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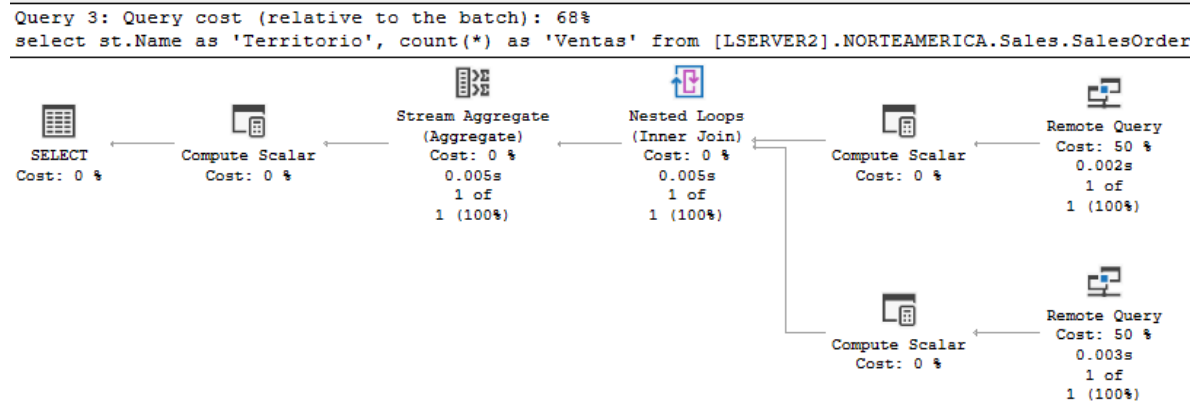
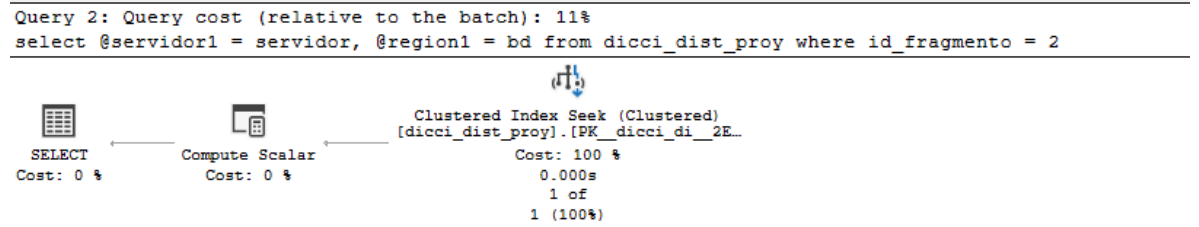
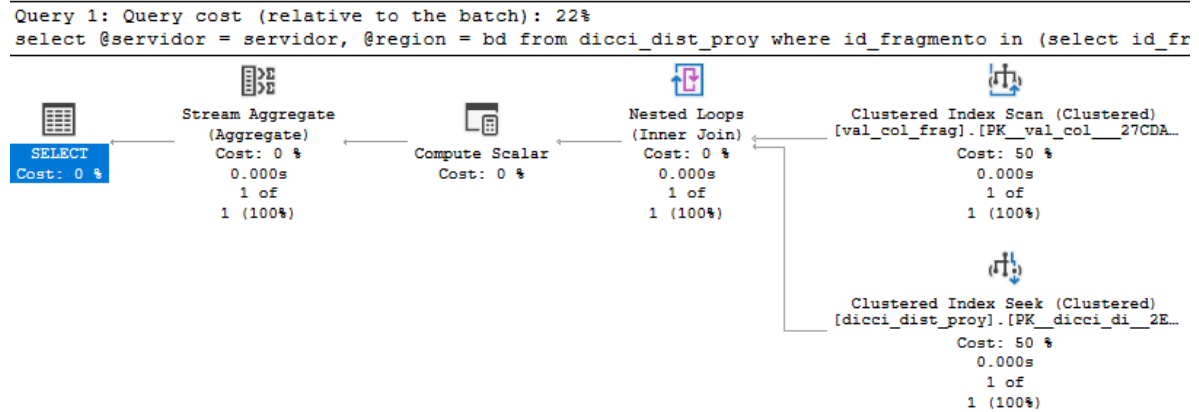
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Planes de Ejecución

Consultas por fragmentación

Consulta 1

Listar el número de ventas por territorio

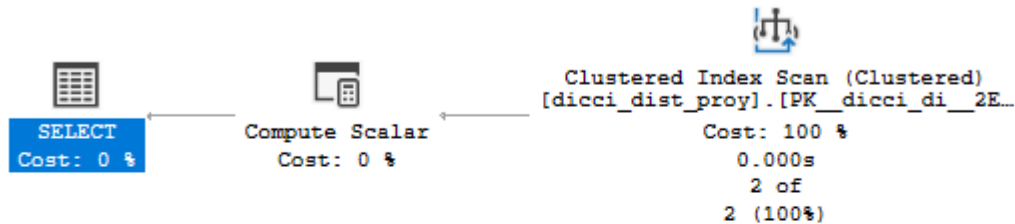


Consulta 2

Listar el número de ventas por tienda

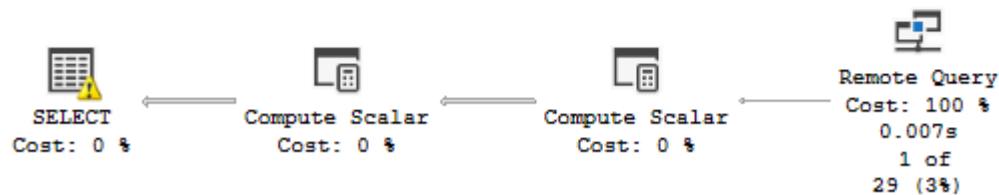
Query 1: Query cost (relative to the batch): 7%

select @region = bd from dicci_dist_proy where servidor = @servidor



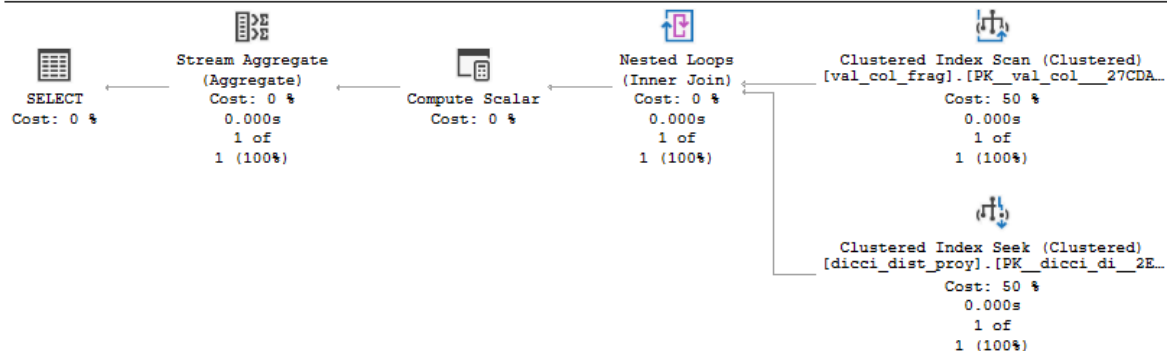
Query 2: Query cost (relative to the batch): 39%

select @territorioOUT = TerritoryID from [LSERVER2].[AdventureWorks2008].[Territory]



