



INSTITUTO TECNOLÓGICO DE CULIACÁN

Unidad 3:

Mineria de Datos

MATERIA:

Temas Selectos de Base de Datos

ACTIVIDAD:

Mineria de Datos (Serie Temporal)

CARRERA:

Ingeniería en Sistemas Computacionales

MAESTRO:

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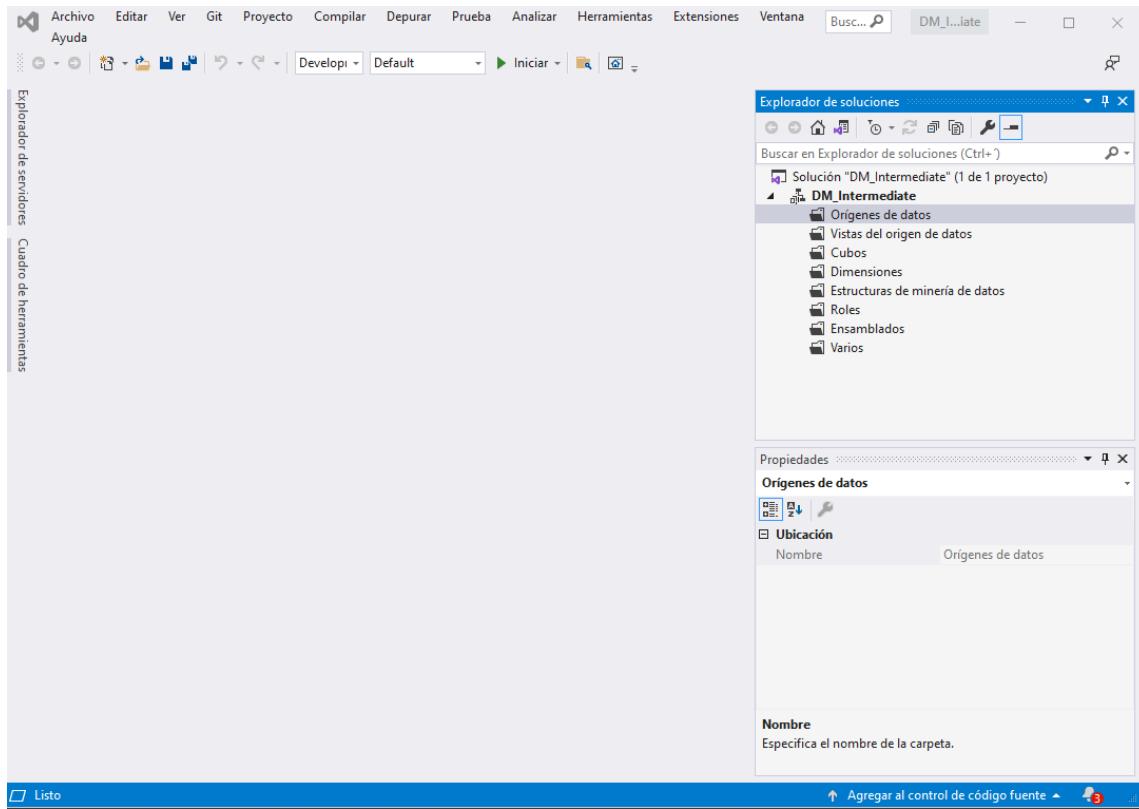
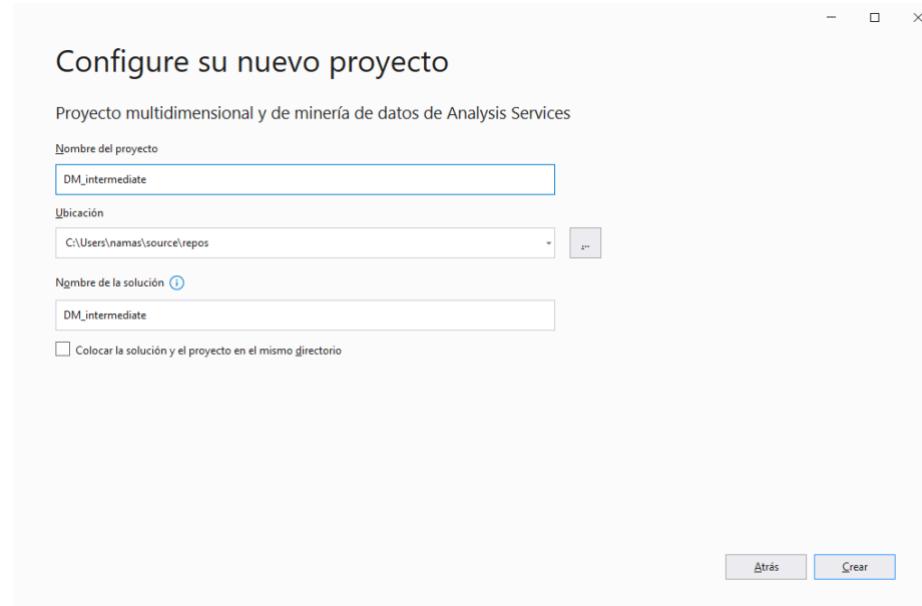
Flores Mascareño America Citlaly

Culiacán Sinaloa a 22 de mayo de 2023

Lección 1: Crear la solución de minería de datos intermedia

Crear una solución y un origen de datos

1.- Para crear un nuevo proyecto de Analysis Services para este tutorial



2.- Para cambiar la instancia donde se almacenan los objetos de minería de datos y cambiar las propiedades de implementación de un proyecto

Páginas de propiedades de DM_Intermediate

Configuración: Active(Development) Plataforma: N/D Administrador de configuración...

| | |
|--------------------------------|---|
| ▲ Propiedades de configuración | ▼ Destino |
| Compilación | Servidor LAPTOP-P59U9Q17 |
| Depuración | Base de datos DM_Intermediate |
| Implementación | |
| | ▼ Opciones |
| | Opción de procesamiento Predeterminado |
| | Implementación transaccional False |
| | Modo de servidor Implementar solo cambios |

Servidor
Instancia de Analysis Services en la que se implementará el proyecto.

Aceptar Cancelar Aplicar

Decidimos poner implementar solo cambios como en el proyecto anterior y cambiar el nombre del servidor local que tenemos.

3.- Para crear un origen de datos

Data Source Wizard

Select how to define the connection
You can select from a number of ways in which your data source will define its connection string.

Create a data source based on another object
 Create a data source based on an existing or new connection

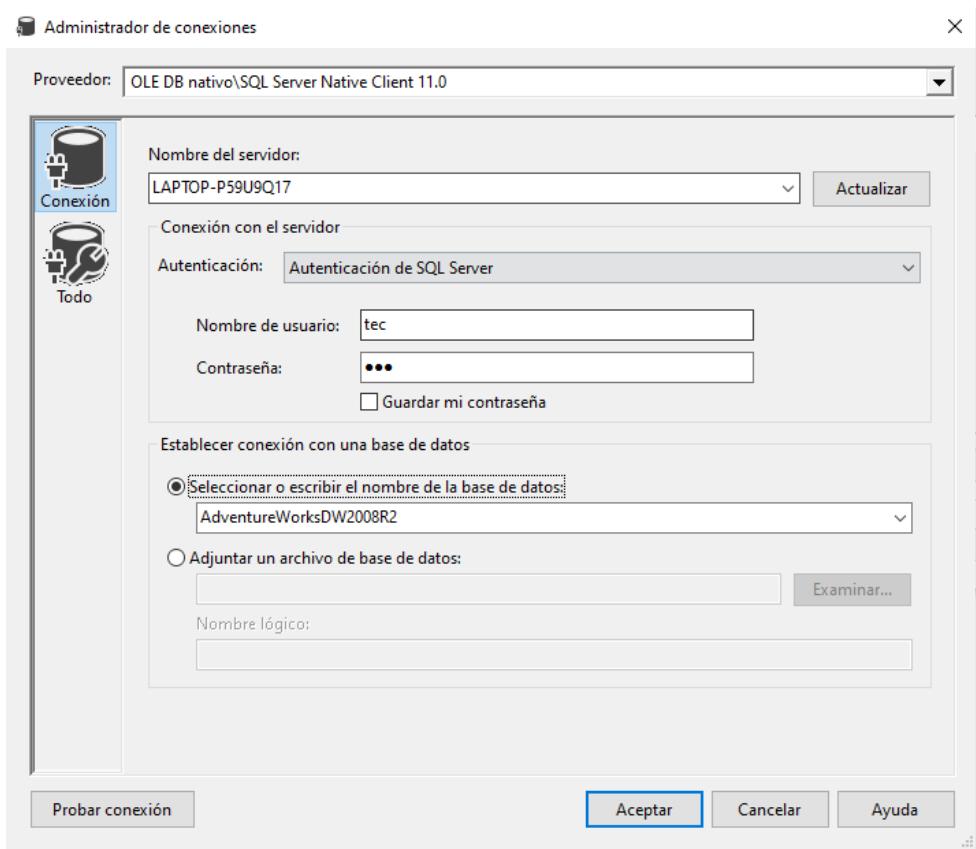
Conexiones de datos: LAPTOP-P59U9Q17.AdventureWorksDW2008R2

| Propiedad | Valor |
|-----------------|-----------------------|
| Data Source | LAPTOP-P59U9Q17 |
| Initial Catalog | AdventureWorksDW20... |
| Provider | SQLNCLI11.1 |
| User ID | tec |

Nueva... Eliminar

< Back Next >| Finish >>| Cancel

La conexión ya estaba creada por la práctica pasada



Configuración del servidor, entramos con la cuenta tec que tiene permisos de administrador, con autenticación de Windows tuvimos problemas al procesar los modelos y seleccionamos la bd adventureworks

**Finalización del asistente**

Provide a name and then click Finish to create the new data source.

Data source name:

AdventureWorksDW2008R2

Preview:

Connection string:

```
Provider=SQLNCLI11.1;Data Source=LAPTOP-P59U9Q17;Password=;User ID=tec;Initial Catalog=AdventureWorksDW2008R2
```

< Back

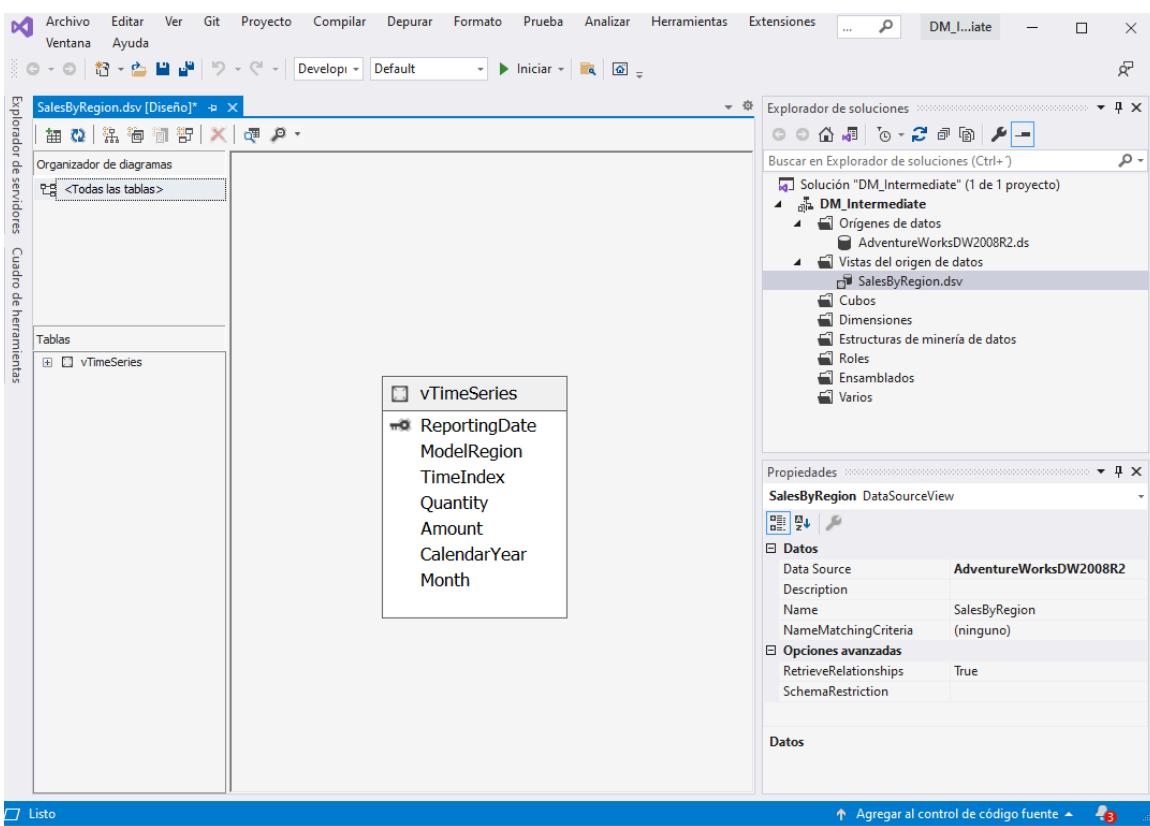
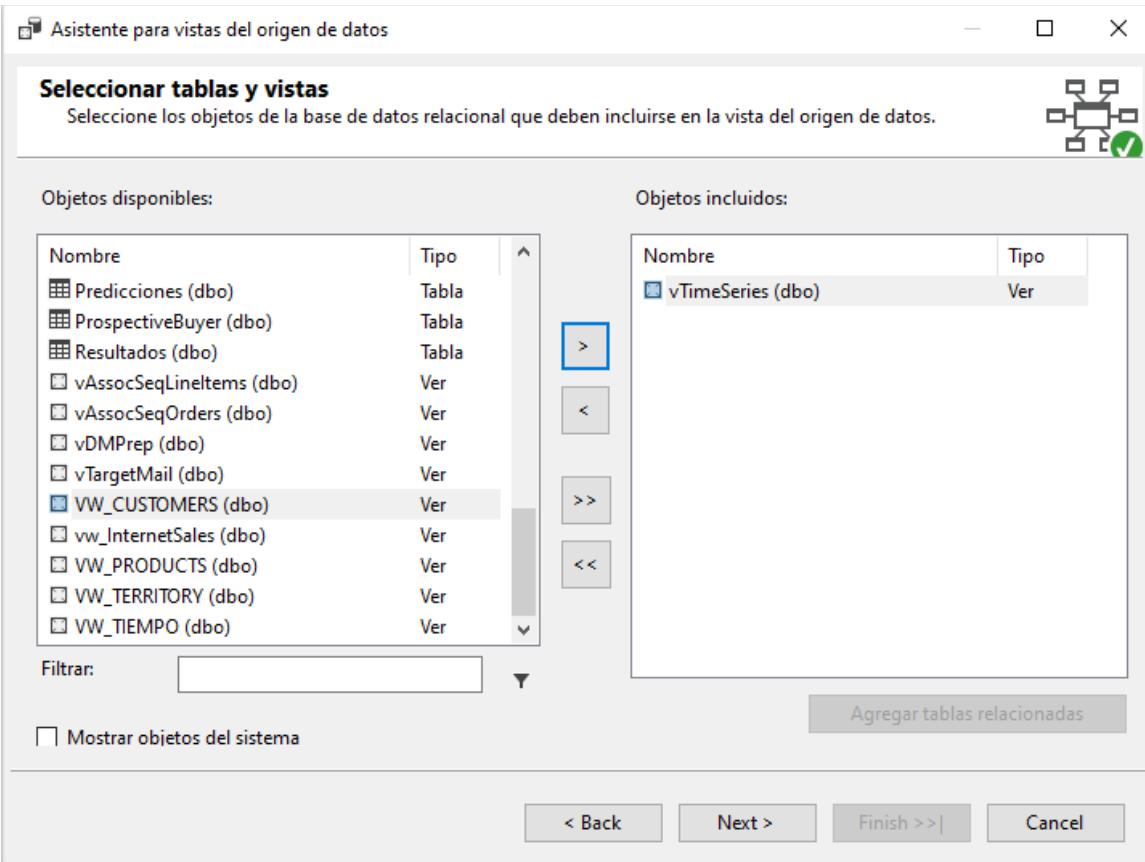
Next >

Finish

Cancel

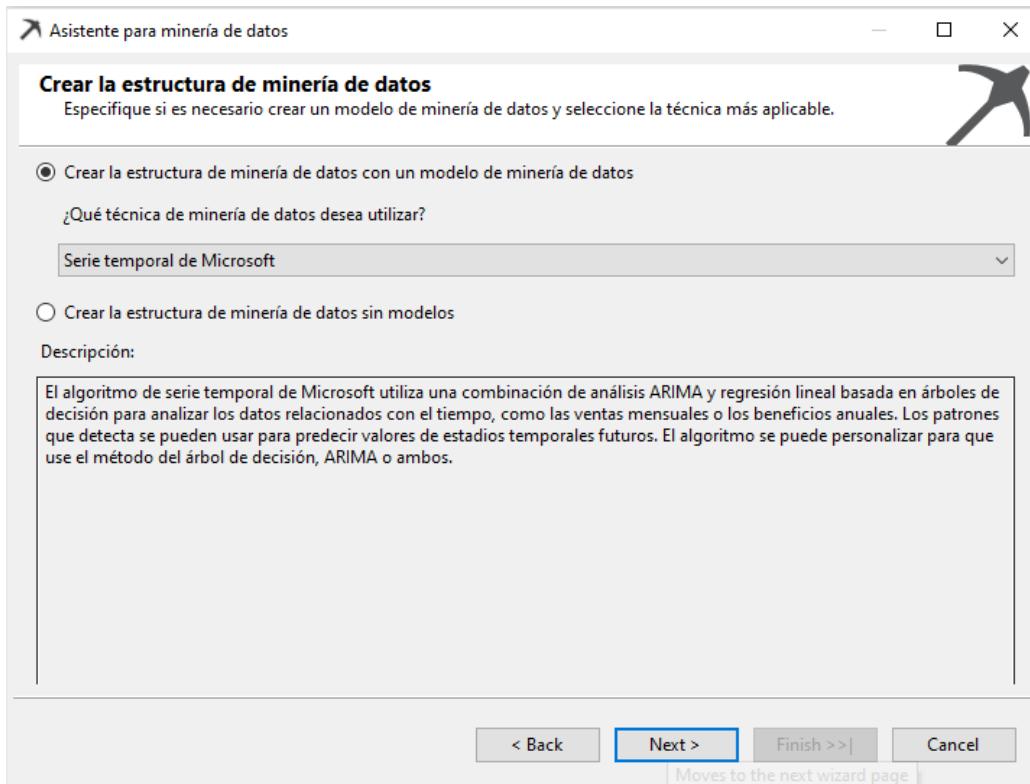
Lección 2: generar un escenario de pronóstico

1.- Para agregar una vista del origen de datos



Se hizo clave principal a ReportingDate como se muestra en el ejemplo ya que no aparece por default

2.- Para crear una estructura de minería de datos de previsión



Especificar los datos de aprendizaje

Especifique las columnas que se utilizarán en el análisis.



Estructura del modelo de minería de datos:

| <input type="checkbox"/> | Tablas y columnas | Clave | <input type="checkbox"/> Entrada | <input type="checkbox"/> De predi... |
|-------------------------------------|-------------------|-------------------------------------|-------------------------------------|--------------------------------------|
| - | vTimeSeries | | | |
| | Amount | <input type="checkbox"/> | <input 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"/> |
| | 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 checked="" type="checkbox"/> | ReportingDate | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | TimelineIndex | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Recomendar entradas para la predicción seleccionada actualmente:

[Sugerir](#)[< Back](#)[Next >](#)[Finish >>](#)[Cancel](#)

Forecasting.dmm [Diseño] * ✎ X SalesByRegion.csv [Diseño]

Estructura de minería de datos Modelos de minería de datos Visor de modelos de datos Gráfico de precisión Predicción

Vista del origen de datos

vTimeSeries

- ReportingDate
- ModelRegion
- TimeIndex
- Quantity
- Amount
- CalendarYear
- Month

3.- Para agregar la columna Amount a la estructura de minería de datos Forecasting

Forecasting.dmm [Diseño] * ✎ X SalesByRegion.csv [Diseño]

Estructura de minería de datos Modelos de minería de datos Visor de modelos de datos

Vista del origen de datos

vTimeSeries

- ReportingDate
- ModelRegion
- TimeIndex
- Quantity
- Amount
- CalendarYear
- Month

4.- Para definir cómo se utilizará la columna Amount

The screenshot shows the Microsoft Data Mining Model Designer interface. The title bar says 'Forecasting.dmm [Diseño]*' and 'SalesByRegion.dsv [Diseño]'. There are three tabs at the top: 'Estructura de minería de datos' (selected), 'Modelos de minería de datos', and 'Visor'. Below the tabs, there are two panes: 'Estructura' on the left and 'Time Series' on the right. In the 'Estructura' pane, under 'Microsoft_Time_Series', the 'Amount' column is selected. In the 'Time Series' pane, there are four items: 'Predict' (selected), 'Key', 'Predict', and 'Key'. The 'Predict' item is highlighted with a blue dashed border.

