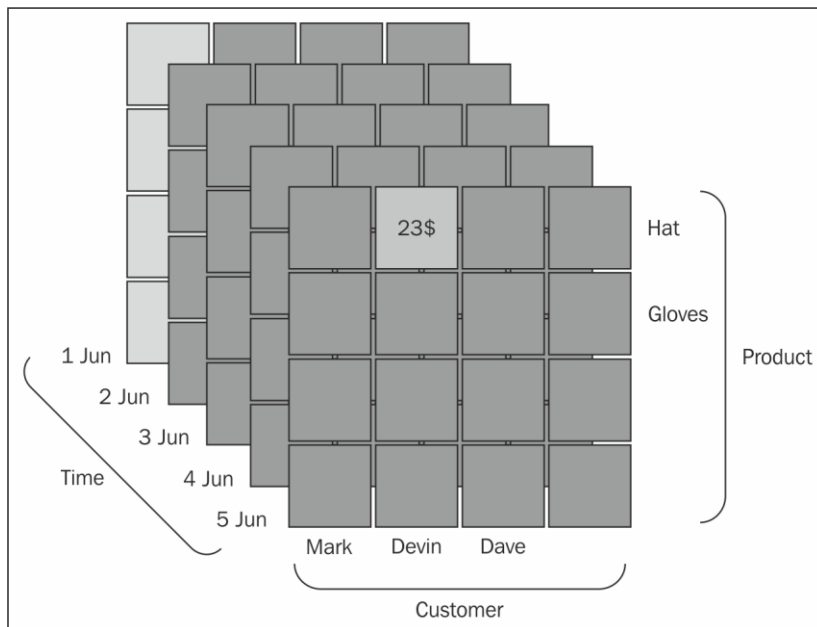
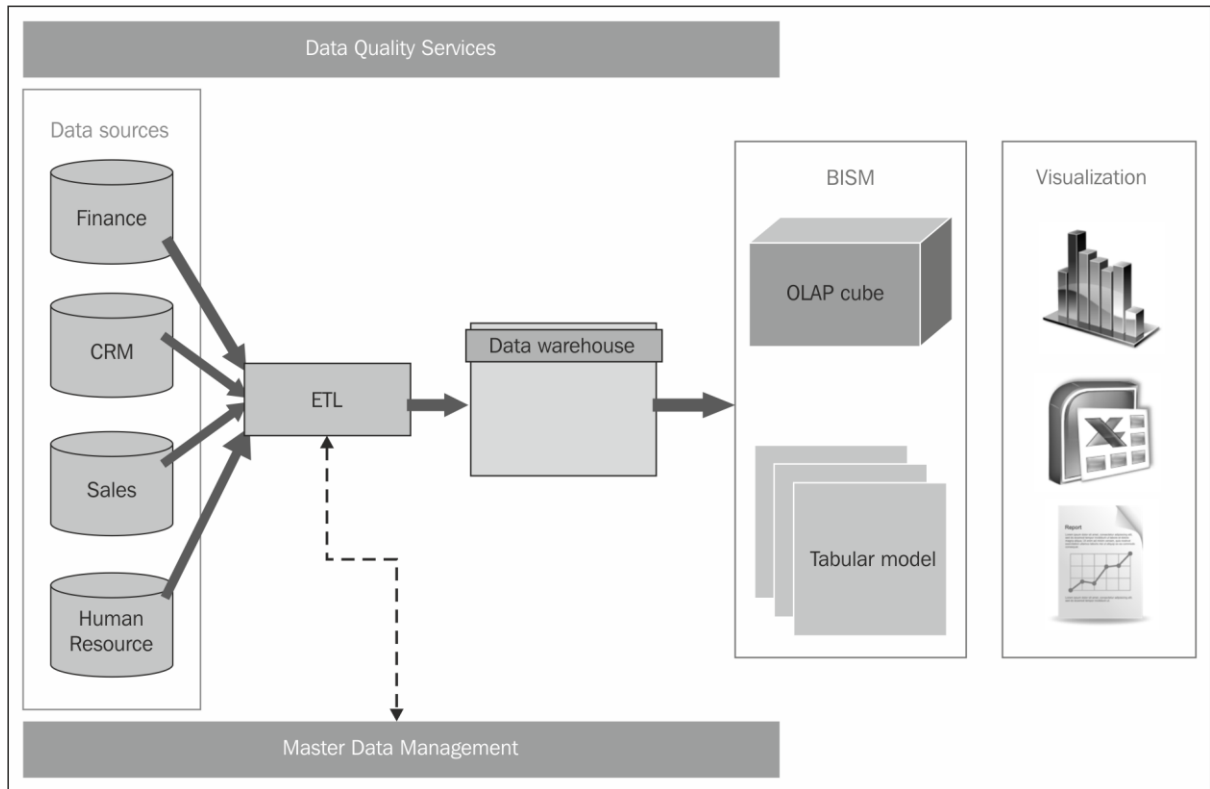
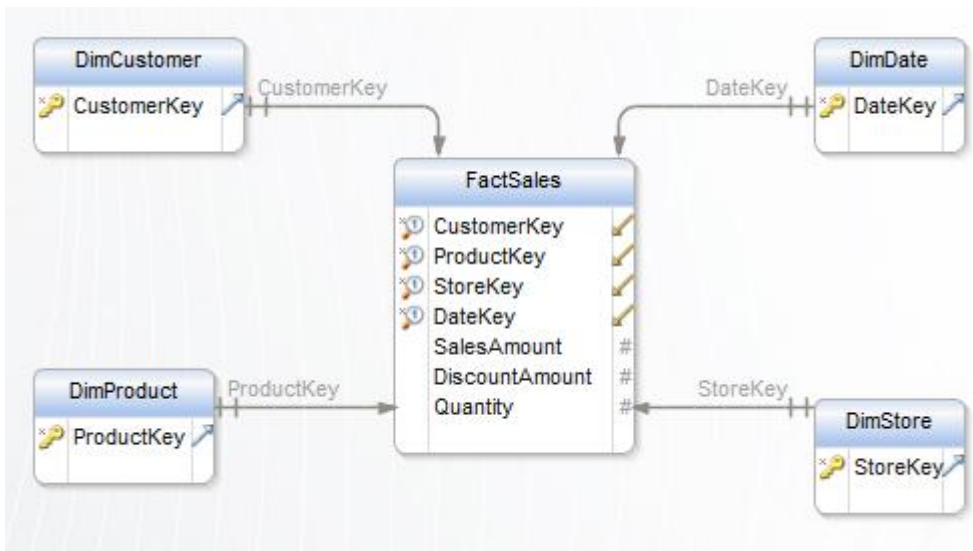
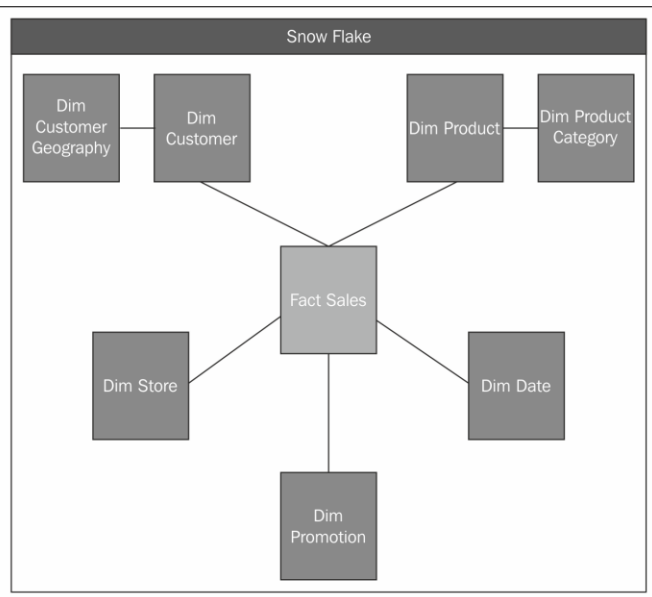
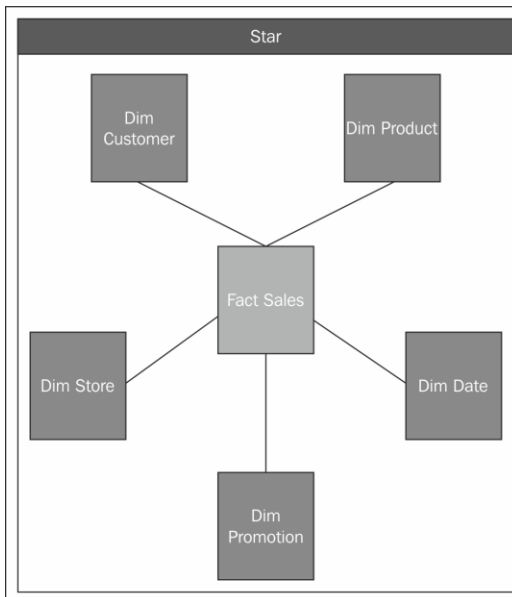



# Chapter 1, Data Warehouse Design




Custom	Father	Geo	
Devin	Batler		11
Peter	Blade		11
Lance	Martin		12

Suburb	City	State	Country	Key
Remuera	Auckland	Auckland	New Zealand	11
City Centre	Sydney	NSW	Australia	12



DimCustomer	
 CustomerKey	
CustomerAlternateKey	t
FirstName	t
LastName	t
FullName	t
JobTitle	t
Company	t
City	t
Suburb	t
State	t
Country	t
Education	t
NumberOfChildren	t
MaritalStatus	t

DimDate	
 DateKey	
FullDateAlternateKey	
Year	
MonthNumberOfYear	
MonthName	
Quarter	
FiscalYear	
FiscalQuarter	
DayNumberOfWeek	
DayNumberOfMonth	
DayNumberOfYear	
IsHoliday	
HolidayDescription	
IsWeekday	
WeekdayName	
WeekNumber	
ISOWeekNumber	

DateKey	DateFullName	DateFull	Year	Quarter	QuarterName	QuarterKey	Month	MonthKey	MonthName	DayOfMonth	NumberOfDaysInTheMonth	DayOfYear	WeekOfYear
20130521	21 May 2013	2013-05-21	2013	2	QTR 2	20132	5	201305	May	21	31	141	21
20130522	22 May 2013	2013-05-22	2013	2	QTR 2	20132	5	201305	May	22	31	142	21
20130523	23 May 2013	2013-05-23	2013	2	QTR 2	20132	5	201305	May	23	31	143	21
20130524	24 May 2013	2013-05-24	2013	2	QTR 2	20132	5	201305	May	24	31	144	21
20130525	25 May 2013	2013-05-25	2013	2	QTR 2	20132	5	201305	May	25	31	145	21
20130526	26 May 2013	2013-05-26	2013	2	QTR 2	20132	5	201305	May	26	31	146	22
20130527	27 May 2013	2013-05-27	2013	2	QTR 2	20132	5	201305	May	27	31	147	22
20130528	28 May 2013	2013-05-28	2013	2	QTR 2	20132	5	201305	May	28	31	148	22
20130529	29 May 2013	2013-05-29	2013	2	QTR 2	20132	5	201305	May	29	31	149	22
20130530	30 May 2013	2013-05-30	2013	2	QTR 2	20132	5	201305	May	30	31	150	22
20130531	31 May 2013	2013-05-31	2013	2	QTR 2	20132	5	201305	May	31	31	151	22
20130601	01 Jun 2013	2013-06-01	2013	2	QTR 2	20132	6	201306	June	1	30	152	22
20130602	02 Jun 2013	2013-06-02	2013	2	QTR 2	20132	6	201306	June	2	30	153	23
20130603	03 Jun 2013	2013-06-03	2013	2	QTR 2	20132	6	201306	June	3	30	154	23
20130604	04 Jun 2013	2013-06-04	2013	2	QTR 2	20132	6	201306	June	4	30	155	23
20130605	05 Jun 2013	2013-06-05	2013	2	QTR 2	20132	6	201306	June	5	30	156	23
20130606	06 Jun 2013	2013-06-06	2013	2	QTR 2	20132	6	201306	June	6	30	157	23
20130607	07 Jun 2013	2013-06-07	2013	2	QTR 2	20132	6	201306	June	7	30	158	23

TimeKey	Hour24	Hour24ShortString	Hour24MinString	Hour24FullString	Hour12	Hour12ShortString	Hour12MinString	Hour12FullString	AmPmCode	AmPmString	Minute
200201	20	20	20:00	20:00:00	8	08	08:00	08:00:00	1	PM	2
200202	20	20	20:00	20:00:00	8	08	08:00	08:00:00	1	PM	2
200203	20	20	20:00	20:00:00	8	08	08:00	08:00:00	1	PM	2
200204	20	20	20:00	20:00:00	8	08	08:00	08:00:00	1	PM	2
200205	20	20	20:00	20:00:00	8	08	08:00	08:00:00	1	PM	2
200206	20	20	20:00	20:00:00	8	08	08:00	08:00:00	1	PM	2
200207	20	20	20:00	20:00:00	8	08	08:00	08:00:00	1	PM	2
200208	20	20	20:00	20:00:00	8	08	08:00	08:00:00	1	PM	2
200209	20	20	20:00	20:00:00	8	08	08:00	08:00:00	1	PM	2
200210	20	20	20:00	20:00:00	8	08	08:00	08:00:00	1	PM	2
200211	20	20	20:00	20:00:00	8	08	08:00	08:00:00	1	PM	2
200212	20	20	20:00	20:00:00	8	08	08:00	08:00:00	1	PM	2
200213	20	20	20:00	20:00:00	8	08	08:00	08:00:00	1	PM	2
200214	20	20	20:00	20:00:00	8	08	08:00	08:00:00	1	PM	2
200215	20	20	20:00	20:00:00	8	08	08:00	08:00:00	1	PM	2
200216	20	20	20:00	20:00:00	8	08	08:00	08:00:00	1	PM	2
200217	20	20	20:00	20:00:00	8	08	08:00	08:00:00	1	PM	2
200218	20	20	20:00	20:00:00	8	08	08:00	08:00:00	1	PM	2
200219	20	20	20:00	20:00:00	8	08	08:00	08:00:00	1	PM	2

Before Change

First Name	Last Name	Job Title	Employee Number	City
Petaer	Jackson	Operations Manager	1244521	Los Angeles

After Change (Type 1)

First Name	Last Name	Job Title	Employee Number	City
Peter	Jackson	Operations Manager	1244521	Los Angeles

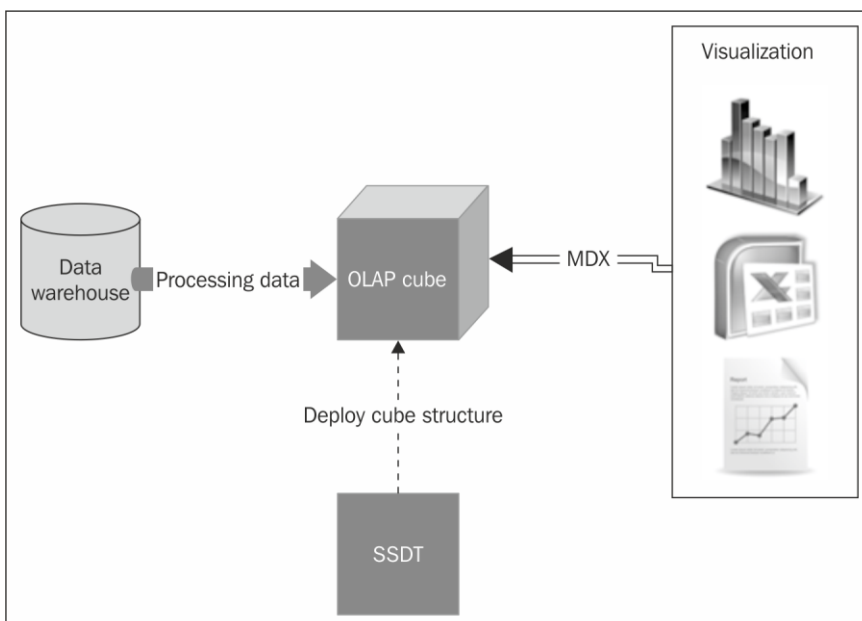
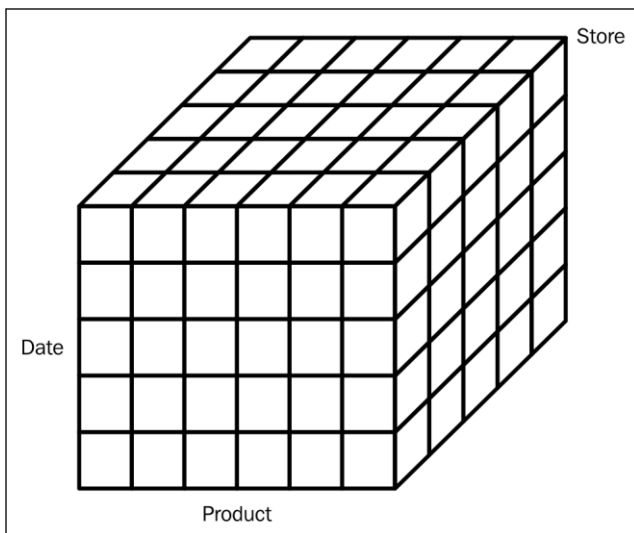
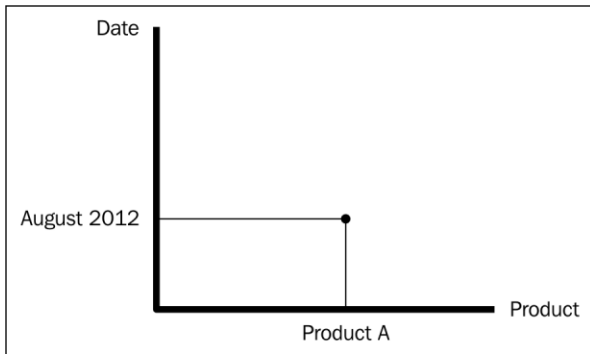
Before Change

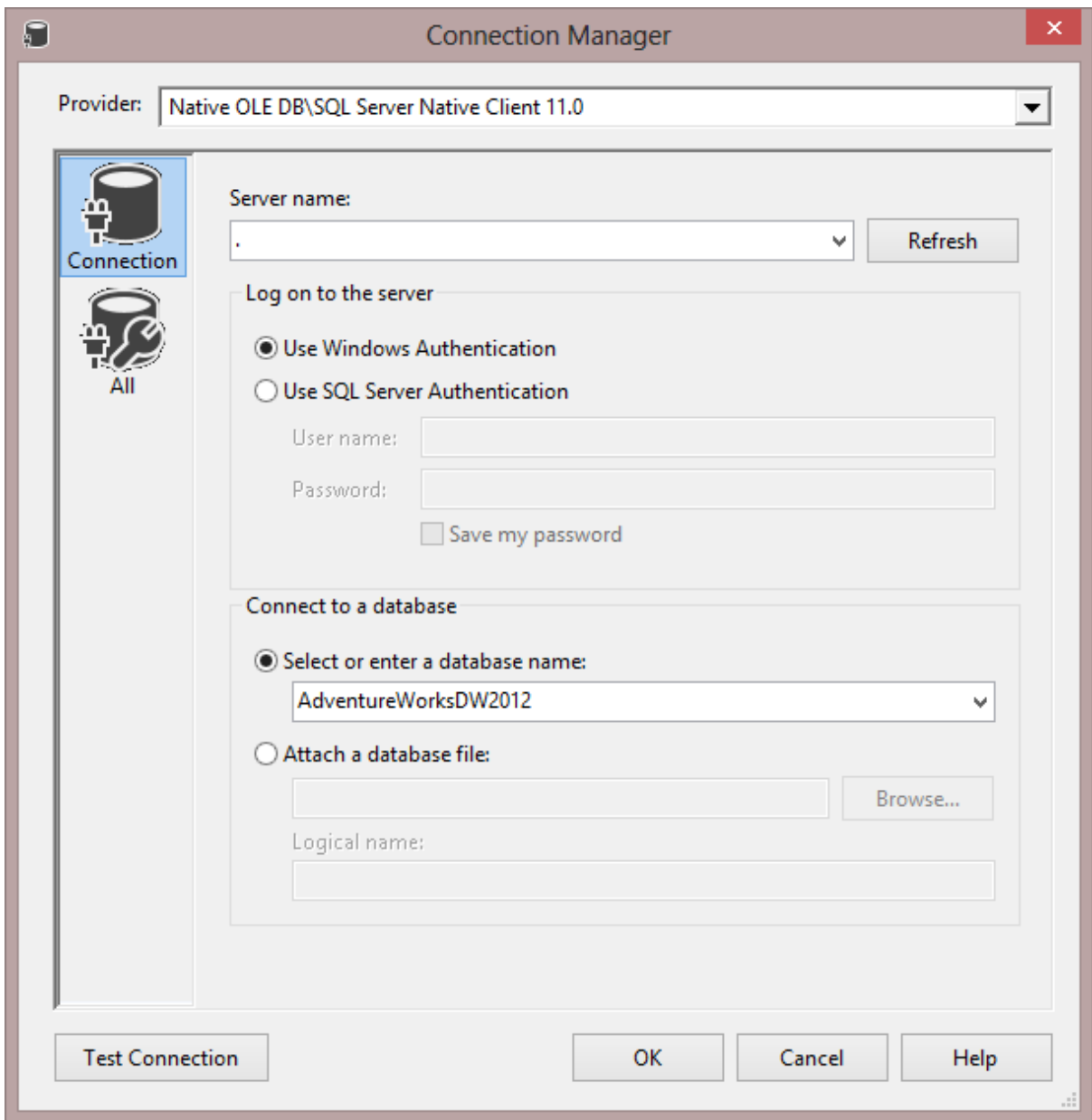
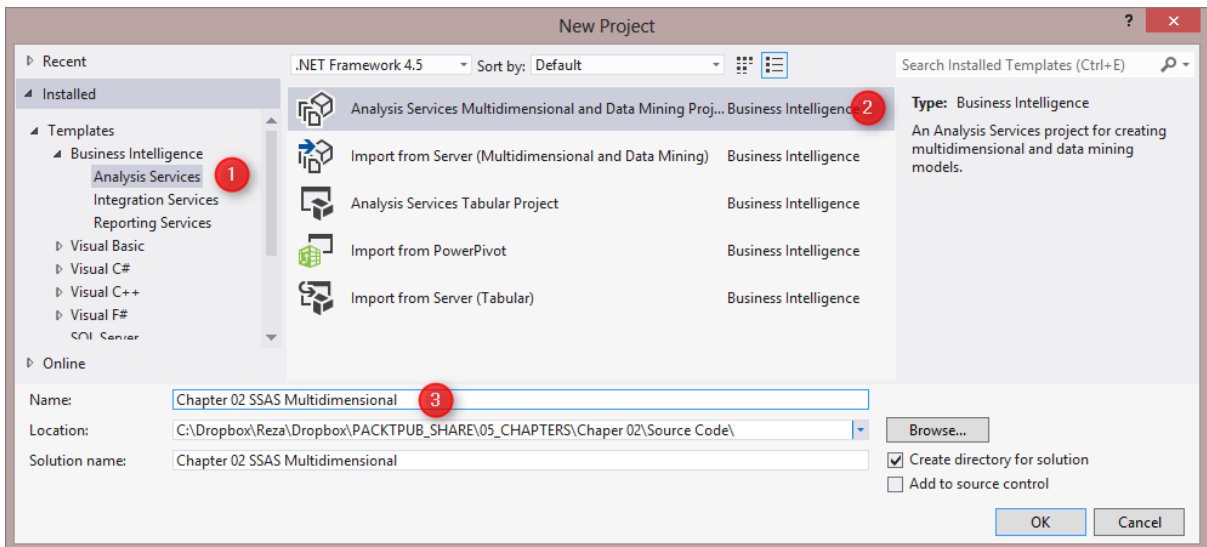
First Name	Last Name	Job Title	Employee Number	City	From Date	To Date
Peter	Jackson	Operations Manager	1244521	Seattle	19900101	NULL

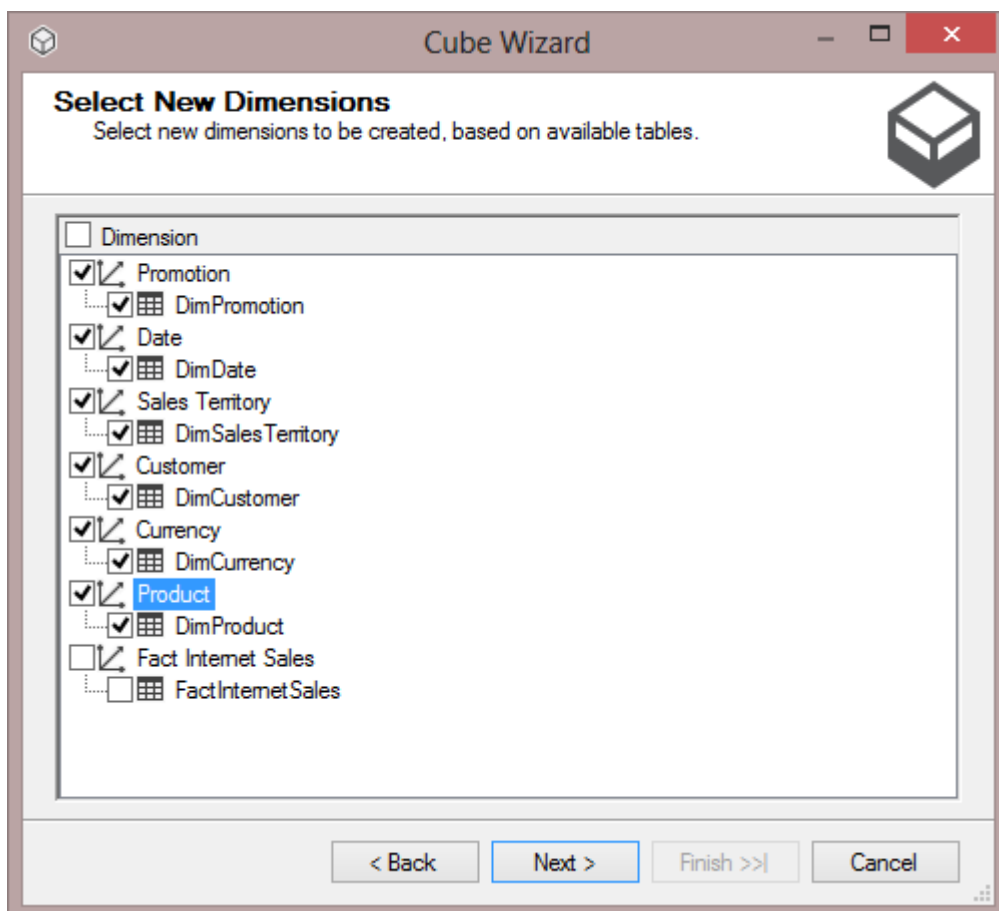
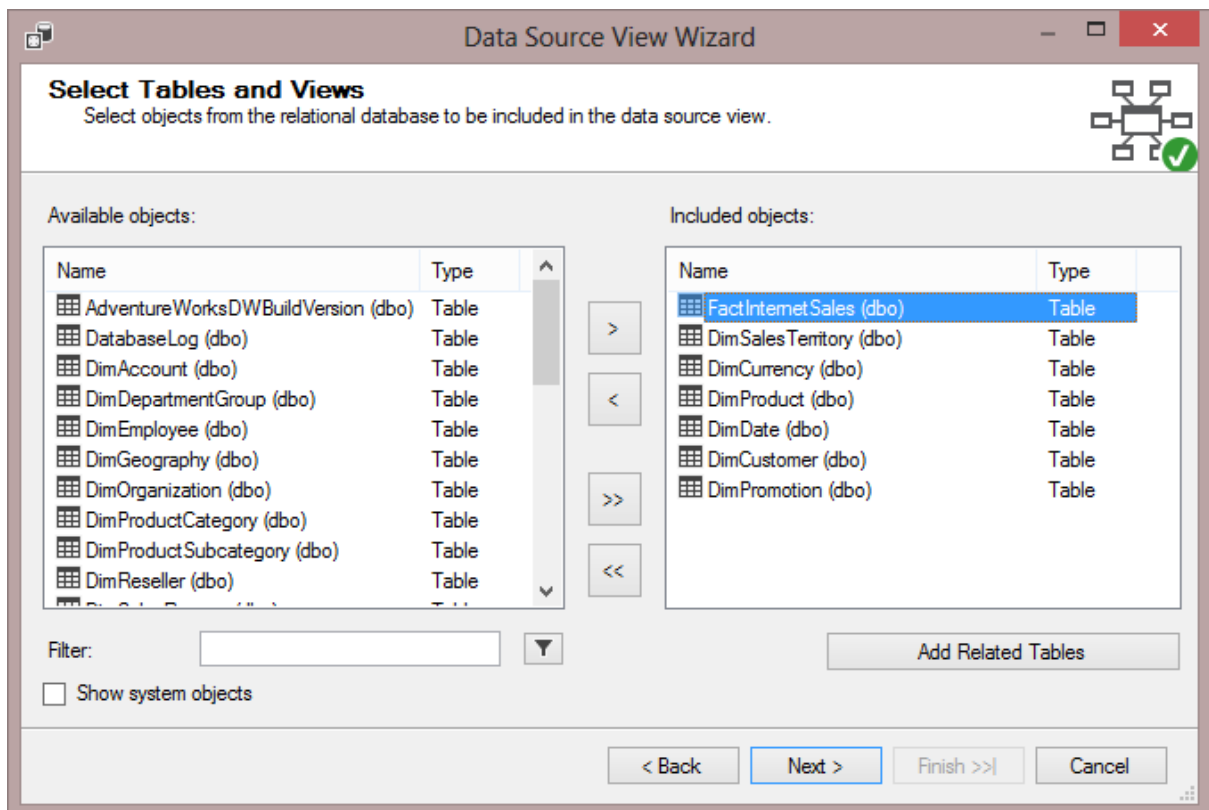
After Change (Type 2)

First Name	Last Name	Job Title	Employee Number	City	From Date	To Date
Peter	Jackson	Operations Manager	1244521	Seattle	19900101	20131129
Peter	Jackson	Operations Manager	1244521	Charlotte	20131129	NULL

# Chapter 2, SQL Server Analysis Services Multidimensional Cube Development







Chapter 02 SSAS Multidimensional - Microsoft Visual Studio

FILE EDIT VIEW PROJECT BUILD DEBUG TEAM SQL FORMAT DATABASE DATA SOURCE VIEW CUBE TOOLS TEST ARCHITECTURE ANALYZE WINDOW HELP

Internet Sales.cube [Design] Adventure Works DW2012.dsv [Design]

Quick Launch (Ctrl+Q)

Search Solution Explorer (Ctrl+)

Solution Explorer

Chapter 02 SSAS Multidimensional

- Data Sources
  - Adventure Works DW2012.ds
- Data Source Views
  - Adventure Works DW2012.dsv
- Cubes
  - Internet Sales.cube
- Dimensions
  - Promotion.dim
  - Sales Territory.dim
  - Customer.dim
  - Currency.dim
  - Product.dim
- Mining Structures
- Roles

Properties

Internet Sales Cube

ProcessingPriority 0

Source Adventure Works DW2012

Visible True

Basic

Description

ID Internet Sales

Name Internet Sales

Configurable

Stratagel ocation

Name

Specifies the name of the object.

Measures

Internet Sales

- Fact Internet Sales
  - Revision Number
  - Order Quantity
  - Unit Price
  - Extended Amount
  - Unit Price Discount Pct
  - Discount Amount
  - Product Standard Cost
  - Total Product Cost
  - Sales Amount
  - Tax Amt
  - Freight
  - Fact Internet Sales Count

Dimensions

Internet Sales

- Promotion
- Order Date
- Sales Territory
- Customer
- Currency
- Product
- Ship Date
- Due Date

Data Source View

DimPromotion

- PromotionKey
- PromotionAlternateKey...
- EnglishPromotionNa...
- SpanishPromotionNa...
- FrenchPromotionName
- DiscountPct
- EnglishPromotionType...
- SpanishPromotionTy...
- FrenchPromotionType...
- EnglishPromotionCat...

DimDate

- DateKey
- FullDateAlternateKey
- DayNumberOfWeek
- EnglishDayNameOf...
- SpanishDayNameOf...
- FrenchDayNameOf...
- DayNumberOfMonth
- DayNumberOfYear
- WeekNumberOfYear
- EnglishMonthName

DimCustomer

- CustomerKey
- GeographyKey
- CustomerAlternat...
- Title
- FirstName
- MiddleName
- LastName
- NameStyle
- BirthDate
- MaritalStatus

FactInternetSales

- SalesOrderNumber
- SalesOrderLineN...
- ProductKey
- OrderDateKey
- ShipDateKey
- CustomerKey
- PromotionKey
- CurrencyKey
- SalesTerritoryKey

DimSalesTerritory

- SalesTerritoryKey
- SalesTerritoryAlternate...
- SalesTerritoryRegion
- SalesTerritoryCountry
- SalesTerritoryGroup
- SalesTerritoryImage

DimProduct

- ProductKey
- ProductAlternateKey
- ProductSubcategor...
- WeightUnitMeasure...
- SizeUnitMeasureC...
- EnglishProductName
- SpanishProductName
- FrenchProductName

DimCurrency

- CurrencyKey
- CurrencyAlternate...
- CurrencyName

Measures

Internet Sales

- Fact Internet Sales
  - Revision Number
  - Order Quantity
  - Unit Price
  - Extended Amount
  - Unit Price Discount Pct
  - Discount Amount
  - Product Standard Cost
  - Total Product Cost
  - Sales Amount
  - Tax Amt
  - Freight
  - Fact Internet Sales Count

Dimensions

Internet Sales

- Promotion
- Order Date
- Sales Territory
- Customer
- Currency
- Product
- Ship Date
- Due Date

Error List Output Find Results 1 Data Tools Operations

Ready



Internet Sales.cube [Design] | Adventure Works DW2012.dsv [Design]

Cube S... | Dimensi... | Calcula... | KPIs | Actions | Partitions | Aggreg... | Perspe... | Transla... | Browser

Language: Default

Edit as Text | Import...

Internet Sales

Metadata

Measure Group: <All>

Internet Sales

- Measures
  - Fact Internet Sales
    - Discount Amount
    - Extended Amount
    - Fact Internet Sales Count
    - Freight
    - Order Quantity
    - Product Standard Cost
    - Revision Number
    - Sales Amount
    - Tax Amt
    - Total Product Cost
    - Unit Price
    - Unit Price Discount Pct
- KPIs
- Currency
- Customer
- Due Date
- Order Date
- Product
- Promotion
- Sales Territory
- Sales Territory Key
- Ship Date

Dimension	Hierarchy	Operator	Filter Expression
<Select dimension>			
Sales Territory Key	Sales Amount	Order Quantity	
1	3649866.55120099	8993	
2	6532.4682	27	
3	3000.8296	20	
4	5718150.81220206	12265	
5	12238.8496	39	
6	1977844.86209997	7620	
7	2644017.71430033	5558	
8	2894312.33820041	5625	
9	9061000.58440184	13345	
10	3391712.21090071	6906	

Sales Territory.dim [Design]\* | Internet Sales.cube [Design]\* | Adventure Works DW2012.dsv [Design]

Dimension Structure | Attribute Relationships | Translations | Browser

Attributes

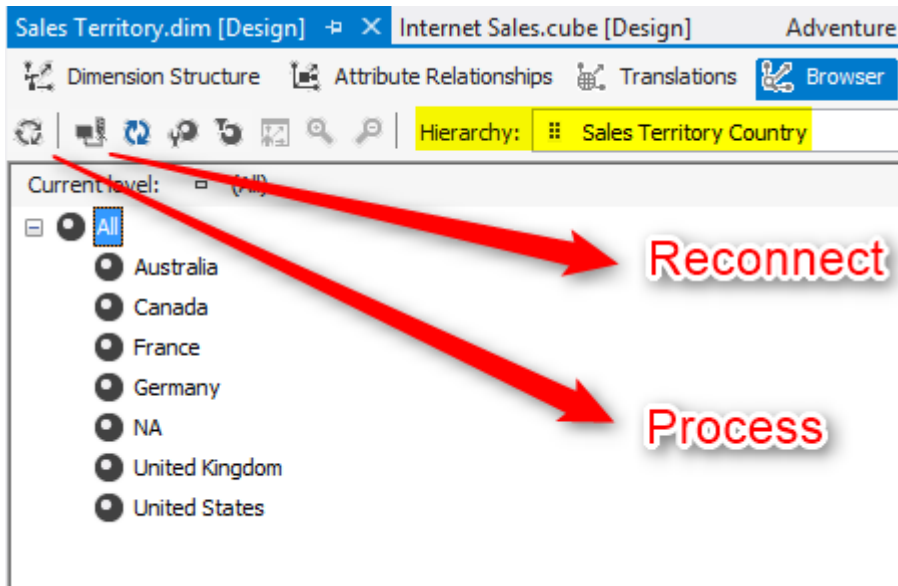
- Sales Territory
  - Sales Territory Country
  - Sales Territory Group
  - Sales Territory Key
  - Sales Territory Region

Hierarchies

To create a new hierarchy, drag an attribute here.