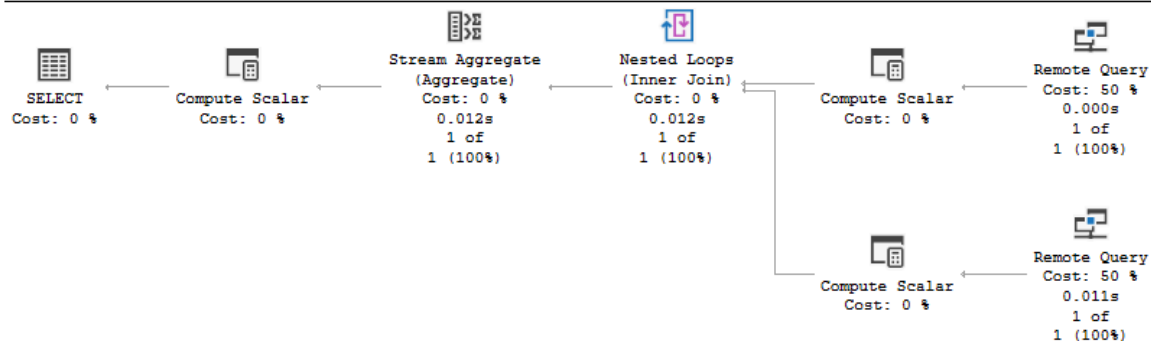
Query 3: Query cost (relative to the batch): 13%

select @servidor2 = servidor, @region2 = bd from dicci_dist_proy where id_fragmento in (select id_fragmento from dicci_dist_proy where id_fragmento < 1000000000)



Query 4: Query cost (relative to the batch): 41%

select st.Name as 'Territorio', count(*) as 'Ventas' from [SERVERTEST].EUROPACIFICO.Sales.SalesOrderHeader as st

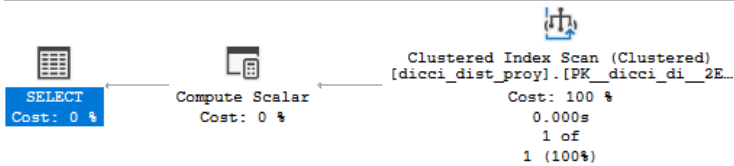


Consulta 3

Listar el total de clientes que pertenecen a cada territorio

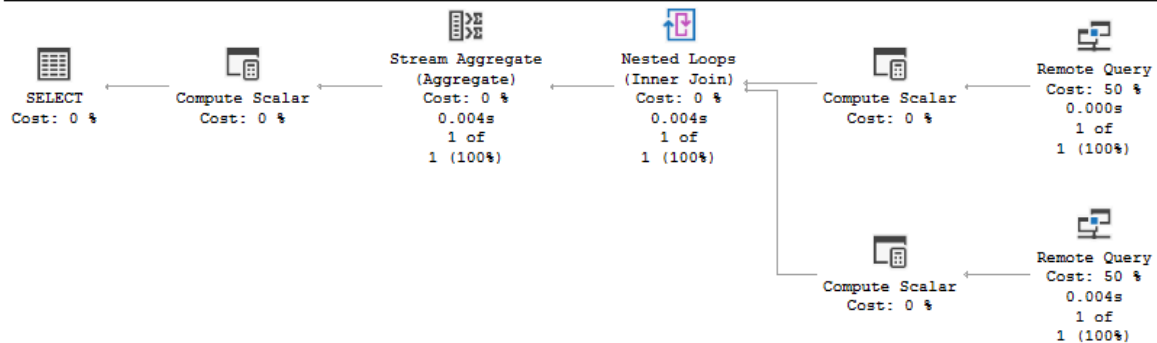
Query 1: Query cost (relative to the batch): 14%

```
select @servidor = servidor, @region = bd from dicci_dist_proy where bd = 'AdventureWorks2019'
```



Query 2: Query cost (relative to the batch): 86%

```
select st.Name as 'Territorio', count(*) as 'Total Clientes' from [LSERVER2].AdventureWorks2019.Sa
```

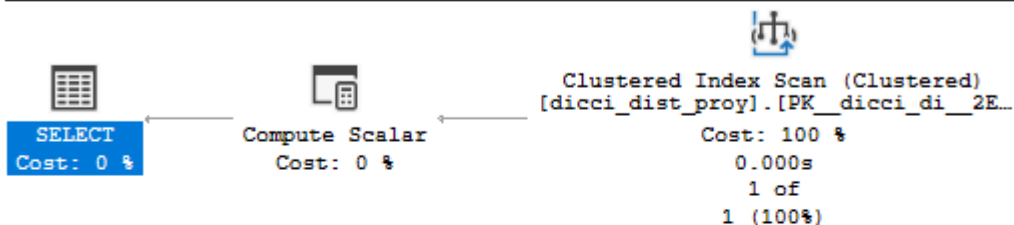


Consulta 4

Actualizar la oferta de llantas de montaña con un descuento del 40%

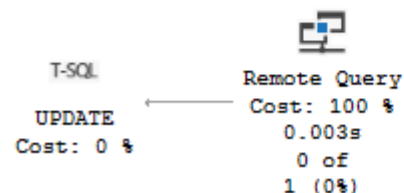
Query 1: Query cost (relative to the batch): 24%

```
select @servidor = servidor from dicci_dist_proy where bd = @region
```



Query 2: Query cost (relative to the batch): 76%

```
update [LSERVER2].[AdventureWorks2019].Sales.SpecialOffer set Discou
```

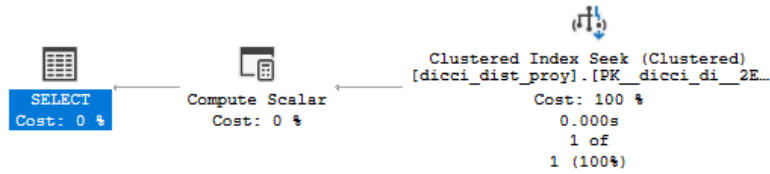


Consulta 5

Listar las ordenes realizadas debidas a anuncio de revista

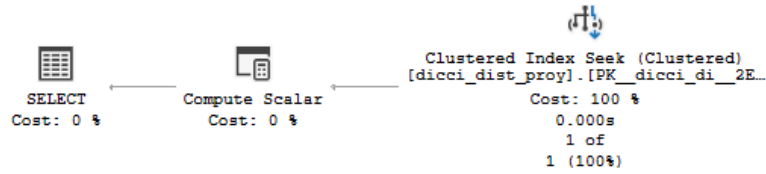
Query 1: Query cost (relative to the batch): 2%

select @servidor = servidor, @region = bd from dicci_dist_proy where id_fragmento = 1



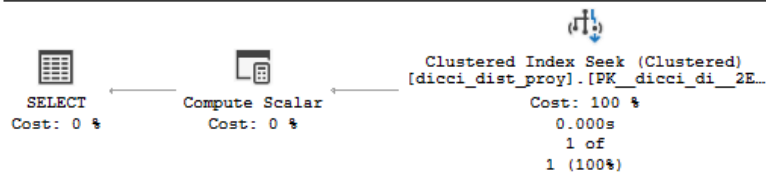
Query 2: Query cost (relative to the batch): 2%

select @servidor1 = servidor, @region1 = bd from dicci_dist_proy where id_fragmento = 3