Personalizar y procesar el modelo de pronóstico

1.- Para cambiar los parámetros del algoritmo

The screenshot shows the 'Parámetros de algoritmo' (Algorithm Parameters) dialog box. At the top, it says 'Parámetros:' followed by a table of parameters and their values:

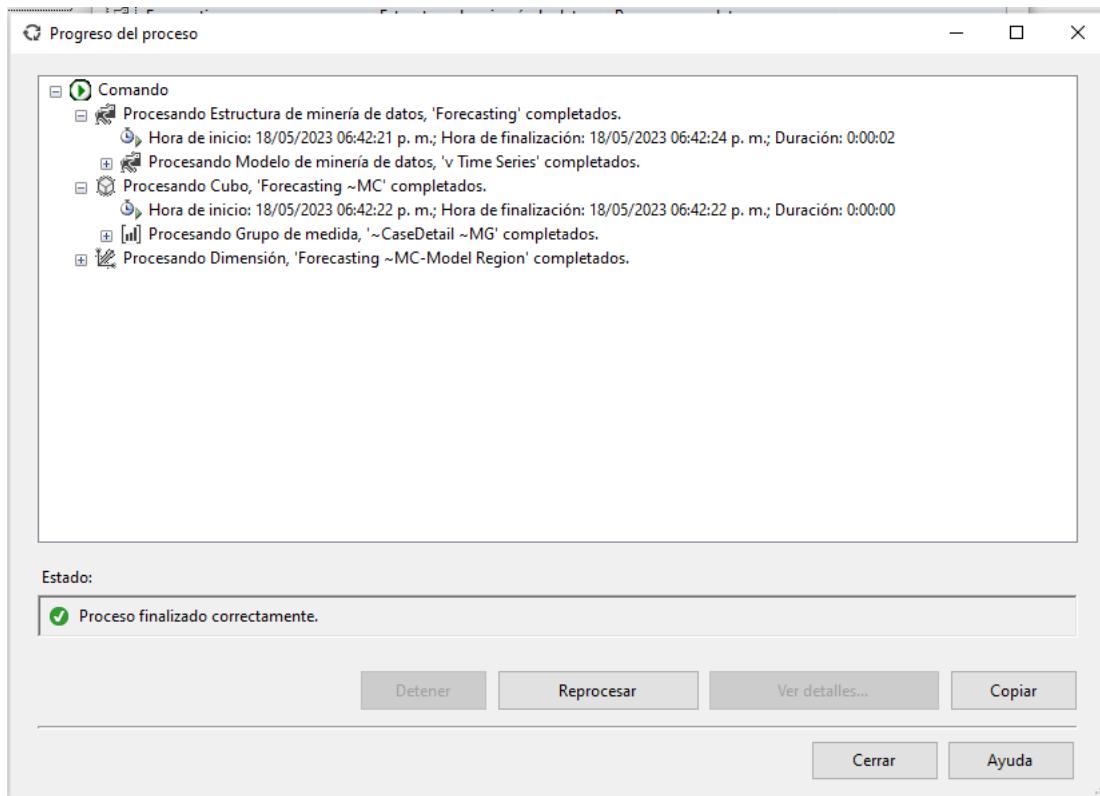
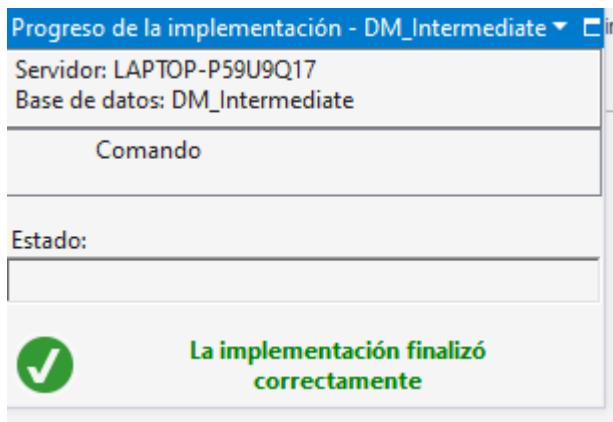
| Parámetro | Valor | Predeterminado | Rango |
|----------------------------|--------|----------------|--------------------------|
| AUTO_DETECT_PERIODICITY | 0.6 | | [0,0,1,0] |
| COMPLEXITY_PENALTY | 0.1 | | (...,1,0) |
| FORECAST_METHOD | MIXED | | ARIMA,ARTXP,MIXED |
| HISTORIC_MODEL_COUNT | 1 | | [0,100] |
| HISTORIC_MODEL_GAP | 10 | | [1,...) |
| INSTABILITY_SENSITIVITY | 1.0 | | [0,0,1,0] |
| MAXIMUM_SERIES_VALUE | +1E308 | | [column maximum,...] |
| MINIMUM_SERIES_VALUE | -1E308 | | [...,column minimum] |
| MINIMUM_SUPPORT | 10 | | [1,...) |
| MISSING_VALUE_SUBSTITUTION | None | | None,Previous,Mean |
| PERIODICITY_HINT | {12} | {1} | {...list of integers...} |
| PREDICTION_SMOOTHING | 0.5 | 0.5 | [0,0,1,0] |

Below the table, a detailed description of the 'PREDICTION_SMOOTHING' parameter is provided:

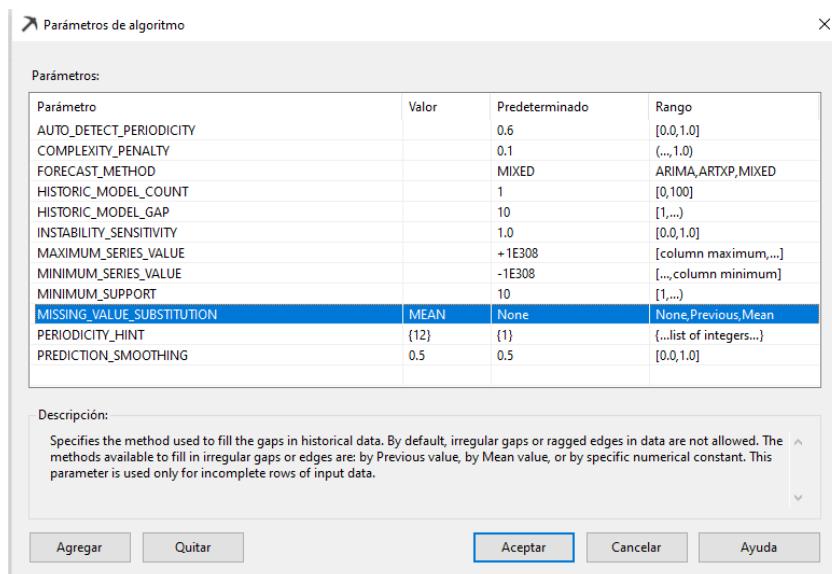
Specifies a value between 0 and 1 that controls the blend of ARTXP and ARIMA time series algorithms. The specified value is only valid when the FORECAST_METHOD parameter is set to MIXED. If the value is 0, the model uses only ARTXP. If the value is 1, the model uses only ARIMA. A value closer to 0 is more heavily weighted to ARTXP. A value closer to 1 is more heavily weighted to ARIMA. [Enterprise]

At the bottom of the dialog box are buttons: 'Agregar' (Add), 'Quitar' (Remove), 'Aceptar' (Accept), 'Cancelar' (Cancel), and 'Ayuda' (Help).

2.- Para procesar el modelo de pronóstico

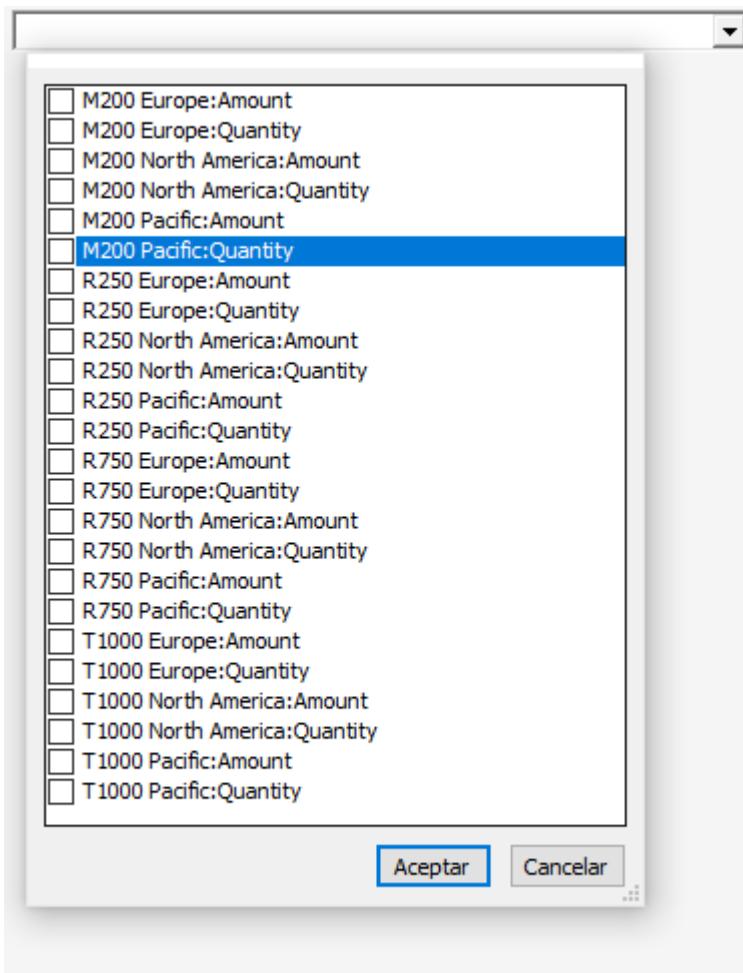


3.- Para especificar que los huecos se rellenen calculando el promedio de los valores



Explorar el modelo de previsión

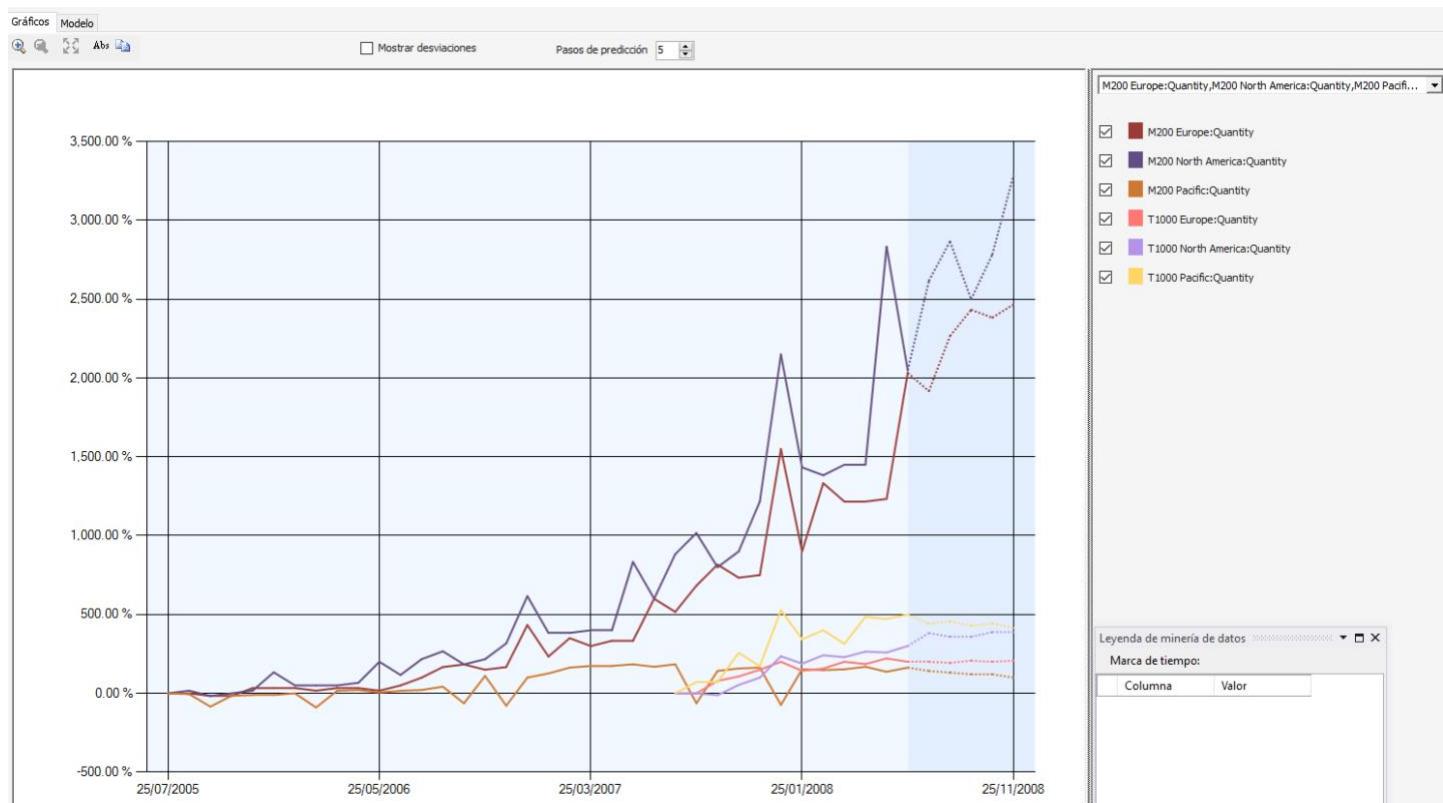
1.- Para seleccionar una serie temporal



- M200 Europe:Amount
- M200 Europe:Quantity
- M200 North America:Amount
- M200 North America:Quantity
- M200 Pacific:Amount
- M200 Pacific:Quantity
- R250 Europe:Amount
- R250 Europe:Quantity
- R250 North America:Amount
- R250 North America:Quantity
- R250 Pacific:Amount
- R250 Pacific:Quantity
- R750 Europe:Amount
- R750 Europe:Quantity
- R750 North America:Amount
- R750 North America:Quantity
- R750 Pacific:Amount
- R750 Pacific:Quantity
- T1000 Europe:Amount
- T1000 Europe:Quantity
- T1000 North America:Amount
- T1000 North America:Quantity
- T1000 Pacific:Amount
- T1000 Pacific:Quantity

