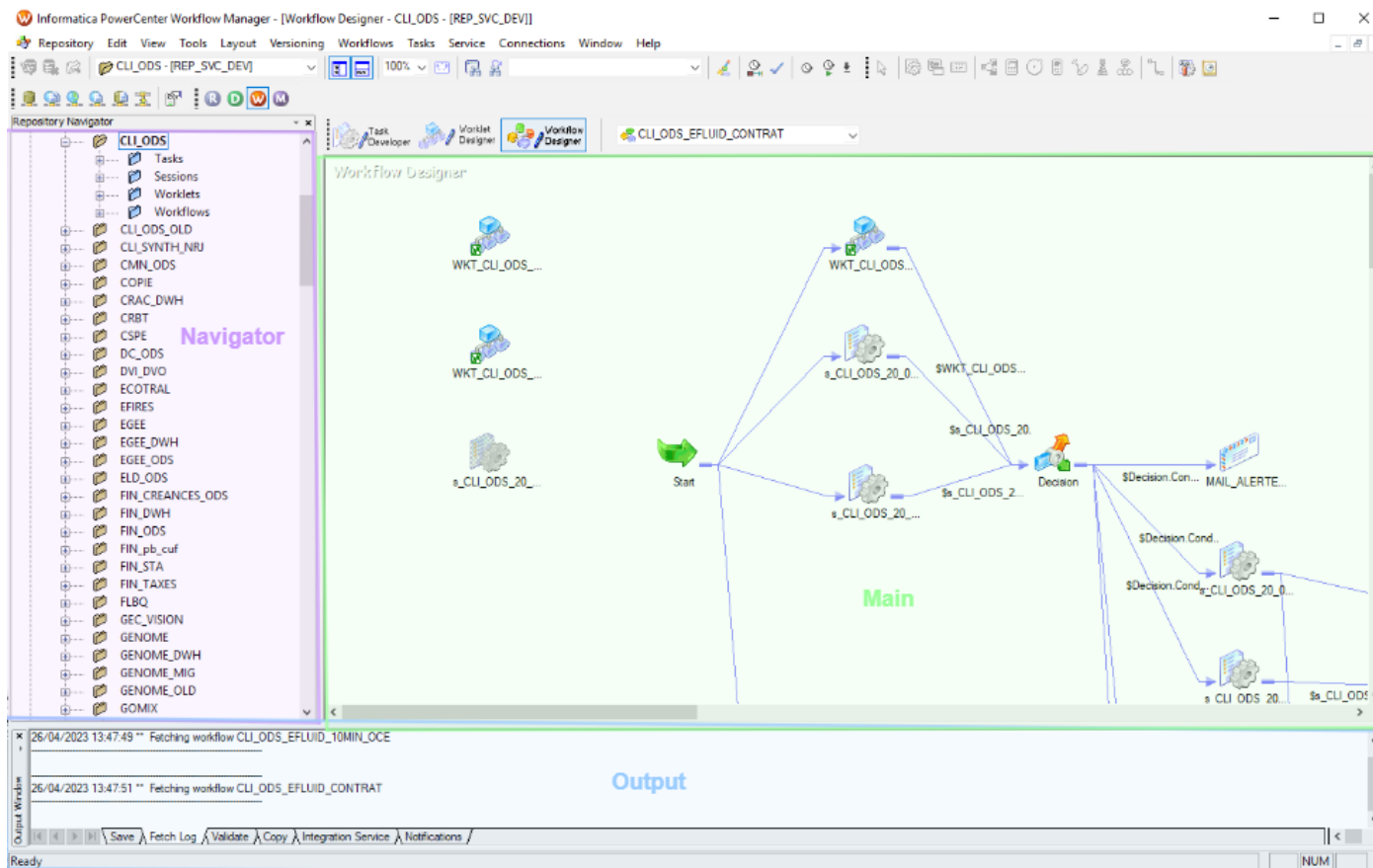
Mapping

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Workflow

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- Session Task
- Decision Task
- Command Task
- E-mail Task

