STEP 1----- CREATION BDATA BASE **FOR\_STG** and **FOR\_DWH**

STEP 2------CREATION NEW PROJECT **ETL\_PRJ\_FOR**

STEP 3-------CREATION OF NEW SSIS PACKAGE **LOAD\_DIMENSION**

STEP 4**------- LOAD\_DIMESNION STEPS**

1. CHOOSE SEQUENCE CONTAINER AND NAME DIMENSION MAGASIN (REGION AND MAGASIN) ----OPEN DATA FLOW TASK NAMED (LOAD REG AND MAG FOR STG)----
   1. CHOOSE FLAT FILE, NAME **SOURCE** REGION, AND NAME FILE REGION IN CONNECTION MANAGER WINDOW, AND CHECK COLUMNS AND ADVANCED PARAMETERS
   2. CHOOSE OLE DB DESTINATION AND NAME DESTINATION REGION, MAKE NEW SERVER NAME **TAOUFIK-PC\MSFORMATION** AND DATABASE NAME **STG\_FOR** AND PERFORM TESTING CONNECTION, THEN MAKE NEW TABLE, STG\_REGION, AND CHANGE NAME IN THE SCIPRT

CREATE TABLE [DESTINATION REGION] (

[CDREGI] varchar(50),

[LBREGI] varchar(50),

[REGI\_CDRESCEN] varchar(50)

)

* 1. ADD SCRIPT COMPONENT AND NAME IT ERROR MESSAGES, THEN WRITE IN SCRIPT

public override void Input0\_ProcessInputRow(Input0Buffer Row)

{

/\*

\* Add your code here

\*/

Row.ErrorDesc = ComponentMetaData.GetErrorDescription(Row.ErrorCode);

}

**RMQ:** Input0\_ProcessInputRow(Input0Buffer Row) **FUNCTION THAT RECEIVES ENTRIES**

**INPUT COLUMNS: ERRORCODE**

**OUTPUT COLUMNS: ERRORDESC**

* 1. THEN CHOOSE OLE DB DESTINATION AND NAMED ERROR DEST REGION, AND CONNECT IT TO SCRIPT ERROR MESSAGE, CHOOSE FOR\_STG DATABASE and NEW TABLE, THEN NAME YOUR ERROR TABLE IN THE FOLLOWING SCRIPT

CREATE TABLE [Eroor Dest region] (

[CDREGI] varchar(50),

[LBREGI] varchar(50),

[REGI\_CDRESCEN] varchar(50),

[ErrorCode] int,

[ErrorColumn] int,

[ErrorDesc] varchar(200)

)

MEME TRAITEMENT POUR DESTINATION MAGASIN

* 1. CREATE SOURCE MAGASIN,FLAT FILE, LOAD FILE AND CHOOSE WANTED COLUMNS AND CONNECT SOURCE TO A DERIVED COLUMNS fx, TO MAKE CONCATINATION OF ADDRESS, MANY ADDRESS COLUMNS GROUPED IN ONE ADDRESS COLUMN WITH THE FOLLOWING FUNCTION IN TYPE CASTS

(DT\_STR, 200, 1252)(RTRIM(LTRIM(CLI\_NVOI)) + " " + RTRIM(LTRIM(CLI\_TVOI)) + " " + RTRIM(LTRIM(CLI\_LVOI)) + " " + RTRIM(LTRIM(CLI\_CVOI)) + " " + RTRIM(LTRIM(CLI\_CPOS)))

LTRIM and RTRIM TO ELIMINATE THE SPACES IN ADDRESSES VALUES

IN THE DESTINATION, A TABLE NAMED STG\_MAGASIN WITH FOLLOWING SQL SCRIPT:

CREATE TABLE [OLE DB Destination] (

[COD\_MAG] numeric(18,0),

[COD\_REG] numeric(18,0),

[LIB\_MAG] varchar(50),

[CLI\_NVOI] varchar(50),

[CLI\_TVOI] varchar(50),

[CLI\_LVOI] varchar(50),

[CLI\_CVOI] varchar(50),

[CLI\_CPOS] varchar(50),

[Adresse] varchar(200)