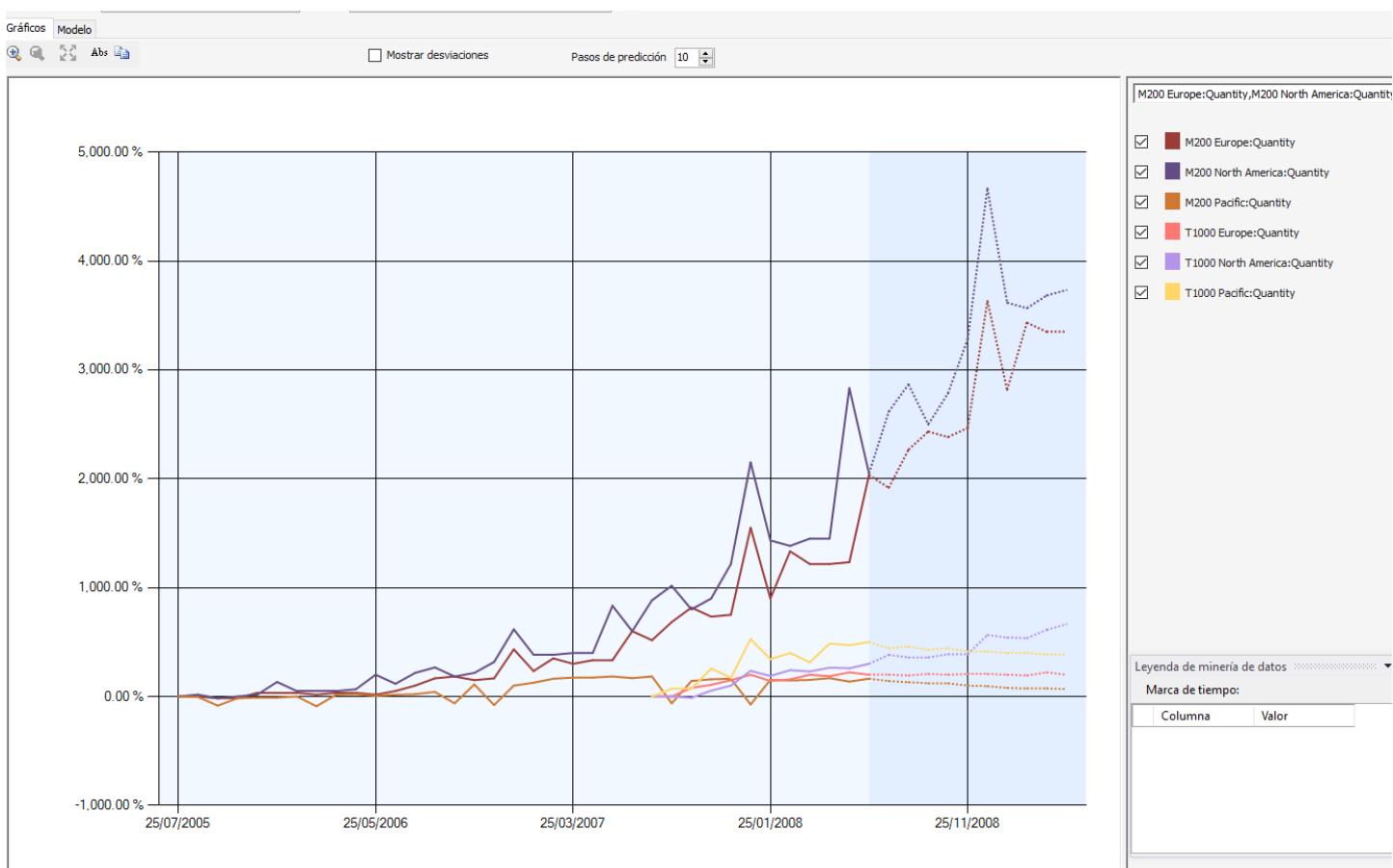
Aceptar

Cancelar

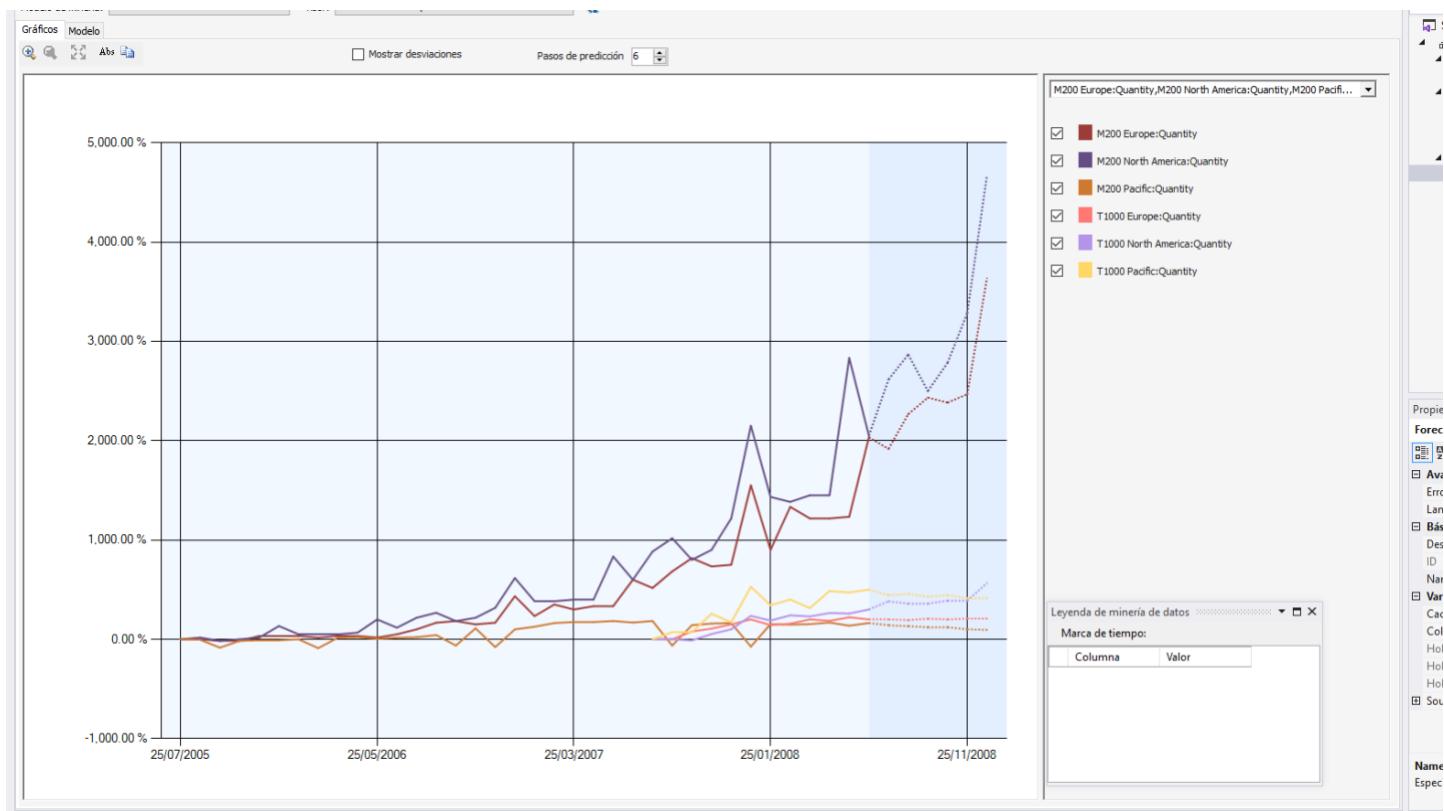


2.- Para cambiar las opciones de predicción y presentación de la vista Gráfico

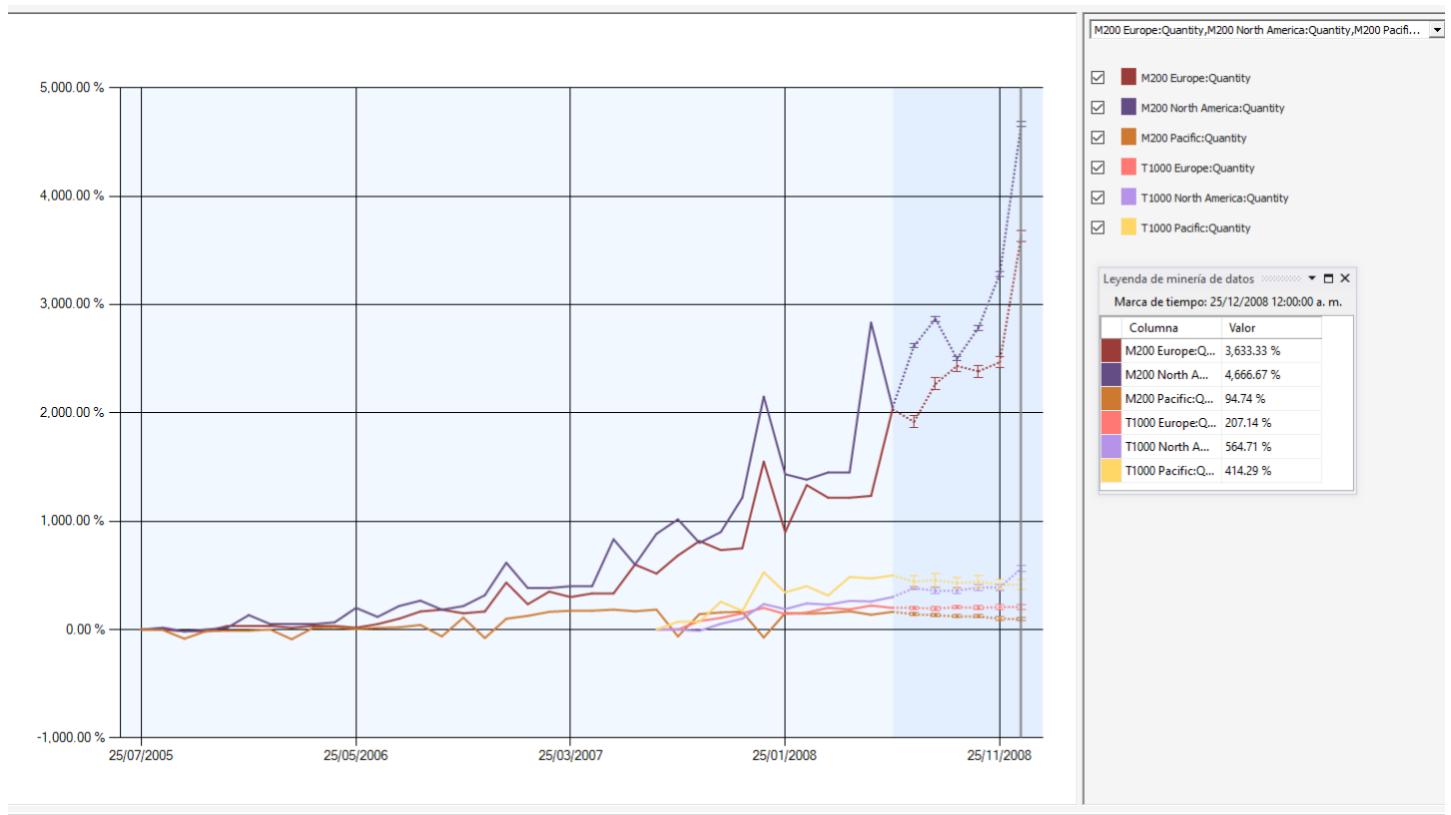
Pasos de predicción 10



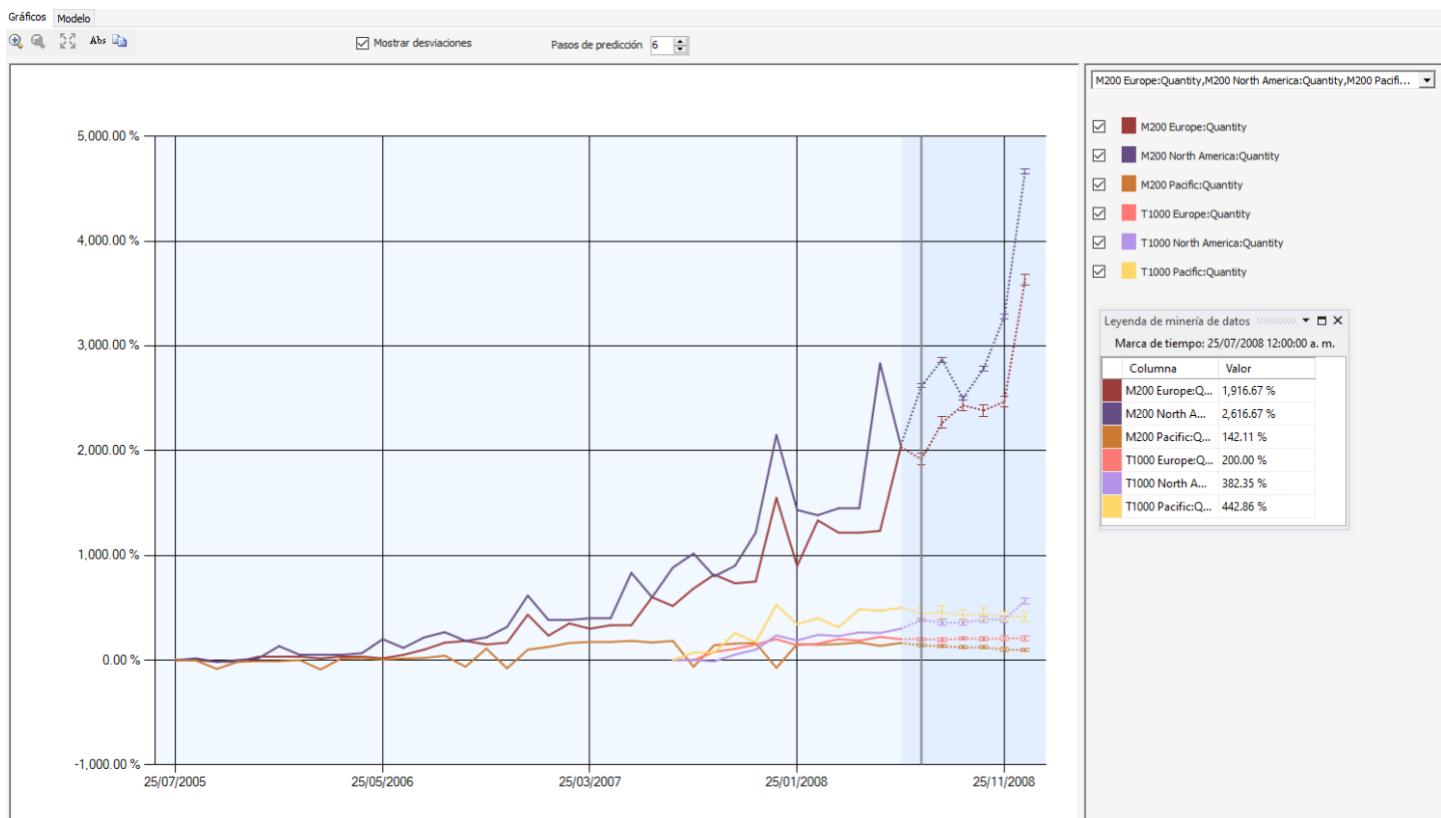
Pasos de predicción 6



Barras de error M200



BARRA DE ERROR T100 PACIFIC

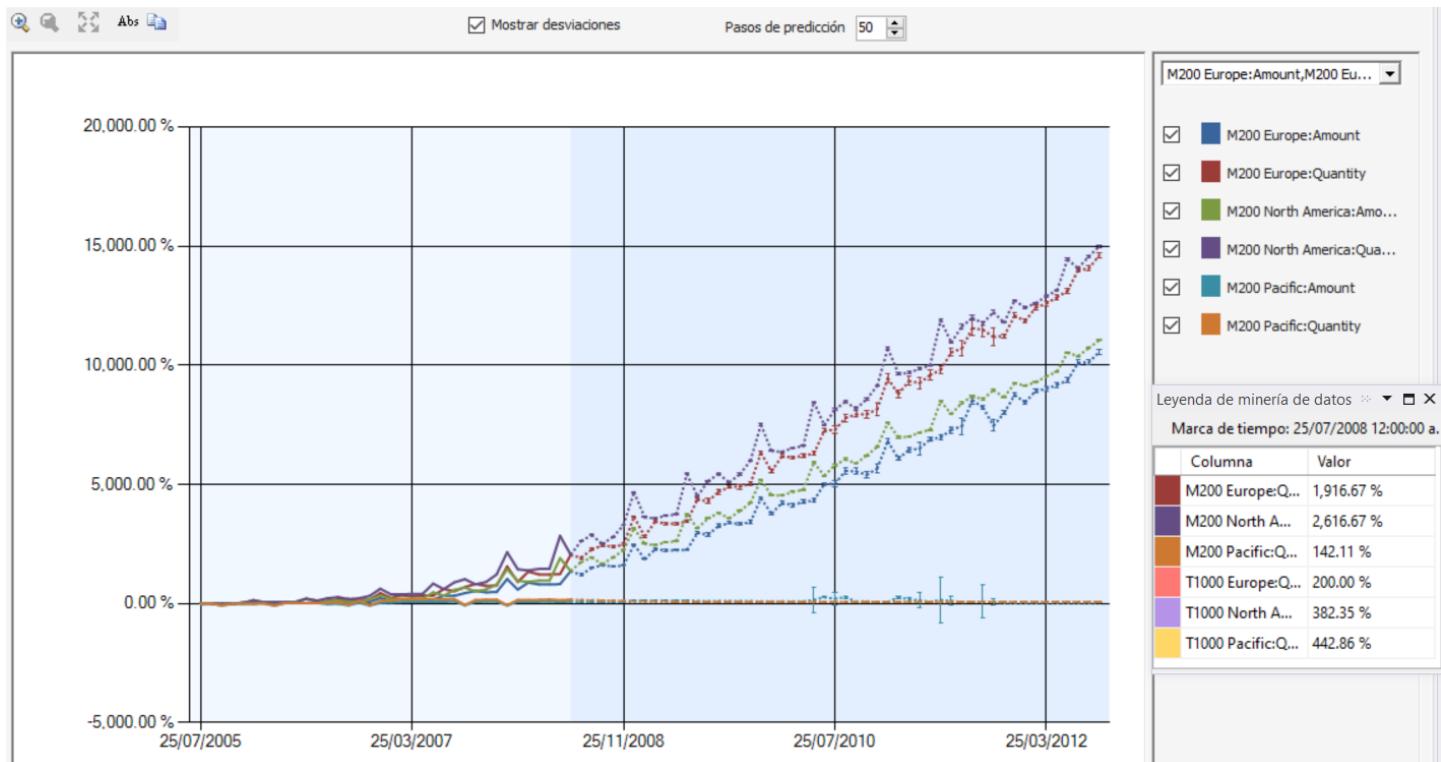


Reportes:

Bicicleta: M200 todas las regiones, Pasos de predicción: 50.



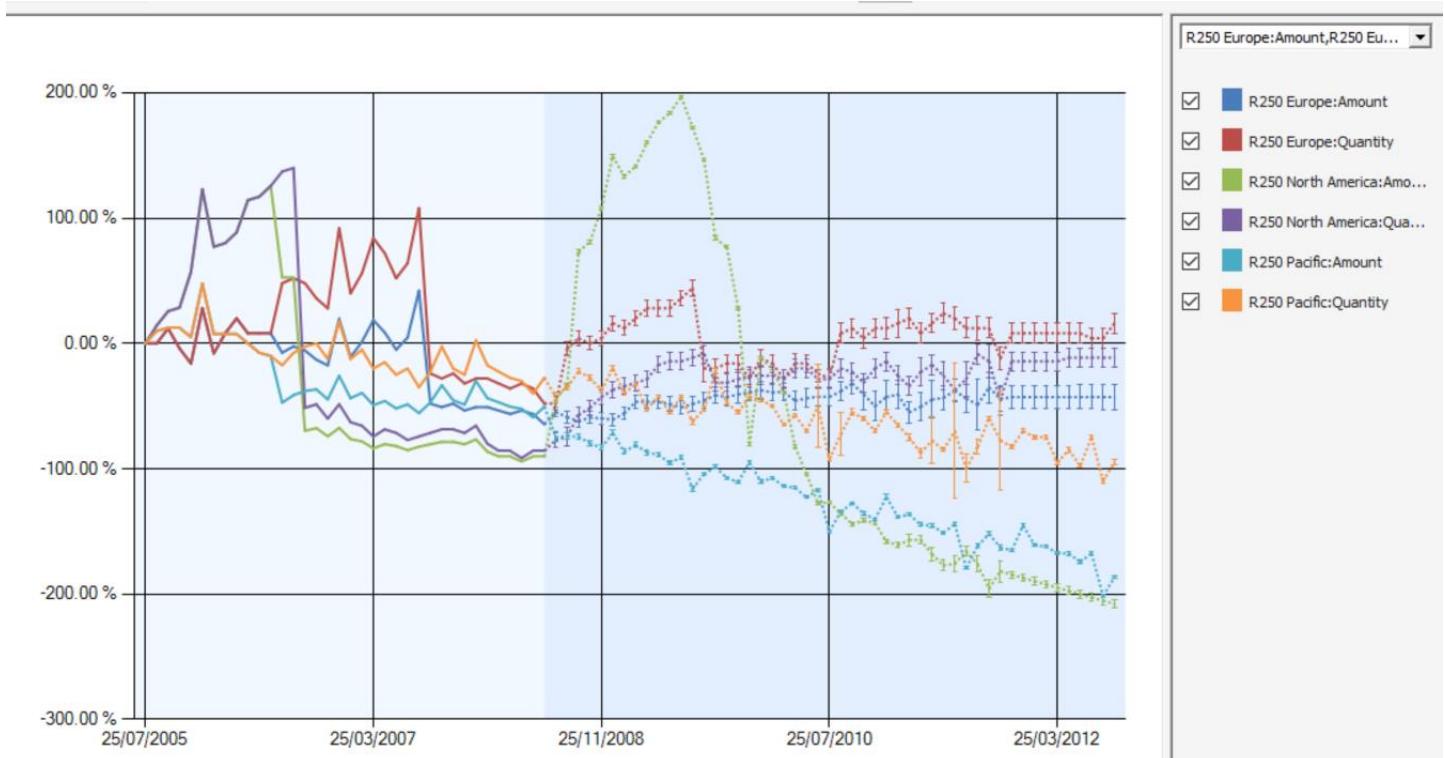
Bicicleta: M200 todas las regiones, Pasos de predicción: 50. Con mostrar desviaciones.



Bicicleta: R250 todas las regiones, Pasos de predicción: 50.



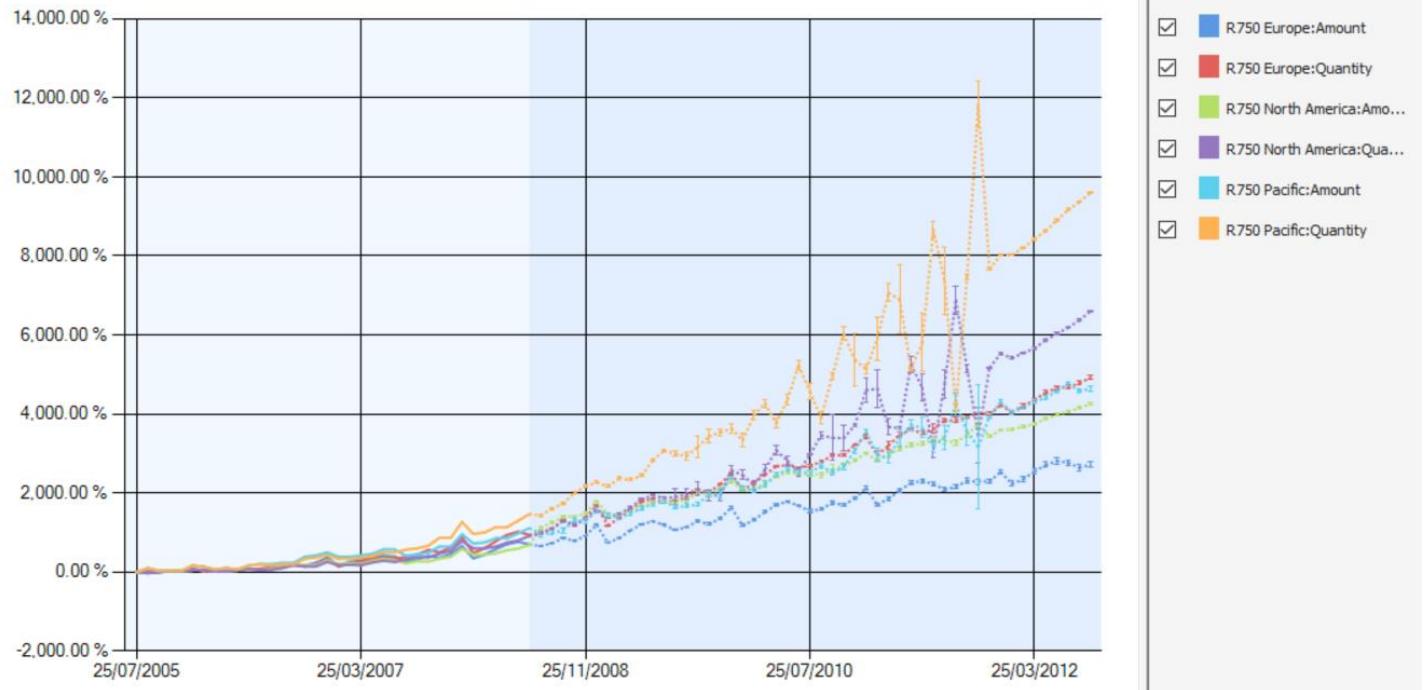
Bicicleta: R250 todas las regiones, Pasos de predicción: 50. Con mostrar desviaciones.