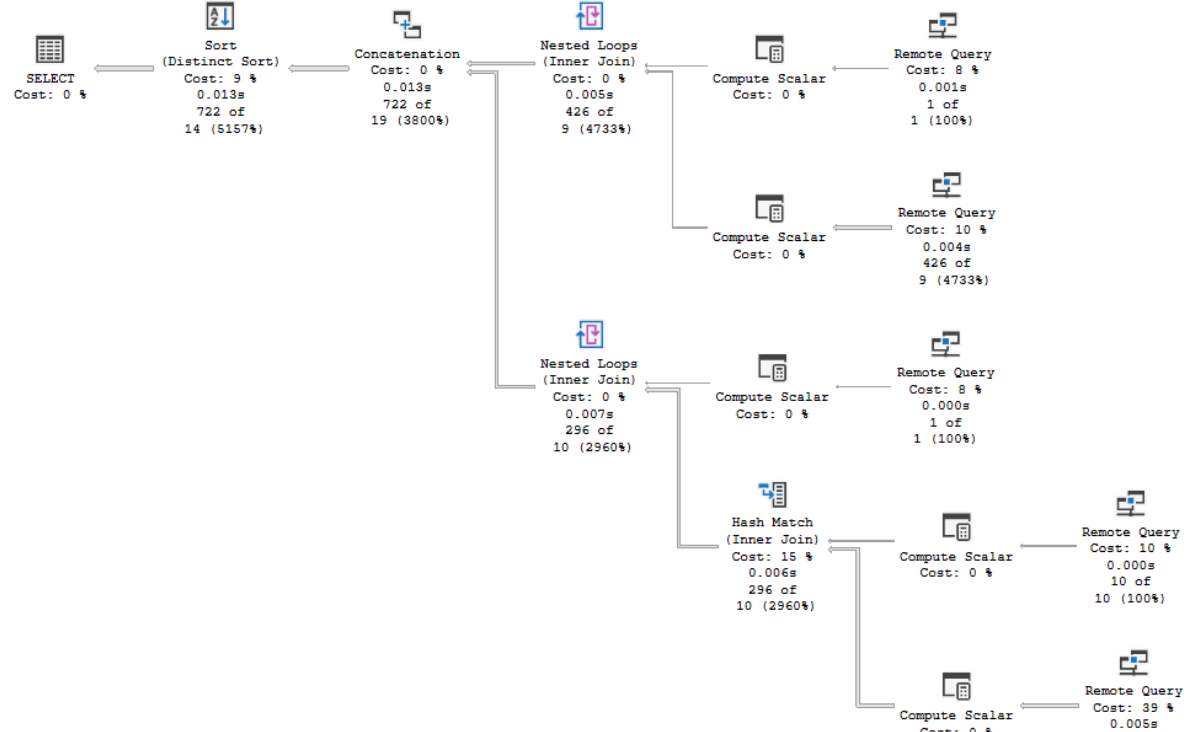
Query 3: Query cost (relative to the batch): 2%

select @servidor2 = servidor, @region2 = bd from dicci_dist_proy where id_fragmento = 2



Query 4: Query cost (relative to the batch): 93%

select soh.SalesOrderID as 'Orden', sr.Name as 'Razon', st.Name as 'Territorio' from [LSERVER2].NORTEAMERICA.Sales.S

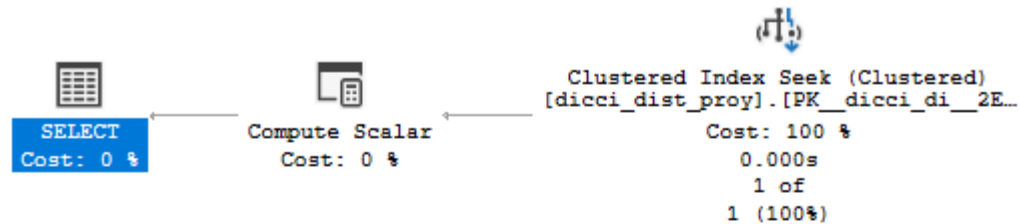


Consulta 6

Listar el total de ordenes hechas por cada representante de ventas

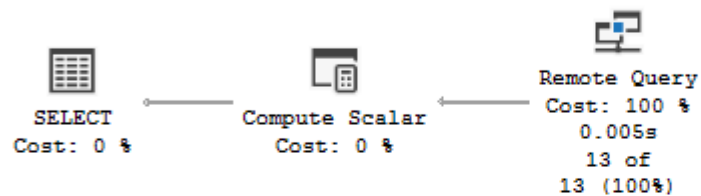
Query 1: Query cost (relative to the batch): 5%

select @servidor = servidor, @nom_bd = bd from dicci_dist_proy wh



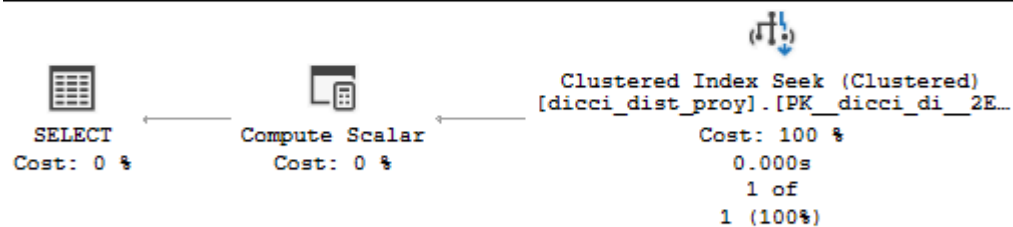
Query 2: Query cost (relative to the batch): 20%

select SalesPersonID as "Representante de Ventas", count(*) as "O



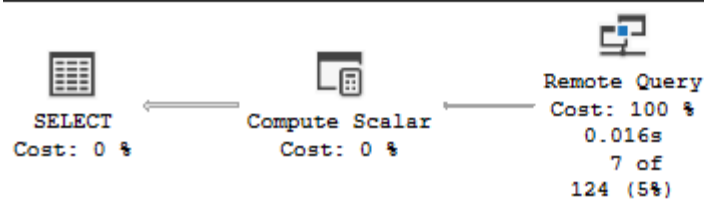
Query 3: Query cost (relative to the batch): 5%

select @servidor = servidor, @nom_bd = bd from dicci_dist_proy wh



Query 4: Query cost (relative to the batch): 71%

select SalesPersonID as "Representante de Ventas", count(*) as "O

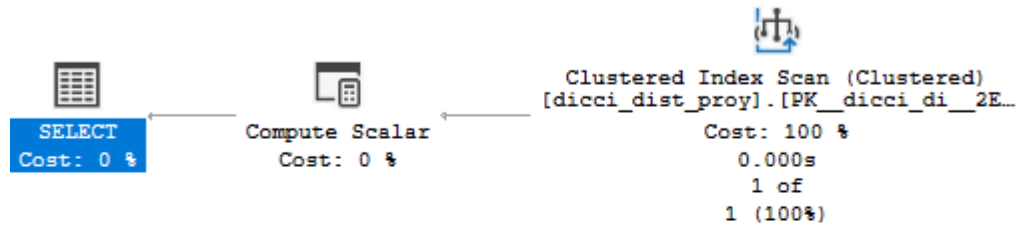


Consulta 7

Agregar el producto "HL Road Frame - Black, 58" a la oferta "Descuento por volumen 11 a 14"

