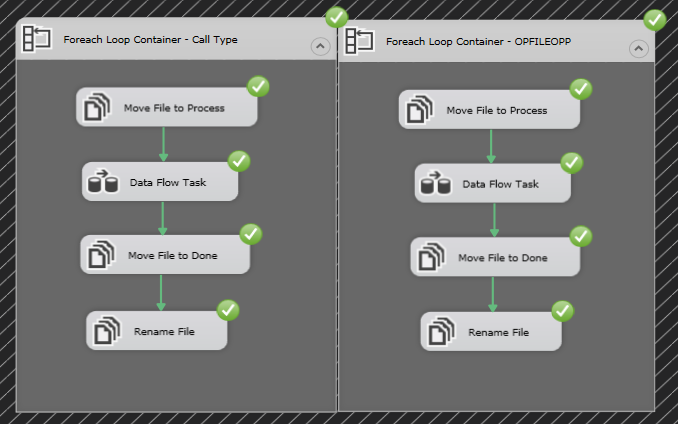
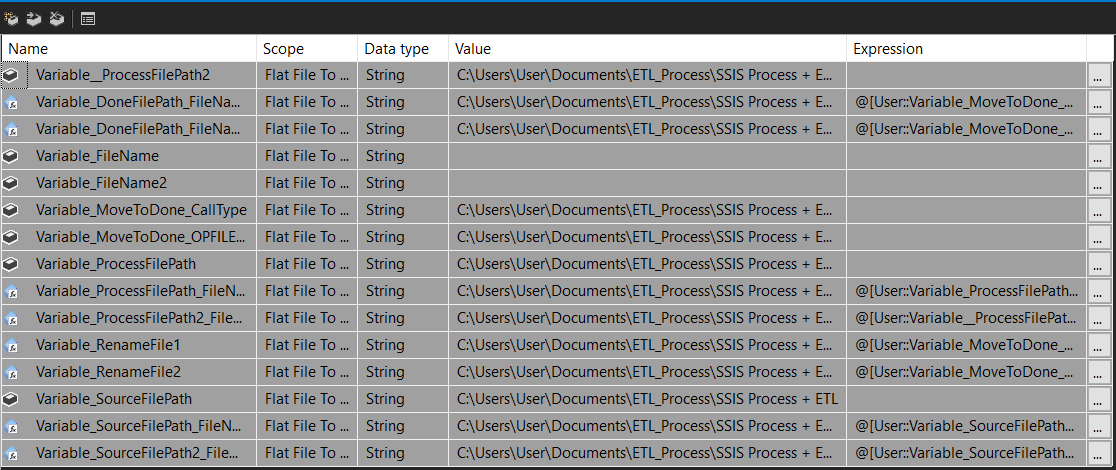
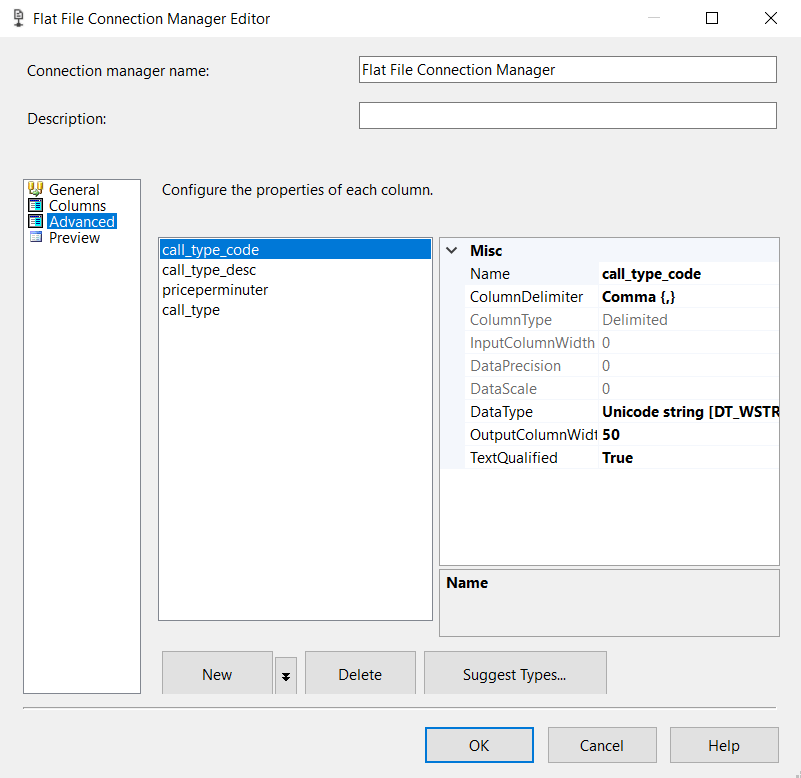
Process ETL – Step Dynamically upload CSV files:

Process ETL – The Variables of process Dynamically upload:



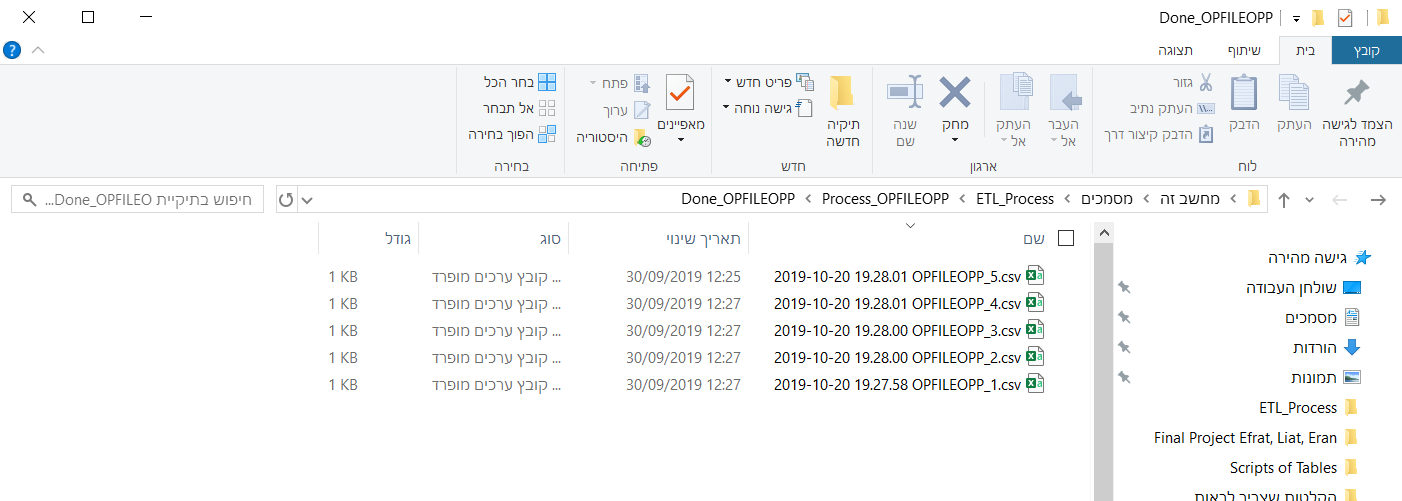
In editing of data in Connection Manager

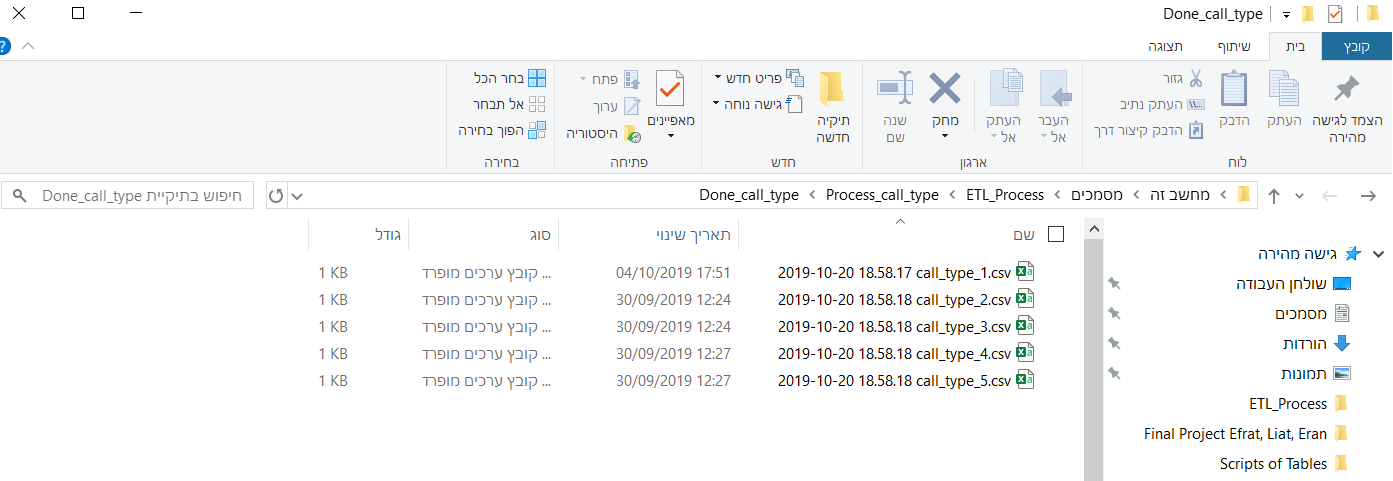
We are change DataType of the data.