Data Source View

- DimSalesTerritory
  - SalesTerritoryKey
  - SalesTerritoryAlternateKey
  - SalesTerritoryRegion
  - SalesTerritoryCountry
  - SalesTerritoryGroup
  - SalesTerritoryImage



Book2 - Excel

FILE HOME INSERT PAGE LA FORMUL DATA REVIEW VIEW Load Tes Master D DATA

PivotTable Active Field Group Filter Insert Slicer Insert Timeline Filter Connections Refresh Change Data Source Actions Calculations

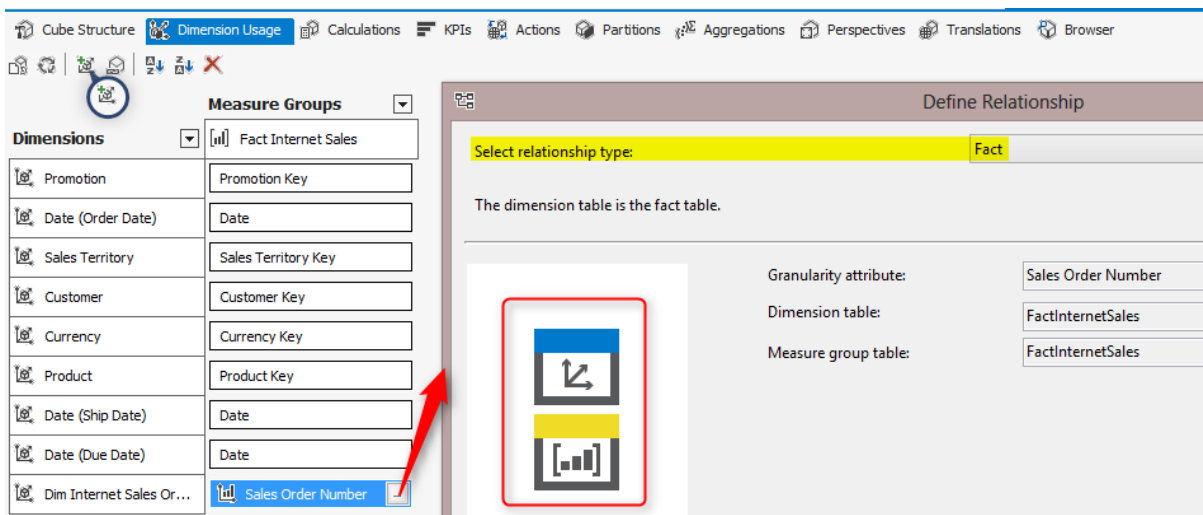
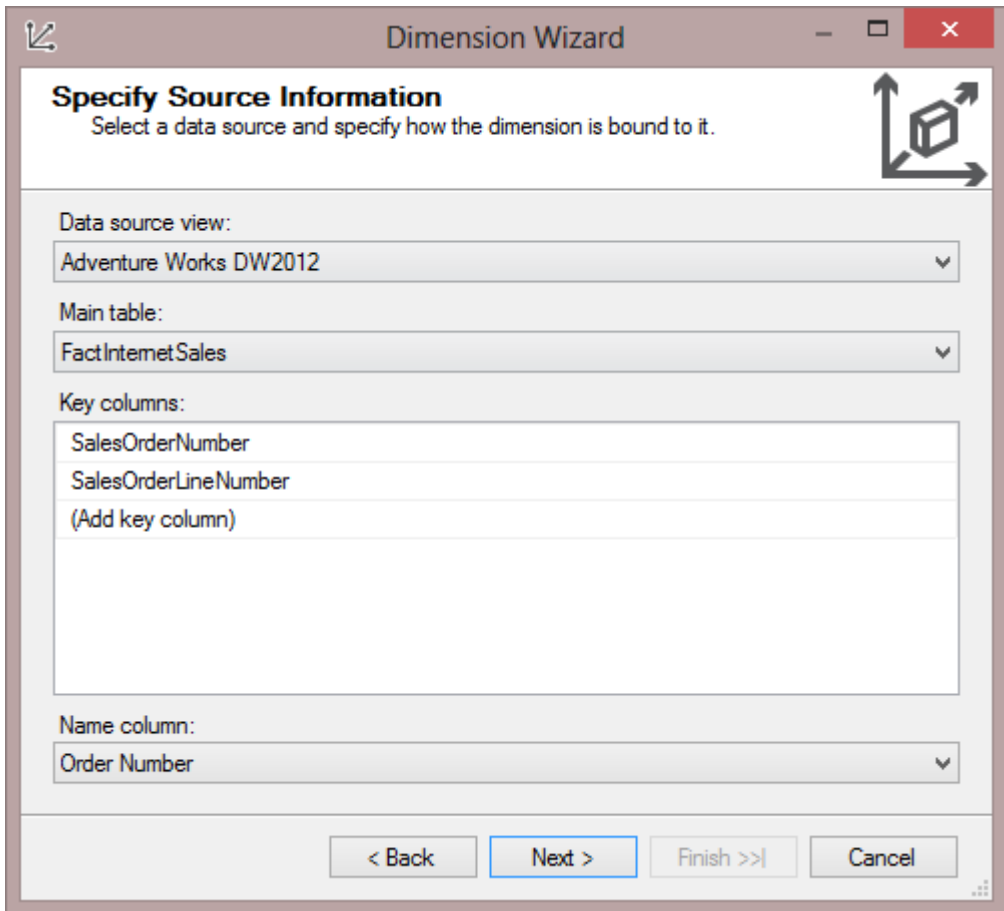
A1 Row Labels

	A	B	C	D
1	Row Labels	Order Quantity	Sales Amount	
2	2005	1,013	\$3,266,373.66	
3	2006	2,677	\$6,530,343.53	
4	2007	24,443	\$9,791,060.30	
5	2008	32,265	\$9,770,899.74	
6	Grand Total	60,398	\$29,358,677.22	
7				
8				
9				

PivotTable Fields

Choose fields to add to report:

- Due Date.Month
- Order Date
  - Calendar Year
  - Order Date.Date
  - Order Date.Month



- [-] ● All
- + ● Accessories
- + ● Bikes
- + ● Clothing
- [-] ● Components
  - [-] ● Bottom Brackets
    - LL Bottom Bracket
    - ML Bottom Bracket
    - HL Bottom Bracket
  - + ● Brakes
  - + ● Chains

	All	Australia	Canada	France	Germany	NA	United Kingdom	United States
2005	1013	394	47	59	76	(null)	96	341
2006	2677	859	226	233	233	(null)	265	861
2007	24443	5335	3086	2291	2254	(null)	2966	8511
2008	32265	6757	4261	2975	3062	(null)	3579	11631
2009	(null)	(null)	(null)	(null)	(null)	(null)	(null)	(null)
2010	(null)	(null)	(null)	(null)	(null)	(null)	(null)	(null)

Cube Structure Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Script Organizer **New Calculated Member**

Command

- CALCULATE
- [Profit]

Name: [Profit]

Parent Properties

Parent hierarchy: Measures

Parent member: [ ] Change

Expression

[Measures].[Sales Amount] - [Measures].[Total Product Cost]

Additional Properties

Format string: "Currency"

Visible: True

Non-empty behavior: [ ]

Associated measure group: (Undefined)

Display folder: [ ]

Color Expressions

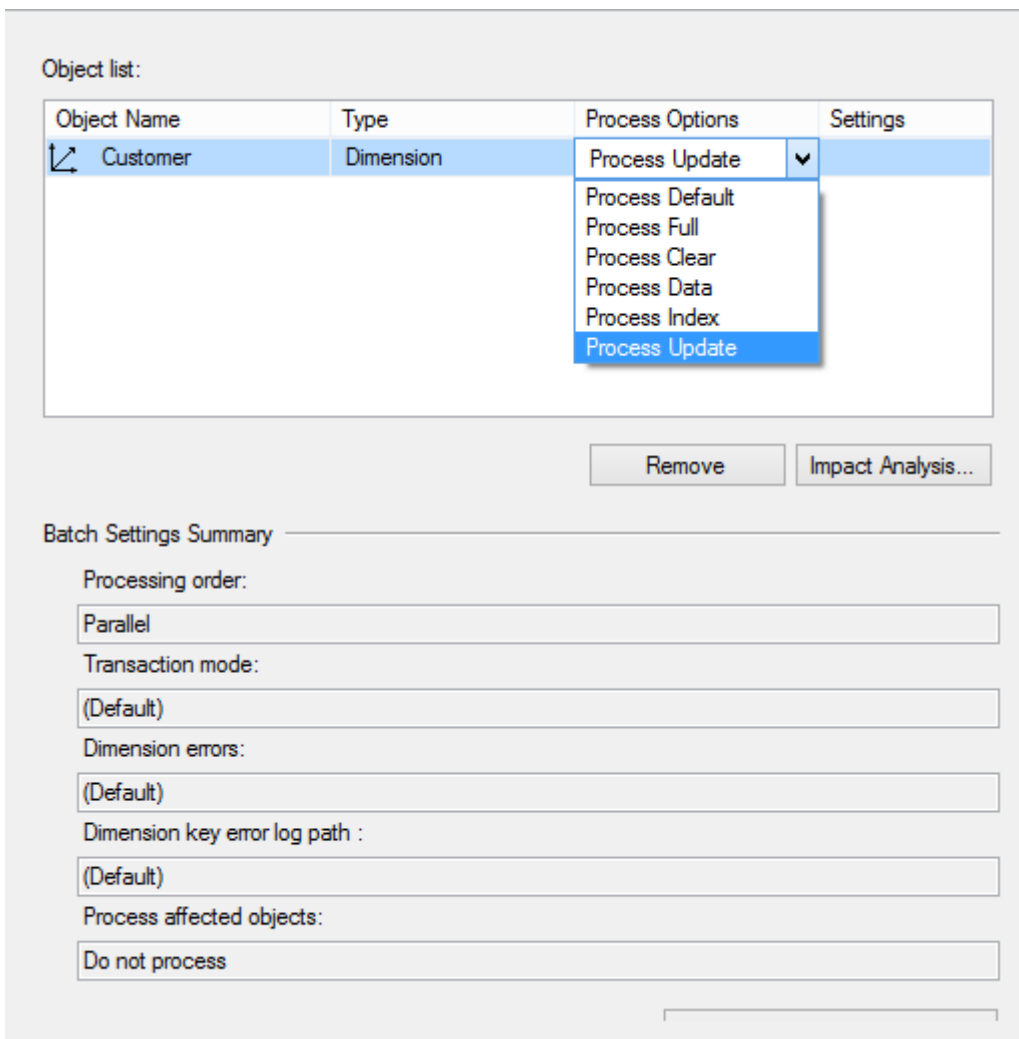
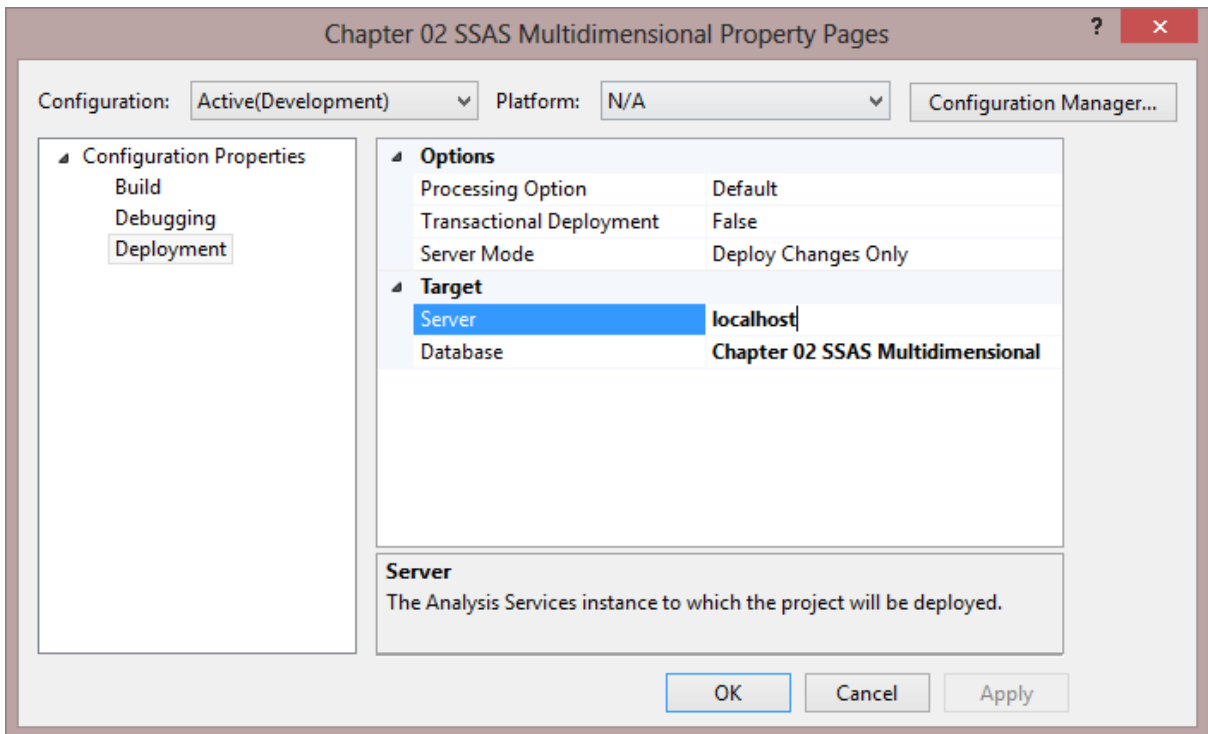
Font Expressions

Calculation Tools

Metadata Functions Templates

Measure Group: <All>

- [-] Fact Internet Sales
  - Discount Amount
  - Extended Amount
  - Fact Internet Sales Count
  - Freight



Change Settings

These settings apply to the entire processing batch.

Processing options | Dimension key errors

Use default error configuration

Use custom error configuration

Key error action: Convert to unknown

Processing error limit:

Ignore errors count

Stop on error

Number of errors: 0

On error action: Stop processing

Specific error conditions:

Key not found: Report and continue

Duplicate key: Ignore error

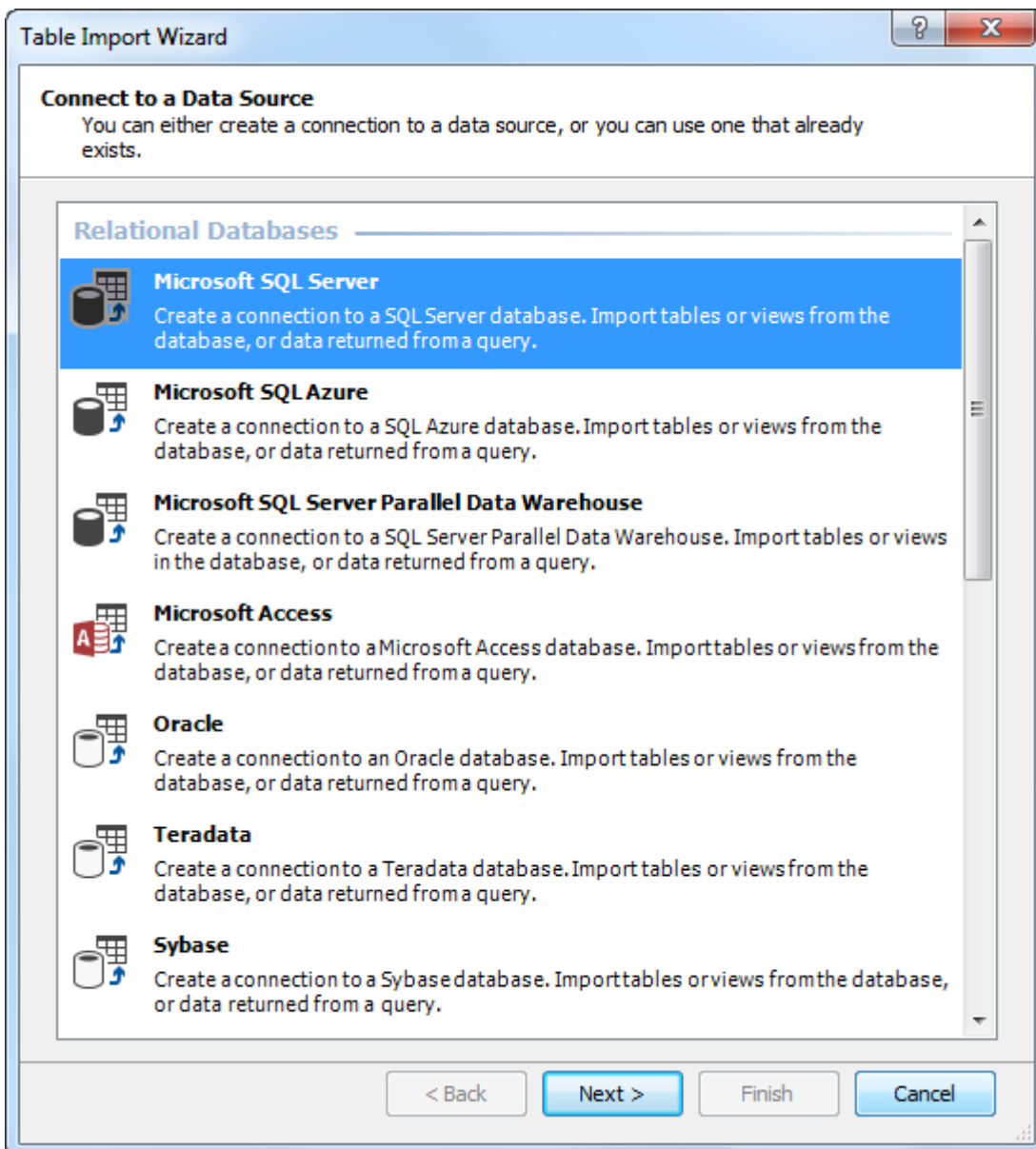
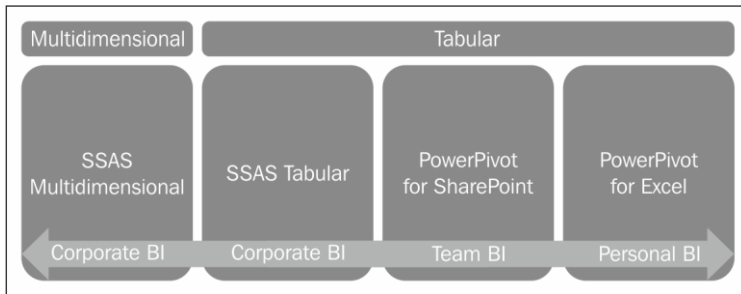
Null key converted to unknown: Ignore error

Null key not allowed: Report and continue

Error log path:  Browse ...

OK Cancel Help

# Chapter 3, Tabular Model Development of SQL Server Analysis Services



Model.bim Columns

[CurrencyKey]	CurrencyAlternateKey	CurrencyName	Add Column
1	AFA	Afghani	
2	DZD	Algerian Dinar	
3	ARS	Argentine Peso	
4	AMD	Armenian Dram	
5	AWG	Aruban Guilder	
6	AUD	Australian Dollar	
7	AZM	Azerbaijani M...	
8	BSD	Bahamian Dollar	
9	BHD	Bahraini Dinar	
10	THB	Baht	
11	PAB	Balboa	
12	BBD	Barbados Dollar	
13	BEF	Belgian Franc	
14	VEB	Bolivar	
15	BOB	Boliviano	
16	BRL	Brazilian Real	

Measures Pane

Tables Pane

Currency Customer Date Product Promotion SalesTerritory InternetSales

Record: 1 of 105

Solution Explorer

Search Solution Explorer (Ctrl+;)

Solution 'Chapter 03 Tabular' (1 project)

- Chapter 03 Tabular
  - References
  - Model.bim

Solution Explorer Class View

Properties

Currency Table

Basic

Connection Name SqlServer localhost

Hidden False

Partitions (Click to edit)

Source Data (Click to edit)

Table Description

Table Name Currency

Reporting Properties

Default Field Set (Click to edit)

Table Behavior (Click to edit)

Diagram View

Grid View

Start Development

Sum

Amount: =SUM([SalesAmount])

OrderQuantity	SalesAmount	TaxAmt
.87	1	\$4.99 \$0.40
.87	1	\$4.99 \$0.40
.87	1	\$4.99 \$0.40
.87	1	\$4.99 \$0.40
.87	1	\$4.99 \$0.40
.87	1	\$4.99 \$0.40

Sum of OrderQuantity: 60398

Sum of SalesAmount: \$29,358,677.22

Properties

Sum of SalesAmount Measure

Basic

Currency Symbol \$ English (New Zealand)

Decimal places 2

Description

Format Currency

Formula SUM([SalesAmount])

Measure Name Sum of SalesAmount



File Home Insert Page Layout Formulas Data Review View Master Data Acrobat Optic

PivotTable Name: PivotTable1 Active Field: CalendarYear

Options Field Settings Expand Entire Field Collapse Entire Field

Group Selection Ungroup Group Field

Sort Insert Slicer Refresh Change Data Source

Row Labels

1	Row Labels	Sum of OrderQuantity	Sum of SalesAmount
2	2005	1,013	\$3,266,373.66
3	2006	2,677	\$6,530,343.53
4	2007	24,443	\$9,791,060.30
5	2008	32,265	\$9,770,899.74
6	<b>Grand Total</b>	<b>60,398</b>	<b>\$29,358,677.22</b>
7			
8			

PivotTable Field List

Show fields related to: (All)

- InternetSales
  - Sum of OrderQuantity
  - Sum of SalesAmount
- Currency

Date

- FrenchDayNameOrWeek
- DayNumberOfMonth
- DayNumberOfYear
- WeekNumberOfYear
- EnglishMonthName
- SpanishMonthName
- FrenchMonthName
- MonthNumberOfYear
- CalendarQuarter
- CalendarYear
- CalendarSemester
- FiscalQuarter
- FiscalYear
- FiscalSemester
- Calendar**
  - CalendarYear (CalendarYear)
  - CalendarQuarter (CalendarQuarter)
  - EnglishMonthName (EnglishMonthName)
  - FullDateAlternateKey (FullDateAlternateKey)

Create Hierarchy

Row Labels	Sum of SalesAmount	Sales Amount YTD
2005	\$3,266,373.66	\$3,266,373.66
<b>3</b>	<b>\$1,453,522.89</b>	<b>\$1,453,522.89</b>
July	\$473,388.16	\$473,388.16
August	\$506,191.69	\$506,191.69
September	\$473,943.03	\$473,943.03
4	\$1,812,850.77	\$1,812,850.77
2006	\$6,530,343.53	\$6,530,343.53

Row Labels	Sum of SalesAmount	Sales Amount YTD
2005	\$3,266,373.66	\$3,266,373.66
3	\$1,453,522.89	\$1,453,522.89
July	\$473,388.16	\$473,388.16
August	\$506,191.69	\$979,579.85
September	\$473,943.03	\$1,453,522.89
4	\$1,812,850.77	\$3,266,373.66
2006	\$6,530,343.53	\$6,530,343.53

Row Labels	Sum of SalesAmount	Sales Amount YTD	Sales Amount QTD	Sales Amount YTD Fiscal	Running Total
2005	\$3,266,373.66	\$3,266,373.66	\$1,812,850.77	\$3,266,373.66	\$3,266,373.66
3	\$1,453,522.89	\$1,453,522.89	\$1,453,522.89	\$1,453,522.89	\$1,453,522.89
July	\$473,388.16	\$473,388.16	\$473,388.16	\$473,388.16	\$473,388.16
August	\$506,191.69	\$979,579.85	\$979,579.85	\$979,579.85	\$979,579.85
September	\$473,943.03	\$1,453,522.89	\$1,453,522.89	\$1,453,522.89	\$1,453,522.89
4	\$1,812,850.77	\$3,266,373.66	\$1,812,850.77	\$3,266,373.66	\$3,266,373.66
2006	\$6,530,343.53	\$6,530,343.53	\$1,327,799.32	\$2,724,632.94	\$9,796,717.18
1	\$1,791,698.45	\$1,791,698.45	\$1,791,698.45	\$5,058,072.11	\$5,058,072.11
2	\$2,014,012.13	\$3,805,710.59	\$2,014,012.13	\$7,072,084.24	\$7,072,084.24
April	\$663,692.29	\$2,455,390.74	\$663,692.29	\$5,721,764.40	\$5,721,764.40
May	\$673,556.20	\$3,128,946.94	\$1,337,248.48	\$6,395,320.59	\$6,395,320.59
June	\$676,763.65	\$3,805,710.59	\$2,014,012.13	\$7,072,084.24	\$7,072,084.24
3	\$1,396,833.62	\$5,202,544.20	\$1,396,833.62	\$1,396,833.62	\$8,468,917.86
July	\$500,365.16	\$4,306,075.74	\$500,365.16	\$500,365.16	\$7,572,449.40
August	\$546,001.47	\$4,852,077.21	\$1,046,366.63	\$1,046,366.63	\$8,118,450.87
September	\$350,466.99	\$5,202,544.20	\$1,396,833.62	\$1,396,833.62	\$8,468,917.86
4	\$1,327,799.32	\$6,530,343.53	\$1,327,799.32	\$2,724,632.94	\$9,796,717.18
2007	\$9,791,060.30	\$9,791,060.30	\$4,009,218.46	\$6,753,558.94	\$19,587,777.48
2008	\$9,770,899.74	\$9,770,899.74		\$50,840.63	\$29,358,677.22
2009					\$29,358,677.22
2010					\$29,358,677.22
Grand Total	\$29,358,677.22				\$29,358,677.22

Role Manager

Specify the roles for the tabular project. Roles define a group of users with a set of permissions on the Analysis Services database.

Name	Permissions	Description
SampleRole	Read	

New Copy Delete

Details - SampleRole

Row Filters Members

Specify DAX expressions that return Boolean values. Only rows that match the specified filters are visible to users in this role.

Table	DAX Filter
Currency	
Customer	
Date	=Date'[CalendarYear]=2008
Product	
Promotion	

OK Cancel

Fields	Product Perspecti...
- Tables	<input checked="" type="checkbox"/>
- Currency	<input type="checkbox"/>
CurrencyAlternateKey	<input type="checkbox"/>
CurrencyKey	<input type="checkbox"/>
CurrencyName	<input type="checkbox"/>
+ Customer	<input type="checkbox"/>
+ Date	<input checked="" type="checkbox"/>
+ InternetSales	<input checked="" type="checkbox"/>
+ Product	<input checked="" type="checkbox"/>
+ ProductCategory	<input type="checkbox"/>
+ ProductSubcategory	<input type="checkbox"/>
+ Promotion	<input type="checkbox"/>
+ SalesTerritory	<input type="checkbox"/>

Configuration: Active(Development)

Platform: Active(x86)

Configuration Manager...

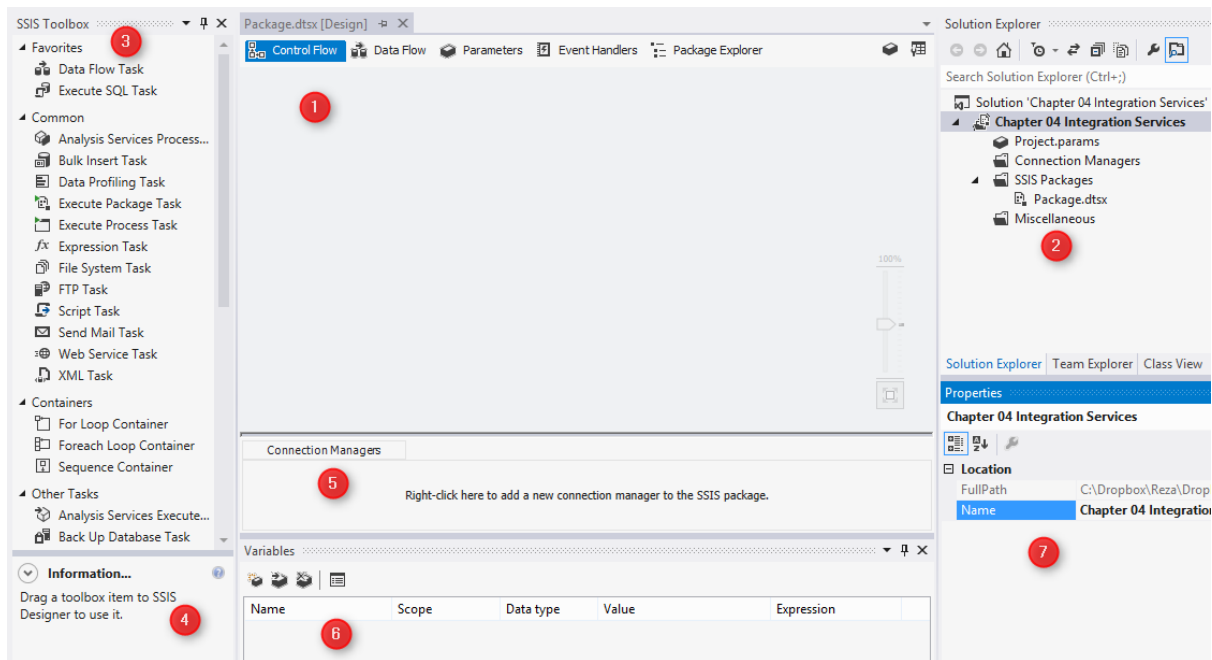
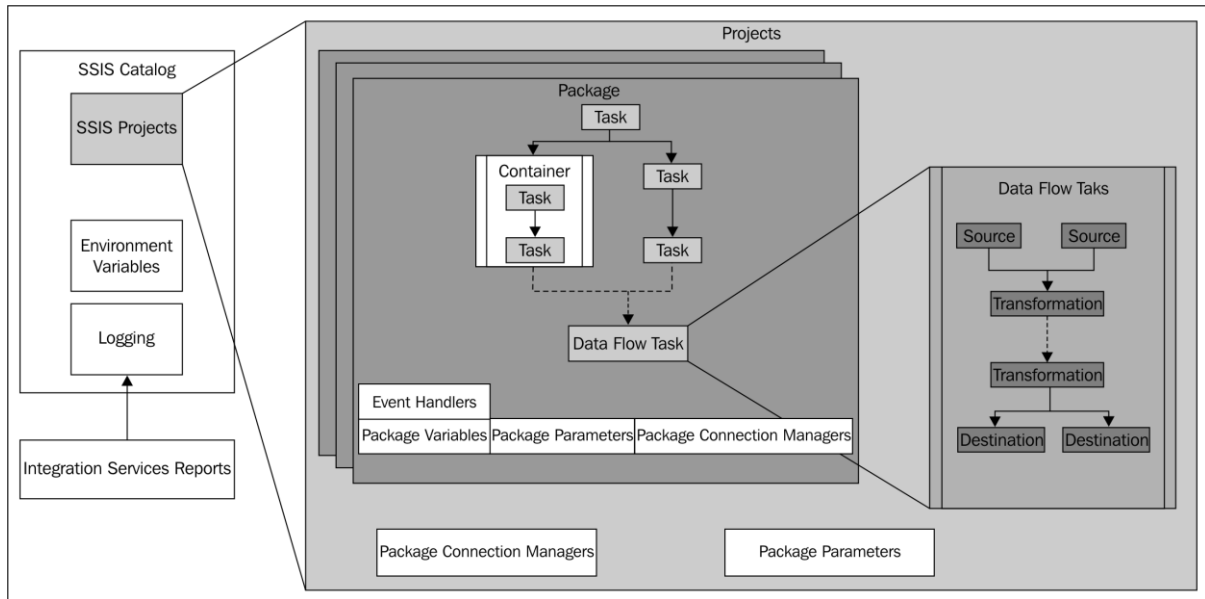
- Configuration Properties
  - Deployment


Deployment Options	
Processing Option	Default
Transactional Deployment	False
Query Mode	DirectQuery
Deployment Server	
Server	DirectQuery with In-Memory
Edition	In-Memory
Database	In-Memory with DirectQuery
Cube Name	Model
Version	11.0
DirectQuery Options	
Impersonation Settings	Default

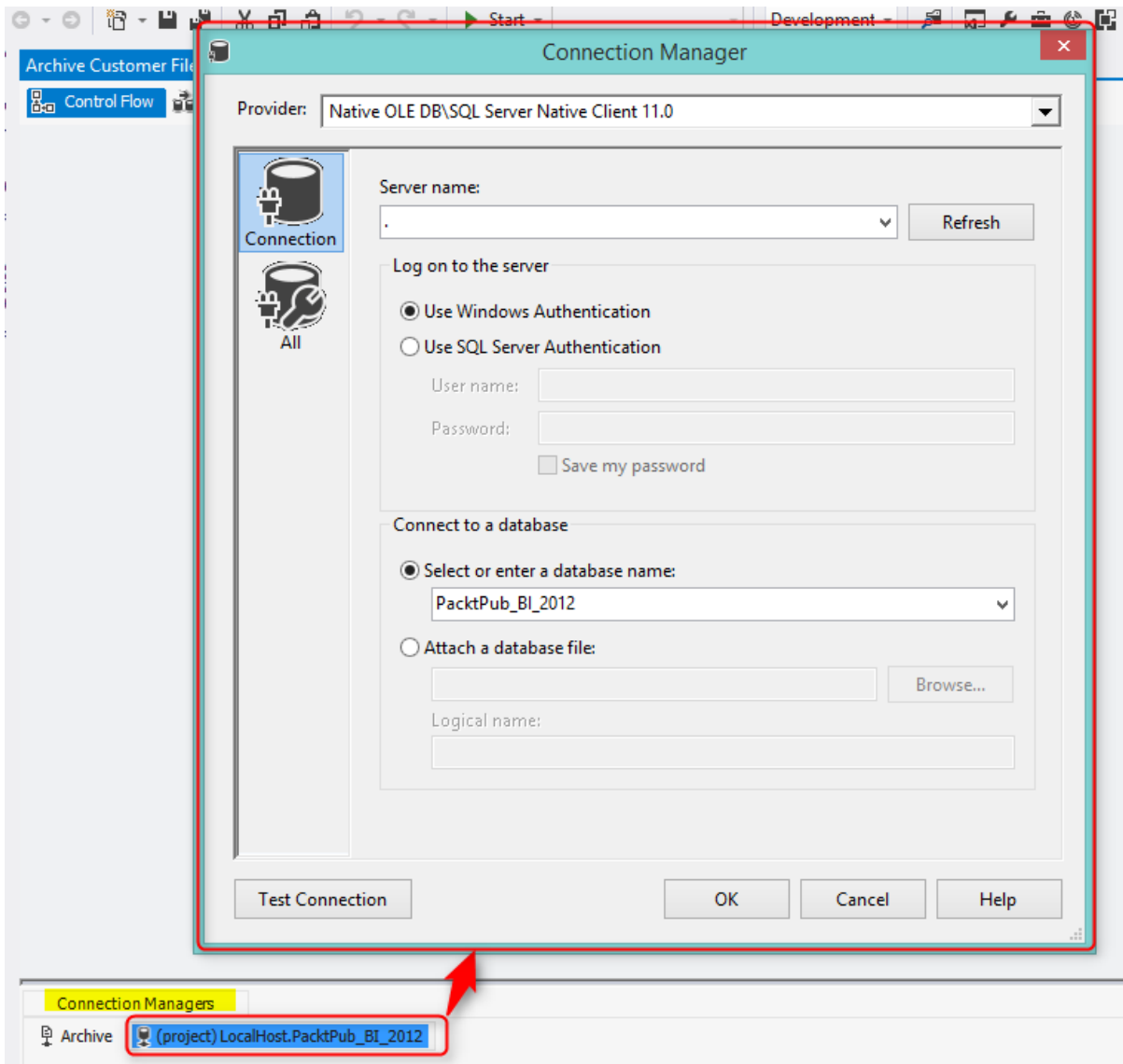
**Query Mode**  
Specifies the source from which query results are returned, either the In-Memory cache or DirectQuery data source

OK Cancel Apply

# Chapter 4, ETL with Integration Services

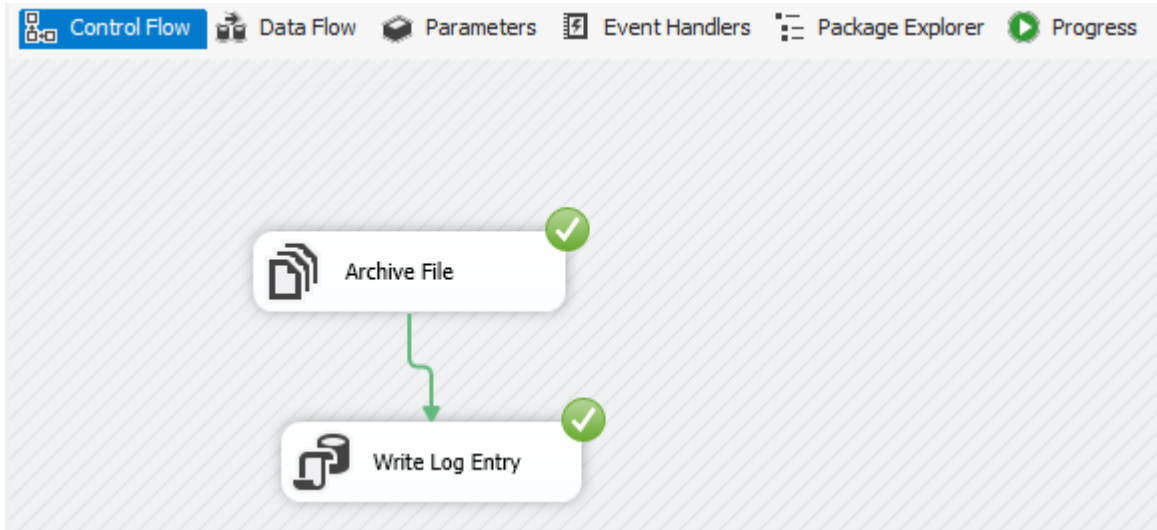


<b>Destination Connection</b>	
IsDestinationPathVariable	False
DestinationConnection	
OverwriteDestination	False
<b>General</b>	
Name	File System Task
Description	File System Task
<b>Operation</b>	
Operation	Move file 
<b>Source Connection</b>	
IsSourcePathVariable	Copy directory
SourceConnection	Copy file
	Create directory
	Delete directory
	Delete directory content
	Delete file
	Move directory
	Move file
	Rename file
	Set Attributes

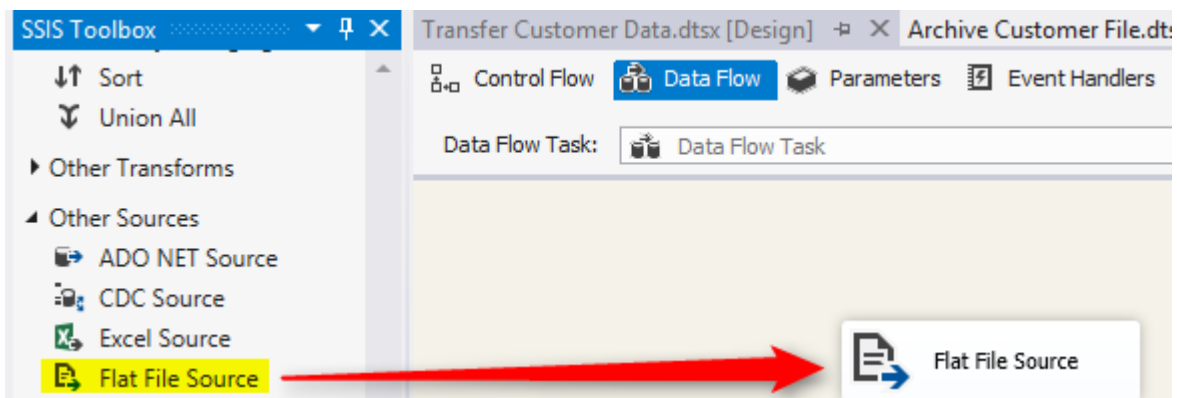


General	
Name	Write Log Entry
Description	Execute SQL Task
Options	
TimeOut	0
CodePage	1252
TypeConversionMode	Allowed
Result Set	
ResultSet	None
SQL Statement	
ConnectionType	OLE DB
Connection	LocalHost.PacktPub_BI_2012
SQLSourceType	Direct input
SQLStatement	INSERT INTO [dbo].[LogSourceFile] ((F...
IsQueryStoredProcedure	False
BypassPrepare	True

Variable Name	Direction	Data Type	Parameter Name	Parameter Size
User::FilePath	Input	VARCHAR	0	-1



```
"CustomerKey", "GeographyKey", "CustomerAlternateKey", "Title", "FirstName", "MiddleName", "LastName", "NameStyle",
"16999", "383", "AW00016999", "", "Chloe", "M", "Kelly", "False", "1964-04-18", "S", "", "F", "chloe64@adventure-works.c
"17000", "307", "AW00017000", "", "Miranda", "M", "Henderson", "False", "1963-07-03", "S", "", "F", "miranda5@adventure-
"17001", "638", "AW00017001", "", "Ashley", "F", "Moore", "False", "1963-09-02", "S", "", "F", "ashley8@adventure-works.
"17002", "546", "AW00017002", "", "Dylan", "", "Martin", "False", "1963-12-15", "S", "", "M", "dylan44@adventure-works.c
"17003", "299", "AW00017003", "", "Joanna", "M", "Dominguez", "False", "1963-10-28", "S", "", "F", "joanna11@adventure-w
"17004", "300", "AW00017004", "", "Krista", "L", "Torres", "False", "1963-05-08", "S", "", "F", "krista12@adventure-work
"17005", "307", "AW00017005", "", "Priscilla", "R", "Anand", "False", "1963-01-19", "S", "", "F", "priscilla21@adventure
```





Select a file and specify the file properties and the file format.