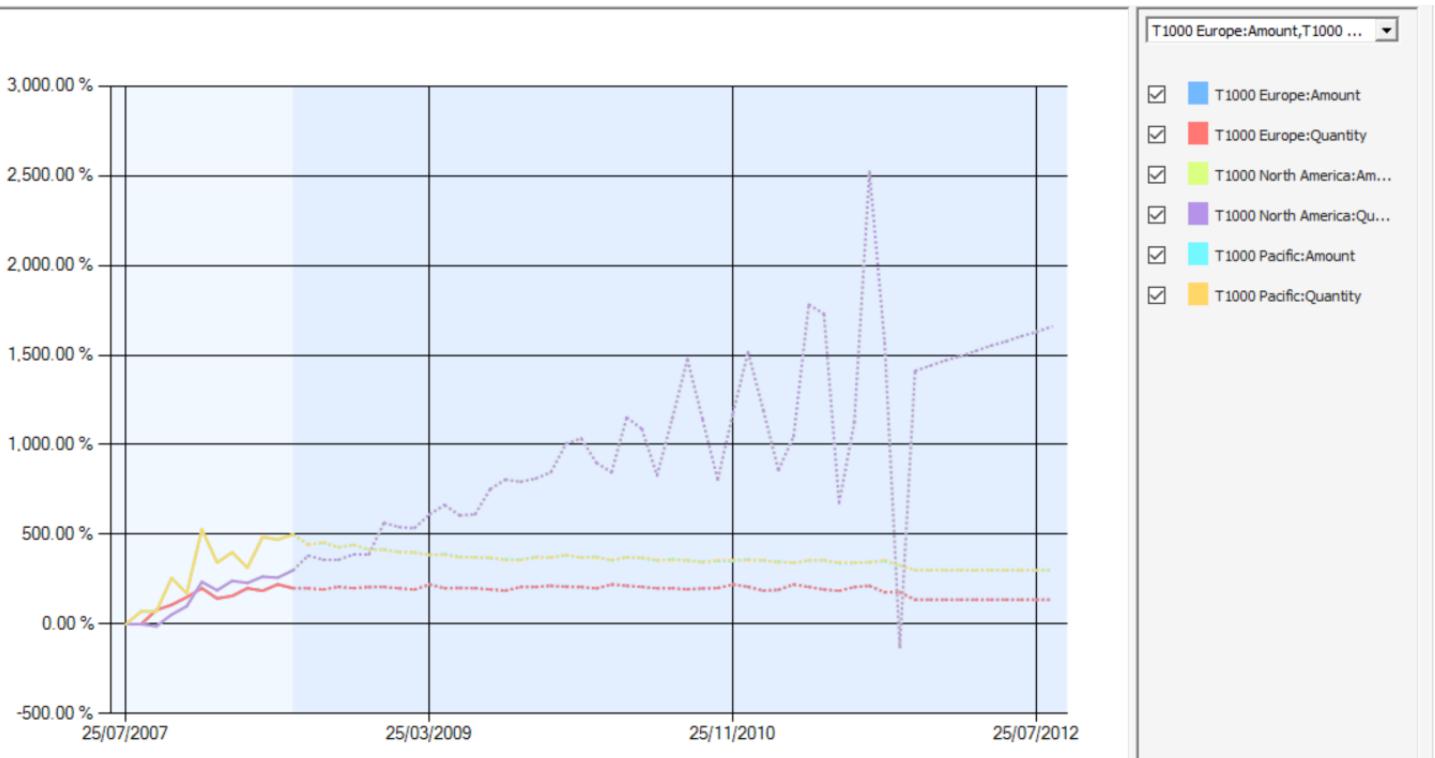
Bicicleta: R750 todas las regiones, Pasos de predicción: 50.



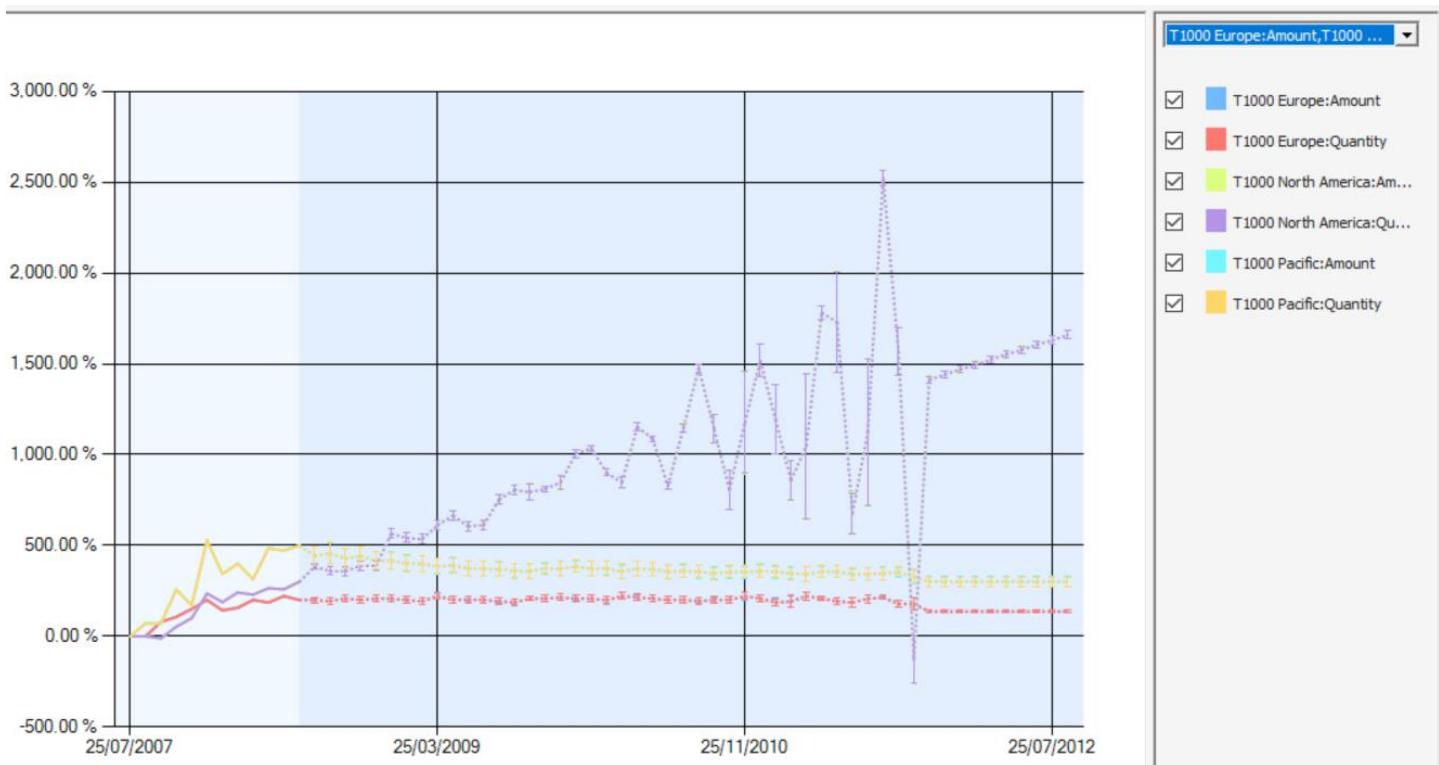
Bicicleta: R750 todas las regiones, Pasos de predicción: 50. Con mostrar desviaciones.



Bicicleta: T1000 todas las regiones, Pasos de predicción: 50.



Bicicleta: T1000 todas las regiones, Pasos de predicción: 50. Con mostrar desviaciones.



3.- Para ver el árbol de decisión de un modelo de series temporales

Leyenda de minería de datos M200 NORTH AMERICA:Amount

Leyenda de minería de datos

Alta Baja

Escenarios totales: 24

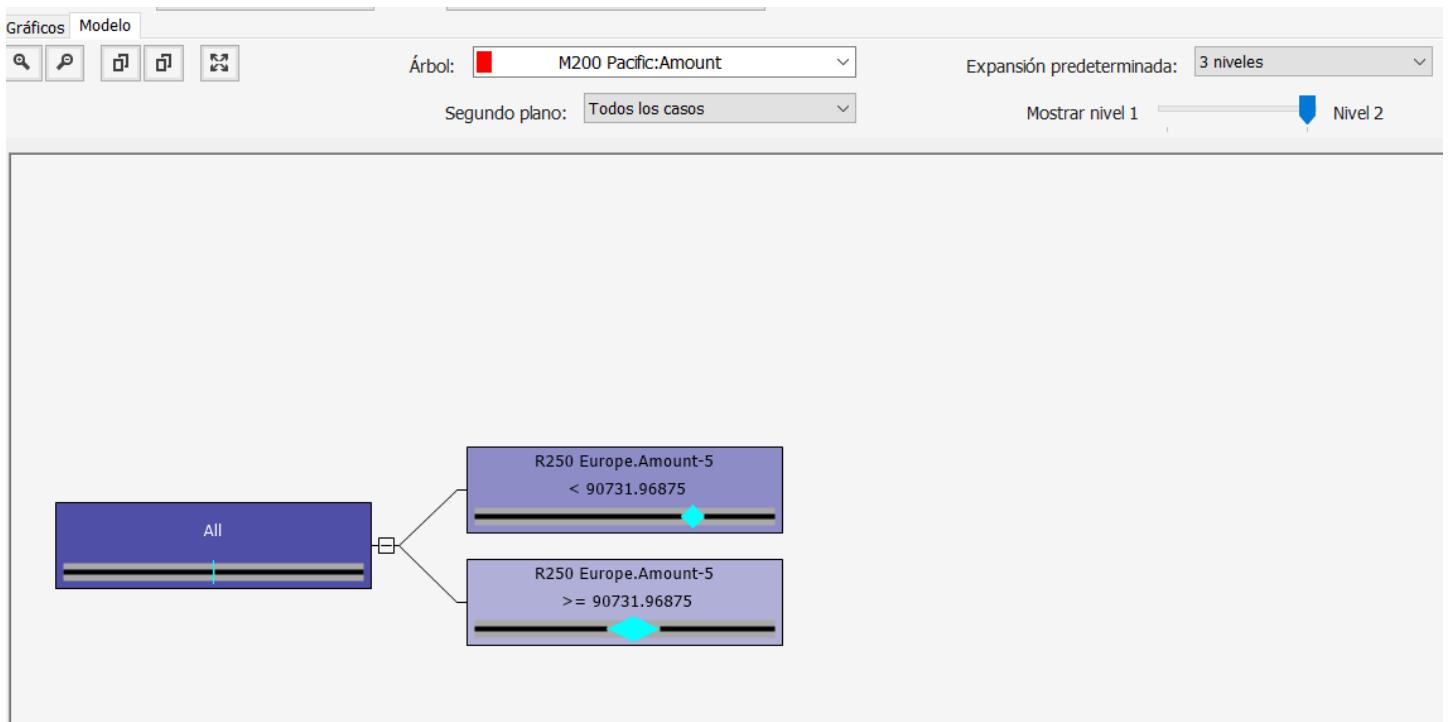
| Plazo | Coeficiente | Histograma |
|-------------------------|--------------------|------------|
| | 6095.04452255538 | |
| Amount(M200 North ... | -0.676211499510085 | |
| Amount(M200 North ... | 0.0172490488691471 | |
| Amount(R750 Pacific... | 0.245742936295049 | |
| Quantity(M200 Europ... | 43.4793481979523 | |
| Quantity(M200 North ... | 8641.59105385889 | |
| Quantity(M200 North ... | 48.6563736528617 | |
| Quantity(R750 Europ... | -798.595604231596 | |

All
Escenarios totales: 24

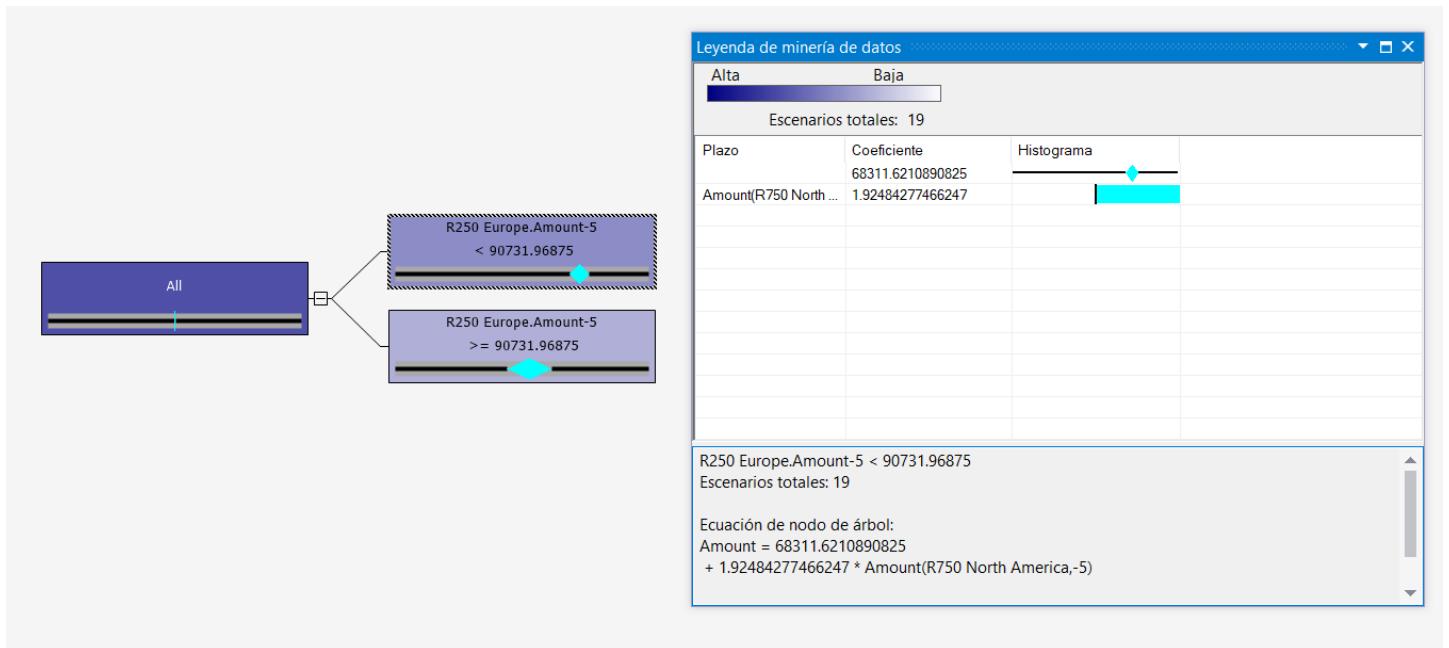
Ecuación de nodo de árbol:

$$\text{Amount} = 6095.04452255538 + 0.0172490488691471 * \text{Amount}(\text{M200 North America}, -5) - 798.595604231596 * \text{Quantity}(\text{R750})$$

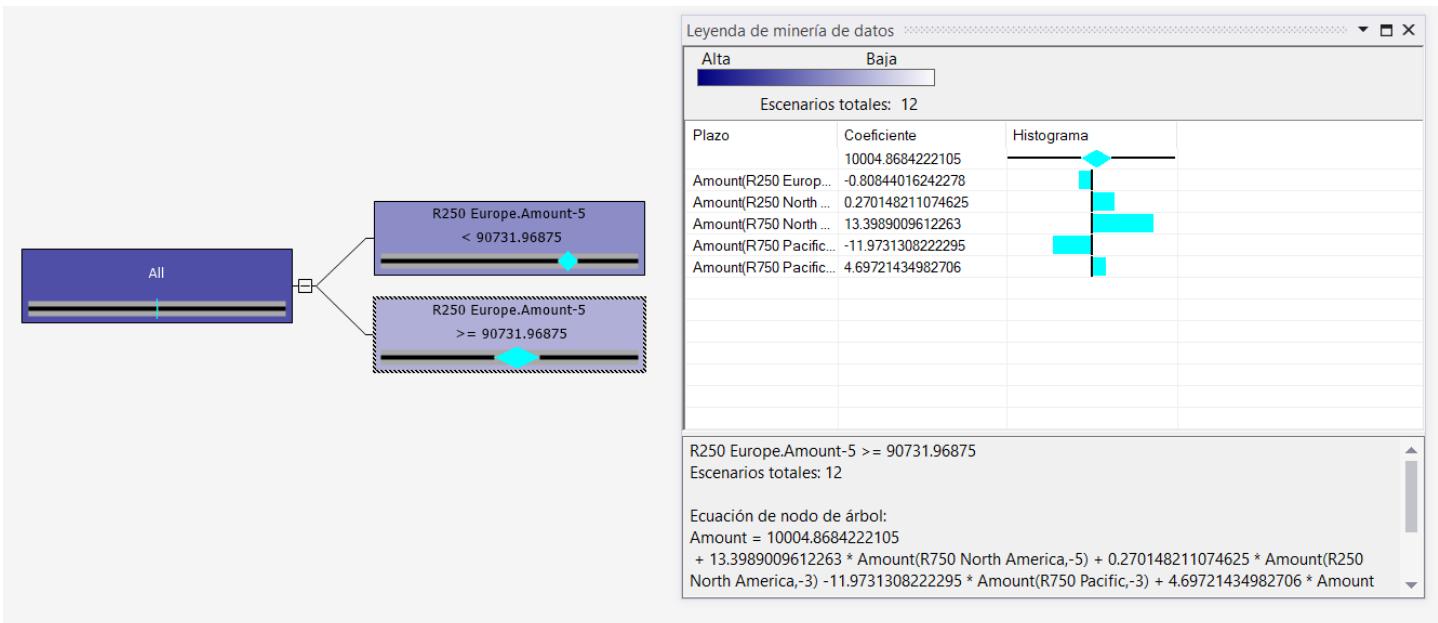
M200 Pacific: Amount



Leyenda de minería rango <90731.96875



Leyenda de minería rango >=90731.96875



4.- Para ver los detalles de una determinada serie de datos en el visor de contenido genérico

Node_description

| Leyenda de nodo (id. único) | | Detalles de nodo | |
|-----------------------------|---|---------------------------|--|
| (TS) | All (TS00000000) | MODEL_CATALOG | DM_Intermediate |
| | All (TS00000001) | MODEL_SCHEMA | v Time Series |
| | All (TS00000002) | MODEL_NAME | M200 Pacific:Quantity |
| | All (TS00000003) | ATTRIBUTE_NAME | TS0000000400 |
| □ | All (TS00000004) | NODE_NAME | TS0000000400 |
| ⊕ | R750 North America.Amount-5 < 15795.5673828125 | NODE_UNIQUE_NAME | 3 (Interior) |
| | R750 North America.Amount-5 >= 15795.5673828125 | NODE_TYPE | R750 North America.Amount-5 < 15795.5673828125 |
| □ | All (TS00000005) | CHILDREN_CARDINALITY | 2 |
| ⊕ | All (TS00000006) | PARENT_UNIQUE_NAME | TS0000000400 |
| □ | All (TS00000007) | NODE_DESCRIPTION | R750 North America.Amount-5 < 15795.5673828125 |
| ⊕ | All (TS00000008) | NODE_RULE | <compound-predicate op="and"> <predicate op="lt" value="15795.5673828125"> <simple-attribute name="Amount" /> </predicate> </compound-predicate> |
| ⊕ | All (TS00000009) | MARGINAL_RULE | <predicate op="lt" value="15795.5673828125"> <simple-attribute name="Amount" /> </predicate> |
| □ | All (TS0000000a) | NODE_PROBABILITY | 0.67741935483871 |
| ⊕ | All (TS0000000b) | MARGINAL_PROBABILITY | 0.67741935483871 |
| ⊕ | All (TS0000000c) | NODE_DISTRIBUTION | ATTRIBUTE_NAME ATTRIBUTE_VALUE SUPPORT PROBABILITY VARIANCE VALUETYPE |
| ⊕ | All (TS0000000d) | NODE_SUPPORT | 21 |
| ⊕ | All (TS0000000e) | MSOLAP_MODEL_COLUMN | M200 Pacific:Quantity |
| ⊕ | All (TS0000000f) | MSOLAP_NODE_SCORE | 3.02806559140063 |
| ⊕ | All (TS0000000g) | MSOLAP_NODE_SHORT_CAPTION | R750 North America.Amount-5 < 15795.5673828125 |
| ⊕ | All (TS0000000h) | | |
| ⊕ | All (TS0000000i) | | |
| ⊕ | All (TS0000000j) | | |
| ⊕ | All (TS0000000k) | | |
| ⊕ | All (TS0000000l) | | |
| ⊕ | All (TS0000000m) | | |
| ⊕ | All (TS0000000n) | | |
| ⊕ | ARIMA (1,1,0) X (1,1,2)(12) (TA00000000) | | |
| ⊕ | ARIMA (1,1,0) X (1,1,2)(12) (TA00000001) | | |
| ⊕ | ARIMA (5,1,1) X (1,1,2)(12) (TA00000002) | | |
| ⊕ | ARIMA (5,1,1) X (1,1,2)(12) (TA00000003) | | |
| ⊕ | ARIMA (1,0,8) (TA00000004) | | |
| ⊕ | ARIMA (1,0,1) (TA00000005) | | |
| ⊕ | ARIMA (2,0,7) X (1,0,2)(12) (TA00000006) | | |
| ⊕ | ARIMA (1,0,8) (TA00000007) | | |
| ⊕ | ARIMA (1,0,2) X (1,0,3)(12) (TA00000008) | | |
| ⊕ | ARIMA (2,1,1) X (1,0,3)(12) (TA00000009) | | |
| ⊕ | ARIMA (2,0,2) X (1,1,2)(12) (TA0000000a) | | |
| ⊕ | ARIMA (1,0,2) X (1,1,1)(12) (TA0000000b) | | |
| ⊕ | ARIMA (2,1,1) X (1,1,2)(12) (TA0000000c) | | |
| ⊕ | ARIMA (1,1,1) X (1,1,2)(12) (TA0000000d) | | |
| ⊕ | ARIMA (1,1,1) X (1,1,2)(12) (TA0000000e) | | |

ARIMA de la serie M200 Europa.