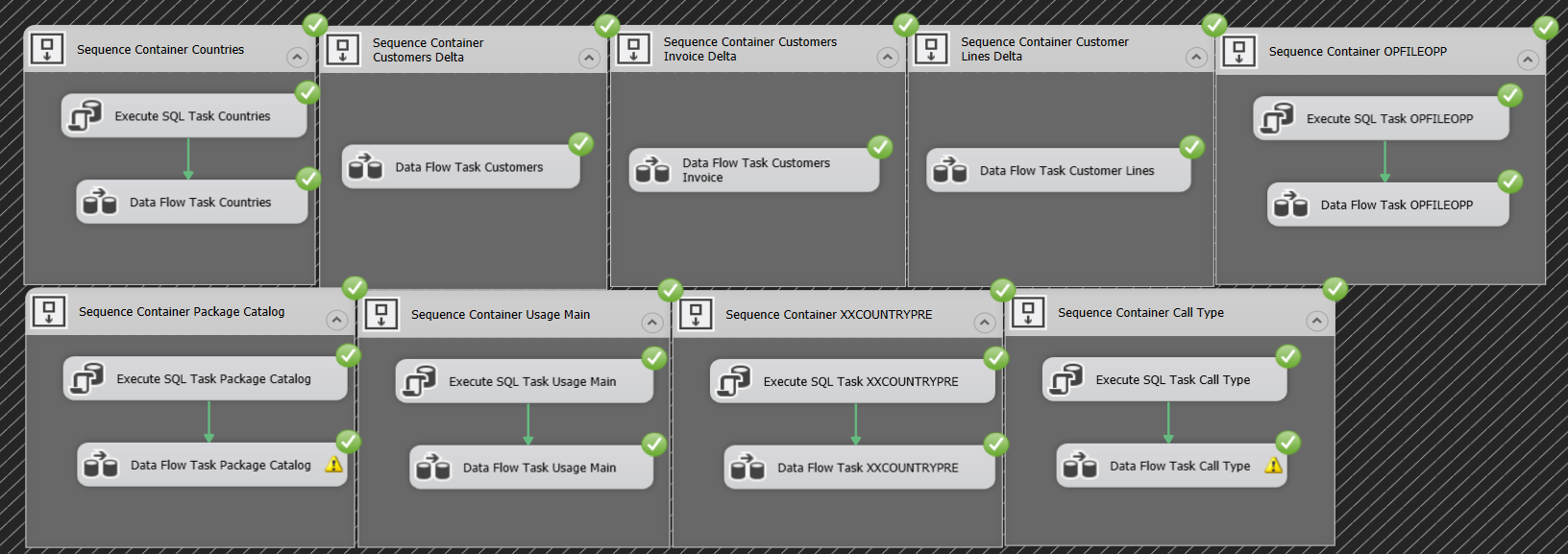
For the charging process to work.

Process ETL – The Result

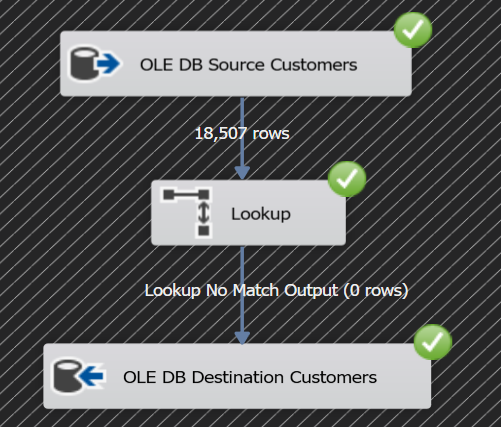
Upload CSV files:

OPFILEOPP

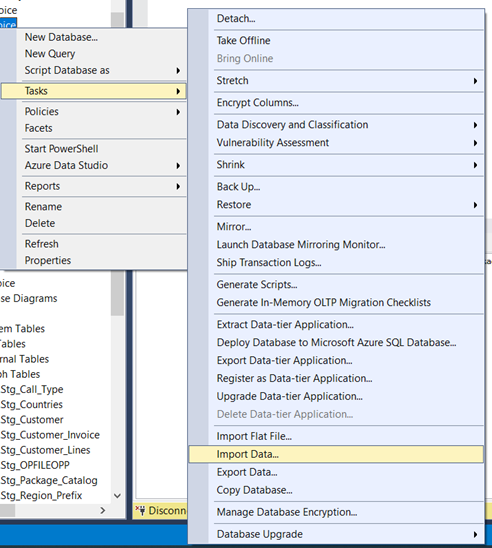
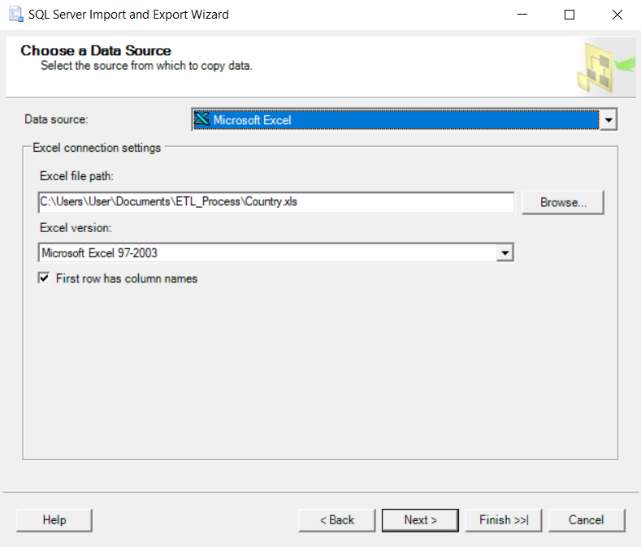
Call\_Type