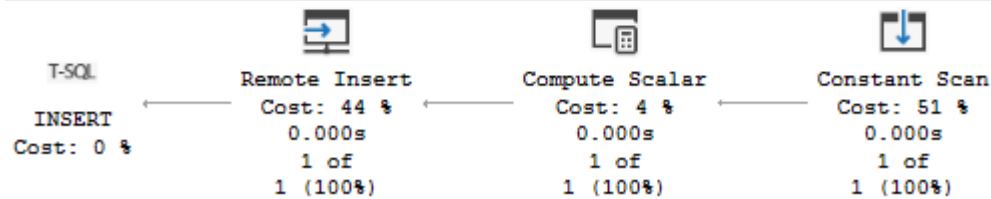
Query 1: Query cost (relative to the batch): 100%

select @servidor = servidor from dicci_dist_proy where bd = @region



Query 2: Query cost (relative to the batch): 0%

insert into [LSERVER2].[AdventureWorks2019].Sales.SpecialOfferProduc

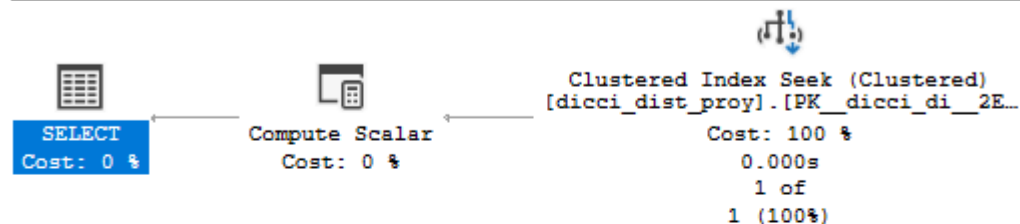


Consulta 8

La suma de total de venta por PersonID

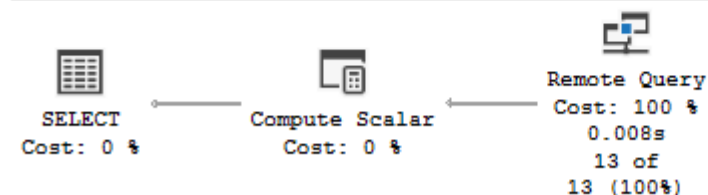
Query 1: Query cost (relative to the batch): 10%

select @servidor = servidor, @nom_bd = bd from dicci_dist_proy w



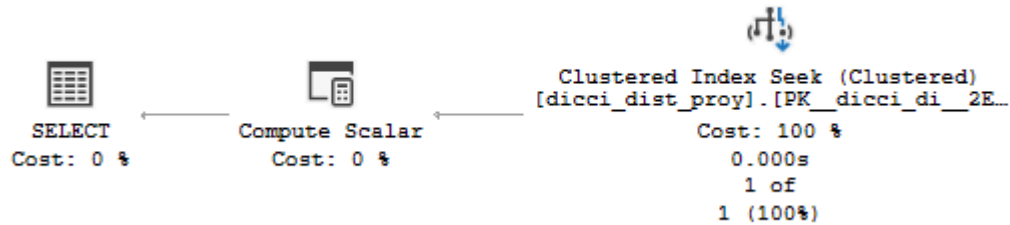
Query 2: Query cost (relative to the batch): 43%

select 'NORTEAMERICA' as Territorio, SalesPersonID as "Represent



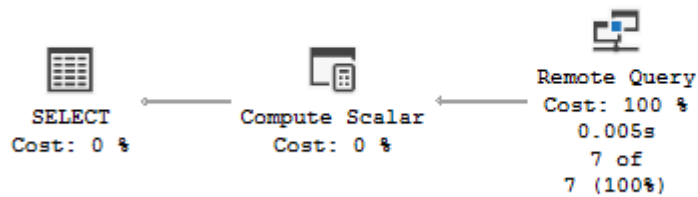
Query 3: Query cost (relative to the batch): 10%

select @servidor = servidor, @nom_bd = bd from dicci_dist_proy w



Query 4: Query cost (relative to the batch): 37%

select 'EUROPACIFICO' as Territorio, SalesPersonID as "Represent

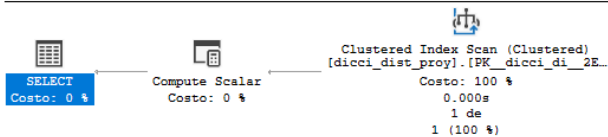


Consulta 9

Listar el producto más vendido por cada categoría

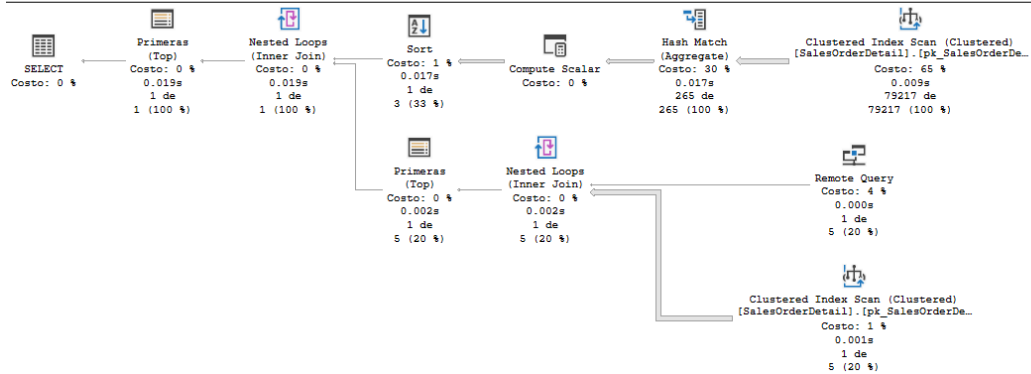
Consulta 1: Costo de la consulta (relativo al lote): 0 %

select @servidor = servidor from dicci_dist_proy where bd = @nom_b

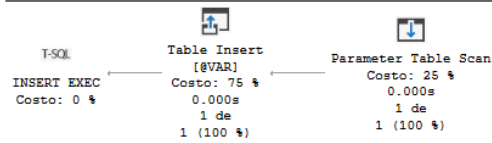


Consulta 2: Costo de la consulta (relativo al lote): 84 %

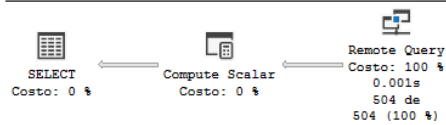
Select top 1 ProductID, count(ProductID) as Total_ordenes from Sales.SalesOrderDetail where ProductID in (Select ProductID from (Select tbl1...