File name:

Locale:   Unicode

Code page:

---

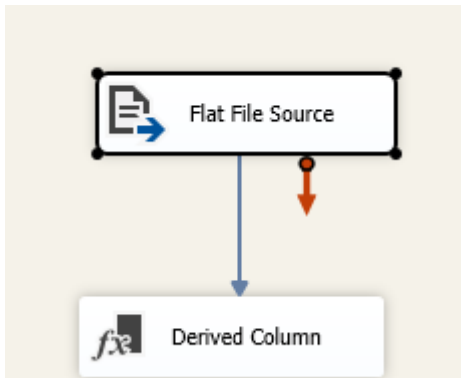
Format:

Text qualifier:

Header row delimiter:

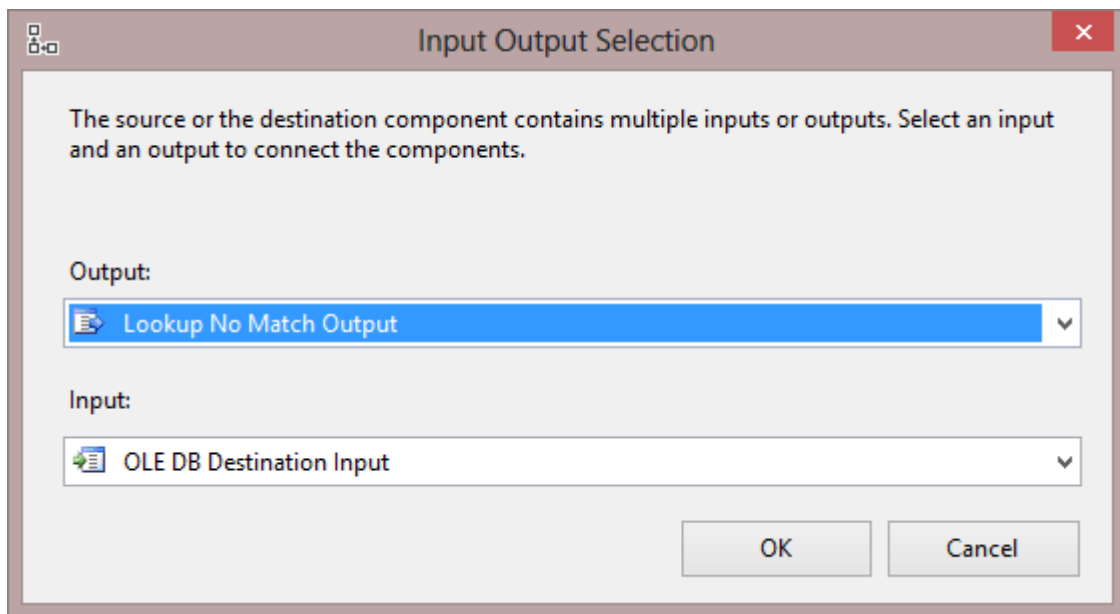
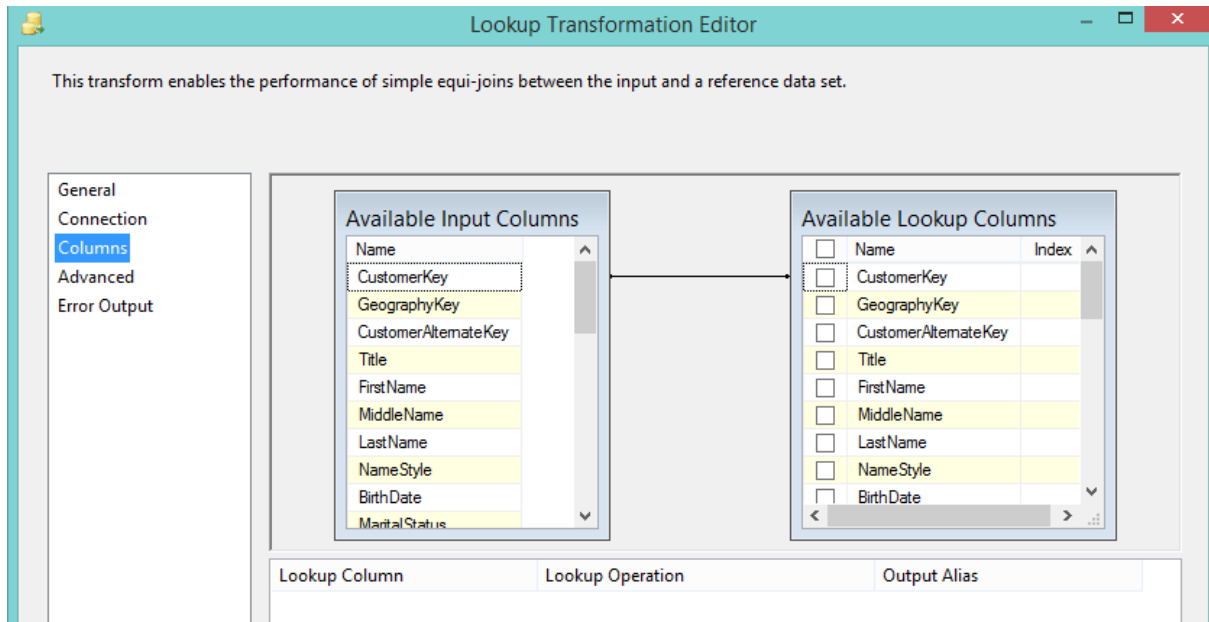
Header rows to skip:

Column names in the first data row



Derived Column Name	Derived Column	Expression	Data Type
Age	<add as new co...	YEAR(GETDATE()) - YEAR((DT_DATE)BirthDate)	four-byte signed integer [...]

Specify how to handle rows with no matching entries



OLE DB connection manager:

LocalHost.PacktPub\_BI\_2012

New...

Data access mode:

Table or view - fast load

Name of the table or the view:

[dbo].[Customer]

New...

Keep identity

Table lock

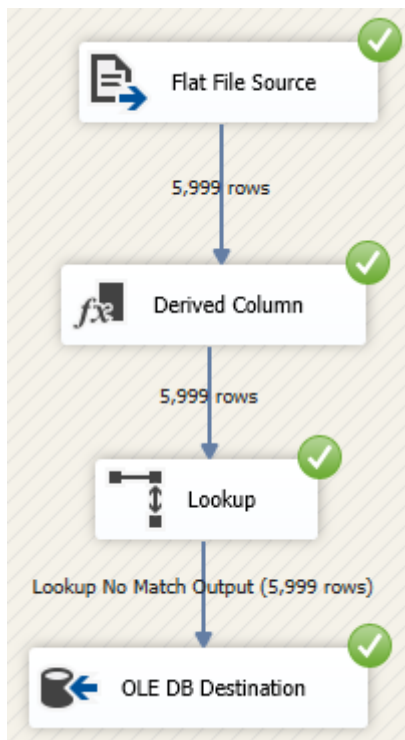
Keep nulls

Check constraints

Rows per batch:

Maximum insert commit size:

2147483647



▲ **Foreach Loop Editor**

Enumerator

**Foreach File Enumerator**

▶ Expressions

**Enumerator**

Specifies the enumerator type.

Enumerator configuration

Folder:

C:\Dropbox\Reza\Dropbox\PacktPub\_Microsoft Business Intelligence with

[Browse...](#)

Files:

\*.\*

Retrieve file name

Name and extension  Fully qualified  Name only

Traverse subfolders

Parameterize - Flat File Connection Manager

Specify the property to parameterize and the parameter to use. An expression referencing the parameter will be created on the property.

Property:

Do not use parameter

Use existing parameter

Create new parameter

Name:

Description:

Value:

Scope:

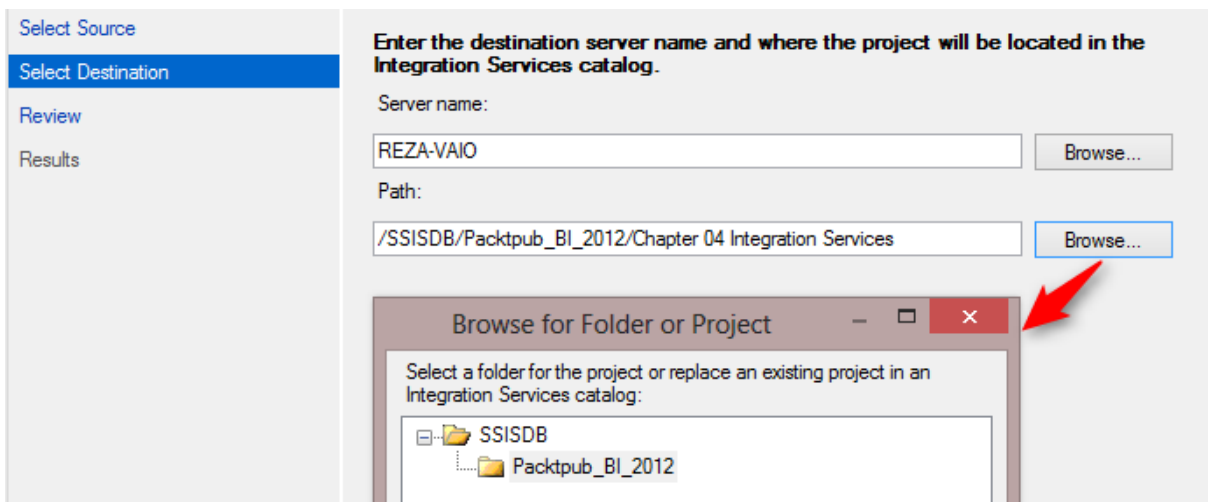
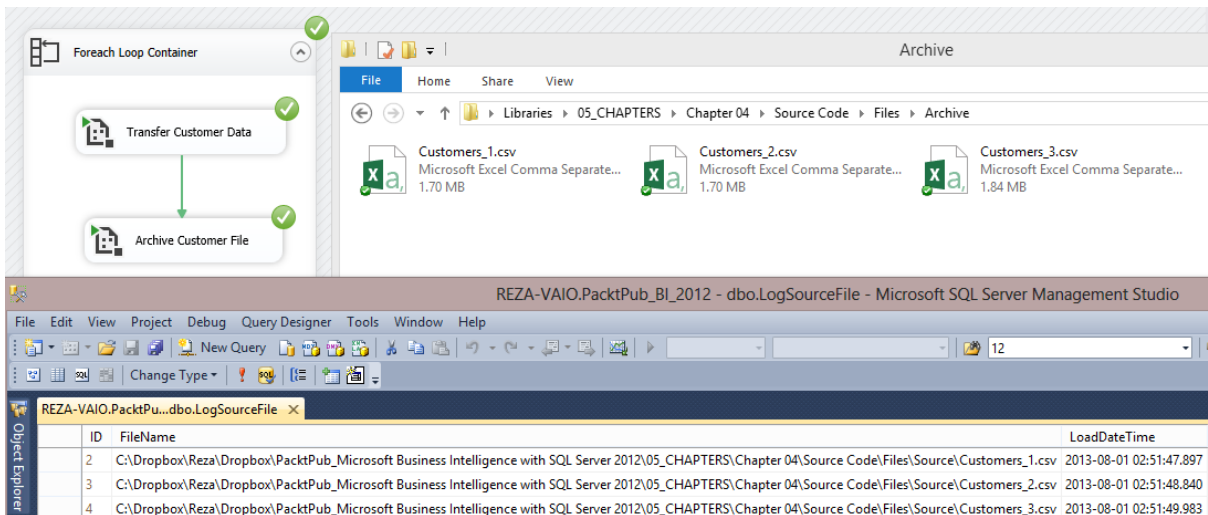
Package

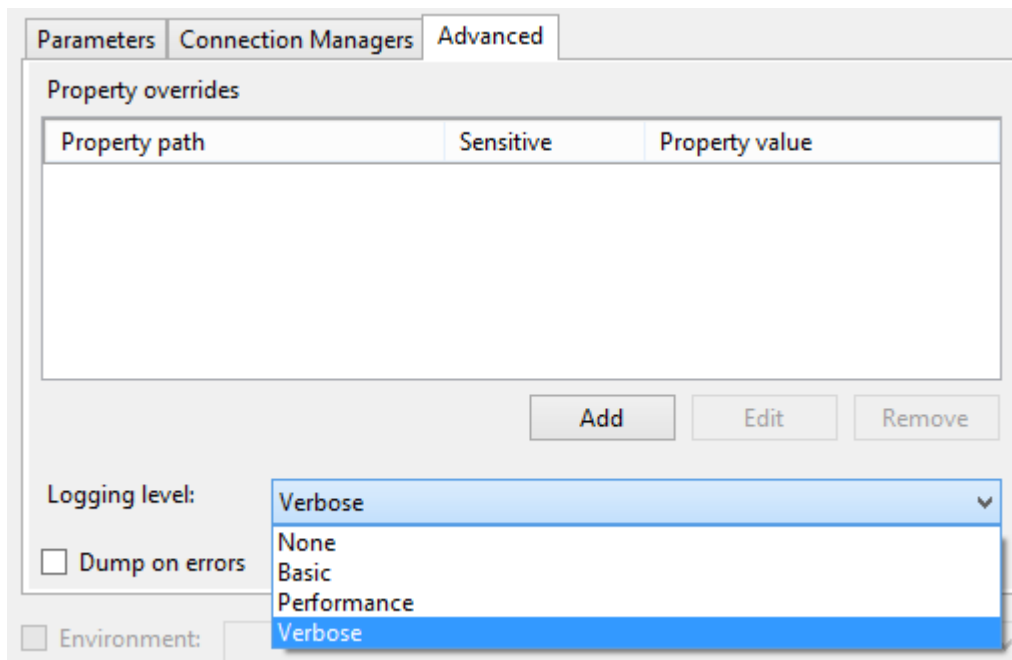
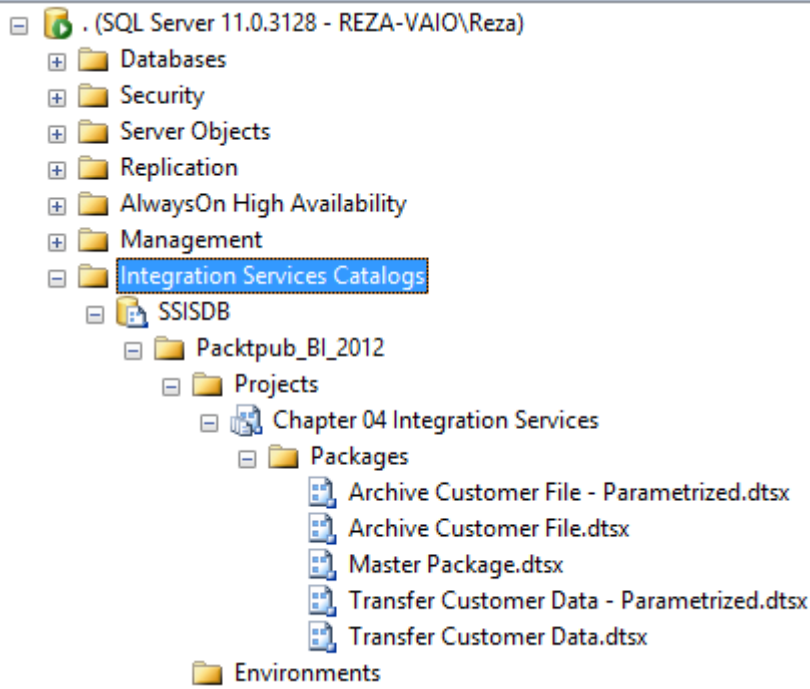
Project

Sensitive

Required

General	Configure parameter bindings for the child package. Note: Parameters from externally referenced child packages are ignored.	
Package		
Parameter bindings	Child package parameter	Binding parameter or variable
Expressions	<input type="text" value="FlatFileManager_ConnectionString"/>	<input type="text" value="User::FilePath"/>





## Integration Services Dashboard

on REZA-VAIO at 8/2/2013 12:23:37 AM

This report provides information about operations that have run in the past 24 hours, including executions that are currently running.

Execution Information (Past 24 Hours)

**0**  
Failed

**0**  
Running

**1**  
Succeeded

**0**  
Others

Package Information (Past 24 Hours)

1 out of 5 packages have executed.

Connection Information (Past 24 Hours)

This table displays information about connections that have been used in failed executions.

Connection String	Execution Occurrences	Last Failed Time	Last Failed Package
-------------------	-----------------------	------------------	---------------------

Packages Detailed Information (Past 24 Hours)

This table displays information about the packages that have been executed. The table includes information about the latest execution and the average execution duration.

Status	Report	Package Path	Failed/Total Executions	Last Deployed Time
Succeeded	<a href="#">Overview</a> <a href="#">All Messages</a> <a href="#">Execution Performance</a>	<a href="#">Packtpub_BI_2012\Chapter 04 Integration Services \Master Package.dtsx</a>	0/1	8/2/2013 12:01:58 AM

### Other Integration Services Reports

[All Executions](#)

View all package executions.

[All Validations](#)

View all package validations.

[All Operations](#)

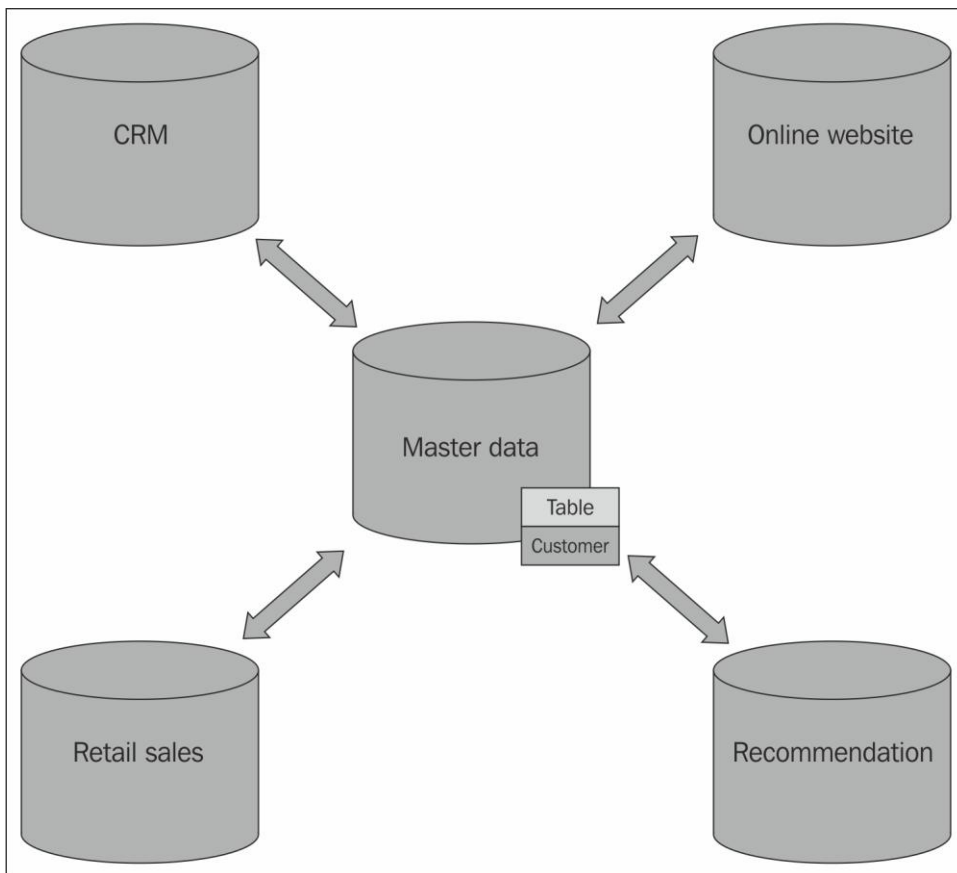
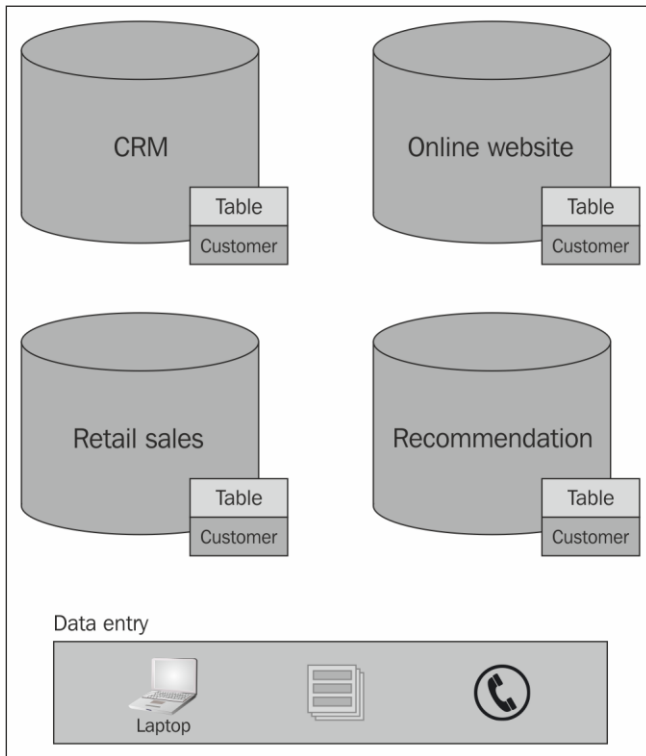
View all operations.

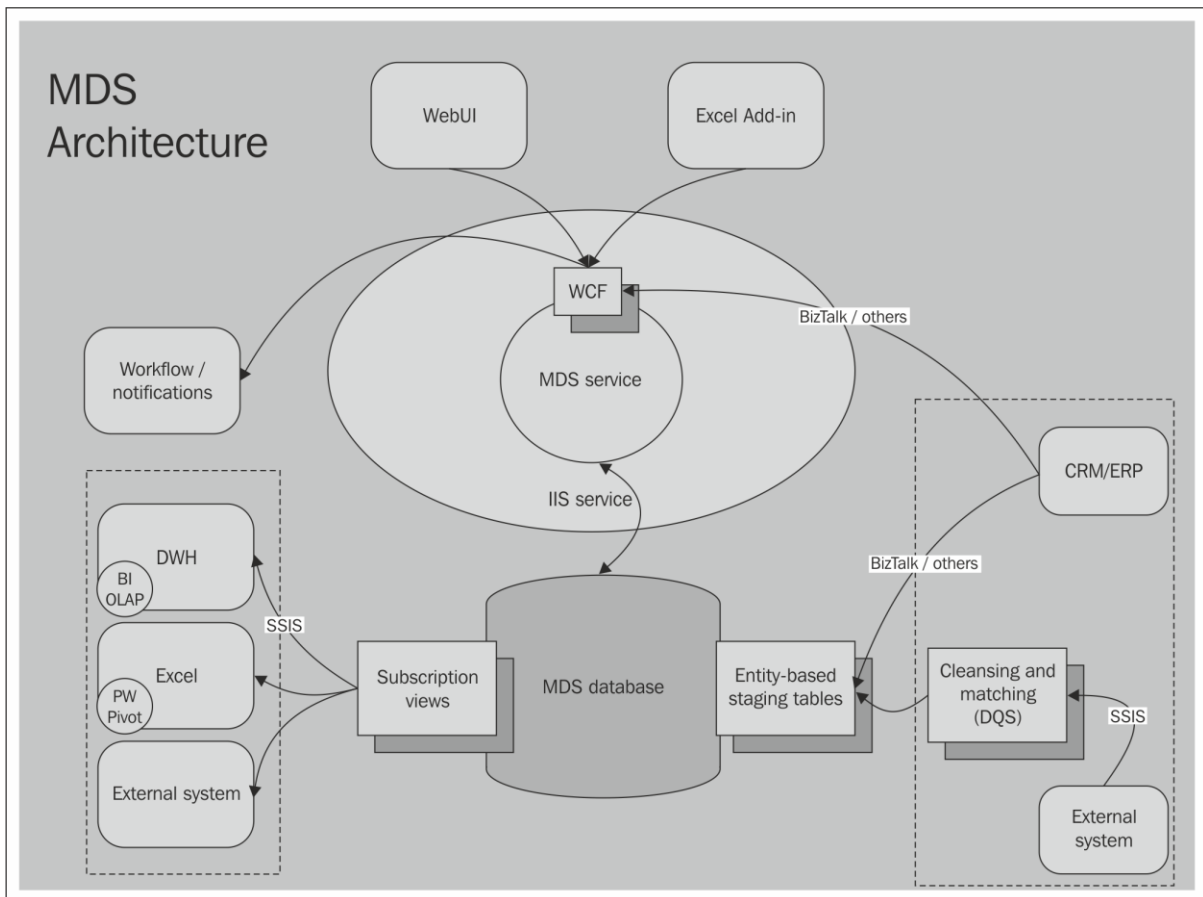
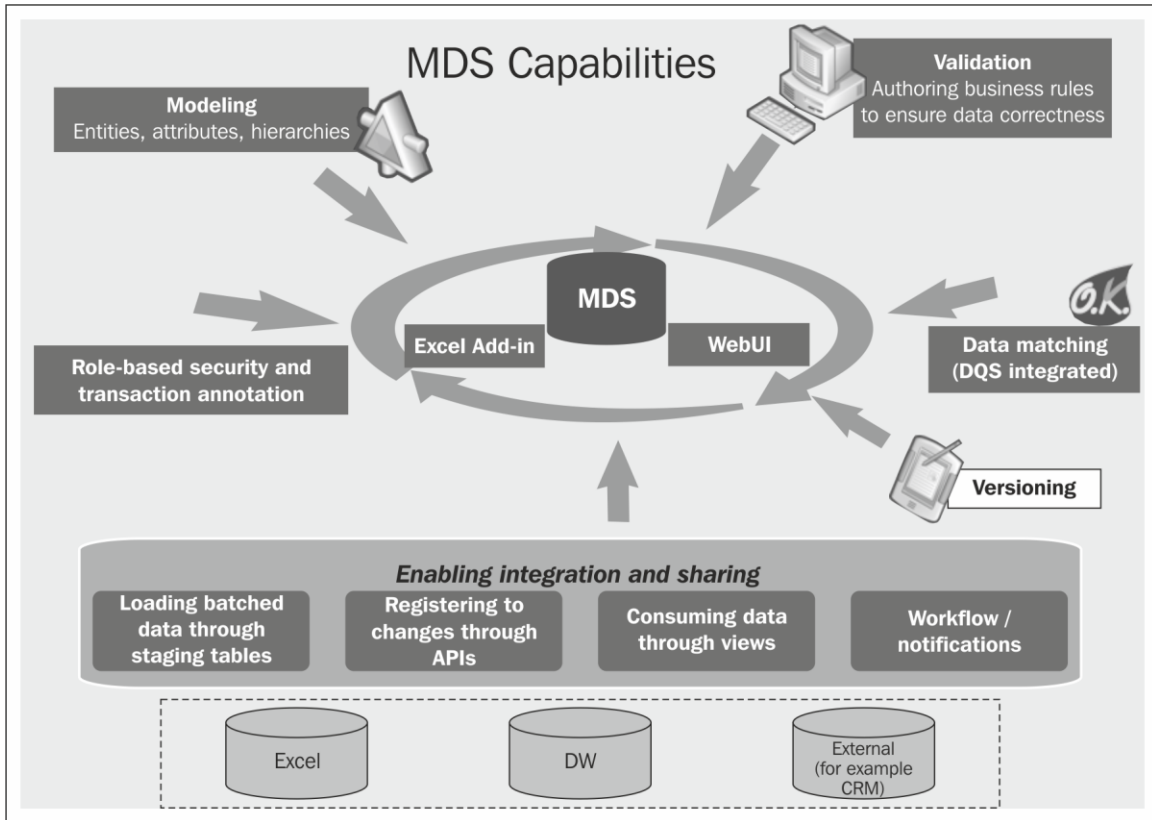
[All Connections](#)

View information for connections used in failed executions



# Chapter 5, Master Data Management





Information Worker Tasks

Model:

Version:



**Explorer**

Work with master data and with hierarchy relationships.



**Install Master Data Services Add-in for Microsoft Excel**

- Users can load and bulk edit data.
- Administrators can load data, create entities, and update attributes.

The screenshot shows the Microsoft Excel interface with the 'Master Data' ribbon tab active. The ribbon contains several groups of commands: 'Connect and Load' (Connect, Show Explorer, Refresh, Filter), 'Save and Send' (Save Query, Send Query), 'Publish and Validate' (Publish, Delete, Combine Data, Apply Rules, Show Status), 'Build Model' (Create Entity, Attribute Properties), and 'Options' (Settings, Help). The active cell is A1.

**MDS Connection:** local MDS(http://reza-vaio/mds) **Model:** PacktPub\_BI\_Model **Version:** VERSION\_1 **Entity:** Product Category

Name	Code	ProductCategoryAlternateKey	SpanishProductCategoryName	FrenchProductCategoryName
Bikes	1		1 Bicicleta	Vélo
Components	2		2 Componente	Composant
Clothing	3		3 Prenda	Vêtements
Accessories	4		4 Accesorio	Accessoire
my sample	5		5 my sample	my sample

View transactions

Transaction	Attribute	Old Value	New Value	User	Date
SetAttributeValue	Name	my sample second name	my sample third name	REZA-VAIO\Reza	5/3/2013 12:42:...
SetAttributeValue	Name	my sample first change	my sample second name	REZA-VAIO\Reza	5/3/2013 12:42:...
SetAttributeValue	Name	my sample	my sample first change	REZA-VAIO\Reza	5/3/2013 12:42:...

Annotations: second name change applied

Entities Hierarchies Collections Explorer

**Product Category Entity**

Add Member
  Delete Member
  Apply Rules
  View Transactions
  Filter
  Settings

**[All Attributes]**

	Name	Code	ProductCategoryA	SpanishProductCa	FrenchProductCat
<input checked="" type="checkbox"/>	Bikes	1	1	Bicicleta	Vélo
<input checked="" type="checkbox"/>	Components	2	2	Componente	Composant
<input checked="" type="checkbox"/>	Clothing	3	3	Prenda	Vêtements
<input checked="" type="checkbox"/>	Accessories	4	4	Accesorio	Accessoire
<input checked="" type="checkbox"/>	my sample third name	5	5	my sample data	my sample

**Details**

**Name**

**Code**

ProductCategoryAlternateKey

SpanishProductCategoryName

FrenchProductCategoryName

**Attribute Properties** ✖

Attribute name:

Attribute type:

Populate the attribute with values from:

**MDS Connection:** local MDS(http://reza-vaio/mds) **Model:** PacktPub\_BI\_Model **Version:** VERSION\_1 **Entity:** Product Subcategory **Retrieved:** 5/3/2013 1:10:53 AM

Name	Code	ProductSubcategoryAlternateKey	SpanishProductSubcategoryName	FrenchProductSubcategoryName	Product Category
Mountair	1	1	Bicicleta de montaña	VTT	1 {Bikes}
Road Bike	2	2	Bicicleta de carretera	Vélo de route	1 {Bikes}
Touring B	3	3	Bicicleta de paseo	Vélo de randonnée	1 {Bikes}
Handlebar	4	4	Barra	Barre d'appui	2 {Components}
Bottom B	5	5	Eje de pedalier	Axe de pédalier	2 {Components}
Brakes	6	6	Frenos	Freins	4 {Accessories}
Chains	7	7	Cadena	Chaîne	1 {Bikes}
Cranksets	8	8	Bielas	Pédalier	3 {Clothing}
Derailleur	9	9	Desviador	Dérailleur	2 {Components}

## Edit Action

StandardCost

**must be greater than**

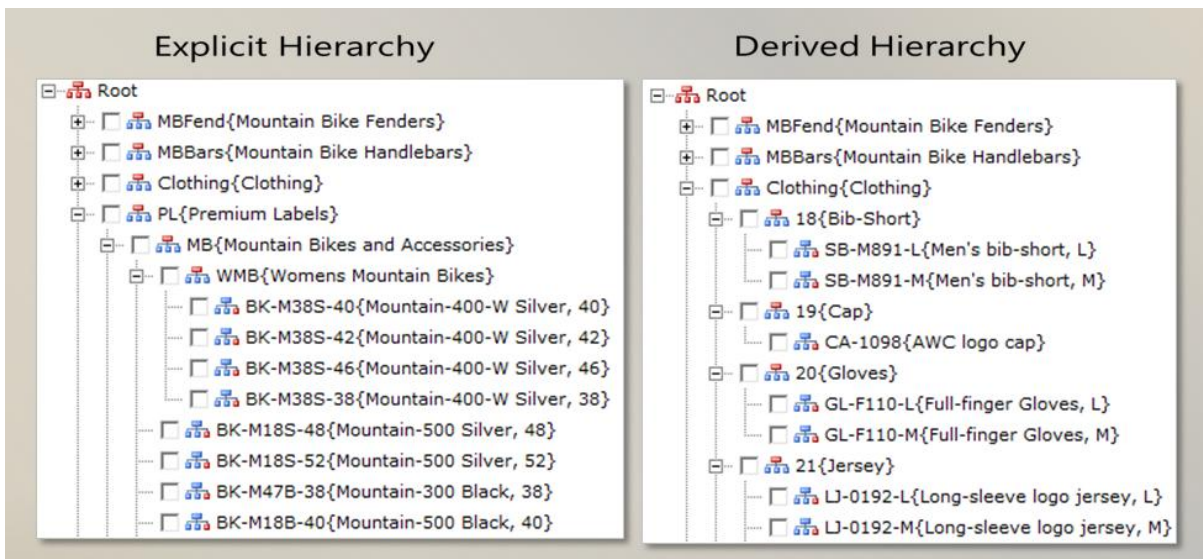
Attribute value:

Attribute: Select attribute

Blank

MDS Connection: local MDS(http://reza-v:40:21 PM)

\$ValidationStatus\$	\$InputStatus\$	Name	Code	ReorderPoint	StandardCost
Waiting for revalidation	Unchanged	Adjustable Bars	1	750	0.0000
Validation failed	Unchanged	Adjustable Bars	1	750	-21.0000
Waiting for revalidation	Unchanged	BB Ball Bearing	3	600	0.0000



## Current Levels

- Current levels: Product Hierarchy
- Product Category
- Product Subcategory
- Product

## Preview



- Root
  - 1 {Bikes}
    - 1 {Mountain Bikes}
    - 2 {Road Bikes}
    - 3 {Touring Bikes}
  - 2 {Components}
  - 3 {Clothing}
  - 4 {Accessories}

Entities
Hierarchies
Collections
Explorer

**Product Hierarchy Hierarchy**

Pin | Cut | Paste

Search hierarchy

- Root
  - 1 {Bikes}
  - 2 {Components}
  - 3 {Clothing}
    - 18 {Bib-Shorts}
    - 19 {Caps}

**Product**

+ Add - Delete Apply Rules View Transactions Filter Settings Leaf members

**[All Attributes]**

	Name	Code	ProductNumber	MakeFlag	FinishedGoodsFlag	Safety
?	Men's Bib-Shorts, S	855	SB-M891-S	False	True	4
?	Men's Bib-Shorts, M	856	SB-M891-M	False	True	4
?	Men's Bib-Shorts, L	857	SB-M891-L	False	True	4

User: REZA-VAIO\Reza (Reza Rad)

General Membership Functions Models Hierarchy Members

Model: All Permissions: User and inherited from group

### Model Permissions

Models

- BI Sandbox
- Metadata
- Movies
- NZBIUG
- PacktPub\_BI\_Model
  - Entities
    - Color
    - Product
    - Product Category
      - Leaf
        - Attributes
          - Name
          - Code
          - Product
            - SpanishP
            - FrenchPr
          - Product Subcategory
          - Product
            - Read-only
            - Update
            - Deny
            - Details
            - Undo

### Model Permission Summary

Type	Name	Source Group	Permission
Model	BI Sandbox		Update
Model	Metadata		Update
Model	Movies		Update
Model	NZBIUG		Update
Model	PacktPub_BI_Model		Update
Model	Product		Update

## Create Subscription View



Subscription view name:

VwProduct

Model:

PacktPub\_BI\_Model

VERSION\_1

Version:

Version flag:

Entity: Product

Entity:

Derived hierarchy:

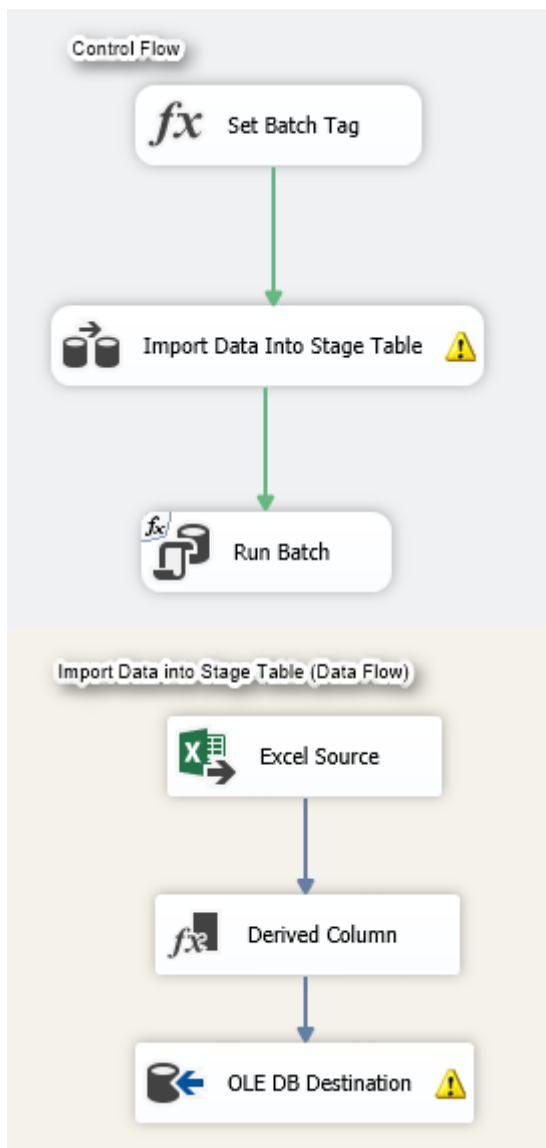
Format: Leaf members

Format:

Level: 1

(level-based hierarchy views only)

Derived Column Name	Derived Column	Expression	Data Type	Length
BatchTag	<add as new column>	(DT_WSTR,20)@[User::BatchTag]	Unicode string [DT_WSTR]	20
ImportType	<add as new column>	0	four-byte signed integer [DT_I4]	



Import ID	Name	Description
0 or blank	Merge Optimistic	All populated record information will loaded into the Entity when either the member does not exist or the member exists. Nulls will be ignored.
1	Insert	Only new member records and their attributes will be loaded into the MDS entity all existing records will be flagged as member code already exists. No attributes on pre-existing records will be updated.
2	Merge Overwrite	All populated record information will loaded into the Entity when either the member does not exist or the member exists any blank element in the EBS table will overwrite values within the MDS entity.
3	Delete	Only the member code will be evaluated and these records will be soft deleted from the MDS entity
4	Purge	Only the member code will be evaluated and these records will be removed from the MDS entity version that these records are staged into.
5	Delete Override	Only the member code will be evaluated and these records will be soft deleted from the MDS entity. This will set any Domain Based Attribute references to Null to complete the operation.
6	Purge Override	Only the member code will be evaluated and these records will be removed from the MDS entity version that these records are staged into. This will set any Domain Based Attribute references to Null to complete the operation.

