PBIG
POWER BI GEBRUIKERSGROEP

Incremental refresh Power BI

Peter van den Bos

9-3-2024

Probleemstelling BNG

Hieronder staan drie tabellen met aantallen die steeds groter worden door de dagelijkse transacties. Dit resulteert tot een grote load als we alles gaan laden per dag.

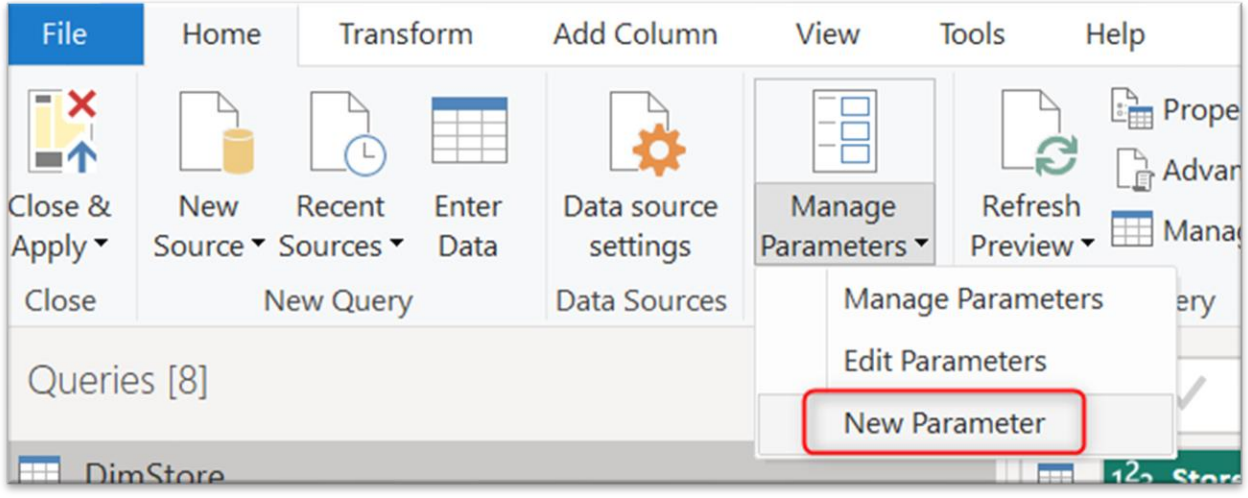
	Tabel1	Tabel2	Tabel3
Dag 1	100.000	1.000.000	10.000.000
Dag 2	200.000	2.000.000	20.000.000
Dag 3	300.000	3.000.000	30.000.000
Dag 4	400.000	5.000.000	50.000.000
Dag 26	2.600.000	196.418.000.000	1.964.180.000.000
Dag 27	2.700.000	317.811.000.000	3.178.110.000.000
Dag 28	2.800.000	514.229.000.000	5.142.290.000.000
Dag 29	2.900.000	832.040.000.000	8.320.400.000.000
Dag 30	3.000.000	1.346.269.000.000	13.462.690.000.000
Dag 31	3.100.000	2.178.309.000.000	21.783.090.000.000
Jaar 2	6.200.000	4.356.618.000.000	43.566.180.000.000
Jaar 3	9.300.000	6.534.927.000.000	65.349.270.000.000

Incremental refresh Power BI

Incremental refresh

In plaats van de totale data elke keer bij een refresh te laden, kun je ook incremental refresh gebruiken.

Start hierbij met het toevoegen van twee parameters in Power Query.

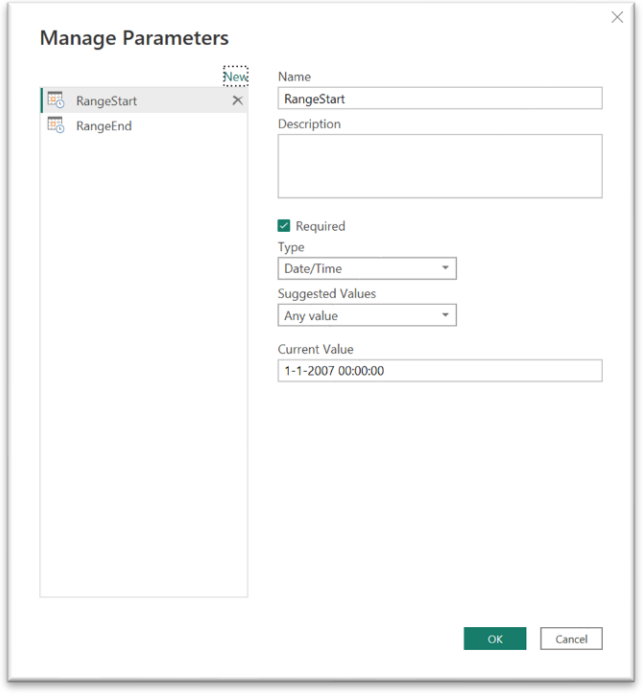


Parameters

De eerste heet RangeStart en de tweede RangeEnd. Let op: Power Query is hoofdlettergevoelig.

Selecteer ‘Type’ en vul ‘Current Value’ in.

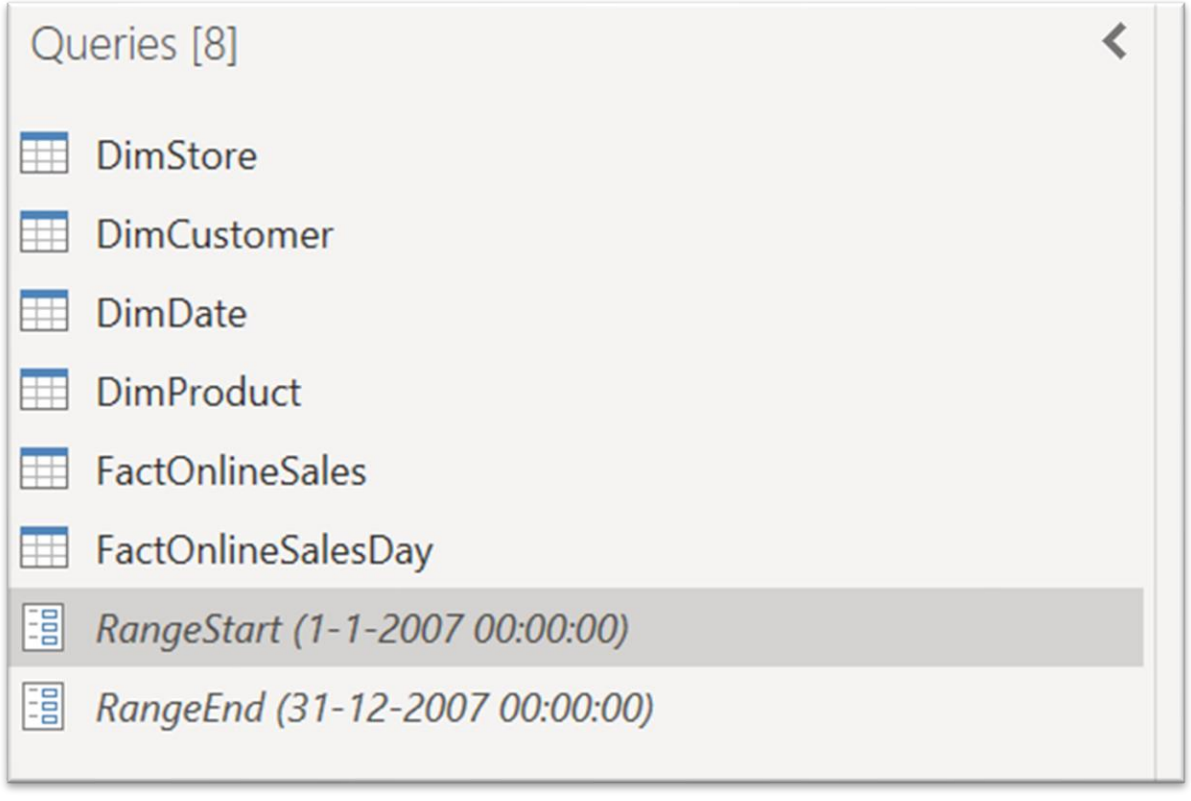
Incremental refresh



Queries window

De parameters staan in Queries window.

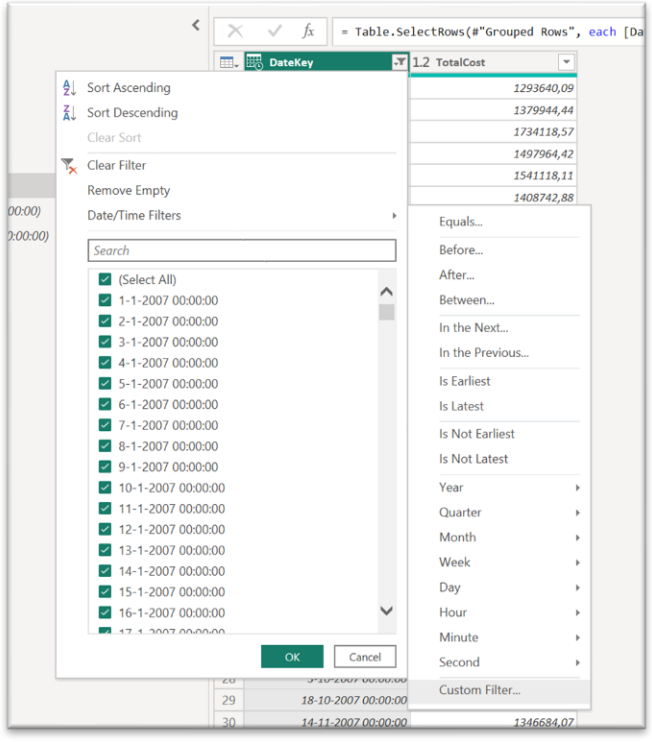
Incremental refresh



Customer filter

Bij het toevoegen van Incremental Refresh aan de tabel stel je een *customerfilter* in op de datumkolom.

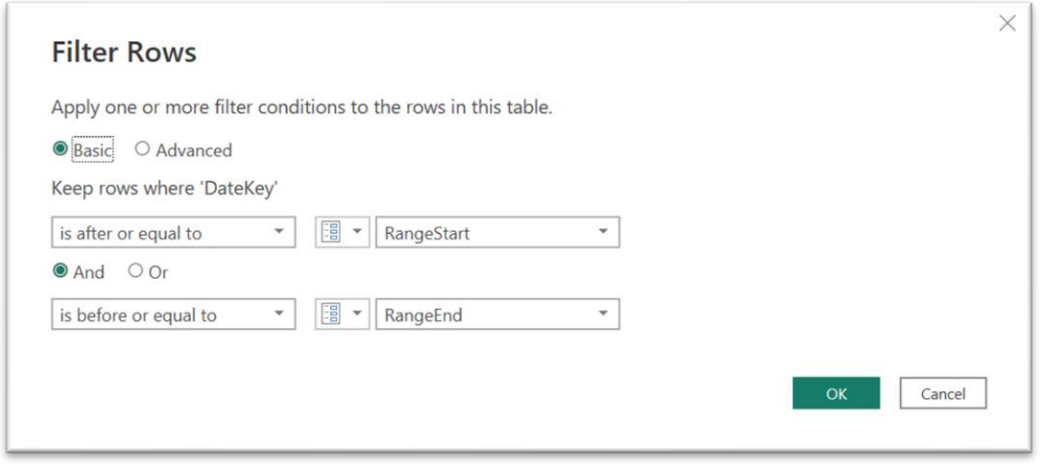
Incremental refresh



Customer filter

Incremental refresh

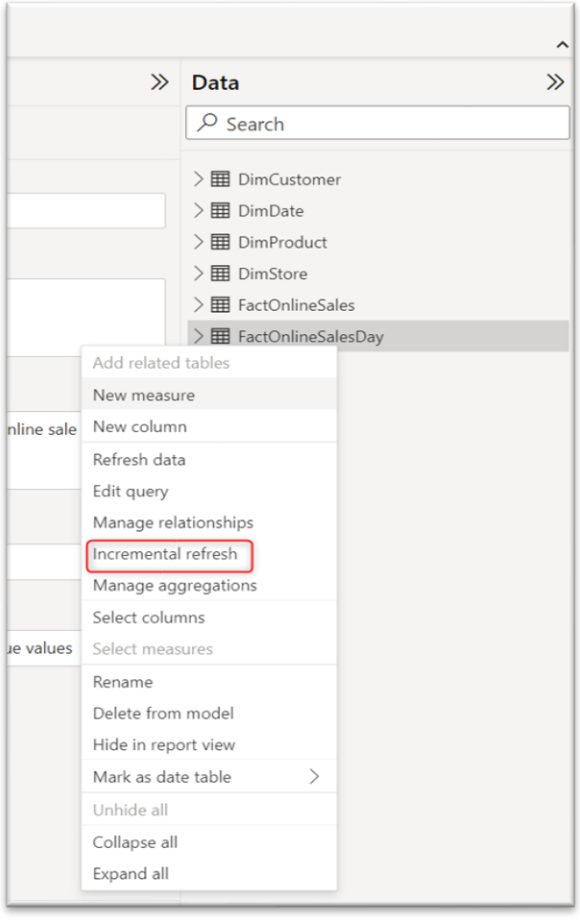
Selecteer de parameters en gebruik *"is after or equal to"* voor de startdatum en *"is before or equal to"* voor de einddatum.



Het voordeel van het hebben van een grote dataset is dat je, door middel van filters, eenvoudig bijvoorbeeld een selectie van een dag kunt maken. Hierdoor kun je bewerkingen uitvoeren op de dataset en deze vervolgens laden in Power BI Desktop, wat het geheel compact houdt en daardoor ook gemakkelijker maakt om mee te werken.

Incremental refresh

Als je Close en Apply kiest om de dataset in orde te maken voor Power BI, kun je voor de gewenste tabel kiezen voor Incremental refresh.



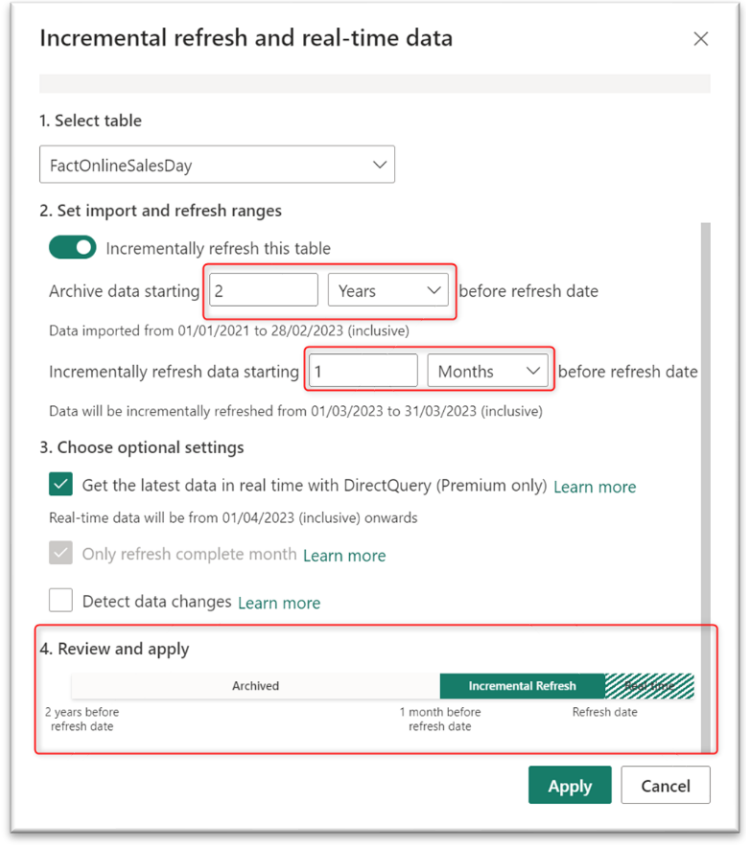
Incremental refresh

Incremental refresh

Selecteer de periode die je in je datamodel wilt hebben.

Selecteer ook de periode van het deel van de data die je wilt refreshen.

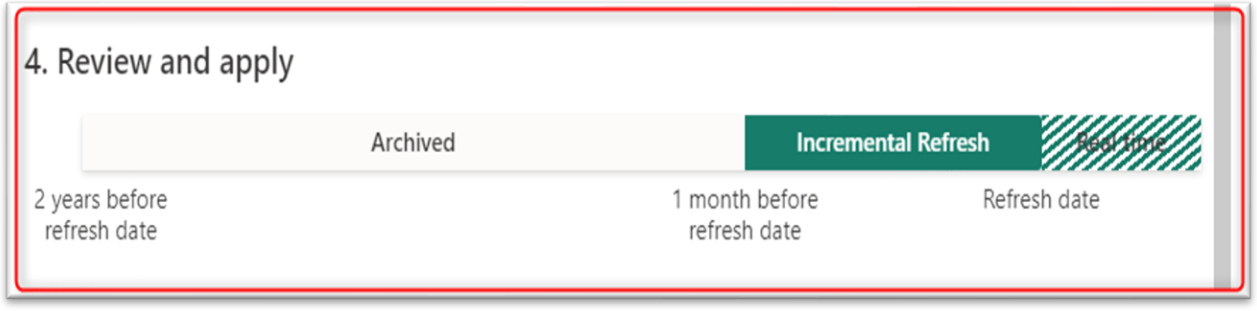
Incremental refresh

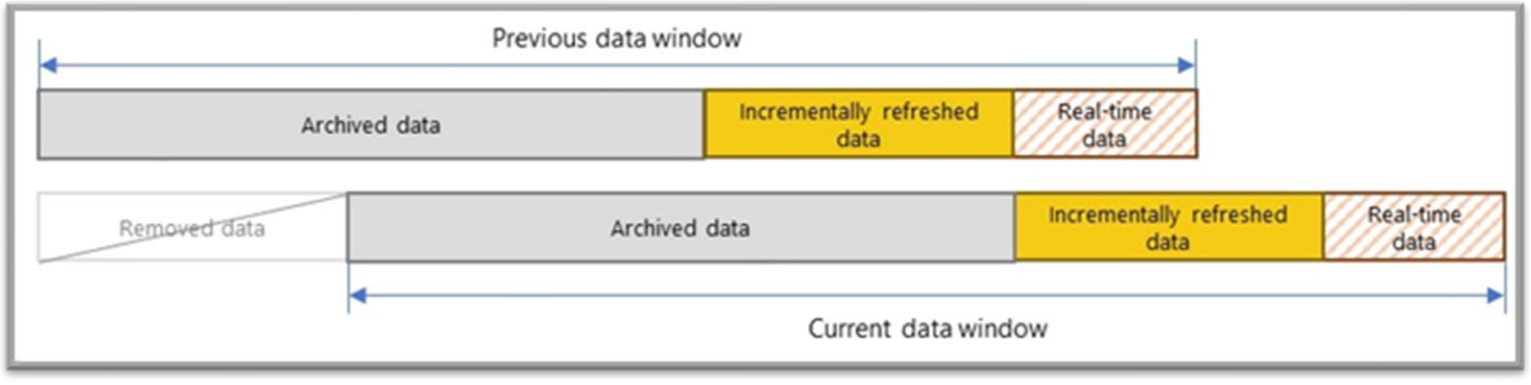


Partities opzet

Incremental refresh

De partities werken met een verschuivend window.





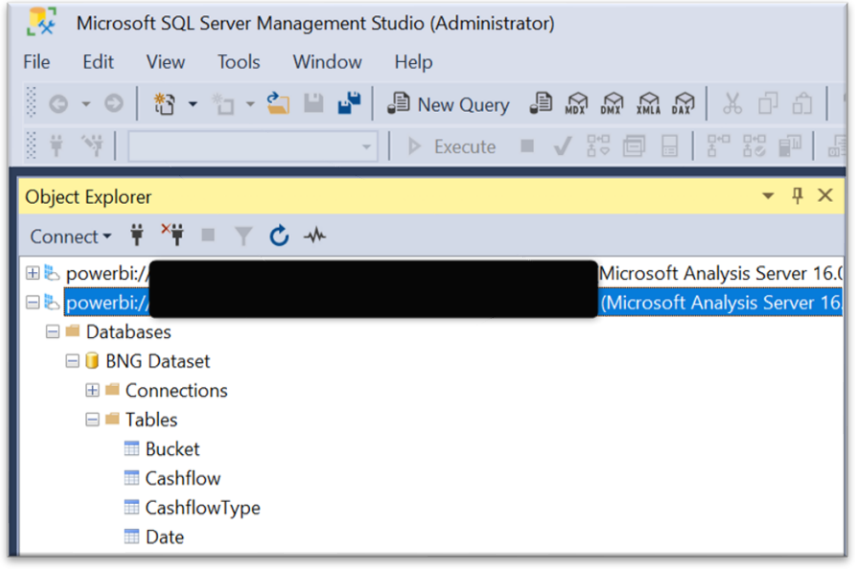
Partities verversen via SSMS

Incremental refresh

We maken verbinding met het semantic model via SQL Server Management Studio.

De volgende modellen zitten in het semantic model:

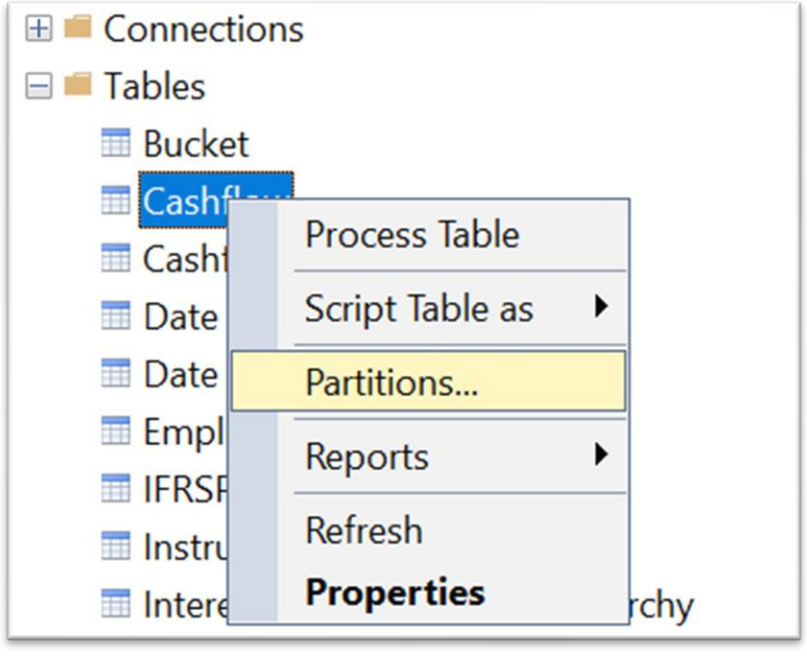
- Bucket
- Cashflow
- Cashflow type
- Date



Partities verversen via SSMS

Incremental refresh

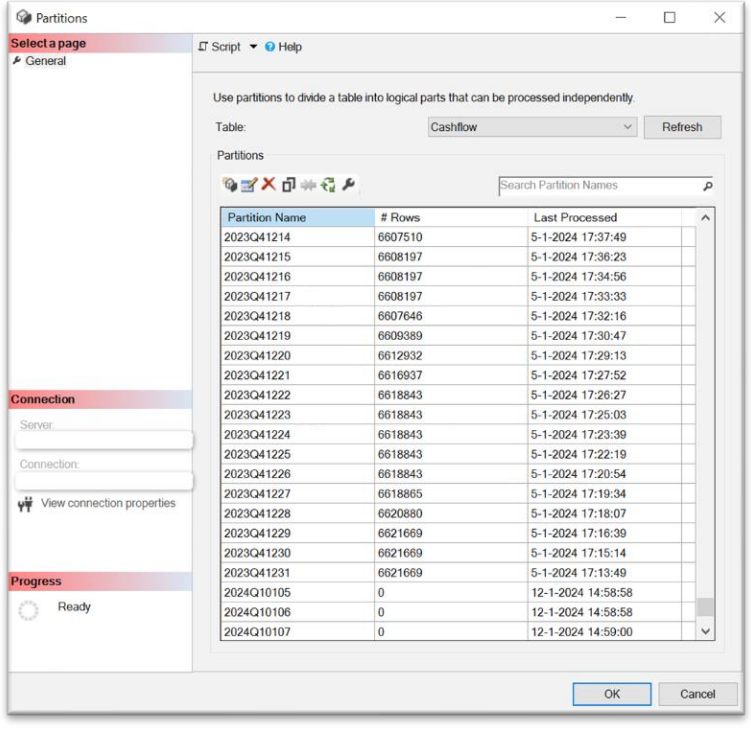
Als we op een tabel rechtermuis toets gebruiken, dan zien we de optie *"Partitions"*, deze selecteren we.



Partities verversen via SSMS

Incremental refresh

We zien nu een overzicht met de bestaande partities en zien ook het aantal rijen en de datum van de laatste verversing.

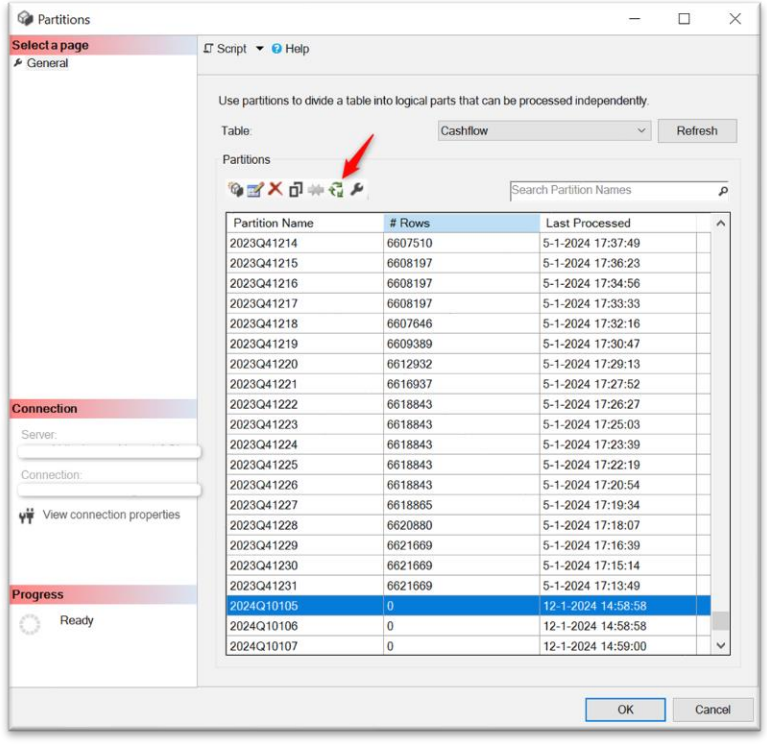


Partities verversen via SSMS

Incremental refresh

We kunnen partities verversen door op het ververs icon te drukken.

We hebben nu partitie 2024Q10105 geselecteerd.

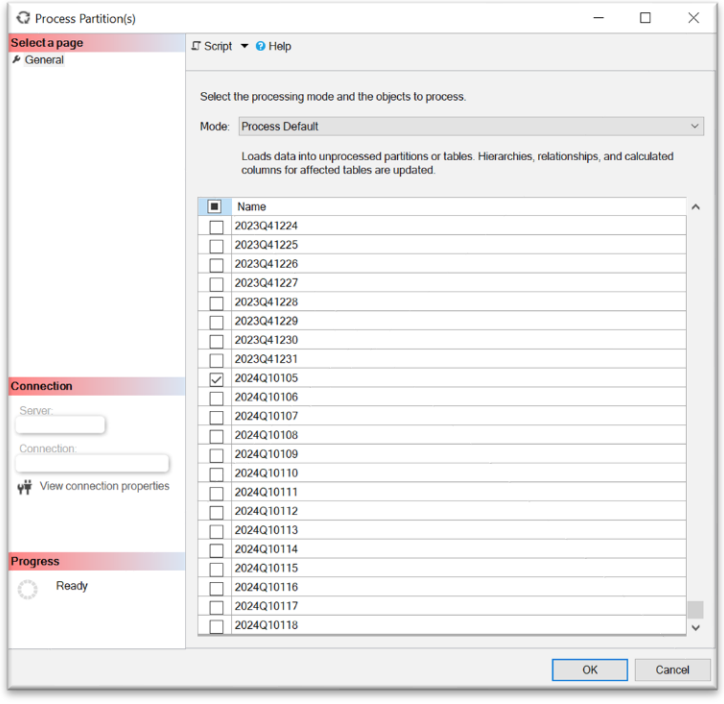


Partities verversen via SSMS

Incremental refresh

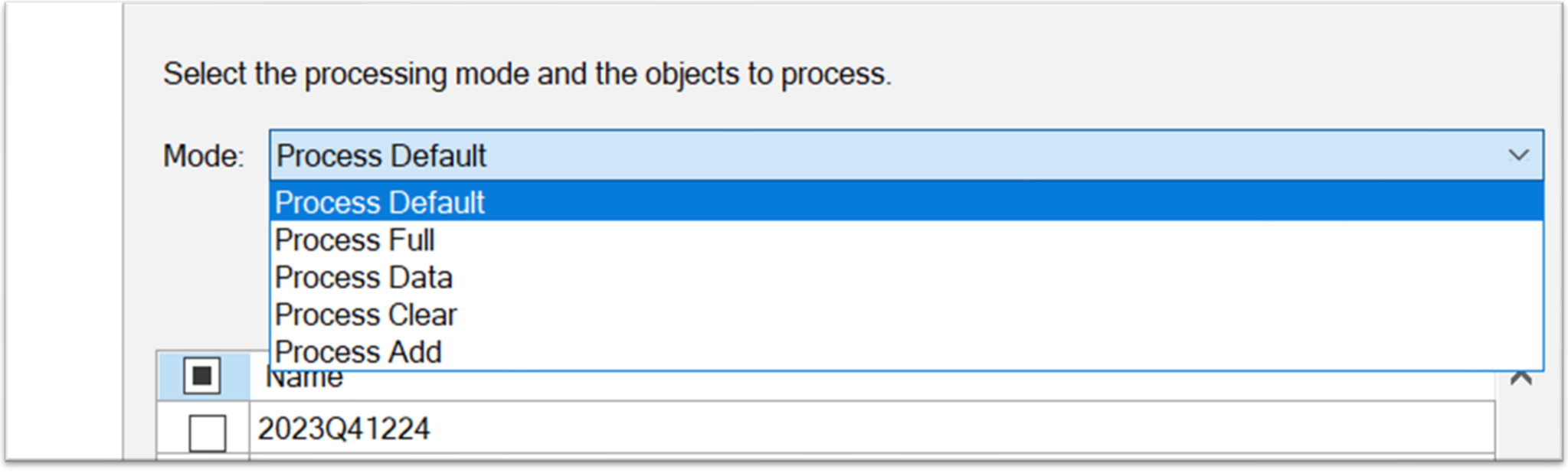
Omdat we partitie 2024Q10105 geselecteerd hadden, is deze direct mee geselecteerd.

In deze stap ben je vrij om meerdere partities te selecteren.



Partities verversen via SSMS

Incremental refresh

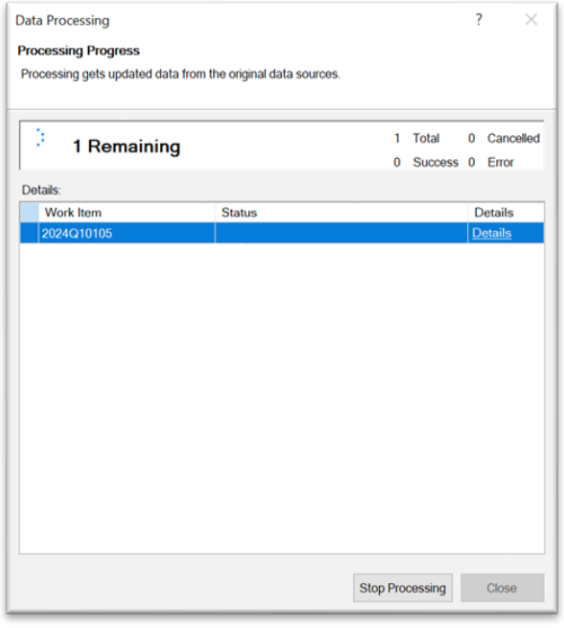


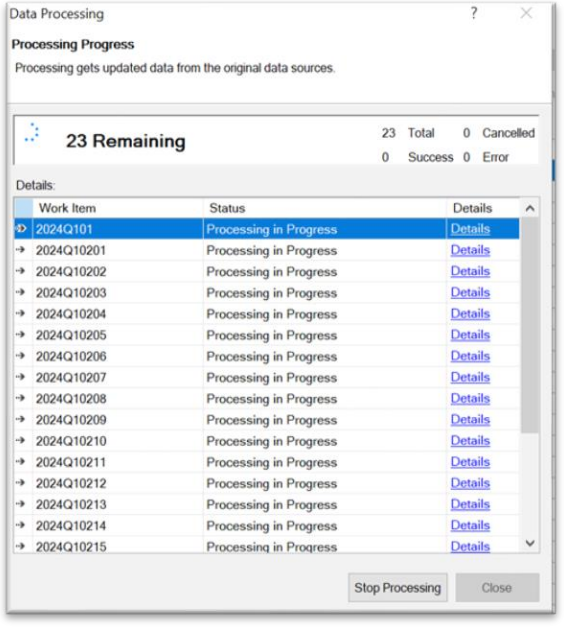
Partities verversen via SSMS

Incremental refresh

Op het moment van vernieuwen verschijnt het volgende scherm.

We zien hier geen wijzigingen totdat de partities zijn vernieuwd.

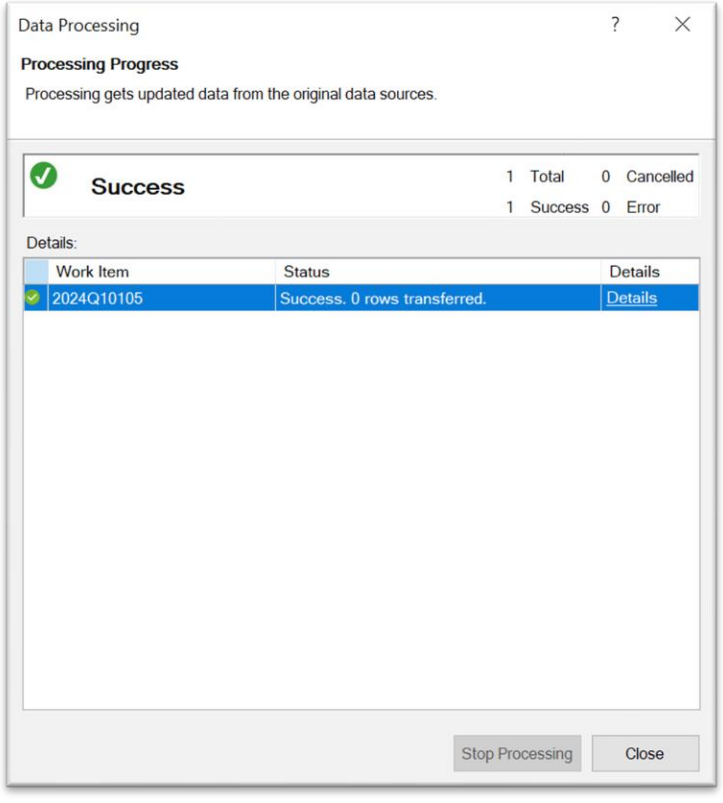




Partities verversen via SSMS

Incremental refresh

De verversing is voltooid.

