SAP Business One, version for SAP HANA Document Version: 1.7 – 2017-10-31

# How to Work with Excel Report and Interactive Analysis

SAP Business One 9.2 PL10 and Later, version for SAP HANA



# Typographic Conventions

Type Style	Description
Example	Words or characters quoted from the screen. These include field names, screen titles, pushbuttons labels, menu names, menu paths, and menu options.  Textual cross-references to other documents.
Example	Emphasized words or expressions.
EXAMPLE	Technical names of system objects. These include report names, program names, transaction codes, table names, and key concepts of a programming language when they are surrounded by body text, for example, SELECT and INCLUDE.
Example	Output on the screen. This includes file and directory names and their paths, messages, names of variables and parameters, source text, and names of installation, upgrade and database tools.
Example	Exact user entry. These are words or characters that you enter in the system exactly as they appear in the documentation.
<example></example>	Variable user entry. Angle brackets indicate that you replace these words and characters with appropriate entries to make entries in the system.
EXAMPLE	Keys on the keyboard, for example, F2 or ENTER.

# **Document History**

Version	Date	Change
1.0	2016-01-12	<ul> <li>First version for the following versions:</li> <li>SAP Business One 9.1 PL10 and later</li> <li>SAP Business One 9.2 PL00 and later</li> <li>SAP Business One analytics 1.2 powered by SAP HANA and later</li> <li>SAP Business One 9.2 PL00, version for SAP HANA</li> </ul>
1.1	2016-01-12	Guide updated for SAP Business One 9.2 PL01, version for SAP HANA. Changes mainly focus on the new feature of report parameters; for more information, see Report Parameters and iaParam Function. Guide version 1.0 still applies to SAP Business One 9.1 PL10 and later; SAP Business One 9.2 PL00 and later; SAP Business One analytics 1.2 powered by SAP HANA and later; and SAP Business One 9.2 PL00, version for SAP HANA.
1.2	2016-02-26	Guide updated for SAP Business One 9.2 PLO2, version for SAP HANA. Changes mainly focus on the new feature of looking up data sources in the Select Data Source window. For more information, see Selecting the Data Source.
1.3	2016-04-27	<ul> <li>Guide updated for SAP Business One 9.2 PLO3, version for SAP HANA.</li> <li>Changes mainly focus on the following:</li> <li>The solution name was changed from Interactive Analysis 2.0 to Excel Report and Interactive Analysis.</li> <li>Besides the Excel reports, which were previously known as interactive analysis reports, you can now design and manage pivot tables on the INTERACTIVE ANALYSIS tab of the Excel report and interactive analysis designer. For more information, see INTERACTIVE ANALYSIS Tab.</li> </ul>
1.4	2016-07-29	Guide updated for SAP Business One 9.2 PLO4, version for SAP HANA. Changes mainly focus on the new feature of time functions. For more information, see Working with Time Functions.
1.5	2016-11-23	Guide updated for SAP Business One 9.2 PLO6, version for SAP HANA. Changes mainly focus on the changes for the Excel report and interactive analysis solution to support SAP Business One Cloud. Changes are in the Logon window and Application Settings window. For more information, see Logging on to a Company and EXCEL REPORT Ribbon.
1.6	2017-02-15	Guide updated for SAP Business One 9.2 PLO7, version for SAP HANA. Changes mainly focus on the following:  The new feature of exporting and importing report packages. For more information, see Exporting and Importing Report Packages.

Version	Date	Change
		More information provided regarding the two logon modes and interactive analysis mapping.
1.7	2017-10-31	Guide updated for SAP Business One 9.2 PL10, version for SAP HANA. Changes mainly focus on the availability of (, <parameter 2="">) for date functions LastNMonths, LastNQuarters, and LastNYears. For more information, see Date Functions and Period Functions.</parameter>

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## 1 Introduction

Excel Report and Interactive Analysis is a solution that provides a report designer and predefined reports. In the report designer, you can design and manage Excel reports and pivot tables on the *EXCEL REPORT* and *INTERACTIVE ANALYSIS* tabs, respectively. When you utilize its exclusive functions together with standard Microsoft Excel features, the Excel report and interactive analysis designer enables you to create reports in an intuitive way based on semantic layers. In addition, by leveraging the SAP in-memory computing technology, it provides real-time computing for your reports, giving you instantaneous access to your data.

This guide has been designed using Microsoft Windows 7 and Microsoft Excel 2010, and updated using Microsoft Windows 7 and Microsoft Excel 2013. Screenshots may vary slightly if you are using a different platform or a different version of Microsoft Excel.

This guide assumes you are familiar with Microsoft Excel. If you are not familiar with Excel, refer to the documentation that came with Microsoft Excel for further explanation.

To work with Excel Report and Interactive Analysis, you must meet the following prerequisites.

- · You have installed Microsoft Excel 2010, 2013 or 2016.
- You have installed the SAP HANA client on your workstation, and ensured that the bit-width of the client
  matches that of your Excel 2010, 2013 or 2016. That is, if Excel 2010 64-bit is installed, then the 64-bit SAP
  HANA client must be installed. For more information about installing the SAP HANA client, see SAP HANA
  Client Installation and Update Guide at https://help.sap.com/hana\_platform.

To check the bit-width of Excel 2010, go to the *File* ribbon, and select *Help*. The bit-width is indicated on the right-hand side, alongside the product version number. To check the bit-width of Excel 2013, go to the *File* ribbon, select *Account*, and choose *About Excel*. The bit-width is indicated at the top of the window alongside the product version number.

• You have initialized the company database on the SAP HANA database server. For more information, look for SAP Business One Administrator's Guide, version for SAP HANA on sappartneredge.com.

For more information about prerequisites and authorizations for various user tasks, see Authorizations for Excel Report and Interactive Analysis.



If you are working with the *Microsoft Analysis ToolPak* add-in, the report designer cannot work properly. To work smoothly with the report designer, deactivate the analysis add-in.



For more information about installing Excel Report and Interactive Analysis, its post-requisites, and its troubleshooting, look for *SAP Business One Administrator's Guide, version for SAP HANA* on sappartneredge.com.

# 2 Authorizations for Excel Report and Interactive Analysis

The following table explains the prerequisites and authorizations required for user tasks in Excel Report and Interactive Analysis.

User Task	User Authorization
Launching and operating in the report designer	<ul> <li>You have one of the following licenses provided by SAP:</li> <li>Professional User</li> <li>B1 Starter Pack</li> <li>Limited CRM User</li> <li>Limited Financials User</li> <li>Limited Logistics User</li> <li>You have full authorizations for the report designer.</li> </ul>
	To set user authorizations for the report designer, from the SAP Business One, version for SAP HANA Main Menu, choose Administration → System Initialization → Authorizations → General Authorizations. In the Authorizations window, select the user for whom you want to set authorizations, and in Analytics →Excel Report and Interactive Analysis Designer, select Full Authorization.
Viewing a specific Excel report	<ul> <li>You have one of the following licenses provided by SAP:         <ul> <li>Professional User</li> <li>B1 Starter Pack</li> <li>Limited CRM User</li> <li>Limited Financials User</li> <li>Limited Logistics User</li> </ul> </li> <li>You have full authorizations for the report.         <ul> <li>To set user authorizations for the report, in the Authorizations window, select the user for whom you want to set authorizations, and in Analytics → Excel Reports, select Full Authorization for the report to which you want to set authorizations.</li> </ul> </li> </ul>
Viewing a specific pivot table	<ul> <li>You have one of the following licenses provided by SAP:</li> <li>Professional User</li> <li>B1 Starter Pack</li> <li>Limited CRM User</li> <li>Limited Financials User</li> <li>Limited Logistics User</li> <li>You have full authorizations for the semantic layer based on which the pivot table is created.</li> </ul>

User Task	User Authorization
	To set user authorizations for the semantic layer, in the <i>Authorizations</i>
	window, select the user for whom you want to set authorizations, and in
	Analytics → Semantic Layers, select Full Authorization for the semantic
	layer to which you want to set authorizations.

# 3 Launching the Excel Report and Interactive Analysis Designer

There are two ways of launching the report designer.

#### Procedure

You can launch the designer from the SAP Business One, version for SAP HANA client as follows:

- 1. In the SAP Business One, version for SAP HANA toolbar, choose *Tools* → *Excel Report and Interactive Analysis Designer*.
- 2. The designer opens in Microsoft Excel with the current SAP Business One, version for SAP HANA user logged on.

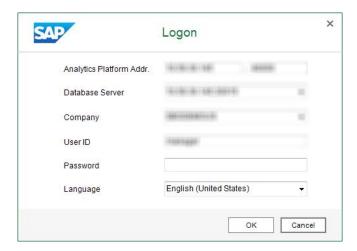
You can launch the designer from the Microsoft Windows Start menu as follows:

- 1. In the lower left corner of your screen, choose *Start*. Alternatively, press the Windows logo key on your keyboard.
  - The Start menu appears.
- 2. In the search box, enter SAP Business One Excel Report and Interactive Analysis, and in the list of results, click SAP Business One Excel Report and Interactive Analysis.
- 3. The designer opens in Microsoft Excel.