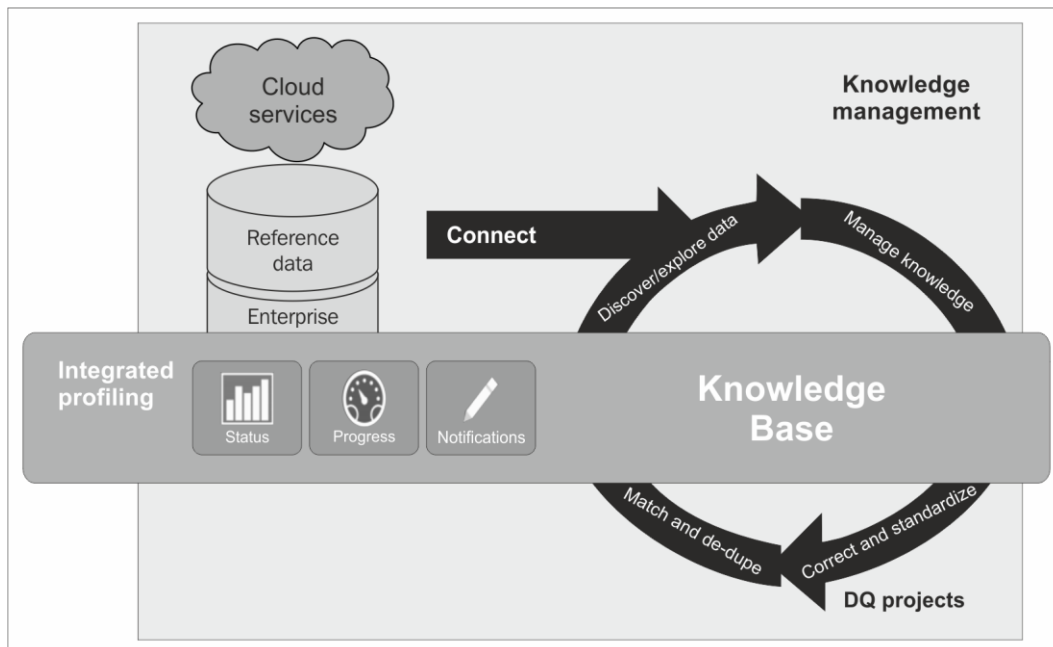


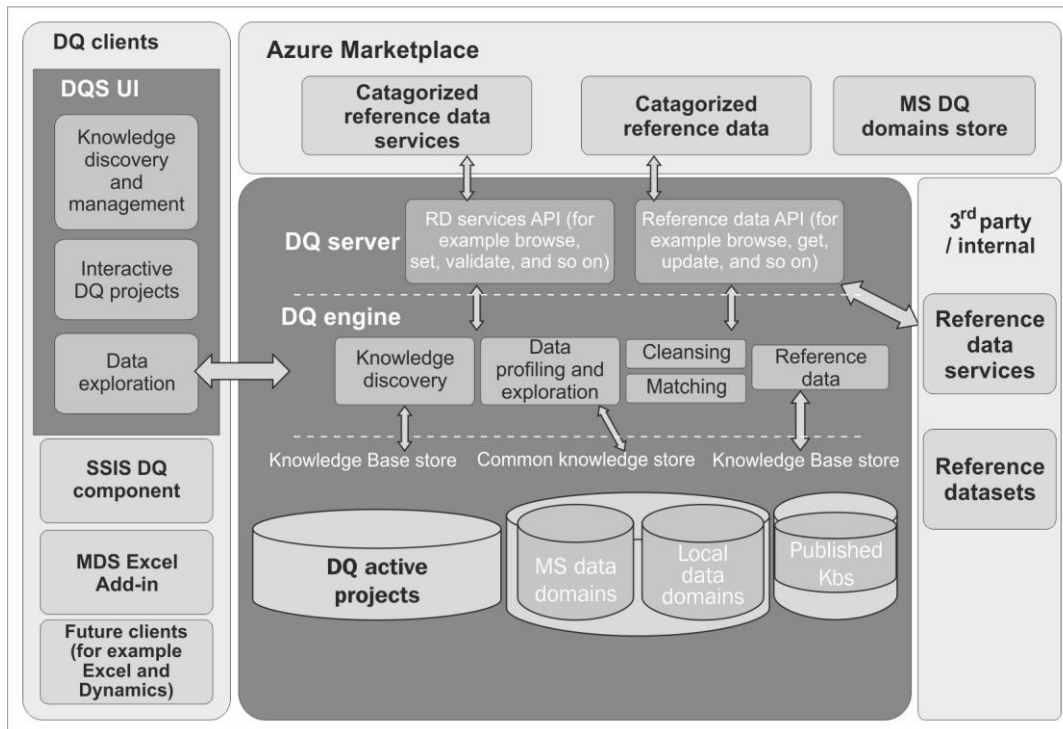
## Chapter 6, Data Quality and Data Cleansing

	Name	Gender	Street	House #	Zip code	City	State	D.O.B
<b>Before</b>	John Doe	Male	60th street	45		New York	New York	08/12/64
	Jane Doe	Male	Jonathan Ln	36	10023	Poughkeepsy	NY	21-dec-1954
	Name	Gender	Street	House #	Zip code	City	State	D.O.B
<b>After</b>	John Doe	Male	E 60th St	45W	10022	New York	NY	08/12/64
	Jane Doe	Female	Jonathan Lane	36	10023	Poughkeepsie	NY	12/21/54

Completeness   
  Accuracy   
  Conformity   
  Consistency   
  Uniqueness

	Name	Address	Postal Code	City	State	
<b>Before</b>	John Smith	545 S Valley View Drive # 136	34563	Anvtown	New York	
	Margaret & John smith	545 Valley View ave unit 136	34563-2341	Anvtown	New York	
	Maggie Smith	545 S Valley View Dr		Anvtown	New York	
	John Smith	545 Valley Drive St.	34253	NY	NY	
	Name	Address	Zip Code	City	State	Cluster
<b>After</b>	John Smith	545 S Valley View Drive # 136	34563	Anvtown	New York	1
	Margaret & John smith	545 Valley View ave unit 136	34563-2341	Anvtown	New York	1
	Maggie Smith	545 S Valley View Dr		Anvtown	New York	1
	John Smith	545 Valley Drive St.	34253	NY	NY	2



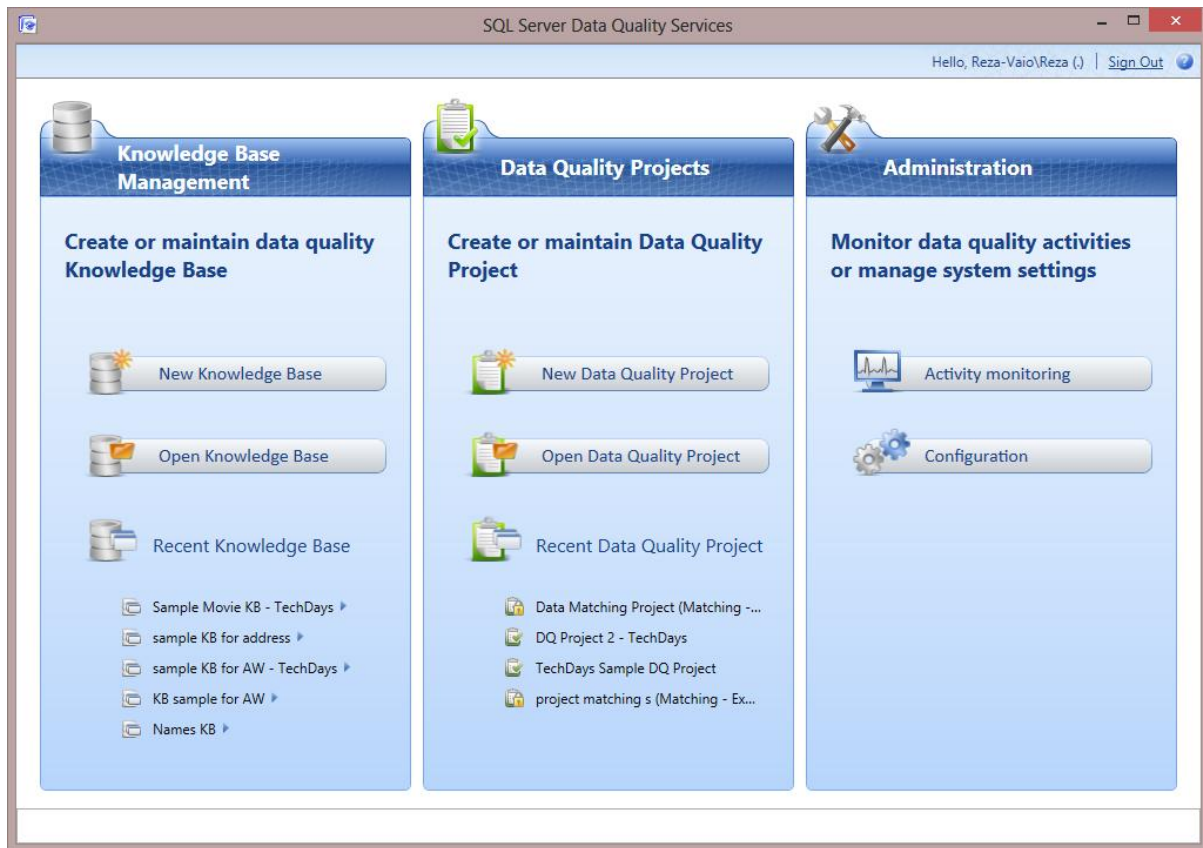


```

Data Quality Server Installer
Microsoft (R) DQS Installer Command Line Tool
Copyright (c) 2012 Microsoft. All rights reserved.

[4/16/2014 11:06:16 PM] DQS Installer started. Installation log will be written
to C:\Program Files\Microsoft SQL Server\MSSQL11.MSSQLSERVER\MSSQL\Log\DQS_insta
ll.log

[4/16/2014 11:06:16 PM] Setting the collation to default value: SQL_Latin1_Gener
al_CP1_CI_AS
[4/16/2014 11:06:17 PM] Using instance: MSSQLSERVER, catalog: DQS.
[4/16/2014 11:06:17 PM] Executing action: Validate collation argument.
[4/16/2014 11:06:17 PM] Action 'Validate collation argument' finished successf
ully.
[4/16/2014 11:06:17 PM] Executing action: Check whether system reboot is pending
.
A reboot from a previous installation is pending. It may cause DQS install failu
re.
Would you like to continue? [Yes/No]
  
```



## Country

Domain Properties    Reference Data    Domain Rules

Domain Name:  (Required)

Description:

Data Type: String

Use Leading Values ?

Normalize String ?

Format Output to:  ?

Language:  ?

Enable Speller ?

Disable Syntax Error Algorithms ?

Data Source:

Excel File:

Worksheet:

Use first row as header

Mappings:

Source Column	Domain
Country Region Name (String)	Country
State ProvinceName (String)	State
City (String)	City

Map
  Discover
  Manage Domain Values

**Performs data discovery analysis on the selected data source**

<b>Pre-processing Records</b>	290/290	Start: 5/22/2013 12:29:38 AM   End: 5/22/2013 12:29:39 AM
<b>Running Domain Rules</b>	100%	Start: 5/22/2013 12:29:39 AM   End: 5/22/2013 12:29:39 AM
<b>Running Discovery</b>	100%	Start: 5/22/2013 12:29:39 AM   End: 5/22/2013 12:29:39 AM

Profiler of the data source has been completed successfully.

**Source Statistics**

Records: 290  
 Total Values: 870  
 New Values: 870 (100 %)  
 Unique Values: 51 (6 %)  
 New Unique Values: 51 (6 %)  
 Valid in Domain Values: 870 (100 %)

Field	Domain	New	Unique	Valid in Domain
City	City	290 (100 %)	31 (11 %)	290 (100 %)
State ProvinceName	State	290 (100 %)	14 (5 %)	290 (100 %)
Country Region Name	Country	290 (100 %)	6 (2 %)	290 (100 %)

Manage discovered domain values, review discovery results and modify as needed

Domain	New Values
City	31
Country	6
State	14

### Country

**Statistics** (All Values 6) Correct: 6 Errors: 0 Invalid: 0

Find:  Filter: All Values  Show Only New

Value	Frequency	Type	Correct to
Australia	1	✓	
Canada	2	✓	
France	1	✓	
Germany	1	✓	
United Kingdom	1	✓	
United States	284	✓	

## Domain Management

**Domain**

- Address Line
- City
- Country
- Full Address
- State

### Full Address

CD Properties Reference Data CD Rules

Select Domains to include in Composite Domain:

Domains List

**Advanced**

Parsing Method:

- Reference Data
- In Order
- Delimiters
  - Tab
  - Semicolon
  - Comma
  - Space
  - Other:

Use Knowledge Base Parsing

## Full Address

Suggested (0)    New (0)    Invalid (0)    Corrected (0)    **Correct (7)**

Search Value:



Value	# Records	Reason	Approve	Reject
Canada Alberta Calgary 3841 Silver Oa	1	Modified by user	<input type="radio"/>	<input type="radio"/>
Canada Ontario Ottawa 371 Apple Dr.	1	Modified by user	<input checked="" type="radio"/>	<input type="radio"/>
United States Utah Nevada 7902 Gram	1	Modified by user	<input checked="" type="radio"/>	<input type="radio"/>
United States Washington Bothell 574	1	Modified by user	<input checked="" type="radio"/>	<input type="radio"/>

### Records containing the value:

Reason	Approve	Reject	Address	Title	First Name
Modified by user	<input checked="" type="radio"/>	<input type="radio"/>	3841 Silver Oaks Place, Canada,	NULL	Ivo

## Domain Management

Domain

- Gender
- Marital Status
- Title

### Title

Domain Properties    Reference Data    Domain Rules

**Domain Values**    Term-Based Relations

**Statistics** (All Values 4) Correct: 4 Errors: 0

Find:  Filter: All Values  Show Only New

Value	Type	Correct to
DQS_NULL	<input checked="" type="checkbox"/>	
Mr.	<input checked="" type="checkbox"/>	
Mrs.	<input checked="" type="checkbox"/>	
Ms.	<input checked="" type="checkbox"/>	
	<input checked="" type="checkbox"/>	

## Title Enrichment

CD Properties    Reference Data    **CD Rules**    Value Relations

Active	Name	Description	Last Updated	Created By
<input checked="" type="checkbox"/>	Male Title		5/22/2013 1:45:26 AM	Reza-Vaio\Reza
<input checked="" type="checkbox"/>	Married Female Title		5/22/2013 1:46:23 AM	Reza-Vaio\Reza
<input checked="" type="checkbox"/>	Single Female Title		5/22/2013 1:47:22 AM	Reza-Vaio\Reza

### Build a Rule: Male Title

Gender

Value is equal to

### Then

Title

Value is equal to

## Title Enrichment

Suggested (0)   New (0)   Invalid (0)   **Corrected (2)**   Correct (5)

Search Value:



Value	# Records	Correct to			Confidence	Reason	Approve	Reject
		Gender	Marital Stat	Title				
F M <b>Mrs.</b>	1	F	M	<b>Mrs.</b>	100%	Corrected by Rule 'Married Female Title'	<input checked="" type="radio"/>	<input type="radio"/>
M M Ms.	1	M	M	<b>Mr.</b>	100%	Corrected by Rule 'Male Title'	<input checked="" type="radio"/>	<input type="radio"/>

### Records containing the value:

Gender	Correct to		Confidence	Reason	Approve	Reject	Gender	Marital Status	Title	First Name
	Marital Stat	Title								
F	M	<b>Mrs.</b>	100%	Corrected t	<input checked="" type="radio"/>	<input type="radio"/>	F	M	Ms.	Chad

Value	Type	Correct to
Canada	✓	
DQS_NULL	✓	
France	✓	
Germany	✓	
United Kingdom	✓	
<b>United States</b>	✓	
🌟 US	✓	United States
🌟 USA	✓	United States



## Data Quality Projects

### New Data Quality Project

Name:

Description:

Use Knowledge Base:

**Knowledge Base details: Address KB**

- Domains
  - Address Line
  - City
  - Country
  - Full Address
    - Address Line
    - City
    - Country
    - State
    - State

**Select Activity**

Cleansing

Matching

## Full Address

Suggested (0)    New (4)    Invalid (0)    **Corrected (3)**    Correct (0)

Search Value:

Value	# Records	Correct to				Confidence	Reason
		Country	State	City	Address Line		
US	1	United States	Washington	Carnation	1411 Ranch D	100%	'Corrected to leading value' in domain 'Country';
USA	1	United States	Washington	Bothell	5747 Shirley D	100%	'Corrected to leading value' in domain 'Country';
USA	1	United States	Washington	Seattle	5407 Cougar	100%	'Corrected to leading value' in domain 'Country';

### Records containing the value:

Correct to				Confidence	Reason	Approve	Reject	Address	Title
Country	State	City	Address						
United St	Washingt	Carnation	1411 Ran	100%	'Corrected to leading value' in domain 'Country';	<input checked="" type="radio"/>	<input type="radio"/>	US, 1411 Ranch Drive, carnation	NULL

First Name	Middle Name	Last Name	Gender	Street	City	State	Country	Phone
Kimberly	B	Zimmerman	Female	6040 S. Justine	CHICAGO	IL	USA	123-555-0167
Kim	B	Zimmerman	F	S. Justine	CHICAGO	IL	United States	(123) 555-0167



## Knowledge Base Management

Knowledge Base: PacktPub\_Movies\_KB    Activity:

1 Map    2 Matching Policy    3 Matching Results

### Choose a database sample to create matching policy rules

Data Source:

Excel File:

Worksheet:

Use first row as header

Mappings:

Source Column	Domain
Title (String)	Title
Director (String)	Director

#### Knowledge Base details: PacktPub\_Movies\_KB

- Domains
  - Director
  - Title



**Rule Details**

Rule name:

Description:

Min. matching score:  %

**Rule Editor**

Domain	Similarity	Weight	Prerequisite
Director	Exact		<input checked="" type="checkbox"/>
Title	Similar	100 %	<input type="checkbox"/>

**Matching Results**

Execute on previous data  Reload data from source

Filter:

Record Id	Cluster	Score	Title	Director	MediaId	MediaType	Genre	Category
1000001	1000001		Hey Arnold! The	Unknown	1001964	Movie	Comedy	Children's/Family
1000016	1000001	85%	Hey Arnold! The Movie	Unknown	11220	Movie	Comedy	Children's/Family
1000002	1000001	80%	Hey Arnold!	Unknown	1001965	Movie	Comedy	Children's/Family
1000004	1000004		Hawk is Dying , The	David Twohy	1001967	Movie	Drama	Drama
1002425	1000004	92%	The Hawk is Dying	David Twohy	1001784	Movie	Drama	Drama
1000005	1000005		Shrooms	Paddy Breathnach	1001968	Movie	Comedy	Comedy
1002540	1000005	100%	Shrooms	Paddy Breathnach	1001922	Movie	Horror	Horror
1002567	1002567		It's a Free World	Ken Loach	1001959	Movie	Drama	Drama
1002575	1002567	100%	It's a Free World...	Ken Loach	1001959	Movie	Drama	Drama

### DQS Cleansing Transformation Editor

Configure the properties used to correct the data of an input column.

Connection Manager | Mapping | Advanced

Select an existing connection manager from the list, or create a new connection by clicking new.

Select a data quality knowledge base for mapping.

Data quality connection manager:

Data Quality Knowledge Base:

Encrypt connection

Available domains:

- Address Line
- City
- Country
- Full Address (Country, State, City, Address Line)
- State

Connection Manager Mapping Advanced

Standardize output

Enable field level columns:

Confidence

Reason

Enable record level columns:

Appended Data (additional data received from reference data provider)

Appended Data Schema

Excel Source

7 rows

DQS Cleansing

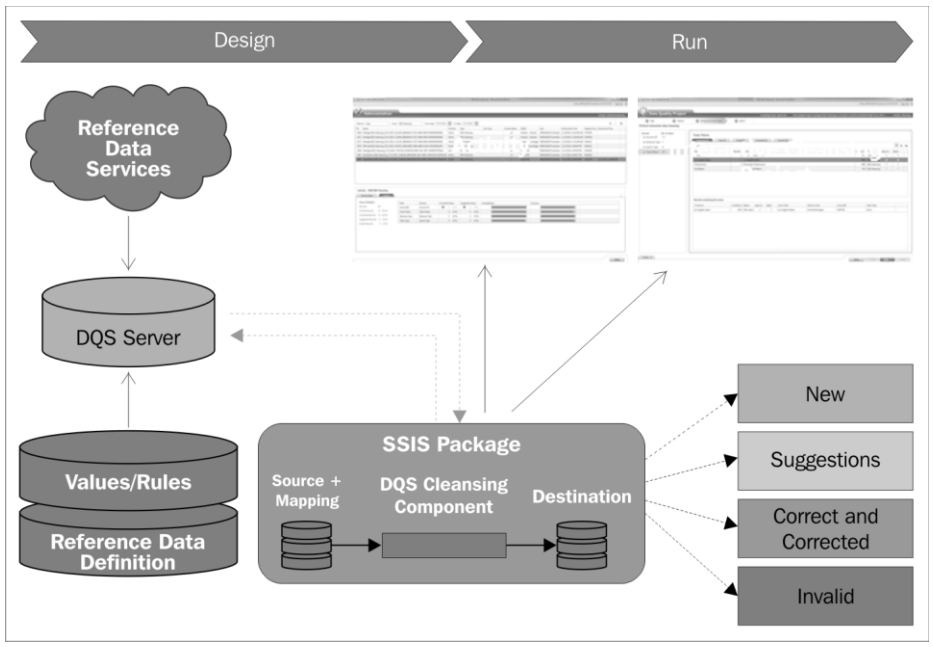
7 rows

Union All

DQS Cleansing Output Data Viewer at Data Flow Task

Detach Copy Data

Email Address	Em...	Address_Source	Address_Output
pilar0@adventure-works....	0	5407 Cougar Way, Seattle, Washington, United States	United States Washington Seattle 5407 Cougar Way
kitt0@adventure-works.c...	0	5376 Catanzaro Way, Seattle, United States, Washington	United States Washington Seattle 5376 Catanzaro Way
don0@adventure-works....	0	1411 Ranch Drive, carnation, Washington, United States	United States Washington Carnation 1411 Ranch Drive
chad0@adventure-works...	1	5747 Shirley Drive, Washington, Bothell, United States	United States Washington Bothell 5747 Shirley Drive
sylvester0@adventure-w...	0	7902 Grammercy Lane, Utah, Nevada, United States	United States Utah Nevada 7902 Grammercy Lane
ivo0@adventure-works.com	0	3841 Silver Oaks Place, Canada, Calgary, Alberta	Canada Alberta Calgary 3841 Silver Oaks Place
eric0@adventure-works.c...	2	371 Apple Dr. , Ottawa, Ontario, Canada	Canada Ontario Ottawa 371 Apple Dr.

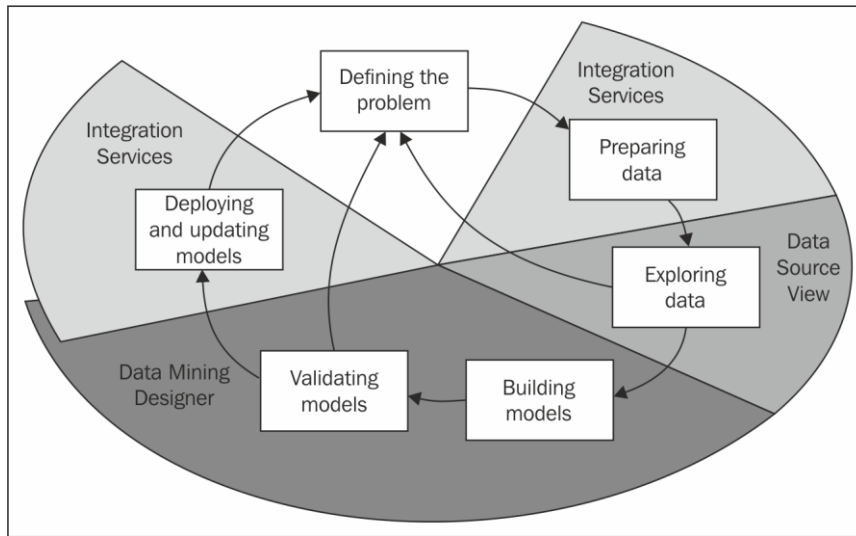


FILE HOME INSERT PAGE LAYOUT FORMULAS DATA REVIEW VIEW Load Test Master Data DATA EXPLORER

Connect Show Explorer Refresh Filter Save Query Send Query Publish Delete Combine Data Apply Rules Show Status Match Data Show Details Data Quality Create Attribute Entity Properties Settings Help

Connect and Load Save and Send Publish and Validate Build Model Options Help

# Chapter 7, Data Mining – Descriptive Models in SSAS



## Create the Data Mining Structure

Specify if mining model should be created and select the most applicable technique.

Create mining structure with a mining model


Which data mining technique do you want to use?

- Microsoft Decision Trees
- Microsoft Association Rules
- Microsoft Clustering
- Microsoft Decision Trees
- Microsoft Linear Regression
- Microsoft Logistic Regression
- Microsoft Naive Bayes
- Microsoft Neural Network
- Microsoft Sequence Clustering
- Microsoft Time Series

## Specify Table Types

Specify the type of tables to use for your analysis.

Input tables:

Tables	Case	Nested
 vTargetMail	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## Specify the Training Data

Specify the columns used in your analysis.



Mining model structure:

<input type="checkbox"/>	Tables/Columns	Key	<input type="checkbox"/> Input	<input type="checkbox"/> Predictable
<input type="checkbox"/>	vTargetMail			
<input type="checkbox"/>	AddressLine1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	AddressLine2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	Age	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	BikeBuyer	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	BirthDate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	CommuteDistance	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	CustomerAlternateKey	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	CustomerKey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	DateFirstPurchase	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	EmailAddress	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	EnglishEducation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	EnglishOccupation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	First Name	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Recommend inputs for currently selected predictable:

## Specify Columns' Content and Data Type


Specify mining structure columns' content and data type.



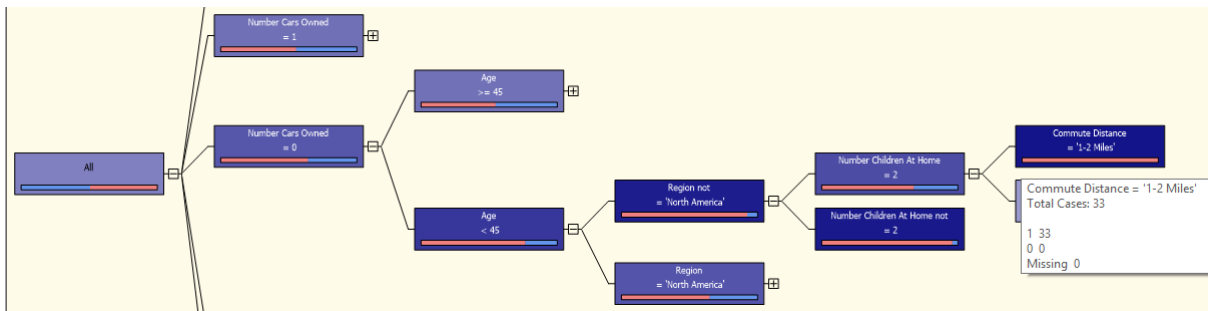
Mining model structure:

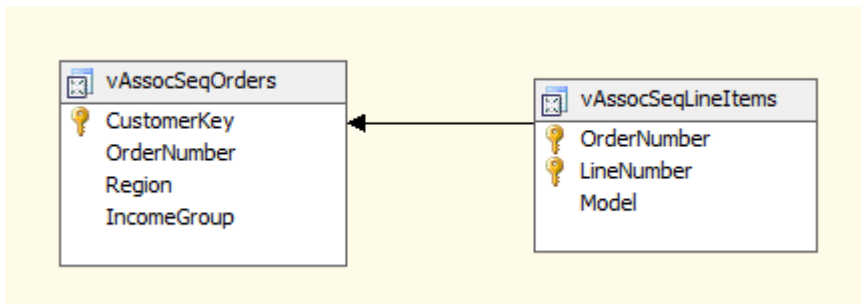
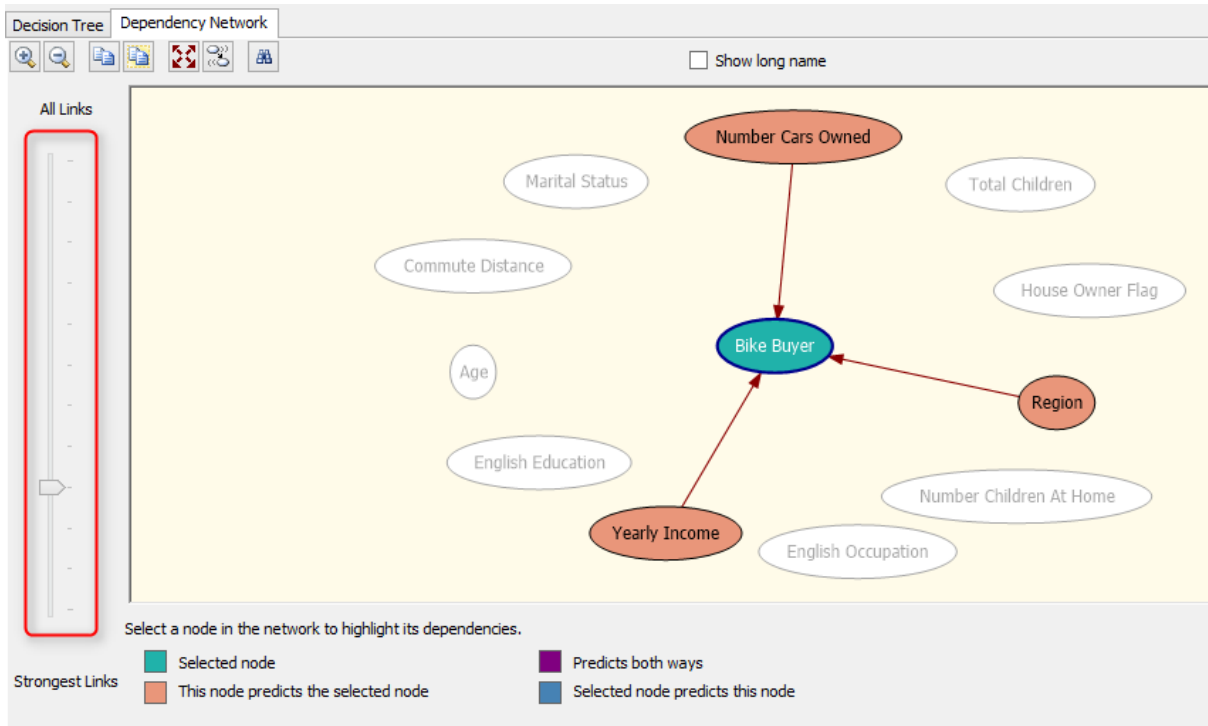
Columns	Content Type	Data Type
<input checked="" type="checkbox"/> Age	Continuous	Long
<input type="checkbox"/> Bike Buyer	Discrete	Long
<input type="checkbox"/> Commute Distance	Discrete	Text
<input checked="" type="checkbox"/> Customer Key	Key	Long
<input type="checkbox"/> English Education	Discrete	Text
<input type="checkbox"/> English Occupation	Discrete	Text
<input type="checkbox"/> Gender	Discrete	Text
<input type="checkbox"/> House Owner Flag	Discrete	Text
<input type="checkbox"/> Marital Status	Discrete	Text
<input type="checkbox"/> Number Cars Owned	Discrete	Long
<input type="checkbox"/> Number Children At Home	Discrete	Long
<input type="checkbox"/> Region	Discrete	Text
<input type="checkbox"/> Total Children	Discrete	Long
<input type="checkbox"/> Yearly Income	Continuous	Double

Detect continuous or discrete for numeric columns:



Properties	
<b>Age</b> ScalarMiningStructureColumn	
<b>Basic</b>	
Description	
ID	Age
<b>Name</b>	<b>Age</b>
<b>Data Type</b>	
Content	<b>Discretized</b>
DiscretizationBucketCount	<b>5</b>
DiscretizationMethod	<b>Automatic</b>
Type	<b>Long</b>





Data Mining Wizard

**Specify Table Types**  
Specify the type of tables to use for your analysis.

Input tables:

Tables	Case	Nested
vAssocSeqLineItems	<input type="checkbox"/>	<input checked="" type="checkbox"/>
vAssocSeqOrders	<input checked="" type="checkbox"/>	<input type="checkbox"/>
vTargetMail	<input type="checkbox"/>	<input type="checkbox"/>

## Specify the Training Data

Specify the columns used in your analysis.

Mining model structure:

<input type="checkbox"/>	Tables/Columns	Key	<input type="checkbox"/> Input	<input type="checkbox"/> Predict...
<input type="checkbox"/>	vAssocSeqOrders			
<input type="checkbox"/>	CustomerKey	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	IncomeGroup	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	OrderNumber	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	Region	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	vAssocSeqLineItems			
<input type="checkbox"/>	LineNumber	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	Model	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

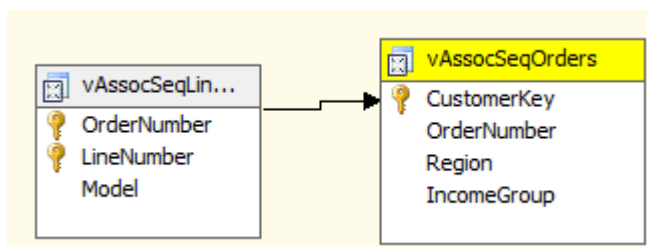
Recommend inputs for currently selected predictable:

## Specify Columns' Content and Data Type

Specify mining structure columns' content and data type.