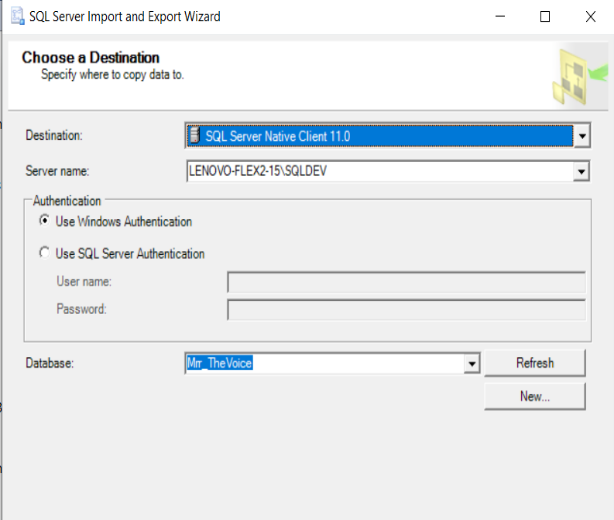
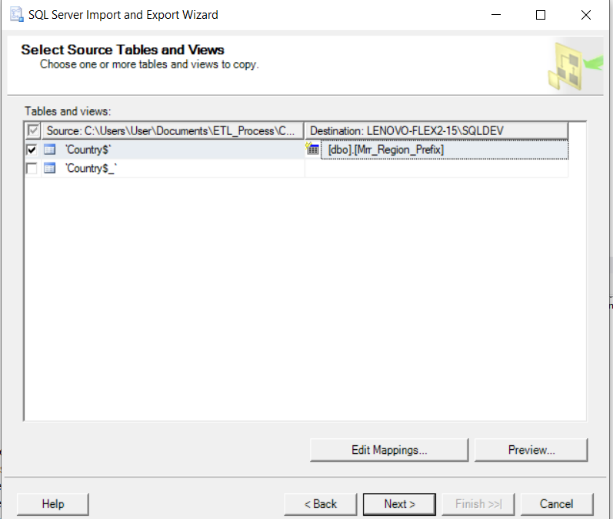
Process ETL – Step Operation to Mirror:

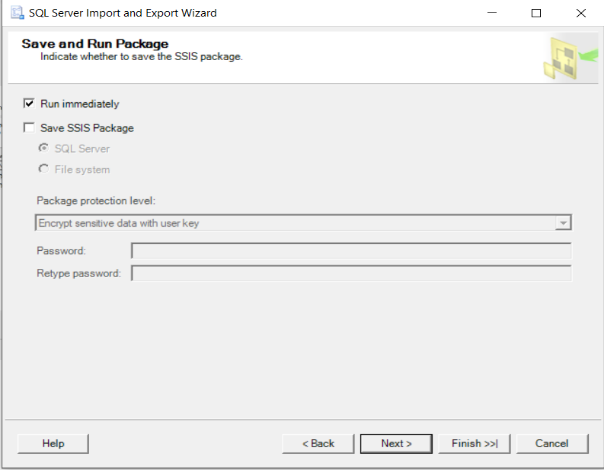
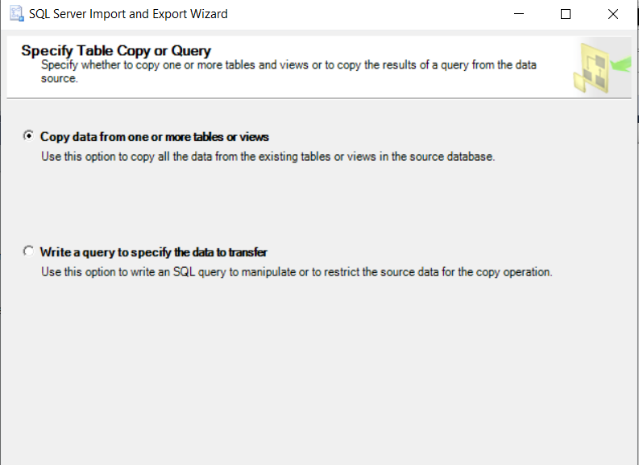
Process ETL – Transfer only Delta of data - For example we show the Customers Table:

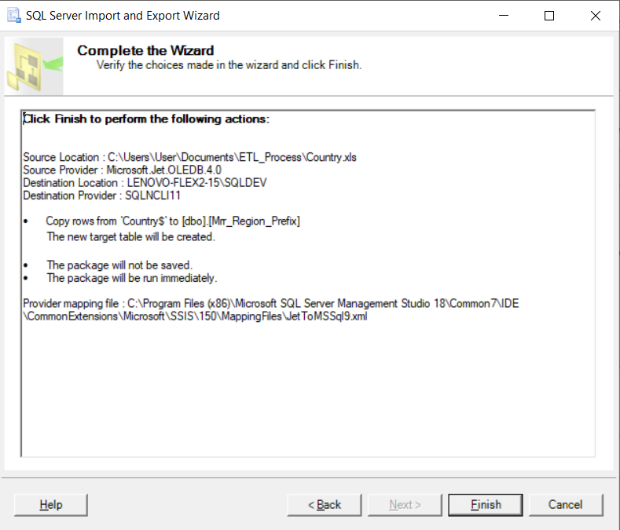


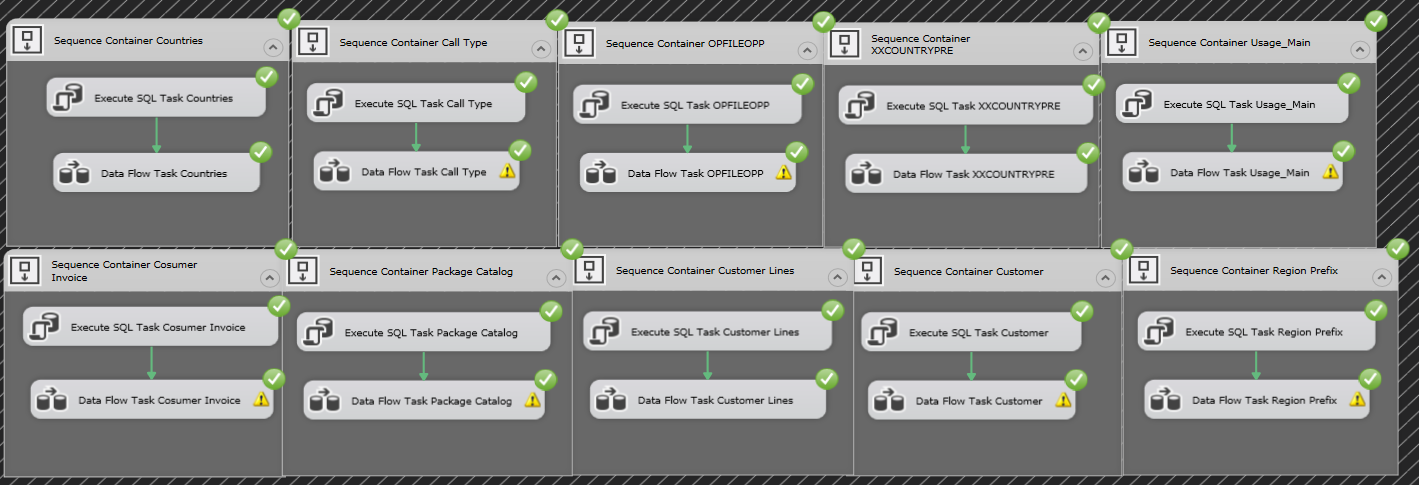
Uploading Excel to SSMS: Table Region Prefix:

1. 2.

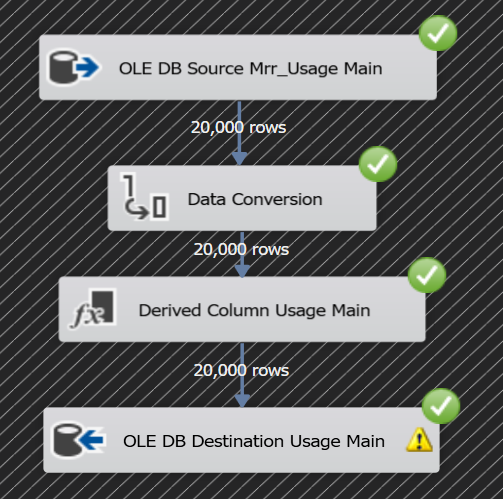
3. 4.

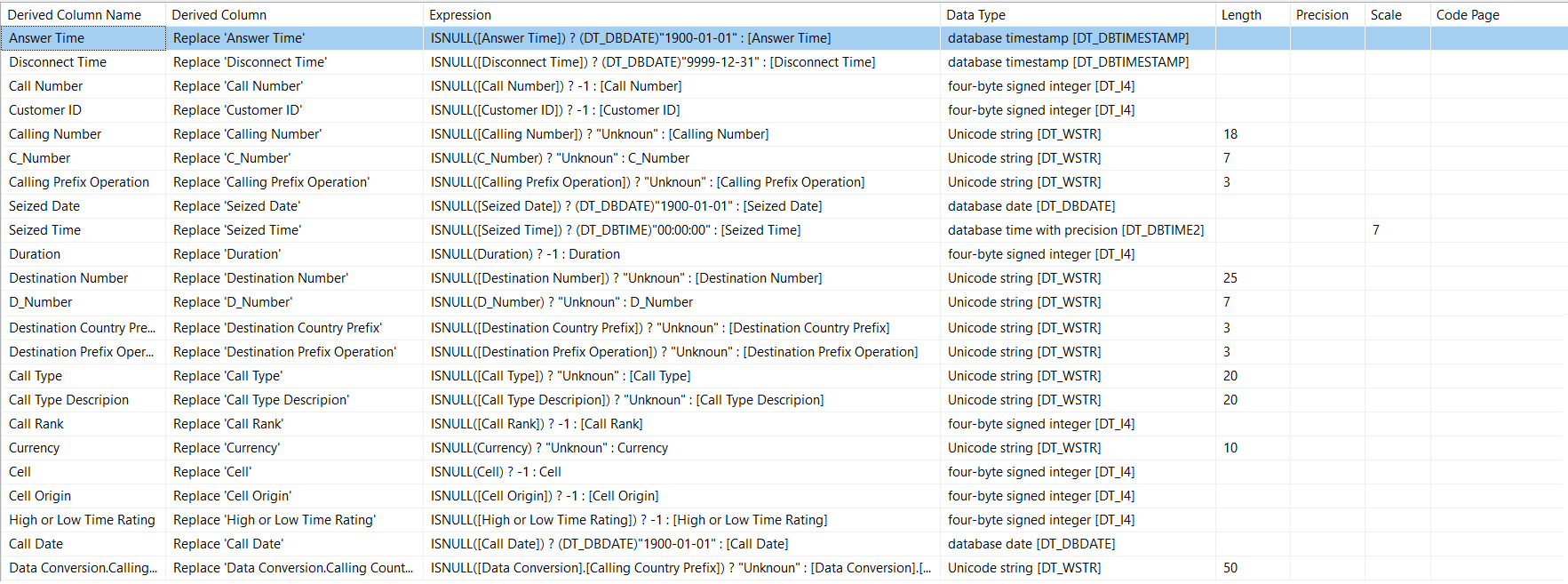
**5. 6.

7.