Realizations

First request – FIN TAXE : Creation of an aggregation

16

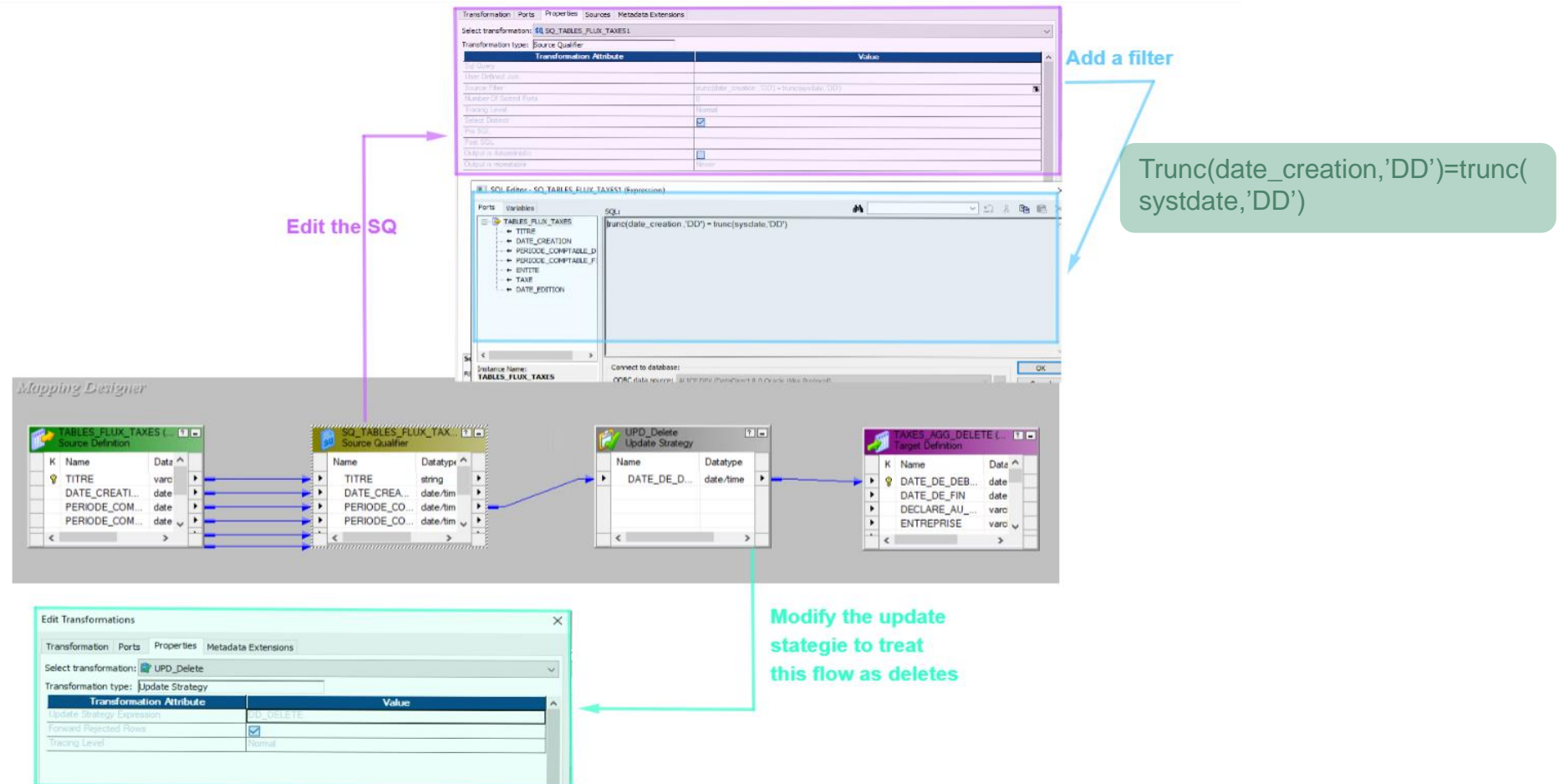
- **delete data from the calculation period:**

```
select distinct periode_comptable_debut from tables_flux_taxes where  
trunc ( date_creation , 'dd' ) = trunc( sysdate , 'dd' )
```