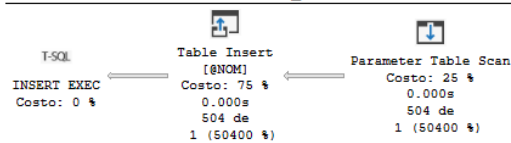
Consulta 3: Costo de la consulta (relativo al lote): 1 %
insert into @VAR exec sys.sp_executesql @sql



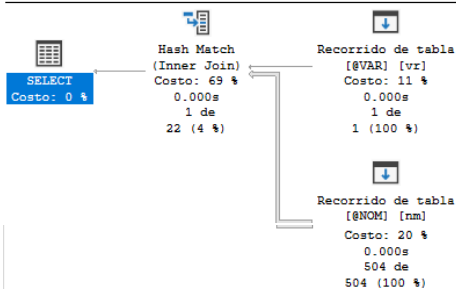
Consulta 4: Costo de la consulta (relativo al lote): 12 %
select ProductID, Name from LSERVER2.AdventureWorks2019.Production.Product



Consulta 5: Costo de la consulta (relativo al lote): 1 %
insert into @NOM exec sys.sp_executesql @sql2



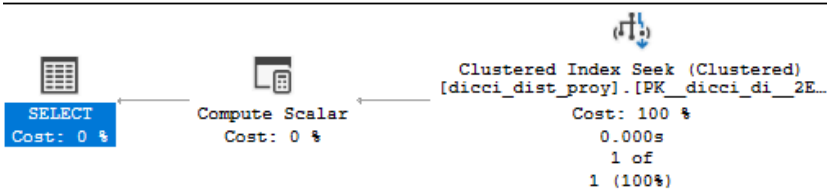
Consulta 6: Costo de la consulta (relativo al lote): 2 %
Select vr.ProductoID, nm.Nombre, vr.Total_Ordenes from @VAR vr inner join @NOM nm on vr.ProductoID = nm.ProductoID



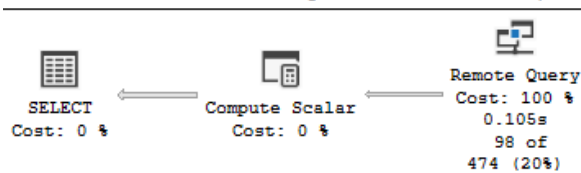
Consulta 10

Listar los productos con ofertas en el territorio 5

Query 1: Query cost (relative to the batch): 2 %
select @servidor = servidor, @nom_bd = bd from dicci_dist_proy

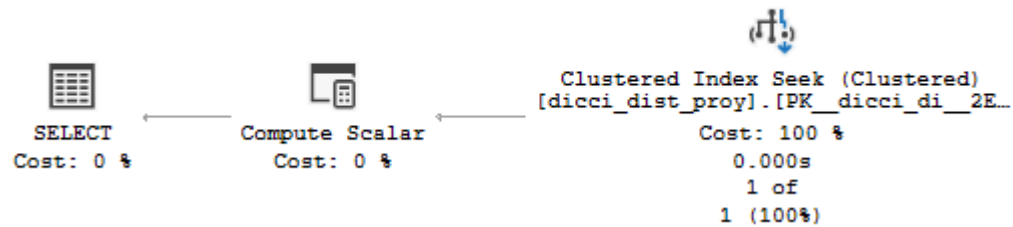


Query 2: Query cost (relative to the batch): 91 %
select Tabla2.TerritoryID as Territorio, Tabla1.ProductID, Tab



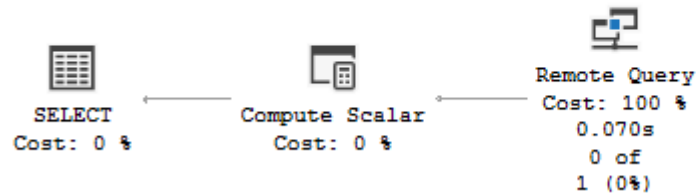
Query 3: Query cost (relative to the batch): 2%

```
select @servidor = servidor, @nom_bd = bd from dicci_dist_proy
```



Query 4: Query cost (relative to the batch): 6%

```
select Tabla2.TerritoryID as Territorio, Tabla1.ProductID, Tab
```

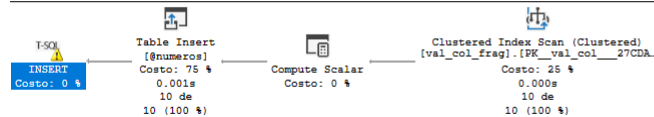


Consulta 11

Listar los cinco productos más solicitados en cada uno de los territorios

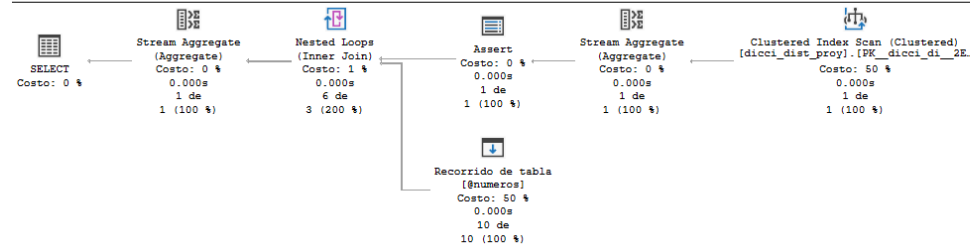
Consulta 1: Costo de la consulta (relativo al lote): 4 %

```
insert into @numeros select id_fragmento ,CAST(val_col as int) from val_col_frag
```



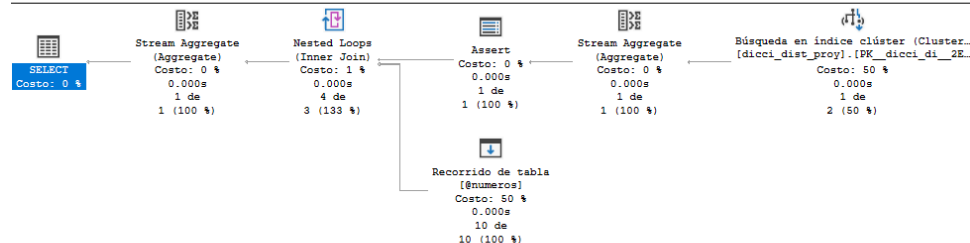
Consulta 2: Costo de la consulta (relativo al lote): 2 %

```
select @i1 = max(id_territorio), @i2 = min(id_territorio) from @numeros where idfragmento = (select id_fragmento from dicci_dist_proy where...
```



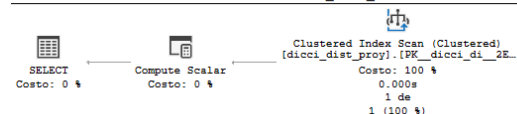
Consulta 3: Costo de la consulta (relativo al lote): 2 %

```
select @i3 = max(id_territorio), @i4 = min(id_territorio) from @numeros where idfragmento = (select id_fragmento from dicci_dist_proy where...
```

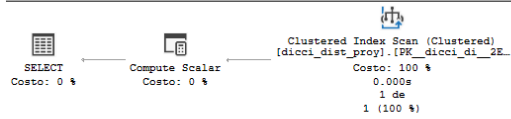


Consulta 4: Costo de la consulta (relativo al lote): 1 %

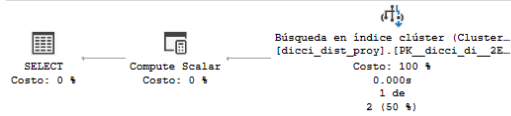
```
select @servidor = servidor from dicci_dist_proy where bd = @nom_b
```



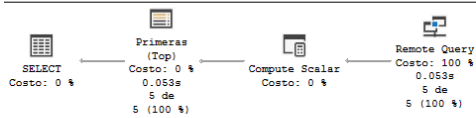
Consulta 4: Costo de la consulta (relativo al lote): 1 %
select @servidor = servidor from dicci_dist_proy where bd = @nom_b



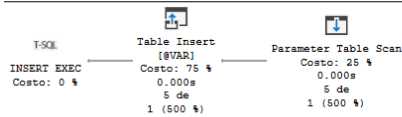
Consulta 5: Costo de la consulta (relativo al lote): 1 %
select @servidor2 = servidor, @nom_b2 = bd from dicci_dist_proy where bd != @nom_bd and id_fragmento != 2



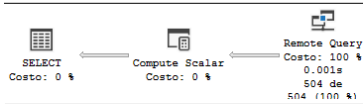
Consulta 6: Costo de la consulta (relativo al lote): 26 %
select top 5 sod.ProductID, count(ProductID) as Total_compras from SERVERTEST.EUROPACIFICO.Sales.SalesOrderDetail sod inner join SERVERTEST...