* 1. Gestion D’erreur: CONNECT TABLE LOAD REG AND MAG FOR STG TO A DATA FLOW TASK NAMED GESTION D4ERREUR IN THE CONTROL FLOW AND CREATE A SOURCE, OLE DB SOURCE IN DATA FLOW AND A FLAT FILE IN DESTINATION FOR ERRORS WRITING LOG FILE;

FOR THE SOURCE CHOOSE FOR\_STG AND TABLE ERR\_ERROR\_REGION AND IN COLUMNS CHOOSE ErrorDesc, IN THE DESTINATION, FLAT FILE, DEFINE CONNECTION MANAGER FILE ERROR REGION AND BROWSE TO SELECT THE FILE NAMED REJET REGION IN WHICH ERRORS WILL BE WRITTEN AND CONNECT GESTION ERROR TO A DATA FLOW TASK IN THE CONTROL NAMED LOAD DIM MAGASIN FOR STG (MAGASIN AND REGION)

* 1. CREATE IN CONTROL A DATA FLOW TASK NAMED LOAD DIM MAGASIN FR STG in which we will MAKE JOIN BETWEEN THE TABLES MAGASIN AND RGION. CREATE A SOURCE IN DATA FLOW TASK OLE DB SOURCE NAMED SOURCE MAGASIN AND REGION IN WHICH YOU CHOOSE FOR\_STG IN CONNECTION MANAGER AND BUILD QUERY TO JOIN TABLES MAGASIN AND REGION

SELECT STG\_MAGASIN.COD\_MAG, STG\_MAGASIN.COD\_REG, STG\_MAGASIN.LIB\_MAG, STG\_MAGASIN.ADR\_MAG, Stg\_region.LIB\_REG, Stg\_region.CODE\_REG

FROM STG\_MAGASIN INNER JOIN

Stg\_region ON STG\_MAGASIN.COD\_REG = Stg\_region.CODE\_REG

* 1. CREATE SOURCE DATA FLOW TASK IN CONTROL AND NAMED IT LOAD DIM MAGASIN FOR DHW AND CREATE SOURCE OLE DB IN DATA FLOW AND SELECT FOR\_STG CONNECTION MANAGER AND A TABLE STG\_DIM\_MAGASIN AND THEN CONNECT TO A SLOWLY CHANGING DIMENSION TO CONFIGURE connection manager FOR\_DWH and DWH\_DIM\_MAGASIN TABLE, SET KEY TYPE TO BUSINESS KEY FOR COD\_REG and COD\_REG, THEN CHOOSE CHANGING ATTRIBUTE TO CHANGING ATTRIBUTE. ADD IN OLE DB COMMAND a script UPDATE [dbo].[DWH\_DIM\_MAGASIN] SET [ADR\_MAG] = ?,[LIB\_MAG] = ?,[LIB\_REG] = ? WHERE [COD\_MAG] = ? AND [COD\_REG] = ?

TO UPDATE DATA IN DWH\_DIM\_MAGASIN, WE SHOULD HAVE **ID AS DESTINATION COLUMN AND BUSINESS KEY.** ADD AN OLE DB DESTINATION NAMED INSERT DESTINATION IN WHICH WE OBSERVE THE **ID** IN DESTINATION COLUMNS. THE ID WAS CONFIGURED IN DWH\_DIM\_MAGASIN [ID] [numeric](18, 0) IDENTITY(1,1) NOT NULL,