# 4 Logging on to a Company

To retrieve data for your report or manage current reports in a specific company database, you need to log on to the company. The logon is different depending on your launch method, as follows:

- If you launched the designer from the SAP Business One, version for SAP HANA client, you are automatically logged on with the company and user in the client.
- If you launched the designer from the Microsoft Windows Start menu, choose Log On in the EXCEL REPORT or INTERACTIVE ANALYSIS ribbon, enter relevant information in the Logon window, and choose OK. For more information about the analytics platform address, look for SAP Business One Administrator's Guide, version for SAP HANA on sappartneredge.com. For more information about changing the analytics platform address, look for the documentation on the Interactive Analysis Mapping tab in EXCEL REPORT Ribbon. There are two logon modes using the Logon window in the designer as described in the following section.



Once you have logged on to a company successfully, all the information, except the password, is saved for your next logon.

The designer automatically logs you off if there is no activity in the designer for 30 minutes.

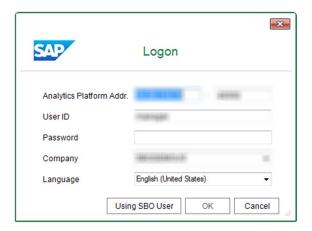
#### Two Modes of Logon

SAP provides two logon modes for you to choose at your most convenience:

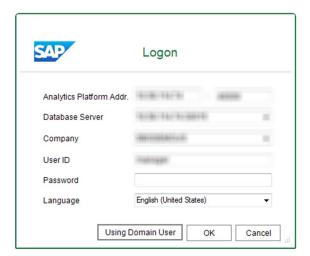
- Log on using SAP Business One credentials, if on the computer you open the designer, you have installed the SAP Business One, version for SAP HANA client for which you use the same credentials to log on.
- Log on using Microsoft Windows domain credentials, if on the computer you open the designer, you have not installed the SAP Business One, version for SAP HANA client for which you use the same credentials to log on.

To log on using the two modes respectively, follow the procedures below:

• To log on with the SAP Business One logon mode, which is the default mode, in the *Logon* window, choose the *Using SBO User* button, enter your SAP Business One credentials, and choose the *OK* button.



To log on with the Microsoft Windows domain logon mode, in the Logon window, choose the Using Domain
User button, enter the domain credentials, and choose the OK button. For this logon mode, in order to use the
interactive analysis feature, you need to map the analytics platform address to the corresponding address
used by interactive analysis reports, i.e., pivot tables. For more information about the settings, see
INTERACTIVE ANALYSIS Ribbon.

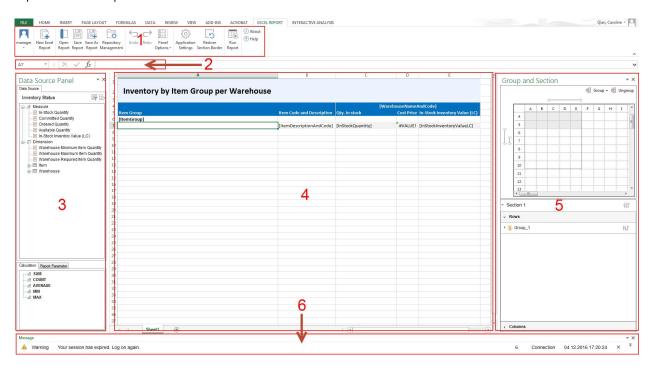


# 5 EXCEL REPORT Tab

#### 5.1 Tab Overview

This section introduces different parts of the main window of the EXCEL REPORT tab, and their respective functions.

You can find the screenshot of the main window as follows, with the *Inventory by Item Group per Warehouse* report as an example:



#### 5.1.1 EXCEL REPORT Ribbon

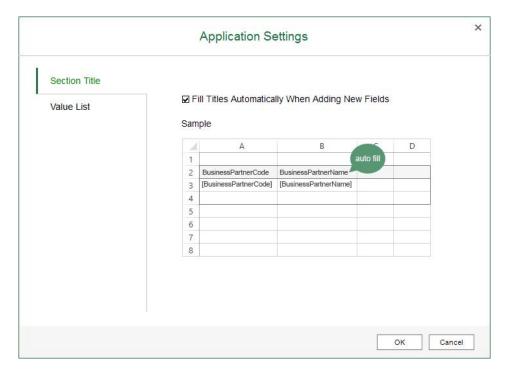
This section is section 1 in the overview screenshot. It contains the following commands:

- Log On (<User ID>): choose this command to log on to a specific company database. For more information, see Logging on to a Company.
- New Excel Report: choose this command to create a new Excel report. For more information, see Creating the Excel Report.
- *Open Report*: choose this command to open an existing report. For more information about predefined reports, see Predefined Excel Reports.
- Save Report: choose this command to save changes to the current report.
- · Save As Report: choose this command to save the report as a new one.

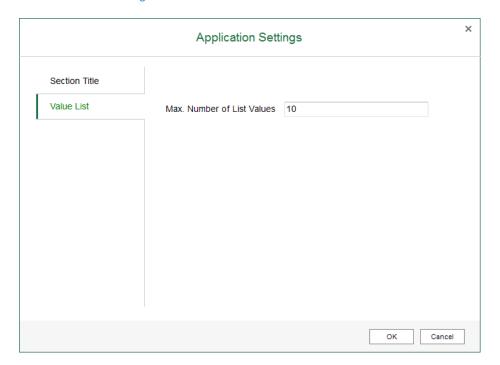
# i Note

You cannot make changes to a predefined report, so use this command to save the changes to a new report.

- Repository Management: choose this command to open the Repository Management window, Import Report
  Package window, or Export Report Package window. For more information, see Managing Excel Reports, and
  Exporting and Importing Report Packages.
- · *Undo*: choose this command to undo the most recent operation in the worksheet.
- Redo: choose this command to redo the most recent operation that you undid using the *Undo* command.
- Panel Options: choose this command to display or hide the data source panel, group and section panel, or message panel.
- · Application Settings: choose this command to open the Application Settings window.
  - o Section Title tab: select the Fill Titles Automatically When Adding New Fields checkbox to enable automatic filling. The checkbox is selected by default.



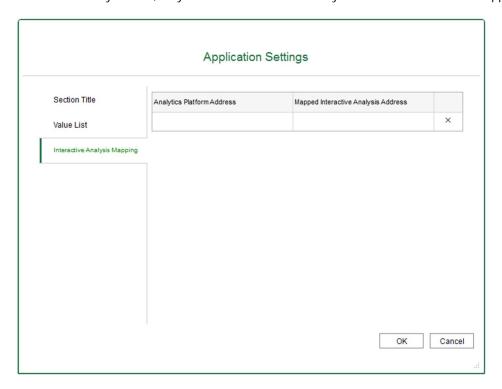
o Value List tab: in the Max. Number of List Values field, specify the maximum number of values to be displayed in a value list. Value lists are used in parameters and filters. For more information, see Working with Parameters and Working with Filters.



o *Interactive Analysis Mapping* tab: this tab is for mapping the analytics platform address to the corresponding address used by interactive analysis reports, i.e., pivot tables.



This mapping is mandatary only if the analytics platform and interactive analysis reports are using different addresses. By default, they use the same address and you do not need to do the mapping.



The address consists of server name/IP and port.

- Default analytics platform address: the default port is 40000. For more information about the analytics platform address, look for SAP Business One Administrator's Guide, version for SAP HANA on sappartneredge.com.
- o Default interactive analysis address: the server name/IP is always the same as that of the analytics platform address, and the default port is 39915.

Therefore, by default, if you do not enter anything in the two columns, **server** name/IP:40000 and **server** name/IP:39915 will be taken as the mapping, in which server name/IP is taken from the analytics platform address you used for logging on to the designer.

However, for security reasons, or server requirements, you may need to change the ports or even set proxies for the two addresses. To do so, follow the procedures below:

- o Change port for the analytics platform address:
- 1. Log on to the Linux server as **root**.
- 2. In the command line terminal, open the configuration file server.xml under path <Installation Path>/SAPBusinessOne/Common/tomcat/conf.
- Modify the parameter of port in Server → Service → Connector tag to xxxxx.
- 4. Restart the server; the default port of 40000 will be changed to xxxxx, which is port1.

i Note

**40000** is the default port number for all the SAP Business One services (except for the app framework) on Linux

- o Change port for the interactive analysis address:
- 1. Log on to the Linux server as **root**.
- 2. In the command line terminal, open the configuration file proxy.cfg under path <Installation Path>/SAPBusinessOne/AnalyticsPlatform/TcpReverseProxy.
- 3. Modify the parameter of port\_instance to xx.
- 4. Restart the server, and the default port of 39915 will be changed to 3xx15, which is port2.
  - o For server name/IP, you can use any method that suits you to set proxies of IP1 and IP2 for the original analytics platform server name/IP and interactive analysis server name/IP, respectively.