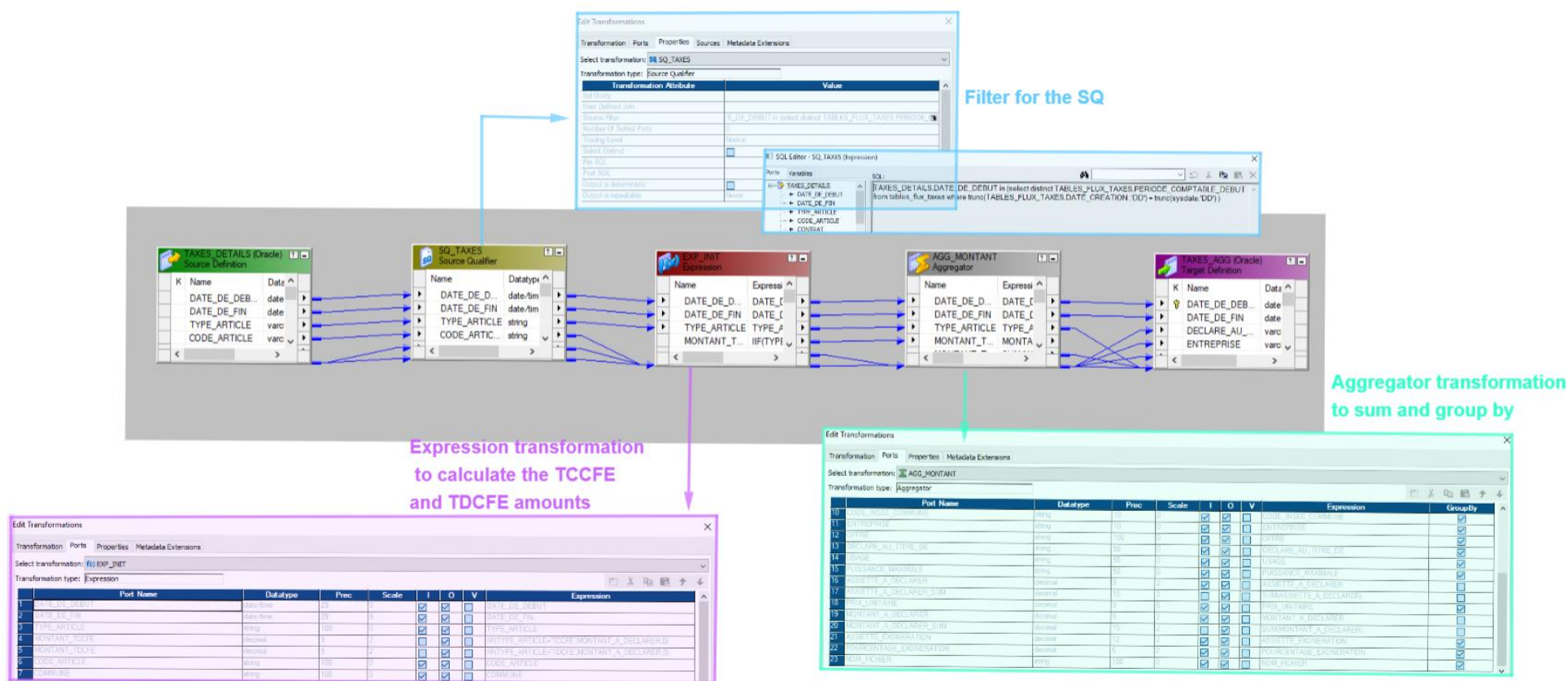
- **aggregation calculation:**

- ▶ **select** date_de_debut, date_de_fin, declare_au_titre_de, entreprise, commune, code_insee_commune, offre, prix_unitaire, **sum**(assiette_a_declarer) assiette_a_declarer, **sum**(montant_a_declarer) montant_a_declarer, assiette_exoneration, pourcentage_exoneration, type_article, code_article, nom_fichier, usage, puissance_maximale,
- ▶ **sum**(**case when** taxes_details.type_article='tccfe' **then** taxes_details.montant_a_declarer **else** 0 **end**) montant_tccfe,
- ▶ **sum**(**case when** taxes_details.type_article='tdcfe' **then** taxes_details.montant_a_declarer **else** 0 **end**) montant_tdcfe
- ▶ **from** taxes_details **where** date_de_debut in (**select distinct** periode_comptable_debut **from** tables_flux_taxes **where** trunc(date_creation , 'dd') = trunc(sysdate, 'dd'))
- ▶ **group by** date_de_debut, date_de_fin, declare_au_titre_de, entreprise, offre, commune, code_insee_commune, prix_unitaire, assiette_exoneration, pourcentage_exoneration, type_article, code_article, nom_fichier, usage, puissance_maximale;

First request – FIN TAXE : Creation of an aggregation



First request – FIN TAXE : Creation of an aggregation



MONTANT_TCCFE =
IIF(TYPE_ARTICLE='TCCFE',MONTANT_A_DECLARER,0)
MONTANT_TDCFE =
IIF(TYPE_ARTICLE='TDCFE',MONTANT_A_DECLARER,0)

MONTANT_TCCFE_SUM = SUM(MONTANT_TCCFE)
MONTANT_TDCFE_SUM = SUM(MONTANT_TDCFE)

First request – FIN TAXE : Creation of an aggregation

Treat Source Row As Options	Description	Recommendation
Insert	Marks all rows to insert into the target.	Turn on the Insert flag in the target table property.
Delete	Marks all rows to delete from the target.	Turn on the Delete flag in the target table property.