Vista de árbol de contenido genérico

Leyenda de nodo (Id. único)

- All (TS00000006)
- All (TS00000007)
- All (TS00000008)
- All (TS00000009)
- All (TS0000000a)
- All (TS0000000b)
- All (TS0000000c)
- All (TS0000000d)
- All (TS0000000e)
- All (TS0000000f)
- All (TS0000000g)
- All (TS0000000h)
- All (TS0000000i)
- All (TS0000000j)
- All (TS0000000k)
- All (TS0000000l)
- All (TS0000000m)
- All (TS0000000n)
- All (TS0000000o)
- All (TS0000000p)
- All (TS0000000q)
- All (TS0000000r)
- All (TS0000000s)
- All (TS0000000t)
- All (TS0000000u)
- All (TS0000000v)
- All (TS0000000w)
- All (TS0000000x)
- All (TS0000000y)
- All (TS0000000z)
- ARIMA (1,1,0) X (1,1,2)(12) (TA00000000)
- ARIMA (1,1,0) (TA0000000000000000)
- ARIMA (1,0,55864455449203) (TA0000000000000000)
- ARIMA (1) (TA0000000000000001)
- ARIMA (1,1,2)(12) (TA0000000000000001)
- ARIMA (1,0,102646097530634) (TA0000000000000000)
- ARIMA (1,-0,270252901771965,9,8264114173154)
- ARIMA (1,1,0) X (1,1,2)(12) (TA0000000001)
- ARIMA (5,1,1) X (1,1,2)(12) (TA0000000002)
- ARIMA (5,1,1) X (1,1,2)(12) (TA0000000003)
- ARIMA (1,0,8) (TA00000004)
- ARIMA (1,0,1) (TA00000005)
- ARIMA (2,0,7) X (1,0,2)(12) (TA00000006)
- ARIMA (1,0,8) (TA00000007)
- ARIMA (1,0,2) X (1,0,3)(12) (TA00000008)
- ARIMA (2,1,1) X (1,0,3)(12) (TA00000009)
- ARIMA (2,0,2) X (1,1,2)(12) (TA0000000a)
- ARIMA (1,0,2) X (1,1,2)(12) (TA0000000b)

Detalles de nodo

| MODEL_CATALOG | DM_Intermediate | | | | | | | | | | | | | | | | | | |
|----------------------------|---|----------------|-----------------|----------|-----------------|----------|-----------|----------------------|---|---|---|---|-----------------|----------------------------|------------------|---|---|---|-----------------|
| MODEL_SCHEMA | | | | | | | | | | | | | | | | | | | |
| MODEL_NAME | v Time Series | | | | | | | | | | | | | | | | | | |
| ATTRIBUTE_NAME | M200_Europe:Quantity | | | | | | | | | | | | | | | | | | |
| NODE_NAME | TA0000000000000000 | | | | | | | | | | | | | | | | | | |
| NODE_UNIQUE_NAME | TA0000000000000000 | | | | | | | | | | | | | | | | | | |
| NODE_TYPE | 29 (Regresión automática ARIMA) | | | | | | | | | | | | | | | | | | |
| NODE_GUID | | | | | | | | | | | | | | | | | | | |
| NODE_CAPTION | ARIMA (1,0,55864455449203) | | | | | | | | | | | | | | | | | | |
| CHILDREN_CARDINALITY | 0 | | | | | | | | | | | | | | | | | | |
| PARENT_UNIQUE_NAME | TA0000000000000000 | | | | | | | | | | | | | | | | | | |
| NODE_DESCRIPTION | ARIMA (1,0,55864455449203) | | | | | | | | | | | | | | | | | | |
| NODE_RULE | <pre><ArimaTerm> <Periodicity value="1" /> <Coefficients> <Coefficient order="0" value="1" /> <Coefficient order="1" value="0.55864455449203" /> </Coefficients> </ArimaTerm></pre> | | | | | | | | | | | | | | | | | | |
| MARGINAL_RULE | | | | | | | | | | | | | | | | | | | |
| NODE_PROBABILITY | 0 | | | | | | | | | | | | | | | | | | |
| MARGINAL_PROBABILITY | 0 | | | | | | | | | | | | | | | | | | |
| NODE_DISTRIBUTION | <table border="1"> <thead> <tr> <th>ATTRIBUTE_NAME</th> <th>ATTRIBUTE_VALUE</th> <th>SUPPORT</th> <th>PROBABILITY</th> <th>VARIANCE</th> <th>VALUETYPE</th> </tr> </thead> <tbody> <tr> <td>M200_Europe:Quantity</td> <td>1</td> <td>0</td> <td>0</td> <td>0</td> <td>7 (Coeficiente)</td> </tr> <tr> <td>(M200_Europe:Quantity - 1)</td> <td>0.55864455449203</td> <td>0</td> <td>0</td> <td>0</td> <td>7 (Coeficiente)</td> </tr> </tbody> </table> | ATTRIBUTE_NAME | ATTRIBUTE_VALUE | SUPPORT | PROBABILITY | VARIANCE | VALUETYPE | M200_Europe:Quantity | 1 | 0 | 0 | 0 | 7 (Coeficiente) | (M200_Europe:Quantity - 1) | 0.55864455449203 | 0 | 0 | 0 | 7 (Coeficiente) |
| ATTRIBUTE_NAME | ATTRIBUTE_VALUE | SUPPORT | PROBABILITY | VARIANCE | VALUETYPE | | | | | | | | | | | | | | |
| M200_Europe:Quantity | 1 | 0 | 0 | 0 | 7 (Coeficiente) | | | | | | | | | | | | | | |
| (M200_Europe:Quantity - 1) | 0.55864455449203 | 0 | 0 | 0 | 7 (Coeficiente) | | | | | | | | | | | | | | |
| NODE_SUPPORT | 36 | | | | | | | | | | | | | | | | | | |
| MSOLAP_MODEL_COLUMN | M200_Europe:Quantity | | | | | | | | | | | | | | | | | | |
| MSOLAP_NODE_SCORE | 8.74189978951697 | | | | | | | | | | | | | | | | | | |
| MSOLAP_NODE_SHORTCaption | ARIMA (1,0,55864455449203) | | | | | | | | | | | | | | | | | | |

Crear predicciones de serie temporal

1.- Para seleccionar un modelo de minería de datos y una tabla de entrada

Modelo de minería de datos

- v Time Series
 - Amount
 - Model Region
 - Quantity
 - Reporting Date

Seleccionar modelo...

Seleccionar tabla(s) de entrada

Quitar tabla... Seleccionar tabla de casos...

Modificar combinación...

Modelo de minería de datos

Seleccionar tabla(s) de entrada

Origen Campo Alias Mostrar Grupo Y/O Criterios o argumento

| | | | | | | |
|------------------------|-------------------|-----------------|-------------------------------------|--|--|------------------------------|
| v Time Series | Amount | | <input checked="" type="checkbox"/> | | | [v Time Series].[Amount].5 |
| | Model Region | | <input checked="" type="checkbox"/> | | | |
| | PredictTimeSeries | PredictAmount | <input checked="" type="checkbox"/> | | | |
| Funció n de predicción | PredictTimeSeries | PredictQuantity | <input checked="" type="checkbox"/> | | | [v Time Series].[Quantity].5 |
| | | | <input type="checkbox"/> | | | |

| Model Region | PredictAmount | PredictQuantity |
|---------------|-----------------|-------------------|
| M200 Europe | + PredictAmount | + PredictQuantity |
| M200 North... | + PredictAmount | + PredictQuantity |
| M200 Pacific | + PredictAmount | + PredictQuantity |
| R250 Europe | + PredictAmount | + PredictQuantity |
| R250 North... | + PredictAmount | + PredictQuantity |
| R250 Pacific | + PredictAmount | + PredictQuantity |
| R750 Europe | + PredictAmount | + PredictQuantity |
| R750 North... | + PredictAmount | + PredictQuantity |
| R750 Pacific | + PredictAmount | + PredictQuantity |
| T1000 Euro... | + PredictAmount | + PredictQuantity |
| T1000 Nort... | + PredictAmount | + PredictQuantity |
| T1000 Pacific | + PredictAmount | + PredictQuantity |

Resultados

Exportar los resultados a una tabla llamada serie2023

Guardado resultado de consulta de minería de datos

Origen de datos:

AdventureWorksDW2008R2

Nombre de la tabla:

Serie2023

Agregar a vista del origen de datos:

Haga clic en el botón Guardar para guardar el resultado de la consulta de minería de datos en la base de datos.

Detener Cerrar

Mostrar la consulta en sql server

A screenshot of the SQL Server Management Studio interface. The query window title is "SQLQuery1.sql - LA...W2008R2 (tec (64))". The query is "SELECT * FROM Serie2023". The results grid shows 120 rows of data with columns: Model, Region, PredictAmount, \$TIME, PredictQuantity, \$TIME, and PredictQuantity, Quantity. The data includes various entries for models like M200 Europe, M200 North America, and M200 Pacific across different time periods. A status bar at the bottom indicates the query was executed successfully on a laptop with Windows 7 Pro (15.0 RTM) and the session ID tec (64).

| Model | Region | PredictAmount | \$TIME | PredictQuantity | \$TIME | PredictQuantity | Quantity |
|-------|--------------------|------------------|-------------------------|-----------------|--------|-----------------|----------|
| 1 | M200 Europe | 264039.420693544 | 2008-07-25 00:00:00.000 | NULL | NULL | NULL | |
| 2 | M200 Europe | 323995.069045674 | 2008-08-25 00:00:00.000 | NULL | NULL | NULL | |
| 3 | M200 Europe | 346405.627525689 | 2008-09-25 00:00:00.000 | NULL | NULL | NULL | |
| 4 | M200 Europe | 337472.763729162 | 2008-10-25 00:00:00.000 | NULL | NULL | NULL | |
| 5 | M200 Europe | 342890.810723042 | 2008-11-25 00:00:00.000 | NULL | NULL | NULL | |
| 6 | M200 Europe | NULL | 2008-07-25 00:00:00.000 | 121 | | | |
| 7 | M200 Europe | NULL | 2008-08-25 00:00:00.000 | 142 | | | |
| 8 | M200 Europe | NULL | 2008-09-25 00:00:00.000 | 152 | | | |
| 9 | M200 Europe | NULL | 2008-10-25 00:00:00.000 | 149 | | | |
| 10 | M200 Europe | NULL | 2008-11-25 00:00:00.000 | 154 | | | |
| 11 | M200 North America | 372986.422986599 | 2008-07-25 00:00:00.000 | NULL | NULL | NULL | |
| 12 | M200 North America | 411315.295378705 | 2008-08-25 00:00:00.000 | NULL | NULL | NULL | |
| 13 | M200 North America | 356186.599413928 | 2008-09-25 00:00:00.000 | NULL | NULL | NULL | |
| 14 | M200 North America | 412292.12224295 | 2008-10-25 00:00:00.000 | NULL | NULL | NULL | |
| 15 | M200 North America | 473739.1877163 | 2008-11-25 00:00:00.000 | NULL | NULL | NULL | |
| 16 | M200 North America | NULL | 2008-07-25 00:00:00.000 | 163 | | | |
| 17 | M200 North America | NULL | 2008-08-25 00:00:00.000 | 178 | | | |
| 18 | M200 North America | NULL | 2008-09-25 00:00:00.000 | 156 | | | |
| 19 | M200 North America | NULL | 2008-10-25 00:00:00.000 | 173 | | | |
| 20 | M200 North America | NULL | 2008-11-25 00:00:00.000 | 203 | | | |
| 21 | M200 Pacific | 107369.298764998 | 2008-07-25 00:00:00.000 | NULL | NULL | NULL | |
| 22 | M200 Pacific | 106901.652588791 | 2008-08-25 00:00:00.000 | NULL | NULL | NULL | |
| 23 | M200 Pacific | 107913.631054087 | 2008-09-25 00:00:00.000 | NULL | NULL | NULL | |
| 24 | M200 Pacific | 107276.186033851 | 2008-10-25 00:00:00.000 | NULL | NULL | NULL | |
| 25 | M200 Pacific | 107846.921648206 | 2008-11-25 00:00:00.000 | NULL | NULL | NULL | |
| 26 | M200 Pacific | NULL | 2008-07-25 00:00:00.000 | 46 | | | |
| 27 | M200 Pacific | NULL | 2008-08-25 00:00:00.000 | 44 | | | |
| 28 | M200 Pacific | NULL | 2008-09-25 00:00:00.000 | 42 | | | |
| 29 | M200 Pacific | NULL | 2008-10-25 00:00:00.000 | 42 | | | |
| 30 | M200 Pacific | NULL | 2008-11-25 00:00:00.000 | 38 | | | |
| 31 | R250 Europe | 40436.4879557353 | 2008-07-25 00:00:00.000 | NULL | NULL | NULL | |
| 32 | R250 Europe | 36734.2609721643 | 2008-08-25 00:00:00.000 | NULL | NULL | NULL | |
| 33 | R250 Europe | 32055.4600077705 | 2008-09-25 00:00:00.000 | NULL | NULL | NULL | |

Query executed successfully. LAPTOP-P59U9Q17 (15.0 RTM) tec (64) AdventureWorksDW2008R2 00:00:00 120 rows

1.- Guardar los resultados de una predicción

```
SELECT FLATTENED  
[v Time Series].[Model Region],  
(PredictTimeSeries([v Time Series].[Amount],5)) as [PredictAmount],  
(PredictTimeSeries([v Time Series].[Quantity],5)) as [PredictQuantity]  
From  
[v Time Series]
```

Consulta con modificación FLATTENED

2.- Para quitar información de estructura jerárquica de los resultados en el panel Resultados

Forecasting.dmm [Diseño] ×

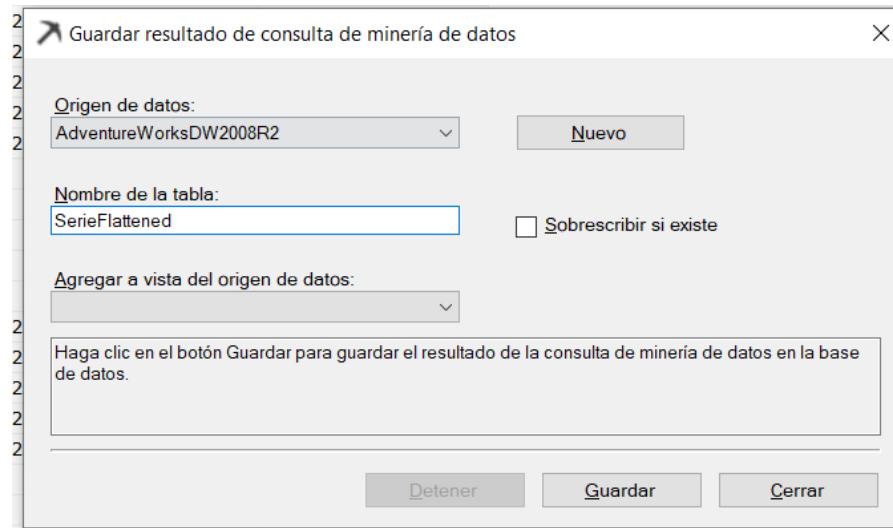
Estructura de minería de datos → Modelos de minería de datos Visor de modelos de minería de datos Gráfico de precisión de minería de datos Predicción de modelo de minería de datos

Model Region PredictAmount.\$TIME PredictAmount.Amount PredictQuantity.\$TIME PredictQuantity.Quantity

| Model Region | PredictAmount.\$TIME | PredictAmount.Amount | PredictQuantity.\$TIME | PredictQuantity.Quantity |
|--------------------|---------------------------|----------------------|---------------------------|--------------------------|
| M200 Europe | 25/07/2008 12:00:00 a. m. | 264039.420693544 | | |
| M200 Europe | 25/08/2008 12:00:00 a. m. | 323995.069045674 | | |
| M200 Europe | 25/09/2008 12:00:00 a. m. | 346405.627525689 | | |
| M200 Europe | 25/10/2008 12:00:00 a. m. | 337472.763729162 | | |
| M200 Europe | 25/11/2008 12:00:00 a. m. | 342890.810723042 | | |
| M200 Europe | | | 25/07/2008 12:00:00 a. m. | 121 |
| M200 Europe | | | 25/08/2008 12:00:00 a. m. | 142 |
| M200 Europe | | | 25/09/2008 12:00:00 a. m. | 152 |
| M200 Europe | | | 25/10/2008 12:00:00 a. m. | 149 |
| M200 Europe | | | 25/11/2008 12:00:00 a. m. | 154 |
| M200 North America | 25/07/2008 12:00:00 a. m. | 372986.422986599 | | |
| M200 North America | 25/08/2008 12:00:00 a. m. | 411315.295378705 | | |
| M200 North America | 25/09/2008 12:00:00 a. m. | 356186.599413928 | | |
| M200 North America | 25/10/2008 12:00:00 a. m. | 412292.12224295 | | |
| M200 North America | 25/11/2008 12:00:00 a. m. | 473739.1877163 | | |
| M200 North America | | | 25/07/2008 12:00:00 a. m. | 163 |
| M200 North America | | | 25/08/2008 12:00:00 a. m. | 178 |
| M200 North America | | | 25/09/2008 12:00:00 a. m. | 156 |
| M200 North America | | | 25/10/2008 12:00:00 a. m. | 173 |
| M200 North America | | | 25/11/2008 12:00:00 a. m. | 203 |
| M200 Pacific | 25/07/2008 12:00:00 a. m. | 107369.298764998 | | |
| M200 Pacific | 25/08/2008 12:00:00 a. m. | 106901.652588791 | | |
| M200 Pacific | 25/09/2008 12:00:00 a. m. | 107913.631054087 | | |
| M200 Pacific | 25/10/2008 12:00:00 a. m. | 107276.186033851 | | |
| M200 Pacific | 25/11/2008 12:00:00 a. m. | 107846.921648206 | | |
| M200 Pacific | | | 25/07/2008 12:00:00 a. m. | 46 |
| M200 Pacific | | | 25/08/2008 12:00:00 a. m. | 44 |
| M200 Pacific | | | 25/09/2008 12:00:00 a. m. | 42 |
| M200 Pacific | | | 25/10/2008 12:00:00 a. m. | 42 |
| M200 Pacific | | | 25/11/2008 12:00:00 a. m. | 38 |
| R250 Europe | 25/07/2008 12:00:00 a. m. | 40436.4879557353 | | |
| R250 Europe | 25/08/2008 12:00:00 a. m. | 36734.2609721643 | | |
| R250 Europe | 25/09/2008 12:00:00 a. m. | 33953.4808077705 | | |