Process ETL – Step Mirror to Stage:

Process ETL – Table errors handling – For example we show the Usage Main Table:



Derived Column - Usage Main Table:

Scripts of Process Mirror to Stage:

--Mrr\_Customer

select \*

from

(select \*, right(CUST\_NUMBER,7) 'Number', case when CUST\_NUMBER like '+\_\_\_%' then SUBSTRING(CUST\_NUMBER,2,3) end 'Prefix country',

case when CUST\_NUMBER like '+\_\_\_%' then SUBSTRING(CUST\_NUMBER,5,2) end 'Prefix Operation'

from Mrr\_Customer

where CUST\_NUMBER like '+972%'

Union all

select \*, right(CUST\_NUMBER,7) 'Number', case when CUST\_NUMBER like '+\_%' then SUBSTRING(CUST\_NUMBER,2,1) end 'Prefix country',

case when CUST\_NUMBER like '+\_%' then SUBSTRING(CUST\_NUMBER,3,3) end 'Prefix Operation'

from Mrr\_Customer C

where CUST\_NUMBER like '+1%') tab

order by customer\_id

--Mrr\_Customer\_Invoice

select \*, right(PHONE\_NO,7) 'Number', case when PHONE\_NO like '+\_\_\_%' then SUBSTRING(PHONE\_NO,2,3) end 'Prefix country', case when PHONE\_NO like '+\_\_\_%' then SUBSTRING(PHONE\_NO,5,2) end 'Prefix Operation'

from Mrr\_Customer\_Invoice

order by INVOICE\_NUM

--Mrr\_Customer\_Lines

select \*, right(PHONE\_NO,7) 'Number', case when PHONE\_NO like '+\_\_\_%' then SUBSTRING(PHONE\_NO,2,3) end 'Prefix country', case when PHONE\_NO like '+\_\_\_%' then SUBSTRING(PHONE\_NO,5,2) end 'Prefix Operation'

from Mrr\_Customer\_Lines

where PHONE\_NO like '+972%'

Union all

select \*, right(PHONE\_NO,7) 'Number', case when PHONE\_NO like '+\_%' then SUBSTRING(PHONE\_NO,2,1) end 'Prefix country',

case when PHONE\_NO like '+\_%' then SUBSTRING(PHONE\_NO,3,3) end 'Prefix Operation'

from Mrr\_Customer\_Lines

where PHONE\_NO like '+1%'

--Mrr\_Usage\_Main

select \*

from

(select CALL\_NO as [Call Number], CUST\_ID as [Customer ID], CALLING\_NO as [Calling Number], right(CALLING\_NO,7) as [C\_Number], case when CALLING\_NO like '+\_\_\_%' then SUBSTRING(CALLING\_NO,2,3) end [Calling Country Prefix], case when CALLING\_NO like '+\_\_\_%' then SUBSTRING(CALLING\_NO,5,2) end [Calling Prefix Operation], ANSWER\_TIME as [Answer Time], convert(date,SEIZED\_TIME) as [Seized Date], convert(time,(convert(smalldatetime,SEIZED\_TIME))) as [Seized Time], DISCONNECT\_TIME as [Disconnect Time], DURATION as [Duration], DES\_NO as [Destination Number], right(DES\_NO,7) as [D\_Number], case when DES\_NO like '+\_\_\_%' then SUBSTRING(DES\_NO,2,3) end [Destination Country Prefix], case when DES\_NO like '+\_\_\_%' then SUBSTRING(DES\_NO,5,2) end [Destination Prefix Operation], CALL\_TYPE as [Call Type], PROD\_TYPE as [Call Type Descripion], RATED\_AMNT as [Call Rank], RATED\_CURR\_CODE as [Currency], CELL as [Cell], CELL\_ORIGIN as [Cell Origin], HIGH\_LOW\_RATE as [High or Low Time Rating], convert(date,CALL\_DATETIME) as [Call Date]

from Mrr\_Usage\_Main

where CALLING\_NO like '+972%' and DES\_NO like '+972%'

union all

select CALL\_NO as [Call Number], CUST\_ID as [Customer ID], CALLING\_NO as [Calling Number], right(CALLING\_NO,7) as [C\_Number], case when CALLING\_NO like '+\_%' then SUBSTRING(CALLING\_NO,2,1) end [Calling Country Prefix], case when CALLING\_NO like '+\_%' then SUBSTRING(CALLING\_NO,3,3) end [Calling Prefix Operation], ANSWER\_TIME as [Answer Time], convert(date,SEIZED\_TIME) as [Seized Date], convert(time,(convert(smalldatetime,SEIZED\_TIME))) as [Seized Time], DISCONNECT\_TIME as [Disconnect Time], DURATION as [Duration], DES\_NO as [Destination Number], right(DES\_NO,7) as [D\_Number], case when DES\_NO like '+\_\_\_%' then SUBSTRING(DES\_NO,2,3) end [Destination Country Prefix], case when DES\_NO like '+\_\_\_%' then SUBSTRING(DES\_NO,5,2) end [Destination Prefix Operation], CALL\_TYPE as [Call Type], PROD\_TYPE as [Call Type Descripion], RATED\_AMNT as [Call Rank], RATED\_CURR\_CODE as [Currency], CELL as [Cell], CELL\_ORIGIN as [Cell Origin], HIGH\_LOW\_RATE as [High or Low Time Rating], convert(date,CALL\_DATETIME) as [Call Date]

from Mrr\_Usage\_Main

where CALLING\_NO like '+1%' and DES\_NO like '+972%'