Mining model structure:

Columns	Content Type	Data Type
Income Group	Discrete	Text
Order Number	Key	Text
Region	Discrete	Text
<input type="checkbox"/> v Assoc Seq Line Items		
Model	Key	Text



Mining Model: Sales Order Association Rules | 
 Viewer: Microsoft Association Rules Viewer

Rules | 
 Itemsets | 
 Dependency Network

Minimum probability:  Filter Rule:

Minimum importance:  Show: Show attribute name only

Show long name | Maximum rows:

▲	Probability	▼	Importance	Rule
	0.543			Touring Tire Tube -> Touring Tire
	1.000			Road-250, Road Tire Tube -> HL Road Tire
	1.000			Touring-1000, Touring Tire Tube -> Touring Tire
	1.000			Mountain-500, Mountain Tire Tube -> LL Mountain Tire
	1.000			Road-350-W, Road Tire Tube -> ML Road Tire
	0.860			Touring Tire -> Touring Tire Tube
	1.000			Road-750, Road Tire Tube -> LL Road Tire
	1.000			Road-550-W, Road Tire Tube -> ML Road Tire
	1.000			Touring-3000, Touring Tire Tube -> Touring Tire
	1.000			Touring-2000, Touring Tire Tube -> Touring Tire

Rules | 
 Itemsets | 
 Dependency Network

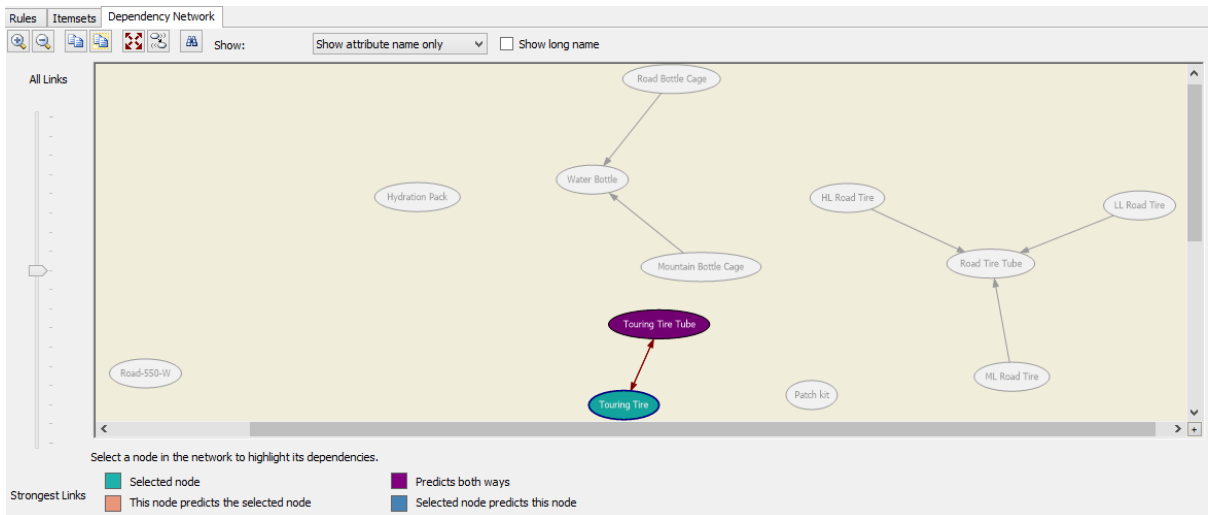
Minimum support:  Filter Itemset:

Minimum itemset size:  Show: Show attribute name only

Maximum rows:   Show long name

▼	Support	Size	Itemset
	589	3	Mountain Bottle Cage, Mountain-200, Water Bottle
	485	3	Road-750, Road Bottle Cage, Water Bottle
	446	3	Mountain Bottle Cage, Water Bottle, Sport-100
	383	3	HL Mountain Tire, Mountain Tire Tube, Sport-100
	376	3	Road Bottle Cage, Water Bottle, Sport-100
	333	3	ML Mountain Tire, Mountain Tire Tube, Sport-100
	331	3	HL Mountain Tire, Mountain-200, Mountain Tire Tube
	309	3	Touring-1000, Road Bottle Cage, Water Bottle





Mining Structure Mining Models Mining Model Viewer Mining Accuracy Chart Mining Model

Structure ^

Sales Order Association Rules	
Income Group	Microsoft_Association Rules
Order Number	Ignore
Region	Key
v Assoc Seq Line Items	Ignore
	Predict

- Process Mining Structure and All Models...
- Process Model...
- Browse Model
- New Mining Model...
- Create a Data Mining Dimension...
- Set Algorithm Parameters...**
- Set Model Filter...

Algorithm Parameters

Parameters:

Parameter	Value	Default	Range
MAXIMUM_ITEMSET_COUNT		200000	[1,...)
MAXIMUM_ITEMSET_SIZE		3	[0,500]
MAXIMUM_SUPPORT		1.0	(0.0,...)
MINIMUM_IMPORTANCE		-999999999	(...,...)
MINIMUM_ITEMSET_SIZE		1	[1,500]
MINIMUM_PROBABILITY		0.4	[0.0,1.0]
MINIMUM_SUPPORT		0.0	[0.0,...)

Description:

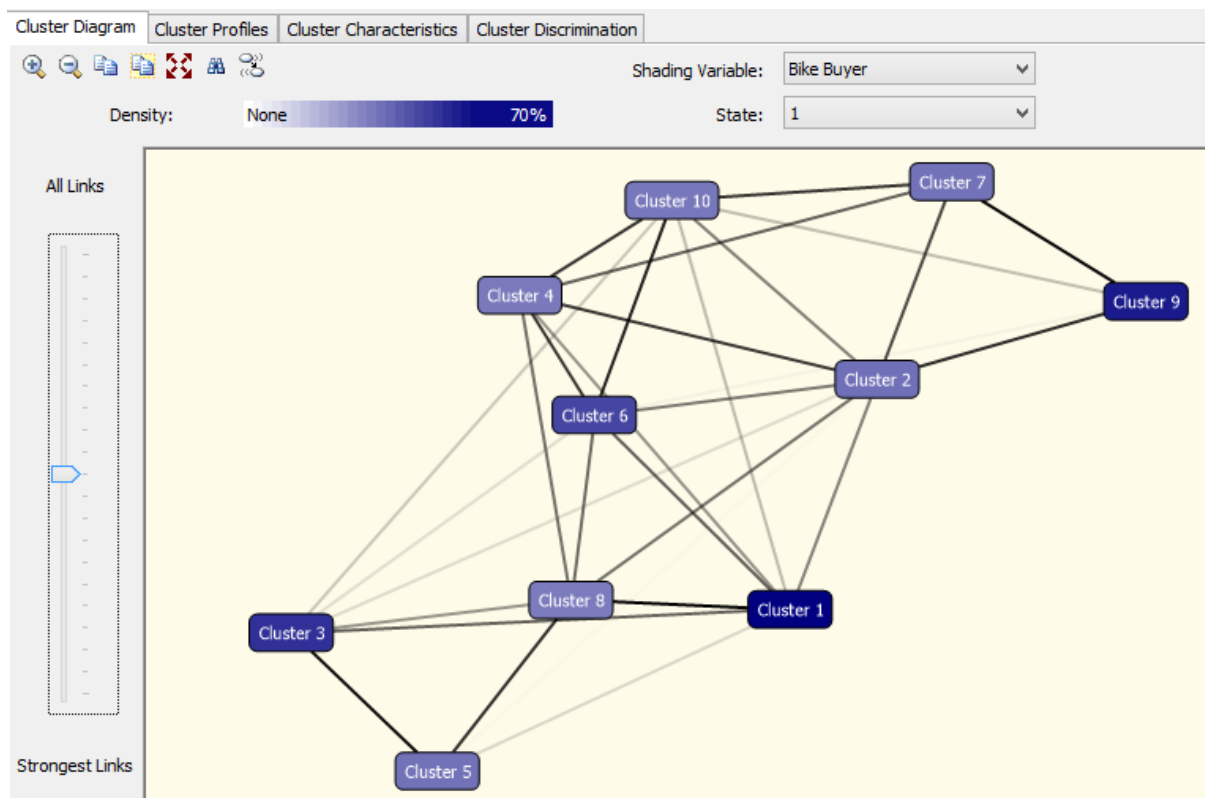
Specifies the maximum number of itemsets to produce. If no number is specified, the algorithm generates all possible itemsets.

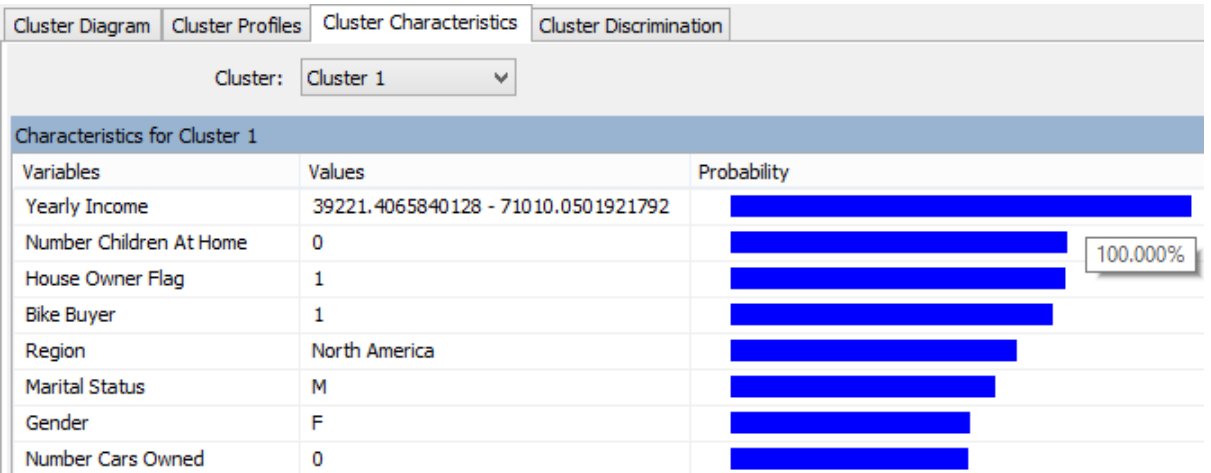
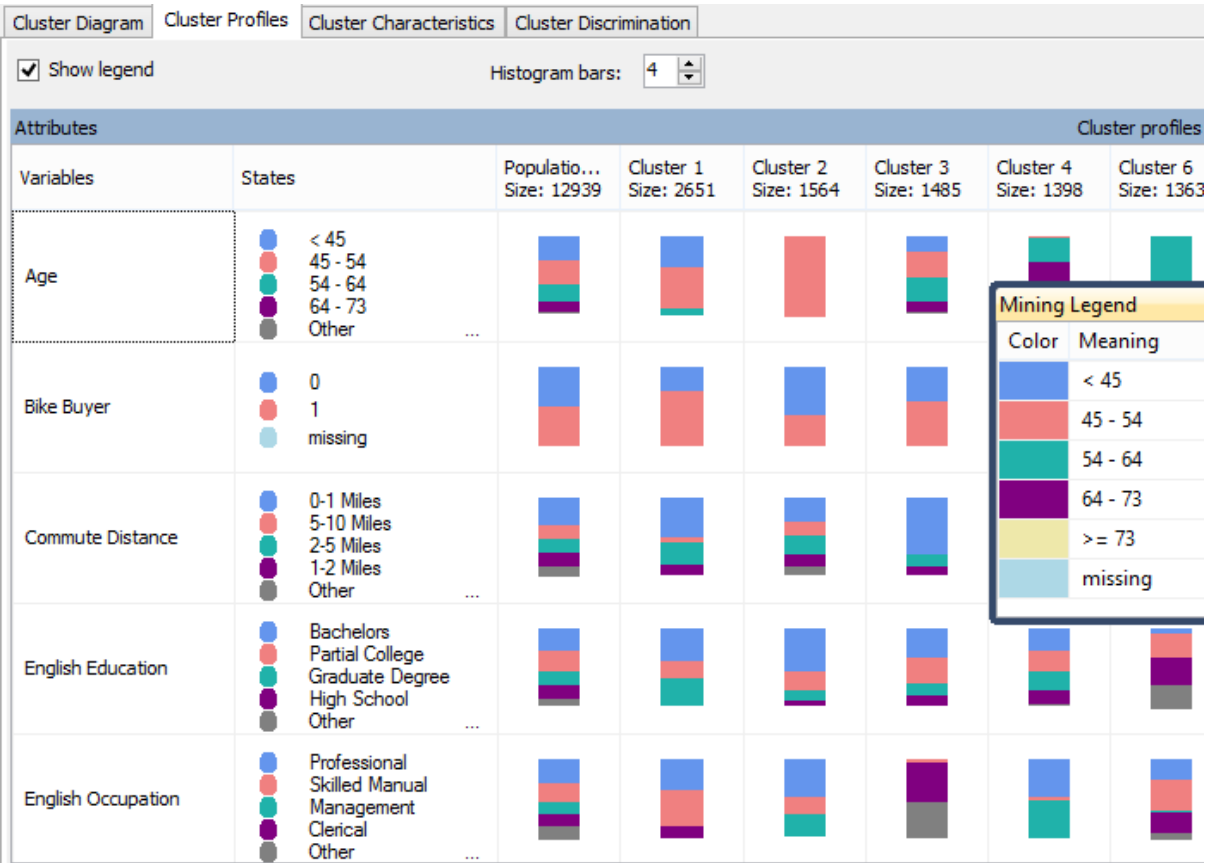
## Chapter 8, Identifying Data Patterns – Predictive Models in SSAS

**New Mining Model**

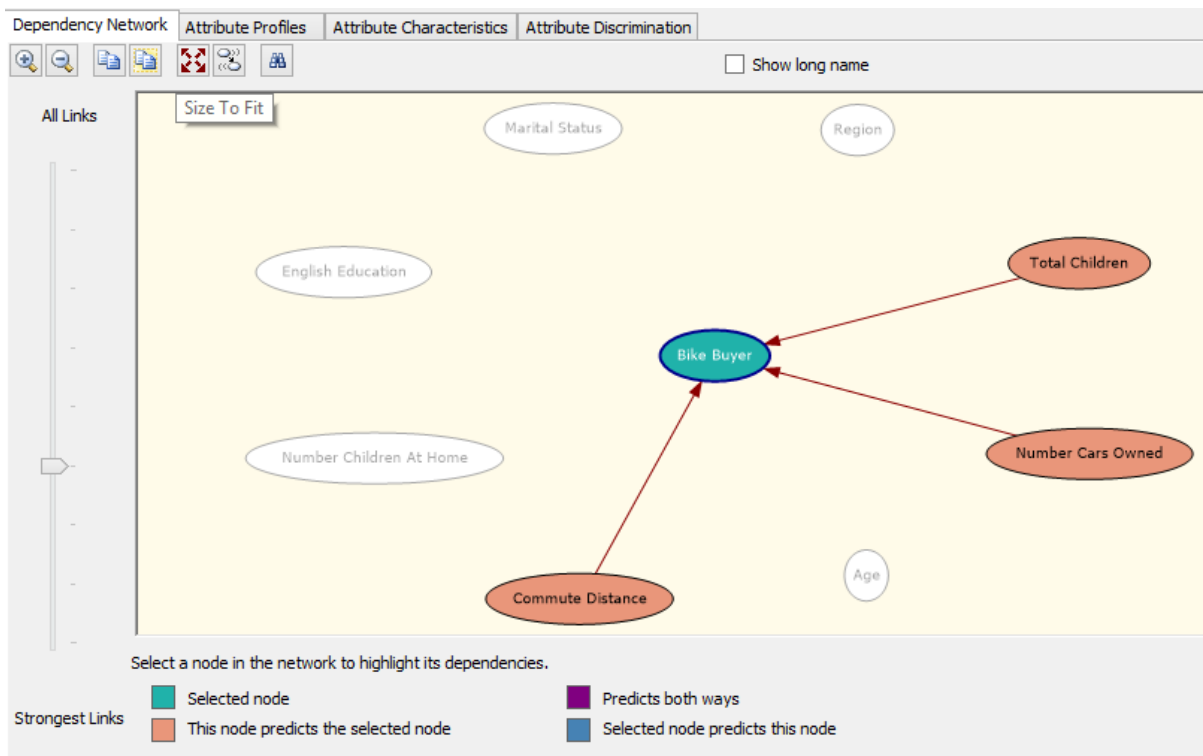
Model name:

Algorithm name:





Cluster Discrimination			
Cluster 1:	Cluster 1	Cluster 2:	Cluster 8
Discrimination scores for Cluster 1 and Cluster 8			
Variables	Values	Favors Cluster 1	Favors Cluster 8
Number Cars Owned	2		
Total Children	0		
Age	< 45		
English Education	High School		
Commute Distance	5-10 Miles		
Number Cars Owned	0		
Age	45 - 54		
Total Children	1		
English Education	Bachelors		



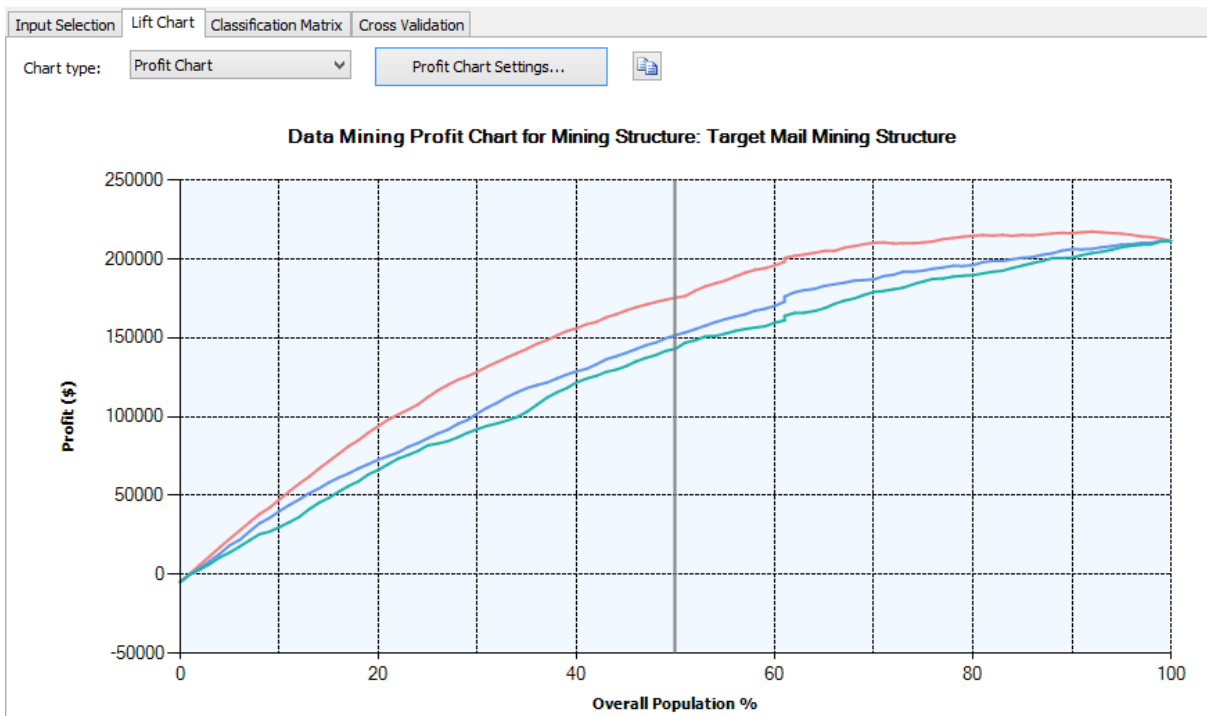
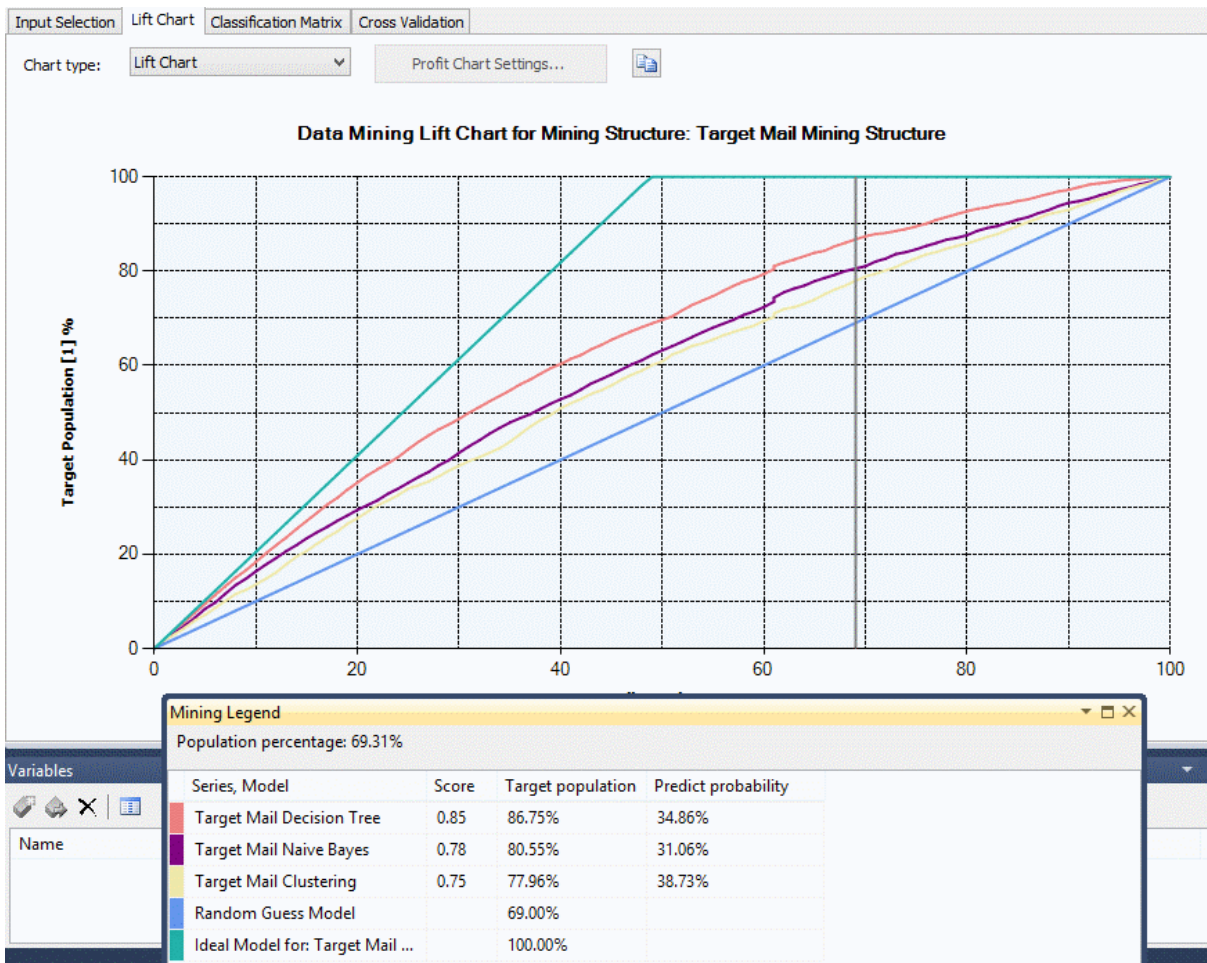
Mining Structure | Mining Models | Mining Model Viewer | Mining Accuracy Chart | Mining

Input Selection | Lift Chart | Classification Matrix | Cross Validation

Select predictable mining model columns to show in the lift chart:

Synchronize Prediction Columns and Values

Show	Mining Model	Predictable Column Name	Predict Value
<input checked="" type="checkbox"/>	Target Mail Decision Tree	Bike Buyer	1
<input checked="" type="checkbox"/>	Target Mail Naive Bayes	Bike Buyer	1
<input checked="" type="checkbox"/>	Target Mail Clustering	Bike Buyer	1



Columns of the classification matrices correspond to actual values; rows correspond to predicted values

Counts for Target Mail Decision Tree on Bike Buyer:

Predicted	0 (Actual)	1 (Actual)
0	2118	921
1	718	1788

Counts for Target Mail Naive Bayes on Bike Buyer:

Predicted	0 (Actual)	1 (Actual)
0	1797	991
1	1039	1718

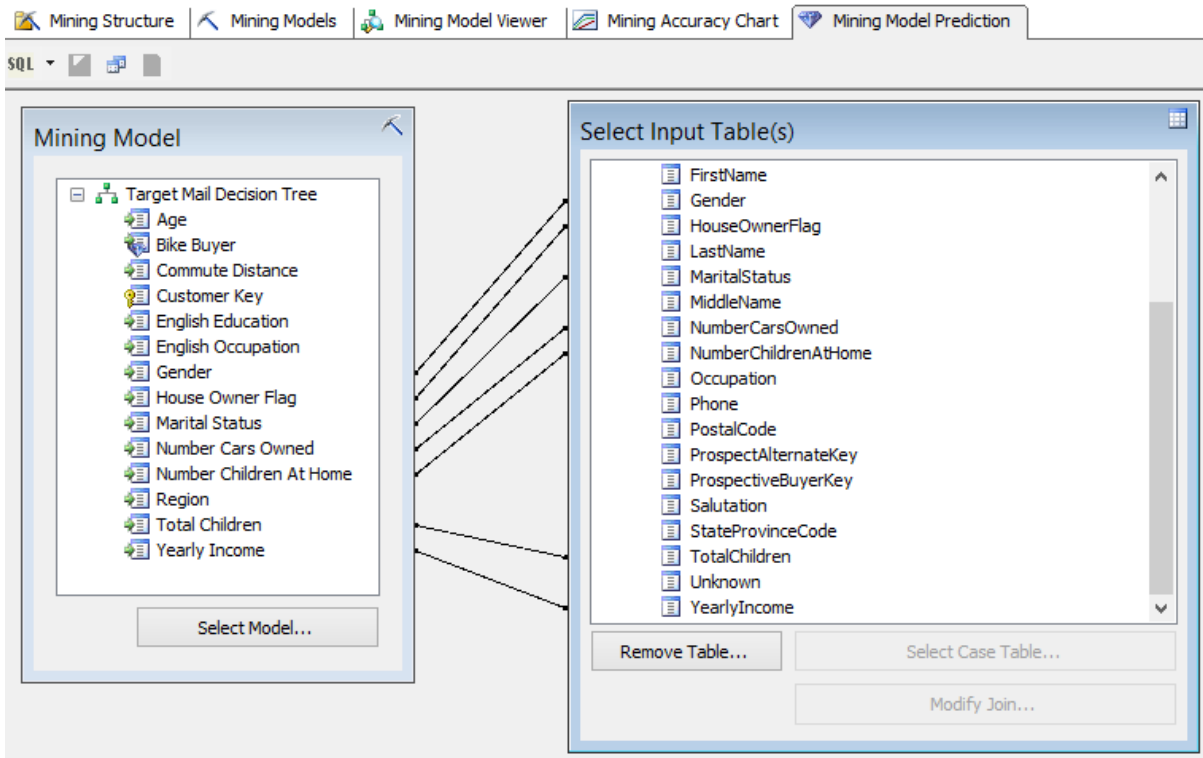
Counts for Target Mail Clustering on Bike Buyer:

Predicted	0 (Actual)	1 (Actual)
0	1803	1120
1	1033	1589

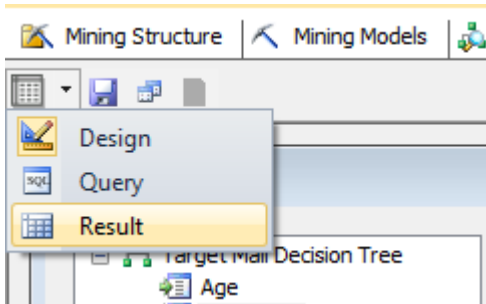
Fold Count:  Max Cases:

Target Attribute:  Target State:  Target Threshold:

Target Mail Decision Tree				
Partition Index	Partition Size	Test	Measure	Value
1	3000	Classification	True Positive	888
2	3000	Classification	True Positive	1069
3	3000	Classification	True Positive	904
			Average	953.6667
			Standard Deviation	81.8142
1	3000	Classification	False Positive	457
2	3000	Classification	False Positive	643
3	3000	Classification	False Positive	410
			Average	503.3333
			Standard Deviation	100.6059
1	3000	Classification	True Negative	1058
2	3000	Classification	True Negative	872
3	3000	Classification	True Negative	1105
			Average	1011.6667



Source	Field	Alias	Show	Group	And/Or	Criteria/Argument
ProspectiveBuyer	FirstName		<input checked="" type="checkbox"/>			
ProspectiveBuyer	LastName		<input checked="" type="checkbox"/>			
ProspectiveBuyer	EmailAddress		<input checked="" type="checkbox"/>			
ProspectiveBuyer	Phone		<input checked="" type="checkbox"/>			
ProspectiveBuyer	Salutation		<input checked="" type="checkbox"/>			
Prediction Function	f PredictProbability	Bike Buyer	<input checked="" type="checkbox"/>			([Target Mail Decision Tree].[Bike Buyer], 1)
	PredictHistogram		<input type="checkbox"/>			
	PredictNodeId		<input type="checkbox"/>			
	PredictProbability		<input checked="" type="checkbox"/>			
	PredictStdev		<input type="checkbox"/>			







FirstName	LastName	EmailAddress	Phone	Salutation	Bike Buyer
Adam	Alexander	aaalexander@lucernepublishing.com	516-555-0187	Mr.	0.404269317932597
Adrienne	Alonso	aalonso@alpineskihouse.com	607-555-0119	Ms.	0.404269317932597
Alfredo	Alvarez	aalvarez@fineartschool.net	1 (11) 500 555-0143	Mr.	0.382441597588546
Arthur	Arun	aarun@adventure-works.com	403-555-0186	Mr.	0.404269317932597
Andrea	Bailey	abailey@lucernepublishing.com	1 (11) 500 555-0113	Ms.	0.637460885113992

FirstName	LastName	EmailAddress	Phone	Salutation	Bike Buyer
Rebekah	Rodriguez	rrodriguez@contoso.com	1 (11) 500 555-0187	Ms.	0.772810777709737
Seth	Martinez	smartinez@blueyonderairlines.com	835-555-0181	Mr.	0.772810777709737
Jesus	Jimenez	jjimenez@lucernepublishing.com	1 (11) 500 555-0121	Mr.	0.772810777709737
Connor	Carter	ccarter@alpineskihouse.com	1 (11) 500 555-0136	Mr.	0.772810777709737
Latoya	Xie	lxie@alpineskihouse.com	913-555-0169	Ms.	0.772810777709737
Abigail	Davis	adavis@fabrikam.com	1 (11) 500 555-0187	Ms.	0.772810777709737
Zachary	Brown	zbrown@fineartschool.net	1 (11) 500 555-0140	Mr.	0.772810777709737
Tony	Goel	tgoel@alpineskihouse.com	277-555-0195	Mr.	0.772810777709737
Alicia	Deng	adeng@cpandl.com	278-555-0139	Ms.	0.637460885113992
Adrian	Rogers	arogers@margiestravel.com	1 (11) 500 555-0121	Mr.	0.637460885113992

Save Data Mining Query Result
✕

Data Source:

Adventure Works DW2012

New

Table Name:

ProspectiveBikeBuyersProbability

Overwrite if exists

Add to DSV:

Adventure Works DW2012

Click the Save button to save data mining query result to database

Stop

Save

Close

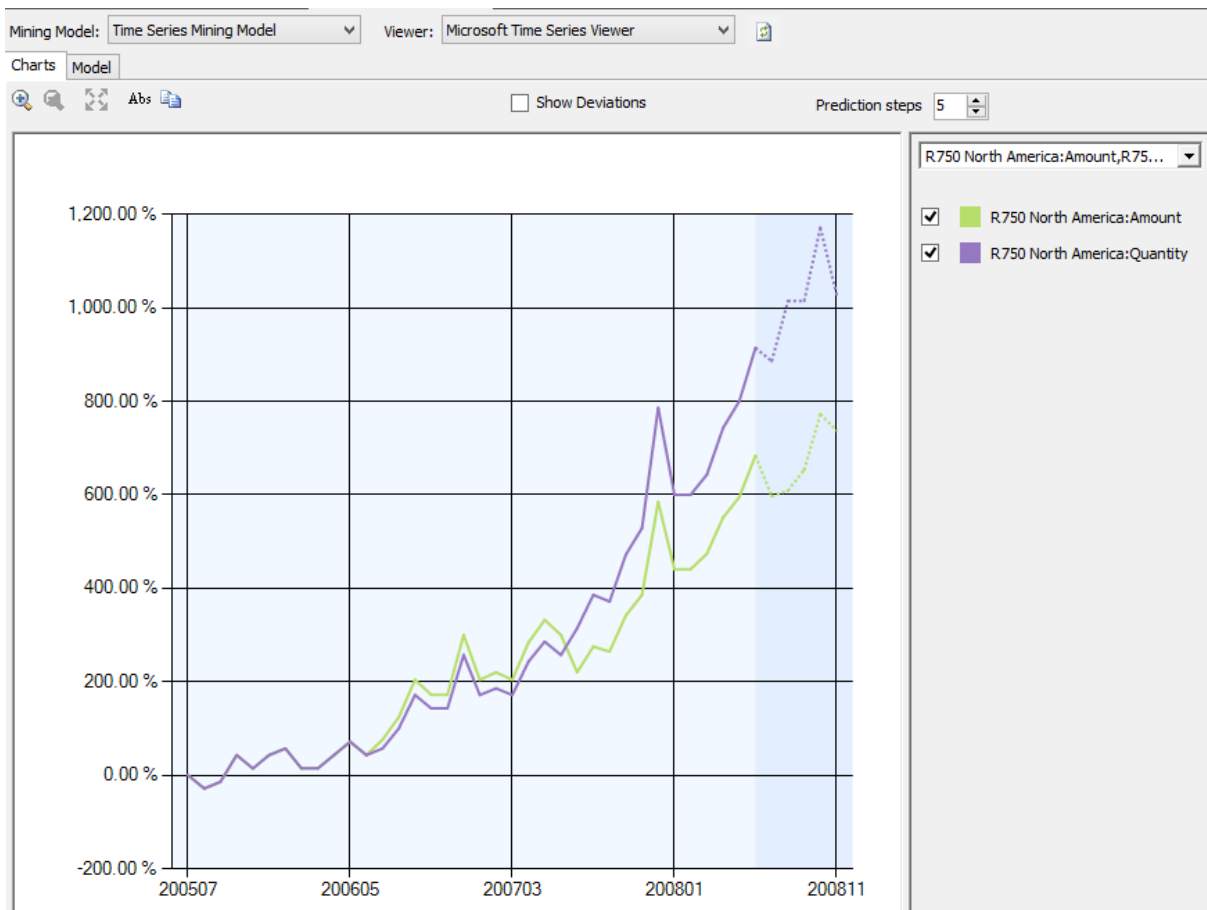
**Data Mining Wizard**

**Specify the Training Data**  
Specify the columns used in your analysis.

Mining model structure:

<input type="checkbox"/>	Tables/Columns	Key	<input type="checkbox"/> Input	<input type="checkbox"/> Predict...
<input type="checkbox"/>	v TimeSeries			
<input checked="" type="checkbox"/>	Amount	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	CalendarYear	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	ModelRegion	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Month	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	Quantity	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	ReportingDate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	TimeIndex	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Recommend inputs for currently selected predictable:

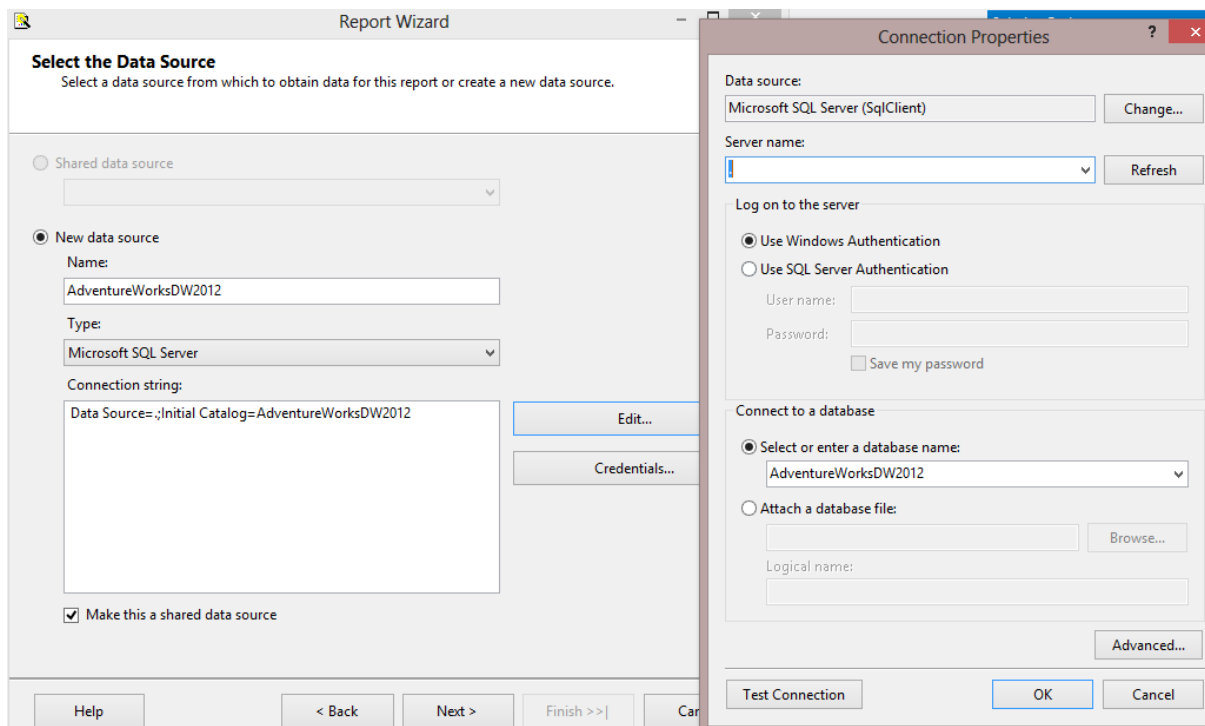
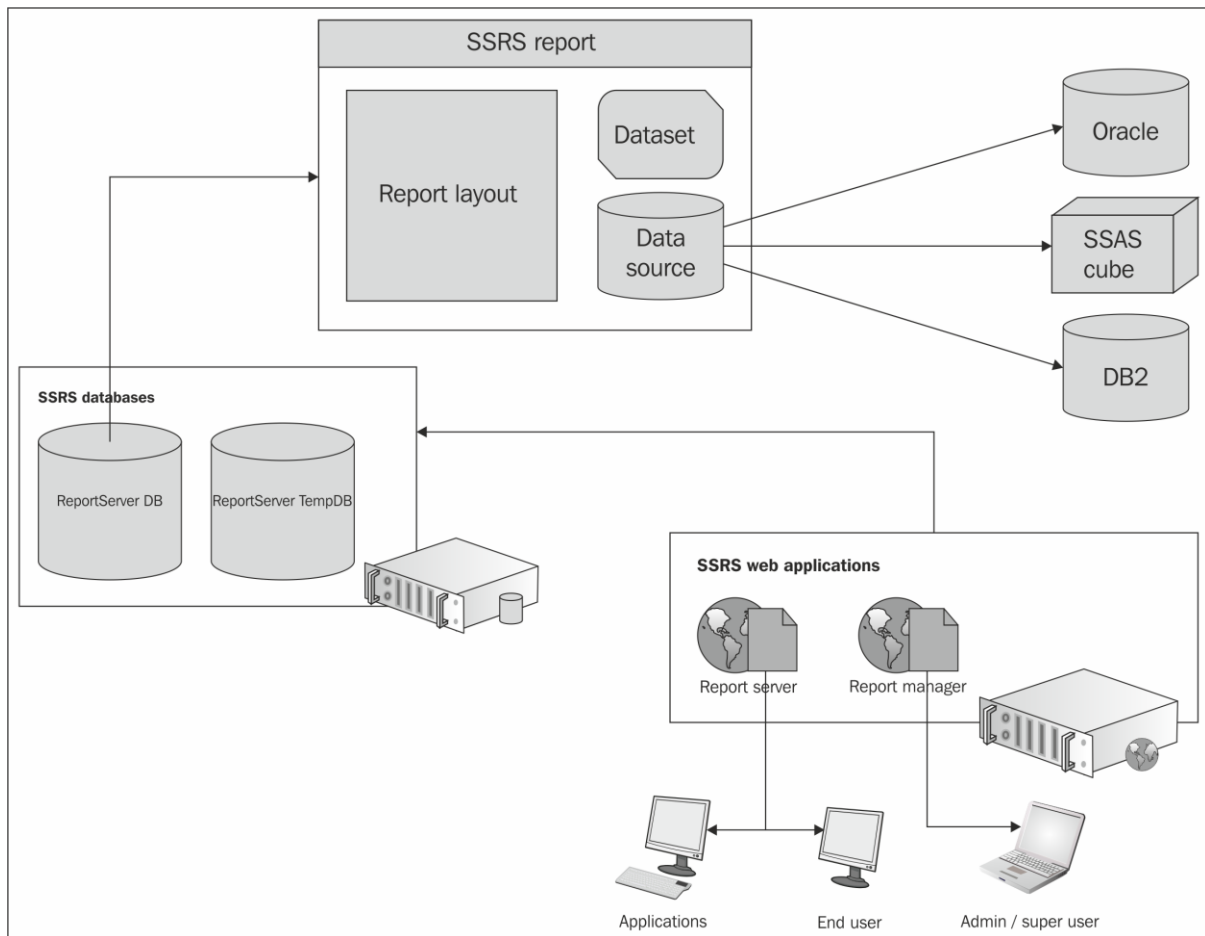