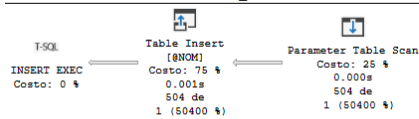
Consulta 7: Costo de la consulta (relativo al lote): 4 %
insert into @VAR exec sys.sp_executesql @sql



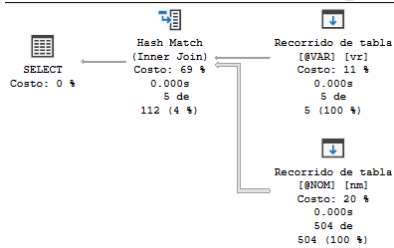
Consulta 8: Costo de la consulta (relativo al lote): 49 %
select ProductID, Name from LSERVER2.AdventureWorks2019.Production.Product



Consulta 9: Costo de la consulta (relativo al lote): 4 %
insert into @NOM exec sys.sp_executesql @sql2



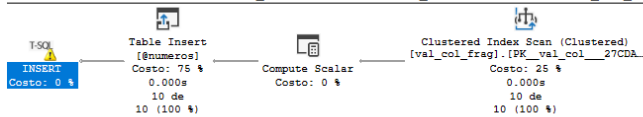
Consulta 10: Costo de la consulta (relativo al lote): 8 %
Select vr.ProductoID, nm.Nombre, vr.Total_Compras from @VAR vr inner join @NOM nm on vr.ProductoID = nm.ProductoID



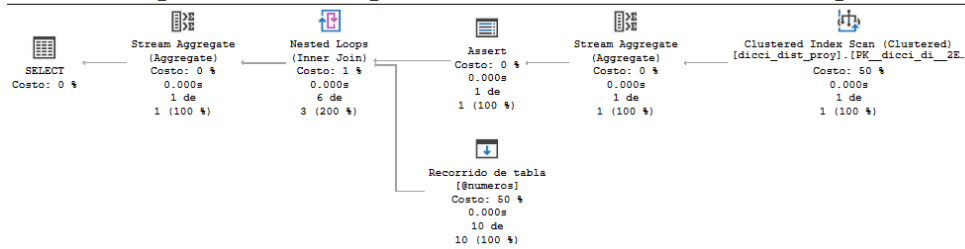
Consulta 12

Listar el producto menos solicitado por cada territorio

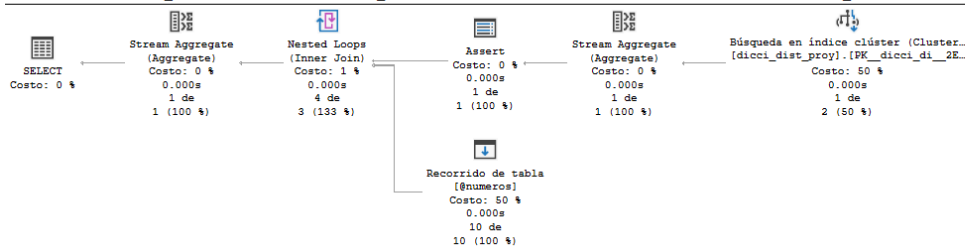
Consulta 1: Costo de la consulta (relativo al lote): 4 %
 insert into @numeros select id_fragmento ,CAST(val_col as int) from val_col_frag



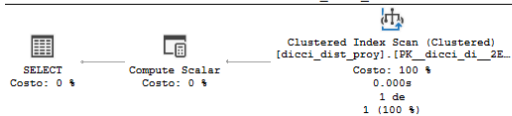
Consulta 2: Costo de la consulta (relativo al lote): 2 %
 select @i = max(id_territorio), @i2 = min(id_territorio) from @numeros where idfragmento = (select id_fragmento from dicci_dist_proy where...



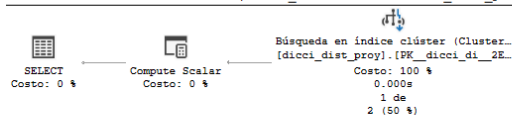
Consulta 3: Costo de la consulta (relativo al lote): 2 %
 select @i3 = max(id_territorio), @i4 = min(id_territorio) from @numeros where idfragmento = (select id_fragmento from dicci_dist_proy where...



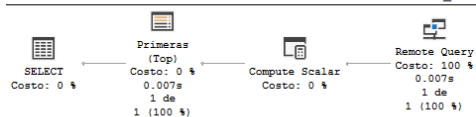
Consulta 4: Costo de la consulta (relativo al lote): 1 %
 select @servidor = servidor from dicci_dist_proy where bd = @nom_b



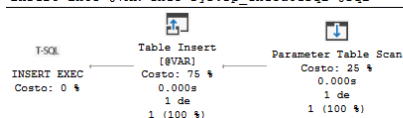
Consulta 5: Costo de la consulta (relativo al lote): 1 %
 select @servidor2 = servidor, @nom_b2 = bd from dicci_dist_proy where bd != @nom_bd and id_fragmento != 2

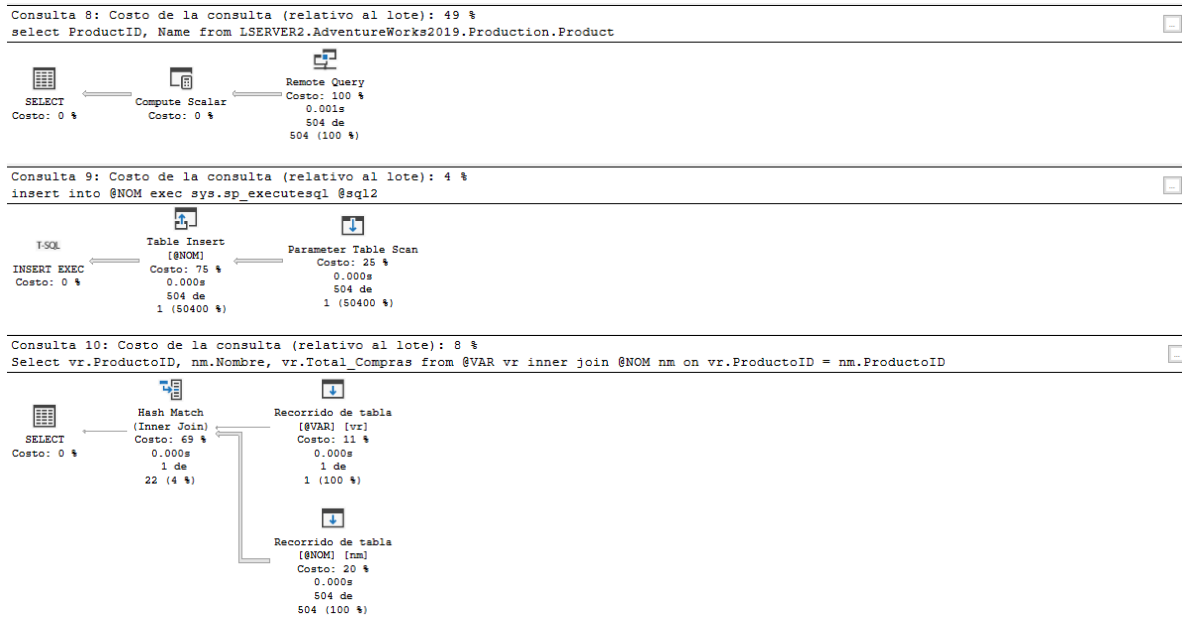


Consulta 6: Costo de la consulta (relativo al lote): 26 %
 select top 1 sod.ProductID, count(ProductID) as Total_compras from SERVERTEST.EUROPACIFICO.Sales.SalesOrderDetail sod inner join SERVERTEST...