After completing all the above configurations, to map the analytics platform address to the interactive analysis address, enter IP1:port1 and IP2:port2 for the addresses, respectively.



The designer will save the mappings you entered on this tab, and will use the corresponding mapping whose analytics platform address matches the one you used for logon. If the designer cannot find a mapping with the same analytics platform address as the one you used for logon, the following default interactive analysis address will be used: <the server name/IP in the analytics platform address you used for logon>:39915.

- Restore Section Border: choose this button to restore what was the section border when you started your report. As the border can be customized using the regular Microsoft Excel border function, and you may not want the customized border at a certain point, this button lets you restore the original section border.
- Run Report: choose this command to view the result of the report that you are designing. Every time you view
  the report result, Excel Report and Interactive Analysis retrieves data from the database, displaying real-time
  statistics in the report.
- About: choose this command to view the copyrights and version of the report designer.
- Help: choose this command to open this guide.

#### 5.1.2 Formula Bar

This section is section 2 in the overview screenshot. It displays the name and content of the cell you select in the worksheet. For more information about the formula bar, see the documentation that came with Microsoft Excel.

#### 5.1.3 Data Source Panel

This section is section 3 in the overview screen shot. It displays the data source that you are currently working with. In this panel, you can change the data source parameter values, change the data source, use the quick calculation methods, and manage report parameters. For more information, see Working with Parameters, Selecting the Data Source and Working with Calculations.

#### 5.1.4 Worksheet

This section is section 4 in the overview screenshot. For more information about the worksheet, see the documentation that came with Microsoft Excel.

i Note

Only one worksheet is supported.

### 5.1.5 Group and Section Panel

This section is section 5 in the overview screenshot. It displays the group information, and you can perform group and section related operations in this section. For more information, see Working with Group, Details Group, and Field.

# 5.1.6 Message Panel

This section is section 6 in the overview screenshot. It displays messages during your operation. Messages are categorized as follows:

- DEBUG
- INFO
- · WARN
- ERROR
- FATAL

One log file is generated every time you launch the Excel report and interactive analysis designer, containing the messages you encountered during operation.

To filter a certain message category in the log file, follow the procedure below:

- 1. In the installation path of SAP Business One, version for SAP HANA, you can find a folder called *SAP Business One Excel Report and Interactive Analysis*. In the folder, open *SAP.InteractiveAnalysis.dll.log4net*.
- 2. In this file, you can find the attributes of the Excel Report and Interactive Analysis log file, including its type, name, location, and so on.
- 3. You can find the message category in the *level value* tag. The default category is *ERROR*. To change the category, enter one of the following in the *level value* tag:
  - o ALL: to display all categories in the log file
  - o DEBUG
  - o INFO
  - o WARN
  - o ERROR
  - o FATAL
  - o OFF: to display no category in the log file

# 5.2 Basic Operations

This section provides an introduction to the EXCEL REPORT tab of the report designer as you create Excel report *Inventory by Item Group per Warehouse*. The report shows the in-stock quantity, cost price, and in-stock inventory value of items for each item group in each warehouse.

The report in the worksheet looks like the following:

Inventory by Item Group per Warehouse					
ļ		[\	WarehouseName/	AndCode]	
Item Group	Item Code and Description	Qty. In stock	Cost Price	In-Stock Inventory Value (LC)	
[ItemGroup]					
<u> </u>	[ItemDescriptionAndCode]	[InStockQuantity]	#VALUE!	[InStockInventoryValueLC]	
i					
İ					
i					

The report result looks like the following:

			General V	Varehouse (01)	Ī	West Cost	Warehouse (02)		onsignmen	tl Warehouse (04)	i	Bi
em Group	Item Code and Description	Qty. In stock			Qty. In stock					In-Stock Inventory Value (LC)	Qty. In stock	
cessories												
	Memory Chip (LM4029MC)	412	37.802379	15574.58	50	50	2500	(	0	0		0 ,
ems	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1											
	Blu-Ray Disc 10-Pack (100001)	1087	2.1303772	2315.72	C	0	0	(	0	0		0 ,
	Blu-Ray DL Disc 10-Pack (1000	1022	8.4780039	8664.52	0	0	0	(	0	0		0
	Computer Monitor 24" HDMI	1065	142.50098	151763.54	50	200	10000	(	0	0		0
	Gigabit Network Card (C0000	967	10.168821	9833.25	50	15	750	(	0	0		0
	Hard Disk 3TB (C00007)	1060	354.48218	375751.11	50	500	25000	(	0	0		0
	J.B. Laptop Batteries X1 serie	1014	61.177702	62034.19	0	0	0	(	0	0		0
	J.B. Laptop Batteries X2 serie	984	58.006128	57078.03	0	0	0	(	0	0		0
	Keyboard Comfort USB (C000	1058	14.118677	14937.56	50	20	1000	(	0	0		0
	KG PC-to-Mac Transfer Kit (IC	1088	31.889458	34695.73	0	0	0	(	0	0		0
	KG USB Travel Hub (100011)	1066	8.4042214	8958.9	0	0	0	(	0	0		0
	LeMon 4029 500 sheet paper	772	23.86035	18420.19	0	0	0	(	0	0		0
	LeMon 4029 Printer (LM4029	267	193.20951	51586.94	0	0	0	(	0	0	1	0
	LeMon 4029 Printer AC Adap	700	7.2571143	5079.98	0	0	0	(	0	0	1	0
	LeMon 4029 Printer AC Powe	650	3.8355538	2493.11	0	0	0	(	0	0		0
	LeMon 4029 Printer Head (LN	782	13.775754	10772.64	0	0	0	(	0	0		0
	LeMon 4029 Printer Power St	44	11.677045	513.79	0	0	0	(	0	0		0
	LeMon 4029 Printer System E	703	73.558734	51711.79	0	0	0	(	0	0		0
	Memory DDR RAM 8GB (C000	1018	30.053517	30594.48	50	40	2000	(	0	0		0
	Motherboard BTX (C00001)	1231	290.18771	357221.07	50	400	20000	(	0	0		0
	Motherboard MicroATX (C00	1132	214.33222	242624.07	50	300	15000	(	0	0		0
	Mouse USB (C00010)	1021	14.118286	14414.77	50	20	1000	(	0	0		0
	MRP_BOM (MRP_BOM)	0	0	0	0	0	0	(	0	0	-	0
_	MRP Child1 (MRP Child1)	0	0	0	0	0	0	(	0	. 0		0

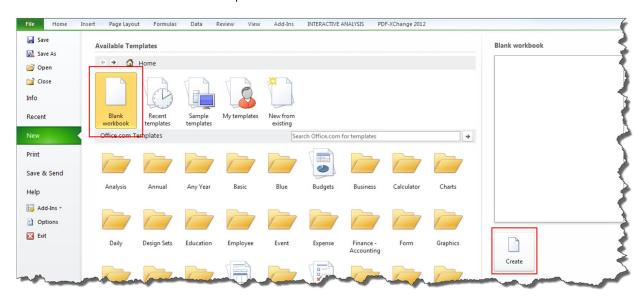
# 5.2.1 Creating the Excel Report

Use the blank workbook as a starting point for creating the Excel report.



For blank workbooks that are NOT opened using one of the two launching methods provided above, you may encounter errors while using Excel Report and Interactive Analysis.

For example, you may encounter errors while using Excel Report and Interactive Analysis if you open a blank workbook from the *New* option on the *File* tab of Microsoft Excel as follows:



# i Note

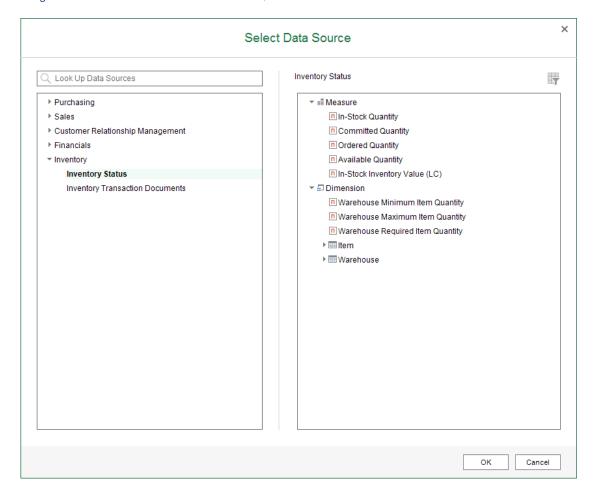
The order of the procedures in this section may vary based on the working preference of each person. For example, you may add fields before adding the groups, or add a child group for the *ItemGroup* group instead of adding a parent group for the *ItemDescriptionAndCode* group, as described below.