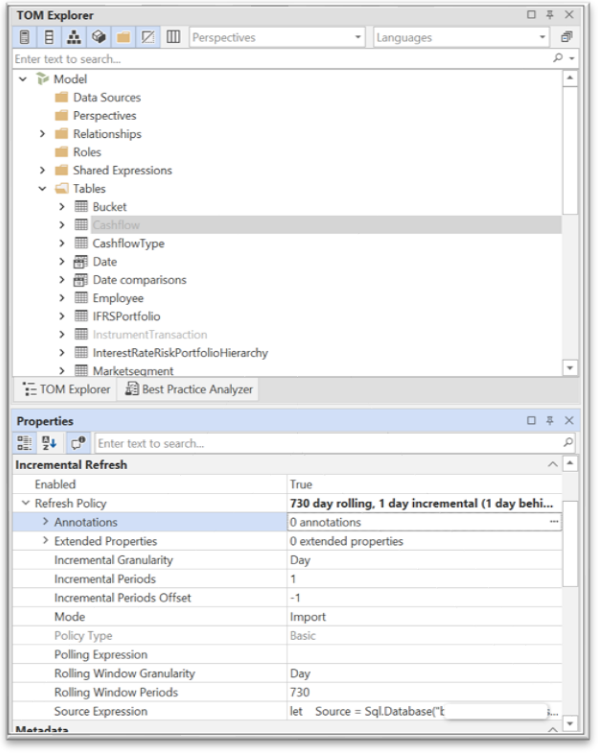


Partities verversen via Tabular Editor 3

Incremental refresh

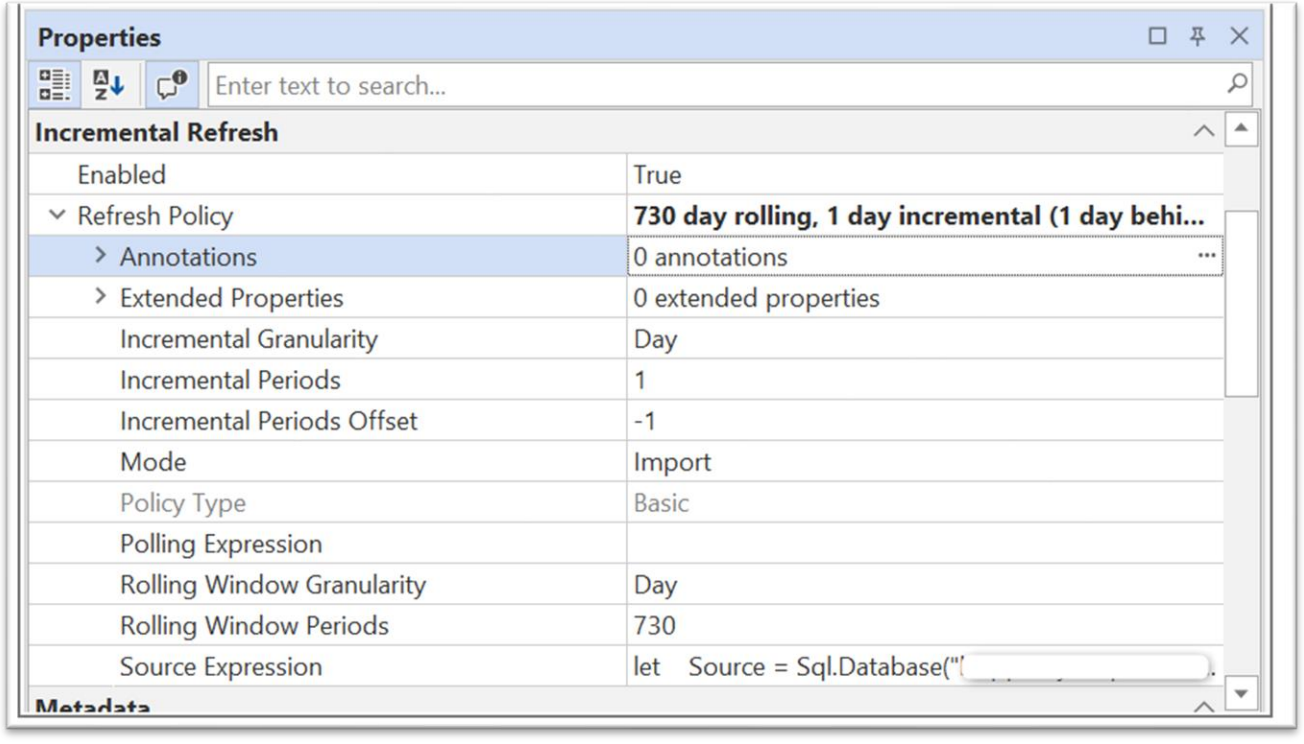
We kunnen Tabular Editor 3 gebruiken voor het verversen, echter kunnen we hiermee ook het model beheersen en ook de Increment refresh beheersen en aanpassen waar noodzakelijk.

Als we op een tabel gaan staan kunnen we bij de properties zien, hoe de Incremental Refresh is ingeregeld.



Partities verversen via Tabular Editor 3

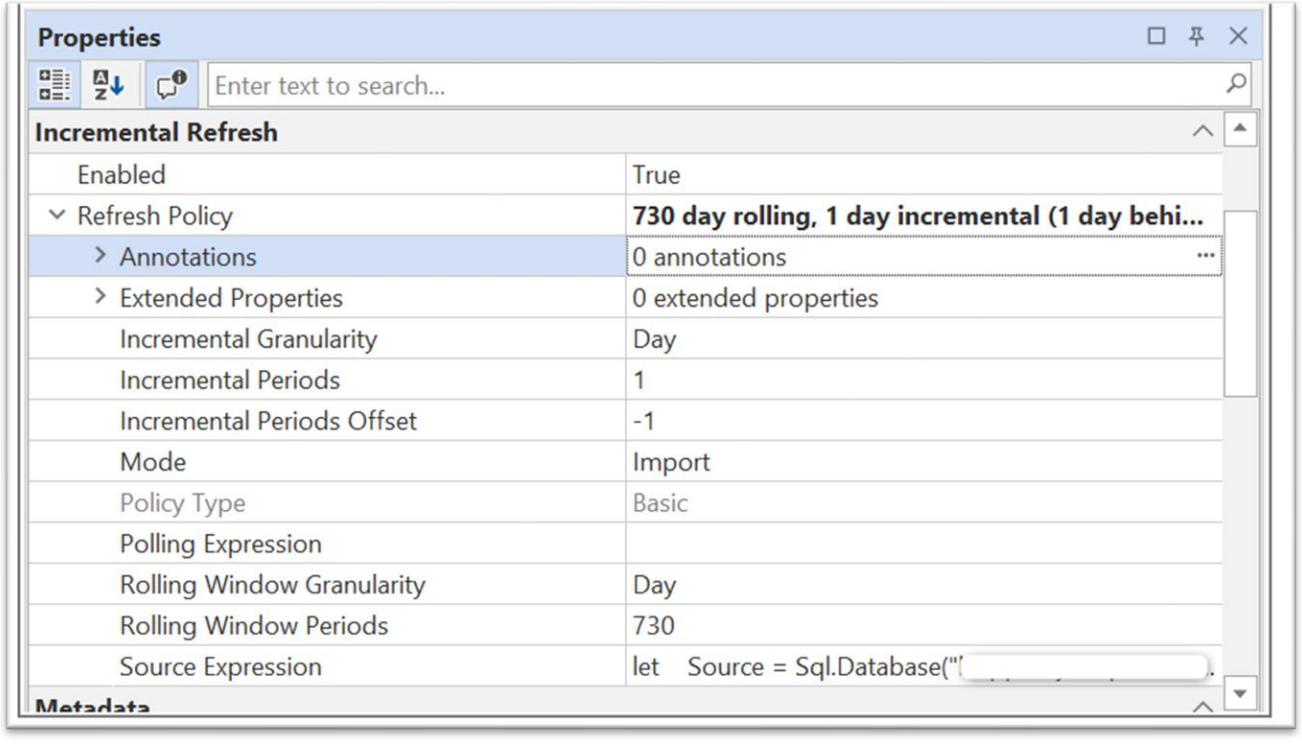
Incremental refresh



Property Name	Power BI Desktop Equivalent	Description	Expected Value
EnableRefreshPolicy	Incrementally refresh this table	Whether a refresh policy is enabled for the table. In Tabular Editor, other Refresh Policy properties will only be visible if this value is set to `True`.	`True` or `False`.
IncrementalGranularity	Incremental Refresh Period	The granularity of the incremental window. Example: *"Refresh data in the last 30 **days** before refresh date."*	`Day`, `Month`, `Quarter` or `Year`. Must be smaller than or equal to the IncrementalGranularity.
IncrementalPeriods	Number of Incremental Refresh Periods	The number of periods for the incremental window. Example: *"Refresh data in the last **30** days before refresh date."*	An integer of the number of *IncrementalGranularity* periods. Must define a total period smaller than the *RollingWindowPeriods*
IncrementalPeriodsOffset	Only refresh complete days	The offset to be applied to *IncrementalPeriods*. Example for: *IncrementalPeriodsOffset=* `-1`; *IncrementalPeriods =* `30`; *IncrementalGranularity =* `Day`: *"Only refresh data in the last 30 days, from the day before refresh date.*	An integer of the number of *IncrementalGranularity* periods to shift the Incremental window.
Mode	Get the latest data in real time with DirectQuery	Specifies whether Incremental Refresh is configured with only import partitions or also a DirectQuery partition, to result in a "Hybrid Table".	`Import` or `Hybrid`.

Partities verversen via Tabular Editor 3

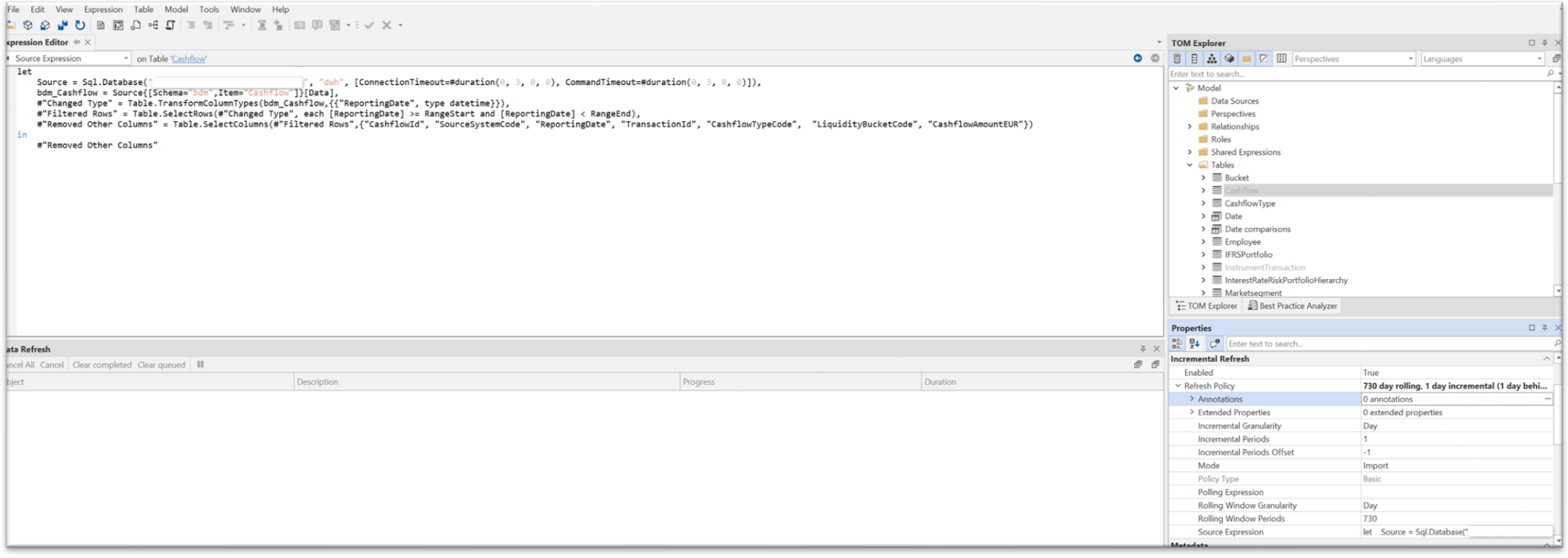
Incremental refresh



Property Name	Power BI Desktop Equivalent	Description	Expected Value
PolicyType	N/A	Specifies the type of refresh policy.	Can only contain a single value: `Basic`.
PollingExpression (Optional)	Detect Data Changes	The M Expression used to detect changes in a specific column such as *LastUpdateDate* In Tabular Editor, **the *Polling Expression* can be viewed and modified from the *Expression Editor* window** by selecting it from the dropdown menu in the top-left.	A valid M Expression that returns a scalar value of the latest date in a column. All records in incremental window hot partitions containing that value for the column will be refreshed. Records in archived partitions are *not* refreshed.
RollingWindowGranularity	Archive Data Period	The granularity of the rolling window. Example: *"Archive data starting 3 **years** before refresh date."*	`Day`, `Month`, `Quarter` or `Year`. Must be larger than or equal to the IncrementalGranularity.
RollingWindowPeriods	Number of Archive Data Periods	The number of periods for the rolling window. Example: *"Archive data starting **3** years before refresh date."*	An integer of the number of *RollingWindowGranularity* periods. Must define a total period larger than the *IncrementalPeriods*
SourceExpression	Power Query Source Expression	The M Expression for the table data source. This is where the original table M Expression is, and where any existing Power Query transformations would be modified. In Tabular Editor, **the *Source Expression* can be viewed and modified from the *Expression Editor*** by selecting it from the dropdown menu in the top-left.	A valid M Expression containing a filter step appropriately using `RangeStart` and `RangeEnd`.

Partities verversen via Tabular Editor 3

Incremental refresh



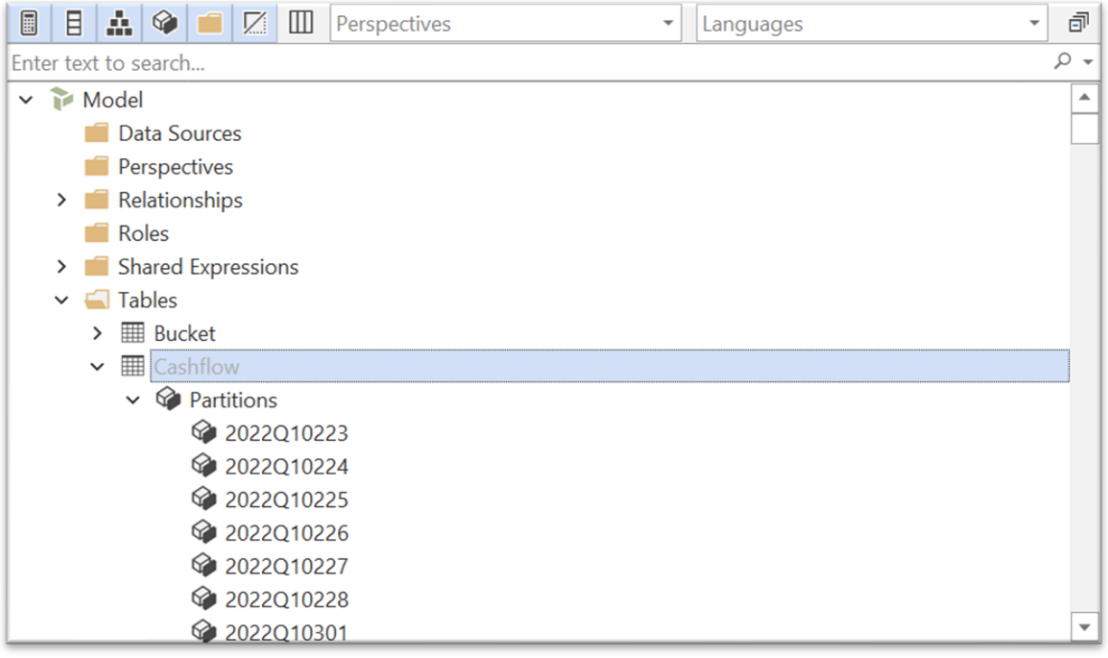
Partities verversen via Tabular Editor 3

Incremental refresh

Partities verversen via Tabular Editor 3

Incremental refresh

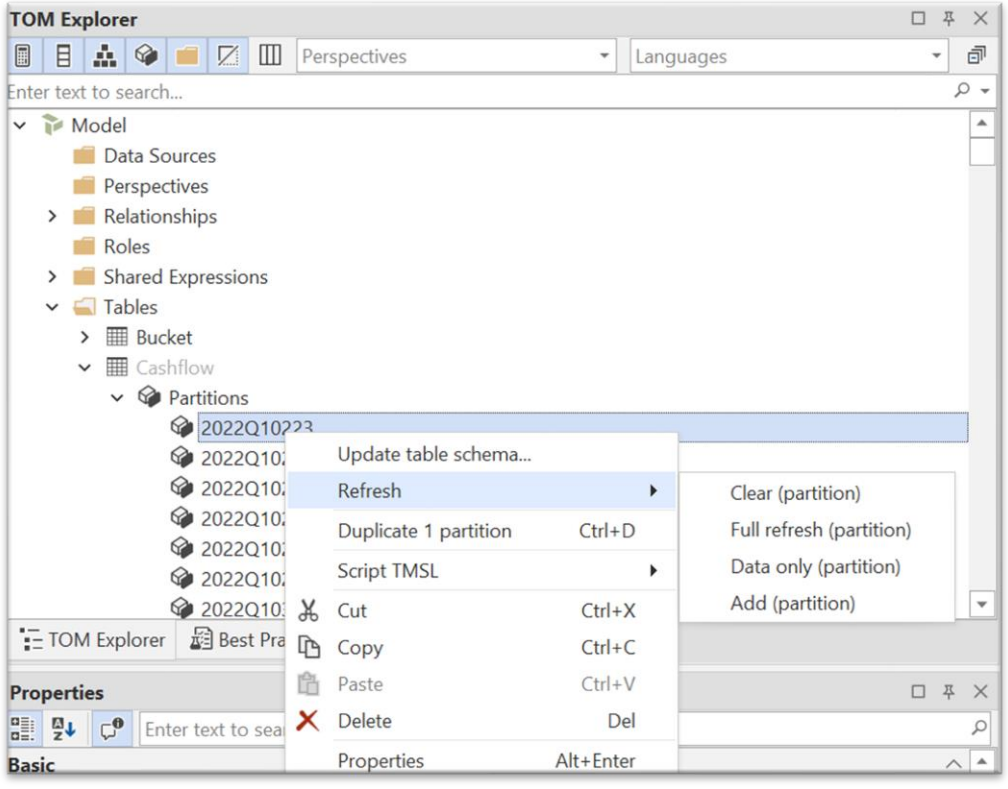
Wanneer je de tabel zie je de verschillende partities staan.



Partities verversen via Tabular Editor 3

Incremental refresh

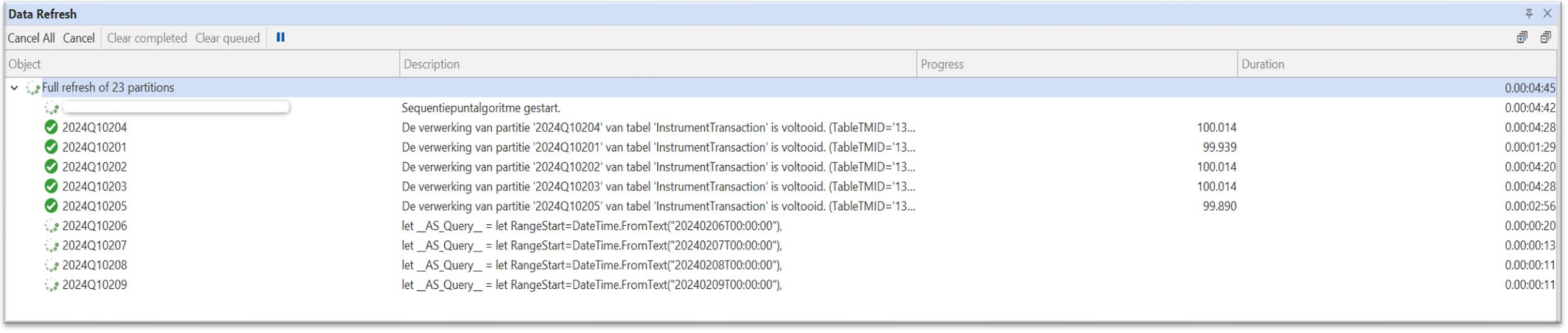
Wanneer je op de juiste partitie klikt met de rechtermuis knop vind je hier de optie *“Refresh”.* Kies hier de gewenste refresh optie.



Partities verversen via Tabular Editor 3

Incremental refresh

Het voordeel ten opzichte van SSMS is dat je tijdens het vernieuwingsproces kunt zien wat er gebeurt. Je kunt per partitie observeren hoe rijen worden geladen, en zodra het proces is voltooid, wordt dit ook weergegeven.



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Session evaluation

Event evaluation

Platinum partners

creates.

In Summa

Goud partners

Kimura

plainwater
de kracht van heldere data

KASPAROV FINANCE & BI

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rockfeather

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Datamanzi

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Heb je vragen of interesse?

Neem contact op.

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Business Intelligence Consultant

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