* 1. ANOTHER METHOD USED IN ORDER TO BYPASS SLOWLY CHANGING COMMAND WHEN LOADING DATA FROM STAGING IN DWH, IN ORDER TO ACCELERATE THE PROCESS OF LOADING, BY CREATING EXECUTE SQL TASK AND WRITING THE FOLLOWING SCRIPT: COMPARE AND DELETE DATA FROM DWH IF THE SAME IN STAGING; IN DATA FLOW SOURCE WITH STAGING DATA AND A DESTINATION: INSERT DATA WITH ID IN THE DIMENSION COLUMN;

delete from DWH\_DIM\_ARTICLE

where cast(COD\_DEP as varchar(10)) + cast(COD\_RAY as varchar(10)) + cast(COD\_FAM as varchar(10)) + cast(COD\_ART as varchar(10))in

(select cast(COD\_DEP as varchar(10)) + cast(COD\_RAY as varchar(10)) + cast(COD\_FAM as varchar(10)) + cast(COD\_ART as varchar(10))

from [Prj-STG].[dbo].[STG\_DIM\_ARTICLE])

* 1. A NEW FOR EACH LOOP CONTAINER IS CRETAED IN WHICH WE SELECT THE FILES OF FOURNISSEUR, AND CREATE THE VARIABLE STRING, A NEW DATA FLOW TASK IS CREATED AND NAMED LOAD FOURNISSEUR WITH SOURCE FLAT FILE FOURNISSEUR AND A DESTINATION OLE DB TABLE IN STAGING. THEN CONNECT TO ANOTHER DATA FLOW TASK NAMED DWH\_FOURNISSEUR. DWH\_FOURNISSEUR CONTAIN A SOURCE STAGING TABLE AND A SLOWLY CHANGING DIMENSION NAMED LOAD FOURNISSEUR DWH AND CONTAIN INSERT DESTINATION AND A OLE DB COMMAND WITH FOLLWING SQL SCRIPT

UPDATE [dbo].[DWH\_DIM\_FOURNISSEUR] SET [LIB\_FOUR] = ? WHERE [COD\_FOUR] = ?

* 1. A NEW SEQUENCE CONTAINER WITH LOAD TIME DWH IS CREATED A FALT FILE IN SOURCE WITH A CHANGE IN DAY BY DT\_CAL AND AN OLE DB IN DESTINATION

STEP 5**------- LOAD\_FAIT STEPS**

1. CREATE EXECUTE SQL TASK TO MAKE A PURGE WITH TRUNCATE TABLE STG\_VENTES AND CONNECT IT TO DATA FLOW TASK NAMED LOAD VENTES; CREATE SOURCE IN DATA FLOW A FLAT FILE AND CRATE CONNECTION MANAGER FILE VENTES, THEN BROWSE TO GET THE FILE SOURCE\_VENTES AND CONNECT IT TO DERIVED COLUMN FUNCTION TO REPLACE THE CODE\_ARTICLE WITHOUT A0000 PATERN; (DT\_NUMERIC,18,0)(REPLACE(CODE\_ARTICLE,"A00000",""))

AFTER CONNECT TO DESTINATION OLE DB NAMED DESTINATION VENTES. THE NAME OF THE SOURCE CODE\_ARTICLE IS CHANGED TO ARTICLE THE DERIVED COLLUMN FUNCTION; THE NAMED OF DESTINATION COLUMNS CAN BE CHANGED IN THE ADVANCED ITEM IN CONNECTION MANAGER CONFIGURATION

CREATE A DATA FLOW TASK IN CONTROL NAMED LOAD VENTES DWH THENIN DATA DLOW CREATE A SOURCE OLE DB IS CREATED WITH A TABLE NAMED STG\_VENTES IN FOR8STG CONNECTION MANAGER? THEN WE WILL MAKE A LOOK UP FOR THE ID’s OF DIMENSION MAGASIN AND ARTICLE IN THE DWH\_DIM\_MAGASIN and DWH\_DIM \_ARTICLE DIMENSION, FULL CACHE CONFIG, AND COCHER ID IN COLUMN TO SAY COD-MAG is THE ID THE ID WE LOOK AFTER IT THEN CHANGE IN LOOKUP THE COD\_ART AND COD\_MAG to ID\_ARTICLE AND ID\_MAGASIN AND THEN MAKE AGGREGATION AGGREGATE FUNCTION AND SELECT FUNCTIONS GROUP BY FOR PRIMARY KEYS