Source	Field	Alias	Show	Group	And/Or	Criteria/Argument
Time Series Mining ...	Model Region		<input checked="" type="checkbox"/>			
Prediction Function	f PredictTimeSeries		<input checked="" type="checkbox"/>			[Time Series Mining Model].[Amount],5
Prediction Function	f PredictTimeSeries		<input checked="" type="checkbox"/>			[Time Series Mining Model].[Quantity],5

Model Region	Expression	Expression																								
M200 Europe	[-] Expression	[-] Expression																								
	<table border="1"> <thead> <tr> <th>\$TIME</th> <th>Amount</th> </tr> </thead> <tbody> <tr><td>200807</td><td>172067.11356...</td></tr> <tr><td>200808</td><td>157879.00458...</td></tr> <tr><td>200809</td><td>152304.00129...</td></tr> <tr><td>200810</td><td>143453.17921...</td></tr> <tr><td>200811</td><td>126490.45833...</td></tr> </tbody> </table>	\$TIME	Amount	200807	172067.11356...	200808	157879.00458...	200809	152304.00129...	200810	143453.17921...	200811	126490.45833...	<table border="1"> <thead> <tr> <th>\$TIME</th> <th>Quantity</th> </tr> </thead> <tbody> <tr><td>200807</td><td>77</td></tr> <tr><td>200808</td><td>64</td></tr> <tr><td>200809</td><td>59</td></tr> <tr><td>200810</td><td>56</td></tr> <tr><td>200811</td><td>56</td></tr> </tbody> </table>	\$TIME	Quantity	200807	77	200808	64	200809	59	200810	56	200811	56
\$TIME	Amount																									
200807	172067.11356...																									
200808	157879.00458...																									
200809	152304.00129...																									
200810	143453.17921...																									
200811	126490.45833...																									
\$TIME	Quantity																									
200807	77																									
200808	64																									
200809	59																									
200810	56																									
200811	56																									
M200 North Am...	[+] Expression	[+] Expression																								
M200 Pacific	[+] Expression	[+] Expression																								

Model Region	Expression.\$TIME	Expression.Amount	Expression.\$TIME	Expression.Quantity
M200 Europe	200807	172067.113565148		
M200 Europe	200808	157879.00458742		
M200 Europe	200809	152304.00129356		
M200 Europe	200810	143453.179211655		
M200 Europe	200811	126490.458337547		
M200 Europe			200807	77
M200 Europe			200808	64
M200 Europe			200809	59
M200 Europe			200810	56
M200 Europe			200811	56
M200 North Am...	200807	363390.688396527		
M200 North Am...	200808	396690.963864866		

# Chapter 9, Reporting Services

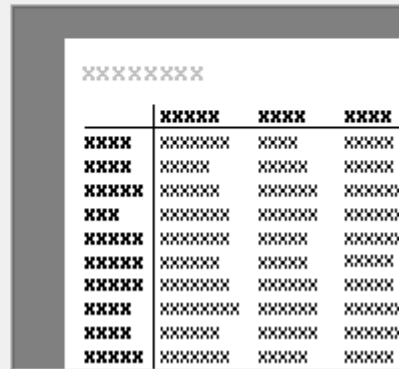


## Select the Report Type

Select the type of report that you want to create.

Tabular

Matrix



	XXXX	XXXX	XXXX
XXXX	XXXXXXXX	XXXX	XXXX
XXXX	XXXX	XXXX	XXXX
XXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX
XXX	XXXXXXXX	XXXXXXXX	XXXXXXXX
XXXXX	XXXXXXXX	XXXX	XXXX
XXXXX	XXXXXXXX	XXXX	XXXX
XXXXX	XXXXXXXX	XXXX	XXXX
XXXX	XXXXXXXX	XXXX	XXXX
XXXX	XXXXXXXX	XXXX	XXXX
XXXXX	XXXXXXXX	XXXX	XXXX

## Design the Matrix

Choose the fields that you want to display in the matrix.



Available fields:

Displayed fields:

Page >

Columns >

Rows >

Details >

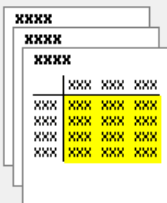
< Remove

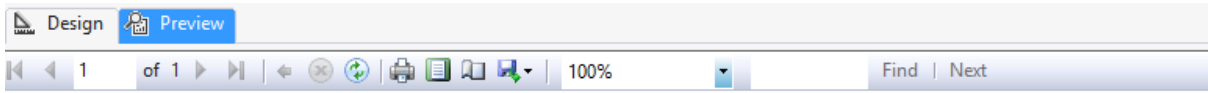
EnglishProductCategoryName  
EnglishProductSubcategoryName  
EnglishProductName

SalesTerritoryGroup  
SalesTerritoryCountry  
SalesTerritoryRegion

SalesAmount

Enable drilldown





## Sales by Product and Territory

		Accessories	Bikes			Clothing
			Mountain Bikes	Road Bikes	Touring Bikes	
Europe	France	63406.7800	899260.7108	1311933.1035	342381.9000	27035.2200
	Germany	62232.5900	1003800.9790	1380342.8492	424370.5200	23565.4000
	United Kingdom	76630.0400	1162980.2866	1598217.4843	521644.8900	32239.5100
North America		359799.9200	4032898.1394	5225542.1835	1562721.6000	186672.5300
Pacific		138690.6300	2853819.4486	5004548.4158	993682.1400	70259.9500

Report Data: Sales by Product and Territory.rdl [Design]

1

2

3

4

5

6

Report Designer Interface:

- Report Data:** Shows the report title and data source information.
- Left Pane (Data Sources):** Lists data sources like AdventureWorksDW2012 and DataSets like EnglishProductCategoryName, EnglishProductSubcategoryName, EnglishProductName, SalesTerritoryRegion, SalesTerritoryCountry, SalesTerritoryGroup, and SalesAmount.
- Report Body:** Displays the report title and a table structure with fields like EnglishProductCategoryName, EnglishProductSubcategoryName, EnglishProductName, SalesTerritoryGroup, SalesTerritoryCountry, SalesTerritoryRegion, and Sum(SalesAmount).
- Row Groups:** Shows a hierarchy starting with matrix1\_SalesTerritoryGroup, followed by matrix1\_SalesTerritoryCountry and matrix1\_SalesTerritoryRegion.
- Column Groups:** Shows a hierarchy starting with matrix1\_EnglishProductCategoryName, followed by matrix1\_EnglishProductSubcategoryName and matrix1\_EnglishProductName.
- Right Pane (Properties):** Shows the Properties window for the Report, including InitialPageName, Page properties (BackgroundImage, BorderColor, BorderStyle, BorderWidth, Columns, InteractiveSize, Margins, PageSize), and Page properties (BackgroundColor, BackgroundImage, BorderColor, BorderStyle, BorderWidth, Columns, InteractiveSize, Margins, PageSize).
- Solution Explorer:** Shows the project structure, including Chapter 09 SSRS, Shared Data Sources, Shared Datasets, and Reports.

### Dataset Properties

Query

Fields

Options

Filters

Parameters

Choose a data source and create a query.

Name:

Use a shared dataset.  
 Use a dataset embedded in my report.

Data source:

Query type:  
 Text  Table  Stored Procedure

Query:  

```
SELECT distinct (OrderDateKey/10000) as [Year]
FROM FactInternetSales
```

General

Available Values

Default Values

Advanced

Choose the available values for this parameter.

Select from one of the following options:

None  
 Specify values  
 Get values from a query

Dataset:

Value field:

Label field:



Year 2008

1 of 1 100%

## Sales by Product and Territory

	Accessories	Bikes	Clothing
Europe	117811.2500	3044696.4900	46848.3400
North America	207929.8400	3676699.9200	113029.6100
Pacific	81309.1600	2440928.4400	41646.6900

Dataset Properties

Choose query parameter values.

Add Delete

Parameter Name	Parameter Value
@Year	@Year

Year 2007 Month January, February

1 of 1

Sales by Product and Territory

	Bikes
Europe	309112.1990
North America	224823.0442
Pacific	394020.2642

Design Preview

1 of 2? 100% Find | Next

## Customers

First Name	Last Name	Birth Date	Marital Status	Total Children	Number Children At Home	English Education	Number Cars Owned
Jon	Yang	4/8/1966 12:00:00 AM	M	2	0	Bachelors	0
Eugene	Huang	5/14/1965 12:00:00 AM	S	3	3	Bachelors	1
Ruben	Torres	8/12/1965	M	M	3	3 Bachelors	1

- XML file with report data
- CSV (comma delimited)
- TIFF file
- PDF
- MHTML (web archive)
- Excel
- Word

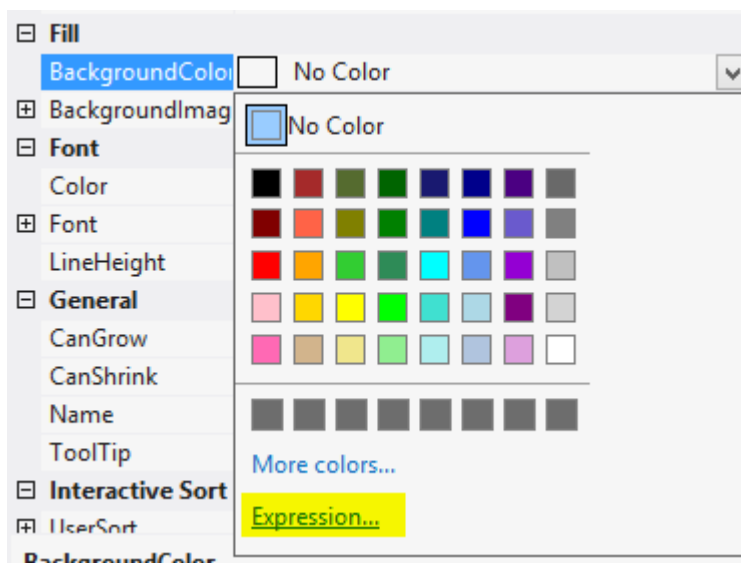
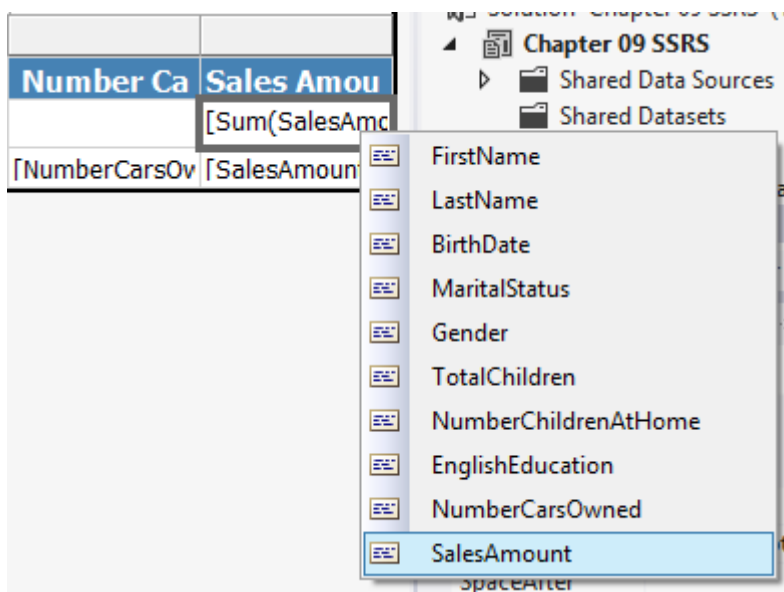
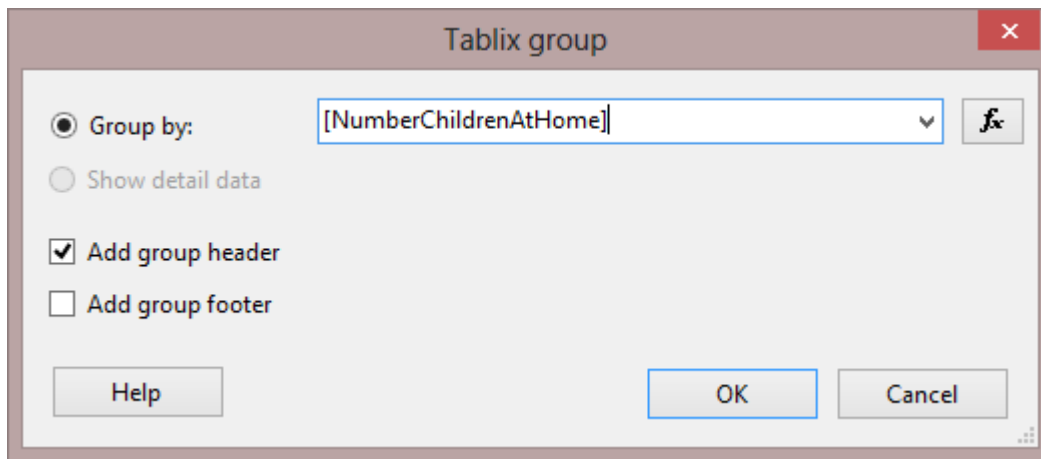
### Properties

#### Report

- BorderWidth: 1pt
- Columns
- InteractiveSize: 11in, 8.5in
- Margins: 0.5in, 0.5in, 0.5in, 0.5in
  - Left: 0.5in
  - Right: 0.5in
  - Top: 0.5in
  - Bottom: 0.5in
- PageSize: 11in, 8.5in
  - Width: 11in
  - Height: 8.5in
- References
  - Assemblies
  - Classes

Last Name	Birth Date
[LastName]	[BirthDate]

- Insert Column
- Delete Columns
- Column Visibility...
- Tablix Properties...



## Customers

Number Children At Home	First Name	Last Name	Birth Date	Marital Status	Gender	Total Children	Number Children At Home	English Education
0								
	Adriana	Gonzalez	7/18/1946 12:00:00 AM	S	F	5	0	Partial College
	Bonnie	Nath	8/18/1944 12:00:00 AM	M	F	5	0	Bachelors
	Bonnie	Xie	11/15/1968 12:00:00 AM	M	F	0	0	Graduate Degree
	Carmen	Rana	2/23/1967 12:00:00 AM	M	F	0	0	Bachelors
	Cory	Kapoor	4/18/1967 12:00:00 AM	M	M	0	0	Bachelors
	Isabella	Ward	8/13/1963 12:00:00 AM	M	F	1	0	Bachelors

Expression ✕

Set expression for: BackgroundColor

```
=iif(Fields!Gender.Value="M", "Light Green", "Khaki")
```

100 %

Category:

- Built-in Fields
- Parameters
- Fields (DataSet1) 2
- Datasets
- Variables
- Operators
- Common Functions
  - Text
  - Date & Time
  - Math
  - Inspection
  - Program Flow
  - Aggregate
  - Financial
  - Conversion
  - Miscellaneous

Item:

- Choose
- IIf 3
- Switch

Description

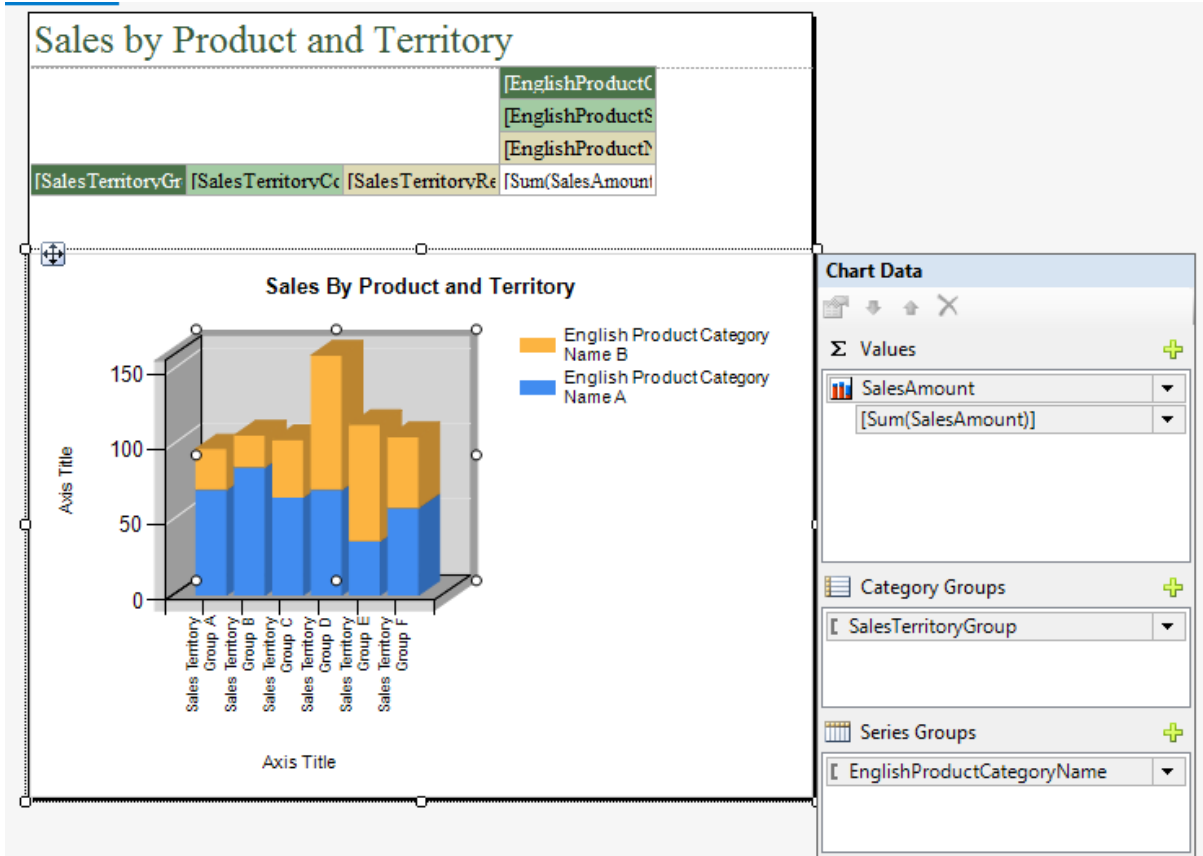
Selects and returns a value from a list of arguments. 4

Example

```
= Choose(2, "13", "15", "21")
= Choose(Datepart("w", Fields! BirthDate.Value), "First", "Second", "Third", "Fourth", "Fifth", "Sixth", "Seventh")
```

5

Help
OK
Cancel



Reporting Services Configuration Manager: REZA-VAIO\MSSQLSERVER

Microsoft SQL Server 2012 Reporting Services Configuration Manager

**Connect**

- REZA-VAIO\MSSQLSERVER
- Service Account
- Web Service URL**
- Database
- Report Manager URL
- E-mail Settings
- Execution Account
- Encryption Keys
- Scale-out Deployment

**Web Service URL**

Configure a URL used to access the Report Server. Click Advanced to define multiple URLs for a single Report Server instance, or to specify additional parameters on the URL.

Report Server Web Service has more than one HTTP or HTTPS sites. Click Advanced to manage them.

Report Server Web Service Virtual Directory

Virtual Directory:

Report Server Web Service Site identification

IP Address:

TCP Port:

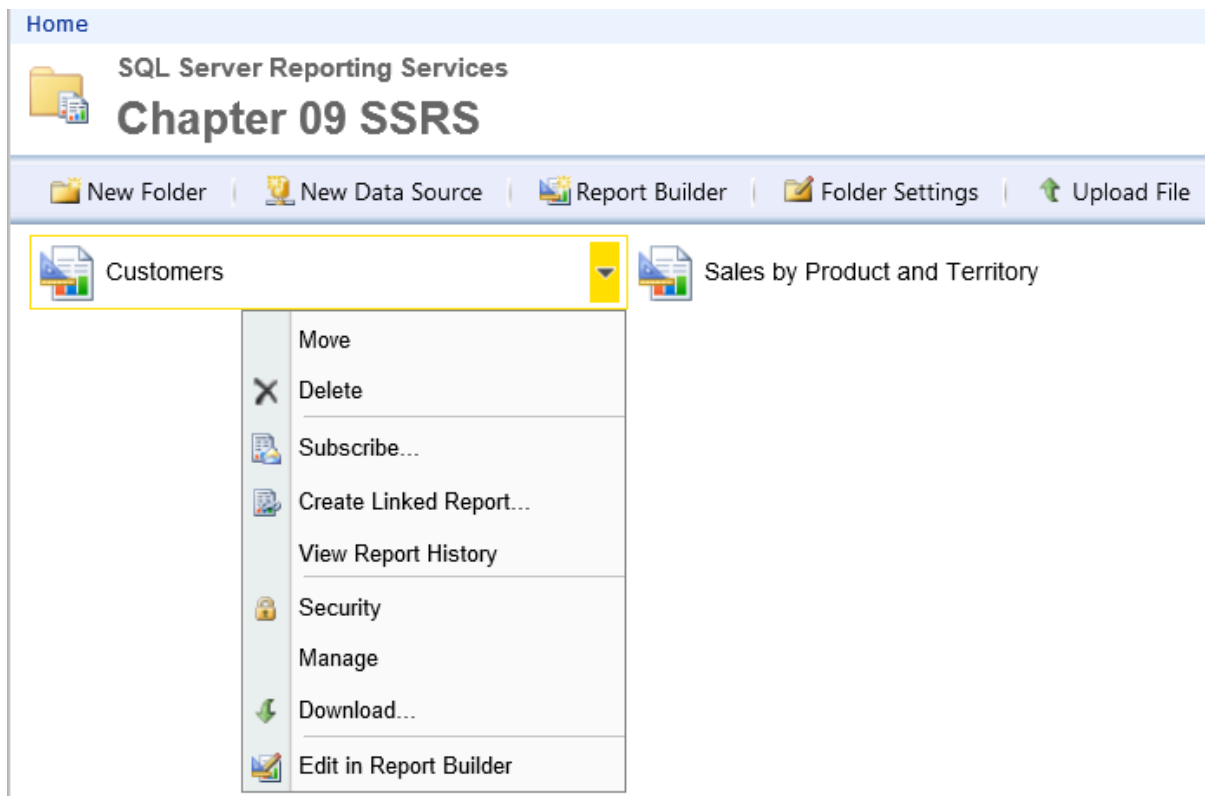
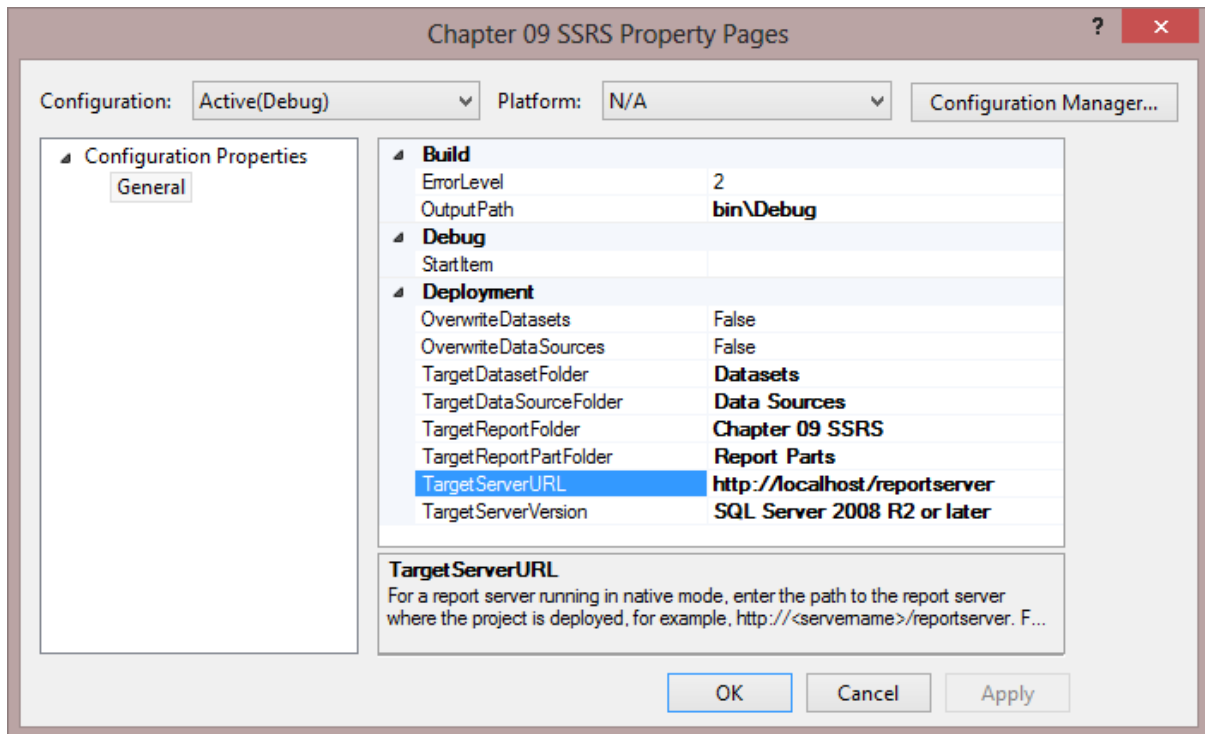
SSL Certificate:

SSL Port:

Report Server Web Service URLs

URLs: <http://localhost:80/ReportServer>

**Results**



# Chapter 10, Dashboard Design

## Web Application

Select a web application.

To create a new web application go to [New Web Application](#) page.

## Title and Description

Type a title and description for your new site. The title will be displayed on each page in the site.

## Web Site Address

Specify the URL name and URL path to create a new site, or choose to create a site at a specific path.

To add a new URL Path go to the [Define Managed Paths](#) page.

## Template Selection

Web Application: [http://win12sp13sql12/](#) ▾

Title:

PacktPub BI Site

Description:

Sample BI Site for Chapter 10 PerformancePoint

URL:

[http://win12sp13sql12](#) /sites/ ▾ PacktPubBI

Select experience version:

2013 ▾

Select a template:

Collaboration Enterprise Publishing Custom

Document Center

eDiscovery Center

Records Center

**Business Intelligence Center**

Enterprise Search Center



EDIT LINKS

# PacktPub BI Site

EDIT LINKS

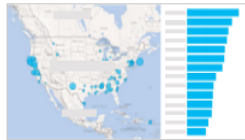
Site Contents

Empower the people in your organization to gain insights with ease using familiar tools. [Learn More](#)



## Explore and Analyze Data

Create powerful data mash-ups of millions of rows of data from various sources using [PowerPivot](#).



## Design Interactive Reports

Create presentation-ready reports that tell a compelling story using [Excel](#) and [Power View](#).



## Share Dashboards

Publish dashboards that users can interact with using [Excel Services](#).

Untitled - Dashboard Designer

Home Edit Create

Paste Copy Cut Add Lists Add Items Refresh Remove Permissions Rename Properties Delete Compare Item Validate Item Mark Differences Import Items

Clipboard Workspace Item Changes Import

Workspace Browser << SharePoint Workspace

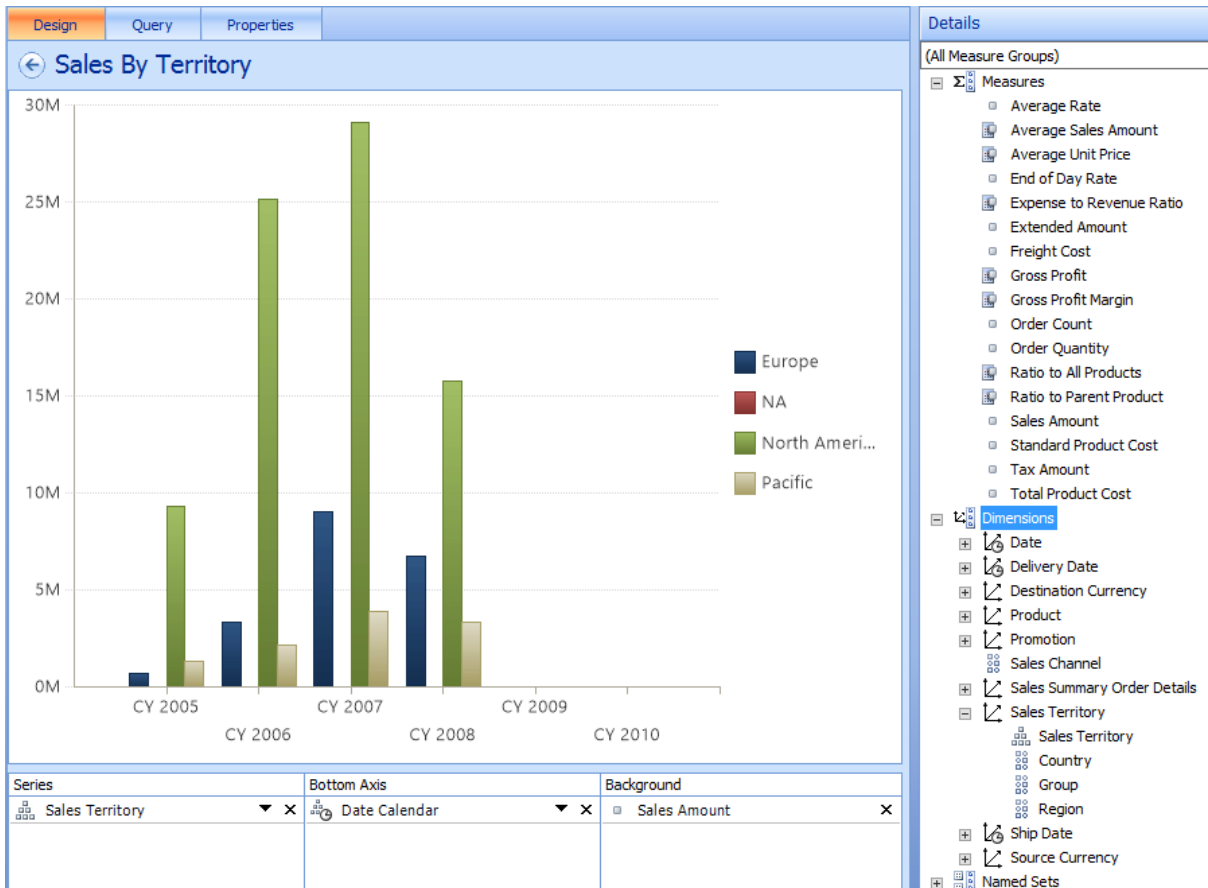
- UntitledWorkspace
- Data Connections
- PerformancePoint Content

### Data Connections

Name	Type	Description	Person Re...	Modified	Modified By
No items found.					

User: System Account Connected to: http://win12sp13sql12/sites/PacktPubBI





Workspace Browser

- UntitledWorkspace
- Data Connections
- Sales Summary Cube Connection
- PerformancePoint Content
- Sales By Territory
- Sales Dashboard**
- Copy
- Paste
- Rename
- Delete
- Remove from Workspace
- Save
- Deploy to SharePoint...
- Manage Permissions...
- Properties

Editor Properties

### Sales Dashboard

Pages

Name	Owner	Date Modified
Sales	WIN12SP13SQL12\Admi...	6/11/2013 7:40:48 PM

Dashboard Content

Column

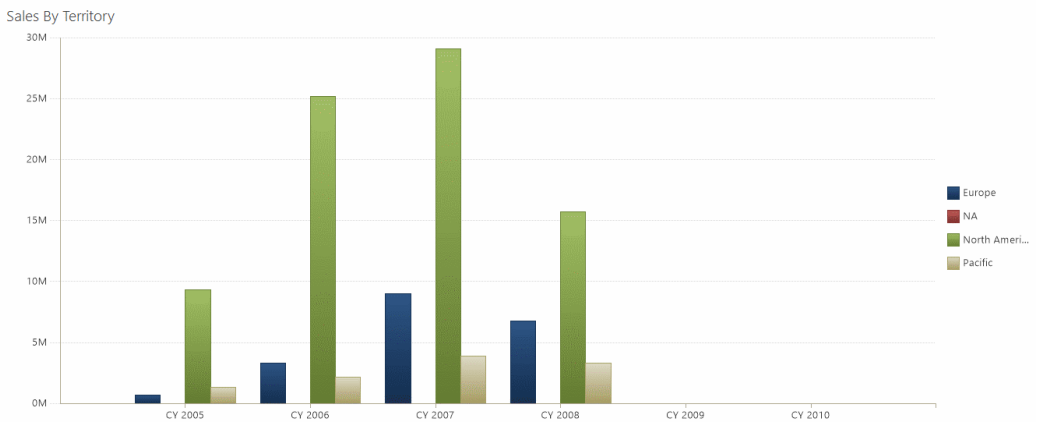
Sales By Territory  
Type: Report: Analytic Chart  
Drop fields to create connections

Details

- Scorecards
- Reports
- PerformancePoint Content
- Sales By Territory
- Filters

# Sales Dashboard > Sales

Sales  
EDIT LINKS  
Site Contents

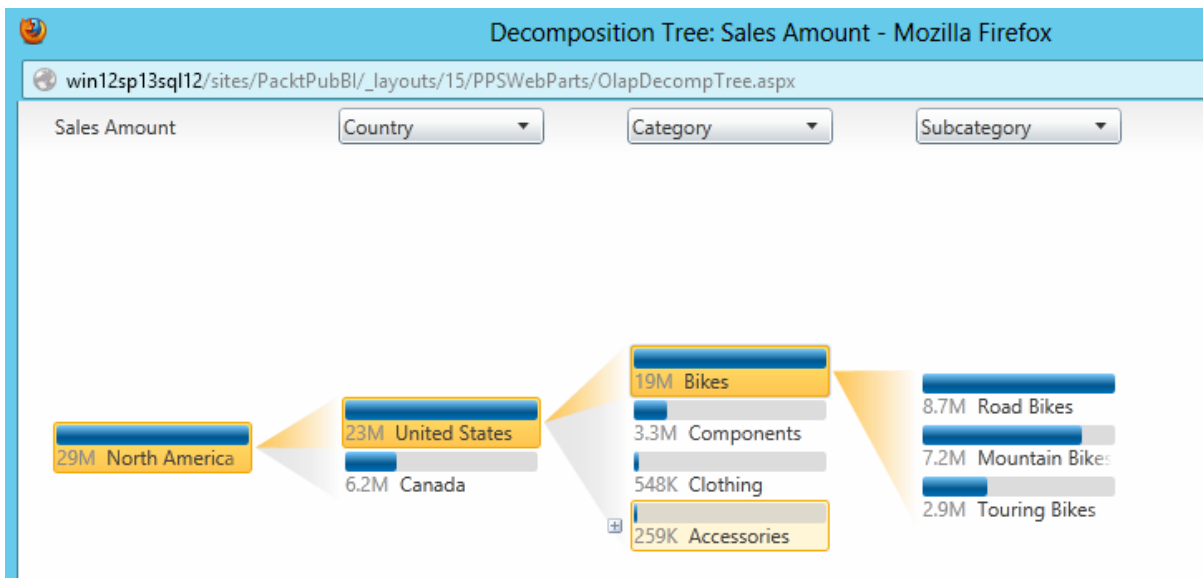


Select Measures...

- Filter
  - Series
  - Clear Filter
  - Value Filters...
  - Top 10...
- Pivot
- Report Type
- Format Report
- Show Information Bar
  - Bottom Axis
    - Clear Filter
    - Value Filters...
    - Top 10...
  - Filter Empty Series
  - Filter Empty Axis Items

Select Measures...

- Filter
  - Pivot
- Report Type
  - Grid
  - Bar Chart
  - Stacked Bar Chart
  - 100% Stacked Bar Chart
  - Line Chart
  - Line Chart with Markers
  - Pie Chart
- Format Report
- Show Information Bar



Select a Filter Template

Template:

- Custom Table
- MDX Query
- Member Selection
- Named Set
- Time Intelligence
- Time Intelligen...