union all

select CALL\_NO as [Call Number], CUST\_ID as [Customer ID], CALLING\_NO as [Calling Number], right(CALLING\_NO,7) as [C\_Number], case when CALLING\_NO like '+\_\_\_%' then SUBSTRING(CALLING\_NO,2,3) end [Calling Country Prefix], case when CALLING\_NO like '+\_\_\_%' then SUBSTRING(CALLING\_NO,5,2) end [Calling Prefix Operation], ANSWER\_TIME as [Answer Time], convert(date,SEIZED\_TIME) as [Seized Date], convert(time,(convert(smalldatetime,SEIZED\_TIME))) as [Seized Time], DISCONNECT\_TIME as [Disconnect Time], DURATION as [Duration], DES\_NO as [Destination Number], right(DES\_NO,7) as [D\_Number], case when DES\_NO like '+\_%' then SUBSTRING(DES\_NO,2,1) end [Destination Country Prefix], case when DES\_NO like '+\_%' then SUBSTRING(DES\_NO,3,3) end [Destination Prefix Operation], CALL\_TYPE as [Call Type], PROD\_TYPE as [Call Type Descripion], RATED\_AMNT as [Call Rank], RATED\_CURR\_CODE as [Currency], CELL as [Cell], CELL\_ORIGIN as [Cell Origin], HIGH\_LOW\_RATE as [High or Low Time Rating], convert(date,CALL\_DATETIME) as [Call Date]

from Mrr\_Usage\_Main

where CALLING\_NO like '+972%' and DES\_NO like '+1%'