NOW CONNECT TO OLE DB DWH

FINALY CREATE IN CONTROL LOAD FACT VENTES WITH SQL BUILD QUERY

select CODE\_MAG,CODE\_ART, DT\_VENTE,

sum(CA\_TTC) as CA\_TTC,

avg(TVA) as TVA,

sum(PRIX\_PRV) as PRIX\_PRV

from DWH\_ventes

group by

CODE\_MAG, CODE\_ART, DT\_VENTE

AND CONNECT IT TO OLE DB DESTINATION: FACT VENTE

VERY IMPORTANT TO TRUNCATE DWH TABLES

select 'truncate table ' + TABLE\_NAME +';' from INFORMATION\_SCHEMA .TABLES

CETTE COMMANDE VA LISTER LES TRUNCATE TABLE TO EXECUTE WHICH ARE THE FOLLOWING

truncate table DWH\_DIM\_MAGASIN;

truncate table DWH\_DIM\_ARTICLE;

truncate table DWH\_DIM\_FOURNISSEUR;

truncate table DWH\_ventes;

truncate table DWH\_FACT\_ventes;

truncate table DWH\_DIM\_TEMPS;

THEN YOU HAVE TO EXECUTE ALL SSIS

PARTITIONS DATES SUR CUBE CAR GRAND VOLUME DE DONNEES

SELECT [dbo].[DWH\_FACT\_ventes].[CODE\_MAG],

[dbo].[DWH\_FACT\_ventes].[CODE\_ART],

[dbo].[DWH\_FACT\_ventes].[CA\_TTC],

[dbo].[DWH\_FACT\_ventes].[DT\_VENTE],

[dbo].[DWH\_FACT\_ventes].[TVA],

[dbo].[DWH\_FACT\_ventes].[PRIX\_PRV]

FROM [dbo].[DWH\_FACT\_ventes]

WHERE DT\_VENTE between cast ('2015-01-01' as date) and cast ('2015-01-01' as date);

**PROJECT SSAS**

**STEP1 DATA SOURCES**

**STEP2 CUBE VENTES**

In CUBE\_VENTES KPI’s CONFIGURATION:

VALUE EXPRESSION;

([Measures].[CA TTC]/[Measures].[PRIX PRV]) – 1

GOAL EXPRESSION: METTRE L’OBJECTIF EN QUESTION

CASE WHEN [DIM\_MAGASIN].[REGION] IS [DIM\_MAGASIN].[REGION].&[1.] THEN 0.27

WHEN [DIM\_MAGASIN].[REGION] IS [DIM\_MAGASIN].[REGION].&[2.] THEN 0.25

WHEN [DIM\_MAGASIN].[REGION] IS [DIM\_MAGASIN].[REGION].&[7.] THEN 0.17

ELSE 0.17

END

COMPARAISON

CASE WHEN KPIVALUE("GAIN")>KPIGOAL( "GAIN" ) THEN 1

WHEN KPIVALUE( "GAIN" )<KPIGOAL( "GAIN" ) THEN -1

ELSE 0

END

COMPARAISON

CASE WHEN (KPIVALUE ("GAIN"),[DIM\_TEMPS].[JOUR].CURRENTMEMBER)>(KPIVALUE("GAIN"),[DIM\_TEMPS].[JOUR].CURRENTMEMBER.PREVMEMBER) THEN 1

WHEN (KPIVALUE("GAIN"),[DIM\_TEMPS].[JOUR].CURRENTMEMBER)<(KPIVALUE("GAIN"),[DIM\_TEMPS].[JOUR].CURRENTMEMBER.PREVMEMBER) THEN -1

ELSE

0

END