# 5.2.1.1 Selecting the Data Source

#### Procedure

1. In the EXCEL REPORT ribbon, choose New Excel Report.

The Select Data Source window appears, displaying all the calculation views in the deployed predefined model package and the customized SAP HANA model packages that you have deployed using the SAP HANA Model Management window in the SAP Business One, version for SAP HANA client.



The predefined model package was deployed during the database initialization, and for more information about customized SAP HANA model packages, see *Managing SAP HANA Models* in the online help of SAP Business One, version for SAP HANA.

i Note

The name of the calculation views must end with Query.

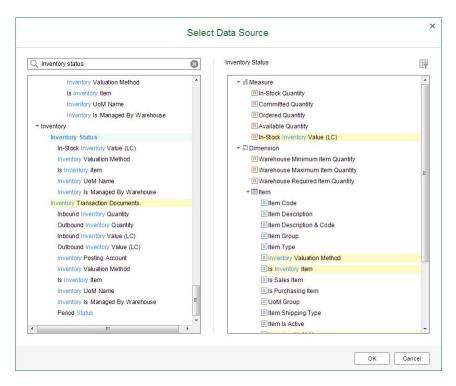
i Note

You must have authorizations for the data sources that you want to use. To check the authorizations, from the SAP Business One, version for SAP HANA Main Menu, choose  $Administration \rightarrow System$ 

Initialization 
ightharpoonup Authorizations 
ightharpoonup General Authorizations. In the Authorizations window, select the user for whom you want to check authorizations, and select Analytics 
ightharpoonup Semantic Layers to find the specific data source.

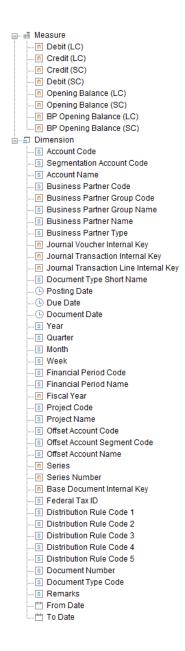
2. In the *Select Data Source* window, select *Inventory Status* under *Inventory*, and choose *OK*. For more information about data sources with parameters, see Working with Parameters.

[Optional] You can use the search bar at the top of the tree list on the left to look for data sources. To search for data sources, enter the semantic layer name, part of the semantic layer name, the name of the dimension or measure, or part of the dimension or measure name, and choose <code>Enter</code>. Results that match your search query appear in the tree list, highlighted, and you can choose the data source to see its contents in the table on the right.



The measures and dimensions appear in the data source panel.

- o Number type is labeled with <a>I</a></a>
- o String type is labeled with <a>\$\square\$</a>.
- Datetime type is labeled with <a>©</a>.
- Date type is labeled with

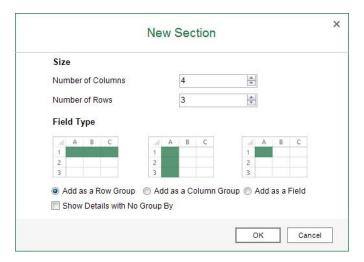


# 5.2.1.2 Adding the Item Group

As you need the in-stock inventory information of each item, you will add the item information that is grouped by items to the report. For more information about the field types, see Working with Group, Details Group, and Field.

#### Procedure

1. Under Item, drag Item Description & Code to the worksheet. The New Section window appears.



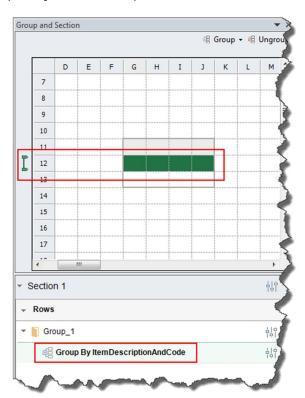
2. In the *New Section* window, define the section size, select the *Add as a Row Group* radio button, and choose *OK*.

#### Result

- In the worksheet, the title of this column is automatically filled. To disable the automatic filling, choose the Application Settings command in the EXCEL REPORT ribbon. For more information, see EXCEL REPORT Ribbon.
- · In the worksheet, the section looks like the following:



• In the *Group and Section* panel, you can find the position and information of this group as follows:



In the EXCEL REPORT ribbon, choose Run Report.

The report result shows all the items in the database.

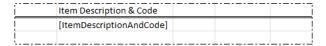


# 5.2.1.3 Adding a Parent Group

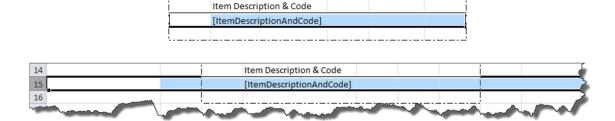
As you need to group the items by item groups, you will add a parent group to group the items by item groups.

#### Procedure

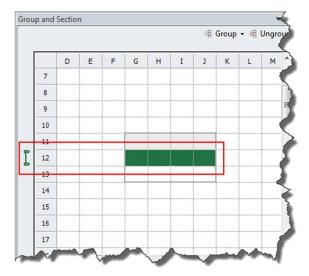
1. Insert a column before the *Item Description & Code* column to reserve a place for the item group column. The section looks like the following:



- 2. Select the *ItemDescriptionAndCode* group using either of the following two methods:
  - o In the Group and Section panel, select the staple.
  - o In the worksheet, select the whole *ItemDescriptionAndCode* group row in the section or select the whole Excel row as follows:

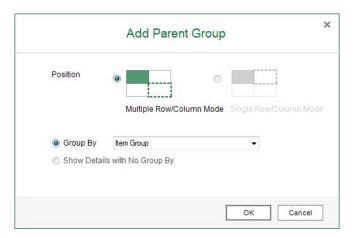


In the *Group and Section* panel, the staple is marked in green, indicating that the group has been selected.



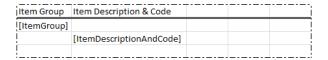
In the Group and Section panel, choose Group → Add Parent Group.
 The Add Parent Group window appears.

4. In the *Group By* dropdown list, select *Item Group*, and choose *OK*.

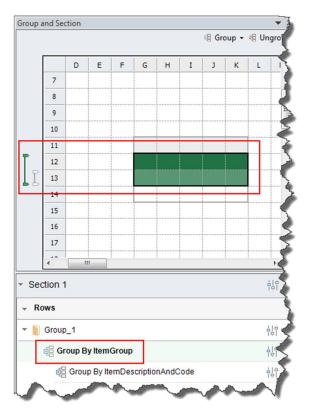


#### Result

· In the worksheet, the section looks like the following:



• In the *Group and Section* panel, you can find the position and information of this parent group as follows:



In the EXCEL REPORT ribbon, choose Run Report.

The report result shows all the items grouped by item groups.

Item Group	Item Description & Code	É
Accessories		7
	Memory Chip (LM4029MC)	4
Items		1
	Blu-Ray Disc 10-Pack (I00001)	3
	Blu-Ray DL Disc 10-Pack (100002)	ø
	Computer Monitor 24" HDMI (C00008)	¥.
	Gigabit Network Card (C00006)	ì
	Hard Disk 3TB (C00007)	<
	J.B. Laptop Batteries X1 series (100005)	4
	J.B. Laptop Batteries X2 series (100006)	ď
	Keyboard Comfort USB (C00009)	7
	KG PC-to-Mac Transfer Kit (100012)	1
	KG USB Travel Hub (I00011)	_

# 5.2.1.4 Adding Fields and Calculated Values

As you need the in-stock inventory quantity, cost price, and in-stock inventory value of each item, you will add the in-stock inventory information as fields to the report. For more information about the field types, see Working with Group, Details Group, and Field.

#### Procedure

1. Drag measures *In-Stock Quantity* and *In-Stock Inventory Value (LC)* from the data source panel to the worksheet as follows:

Item Group	Item Description & Code	In-Stock Quantity	 In-Stock Inventory Value (LC)
[ItemGroup]			
!	[ItemDescriptionAndCode]	[InStockQuantity]	[InStockInventoryValueLC]
ļ			

2. In the column between the *In-Stock Quantity* and *In-Stock Inventory Value (LC)* columns, enter the title for the cost price of each item as follows:

Item Group	Item Description & Code	In-Stock Quantity	Cost Price	In-Stock Inventory Value (LC)
[ItemGroup]				
1	[ItemDescriptionAndCode]	[InStockQuantity]		[InStockInventoryValueLC]
ļ				

3. As the cost price is the in-stock inventory value divided by the in-stock quantity, in the cell under *Cost Price*, enter the formula:

=IF(iaCellRef(<name of the InStockQuantity cell>)=0,0,iaCellRef(<name of the InStockInventoryValueLC cell>)/iaCellRef(<name of the InStockQuantity cell>))

In the example, the name of the InStockQuantity cell is E7, and the name of the InStockInventoryValueLC cell is G7, so you will enter the following:

#### =IF(iaCellRef(E7)=0,0,iaCellRef(G7)/iaCellRef(E7))

For more information about the functions, see Working with Functions.

#### Result

· In the worksheet, the section looks like the following:



When you select the cell under *Cost Price*, the formula bar looks like the following:



· In the EXCEL REPORT ribbon, choose Run Report.

The report result shows the in-stock inventory quantity, cost price, and in-stock inventory value of each item; the items are grouped by item group.

	In-Stock Inventory Value (LC)	Cost Price	In-Stock Quantity	Item Description & Code	Item Group
					Accessories
	18074.58	39.122468	462	Memory Chip (LM4029MC)	
					ems
	2315.72	2.1303772	1087	Blu-Ray Disc 10-Pack (100001)	
	8664.52	8.4780039	1022	Blu-Ray DL Disc 10-Pack (1000	
	161763.54	145.07941	1115	Computer Monitor 24" HDMI	
	10583.25	10.406342	1017	Gigabit Network Card (C0000	
	400751.11	361.03704	1110	Hard Disk 3TB (C00007)	
	62034.19	61.177702	1014	J.B. Laptop Batteries X1 serie	
	57078.03	58.006128	984	J.B. Laptop Batteries X2 serie	
	15937.56	14.384079	1108	Keyboard Comfort USB (C000	
	34695.73	31.889458	1088	KG PC-to-Mac Transfer Kit (IC	
	8958.9	8.4042214	1066	KG USB Travel Hub (100011)	
	18420.19	23.86035	772	LeMon 4029 500 sheet paper	
	51586.94	193.20951	267	LeMon 4029 Printer (LM4029	
	5079.98	7.2571143	700	LeMon 4029 Printer AC Adap	
	2493.11	3.8355538	650	LeMon 4029 Printer AC Powe	
1	10772.64	13.775754	782	LeMon 4029 Printer Head (LN	
	513.79	11.677045	44	LeMon 4029 Printer Power S	
	51711.79	73.558734	703	LeMon 4029 Printer System E	
	32594.48	30.519176	1068	Memory DDR RAM 8GB (C000	
	377221.07	294.4739	1281	Motherboard BTX (C00001)	
	257624.07	217.95607	1182	Motherboard MicroATX (C00	
	15414.77	14.392876	1071	Mouse USB (C00010)	
	0	0	0	MRP_BOM (MRP_BOM)	
	oi	0	0	MRP_Child1 (MRP_Child1)	
	oi	0	0	MRP_Child2 (MRP_Child2)	
	oi	0	_ 0	MRP_Grandchild (MRP_Gran	

# 5.2.1.5 Adding the Warehouse Group

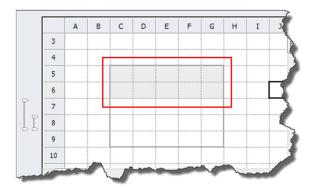
As you need the in-stock inventory information of each item in each warehouse, you will add the warehouse information that is grouped by warehouses to the report.

#### Procedure

1. Insert a row above the first row to reserve a place for the warehouse information. The section looks like the following:

i				
Item Group	Item Description & Code	In-Stock Quantity	Cost Price	In-Stock Inventory Value (LC)
[ItemGroup]				
	[ItemDescriptionAndCode]	[InStockQuantity]	#VALUE!	[InStockInventoryValueLC]

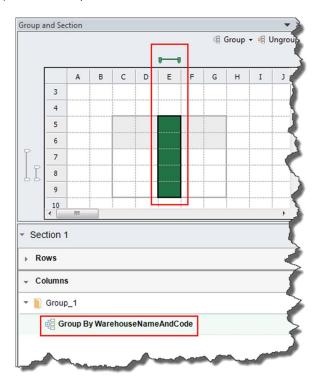
The section header in the *Group and Section* panel now contains two rows as follows:



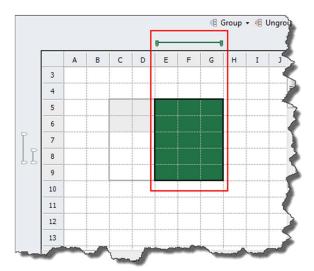
2. Drag Warehouse Name & Code to the cell above In-Stock Quantity as follows:

i		[WarehouseNameAndCode]		
Item Group	Item Description & Code	In-Stock Quantity	Cost Price	In-Stock Inventory Value (LC)
[ItemGroup]				
	[ItemDescriptionAndCode]	[InStockQuantity]	#VALUE!	[InStockInventoryValueLC]

A column group is automatically added and is grouped by *WarehouseNameAndCode*. You can find the group information in the *Group and Section* panel.



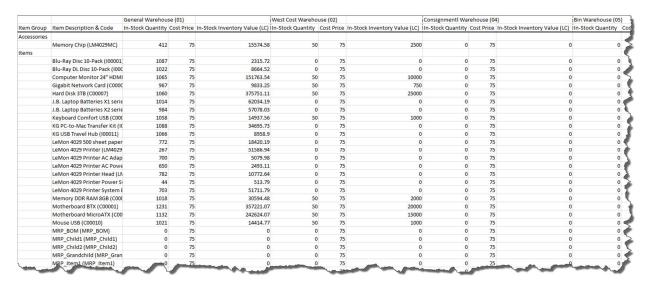
3. As you need all the in-stock inventory information of each item in each warehouse, you will enlarge the *WarehouseNameAndCode* group to cover the three in-stock inventory columns. To do so, in the *Group and Section* panel, enlarge the *WarehouseNameAndCode*group by dragging the staple.



#### Result

In the EXCEL REPORT ribbon, choose Run Report.

The report result looks like the following, displaying the in-stock inventory quantity, cost price, and in-stock inventory value of each item in each warehouse.



# 5.2.1.6 Modifying the Layout

To make the report clearer to read, add a title, and make some changes in the report as follows:

Inventory by Item Group per Warehouse									
!		[WarehouseNameAndCode]							
Item Group	Item Code and Description	Qty. In stock	Cost Price	In-Stock Inventory Value (LC)					
[ItemGroup]									
i	[ItemDescriptionAndCode]	[InStockQuantity]	#VALUE!	[InStockInventoryValueLC]					
i									
i									
i		L							

# 5.2.1.6.1 Tips to Center a Value for a Multi-Column Group



The report designer does not support using the *Merge & Center* or *Merge cells* function to achieve the following result. You can always merge cells using the *Merge & Center* or *Merge cells* function in the report result.

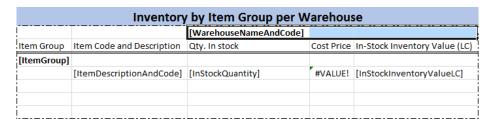
The report result of the current layout looks like the following, displaying the warehouse information to the left of the *WarehouseNameAndCode* group:

Inventory by Item Group per Warehouse											-1	
		General Warehouse (01)				Consignmentl Warehouse (04)			Bin Warehouse (05)			
em Group	Item Code and Description	Qty. In stock	Cost Price	In-Stock Inventory Value (LC)	Qty. In stock	Cost Price	In-Stock Inventory Value (LC)	Qty. In stock	Cost Price	In-Stock Inventory Value (LC)	Qty. In stock	c Cost
ccessories												
	Memory Chip (LM4029MC)	412	37.802379	15574.58	50	50	2500	0	0		)	0 *
ms												
	Blu-Ray Disc 10-Pack (100001)	1087	2.1303772	2315.72	0	0	0	0	0		0	0
	Blu-Ray DL Disc 10-Pack (1000	1022	8.4780039	8664.52	0	0	0	0	0		0	0
	Computer Monitor 24" HDMI	1065	142.50098	151763.54	50	200	10000	0	0		)	0
	Gigabit Network Card (C0000	967	10.168821	9833.25	50	15	750	0	0		0	0
	Hard Disk 3TB (C00007)	1060	354.48218	375751.11	50	500	25000	0	0		)	0
	J.B. Laptop Batteries X1 serie	1014	61.177702	62034.19	0	0	0	0	0		0	0 ,
	J.B. Laptop Batteries X2 serie	984	58.006128	57078.03	0	0	0	0	0		0	0
	Keyboard Comfort USB (C000	1058	14.118677	14937.56	50	20	1000	0	0		0	0
	KG PC-to-Mac Transfer Kit (IC	1088	31.889458	34695.73	0	0	0	0	0		0	0
	KG USB Travel Hub (100011)	1066	8.4042214	8958.9	0	0	0	0	0		0	0
	LeMon 4029 500 sheet paper	772	23.86035	18420.19	0	0	0	0	0		)	0
	LeMon 4029 Printer (LM4029	267	193.20951	51586.94	0	0	0	0	0		0	0 4
	LeMon 4029 Printer AC Adap	700	7.2571143	5079.98	0	0	0	0	0		0	0
	LeMon 4029 Printer AC Powe	650	3.8355538	2493.11	0	0	0	0	0		0	0
	LeMon 4029 Printer Head (LN	782	13.775754	10772.64	0	0	0	0	0		0	0
	LeMon 4029 Printer Power Si	44	11.677045	513.79	0	0	0	0	0		0	0
	LeMon 4029 Printer System E	703	73.558734	51711.79	0	0	0	0	0		0	0
	Memory DDR RAM 8GB (C000	1018	30.053517	30594.48	50	40	2000	0	0		0	0
	Motherboard BTX (C00001)	1231	290.18771	357221.07	50	400	20000	0	0		0	0
	Motherboard MicroATX (C00	1132	214.33222	242624.07	50	300	15000	0	0		0	0
	Mouse USB (C00010)	1021	14.118286	14414.77	50	20	1000	0	0		0	0
	MRP_BOM (MRP_BOM)	0	0	0	0	0	0	0	0		)	0
	MRP_Child1 (MRP_Child1)	0	0	0	0	0	0	0	0		)	0
	MRP_Child2 (MRP_Child2)	0	0	0	0	0	0	0	0		)	0
	MRP Grandchild (MRP Gran	0	0	0	0	0	0	0	.0		0	0