Ejecución de consulta finalizada con 120 filas recuperadas

3.- Para exportar los resultados de una consulta de predicción



SQLQuery1.sql - LA...W2008R2 (tec (62))* # X

```
select * from SerieFlattened
```

116 %

Results Messages

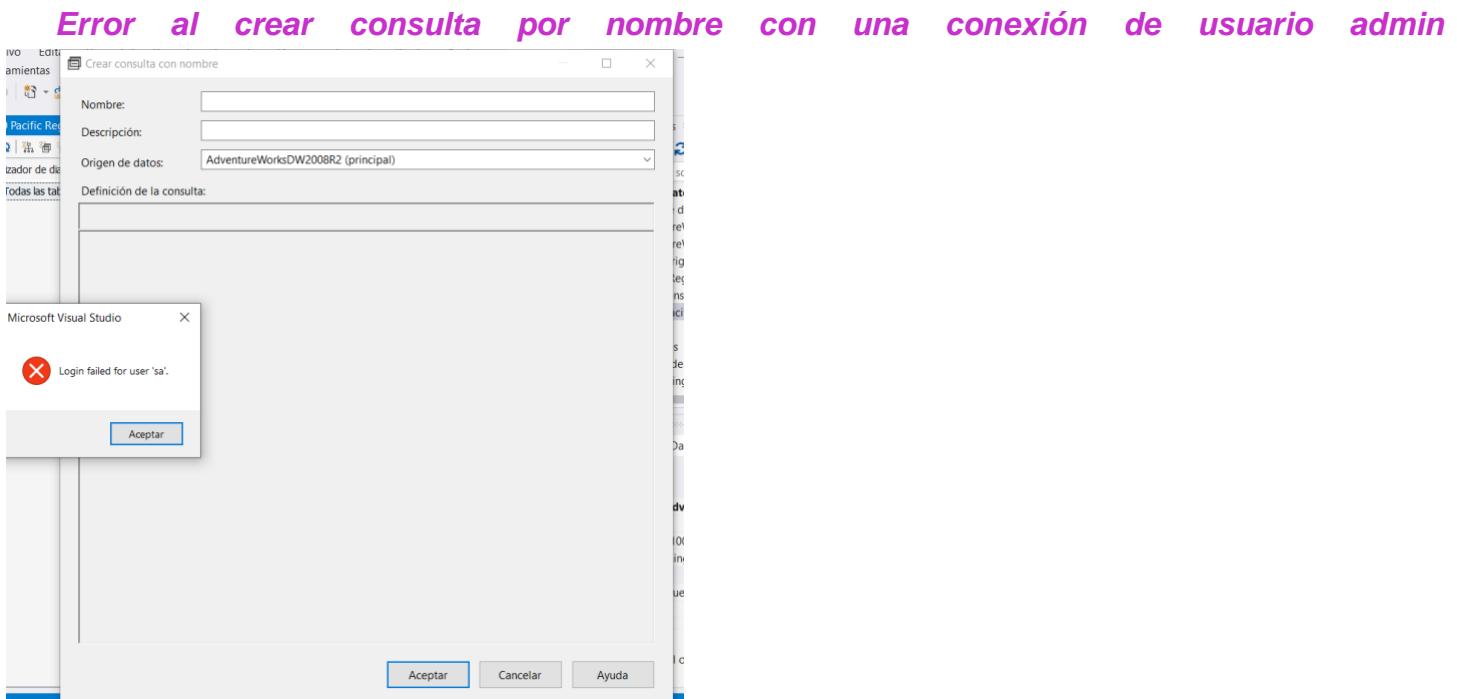
| | Model.Region | PredictAmount.\$TIME | PredictAmount.Amount | PredictQuantity.\$TIME | PredictQuantity.Quantity |
|----|--------------------|-------------------------|----------------------|-------------------------|--------------------------|
| 1 | M200 Europe | 2008-07-25 00:00:00.000 | 264039.420693544 | NULL | NULL |
| 2 | M200 Europe | 2008-08-25 00:00:00.000 | 323995.069045674 | NULL | NULL |
| 3 | M200 Europe | 2008-09-25 00:00:00.000 | 346405.627525689 | NULL | NULL |
| 4 | M200 Europe | 2008-10-25 00:00:00.000 | 337472.763729162 | NULL | NULL |
| 5 | M200 Europe | 2008-11-25 00:00:00.000 | 342890.810723042 | NULL | NULL |
| 6 | M200 Europe | NULL | NULL | 2008-07-25 00:00:00.000 | 121 |
| 7 | M200 Europe | NULL | NULL | 2008-08-25 00:00:00.000 | 142 |
| 8 | M200 Europe | NULL | NULL | 2008-09-25 00:00:00.000 | 152 |
| 9 | M200 Europe | NULL | NULL | 2008-10-25 00:00:00.000 | 149 |
| 10 | M200 Europe | NULL | NULL | 2008-11-25 00:00:00.000 | 154 |
| 11 | M200 North America | 2008-07-25 00:00:00.000 | 372986.422986599 | NULL | NULL |
| 12 | M200 North America | 2008-08-25 00:00:00.000 | 411315.295378705 | NULL | NULL |
| 13 | M200 North America | 2008-09-25 00:00:00.000 | 356186.599413928 | NULL | NULL |
| 14 | M200 North America | 2008-10-25 00:00:00.000 | 412292.12224295 | NULL | NULL |
| 15 | M200 North America | 2008-11-25 00:00:00.000 | 473739.1877163 | NULL | NULL |
| 16 | M200 North America | NULL | NULL | 2008-07-25 00:00:00.000 | 163 |
| 17 | M200 North America | NULL | NULL | 2008-08-25 00:00:00.000 | 178 |
| 18 | M200 North America | NULL | NULL | 2008-09-25 00:00:00.000 | 156 |
| 19 | M200 North America | NULL | NULL | 2008-10-25 00:00:00.000 | 173 |
| 20 | M200 North America | NULL | NULL | 2008-11-25 00:00:00.000 | 203 |
| 21 | M200 Pacific | 2008-07-25 00:00:00.000 | 107369.298764998 | NULL | NULL |
| 22 | M200 Pacific | 2008-08-25 00:00:00.000 | 106901.652588791 | NULL | NULL |
| 23 | M200 Pacific | 2008-09-25 00:00:00.000 | 107913.631054087 | NULL | NULL |
| 24 | M200 Pacific | 2008-10-25 00:00:00.000 | 107276.186033851 | NULL | NULL |
| 25 | M200 Pacific | 2008-11-25 00:00:00.000 | 107846.921648206 | NULL | NULL |
| 26 | M200 Pacific | NULL | NULL | 2008-07-25 00:00:00.000 | 46 |
| 27 | M200 Pacific | NULL | NULL | 2008-08-25 00:00:00.000 | 44 |
| 28 | M200 Pacific | NULL | NULL | 2008-09-25 00:00:00.000 | 42 |
| 29 | M200 Pacific | NULL | NULL | 2008-10-25 00:00:00.000 | 42 |
| 30 | M200 Pacific | NULL | NULL | 2008-11-25 00:00:00.000 | 38 |
| 31 | R250 Europe | 2008-07-25 00:00:00.000 | 40436.4879557353 | NULL | NULL |
| 32 | R250 Europe | 2008-08-25 00:00:00.000 | 36734.2609721643 | NULL | NULL |
| 33 | R250 Europe | 2008-09-25 00:00:00.000 | 33953.4808077705 | NULL | NULL |
| 34 | R250 Europe | 2008-10-25 00:00:00.000 | 36470.70666392 | NULL | NULL |

Query executed successfully.

LAPTOP-P59U9Q17 (15.0 RTM) | tec (62) | AdventureWorksDW2008R2 | 00:00:00 | 120 rows

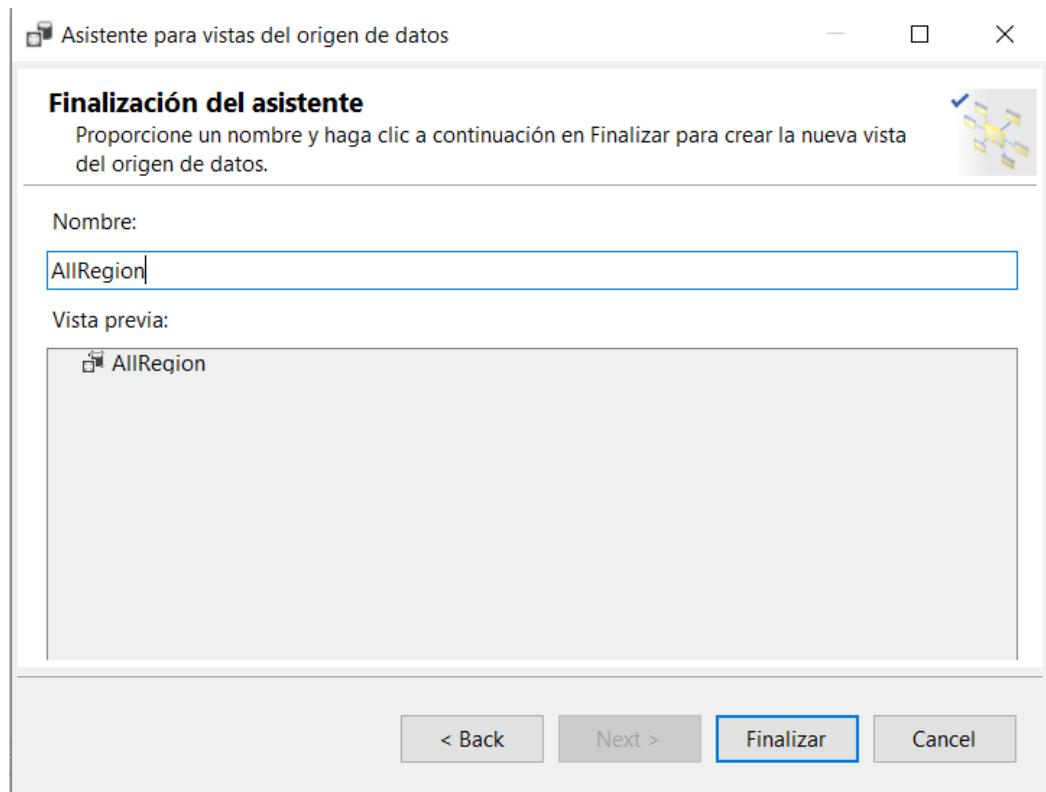
Agregar un modelo de predicción agregado

En esta parte tuvimos un error porque al autenticarnos con un usuario administrador nos aparece que el login falla, si lo hacemos con autenticación de Windows como marca el tutorial el proceso de la estructura y el modelo no se realiza correctamente.



1.- Para crear una vista del origen de datos mediante una consulta o cálculo personalizado

Pasos con autenticación de Windows para crear la consulta para AllRegions



Crear consulta con nombre

Nombre: AllRegions

Descripción: Suma y promedio de ventas para todos los modelos y regiones.

Origen de datos: Adventure Works DW2008R2 (principal)

Definición de la consulta:

Columna Alias Tabla Resultado Tipo de orden Criterio de orden Filtro

```
SELECT ReportingDate,
SUM([Quantity]) as SumQty, AVG([Quantity]) as AvgQty,
SUM([Amount]) AS SumAmt, AVG([Amount]) AS AvgAmt,
'All Regions' as [Region]
FROM dbo.vTimeSeries
GROUP BY ReportingDate
```

Aceptar Cancelar Ayuda

AllRegions.dsv [Diseño] X

Organizador de diagramas

<Todas las tablas>

Tablas

AllRegions

AllRegions

| |
|---------------|
| ReportingDate |
| SumQty |
| AvgQty |
| SumAmt |
| AvgAmt |
| Region |

Explorador de soluciones

Solución "DM_Intermediate" (1 de 1 proy)

DM_Intermediate

- Orígenes de datos
 - AdventureWorksDW2008R2.ds
 - Adventure Works DW2008R2.ds
- Vistas del origen de datos
 - SalesByRegion.dsv
 - AllRegions.dsv
- Cubos
- Dimensiones
- Estructuras de minería de datos
 - Forecasting.dmm

Propiedades

AllRegions DataSourceView

Datos

| | |
|--------------------|--------------------------|
| Data Source | Adventure Works DW2008R2 |
| Description | |
| Name | AllRegions |
| NameMatchingCriter | (ninguno) |

Opciones avanzadas

| | |
|-----------------------|------|
| RetrieveRelationship: | True |
| SchemaRestriction | |

Name

Especifica el nombre del objeto.

Lista de errores

Toda la solución 0 Errores 0 Advertencias 0 Mensajes

Lista de errores de búsqueda

| Descripción | Proyecto | Archivo | Lí... |
|-------------|----------|---------|-------|
|-------------|----------|---------|-------|

Error que marcaba con la autenticación de Windows en el procesamiento de la estructura y modelo.

2.- Para generar una estructura de minería de datos y un modelo de minería de datos utilizando los datos agregados

Especificar los datos de aprendizaje

Especifique las columnas que se utilizarán en el análisis.



Estructura del modelo de minería de datos:

| <input checked="" type="checkbox"/> | Tablas y columnas | Clave | <input type="checkbox"/> Entrada | <input type="checkbox"/> De predic... |
|-------------------------------------|-------------------|-------------------------------------|-------------------------------------|---------------------------------------|
| <input checked="" type="checkbox"/> | AvgAmt | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | AvgQty | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | Region | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input checked="" type="checkbox"/> | ReportingDate | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input checked="" type="checkbox"/> | SumAmt | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | SumQty | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

Recomendar entradas para la predicción seleccionada actualmente:

[Sugerir](#)

< Back

[Next >](#)

[Finish >>](#)

[Cancel](#)

Especificar el contenido y el tipo de datos de las columnas

Especifique el contenido y el tipo de datos de las columnas de la estructura de minería de datos.



Estructura del modelo de minería de datos:

| Columnas | Tipo de contenido | Tipo de datos |
|----------------|-------------------|---------------|
| Avg Amt | Continuous | Double |
| Avg Qty | Continuous | Long |
| Region | Key | Text |
| Reporting Date | Key Time | Date |
| Sum Amt | Continuous | Double |
| Sum Qty | Continuous | Long |

Detectar datos continuos o discretos para columnas numéricas:

< Back

Modelo AllRegions

Lista de errores

Toda la solución 0 Errores 0 Advertencias 0 Mensajes

Lista de errores de búsqueda

Descripción Proyecto Archivo Lí...

AllRegions DataSourceView

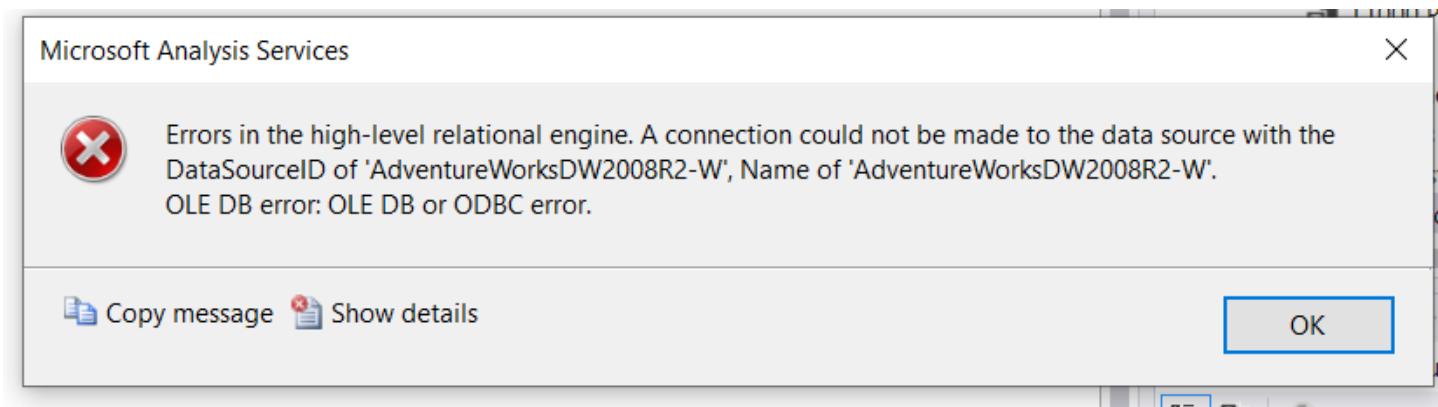
Datos

Data Source Adventure Works DW2008
Description
Name AllRegions
NameMatchingCriter (ninguno)

Opciones avanzadas

RetrieveRelationship: True
SchemaRestriction

Name Especifica el nombre del objeto.



El error OLE DB me aparece cuando la conexión es con Windows autenticación entonces lo que decidimos hacer es crear en Adventure Works dos vistas con las consultas que están indicadas en el tutorial. Y al seleccionar las tablas y vistas seleccionar esa vista.

Vistas creadas:

Con esto obtuvimos un proceso exitoso

Comando

- Procesando Estructura de minería de datos, 'AllRegions' completados.
 - Hora de inicio: 19/05/2023 03:47:37 p. m.; Hora de finalización: 19/05/2023 03:47:40 p. m.; Duración: 0:00:02
- Procesando Modelo de minería de datos, 'AllRegions' completados.
- Procesando Cubo, 'AllRegions ~MC' completados.
 - Hora de inicio: 19/05/2023 03:47:37 p. m.; Hora de finalización: 19/05/2023 03:47:38 p. m.; Duración: 0:00:00
 - Procesando Grupo de medida, '~CaseDetail ~MG' completados.
- Procesando Dimensión, 'AllRegions ~MC-Region' completados.

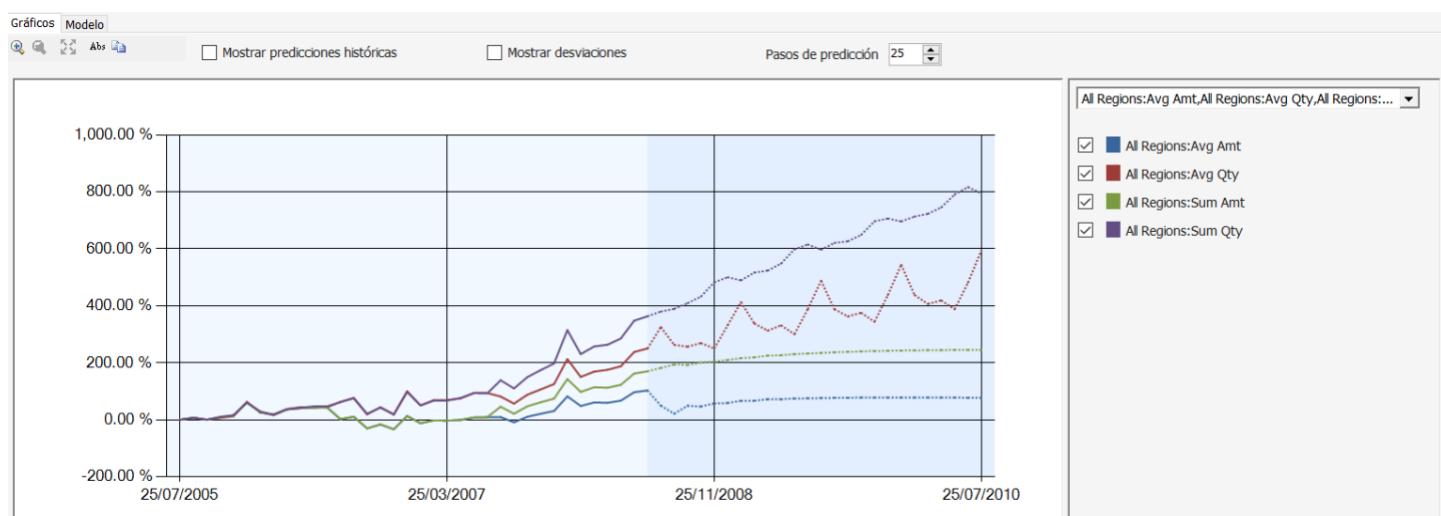
Estado:

- ✓ Proceso finalizado correctamente.