Update	Marks all rows to update into the target. You can further define the update type in the target.	Turn off the Insert and Delete flags in the target, and select any type of update in the target table.
Data Driven	The PowerCenter Integration Service uses Update Strategy transformations in the mapping to determine the operation on a row-by-row basis. You can define the update operation in the target options.	If the mapping contains an Update Strategy transformation, the default option is Data Driven. You can also use this option when the mapping contains Custom transformations configured to set the update strategy.

Second request → Pilotage ESE : Creation nrj_suivi_volume_projete_hdp

► **Table:**

- Add a nrj_suivi_volume_projete_hdp table identical to the volume_projete table.
- Add the date_suivi field to nrj_suivi_volume_projete_hdp

Traitement:

- Delete the nrj_suivi_volume_projete_hdp lines where date_suivi = last_day(\$\$DATE_MAJ)
- Insert in nrj_suivi_volume_projete_hdp the lines volume_projete where segment_marketing not in ('PARTICULIER', 'PROFESSIONNEL')
- Add date_suivi = last_day(\$\$DATE_MAJ)
- Add session in WKF_PILOTAGE_MP after session s_AUR_330_PERTES_PREVISIONNELLES_GAZ

Second request → Pilotage ESE : Creation nrj_suivi_volume_projete_hdp

Mapping execution date

27/07/23

02/08/23

Let's imagine that we are currently on 02/08/23

We start with the deletes, therefore we must delete the lines with date maj 27/07/23

```
date_suivi = last_day(to_date($$date_maj,'DD/MM/YYYY')) = 31/07/23
```

Then we repeat the process, setting

```
date_suivi = last_day(to_date(substr($$date_maj, 2, 10),'DD/MM/YYYY')) = 31/07/23
```

Finally, we change the date maj variable to the current date.

09/08/23

We repeat the treatment one week later.

We start with the deletes, therefore we must delete the lines with date maj 02/08/23

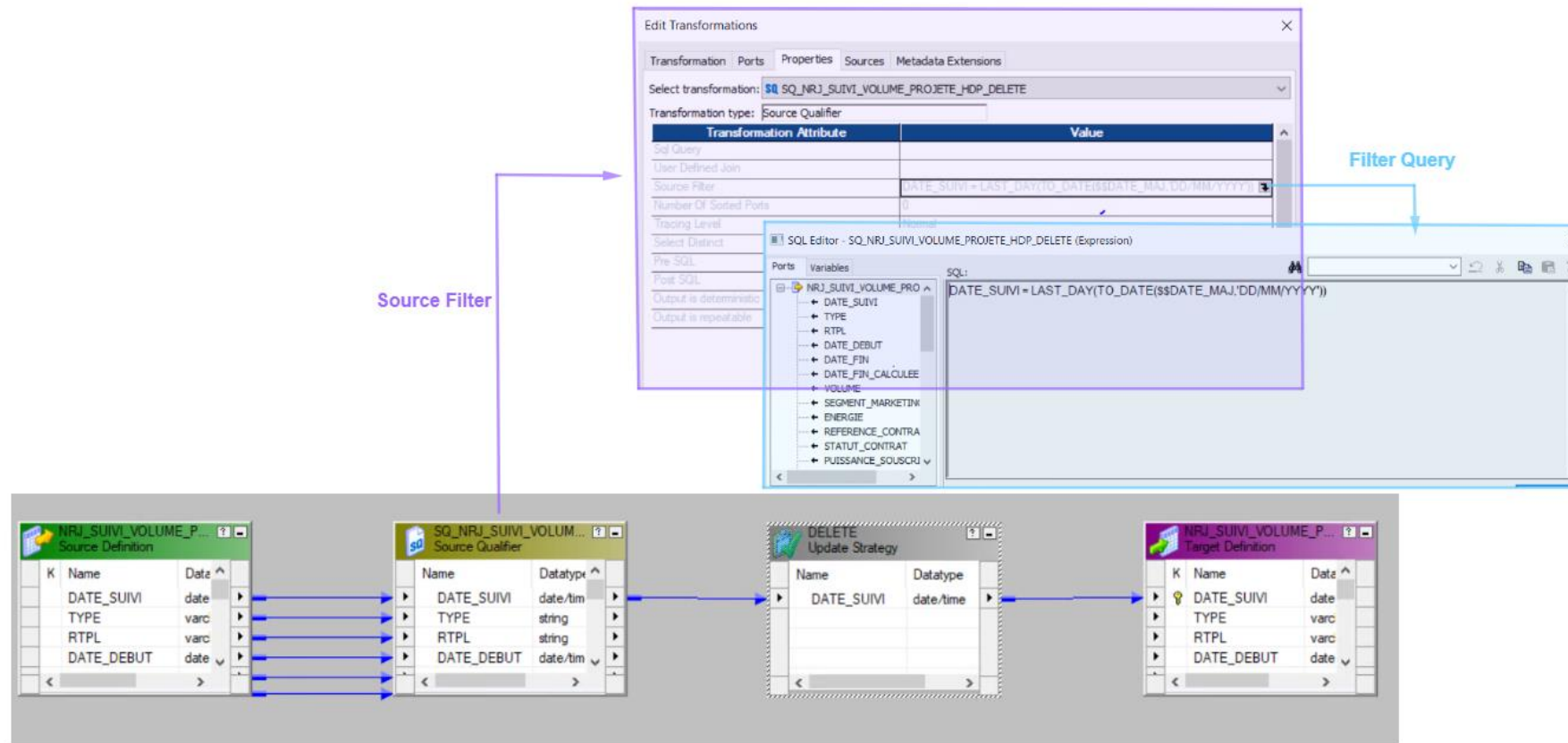
```
date_suivi = last_day(to_date($$date_maj,'DD/MM/YYYY')) = 31/08/23
```

Then we repeat the process, setting

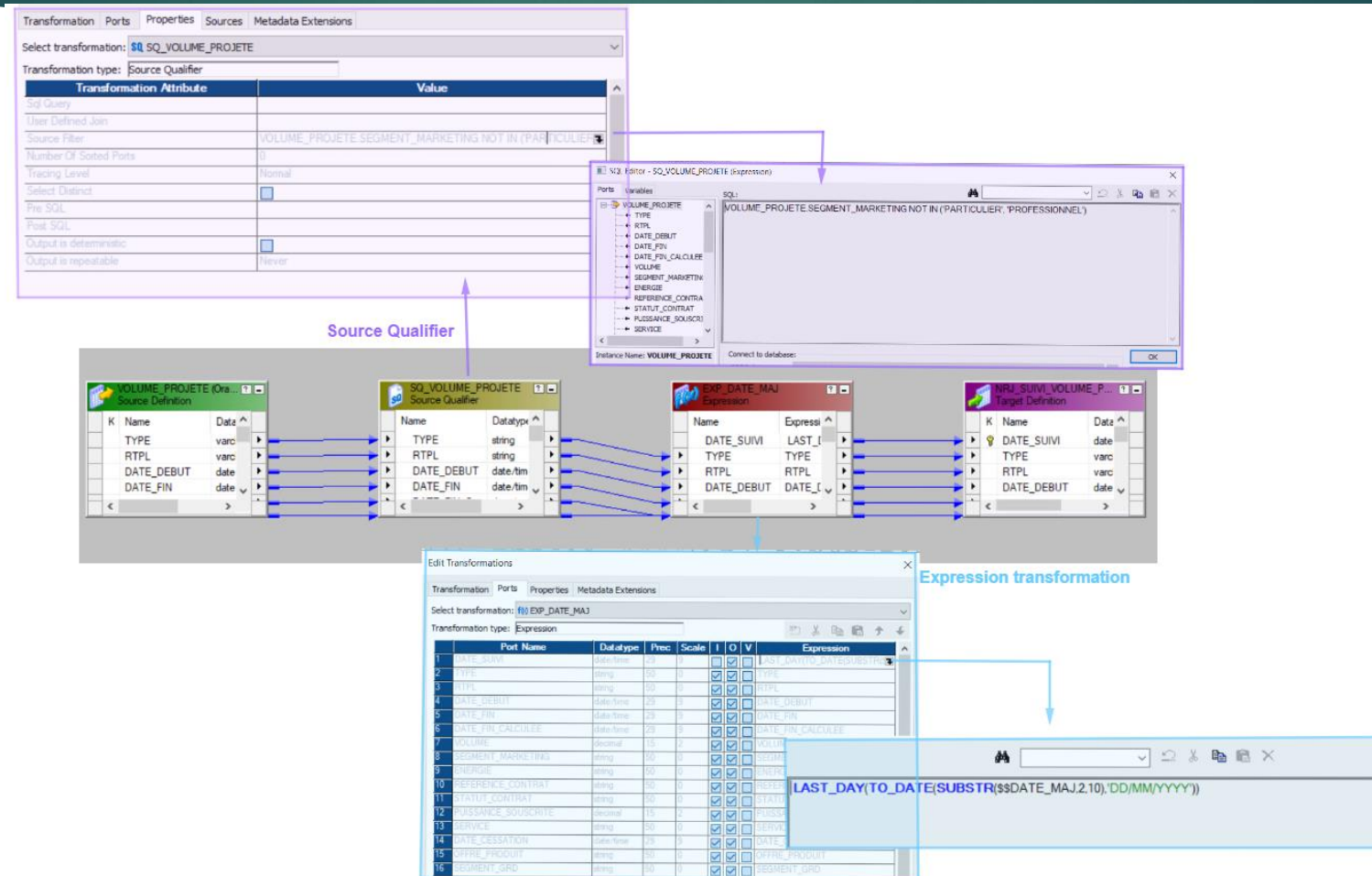
```
date_suivi = last_day(to_date(substr($$date_maj, 2, 10),'DD/MM/YYYY')) = 31/08/23
```

Finally, we change the date maj variable to the current date.