#### Procedure

To display the warehouse information in the center of the group, follow the procedure below:

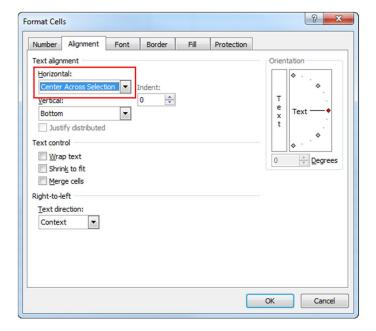
1. In the worksheet, select the three cells in the section header.



2. Right-click the area and choose Format Cells.

The Format Cells window appears.

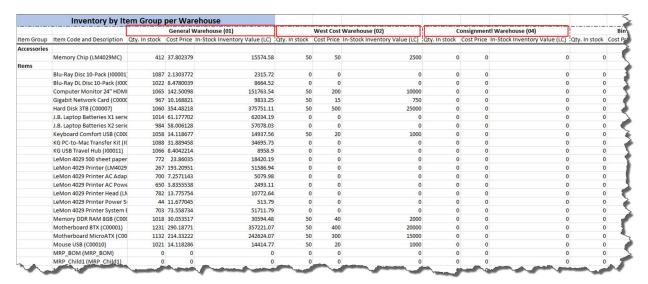
3. On the *Alignment* tab, in the *Text Alignment* section, in the *Horizontal* dropdown list, select *Center Across Selection*, and choose *OK*.



#### Result

In the EXCEL REPORT ribbon, choose Run Report.

The report result now looks like the following, displaying the warehouse information in the center of the *WarehouseNameAndCode* group:



You have now completed the report design.

### 5.2.2 Saving the Report

To save the report, follow the procedure below.

- 1. In the EXCEL REPORT ribbon, choose Save Report.
- 2. In the Save window, select the folder to place the report, define a report name, and choose OK.

#### Result

 To open the saved reports, in the EXCEL REPORT ribbon, choose Open Report. Alternatively, you can open the saved reports under the menu entry of Excel Report and Interactive Analysis in the SAP Business One, version for SAP HANA client.



For newly saved reports to appear in the SAP Business One, version for SAP HANA client, you need to log off the client and log on again.

To manage the saved reports, in the EXCEL REPORT ribbon, choose Repository Management. For more
information, see Managing Excel Reports.

### 5.2.3 Viewing the Report Result



You can view the report result at any time during your design process.

Every time you view the report result, Excel Report and Interactive Analysis retrieves data from the database, displaying real-time statistics in the report.

#### Procedure

To view the report result, you can do either of the following:

- In the EXCEL REPORT ribbon of the report designer, choose Run Report.
   The report opens in the report designer.
- In the Main Menu of the SAP Business One, version for SAP HANA client, choose Excel Report and Interactive
   Analysis → <the report you want to view>.

The report opens in Microsoft Excel with no *EXCEL REPORT* ribbon.

### 5.3 Advanced Operations

### 5.3.1 Working with Parameters

In the report designer, there are two types of parameters: the data source parameter and the report parameter.

A data source parameter is designed in the semantic layer that you can use as a data source, and in order to create a meaningful report, you must define the parameter value when you select the data source. To change the data source parameter value, you need to go to the report designer. While a report parameter is what you create during your report design, you must define the parameter value when you run the report. You can change the report parameter value every time you run the report.

You can link together the two types of parameters. When the two types of parameters are linked, you do not need to go to the report designer every time you want to view the report based on different data source parameter values; instead, you can do so by defining the linked report parameter values when you run the report. The report parameter values will then be transferred to the data source parameter, and your report appears according to the report parameter values you define when you run the report. For more information, see Linking Report Parameters to Data Source Parameters.

#### 5.3.1.1 Data Source Parameters

Certain semantic layers are designed with data source parameters. To create a meaningful report, you must define those parameter values once you have selected such semantic layers.

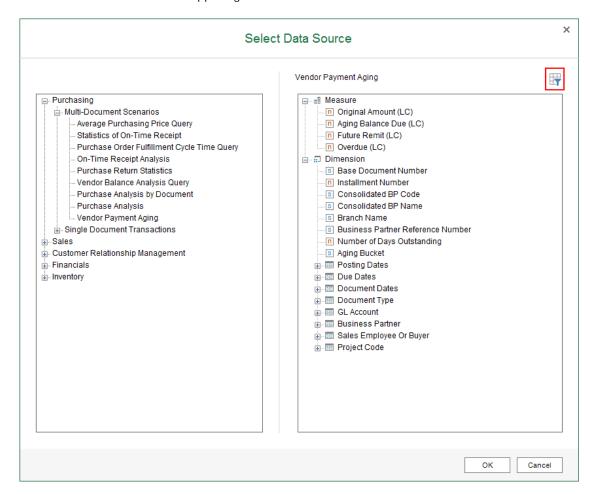


When the data source you are using contains a data source parameter, you cannot use the *Dynamic* input type in your report parameters. For more information, see Report Parameters.

#### Procedure

You can define or change data source parameter values in the Select Data Source window as follows:

1. In the Select Data Source window, when you select a semantic layer with parameters, the Change Parameters icon becomes available in the upper right corner of the window.

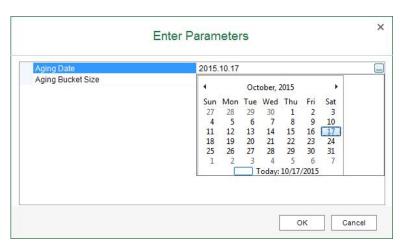


2. To define or change the parameter values, choose (Change Parameters).

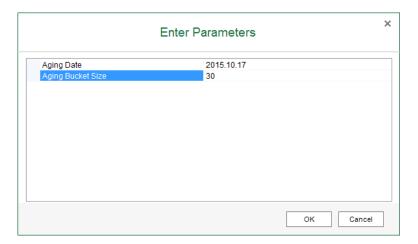
The Enter Parameters window appears.

Alternatively, choose OK in the Select Data Source window. The Enter Parameters window also appears.

- 3. For different kinds of parameters, define their values, and choose *OK*.
  - o For a date type parameter, select a date.



o For a value type parameter, specify a value.

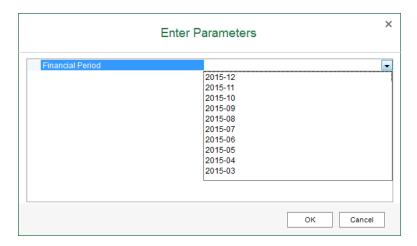


o For a value-list parameter, select a value. The values are retrieved from the database to which you logged on.

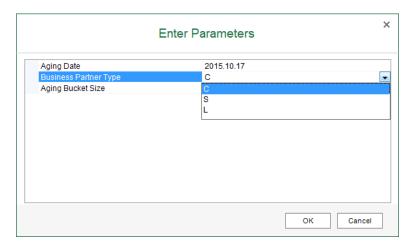


## Note

To display more or fewer values in the list, use the *Max. Number of List Values* field on the *Value List* tab of the *Application Settings* window. For more information, see EXCEL REPORT Ribbon.

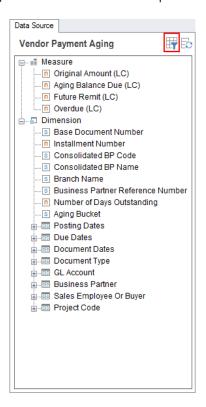


o For a value-selection parameter, select a value. The values are retrieved from the semantic layer. In the example below, *C* stands for customer, *S* stands for supplier, and *L* stands for leads.



You can change data source parameter values when you are designing a report, as follows:

1. When you are designing a report whose data source has parameters, the *Change Parameters* icon becomes available in the upper right corner of the *Data Source* panel.