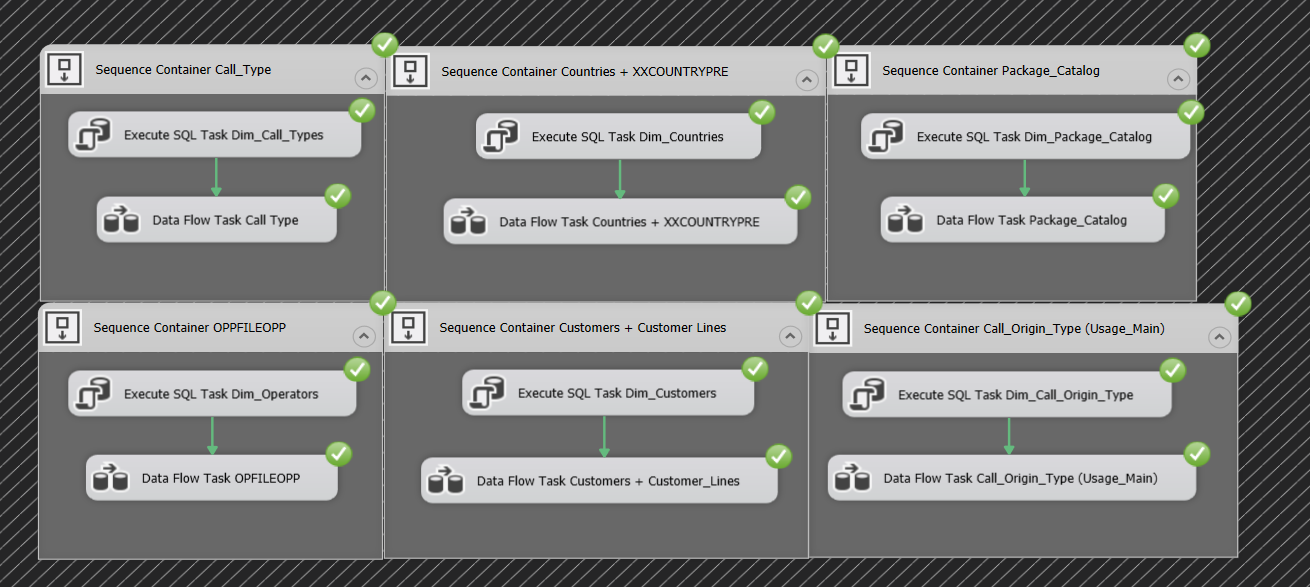
union all

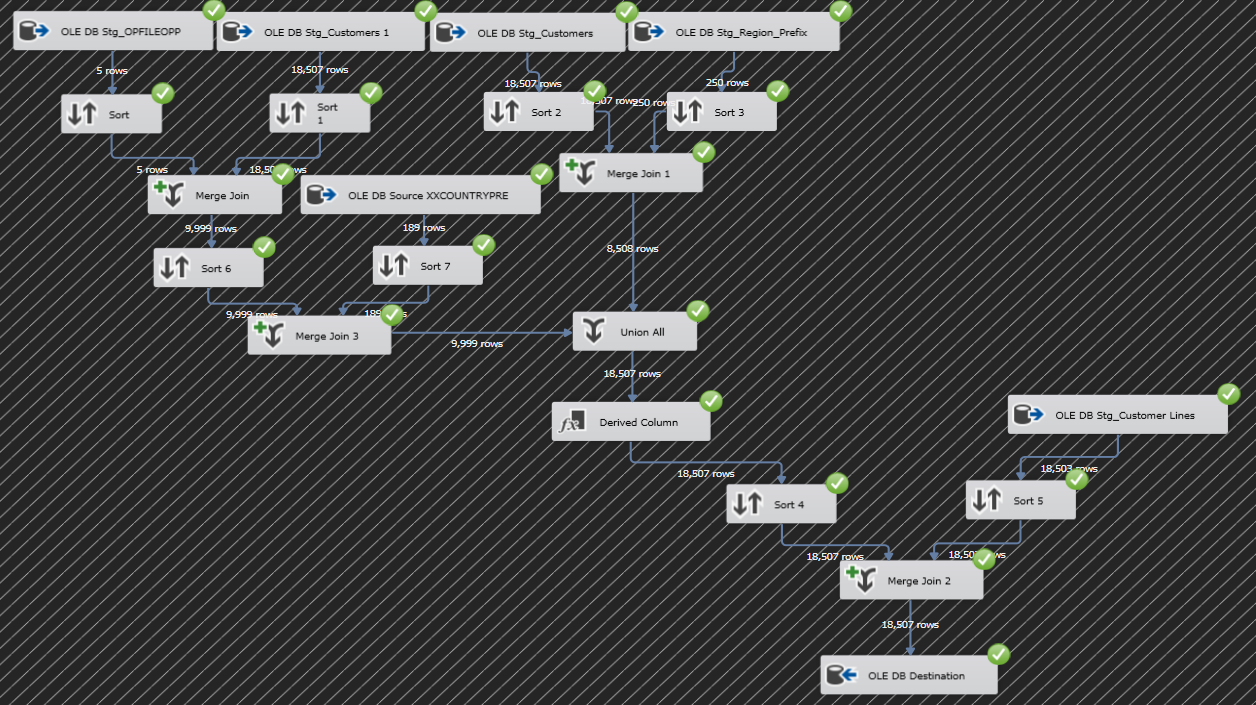
select CALL\_NO as [Call Number], CUST\_ID as [Customer ID], CALLING\_NO as [Calling Number], right(CALLING\_NO,7) as [C\_Number], case when CALLING\_NO like '+\_%' then SUBSTRING(CALLING\_NO,2,1) end [Calling Country Prefix], case when CALLING\_NO like '+\_%' then SUBSTRING(CALLING\_NO,3,3) end [Calling Prefix Operation], ANSWER\_TIME as [Answer Time], convert(date,SEIZED\_TIME) as [Seized Date], convert(time,(convert(smalldatetime,SEIZED\_TIME))) as [Seized Time], DISCONNECT\_TIME as [Disconnect Time], DURATION as [Duration], DES\_NO as [Destination Number], right(DES\_NO,7) as [D\_Number], case when DES\_NO like '+\_%' then SUBSTRING(DES\_NO,2,1) end [Destination Country Prefix], case when DES\_NO like '+\_%' then SUBSTRING(DES\_NO,3,3) end [Destination Prefix Operation], CALL\_TYPE as [Call Type], PROD\_TYPE as [Call Type Descripion], RATED\_AMNT as [Call Rank], RATED\_CURR\_CODE as [Currency], CELL as [Cell], CELL\_ORIGIN as [Cell Origin], HIGH\_LOW\_RATE as [High or Low Time Rating], convert(date,CALL\_DATETIME) as [Call Date]

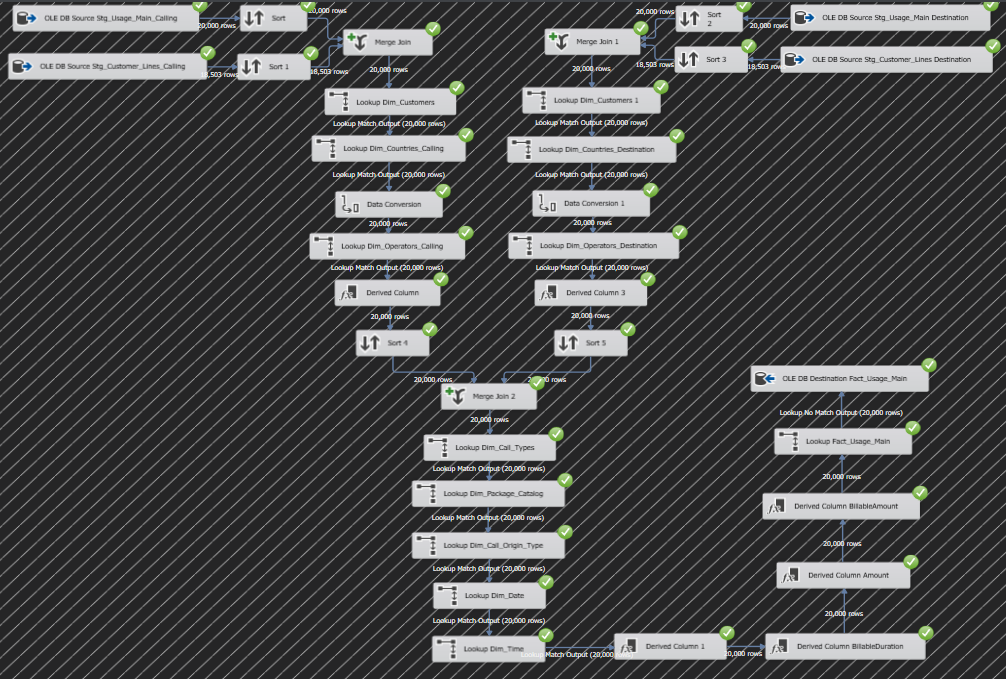
from Mrr\_Usage\_Main

where CALLING\_NO like '+1%' and DES\_NO like '+1%') tab

order by [Call Number]

Process ETL – Step Stage to DW:

Process ETL - Integration of Countries and Prefix Operators tables with Customers table:

Structure and Process ETL in Fact DW: