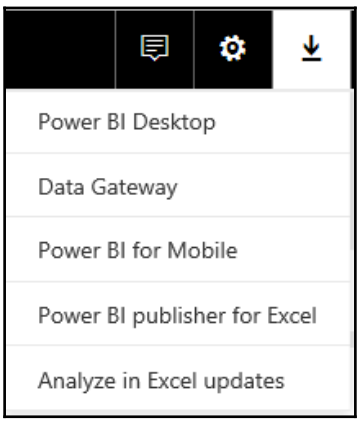
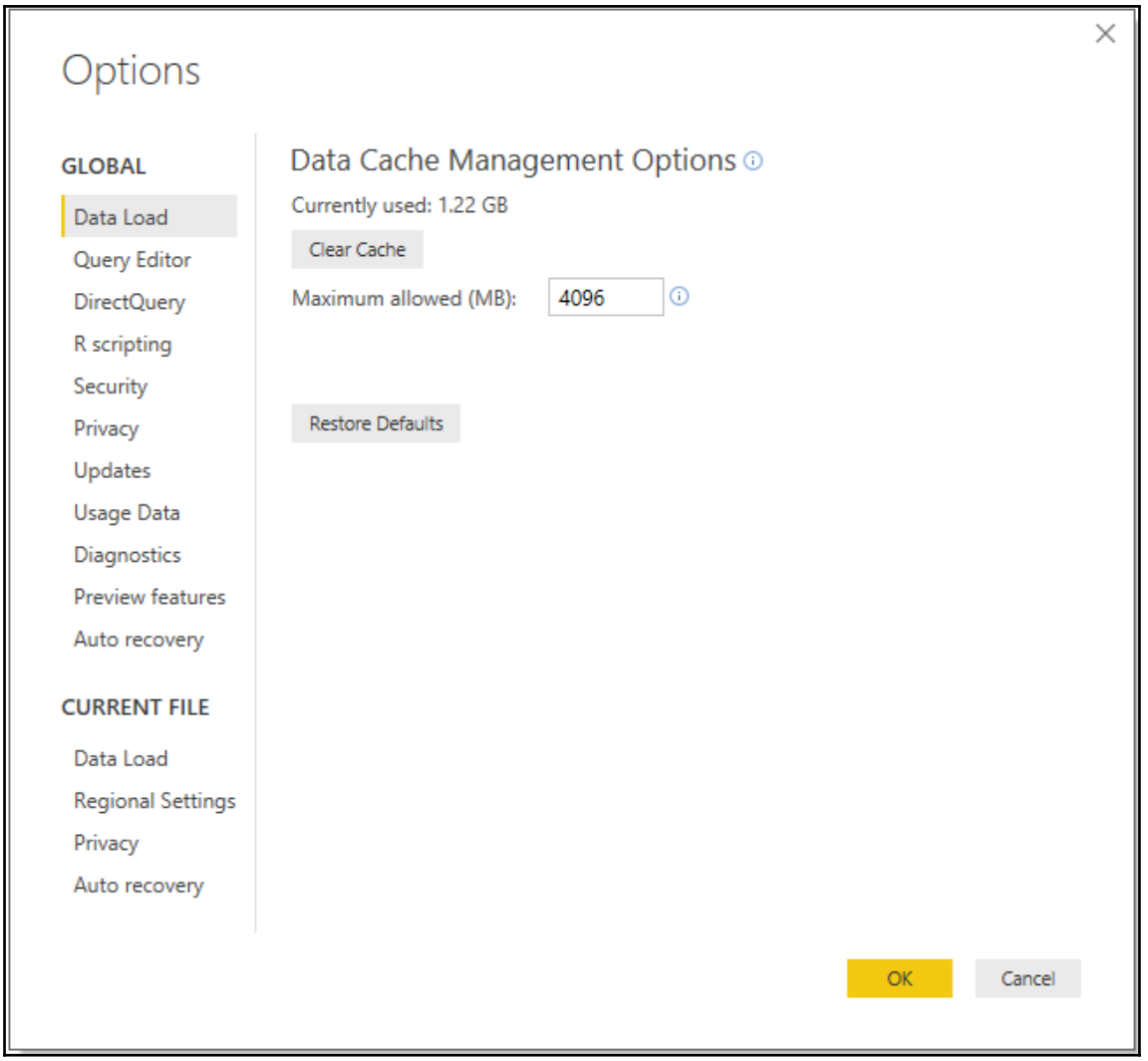
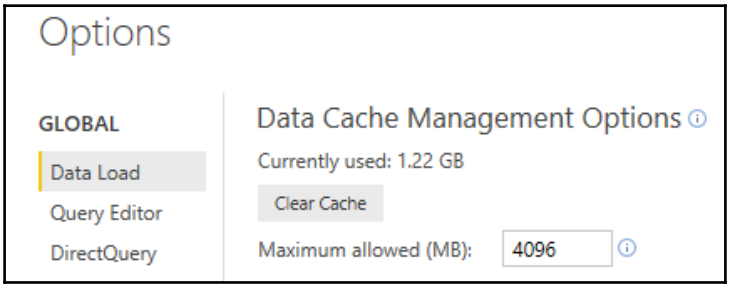
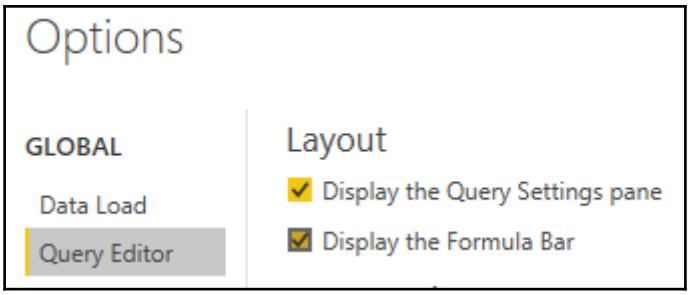
Chapter 1: Configuring Power BI Development Tools

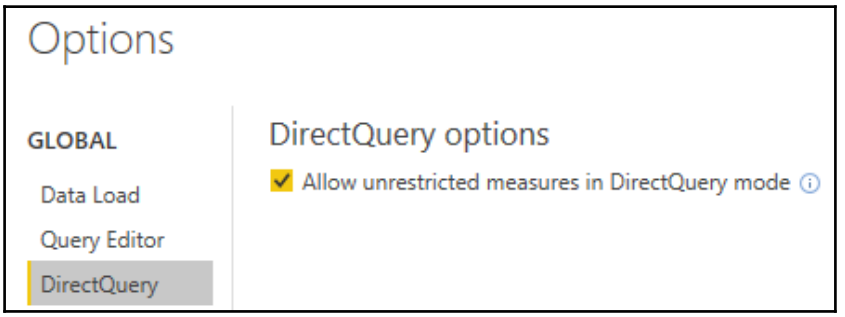


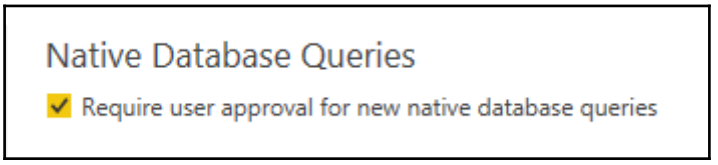

Microsoft Power BI Desktop (x64) Setup
Power BI
Completed the Microsoft Power BI Desktop (x64) Setup Wizard
You have successfully completed the Microsoft Power BI Desktop (x64) Setup Wizard. To close this wizard, click Finish.
Launch Microsoft Power BI Desktop
Back
Finish
Cancel

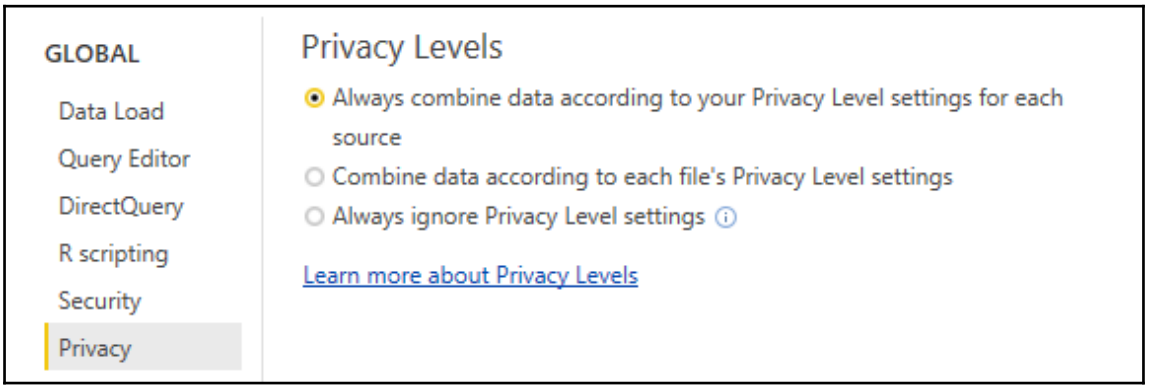

Options
GLOBAL
Data Load
Query Editor
DirectQuery
R scripting
Security
Privacy
Updates
Usage Data
Diagnostics
Preview features
Auto recovery
CURRENT FILE
Data Load
Regional Settings
Privacy
Auto recovery
Data Cache Management Options
Currently used: 1.22 GB
Clear Cache
Maximum allowed (MB): 4096
Restore Defaults
OK
Cancel

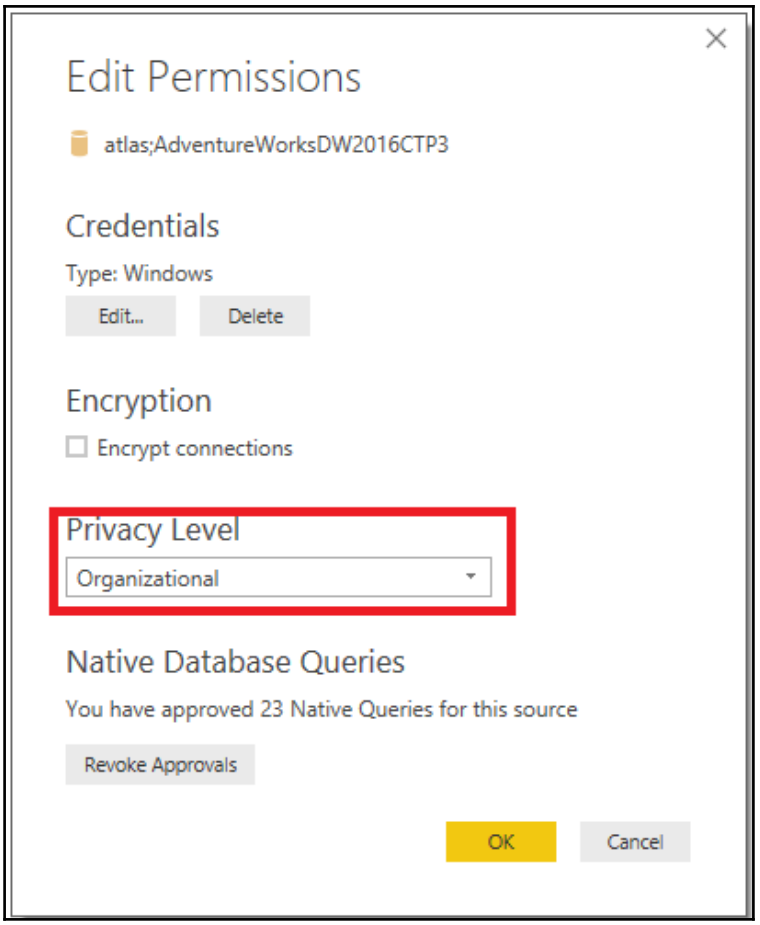

Options
GLOBAL
Data Load
Query Editor
DirectQuery
Data Cache Management Options
Currently used: 1.22 GB
Clear Cache
Maximum allowed (MB): 4096

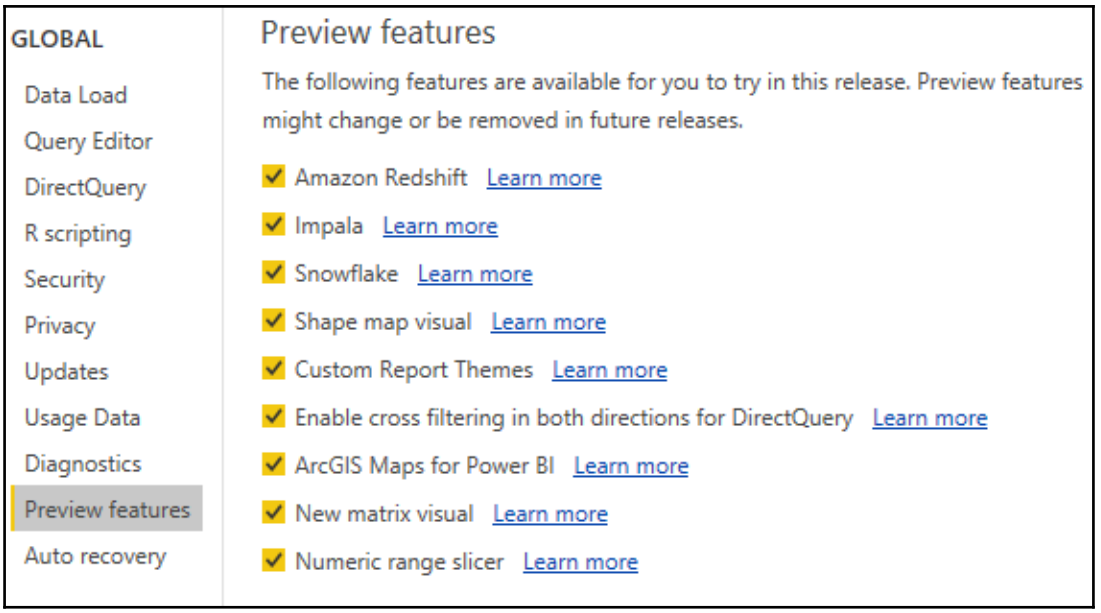

Options
GLOBAL
Data Load
Query Editor
Layout
Display the Query Settings pane
Display the Formula Bar

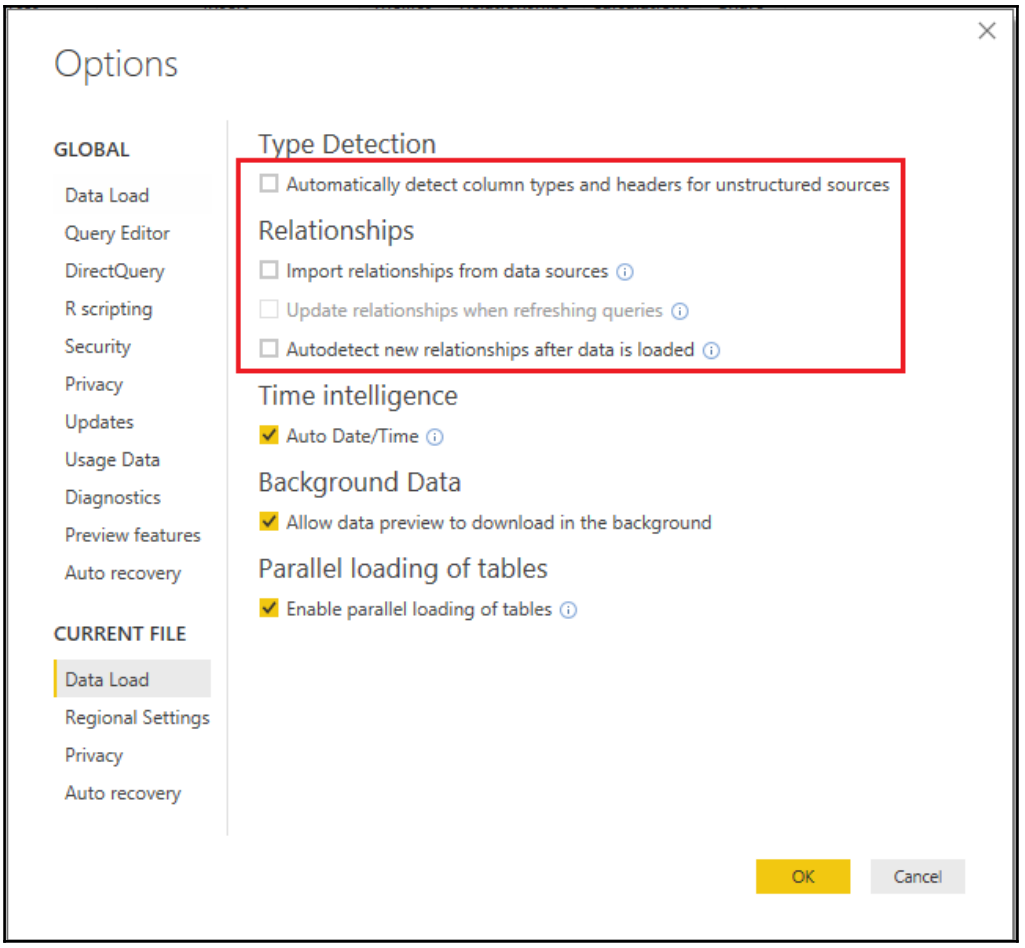

Options
GLOBAL
Data Load
Query Editor
DirectQuery
DirectQuery options
Allow unrestricted measures in DirectQuery mode

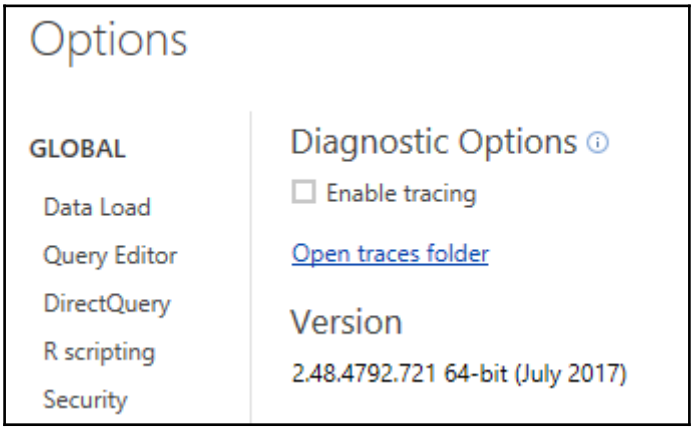

Native Database Queries
Require user approval for new native database queries


GLOBAL
Data Load
Query Editor
DirectQuery
R scripting
Security
Privacy
Privacy Levels
Always combine data according to your Privacy Level settings for each source
Combine data according to each file's Privacy Level settings
Always ignore Privacy Level settings
Learn more about Privacy Levels


Edit Permissions
atlas;AdventureWorksDW2016CTP3
Credentials
Type: Windows
Edit...
Delete
Encryption
Encrypt connections
Privacy Level
Organizational
Native Database Queries
You have approved 23 Native Queries for this source
Revoke Approvals
OK
Cancel


GLOBAL
Data Load
Query Editor
DirectQuery
R scripting
Security
Privacy
Updates
Usage Data
Diagnostics
Preview features
Auto recovery
Preview features
The following features are available for you to try in this release. Preview features might change or be removed in future releases.
Amazon Redshift Learn more
Impala Learn more
Snowflake Learn more
Shape map visual Learn more
Custom Report Themes Learn more
Enable cross filtering in both directions for DirectQuery Learn more
ArcGIS Maps for Power BI Learn more
New matrix visual Learn more
Numeric range slicer Learn more


Options
GLOBAL
Data Load
Query Editor
DirectQuery
R scripting
Security
Privacy
Updates
Usage Data
Diagnostics
Preview features
Auto recovery
CURRENT FILE
Data Load
Regional Settings
Privacy
Auto recovery
Type Detection
Automatically detect column types and headers for unstructured sources
Relationships
Import relationships from data sources
Update relationships when refreshing queries
Autodetect new relationships after data is loaded
Time intelligence
Auto Date/Time
Background Data
Allow data preview to download in the background
Parallel loading of tables
Enable parallel loading of tables
OK
Cancel


Options
GLOBAL
Data Load
Query Editor
DirectQuery
R scripting
Security
Diagnostic Options
Enable tracing
Open traces folder
Version
2.48.4792.721 64-bit (July 2017)

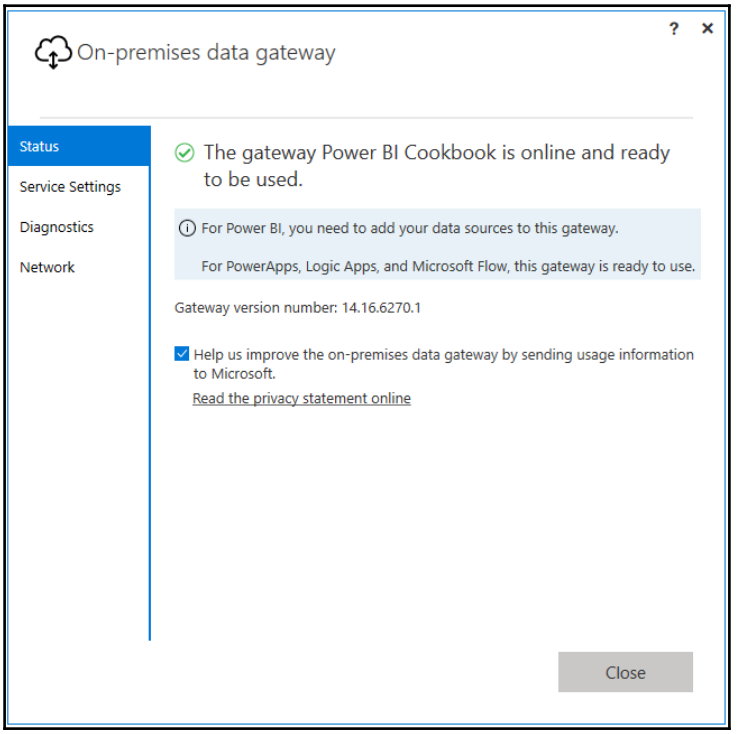
Power BI Desktop March Feature Summary

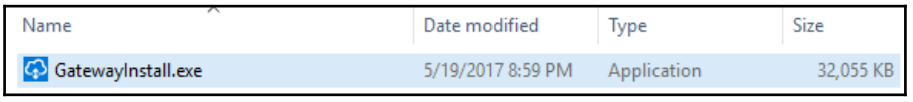
Amanda Cofsky
Program Manager

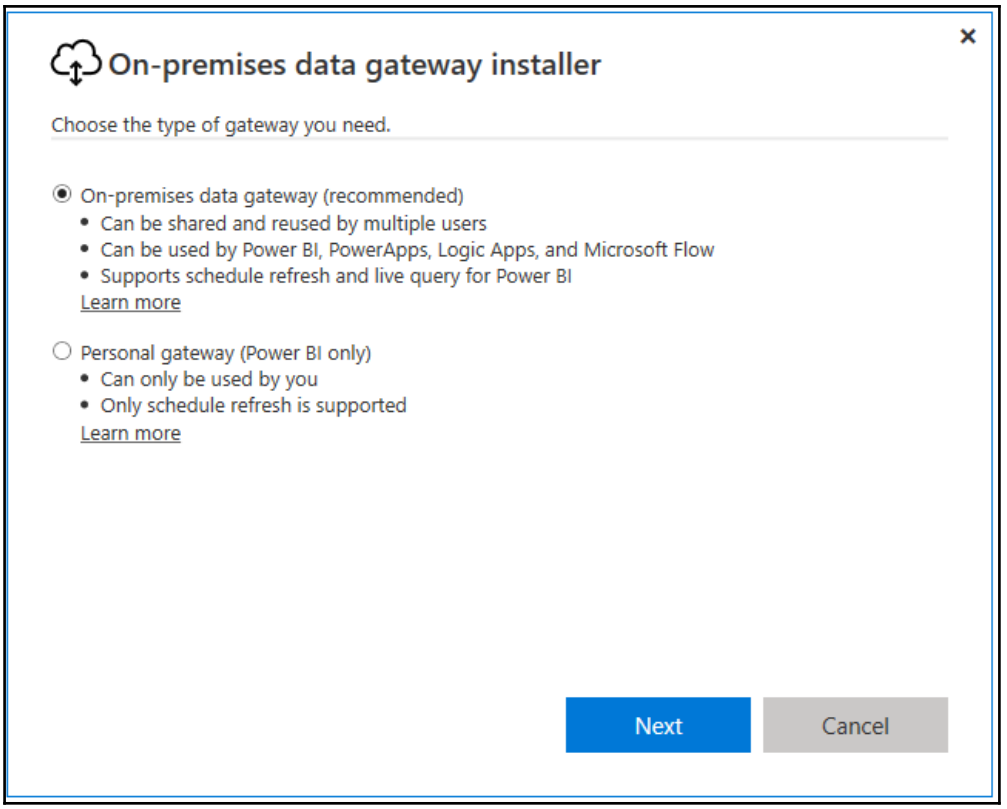
March 6, 2017

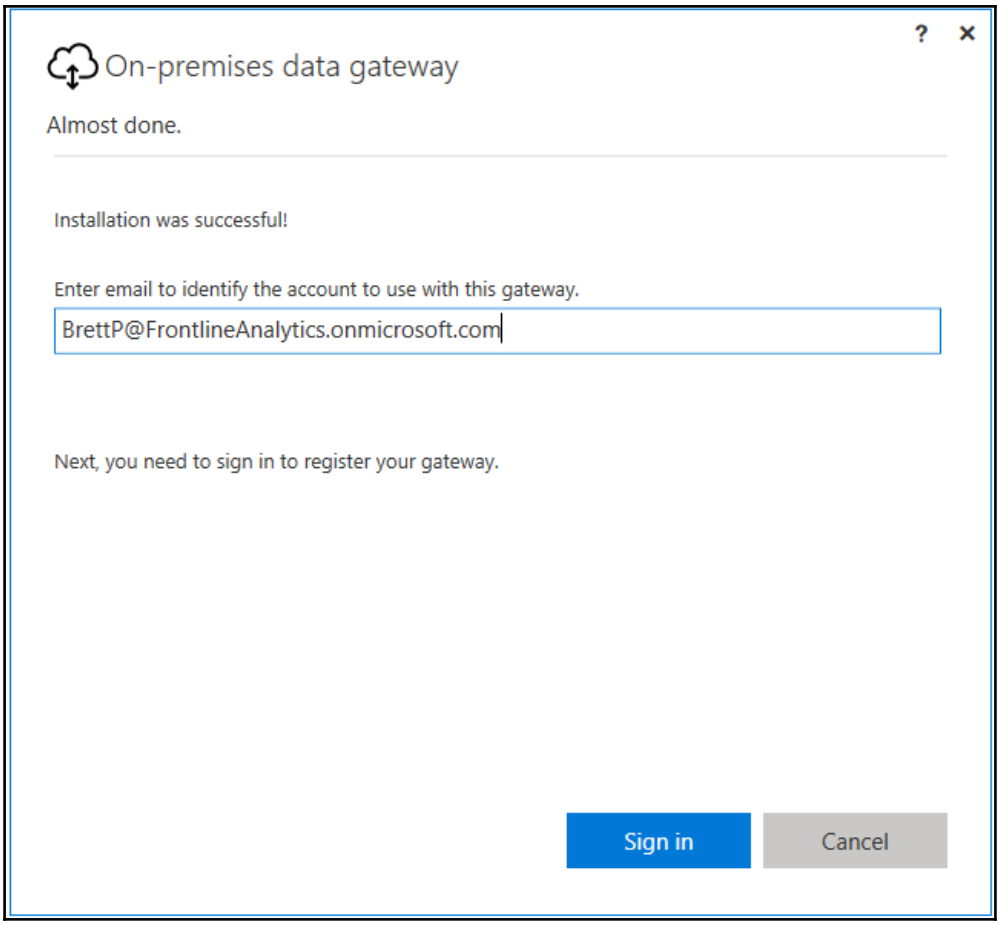
Share Tweet Like

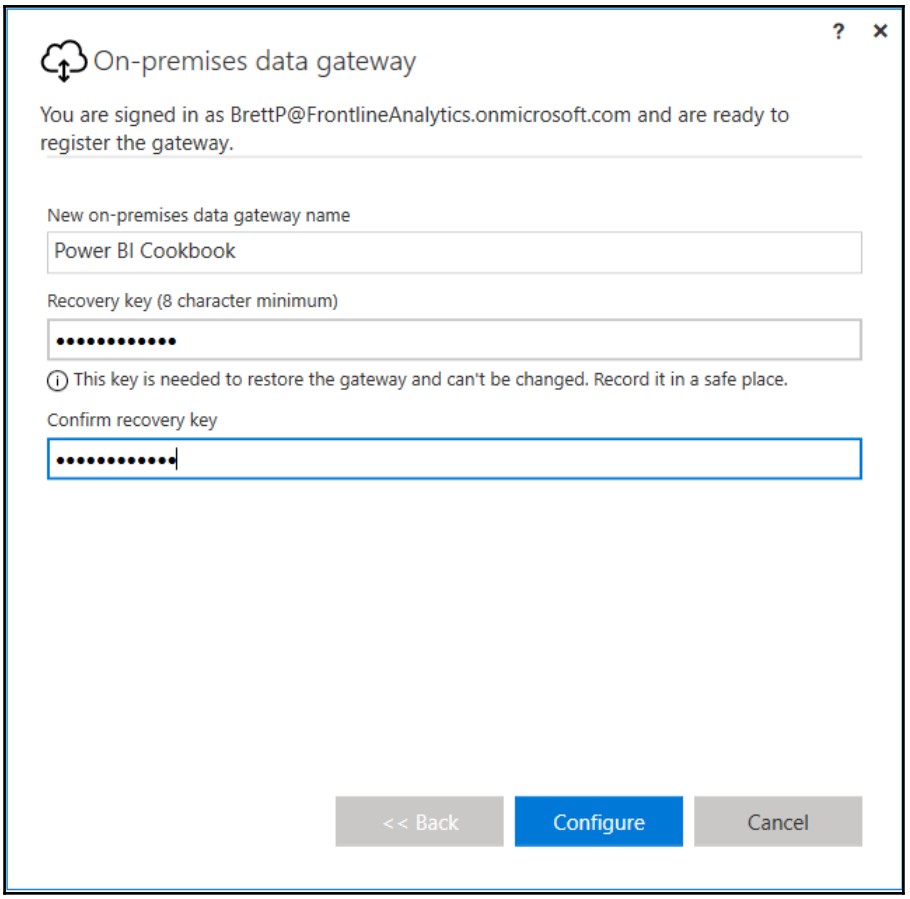
We have a very exciting Power BI Desktop update for you this month! We have several highly-requested features in this month's release, including textbox font color, several visual improvements, and previews of three highly requested features: report theming, a new matrix visual with major experience updates, and a numeric range slicer.



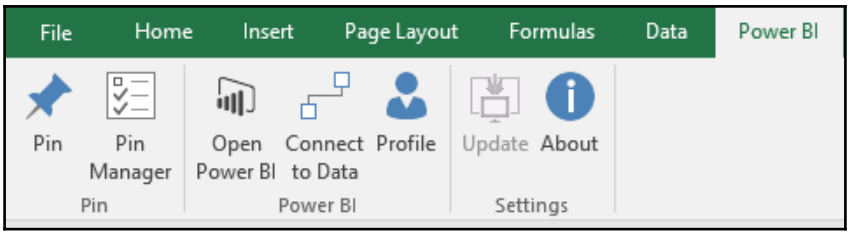


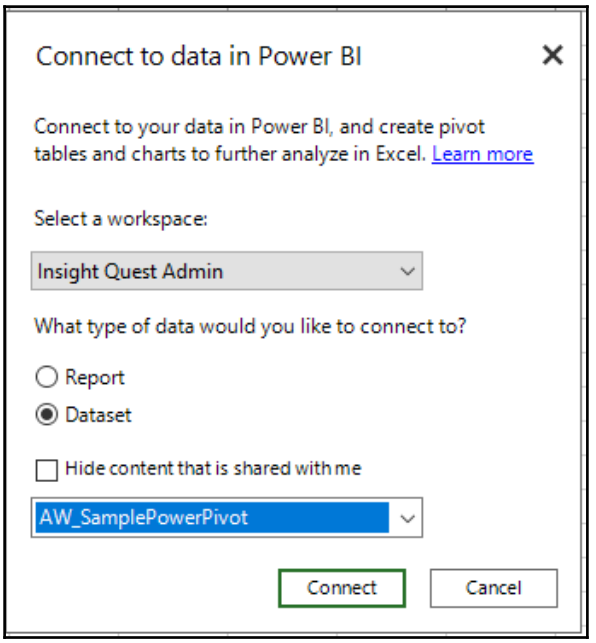

On-premises data gateway installer
Choose the type of gateway you need.
On-premises data gateway (recommended)
Can be shared and reused by multiple users
Can be used by Power BI, PowerApps, Logic Apps, and Microsoft Flow
Supports schedule refresh and live query for Power BI
Learn more
Personal gateway (Power BI only)
Can only be used by you
Only schedule refresh is supported
Learn more
Next
Cancel


On-premises data gateway
Almost done.
Installation was successful!
Enter email to identify the account to use with this gateway.
BrettP@FrontlineAnalytics.onmicrosoft.com
Next, you need to sign in to register your gateway.
Sign in
Cancel

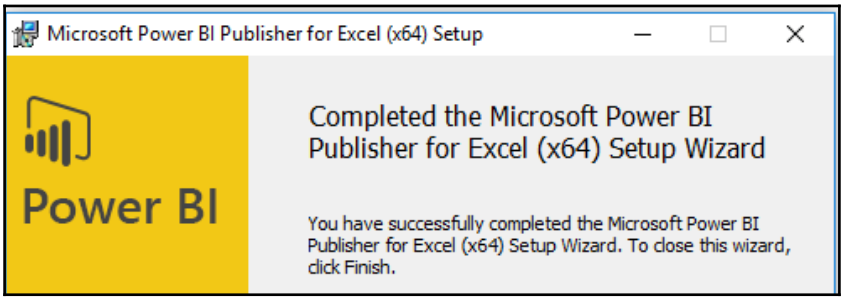

On-premises data gateway
You are signed in as BrettP@FrontlineAnalytics.onmicrosoft.com and are ready to register the gateway.
New on-premises data gateway name
Power BI Cookbook
Recovery key (8 character minimum)
This key is needed to restore the gateway and can't be changed. Record it in a safe place.
Confirm recovery key
<< Back
Configure
Cancel

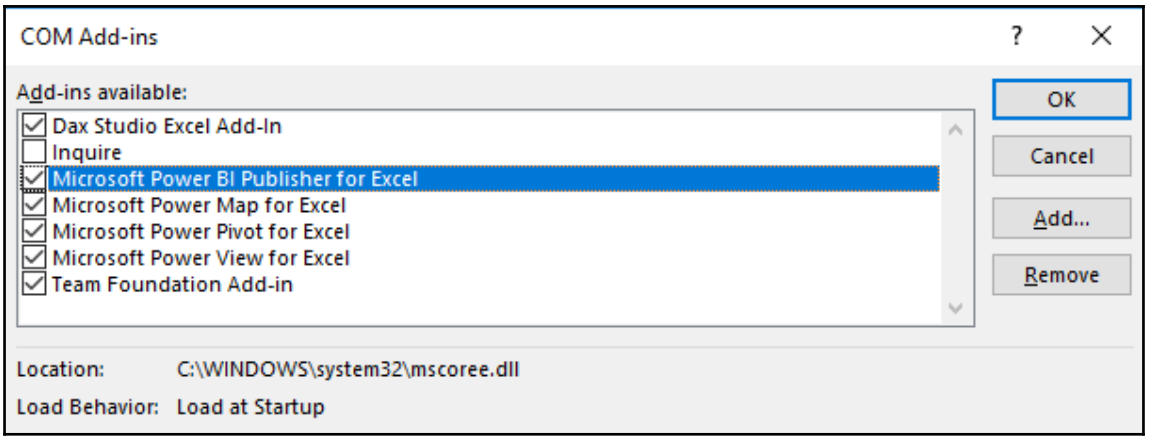

Power BI Ideas
How can we improve Power BI?
Enter your idea
Hot
Top
New
Category
started (47)
My feedback

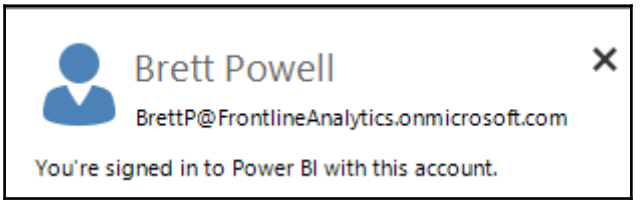

File
Home
Insert
Page Layout
Formulas
Data
Power BI
Pin
Pin Manager
Open Power BI
Connect to Data
Profile
Update
About
Pin
Power BI
Settings

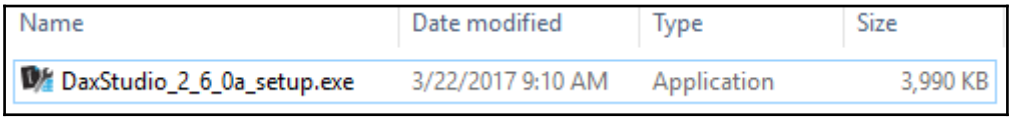

Connect to data in Power BI
Connect to your data in Power BI, and create pivot tables and charts to further analyze in Excel. Learn more
Select a workspace:
Insight Quest Admin
What type of data would you like to connect to?
Report
Dataset
Hide content that is shared with me
AW_SamplePowerPivot
Connect
Cancel

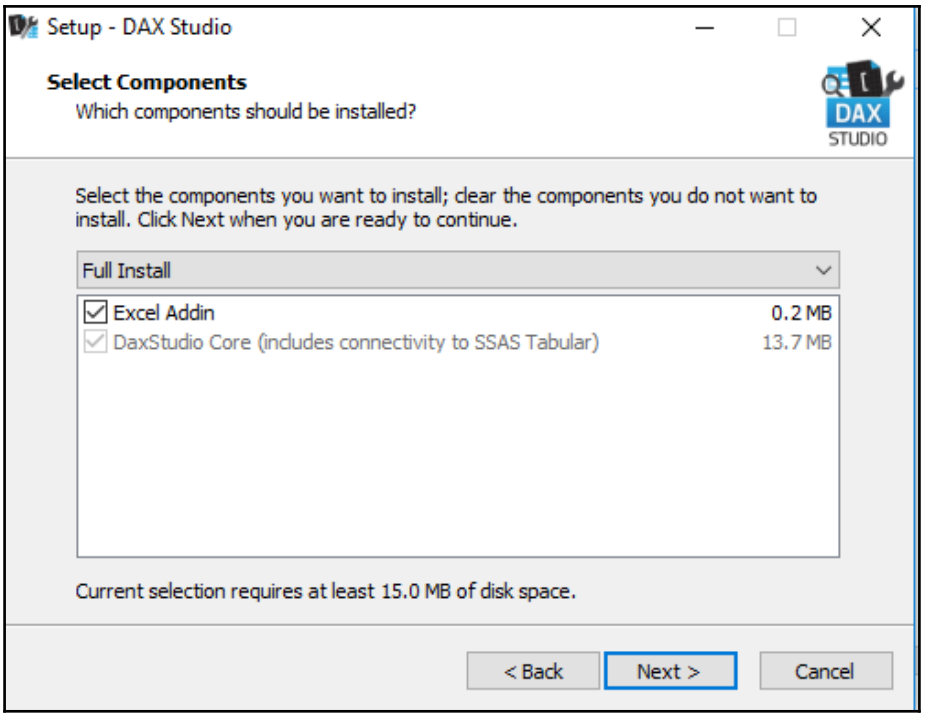

Name
Date modified
Type
Size
PowerBIpublisher_[64bit][en-us].msi
3/22/2017 1:12 PM
Windows Installer Package
46,512 KB


Microsoft Power BI Publisher for Excel (x64) Setup
Power BI
Completed the Microsoft Power BI Publisher for Excel (x64) Setup Wizard
You have successfully completed the Microsoft Power BI Publisher for Excel (x64) Setup Wizard. To close this wizard, click Finish.

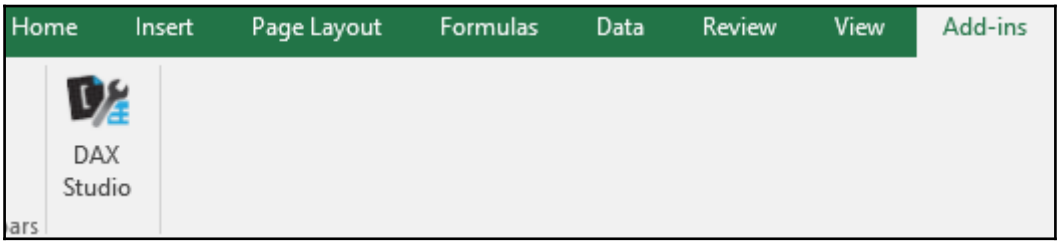

COM Add-ins
Add-ins available:
Dax Studio Excel Add-In
Inquire
Microsoft Power BI Publisher for Excel
Microsoft Power Map for Excel
Microsoft Power Pivot for Excel
Microsoft Power View for Excel
Team Foundation Add-in
OK
Cancel
Add...
Remove
Location: C:\WINDOWS\system32\mscoree.dll
Load Behavior: Load at Startup

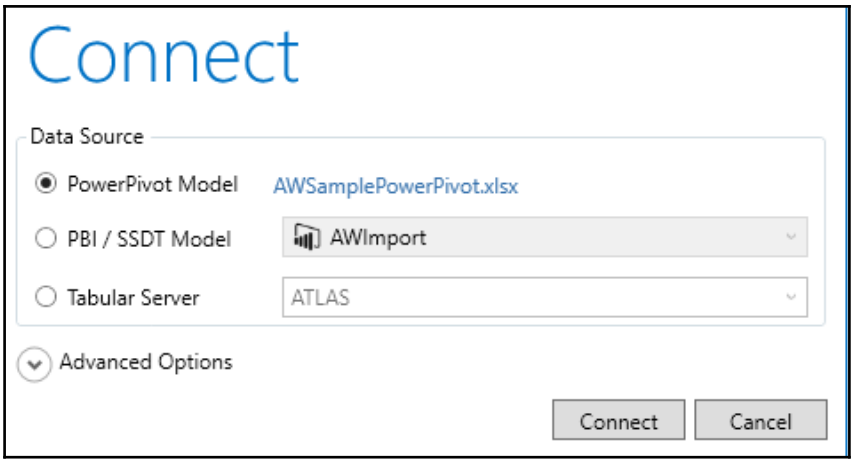

Brett Powell
BrettP@FrontlineAnalytics.onmicrosoft.com
You're signed in to Power BI with this account.

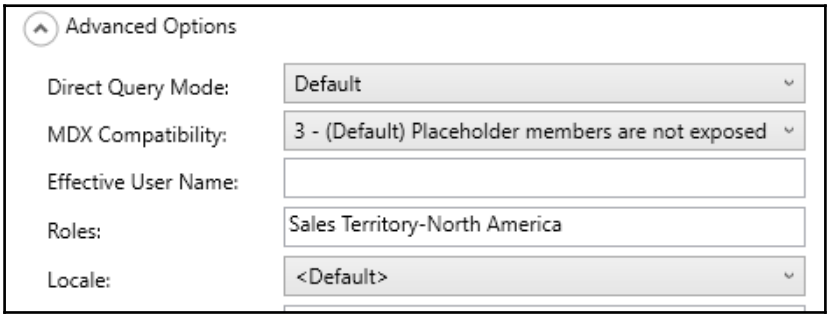

Name
Date modified
Type
Size
DaxStudio_2_6_0a_setup.exe
3/22/2017 9:10 AM
Application
3,990 KB

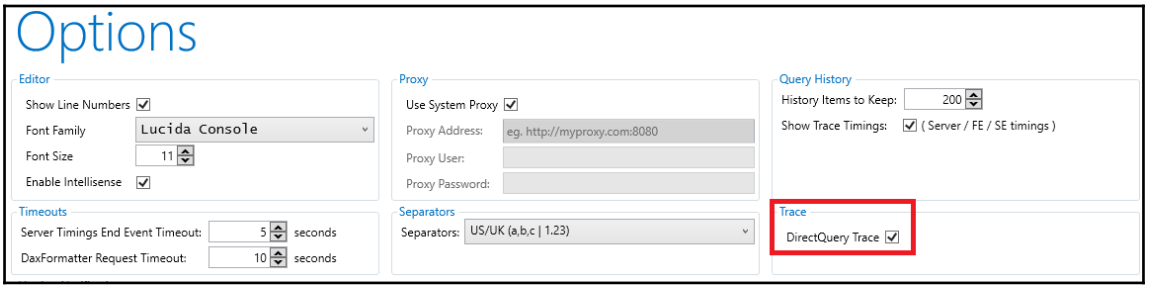

Setup - DAX Studio
Select Components
Which components should be installed?
DAX
STUDIO
Select the components you want to install; clear the components you do not want to install. Click Next when you are ready to continue.
Full Install
Excel Addin
0.2 MB
DaxStudio Core (includes connectivity to SSAS Tabular)
13.7 MB
Current selection requires at least 15.0 MB of disk space.
< Back
Next >
Cancel

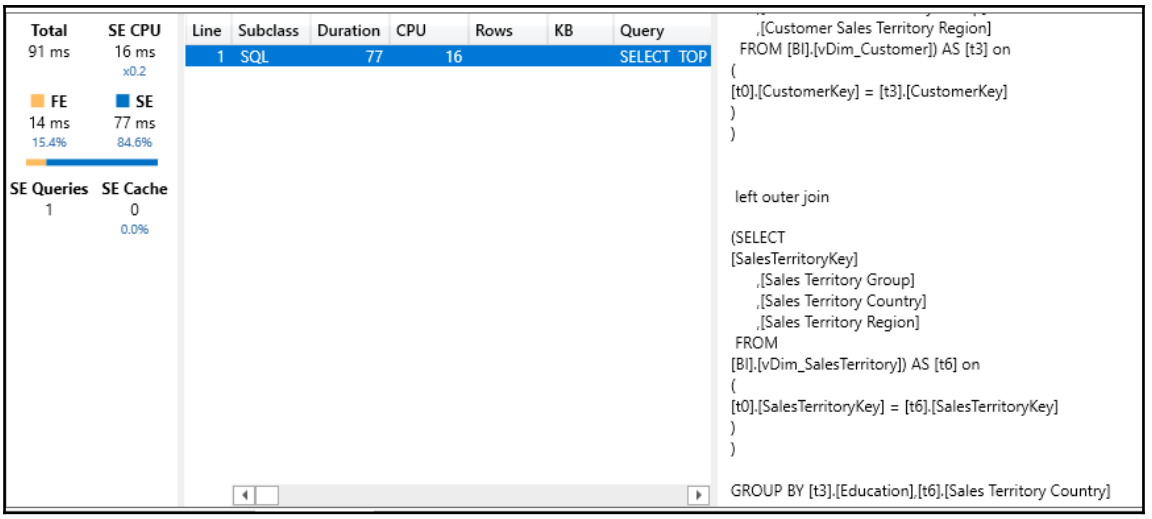

D
DAX Studio
DAX Studio


Home
Insert
Page Layout
Formulas
Data
Review
View
Add-ins
DAX
Studio
ars

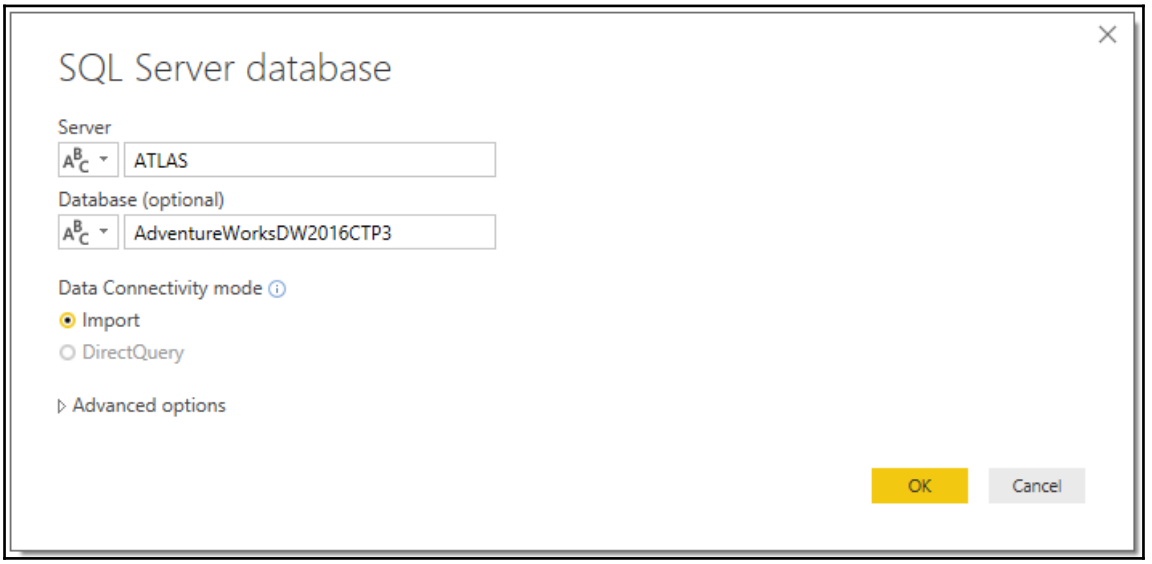

Connect
Data Source
PowerPivot Model
AWSamplePowerPivot.xlsx
PBI / SSDT Model
AWImport
Tabular Server
ATLAS
Advanced Options
Connect
Cancel

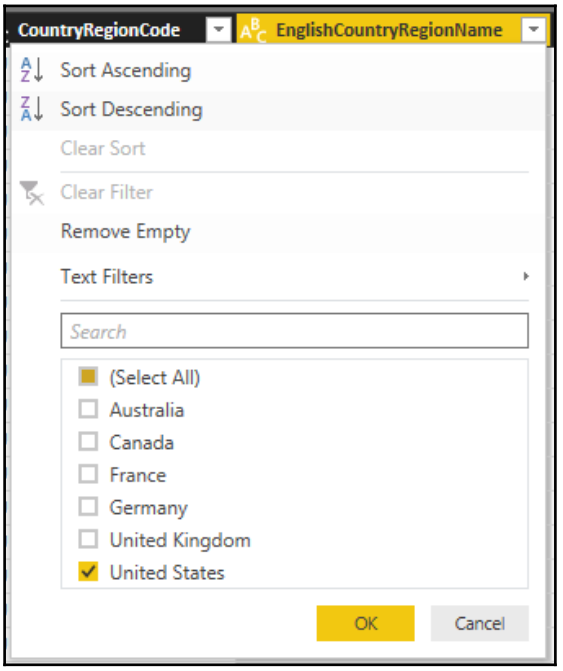

Advanced Options
Direct Query Mode:
Default
MDX Compatibility:
3 - (Default) Placeholder members are not exposed
Effective User Name:
Roles:
Sales Territory-North America
Locale:
<Default>

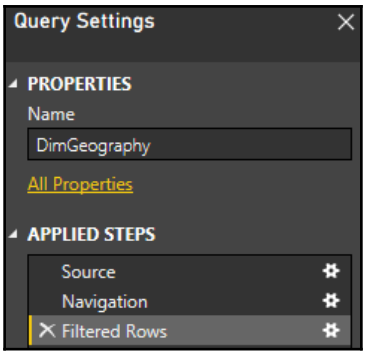

Options
Editor
Show Line Numbers
Font Family
Lucida Console
Font Size
11
Enable Intellisense
Proxy
Use System Proxy
Proxy Address:
eg. http://myproxy.com:8080
Proxy User:
Proxy Password:
Query History
History Items to Keep:
200
Show Trace Timings:
(Server / FE / SE timings)
Timeouts
Server Timings End Event Timeout:
5
seconds
DaxFormatter Request Timeout:
10
seconds
Separators
Separators:
US/UK (a,b,c | 1.23)
Trace
DirectQuery Trace


Total
91 ms
SE CPU
16 ms
x0.2
FE
14 ms
15.4%
SE
77 ms
84.6%
SE Queries
1
SE Cache
0
0.0%
Line
Subclass
Duration
CPU
Rows
KB
Query
1
SQL
77
16
SELECT TOP
,[Customer Sales Territory Region]
FROM [BI].[vDim_Customer]) AS [t3] on
(
[t0].[CustomerKey] = [t3].[CustomerKey]
)
)
left outer join
(SELECT
[SalesTerritoryKey]
,[Sales Territory Group]
,[Sales Territory Country]
,[Sales Territory Region]
FROM
[BI].[vDim_SalesTerritory]) AS [t6] on
(
[t0].[SalesTerritoryKey] = [t6].[SalesTerritoryKey]
)
)
GROUP BY [t3].[Education],[t6].[Sales Territory Country]

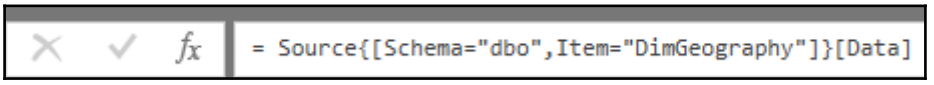
Chapter 2: Accessing and Retrieving Data

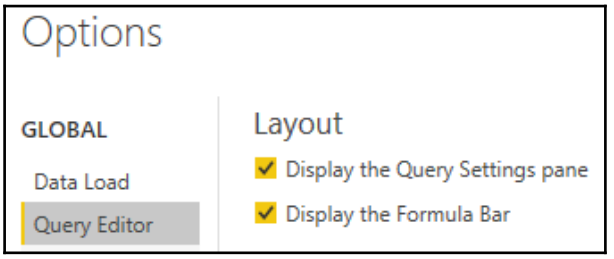


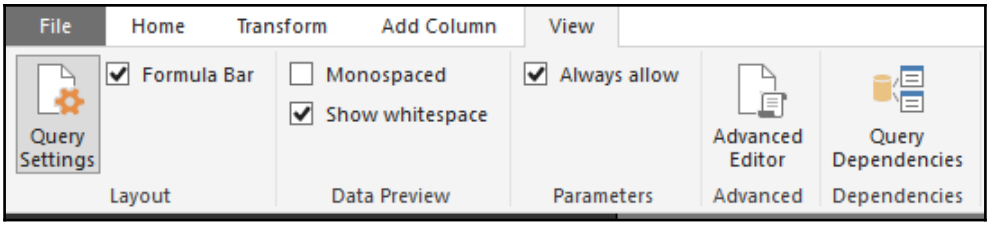


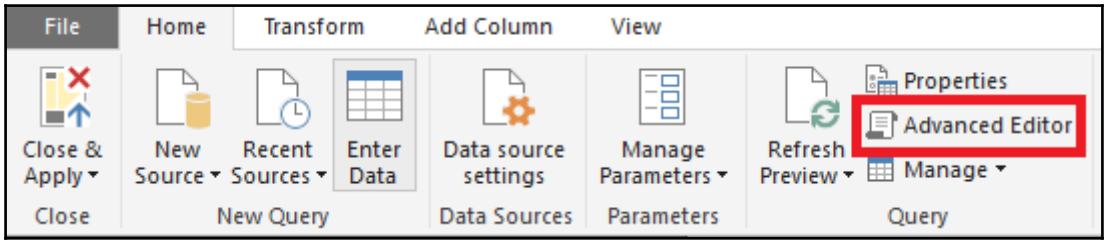

Query Settings
PROPERTIES
Name
DimGeography
All Properties
APPLIED STEPS
Source
Navigation
Filtered Rows

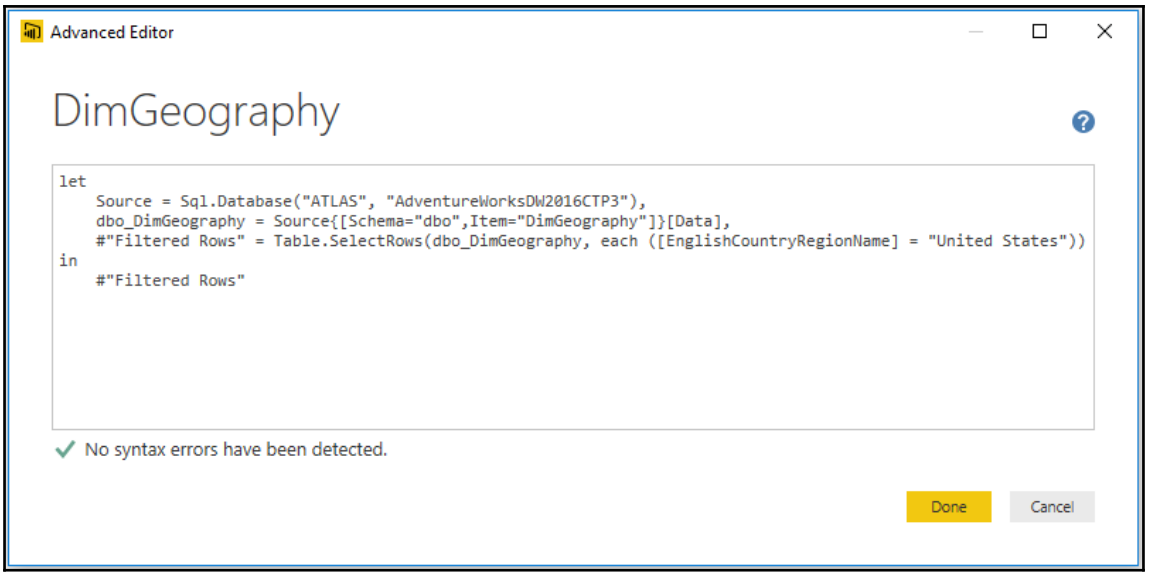

= Sql.Database("ATLAS", "AdventureWorksDW2016CTP3")

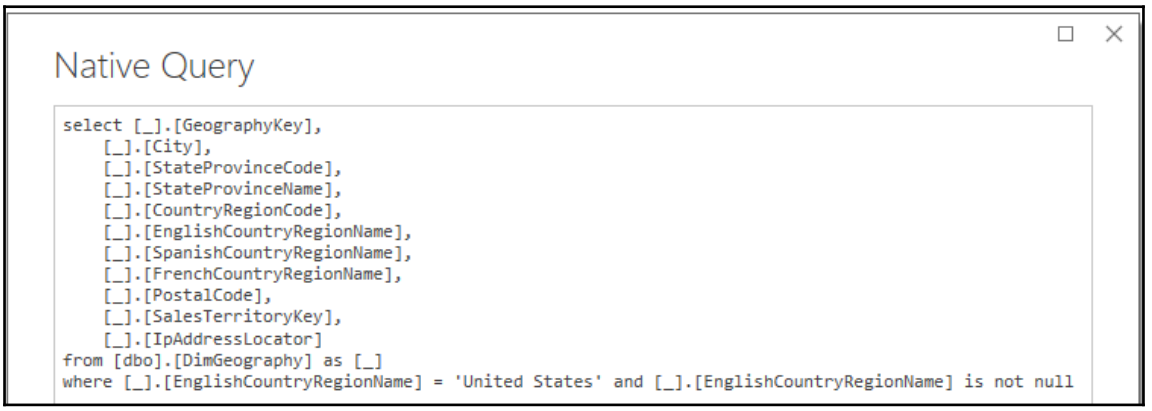

= Source{[Schema="dbo",Item="DimGeography"]}[Data]

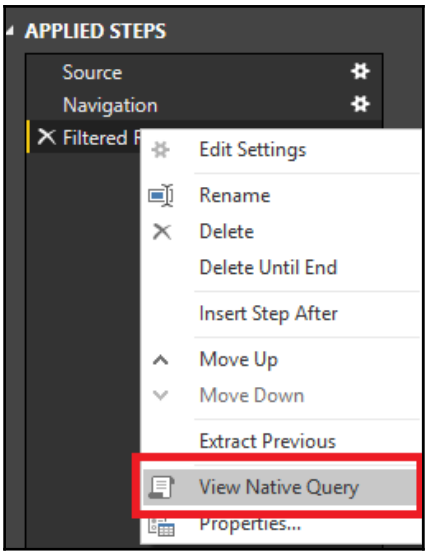

Options
GLOBAL
Data Load
Query Editor
Layout
Display the Query Settings pane
Display the Formula Bar


File
Home
Transform
Add Column
View
Query Settings
Formula Bar
Monospaced
Show whitespace
Always allow
Advanced Editor
Query Dependencies
Layout
Data Preview
Parameters
Advanced
Dependencies

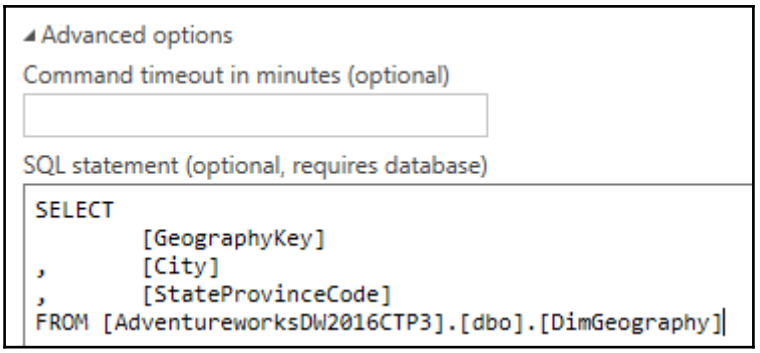

File
Home
Transform
Add Column
View
Close & Apply
New Source
Recent Sources
Enter Data
Data source settings
Manage Parameters
Refresh Preview
Properties
Advanced Editor
Manage
Close
New Query
Data Sources
Parameters
Query

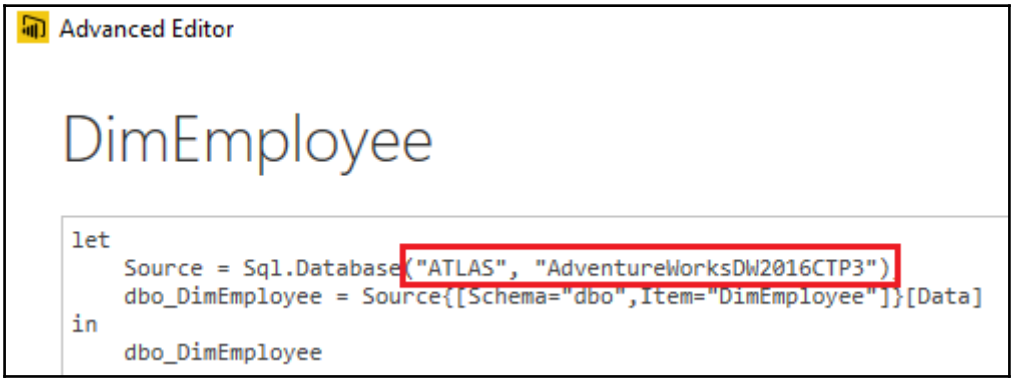

Advanced Editor
DimGeography
let
Source = Sql.Database("ATLAS", "AdventureWorksDW2016CTP3"),
dbo_DimGeography = Source{[Schema="dbo",Item="DimGeography"]}[Data],
#"Filtered Rows" = Table.SelectRows(dbo_DimGeography, each ([EnglishCountryRegionName] = "United States"))
in
#"Filtered Rows"
No syntax errors have been detected.
Done
Cancel

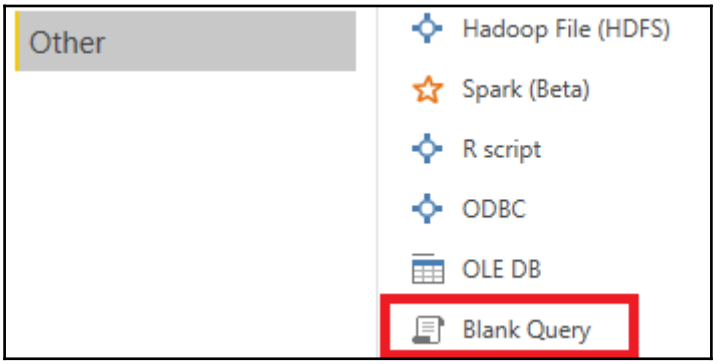

Native Query
select [_].[GeographyKey],
[_].[City],
[_].[StateProvinceCode],
[_].[StateProvinceName],
[_].[CountryRegionCode],
[_].[EnglishCountryRegionName],
[_].[SpanishCountryRegionName],
[_].[FrenchCountryRegionName],
[_].[PostalCode],
[_].[SalesTerritoryKey],
[_].[IpAddressLocator]
from [dbo].[DimGeography] as [_]
where [_].[EnglishCountryRegionName] = 'United States' and [_].[EnglishCountryRegionName] is not null

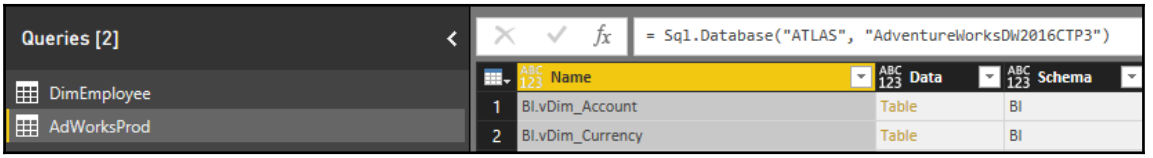



```
execute sp_executesql N'select [_].[GeographyKey],
    [_].[City],
    [_].[StateProvinceCode],
    [_].[StateProvinceName],
    [_].[CountryRegionCode],
    [_].[EnglishCountryRegionName],
    [_].[SpanishCountryRegionName],
    [_].[FrenchCountryRegionName],
    [_].[PostalCode],
    [_].[SalesTerritoryKey],
    [_].[IpAddressLocator]
from [dbo].[DimGeography] as [_]
where [_].[EnglishCountryRegionName] = ''Canada'' and [_].[EnglishCountryRegionName] is not null'
```

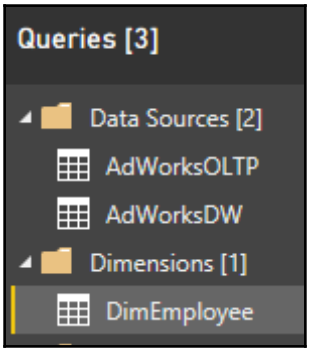

Advanced options
Command timeout in minutes (optional)
SQL statement (optional, requires database)
SELECT
[GeographyKey]
, [City]
, [StateProvinceCode]
FROM [AdventureworksDW2016CTP3].[dbo].[DimGeography]

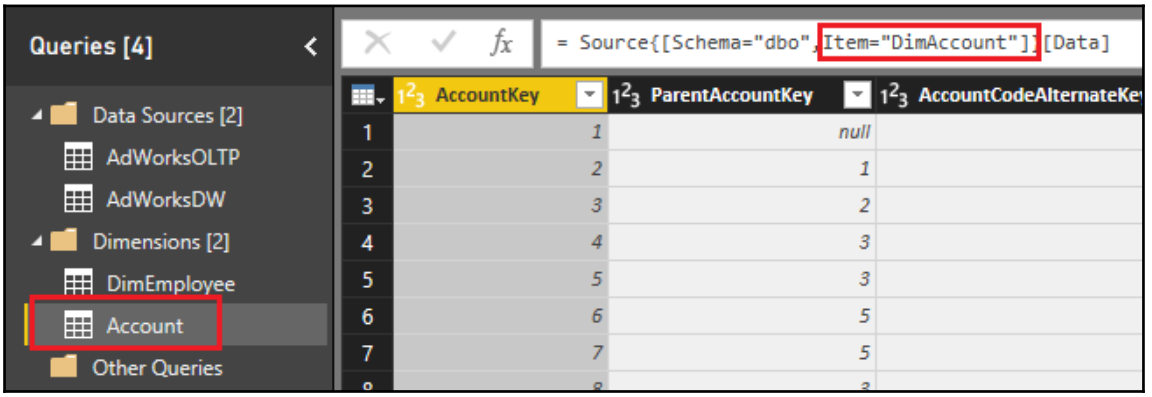

Advanced Editor
DimEmployee
let
Source = Sql.Database("ATLAS", "AdventureWorksDW2016CTP3")
dbo_DimEmployee = Source{[Schema="dbo",Item="DimEmployee"]}[Data]
in
dbo_DimEmployee

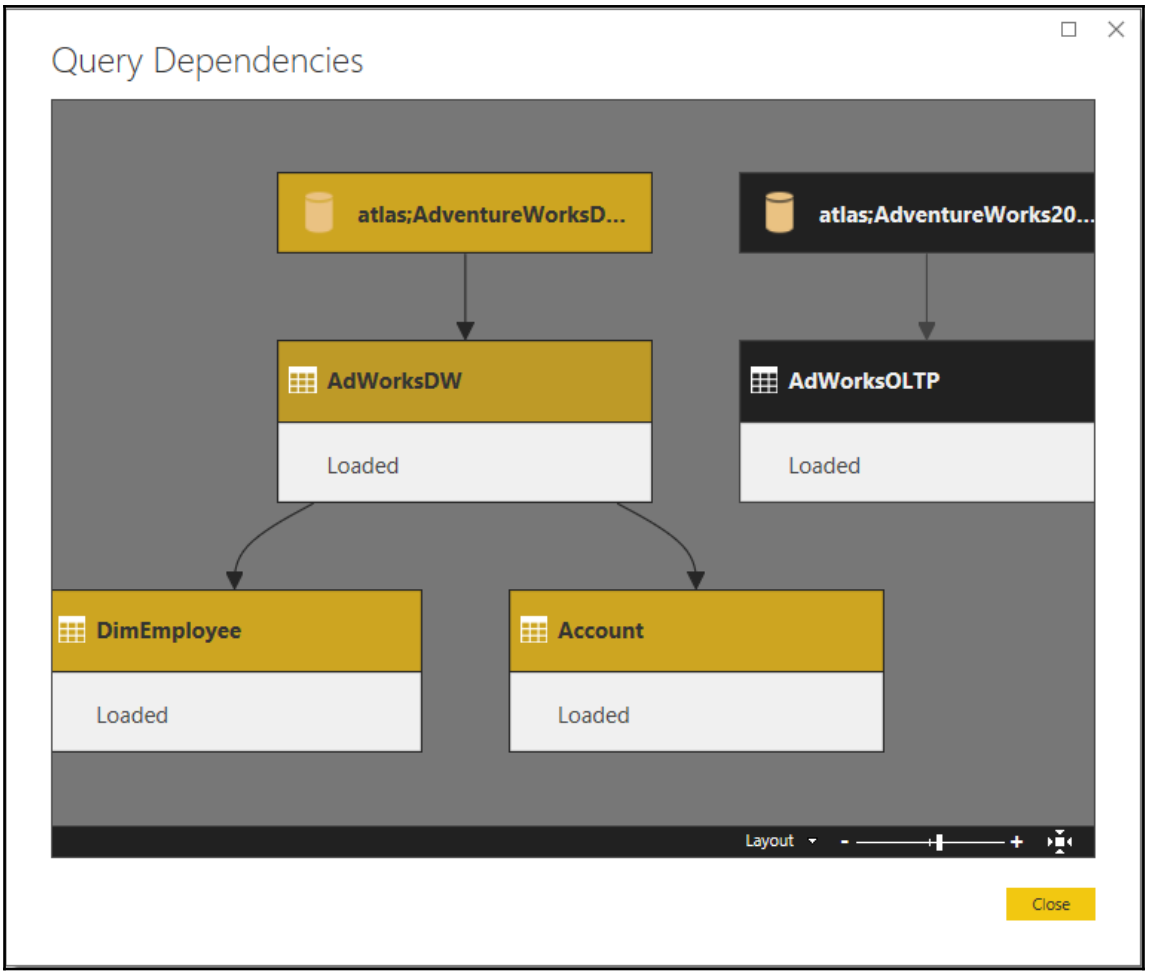

Other
Hadoop File (HDFS)
Spark (Beta)
R script
ODBC
OLE DB
Blank Query

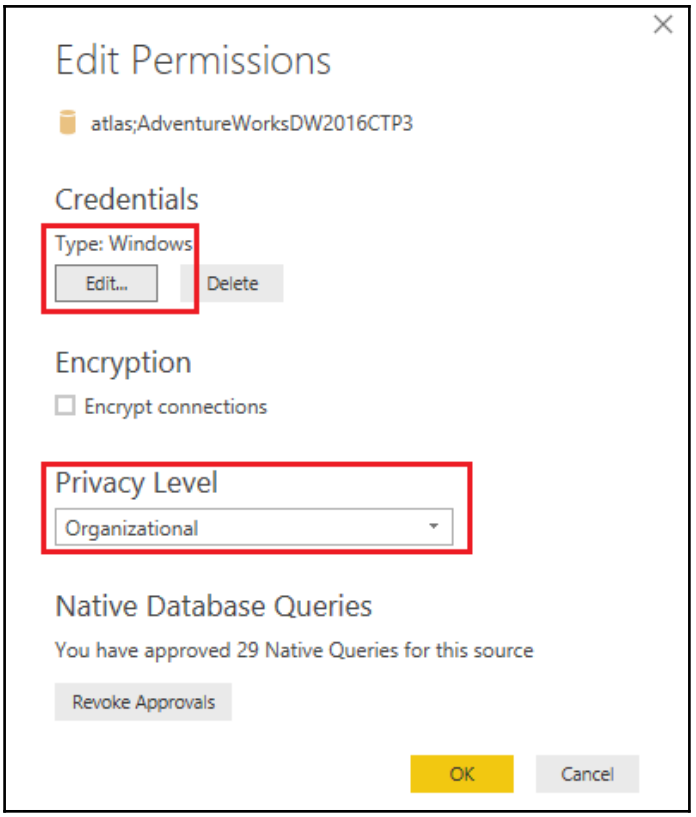

Queries [2]
DimEmployee
AdWorksProd
= Sql.Database("ATLAS", "AdventureWorksDW2016CTP3")
Name
Data
Schema
1 BI.vDim_Account Table BI
2 BI.vDim_Currency Table BI

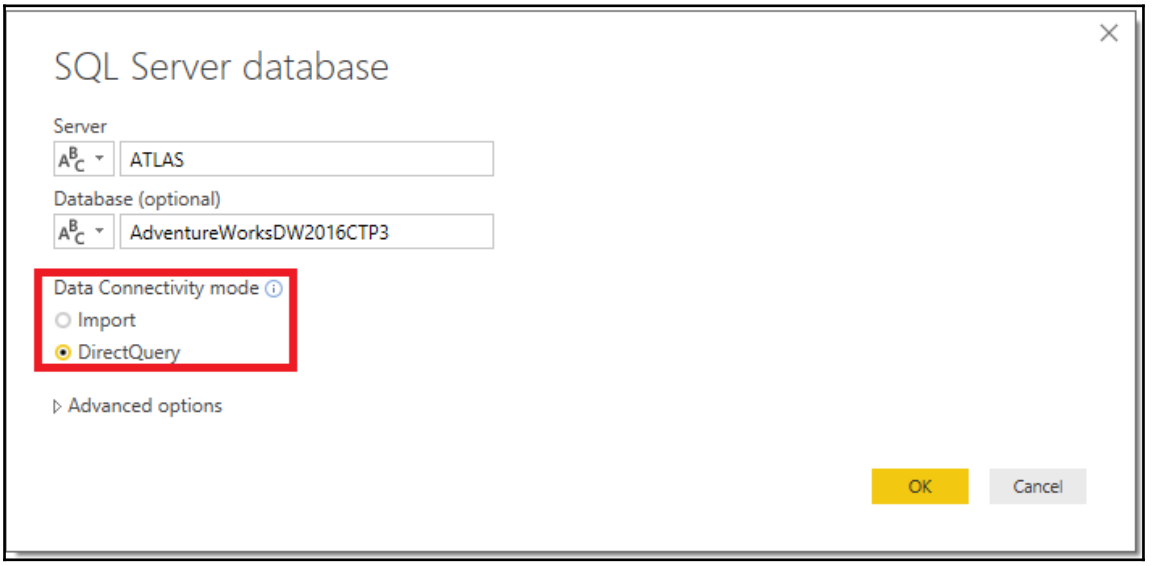
```
let
    Source = AdWorksProd,
    dbo_DimEmployee = Source{[Schema="dbo",Item="DimEmployee"]}[Data]
in
    dbo_DimEmployee
```



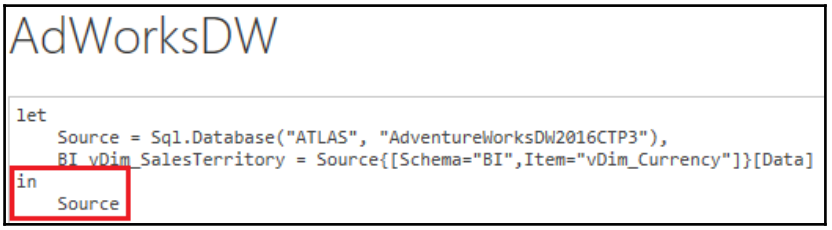


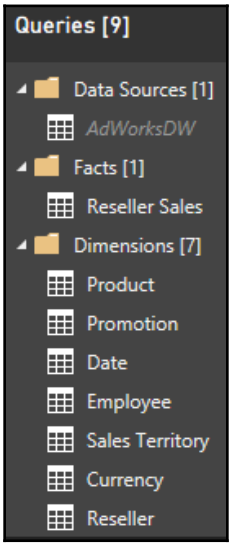

Query Dependencies
atlas;AdventureWorksD...
atlas;AdventureWorks20...
AdWorksDW
Loaded
AdWorksOLTP
Loaded
DimEmployee
Loaded
Account
Loaded
Layout
Close

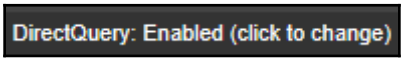

Edit Permissions
atlas;AdventureWorksDW2016CTP3
Credentials
Type: Windows
Edit...
Delete
Encryption
Encrypt connections
Privacy Level
Organizational
Native Database Queries
You have approved 29 Native Queries for this source
Revoke Approvals
OK
Cancel

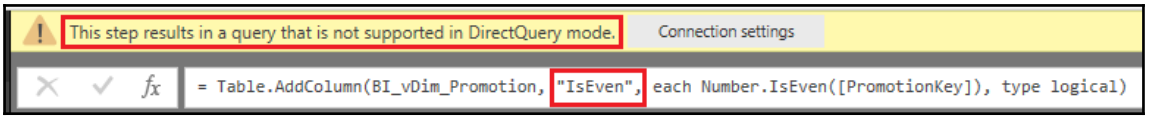

SQL Server database
Server
ATLAS
Database (optional)
AdventureWorksDW2016CTP3
Data Connectivity mode
Import
DirectQuery
Advanced options
OK
Cancel


= Source{[Schema="BI",Item="vDim_Currency"]}[Data]
CurrencyKey
Currency
Currency Abbrev
1
1
Afghani
AFA
2
2
Algerian Dinar
DZD


AdWorksDW
let
Source = Sql.Database("ATLAS", "AdventureWorksDW2016CTP3"),
BI_vDim_SalesTerritory = Source{[Schema="BI",Item="vDim_Currency"]}[Data]
in
Source


Queries [9]
Data Sources [1]
AdWorksDW
Facts [1]
Reseller Sales
Dimensions [7]
Product
Promotion
Date
Employee
Sales Territory
Currency
Reseller


DirectQuery: Enabled (click to change)

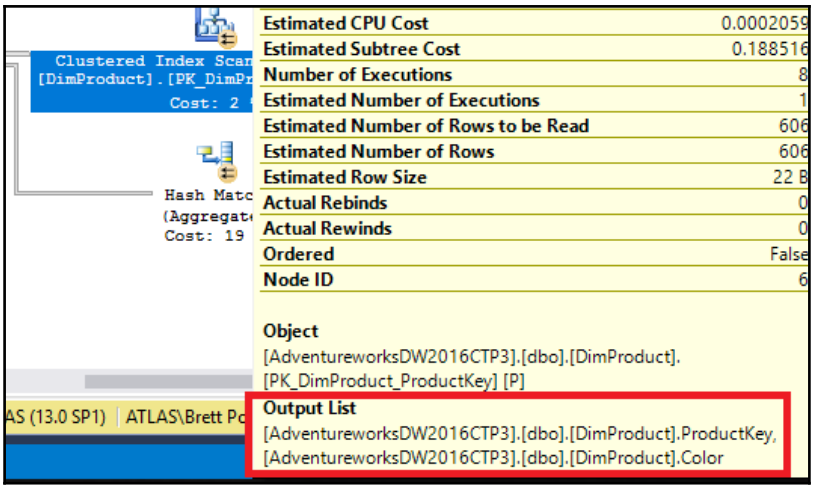

This step results in a query that is not supported in DirectQuery mode.
Connection settings
= Table.AddColumn(BI_vDim_Promotion, "IsEven", each Number.IsEven([PromotionKey]), type logical)

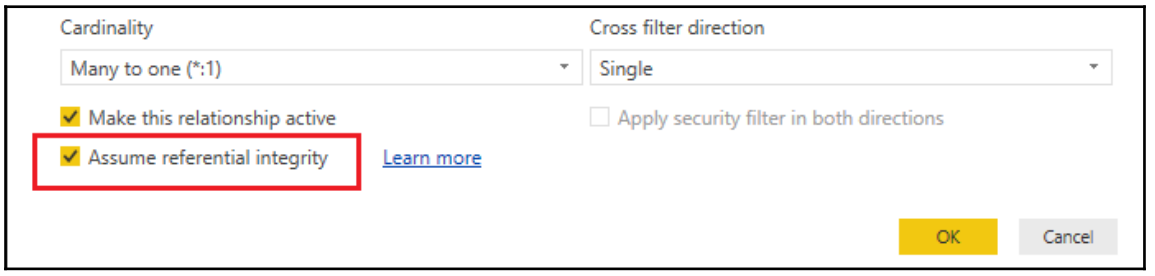
ProductNativeQry

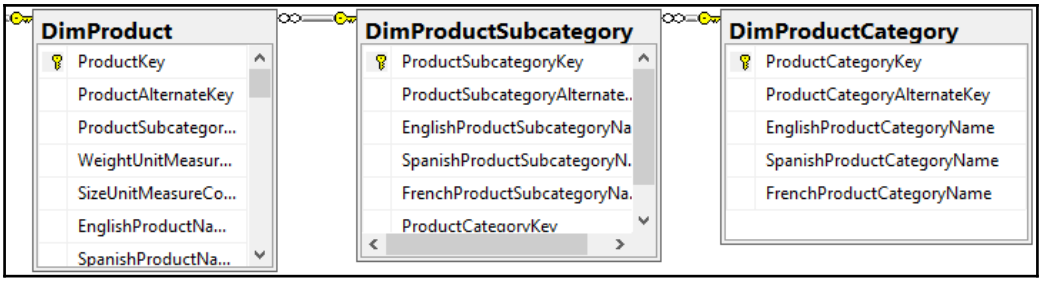
```
let
    Source = AdWorksDW,
    ProductNativeQuery = Value.NativeQuery(Source,
"SELECT
        P.ProductKey
,       P.Class AS 'Product Class'
,       p.Color as 'Product Color'
,       p.EnglishProductName as 'Product Name'
,       p.ListPrice as 'List Price'
,       p.ModelName as 'Product Model'
,       p.Weight as 'Product Weight'
,       p.Style as 'Product Style'
,       p.StandardCost as 'Standard Cost'
,       p.ProductLine as 'Product line'
,       p.Status as 'Product Status'
,       S.EnglishProductSubcategoryName AS 'Product Subcategory'
,       C.EnglishProductCategoryName AS 'Product Category'
FROM
DBO.DimProduct AS P
LEFT JOIN DBO.DimProductSubcategory AS S
ON P.ProductSubcategoryKey = S.ProductSubcategoryKey
LEFT JOIN DBO.DimProductCategory AS C
ON S.ProductCategoryKey = C.ProductCategoryKey")
in
    ProductNativeQuery
```

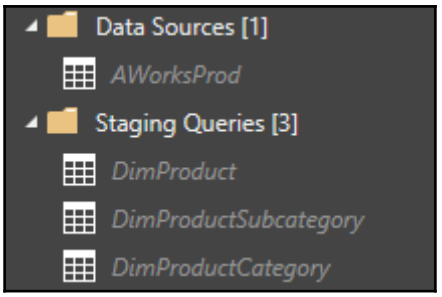
Query

```
SELECT  TOP (1000001) [t1].[Product Color],SUM([t0].[Sales
    [$Table].[Standard Cost] as [Standard Cost],
    [$Table].[Product line] as [Product line],
    [$Table].[Product Status] as [Product Status],
    [$Table].[Product Safety Stock Level] as [Product Safety Stock Level],
    [$Table].[Product Subcategory] as [Product Subcategory],
    [$Table].[Product Category] as [Product Category]
from [BI].[vDim_Product] as [$Table]) AS [t1] on
(
[t0].[ProductKey] = [t1].[ProductKey]
)
)

GROUP BY [t1].[Product Color]
```


Clustered Index Scan
[DimProduct].[PK_DimPr
Cost: 2
Hash Matc
(Aggregat
Cost: 19
AS (13.0 SP1)
ATLAS\Brett Pc
Estimated CPU Cost 0.0002059
Estimated Subtree Cost 0.188516
Number of Executions 8
Estimated Number of Executions 1
Estimated Number of Rows to be Read 606
Estimated Number of Rows 606
Estimated Row Size 22 B
Actual Rebinds 0
Actual Rewinds 0
Ordered False
Node ID 6
Object
[AdventureworksDW2016CTP3].[dbo].[DimProduct].
[PK_DimProduct_ProductKey] [P]
Output List
[AdventureworksDW2016CTP3].[dbo].[DimProduct].ProductKey,
[AdventureworksDW2016CTP3].[dbo].[DimProduct].Color


Cardinality
Many to one (*:1)
Cross filter direction
Single
Make this relationship active
Apply security filter in both directions
Assume referential integrity
Learn more
OK
Cancel


DimProduct
ProductKey
ProductAlternateKey
ProductSubcategor...
WeightUnitMeasur...
SizeUnitMeasureCo...
EnglishProductNa...
SpanishProductNa...
DimProductSubcategory
ProductSubcategoryKey
ProductSubcategoryAlternate...
EnglishProductSubcategoryNa
SpanishProductSubcategoryN.
FrenchProductSubcategoryNa.
ProductCategoryKey
DimProductCategory
ProductCategoryKey
ProductCategoryAlternateKey
EnglishProductCategoryName
SpanishProductCategoryName
FrenchProductCategoryName




```
let
    Source = AWorksProd,
    DimProduct = Source{[Schema = "dbo",Item = "DimProductSubcategory"]}[Data]
in
    DimProduct
```

```
= Source{[Schema = "dbo",Item = "DimProductCategory"]}[Data]
```

	ProductCategoryKey	ProductCategoryAlternateKey	EnglishProductCategoryName
1	1	1	Bikes
2	2	2	Components

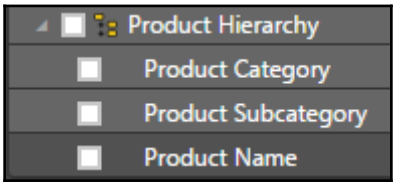
```
let
    ProductSubCatJoin =
        Table.NestedJoin(DimProduct,"ProductSubcategoryKey",DimProductSubcategory,"ProductSubcategoryKey",
            "SubCatColumn",JoinKind.LeftOuter),

    ProductSubCatColumns =
        Table.ExpandTableColumn(ProductSubCatJoin,"SubCatColumn",
            {"EnglishProductSubcategoryName","ProductCategoryKey"},  {"Product Subcategory", "ProductCategoryKey"})
in
    ProductSubCatColumns
```

Product Subcategory	ProductCategoryKey
Socks	3
Socks	3
Helmets	4
Helmets	4

```
    ProductCatJoin =
        Table.NestedJoin(ProductSubCatColumns,"ProductCategoryKey",DimProductCategory,"ProductCategoryKey",
            "ProdCatColumn",JoinKind.LeftOuter),

    ProductCatColumns =
        Table.ExpandTableColumn(ProductCatJoin, "ProdCatColumn",
            {"EnglishProductCategoryName"}, {"Product Category"})

in ProductCatColumns
```

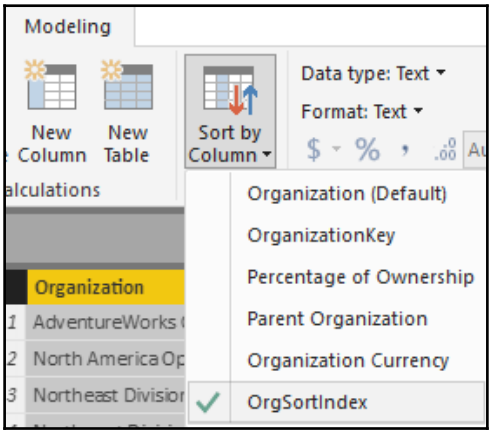
```
    SelectProductColumns =
        Table.SelectColumns(ProductCatColumns,
            {"ProductKey", "EnglishDescription","EnglishProductName",
            "Product Subcategory", "Product Category"
            })
,
    RenameProductColumns =
        Table.RenameColumns(SelectProductColumns,
            {
            {"EnglishDescription", "Product Description"},
            {"EnglishProductName", "Product Name"}
            })

in
    RenameProductColumns
```

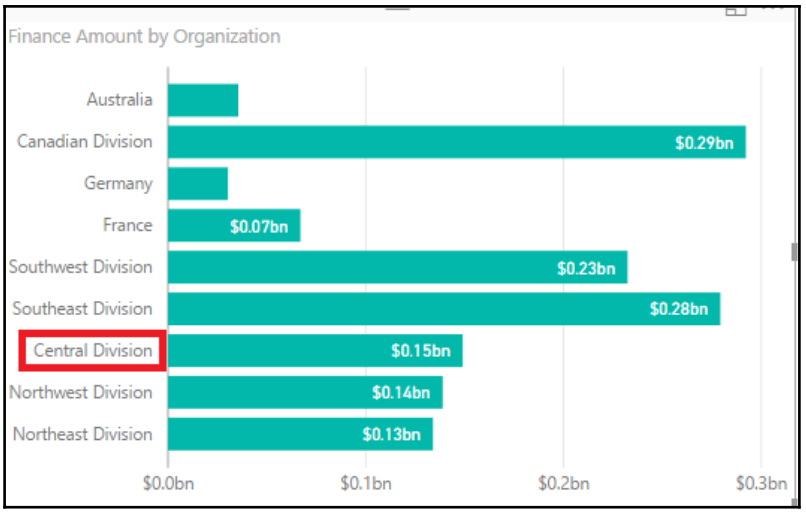
ProductKey	Product Description	Product Name	Product Subcategory	Product Category
212	Universal fit, well-vented, light...	Sport-100 Helmet, Red	Helmets	Accessories
213	Universal fit, well-vented, light...	Sport-100 Helmet, Red	Helmets	Accessories
214	Universal fit, well-vented, light...	Sport-100 Helmet, Red	Helmets	Accessories
215	Universal fit, well-vented, light...	Sport-100 Helmet, Black	Helmets	Accessories
216	Universal fit, well-vented, light...	Sport-100 Helmet, Black	Helmets	Accessories
217	Universal fit, well-vented, light...	Sport-100 Helmet, Black	Helmets	Accessories

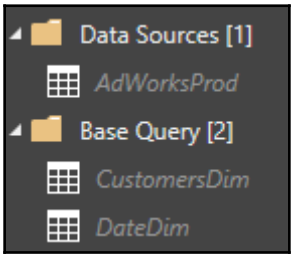


```
    OrgSorted = Table.Sort(Source,
            {
                {"Parent Organization", Order.Ascending},
                {"Organization Currency", Order.Ascending}
            }),
    OrgSortIndex = Table.AddIndexColumn(OrgSorted, "OrgSortIndex", 1, 1)
in
    OrgSortIndex
```

OrganizationKey	Organization	OrgSortIndex	Parent Organization	Organization Currency
1	AdventureWorks Cycle	1	*null*	US Dollar
10	Pacific Operations	2	AdventureWorks Cycle	Australian Dollar
9	European Operations	3	AdventureWorks Cycle	EURO
2	North America Operations	4	AdventureWorks Cycle	US Dollar
12	Germany	5	European Operations	EURO
11	France	6	European Operations	EURO
8	Canadian Division	7	North America Operations	Canadian Dollar
14	USA Operations	8	North America Operations	US Dollar
13	Australia	9	Pacific Operations	Australian Dollar
3	Northeast Division	10	USA Operations	US Dollar
7	Southwest Division	11	USA Operations	US Dollar
6	Southeast Division	12	USA Operations	US Dollar
5	Central Division	13	USA Operations	US Dollar
4	Northwest Division	14	USA Operations	US Dollar

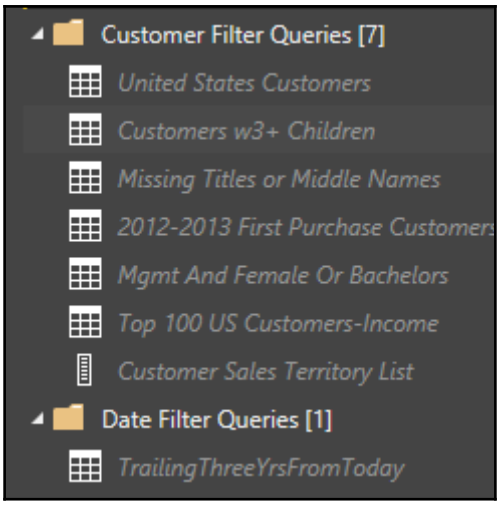






CustomersDim

```
let
    Source = AdWorksProd,
    ProductDim = Source{[Schema = "BI",Item = "vDim_Customer"]}[Data]
in
    ProductDim
```




```
let
    Customers = CustomersDim,
    USCustomers = Table.SelectRows(Customers, each [Country Code] = "US")
in
    USCustomers
```

```
let
    Customers = CustomersDim,
    ThreePlusChildFamilies = Table.SelectRows(Customers, each [Children] >= 3)
in
    ThreePlusChildFamilies
```

```
let
    Customers = CustomersDim,
    MissingTitleOrMiddleName = Table.SelectRows(Customers, each [Middle Name] = null or [Title] = null)
in
    MissingTitleOrMiddleName
```

```
let
    Customers = CustomersDim,
    BetweenDates = Table.SelectRows
            (
            Customers,
            each [First Purchase Date] >= #date(2012,01,01) and [First Purchase Date] <= #date(2013,12,31)
            )
in
    BetweenDates
```

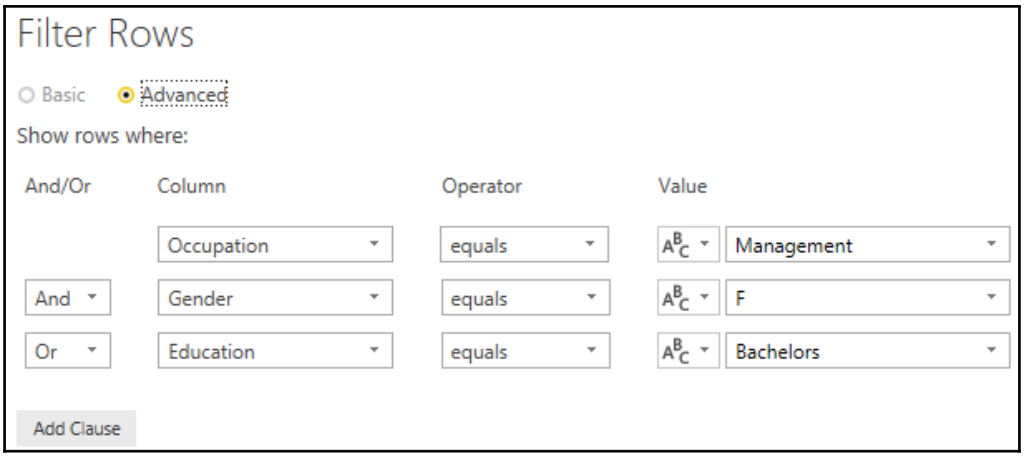
```
let
    Customers = CustomersDim,
    MgmtAndFemaleOrBachelors = Table.SelectRows(Customers, each
        [Occupation] = "Management" and ([Gender] = "F" or [Education] = "Bachelors"))
in
    MgmtAndFemaleOrBachelors
```

```
let
    Source = #"United States Customers",
    SortedByIncome = Table.Sort(Source,{{"Annual Income", Order.Descending}}),
    TopUSIncomeCustomers = Table.FirstN(SortedByIncome,100)
in
    TopUSIncomeCustomers
```

```
let
    SalesTerritoryCountryList = List.Distinct(CustomersDim[Customer Sales Territory Country]),
    OrderedList = List.Sort(SalesTerritoryCountryList,Order.Ascending)
in
    OrderedList
```

	List
1	Australia
2	Canada
3	France
4	Germany
5	United Kingdom
6	United States

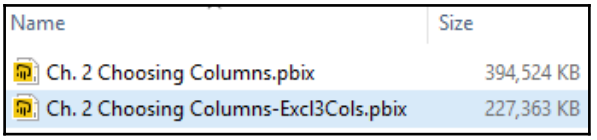
```
let
    Dates = DateDim,
    TrailingThreeFromToday = Table.SelectRows(Dates, each
    [Date] <= DateTime.Date(DateTime.LocalNow()) and
    [Calendar Year] >= Date.Year(DateTime.LocalNow()) - 3 )
in
    TrailingThreeFromToday
```



SalesOrderNumber	CarrierTrackingNumber	CustomerPONumber
SO72650	A274677A-F54A	PO7183881
SO77910	FB59680F-B34A	PO1196047
SO78157	5F262B78-6F7F	PO6814642
SO78888	44E969DE-11C4	PO931459

Table Rows	Distinct Sales Orders	Distinct Tracking Numbers	Distinct Customer PO Numbers
11,669,638	1,669,013	1,669,013	1,538,107

```
let
    ResellerSales = AdWorksProd{[Schema="BI",Item="vFact_ResellerSalesXL_CCI_AllColumns"]}[Data],

    RemovedCols =
Table.RemoveColumns(ResellerSales, {"SalesOrderNumber", "CarrierTrackingNumber", "CustomerPONumber"})
in
    RemovedCols
```



```
    SelectCustCols =
        Table.SelectColumns(Customer,
            {
            "CustomerKey","FirstName","LastName", "YearlyIncome", "Gender", "EnglishEducation",
            "MaritalStatus", "Phone","CommuteDistance","AddressLine1", "TotalChildren"
            }, MissingField.UseNull)
in
       SelectCustCols
```

	CustomerKey	FirstName	LastName	YearlyIncome	Gender	EnglishEducation
1	11000	Jon	Yang	90000	M	Bachelors
2	11001	Eugene	Huang	60000	M	Bachelors
3	11002	Ruben	Torres	60000	M	Bachelors
4	11003	Christy	Zhu	70000	F	Bachelors
5	11004	Elizabeth	Johnson	80000	F	Bachelors

CustomerKey	FirstName	LastName	YearlyIncome	Gender	EnglishEducation
11000	Jon	Yang	null	M	Bachelors
11001	Eugene	Huang	null	M	Bachelors
11002	Ruben	Torres	null	M	Bachelors

```
    CustomerNameAdd = Table.AddColumn(SelectCustCols, "Customer Name", each
        [FirstName] & " " & [LastName]),

    CustomerTable =   Table.SelectColumns(CustomerNameAdd,
            {
            "CustomerKey","Customer Name","YearlyIncome", "Gender", "EnglishEducation",
            "MaritalStatus", "Phone","CommuteDistance","AddressLine1", "TotalChildren"
            })
in
       CustomerTable
```

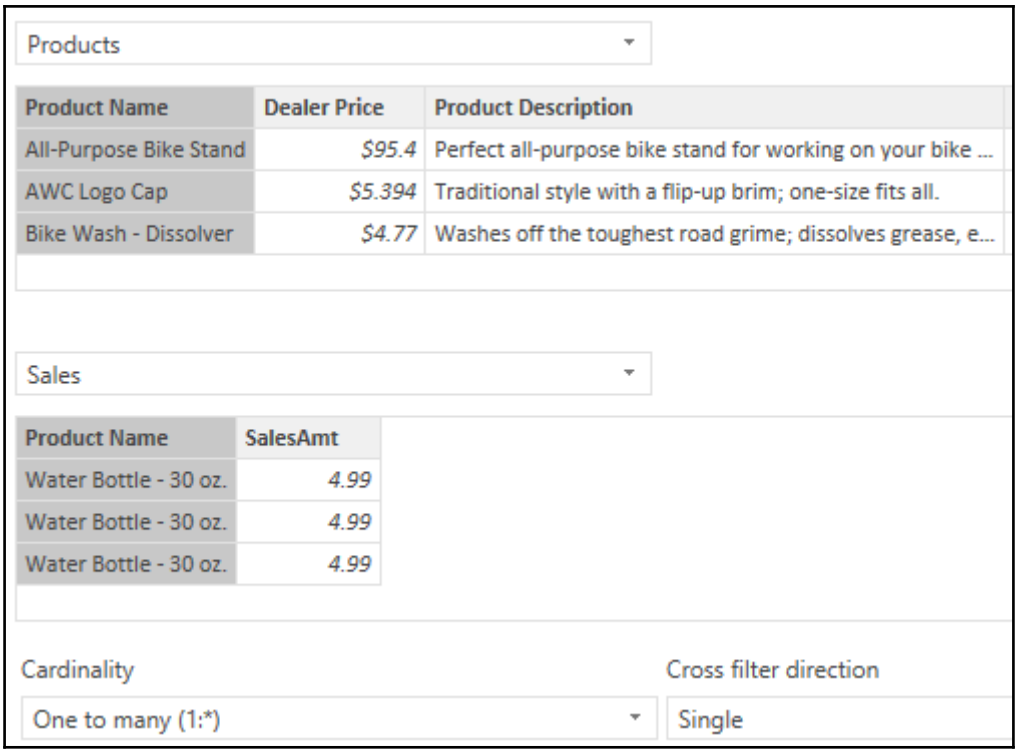
CustomerKey	Customer Name	YearlyIncome	Gender	EnglishEducation
11000	Jon Yang	90000	M	Bachelors
11001	Eugene Huang	60000	M	Bachelors
11002	Ruben Torres	60000	M	Bachelors
11003	Christy Zhu	70000	F	Bachelors

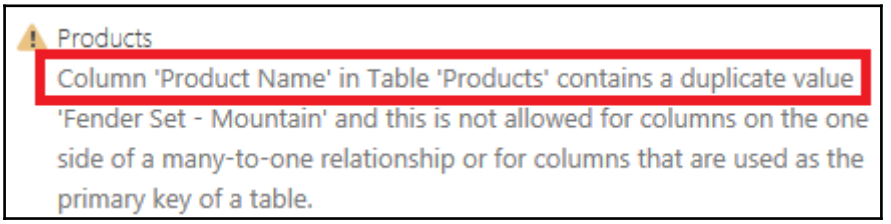
```
RenamedColumns = Table.RenameColumns(CustomerTable,
        {
            {"YearlyIncome", "Customer Annual Income"},
            {"Gender", "Customer Gender"},
            {"EnglishEducation", "Customer Education"},
            {"Phone", "Customer Phone Number"}
        }
        )
```

```
Extended Amount Metric = SUMX('Reseller Sales',
    'Reseller Sales'[UnitPrice]*'Reseller Sales'[OrderQuantity])
```

Product Name	Dealer Price	Product Description	Start Date
Classic Vest, S	*38.1*	Light-weight, wind-resistant, packs to fit into a pocket.	*7/1/2013*
Fender Set - Mountain	*13.188*	Clip-on fenders fit most mountain bikes.	*7/1/2013*
Front Brakes	*63.9*	All-weather brake pads; provides superior stopping by applying more...	*7/1/2013*

Product Name	Dealer Price	Product Description	Start Date
Chain	12.144	Superior shifting perfo	7/1/2013
Classic Vest, L	38.1	Light-weight, wind-res	7/1/2013
Classic Vest, M	38.1	Light-weight, wind-res	7/1/2013
Classic Vest, S	38.1	Light-weight, wind-res	7/1/2013
Fender Set - Mountain	13.188	Clip-on fenders fit mos	7/1/2013


Products
Product Name
Dealer Price
Product Description
All-Purpose Bike Stand
$95.4
Perfect all-purpose bike stand for working on your bike ...
AWC Logo Cap
$5.394
Traditional style with a flip-up brim; one-size fits all.
Bike Wash - Dissolver
$4.77
Washes off the toughest road grime; dissolves grease, e...
Sales
Product Name
SalesAmt
Water Bottle - 30 oz.
4.99
Water Bottle - 30 oz.
4.99
Water Bottle - 30 oz.
4.99
Cardinality
Cross filter direction
One to many (1:*)
Single


Products
Column 'Product Name' in Table 'Products' contains a duplicate value 'Fender Set - Mountain' and this is not allowed for columns on the one side of a many-to-one relationship or for columns that are used as the primary key of a table.

```
let
    ProductsTbl = Table.TransformColumnTypes(ProductListExcel,
     {
        {"Product Name", type text},
        {"Dealer Price",    Currency.Type},
        {"Product Description", type text},
        {"Start Date", type date}
        }
    ),
    TrimText = Table.TransformColumns(ProductsTbl,{"Product Name",Text.Trim}),
    DuplicateKey = Table.DuplicateColumn(TrimText,"Product Name", "Product Name-Copy"),
    DistinctProductRows = Table.Distinct(UpperCase),
    DistinctProductNames = Table.Distinct(DistinctProductRows, {"Product Name"})
in
    DistinctProductNames
```

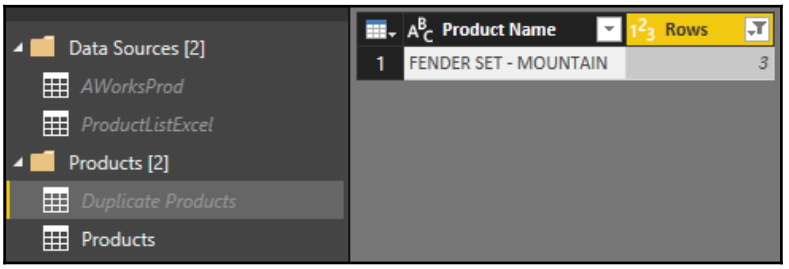
	Product Name	Dealer Price	Product Description	Start Date
1	Fender Set - Mountain	13.188	Clip-on fenders fit most mountain bikes.	7/1/2013
2	Fender set - Mountain	13.188	Clip-on fenders fit most mountain bikes.	7/1/2013

```
    TrimText = Table.TransformColumns(ProductsTbl,{"Product Name",Text.Trim}),
    DuplicateKey = Table.DuplicateColumn(TrimText,"Product Name", "Product Name-Copy"),

    UpperCase = Table.TransformColumns(DuplicateKey,{{"Product Name", Text.Upper}}),

    DistinctProductRows = Table.Distinct(UpperCase),
    DistinctProductNames = Table.Distinct(DistinctProductRows, {"Product Name"})
in
    DistintProductNames
```

Product Name
ALL-PURPOSE BIKE STAND
AWC LOGO CAP
BIKE WASH - DISSOLVER
CHAIN

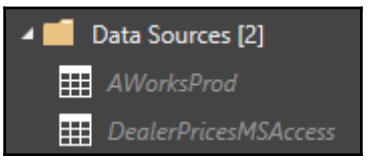
```
    RemoveProductName = Table.RemoveColumns(DistinctProductNames,"Product Name"),
    ReplaceProductName = Table.RenameColumns(RemoveProductName,{"Product Name-Copy","Product Name"})
in
    ReplaceProductName
```

```
    UpperCase = Table.TransformColumns(ProductSourceRows,{{"Product Name", Text.Upper}}),
    ProductName = Table.SelectColumns(UpperCase,"Product Name"),
    GroupedRows = Table.Group(ProductName, {"Product Name"}, {{"Rows", each Table.RowCount(_), Int64.Type}}),
    Duplicates = Table.SelectRows(GroupedRows, each [Rows] > 1)
in
     Duplicates
```

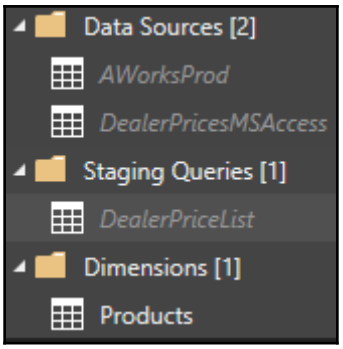


ProductKey	EnglishProductName	DealerPrice
1	Adjustable Race	null
2	Bearing Ball	null
3	BB Ball Bearing	null

ProductKey	Product Name	Dealer Price
1	Adjustable Race	$48.25
2	Bearing Ball	$37.50
3	BB Ball Bearing	$29.50




```
let
    Source = DealerPricesMSAccess,
    DealerPriceList = Source{[Schema="",Item="DealerPrices"]}[Data]
in
    DealerPriceList
```




```
let
    Source = AWorksProd,
    Products = Source{[Schema = "dbo",Item = "DimProduct"]}[Data],
    ProductSelect = Table.SelectColumns(Products, {"ProductKey", "EnglishProductName", "DealerPrice"}),
    ProductRename = Table.RenameColumns(ProductSelect,
        {
            {"EnglishProductName", "Product Name"},
            {"DealerPrice", "Dealer Price"}
        }
        )
in
    ProductRename
```

ProductKey	Product Name	Dealer Price	Dealer List Price
209	Rear Derailleur Cage	null	116.885
210	HL Road Frame - Black, 58	null	117.385
211	HL Road Frame - Red, 58	null	117.885
212	Sport-100 Helmet, Red	20.1865	null
213	Sport-100 Helmet, Red	20.1865	null
214	Sport-100 Helmet, Red	20.994	null

```
    DealerPriceJoin = Table.NestedJoin(ProductRename,"ProductKey",DealerPriceList,"ProductKey","PriceListColumns",JoinKind.LeftOuter),

    DealerPriceListCols = Table.ExpandTableColumn(DealerPriceJoin, "PriceListColumns",{"Dealer Price"},{"Dealer List Price"})

in
    DealerPriceListCols
```

ProductK...	Produ...	Dealer Price	Dealer List Price	Adj Dealer Price
210	HL Road Fram...	null	117.385	117.385
211	HL Road Fram...	null	117.885	117.885
212	Sport-100 Hel...	20.1865	null	20.1865
213	Sport-100 Hel...	20.1865	null	20.1865
214	Sport-100 Hel...	20.994	null	20.994

```
AdjDealerPriceCol = Table.AddColumn(DealerPriceListCols, "Adj Dealer Price", each
    if [Dealer Price] = null then [Dealer List Price] else [Dealer Price]
    , Currency.Type)

in
    AdjDealerPriceCol
```

ProductKey	Product Name	Dealer Price
1	Adjustable Race	48.25
2	Bearing Ball	37.5
3	BB Ball Bearing	29.5
4	Headset Ball Bearings	27.5

```
ProductAdjSelect = Table.SelectColumns(AdjDealerPriceCol,{"ProductKey", "Product Name", "Adj Dealer Price"}),
ProductAdjRename = Table.RenameColumns(ProductAdjSelect,
    {
        {"Adj Dealer Price", "Dealer Price"}
    })
in
    ProductAdjRename
```

	CustomerKey	Customer Name	Date of Birth
1	11000	Jon Yang	10/6/1971
2	11001	Eugene Huang	5/10/1976
3	11002	Ruben Torres	2/9/1971
4	11003	Christy Zhu	8/14/1973
5	11004	Elizabeth Johnson	8/5/1979

```
let
    CurrentDate = DateTime.Date(DateTime.LocalNow()),
    CurrentYear =  Date.Year(CurrentDate),
    CurrentMonth = Date.Month(CurrentDate),
    CurrentDay = Date.Day(CurrentDate),

    Source = AdWorksProd,
    BI_vDim_Customer = Source{[Schema="BI",Item="vDim_Customer"]}[Data],
    CustomerTbl = Table.SelectColumns(BI_vDim_Customer,{"CustomerKey", "Customer Name", "Date of Birth"}),
```

	CustomerKey	Customer Name	Date of Birth	Customer Year	Customer Month	Customer Day
1	11000	Jon Yang	10/6/1971	1971	10	6
2	11001	Eugene Huang	5/10/1976	1976	5	10
3	11002	Ruben Torres	2/9/1971	1971	2	9
4	11003	Christy Zhu	8/14/1973	1973	8	14
5	11004	Elizabeth Johnson	8/5/1979	1979	8	5
6	11005	Julio Ruiz	8/1/1976	1976	8	1

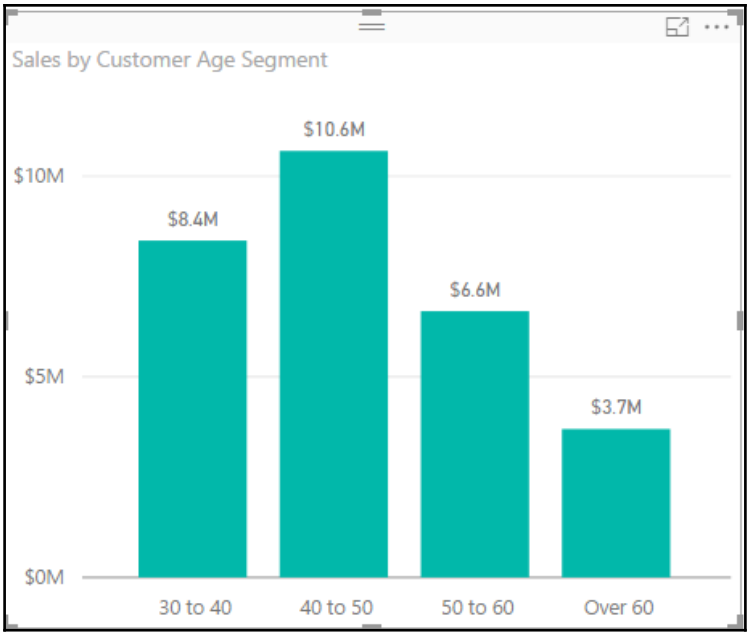
```
    Source = AdWorksProd,
    BI_vDim_Customer = Source{[Schema="BI",Item="vDim_Customer"]}[Data],
    CustomerTbl = Table.SelectColumns(BI_vDim_Customer,{"CustomerKey", "Customer Name", "Date of Birth"}),

    CustomerYr = Table.AddColumn(CustomerTbl, "Customer Year", each Date.Year([Date of Birth]), Int64.Type),
    CustomerMonth = Table.AddColumn(CustomerYr, "Customer Month", each Date.Month([Date of Birth]), Int64.Type),
    CustomerDay = Table.AddColumn(CustomerMonth, "Customer Day", each Date.Day([Date of Birth]), Int64.Type)
in
    CustomerDay
```

```
CustomerAge = Table.AddColumn(CustomerDay, "Customer Age", each
if   [Customer Month] < CurrentMonth then CurrentYear - [Customer Year]
else if [Customer Month] > CurrentMonth then CurrentYear - [Customer Year]  - 1
else if [Customer Day] < CurrentDay then CurrentYear - [Customer Year]
else CurrentYear - [Customer Year]  - 1
)
```

CustomerKey	Customer Na...	Date of Birth	Customer Age
11000	Jon Yang	10/6/1971	45
11001	Eugene Huang	5/10/1976	40
11002	Ruben Torres	2/9/1971	46
11003	Christy Zhu	8/14/1973	43
11004	Elizabeth Johnson	8/5/1979	37

	CustomerKey	Customer Na...	Date of Birth	Customer Age	Customer Age Segment
1	11000	Jon Yang	10/6/1971	45	40 to 50
2	11001	Eugene Huang	5/10/1976	40	40 to 50
3	11002	Ruben Torres	2/9/1971	46	40 to 50
4	11003	Christy Zhu	8/14/1973	43	40 to 50
5	11004	Elizabeth Johnson	8/5/1979	37	30 to 40
6	11005	Julio Ruiz	8/1/1976	40	40 to 50

```
    CustomerSegment = Table.AddColumn(CustomerAgeOnly, "Customer Age Segment", each
    if [Customer Age] < 30 then "Less Than 30"
    else if [Customer Age] < 40 then "30 to 40"
    else if [Customer Age] < 50 then "40 to 50"
    else if [Customer Age] < 60 then "50 to 60"
    else                             "Over 60"
    )
in
    CustomerSegment
```



	First Name	Last Name	Middle Name	Title
11	Jacquelyn	Suarez	C	*null*
12	Curtis	Lu	*null*	*null*
13	Lauren	Walker	M	*null*
14	Ian	Jenkins	M	*null*
15	Sydney	Bennett	*null*	*null*

```
NameFormatTbl = Table.AddColumn(NameTbl,"Formatted Name", each
if         [Title] = null and [Middle Name] = null then [First Name] & " " & [Last Name]
else if    [Title] = null then [First Name] & " " & Text.Range([Middle Name],0,1) & ". " & [Last Name]
else [Title] & " " & [First Name] & " " & Text.Range([Middle Name],0,1) & ". " & [Last Name]
)
```

	First Name	Last Name	Middle Name	Title	Formatted Name
376	Francisco	Martinez	*null*	*null*	Francisco Martinez
377	Lance	Vazquez	*null*	*null*	Lance Vazquez
378	David	Robinett	R.	Mr.	Mr. David R. Robinett
379	Shannon	Liang	*null*	*null*	Shannon Liang
380	Gary	Vazquez	*null*	*null*	Gary Vazquez
381	Mitchell	Kumar	L	*null*	Mitchell L. Kumar

Factory ID	Factory	Date	Qty
18	Atchula	*3/12/2017*	*20*
15	Jasper	*3/12/2017*	*24*
11	Crandall	*3/12/2017*	*25*
14	Jenkins	*3/12/2017*	*27*
15	Jasper	*3/13/2017*	*17*
11	Crandall	*3/13/2017*	*20*
18	Atchula	*3/13/2017*	*22*

```
    SortedTbl = Table.Sort(SourceTbl,
        {{"Factory ID", Order.Ascending},{"Date",Order.Ascending}})
in
    SortedTbl
```

Factory ID	Factory	Date	Qty
11	Crandall	3/12/2017	25
11	Crandall	3/13/2017	20
11	Crandall	3/14/2017	30
11	Crandall	3/15/2017	18
11	Crandall	3/16/2017	21

```
RowIndex = Table.TransformColumnTypes
     (Table.AddIndexColumn(SortedTbl, "Row Index", 1, 1),
     {{ "Row Index",Int64.Type}}),

 PrevRowIndex =
     Table.TransformColumnTypes(
     Table.AddIndexColumn(RowIndex, "PrevRow Index",0,1),{{"PrevRow Index",Int64.Type}}
```

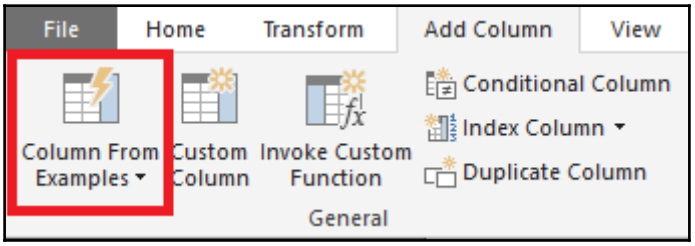
	Factory ID	Factory	Date	Qty	Row Index	PrevRow Index
1	11	Crandall	3/12/2017	25	1	0
2	11	Crandall	3/13/2017	20	2	1
3	11	Crandall	3/14/2017	30	3	2
4	11	Crandall	3/15/2017	18	4	3
5	11	Crandall	3/16/2017	21	5	4
6	14	Jenkins	3/12/2017	27	6	5

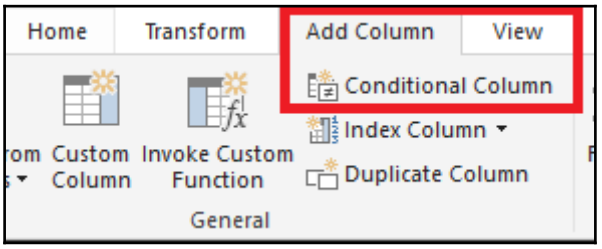
```
SelfJoin = Table.NestedJoin(PrevRowIndex,{"PrevRow Index"},PrevRowIndex,{"Row Index"},
    "NewColumn",JoinKind.LeftOuter),

AddPreviousColumns = Table.ExpandTableColumn(SelfJoin, "NewColumn", {"Factory ID", "Qty"},
    {"Prev Factory ID", "Prev Qty"}),
```

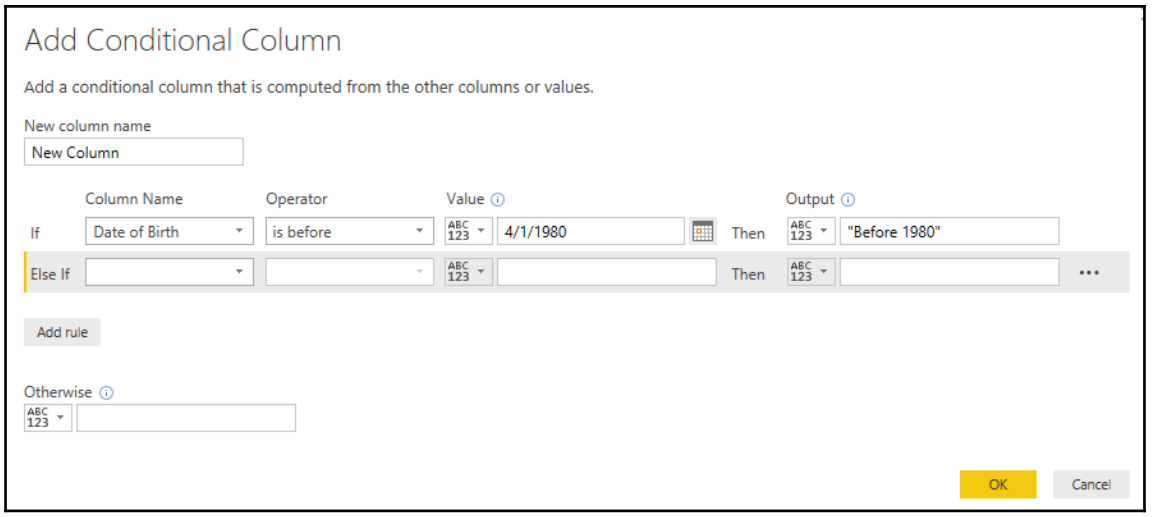
	Factory ID	Factory	Date	Qty	Row Index	PrevRow Index	Prev Factory ID	Prev Qty
1	11	Crandall	3/12/2017	25	1	0	null	null
2	11	Crandall	3/13/2017	20	2	1	11	25
3	11	Crandall	3/14/2017	30	3	2	11	20
4	11	Crandall	3/15/2017	18	4	3	11	30
5	11	Crandall	3/16/2017	21	5	4	11	18
6	14	Jenkins	3/12/2017	27	6	5	11	21

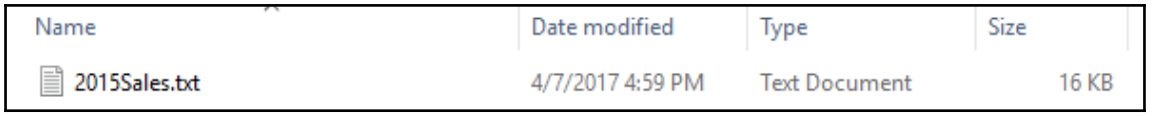
```
VarianceColumn = Table.AddColumn(RemovedCols, "Daily Qty Var", each

    if [Factory ID] = [Prev Factory ID] then [Qty] - [Prev Qty]
    else null,
         Int64.Type)
```

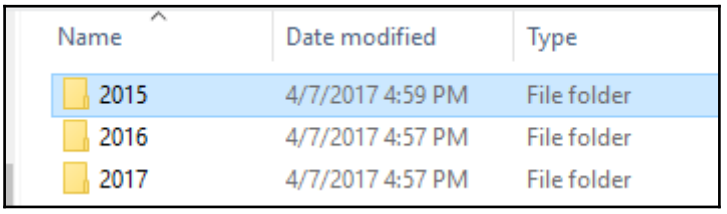
Factory ID	Factory	Date	Qty	Daily Qty Var
11	Crandall	3/12/2017	25	null
11	Crandall	3/13/2017	20	-5
11	Crandall	3/14/2017	30	10
11	Crandall	3/15/2017	18	-12
11	Crandall	3/16/2017	21	3
14	Jenkins	3/12/2017	27	null
14	Jenkins	3/13/2017	24	-3
14	Jenkins	3/14/2017	36	12

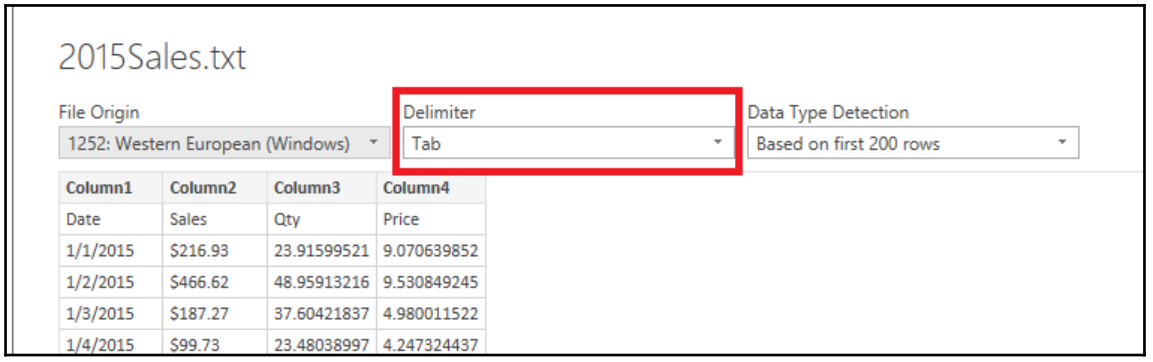





Add Conditional Column
Add a conditional column that is computed from the other columns or values.
New column name
New Column
Column Name
Operator
Value
Output
If
Date of Birth
is before
4/1/1980
Then
"Before 1980"
Else If
Then
Add rule
Otherwise
OK
Cancel


Name
Date modified
Type
Size
2015Sales.txt
4/7/2017 4:59 PM
Text Document
16 KB

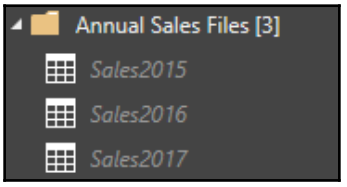

Name
Date modified
Type
2015
4/7/2017 4:59 PM
File folder
2016
4/7/2017 4:57 PM
File folder
2017
4/7/2017 4:57 PM
File folder


2015Sales.txt
File Origin
1252: Western European (Windows)
Delimiter
Tab
Data Type Detection
Based on first 200 rows
Column1
Column2
Column3
Column4
Date
Sales
Qty
Price
1/1/2015
$216.93
23.91599521
9.070639852
1/2/2015
$466.62
48.95913216
9.530849245
1/3/2015
$187.27
37.60421837
4.980011522
1/4/2015
$99.73
23.48038997
4.247324437

	Column1	Column2	Column3	Column4
1	Date	Sales	Qty	Price
2	1/1/2015	$216.93	23.91599521	9.070639852
3	1/2/2015	$466.62	48.95913216	9.530849245
4	1/3/2015	$187.27	37.60421837	4.980011522

```
    HeaderPromote = Table.PromoteHeaders(Source),
    ColumnTypes = Table.TransformColumnTypes(HeaderPromote,
    {{"Date", type date}, {"Sales", Currency.Type}, {"Qty", Int64.Type}, {"Price", Currency.Type}})
in
    ColumnTypes
```

	Date	Sales	Qty	Price
1	1/1/2015	216.93	24	9.0706
2	1/2/2015	466.62	49	9.5308
3	1/3/2015	187.27	38	4.98
4	1/4/2015	99.73	23	4.2473
5	1/5/2015	32.12	4	7.2123




```
= Table.Combine({Sales2015,Sales2016,Sales2017})
```

	Date	Sales	Qty	Price
1	1/1/2015	216.93	24	9.0706
2	1/2/2015	466.62	49	9.5308
3	1/3/2015	187.27	38	4.98
4	1/4/2015	99.73	23	4.2473

	EmployeeKey	ParentEmployeeKey	Employee Name	Title
1	1	18	Guy Gilbert	Production Technician - WC60
2	2	7	Kevin Brown	Marketing Assistant
3	3	14	Roberto Tamburello	Engineering Manager
4	4	3	Rob Walters	Senior Tool Designer

```
let

    Source = AdWorksProd,
    Employee = Source{[Schema = "dbo",Item = "DimEmployee"]}[Data],
    SelectCols = Table.SelectColumns(Employee,
        {"EmployeeKey","FirstName", "LastName", "Title"}),
    EmployeeName = Table.AddColumn(SelectCols, "Employee Name", each
            [FirstName] & " " & [LastName]
            , type text),
    SelectCols2 = Table.SelectColumns(EmployeeName,
        {"EmployeeKey","Employee Name","Title"}),
    EmployeeStage = Table.RenameColumns(SelectCols2,
        {"Title","Employee Title"})
in
    EmployeeStage
```

EmployeeKey	Employee Name	Employee Title
1	Guy Gilbert	Production Technician - WC60
2	Kevin Brown	Marketing Assistant
3	Roberto Tamburello	Engineering Manager
4	Rob Walters	Senior Tool Designer

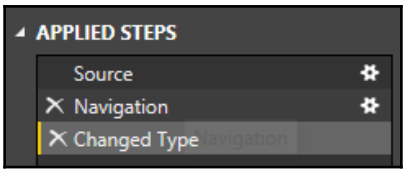
```
    EmployeeManagerJoin = Table.NestedJoin(Employees,
        "ParentEmployeeKey",Managers,"EmployeeKey","ManagerColumn", JoinKind.LeftOuter),

    ManagerColumns = Table.ExpandTableColumn(EmployeeManagerJoin,"ManagerColumn",
        {"Employee Name", "Employee Title"},{"Manager Name", "Manager Title"}),

    EmployeeManager = Table.SelectColumns
            (ManagerColumns,
            {"EmployeeKey","Employee Name", "Employee Title", "Manager Name", "Manager Title"})
in
    EmployeeManager
```

	EmployeeKey	Employee Name	Employee Title	Manager Name	Manager Title
1	112	Ken Sánchez	Chief Executive Officer	*null*	*null*
2	4	Rob Walters	Senior Tool Designer	Roberto Tamburello	Engineering Manager
3	5	Rob Walters	Senior Tool Designer	Roberto Tamburello	Engineering Manager
4	11	Gail Erickson	Design Engineer	Roberto Tamburello	Engineering Manager
5	13	Jossef Goldberg	Design Engineer	Roberto Tamburello	Engineering Manager
6	162	Dylan Miller	Research and Development Manager	Roberto Tamburello	Engineering Manager
7	267	Ovidiu Cracium	Senior Tool Designer	Roberto Tamburello	Engineering Manager
8	271	Michael Sullivan	Senior Design Engineer	Roberto Tamburello	Engineering Manager
9	274	Sharon Salavaria	Design Engineer	Roberto Tamburello	Engineering Manager

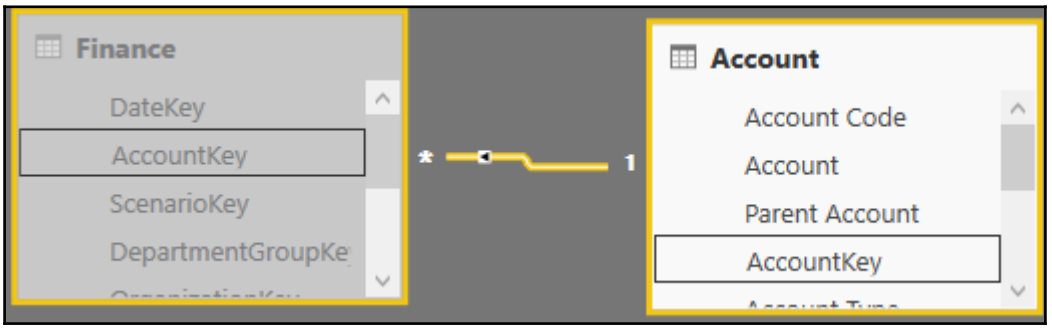
Manager -Employee

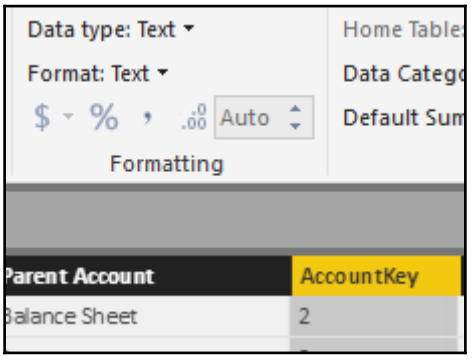
Manager Name	Count of Employee Name
A. Scott Wright	5
Alan Brewer	1
Brian LaMee	1
Sairaj Uddin	1
William Vong	2
Amy Alberts	3
Jae Pak	1
Rachel Valdez	1
Ranjit Varkey Chudukatil	1

```
        { EmployeeKey", ParentEmployeeKey", "Employee Name", Title"}),
    Employees = Table.RenameColumns(SelectCols2,{"Title", "Employee Title"}),
    ManagerInLine = Employees,

    EmployeeManagerJoin = Table.NestedJoin(Employees,
        "ParentEmployeeKey",ManagerInLine,"EmployeeKey","ManagerColumn", JoinKind.LeftOuter),

    ManagerColumns = Table.ExpandTableColumn(EmployeeManagerJoin,"ManagerColumn",
        {"Employee Name", "Employee Title"},{"Manager Name", "Manager Title"}),

    EmployeeManager = Table.SelectColumns
            (ManagerColumns,
            {"EmployeeKey","Employee Name", "Employee Title", "Manager Name", "Manager Title"})
in
    EmployeeManager
```

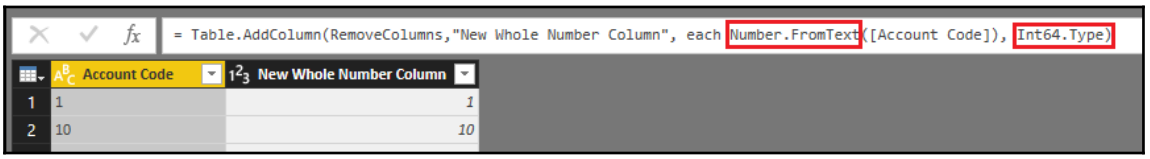


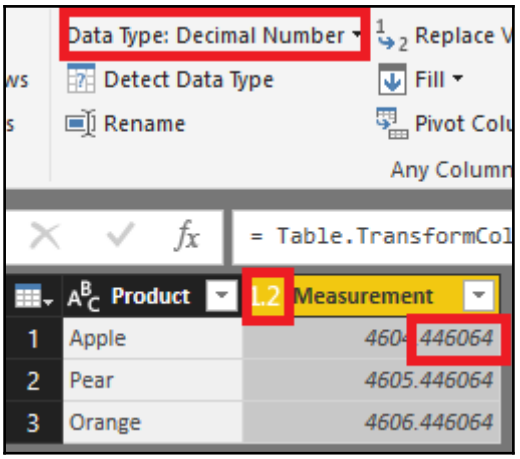

```
= Table.TransformColumnTypes(DimProductTbl_Table,{{"ProductKey", Int64.Type}, {"Product Class", type text}, {"Product Color", type text}, {"Days to Manufacture", Int64.Type}, {"Dealer Price", type any}, {"Product Start Date", type date}, {"Product End Date", type any}, {"Product Description", type any}, {"Product Name", type text}, {"Finished Goods Flag", type text}, {"List Price", type any}, {"Product Model", type any}, {"Product Weight", Int64.Type}, {"Product Style", type any}, {"Standard Cost", type any}, {"Product line", type any}, {"Product Status", type text}, {"Product Safety Stock Level", Int64.Type}, {"Product Subcategory", type any}, {"Product Category", type any}})
```

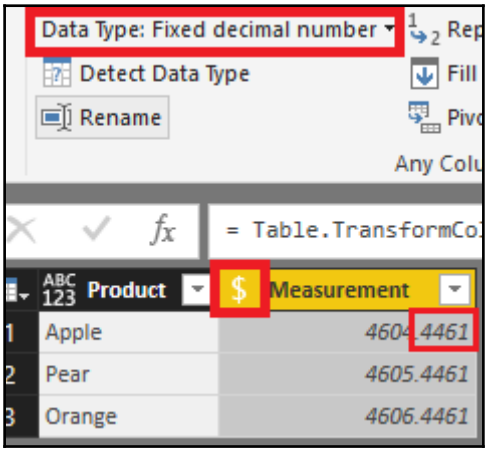




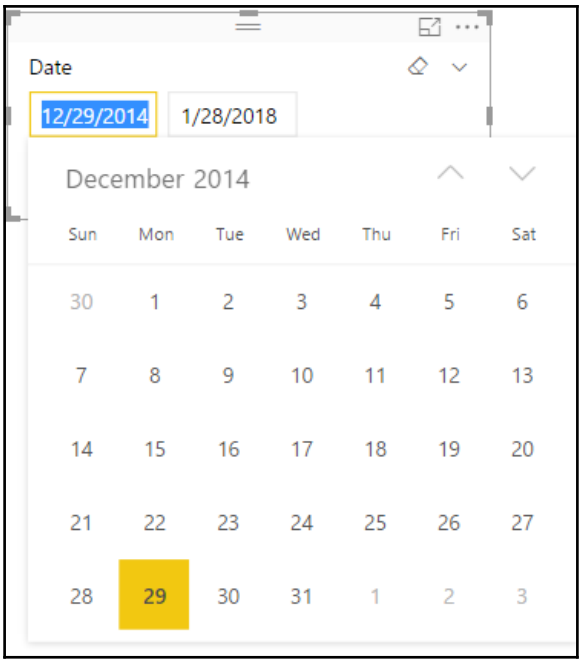

```
AccountKeyToWholeNumber = Table.TransformColumnTypes(Source,{{"AccountKey", Int64.Type}})
```





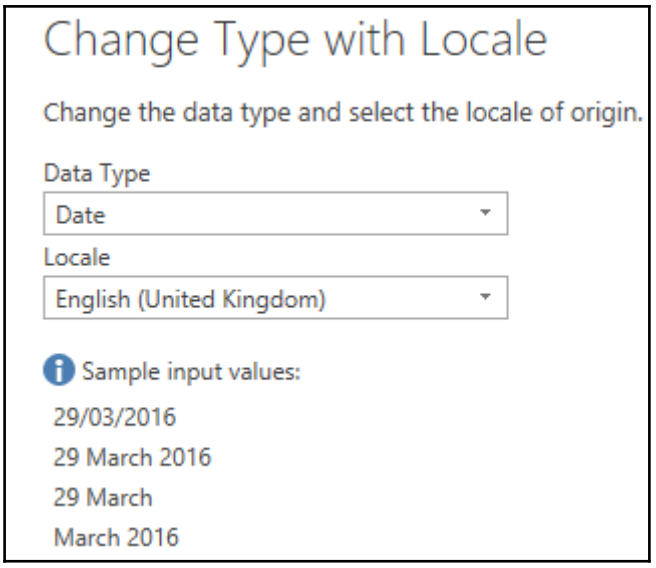



```
FixedDecimal = Table.TransformColumnTypes(DecimalData_Table,{{"Measurement", Currency.Type}})
```




```
Sales in 2016 and Later = CALCULATE([Internet Sales], 'Date'[Calendar Year] >= 2016)
```

	Original Date	Date with Locale	Date Transform Only	Qty
1	26/1/2017	*1/26/2017*	Error	*5*
2	14/2/2017	*2/14/2017*	Error	*6*
3	27/3/2017	*3/27/2017*	Error	*7*
4	17/5/2017	*5/17/2017*	Error	*8*

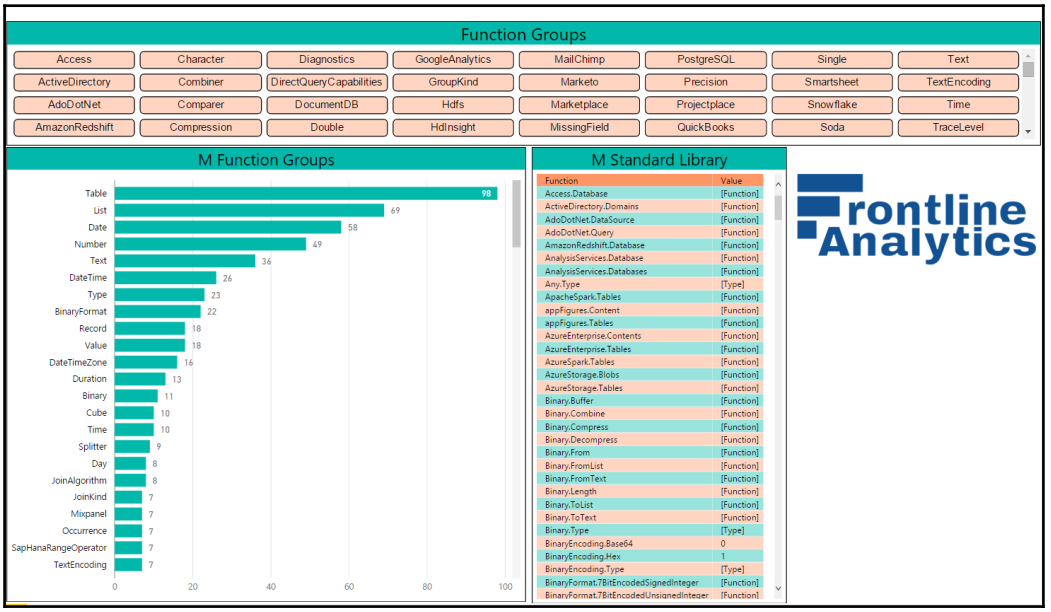


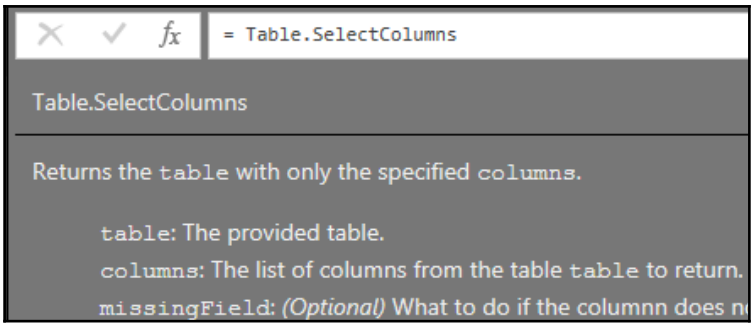

```
#"Changed Type" = Table.TransformColumnTypes(#"Renamed Columns",{{"Date Transform Only", type date}}),
#"Changed Type with Locale" = Table.TransformColumnTypes(#"Changed Type", {{"Date with Locale", type date}}, "en-GB")
```

M Functions

```
let
    SharedToTable = Record.ToTable(#shared),
    RenamedToFunction = Table.RenameColumns(SharedToTable,{{"Name", "Function"}}),
    SortedFunctionTable = Table.Sort(RenamedToFunction,{{"Function", Order.Ascending}}),
    DuplicatedColumn = Table.DuplicateColumn(SortedFunctionTable, "Function", "FunctionColumnDuplicate"),
    SplitFunctionColumn = Table.SplitColumn(DuplicatedColumn,"FunctionColumnDuplicate",Splitter.SplitTextByDelimiter(
    ".", QuoteStyle.Csv),{"Function Group", " Function Detail"}),
    MLibraryTable = Table.TransformColumnTypes(SplitFunctionColumn,{{"Function Group", type text}, {" Function Detail", type text}})
in
    MLibraryTable
```

	Function	Value	Function Group	Function Detail
1	Access.Database	Function	Access	Database
2	ActiveDirectory.Domains	Function	ActiveDirectory	Domains
3	AdoDotNet.DataSource	Function	AdoDotNet	DataSource
4	AdoDotNet.Query	Function	AdoDotNet	Query
5	AmazonRedshift.Database	Function	AmazonRedshift	Database
6	AnalysisServices.Database	Function	AnalysisServices	Database
7	AnalysisServices.Databases	Function	AnalysisServices	Databases
8	Any.Type	Type	Any	Type
9	ApacheSpark.Tables	Function	ApacheSpark	Tables
10	AzureEnterprise.Contents	Function	AzureEnterprise	Contents
11	AzureEnterprise.Tables	Function	AzureEnterprise	Tables
12	AzureSpark.Tables	Function	AzureSpark	Tables

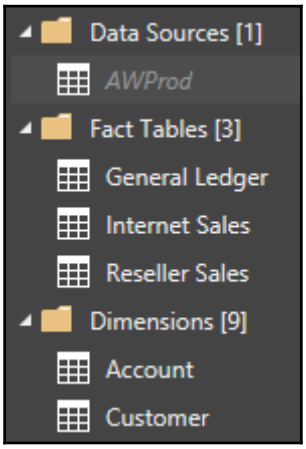


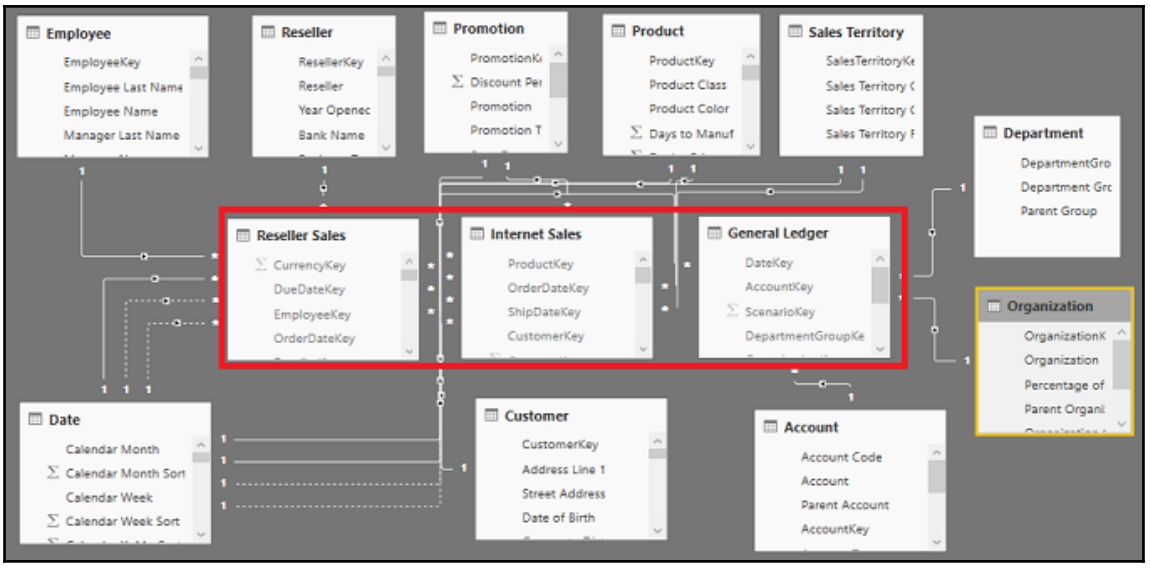

= Table.SelectColumns
Table.SelectColumns
Returns the table with only the specified columns.
table: The provided table.
columns: The list of columns from the table table to return.
missingField: (Optional) What to do if the columnn does n

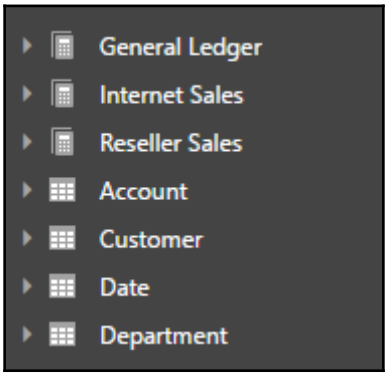
Chapter 3: Building a Power BI Data Model

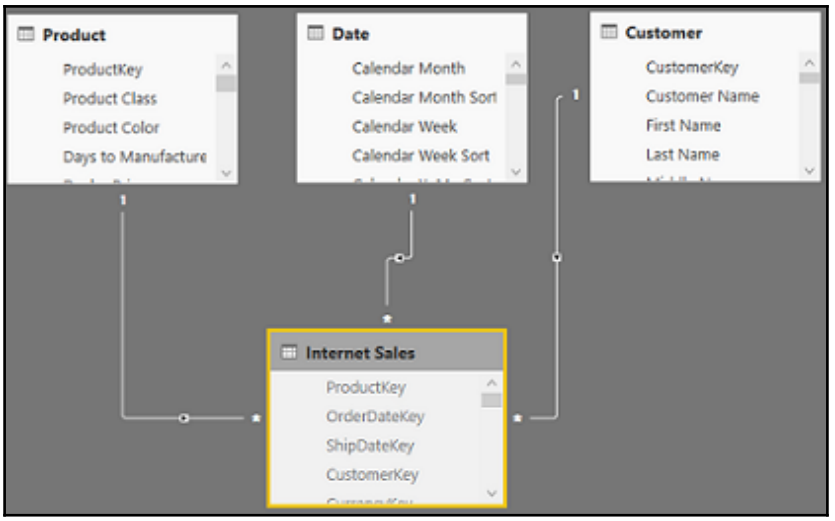
	SHARED DIMENSIONS									
BUSINESS PROCESSES	Date	Customer	Product	Vendor	Promotion	Reseller	Sales Territory	Employee	Account	Organization
Internet Sales	✓	✓	✓	✓	✓		✓			
Reseller Sales	✓		✓		✓	✓	✓	✓		
General Ledger	✓								✓	✓
Sales Plan	✓		✓				✓			
Inventory	✓		✓	✓					✓	
Customer Surveys	✓	✓								
Customer Service Calls	✓	✓	✓					✓		

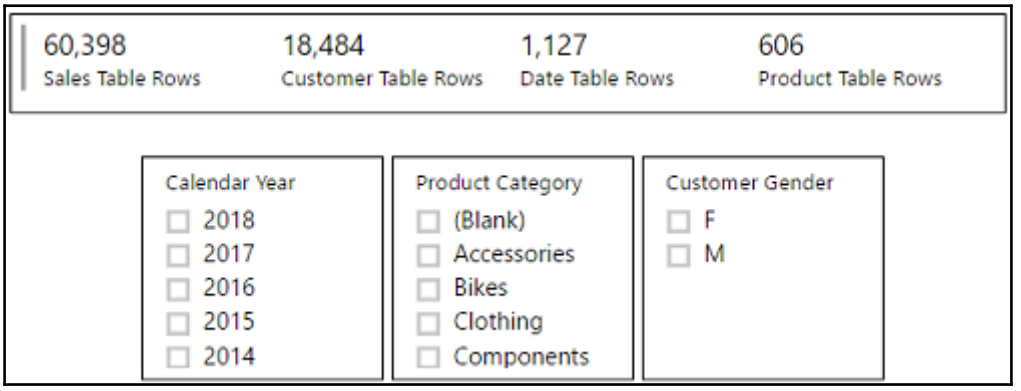
BUSINESS PROCESSES	Row Granularity	Measures	Date	Customer	Product	Promotion	Reseller	Sales Territory	Employee	Account	Organization	Department
Internet Sales	Sales Order Line (SKU)	Internet Sales Dollars and Units, Count of Customers and Products	✓	✓	✓	✓		✓				
Reseller Sales	Sales Order Line (SKU)	Gross and Net Sales, Discounts, Margin Amount and %	✓		✓	✓	✓	✓	✓			
General Ledger	GL Account Entry	Account Balance Amount	✓							✓	✓	✓

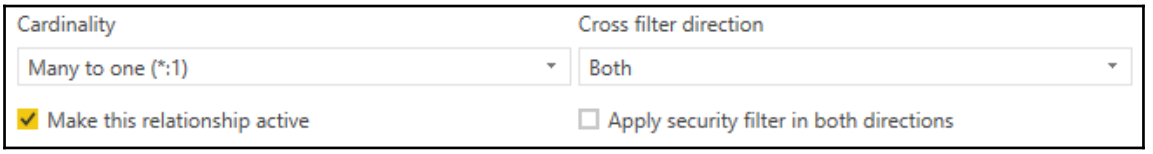


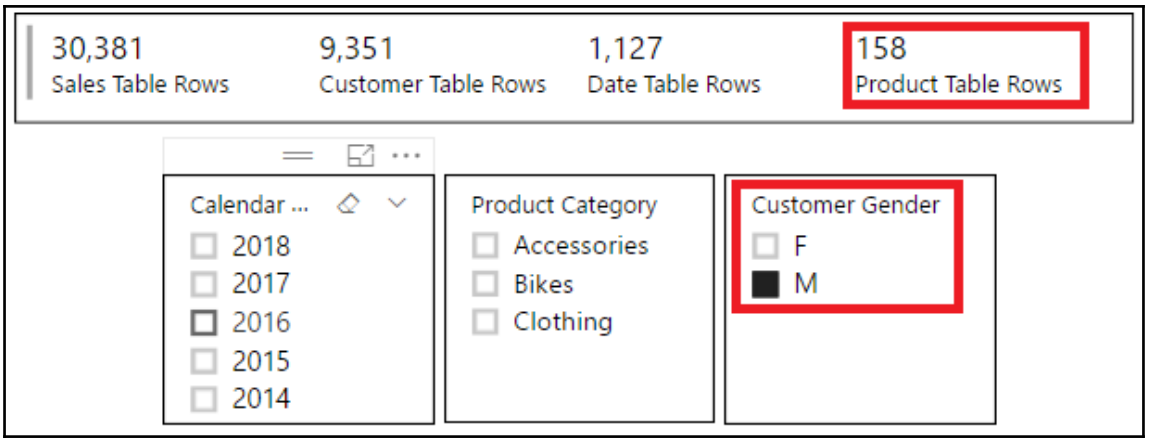

Employee
EmployeeKey
Employee Last Name
Employee Name
Manager Last Name
Reseller
ResellerKey
Reseller
Year Opened
Bank Name
Promotion
PromotionKe
Discount Per
Promotion
Promotion T
Product
ProductKey
Product Class
Product Color
Days to Manuf
Sales Territory
SalesTerritoryKe
Sales Territory C
Sales Territory C
Sales Territory F
Department
DepartmentGro
Department Gro
Parent Group
Reseller Sales
CurrencyKey
DueDateKey
EmployeeKey
OrderDateKey
Internet Sales
ProductKey
OrderDateKey
ShipDateKey
CustomerKey
General Ledger
DateKey
AccountKey
ScenarioKey
DepartmentGroupKe
Organization
OrganizationK
Organization
Percentage of
Parent Organi
Date
Calendar Month
Calendar Month Sort
Calendar Week
Calendar Week Sort
Customer
CustomerKey
Address Line 1
Street Address
Date of Birth
Account
Account Code
Account
Parent Account
AccountKey


General Ledger
Internet Sales
Reseller Sales
Account
Customer
Date
Department

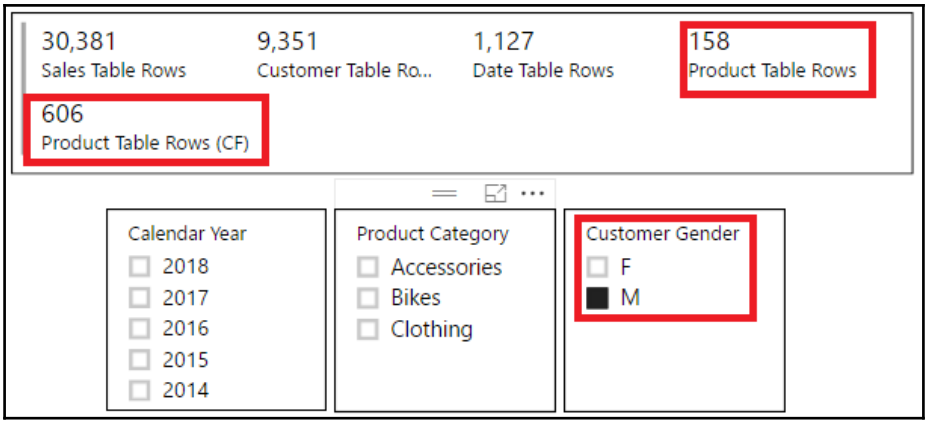

Product
ProductKey
Product Class
Product Color
Days to Manufacture
Date
Calendar Month
Calendar Month Sort
Calendar Week
Calendar Week Sort
Customer
CustomerKey
Customer Name
First Name
Last Name
1
1
1
Internet Sales
ProductKey
OrderDateKey
ShipDateKey
CustomerKey

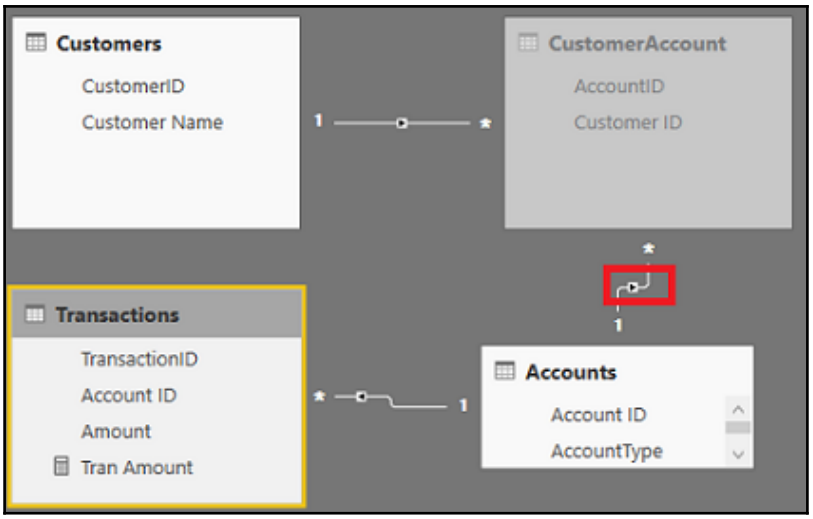

60,398
Sales Table Rows
18,484
Customer Table Rows
1,127
Date Table Rows
606
Product Table Rows
Calendar Year
2018
2017
2016
2015
2014
Product Category
(Blank)
Accessories
Bikes
Clothing
Components
Customer Gender
F
M


Cardinality
Many to one (*:1)
Cross filter direction
Both
Make this relationship active
Apply security filter in both directions

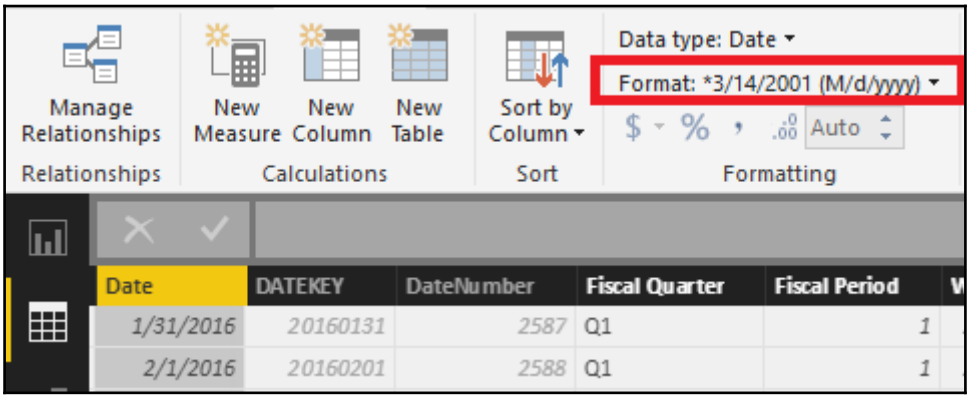


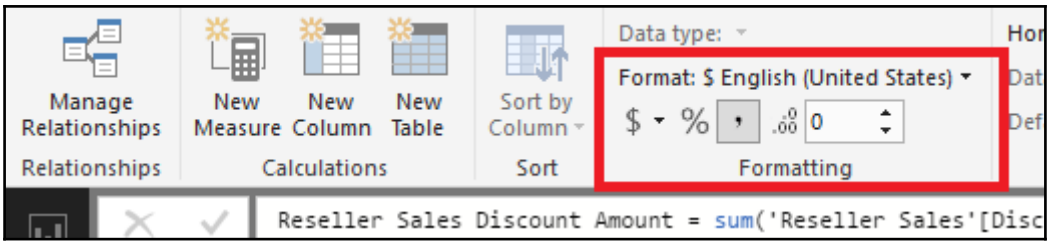
Customer Gender	Product Table Rows
F	158
M	158
Total	**606**

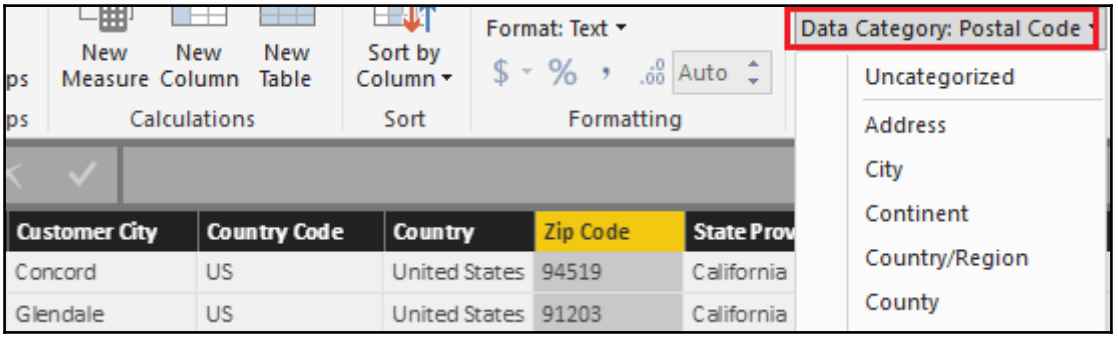


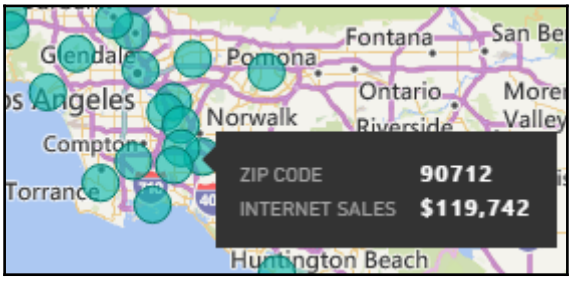


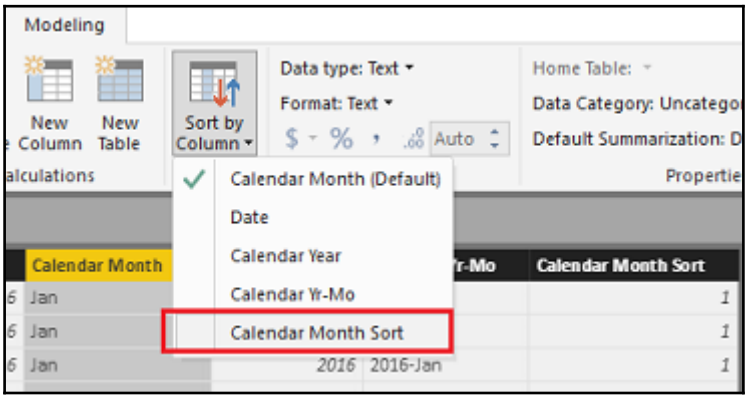
Customer Name	Tran Amount
Terry Hatcher	$300
Rick Stevens	$300
Larry Michaels	$500
James Langford	$600
Gary Reynolds	$500
Bob Johnson	$300
Total	**$1,400**




Manage Relationships
Relationships
New Measure
New Column
New Table
Calculations
Sort by Column
Sort
Data type:
Format: $ English (United States)
Formatting
Reseller Sales Discount Amount = sum('Reseller Sales'[Disc


New Measure
New Column
New Table
Calculations
Sort by Column
Sort
Format: Text
Auto
Formatting
Data Category: Postal Code
Uncategorized
Address
City
Continent
Country/Region
County
Customer City
Country Code
Country
Zip Code
State Prov
Concord
US
United States
94519
California
Glendale
US
United States
91203
California


Glendale
Pomona
Fontana
Los Angeles
Ontario
Norwalk
Compton
Torrance
Huntington Beach
ZIP CODE 90712
INTERNET SALES $119,742


Modeling
New Column
New Table
Sort by Column
Data type: Text
Format: Text
Auto
Home Table:
Data Category: Uncatego
Default Summarization: D
Properties
Calendar Month (Default)
Date
Calendar Year
Calendar Yr-Mo
Calendar Month Sort
Calendar Month
Calendar Month Sort
Jan
Jan
Jan
2016
2016-Jan

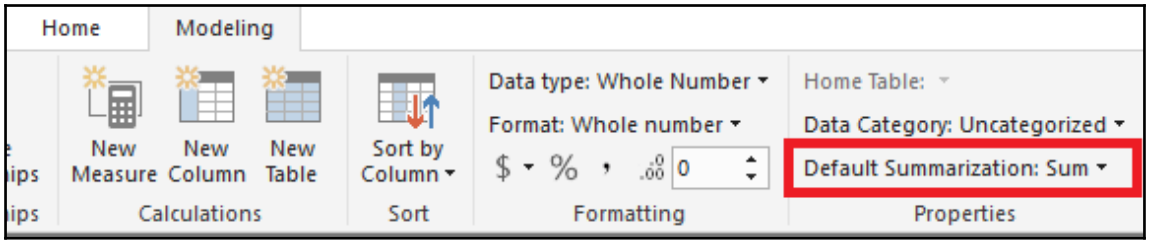
```
CalYr-Mo Sort = (YEAR(Dates[Date]) * 100) + MONTH(Dates[Date])
```

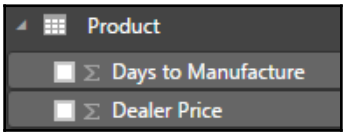
Date	Calendar Month	Calendar Year	Calendar Yr-Mo	Calendar Month Sort	CalYr-Mo Sort
1/1/2016	Jan	2016	2016-Jan	1	201601
1/2/2016	Jan	2016	2016-Jan	1	201601

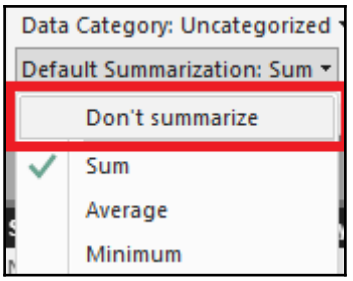
```
DeptGroupRank = RANKX('Department Group',[Finance Amount])
```

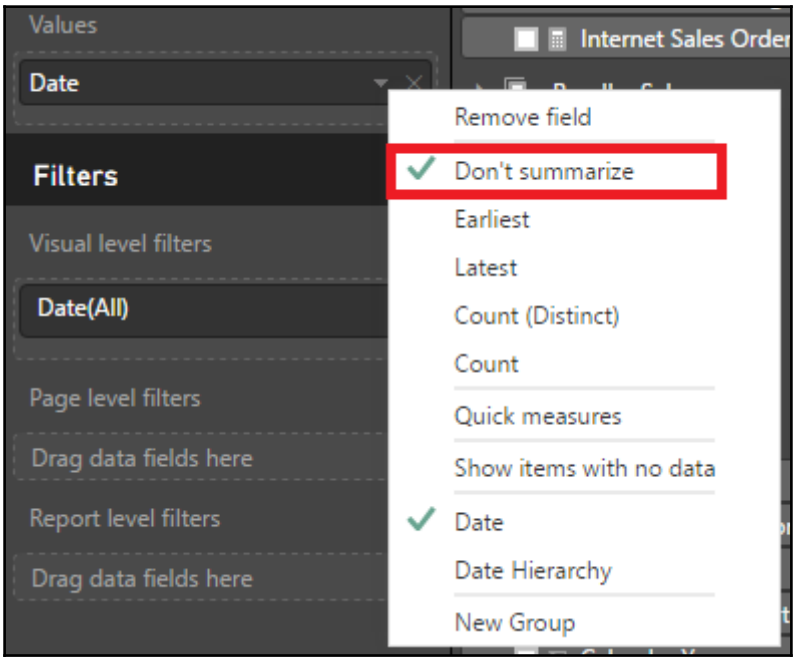
DepartmentGroupKey	Department Group	Parent Group	DeptGroupRank
1	Corporate		5
2	Executive General and Administration	Corporate	4
3	Inventory Management	Corporate	3
4	Manufacturing	Corporate	6
5	Quality Assurance	Corporate	7
6	Research and Development	Corporate	2
7	Sales and Marketing	Corporate	1

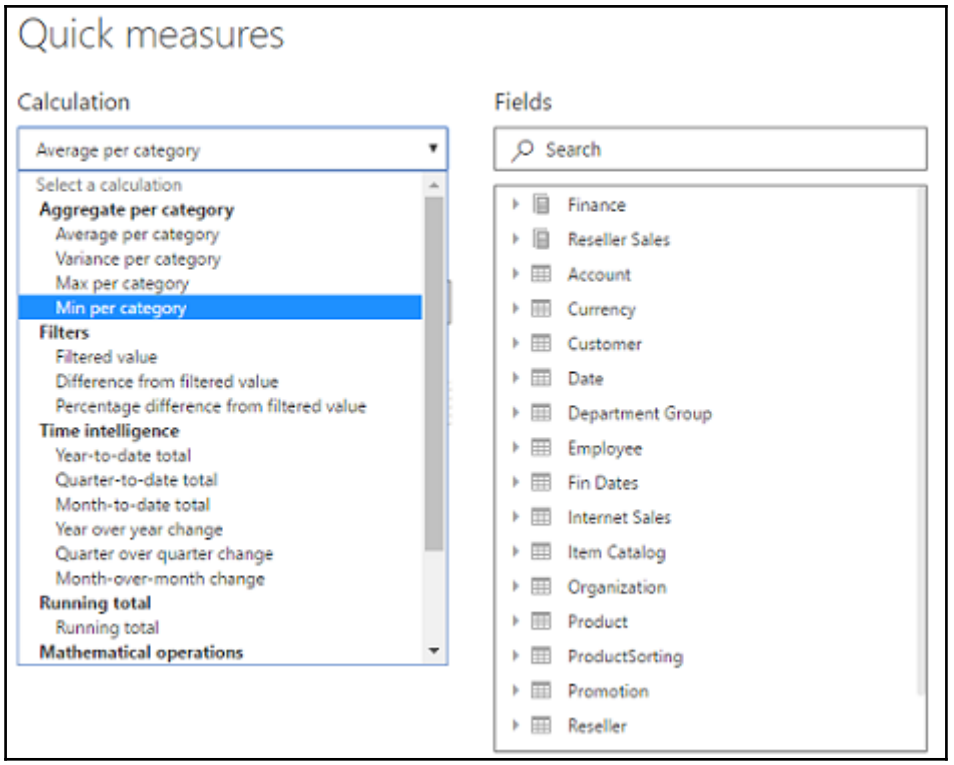
Department Group	Finance Row Count
Sales and Marketing	9,057
Research and Development	12,003
Inventory Management	1,908
Executive General and Administration	4,088
Corporate	8,843
Total	**39,409**

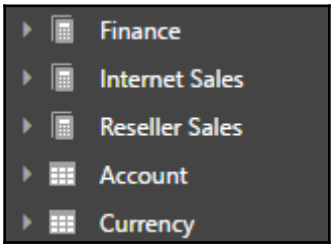


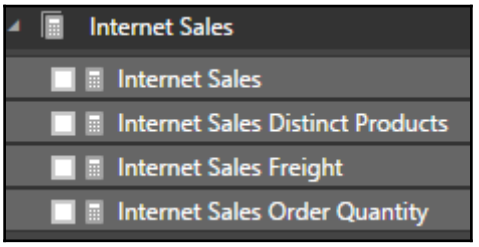


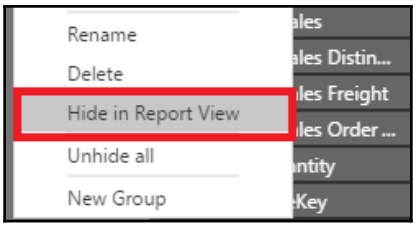

Data Category: Uncategorized
Default Summarization: Sum
Don't summarize
Sum
Average
Minimum


Values
Date
Filters
Visual level filters
Date(All)
Page level filters
Drag data fields here
Report level filters
Drag data fields here
Internet Sales Order
Remove field
Don't summarize
Earliest
Latest
Count (Distinct)
Count
Quick measures
Show items with no data
Date
Date Hierarchy
New Group

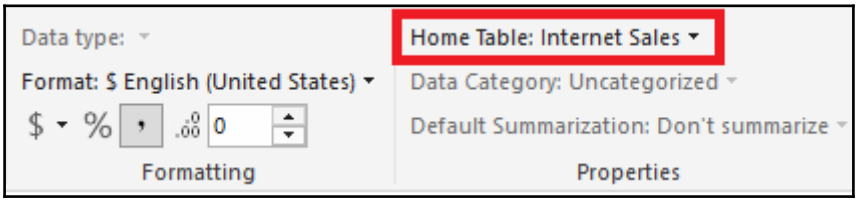

Quick measures
Calculation
Average per category
Select a calculation
Aggregate per category
Average per category
Variance per category
Max per category
Min per category
Filters
Filtered value
Difference from filtered value
Percentage difference from filtered value
Time intelligence
Year-to-date total
Quarter-to-date total
Month-to-date total
Year over year change
Quarter over quarter change
Month-over-month change
Running total
Running total
Mathematical operations
Fields
Search
Finance
Reseller Sales
Account
Currency
Customer
Date
Department Group
Employee
Fin Dates
Internet Sales
Item Catalog
Organization
Product
ProductSorting
Promotion
Reseller

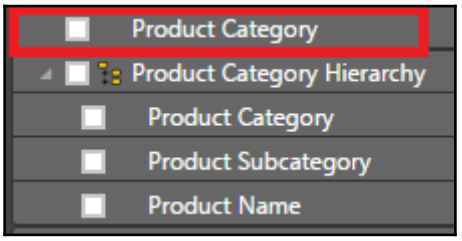

Finance
Internet Sales
Reseller Sales
Account
Currency

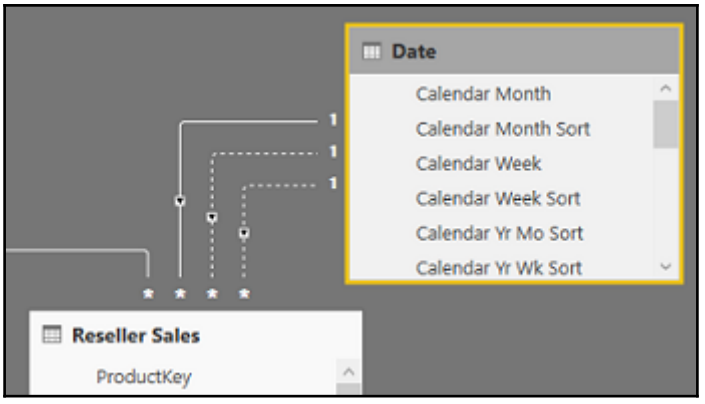

Internet Sales
Internet Sales
Internet Sales Distinct Products
Internet Sales Freight
Internet Sales Order Quantity


Rename
Delete
Hide in Report View
Unhide all
New Group


Fields
Search

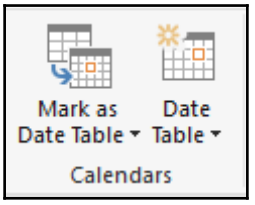

Data type:
Format: $ English (United States)
Home Table: Internet Sales
Data Category: Uncategorized
Default Summarization: Don't summarize
Formatting
Properties

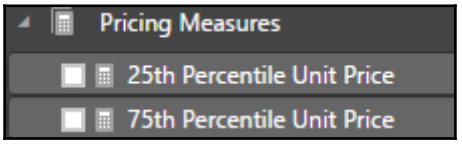

Product Category
Product Category Hierarchy
Product Category
Product Subcategory
Product Name

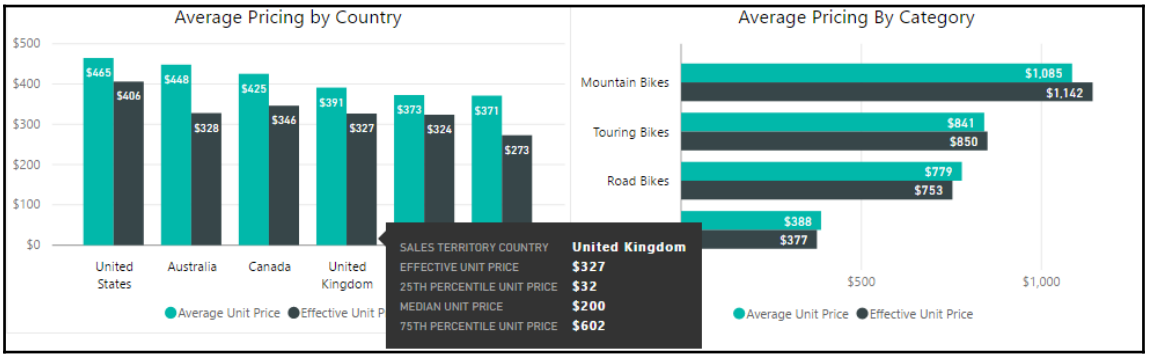

Date
Calendar Month
Calendar Month Sort
Calendar Week
Calendar Week Sort
Calendar Yr Mo Sort
Calendar Yr Wk Sort
Reseller Sales
ProductKey

Reseller Net Sales: Q1 Order to Ship

Calendar Yr-Mo	Reseller Net Sales	Reseller Net Sales by Due Date	Reseller Net Sales by Ship Date
2017-Jan	$131,651,752	$118,238,803	$116,693,960
2017-Feb	$147,208,806	$149,143,063	$159,811,869
2017-Mar	$164,929,146	$169,099,064	$170,129,081
Total	**$443,789,703**	**$436,480,931**	**$446,634,910**







IndexKey	Date	Adj Close	Security
1	4/18/2012	$25.96	Balanced Fund A
2	4/19/2012	$25.74	Balanced Fund A
3	4/20/2012	$26.01	Balanced Fund A

6.27%	0.65%	0.03%
Yearly Geometric Return	Monthly Geometric Return	Daily Geometric Return

Product Category	Count of Customers	%GT Count of Customers
Accessories	15,114	81.77%
Bikes	9,132	49.40%
Clothing	6,852	37.07%
Total	**18,484**	**100.00%**

Accessory ex Bike Customers

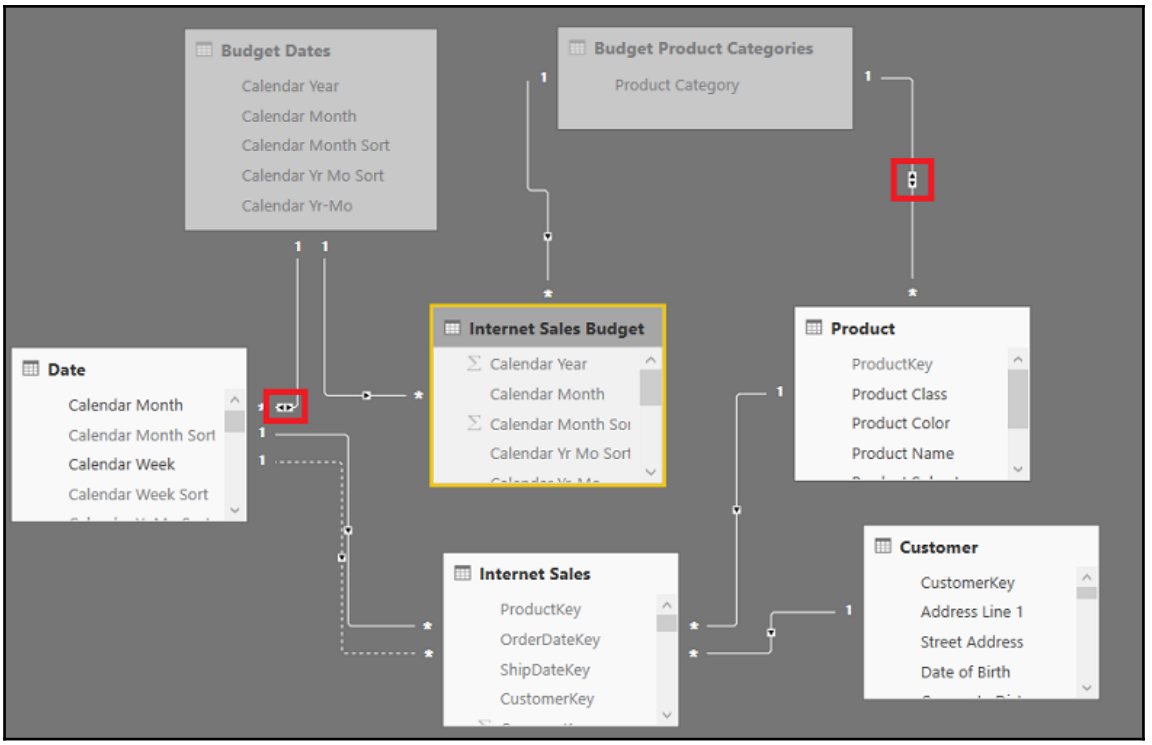
8,587

CustomerAlternateKey	Customer Name	Count of Accessory But Not Bike Customers
AW00011012	Lauren Walker	1
AW00011013	Ian Jenkins	1
Total		**8,587**

Last Year Customers Missing

287

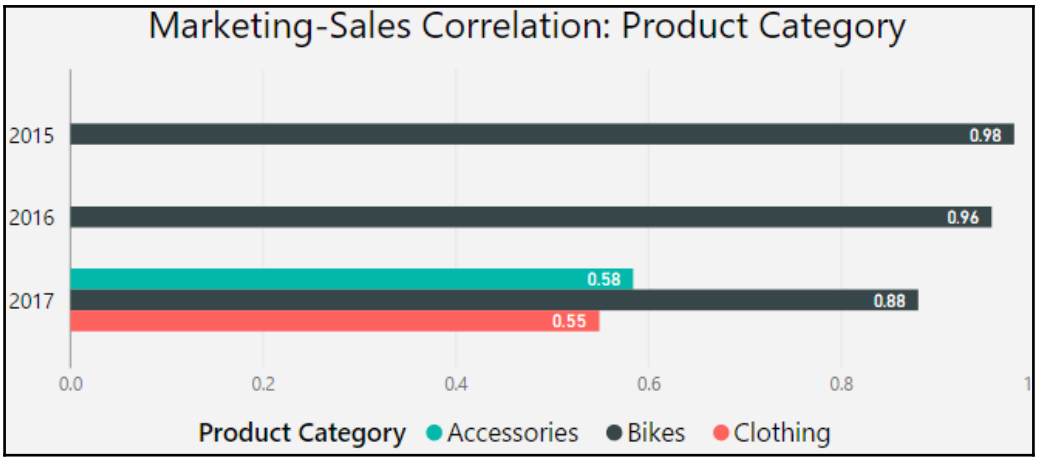
CustomerAlternateKey	Customer Name	2016 Sales	2017 Sales
AW00027099	Zachary Williams	$783	
AW00027082	Zachary Taylor	$783	
Total		**$550,404**	



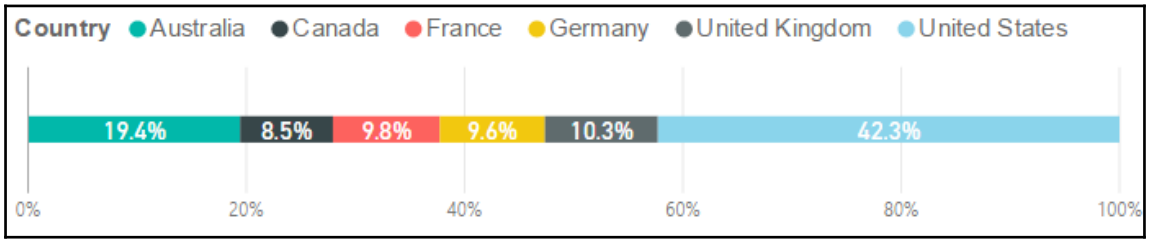
Product Category	2017-Jan	2017-Feb	2017-Mar	2017-Apr	2017-May	2017-Jun	2017-Jul
Accessories	($5,524)	($462)	$13,281	($3,103)	($16,784)	($1,876)	$8,120
Bikes	($66,393)	$98,532	($48,389)	$271,293	($336,043)	$465,368	$385,256
Clothing	($87)	$2,131	$2,679	$5,333	$266	($2,943)	($5,602)
Total	**($72,005)**	**$100,200**	**($32,428)**	**$273,523**	**($352,562)**	**$460,549**	**$387,774**

$$Correl(X,Y) = \frac{\sum (x-\bar{x})(y-\bar{y})}{\sqrt{\sum (x-\bar{x})^2 \sum (y-\bar{y})^2}}$$

Calendar Yr-Mo	Year	Month	Product Category	Marketing Amt	Sales
2016-Jul	*2016*	Jul	Bikes	*$22,005.621*	*$444,558.2281*
2016-Sep	*2016*	Sep	Bikes	*$23,579.5845*	*$486,177.4502*



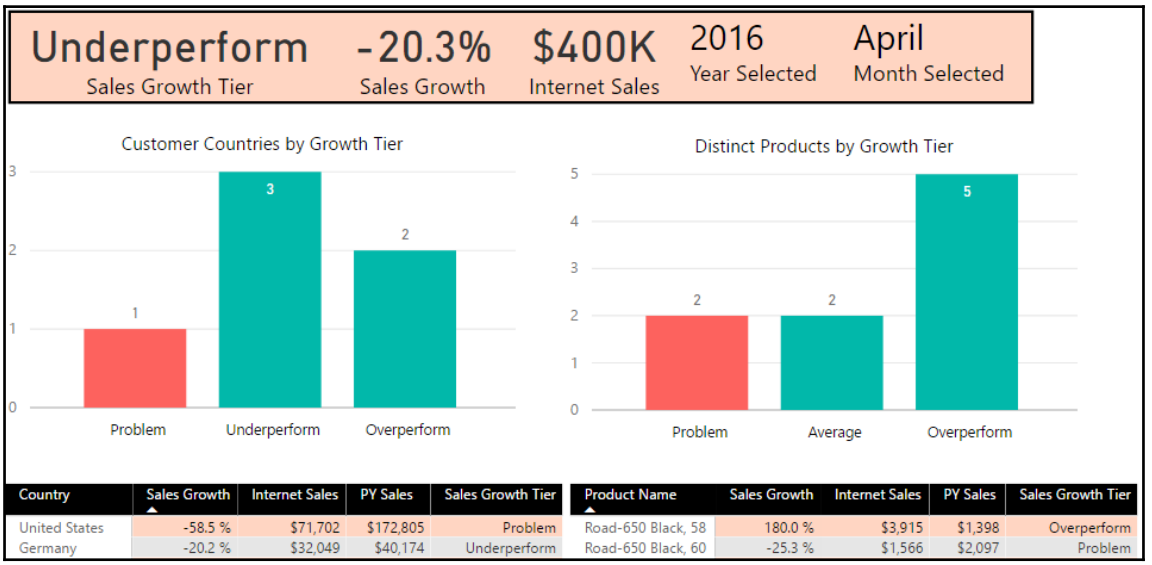
$$\sum_{i=1}^{n} \frac{(O_i - E_i)^2}{E_i}$$



68
Goodness-of-Fit Stat

Country	Observe	Expected	O - E	Squared	Result
USA	1,281	1,490	-209	43,798	29
Canada	382	299	83	6,818	23
Australia	763	685	78	6,159	9
France	347	345	2	4	0
Germany	337	339	-2	5	0
UK	413	365	48	2,341	6
Total					**68**

GrowthTierKey	Growth Tier	Min	Max
1	Problem	-100 %	-25 %
2	Underperform	-25 %	0 %
3	Average	0 %	25 %
4	Overperform	25 %	900 %

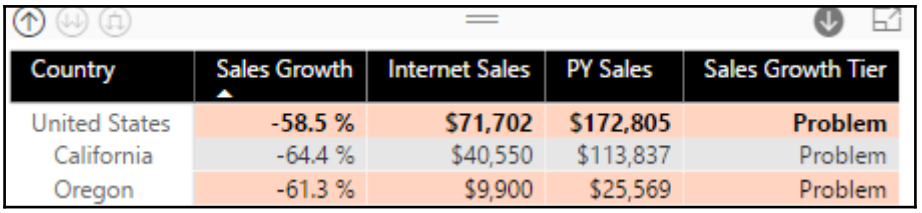


Country	Sales Growth	Internet Sales	PY Sales	Sales Growth Tier
United States	-58.5 %	$71,702	$172,805	Problem
Germany	-20.2 %	$32,049	$40,174	Underperform

Product Name	Sales Growth	Internet Sales	PY Sales	Sales Growth Tier
Road-650 Black, 58	180.0 %	$3,915	$1,398	Overperform
Road-650 Black, 60	-25.3 %	$1,566	$2,097	Problem

Calendar Year	Calendar Month	Plan Subcategory	Plan Amt
2014	Dec	Road Bikes	*26975.0081*
2014	Dec	Mountain Bikes	*17653.948*

Calendar Month	Jan			Feb		
Product Subcategory	Subcat Plan Amt	Internet Sales	Internet Sales vs Plan	Subcat Plan Amt	Internet Sales	Internet Sales vs Plan
Bike Racks	$1,513	$1,560	$47	$2,444	$2,520	$76
Bike Stands	$1,361	$1,272	($89)	$2,722	$2,544	($178)



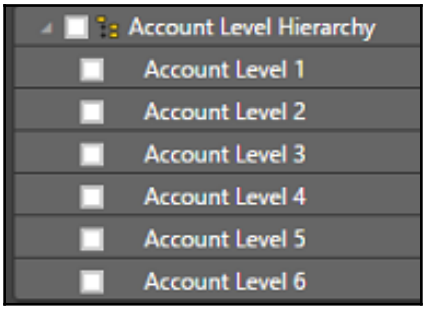
Country	Sales Growth	Internet Sales	PY Sales	Sales Growth Tier
United States	**-58.5 %**	**$71,702**	**$172,805**	**Problem**
California	-64.4 %	$40,550	$113,837	Problem
Oregon	-61.3 %	$9,900	$25,569	Problem

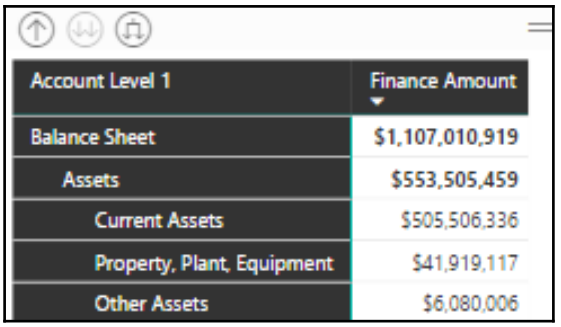
AccountKey	ParentAccountKey	Account	Parent Account
4	*3*	Cash	Current Assets
5	*3*	Receivables	Current Assets

```
Account Level 1 =
VAR AccountPath = PATH(Account[AccountKey],Account[ParentAccountKey])
VAR AccountKey = PATHITEM(AccountPath,1,1)
RETURN
LOOKUPVALUE(Account[Account],Account[AccountKey],AccountKey)
```

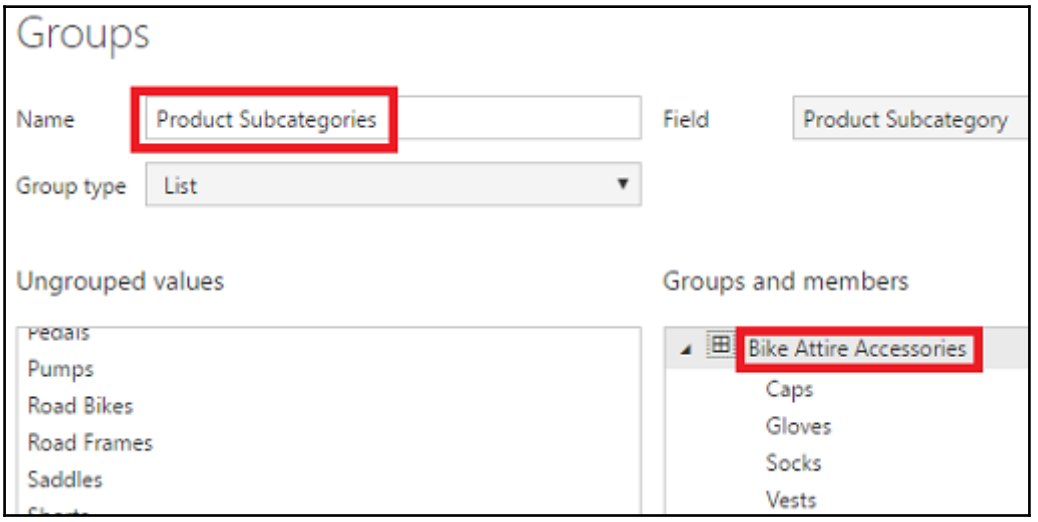
ount Type	Operator	Parent Account Code	ParentAccountKey	ValueType	Account Level 1
ets	+	*1*	*1*	Currency	Balance Sheet
ets	+	*10*	*2*	Currency	Balance Sheet
ets	+	*110*	*3*	Currency	Balance Sheet

Account Level 1	Account Level 2	Account Level 3	Account Level 4	Account Level 5	Account Level 6
Balance Sheet	Liabilities and Owners Equity	Liabilities	Current Liabilities	Notes Payable	
Balance Sheet	Liabilities and Owners Equity	Liabilities	Current Liabilities	Accounts Payable	

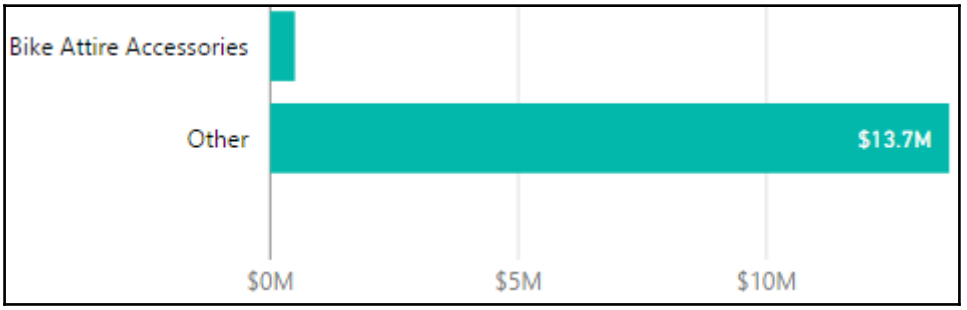


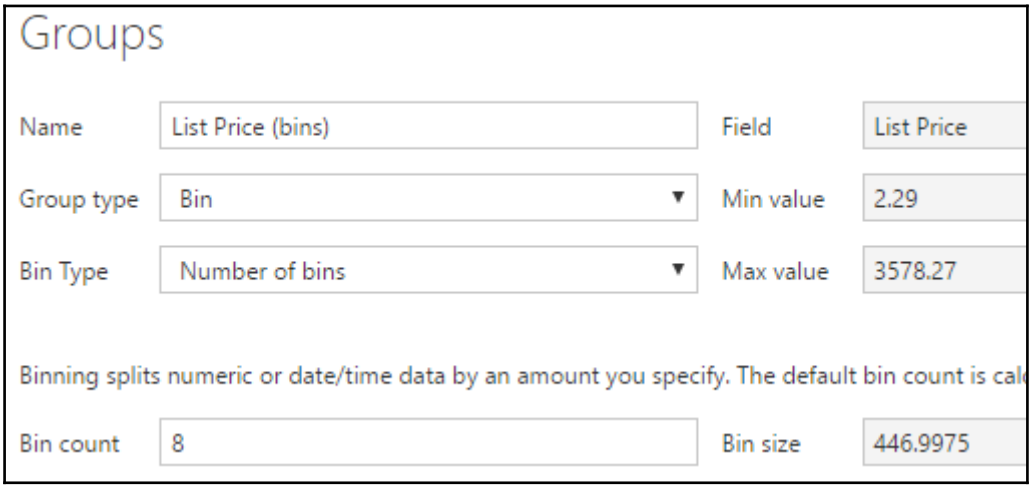


Account Level 1	Finance Amount
Balance Sheet	$1,107,010,919
Assets	$553,505,459
Current Assets	$505,506,336
Property, Plant, Equipment	$41,919,117
Other Assets	$6,080,006

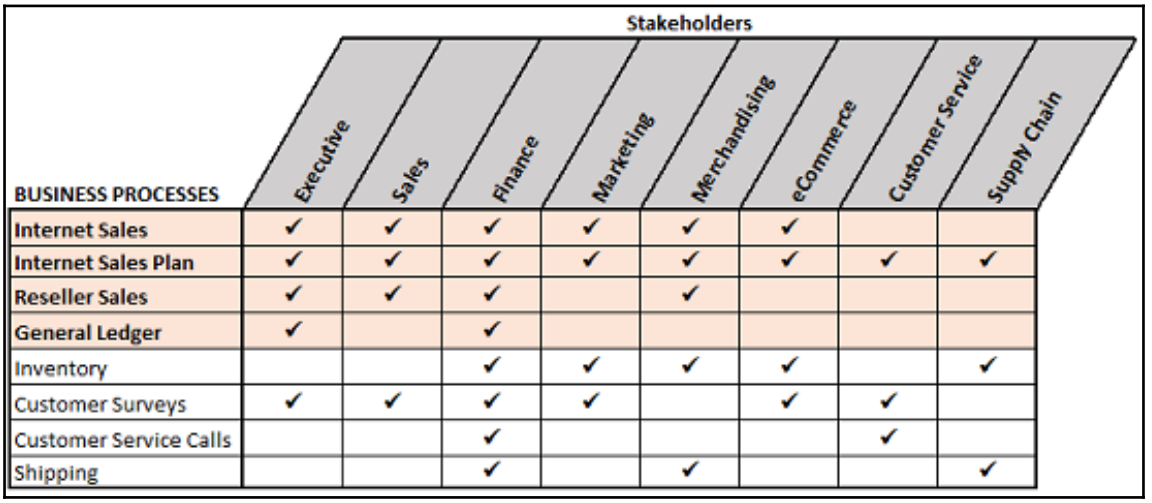


The Path
1|2
1|2|3
1|2|3|4
1|2|3|5
1|2|3|5|6
1|2|3|5|7
1|2|3|8

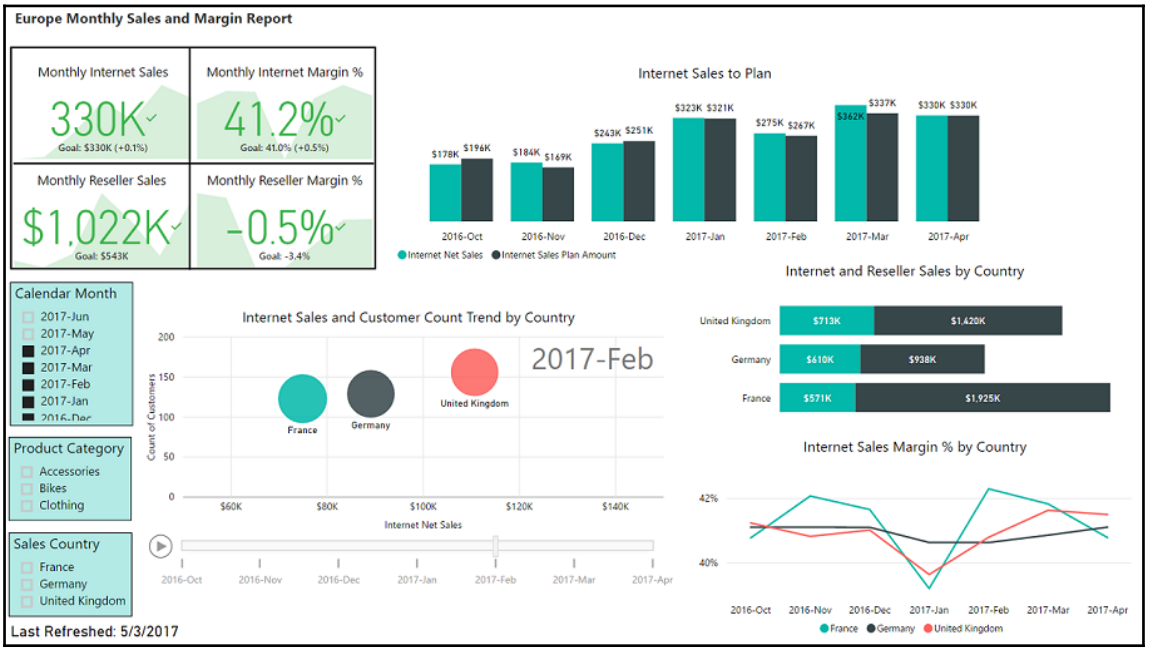


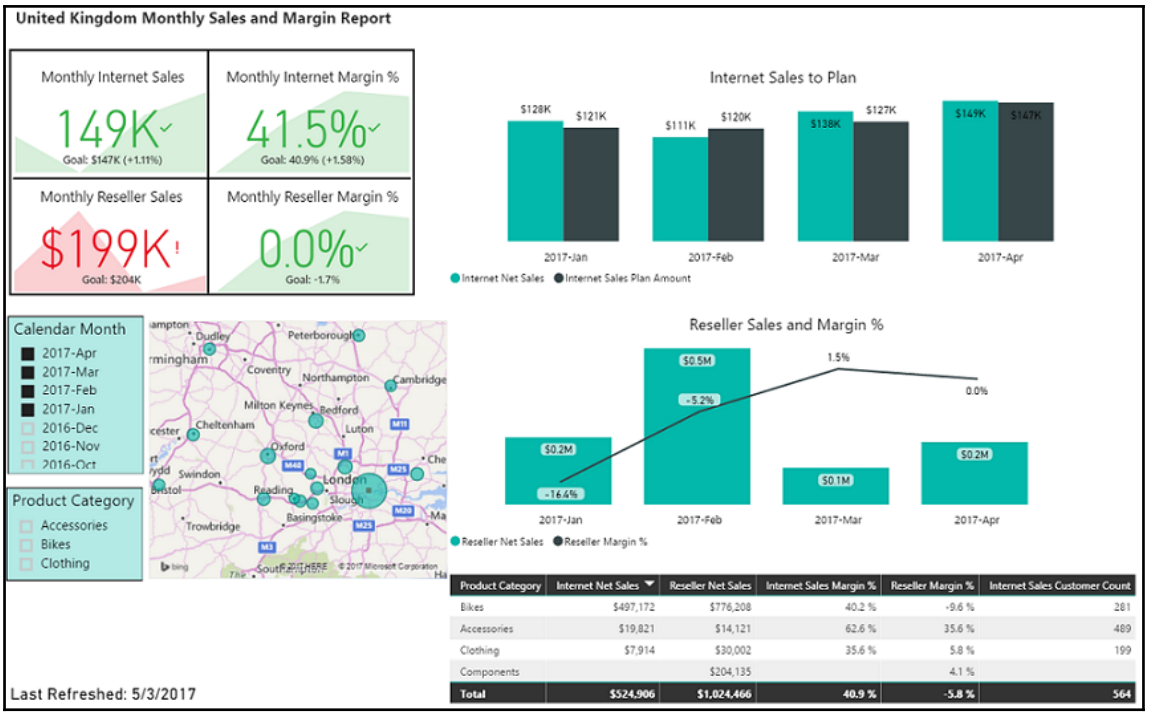


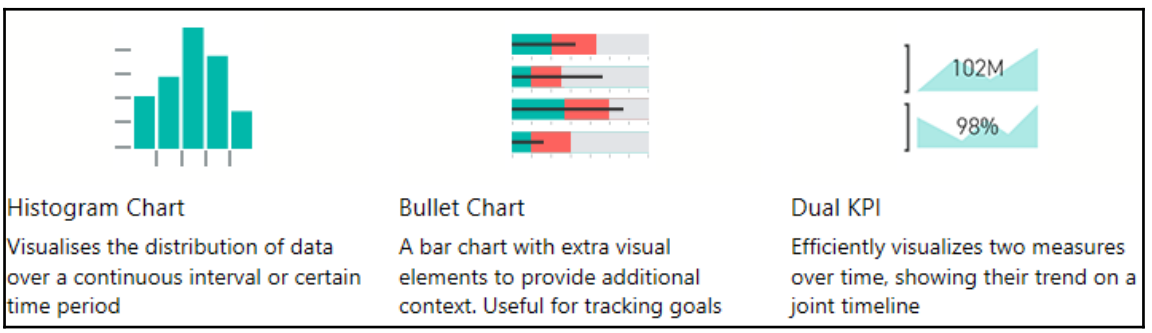
Chapter 4: Authoring Power BI Reports

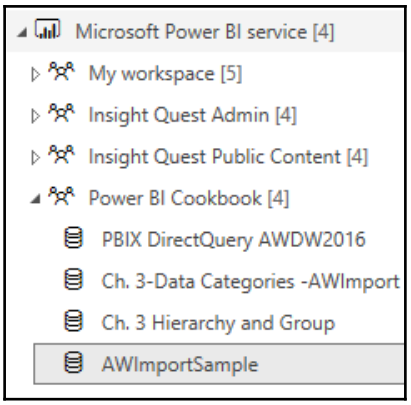


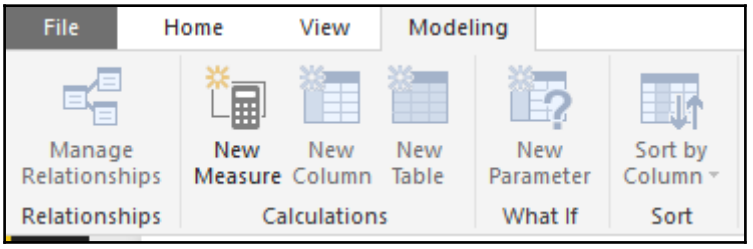
	Stakeholders							
BUSINESS PROCESSES	**Executive**	**Sales**	**Finance**	**Marketing**	**Merchandising**	**eCommerce**	**Customer Service**	**Supply Chain**
Internet Sales	✓	✓	✓	✓	✓	✓		
Internet Sales Plan	✓	✓	✓	✓	✓	✓	✓	✓
Reseller Sales	✓	✓	✓		✓			
General Ledger	✓		✓					
Inventory			✓	✓	✓	✓		✓
Customer Surveys	✓	✓	✓	✓		✓	✓	
Customer Service Calls			✓				✓	
Shipping			✓		✓			✓

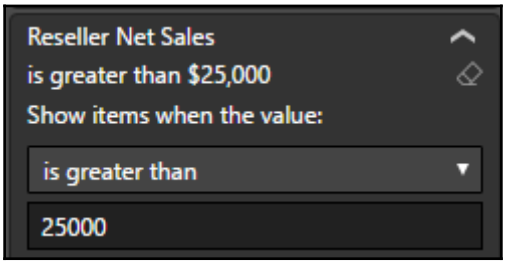


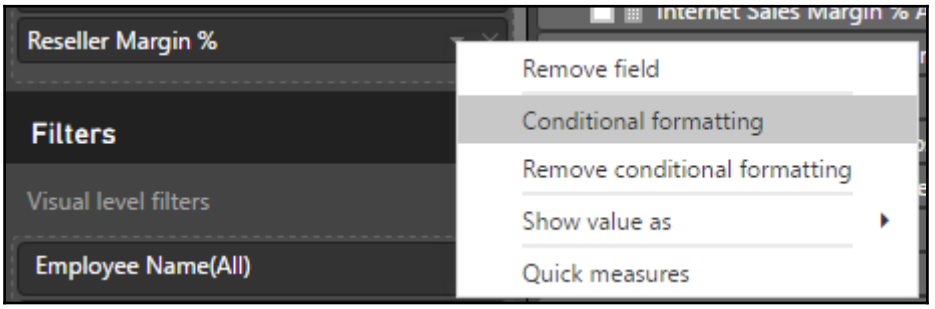

United Kingdom Monthly Sales and Margin Report
Monthly Internet Sales
149K
Goal: $147K (+1.11%)
Monthly Internet Margin %
41.5%
Goal: 40.9% (+1.58%)
Monthly Reseller Sales
$199K
Goal: $204K
Monthly Reseller Margin %
0.0%
Goal: -1.7%
Internet Sales to Plan
$128K
$121K
$111K
$120K
$138K
$127K
$149K
$147K
2017-Jan
2017-Feb
2017-Mar
2017-Apr
Internet Net Sales
Internet Sales Plan Amount
Calendar Month
2017-Apr
2017-Mar
2017-Feb
2017-Jan
2016-Dec
2016-Nov
Product Category
Accessories
Bikes
Clothing
Reseller Sales and Margin %
$0.2M
$0.5M
$0.1M
$0.2M
-16.4%
-5.2%
1.5%
0.0%
2017-Jan
2017-Feb
2017-Mar
2017-Apr
Reseller Net Sales
Reseller Margin %
Product Category | Internet Net Sales | Reseller Net Sales | Internet Sales Margin % | Reseller Margin % | Internet Sales Customer Count
Bikes | $497,172 | $776,208 | 40.2 % | -9.6 % | 281
Accessories | $19,821 | $14,121 | 62.6 % | 35.6 % | 489
Clothing | $7,914 | $30,002 | 35.6 % | 5.8 % | 199
Components | | $204,135 | | 4.1 % |
Total | $524,906 | $1,024,466 | 40.9 % | -5.8 % | 564
Last Refreshed: 5/3/2017

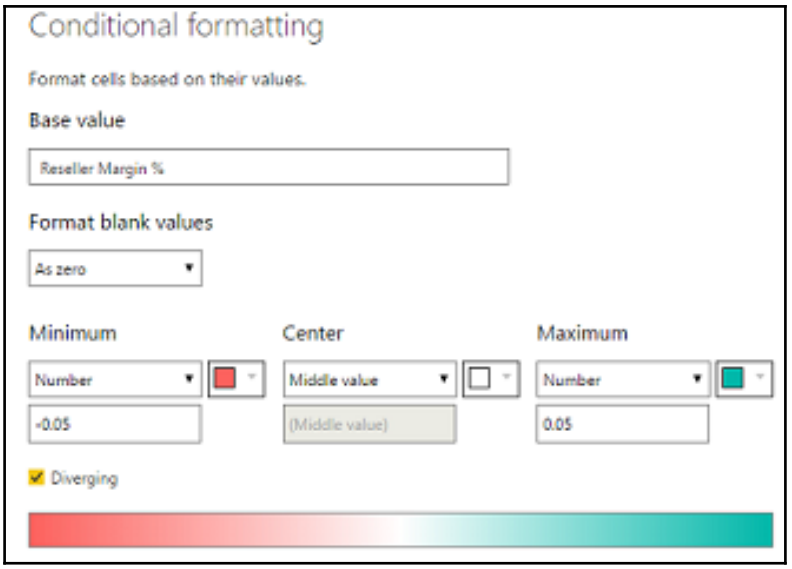

102M
98%
Histogram Chart
Visualises the distribution of data over a continuous interval or certain time period
Bullet Chart
A bar chart with extra visual elements to provide additional context. Useful for tracking goals
Dual KPI
Efficiently visualizes two measures over time, showing their trend on a joint timeline


Microsoft Power BI service [4]
My workspace [5]
Insight Quest Admin [4]
Insight Quest Public Content [4]
Power BI Cookbook [4]
PBIX DirectQuery AWDW2016
Ch. 3-Data Categories -AWImport
Ch. 3 Hierarchy and Group
AWImportSample

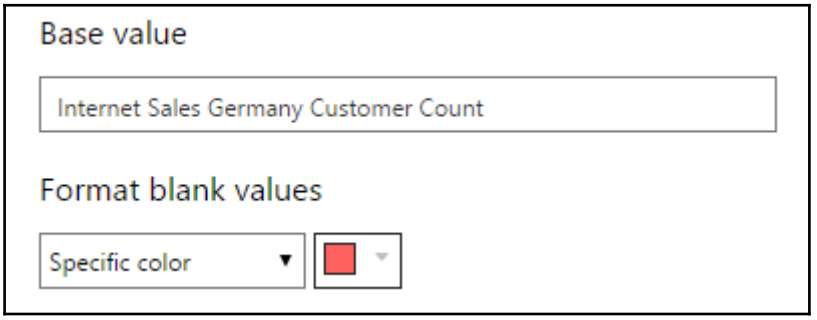

File
Home
View
Modeling
Manage Relationships
New Measure
New Column
New Table
New Parameter
Sort by Column
Relationships
Calculations
What If
Sort


Reseller Net Sales
is greater than $25,000
Show items when the value:
is greater than
25000

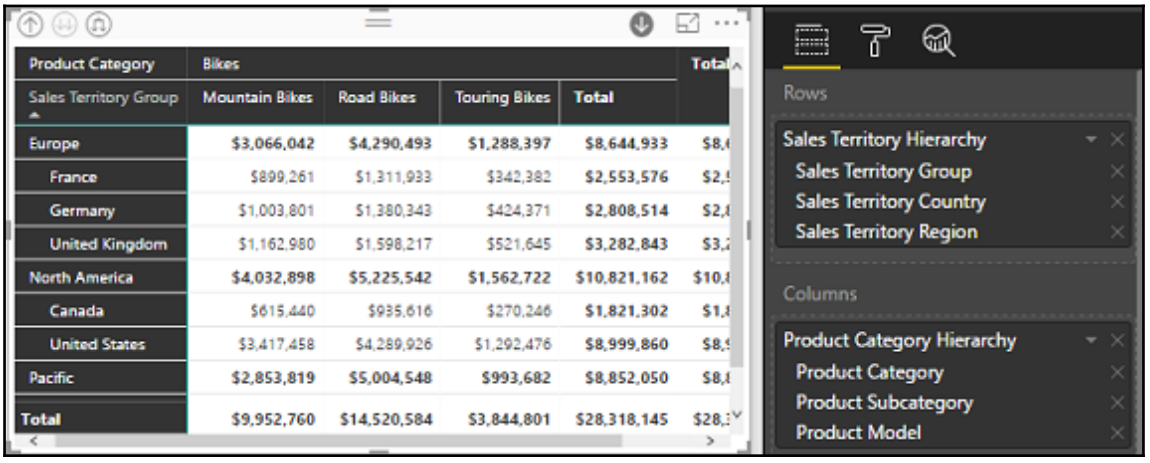

Reseller Margin %
Filters
Visual level filters
Employee Name(All)
Remove field
Conditional formatting
Remove conditional formatting
Show value as
Quick measures

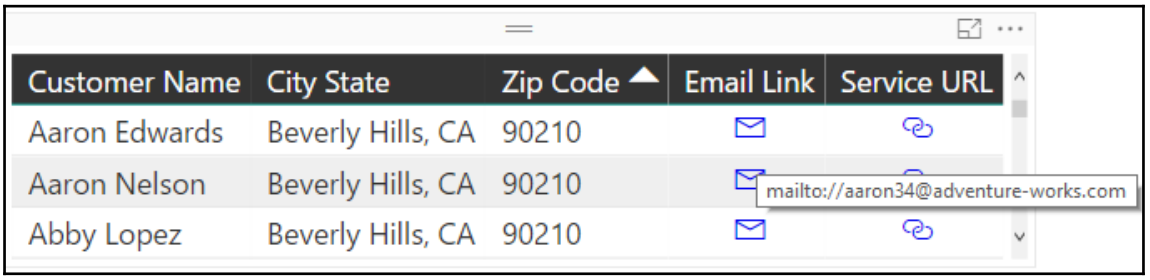


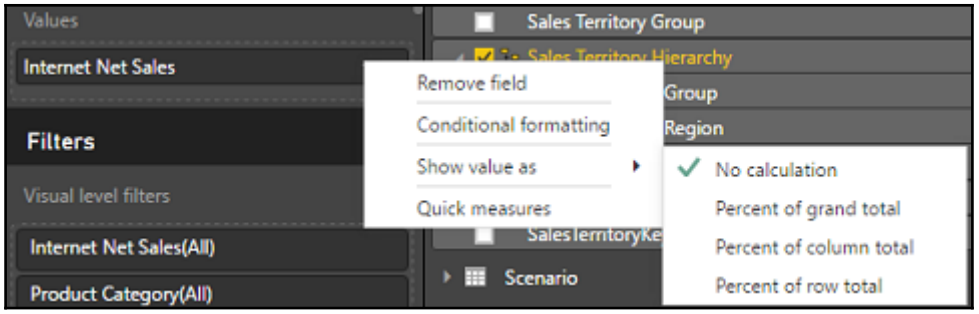
Employee Name	Reseller	Promotion	Reseller Net Sales	Reseller Sales Order Quantity	Reseller Margin %
Ranjit Varkey Chudukatil	Metropolitan Equipment	No Discount	$561,291	1,596	-1.4 %
Ranjit Varkey Chudukatil	Registered Cycle Store	No Discount	$516,783	1,818	10.8 %
José Saraiva	Bulk Discount Store	No Discount	$423,881	984	-3.4 %
José Saraiva	Metropolitan Bicycle Supply	No Discount	$413,625	929	10.6 %
Ranjit Varkey Chudukatil	Roadway Bicycle Supply	No Discount	$404,119	657	-2.3 %



Date	Internet Net ...	Internet Sales Order Quantity	Internet Sales Germany Customer Count	Internet Sales France Customer Count
7/14/2017	$388	28	2	6
7/13/2017	$536	23	6	5
7/12/2017	$314	18		4
7/11/2017	$223	11	2	1
7/10/2017	$548	29	4	4

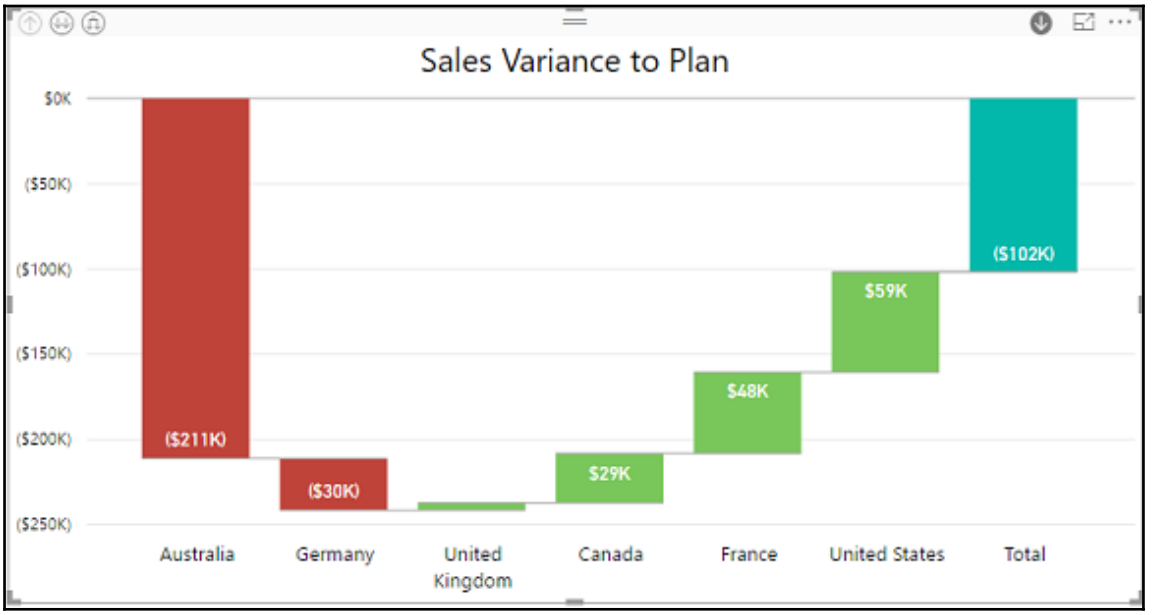


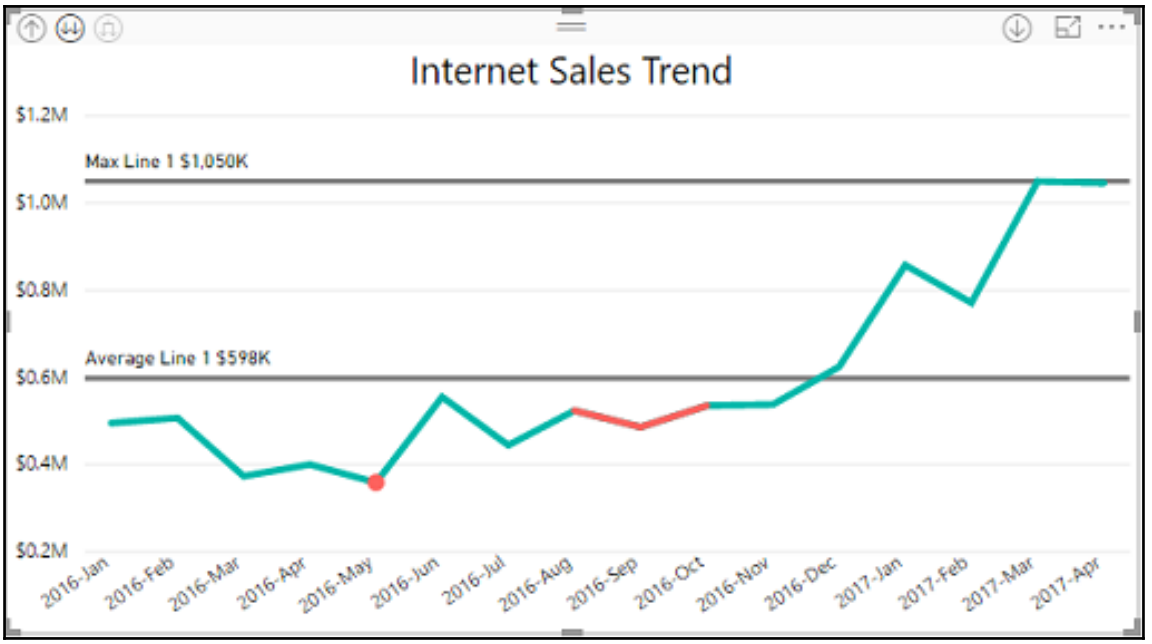


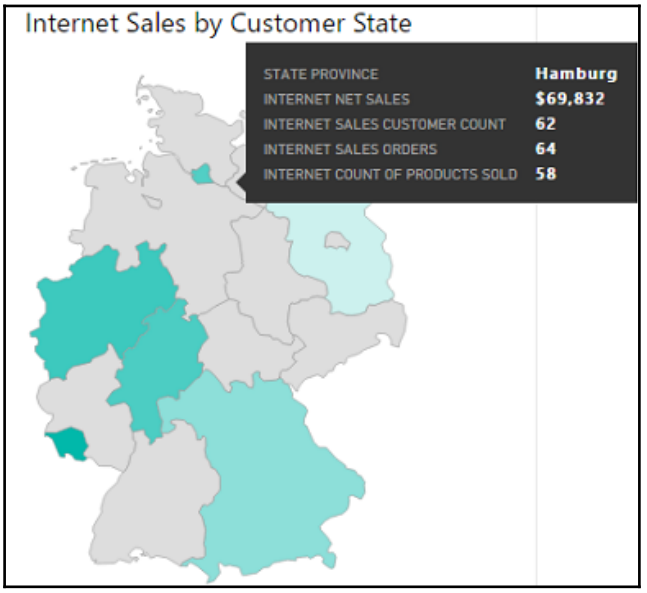


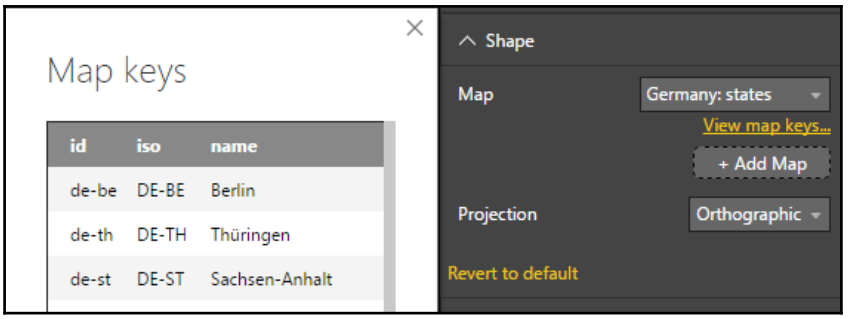
Calendar Yr-Qtr	2016-Q1				2016-Q2			
Product Category	2016-Jan	2016-Feb	2016-Mar	**Total**	2016-Apr	2016-May	2016-Jun	**Total**
Bikes								
Total Net Sales	$3,175,285	$2,663,439	$1,839,276	**$7,678,001**	$2,895,168	$2,092,787	$1,726,871	**$6,714,827**
Total Margin	$205,256	$254,174	$179,070	**$638,500**	$219,310	$192,622	$259,229	**$671,161**
Total Margin %	6.5 %	9.5 %	9.7 %	**8.3 %**	7.6 %	9.2 %	15.0 %	**10.0 %**
Components								
Total Net Sales	$799,484	$627,456	$273,062	**$1,700,003**	$474,023	$376,664	$111,132	**$961,819**
Total Margin	$98,119	$77,150	$34,701	**$209,971**	$59,488	$47,377	$14,121	**$120,986**
Total Margin %	12.3 %	12.3 %	12.7 %	**12.4 %**	12.5 %	12.6 %	12.7 %	**12.6 %**
Total Net Sales	**$3,974,770**	**$3,290,895**	**$2,112,338**	**$9,378,003**	**$3,369,191**	**$2,469,452**	**$1,838,003**	**$7,676,646**
Total Margin	**$303,375**	**$331,324**	**$213,771**	**$848,470**	**$278,798**	**$239,998**	**$273,351**	**$792,147**
Total Margin %	**7.6 %**	**10.1 %**	**10.1 %**	**9.0 %**	**8.3 %**	**9.7 %**	**14.9 %**	**10.3 %**

Product Subcategory	Internet Net Sales	Internet Sales Margin %
Road Bikes	$11,119,297	38.7 %
Mountain Bikes	$5,578,970	45.3 %
Touring Bikes	$1,039,045	37.8 %
Tires and Tubes	$83,895	62.6 %

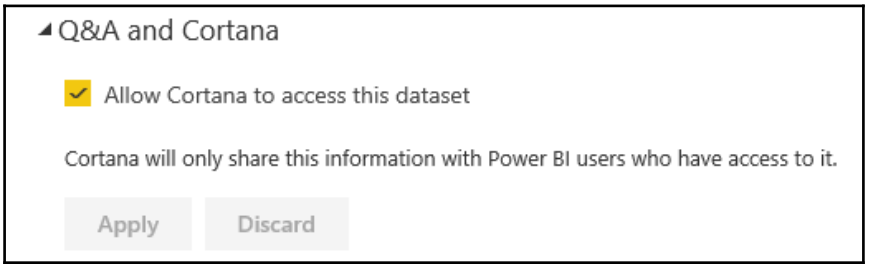


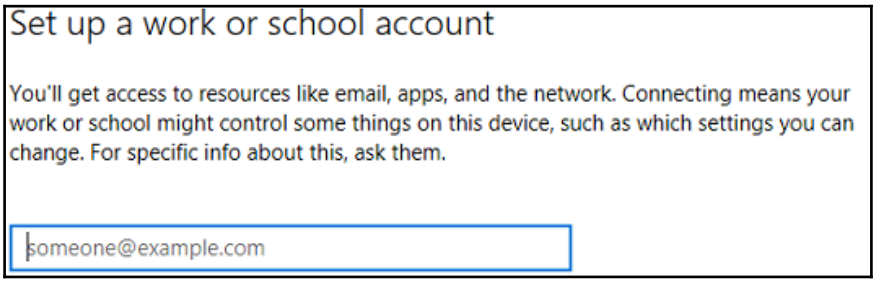

Internet Sales Trend
$1.2M
Max Line 1 $1,050K
$1.0M
$0.8M
Average Line 1 $598K
$0.6M
$0.4M
$0.2M
2016-Jan
2016-Feb
2016-Mar
2016-Apr
2016-May
2016-Jun
2016-Jul
2016-Aug
2016-Sep
2016-Oct
2016-Nov
2016-Dec
2017-Jan
2017-Feb
2017-Mar
2017-Apr

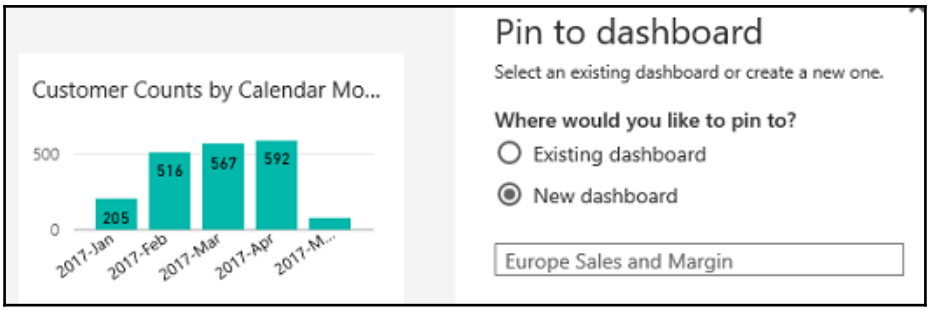

Internet Sales by Customer State
STATE PROVINCE Hamburg
INTERNET NET SALES $69,832
INTERNET SALES CUSTOMER COUNT 62
INTERNET SALES ORDERS 64
INTERNET COUNT OF PRODUCTS SOLD 58

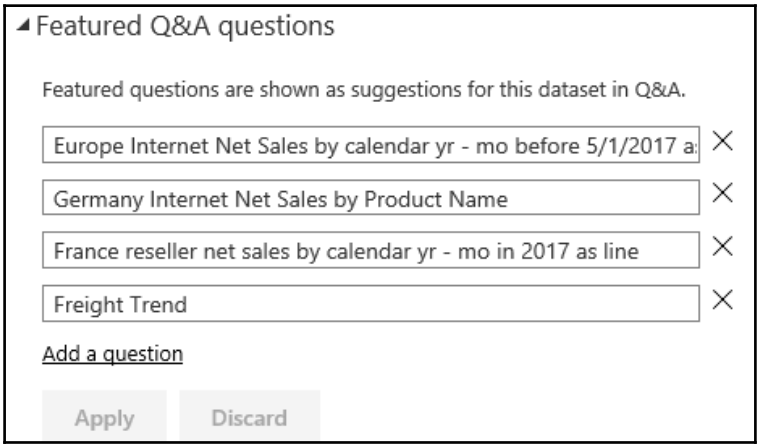

Map keys
id iso name
de-be DE-BE Berlin
de-th DE-TH Thüringen
de-st DE-ST Sachsen-Anhalt
Shape
Map
Germany: states
View map keys...
+ Add Map
Projection
Orthographic
Revert to default


Ask questions about data using Cortana
Enabled for the entire organization
Users in the organization can ask questions about their data using Cortana.
Enabled

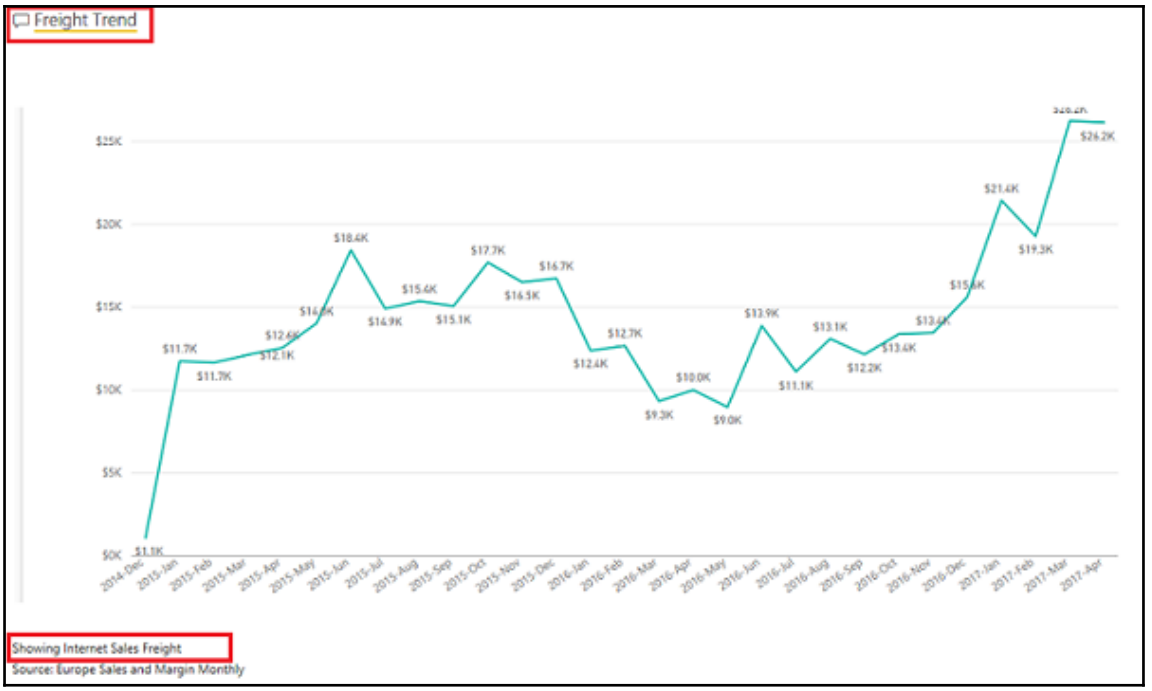

Q&A and Cortana
Allow Cortana to access this dataset
Cortana will only share this information with Power BI users who have access to it.
Apply
Discard

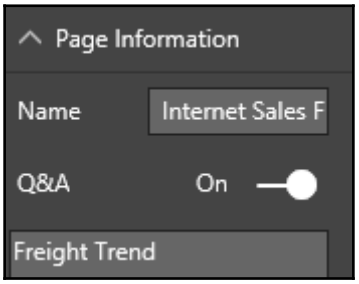

Set up a work or school account
You'll get access to resources like email, apps, and the network. Connecting means your work or school might control some things on this device, such as which settings you can change. For specific info about this, ask them.
someone@example.com

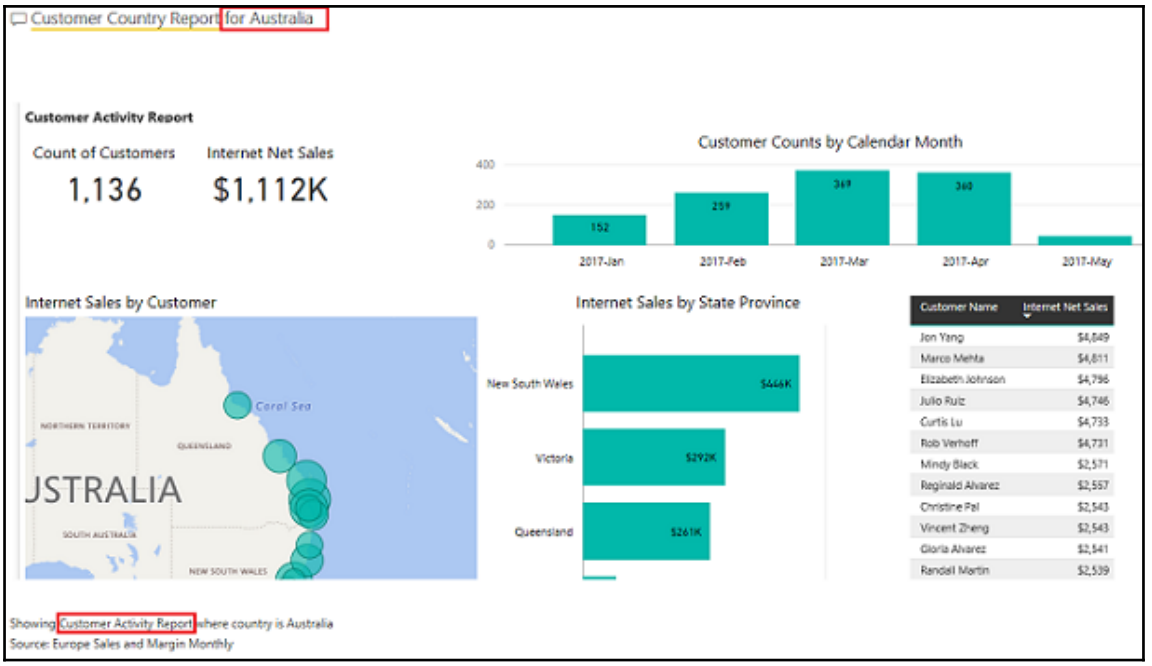

Customer Counts by Calendar Mo...
500
0
205
516
567
592
2017-Jan
2017-Feb
2017-Mar
2017-Apr
2017-M...
Pin to dashboard
Select an existing dashboard or create a new one.
Where would you like to pin to?
Existing dashboard
New dashboard
Europe Sales and Margin

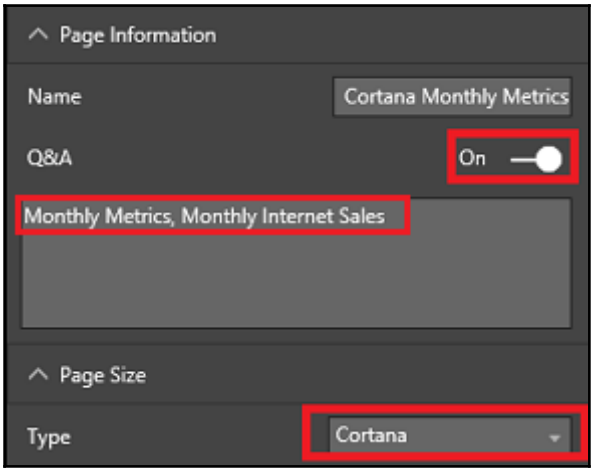

Featured Q&A questions
Featured questions are shown as suggestions for this dataset in Q&A.
Europe Internet Net Sales by calendar yr - mo before 5/1/2017 a
Germany Internet Net Sales by Product Name
France reseller net sales by calendar yr - mo in 2017 as line
Freight Trend
Add a question
Apply
Discard


EUROPE SALES AND MARGIN MONTHLY:
Europe Internet Net Sales by calendar yr - mo before 5/1/2017 as line
Germany Internet Net Sales by Product Name
France reseller net sales by calendar yr - mo in 2017 as line
Freight Trend
Internet Sales Freight
last re

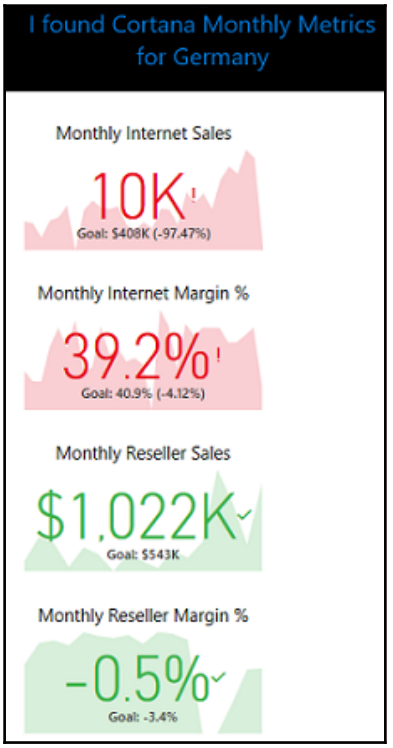

Freight Trend
$25K
$20K
$15K
$10K
$5K
$0K
$1.1K
$11.7K
$11.7K
$12.1K
$12.6K
$14.0K
$18.4K
$14.9K
$15.4K
$15.1K
$17.7K
$16.5K
$16.7K
$12.4K
$12.7K
$9.3K
$10.0K
$9.0K
$13.9K
$11.1K
$13.1K
$12.2K
$13.4K
$13.6K
$15.4K
$21.4K
$19.3K
$26.2K
2014-Dec
2015-Jan
2015-Feb
2015-Mar
2015-Apr
2015-May
2015-Jun
2015-Jul
2015-Aug
2015-Sep
2015-Oct
2015-Nov
2015-Dec
2016-Jan
2016-Feb
2016-Mar
2016-Apr
2016-May
2016-Jun
2016-Jul
2016-Aug
2016-Sep
2016-Oct
2016-Nov
2016-Dec
2017-Jan
2017-Feb
2017-Mar
2017-Apr
Showing Internet Sales Freight
Source: Europe Sales and Margin Monthly

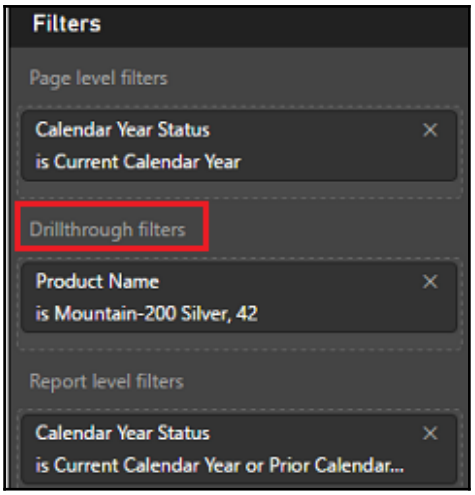

Page Information
Name
Internet Sales F
Q&A
On
Freight Trend

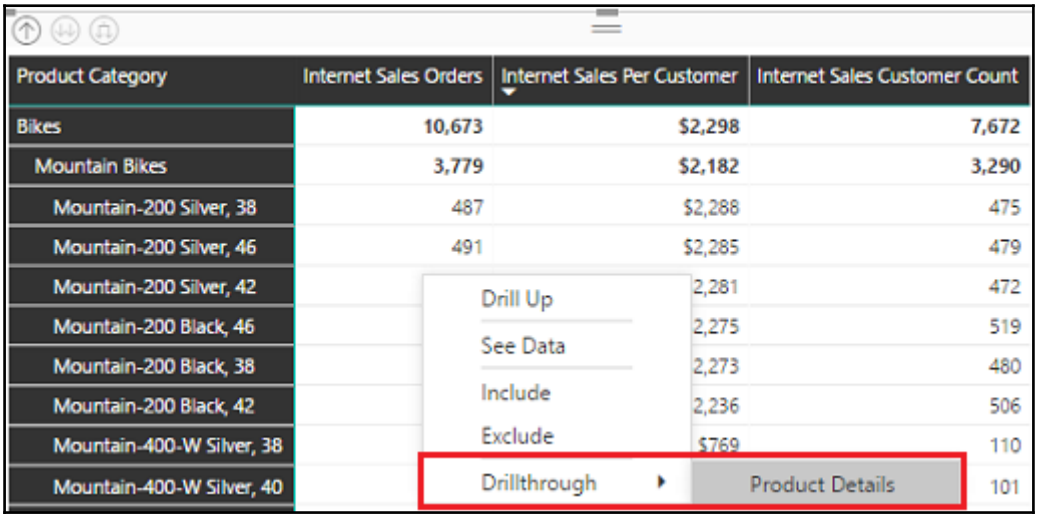

Customer Country Report for Australia
Customer Activity Report
Count of Customers
1,136
Internet Net Sales
$1,112K
Customer Counts by Calendar Month
400
200
0
152
259
369
360
2017-Jan
2017-Feb
2017-Mar
2017-Apr
2017-May
Internet Sales by Customer
Coral Sea
NORTHERN TERRITORY
QUEENSLAND
JSTRALIA
SOUTH AUSTRALIA
NEW SOUTH WALES
Internet Sales by State Province
New South Wales
$446K
Victoria
$292K
Queensland
$261K
Customer Name
Internet Net Sales
Jon Yang $4,849
Marco Mehta $4,811
Elizabeth Johnson $4,796
Julio Ruiz $4,746
Curtis Lu $4,733
Rob Verhoff $4,731
Mindy Black $2,571
Reginald Alvarez $2,557
Christine Pal $2,543
Vincent Zheng $2,543
Gloria Alvarez $2,541
Randall Martin $2,539
Showing Customer Activity Report where country is Australia
Source: Europe Sales and Margin Monthly

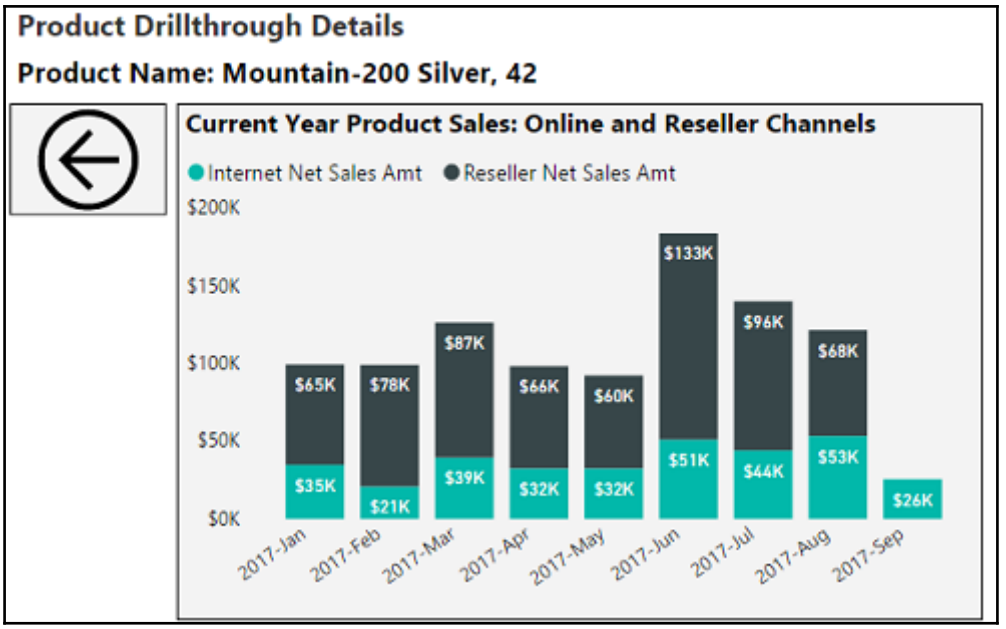

Page Information
Name
Cortana Monthly Metrics
Q&A
On
Monthly Metrics, Monthly Internet Sales
Page Size
Type
Cortana

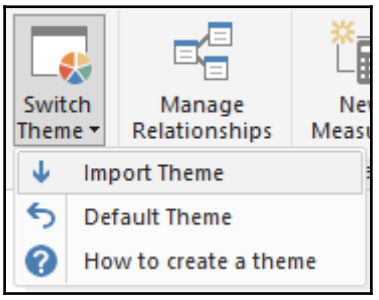

Best match
Monthly Metrics for Germany
Europe Sales and Margin Monthly
Web search suggestions
monthly metrics for germany - Search the web

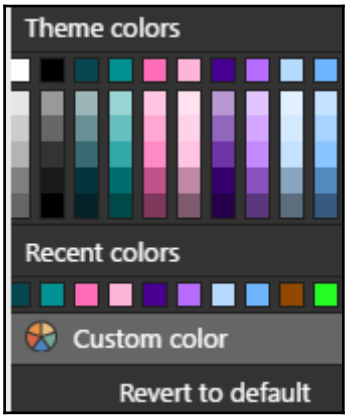

I found Cortana Monthly Metrics for Germany
Monthly Internet Sales
10K
Goal: $408K (-97.47%)
Monthly Internet Margin %
39.2%
Goal: 40.9% (-4.12%)
Monthly Reseller Sales
$1,022K
Goal: $543K
Monthly Reseller Margin %
-0.5%
Goal: -3.4%


Filters
Page level filters
Calendar Year Status
is Current Calendar Year
Drillthrough filters
Product Name
is Mountain-200 Silver, 42
Report level filters
Calendar Year Status
is Current Calendar Year or Prior Calendar...


Product Category
Internet Sales Orders
Internet Sales Per Customer
Internet Sales Customer Count
Bikes 10,673 $2,298 7,672
Mountain Bikes 3,779 $2,182 3,290
Mountain-200 Silver, 38 487 $2,288 475
Mountain-200 Silver, 46 491 $2,285 479
Mountain-200 Silver, 42 2,281 472
Mountain-200 Black, 46 2,275 519
Mountain-200 Black, 38 2,273 480
Mountain-200 Black, 42 2,236 506
Mountain-400-W Silver, 38 $769 110
Mountain-400-W Silver, 40 101
Drill Up
See Data
Include
Exclude
Drillthrough
Product Details


Product Drillthrough Details
Product Name: Mountain-200 Silver, 42
Current Year Product Sales: Online and Reseller Channels
Internet Net Sales Amt
Reseller Net Sales Amt
$200K
$150K
$100K
$50K
$0K
$65K
$35K
$78K
$21K
$87K
$39K
$66K
$32K
$60K
$32K
$133K
$51K
$96K
$44K
$68K
$53K
$26K
2017-Jan
2017-Feb
2017-Mar
2017-Apr
2017-May
2017-Jun
2017-Jul
2017-Aug
2017-Sep


Switch Theme
Manage Relationships
Import Theme
Default Theme
How to create a theme


Theme colors
Recent colors
Custom color
Revert to default

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"name": "ColorblindSafe-Longer",
"dataColors": ["#074650", "#009292", "#fe6db6", "#feb5da", "#480091", "#b66dff", "#b5dafe", "#6db6ff", "#914800", "#23fd23"],
"background":"#FFFFFF",
"foreground": "#074650",
"tableAccent": "#fe6db6"
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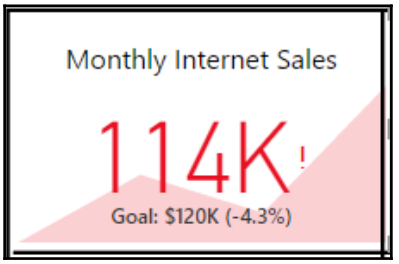
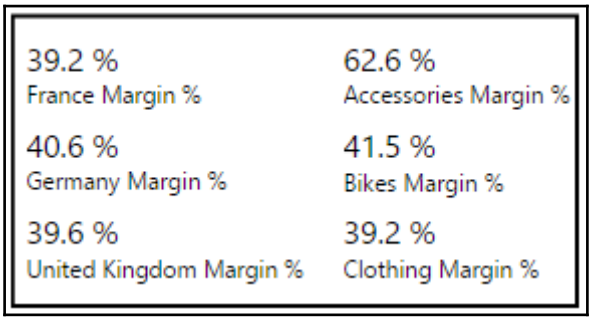
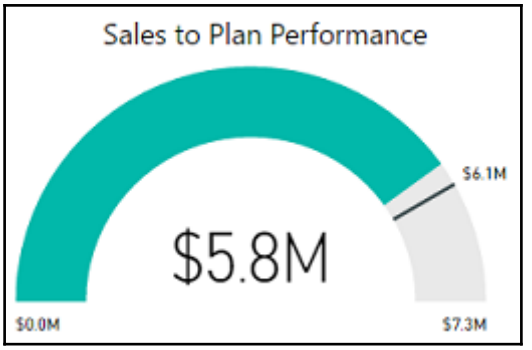
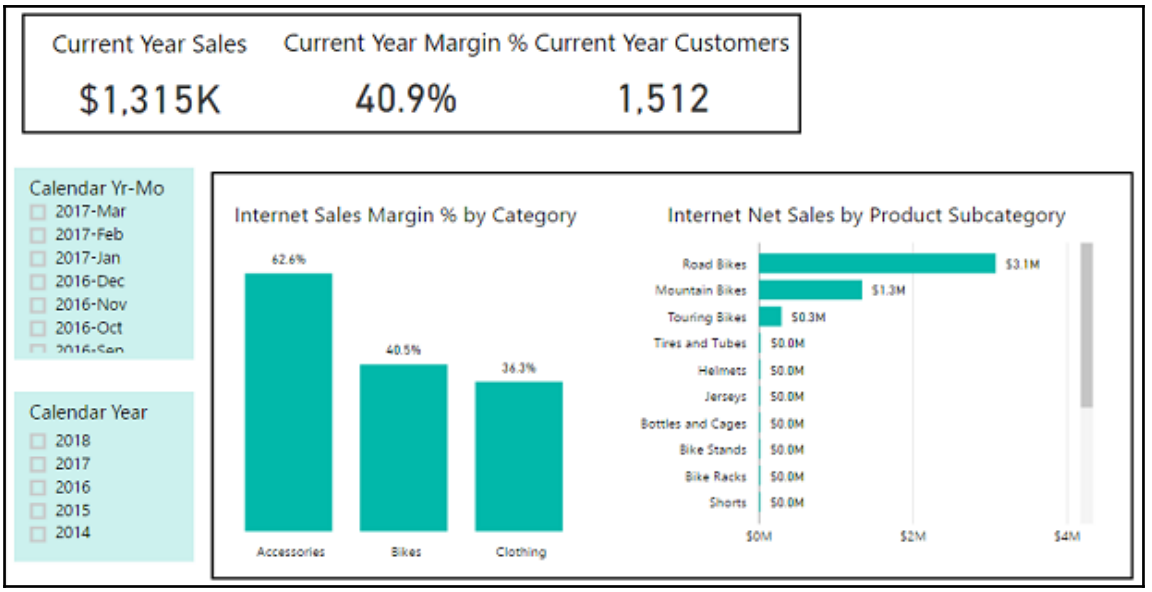
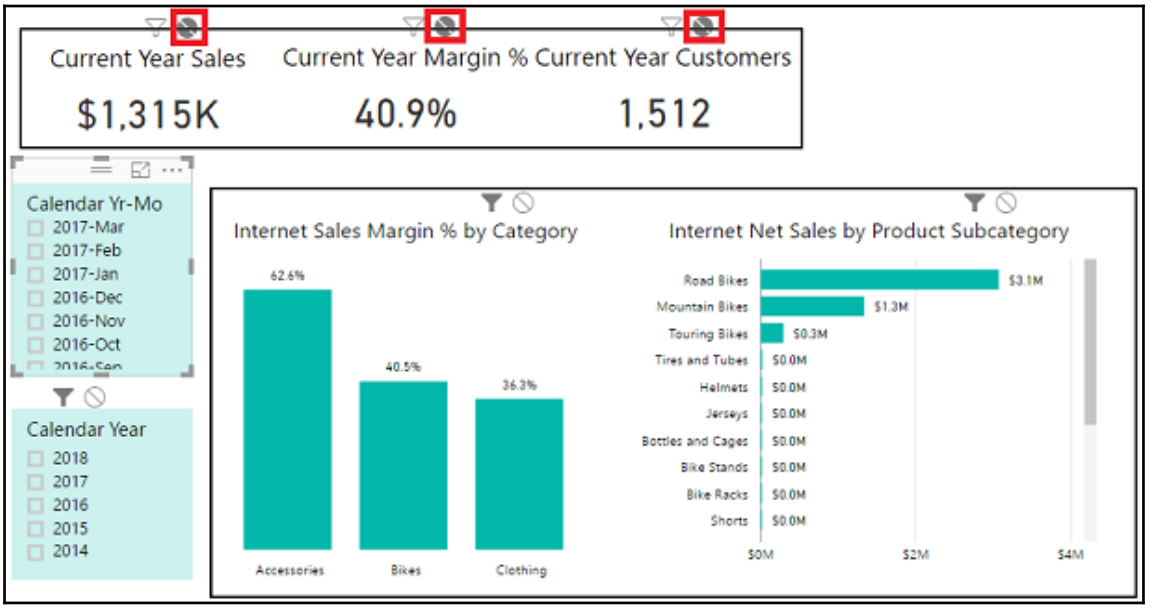
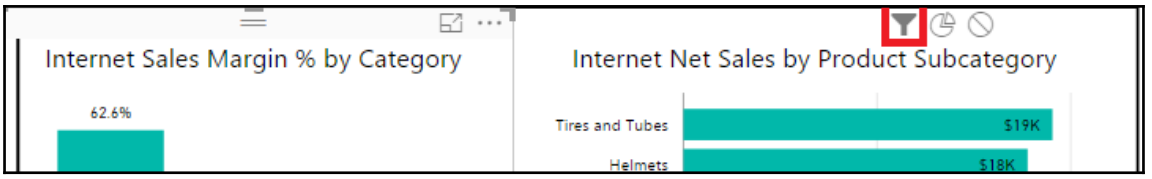


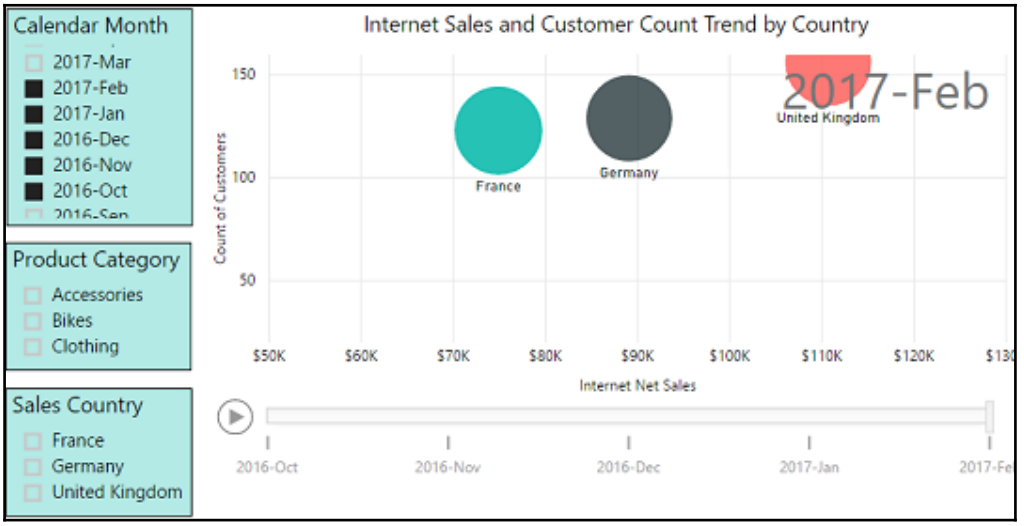




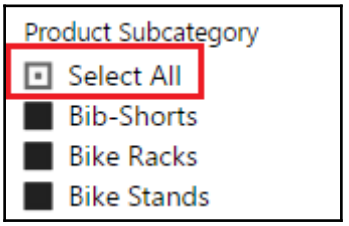

Current Year Sales
$1,315K
Current Year Margin %
40.9%
Current Year Customers
1,512
Calendar Yr-Mo
2017-Mar
2017-Feb
2017-Jan
2016-Dec
2016-Nov
2016-Oct
Calendar Year
2018
2017
2016
2015
2014
Internet Sales Margin % by Category
62.6%
40.5%
36.3%
Accessories
Bikes
Clothing
Internet Net Sales by Product Subcategory
Road Bikes
$3.1M
Mountain Bikes
$1.3M
Touring Bikes
$0.3M
Tires and Tubes
$0.0M
Helmets
$0.0M
Jerseys
$0.0M
Bottles and Cages
$0.0M
Bike Stands
$0.0M
Bike Racks
$0.0M
Shorts
$0.0M
$0M
$2M
$4M

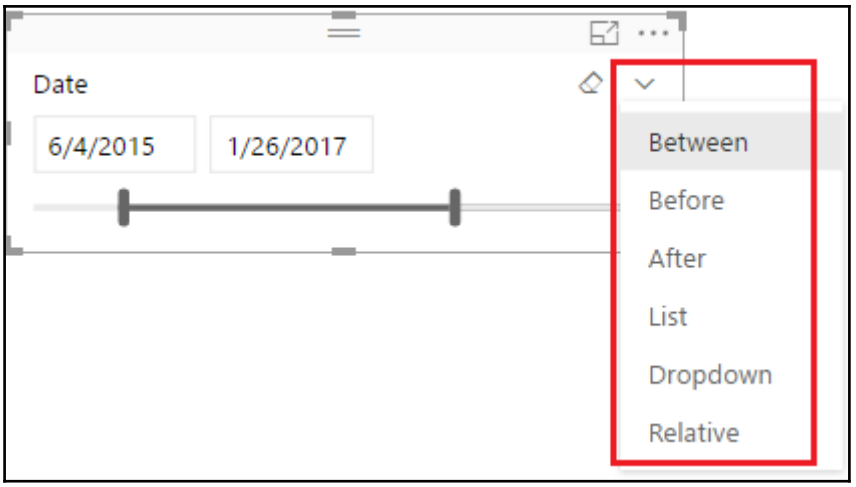

Current Year Sales
$1,315K
Current Year Margin %
40.9%
Current Year Customers
1,512
Calendar Yr-Mo
2017-Mar
2017-Feb
2017-Jan
2016-Dec
2016-Nov
2016-Oct
Calendar Year
2018
2017
2016
2015
2014
Internet Sales Margin % by Category
62.6%
40.5%
36.3%
Accessories
Bikes
Clothing
Internet Net Sales by Product Subcategory
Road Bikes
$3.1M
Mountain Bikes
$1.3M
Touring Bikes
$0.3M
Tires and Tubes
$0.0M
Helmets
$0.0M
Jerseys
$0.0M
Bottles and Cages
$0.0M
Bike Stands
$0.0M
Bike Racks
$0.0M
Shorts
$0.0M
$0M
$2M
$4M

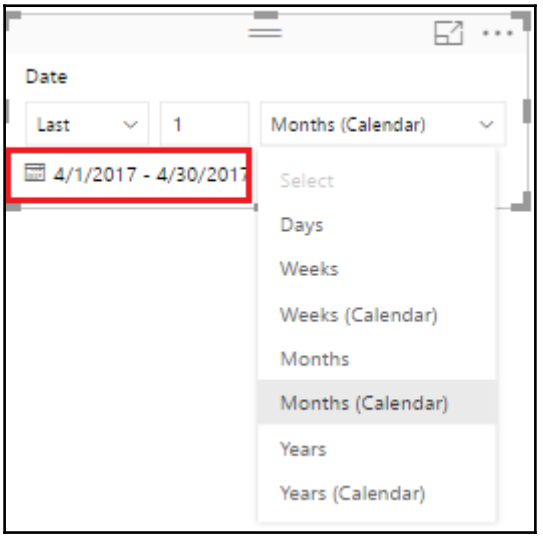

Internet Sales Margin % by Category
62.6%
Internet Net Sales by Product Subcategory
Tires and Tubes
$19K
Helmets
$18K

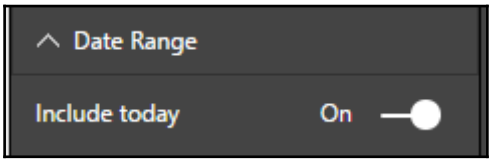

Calendar Month
2017-Mar
2017-Feb
2017-Jan
2016-Dec
2016-Nov
2016-Oct
Product Category
Accessories
Bikes
Clothing
Sales Country
France
Germany
United Kingdom
Internet Sales and Customer Count Trend by Country
2017-Feb
United Kingdom
France
Germany
Count of Customers
150
100
50
$50K
$60K
$70K
$80K
$90K
$100K
$110K
$120K
Internet Net Sales
2016-Oct
2016-Nov
2016-Dec
2017-Jan

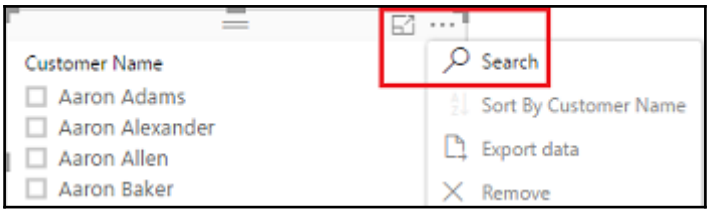

Product Category
Accessories
Bikes
Clothing
Components

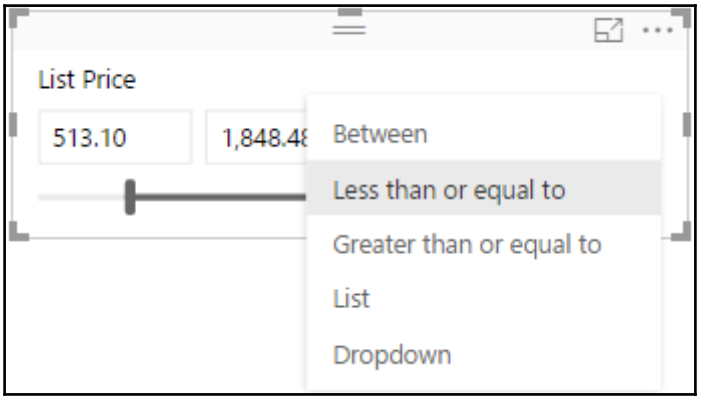

Product Subcategory
Select All
Bib-Shorts
Bike Racks
Bike Stands


Date
6/4/2015
1/26/2017
Between
Before
After
List
Dropdown
Relative

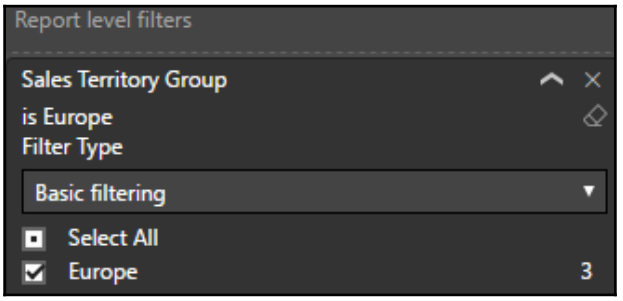

Date
Last
1
Months (Calendar)
4/1/2017 - 4/30/2017
Select
Days
Weeks
Weeks (Calendar)
Months
Months (Calendar)
Years
Years (Calendar)

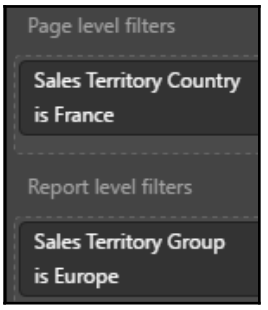

Date Range
Include today
On

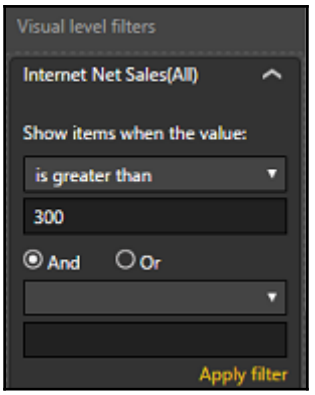

Customer Name
Aaron Adams
Aaron Alexander
Aaron Allen
Aaron Baker
Search
Sort By Customer Name
Export data
Remove

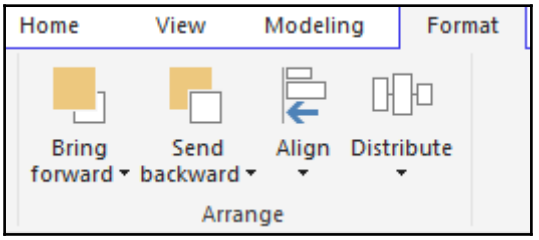

List Price
513.10
Between
Less than or equal to
Greater than or equal to
List
Dropdown

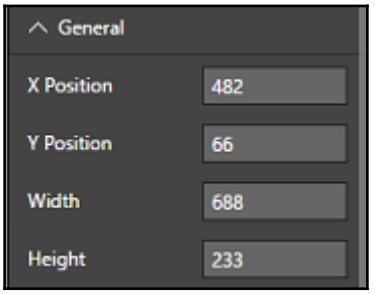

Europe
Germany
France
United Kingdom
Cortana Monthly Metrics

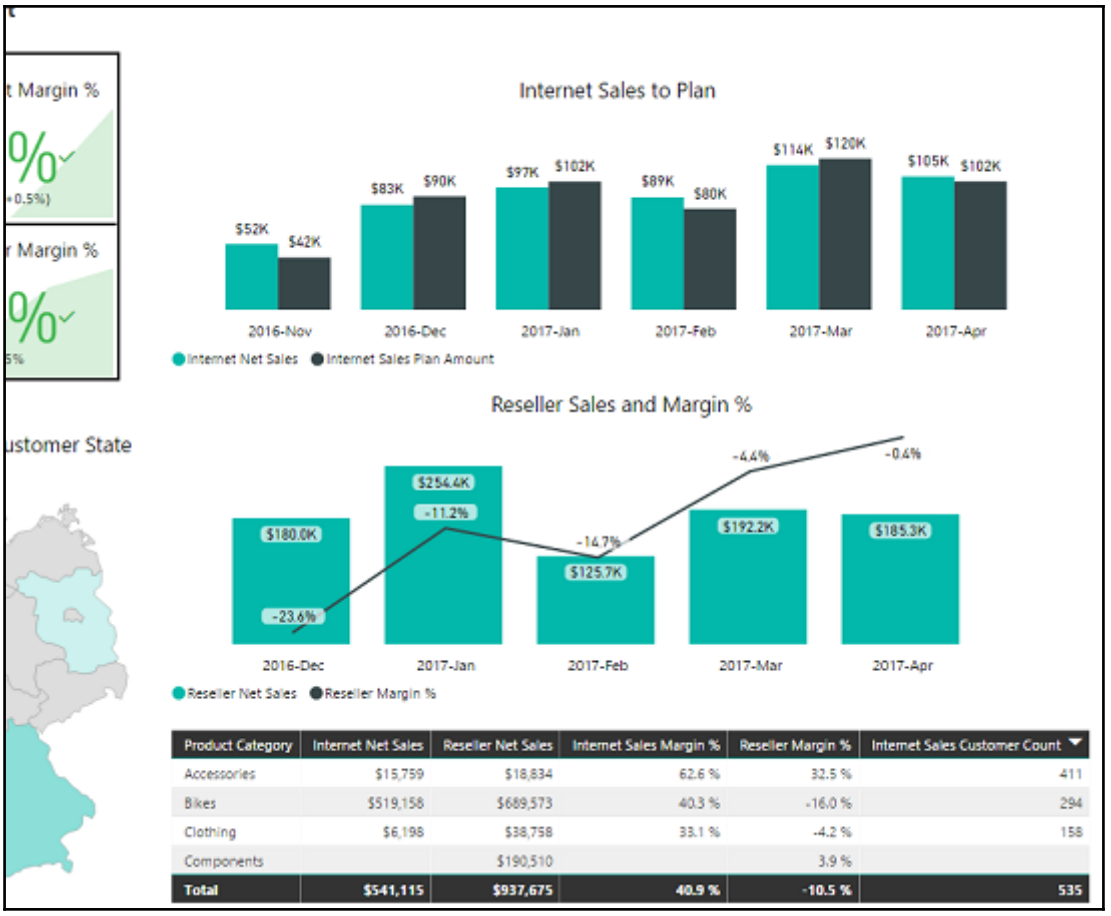

Report level filters
Sales Territory Group
is Europe
Filter Type
Basic filtering
Select All
Europe
3


Page level filters
Sales Territory Country
is France
Report level filters
Sales Territory Group
is Europe


Visual level filters
Internet Net Sales(All)
Show items when the value:
is greater than
300
And
Or
Apply filter


Home
View
Modeling
Format
Bring forward
Send backward
Align
Distribute
Arrange

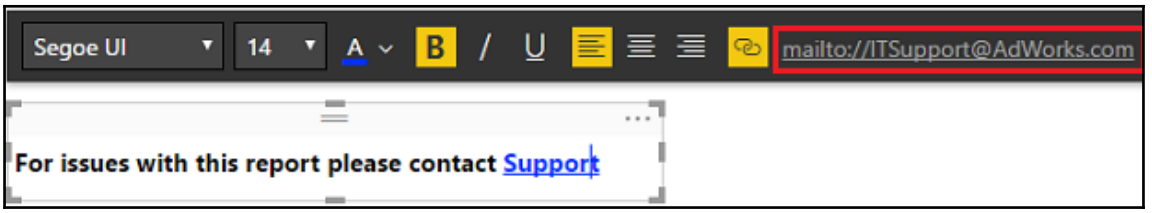

General
X Position
482
Y Position
66
Width
688
Height
233

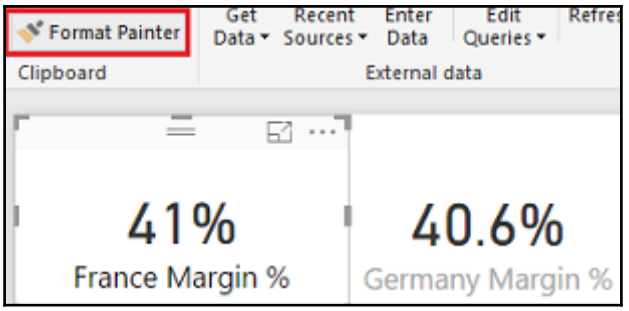


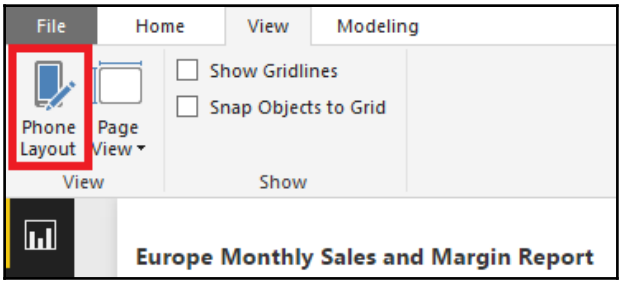
Product Category	Internet Net Sales	Reseller Net Sales	Internet Sales Margin %	Reseller Margin %	Internet Sales Customer Count
Accessories	$15,759	$18,834	62.6 %	32.5 %	411
Bikes	$519,158	$689,573	40.3 %	-16.0 %	294
Clothing	$6,198	$38,758	33.1 %	-4.2 %	158
Components		$190,510		3.9 %	
Total	**$541,115**	**$937,675**	**40.9 %**	**-10.5 %**	**535**

62.6%	40.5%	36.3%
Accessories Margin %	Bikes Margin %	Clothing Margin %

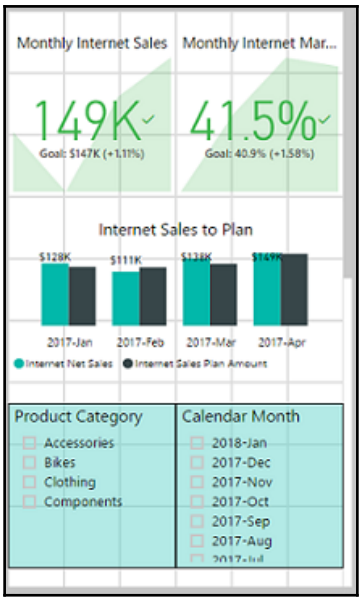
62.6%	40.5%	36.3%
Accessories Margin %	Bikes Margin %	Clothing Margin %

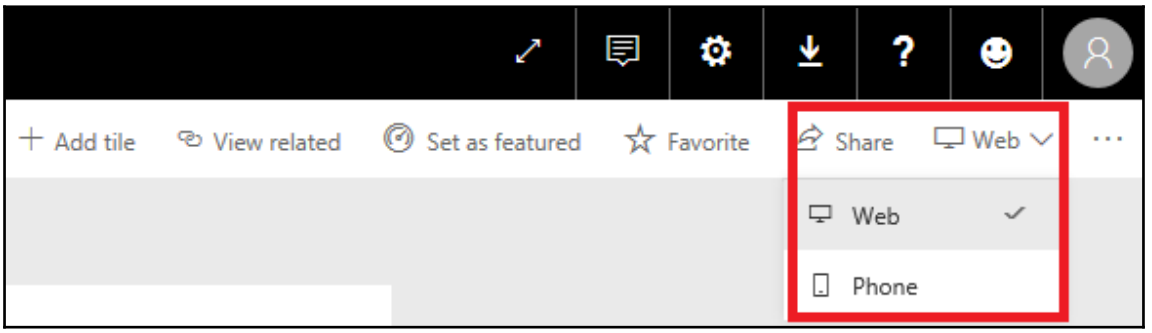



Format Painter
Get Data
Recent Sources
Enter Data
Edit Queries
Clipboard
External data
41%
France Margin %
40.6%
Germany Margin %

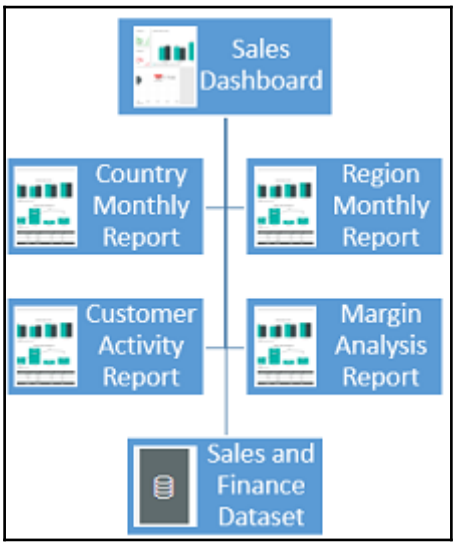

File
Home
View
Modeling
Phone Layout
Page View
Show Gridlines
Snap Objects to Grid
View
Show
Europe Monthly Sales and Margin Report

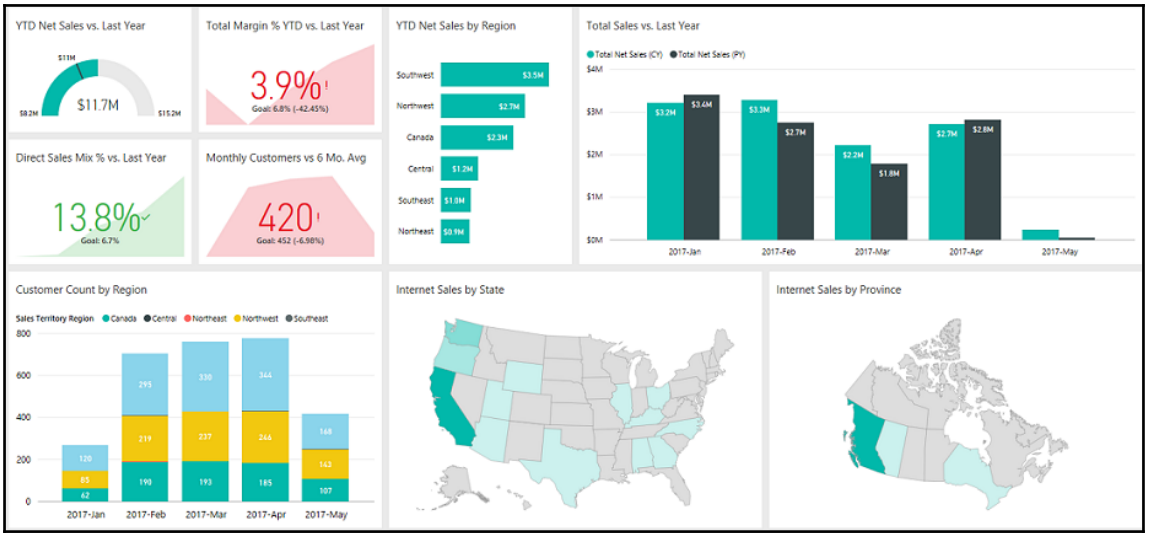

Monthly Internet Sales
Monthly Reseller Sales
330K
$1,022K
Monthly Reseller Mar...
Monthly Internet Mar...
-0.5%
41.2%
Internet Sales to Plan


Monthly Internet Sales
Monthly Internet Mar...
149K
Goal: $147K (+1.11%)
41.5%
Goal: 40.9% (+1.58%)
Internet Sales to Plan
$128K
$111K
$138K
$149K
2017-Jan
2017-Feb
2017-Mar
2017-Apr
Internet Net Sales
Internet Sales Plan Amount
Product Category
Accessories
Bikes
Clothing
Components
Calendar Month
2018-Jan
2017-Dec
2017-Nov
2017-Oct
2017-Sep
2017-Aug


Add tile
View related
Set as featured
Favorite
Share
Web
Web
Phone

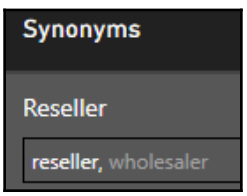
Chapter 5: Creating Power BI Dashboards

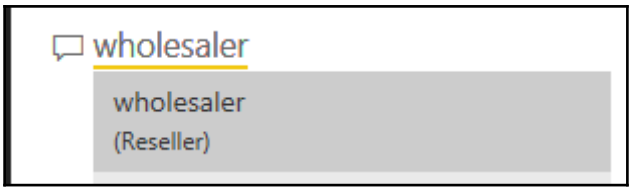


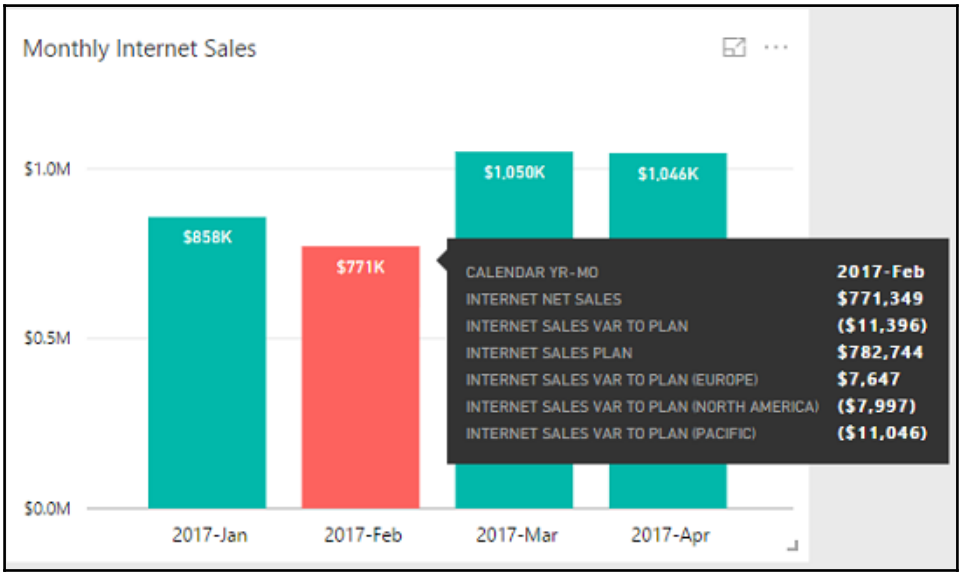



Dashboards
Reports
Datasets
Sales
Inventory
Call Center
General Ledger


TOTAL NET SALES (-10.7%)
4.53M
TOTAL MARGIN % (+8%)
10%
HEADCOUNT (-1.9%)
270
TOTAL CALLS (-34.6%)
5.35K
RESELLER NET SALES (-17.4%)
3.48M
RESELLER MARGIN % (+6.5%)
0.6%
LABOR EXPENSES (-4.9%)
1.29M
TOTAL ISSUES RAISED (-36.3%)
22.0
last 456 days
last 14 days
ADVENTURE WORKS cycles
BI Homepage
Documentation
Support
INTERNET NET SALES (+27.9%)
1.05M
INTERNET SALES CUSTOMER COUNT (+1
1.56K
CURRENT LIABILITIES (-7%)
4.10M
Year to Date Net Sales
INTERNET SALES MARGIN % (+0.4%)
41.4%
INTERNET SALES NEW CUSTOMERS (+2
1.21K
LONG TERM LIABILITIES (-9.6%)
2.65M
North America
$11.7M
Europe
$4.9M
Pacific
$1.8M
last 90 days

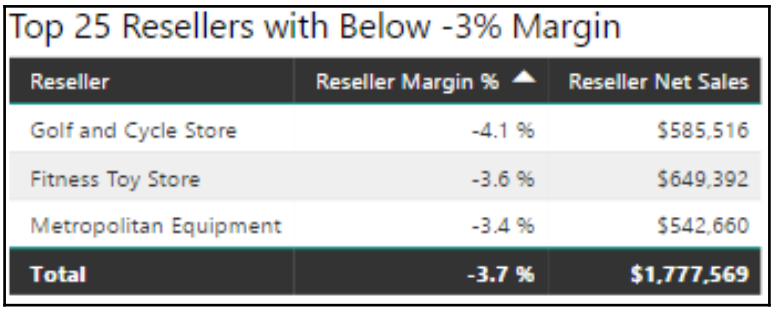

Synonyms
Reseller
reseller, wholesaler


wholesaler
wholesaler
(Reseller)


Monthly Internet Sales
$1.0M
$0.5M
$0.0M
$858K
$771K
$1,050K
$1,046K
2017-Jan
2017-Feb
2017-Mar
2017-Apr
CALENDAR YR-MO 2017-Feb
INTERNET NET SALES $771,349
INTERNET SALES VAR TO PLAN ($11,396)
INTERNET SALES PLAN $782,744
INTERNET SALES VAR TO PLAN (EUROPE) $7,647
INTERNET SALES VAR TO PLAN (NORTH AMERICA) ($7,997)
INTERNET SALES VAR TO PLAN (PACIFIC) ($11,046)

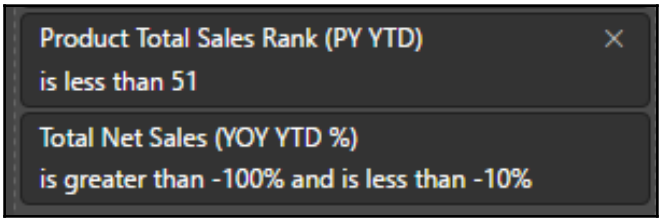

Minimum
Maximum
Minimum
0
Maximum
0

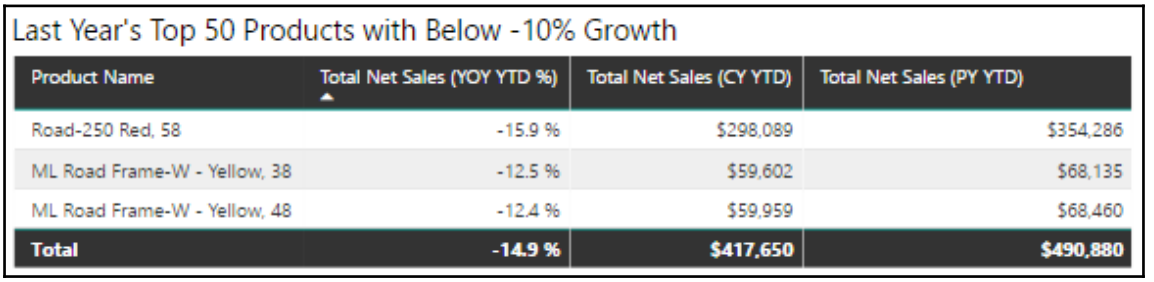

Visual level filters
Reseller(All)
Reseller Key
top 25 by Reseller Net Sales
Reseller Margin %
is less than -3%
Reseller Net Sales(All)



Top 25 Resellers with Below -3% Margin

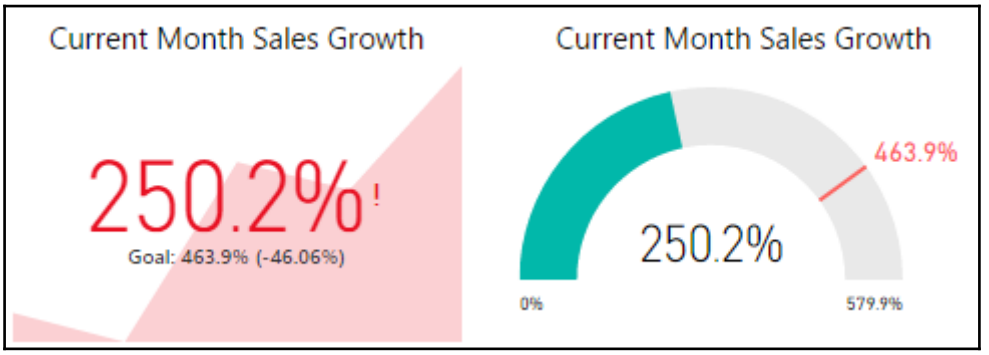
Reseller	Reseller Margin %	Reseller Net Sales
Golf and Cycle Store	-4.1 %	$585,516
Fitness Toy Store	-3.6 %	$649,392
Metropolitan Equipment	-3.4 %	$542,660
Total	**-3.7 %**	**$1,777,569**

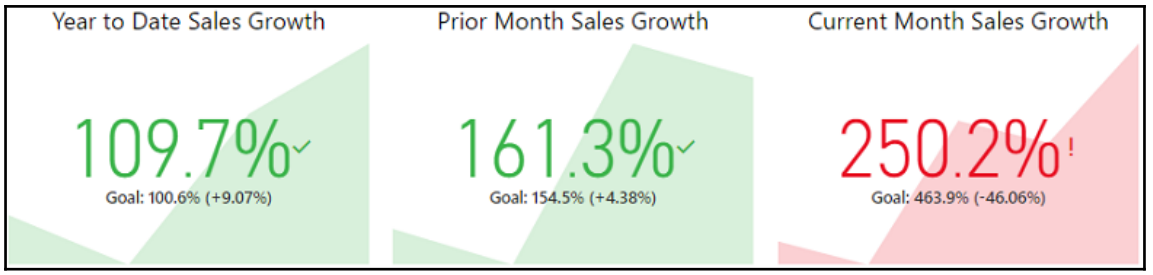


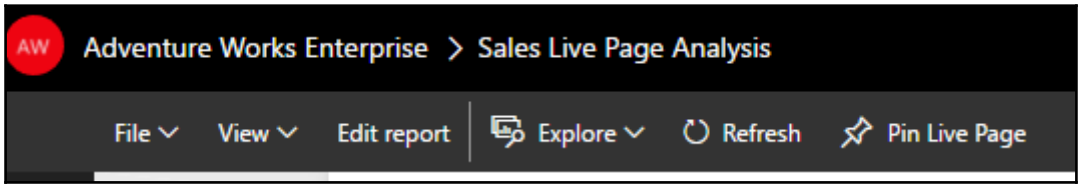


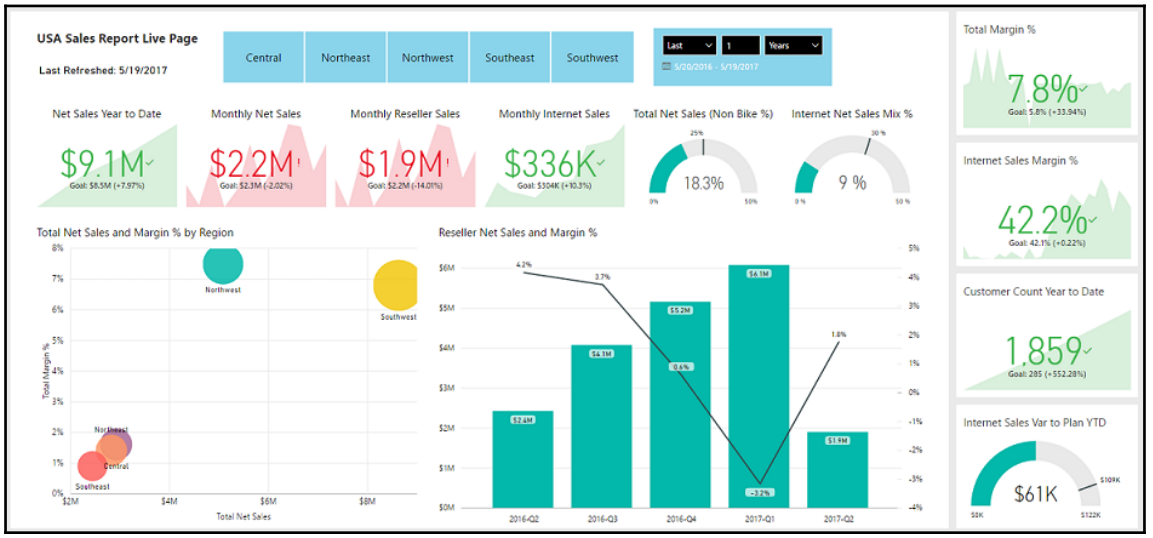
Last Year's Top 50 Products with Below -10% Growth

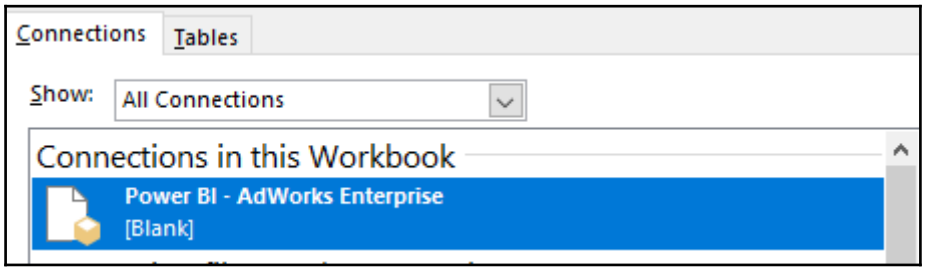
Product Name	Total Net Sales (YOY YTD %)	Total Net Sales (CY YTD)	Total Net Sales (PY YTD)
Road-250 Red, 58	-15.9 %	$298,089	$354,286
ML Road Frame-W - Yellow, 38	-12.5 %	$59,602	$68,135
ML Road Frame-W - Yellow, 48	-12.4 %	$59,959	$68,460
Total	**-14.9 %**	**$417,650**	**$490,880**

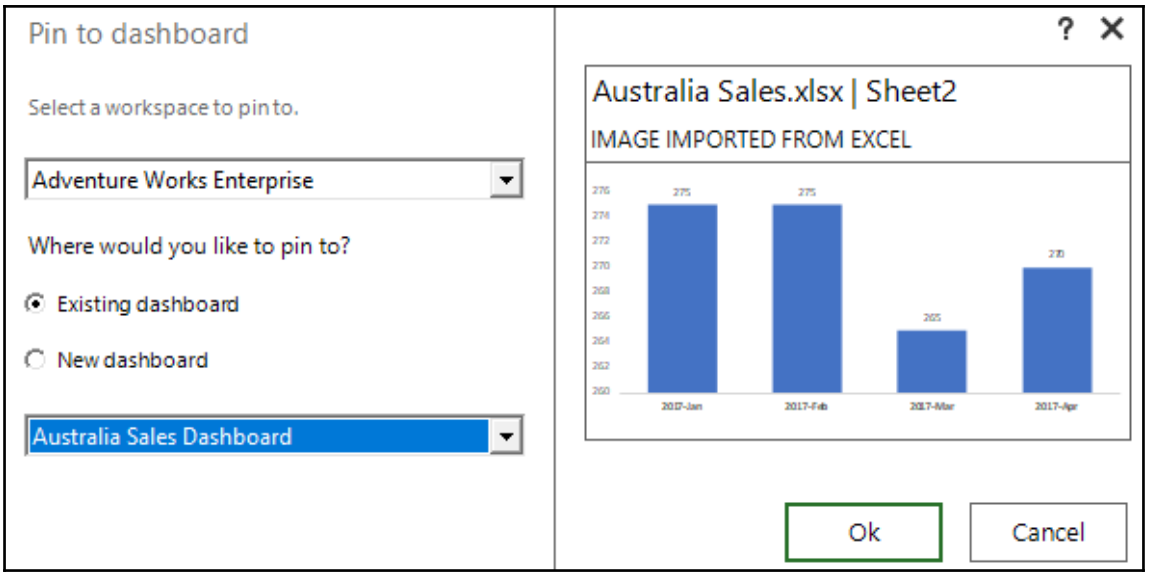


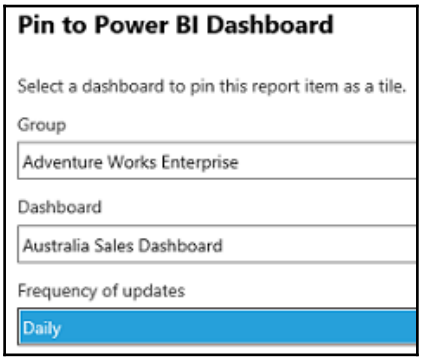

Year to Date Sales Growth
109.7%
Goal: 100.6% (+9.07%)
Prior Month Sales Growth
161.3%
Goal: 154.5% (+4.38%)
Current Month Sales Growth
250.2%
Goal: 463.9% (-46.06%)

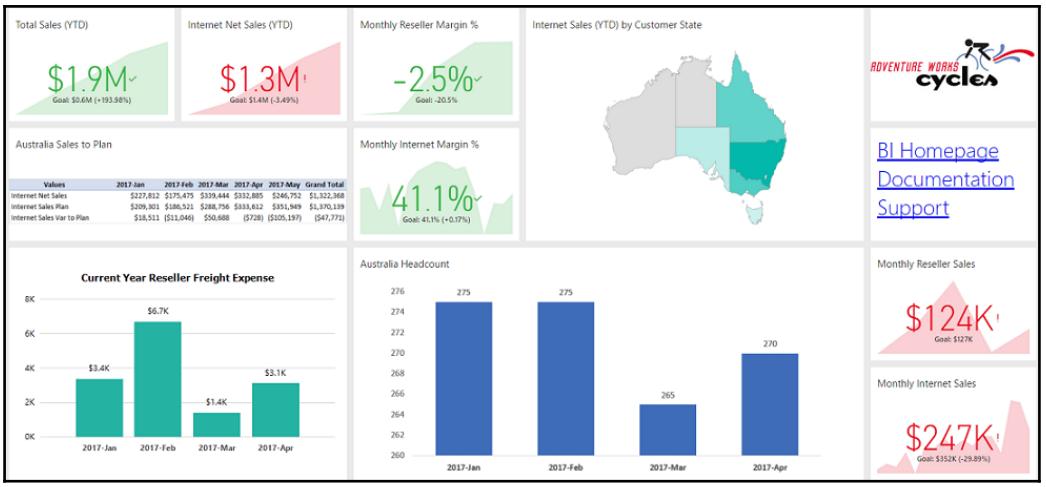

AW
Adventure Works Enterprise > Sales Live Page Analysis
File
View
Edit report
Explore
Refresh
Pin Live Page

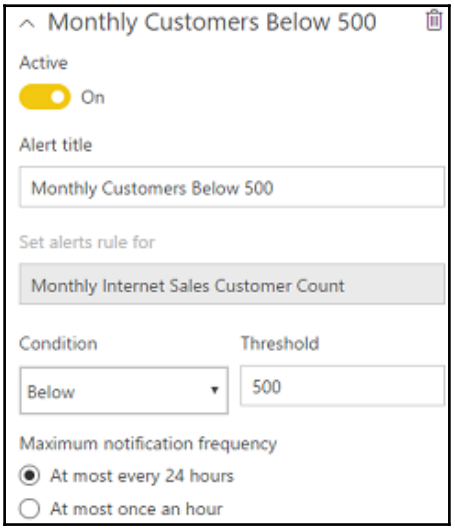

USA Sales Report Live Page
Last Refreshed: 5/19/2017
Central
Northeast
Northwest
Southeast
Southwest
Net Sales Year to Date
$9.1M
Monthly Net Sales
$2.2M
Monthly Reseller Sales
$1.9M
Monthly Internet Sales
$336K
Total Net Sales (Non Bike %)
18.3%
Internet Net Sales Mix %
9 %
Total Net Sales and Margin % by Region
Reseller Net Sales and Margin %
Total Margin %
7.8%
Internet Sales Margin %
42.2%
Customer Count Year to Date
1,859
Internet Sales Var to Plan YTD
$61K

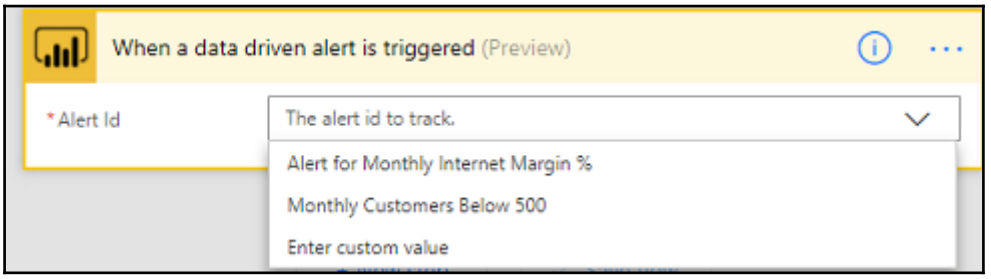

Connections
Tables
Show:
All Connections
Connections in this Workbook
Power BI - AdWorks Enterprise
[Blank]

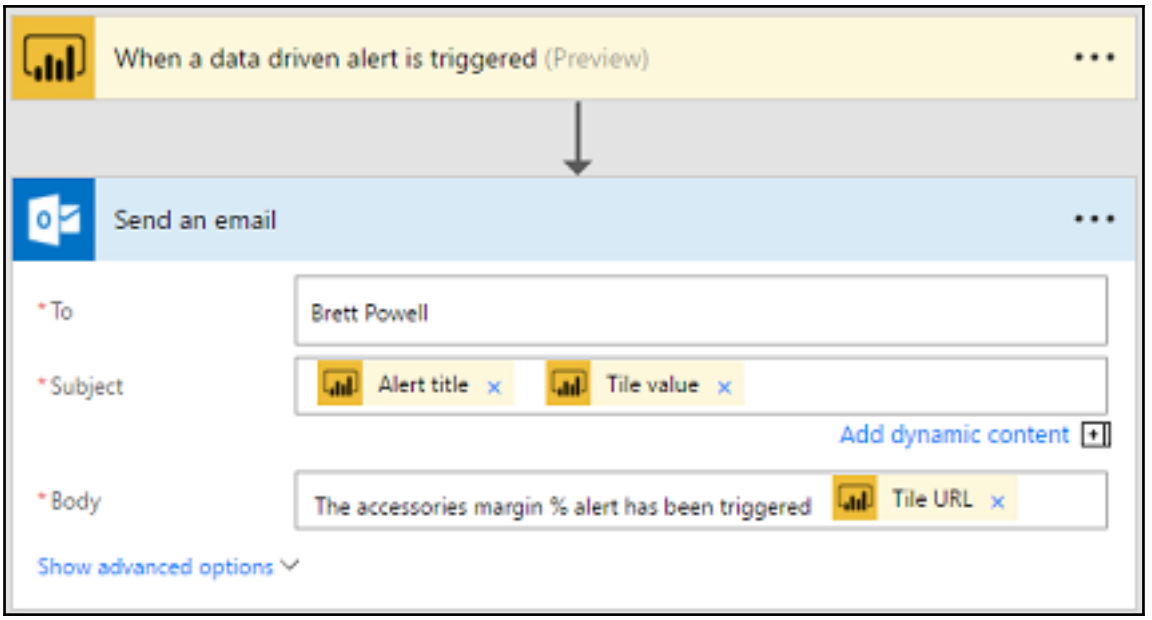

Pin to dashboard
Select a workspace to pin to.
Adventure Works Enterprise
Where would you like to pin to?
Existing dashboard
New dashboard
Australia Sales Dashboard
Australia Sales.xlsx | Sheet2
IMAGE IMPORTED FROM EXCEL
Ok
Cancel

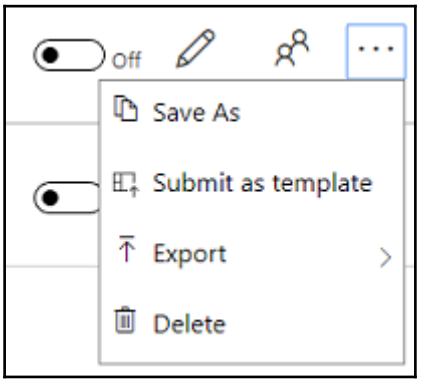

Pin to Power BI Dashboard
Select a dashboard to pin this report item as a tile.
Group
Adventure Works Enterprise
Dashboard
Australia Sales Dashboard
Frequency of updates
Daily


Total Sales (YTD)
$1.9M
Goal: $0.6M (+193.98%)
Internet Net Sales (YTD)
$1.3M
Goal: $1.4M (-3.49%)
Monthly Reseller Margin %
-2.5%
Goal: -20.5%
Internet Sales (YTD) by Customer State
Australia Sales to Plan
Values 2017-Jan 2017-Feb 2017-Mar 2017-Apr 2017-May Grand Total
Internet Net Sales $227,812 $175,475 $339,444 $332,885 $246,752 $1,322,368
Internet Sales Plan $209,301 $186,521 $288,756 $333,612 $351,949 $1,370,139
Internet Sales Var to Plan $18,511 ($11,046) $50,688 ($728) ($105,197) ($47,771)
Monthly Internet Margin %
41.1%
Goal: 41.1% (+0.17%)
ADVENTURE WORKS cycles
BI Homepage
Documentation
Support
Current Year Reseller Freight Expense
8K
6K
4K
2K
0K
$3.4K
$6.7K
$1.4K
$3.1K
2017-Jan
2017-Feb
2017-Mar
2017-Apr
Australia Headcount
276
274
272
270
268
266
264
262
260
275
275
265
270
2017-Jan
2017-Feb
2017-Mar
2017-Apr
Monthly Reseller Sales
$124K
Goal: $127K
Monthly Internet Sales
$247K
Goal: $352K (-29.89%)


Monthly Customers Below 500
Active
On
Alert title
Monthly Customers Below 500
Set alerts rule for
Monthly Internet Sales Customer Count
Condition
Threshold
Below
500
Maximum notification frequency
At most every 24 hours
At most once an hour


When a data driven alert is triggered (Preview)
*Alert Id
The alert id to track.
Alert for Monthly Internet Margin %
Monthly Customers Below 500
Enter custom value


When a data driven alert is triggered (Preview)
Send an email
*To
Brett Powell
*Subject
Alert title
Tile value
Add dynamic content
*Body
The accessories margin % alert has been triggered
Tile URL
Show advanced options


Off
Save As
Submit as template
Export
Delete


Monthly Customers Below 500 32 seconds ago
Monthly Customers Below 500 on Sales Alert Dashboard is 478, which is below the threshold of 500.
Go to tile

Chapter 6: Getting Serious with Date Intelligence

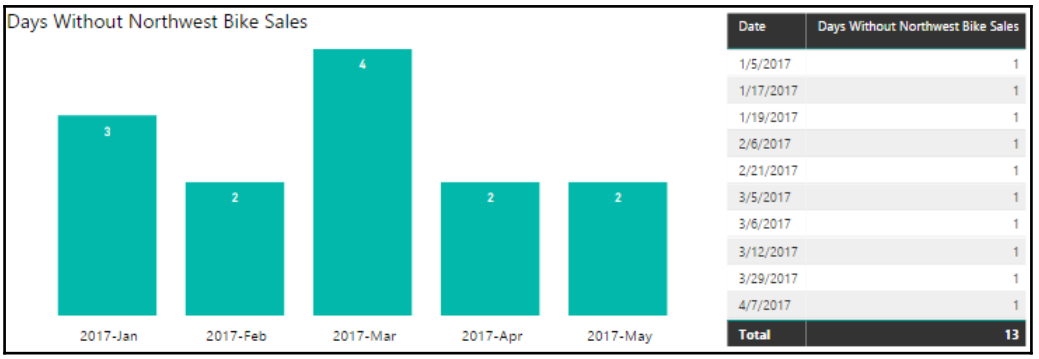
Calendar Year	Calendar Month Number	Calendar Yr Mo Index
2016	11	95
2016	12	96
2017	1	97
2017	2	98

Date	Calendar Yr-Mo	Calendar Year Month Number
2017-12-30	2017-Dec	108
2017-12-31	2017-Dec	108
2018-01-01	2018-Jan	109
2018-01-02	2018-Jan	109

Calendar Yr-Mo	Calendar Year Month Number	Internet Net Sales	Internet Net Sales (Trailing 3 Periods)
2017-May	101	$1,169,589	$3,265,519
2017-Apr	100	$1,046,023	$2,867,279
2017-Mar	99	$1,049,907	$2,678,946

Date	Year	Month Name	Year-Mo	Month Number	Weekday	Weekday Number	Year Status	Month Status
5/30/2017	2017	May	2017-May	5	Tuesday	2	Current Year	Current Month
5/29/2017	2017	May	2017-May	5	Monday	1	Current Year	Current Month
5/28/2017	2017	May	2017-May	5	Sunday	0	Current Year	Current Month

Date Intelligence Measures	YTD	MTD	WTD	PY	PM	PYTD	PMTD	YOY	YOY %	YOY YTD	YOY YTD %	Rolling 12
Internet Sales	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Internet Orders	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Reseller Sales	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓



Date	Days Without Northwest Bike Sales
1/5/2017	1
1/17/2017	1
1/19/2017	1
2/6/2017	1
2/21/2017	1
3/5/2017	1
3/6/2017	1
3/12/2017	1
3/29/2017	1
4/7/2017	1
Total	**13**

$2,135,055
Sales (PYTD-Custom)

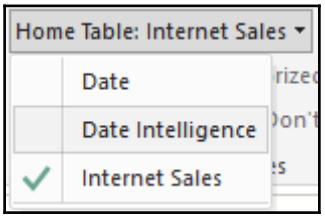
Calendar Yr-Mo	Sales (PYTD-Custom)	Internet Sales
2017-Jun		$114,259
2017-May	$2,135,055	$1,284,593
2017-Apr	$1,776,177	$1,046,023
Total	**$2,135,055**	**$18,085,253**

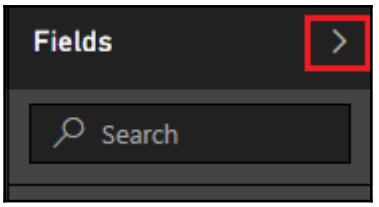
Calendar Year	Sales (PYTD-Custom)	Internet Sales
2017	$2,135,055	$5,123,821
2016	$7,075,526	$5,842,485
2015	$43,421	$7,075,526
Total	**$2,135,055**	**$18,085,253**

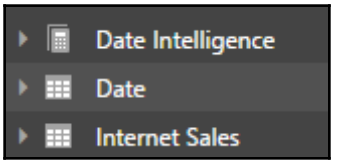
```
Shipment Dates = SELECTCOLUMNS('Date', "Shipment Da
```

Shipment Date	Shipment Year	Shipment Month	Last Refreshed
2/1/2016	*2016*	Feb	*5/30/2017 3:21:00 PM*
2/2/2016	*2016*	Feb	*5/30/2017 3:21:00 PM*
2/3/2016	*2016*	Feb	*5/30/2017 3:21:00 PM*

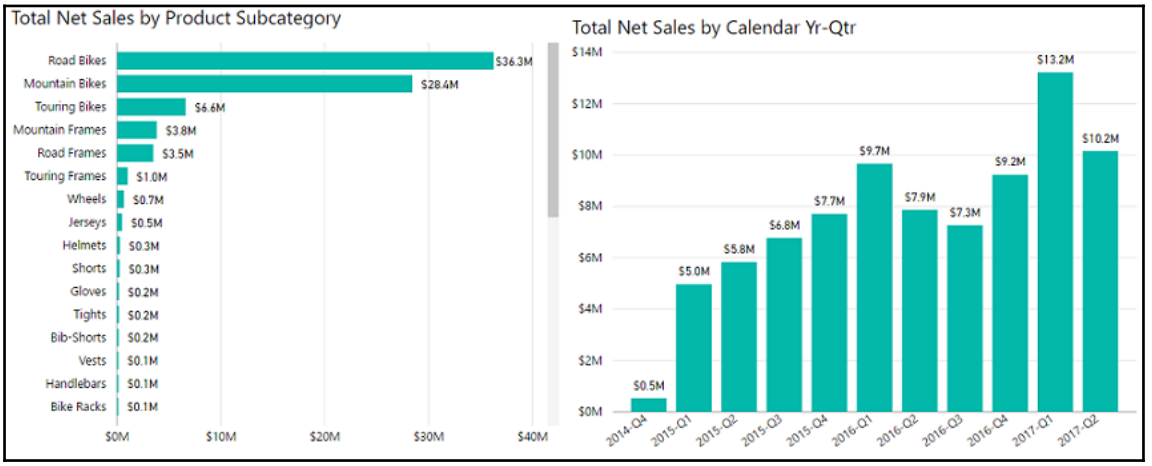
Last Refreshed	Today	30 Days Prior	90 Days Prior	Current Fiscal Year	Prior Fiscal Year	Current Fiscal Year-Period
5/30/2017 5:14:46 P	*5/30/2017*	*4/30/2017*	*3/1/2017*	*2017*	*2016*	2017-P5

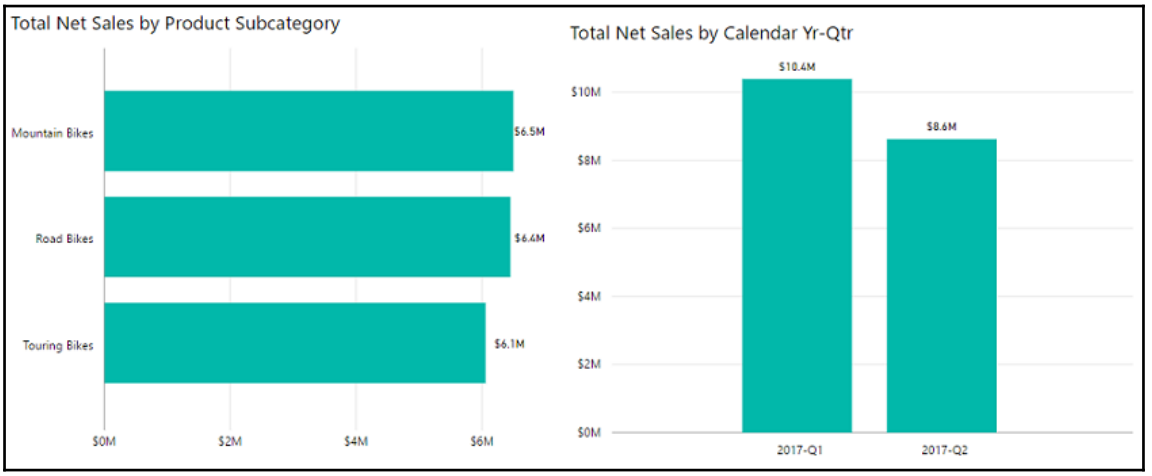



Fields
Search

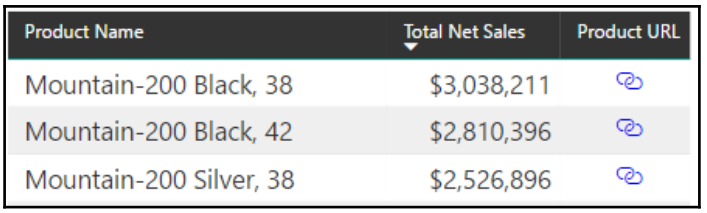

Date Intelligence
Date
Internet Sales

Chapter 7: Parameterizing Power BI Solutions

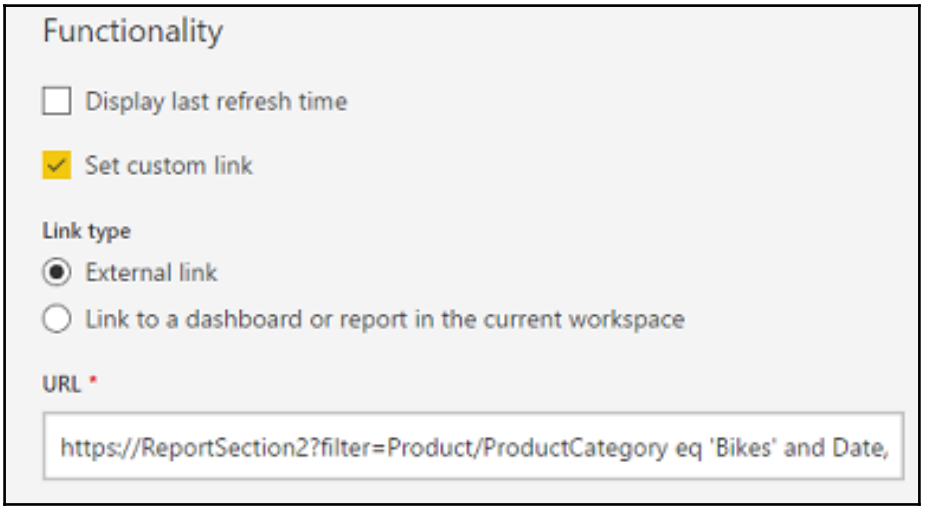


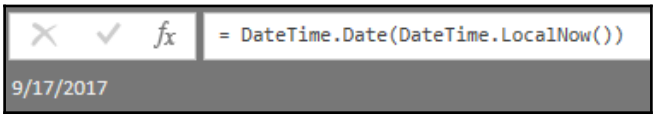


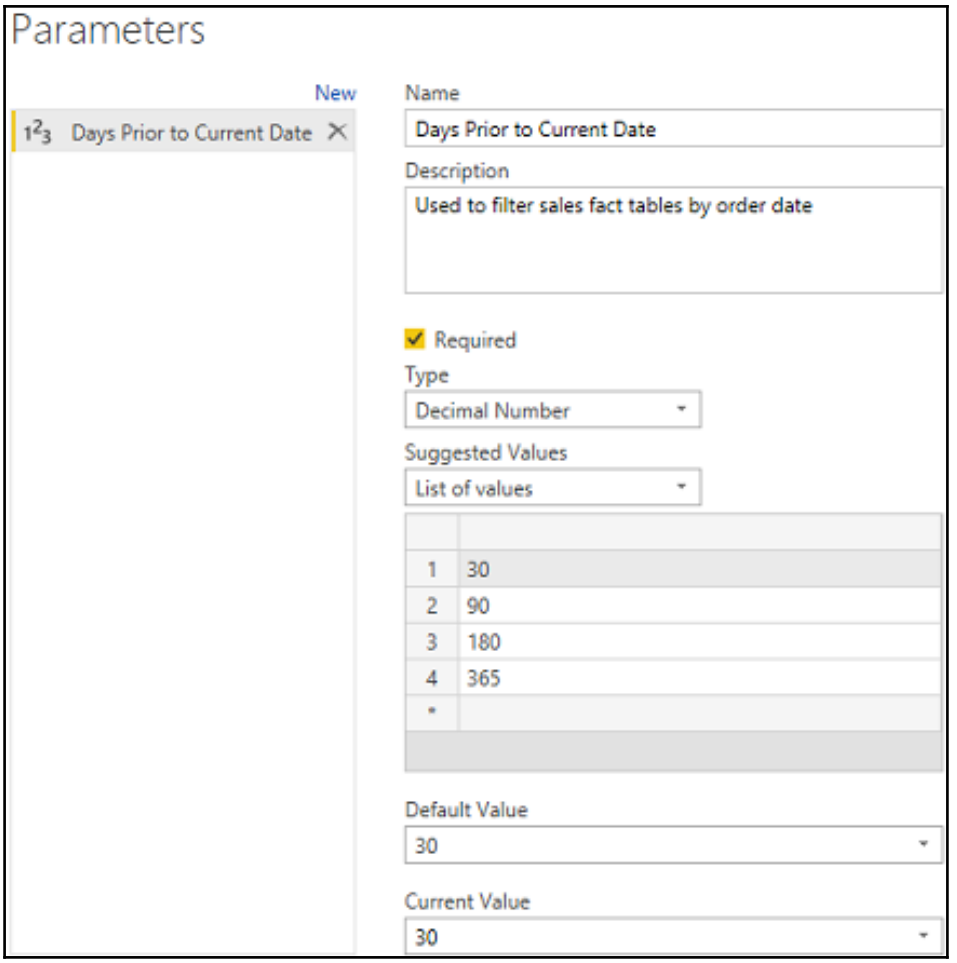

```
/ReportSection?filter=Product/ProductName eq 'BB Ball Bearing'
```

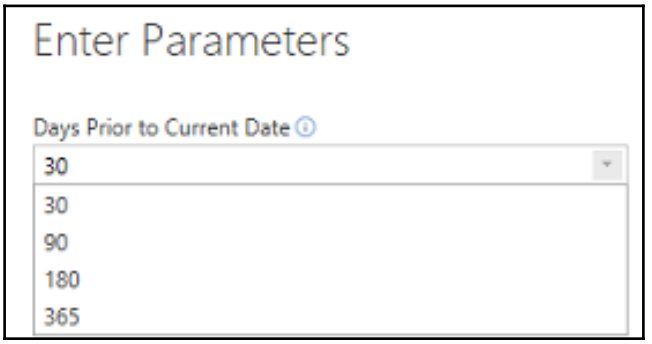


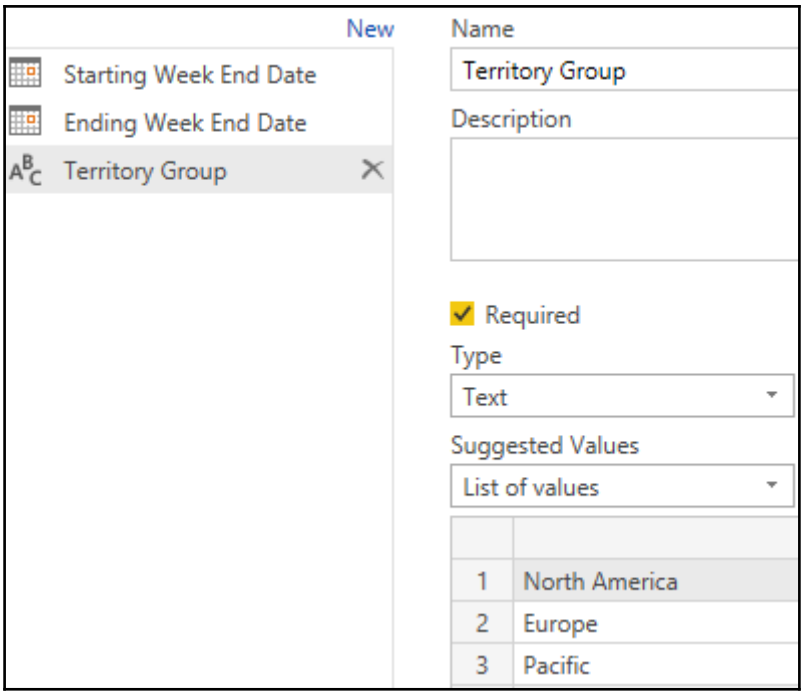
Product Name	Total Net Sales	Product URL
Mountain-200 Black, 38	$3,038,211	
Mountain-200 Black, 42	$2,810,396	
Mountain-200 Silver, 38	$2,526,896	

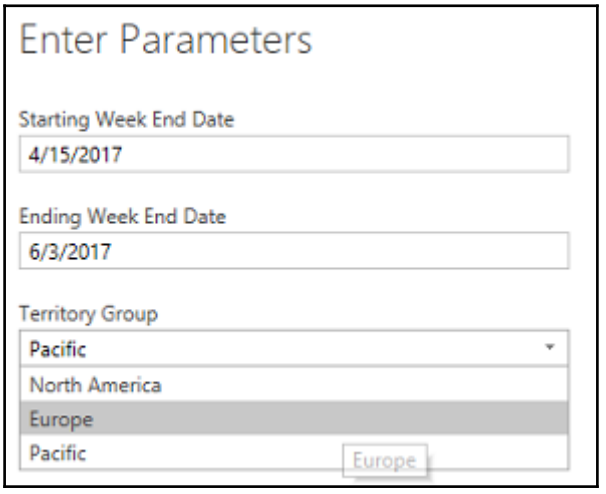





Parameters
New
Days Prior to Current Date
Name
Days Prior to Current Date
Description
Used to filter sales fact tables by order date
Required
Type
Decimal Number
Suggested Values
List of values
1 30
2 90
3 180
4 365
Default Value
30
Current Value
30

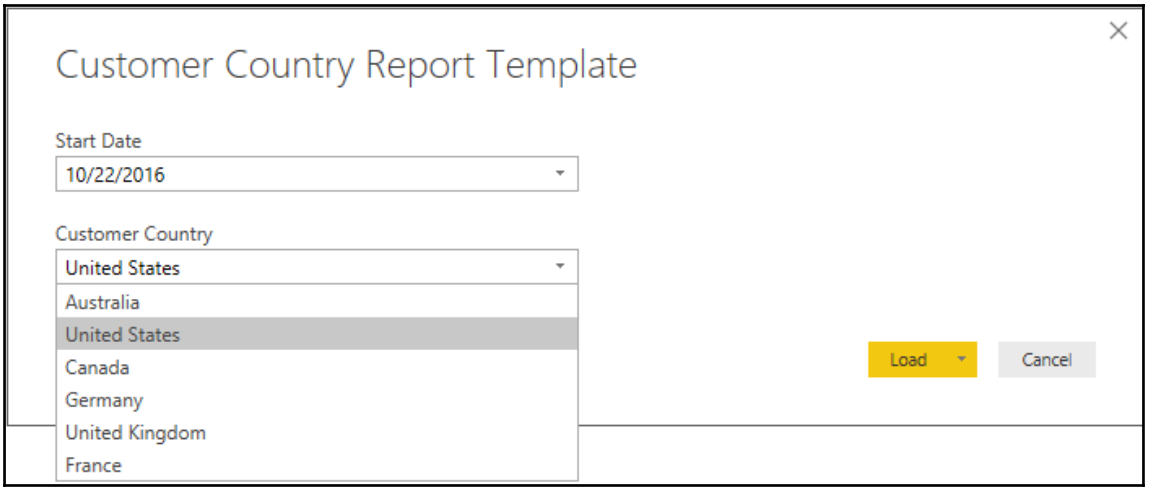

Enter Parameters
Days Prior to Current Date
30
30
90
180
365


New
Starting Week End Date
Ending Week End Date
Territory Group
Name
Territory Group
Description
Required
Type
Text
Suggested Values
List of values
1
North America
2
Europe
3
Pacific


Enter Parameters
Starting Week End Date
4/15/2017
Ending Week End Date
6/3/2017
Territory Group
Pacific
North America
Europe
Pacific
Europe

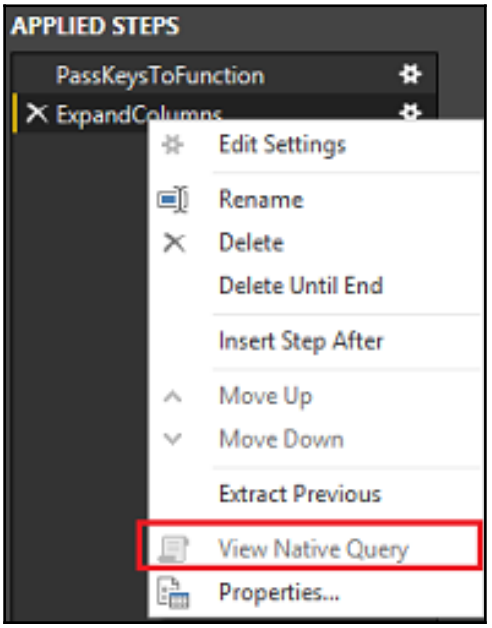
```
    from [BI].[vFact_InternetSales] as [_]
    where [_].[Order Date] >= convert(datetime2, '2017-05-06 00:00:00') and [_].[Order Date] <= convert(datetime2, '2017-06-03 0
) as [$Outer]
inner join
(
    select distinct [_].[SalesTerritoryKey]
    from [BI].[vDim_SalesTerritory] as [_]
    where [_].[Sales Territory Group] = 'Europe' and [_].[Sales Territory Group] is not null
) as [$Inner] on ([$Outer].[SalesTerritoryKey] = [$Inner].[SalesTerritoryKey])
```

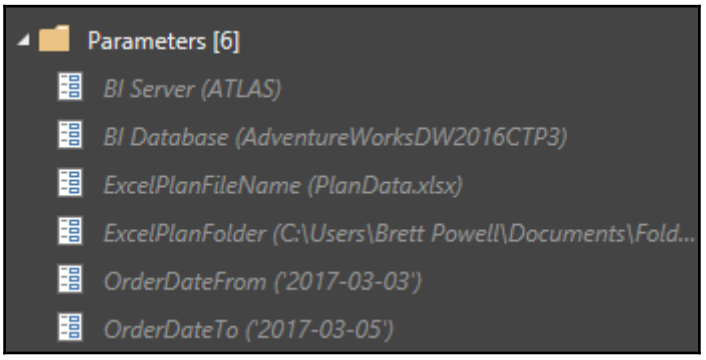
```
    from [BI].[vFact_InternetSales] as [_]
    where [_].[Order Date] >= convert(datetime2, '2017-04-29 00:00:00') and [_].[Order Date] <= convert(datetime
) as [$Outer]
inner join
(
    select [_].[Customer Key] as [CustomerKey]
    from [BI].[vDim_Customer] as [_]
    where [_].[Customer Country] = 'United States' and [_].[Customer Country] is not null
) as [$Inner] on ([$Outer].[CustomerKey] = [$Inner].[CustomerKey])
```

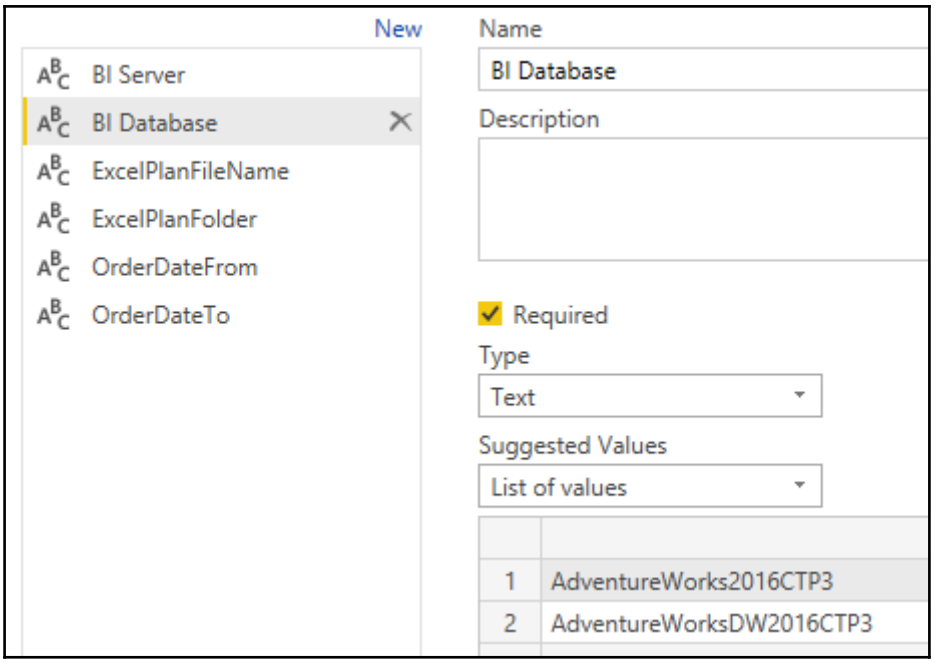


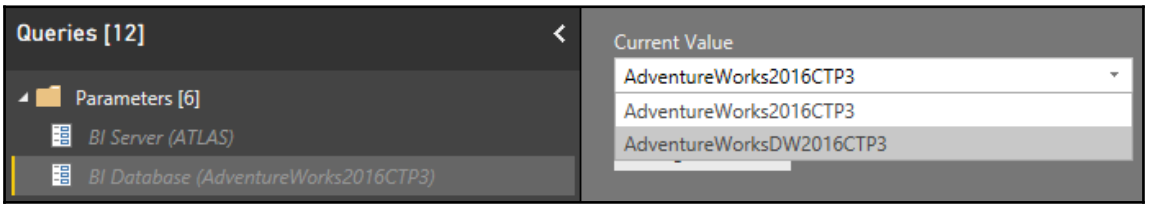
Employee Alternate Key	FunctionTbl
14417807	Table
253022876	Table
509647174	Table

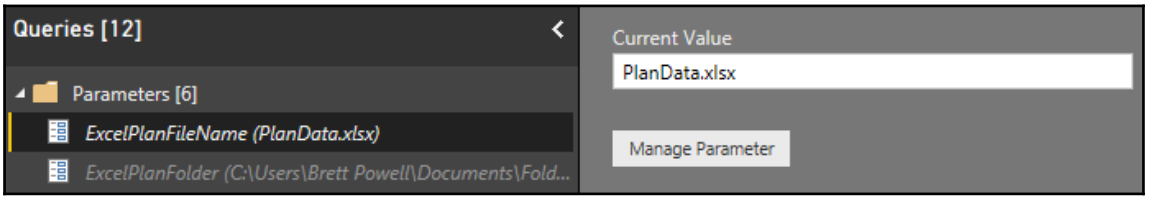
Employee Alternate Key	Employee Name	Employee Department	Employee Email Address
10708100	Frank Miller	Production	frank1@adventure-works.com
367453993	Frank Pellow	Purchasing	frank2@adventure-works.com
947029962	Frank Martinez	Production	frank3@adventure-works.com
295971920	Fred Northup	Production	fred0@adventure-works.com



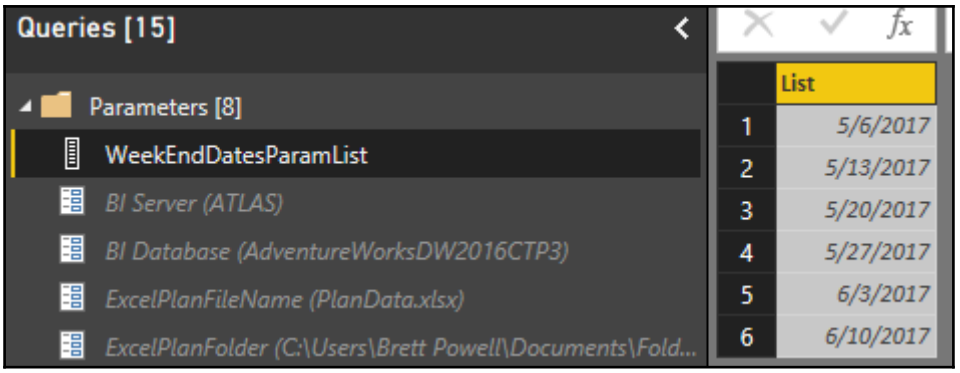


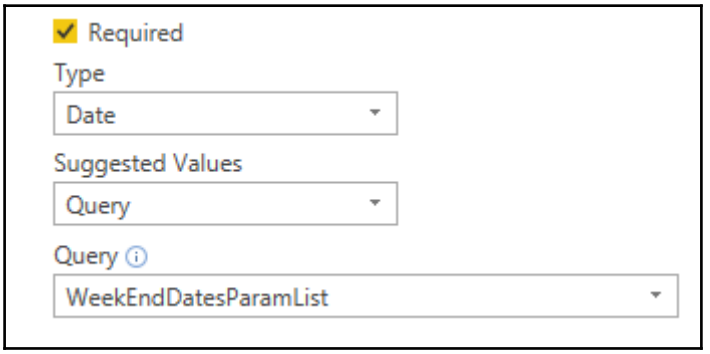

New
BI Server
BI Database
ExcelPlanFileName
ExcelPlanFolder
OrderDateFrom
OrderDateTo
Name
BI Database
Description
Required
Type
Text
Suggested Values
List of values
1
AdventureWorks2016CTP3
2
AdventureWorksDW2016CTP3

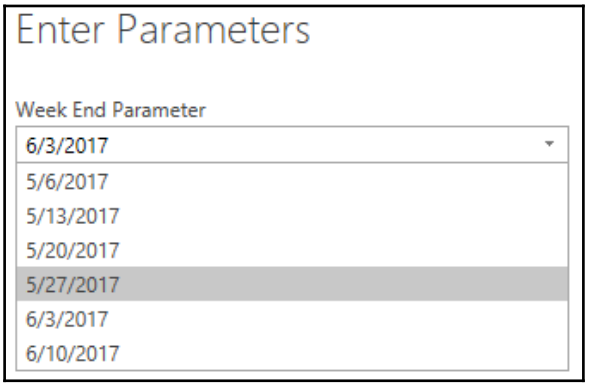

Queries [12]
Parameters [6]
BI Server (ATLAS)
BI Database (AdventureWorks2016CTP3)
Current Value
AdventureWorks2016CTP3
AdventureWorks2016CTP3
AdventureWorksDW2016CTP3

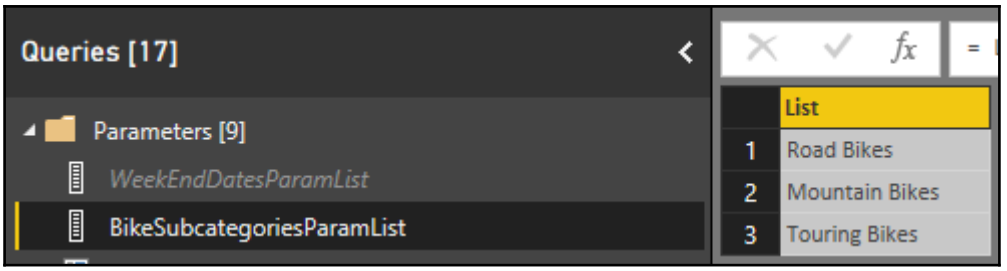

Queries [12]
Parameters [6]
ExcelPlanFileName (PlanData.xlsx)
ExcelPlanFolder (C:\Users\Brett Powell\Documents\Fold...
Current Value
PlanData.xlsx
Manage Parameter

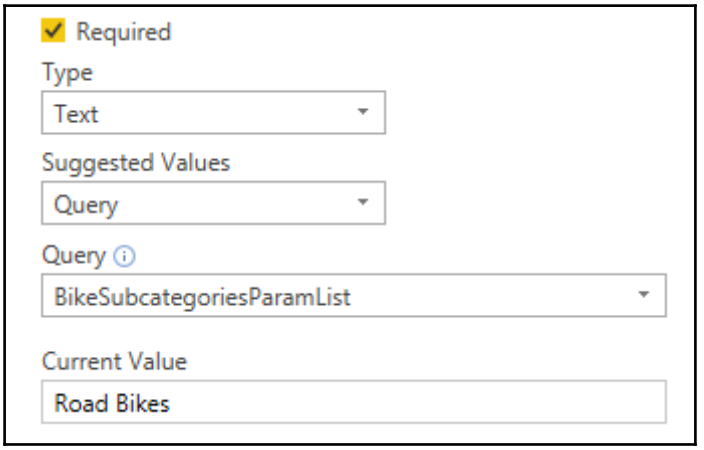

Permission is required to run this native database query.
Edit Permission

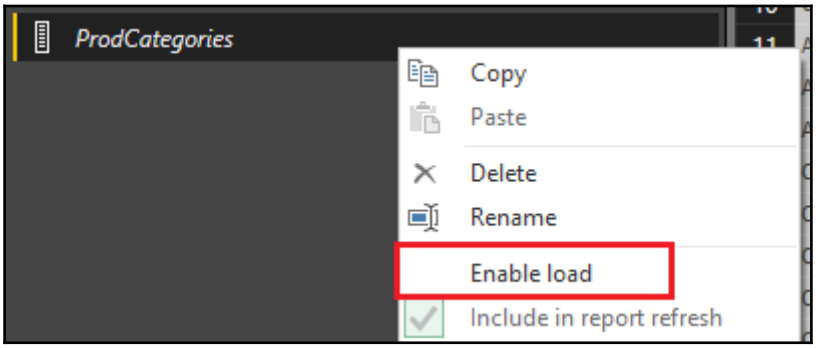

Queries [15]
Parameters [8]
WeekEndDatesParamList
BI Server (ATLAS)
BI Database (AdventureWorksDW2016CTP3)
ExcelPlanFileName (PlanData.xlsx)
ExcelPlanFolder (C:\Users\Brett Powell\Documents\Fold...
List
1 5/6/2017
2 5/13/2017
3 5/20/2017
4 5/27/2017
5 6/3/2017
6 6/10/2017


Required
Type
Date
Suggested Values
Query
Query
WeekEndDatesParamList


Enter Parameters
Week End Parameter
6/3/2017
5/6/2017
5/13/2017
5/20/2017
5/27/2017
6/3/2017
6/10/2017


Queries [17]
Parameters [9]
WeekEndDatesParamList
BikeSubcategoriesParamList
List
1 Road Bikes
2 Mountain Bikes
3 Touring Bikes


Required
Type
Text
Suggested Values
Query
Query
BikeSubcategoriesParamList
Current Value
Road Bikes

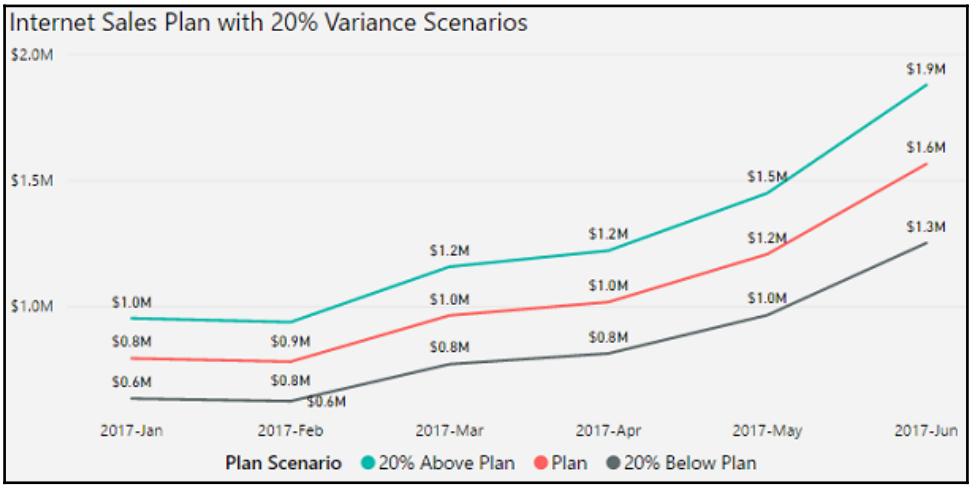

ProdCategories
Copy
Paste
Delete
Rename
Enable load
Include in report refresh

Plan Scenario	Var to Plan	Scenario Sort
Plan	1	3
10% Above Plan	1.1	2
20% Above Plan	1.2	1
10% Below Plan	0.9	4
20% Below Plan	0.8	5

Plan Scenario

- [ ] 20% Above Plan
- [ ] 10% Above Plan
- [ ] Plan
- [ ] 10% Below Plan
- [ ] 20% Below Plan

Plan Scenario	Accessories	Bikes	Clothing	Total
20% Above Plan	$346,396	$7,096,765	$162,065	**$7,605,226**
10% Above Plan	$317,529	$6,505,368	$148,559	**$6,971,457**
Plan	$288,663	$5,913,971	$135,054	**$6,337,688**
10% Below Plan	$259,797	$5,322,574	$121,549	**$5,703,919**
20% Below Plan	$230,930	$4,731,177	$108,043	**$5,070,150**
Total	**$288,663**	**$5,913,971**	**$135,054**	**$6,337,688**



Forecast Name	Base Forecast
Forecast Year	2018

Total Sales Growth: Base Forecast												
YOY Growth %	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Internet Sales	4.0%	8.0%	5.0%	7.0%	6.0%	8.0%	9.0%	6.5%	9.0%	10.0%	11.0%	12.0%

Sales Group Allocation												
Group	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
North America	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%
Europe	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Pacific	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

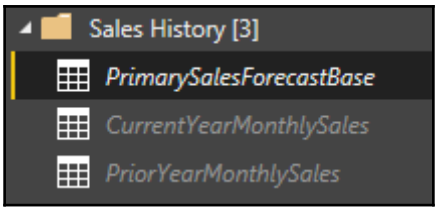
Name Manager

New... Edit... Delete

Name	Value	Refers To	Scope
PrimaryEuropeCountryAll...	{"Country","Jan","Feb","M...	=PrimaryForecast!$E$22:...	Workbo...
PrimaryFcstMeta	{"Forecast Name","Base F...	=PrimaryForecast!$B$2:...	Workbo...
PrimaryGroupAlloc	{"Group","Jan","Feb","Mar...	=PrimaryForecast!$E$9:$...	Workbo...
PrimaryNACountryAlloc	{"Country","Jan","Feb","M...	=PrimaryForecast!$E$16:...	Workbo...
PrimaryNARegionalAlloc	{"Region","Jan","Feb","Ma...	=PrimaryForecast!$E$29:...	Workbo...
PrimaryTotalGrowth	{"YOY Growth %","Jan","Fe...	=PrimaryForecast!$E$5:$...	Workbo...
SecondaryEuropeCountr...	{"Country","Jan","Feb","M...	=SecondaryForecast!$E...	Workbo...
SecondaryFcstMeta	{"Forecast Name","High G...	=SecondaryForecast!$B...	Seconda...
SecondaryGroupAlloc	{"Group","Jan","Feb","Mar...	=SecondaryForecast!$E...	Workbo...

Sales Regional Allocation: North America								
Region	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Central	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Northeast	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Northwest	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Southeast	10.0%	10.0%	10.0%	9.0%	10.0%	10.0%	10.0%	10.0%
Southwest	60.0%	60.0%	60.0%	60.0%	60.0%	61.0%	60.0%	60.0%
Total	100%	100%	100%	99%	100%	101%	100%	100%

YOY Growth %	Month	Sales Growth
Internet Sales	Jan	0.04
Internet Sales	Feb	0.08
Internet Sales	Mar	0.05

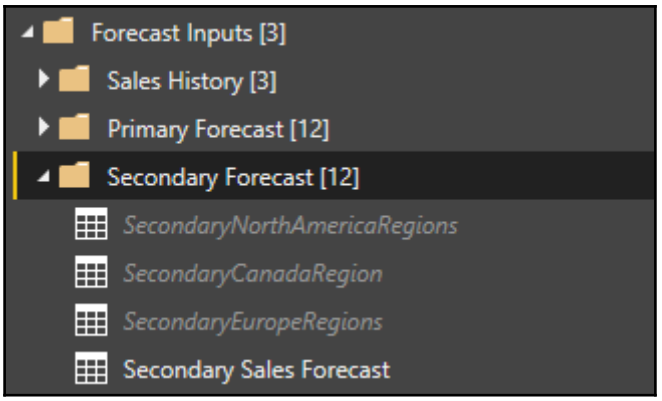


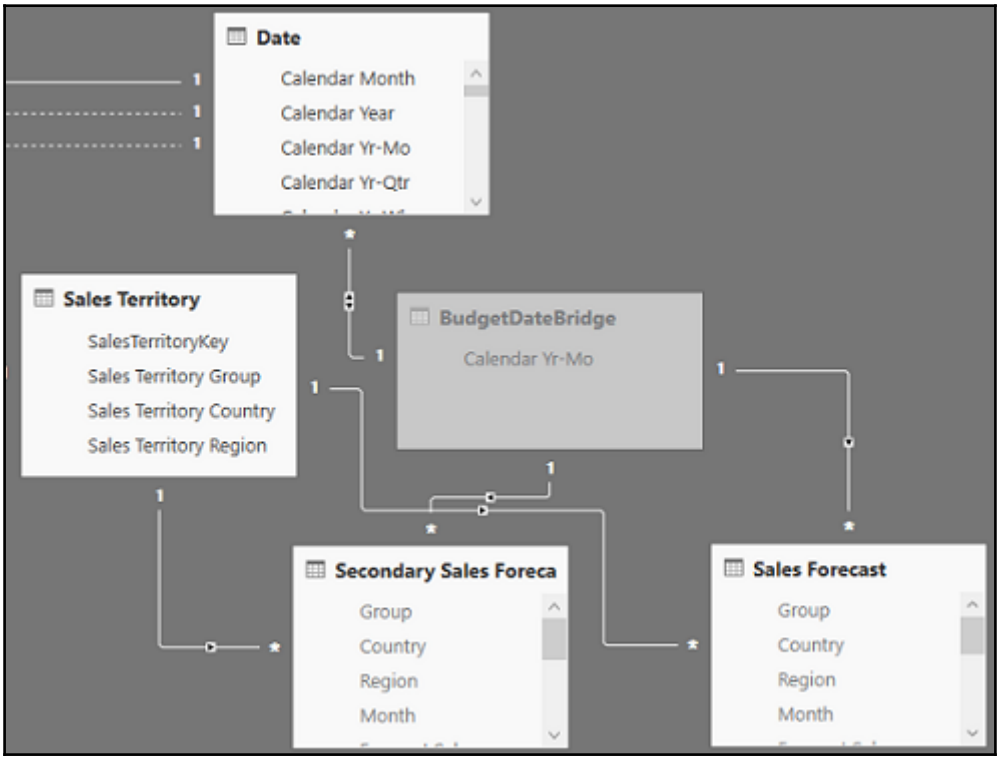
	1.2 Calendar Year	Calendar Month	$ Sales
1	2017	Jan	525548.26
2	2017	Feb	487343.13
3	2017	Mar	586224.36
4	2017	Apr	674934.29
5	2017	May	781513.42
6	2017	Jun	1035178.26
7	2017	Jul	864418.79
8	2017	Aug	903646.61
9	2016	Sep	1080029.61
10	2016	Oct	1117536.485
11	2016	Nov	1284440.397
12	2016	Dec	1405412.757

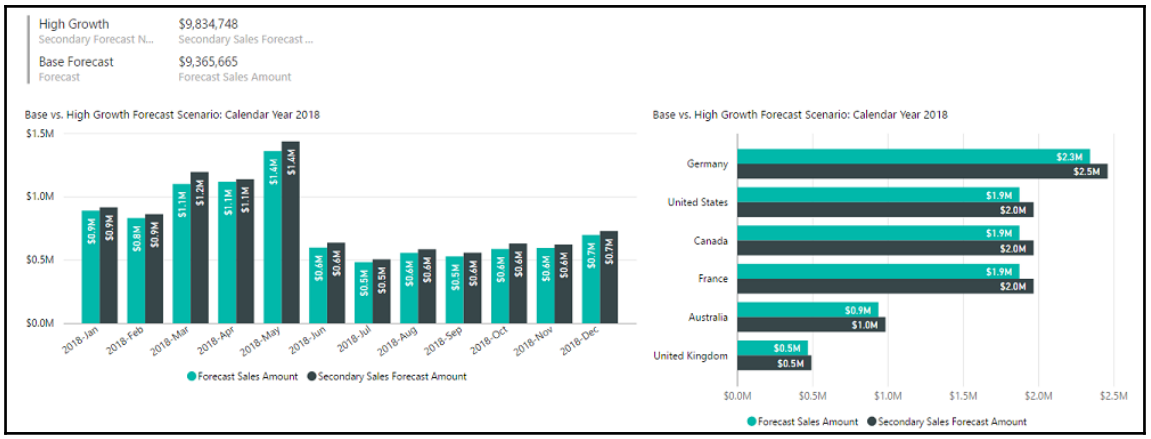
	1.2 Calendar Year	Calendar Month	$ Sales	1.2 Sales Growth	$ Forecast Sales
1	2017	Jan	857689.91	0.04	891997.5064
2	2017	Feb	771348.74	0.08	833056.6392
3	2017	Mar	1049907.39	0.05	1102402.759
4	2017	Apr	1046022.77	0.07	1119244.364

Group	Country	Region	Month	$ Forecast Sales
Europe	France	France	Jan	178399.5013
Europe	Germany	Germany	Jan	222999.3766
Europe	United Kingdom	United Kingdom	Jan	44599.87532

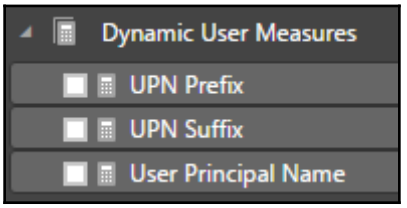
Group	Country	Region	Month	Forecast Sales	ForecastYear	Forecast Name	Calendar Year-Mo
Europe	France	France	Jan	178399.5013	2018	Base Forecast	2018-Jan
Europe	Germany	Germany	Jan	222999.3766	2018	Base Forecast	2018-Jan
Europe	United Kingdom	United Kingdom	Jan	44599.87532	2018	Base Forecast	2018-Jan


Forecast Inputs [3]
Sales History [3]
Primary Forecast [12]
Secondary Forecast [12]
SecondaryNorthAmericaRegions
SecondaryCanadaRegion
SecondaryEuropeRegions
Secondary Sales Forecast


Date
Calendar Month
Calendar Year
Calendar Yr-Mo
Calendar Yr-Qtr
Sales Territory
SalesTerritoryKey
Sales Territory Group
Sales Territory Country
Sales Territory Region
BudgetDateBridge
Calendar Yr-Mo
Secondary Sales Foreca
Group
Country
Region
Month
Sales Forecast
Group
Country
Region
Month


High Growth
Secondary Forecast N...
$9,834,748
Secondary Sales Forecast ...
Base Forecast
Forecast
$9,365,665
Forecast Sales Amount
Base vs. High Growth Forecast Scenario: Calendar Year 2018
$1.5M
$1.0M
$0.5M
$0.0M
$0.9M
$0.9M
$0.8M
$0.9M
$1.1M
$1.2M
$1.1M
$1.1M
$1.4M
$1.4M
$0.6M
$0.6M
$0.5M
$0.5M
$0.6M
$0.6M
$0.5M
$0.6M
$0.6M
$0.6M
$0.6M
$0.6M
$0.7M
$0.7M
2018-Jan
2018-Feb
2018-Mar
2018-Apr
2018-May
2018-Jun
2018-Jul
2018-Aug
2018-Sep
2018-Oct
2018-Nov
2018-Dec
Forecast Sales Amount
Secondary Sales Forecast Amount
Base vs. High Growth Forecast Scenario: Calendar Year 2018
Germany
$2.3M
$2.5M
United States
$1.9M
$2.0M
Canada
$1.9M
$2.0M
France
$1.9M
$2.0M
Australia
$0.9M
$1.0M
United Kingdom
$0.5M
$0.5M
$0.0M
$0.5M
$1.0M
$1.5M
$2.0M
$2.5M
Forecast Sales Amount
Secondary Sales Forecast Amount

Chapter 8: Implementing Dynamic User-Based Visibility in Power BI

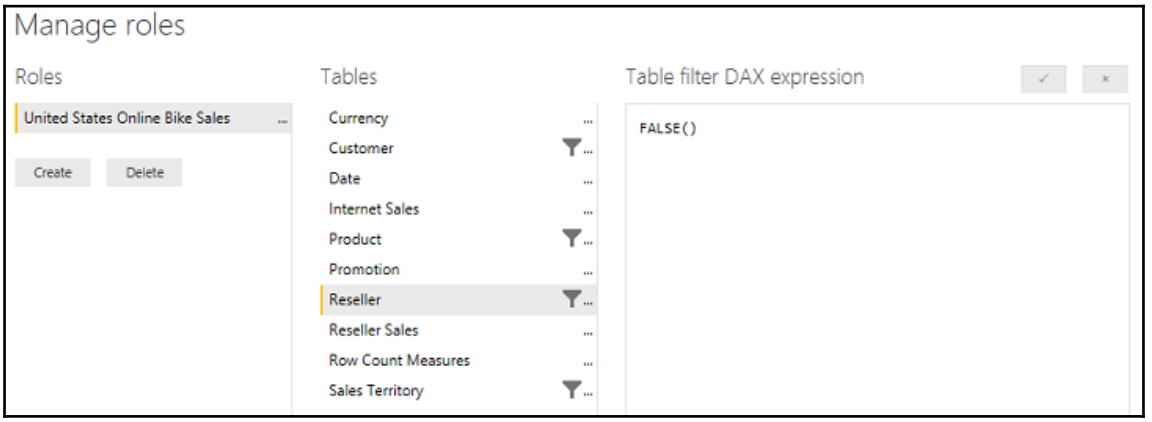


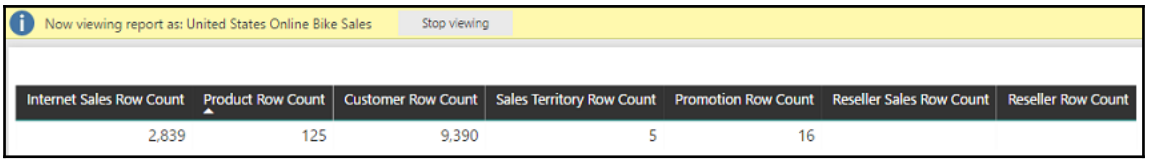
User Principal Name	UPN Prefix	UPN Suffix
BrettP@FrontlineAnalytics.onmicrosoft.com	BrettP	FrontlineAnalytics.onmicrosoft.com

User Principal Name	UPN Prefix	UPN Suffix
JenLawrence@FrontlineAnalytics.onmicrosoft.com	JenLawrence	FrontlineAnalytics.onmicrosoft.com

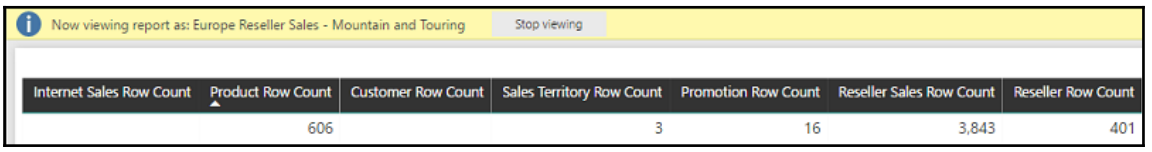
User Name	User Name Domain	User Name Login
ATLAS\Brett Powell	ATLAS	Brett Powell

Internet Sales Row Count	Product Row Count	Customer Row Count	Sales Territory Row Count	Promotion Row Count	Reseller Sales Row Count	Reseller Row Count
26,608	606	18,484	11	16	47,572	701

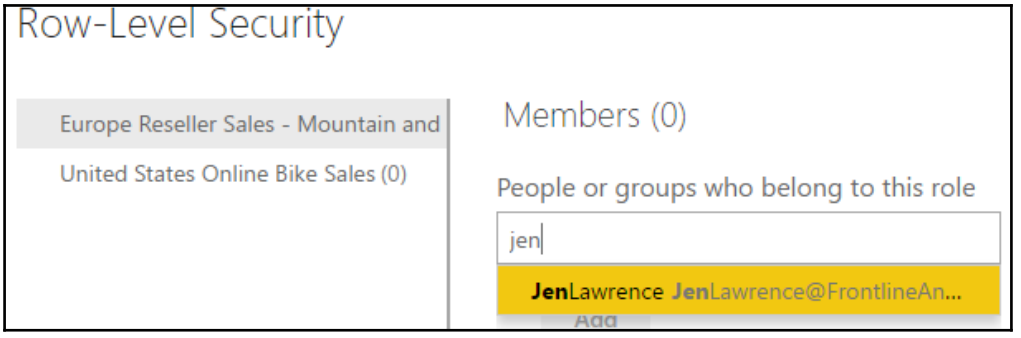




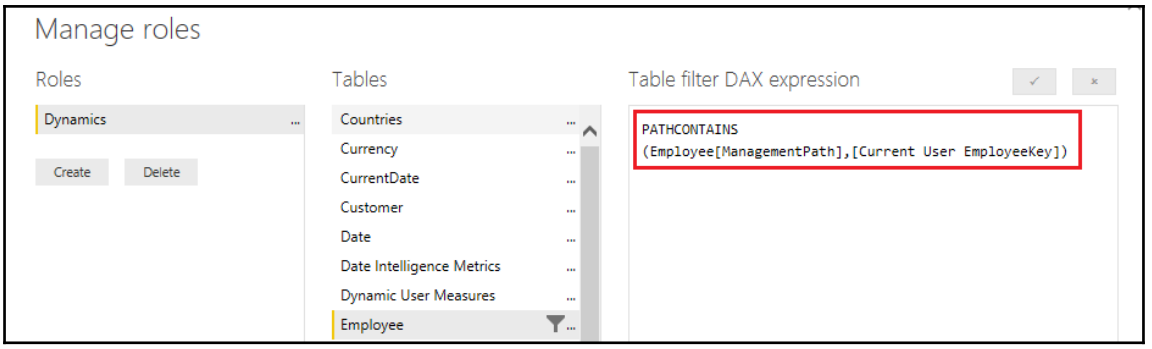
Internet Sales Row Count	Product Row Count	Customer Row Count	Sales Territory Row Count	Promotion Row Count	Reseller Sales Row Count	Reseller Row Count
2,839	125	9,390	5	16		

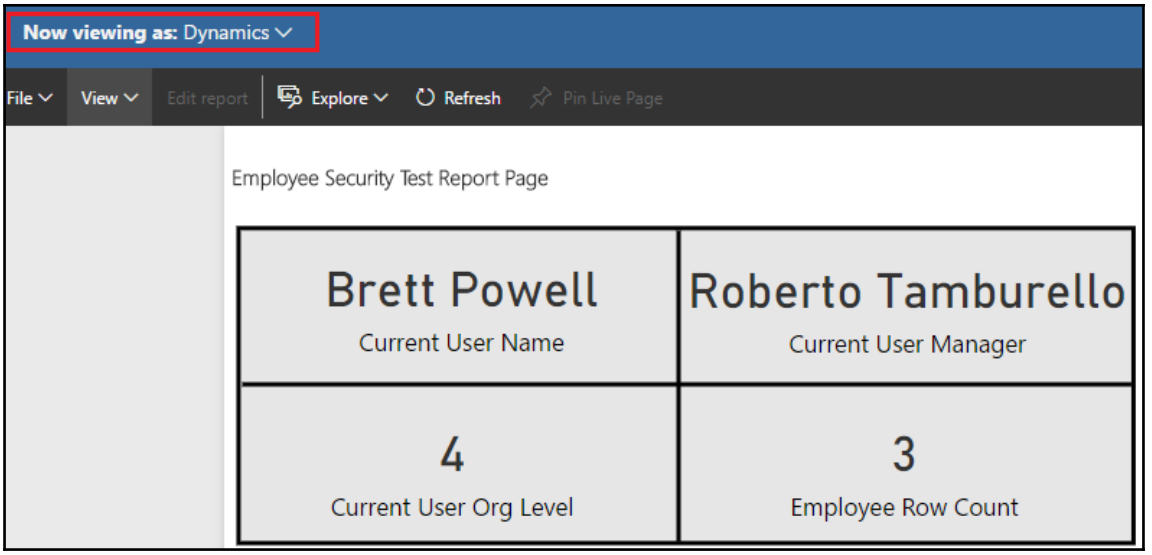


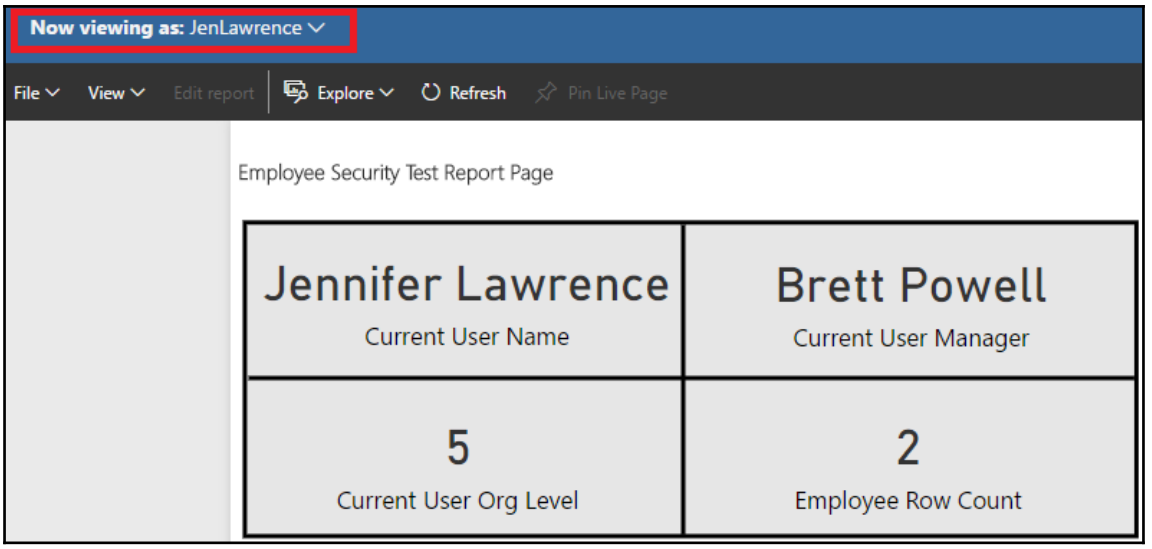
Internet Sales Row Count	Product Row Count	Customer Row Count	Sales Territory Row Count	Promotion Row Count	Reseller Sales Row Count	Reseller Row Count
	606		3	16	3,843	401



Employee Name	Manager Name	EmployeeKey	ParentEmployeeKey	Employee Email Address	ManagementPath	ManagementPathLength
Roberto Tamburello	Terri Duffy	3	14	roberto0@adventure-works.com	112|14|3	3
Brett Powell	Roberto Tamburello	999999999	3	BrettP@FrontlineAnalytics.onmicrosoft.com	112|14|3|999999999	4
Jennifer Lawrence	Brett Powell	888888888	999999999	JenLawrence@FrontlineAnalytics.onmicrosoft.com	112|14|3|999999999|888888888	5
John Jacobs	Jennifer Lawrence	777777777	888888888	JohnJ@FrontlineAnalytics.onmicrosoft.com	112|14|3|999999999|888888888|777777777	6

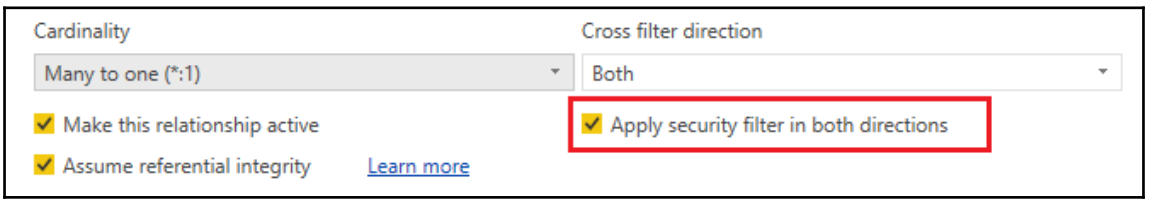

Manage roles
Roles
Dynamics
Create
Delete
Tables
Countries
Currency
CurrentDate
Customer
Date
Date Intelligence Metrics
Dynamic User Measures
Employee
Table filter DAX expression
PATHCONTAINS
(Employee[ManagementPath],[Current User EmployeeKey])

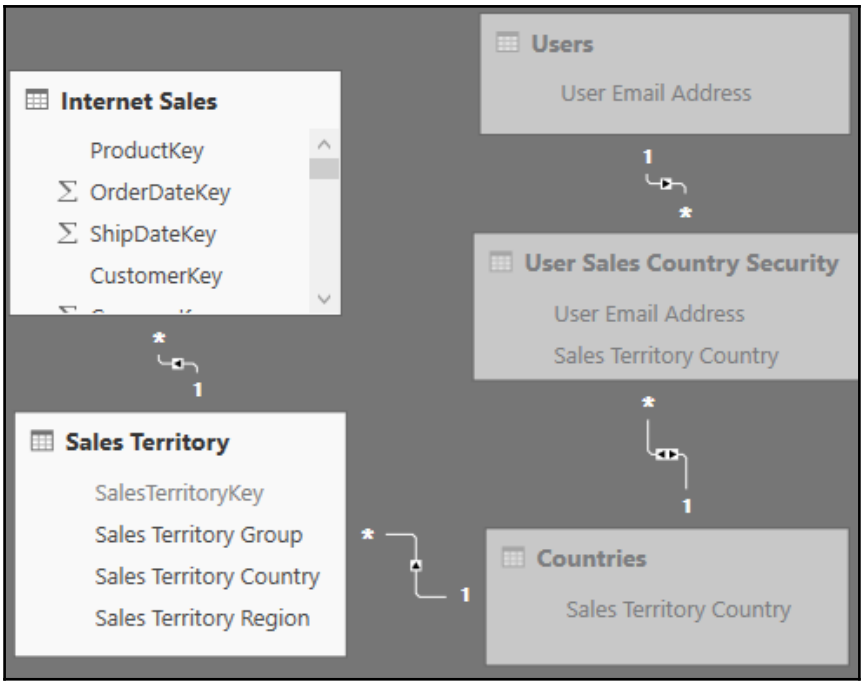

Now viewing as: Dynamics
File
View
Edit report
Explore
Refresh
Pin Live Page
Employee Security Test Report Page
Brett Powell
Current User Name
Roberto Tamburello
Current User Manager
4
Current User Org Level
3
Employee Row Count

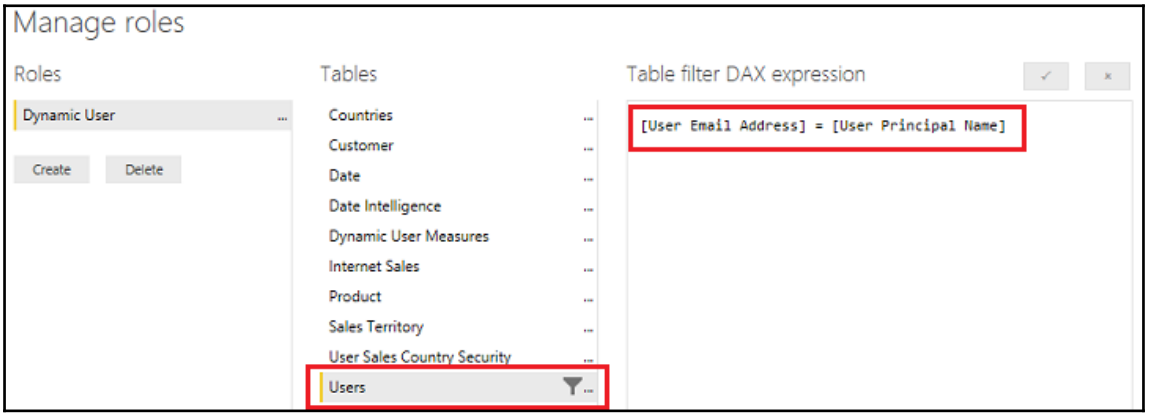


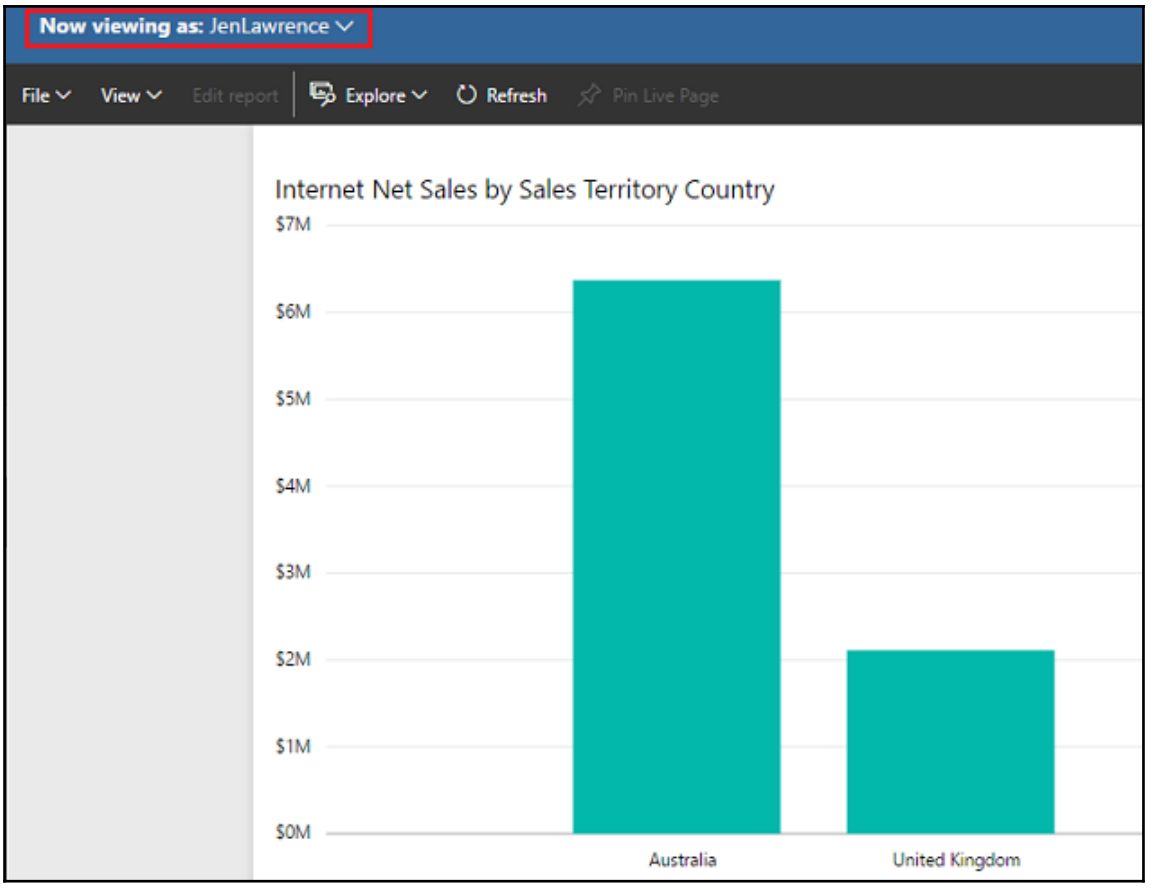
User Name	User Email Address	User Employee Key
Jennifer Lawrence	JenLawrence@FrontlineAnalytics.onmicrosoft.com	888888888
Brett Powell	BrettP@FrontlineAnalytics.onmicrosoft.com	999999999

User Email Address	Sales Territory Country
BrettP@FrontlineAnalytics.onmicrosoft.com	United States
BrettP@FrontlineAnalytics.onmicrosoft.com	Canada
JenLawrence@FrontlineAnalytics.onmicrosoft.com	Australia
JenLawrence@FrontlineAnalytics.onmicrosoft.com	United Kingdom

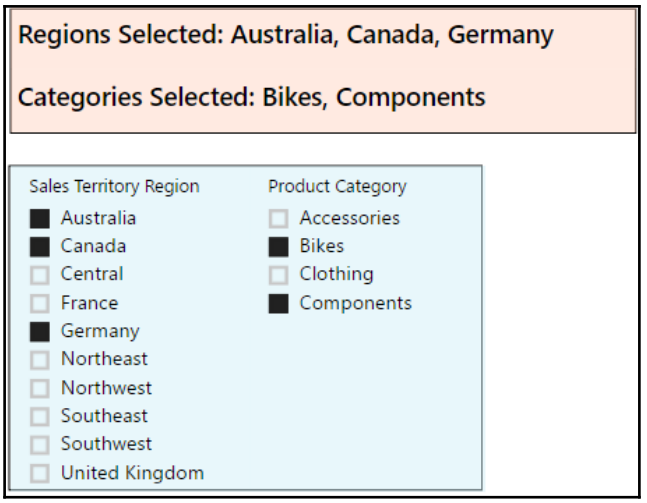



Users
User Email Address
1
*
Internet Sales
ProductKey
OrderDateKey
ShipDateKey
CustomerKey
User Sales Country Security
User Email Address
Sales Territory Country
*
1
*
1
Sales Territory
SalesTerritoryKey
Sales Territory Group
Sales Territory Country
Sales Territory Region
*
1
Countries
Sales Territory Country

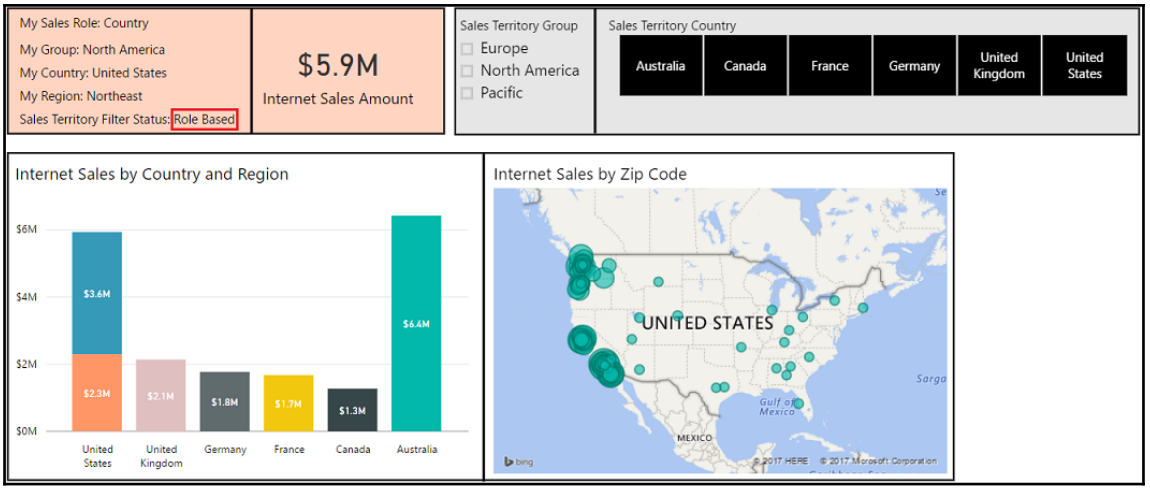

Manage roles
Roles
Dynamic User
Create
Delete
Tables
Countries
Customer
Date
Date Intelligence
Dynamic User Measures
Internet Sales
Product
Sales Territory
User Sales Country Security
Users
Table filter DAX expression
[User Email Address] = [User Principal Name]

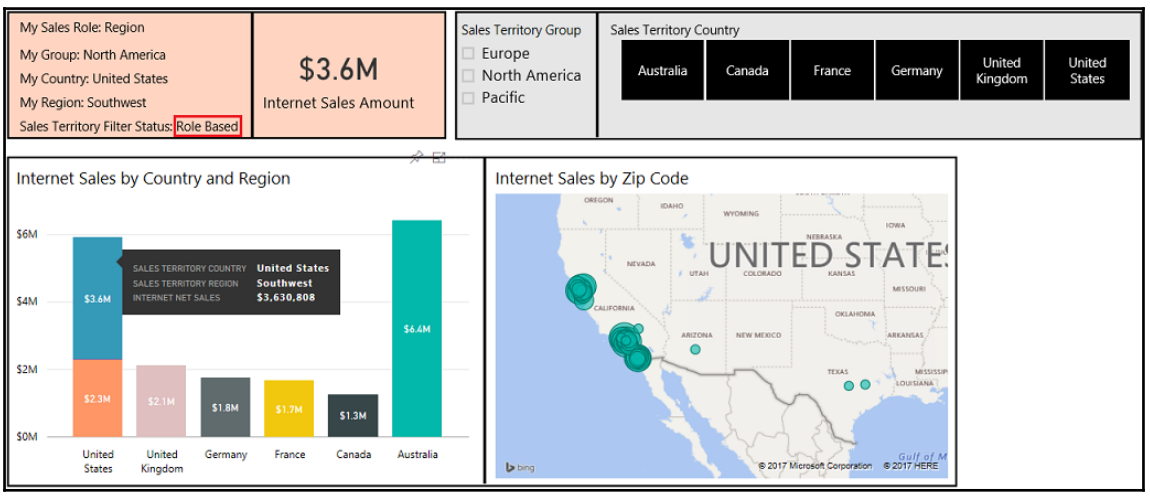


Security Role	Sales Country	Product Category
European Bike	France	Bikes
European Bike	United Kingdom	Bikes
European Bike	Germany	Bikes
USA Non Bikes	United States	Accessories
USA Non Bikes	United States	Clothing
USA Non Bikes	United States	Components



User Email Address	SalesTerritoryKey	User Role
BrettP@FrontlineAnalytics.onmicrosoft.com	2	Country
JenLawrence@FrontlineAnalytics.onmicrosoft.com	4	Region


My Sales Role: Country
My Group: North America
My Country: United States
My Region: Northeast
Sales Territory Filter Status: Role Based
$5.9M
Internet Sales Amount
Sales Territory Group
Europe
North America
Pacific
Sales Territory Country
Australia
Canada
France
Germany
United Kingdom
United States
Internet Sales by Country and Region
$6M
$4M
$2M
$0M
$3.6M
$2.3M
$2.1M
$1.8M
$1.7M
$1.3M
$6.4M
United States
United Kingdom
Germany
France
Canada
Australia
Internet Sales by Zip Code
UNITED STATES
MEXICO
Gulf of Mexico
bing
© 2017 HERE © 2017 Microsoft Corporation


My Sales Role: Region
My Group: North America
My Country: United States
My Region: Southwest
Sales Territory Filter Status: Role Based
$3.6M
Internet Sales Amount
Sales Territory Group
Europe
North America
Pacific
Sales Territory Country
Australia
Canada
France
Germany
United Kingdom
United States
Internet Sales by Country and Region
SALES TERRITORY COUNTRY United States
SALES TERRITORY REGION Southwest
INTERNET NET SALES $3,630,808
$6M
$4M
$2M
$0M
$3.6M
$2.3M
$2.1M
$1.8M
$1.7M
$1.3M
$6.4M
United States
United Kingdom
Germany
France
Canada
Australia
Internet Sales by Zip Code
UNITED STATES
bing
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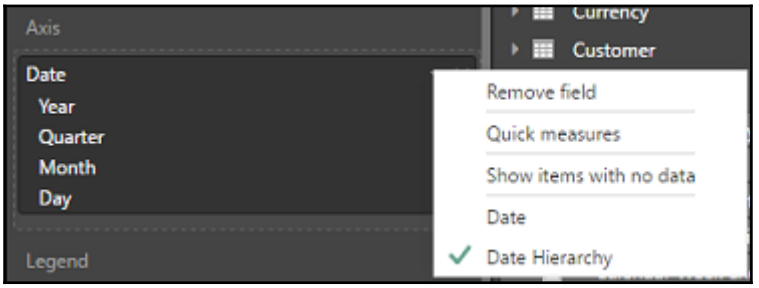
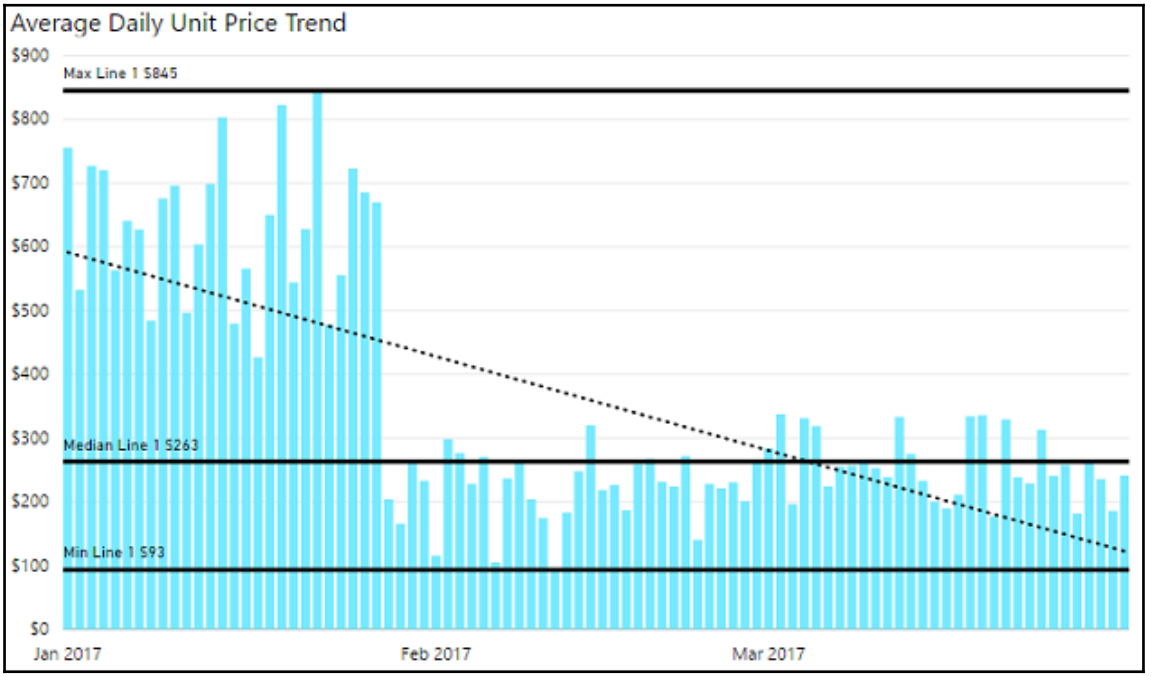
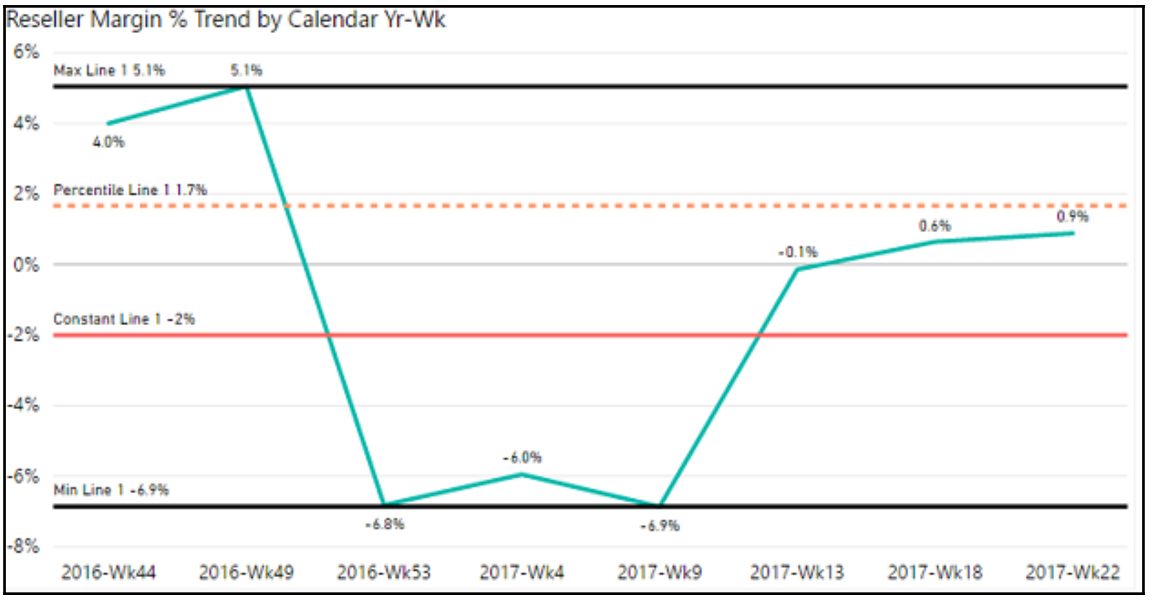
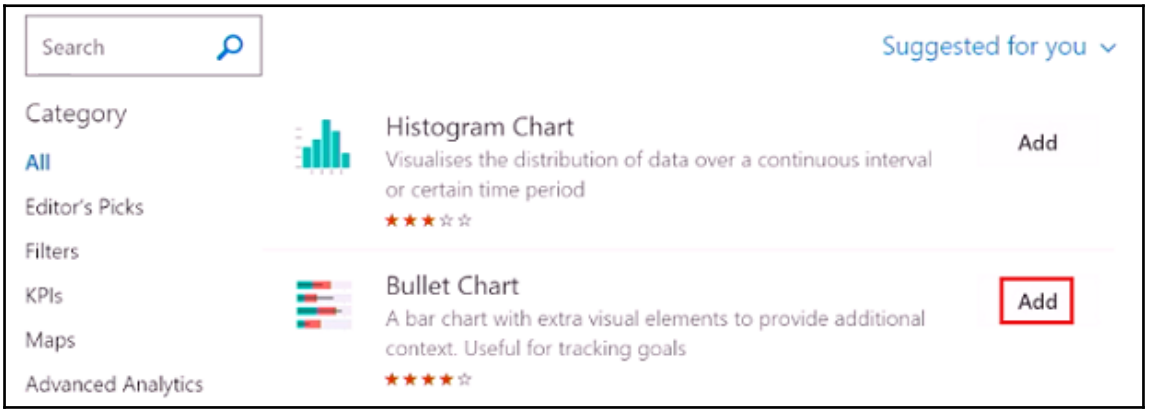
Chapter 9: Applying Advanced Analytics and Custom Visuals

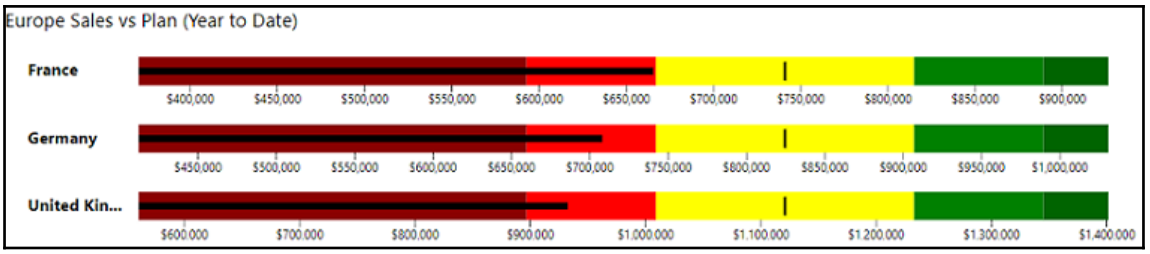


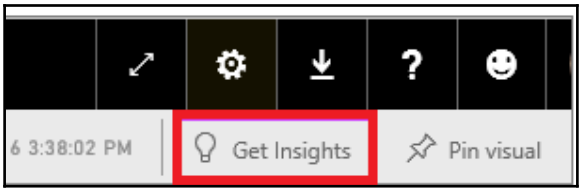


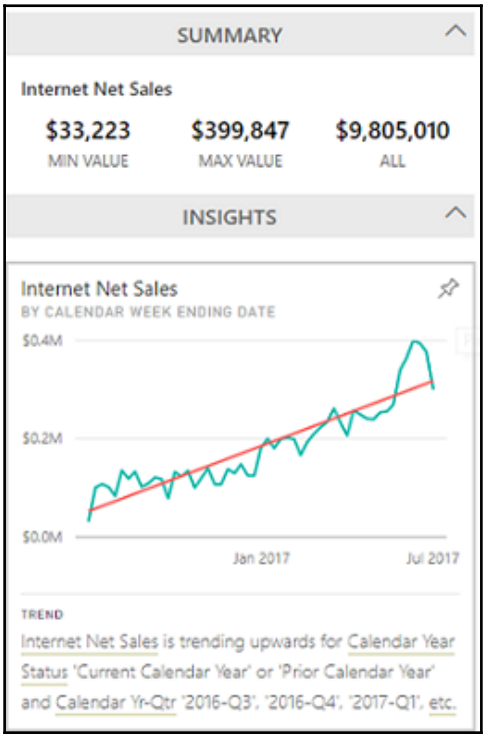



```
EVALUATE
  GROUPBY(
    __DSOCore,
    "MinInternet_Net_Sales", MINX(CURRENTGROUP(), [Internet_Net_Sales]),
    "MaxInternet_Net_Sales", MAXX(CURRENTGROUP(), [Internet_Net_Sales]),
    "AverageInternet_Net_Sales", AVERAGEX(CURRENTGROUP(), [Internet_Net_Sales]),
    "MinMinDate", MINX(CURRENTGROUP(), [MinDate])
  )
```

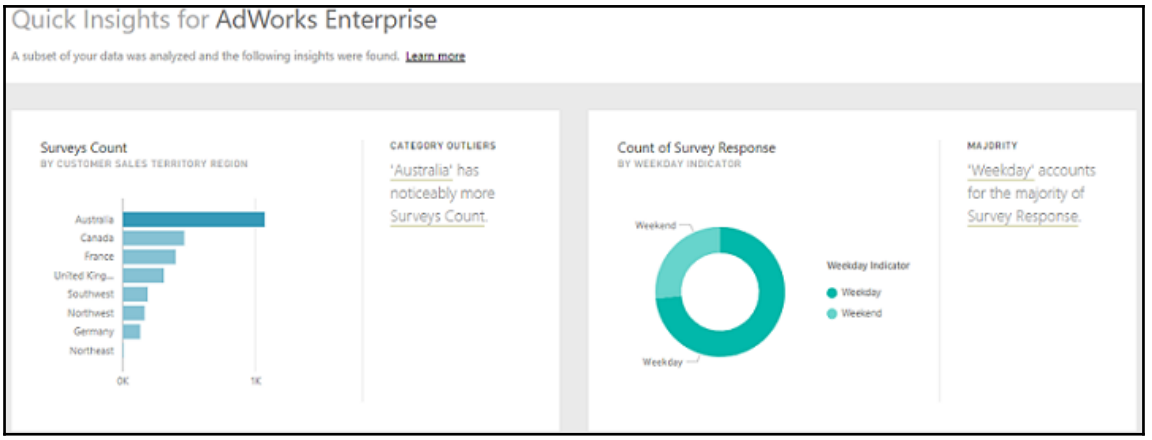


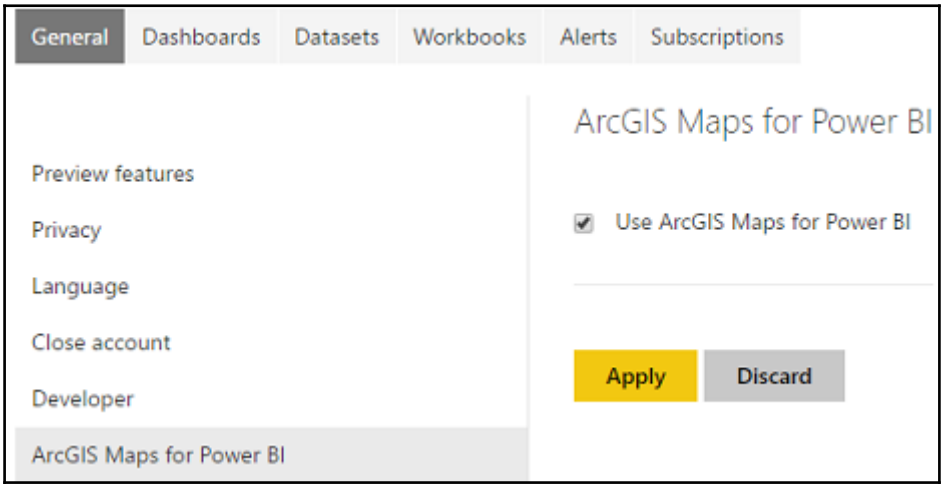

Europe Sales vs Plan (Year to Date)
France
$400,000 $450,000 $500,000 $550,000 $600,000 $650,000 $700,000 $750,000 $800,000 $850,000 $900,000
Germany
$450,000 $500,000 $550,000 $600,000 $650,000 $700,000 $750,000 $800,000 $850,000 $900,000 $950,000 $1,000,000
United Kin...
$600,000 $700,000 $800,000 $900,000 $1,000,000 $1,100,000 $1,200,000 $1,300,000 $1,400,000


6 3:38:02 PM
Get Insights
Pin visual

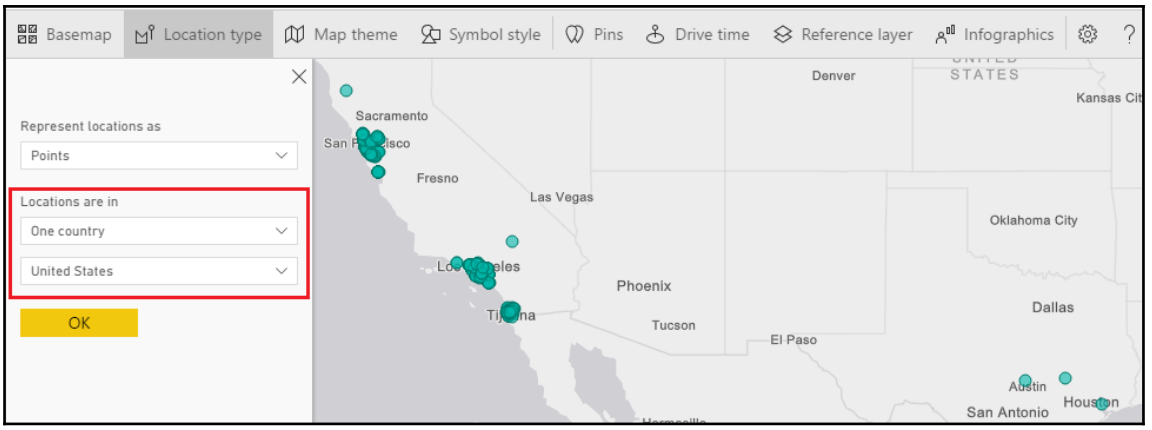

SUMMARY
Internet Net Sales
$33,223
MIN VALUE
$399,847
MAX VALUE
$9,805,010
ALL
INSIGHTS
Internet Net Sales
BY CALENDAR WEEK ENDING DATE
$0.4M
$0.2M
$0.0M
Jan 2017
Jul 2017
TREND
Internet Net Sales is trending upwards for Calendar Year Status 'Current Calendar Year' or 'Prior Calendar Year' and Calendar Yr-Qtr '2016-Q3', '2016-Q4', '2017-Q1', etc.

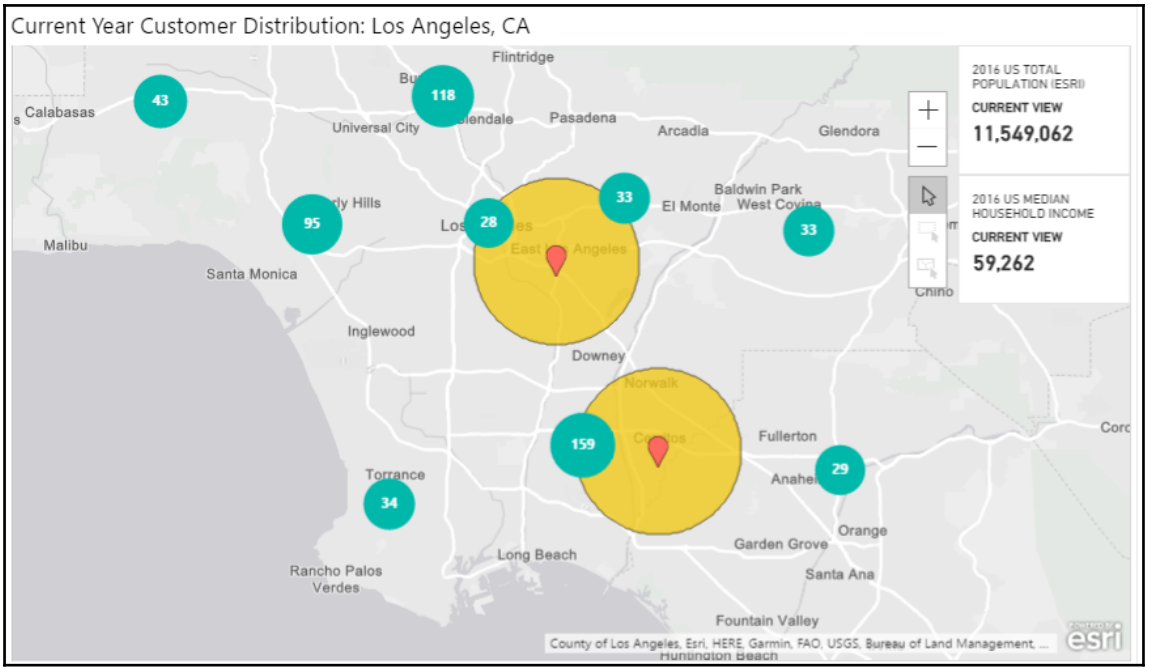

Analyze
Explain the decrease
Find additional insights

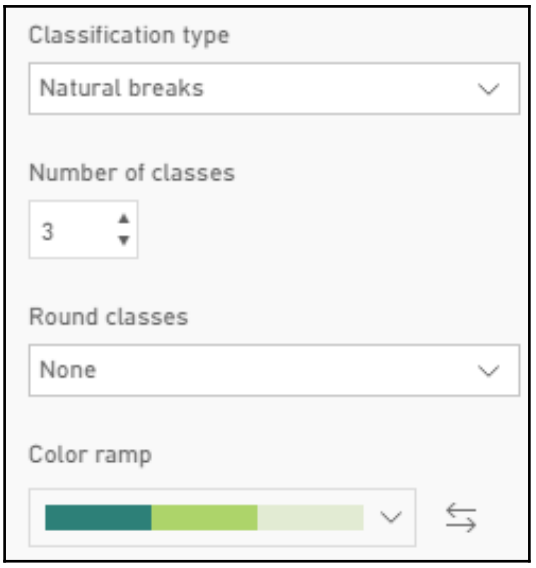




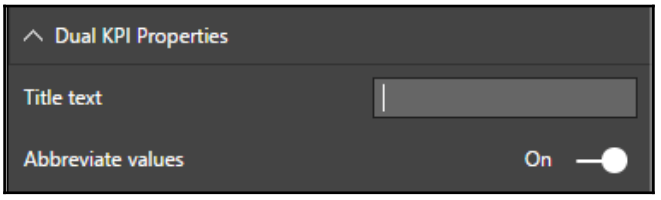
Address Line 1	Customer City	Customer State Province Code	Customer Postal Code	Customer Full Address
7902 Hudson Ave.	Lebanon	OR	97355	7902 Hudson Ave., Lebanon, OR 97355
9011 Tank Drive	Redmond	WA	98052	9011 Tank Drive, Redmond, WA 98052
244 Willow Pass Road	Burbank	CA	91502	244 Willow Pass Road, Burbank, CA 91502

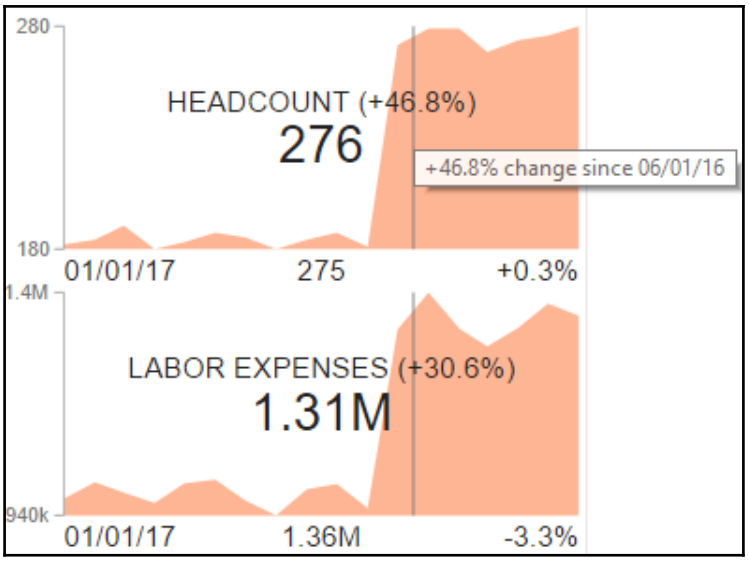

Basemap
Location type
Map theme
Symbol style
Pins
Drive time
Reference layer
Infographics
Represent locations as
Points
Locations are in
One country
United States
OK
Sacramento
Fresno
Las Vegas
Denver
Oklahoma City
Phoenix
Tucson
El Paso
Dallas
Austin
San Antonio
Houston

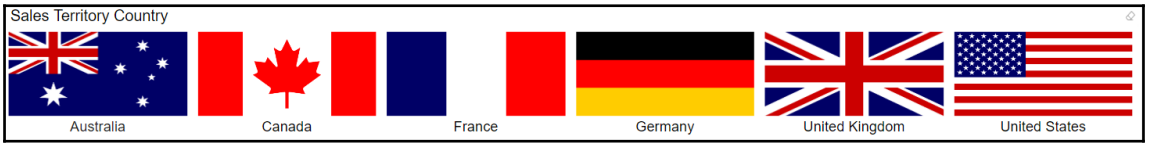

Current Year Customer Distribution: Los Angeles, CA
Flintridge
Calabasas
Universal City
Pasadena
Arcadia
Glendora
Baldwin Park
El Monte
West Covina
Malibu
Santa Monica
Inglewood
Downey
Norwalk
Fullerton
Torrance
Long Beach
Garden Grove
Orange
Santa Ana
Rancho Palos Verdes
Fountain Valley
43
118
95
28
33
33
159
29
34
2016 US TOTAL POPULATION (ESRI)
CURRENT VIEW
11,549,062
2016 US MEDIAN HOUSEHOLD INCOME
CURRENT VIEW
59,262
County of Los Angeles, Esri, HERE, Garmin, FAO, USGS, Bureau of Land Management, ...
esri

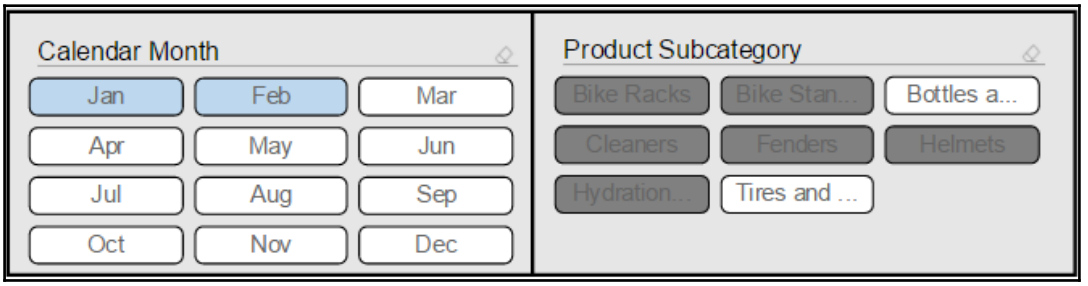


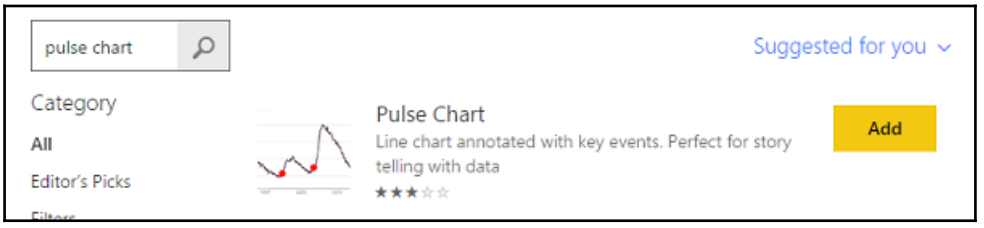
SalesTerritoryKey	SalesTerritoryGroup	SalesTerritoryCountry	SalesTerritoryRegion	SalesTerritoryCountryURL
4	North America	United States	Southwest	http://www.crwflags.com/fotw/images/u/us.gif
7	Europe	France	France	http://www.crwflags.com/fotw/images/f/fr.gif
8	Europe	Germany	Germany	http://www.crwflags.com/fotw/images/d/de.gif
9	Pacific	Australia	Australia	http://www.crwflags.com/fotw/images/a/au.gif
10	Europe	United Kingdom	United Kingdom	http://www.crwflags.com/fotw/images/g/gb.gif

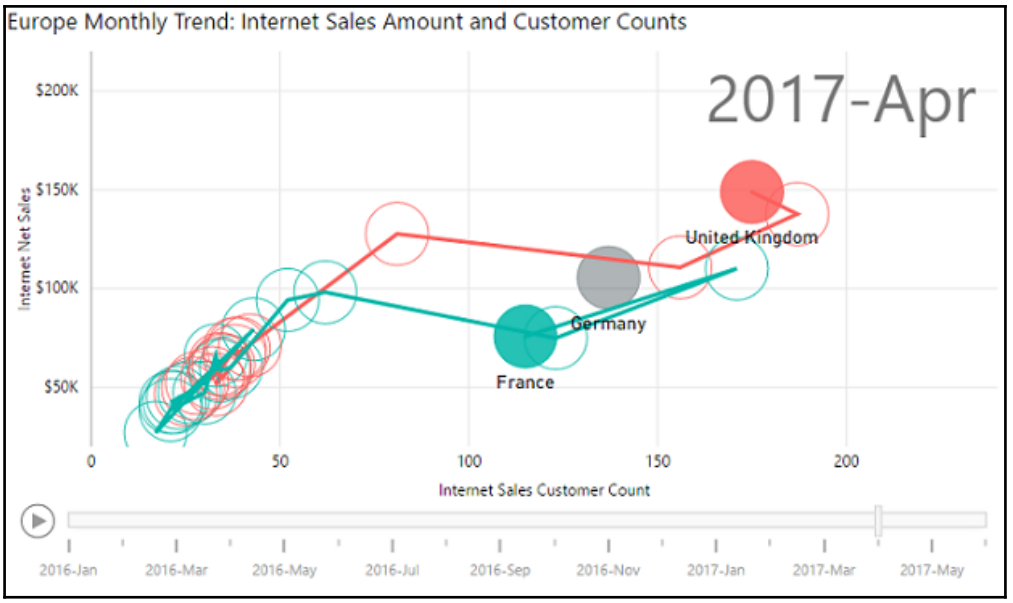


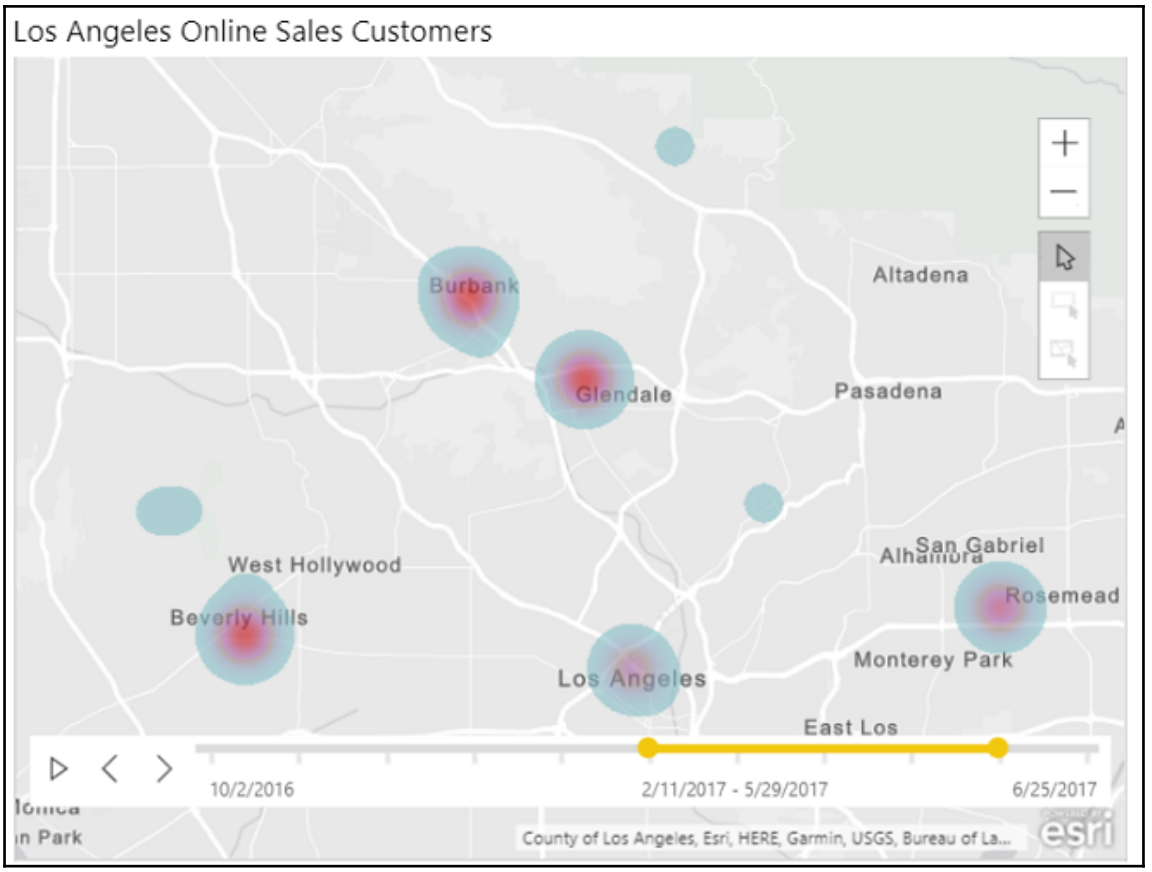

280
HEADCOUNT (+46.8%)
276
+46.8% change since 06/01/16
180
01/01/17
275
+0.3%
1.4M
LABOR EXPENSES (+30.6%)
1.31M
940k
01/01/17
1.36M
-3.3%


Sales Territory Country
Australia
Canada
France
Germany
United Kingdom
United States

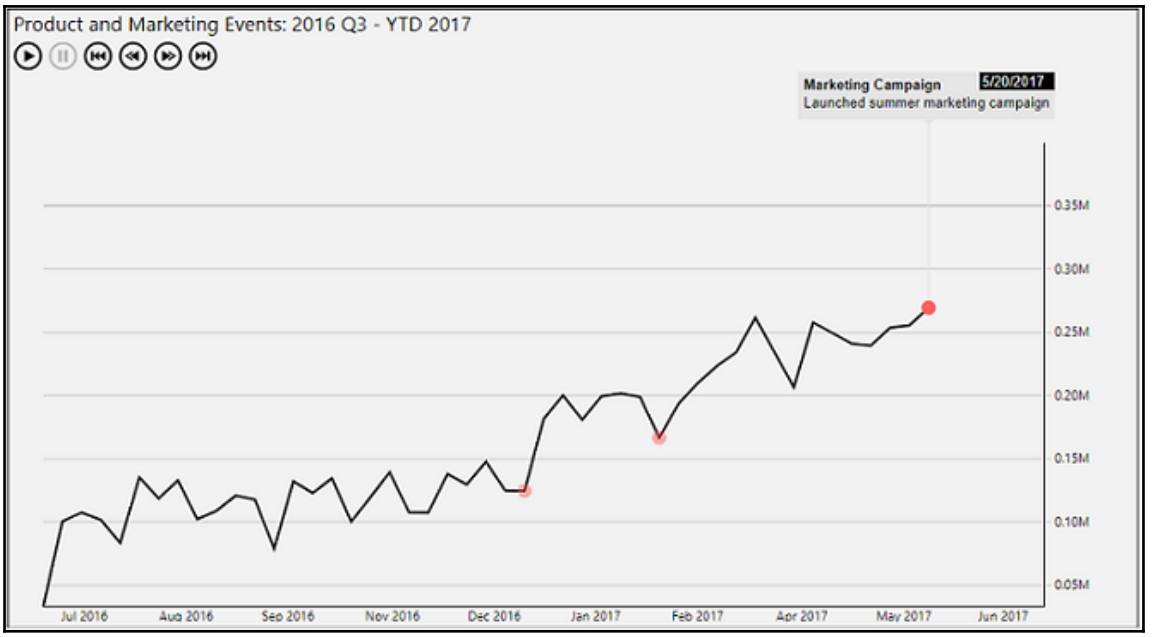

Calendar Month
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Product Subcategory
Bike Racks
Bike Stan...
Bottles a...
Cleaners
Fenders
Helmets
Hydration...
Tires and ...

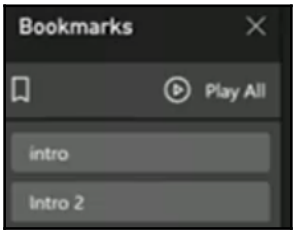

pulse chart
Suggested for you
Category
All
Editor's Picks
Pulse Chart
Line chart annotated with key events. Perfect for story telling with data
Add

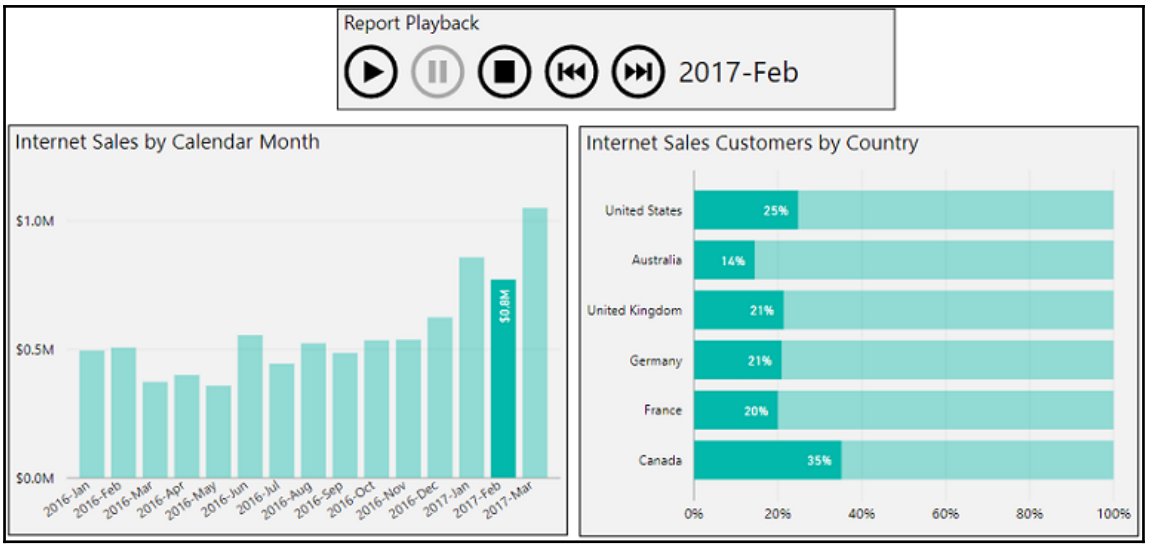

Europe Monthly Trend: Internet Sales Amount and Customer Counts
2017-Apr
$200K
$150K
$100K
$50K
Internet Net Sales
United Kingdom
Germany
France
0
50
100
150
200
Internet Sales Customer Count
2016-Jan
2016-Mar
2016-May
2016-Jul
2016-Sep
2016-Nov
2017-Jan
2017-Mar
2017-May

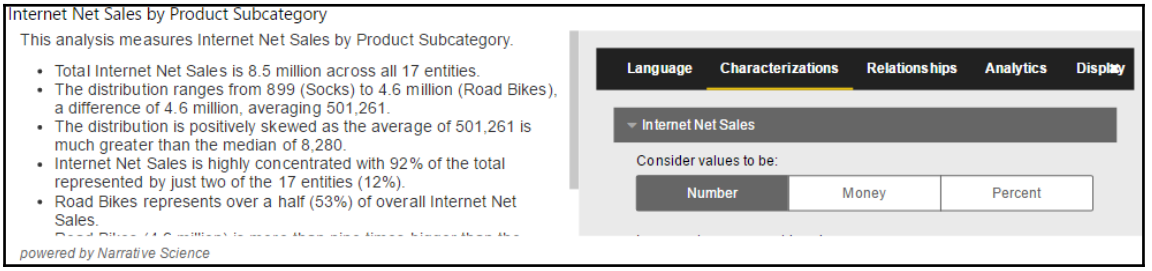


Event Date	Event Title	Event Description
2016-12-24	New Product Category	Accessories category made available online
2017-02-11	New Product Release	New Road and Touring models released
2017-05-20	Marketing Campaign	Launched summer marketing campaign


Product and Marketing Events: 2016 Q3 - YTD 2017
Marketing Campaign
5/20/2017
Launched summer marketing campaign
0.35M
0.30M
0.25M
0.20M
0.15M
0.10M
0.05M
Jul 2016
Aug 2016
Sep 2016
Nov 2016
Dec 2016
Jan 2017
Feb 2017
Apr 2017
May 2017
Jun 2017


Bookmarks
Play All
intro
Intro 2





Calendar Yr-Mo	Marketing Amount	Internet Sales	Calendar Year Month Number
2014-Dec	838.0053	43421.0364	72
2015-Jan	8738.7364	469823.9148	73

Calendar Yr-Mo	Marketing Amount	Internet Sales	Slope	Calendar Year Month Number	Y Intercept	Predicted Internet Sales	Residual
2014-Dec	$838	$43,421	47.47	72	34,447	$74,232	($30,811)
2015-Jan	$8,739	$469,824	47.47	73	34,447	$449,317	$20,506
2015-Feb	$9,094	$466,335	47.47	74	34,447	$466,161	$174

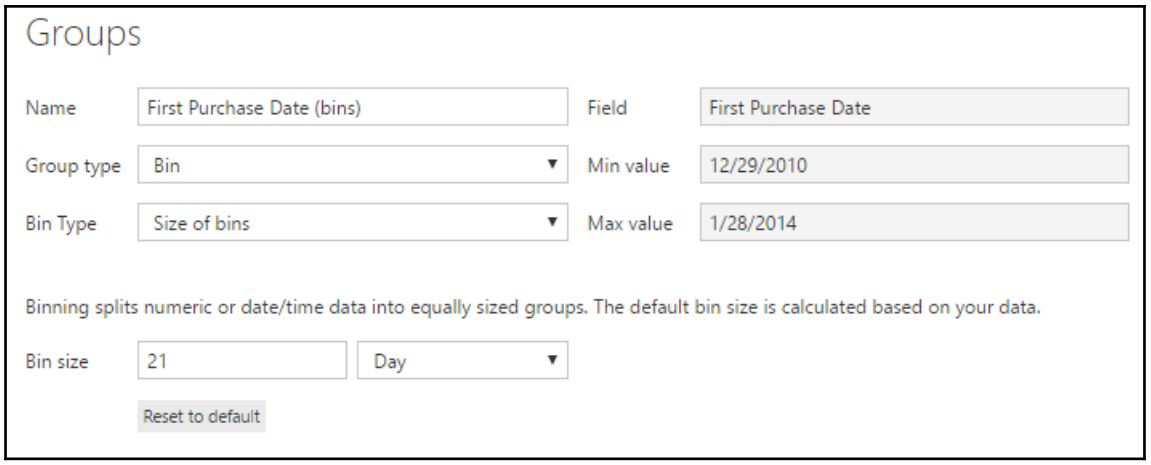
$$Correl(X,Y) = \frac{\sum (x-\bar{x})(y-\bar{y})}{\sqrt{\sum (x-\bar{x})^2 \sum (y-\bar{y})^2}}$$

$$b = \frac{\sum (x-\bar{x})(y-\bar{y})}{\sum (x-\bar{x})^2}$$

$$a = \bar{y} - b\bar{x}$$

K3 =SLOPE(C2:C32,D2:D32)

Calendar Yr-Mo	Internet Net Sales	Marketing Fin Amount	Excel Functions		
			CORREL	SLOPE	INTERCEPT
2017-Jun	$1,643,178	$35,986			
2017-May	$1,284,593	$24,792	0.987	47.5	34,453



Customer First Purchase Calendar Quarter	2015	2016	2017	Total
April 2013			$914,359	**$914,359**
January 2013			$994,870	**$994,870**
October 2012		$1,620,094	$298,288	**$1,918,382**
July 2012		$1,461,896	$374,907	**$1,836,803**
April 2012		$1,320,543	$357,780	**$1,678,322**
January 2012		$1,378,995	$482,960	**$1,861,955**
October 2011	$2,038,185	$3,485	$466,062	**$2,507,732**
July 2011	$1,814,388	$16,952	$580,050	**$2,411,390**
April 2011	$1,801,595	$22,953	$387,781	**$2,212,329**
January 2011	$1,421,357	$17,567	$248,434	**$1,687,358**
October 2010			$18,330	**$18,330**

CustomerKey	Last Order Date	Days Since Last Purchase
15652	*3/31/2017*	*88*
14324	*9/4/2016*	*296*
18569	*2/6/2017*	*141*

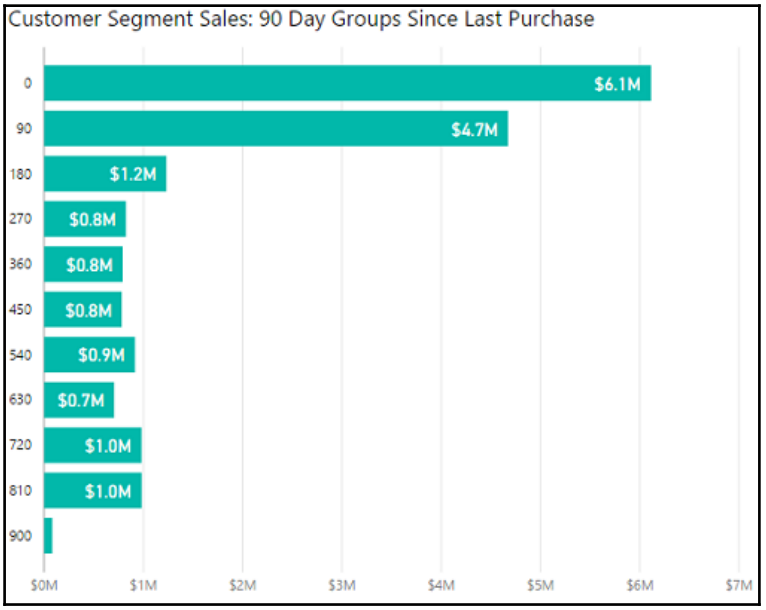
Groups

Name	90 Days Since Last Purchase Groups	Field	Days Since Last Purchase
Group type	Bin	Min value	0
Bin Type	Size of bins	Max value	911

Binning splits numeric or date/time data into equally sized groups. The default bin size is calculated based on your data.