### Select Members

Right click any member to view additional selection options.

Product.Product Categories

- Default Member (All Products)
  - All Products
    - Access
      - Set as Default Selection
      - Clear All Default Selections
    - Bikes
    - Clothing
    - Components
      - Autoselect Members
        - Select Children
        - Select Leaves
        - Select All Descendants
      - Select Visible
      - Select Children
      - Clear Visible
      - Clear All

### Connection

Create and modify a connection between dashboard items.

Items Values

Connect to:  
Product Categories

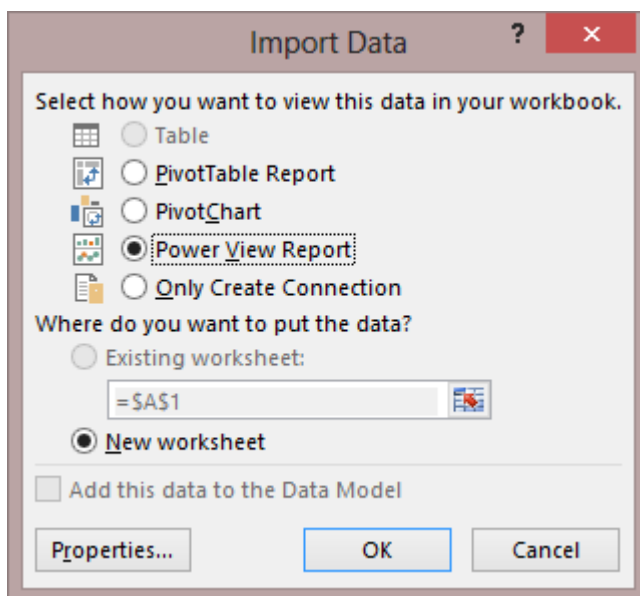
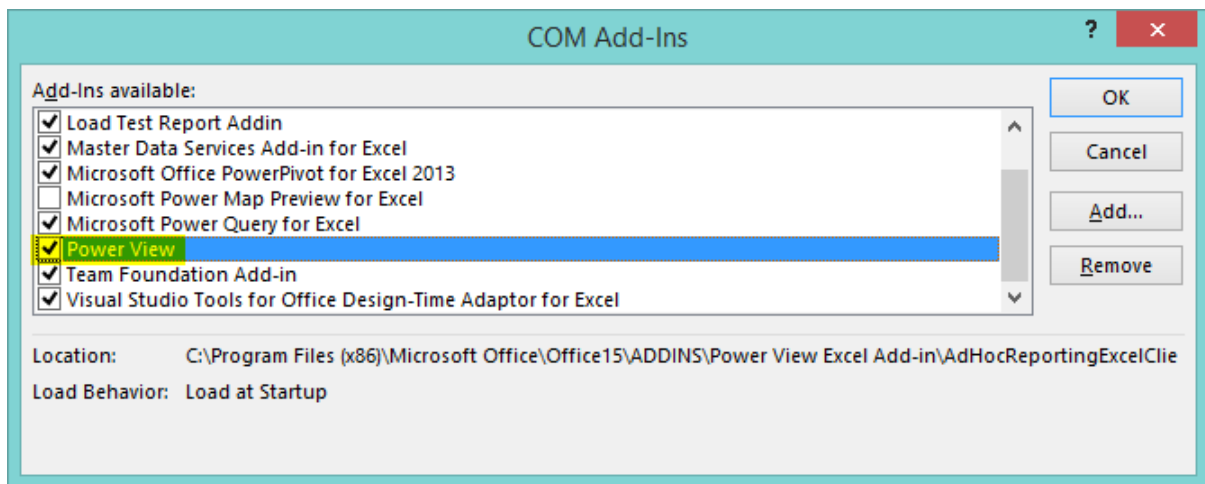
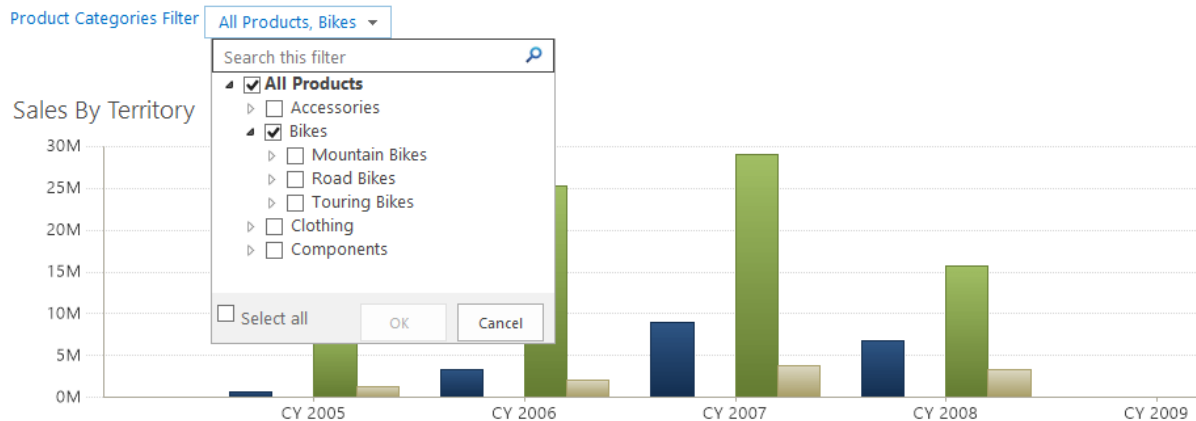
Select the field to receive the source values.

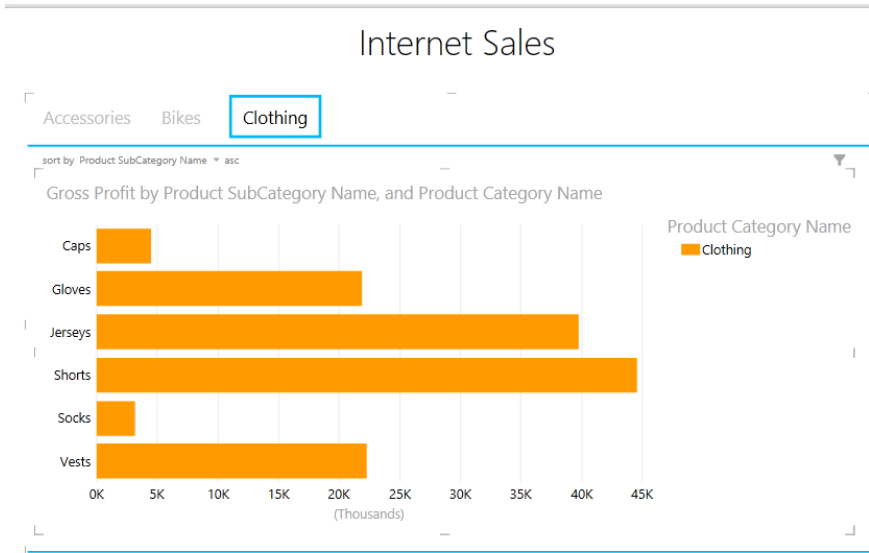
Source value:  
Member Unique Name

Connection Formula...

OK Cancel

# Sales Dashboard > Sales





Filters

### Power View Fields

ACTIVE: **ALL**

- Model Name
- Product Category Name**
- Product End Date
- Product Id
- Product Line
- Product Name
- Product Start Date
- Product Status
- Product SubCategory Name**
- Reorder Point
- Category SubCategory

Drag fields between areas below:

**TILE BY**

Product Category Name

**VALUES**

Σ Gross Profit

**AXIS**

Product SubCategory Name

**LEGEND**

Product Category Name

**VERTICAL MULTIPLES**

Not available with tiles

**HORIZONTAL MULTIPLES**

Not available with tiles

Drag fields between areas below:

**TILE BY**

Country Region Name ▾

**SIZE**

Σ Sales Amount ▾

**LOCATIONS**

State Province Code ▾

City ▾

**LONGITUDE**

**LATITUDE**

**COLOR**

Product Category Name ▾

Australia

Canada

France

Germany

United Kind...

United Sta...

### Sales Amount by State Province Code, and Product Category Name

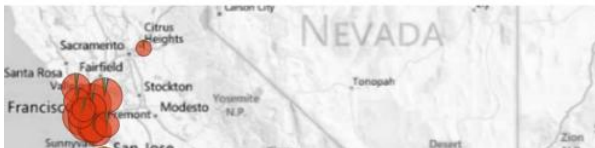


### Product Category Name

- Accessories
- Bikes
- Clothing

### Internate Sales by Geographical Info

### City, and Product Category Name



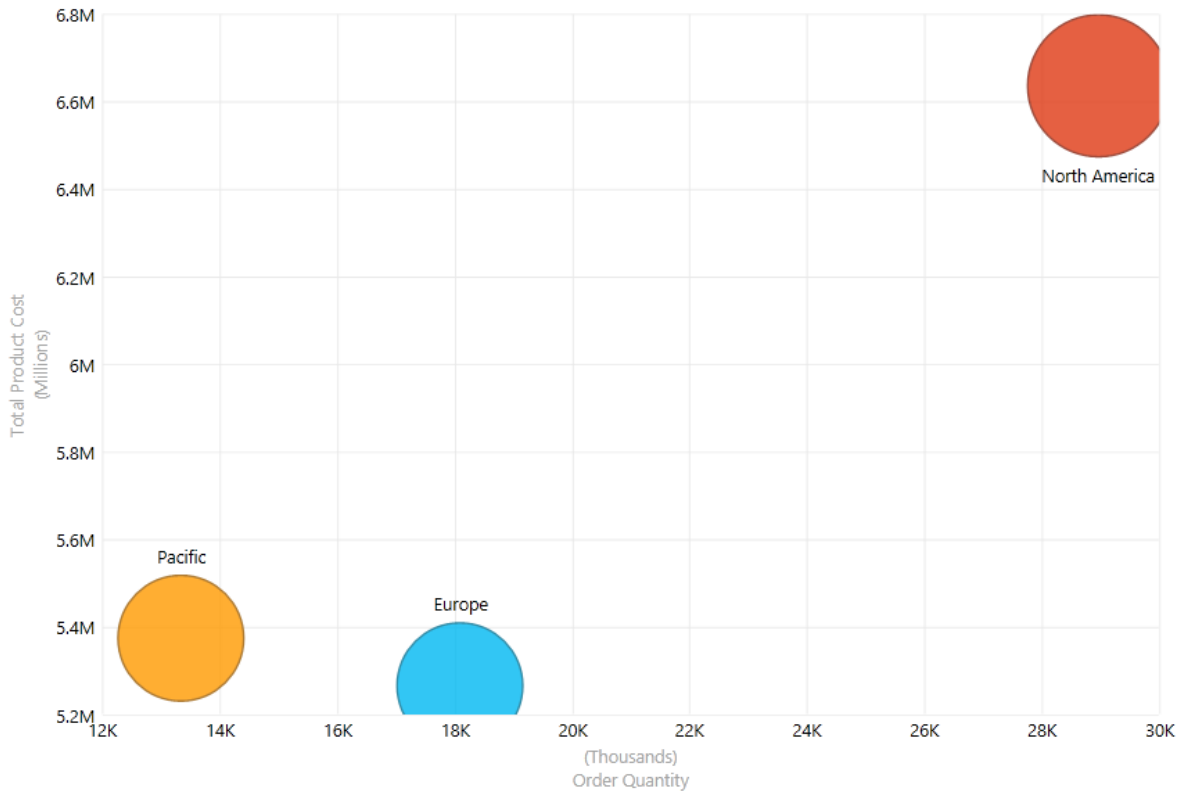
### Filters

VIEW | MAP

- ▶ City (All)
- ▶ Country Region Name (All)
- ▶ Product Category Name (All)
- ▶ Sales Amount (All)
- ▶ State Province Code is CA
- ▶ State Province Name (All)



Order Quantity, Total Product Cost, and Gross Profit by Sales Territory Group



Drag fields between areas below:

TILE BY

*Not available with play axis*

Σ X VALUE

Σ Order Quantity

Σ Y VALUE

Σ Total Product Cost

Σ SIZE

Σ Gross Profit

DETAILS

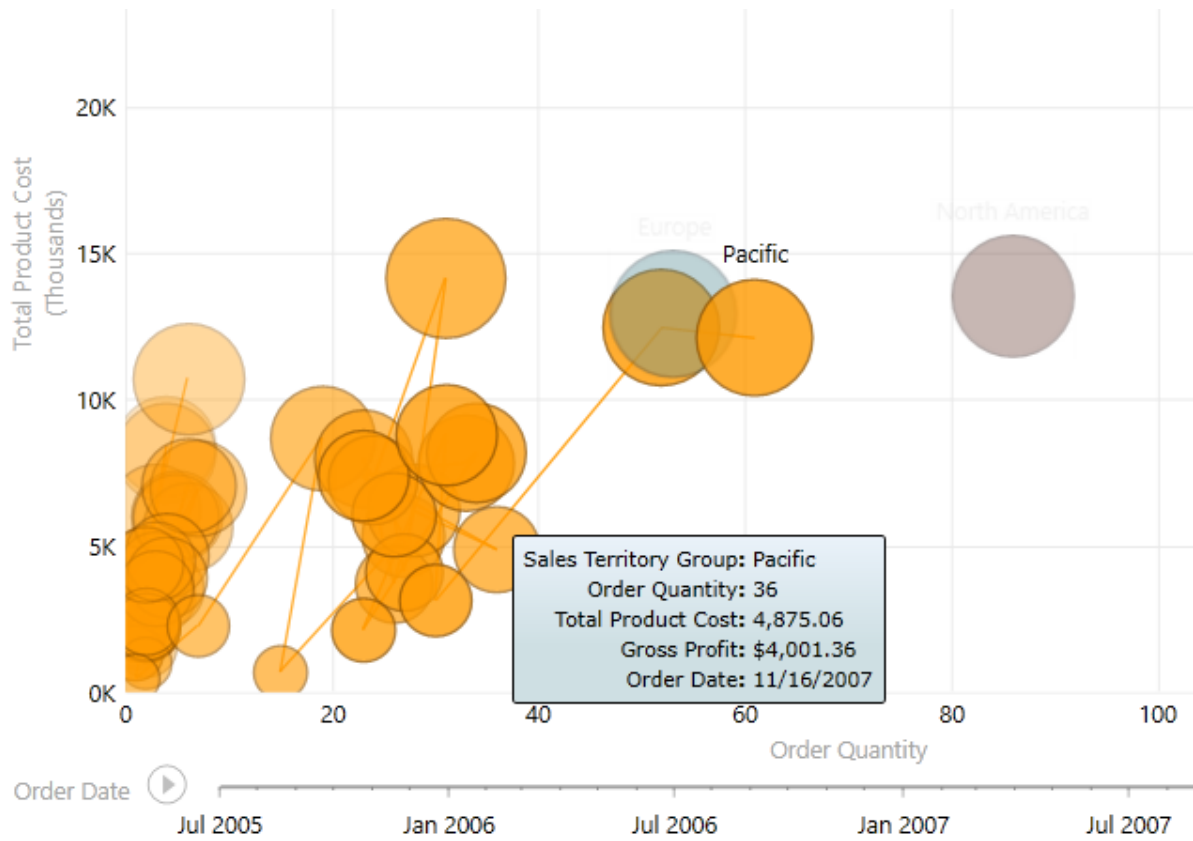
Sales Territory Group

COLOR

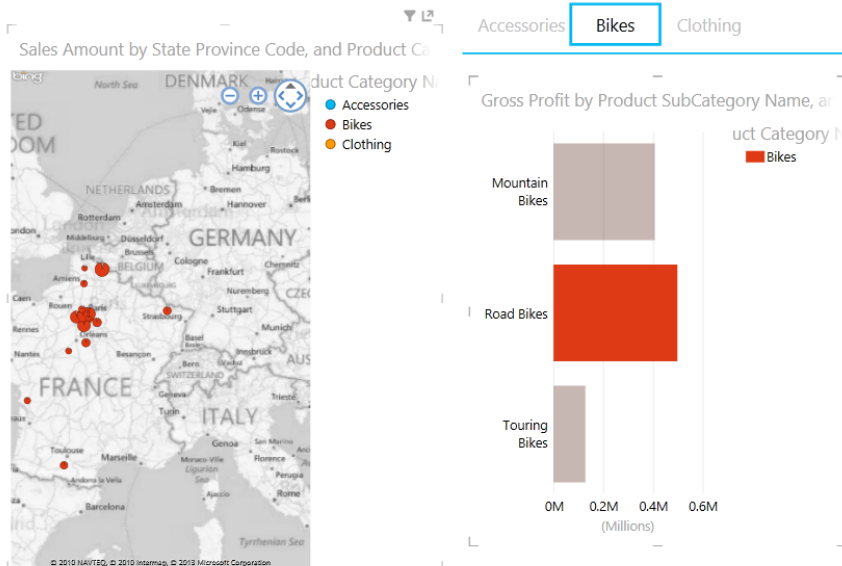
PLAY AXIS

Order Date





Click here to add a title



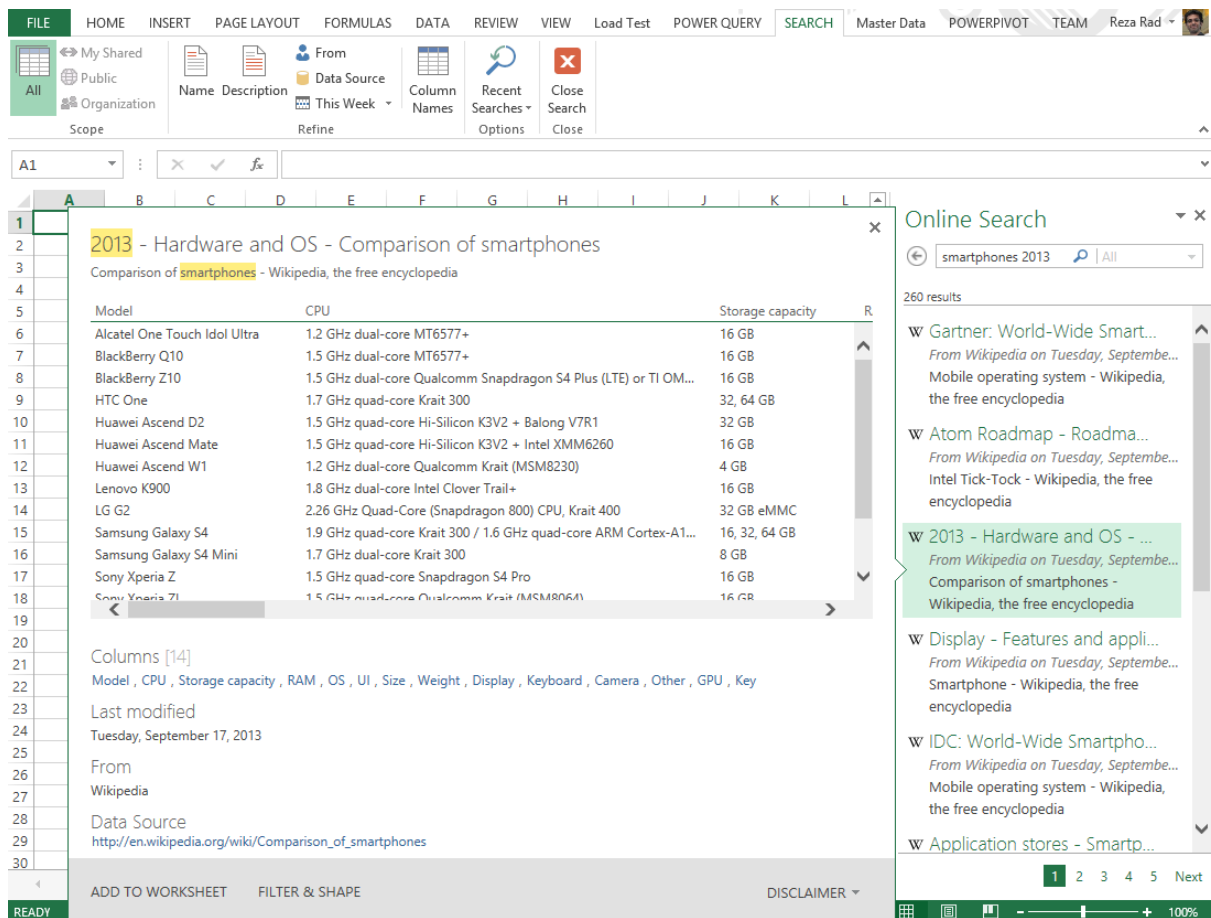
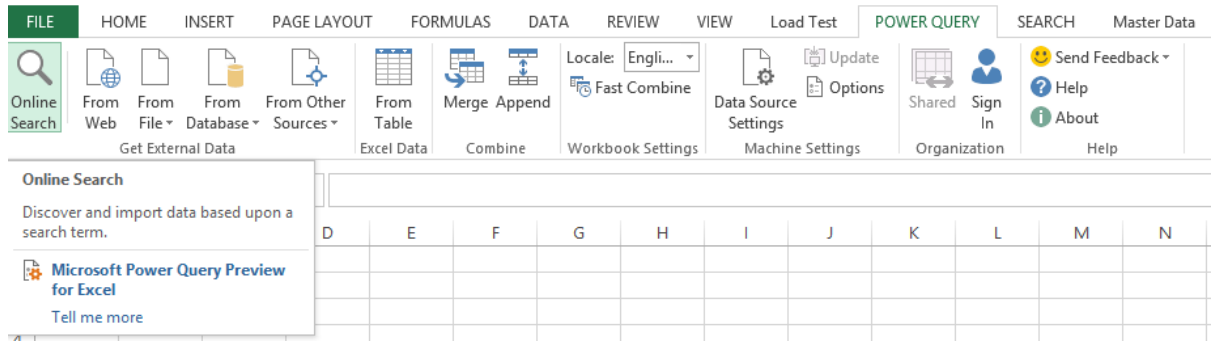
Filters

VIEW | CHART

Sales Territory Country is France

- (All)
- Australia
- Canada
- France
- Germany
- NA
- United Kingdom
- United States

# Chapter 11, Power BI



/publicdata.clouddatahub.net/Web/Tables/f099

Weight

- Remove
- Remove Other Columns
- Use First Row As Headers
- Duplicate Column
- Split Column
- Remove Duplicates
- Remove Errors
- Replace Values...
- Change Type
- Transform
- Insert Custom Column...
- Insert Index Column
- Group By...
- Unpivot
- Move
- Rename...
- Drill Down
- Add as New Query

```
f_x = Table.ReorderColumns(RemovedOtherColumns,{"Key", "Model", "OS", "Weight", "Other"})
```

Key	Model	OS	Weight	Other
1	Alcatel One Touch Idol Ultra	Android 4.1 (Jelly Bean)	110	microUSB, Wi-Fi (802.11 a/b/g/n, Wi-Fi Direct), Bluetooth 4.0, aGPS, accel
2	BlackBerry Q10	BlackBerry 10	139	QWERTY keyboard, microSDXC, microUSB, Wi-Fi (IEEE 802.11n-2009), Blu
3	BlackBerry Z10	BlackBerry 10	137.5	QWERTY keyboard, microSDXC, microUSB, Wi-Fi (IEEE 802.11n-2009), Blu
4	HTC One	Android 4.1.2	143	Wi-Fi 802.11 a/b/g/n/ac (2.4/5 GHz), NFC, Bluetooth: 4.0 with apt-X, DLNA
5	Huawei Ascend D2	Android 4.1 (Jelly Bean)	170	microUSB, Wi-Fi (802.11 a/b/g/n, dual-band, DLNA, Wi-Fi Direct, Wi-Fi hot
6	Huawei Ascend Mate	Android 4.1 (Jelly Bean)	198	microUSB, Wi-Fi (802.11 a/b/g/n, dual-band, DLNA, Wi-Fi Direct, Wi-Fi hot
7	Huawei Ascend W1	Windows Phone 8	130	touch screen with OGS Technology, microUSB (up to 32GB), Wi-Fi (802.11
8	Lenovo K900	Android 4.2 (Jelly Bean)	162	microSD (up to 32GB), microUSB v2.0, IPS display, Corning Gorilla Glass 2,
9	LG G2	Android 4.2.2 (Jelly Bean)	140	3000 mAh SiO+ battery, CDMA (1x / EVDO Rev.A)2G (GSM / EDGE)3G (HSF
10	Samsung Galaxy S4	Android 4.2.2 (Jelly Bean)	130	Wi-Fi a/b/g/n/ac, Wi-Fi hotspot, Bluetooth 4.0, standard microUSB port w
11	Samsung Galaxy S4 Mini	Android 4.2.2 (Jelly Bean)	107	Wi-Fi a/b/g/n, Wi-Fi hotspot, Bluetooth 4.0, standard microUSB port, GPS
12	Sony Xperia Z	Android 4.1 (Jelly Bean), planned upgrade to 4.2	146	water and dust resistant (IP55, IP57), shatter proof and scratch-resistant g
13	Sony Xperia ZL	Android 4.1 (Jelly Bean), planned upgrade to 4.2	151	shatter proof and scratch-resistant glass, microSD (up to 32 GB), NFC, Blue
14	Sony Xperia SP	Android 4.1 (Jelly Bean), planned upgrade to 4.3	155	Corning Gorilla Glass, microSD (up to 32 GB), NFC, Bluetooth 4.0 with A2D
15	YotaPhone	Android 4.2 (Jelly Bean)	140	E-Paper-Display (EPD) back, both displays having Gorilla Glass, GPRS, EDG
16	ZTE Grand S	Android 4.1.2 (Jelly Bean)	null	microSD (up to 32 GB), SNS integration, active noise cancellation with ded

Other

- microUSB, Wi-Fi (802.11 a/b/g/n/ac (2.4, 5 GHz))
- QWERTY keyboard, microSDXC
- QWERTY keyboard, microSDXC
- Wi-Fi 802.11 a/b/g/n/ac (2.4, 5 GHz)
- microUSB, Wi-Fi (802.11 a/b/g/n/ac (2.4, 5 GHz))
- microUSB, Wi-Fi (802.11 a/b/g/n/ac (2.4, 5 GHz))
- touch screen with OGS Technology
- microSD (up to 32GB), microSDXC
- 3000 mAh SiO+ battery, CDM
- Wi-Fi a/b/g/n/ac, Wi-Fi hotspot
- Wi-Fi a/b/g/n, Wi-Fi hotspot, Wi-Fi Direct
- water and dust resistant (IP54)
- shatter proof and scratch-resistant
- Corning Gorilla Glass, microSD
- E-Paper-Display (EPD) back, battery
- microSD (up to 32 GB), SNS in

Steps

- Source
- ReplacedValue
- ChangedType
- By Delimiter...
- By Number of Characters...

Settings Done

$f_x = \text{Table.RemoveColumns}(\text{Unpivot}, ("Attribute"))$

Key	Model	OS	Weight	Value
1	1 Alcatel One Touch Idol Ultra	Android 4.1 (Jelly Bean)	110	microUSB
2	1 Alcatel One Touch Idol Ultra	Android 4.1 (Jelly Bean)	110	Wi-Fi (802.11 a/b/g/n)
3	1 Alcatel One Touch Idol Ultra	Android 4.1 (Jelly Bean)	110	Wi-Fi Direct)
4	1 Alcatel One Touch Idol Ultra	Android 4.1 (Jelly Bean)	110	Bluetooth 4.0
5	1 Alcatel One Touch Idol Ultra	Android 4.1 (Jelly Bean)	110	aGPS
6	1 Alcatel One Touch Idol Ultra	Android 4.1 (Jelly Bean)	110	accelerometer
7	1 Alcatel One Touch Idol Ultra	Android 4.1 (Jelly Bean)	110	light sensor
8	1 Alcatel One Touch Idol Ultra	Android 4.1 (Jelly Bean)	110	proximity sensor
9	1 Alcatel One Touch Idol Ultra	Android 4.1 (Jelly Bean)	110	compass
10	2 BlackBerry Q10	BlackBerry 10	139	QWERTY keyboard
11	2 BlackBerry Q10	BlackBerry 10	139	microSDXC
12	2 BlackBerry Q10	BlackBerry 10	139	microUSB
13	2 BlackBerry Q10	BlackBerry 10	139	Wi-Fi (IEEE 802.11n-2009)
14	2 BlackBerry Q10	BlackBerry 10	139	Bluetooth 4.0
15	2 BlackBerry Q10	BlackBerry 10	139	NFC
16	2 BlackBerry Q10	BlackBerry 10	139	Micro HDMI

Steps

- Source
- ReplacedValue
- ChangedType
- RemovedOtherColu...
- ReorderedColumns
- SplitColumnDelimiter
- ChangedType1
- Unpivot
- RemovedColumns

fx = Table.RemoveColumns(OnPivot,{"Attribute"})

Navigator

Key	Model	OS
	Ultra	Android 4.
	Ultra	Android 4.
	Ultra	Android 4.
	Ultra	Android 4.
	Ultra	Android 4.
	Ultra	Android 4.
	Ultra	Android 4.
	Ultra	Android 4.
	Ultra	Android 4.
		BlackBerry
		BlackBerry
		BlackBerry

- Use First Row As Headers
- Remove Duplicates
- Remove Errors
- Insert Custom Column...
- Insert Index Column
- Keep Top Rows...
- Keep Top 100 Rows
- Keep Range of Rows...
- Remove Top Rows...
- Remove Alternate Rows...

Append

Select the primary table to which you want to append more data.

2012 - Hardware and OS - Comparis... ▾

Select the table to append with the primary table.

2013 - Hardware and OS - Comparis... ▾

OK Cancel

Microsoft Excel ribbon showing the 'Home' tab, 'Remove Duplicates' button highlighted, and a data table with 7 rows of 'Apple iPhone 5' entries.

File Home Insert View

Apply & Refresh Close

Remove Top Rows Remove Columns

Remove Bottom Rows Remove Alternate Rows Remove Duplicates Remove Errors

Keep Top Rows Keep Range

Sort A-Z Z-A

Query Reduce

= Table.Combine({#"2012 - Hardware and OS - Comparison of

Key	Model
1	Apple iPhone 5
2	Apple iPhone 5
3	Apple iPhone 5
4	Apple iPhone 5
5	Apple iPhone 5
6	Apple iPhone 5
7	Apple iPhone 5

# Append1

Preview downloaded at 1:56 PM.

>  $f_x = \text{Table.Distinct}(\text{RemovedColumns})$

Navigator

	Key	Model	OS	Weight	Release Year
1	1	Apple iPhone 5	iOS 6.0	112	2012
2	2	HTC One V	Android 4.0.3	115	2012
3	3	HTC One S	Android 4.0.3/4.0.4	119.5	2012
4	4	HTC One X	Android 4.0.3/4.0.4	130	2012
5	5	HTC One X+	Android 4.1.1	135	2012
6	6	Nexus 4	Android 4.3 (Jelly Bean)	139	2012
7	7	Nokia Lumia 900	Windows Phone 7.5	160	2012
8	8	Nokia Lumia 920	Windows Phone 8	185	2012
9	9	Samsung Exhibit II 4G	Android	135	2012
10	10	Samsung Galaxy Note	Android 4.1.1 (Jelly Bean)	180	2012
11	11	Samsung Galaxy S III C	Android 4.04	133	2012
12	12	Samsung Galaxy S III S	Android 4.04	138.5	2012
13	13	Samsung Galaxy S III S	Android 4.04	133	2012
14	14	Samsung Galaxy S III C	Android 4.04	133	2012
15	15	Samsung Galaxy S III r	Android 4.1.2	112	2012
16	16	Sony Xperia V	Android 4.0	120	2012
17	17	Sony Xperia S	Android 2.3 (upgradable to	144	2012
18	18	Sony Xperia Sola	Android 4.0	126	2012
19	19	Samsung ATIV S	Windows Phone 8	135	2012
20	1	Alcatel One Touch Idc	Android 4.1 (Jelly Bean)	110	2013
21	2	BlackBerry Q10	BlackBerry 10	139	2013
22	3	BlackBerry Z10	BlackBerry 10	137.5	2013
23	4	HTC One	Android 4.1.2	143	2013



Get External Data

A1

	A	B	C
1			
2			
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- From SharePoint List**  
Import data from a Microsoft SharePoint site.
- From OData Feed**  
Import data from an OData feed.
- From Windows Azure Marketplace**  
Import data from the Microsoft Windows Azure Marketplace.
- From Hadoop File (HDFS)**  
Import data from a Hadoop Distributed File System.
- From Windows Azure HDInsight**  
Import data from Microsoft Windows Azure HDInsight.
- From Windows Azure Blob Storage**  
Import data from Microsoft Windows Azure Blob Storage.
- From Windows Azure Table Storage**  
Import data from Microsoft Windows Azure Table Storage.
- From Active Directory**  
Import data from Active Directory.
- From Microsoft Exchange**  
Import data from Microsoft Exchange.
- From Facebook**  
Import data from Facebook.
- From SAP BusinessObjects BI Universe**  
Import data from an SAP BusinessObjects BI Universe.
- Blank Query**  
Write a query from scratch.



Microsoft Excel ribbon showing the 'INSERT' tab with the 'Map' button highlighted. A context menu is open over the 'Map' button, showing options: 'Launch Power Map' and 'Microsoft Power Map Preview for Excel'.

	H	I	J	K	L	M	N	O	P	Q	R
1	Condition	StoryClass	Frame	Foundation	ExteriorWa	Roof	Heating	AC	HasFireplac	HasPool	HasSpa
2	FAIR	1 FRAME	SLAB	BRICK VENEER	GABLE	CENTRAL I	CENTRAL I Y		N	N	N
3	GOOD	1 FRAME	SLAB	BRICK VENEER	HIP	CENTRAL I	CENTRAL I Y		N	N	N

Microsoft Power Map interface showing a 3D map of a city with a tour path. The 'Map' ribbon is active, and the 'Layer' panel is open on the right, showing a list of geographies to be displayed on the map.