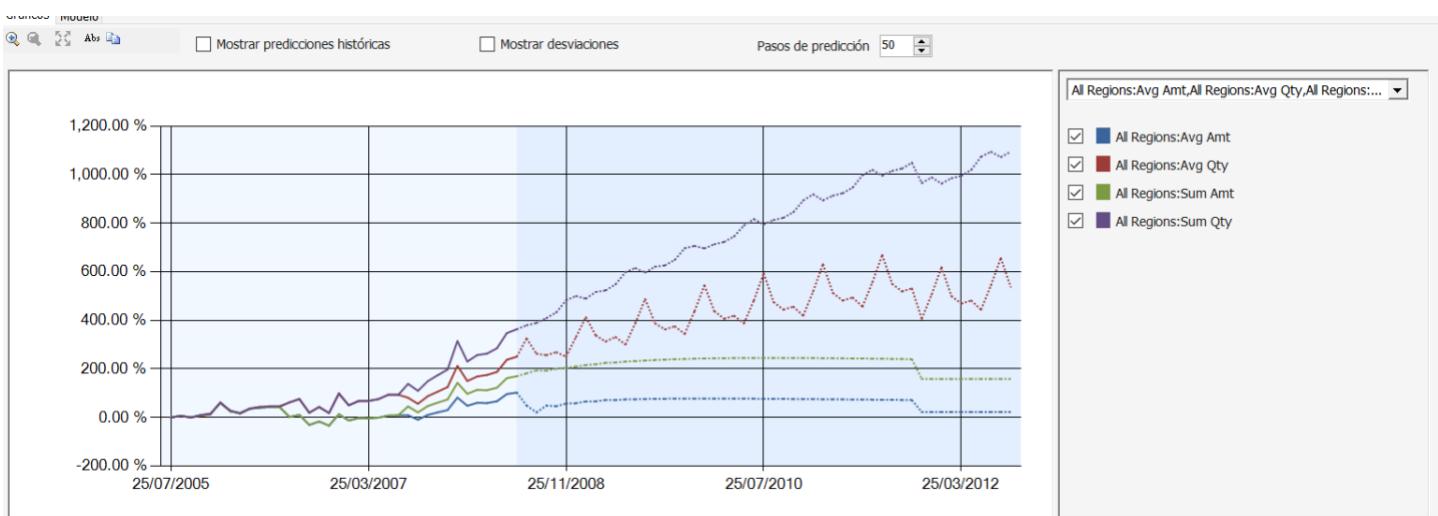
[Detener](#)[Reprocesar](#)[Ver detalles...](#)[Copiar](#)[Cerrar](#)[Ayuda](#)

Reportes:

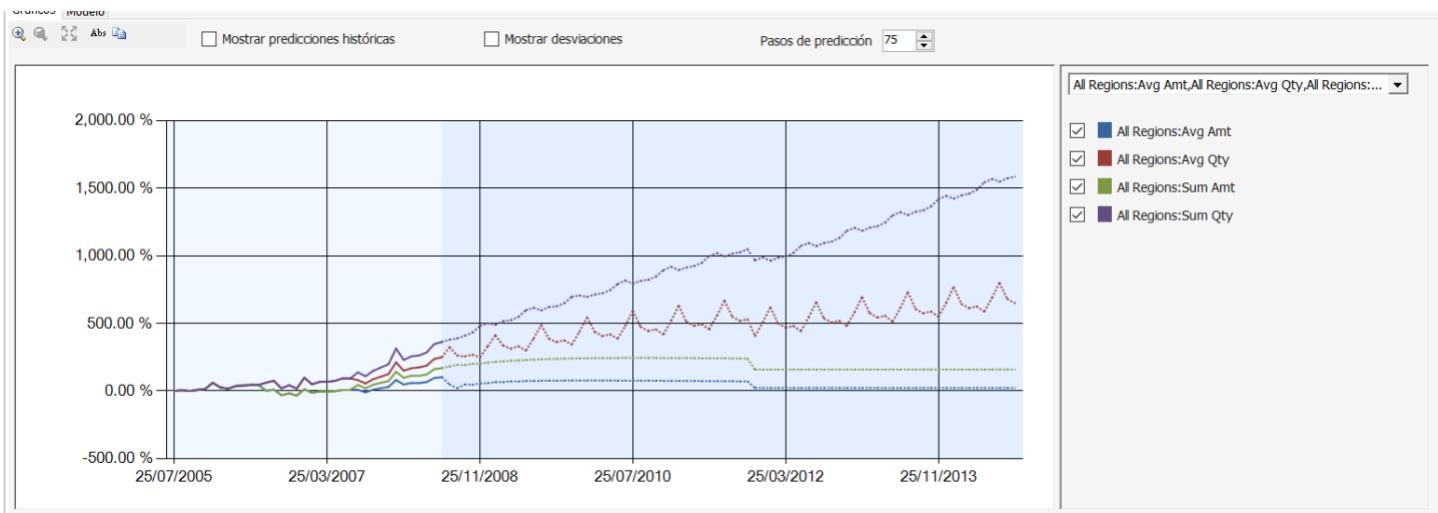
Todas las regiones, Pasos de predicción: 25.



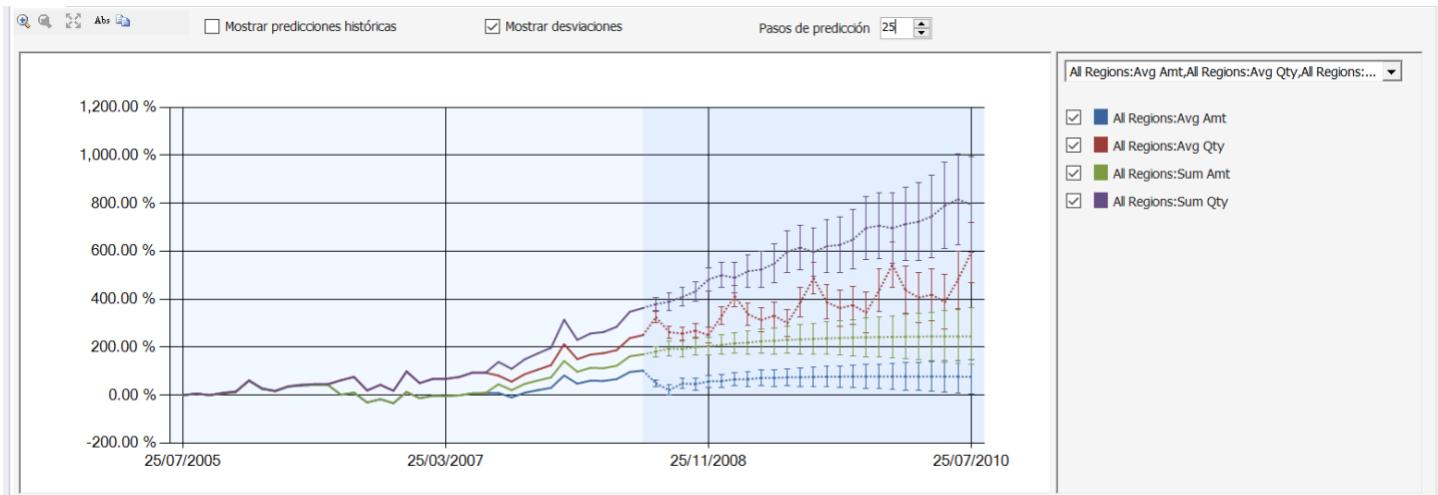
Todas las regiones, Pasos de predicción: 50.



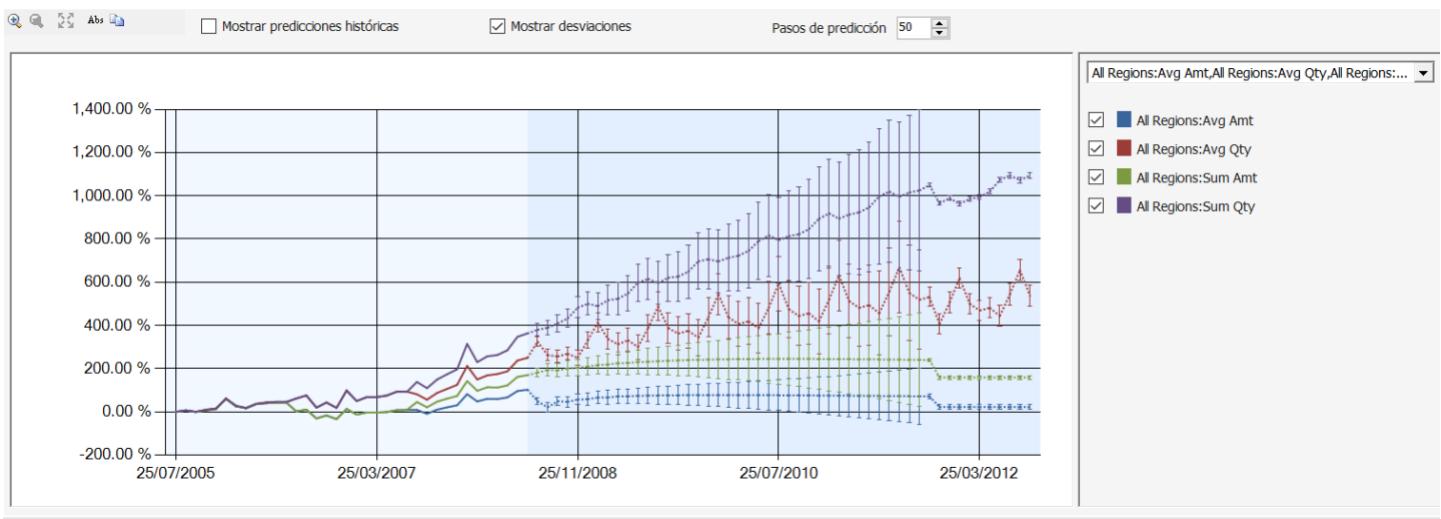
Todas las regiones, Pasos de predicción: 75.



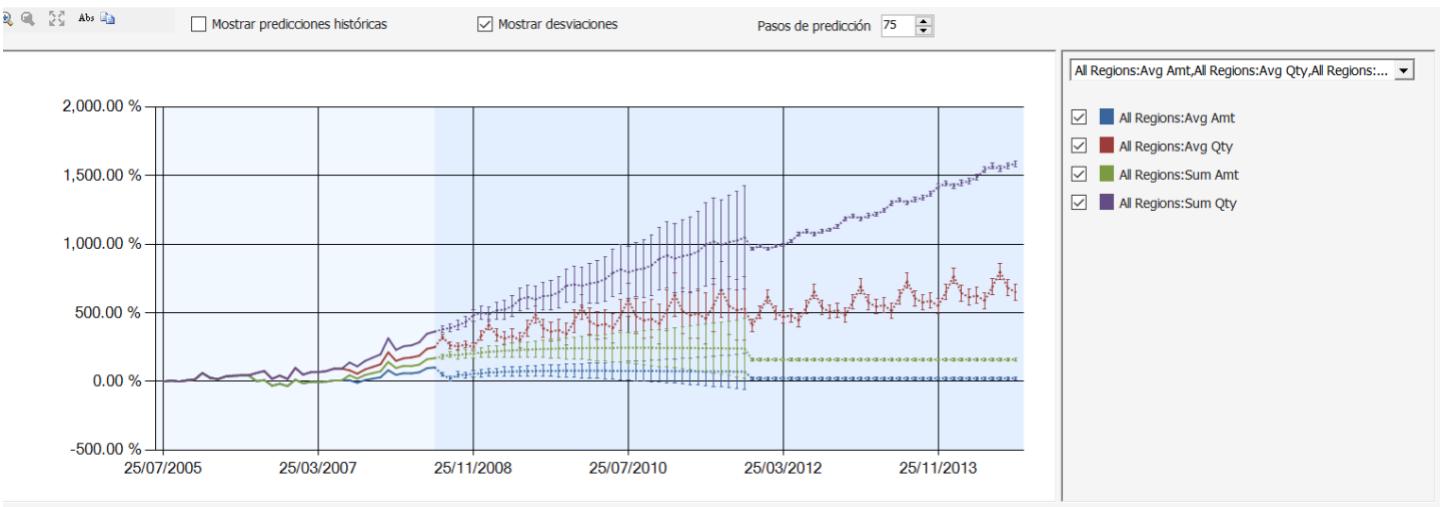
Todas las regiones, Pasos de predicción: 25. Con mostrar desviaciones.



Todas las regiones, Pasos de predicción: 50. Con mostrar desviaciones.



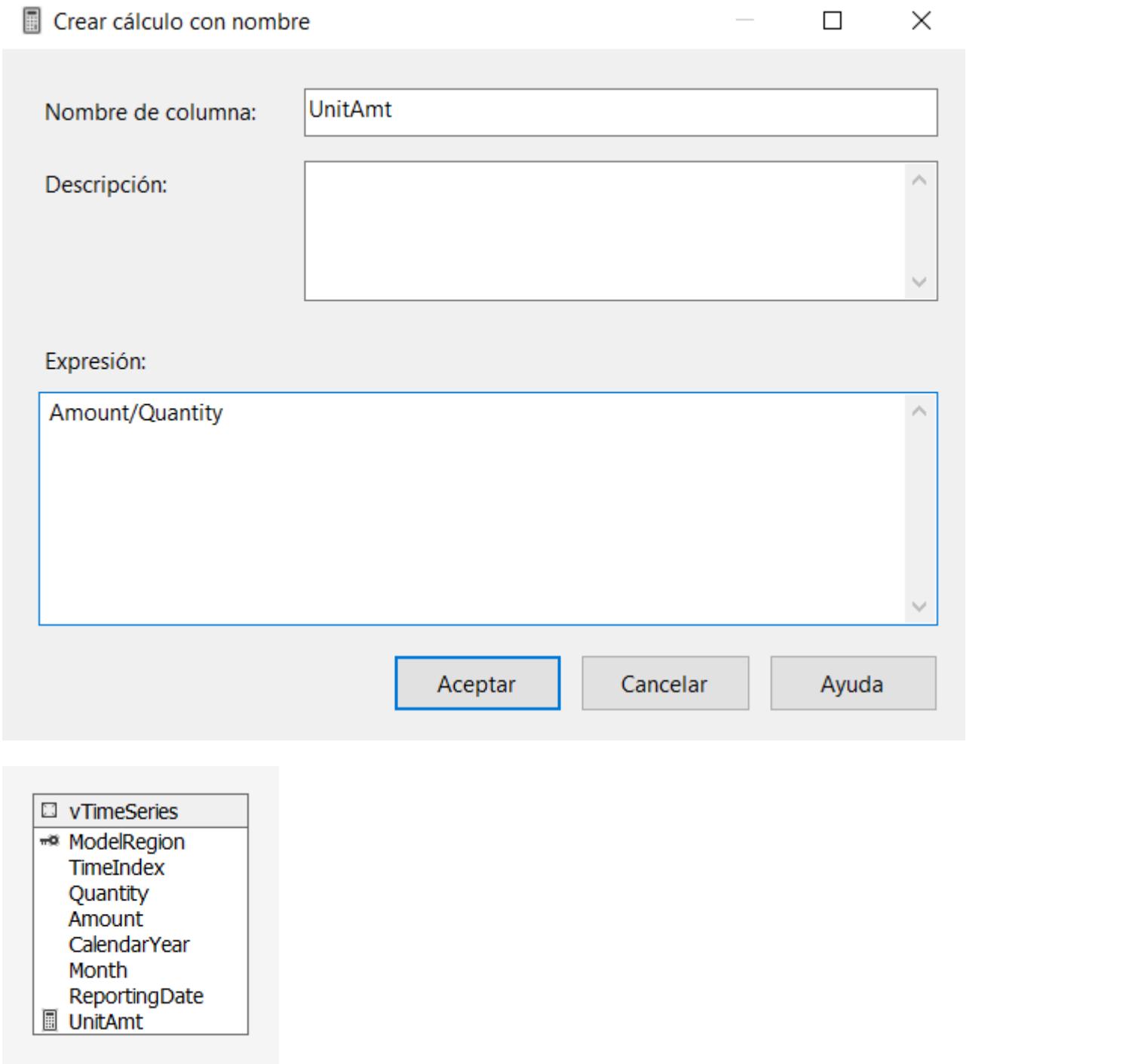
Todas las regiones, Pasos de predicción: 75. Con mostrar desviaciones.