- 2. To change the parameter values, choose (Change Parameters).

  The Enter Parameters window appears.
- 3. For different kinds of parameters, define their values, and choose *OK*.

  For more information about different kinds of parameters, see the procedure above.

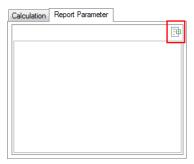
## 5.3.1.2 Report Parameters

While designing your report, you can create report parameters and use those parameters in the section and in the filters, or link them to the data source parameter. Every time you run the report, you must define the report parameter values in the *Input Parameter* window by selecting a value from the value dropdown list or entering a value for the corresponding parameter.

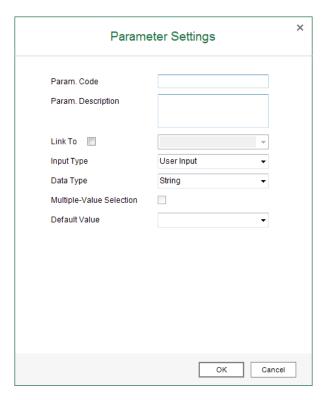
## 5.3.1.2.1 Creating Report Parameters

## Procedure

1. On the Report Parameter tab of the data source panel, choose  $^{\boxdot}$ .



The Parameter Settings window appears.



2. Enter the code and description for the parameter. The code will appear as the parameter name in the *Input Parameter* window, and the description will appear as a tooltip when your hover your mouse over the parameter name. You cannot change the code after adding the parameter.



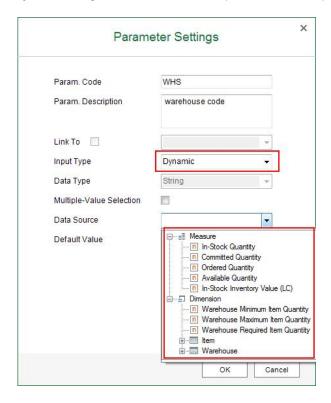
You cannot use quotation marks (") or backslashes (\)in your parameter code.

- 3. [Optional] Select the *Link To* checkbox to link the report parameter to a data source parameter. For more information, see Linking Report Parameters to Data Source Parameters.
  - i Note

When you link your report parameter to a data source parameter that is a value-list parameter, you can only use the input type *User Input* for the report parameter.

- 4. Select the input type for the parameter. There are three input types, as follows:
  - o *Dynamic*: The parameter values are retrieved from the data source you defined in the *Data Source* dropdown list. When you select this input type, the measures and dimensions appear in the *Data Source* dropdown list. Select a measure or dimension as the data source for the parameter values.
    - i Note

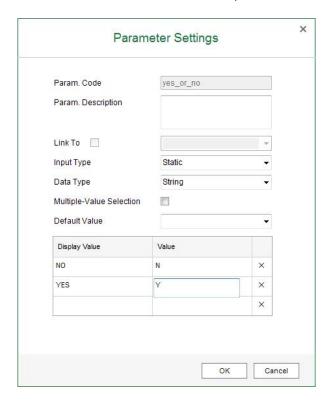
When the data source you are using contains a data source parameter, this input type is not available.



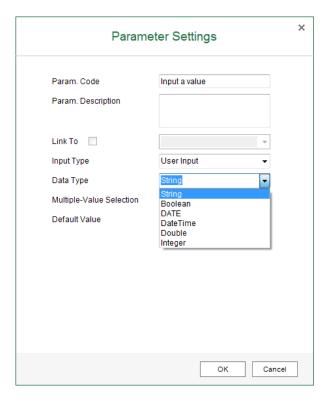
- o *Static*: The parameter values are retrieved from the values you defined for this parameter. When you select this input type, you can define the following data types and specific values for the parameter.
  - o String: The parameter value must be a string.
  - o *Boolean*: The parameter value must be *True* or *False*. In the *Value* column, you can select from the two options using the dropdown list.
  - o DATE: The parameter value must be a date in the format **YYYY.MM.DD** or **YYYY-MM-DD**. In the Value column, you can select the date using the date picker.
  - O DateTime: The parameter value must be a date and time in the format YYYY.MM.DD

    HH:MM:SS.FFFFFF OR YYYY-MM-DD HH:MM:SS.FFFFFF. In the Value column, you can select the date using the date picker. The time is optional. If you do not enter a time, 00:00:00.000000 will be saved in the database.
  - o *Double*: The parameter value must be a number with or without a decimal point. This data type is more accurate in calculations compared to the *Integer* data type.
  - o *Integer*: The parameter value must be a whole number without a decimal point.

The display values will appear as the options for you to select in the *Default Value* dropdown list or in the *Input Parameter* window, and the values you defined will be transferred from the parameter to the place you use it, the cell in the section, the filter, or the data source parameter.



User Input: The parameter value, the one that will be transferred from the parameter to the place you use
it, is what you enter in the Input Parameter window. When you select this input type, you must define the
data types in the Data Type dropdown list. For more information about the data type, see the above input
type.



- 5. [Optional] To enable selecting or entering multiple values in the *Input Parameter* window, select the *Multiple-Value Selection* checkbox.
- 6. In the *Default Value* field, select or enter a default value, depending on the input type of the parameter. This value appears in the *Input Parameter* window as the default value for the parameter.
  - o For the *Dynamic* type, select a value from the measure or dimension.
  - o For the Static type, select a display value from the ones you defined in the table.
  - o For the *User Input* type, enter a value according to the data type of the parameter.
- 7. To save the parameter, choose OK.

## 5.3.1.2.2 Using Report Parameters

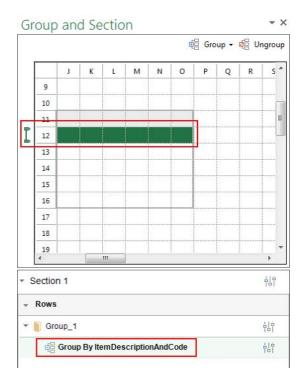
You can use parameters in the section or in the filters. The parameter value you select or enter when you run the report is then transferred to the section as a display value, or to the filter as a filtering value, respectively. Therefore, you do not need to go to the report designer every time you need to change the display value or the filtering value; instead, you can change them every time you run the report.

In the following example, you will create a report to view the in-stock quantities of items in different warehouses using a *Dynamic* report parameter. The parameter value you select when you run the report will be transferred to the section as a display value and to the filter as a filtering value.

## Procedure

- 1. Select *Inventory Status* as your data source, and drag *Item Description & Code* to the worksheet. The *New Section* window appears.
- 2. In the New Section window, define the section size, select the Add as a Row Group radio button, and choose OK

In the *Group and Section* panel, a staple appears to indicate that a group was created.



3. Drag *In-Stock Quantity* to the group, as follows:

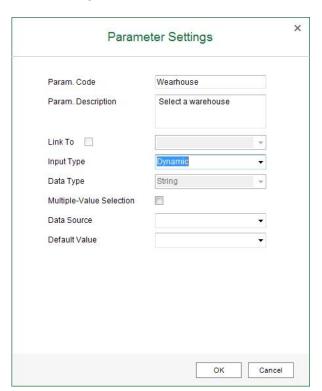


4. On the Report Parameter tab of the data source panel, choose ...

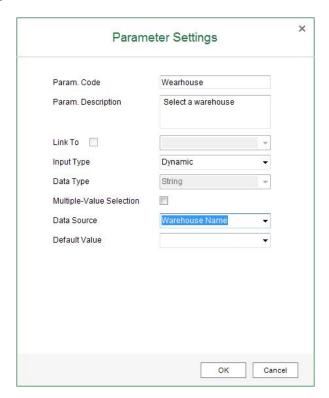
5. The *Parameter Settings* window appears. Enter the code **Warehouse** and the description **Select a** warehouse.



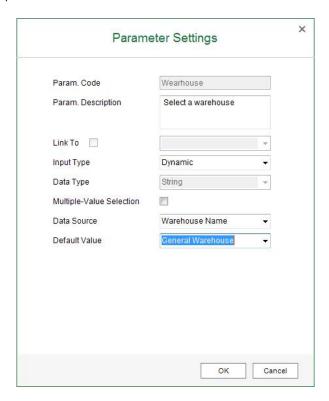
6. In the *Input Type* dropdown list select *Dynamic*.