Enter Tour Name:

1

Layer 1

CHOOSE GEOGRAPHY

- Address
- City
- Condition
- DecadeBuilt
- ExteriorWall
- Foundation
- Frame
- FullBaths
- HalfBaths
- HasFireplace
- HasPool
- HasSauna
- HasSpa
- Heating
- kWh
- Latitude
- Longitude

GEOGRAPHY AND MAP LEVEL

- Latitude Latitude
- Longitude Longitude

Next



Layer 1

**GEOGRAPHY**



Map by Latitude/Longitude (Latitude/Longitude)

Table1

- AC
- Address
- City
- Condition
- DecadeBuilt
- ExteriorWall
- Foundation
- Frame
- FullBaths
- HalfBaths
- HasFireplace
- HasPool
- HasSauna
- HasSna

**TYPE**

Column

**HEIGHT**

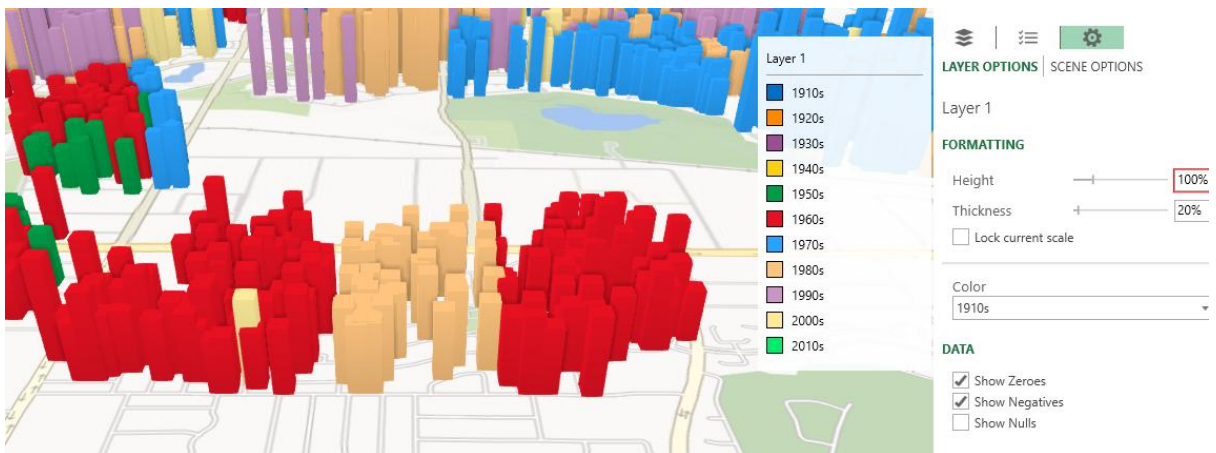
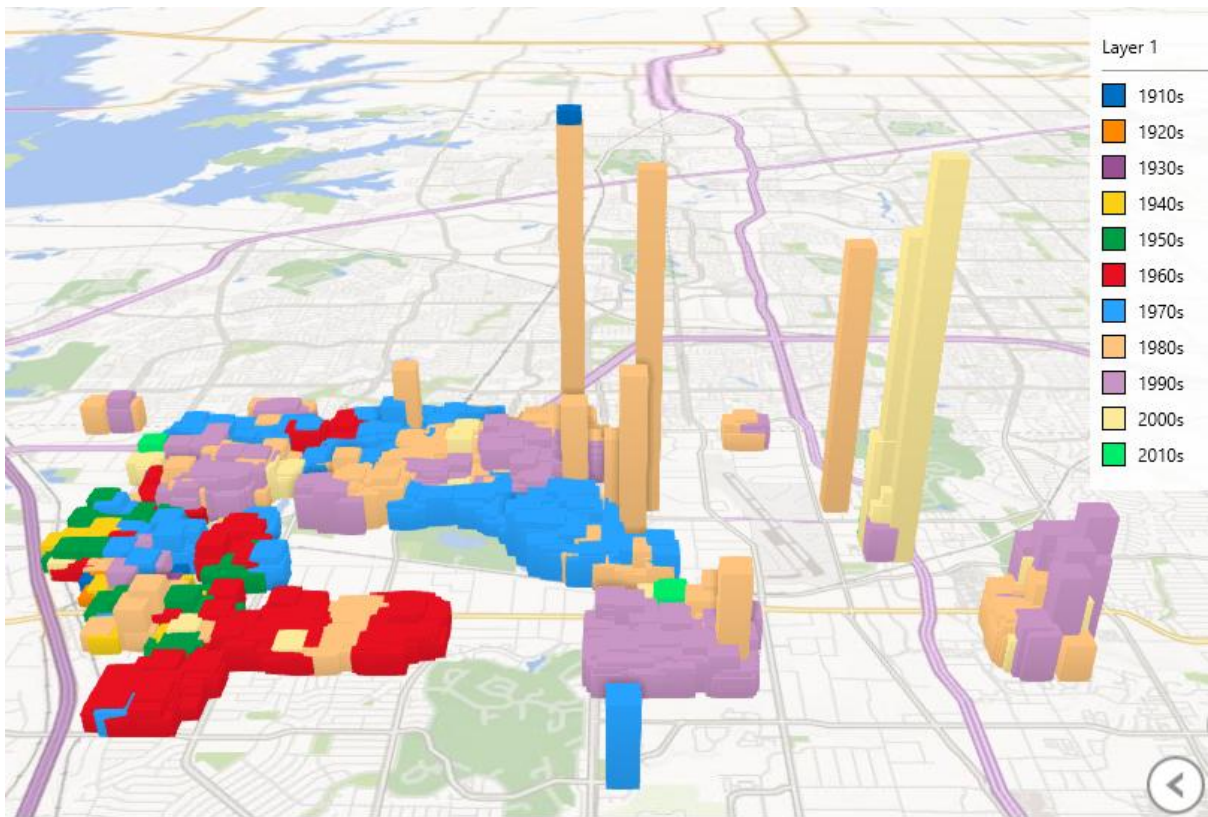
SquareFeet (Sum)

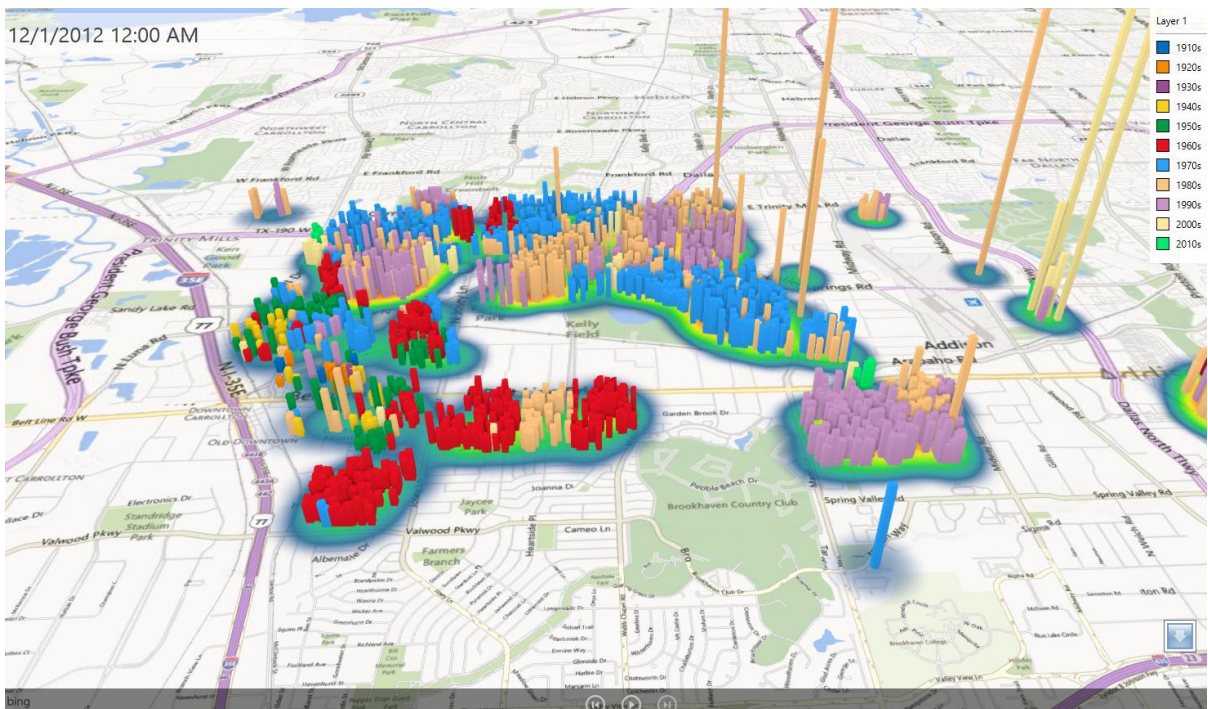
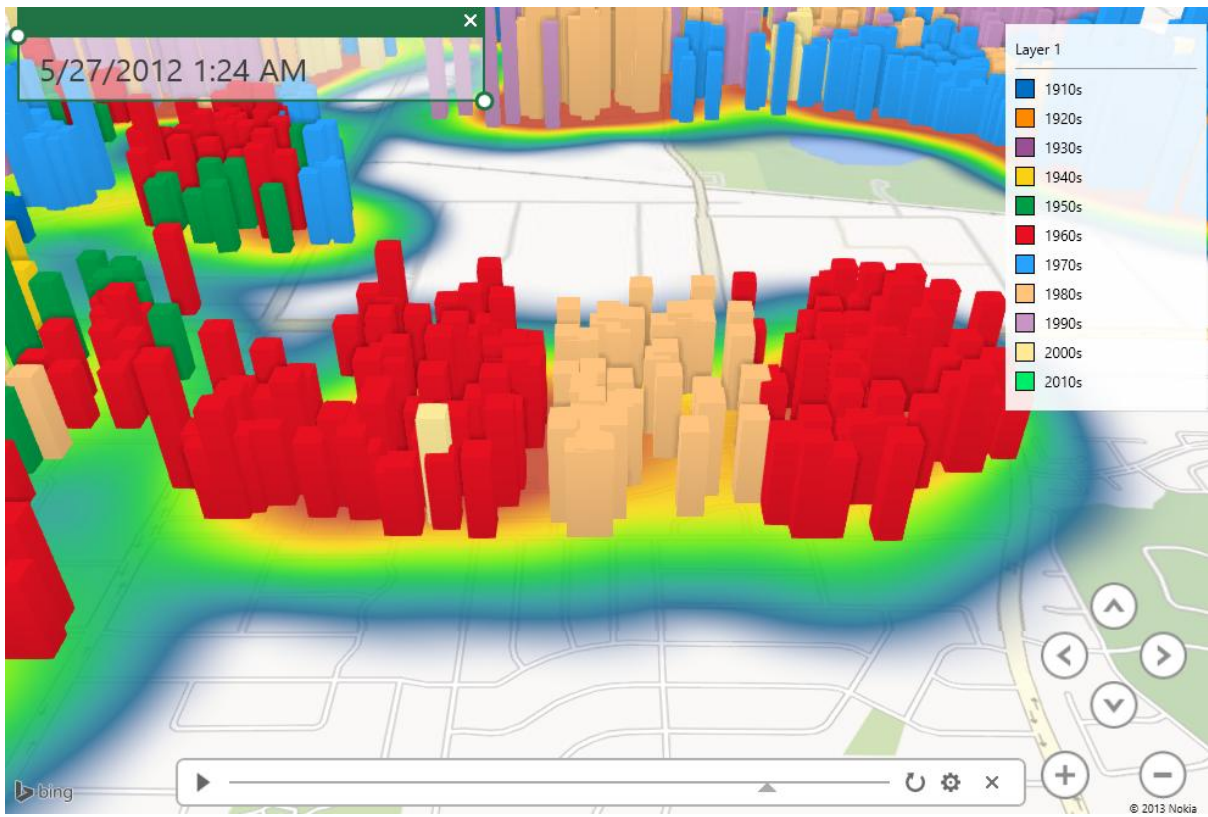
**CATEGORY**

Check or drag fields from above

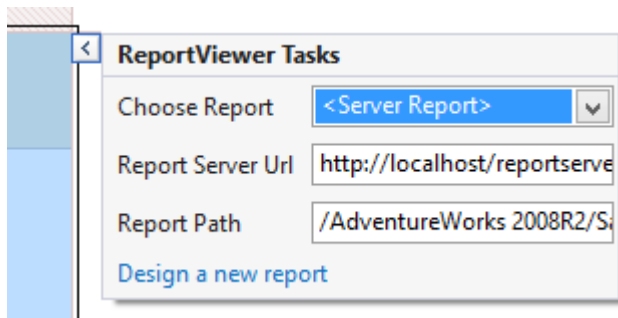
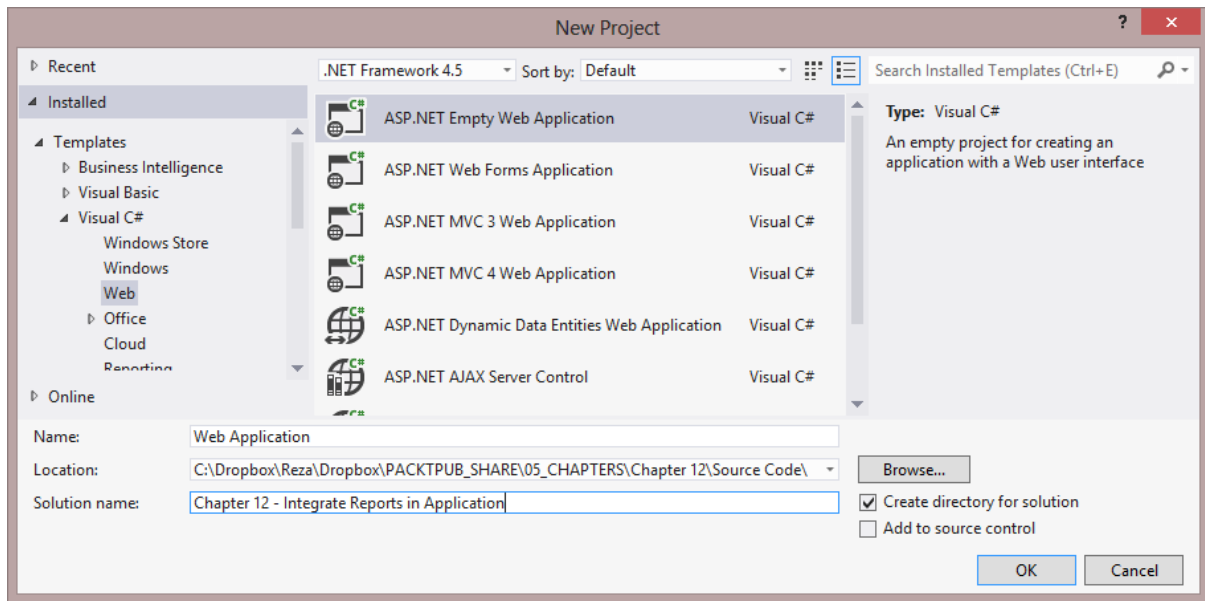
**TIME**

Check or drag fields from above





# Chapter 12, Integrating Reports in Applications

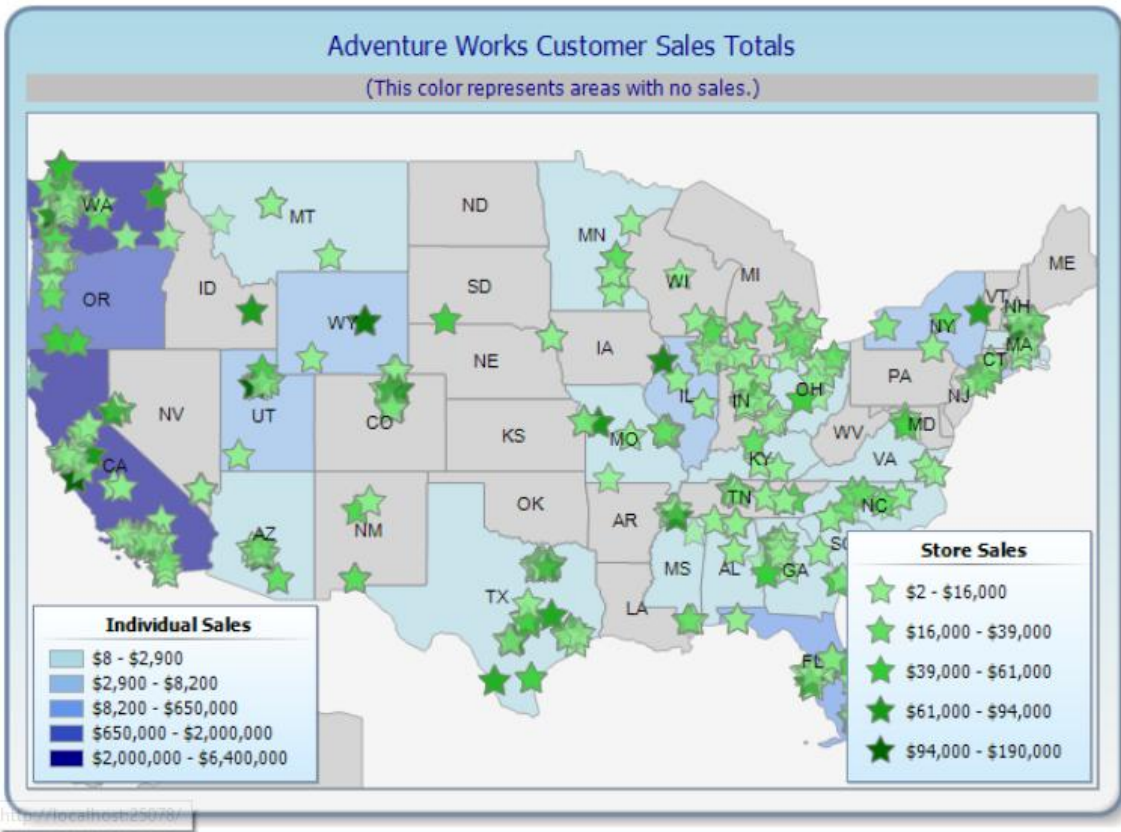


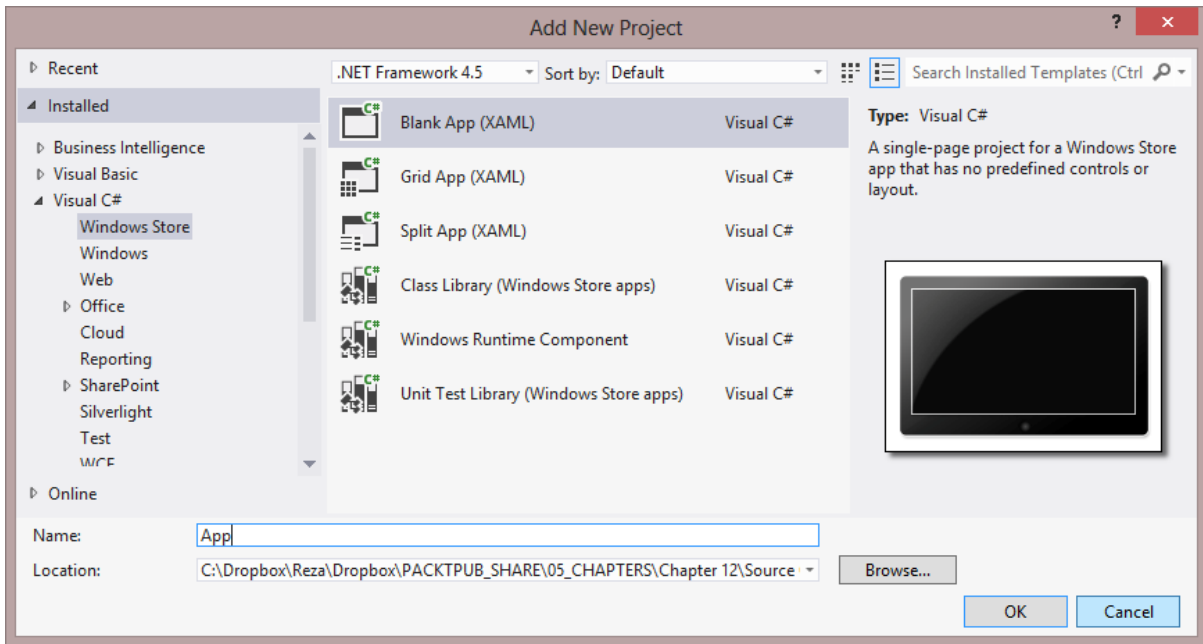
Show Bing Map layer?  Bing Map tile type?    
Transparency for US States?  Show all information?  True  False



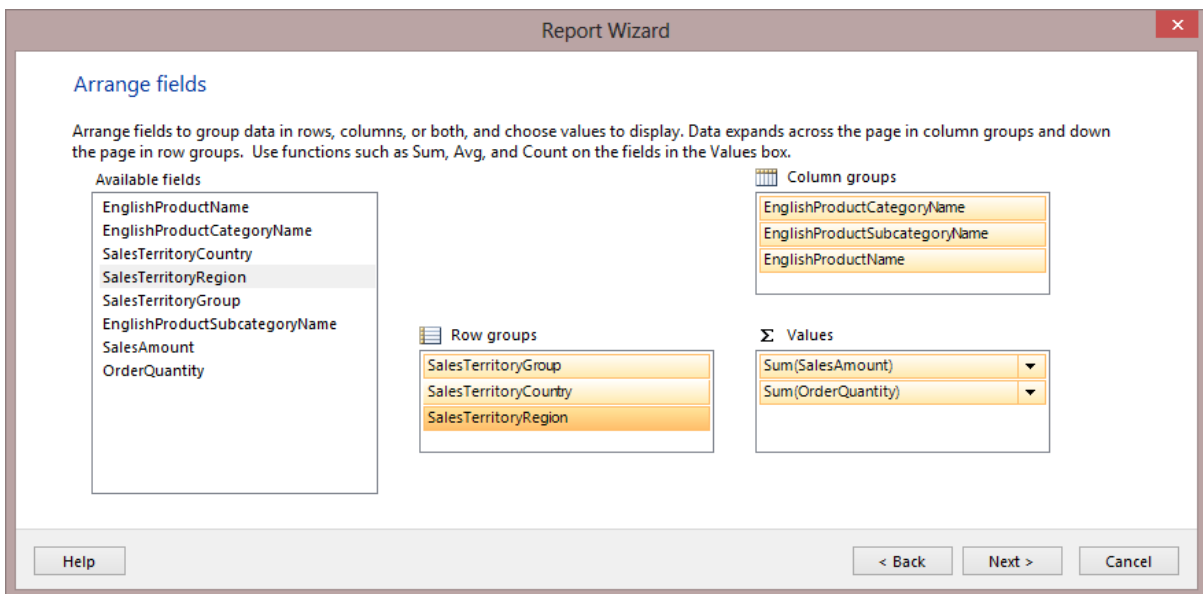
Sales\_by\_Region\_2008R2

Click + to view the scenario story.





```
<Page
  x:Class="App.MainPage"
  xmlns="http://schemas.microsoft.com/winfx/2006/xaml/presentation"
  xmlns:x="http://schemas.microsoft.com/winfx/2006/xaml"
  xmlns:local="using:App"
  xmlns:d="http://schemas.microsoft.com/expression/blend/2008"
  xmlns:mc="http://schemas.openxmlformats.org/markup-compatibility/2006"
  mc:Ignorable="d" Loaded="Page_Loaded">
  <Grid Background="{StaticResource ApplicationPageBackgroundThemeBrush}">
    <WebView HorizontalAlignment="Center" Name="webViewReport" Height="600" VerticalAlignment="Top" Width="800"/>
  </Grid>
</Page>
```



- Built-in Fields
- Parameters
- Images
- Data Sources
  - AdventureWorksDW2012DataSet1
- Datasets
  - Sales
    - EnglishProductName
    - EnglishProductCategoryName
    - SalesTerritoryCountry
    - SalesTerritoryRegion
    - SalesTerritoryGroup
    - EnglishProductSubcategoryName
    - SalesAmount
    - OrderQuantity

		[EnglishProductCategoryName]			Total			Total	
		[EnglishProductSubcategoryName]			Total			Total	
		[EnglishProductName]			Total			Total	
Sales Territ	Sales Territ	Sales Territ	Sales Amou	Order Quan	Sales Amou	Order Quan	Sales Amou	Order Quan	Sales Amou
[SalesTerritor	[SalesTerritor	[SalesTerritor	[Sum(SalesAmc	[Sum(OrderQua	[Sum(SalesAn	[Sum(OrderQu	[Sum(SalesAn	[Sum(OrderQu	[Sum(SalesAn
	Total		[Sum(SalesAn	[Sum(OrderQu	[Sum(SalesAn	[Sum(OrderQu	[Sum(SalesAn	[Sum(OrderQu	[Sum(SalesAn
Total			[Sum(SalesAn	[Sum(OrderQu	[Sum(SalesAn	[Sum(OrderQu	[Sum(SalesAn	[Sum(OrderQu	[Sum(SalesAn

Row Groups

- [ SalesTerritoryGroup
- [ SalesTerritoryCountry
- [ SalesTerritoryRegion

Column Groups

- [ EnglishProductCategoryName
- [ EnglishProductSubcategoryName
- [ EnglishProductName

LocalProcessingMode

1 of 1 | 100% | Find | Next

		Accessories	Bikes	Clothing	Total					
		Total	Total	Total	Total					
Sales Territory Group	Sales Territory Country	Sales Territory Region	Sales Amount	Order Quantity	Sales Amount	Order Quantity	Sales Amount	Order Quantity	Sales Amount	Order Quantity
Europe	France	Total	63406.7800	3344	2553575.7143	1444	27035.2200	770	2644017.7143	5558
		Germany	Total	62232.5900	3273	2808514.3482	1600	23565.4000	752	2894312.3382
	United Kingdom	Total	76630.0400	4057	3282842.6609	1858	32239.5100	991	3391712.2109	6906
		Total		202269.4100	10674	8644932.7234	4902	82840.1300	2513	8930042.2634
North America	Total		359799.9200	18414	10821161.9229	5831	186672.5300	4719	11367634.3729	28964
Pacific	Total		138690.6300	7004	8852050.0044	4472	70259.9500	1869	9061000.5844	13345
Total			700759.9600	36092	28318144.6507	15205	339772.6100	9101	29358677.2207	60398

RemoteProcessingMode.cs

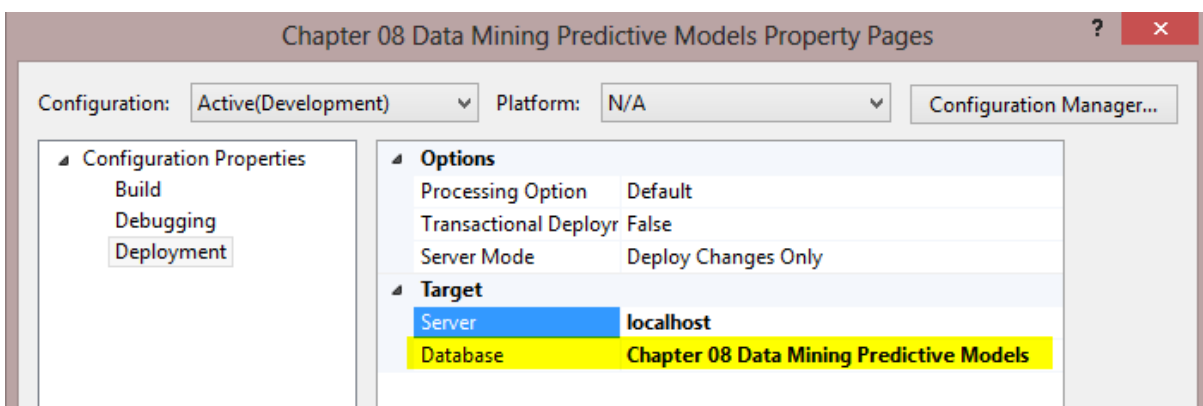
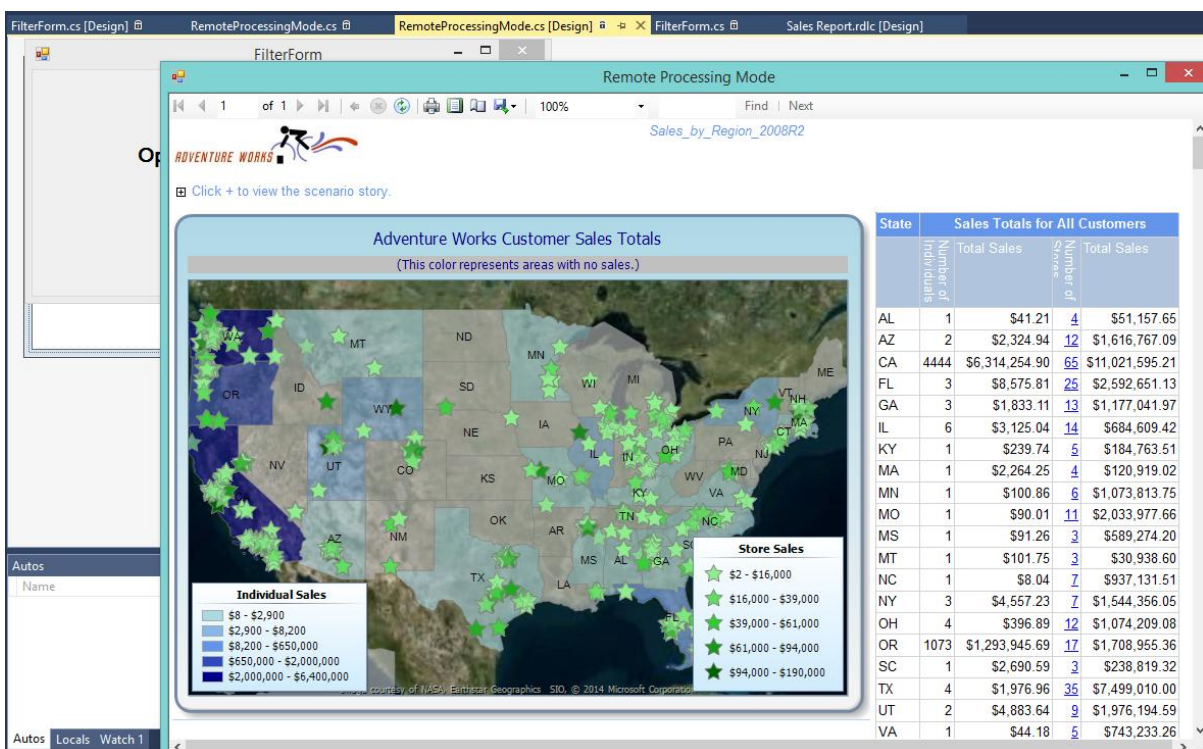
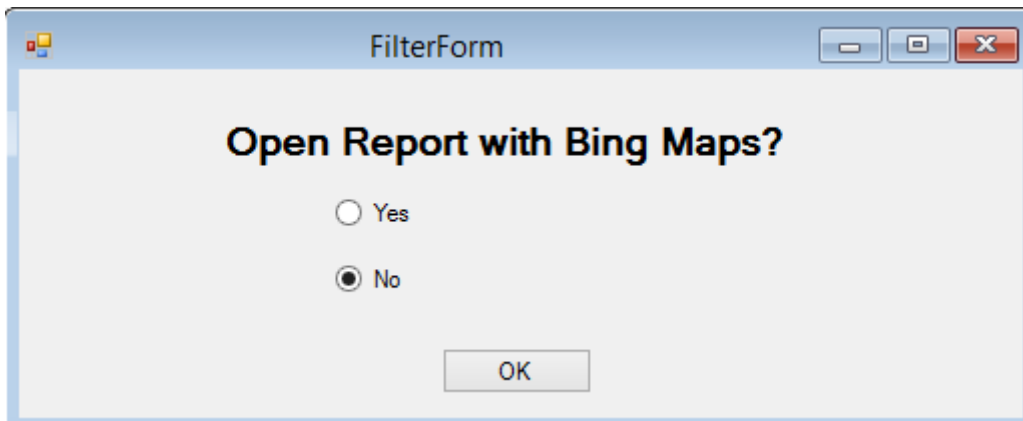
Solution Explorer | Team Explorer | Class View

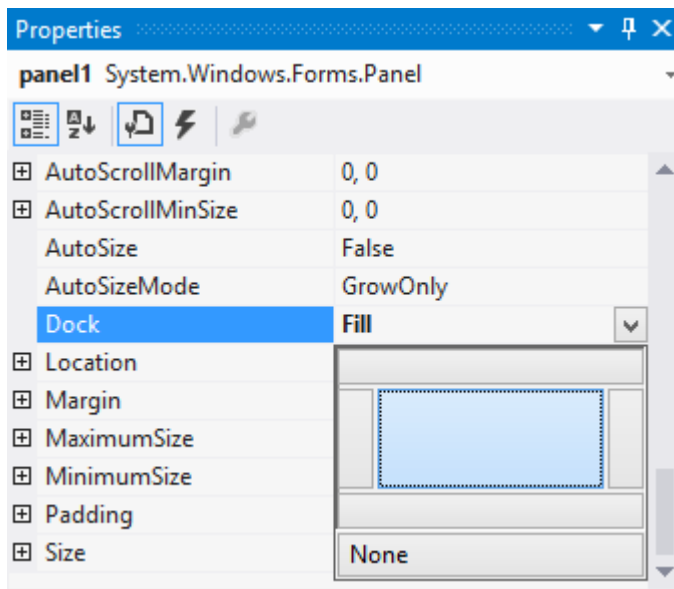
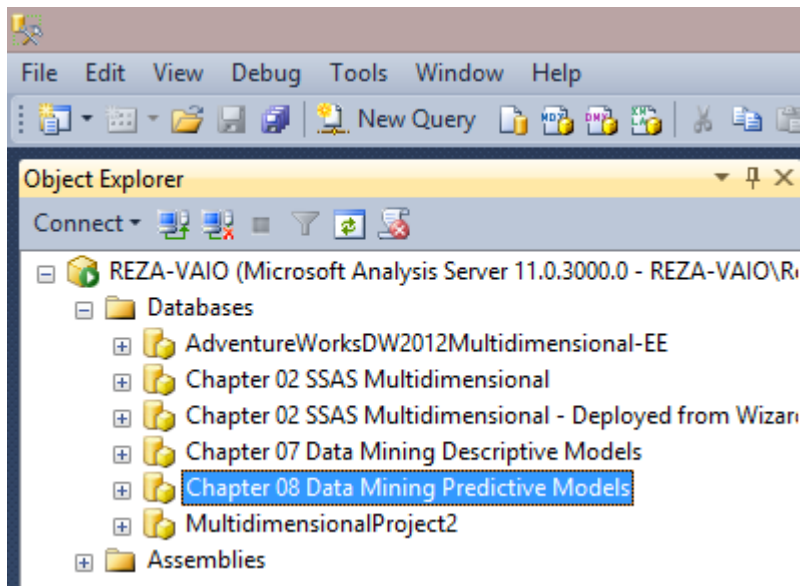
Properties

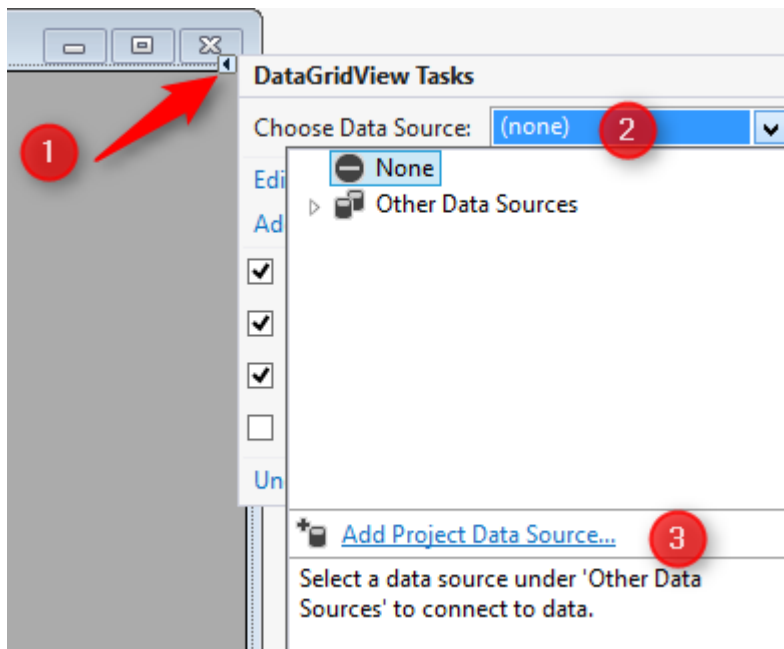
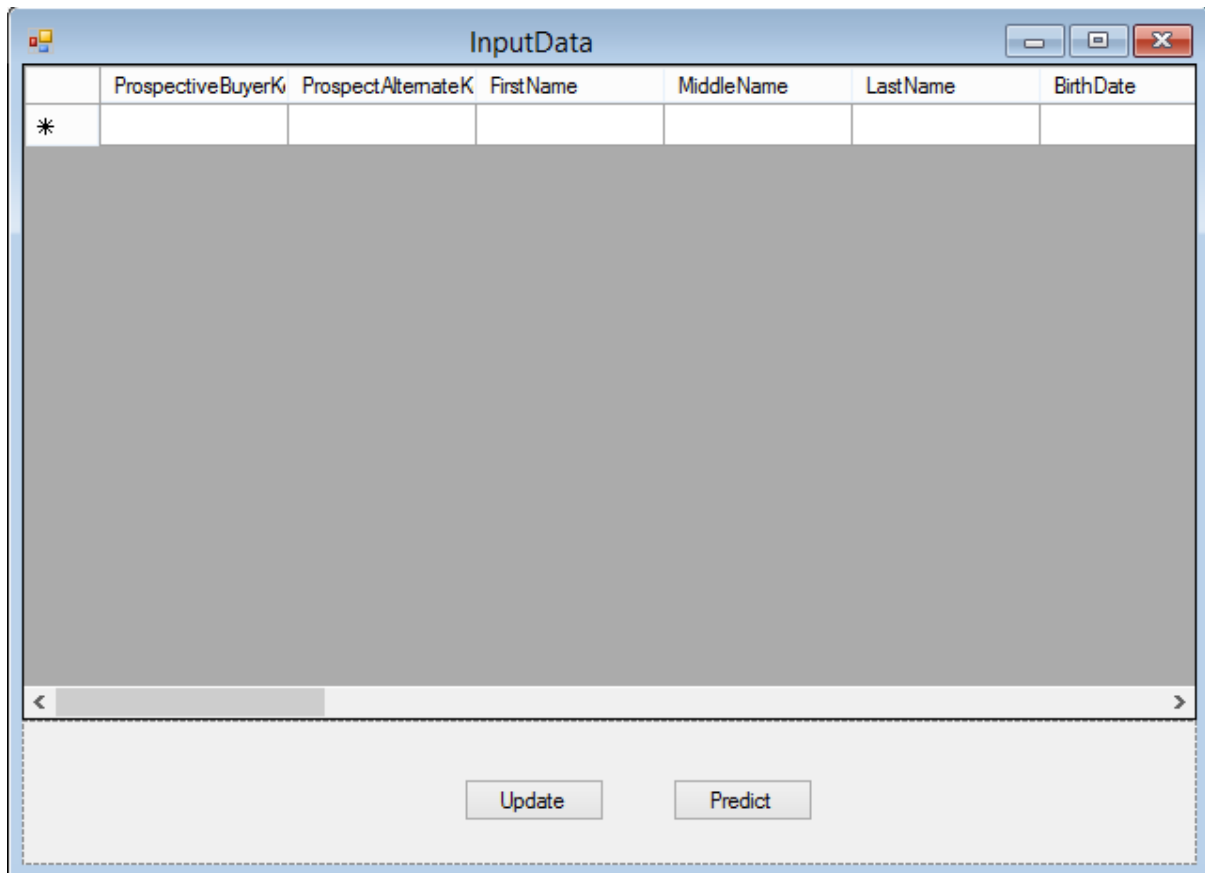
rwvSales Microsoft.Reporting.WinForms.ReportViewer

- (ApplicationSettings)
- (DataBindings)
  - Tag
- Design
  - (Name) rwvSales
  - GenerateMember True
  - Locked False
  - Modifiers Public









InputData

ProspectiveBuyerK	ProspectAlternateK	FirstName	MiddleName	LastName
1	21596444800	Adam		Alexander
2	3003	Adienne		Alonso
3	1077	Alfredo	B	Alvarez
4	4779	Arthur	A	
5	38032399400	Andrea	M	
6	67701756358	Angel	C	
7	14496465921	Anna	S	
8	96338913440	Alyssa	L	
9	467	Aturo	J	
10	53313373327	Abigail		
11	54107006788	Abigail	C	

Update Predict

Prediction Result

FirstName	LastName	EmailAddress	Phone	Salutation	Bike Buyer
Seth	Martinez	smartinez@bluey...	835-555-0181	Mr.	0.772810777709...
Rebekah	Rodriguez	rrodriguez@cont...	1 (11) 500 555-0...	Ms.	0.772810777709...
Abigail	Davis	adavis@fabrikam...	1 (11) 500 555-0...	Ms.	0.772810777709...
Connor	Carter	ccarter@alpinesk...	1 (11) 500 555-0...	Mr.	0.772810777709...
Latoya	Xie	lxie@alpineskho...	913-555-0169	Ms.	0.772810777709...
Zachary	Brown	zbrown@finearts...	1 (11) 500 555-0...	Mr.	0.772810777709...
Tony	Goel	tgoel@alpineskho...	277-555-0195	Mr.	0.772810777709...
Jesus	Jimenez	jjimenez@luceme...	1 (11) 500 555-0...	Mr.	0.772810777709...
Byron	Munoz	bmunoz@advent...	400-555-0168	Mr.	0.637460885113...
Kenneth	Chander	kchander@lucer...	1 (11) 500 555-0...	Mr.	0.637460885113...
Ronnie	Guo	rguo@cpandl.com	1 (11) 500 555-0...	Mr.	0.637460885113...
Jennifer	Richardson	jrRichardson@fine...	1 (11) 500 555-0...	Ms.	0.637460885113...
Jeremiah	Brown	jbrown@thephon...	264-555-0124	Mr.	0.637460885113...
Ian	Carter	icarter@fineartsc...	875-555-0110	Mr.	0.637460885113...
Isaiiah	Cooper	icooper@fabrika...	997-555-0187	Mr.	0.637460885113...
Kellie	Suarez	ksuarez@itwarei...	892-555-0160	Ms.	0.637460885113...