Descripción de las tendencias del modelo de serie temporal

1.- Para crear un cálculo con nombre

Crear UnitAmt



2.- Para crear un gráfico dinámico mediante el cálculo con nombre (En las últimas versiones a partir de VS2015 ya no tiene esta opción)

3.- Para ver el árbol de decisión de cada serie

No se realizó la versión de visual studio es la 2019. Solo aparece una tabla con la información pero no es dinámica

Explorar la tabla vTimeSeries ✎ X SalesByRegion.dsv [Diseño]

Tabla

| ModelRegion | TimeIndex | Quantity | Amount | CalendarYear | Month | ReportingDate | UnitAmt |
|-------------|-----------|----------|------------|--------------|-------|---------------------|-----------|
| M200 Europe | 200507 | 6 | 20324.94 | 2005 | 7 | 2005-07-25 00:00... | 3387.49 |
| M200 Europe | 200508 | 6 | 20349.94 | 2005 | 8 | 2005-08-25 00:00... | 3391.6566 |
| M200 Europe | 200509 | 5 | 16949.95 | 2005 | 9 | 2005-09-25 00:00... | 3389.99 |
| M200 Europe | 200510 | 5 | 16949.95 | 2005 | 10 | 2005-10-25 00:00... | 3389.99 |
| M200 Europe | 200511 | 8 | 27124.92 | 2005 | 11 | 2005-11-25 00:00... | 3390.615 |
| M200 Europe | 200512 | 8 | 27049.92 | 2005 | 12 | 2005-12-25 00:00... | 3381.24 |
| M200 Europe | 200601 | 8 | 27124.92 | 2006 | 1 | 2006-01-25 00:00... | 3390.615 |
| M200 Europe | 200602 | 7 | 23699.93 | 2006 | 2 | 2006-02-25 00:00... | 3385.7042 |
| M200 Europe | 200603 | 8 | 27049.92 | 2006 | 3 | 2006-03-25 00:00... | 3381.24 |
| M200 Europe | 200604 | 8 | 27099.92 | 2006 | 4 | 2006-04-25 00:00... | 3387.49 |
| M200 Europe | 200605 | 7 | 23699.93 | 2006 | 5 | 2006-05-25 00:00... | 3385.7042 |
| M200 Europe | 200606 | 9 | 30524.91 | 2006 | 6 | 2006-06-25 00:00... | 3391.6566 |
| M200 Europe | 200607 | 12 | 24678.464 | 2006 | 7 | 2006-07-25 00:00... | 2056.5386 |
| M200 Europe | 200608 | 16 | 32897.1782 | 2006 | 8 | 2006-08-25 00:00... | 2056.0736 |
| M200 Europe | 200609 | 17 | 35057.8834 | 2006 | 9 | 2006-09-25 00:00... | 2062.2284 |
| M200 Europe | 200610 | 15 | 30892.7228 | 2006 | 10 | 2006-10-25 00:00... | 2059.5148 |
| M200 Europe | 200611 | 16 | 32964.1424 | 2006 | 11 | 2006-11-25 00:00... | 2060.2589 |
| M200 Europe | 200612 | 32 | 65905.9634 | 2006 | 12 | 2006-12-25 00:00... | 2059.5613 |
| M200 Europe | 200701 | 20 | 41227.4994 | 2007 | 1 | 2007-01-25 00:00... | 2061.3749 |
| M200 Europe | 200702 | 27 | 55615.8296 | 2007 | 2 | 2007-02-25 00:00... | 2059.8455 |
| M200 Europe | 200703 | 24 | 49379.2494 | 2007 | 3 | 2007-03-25 00:00... | 2057.4687 |
| M200 Europe | 200704 | 26 | 53499.7672 | 2007 | 4 | 2007-04-25 00:00... | 2057.6833 |
| M200 Europe | 200705 | 26 | 53522.0886 | 2007 | 5 | 2007-05-25 00:00... | 2058.5418 |
| M200 Europe | 200706 | 42 | 86597.838 | 2007 | 6 | 2007-06-25 00:00... | 2061.8532 |
| M200 Europe | 200707 | 37 | 85489.63 | 2007 | 7 | 2007-07-25 00:00... | 2310.5305 |
| M200 Europe | 200708 | 47 | 108439.53 | 2007 | 8 | 2007-08-25 00:00... | 2307.224 |
| M200 Europe | 200709 | 55 | 127024.45 | 2007 | 9 | 2007-09-25 00:00... | 2309.5354 |
| M200 Europe | 200710 | 50 | 115449.5 | 2007 | 10 | 2007-10-25 00:00... | 2308.99 |
| M200 Europe | 200711 | 51 | 117644.49 | 2007 | 11 | 2007-11-25 00:00... | 2306.7547 |
| M200 Europe | 200712 | 99 | 228304.01 | 2007 | 12 | 2007-12-25 00:00... | 2306.1011 |
| M200 Europe | 200801 | 60 | 138349.4 | 2008 | 1 | 2008-01-25 00:00... | 2305.8233 |
| M200 Europe | 200802 | 86 | 198344.14 | 2008 | 2 | 2008-02-25 00:00... | 2306.3272 |
| M200 Europe | 200803 | 79 | 182129.21 | 2008 | 3 | 2008-03-25 00:00... | 2305.433 |
| M200 Europe | 200804 | 79 | 182254.21 | 2008 | 4 | 2008-04-25 00:00... | 2307.0153 |

Predecir utilizando el modelo de cálculo del promedio de la predicción

1.- Para crear la vista del origen de datos que contiene los datos de reemplazo

Crear consulta con nombre

Nombre: T1000 Pacific Region

Descripción: Filtro vTimeSeries por región y modelo

Origen de datos: AdventureWorksDW2008R2-W (principal)

Definición de la consulta:

vTimeSeries

- * (Todas las columnas)
- ModelRegion
- TimeIndex
- Quantity
- Amount

| Columna | Alias | Tabla | Resul... | Tipo de orden | Criterio de or... | Filtro |
|---------------|-------|-------------|-------------------------------------|---------------|-------------------|----------------|
| ReportingDate | | vTimeSeries | <input checked="" type="checkbox"/> | | | = NT1000 Pa... |
| ModelRegion | | vTimeSeries | <input checked="" type="checkbox"/> | | | |

```
SELECT ReportingDate, ModelRegion, Quantity, Amount
FROM vTimeSeries
WHERE (ModelRegion = 'NT1000 Pacific')
```

Aceptar Cancelar Ayuda

| |
|---------------|
| ReportingDate |
| ModelRegion |
| Quantity |
| Amount |

Explorar la tabla T1000 Pacific Region T1000 Pacific Region.dsv [Diseño]*

Tabla

| ReportingDate | ModelRegion | Quantity | Amount |
|----------------------|---------------|----------|-----------|
| 2007-07-25 00:00:00Z | T1000 Pacific | 7 | 16688.49 |
| 2007-08-25 00:00:00Z | T1000 Pacific | 12 | 28608.84 |
| 2007-09-25 00:00:00Z | T1000 Pacific | 12 | 28608.84 |
| 2007-10-25 00:00:00Z | T1000 Pacific | 25 | 59601.75 |
| 2007-11-25 00:00:00Z | T1000 Pacific | 19 | 45297.33 |
| 2007-12-25 00:00:00Z | T1000 Pacific | 44 | 104899.08 |
| 2008-01-25 00:00:00Z | T1000 Pacific | 31 | 73906.17 |
| 2008-02-25 00:00:00Z | T1000 Pacific | 35 | 83442.45 |
| 2008-03-25 00:00:00Z | T1000 Pacific | 29 | 69138.03 |
| 2008-04-25 00:00:00Z | T1000 Pacific | 41 | 97746.87 |
| 2008-05-25 00:00:00Z | T1000 Pacific | 40 | 95362.8 |
| 2008-06-25 00:00:00Z | T1000 Pacific | 42 | 100130.94 |

2.- Para generar la consulta de predicción y proporcionar los datos de reemplazo

Reportes

Origen de datos:

T1000 Pacific Region



Nombre de tabla o vista

 T1000 Pacific Region

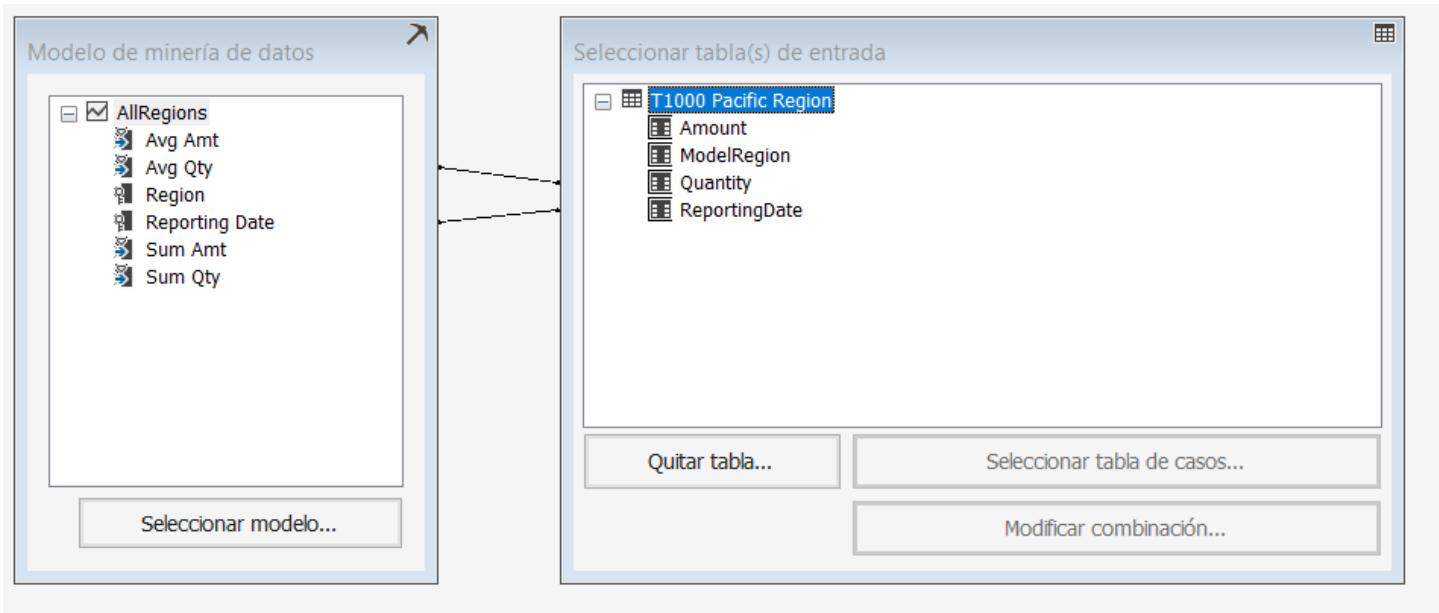
The screenshot shows the 'Modelo de minería de datos' (Data Mining Model) dialog box. On the left, the 'Modelo de minería de datos' tab is selected, displaying a list of columns: AllRegions, Avg Amt, Avg Qty, Region, Reporting Date, Sum Amt, and Sum Qty. A checkbox next to 'AllRegions' is checked. At the bottom of this tab is a 'Seleccionar modelo...' button. On the right, the 'Seleccionar tabla(s) de entrada' tab is selected, showing a list of tables: T1000 Pacific Region, which contains columns Amount, ModelRegion, Quantity, and ReportingDate. Below the table list are three buttons: 'Quitar tabla...', 'Seleccionar tabla de casos...', and 'Modificar combinación...'. A dashed arrow points from the 'AllRegions' checkbox in the first tab to the 'T1000 Pacific Region' table in the second tab.

MODIFICACIONES A AVG QTY

The screenshot shows the 'Modificar asignación' (Modify Assignment) dialog box. The title bar says 'Modificar asignación'. The main area is titled 'Asignaciones:' and contains a table for mapping columns between the data mining model and the source table T1000 Pacific Region.

| Columna del modelo de minería de datos | Columna de la tabla |
|--|------------------------------------|
| Avg Amt | |
| Avg Qty | T1000 Pacific Region.Quantity |
| Region | |
| Reporting Date | T1000 Pacific Region.ReportingDate |
| Sum Amt | |
| Sum Qty | |

At the bottom right are two buttons: 'Aceptar' (Accept) and 'Cancelar' (Cancel).



Creación de filas indicadas

AllRegions.dmm [Diseño] T1000 Pacific Region.csv [Diseño]

Estructura de minería de datos Modelos de minería de datos Visor de modelos de minería de datos Gráfico de precisión de minería de datos Predicción de modelo de minería de datos

Modelo de minería de datos

- AllRegions
 - Avg Amt
 - Avg Qty
 - Region
 - Reporting Date
 - Sum Amt
 - Sum Qty

Seleccionar modelo...

Seleccionar tabla(s) de entrada

T1000 Pacific Region

- Amount
- ModelRegion
- Quantity
- ReportingDate

Quitar tabla... Seleccionar tabla de casos...
Modificar combinación...

| Origen | Campo | Alias | Mos... | Grupo | Y/O | Criterios o argumento |
|-------------------|--------------------|--------------------|-------------------------------------|-------|-----|--|
| AllRegions | Region | Model Utilizado | <input checked="" type="checkbox"/> | | | |
| Expresión pers... | | ModelRegion | <input checked="" type="checkbox"/> | | | 'T1000 Pacific' |
| Función de pre... | PredictTimeSeri... | Valores predich... | <input checked="" type="checkbox"/> | | | [AllRegions].[Avg Qty],5,REPLACE_MODEL_CASES |
| | | | <input type="checkbox"/> | | | |

| Modelo Utiliz... | ModelRegion | Valores predichos | | | | | | | | | | | | |
|--|---------------|---------------------|--------|---------|--------------|----|--------------|----|--------------|----|--------------|----|--------------|----|
| All Regions | T1000 Pacific | - Valores predichos | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>\$TIME</th> <th>Avg Qty</th> </tr> </thead> <tbody> <tr> <td>25/07/200...</td> <td>68</td> </tr> <tr> <td>25/08/200...</td> <td>52</td> </tr> <tr> <td>25/09/200...</td> <td>48</td> </tr> <tr> <td>25/10/200...</td> <td>56</td> </tr> <tr> <td>25/11/200...</td> <td>44</td> </tr> </tbody> </table> | | | \$TIME | Avg Qty | 25/07/200... | 68 | 25/08/200... | 52 | 25/09/200... | 48 | 25/10/200... | 56 | 25/11/200... | 44 |
| \$TIME | Avg Qty | | | | | | | | | | | | | |
| 25/07/200... | 68 | | | | | | | | | | | | | |
| 25/08/200... | 52 | | | | | | | | | | | | | |
| 25/09/200... | 48 | | | | | | | | | | | | | |
| 25/10/200... | 56 | | | | | | | | | | | | | |
| 25/11/200... | 44 | | | | | | | | | | | | | |

Valores predichos

Modificar la consulta de predicción para los siguientes datos:

- *M200 Europe*

| Modelo Utiliz... | ModelRegion | Valores predichos | | | | | | | | | | | | |
|--|---------------|---------------------|--------|---------|--------------|-----|--------------|-----|--------------|-----|--------------|-----|--------------|----|
| All Regions | T1000 Pacific | - Valores predichos | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>\$TIME</th> <th>Avg Qty</th> </tr> </thead> <tbody> <tr> <td>25/07/200...</td> <td>143</td> </tr> <tr> <td>25/08/200...</td> <td>126</td> </tr> <tr> <td>25/09/200...</td> <td>115</td> </tr> <tr> <td>25/10/200...</td> <td>119</td> </tr> <tr> <td>25/11/200...</td> <td>94</td> </tr> </tbody> </table> | | | \$TIME | Avg Qty | 25/07/200... | 143 | 25/08/200... | 126 | 25/09/200... | 115 | 25/10/200... | 119 | 25/11/200... | 94 |
| \$TIME | Avg Qty | | | | | | | | | | | | | |
| 25/07/200... | 143 | | | | | | | | | | | | | |
| 25/08/200... | 126 | | | | | | | | | | | | | |
| 25/09/200... | 115 | | | | | | | | | | | | | |
| 25/10/200... | 119 | | | | | | | | | | | | | |
| 25/11/200... | 94 | | | | | | | | | | | | | |

- *M200 North America*

| Modelo Utiliz... | ModelRegion | Valores predichos |
|------------------|---------------|---------------------|
| All Regions | T1000 Pacific | - Valores predichos |
| | | \$TIME Avg Qty |
| | | 25/07/200... 208 |
| | | 25/08/200... 150 |
| | | 25/09/200... 149 |
| | | 25/10/200... 151 |
| | | 25/11/200... 172 |

- *M200 Pacific*

| Modelo Utiliz... | ModelRegion | Valores predichos |
|------------------|---------------|---------------------|
| All Regions | T1000 Pacific | - Valores predichos |
| | | \$TIME Avg Qty |
| | | 25/07/200... 89 |
| | | 25/08/200... 80 |
| | | 25/09/200... 71 |
| | | 25/10/200... 77 |
| | | 25/11/200... 57 |

- *R250 Europe*

| Modelo Utiliz... | ModelRegion | Valores predichos |
|------------------|---------------|---------------------|
| All Regions | T1000 Pacific | - Valores predichos |
| | | \$TIME Avg Qty |
| | | 25/07/200... 58 |
| | | 25/08/200... 42 |
| | | 25/09/200... 40 |
| | | 25/10/200... 40 |
| | | 25/11/200... 30 |

- *R250 North America*

| Modelo Utiliz... | ModelRegion | Valores predichos |
|------------------|---------------|-------------------------------|
| All Regions | T1000 Pacific | - Valores predichos |
| | | \$TIME Avg Qty |
| | | 25/07/2008 12:00:00 a. m. 114 |
| | | 25/08/2008 12:00:00 a. m. 70 |
| | | 25/09/2008 12:00:00 a. m. 67 |
| | | 25/10/2008 12:00:00 a. m. 64 |
| | | 25/11/2008 12:00:00 a. m. 41 |

- *R250 Pacific*

| Modelo Utiliz... | ModelRegion | Valores predichos |
|------------------|---------------|------------------------|
| All Regions | T1000 Pacific | - Valores predichos |
| | | \$TIME Avg Qty |
| | | 25/07/2008 12:00... 61 |
| | | 25/08/2008 12:00... 46 |
| | | 25/09/2008 12:00... 45 |
| | | 25/10/2008 12:00... 44 |
| | | 25/11/2008 12:00... 35 |

- *R750 Europe*

| Modelo Utiliz... | ModelRegion | Valores predichos |
|------------------|---------------|---------------------|
| All Regions | T1000 Pacific | - Valores predichos |
| | | \$TIME Avg Qty |
| | | 25/07/2000... 74 |
| | | 25/08/2000... 58 |
| | | 25/09/2000... 61 |
| | | 25/10/2000... 68 |
| | | 25/11/2000... 59 |

- *R750 North America*

| Modelo Utiliz... | ModelRegion | Valores predichos |
|------------------|---------------|---------------------|
| All Regions | T1000 Pacific | - Valores predichos |
| | | \$TIME Avg Qty |
| | | 25/07/200... 97 |
| | | 25/08/200... 76 |
| | | 25/09/200... 75 |
| | | 25/10/200... 81 |
| | | 25/11/200... 68 |

- *R750 Pacific*

| Modelo Utiliz... | ModelRegion | Valores predichos |
|------------------|---------------|---------------------|
| All Regions | T1000 Pacific | - Valores predichos |
| | | \$TIME Avg Qty |
| | | 25/07/200... 65 |
| | | 25/08/200... 51 |
| | | 25/09/200... 51 |
| | | 25/10/200... 52 |
| | | 25/11/200... 46 |

- *T1000 Europe*

| Modelo Utiliz... | ModelRegion | Valores predichos |
|------------------|---------------|---------------------|
| All Regions | T1000 Pacific | - Valores predichos |
| | | \$TIME Avg Qty |
| | | 25/07/200... 65 |
| | | 25/08/200... 51 |
| | | 25/09/200... 54 |
| | | 25/10/200... 53 |
| | | 25/11/200... 48 |

- *T1000 North America*

| Modelo Utiliz... | ModelRegion | Valores predichos | | | | | | | | | | | | |
|------------------|---------------|--|--------|---------|--------------|-----|--------------|----|--------------|----|--------------|----|--------------|----|
| All Regions | T1000 Pacific | - Valores predichos | | | | | | | | | | | | |
| | | <table border="1"><thead><tr><th>\$TIME</th><th>Avg Qty</th></tr></thead><tbody><tr><td>25/07/200...</td><td>103</td></tr><tr><td>25/08/200...</td><td>84</td></tr><tr><td>25/09/200...</td><td>79</td></tr><tr><td>25/10/200...</td><td>85</td></tr><tr><td>25/11/200...</td><td>68</td></tr></tbody></table> | \$TIME | Avg Qty | 25/07/200... | 103 | 25/08/200... | 84 | 25/09/200... | 79 | 25/10/200... | 85 | 25/11/200... | 68 |
| \$TIME | Avg Qty | | | | | | | | | | | | | |
| 25/07/200... | 103 | | | | | | | | | | | | | |
| 25/08/200... | 84 | | | | | | | | | | | | | |
| 25/09/200... | 79 | | | | | | | | | | | | | |
| 25/10/200... | 85 | | | | | | | | | | | | | |
| 25/11/200... | 68 | | | | | | | | | | | | | |

- *T1000 Pacific*

| Modelo Utiliz... | ModelRegion | Valores predichos | | | | | | | | | | | | |
|------------------|---------------|---|--------|---------|--------------|----|--------------|----|--------------|----|--------------|----|--------------|----|
| All Regions | T1000 Pacific | - Valores predichos | | | | | | | | | | | | |
| | | <table border="1"><thead><tr><th>\$TIME</th><th>Avg Qty</th></tr></thead><tbody><tr><td>25/07/200...</td><td>68</td></tr><tr><td>25/08/200...</td><td>52</td></tr><tr><td>25/09/200...</td><td>48</td></tr><tr><td>25/10/200...</td><td>56</td></tr><tr><td>25/11/200...</td><td>44</td></tr></tbody></table> | \$TIME | Avg Qty | 25/07/200... | 68 | 25/08/200... | 52 | 25/09/200... | 48 | 25/10/200... | 56 | 25/11/200... | 44 |
| \$TIME | Avg Qty | | | | | | | | | | | | | |
| 25/07/200... | 68 | | | | | | | | | | | | | |
| 25/08/200... | 52 | | | | | | | | | | | | | |
| 25/09/200... | 48 | | | | | | | | | | | | | |
| 25/10/200... | 56 | | | | | | | | | | | | | |
| 25/11/200... | 44 | | | | | | | | | | | | | |