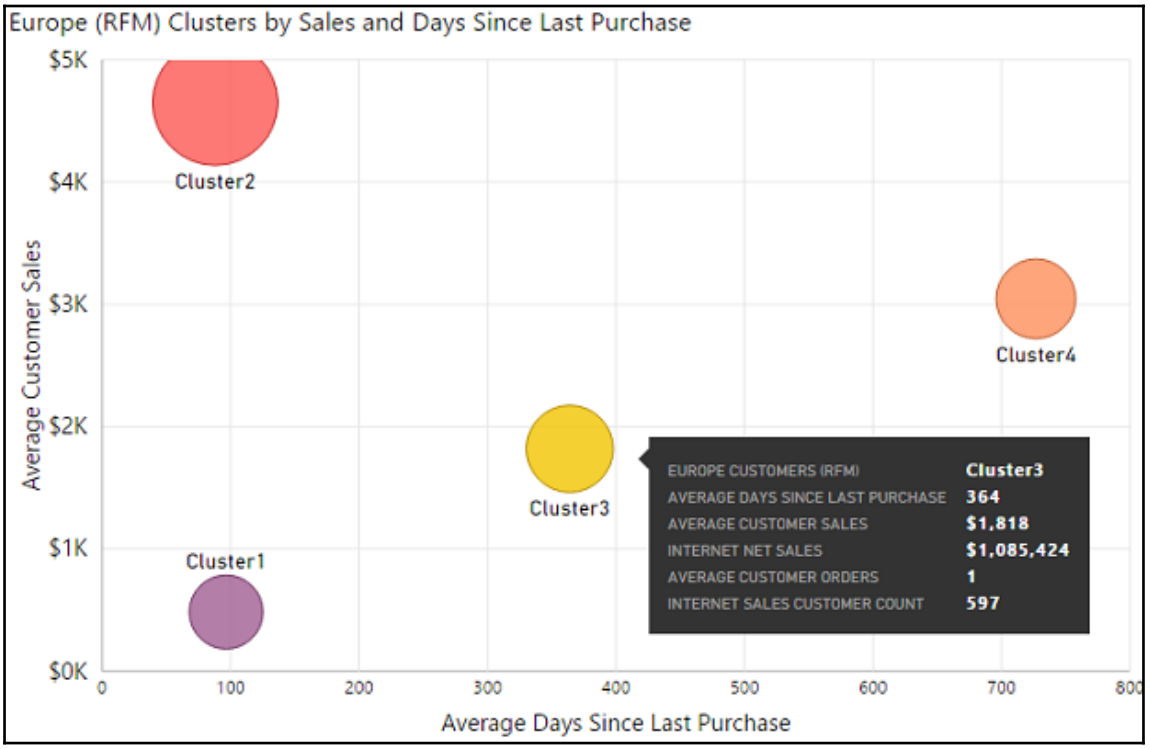
Bin size: 90

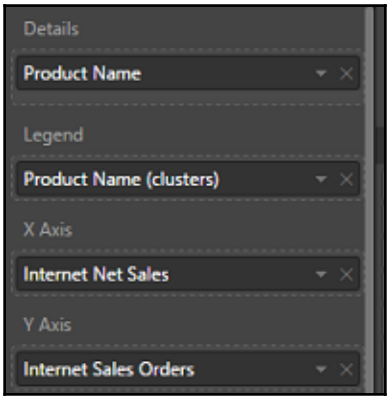
Reset to default

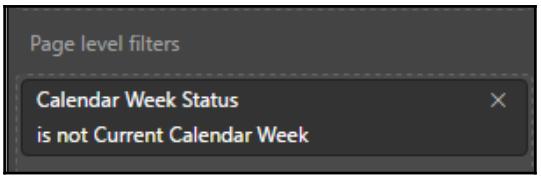


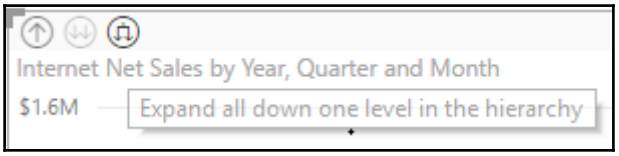
Customer Alternate Key	Internet Net Sales	Internet Sales Orders	Days Since Last Purchase	Europe Customers (RFM)
AW00012132	$10,896	4	71	Cluster2
AW00012301	$10,876	4	55	Cluster2
AW00012308	$10,841	4	44	Cluster2
AW00012323	$10,837	4	41	Cluster2

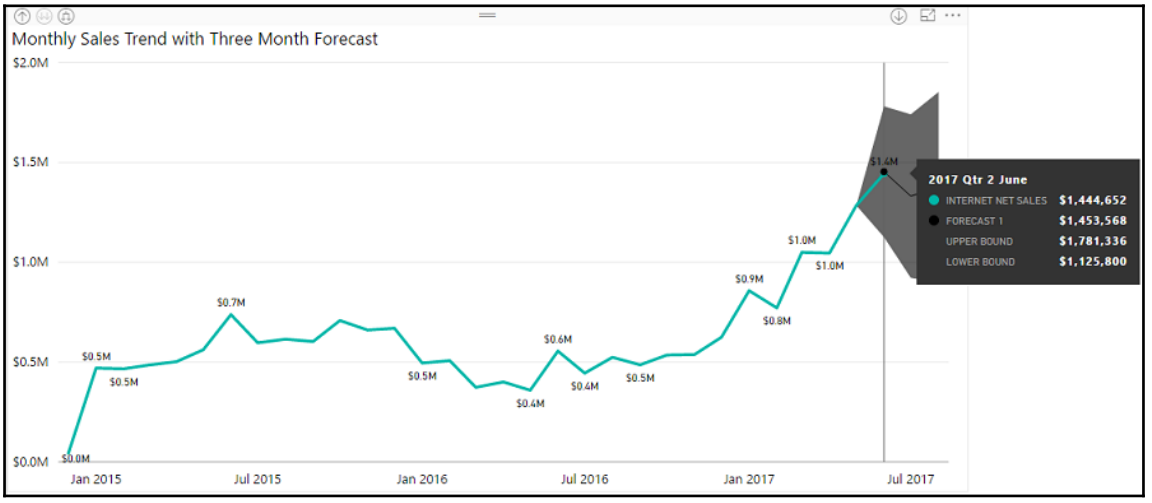
Europe Customers (RFM)	Internet Net Sales	Internet Sales Customer Count	Average Customer Sales	Average Customer Orders	Average Days Since Last Purchase
Cluster2	$2,483,246	534	$4,650	2	88
Cluster4	$904,352	297	$3,045	1	727
Cluster3	$1,085,424	597	$1,818	1	364
Cluster1	$732,915	1,517	$483	1	97
Total	**$5,205,937**	**2,945**	**$1,768**	**1**	**213**

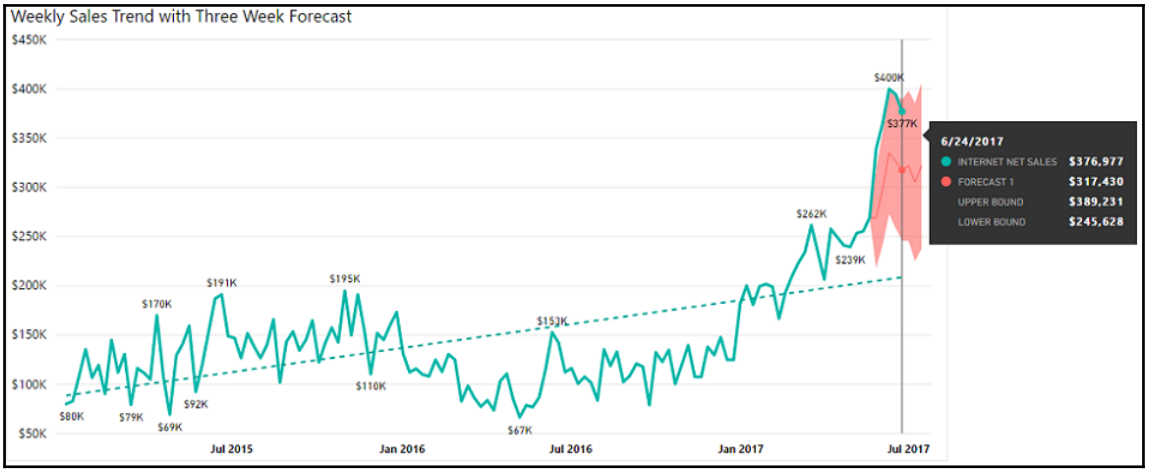


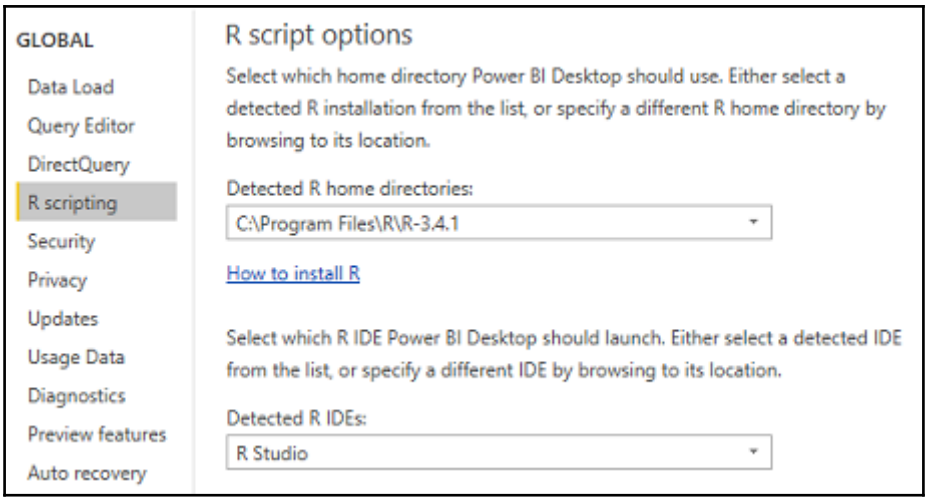


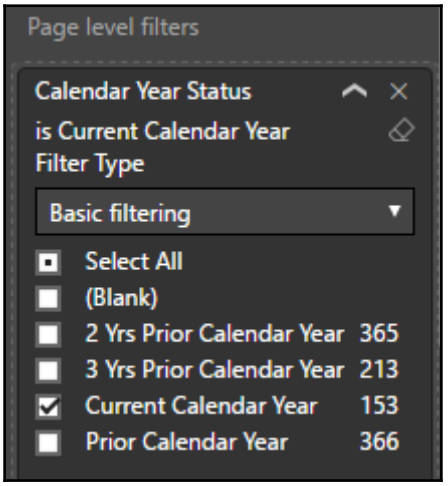

Page level filters
Calendar Week Status
is not Current Calendar Week

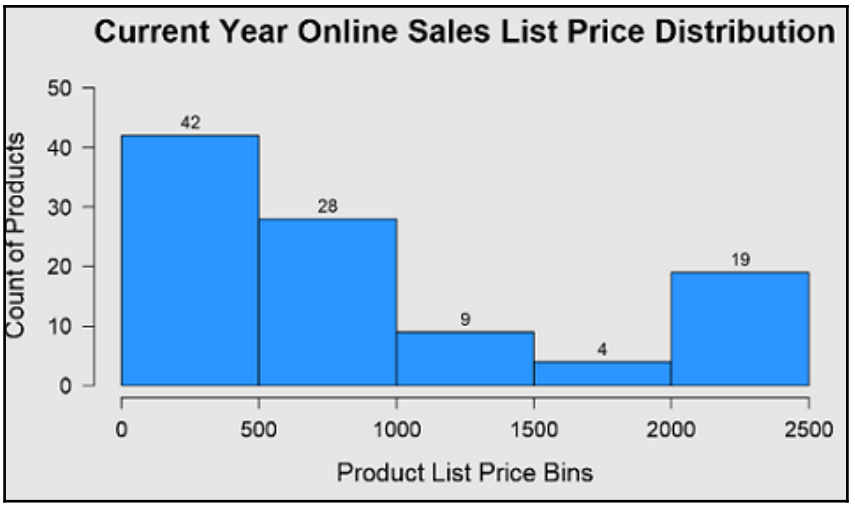

Internet Net Sales by Year, Quarter and Month
$1.6M
Expand all down one level in the hierarchy

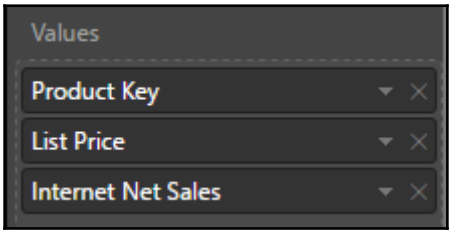

Monthly Sales Trend with Three Month Forecast
$2.0M
$1.5M
$1.0M
$0.5M
$0.0M
Jan 2015
Jul 2015
Jan 2016
Jul 2016
Jan 2017
Jul 2017
$0.0M
$0.5M
$0.5M
$0.7M
$0.5M
$0.4M
$0.6M
$0.4M
$0.5M
$0.9M
$0.8M
$1.0M
$1.0M
$1.4M
2017 Qtr 2 June
INTERNET NET SALES $1,444,652
FORECAST 1 $1,453,568
UPPER BOUND $1,781,336
LOWER BOUND $1,125,800

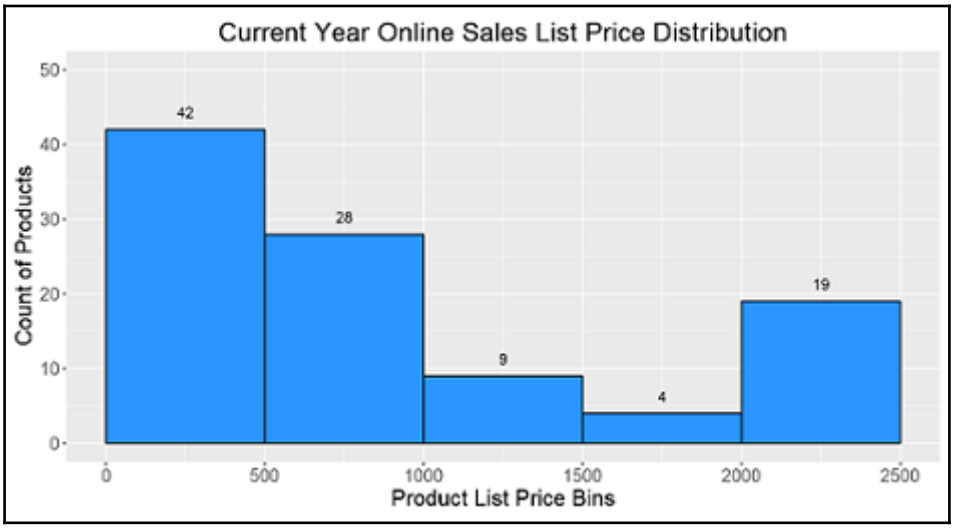

Weekly Sales Trend with Three Week Forecast
$450K
$400K
$350K
$300K
$250K
$200K
$150K
$100K
$50K
Jul 2015
Jan 2016
Jul 2016
Jan 2017
Jul 2017
$80K
$79K
$170K
$69K
$92K
$191K
$110K
$195K
$153K
$67K
$262K
$239K
$400K
$377K
6/24/2017
INTERNET NET SALES $376,977
FORECAST 1 $317,430
UPPER BOUND $389,231
LOWER BOUND $245,628

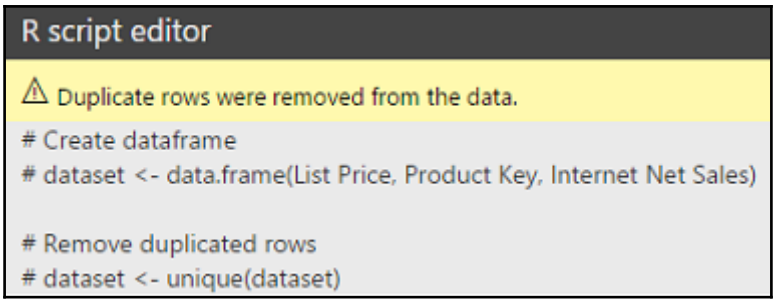

GLOBAL
Data Load
Query Editor
DirectQuery
R scripting
Security
Privacy
Updates
Usage Data
Diagnostics
Preview features
Auto recovery
R script options
Select which home directory Power BI Desktop should use. Either select a detected R installation from the list, or specify a different R home directory by browsing to its location.
Detected R home directories:
C:\Program Files\R\R-3.4.1
How to install R
Select which R IDE Power BI Desktop should launch. Either select a detected IDE from the list, or specify a different IDE by browsing to its location.
Detected R IDEs:
R Studio


Page level filters
Calendar Year Status
is Current Calendar Year
Filter Type
Basic filtering
Select All
(Blank)
2 Yrs Prior Calendar Year 365
3 Yrs Prior Calendar Year 213
Current Calendar Year 153
Prior Calendar Year 366

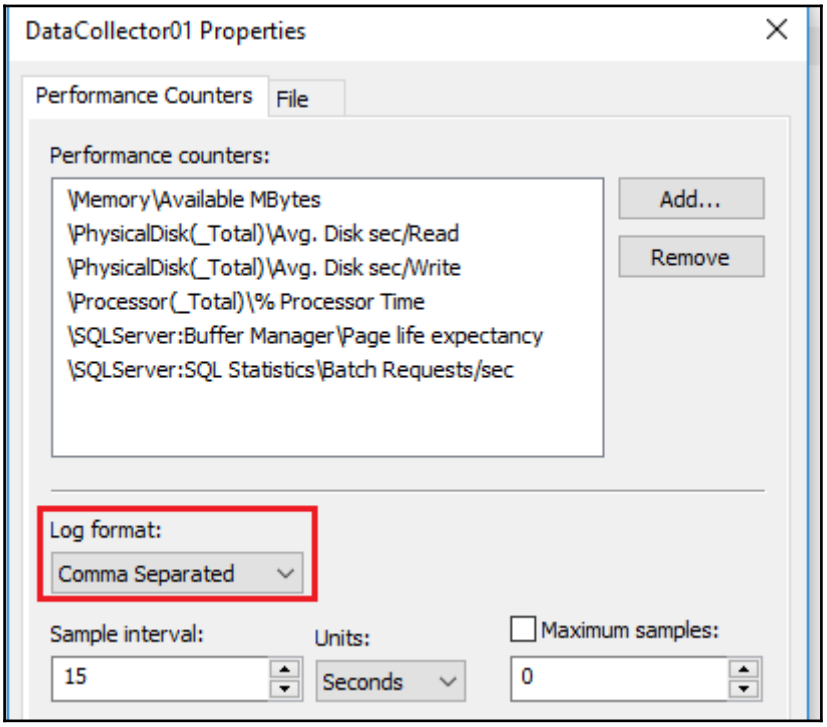

Current Year Online Sales List Price Distribution
Count of Products
50
40
30
20
10
0
42
28
9
4
19
0
500
1000
1500
2000
2500
Product List Price Bins

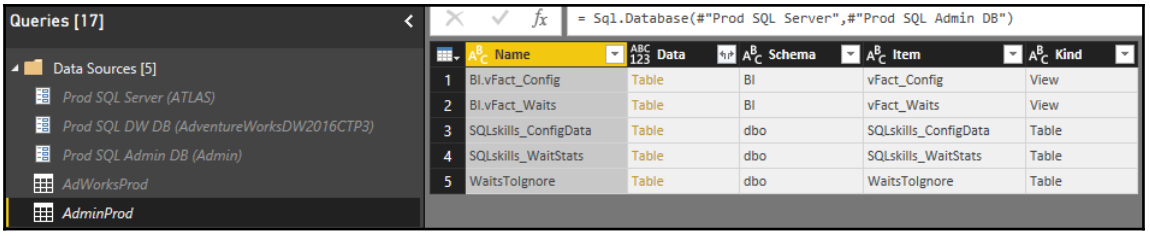

Values
Product Key
List Price
Internet Net Sales


Current Year Online Sales List Price Distribution
Count of Products
50
40
30
20
10
0
42
28
9
4
19
0
500
1000
1500
2000
2500
Product List Price Bins


R script editor
⚠ Duplicate rows were removed from the data.
Create dataframe
dataset <- data.frame(List Price, Product Key, Internet Net Sales)
Remove duplicated rows
dataset <- unique(dataset)

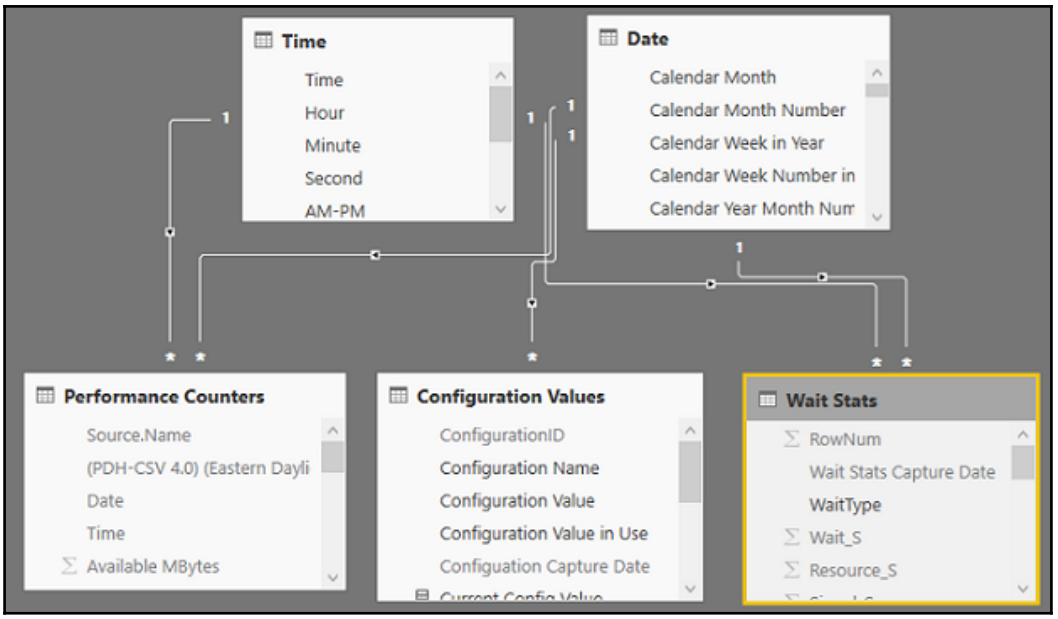
Chapter 10: Developing Solutions for System Monitoring and Administration

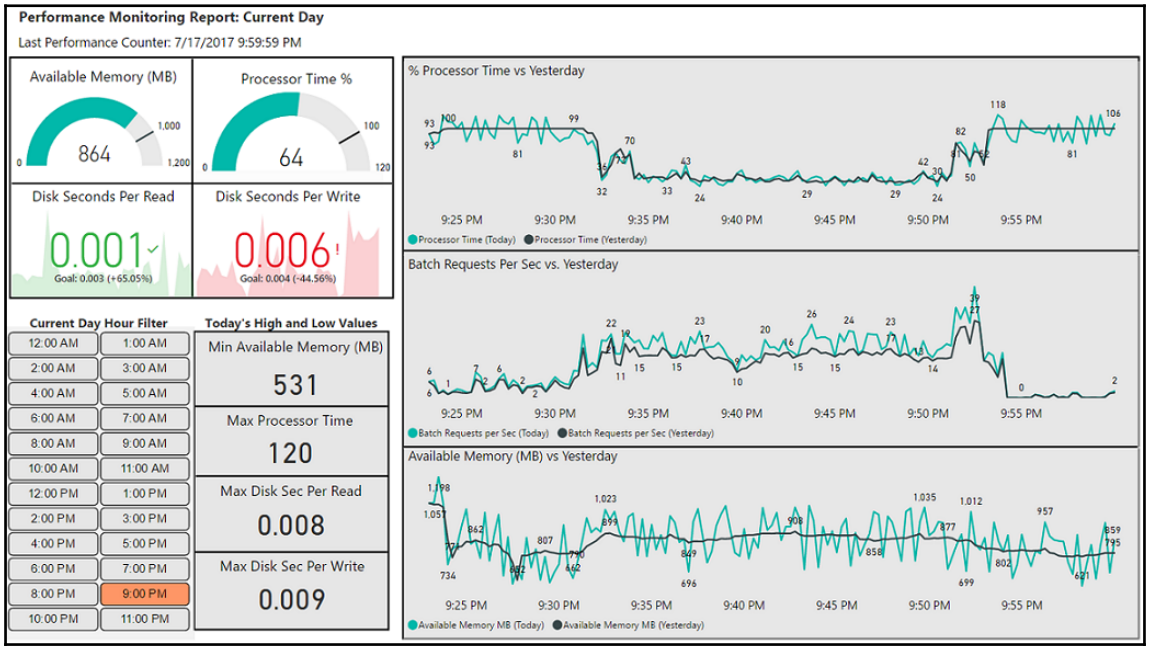


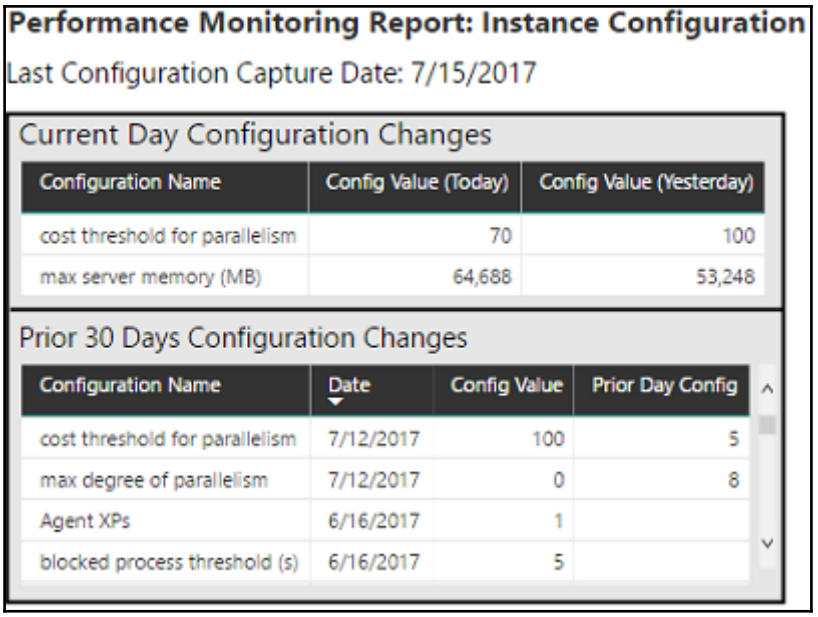


C:\PerfLogs\AdminMonitoringCounters

Content	Name	Extension	Date accessed	Date modified	Date created	Attributes	Folder Path
Binary	DataCollector01.csv	.csv	7/11/2017 11:21:24 AM	7/11/2017 11:21:24 AM	7/11/2017 11:21:24 AM	Record	C:\PerfLogs\AdminMonitoringCounters\ATLAS_201707...
Binary	DataCollector02.csv	.csv	7/11/2017 10:39:31 PM	7/11/2017 10:39:31 PM	7/11/2017 10:24:13 PM	Record	C:\PerfLogs\AdminMonitoringCounters\ATLAS_201707...


Time
Time
Hour
Minute
Second
AM-PM
Date
Calendar Month
Calendar Month Number
Calendar Week in Year
Calendar Week Number in
Calendar Year Month Num
Performance Counters
Source.Name
(PDH-CSV 4.0) (Eastern Dayli
Date
Time
Available MBytes
Configuration Values
ConfigurationID
Configuration Name
Configuration Value
Configuration Value in Use
Configuation Capture Date
Wait Stats
RowNum
Wait Stats Capture Date
WaitType
Wait_S
Resource_S


Performance Monitoring Report: Current Day
Last Performance Counter: 7/17/2017 9:59:59 PM
Available Memory (MB)
864
Processor Time %
64
Disk Seconds Per Read
0.001
Goal: 0.003 (+65.05%)
Disk Seconds Per Write
0.006
Goal: 0.004 (+44.56%)
Current Day Hour Filter
Today's High and Low Values
Min Available Memory (MB)
531
Max Processor Time
120
Max Disk Sec Per Read
0.008
Max Disk Sec Per Write
0.009
% Processor Time vs Yesterday
Batch Requests Per Sec vs. Yesterday
Available Memory (MB) vs Yesterday
9:25 PM
9:30 PM
9:35 PM
9:40 PM
9:45 PM
9:50 PM
9:55 PM



Performance Monitoring Report: Instance Configuration

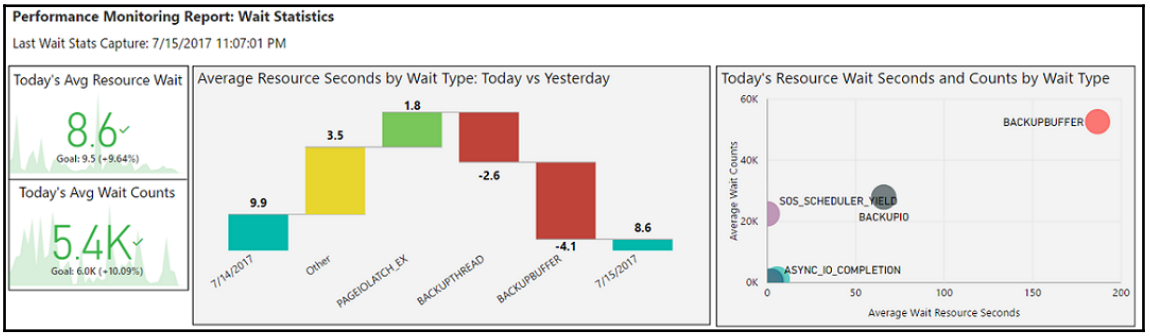
Last Configuration Capture Date: 7/15/2017

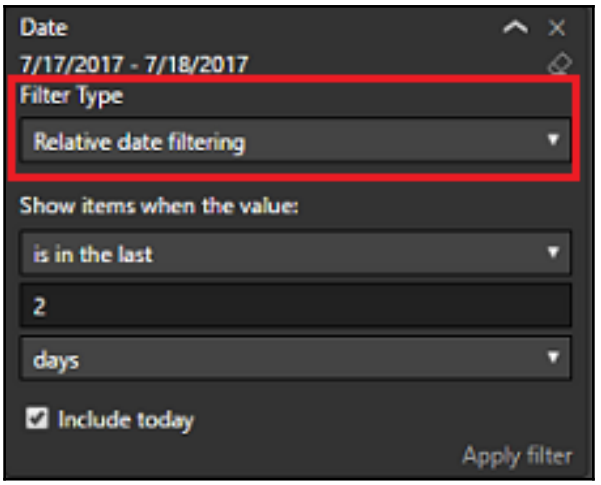
Current Day Configuration Changes

Configuration Name	Config Value (Today)	Config Value (Yesterday)
cost threshold for parallelism	70	100
max server memory (MB)	64,688	53,248

Prior 30 Days Configuration Changes

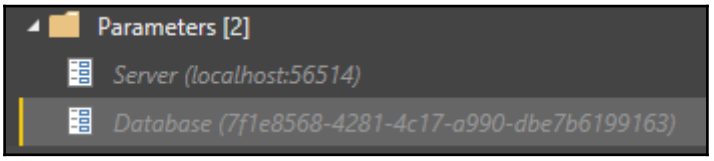
Configuration Name	Date	Config Value	Prior Day Config
cost threshold for parallelism	7/12/2017	100	5
max degree of parallelism	7/12/2017	0	8
Agent XPs	6/16/2017	1	
blocked process threshold (s)	6/16/2017	5	





Top 10 Queries by Duration (Seconds)

SQL Query	Avg Duration (QS DIO)	Avg Logical IO Reads (QS DIO)
select top 4096 [_].[avg_duration], [_].[avg_logical_io_reads], [_].[query_text_id], [_].[query_id], [_].[query_sql_text], [_].[ObjectName], [_].[plan_id], [_].[CurrentUTCTime], [_].[last_execution_time], [_].[LocalLastExecutionTime] from [Website].[QueryStoreDurationIO] as [_] where [_].[LocalLastExecutionTime] >= convert(datetime2, '2017-07-14 05:30:40.6340493')	1.85	7,927
select top 4096 [_].[avg_duration] as [avg_duration]	1.85	7,884
Total	**1.78**	**7,882**



Power BI Dataset Memory Report

524.0	311.2	172.1	39.6
Total Size (MB)	Data Size (MB)	Dictionary Size (MB)	Column Hierarchies Size (MB)

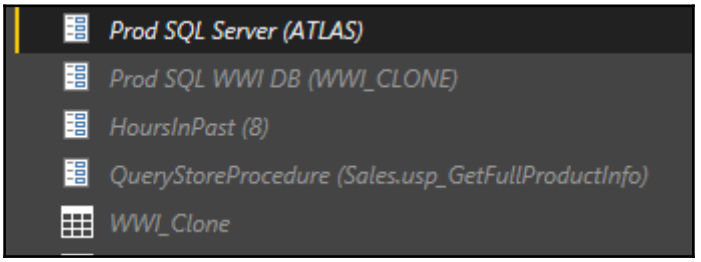
Top 5 Tables by Memory Size

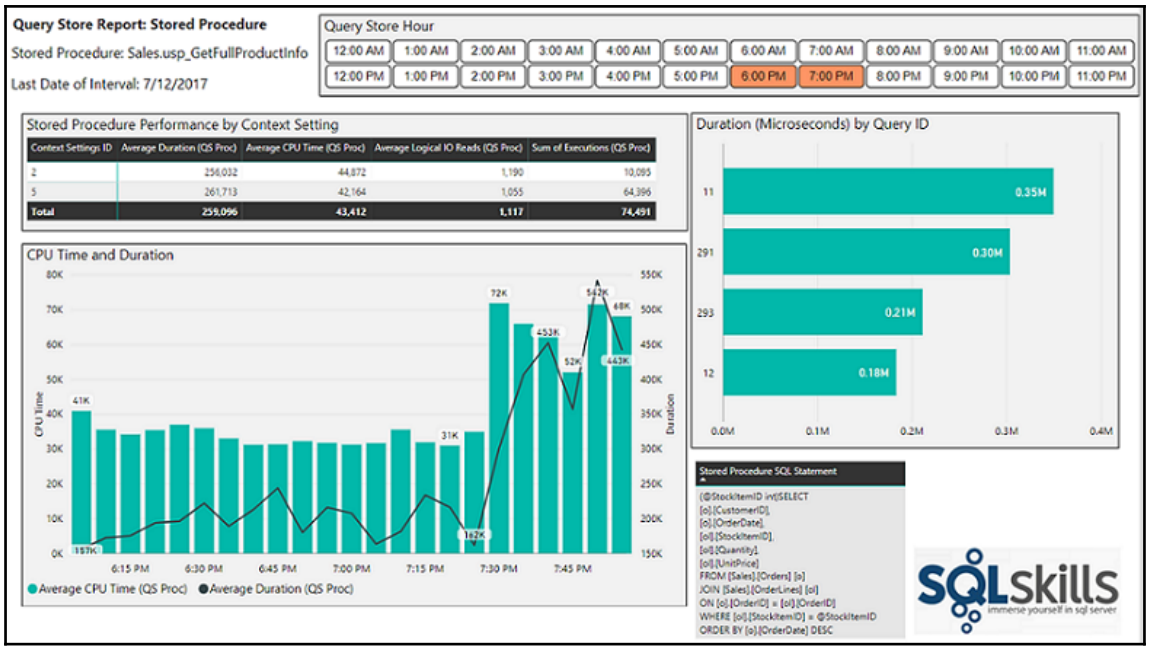
Table	Total Column Size (MB)	Data Size (MB)	Dictionary Size (MB)
Reseller Sales XL	465.1	307.7	157.5
Customer	4.7	0.5	4.2
Reseller Sales	3.2	0.8	2.4
Internet Sales	2.1	0.3	1.8
Inventory	1.5	1.5	0.1
Total	**476.7**	**310.7**	**166.0**

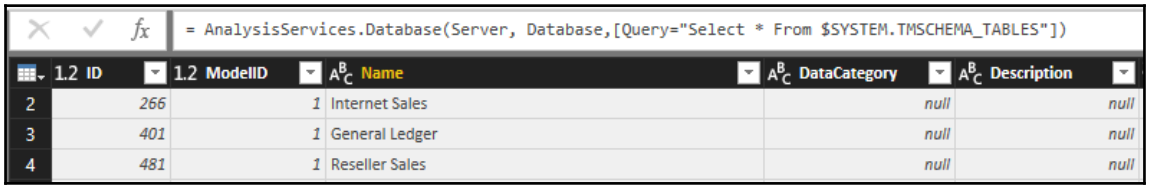
Top 5 Columns by Memory Size

Table	Column	Total Column Size (MB)	Data Size (MB)	Dictionary Size (MB)
Reseller Sales XL	CarrierTrackingNumber	85.2	29.6	55.7
Reseller Sales XL	SalesOrderNumber	80.2	29.6	50.6
Reseller Sales XL	CustomerPONumber	79.5	29.7	49.8
Reseller Sales XL	ExtendedAmount	17.5	17.3	0.1
Reseller Sales XL	SalesAmount	16.1	16.1	0.1
Total		**278.5**	**122.2**	**156.3**

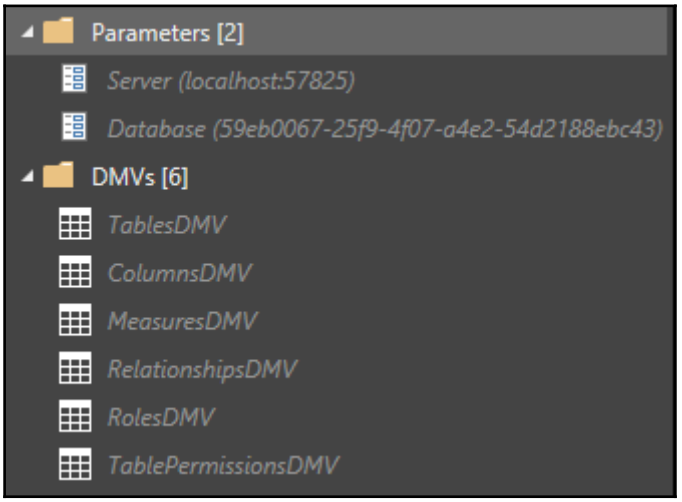
Last Refreshed: 7/8/2017

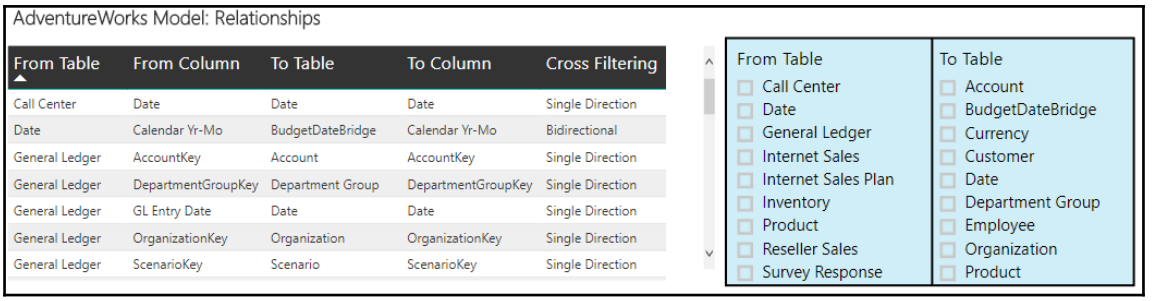


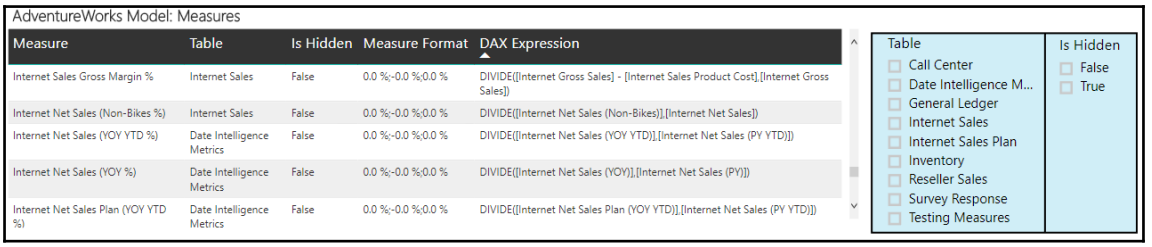


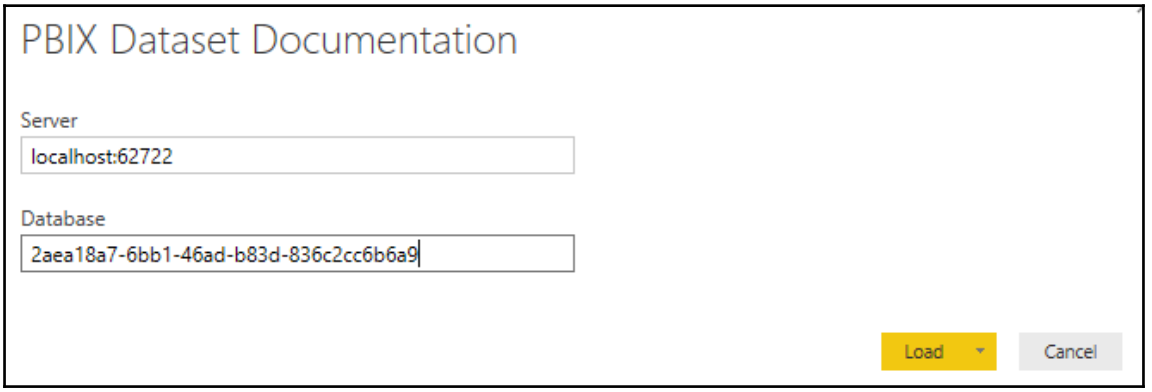


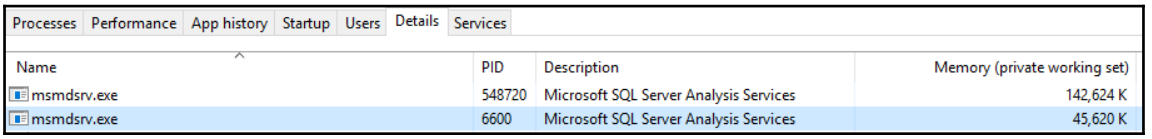
	1.2 ID	1.2 ModelID	Name	DataCategory	Description
2	266	1	Internet Sales	null	null
3	401	1	General Ledger	null	null
4	481	1	Reseller Sales	null	null

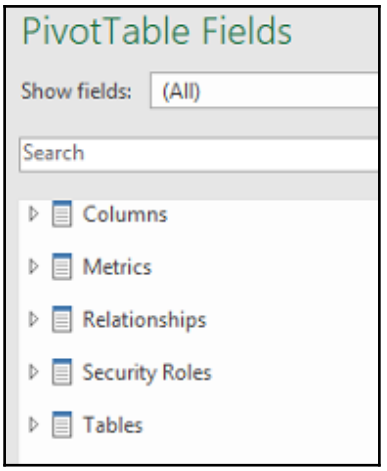


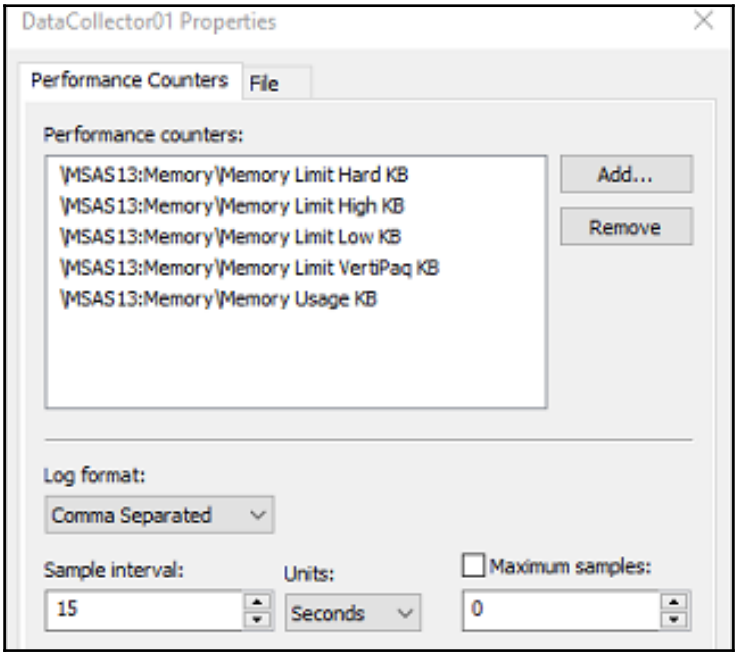

AdventureWorks Model: Relationships
From Table
From Column
To Table
To Column
Cross Filtering
Call Center
Date
Date
Single Direction
Date
Calendar Yr-Mo
BudgetDateBridge
Calendar Yr-Mo
Bidirectional
General Ledger
AccountKey
Account
AccountKey
Single Direction
General Ledger
DepartmentGroupKey
Department Group
DepartmentGroupKey
Single Direction
General Ledger
GL Entry Date
Date
Date
Single Direction
General Ledger
OrganizationKey
Organization
OrganizationKey
Single Direction
General Ledger
ScenarioKey
Scenario
ScenarioKey
Single Direction
From Table
Call Center
Date
General Ledger
Internet Sales
Internet Sales Plan
Inventory
Product
Reseller Sales
Survey Response
To Table
Account
BudgetDateBridge
Currency
Customer
Date
Department Group
Employee
Organization
Product

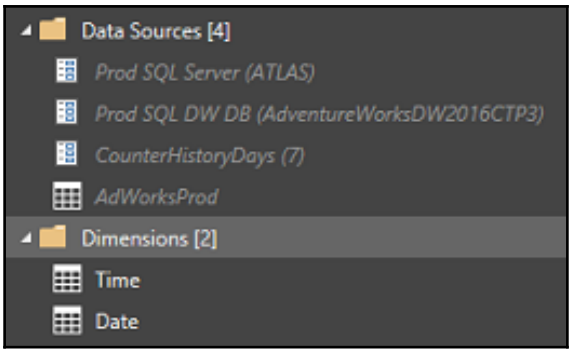

AdventureWorks Model: Measures
Measure
Table
Is Hidden
Measure Format
DAX Expression
Internet Sales Gross Margin %
Internet Sales
False
0.0 %;-0.0 %;0.0 %
DIVIDE([Internet Gross Sales] - [Internet Sales Product Cost],[Internet Gross Sales])
Internet Net Sales (Non-Bikes %)
Internet Sales
False
0.0 %;-0.0 %;0.0 %
DIVIDE([Internet Net Sales (Non-Bikes)],[Internet Net Sales])
Internet Net Sales (YOY YTD %)
Date Intelligence Metrics
False
0.0 %;-0.0 %;0.0 %
DIVIDE([Internet Net Sales (YOY YTD)],[Internet Net Sales (PY YTD)])
Internet Net Sales (YOY %)
Date Intelligence Metrics
False
0.0 %;-0.0 %;0.0 %
DIVIDE([Internet Net Sales (YOY)],[Internet Net Sales (PY)])
Internet Net Sales Plan (YOY YTD %)
Date Intelligence Metrics
False
0.0 %;-0.0 %;0.0 %
DIVIDE([Internet Net Sales Plan (YOY YTD)],[Internet Net Sales (PY YTD)])
Table
Call Center
Date Intelligence M...
General Ledger
Internet Sales
Internet Sales Plan
Inventory
Reseller Sales
Survey Response
Testing Measures
Is Hidden
False
True

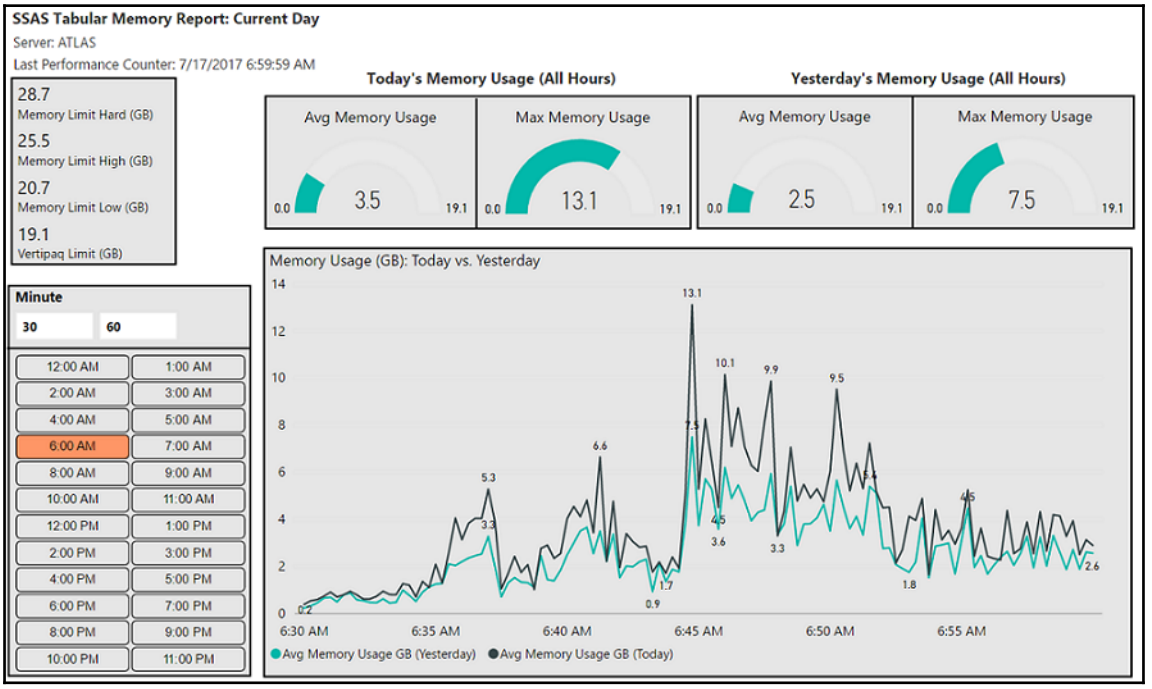

PBIX Dataset Documentation
Server
localhost:62722
Database
2aea18a7-6bb1-46ad-b83d-836c2cc6b6a9
Load
Cancel


Processes
Performance
App history
Startup
Users
Details
Services
Name
PID
Description
Memory (private working set)
msmdsrv.exe
548720
Microsoft SQL Server Analysis Services
142,624 K
msmdsrv.exe
6600
Microsoft SQL Server Analysis Services
45,620 K

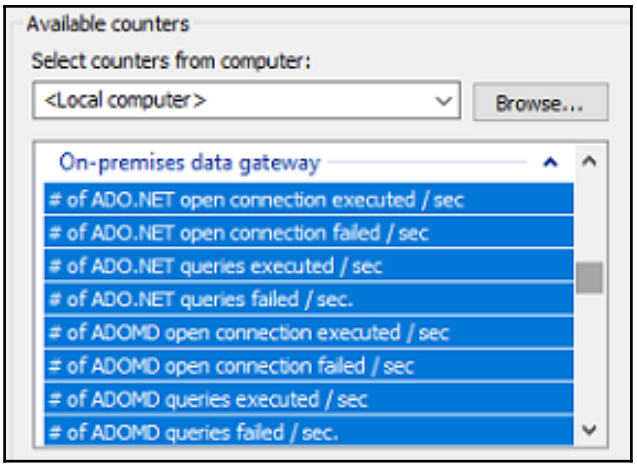

PivotTable Fields
Show fields:
(All)
Search
Columns
Metrics
Relationships
Security Roles
Tables

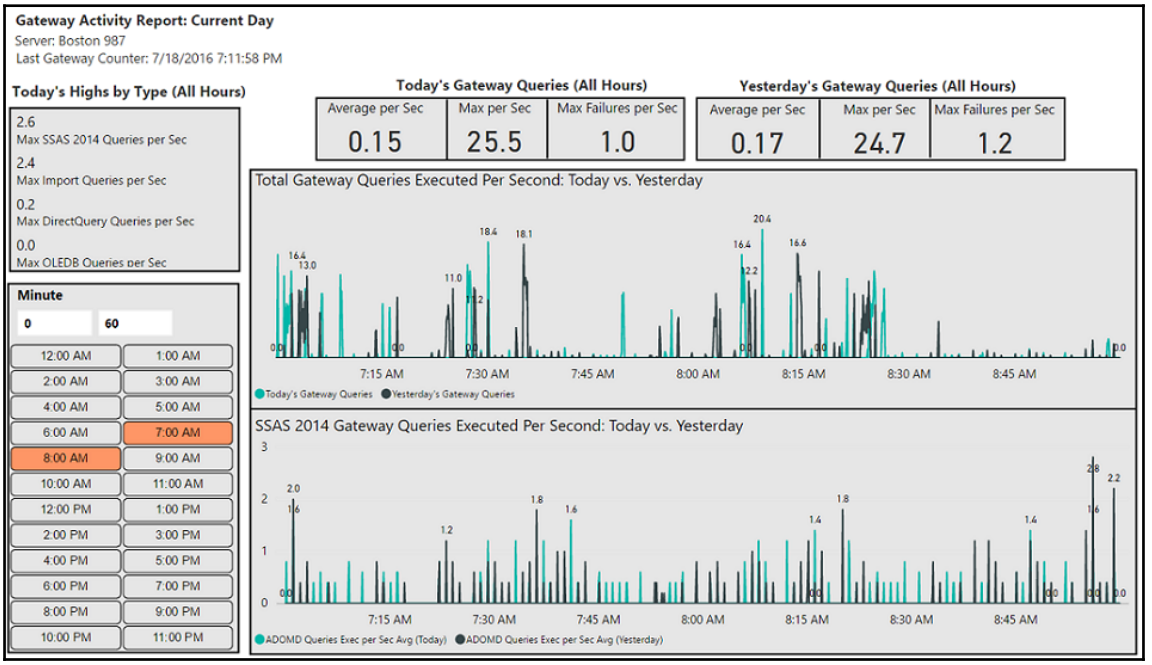

DataCollector01 Properties
Performance Counters
File
Performance counters:
\MSAS13:Memory\Memory Limit Hard KB
\MSAS13:Memory\Memory Limit High KB
\MSAS13:Memory\Memory Limit Low KB
\MSAS13:Memory\Memory Limit VertiPaq KB
\MSAS13:Memory\Memory Usage KB
Add...
Remove
Log format:
Comma Separated
Sample interval:
15
Units:
Seconds
Maximum samples:
0

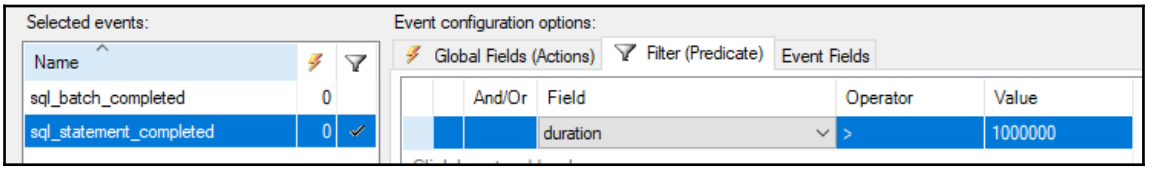




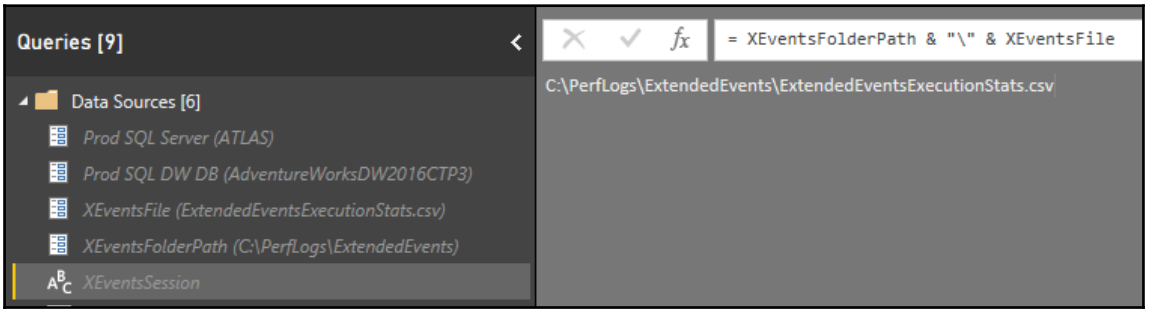
Name	Value	Current Value	Default Value	Restart	Type	Units	Category
Memory \ HardMemoryLimit	0	0	0		dou...		Basic
Memory \ HeapTypeForObjects	0	0	0	yes	int		Advanc...
Memory \ LowMemoryLimit	65	65	65		dou...		Basic
Memory \ MemoryHeapType	-1	-1	-1	yes	int		Advanc...
Memory \ TotalMemoryLimit	80	80	80		dou...		Basic
Memory \ VertiPaqMemoryLimit	60	60	60		dou...		Basic
Memory \ VertiPaqPagingPolicy	1	1	1	yes	int		Advanc...

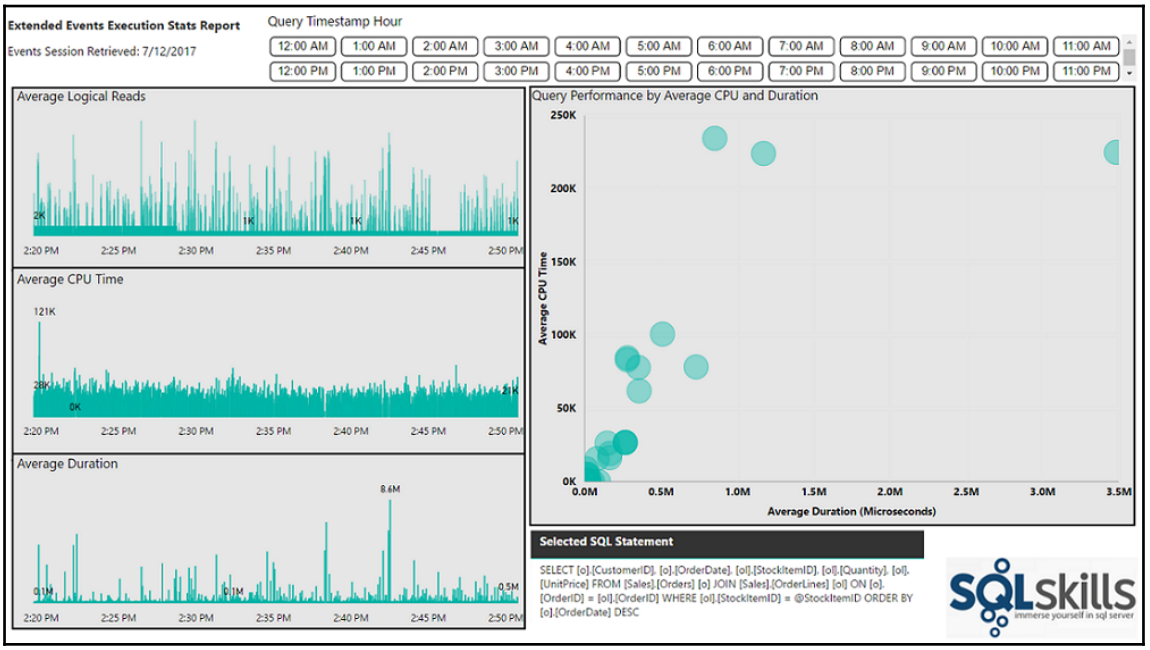

Available counters
Select counters from computer:
<Local computer>
Browse...
On-premises data gateway
# of ADO.NET open connection executed / sec
# of ADO.NET open connection failed / sec
# of ADO.NET queries executed / sec
# of ADO.NET queries failed / sec.
# of ADOMD open connection executed / sec
# of ADOMD open connection failed / sec
# of ADOMD queries executed / sec
# of ADOMD queries failed / sec.

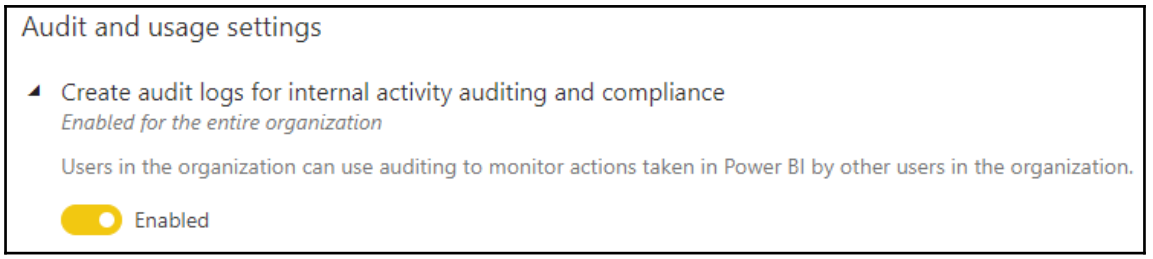

Gateway Activity Report: Current Day
Server: Boston 987
Last Gateway Counter: 7/18/2016 7:11:58 PM
Today's Highs by Type (All Hours)
2.6
Max SSAS 2014 Queries per Sec
2.4
Max Import Queries per Sec
0.2
Max DirectQuery Queries per Sec
0.0
Max OLEDB Queries per Sec
Minute
0
60
12:00 AM
1:00 AM
2:00 AM
3:00 AM
4:00 AM
5:00 AM
6:00 AM
7:00 AM
8:00 AM
9:00 AM
10:00 AM
11:00 AM
12:00 PM
1:00 PM
2:00 PM
3:00 PM
4:00 PM
5:00 PM
6:00 PM
7:00 PM
8:00 PM
9:00 PM
10:00 PM
11:00 PM
Today's Gateway Queries (All Hours)
Average per Sec
0.15
Max per Sec
25.5
Max Failures per Sec
1.0
Yesterday's Gateway Queries (All Hours)
Average per Sec
0.17
Max per Sec
24.7
Max Failures per Sec
1.2
Total Gateway Queries Executed Per Second: Today vs. Yesterday
7:15 AM
7:30 AM
7:45 AM
8:00 AM
8:15 AM
8:30 AM
8:45 AM
Today's Gateway Queries
Yesterday's Gateway Queries
SSAS 2014 Gateway Queries Executed Per Second: Today vs. Yesterday
ADOMD Queries Exec per Sec Avg (Today)
ADOMD Queries Exec per Sec Avg (Yesterday)

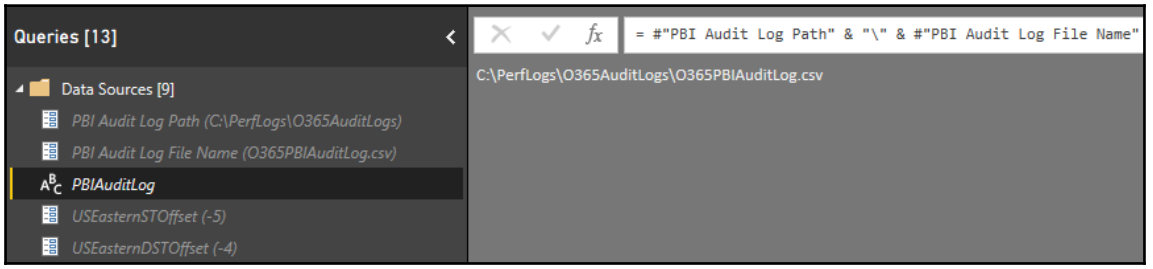

Selected events:
Name
sql_batch_completed
0
sql_statement_completed
0
Event configuration options:
Global Fields (Actions)
Filter (Predicate)
Event Fields
And/Or
Field
Operator
Value
duration
>
1000000

Name	Date modified	Type	Size
ExtendedEventsExecutionStats.csv	7/13/2017 1:31 PM	Microsoft Excel Comma Separated Values File	540,241 KB
PowerBI_0_131443571913450000.xel	7/13/2017 1:26 PM	Microsoft SQL Server Extended Event Log File	519,551 KB

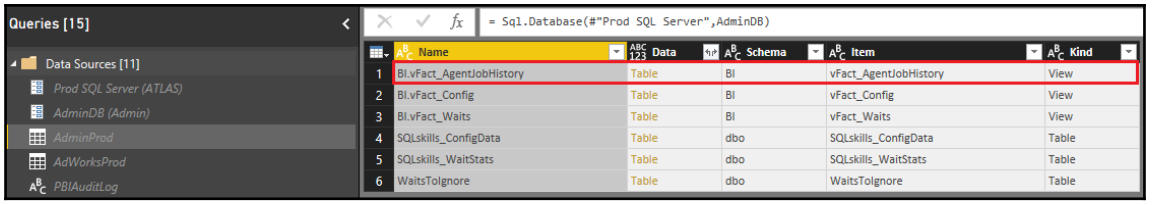




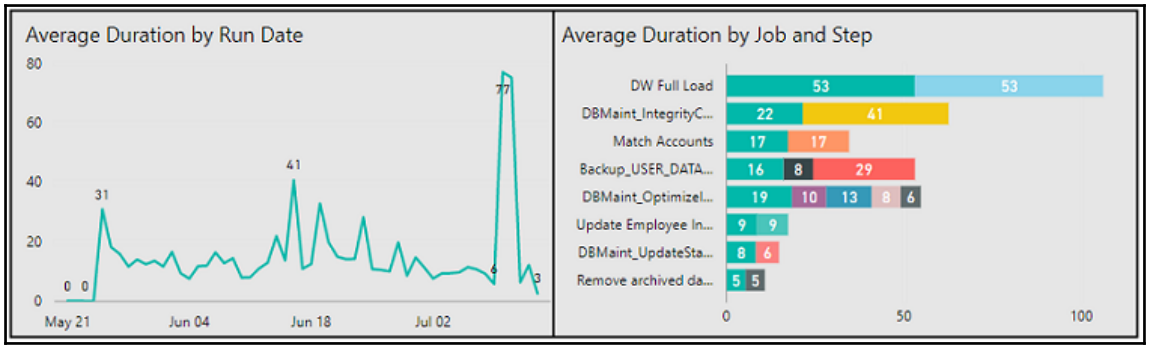




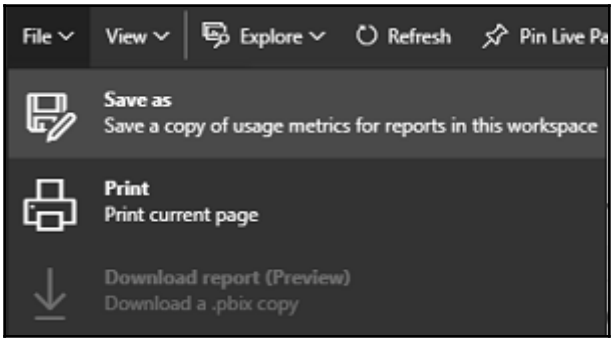
RecordType	CreationDate	UserIDs	Operations	AuditData	CreationDateOnly	DST Flag	LocalCreationDate
PowerBIAudit	7/14/2017 10:35:17 AM	brettp@FrontlineAnalytics.onmicrosoft.com	View Report	Record	7/14/2017	DST	7/14/2017 6:35:17 AM
PowerBIAudit	7/15/2017 11:35:17 AM	JenLawrence@FrontlineAnalytics.onmicrosoft.com	View Dashboard	Record	7/15/2017	DST	7/15/2017 7:35:17 AM

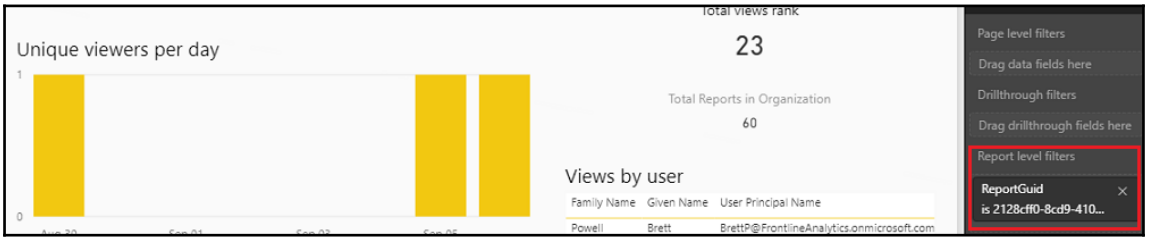


Server	Job Name	Step Na...	Execution St...	Run Date	Run Time	Run Duration Minutes	Message Generated	Job Status	Date Created
PRODSRV01	Capture Hourly Ba...	(Job outcome)	Succeeded	5/23/2017	4:00:29 PM	2	The job succeeded. The Job was invo...	Disabled	4/22/2017 4:24
PRODSRV01	DBMaint_UpdateS...	Update stats wit...	Failed	5/23/2017	8:00:00 PM	1	Executed as user: ProdAccount\DBA. ...	Enabled	4/22/2017 4:22

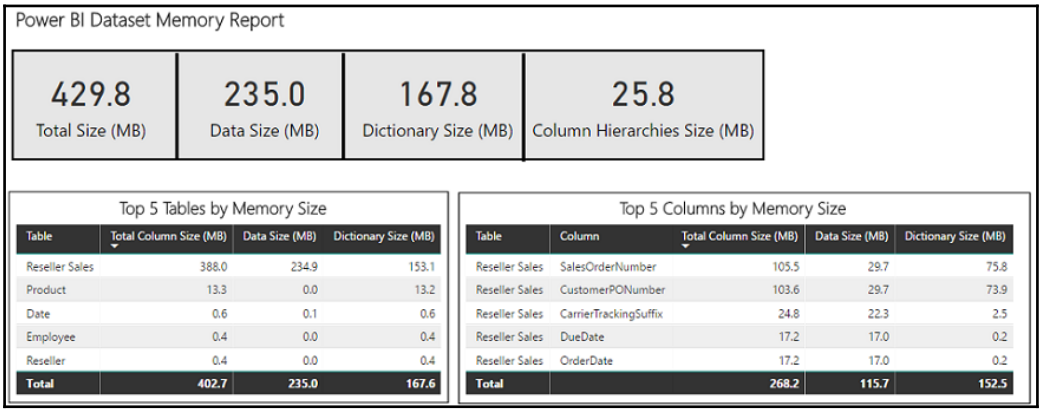



ACTIONS


File
View
Explore
Refresh
Pin Live Pa
Save as
Save a copy of usage metrics for reports in this workspace
Print
Print current page
Download report (Preview)
Download a .pbix copy


Unique viewers per day
1
0
Total views rank
23
Total Reports in Organization
60
Views by user
Family Name
Given Name
User Principal Name
Powell
Brett
BrettP@FrontlineAnalytics.onmicrosoft.com
Page level filters
Drag data fields here
Drillthrough filters
Drag drillthrough fields here
Report level filters
ReportGuid
is 2128cff0-8cd9-410...

Chapter 11: Enhancing and Optimizing Existing Power BI Solutions

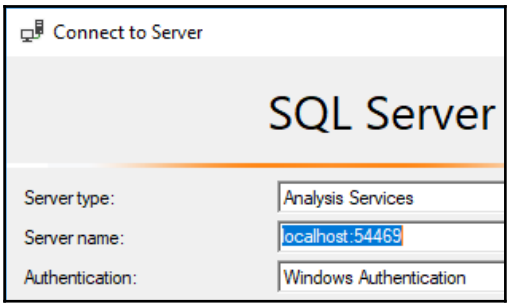


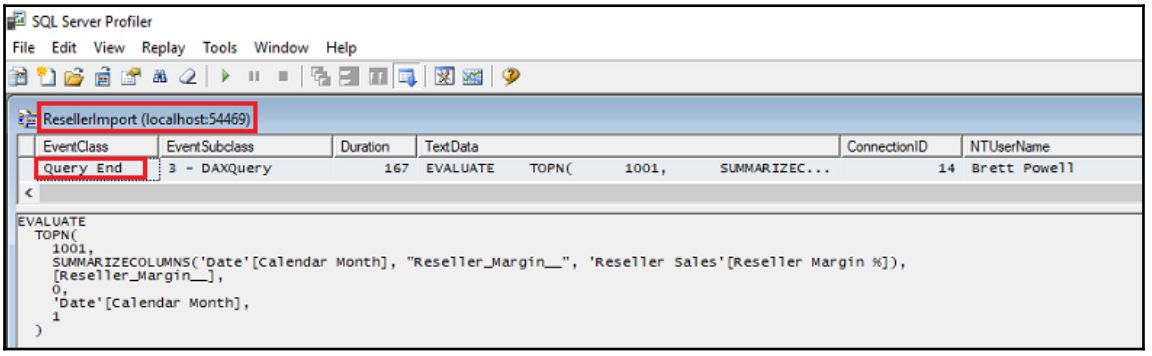
ResellerPromoKey	Reseller	Reseller Business Type	Reseller Product Line	Promotion	Promotion Category	Promotion Type
1008103	Exemplary Cycles	Specialty Bike Shop	Touring	Volume Discount 15 ...	Reseller	Volume Discount
1278103	Tread Industries	Warehouse	Mountain	Volume Discount 15 ...	Reseller	Volume Discount
1368103	Elemental Sporting Goo...	Specialty Bike Shop	Mountain	Volume Discount 15 ...	Reseller	Volume Discount

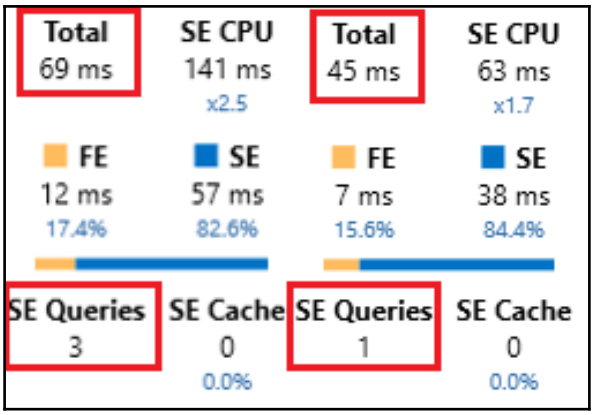
Column	Total Column Size (MB)	Data Size (MB)	Dictionary Size (MB)	VERTIPAQ_STATE
CarrierTrackingSuffix	23.9	22.3	1.6	COMPLETED
ResellerPromoKey	19.4	19.2	0.2	COMPLETED
OrderDate	16.7	16.5	0.2	COMPLETED

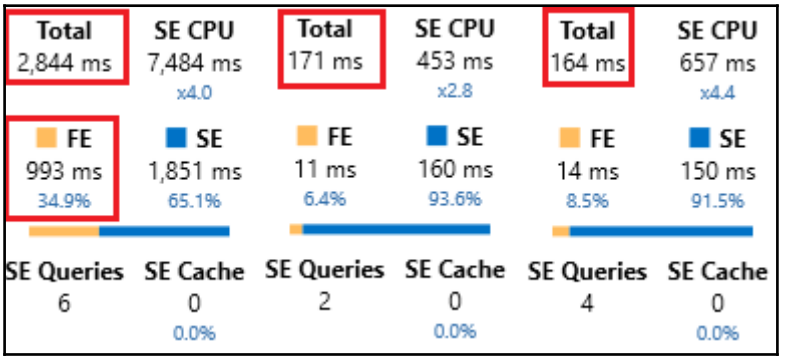
Table	Column	Total Column Size (MB)	Data Size (MB)	Dictionary Size (MB)
Reseller Sales	CarrierTrackingSuffix	24.8	22.3	2.5
Reseller Sales	OrderDate	16.7	16.5	0.2

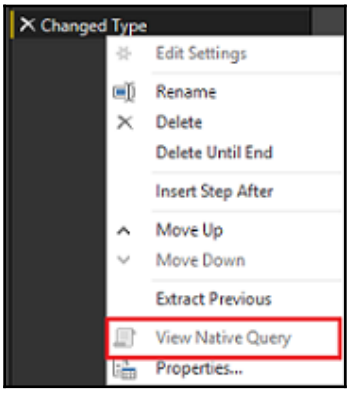
Table	Column	Total Column Size (MB)	Data Size (MB)	Dictionary Size (MB)
Reseller Sales	CarrierTrackingSuffix	24.8	22.3	2.5
Reseller Sales	ResellerKey	13.4	13.4	0.0
Reseller Sales	ProductKey	12.6	12.6	0.0
Reseller Sales	OrderDate	10.8	10.6	0.2



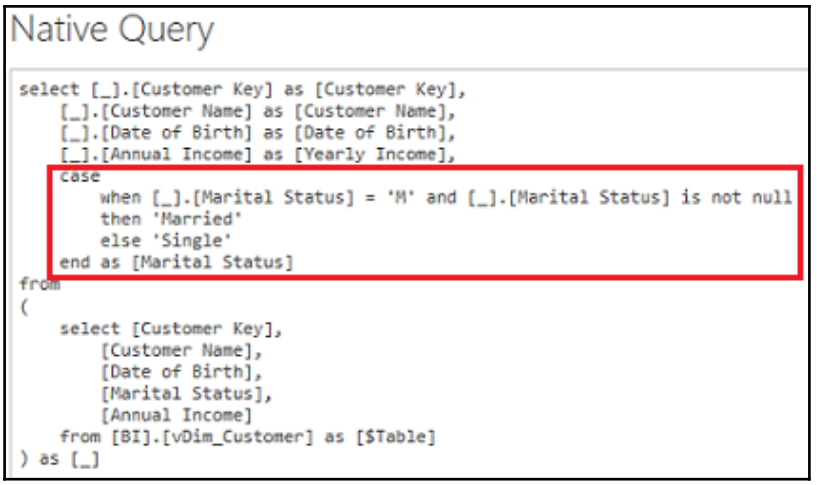


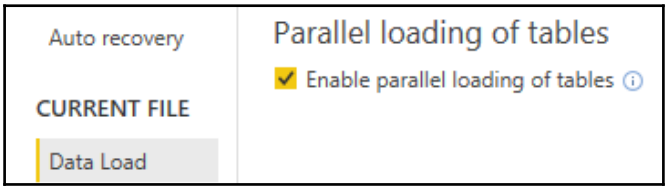


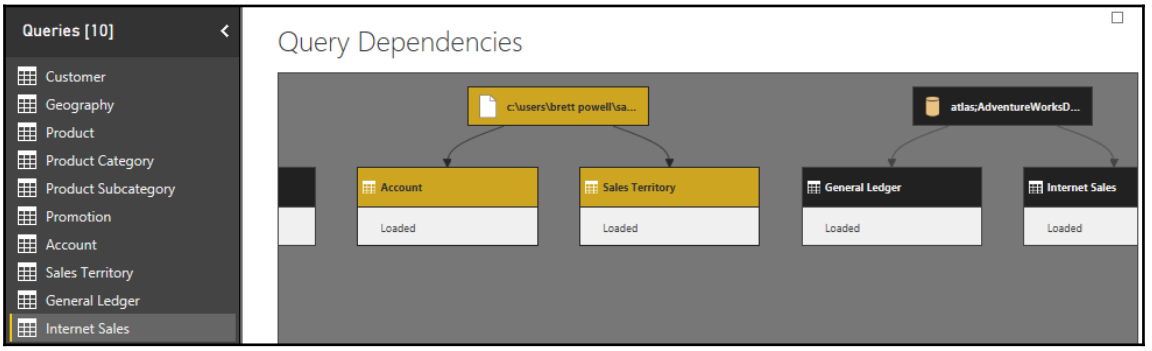


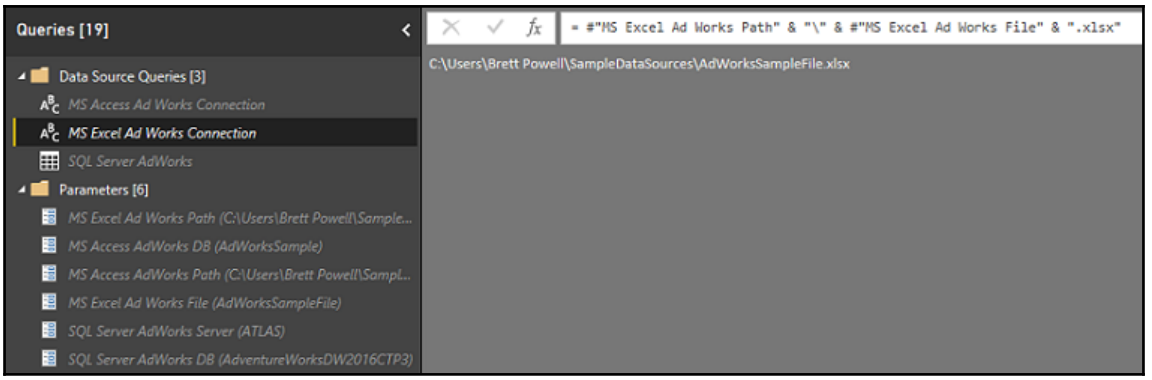



```
let
    Source = Sql.Database("ATLAS", "AdventureWorksDW2016CTP3",
[Query="Select CustomerKey,FirstName,LastName,BirthDate,MaritalStatus,YearlyIncome From dbo.DimCustomer"]),
    ChangedType = Table.TransformColumnTypes(Source,{{"BirthDate", type date}, {"YearlyIncome", Int64.Type}}),
    ReplacedValue = Table.ReplaceValue(ChangedType,"M","Married",Replacer.ReplaceText,{"MaritalStatus"}),
    ReplacedValue1 = Table.ReplaceValue(ReplacedValue,"S","Single",Replacer.ReplaceText,{"MaritalStatus"}),
    MergedColumns = Table.CombineColumns(ReplacedValue1,{"FirstName", "LastName"},Combiner.CombineTextByDelimiter(" ", QuoteStyle.None),"Customer Name"),
    RenamedColumns = Table.RenameColumns(MergedColumns,{{"MaritalStatus", "Marital Status"}, {"YearlyIncome", "Yearly Income"}, {"BirthDate", "Date of Birth"}})
in RenamedColumns
```

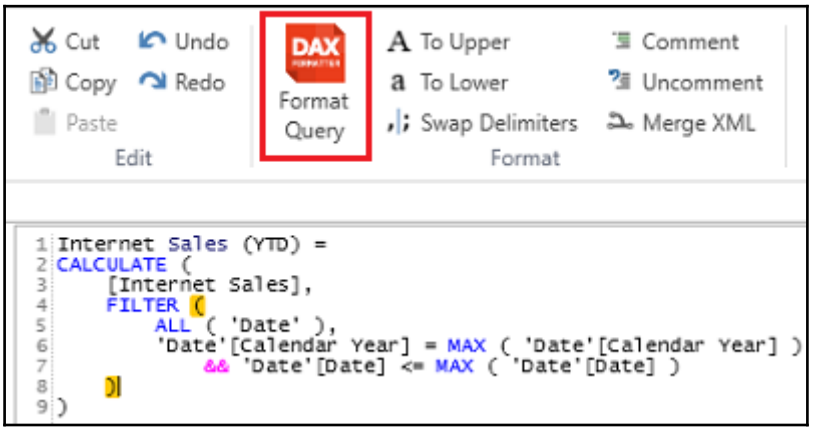

Native Query
select [_].[Customer Key] as [Customer Key],
[_].[Customer Name] as [Customer Name],
[_].[Date of Birth] as [Date of Birth],
[_].[Annual Income] as [Yearly Income],
case
when [_].[Marital Status] = 'M' and [_].[Marital Status] is not null
then 'Married'
else 'Single'
end as [Marital Status]
from
(
select [Customer Key],
[Customer Name],
[Date of Birth],
[Marital Status],
[Annual Income]
from [BI].[vDim_Customer] as [$Table]
) as [_]


Auto recovery
CURRENT FILE
Data Load
Parallel loading of tables
Enable parallel loading of tables

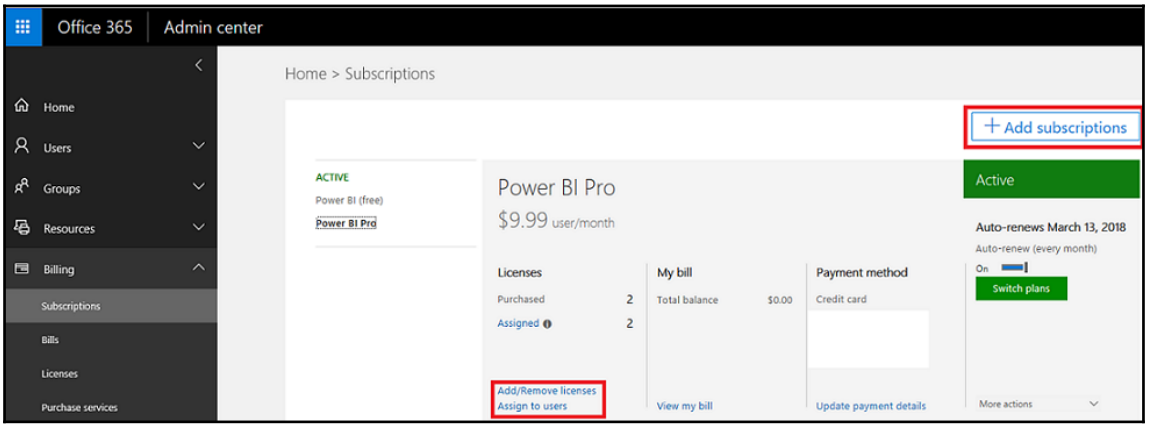

Queries [10]
Customer
Geography
Product
Product Category
Product Subcategory
Promotion
Account
Sales Territory
General Ledger
Internet Sales
Query Dependencies
c:\users\brett powell\sa...
atlas;AdventureWorksD...
Account
Loaded
Sales Territory
Loaded
General Ledger
Loaded
Internet Sales
Loaded