Second request → Pilotage ESE : Creation nrj_suivi_volume_projete_hdp



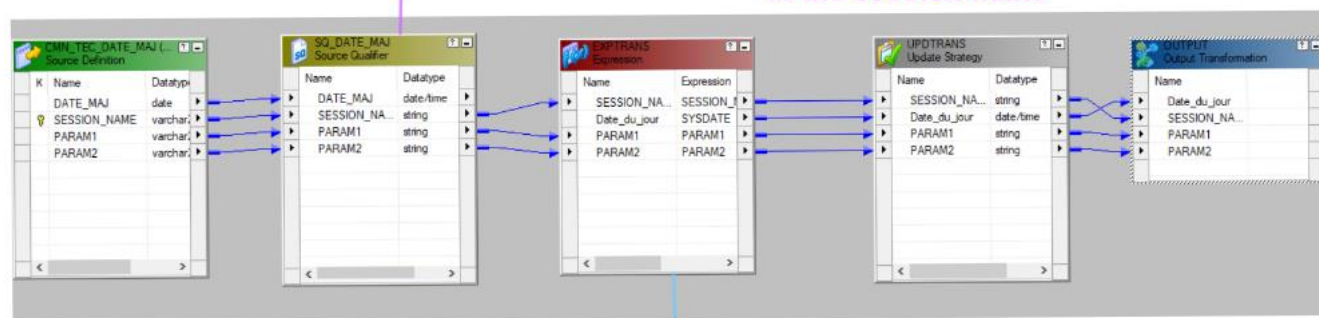
Second request → Pilotage ESE : Creation nrj_suivi_volume_projete_hdp



Second request → Pilotage ESE : Creation nrj_suivi_volume_projete_hdp

The screenshot shows the 'Properties' tab for the 'SQ_DATE_MAJ' transformation. The 'Transformation type' is 'Source Qualifier'. The 'Source Filter' is set to 'CMN_TEC_DATE_MAJ SESSION_NAME=%%SESSION_NAME'. The 'SQL Editor' window shows the SQL expression 'CMN_TEC_DATE_MAJ SESSION_NAME=%%SESSION_NAME'.

Source Qualifier filter
in the session name



The screenshot shows the 'Properties' tab for the 'EXPTRANS' transformation. The 'Transformation type' is 'Expression'. The table below shows the port names, datatypes, and expressions for each port.

Port Name	Datatype	Prec	Scale	I	O	V	Expression
1 SESSION_NAME	string	255	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	SESSION_NAME
2 Date_du_jour	date/time	29	9	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	SYSDATE
3 PARAM1	string	60	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	PARAM1
4 PARAM2	string	60	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	PARAM2

We change the update
date to today's date

Conclusion

Bibliography

- ▶ Es. https://fr.wikipedia.org/wiki/%C3%89lectricit%C3%A9_de_Strasbourg.
- ▶ Etl. <https://www.oracle.com/fr/database/processus-etl-definition/>.
- ▶ Informatica documentation. <https://docs.informatica.com/> .
- ▶ Sap documentation. [SAP BusinessObjects Business Intelligence Platform | SAP Help Portal](#)
- ▶ Sql developer documentation. https://docs.oracle.com/cd/E12151_01/index.htm
- ▶ Website of atos. <https://atos.net/fr/>
- ▶ Rapport de stage de leslie.