Consulta 7: Costo de la consulta (relativo al lote): 4 %
 insert into @VAR exec sys.sp_executesql @sql

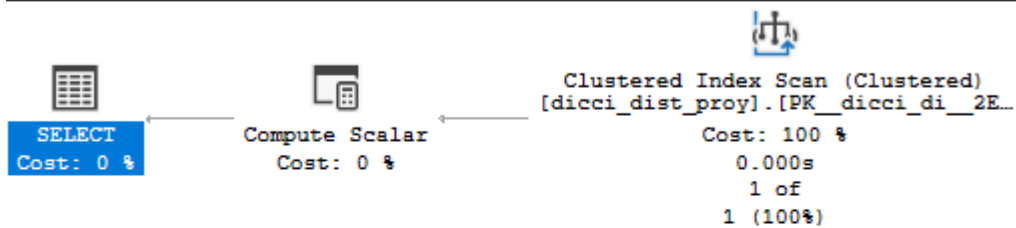




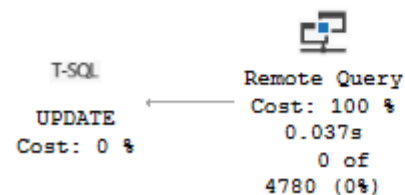
Consulta 13

Actualizar nombre de tarjeta de crédito SuperiorCard a SCard (Posible optimización)

Query 1: Query cost (relative to the batch): 0%
 select @servidor = servidor, @nom_bd = bd from dicci_dist_proy



Query 2: Query cost (relative to the batch): 100%
 Update LSERVER2.AdventureWorks2019.Sales.CreditCard set CardTy

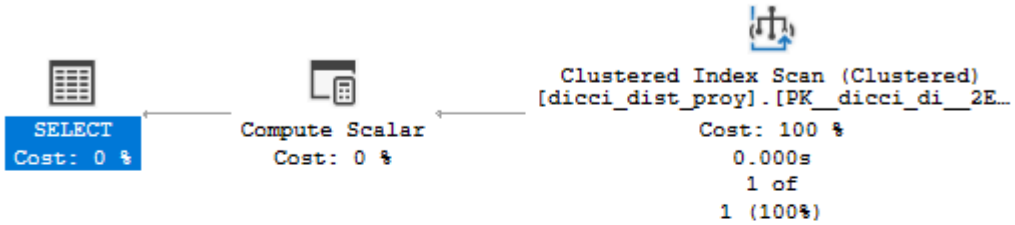


Consulta 14

Listado de registros donde el ID de territorio de clientes es 1 y 3 (Posible optimización)

Query 1: Query cost (relative to the batch): 0%

select @servidor = servidor, @nom_bd = bd from dicci_dist_proy w



Query 2: Query cost (relative to the batch): 100%

select * from LSERVER2.AdventureWorks2019.Sales.Customer where T

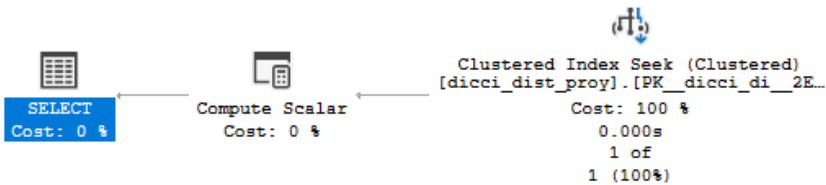


Consulta 15

Listado de ventas con costo mayor a 2000 y menor a 4000

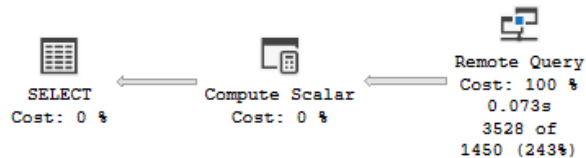
Query 1: Query cost (relative to the batch): 0%

select @servidor = servidor, @nom_bd = bd from dicci_dist_proy where id_fragmento = @i



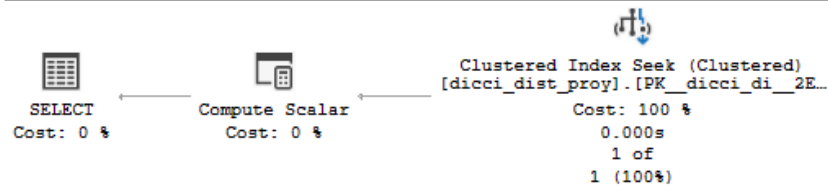
Query 2: Query cost (relative to the batch): 51%

select * from LSERVER2.NORTEAMERICA.Sales.SalesOrderHeader where TotalDue > 2000 and To



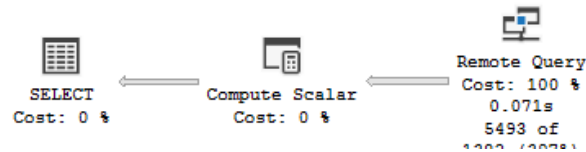
Query 3: Query cost (relative to the batch): 0%

```
select @servidor = servidor, @nom_bd = bd from dicci_dist_proy where id_fragmento = @i
```



Query 4: Query cost (relative to the batch): 49%

```
select * from SERVERTEST.EUROPACIFICO.Sales.SalesOrderHeader where TotalDue > 2000 and
```

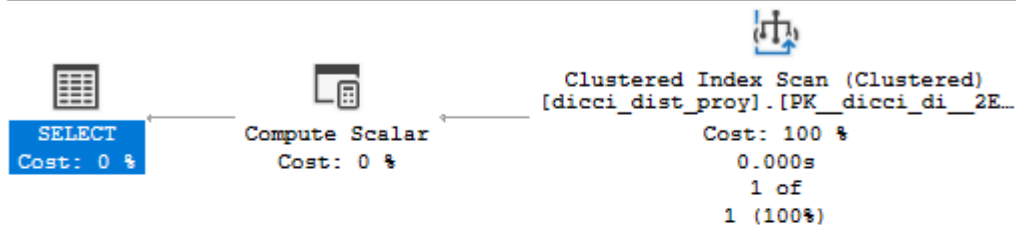


Consulta 16

Listado de cambio de moneda de USD a MXN

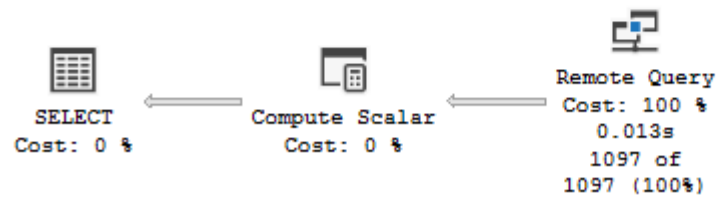
Query 1: Query cost (relative to the batch): 1%

```
select @servidor = servidor, @nom_bd = bd from dicci_dist_proy
```



Query 2: Query cost (relative to the batch): 99%

```
select * from LSERVER2.AdventureWorks2019.Sales.CurrencyRate w
```



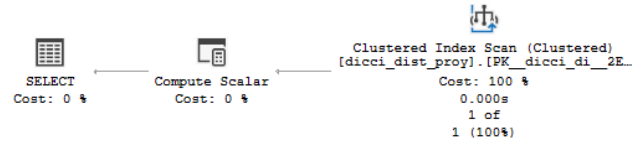
Consultas por segmento

Consulta 1

Listar las ordenes que utilizan el método de envío 'CARGO TRANSPORT 5' con su tarifa de envío.

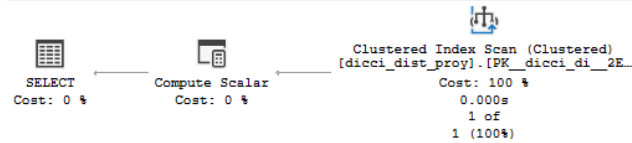
Query 1: Query cost (relative to the batch): 0%

```
select @servidor = servidor from dicci_dist_proy where bd = @region
```



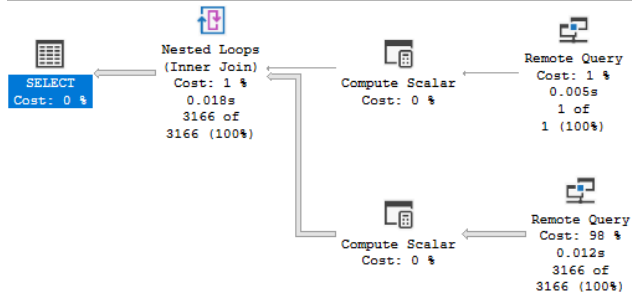
Query 2: Query cost (relative to the batch): 0%

```
select @region = bd from dicci_dist_proy where servidor = @servido
```



Query 3: Query cost (relative to the batch): 99%

```
select t1.SalesOrderID, t1.ShipDate, t1.ShipToAddressID, t1.ShipMe
```

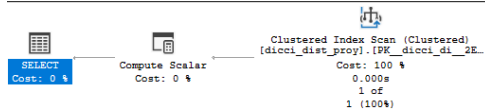


Consulta 2

Listar los datos de los 5 representantes de ventas con mayor número de ordenes realizadas.

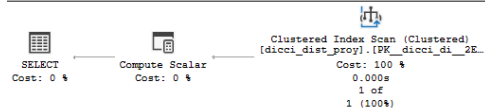
Query 1: Query cost (relative to the batch): 0%

```
select @servidor = servidor from dicci_dist_proy where bd = @region1
```



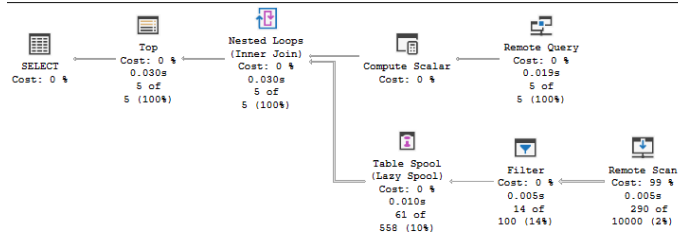
Query 2: Query cost (relative to the batch): 0%

```
select @region = bd from dicci_dist_proy where servidor = @servidor and bd not in (@reg
```



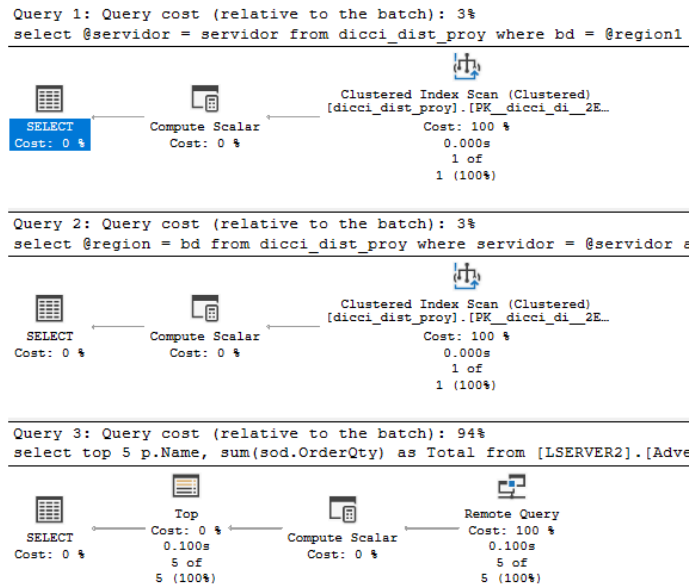
Query 3: Query cost (relative to the batch): 100%

```
select top 5 * from (select t1.BusinessEntityID, t1.NationalIDNumber, t1.LoginID, t1.Hi
```



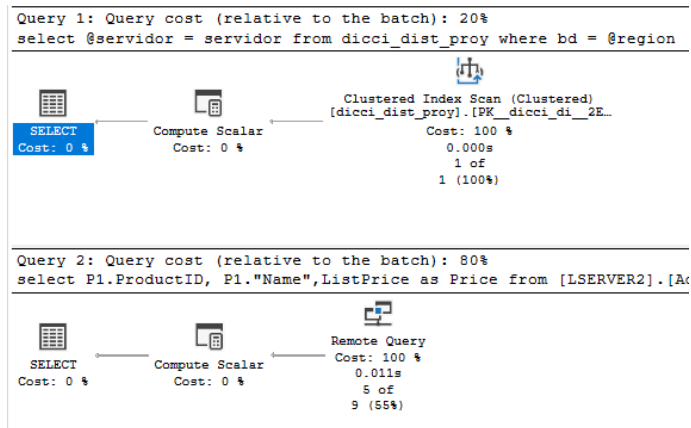
Consulta 3

Listar los 5 productos diferentes más vendidos por cantidad - historial global.



Consulta 4

Listar el producto que tiene el precio de venta más caro que esté en oferta especial



Observaciones

Hay que aclarar que estos son “Actual Execution Plan” ya que, si usábamos la estimación, estos no lograban marcar todo su trabajo debido a que al usar un SP para ejecutar una consulta en forma de texto no lo tomaba en cuenta.

Como principal observación al analizar todos los planes de ejecución, nos encontramos con que ningún plan de ejecución tiene un costo estimado de operador no es alto, ya que en ninguna consulta ningún operador tiene un costo mayor a 1, por excepción a las consultas 13 y 14, ya que en estas hay un operador en cada uno que supera ese rango pasando a 1.5.

Al mismo tiempo nos damos cuenta de que en ningún caso se esta observando un table scan, lo cual nos indica que si existen índices los cuales puedan ayudar al performance de las consultas. Lo cual podría evitarnos implementar otros índices, pero el posible problema que nos podemos encontrar después es que en caso de que la base de datos se llenara con una mayor cantidad de datos, es posible que el performance disminuya lo cual afectaría y en ese momento tendríamos que ver que medidas podemos tomar para mejorarla.

Por otro lado, lo que tenemos para las consultas entre segmentos, son casos similares, la principal diferencia es que hay un performance menor que para las consultas hechas por fragmento, a pesar de ello el máximo costo que tiene un operador es de 3, así que no creemos que sea necesario en este momento realizar un nuevo índice.

Por el momento consideramos que los índices que contiene son suficientes, por lo que optamos por no agregar vistas adicionales de las que ya contiene por la base de datos AdventureWorks2019 y las del diccionario.