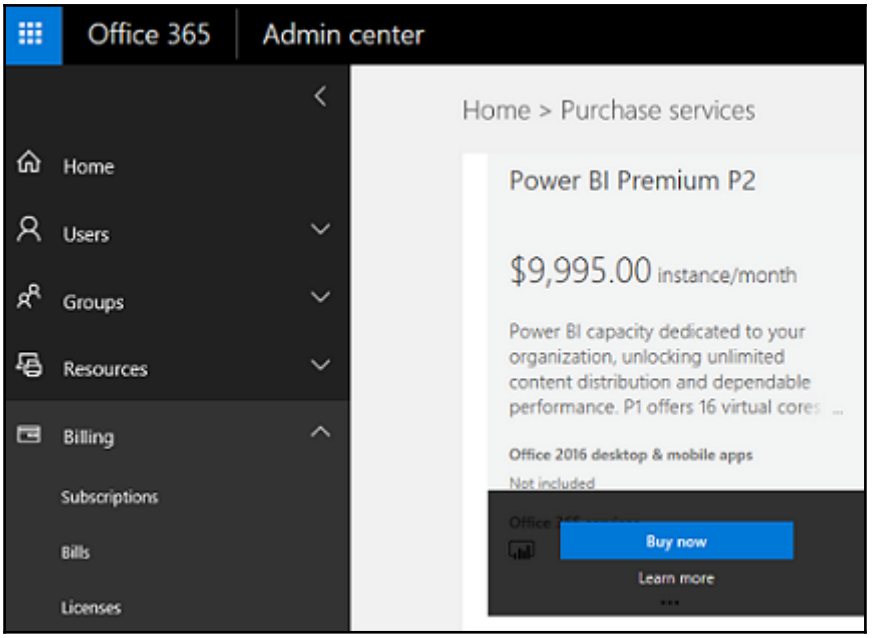


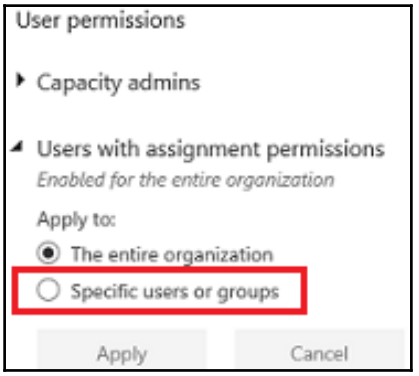
CustomerKey	CustomerAlternateKey	EmailAddress	BirthDate
11000	AW00011000	jon24@adventure-works.com	null
11001	AW00011001	eugene10@adventure-works.com	null
11002	AW00011002	ruben35@adventure-works.com	null

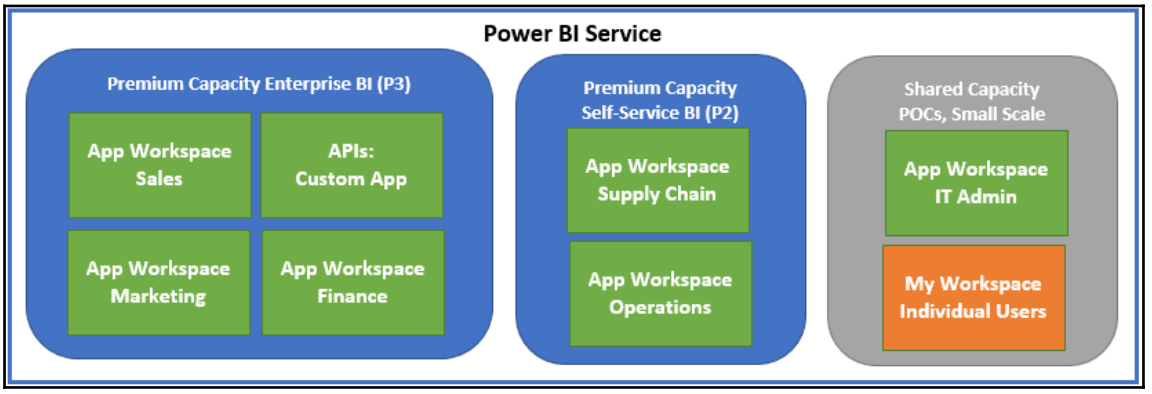


Chapter 12: Deploying and Distributing Power BI Content

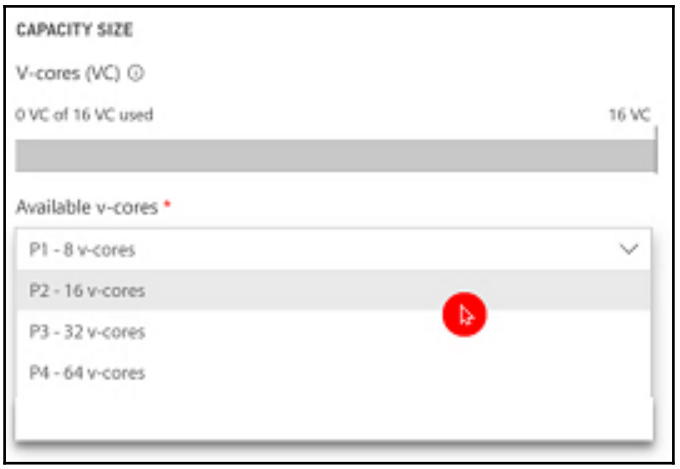


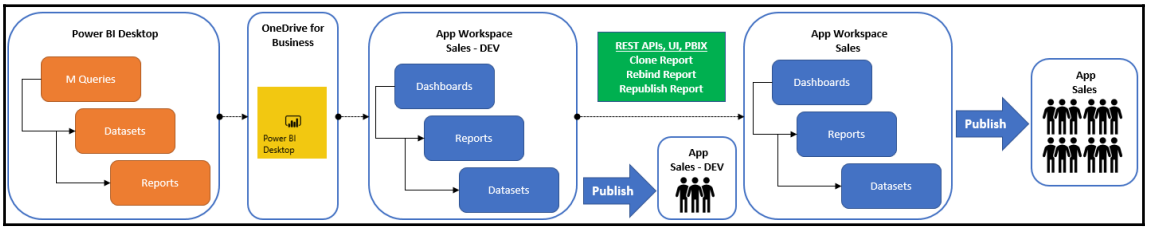


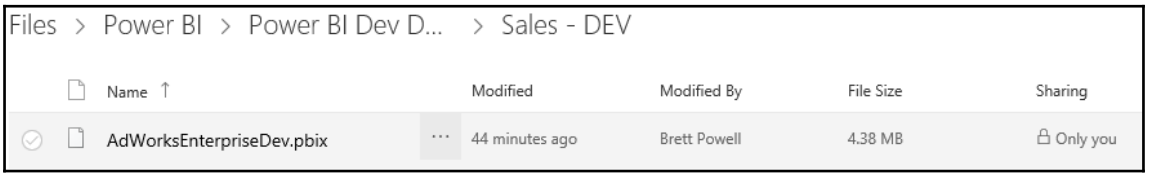


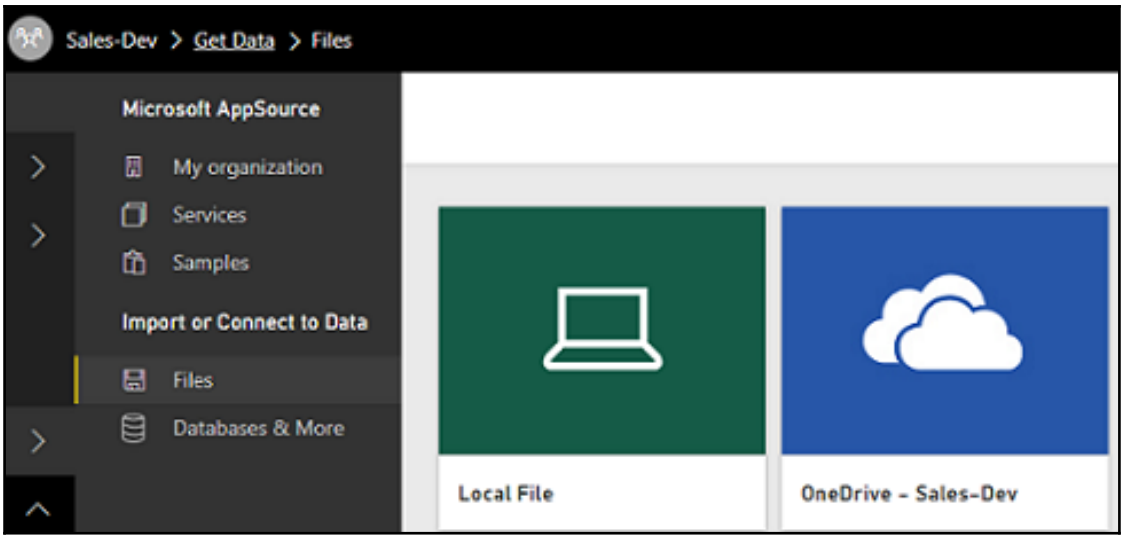


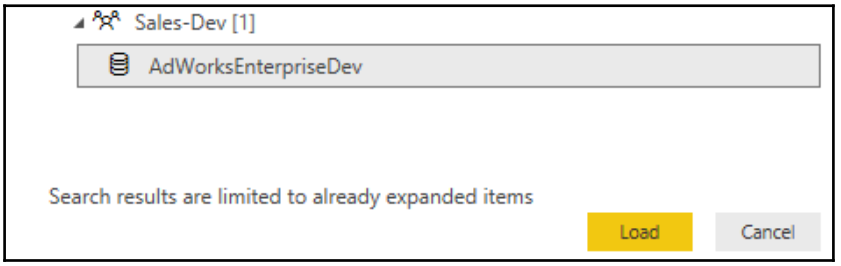
CAPACITY NODE	CORES	BACKEND CORES	FRONTEND CORES
P1	8 v-Cores	4 cores, 25 GB RAM	4 cores
P2	16 v-Cores	8 cores, 50 GB RAM	8 cores
P3	32 v-Cores	16 cores, 100 GB RAM	16 cores

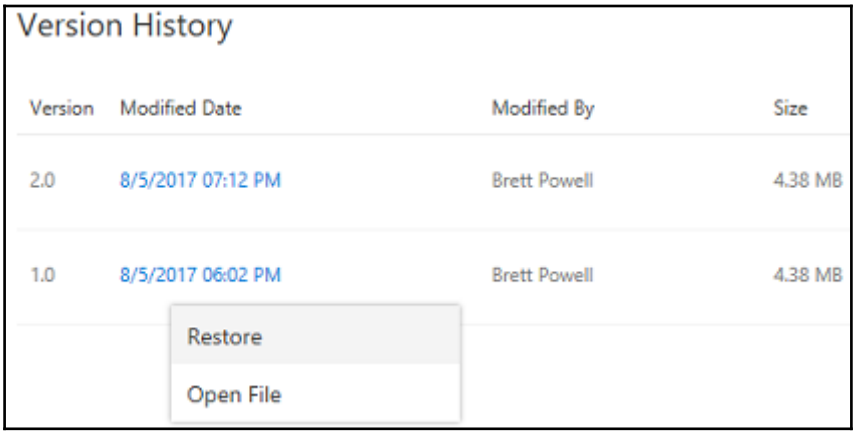

CAPACITY SIZE
V-cores (VC)
0 VC of 16 VC used
16 VC
Available v-cores *
P1 - 8 v-cores
P2 - 16 v-cores
P3 - 32 v-cores
P4 - 64 v-cores

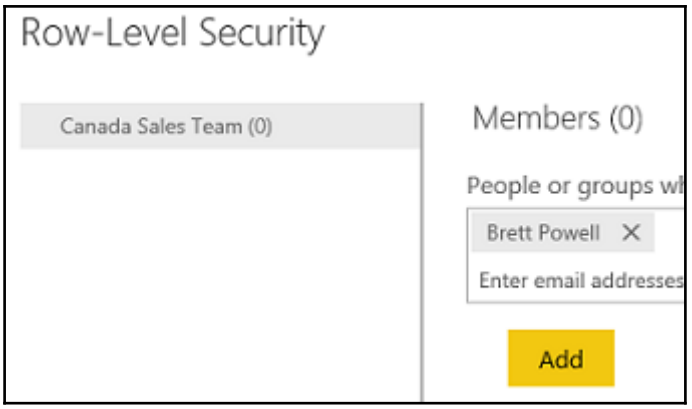

Power BI Desktop
M Queries
Datasets
Reports
OneDrive for Business
Power BI Desktop
App Workspace Sales - DEV
Dashboards
Reports
Datasets
REST APIs, UI, PBIX
Clone Report
Rebind Report
Republish Report
Publish
App Sales - DEV
App Workspace Sales
Dashboards
Reports
Datasets
Publish
App Sales

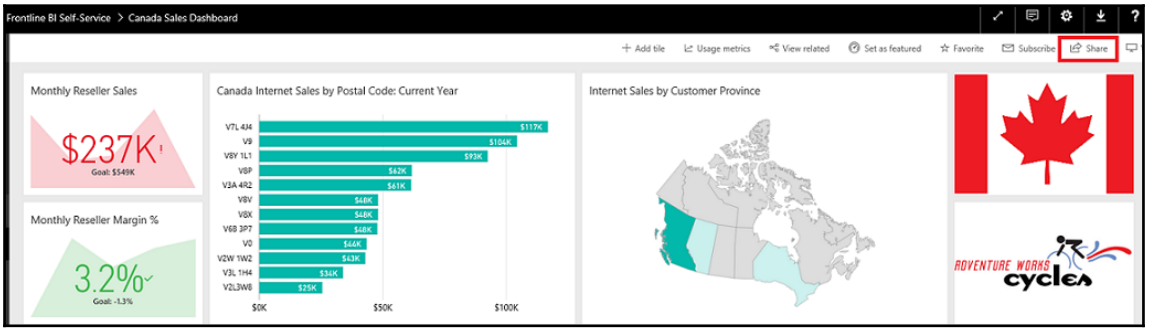

Files > Power BI > Power BI Dev D... > Sales - DEV
Name
Modified
Modified By
File Size
Sharing
AdWorksEnterpriseDev.pbix
44 minutes ago
Brett Powell
4.38 MB
Only you

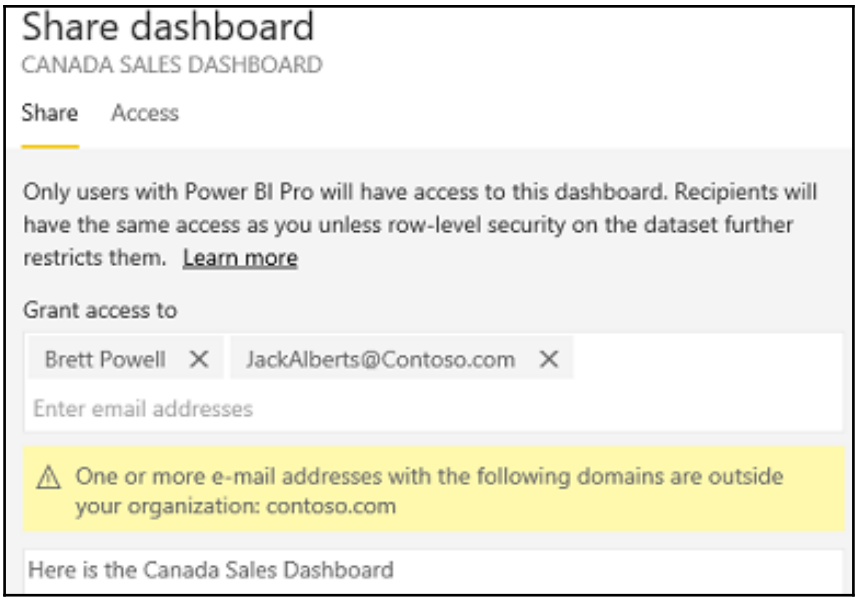

Sales-Dev > Get Data > Files
Microsoft AppSource
My organization
Services
Samples
Import or Connect to Data
Files
Databases & More
Local File
OneDrive - Sales-Dev

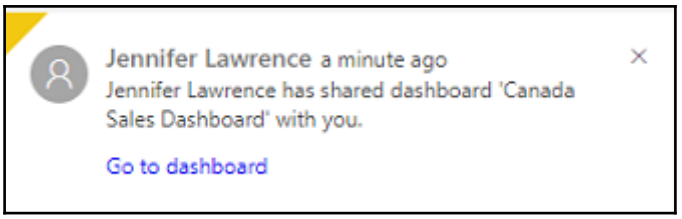

Sales-Dev [1]
AdWorksEnterpriseDev
Search results are limited to already expanded items
Load
Cancel

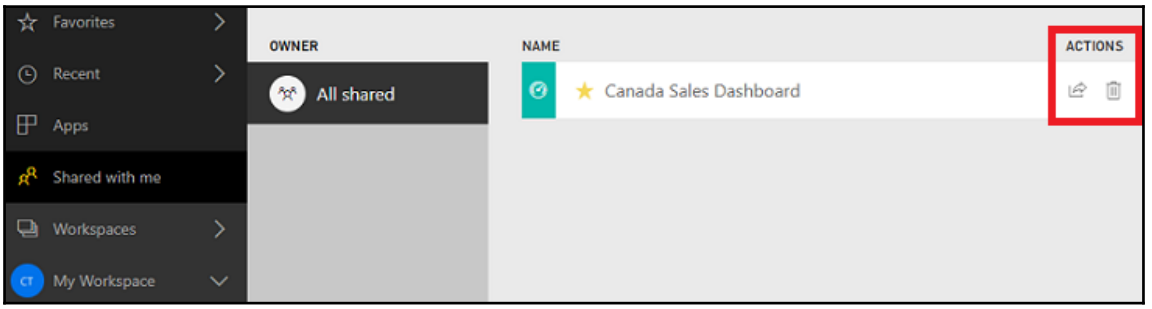

Version History
Version
Modified Date
Modified By
Size
2.0
8/5/2017 07:12 PM
Brett Powell
4.38 MB
1.0
8/5/2017 06:02 PM
Brett Powell
4.38 MB
Restore
Open File

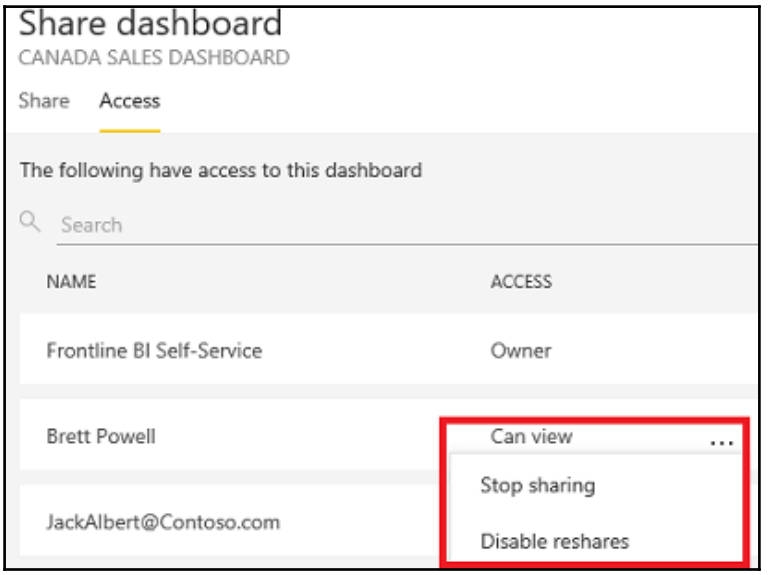

Row-Level Security
Canada Sales Team (0)
Members (0)
People or groups wh
Brett Powell
Enter email addresses
Add

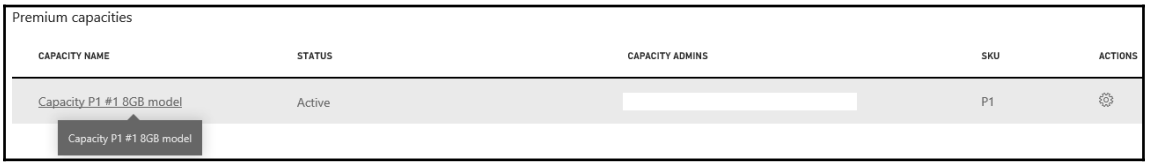

Frontline BI Self-Service > Canada Sales Dashboard
Add tile
Usage metrics
View related
Set as featured
Favorite
Subscribe
Share
Monthly Reseller Sales
$237K
Goal: $549K
Monthly Reseller Margin %
3.2%
Goal: -1.3%
Canada Internet Sales by Postal Code: Current Year
V7L 4J4
V9
V8Y 1L1
V8P
V3A 4R2
V8V
V8X
V6B 3P7
V0
V2W 1W2
V3L 1H4
V2L3W8
$117K
$104K
$93K
$62K
$61K
$46K
$46K
$46K
$44K
$43K
$34K
$25K
$0K
$50K
$100K
Internet Sales by Customer Province
ADVENTURE WORKS cycles

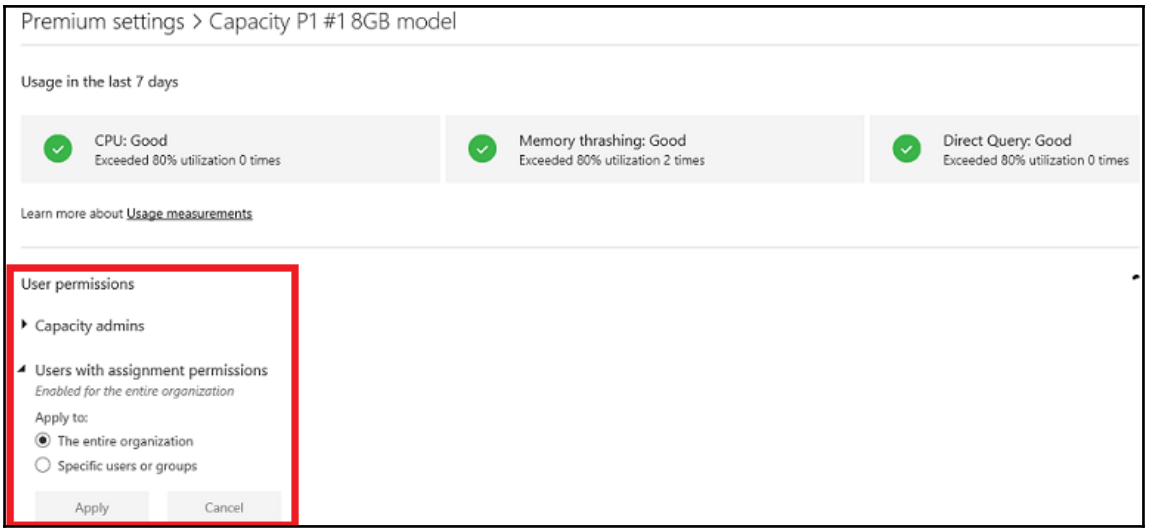

Share dashboard
CANADA SALES DASHBOARD
Share
Access
Only users with Power BI Pro will have access to this dashboard. Recipients will have the same access as you unless row-level security on the dataset further restricts them. Learn more
Grant access to
Brett Powell
JackAlberts@Contoso.com
Enter email addresses
One or more e-mail addresses with the following domains are outside your organization: contoso.com
Here is the Canada Sales Dashboard

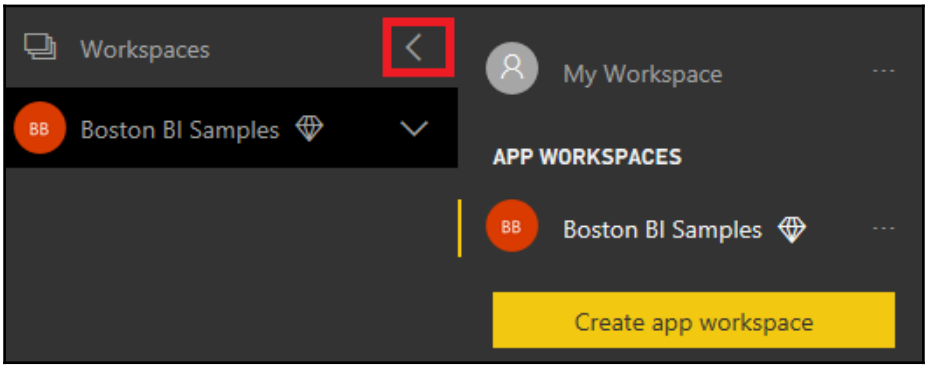

Jennifer Lawrence a minute ago
Jennifer Lawrence has shared dashboard 'Canada Sales Dashboard' with you.
Go to dashboard

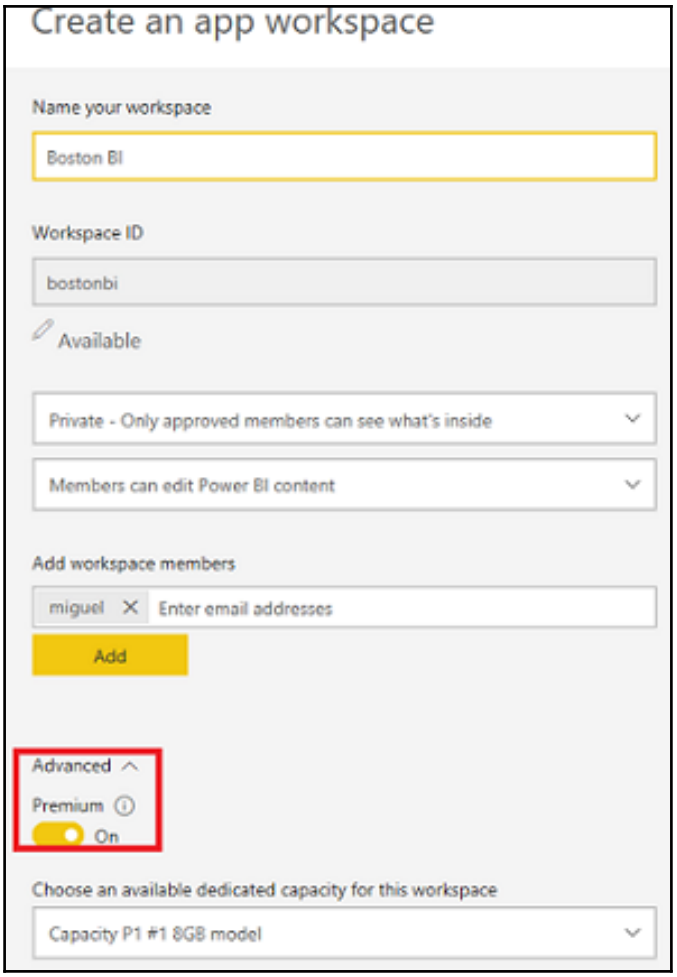

Favorites
Recent
Apps
Shared with me
Workspaces
My Workspace
OWNER
All shared
NAME
Canada Sales Dashboard
ACTIONS

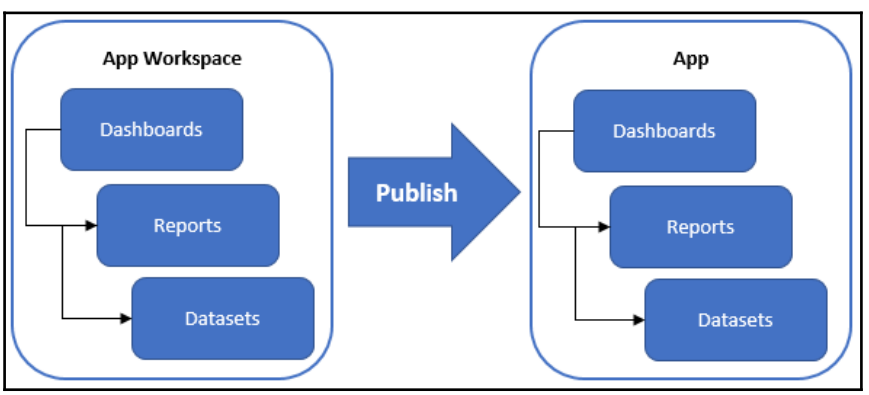

Share dashboard
CANADA SALES DASHBOARD
Share
Access
The following have access to this dashboard
Search
NAME
ACCESS
Frontline BI Self-Service
Owner
Brett Powell
Can view
Stop sharing
JackAlbert@Contoso.com
Disable reshares

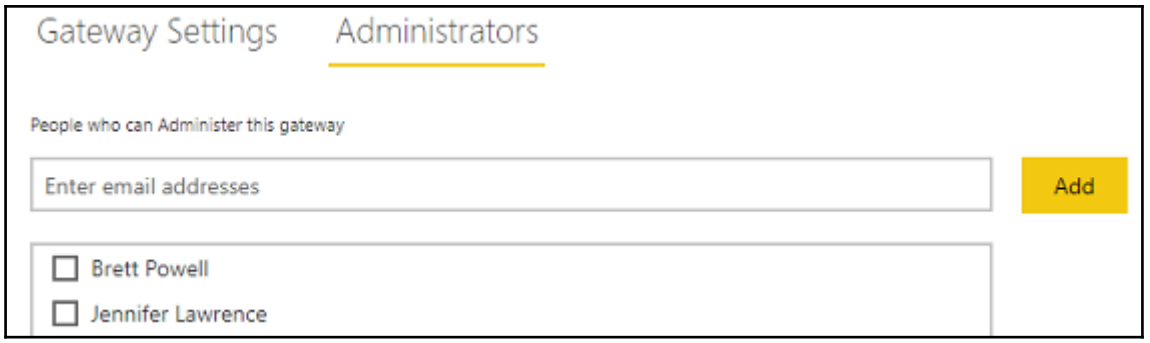

Premium capacities
CAPACITY NAME
STATUS
CAPACITY ADMINS
SKU
ACTIONS
Capacity P1 #1 8GB model
Active
P1
Capacity P1 #1 8GB model

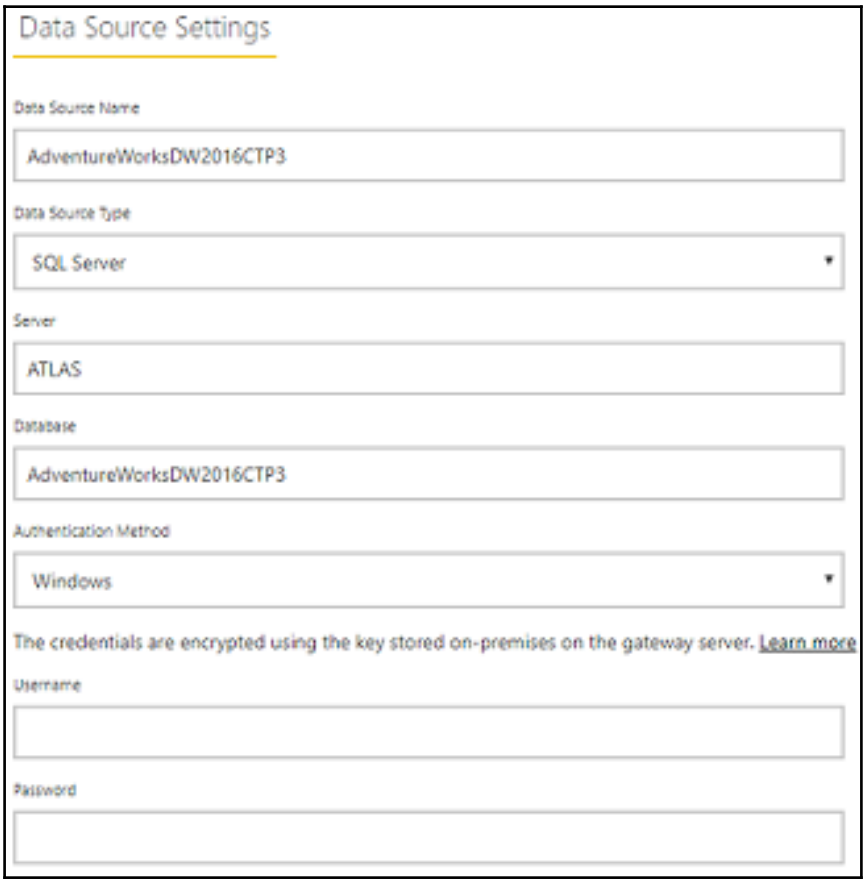

Premium settings > Capacity P1 #1 8GB model
Usage in the last 7 days
CPU: Good
Exceeded 80% utilization 0 times
Memory thrashing: Good
Exceeded 80% utilization 2 times
Direct Query: Good
Exceeded 80% utilization 0 times
Learn more about Usage measurements
User permissions
Capacity admins
Users with assignment permissions
Enabled for the entire organization
Apply to:
The entire organization
Specific users or groups
Apply
Cancel

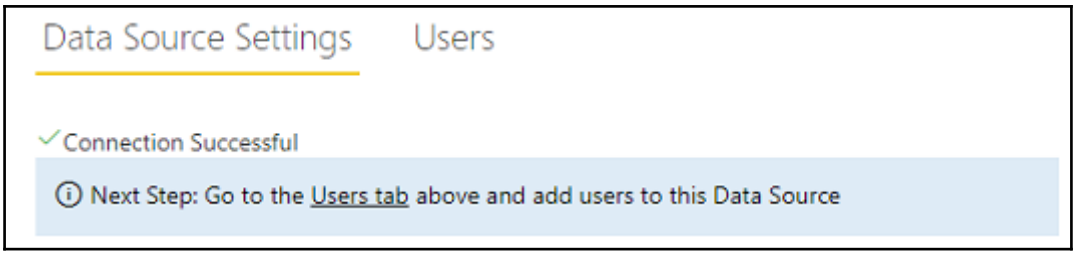

Workspaces
BB
Boston BI Samples
My Workspace
APP WORKSPACES
BB
Boston BI Samples
Create app workspace

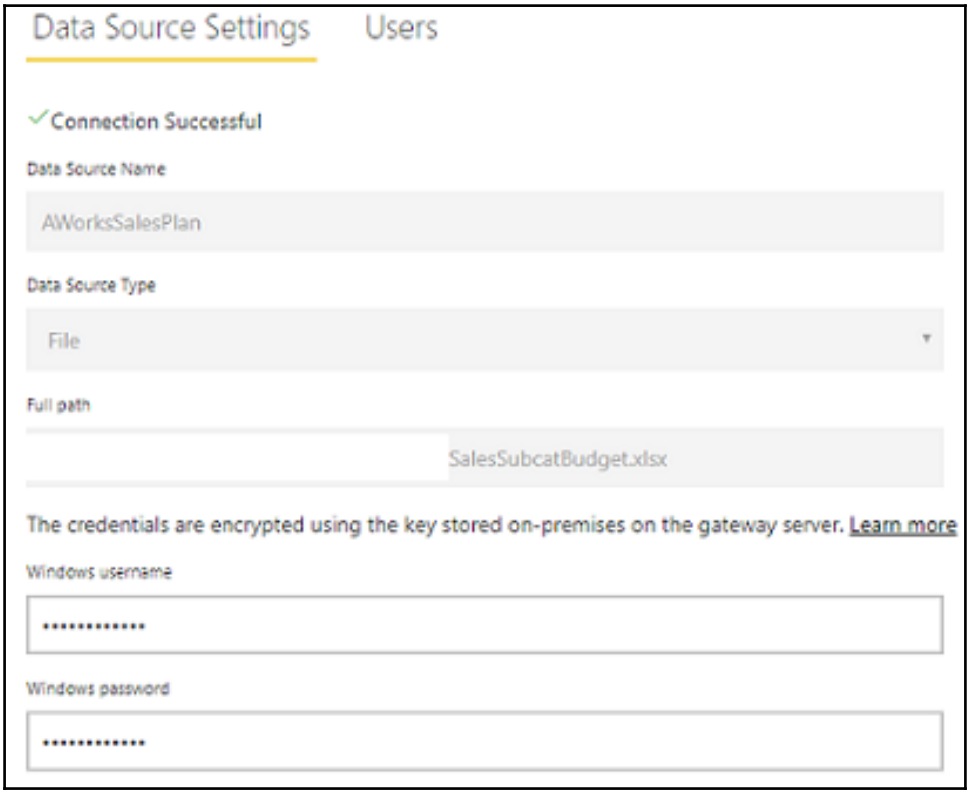

Create an app workspace
Name your workspace
Boston BI
Workspace ID
bostonbi
Available
Private - Only approved members can see what's inside
Members can edit Power BI content
Add workspace members
miguel
Enter email addresses
Add
Advanced
Premium
On
Choose an available dedicated capacity for this workspace
Capacity P1 #1 8GB model

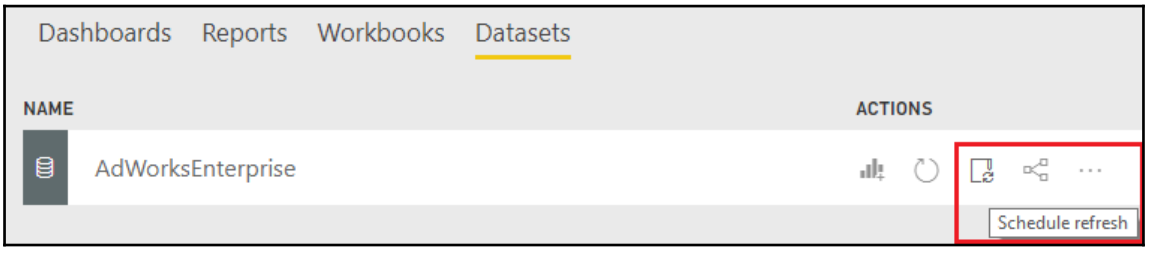

App Workspace
Dashboards
Reports
Datasets
Publish
App
Dashboards
Reports
Datasets

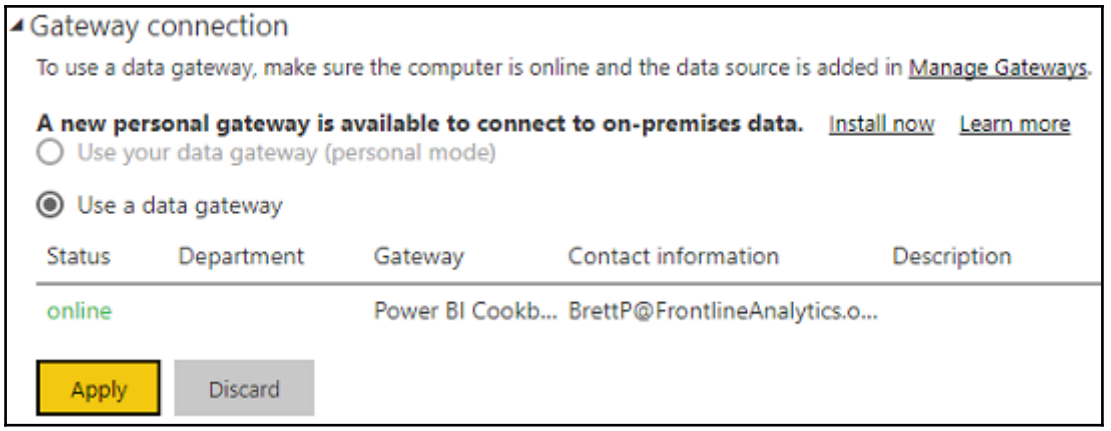

Gateway Settings
Administrators
People who can Administer this gateway
Enter email addresses
Add
Brett Powell
Jennifer Lawrence

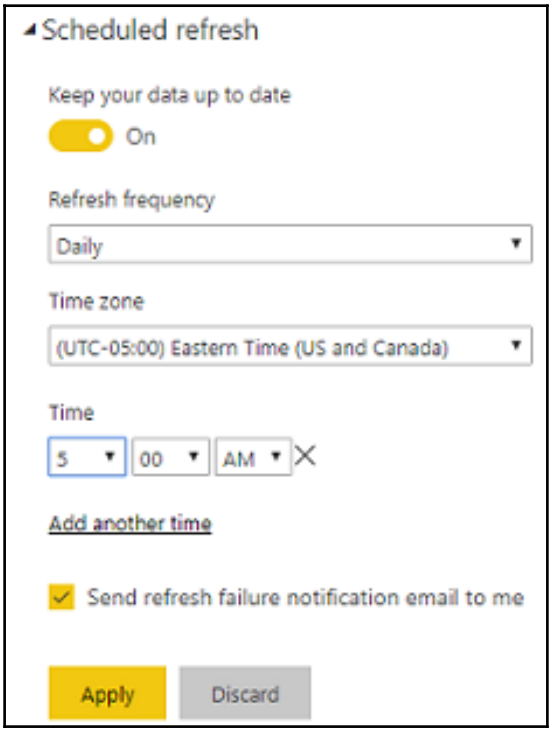

Data Source Settings
Data Source Name
AdventureWorksDW2016CTP3
Data Source Type
SQL Server
Server
ATLAS
Database
AdventureWorksDW2016CTP3
Authentication Method
Windows
The credentials are encrypted using the key stored on-premises on the gateway server. Learn more
Username
Password

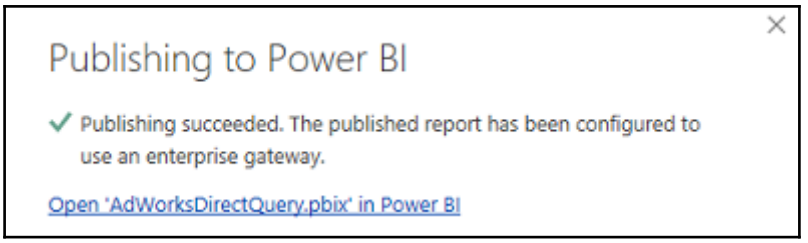

Data Source Settings
Users
Connection Successful
Next Step: Go to the Users tab above and add users to this Data Source

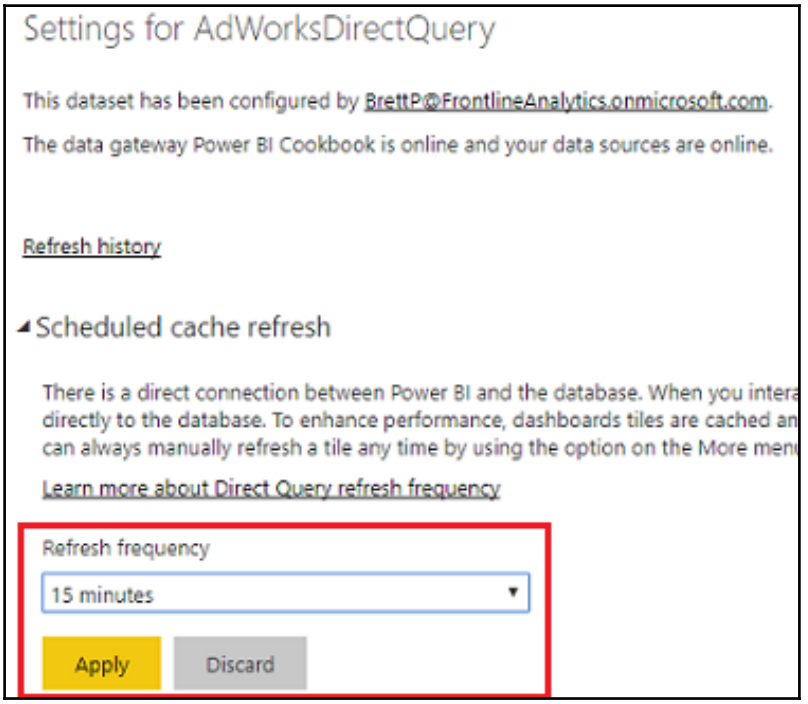

Data Source Settings
Users
Connection Successful
Data Source Name
AWorksSalesPlan
Data Source Type
File
Full path
SalesSubcatBudget.xlsx
The credentials are encrypted using the key stored on-premises on the gateway server. Learn more
Windows username
Windows password

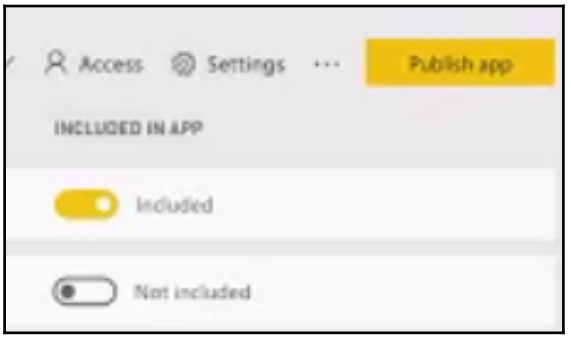

Dashboards
Reports
Workbooks
Datasets
NAME
ACTIONS
AdWorksEnterprise
Schedule refresh

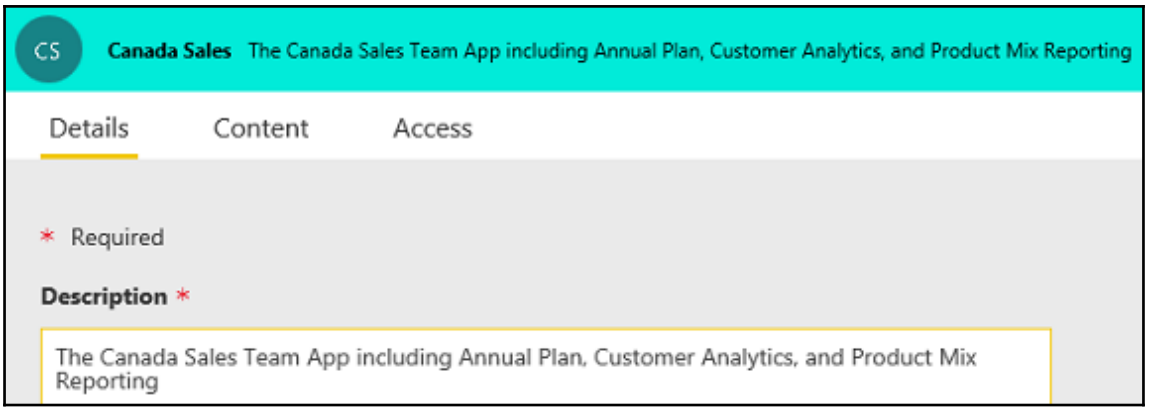

Gateway connection
To use a data gateway, make sure the computer is online and the data source is added in Manage Gateways.
A new personal gateway is available to connect to on-premises data.
Install now
Learn more
Use your data gateway (personal mode)
Use a data gateway
Status
Department
Gateway
Contact information
Description
online
Power BI Cookb...
BrettP@FrontlineAnalytics.o...
Apply
Discard

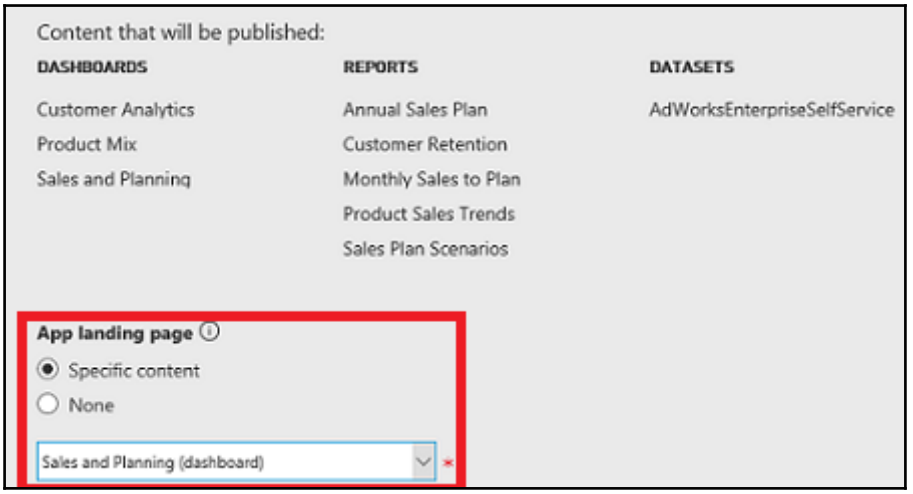

Scheduled refresh
Keep your data up to date
On
Refresh frequency
Daily
Time zone
(UTC-05:00) Eastern Time (US and Canada)
Time
5
00
AM
Add another time
Send refresh failure notification email to me
Apply
Discard

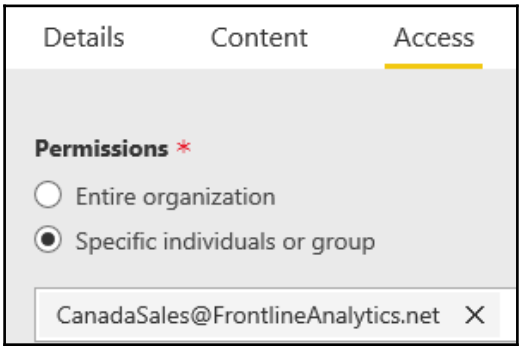

Publishing to Power BI
Publishing succeeded. The published report has been configured to use an enterprise gateway.
Open 'AdWorksDirectQuery.pbix' in Power BI


Settings for AdWorksDirectQuery
This dataset has been configured by BrettP@FrontlineAnalytics.onmicrosoft.com.
The data gateway Power BI Cookbook is online and your data sources are online.
Refresh history
Scheduled cache refresh
There is a direct connection between Power BI and the database. When you intera
directly to the database. To enhance performance, dashboards tiles are cached an
can always manually refresh a tile any time by using the option on the More menu
Learn more about Direct Query refresh frequency
Refresh frequency
15 minutes
Apply
Discard

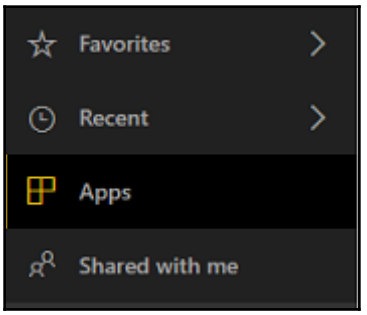

Access
Settings
Publish app
INCLUDED IN APP
Included
Not included

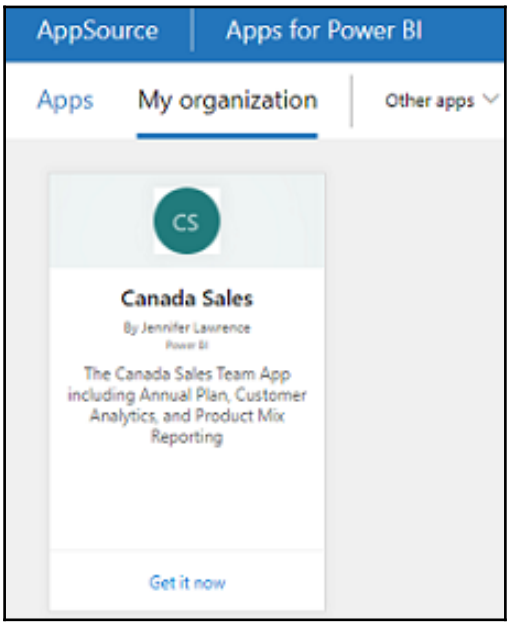

CS
Canada Sales The Canada Sales Team App including Annual Plan, Customer Analytics, and Product Mix Reporting
Details
Content
Access
* Required
Description *
The Canada Sales Team App including Annual Plan, Customer Analytics, and Product Mix Reporting


Content that will be published:
DASHBOARDS
Customer Analytics
Product Mix
Sales and Planning
REPORTS
Annual Sales Plan
Customer Retention
Monthly Sales to Plan
Product Sales Trends
Sales Plan Scenarios
DATASETS
AdWorksEnterpriseSelfService
App landing page
Specific content
None
Sales and Planning (dashboard)

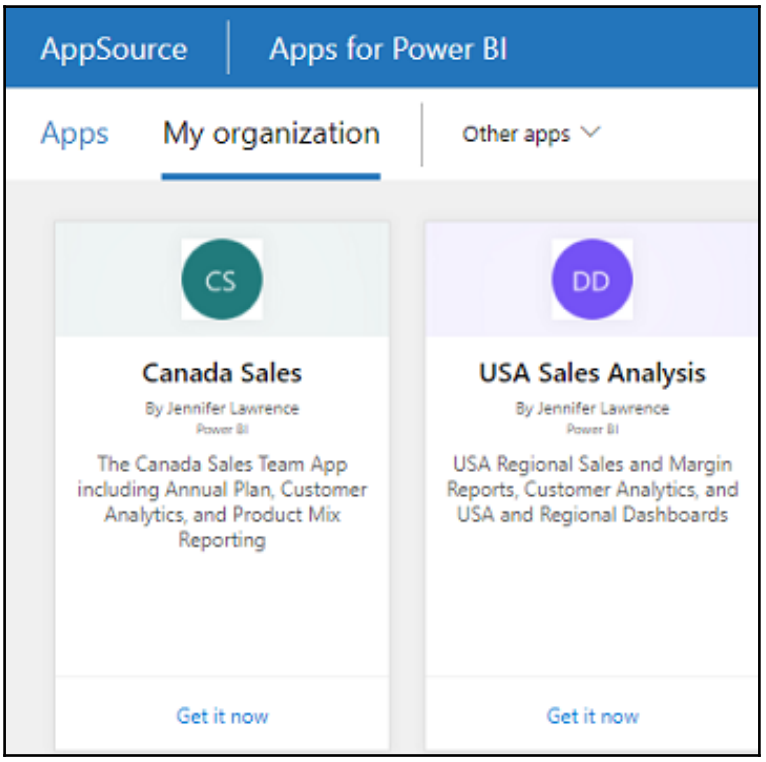

Details
Content
Access
Permissions *
Entire organization
Specific individuals or group
CanadaSales@FrontlineAnalytics.net


SUCCESSFULLY PUBLISHED
Canada Sales
You can now share this link with everyone you have given access to. Users that were given access can also install the app by visiting Get Apps.
https://app.powerbi.com/Redirect?action=OpenApp&appId=4c3
Copy


Favorites
Recent
Apps
Shared with me


AppSource
Apps for Power BI
Apps
My organization
Other apps
CS
Canada Sales
By Jennifer Lawrence
Power BI
The Canada Sales Team App including Annual Plan, Customer Analytics, and Product Mix Reporting
Get it now


3
5
0
1
View content list


AppSource
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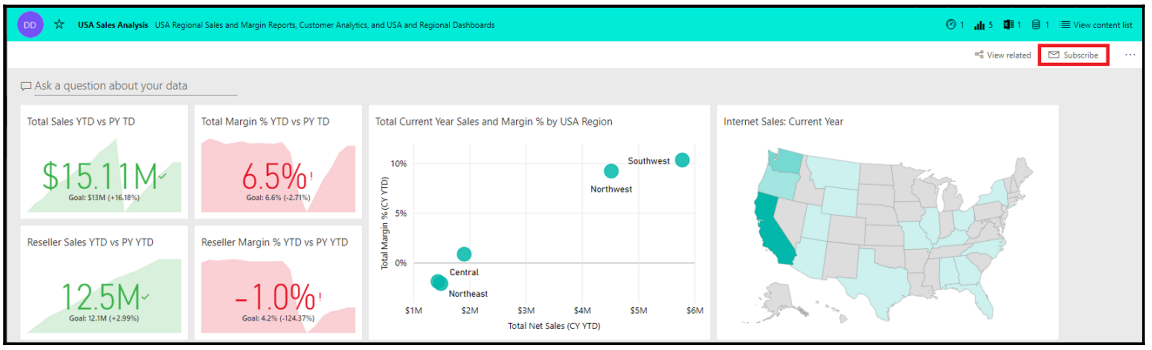
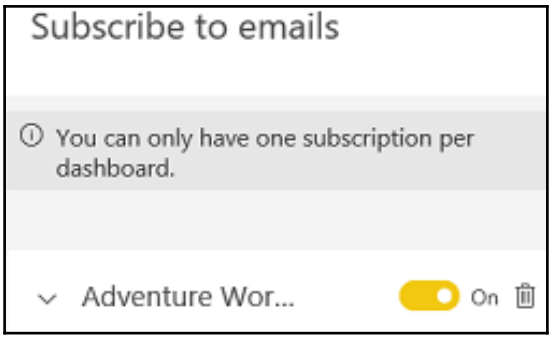
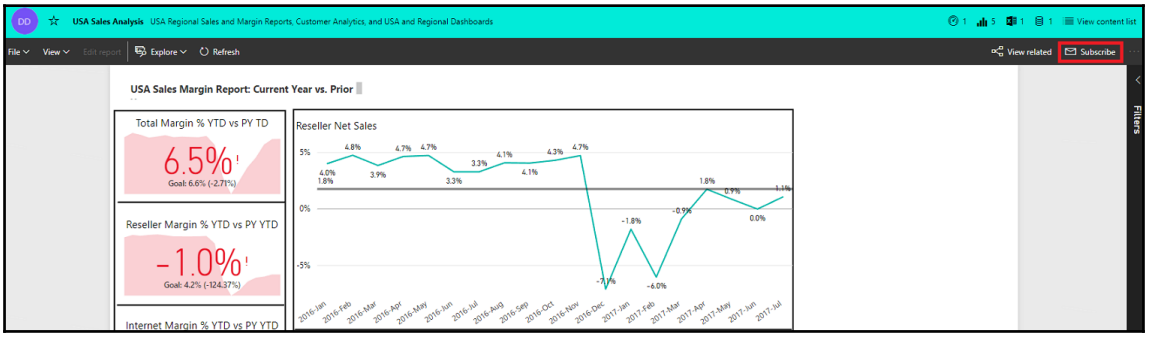
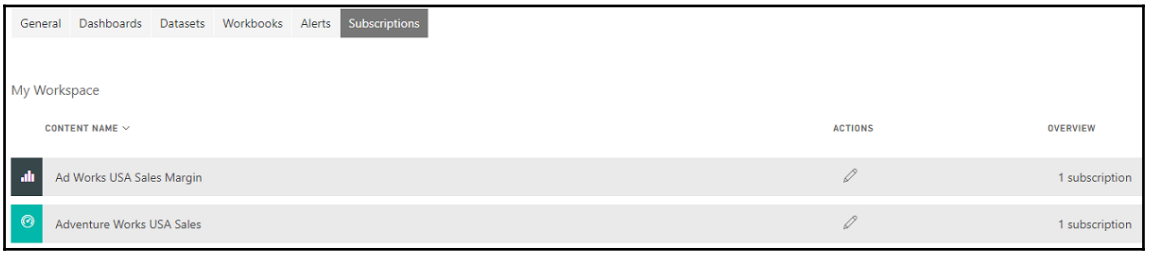
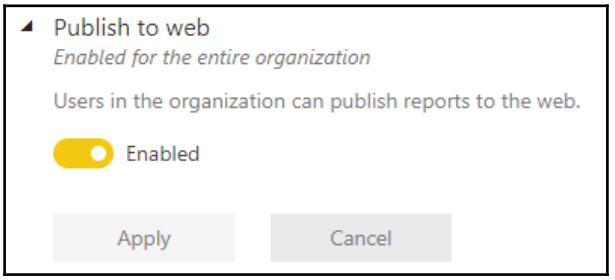
DD
USA Sales Analysis
By Jennifer Lawrence
Power BI
USA Regional Sales and Margin Reports, Customer Analytics, and USA and Regional Dashboards
Get it now

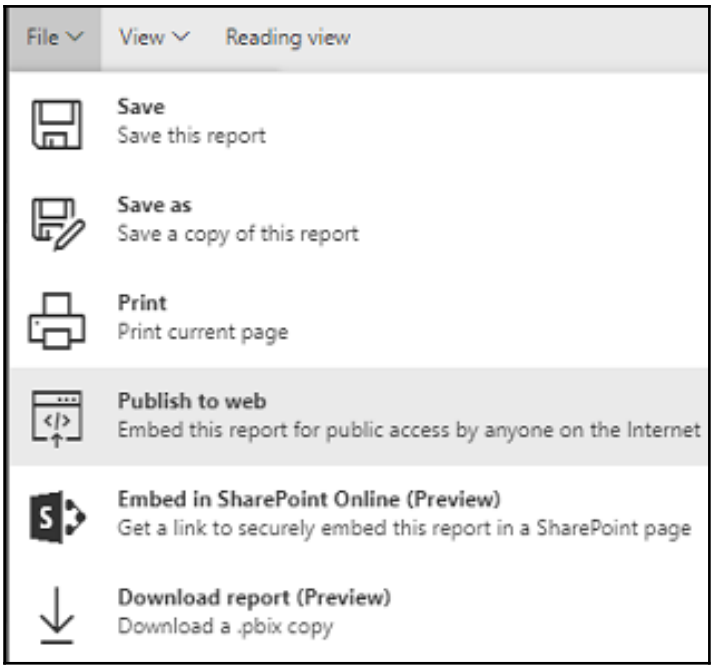

USA Sales Analysis
USA Regional Sales and Margin Reports, Customer Analytics, and USA and Regional Dashboards
View content list
View related
Subscribe
Ask a question about your data
Total Sales YTD vs PY TD
$15.11M
Total Margin % YTD vs PY TD
6.5%
Total Current Year Sales and Margin % by USA Region
Southwest
Northwest
Central
Northeast
Total Margin % (CY YTD)
Total Net Sales (CY YTD)
Internet Sales: Current Year
Reseller Sales YTD vs PY YTD
12.5M
Reseller Margin % YTD vs PY YTD
-1.0%


Subscribe to emails
You can only have one subscription per dashboard.
Adventure Wor...
On


USA Sales Analysis
USA Regional Sales and Margin Reports, Customer Analytics, and USA and Regional Dashboards
File
View
Edit report
Explore
Refresh
View related
Subscribe
USA Sales Margin Report: Current Year vs. Prior
Total Margin % YTD vs PY TD
6.5%
Goal: 6.6% (-2.71%)
Reseller Margin % YTD vs PY YTD
-1.0%
Goal: 4.2% (-124.37%)
Internet Margin % YTD vs PY YTD
Reseller Net Sales
Filters


General
Dashboards
Datasets
Workbooks
Alerts
Subscriptions
My Workspace
CONTENT NAME
ACTIONS
OVERVIEW
Ad Works USA Sales Margin
1 subscription
Adventure Works USA Sales
1 subscription

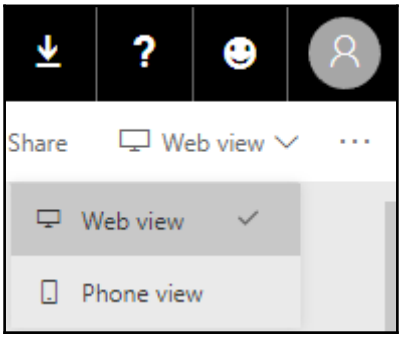

Publish to web
Enabled for the entire organization
Users in the organization can publish reports to the web.
Enabled
Apply
Cancel


File
View
Reading view
Save
Save this report
Save as
Save a copy of this report
Print
Print current page
Publish to web
Embed this report for public access by anyone on the Internet
Embed in SharePoint Online (Preview)
Get a link to securely embed this report in a SharePoint page
Download report (Preview)
Download a .pbix copy

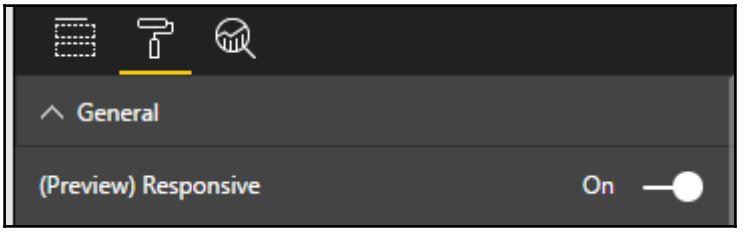

AdventureWorks Publish to Web
Associated Report
Status
Date Created
Boston Property Assessment
Active
7/30/2017, 5:56:39 PM
Get code
Delete


Embed code
Link you can send in email
https://app.powerbi.com/view?r=eyJrIjoiM2ZiNjVlMDMtMWNjZi00YmFkl
Html you can paste into your blog or website
<iframe width="800" height="600" src="https://app.powerbi.com/view?r
Size
800 x 600 px

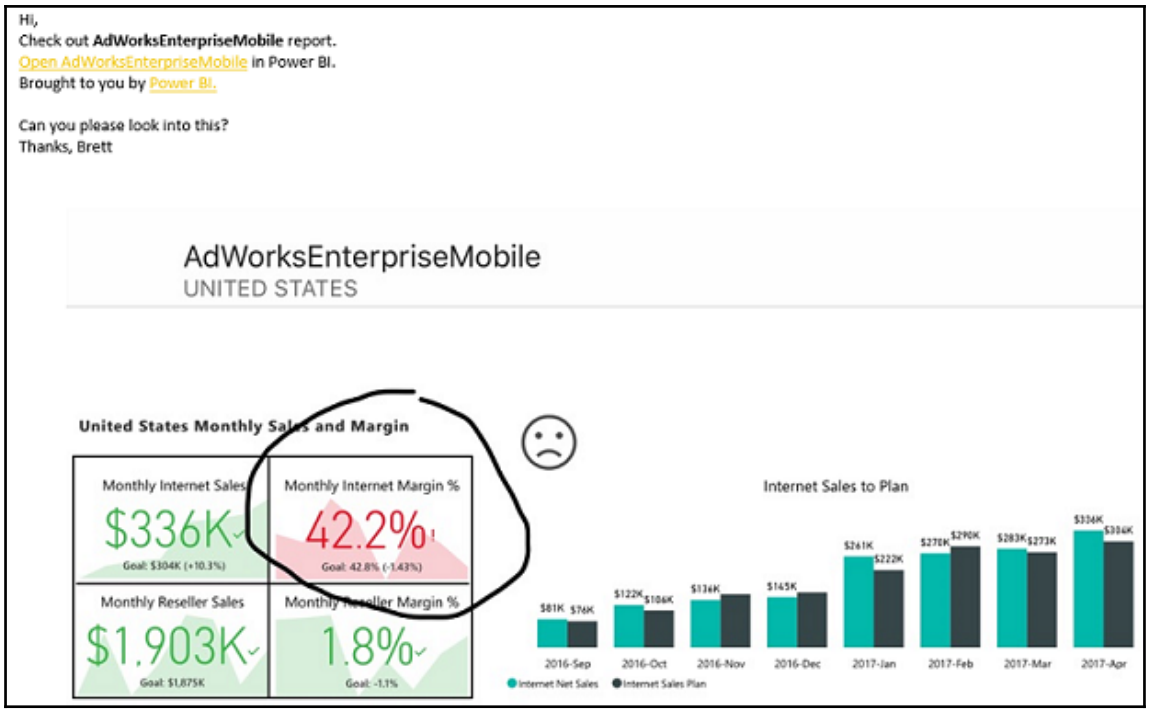

Most Consumed Dashboards by Users
2
1
0
Customer Analytics - 4331058
Product Mix - 4331059
Sales and Planning - 4331057
Brett's Dashboard - 802432
Canada Sales Dashboard - 4322657
North America Sale Dashboard - 3976759
Most Consumed Packages by Users
Canada Sales
WeightLossTrend.pbix
PlayerScores.xlsx
TestEmployeeDS.pbix
LocalPBIXDataModel.pbix
WWI_Import.pbix
SecurityTest.pbix
Chapter 2 Lessons.pbix

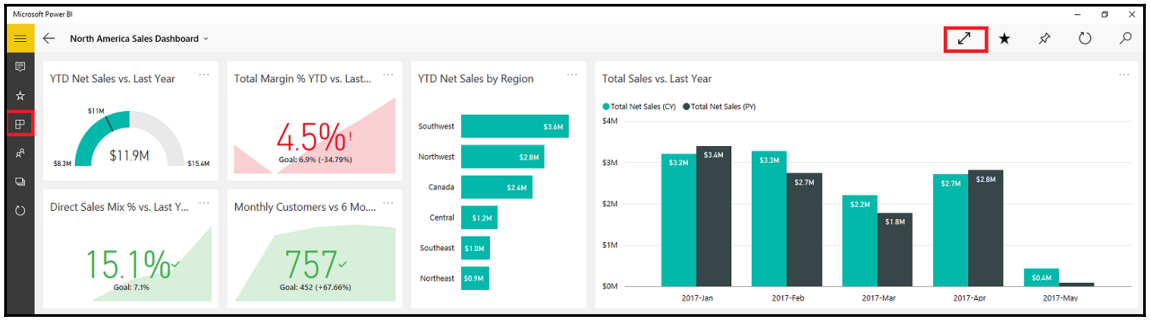

Share
Web view
Web view
Phone view

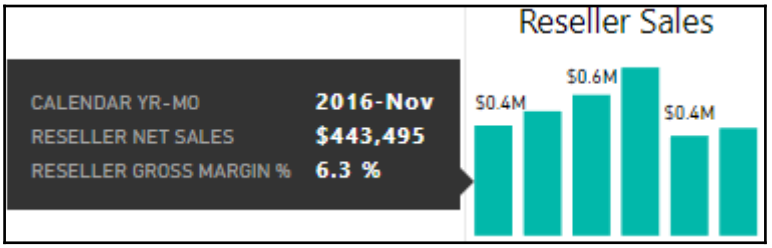

Canada Sales Dashboard
Monthly Internet Sales
$120K
Goal: $121K (-1.43%)
Monthly Reseller Margin %
3.2%
Goal: -1.3%
Canada Internet Sales by Postal Code: Current Y...
V7L 4J4
V9
V8Y 1L1
$0.12M
$0.10M
$0.09M
$0.0M
$0.1M
Unpinned tiles
Internet Sales by Customer Prov


General
(Preview) Responsive
On

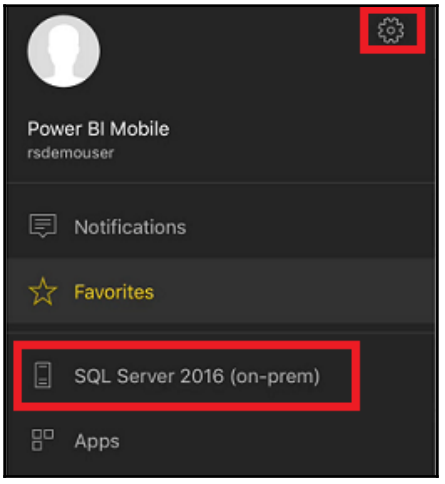

2
Power BI

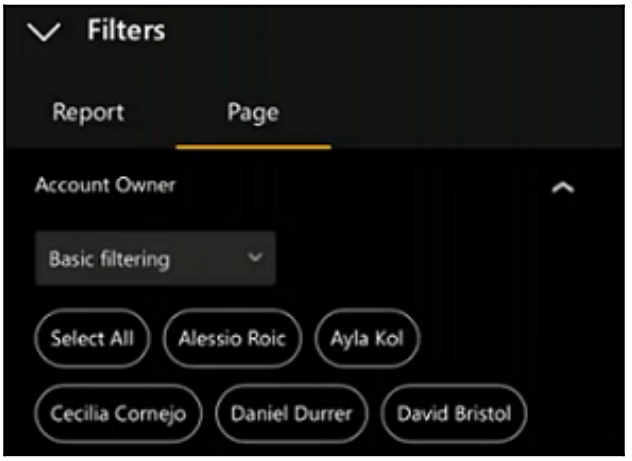

Hi,
Check out AdWorksEnterpriseMobile report.
Open AdWorksEnterpriseMobile in Power BI.
Brought to you by Power BI.
Can you please look into this?
Thanks, Brett
AdWorksEnterpriseMobile
UNITED STATES
United States Monthly Sales and Margin
Monthly Internet Sales
$336K
Goal: $304K (+10.3%)
Monthly Internet Margin %
42.2%
Goal: 42.8% (-1.43%)
Monthly Reseller Sales
$1.903K
Goal: $1,875K
Monthly Reseller Margin %
1.8%
Goal: -1.1%
Internet Sales to Plan
$81K $76K
$122K $104K
$134K
$145K
$261K $222K
$276K $290K
$283K $273K
$334K $304K
2016-Sep
2016-Oct
2016-Nov
2016-Dec
2017-Jan
2017-Feb
2017-Mar
2017-Apr
Internet Net Sales
Internet Sales Plan


Microsoft Power BI
North America Sales Dashboard
YTD Net Sales vs. Last Year
$11.9M
$8.3M
$15.4M
Total Margin % YTD vs. Last...
4.5%
Goal: 6.9% (-34.79%)
YTD Net Sales by Region
Southwest $3.6M
Northwest $2.8M
Canada $2.4M
Central $1.2M
Southeast $1.0M
Northeast $0.9M
Total Sales vs. Last Year
Total Net Sales (CY)
Total Net Sales (PY)
$4M
$3M
$2M
$1M
$0M
$3.2M $3.4M
$3.3M $2.7M
$2.2M $1.8M
$2.7M $2.8M
$0.4M
2017-Jan
2017-Feb
2017-Mar
2017-Apr
2017-May
Direct Sales Mix % vs. Last Y...
15.1%
Goal: 7.1%
Monthly Customers vs 6 Mo....
757
Goal: 452 (+67.66%)

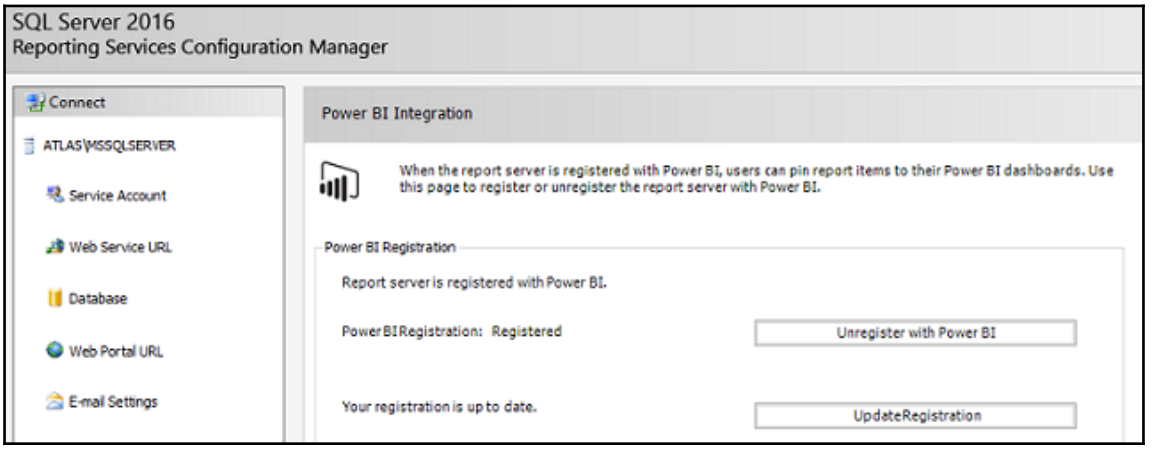

CALENDAR YR-MO 2016-Nov
RESELLER NET SALES $443,495
RESELLER GROSS MARGIN % 6.3 %
Reseller Sales
$0.4M
$0.6M
$0.4M

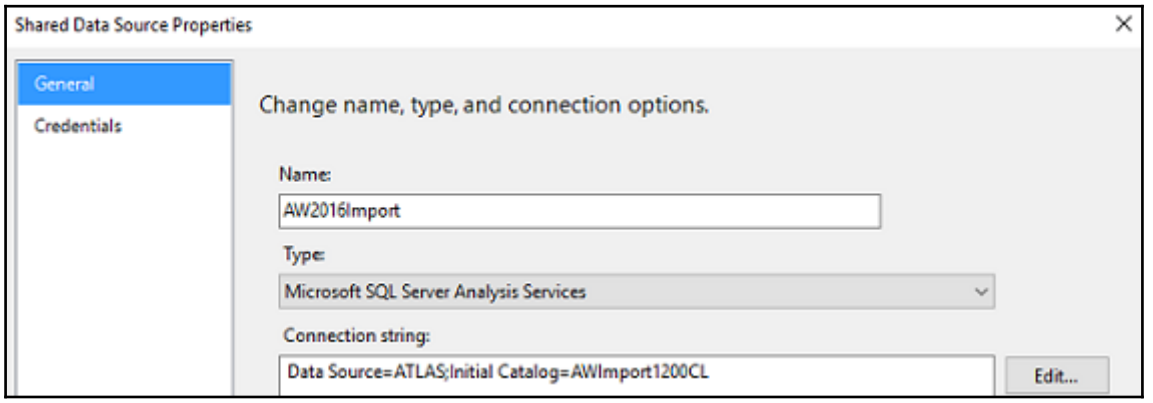

Sales and Plan...2:03
Monthly Internet...
42.4 %
Monthly Reseller M...
3.2 %
Sales and Pla... 2:03
42.4 %
GOAL: 43.8 %(-3.14%)
Monthly Internet
Margin %

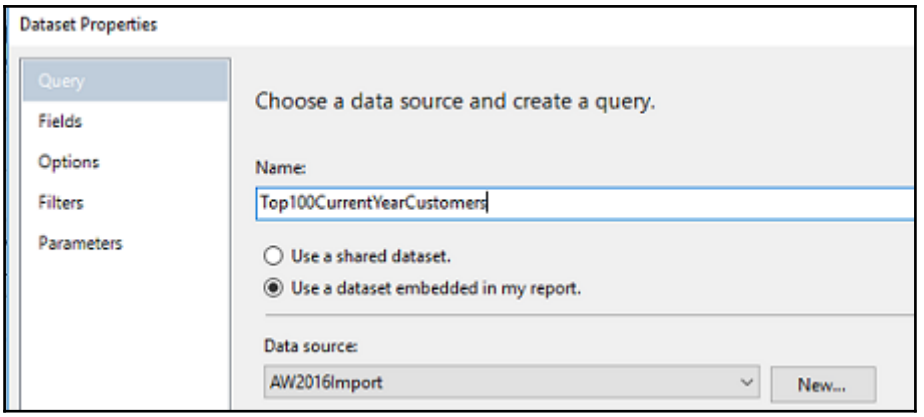

Power BI Mobile
rsdemouser
Notifications
Favorites
SQL Server 2016 (on-prem)
Apps

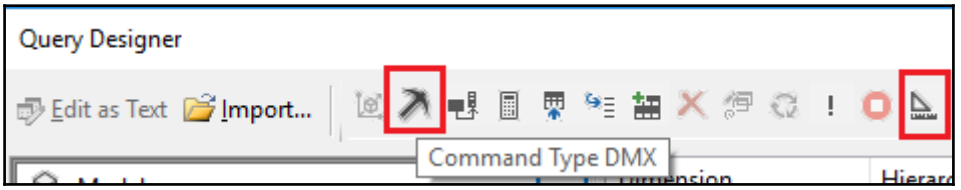

Filters
Report
Page
Account Owner
Basic filtering
Select All
Alessio Roic
Ayla Kol
Cecilia Cornejo
Daniel Durrer
David Bristol

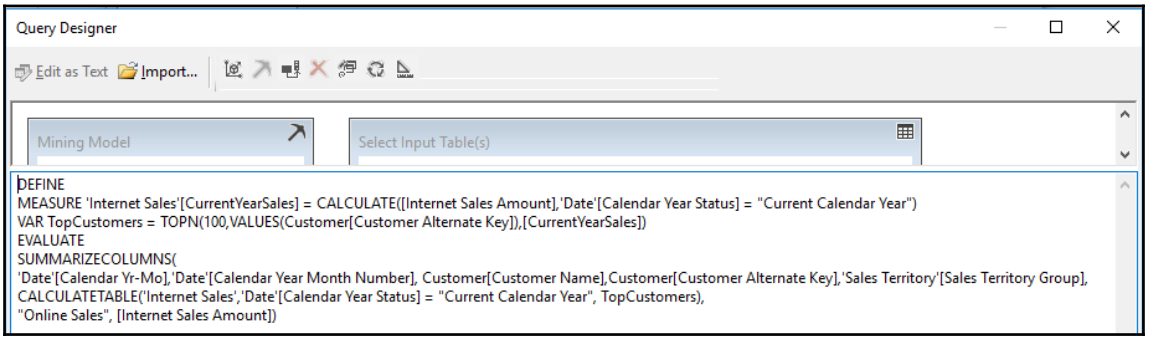
Chapter 13: Integrating Power BI with Other Applications

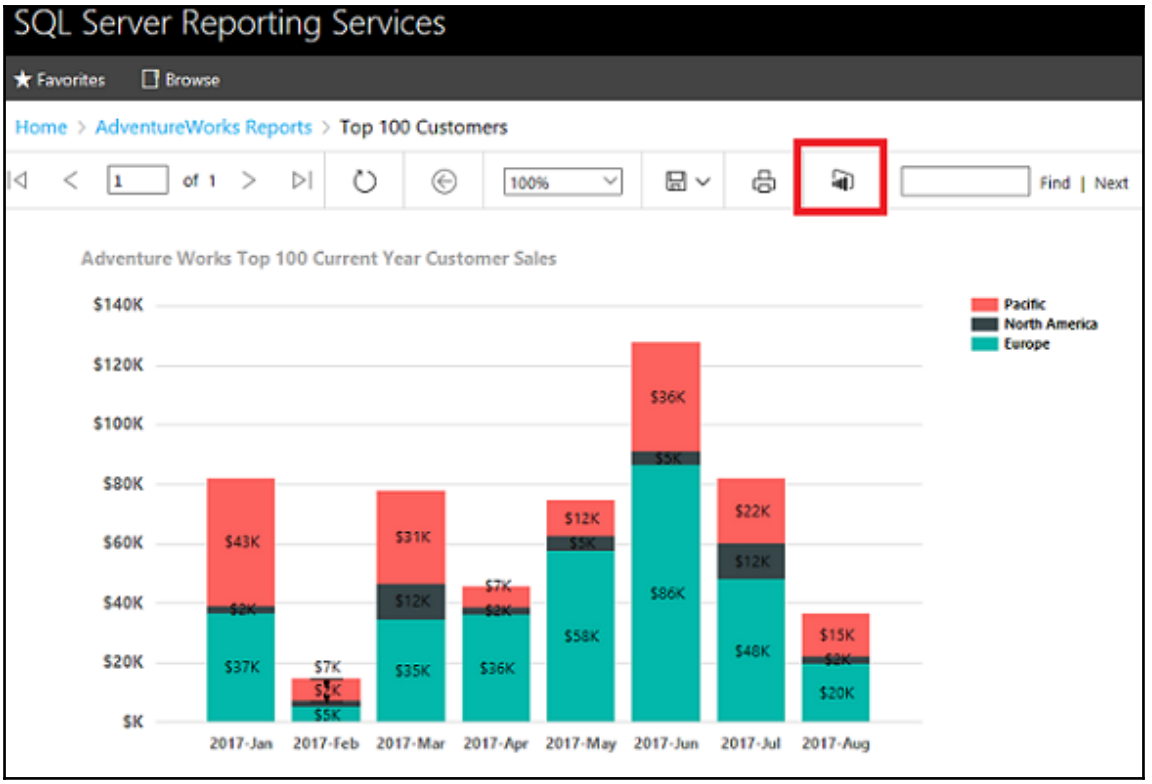


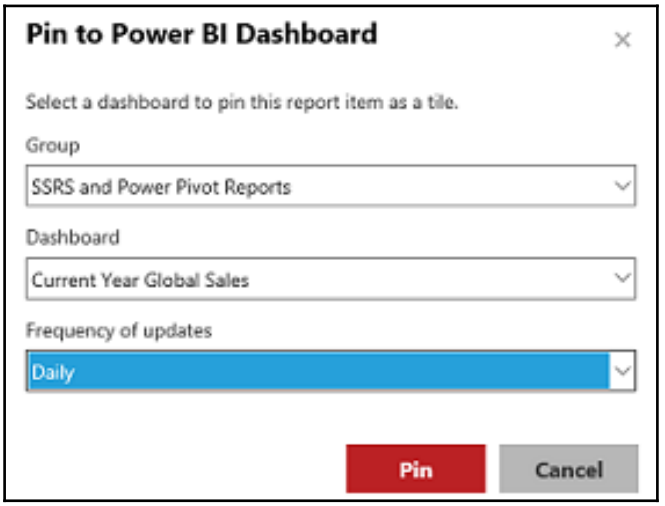



Dataset Properties
Query
Fields
Options
Filters
Parameters
Choose a data source and create a query.
Name:
Top100CurrentYearCustomers
Use a shared dataset.
Use a dataset embedded in my report.
Data source:
AW2016Import
New...

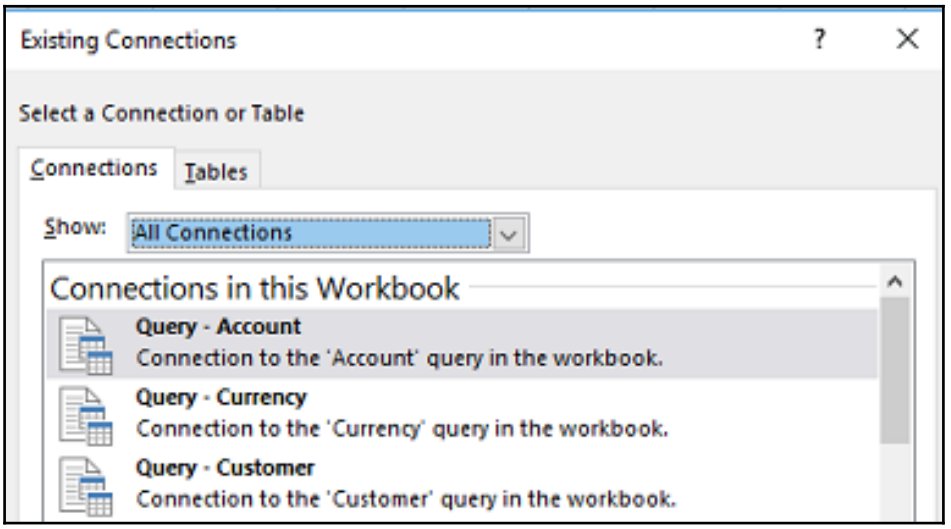

Query Designer
Edit as Text
Import...
Command Type DMX

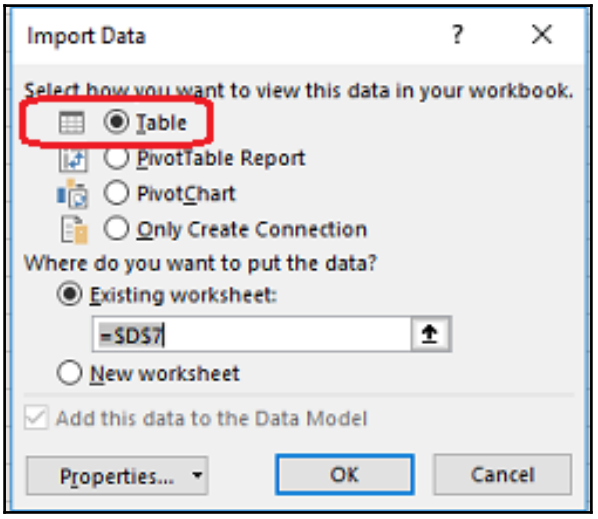

Query Designer
Edit as Text
Import...
Mining Model
Select Input Table(s)
DEFINE
MEASURE 'Internet Sales'[CurrentYearSales] = CALCULATE([Internet Sales Amount],'Date'[Calendar Year Status] = "Current Calendar Year")
VAR TopCustomers = TOPN(100,VALUES(Customer[Customer Alternate Key]),[CurrentYearSales])
EVALUATE
SUMMARIZECOLUMNS(
'Date'[Calendar Yr-Mo],'Date'[Calendar Year Month Number], Customer[Customer Name],Customer[Customer Alternate Key],'Sales Territory'[Sales Territory Group],
CALCULATETABLE('Internet Sales','Date'[Calendar Year Status] = "Current Calendar Year", TopCustomers),
"Online Sales", [Internet Sales Amount])

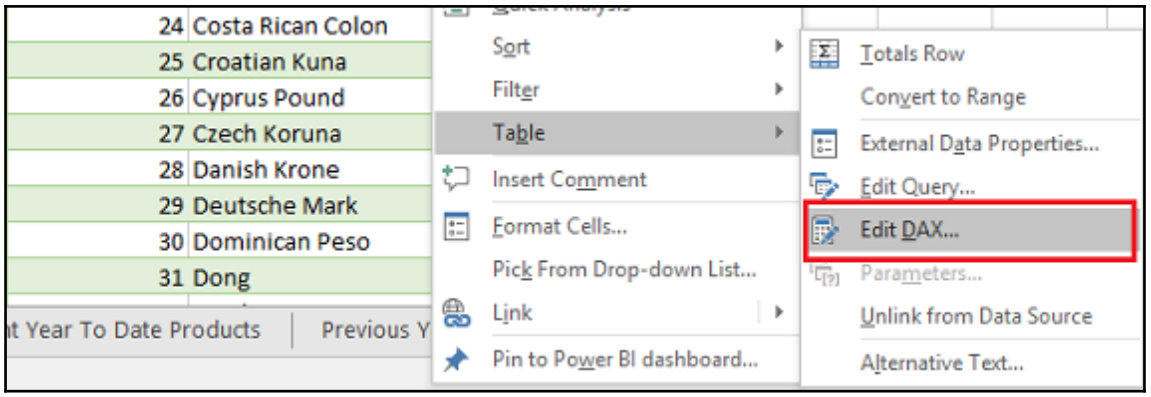

SQL Server Reporting Services
Favorites
Browse
Home > AdventureWorks Reports > Top 100 Customers
1
of 1
100%
Find | Next
Adventure Works Top 100 Current Year Customer Sales
$140K
$120K
$100K
$80K
$60K
$40K
$20K
$K
Pacific
North America
Europe
$43K
$37K
$7K
$5K
$31K
$12K
$35K
$7K
$36K
$12K
$5K
$58K
$36K
$86K
$5K
$22K
$12K
$48K
$15K
$20K
2017-Jan
2017-Feb
2017-Mar
2017-Apr
2017-May
2017-Jun
2017-Jul
2017-Aug

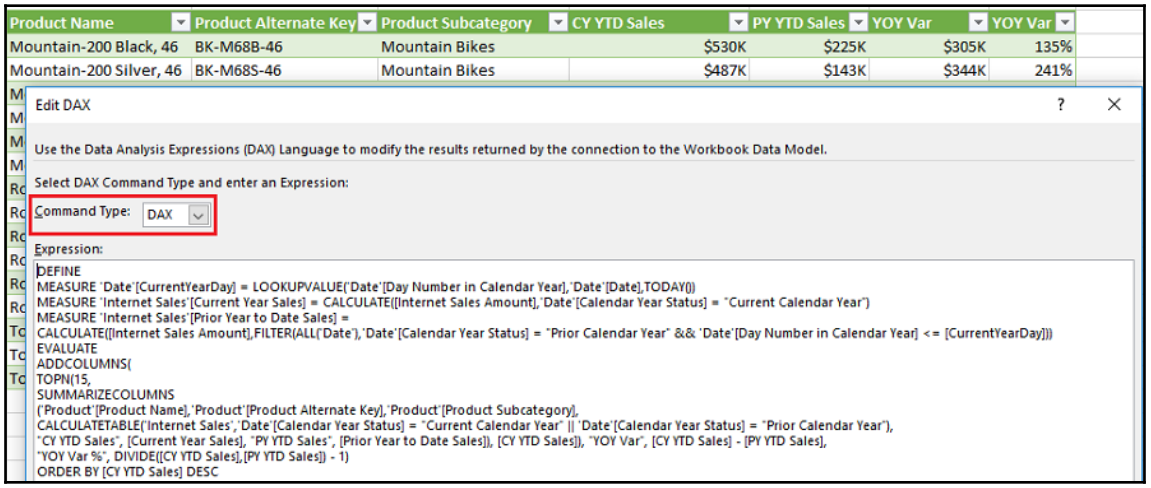

Pin to Power BI Dashboard
Select a dashboard to pin this report item as a tile.
Group
SSRS and Power Pivot Reports
Dashboard
Current Year Global Sales
Frequency of updates
Daily
Pin
Cancel

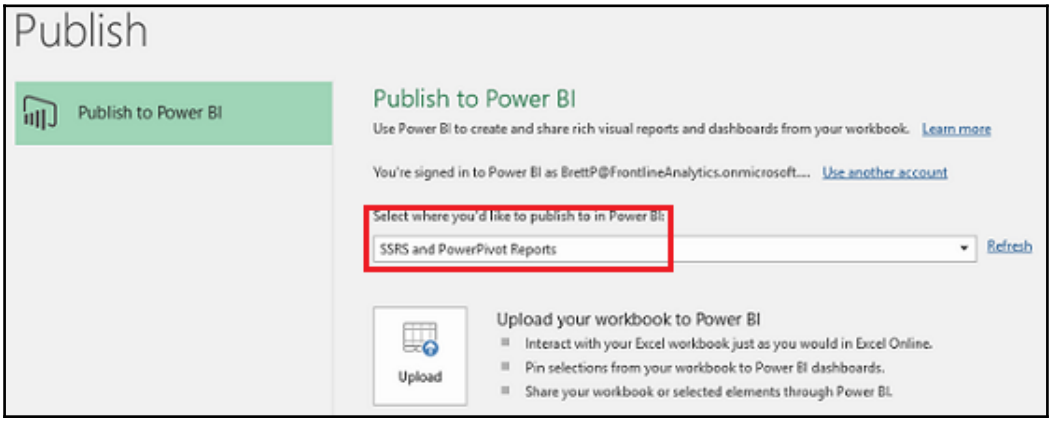
Edit	Report	Description	Status	Type	Folder	Delivery
Edit	Top 100 Customers		Enabled	Standard	/AdventureWorks Reports	Power BI Dashboard

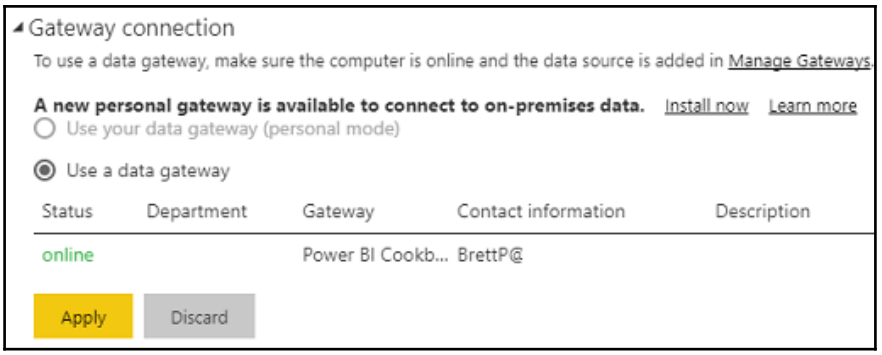


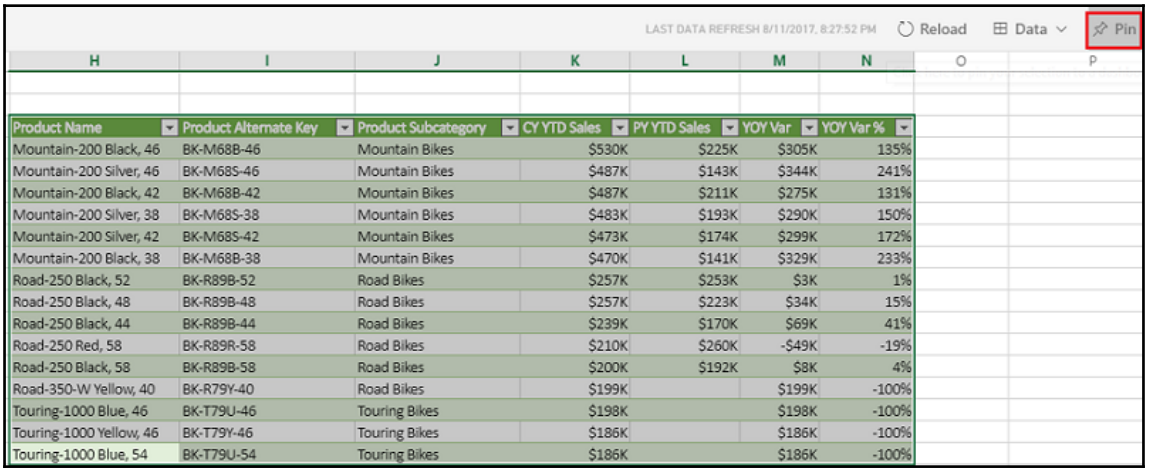



24 Costa Rican Colon
25 Croatian Kuna
26 Cyprus Pound
27 Czech Koruna
28 Danish Krone
29 Deutsche Mark
30 Dominican Peso
31 Dong
t Year To Date Products
Previous Y
Sort
Filter
Table
Insert Comment
Format Cells...
Pick From Drop-down List...
Link
Pin to Power BI dashboard...
Totals Row
Convert to Range
External Data Properties...
Edit Query...
Edit DAX...
Parameters...
Unlink from Data Source
Alternative Text...

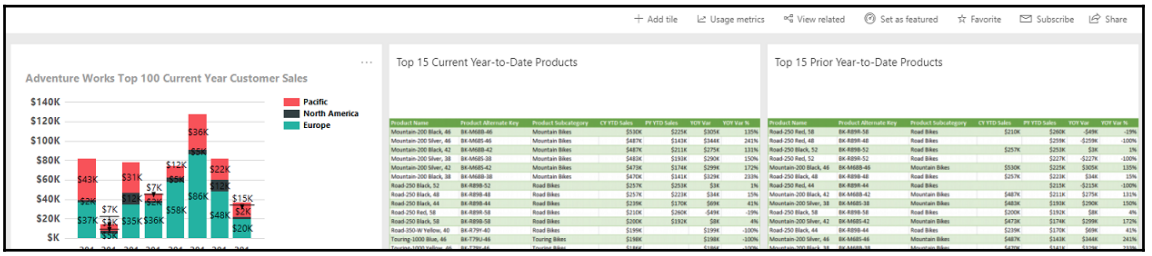

Product Name
Product Alternate Key
Product Subcategory
CY YTD Sales
PY YTD Sales
YOY Var
YOY Var
Mountain-200 Black, 46
BK-M68B-46
Mountain Bikes
$530K
$225K
$305K
135%
Mountain-200 Silver, 46
BK-M68S-46
Mountain Bikes
$487K
$143K
$344K
241%
Edit DAX
Use the Data Analysis Expressions (DAX) Language to modify the results returned by the connection to the Workbook Data Model.
Select DAX Command Type and enter an Expression:
Command Type:
DAX
Expression:
DEFINE
MEASURE 'Date'[CurrentYearDay] = LOOKUPVALUE('Date'[Day Number in Calendar Year],'Date'[Date],TODAY())
MEASURE 'Internet Sales'[Current Year Sales] = CALCULATE([Internet Sales Amount],'Date'[Calendar Year Status] = "Current Calendar Year")
MEASURE 'Internet Sales'[Prior Year to Date Sales] =
CALCULATE([Internet Sales Amount],FILTER(ALL('Date'),'Date'[Calendar Year Status] = "Prior Calendar Year" && 'Date'[Day Number in Calendar Year] <= [CurrentYearDay]))
EVALUATE
ADDCOLUMNS(
TOPN(15,
SUMMARIZECOLUMNS
('Product'[Product Name],'Product'[Product Alternate Key],'Product'[Product Subcategory],
CALCULATETABLE('Internet Sales','Date'[Calendar Year Status] = "Current Calendar Year" || 'Date'[Calendar Year Status] = "Prior Calendar Year"),
"CY YTD Sales", [Current Year Sales], "PY YTD Sales", [Prior Year to Date Sales]), [CY YTD Sales]), "YOY Var", [CY YTD Sales] - [PY YTD Sales],
"YOY Var %", DIVIDE([CY YTD Sales],[PY YTD Sales]) - 1)
ORDER BY [CY YTD Sales] DESC

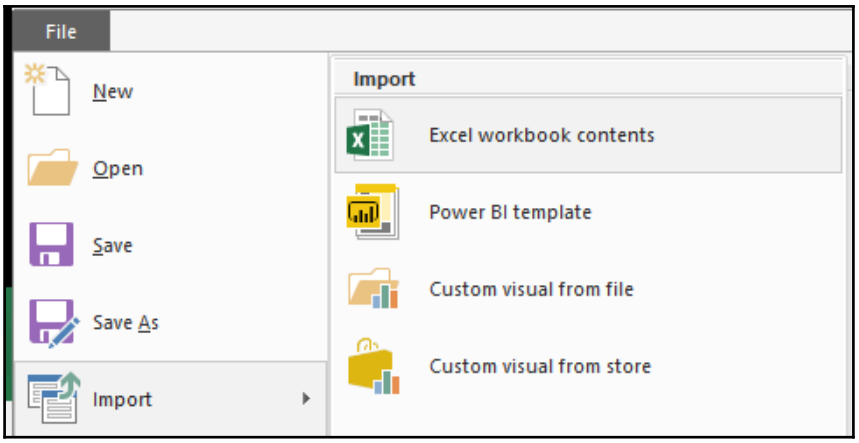

Publish
Publish to Power BI
Publish to Power BI
Use Power BI to create and share rich visual reports and dashboards from your workbook. Learn more
You're signed in to Power BI as BrettP@FrontlineAnalytics.onmicrosoft.... Use another account
Select where you'd like to publish to in Power BI:
SSRS and PowerPivot Reports
Refresh
Upload
Upload your workbook to Power BI
Interact with your Excel workbook just as you would in Excel Online.
Pin selections from your workbook to Power BI dashboards.
Share your workbook or selected elements through Power BI.

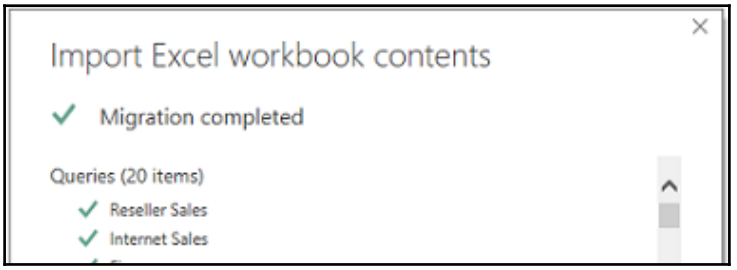




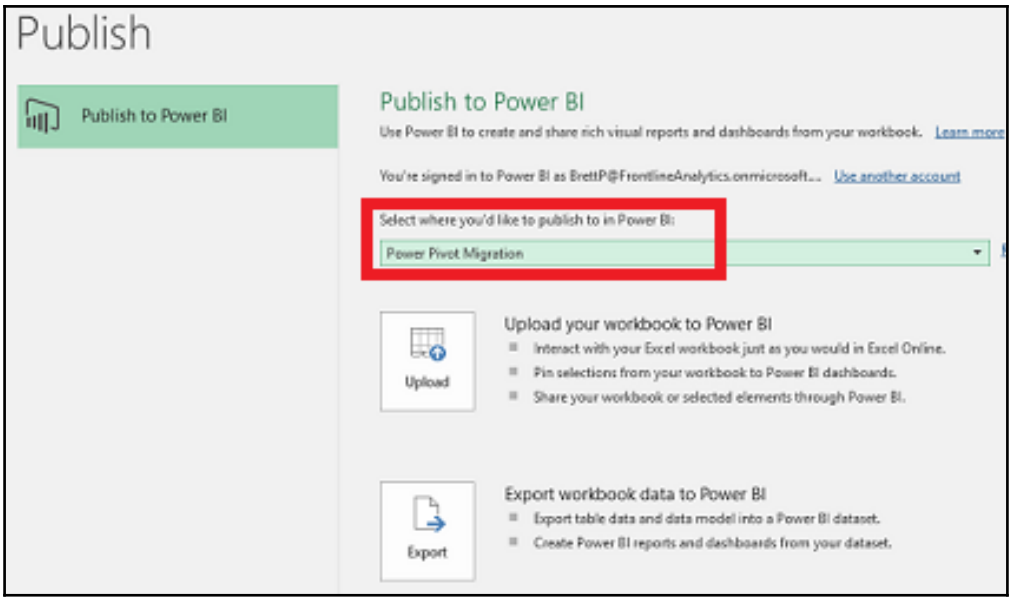
Product Name	Product Alternate Key	Product Subcategory	CY YTD Sales	PY YTD Sales	YOY Var	YOY Var %
Mountain-200 Black, 46	BK-M68B-46	Mountain Bikes	$530K	$225K	$305K	135%
Mountain-200 Silver, 46	BK-M68S-46	Mountain Bikes	$487K	$143K	$344K	241%
Mountain-200 Black, 42	BK-M68B-42	Mountain Bikes	$487K	$211K	$275K	131%
Mountain-200 Silver, 38	BK-M68S-38	Mountain Bikes	$483K	$193K	$290K	150%
Mountain-200 Silver, 42	BK-M68S-42	Mountain Bikes	$473K	$174K	$299K	172%
Mountain-200 Black, 38	BK-M68B-38	Mountain Bikes	$470K	$141K	$329K	233%
Road-250 Black, 52	BK-R89B-52	Road Bikes	$257K	$253K	$3K	1%
Road-250 Black, 48	BK-R89B-48	Road Bikes	$257K	$223K	$34K	15%
Road-250 Black, 44	BK-R89B-44	Road Bikes	$239K	$170K	$69K	41%
Road-250 Red, 58	BK-R89R-58	Road Bikes	$210K	$260K	-$49K	-19%
Road-250 Black, 58	BK-R89B-58	Road Bikes	$200K	$192K	$8K	4%
Road-350-W Yellow, 40	BK-R79Y-40	Road Bikes	$199K		$199K	-100%
Touring-1000 Blue, 46	BK-T79U-46	Touring Bikes	$198K		$198K	-100%
Touring-1000 Yellow, 46	BK-T79Y-46	Touring Bikes	$186K		$186K	-100%
Touring-1000 Blue, 54	BK-T79U-54	Touring Bikes	$186K		$186K	-100%

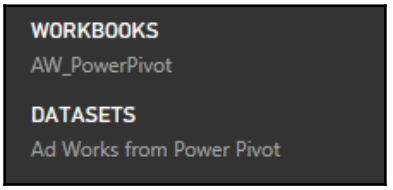


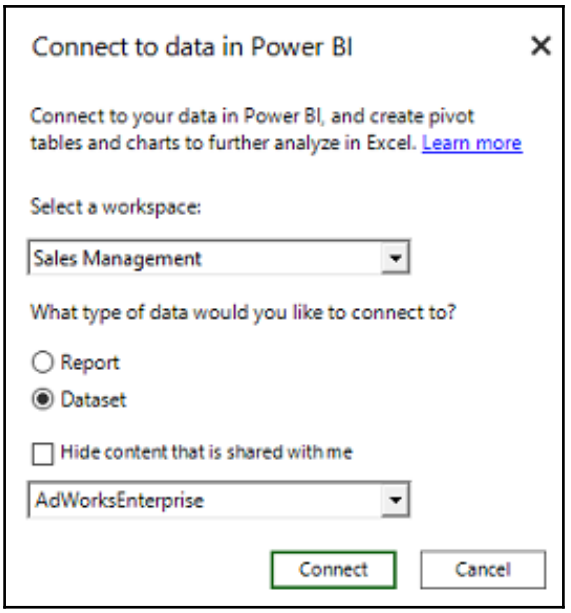

File
New
Open
Save
Save As
Import
Import
Excel workbook contents
Power BI template
Custom visual from file
Custom visual from store

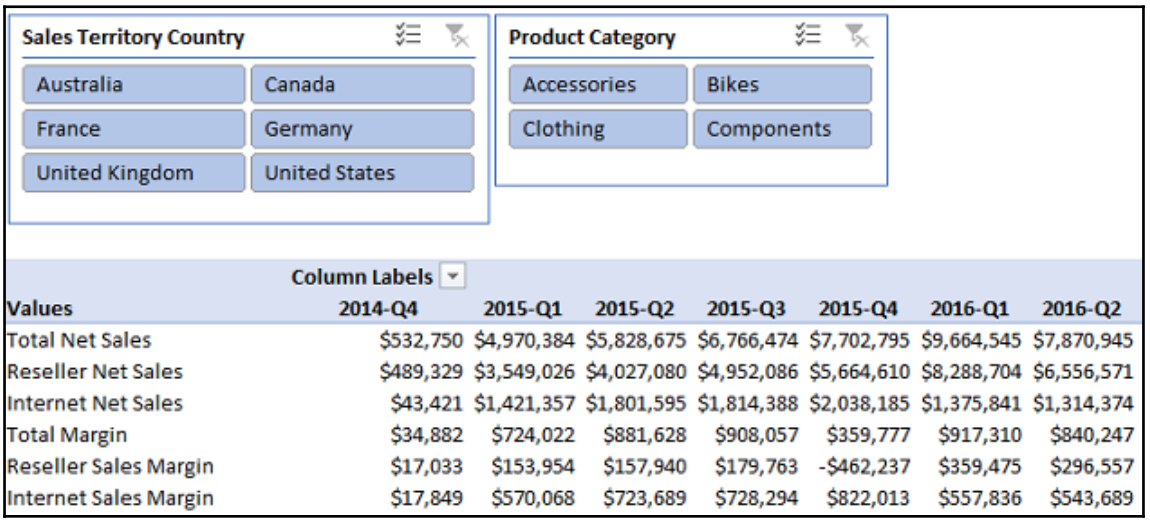

Import Excel workbook contents
Migration completed
Queries (20 items)
Reseller Sales
Internet Sales


Publish to Power BI
Select a destination
Power Pivot Migration

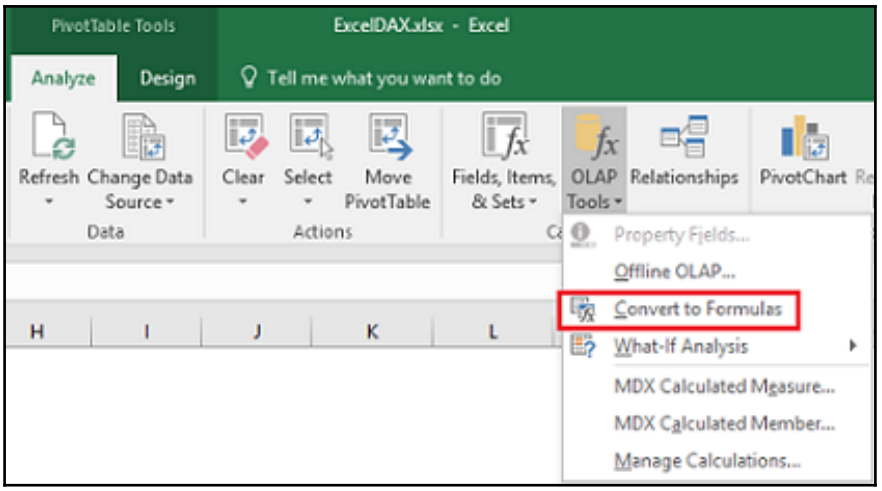

Publish
Publish to Power BI
Publish to Power BI
Use Power BI to create and share rich visual reports and dashboards from your workbook. Learn more
You're signed in to Power BI as BrettP@FrontlineAnalytics.onmicrosoft... Use another account
Select where you'd like to publish to in Power BI:
Power Pivot Migration
Upload
Upload your workbook to Power BI
Interact with your Excel workbook just as you would in Excel Online.
Pin selections from your workbook to Power BI dashboards.
Share your workbook or selected elements through Power BI.
Export
Export workbook data to Power BI
Export table data and data model into a Power BI dataset.
Create Power BI reports and dashboards from your dataset.


WORKBOOKS
AW_PowerPivot
DATASETS
Ad Works from Power Pivot





	Column Labels						
Values	**2014-Q4**	**2015-Q1**	**2015-Q2**	**2015-Q3**	**2015-Q4**	**2016-Q1**	**2016-Q2**
Total Net Sales	$532,750	$4,970,384	$5,828,675	$6,766,474	$7,702,795	$9,664,545	$7,870,945
Reseller Net Sales	$489,329	$3,549,026	$4,027,080	$4,952,086	$5,664,610	$8,288,704	$6,556,571
Internet Net Sales	$43,421	$1,421,357	$1,801,595	$1,814,388	$2,038,185	$1,375,841	$1,314,374
Total Margin	$34,882	$724,022	$881,628	$908,057	$359,777	$917,310	$840,247
Reseller Sales Margin	$17,033	$153,954	$157,940	$179,763	-$462,237	$359,475	$296,557
Internet Sales Margin	$17,849	$570,068	$723,689	$728,294	$822,013	$557,836	$543,689



Sales Territory Country

Australia	Canada
France	Germany
NA	United Kingdom
United States	

Product Category

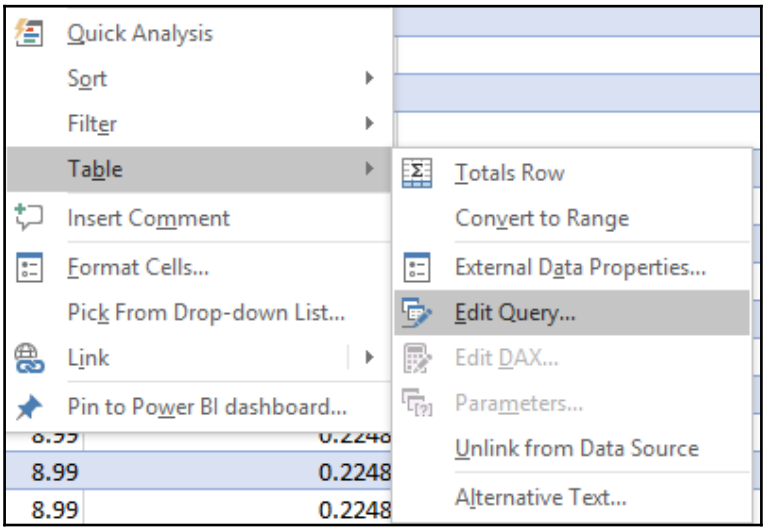
	Accessories
Bikes	Clothing
Components	

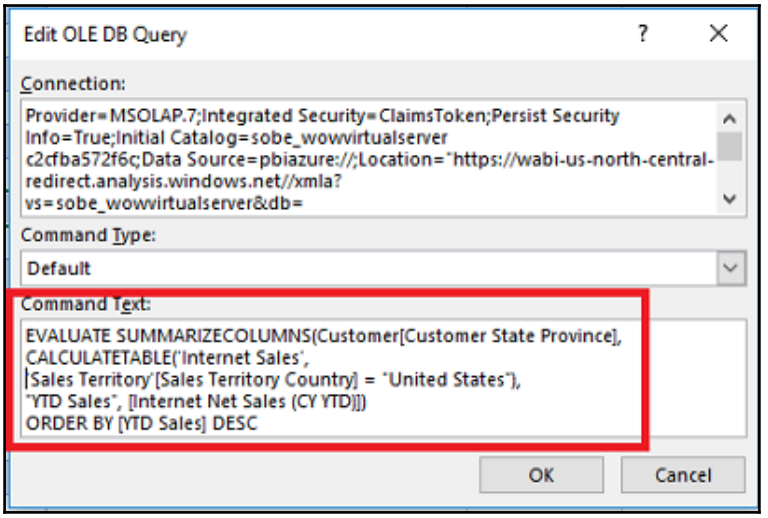
Sales and Margin Metrics		2016-Q1	2016-Q2	2016-1H	2016-Q3	2016-Q4	2016-2H	2017-Q1	2017-Q2	2017-1H
Sales	Total Net Sales	$9,664,545	$7,870,945	$17,535,490	$7,268,733	$9,231,893	$16,500,626	$13,221,607	$12,630,451	$25,852,058
	Reseller Net Sales	$8,288,704	$6,556,571	$14,845,275	$5,814,080	$7,534,276	$13,348,356	$10,542,661	$8,656,657	$19,199,319
	Internet Net Sales	$1,375,841	$1,314,374	$2,690,215	$1,454,653	$1,697,617	$3,152,270	$2,678,946	$3,973,793	$6,652,740
Margin	Total Margin	$917,310	$840,247	$1,757,557	$836,397	$749,952	$1,586,349	$578,070	$1,699,858	$2,277,927
	Reseller Sales Margin	$359,475	$296,557	$656,032	$226,109	$33,758	$259,867	-$531,977	$57,981	-$473,996
	Internet Sales Margin	$557,836	$543,689	$1,101,525	$610,287	$716,194	$1,326,482	$1,110,047	$1,641,877	$2,751,923
Margin %	Total Margin %	9.5 %	10.7 %	10.0%	11.5 %	8.1 %	9.6%	4.4 %	13.5 %	8.8%
	Reseller Margin %	4.3 %	4.5 %	4.4%	3.9 %	0.4 %	1.9%	-5.0 %	0.7 %	-2.5%
	Internet Sales Margin %	40.5 %	41.4 %	40.9%	42.0 %	42.2 %	42.1%	41.4 %	41.3 %	41.4%
Internet Sales Plan	Internet Sales Plan	$1,394,634	$1,354,579	$2,749,213	$1,561,211	$1,771,518	$3,332,729	$2,544,077	$3,793,611	$6,337,688
	Internet Sales Var to Plan	($18,793)	($40,206)	-$58,998	($106,558)	($73,900)	-$180,459	$134,869	$180,183	$315,052
	Internet Sales Var to Plan %	-1.4 %	-3.1 %	-2.1%	-7.3 %	-4.4 %	-5.4%	5.0 %	4.5 %	5.0%

Row Labels	Internet Net Sales
Accessories	$224,586
Bikes	$17,446,201
Clothing	$105,583
Grand Total	**$17,776,370**

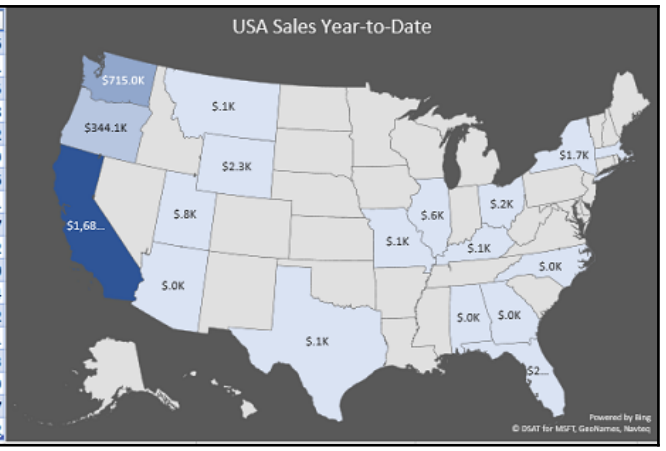
Data returned for Internet Net Sales, Clothing (First 1000 rows).

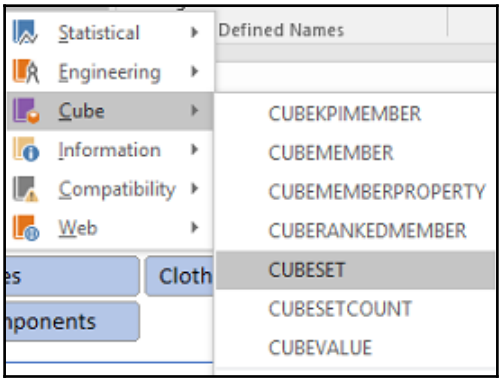
Internet Sales[Sales Amount]	Internet Sales[Freight]	Internet Sales[Order Quantity]	Internet Sales[Discount Amount]
8.99	0.2248	1	0
8.99	0.2248	1	0

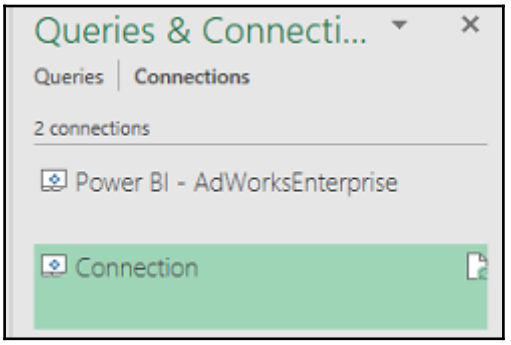




Customer[Customer State Province]	[YTD Sales]
California	$1,686,426
Washington	$715,031
Oregon	$344,105
Florida	$2,398
Wyoming	$2,322
Massachusetts	$2,049
New York	$1,736
Utah	$841
Illinois	$637
Ohio	$182
Kentucky	$120
Texas	$94
Montana	$92
Missouri	$81
Arizona	$33
Georgia	$29
North Carolina	$7
Alabama	$2



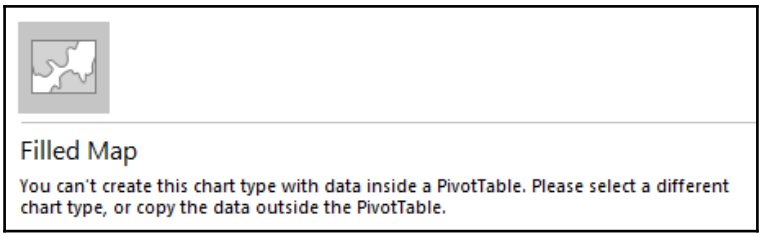


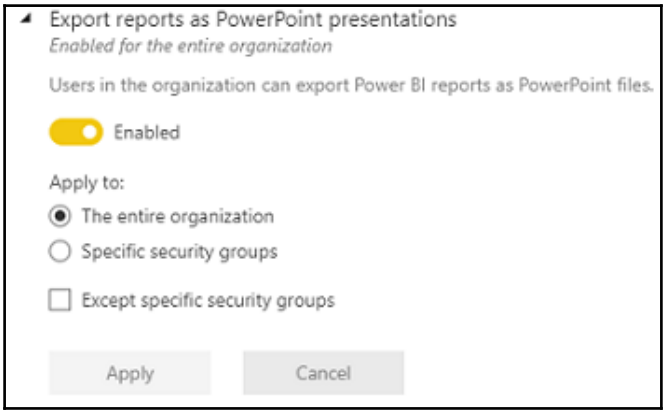


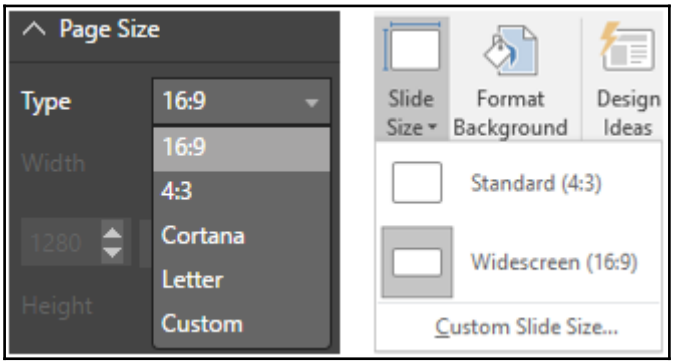
Customer[Customer State Province]	[YTD Sales]
California	$1,686,426
Washington	$715,031
Oregon	$344,105

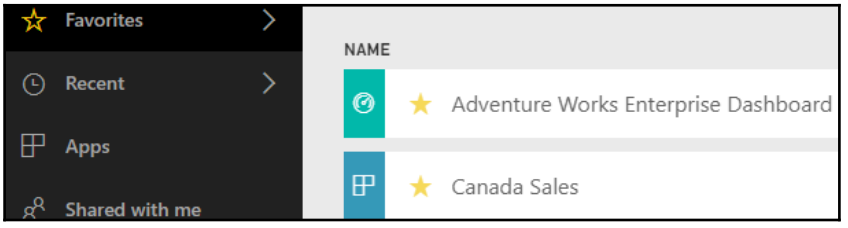
This chart isn't available in your version of Excel.

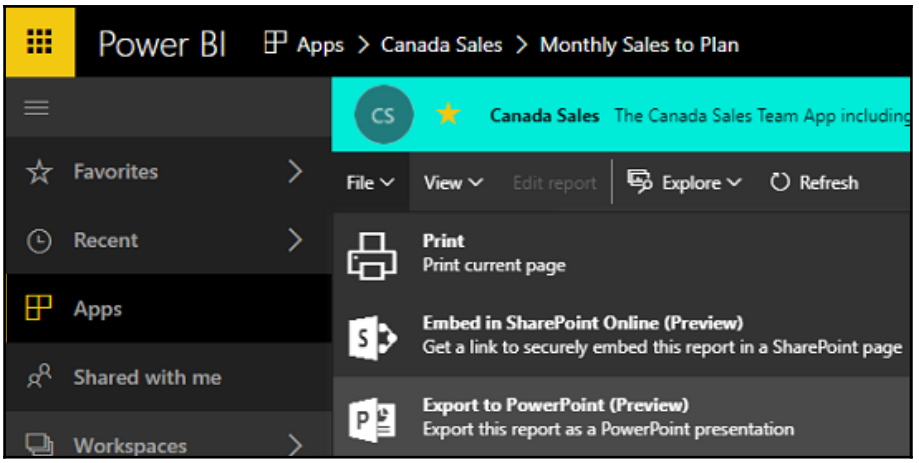
Editing this shape or saving this workbook into a different file format will permanently break the chart.


Filled Map
You can't create this chart type with data inside a PivotTable. Please select a different chart type, or copy the data outside the PivotTable.

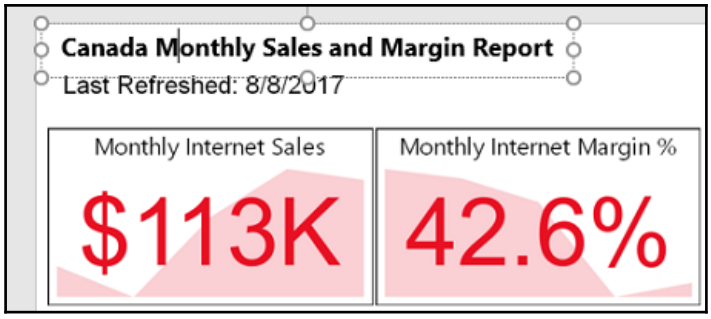

Export reports as PowerPoint presentations
Enabled for the entire organization
Users in the organization can export Power BI reports as PowerPoint files.
Enabled
Apply to:
The entire organization
Specific security groups
Except specific security groups
Apply
Cancel

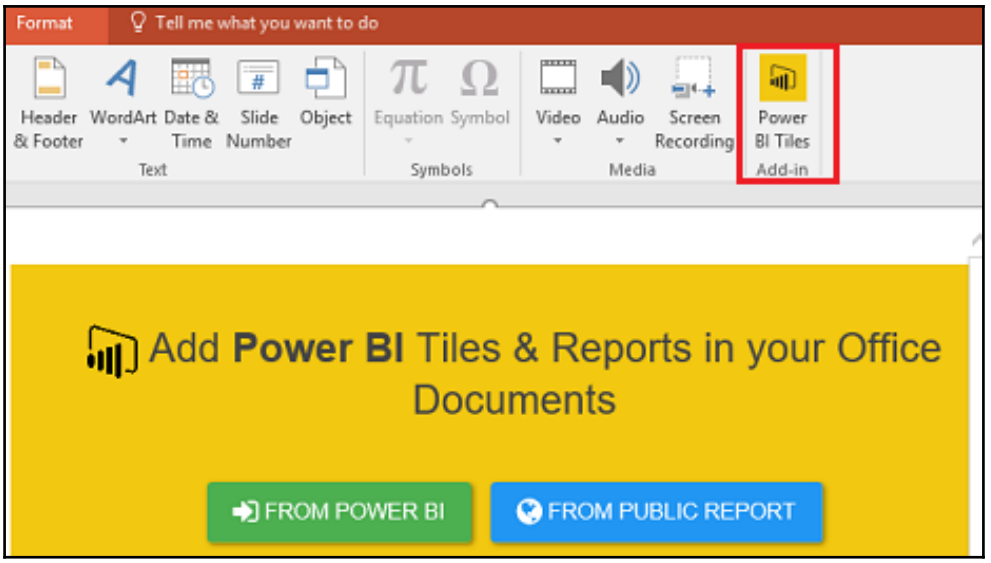

Page Size
Type
16:9
Width
1280
Height
16:9
4:3
Cortana
Letter
Custom
Slide Size
Format Background
Design Ideas
Standard (4:3)
Widescreen (16:9)
Custom Slide Size...

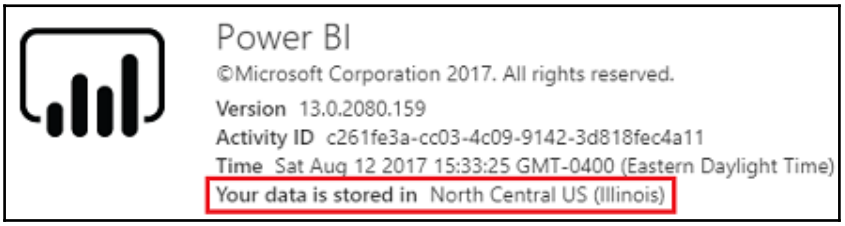

Favorites
Recent
Apps
Shared with me
NAME
Adventure Works Enterprise Dashboard
Canada Sales

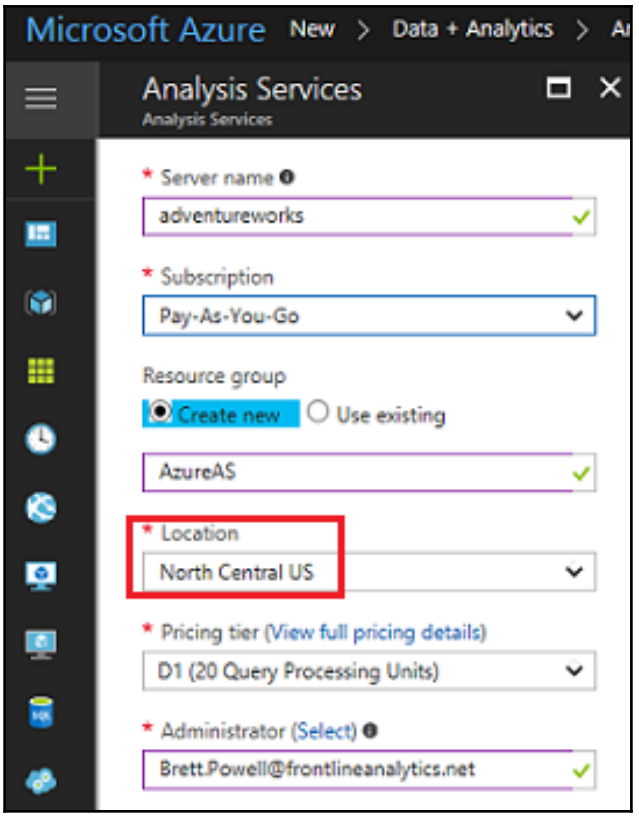

Power BI
Apps > Canada Sales > Monthly Sales to Plan
CS
Canada Sales The Canada Sales Team App including
Favorites
Recent
Apps
Shared with me
Workspaces
File
View
Edit report
Explore
Refresh
Print
Print current page
Embed in SharePoint Online (Preview)
Get a link to securely embed this report in a SharePoint page
Export to PowerPoint (Preview)
Export this report as a PowerPoint presentation

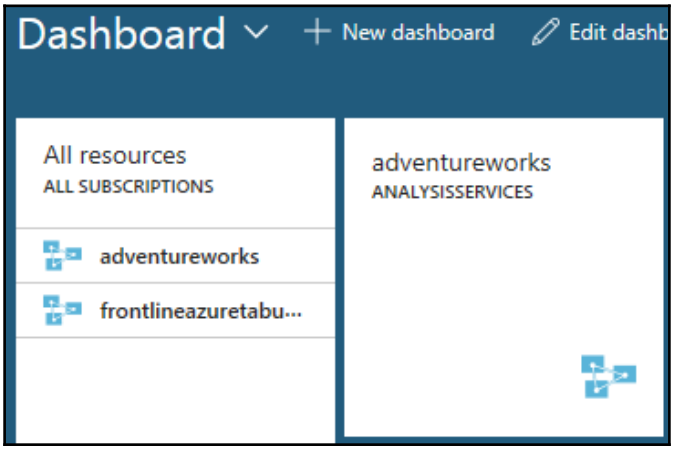

File
Home
Insert
Design
Transitions
Animations
Slide Show
Review
View
Storyboarding
Tell me what you want to do
Monthly Sales to Plan
$113K
42.6%
$323K
0.0%
1
2
3

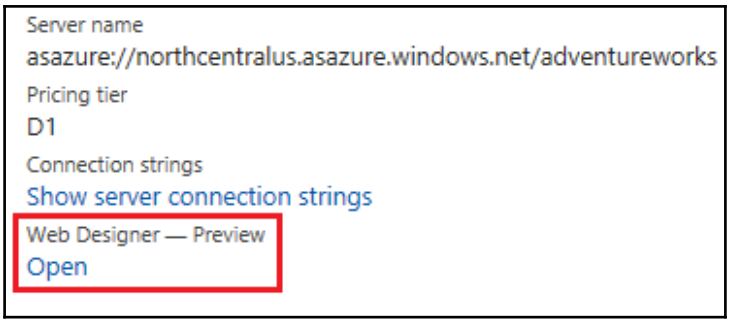

Canada Monthly Sales and Margin Report
Last Refreshed: 8/8/2017
Monthly Internet Sales
$113K
Monthly Internet Margin %
42.6%

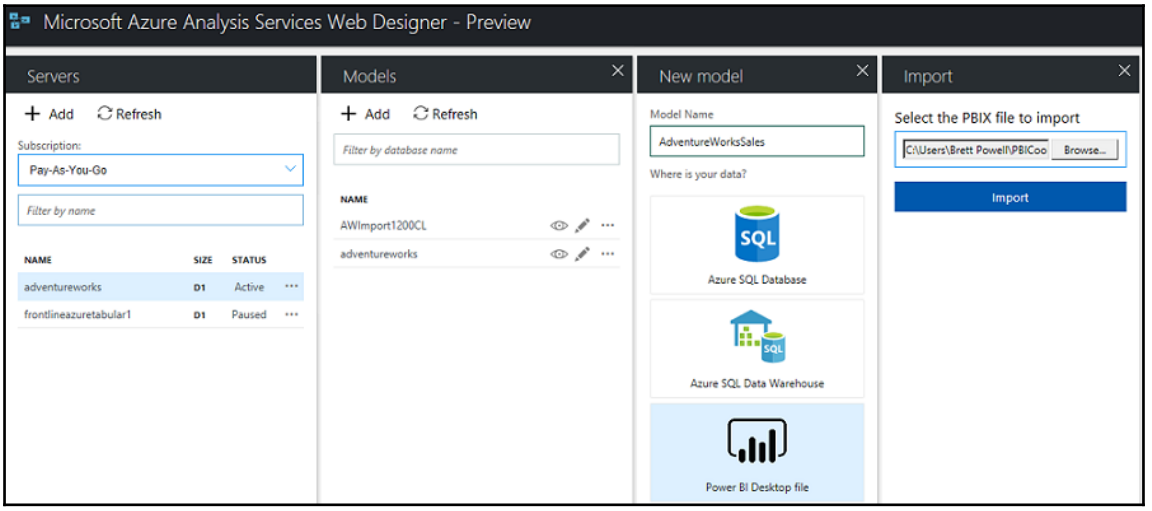

Format
Tell me what you want to do
Header & Footer
WordArt
Date & Time
Slide Number
Object
Text
Equation
Symbol
Symbols
Video
Audio
Screen Recording
Media
Power BI Tiles
Add-in
Add Power BI Tiles & Reports in your Office Documents
FROM POWER BI
FROM PUBLIC REPORT

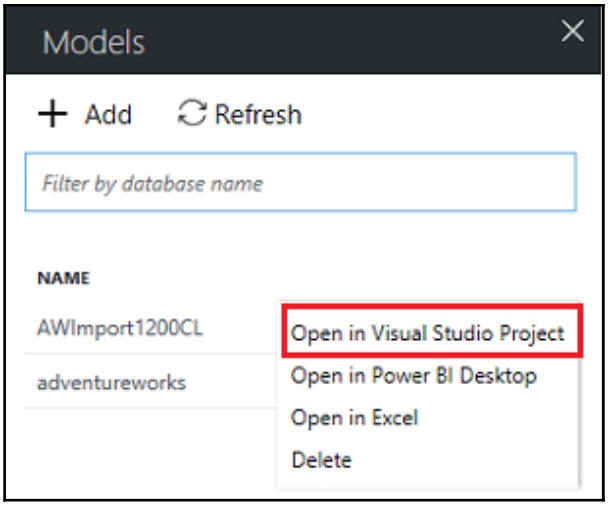

Power BI
©Microsoft Corporation 2017. All rights reserved.
Version 13.0.2080.159
Activity ID c261fe3a-cc03-4c09-9142-3d818fec4a11
Time Sat Aug 12 2017 15:33:25 GMT-0400 (Eastern Daylight Time)
Your data is stored in North Central US (Illinois)

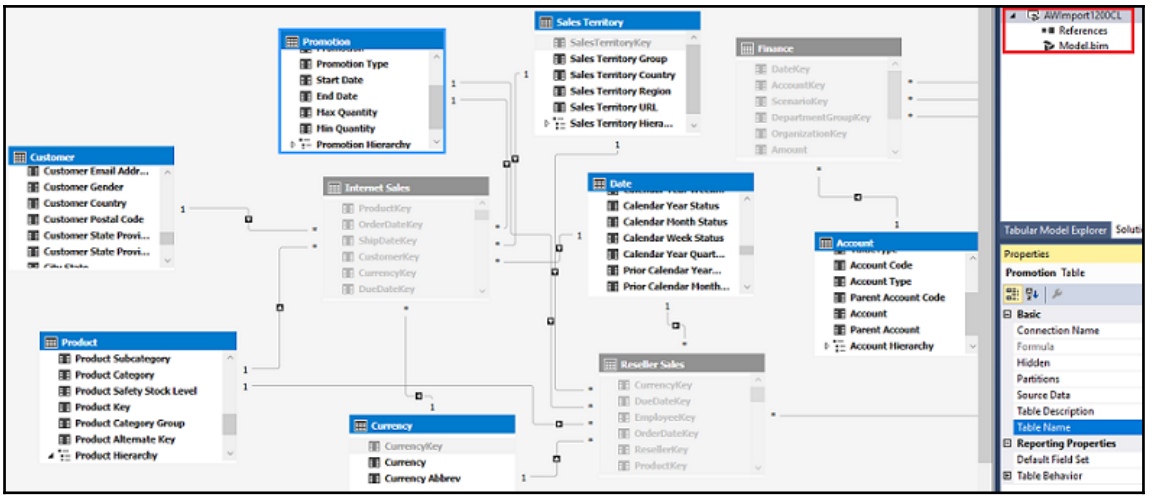

Microsoft Azure
New
Data + Analytics
Analysis Services
Analysis Services
* Server name
adventureworks
* Subscription
Pay-As-You-Go
Resource group
Create new
Use existing
AzureAS
* Location
North Central US
* Pricing tier (View full pricing details)
D1 (20 Query Processing Units)
* Administrator (Select)
Brett.Powell@frontlineanalytics.net

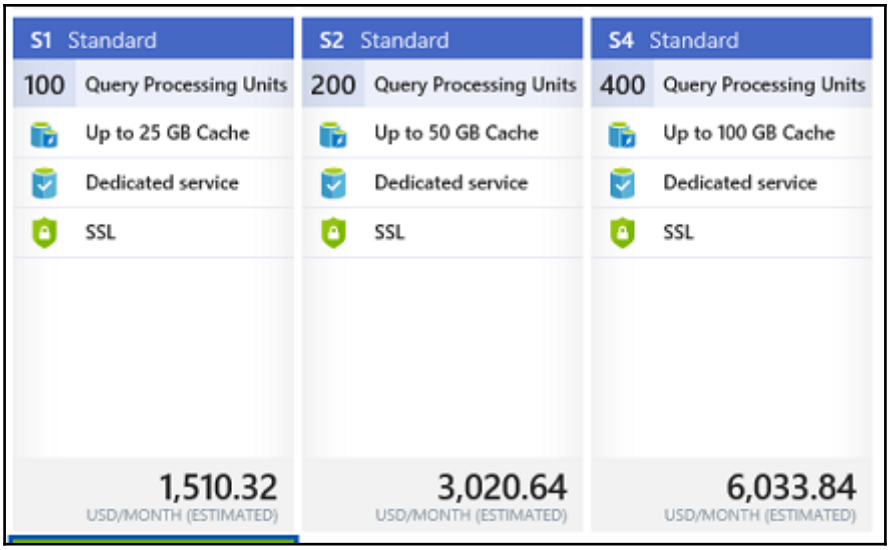

Dashboard
New dashboard
Edit dashb
All resources
ALL SUBSCRIPTIONS
adventureworks
frontlineazuretabu...
adventureworks
ANALYSISSERVICES

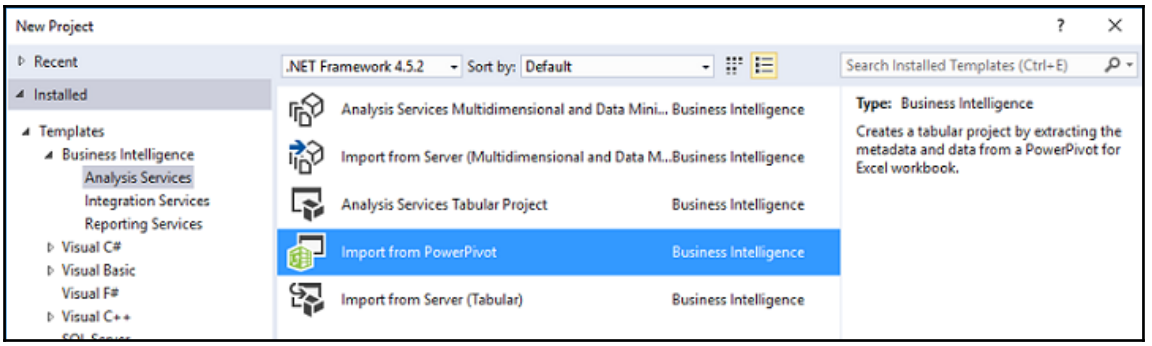

Server name
asazure://northcentralus.asazure.windows.net/adventureworks
Pricing tier
D1
Connection strings
Show server connection strings
Web Designer — Preview
Open

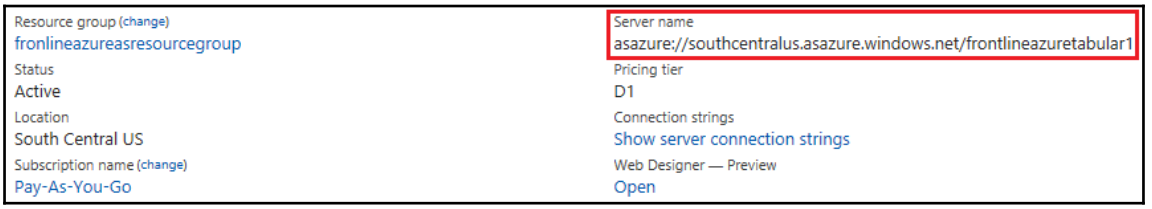

Microsoft Azure Analysis Services Web Designer - Preview
Servers
Add
Refresh
Subscription:
Pay-As-You-Go
Filter by name
NAME
SIZE
STATUS
adventureworks
D1
Active
frontlineazuretabular1
D1
Paused
Models
Add
Refresh
Filter by database name
NAME
AWImport1200CL
adventureworks
New model
Model Name
AdventureWorksSales
Where is your data?
Azure SQL Database
Azure SQL Data Warehouse
Power BI Desktop file
Import
Select the PBIX file to import
C:\Users\Brett Powell\PBICoo
Browse...
Import

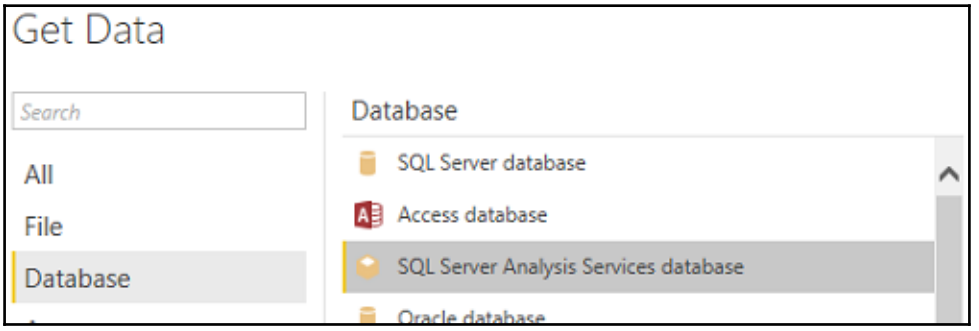

Models
Add
Refresh
Filter by database name
NAME
AWImport1200CL
adventureworks
Open in Visual Studio Project
Open in Power BI Desktop
Open in Excel
Delete

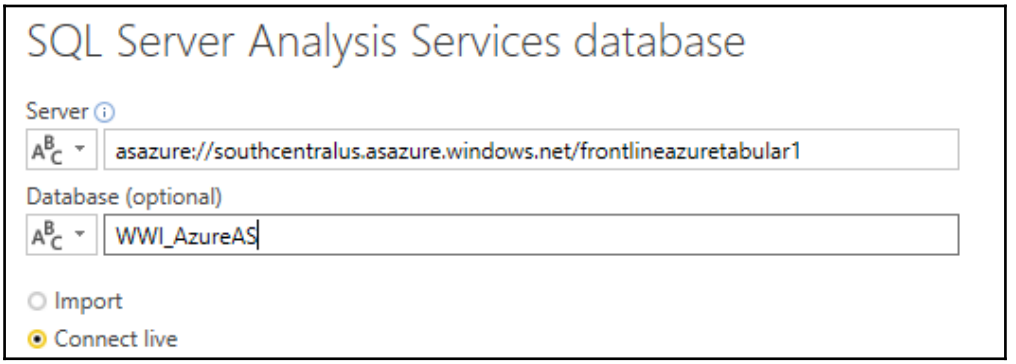

Promotion
Promotion Type
Start Date
End Date
Max Quantity
Min Quantity
Promotion Hierarchy
Sales Territory
SalesTerritoryKey
Sales Territory Group
Sales Territory Country
Sales Territory Region
Sales Territory URL
Sales Territory Hiera...
Finance
DateKey
AccountKey
ScenarioKey
DepartmentGroupKey
OrganizationKey
Amount
Customer
Customer Email Addr...
Customer Gender
Customer Country
Customer Postal Code
Customer State Provi...
Customer State Provi...
Internet Sales
ProductKey
OrderDateKey
ShipDateKey
CustomerKey
CurrencyKey
DueDateKey
Date
Calendar Year Status
Calendar Month Status
Calendar Week Status
Calendar Year Quart...
Prior Calendar Year...
Prior Calendar Month...
Account
Account Code
Account Type
Parent Account Code
Account
Parent Account
Account Hierarchy
Product
Product Subcategory
Product Category
Product Safety Stock Level
Product Key
Product Category Group
Product Alternate Key
Product Hierarchy
Currency
CurrencyKey
Currency
Currency Abbrev
Reseller Sales
CurrencyKey
DueDateKey
EmployeeKey
OrderDateKey
ResellerKey
ProductKey
AWImport1200CL
References
Model.bim
Tabular Model Explorer
Properties
Promotion Table
Basic
Connection Name
Formula
Hidden
Partitions
Source Data
Table Description
Table Name
Reporting Properties
Default Field Set
Table Behavior

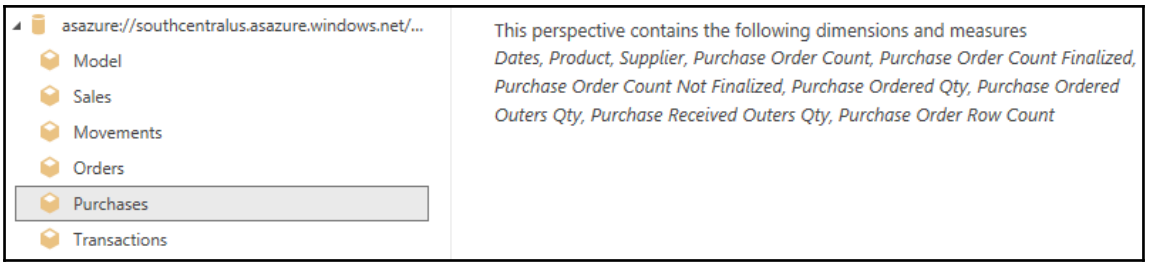

S1 Standard
100 Query Processing Units
Up to 25 GB Cache
Dedicated service
SSL
1,510.32
USD/MONTH (ESTIMATED)
S2 Standard
200 Query Processing Units
Up to 50 GB Cache
Dedicated service
SSL
3,020.64
USD/MONTH (ESTIMATED)
S4 Standard
400 Query Processing Units
Up to 100 GB Cache
Dedicated service
SSL
6,033.84
USD/MONTH (ESTIMATED)

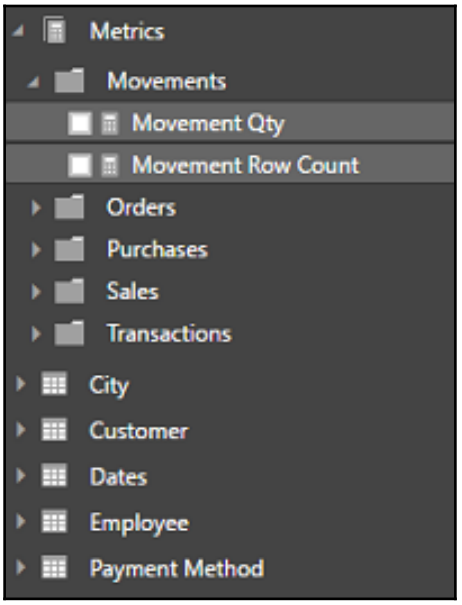

New Project
Recent
Installed
Templates
Business Intelligence
Analysis Services
Integration Services
Reporting Services
Visual C#
Visual Basic
Visual F#
Visual C++
.NET Framework 4.5.2
Sort by: Default
Search Installed Templates (Ctrl+E)
Analysis Services Multidimensional and Data Mini... Business Intelligence
Import from Server (Multidimensional and Data M... Business Intelligence
Analysis Services Tabular Project Business Intelligence
Import from PowerPivot Business Intelligence
Import from Server (Tabular) Business Intelligence
Type: Business Intelligence
Creates a tabular project by extracting the metadata and data from a PowerPivot for Excel workbook.

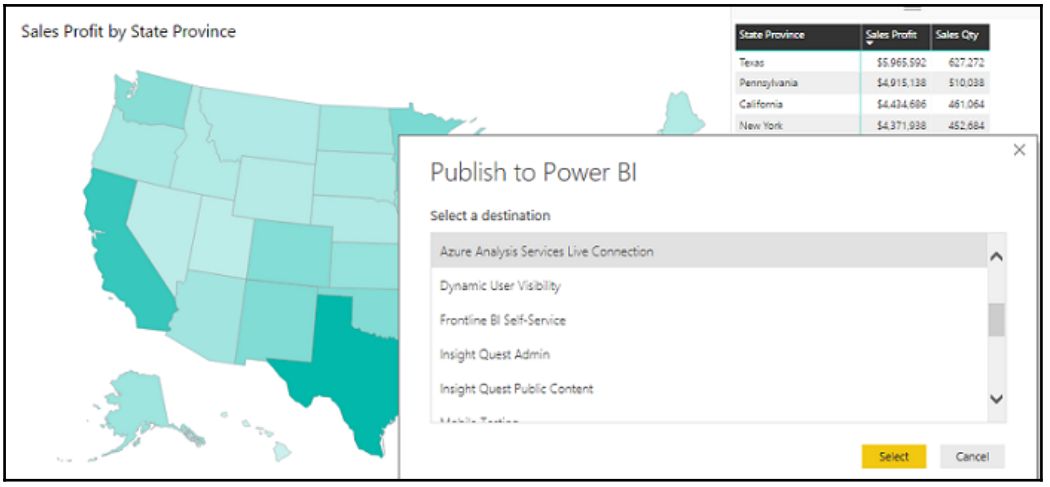

Resource group (change)
fronlineazureasresourcegroup
Status
Active
Location
South Central US
Subscription name (change)
Pay-As-You-Go
Server name
asazure://southcentralus.asazure.windows.net/frontlineazuretabular1
Pricing tier
D1
Connection strings
Show server connection strings
Web Designer — Preview
Open

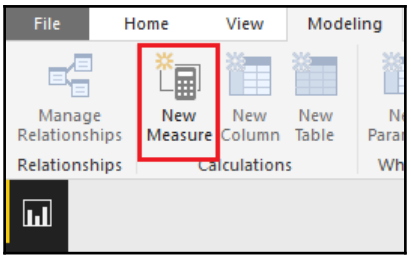

Get Data
Search
All
File
Database
Database
SQL Server database
Access database
SQL Server Analysis Services database
Oracle database

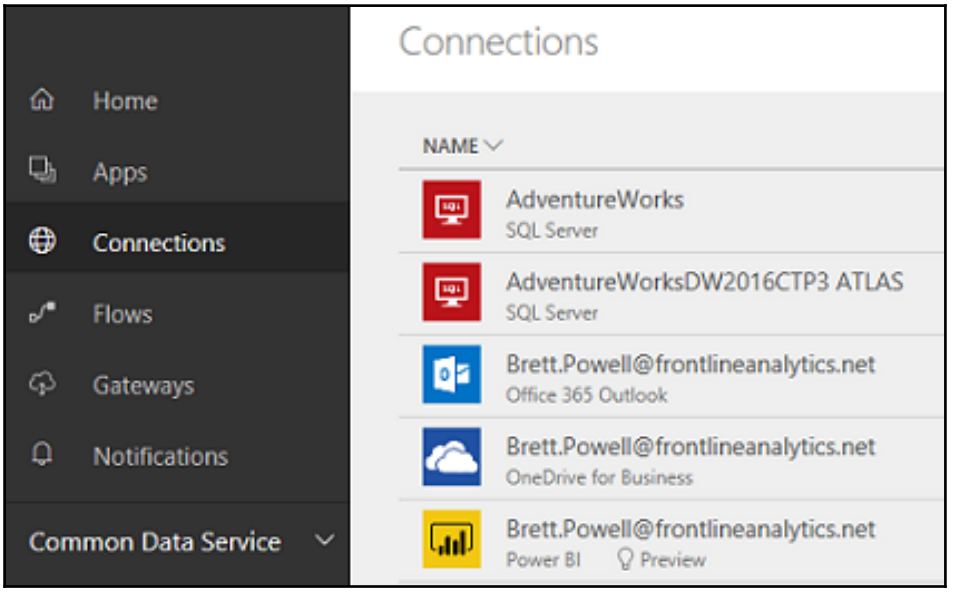

SQL Server Analysis Services database
Server
asazure://southcentralus.asazure.windows.net/frontlineazuretabular1
Database (optional)
WWI_AzureAS
Import
Connect live

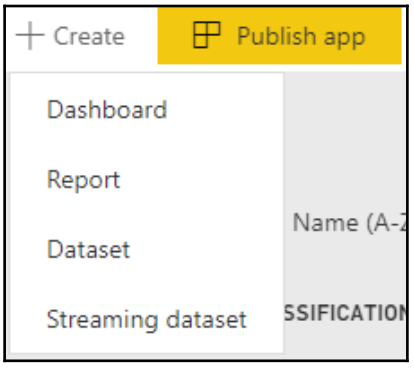

asazure://southcentralus.asazure.windows.net/...
Model
Sales
Movements
Orders
Purchases
Transactions
This perspective contains the following dimensions and measures
Dates, Product, Supplier, Purchase Order Count, Purchase Order Count Finalized, Purchase Order Count Not Finalized, Purchase Ordered Qty, Purchase Ordered Outers Qty, Purchase Received Outers Qty, Purchase Order Row Count

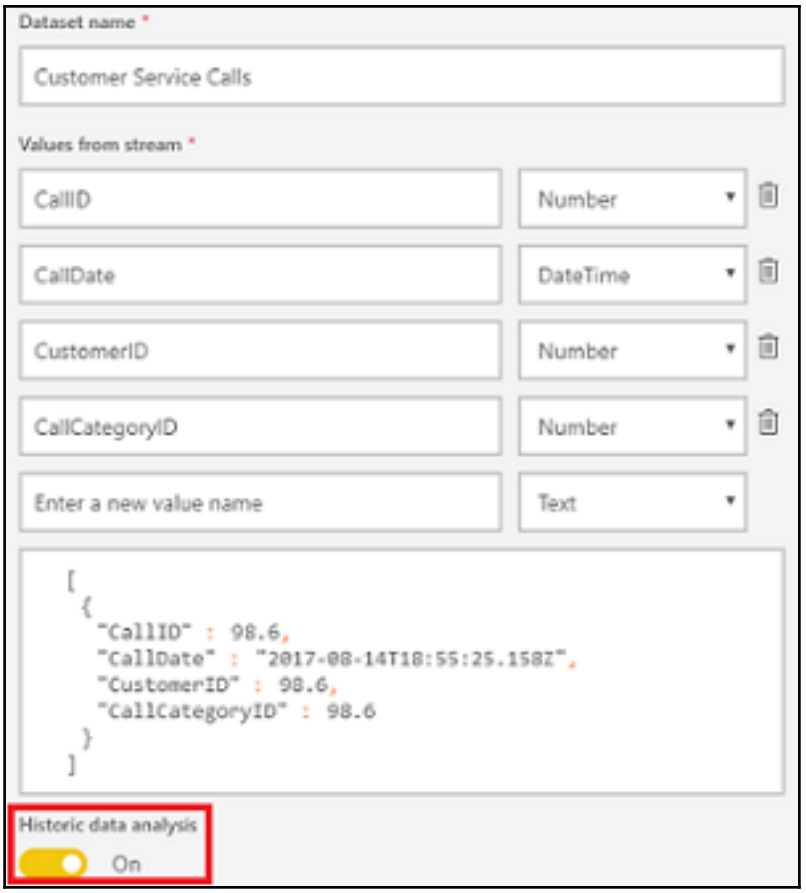

Metrics
Movements
Movement Qty
Movement Row Count
Orders
Purchases
Sales
Transactions
City
Customer
Dates
Employee
Payment Method

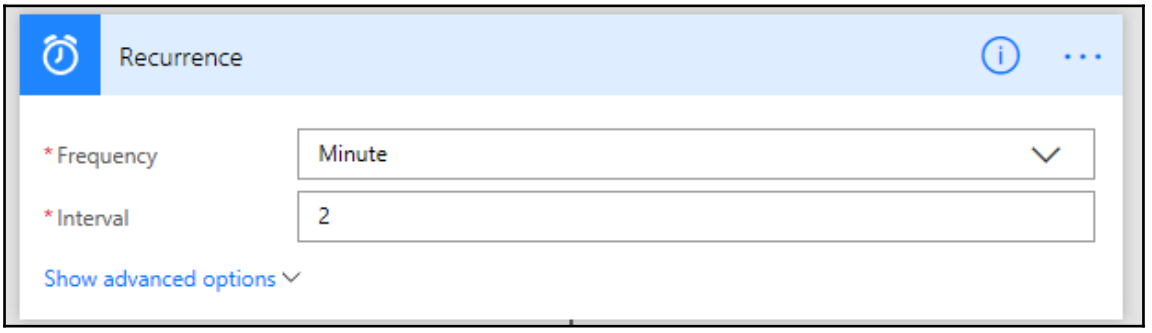

Sales Profit by State Province
State Province
Sales Profit
Sales Qty
Texas
$5,965,592
627,272
Pennsylvania
$4,915,138
510,038
California
$4,434,686
461,064
New York
$4,371,938
452,684
Publish to Power BI
Select a destination
Azure Analysis Services Live Connection
Dynamic User Visibility
Frontline BI Self-Service
Insight Quest Admin
Insight Quest Public Content
Select
Cancel

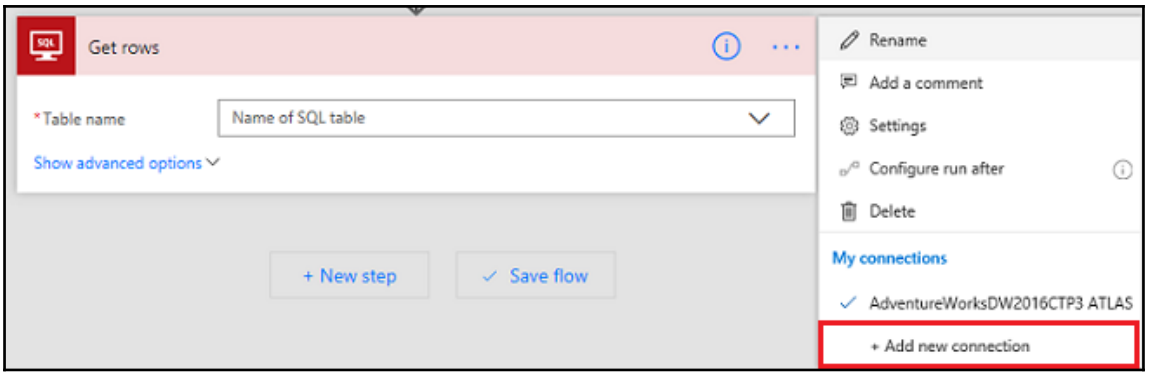

File
Home
View
Modeling
Manage Relationships
New Measure
New Column
New Table
Relationships
Calculations

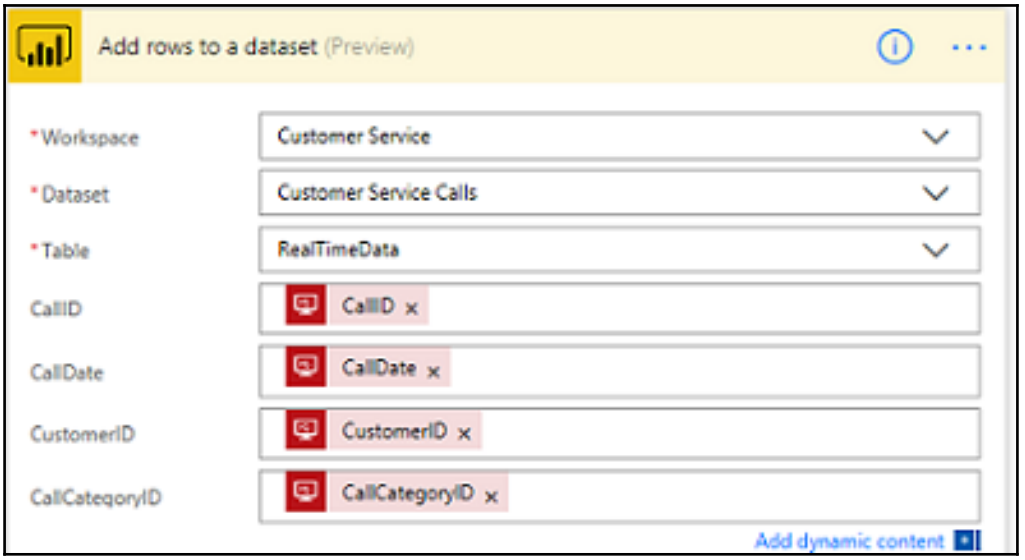

Home
Apps
Connections
Flows
Gateways
Notifications
Common Data Service
Connections
NAME
AdventureWorks
SQL Server
AdventureWorksDW2016CTP3 ATLAS
SQL Server
Brett.Powell@frontlineanalytics.net
Office 365 Outlook
Brett.Powell@frontlineanalytics.net
OneDrive for Business
Brett.Powell@frontlineanalytics.net
Power BI
Preview

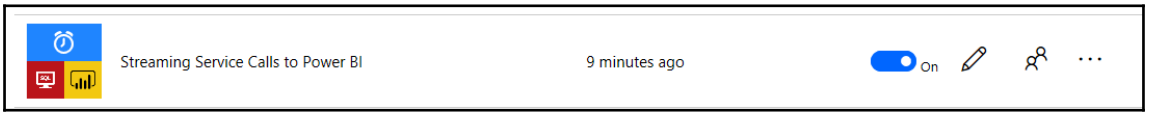

Create
Publish app
Dashboard
Report
Dataset
Streaming dataset
Name (A-Z
SSIFICATION

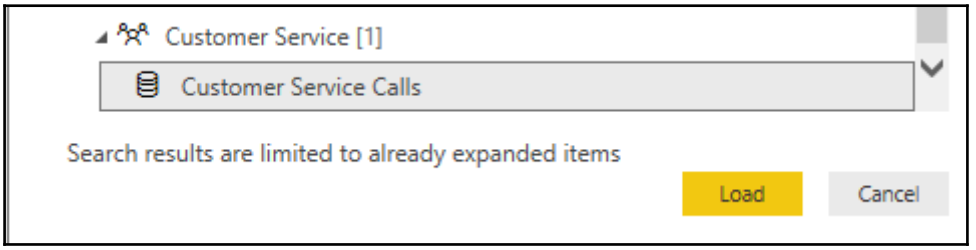

Dataset name *
Customer Service Calls
Values from stream *
CallID
Number
CallDate
DateTime
CustomerID
Number
CallCategoryID
Number
Enter a new value name
Text
[
{
"CallID" : 98.6,
"CallDate" : "2017-08-14T18:55:25.158Z",
"CustomerID" : 98.6,
"CallCategoryID" : 98.6
}
]
Historic data analysis
On

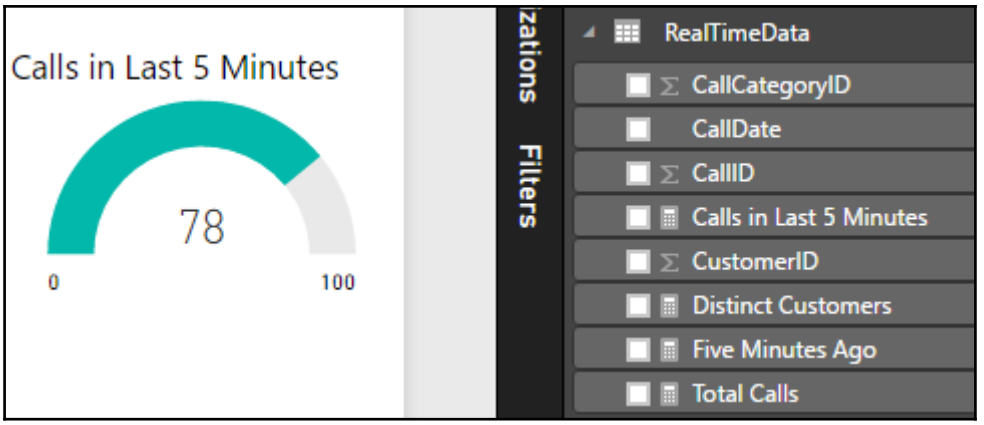

Recurrence
* Frequency
Minute
* Interval
2
Show advanced options

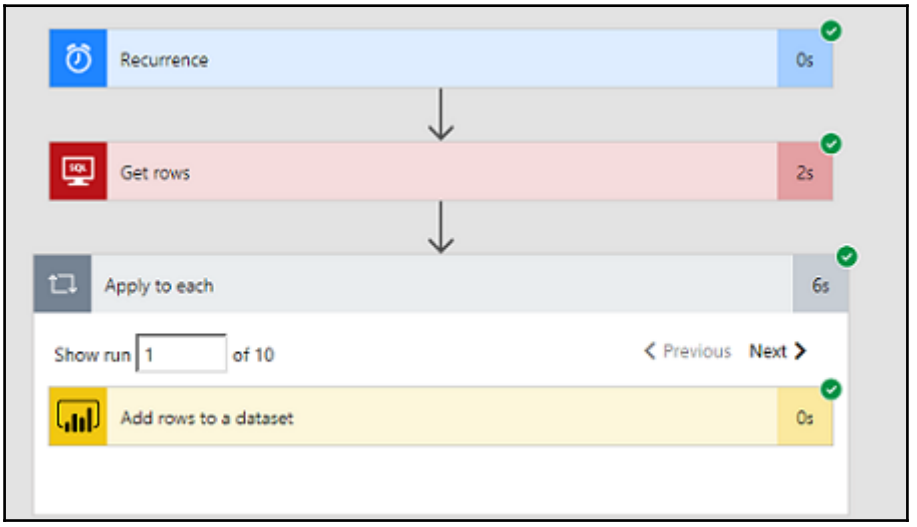

Get rows
*Table name
Name of SQL table
Show advanced options
+ New step
Save flow
Rename
Add a comment
Settings
Configure run after
Delete
My connections
AdventureWorksDW2016CTP3 ATLAS
+ Add new connection

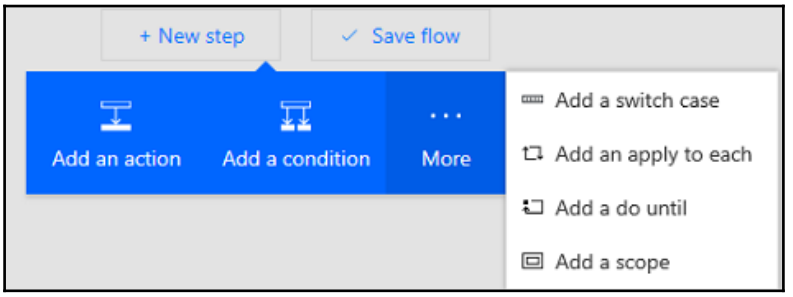

Add rows to a dataset (Preview)
*Workspace
Customer Service
*Dataset
Customer Service Calls
*Table
RealTimeData
CallID
CallID
CallDate
CallDate
CustomerID
CustomerID
CallCategoryID
CallCategoryID
Add dynamic content


Streaming Service Calls to Power BI
9 minutes ago
On

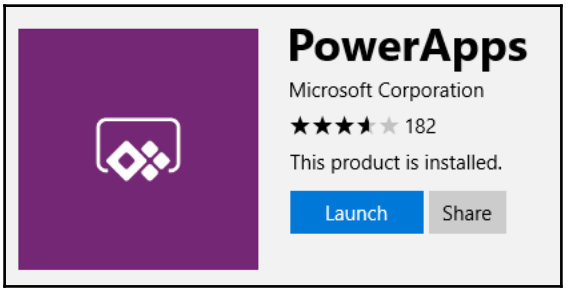

Customer Service [1]
Customer Service Calls
Search results are limited to already expanded items
Load
Cancel


Calls in Last 5 Minutes
78
0
100
Filters
RealTimeData
CallCategoryID
CallDate
CallID
Calls in Last 5 Minutes
CustomerID
Distinct Customers
Five Minutes Ago
Total Calls


Recurrence
0s
Get rows
2s
Apply to each
6s
Show run 1 of 10
Previous
Next
Add rows to a dataset
0s


+ New step
Save flow
Add an action
Add a condition
More
Add a switch case
Add an apply to each
Add a do until
Add a scope


Oracle Database - Get rows
PREMIUM
Oracle Database - Insert row
PREMIUM
Oracle Database - Delete row
PREMIUM
Oracle Database - Get tables
PREMIUM
Oracle Database - Update row
PREMIUM


PowerApps
Microsoft Corporation
182
This product is installed.
Launch
Share

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