7. In the Data Source dropdown list, select Warehouse Name.



8. In the Default Value dropdown list, select General Warehouse.

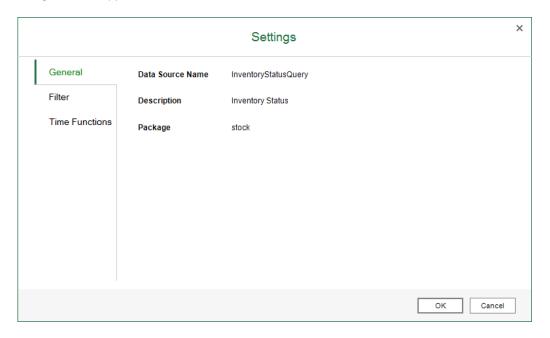


9. In the *Parameter Settings* window, choose *OK*.

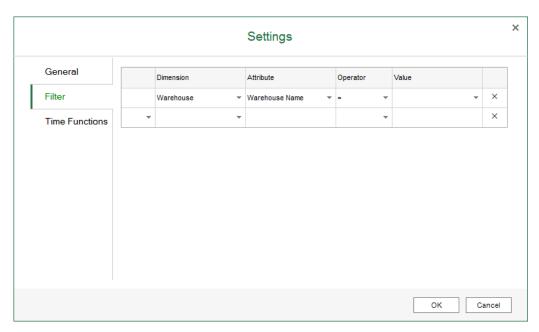
10. In the *Group and Section* panel, choose the *Settings* button next to the section.



The Settings window appears.

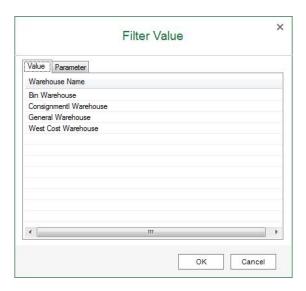


11. On the *Filter* tab, in the *Dimension*, *Attribute*, and *Operator* dropdown lists, select *Warehouse*, *Warehouse*, *Name*, and = respectively.

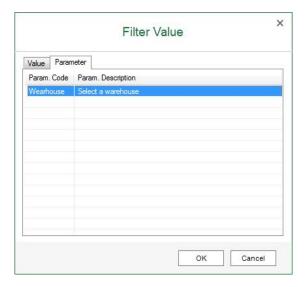


12. In the *Value* column, choose the triangle.

The Filter Value window appears.

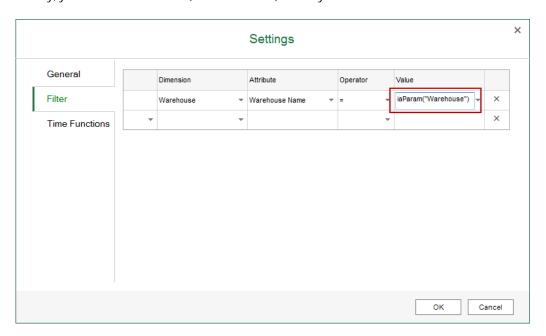


13. On the *Parameter* tab, select the parameter that you have created, and choose *OK*.



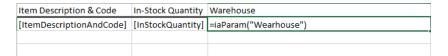
The iaParam function appears in the *Value* column. For more information, see iaParam Function.

Alternatively, you can enter iaParam("Warehouse") directly in the *Value* column.



- 14. In the Settings window, choose OK.
- 15. From the *Report Parameter* tab of the data source panel, drag *Warehouse* to the worksheet, and enter *Warehouse* as its title.

Alternatively, you can enter iaParam("Warehouse") directly in the relevant cell.



## Result

You can view the in-stock quantities of items in different warehouses as follows:

- To view the in-stock quantities of items in the general warehouse, follow the procedure below:
  - 1. In the *EXCEL REPORT* ribbon, choose *Run Report*. The *Input Parameter* window appears, and the default value for the parameter appears in the dropdown list.



2. In the Input Parameter window, choose OK. The report result looks like the following:

Item Description & Code	In-Stock Quantity	Warehouse	
Tower Case with Power supply (C00004)	1085	General Warehouse	•
WLAN Card (C00005)	837	General Warehouse	4
Quadcore CPU 3.4 GHz (C00003)	27	General Warehouse	
LeMon 4029 Printer System Board (LM4029SB)	703	General Warehouse	1
J.B. Officeprint 1420 (A00001)	973	General Warehouse	
MRP_Item5 (MRP_Item5)	0	General Warehouse	
Memory DDR RAM 8GB (C00011)	1018	General Warehouse	
Rainbow Nuance Ink 6-Pack and Photo Paper Kit (100008)	986	General Warehouse	4
MRP_BOM (MRP_BOM)	0	General Warehouse	4
LeMon 4029 Printer (LM4029)	267	General Warehouse	
MRP_Child1 (MRP_Child1)	0	General Warehouse	
J.B. Officeprint 1111 (A00002)	964	General Warehouse	4
LeMon 4029 Printer AC Adapter (LM4029ACA)	700	General Warehouse	
SLR PreciseShot PX1500 (I00009)	972	General Warehouse	
PC - 8x core, DDR 32GB, 2TB HDD (P10001)	29	General Warehouse	
MRP_Child2 (MRP_Child2)	0	General Warehouse	
Tablet PC 64GB Black (Z00001)	0	General Warehouse	
LeMon 4029 Printer AC Power Cord (LM4029APCD)	650	General Warehouse	`
SLR M-CAM 40C (100010)	1086	General Warehouse	4
J.B. Officeprint 1186 (A00003)	1090	General Warehouse	
MRP_Grandchild (MRP_Grandchild)	0	General Warehouse	4
LeMon 4029 500 sheet paper drawer (LM4029D)	772	General Warehouse	3
KG USB Travel Hub (100011)	1066	General Warehouse	
PC - 12x core, 64GB, 5 x 150GB SSD (P10002)	5	General Warehouse	3
Blu-Ray Disc 10-Pack (I00001)	1087	General Warehouse	1
MRP_Item1 (MRP_Item1)	0	General Warehouse	
Memory Chip (LM4029MC)	412	General Warehouse	
KG PC-to-Mac Transfer Kit (100012)	1088	General Warehouse	1
Rainbow Color Printer 5.0 (A00004)	1031	General Warehouse	3

The value you select in the *Input Parameter* window is transferred to the place where you use the report parameter.

- o The report parameter value is transferred to the filter as a filtering value, so only the quantity in the general warehouse is displayed.
- o The report parameter value is transferred to the section as a display value, so *General Warehouse* appears in the *Warehouse* column.
- To view the in-stock quantities of items in the west cost warehouse, follow the procedure below:
  - 1. In the *EXCEL REPORT* ribbon, choose *Run Report*. The *Input Parameter* window appears, and the default value for the parameter appears in the dropdown list.



2. In the *Input Parameter* window, select *West Cost Warehouse*, and choose *OK*. The report result looks like the following.

Item Description & Code	In-Stock Quantity Warehouse
Rainbow Printer 9.5 Inkjet Cartridge (100007)	0 West Cost Warehouse
LeMon 4029 Printer System Board (LM4029SB)	0 West Cost Warehouse
J.B. Officeprint 1420 (A00001)	50 West Cost Warehouse
Rainbow Nuance Ink 6-Pack and Photo Paper Kit (100008)	0 West Cost Warehouse
MRP_Item5 (MRP_Item5)	0 West Cost Warehouse
MRP_BOM (MRP_BOM)	0 West Cost Warehouse
Quadcore CPU 3.4 GHz (C00003)	50 West Cost Warehouse
LeMon 4029 Printer (LM4029)	0 West Cost Warehouse
Memory DDR RAM 8GB (C00011)	50 West Cost Warehouse
MRP_Child1 (MRP_Child1)	0 West Cost Warehouse
J.B. Officeprint 1111 (A00002)	50 West Cost Warehouse
LeMon 4029 Printer AC Adapter (LM4029ACA)	0 West Cost Warehouse
SLR PreciseShot PX1500 (I00009)	0 West Cost Warehouse
PC - 8x core, DDR 32GB, 2TB HDD (P10001)	0 West Cost Warehouse
Tower Case with Power supply (C00004)	50 West Cost Warehouse
MRP_Child2 (MRP_Child2)	0 West Cost Warehouse
LeMon 4029 Printer AC Power Cord (LM4029APCD)	0 West Cost Warehouse
SLR M-CAM 40C (100010)	0 West Cost Warehouse
Tablet PC 64GB Black (Z00001)	0 West Cost Warehouse
J.B. Officeprint 1186 (A00003)	0 West Cost Warehouse
MRP_Grandchild (MRP_Grandchild)	0 West Cost Warehouse
LeMon 4029 500 sheet paper drawer (LM4029D)	0 West Cost Warehouse
KG USB Travel Hub (100011)	0 West Cost Warehouse
WLAN Card (C00005)	50 West Cost Warehouse
PC - 12x core, 64GB, 5 x 150GB SSD (P10002)	0 West Cost Warehouse
Blu-Ray Disc 10-Pack (100001)	0 West Cost Warehouse
MRP_Item1 (MRP_Item1)	0 West Cost Warehouse
Memory Chip (LM4029MC)	50 West Cost Warehouse
KG PC-to-Mac Transfer Kit (100012)	0 West Cost Warehouse
Rainbow Color Printer 5.0 (A00004)	30 West Cost Warehouse
Tablet PC 64CR White (Z00002)	9 West 9 st Warehous

The value you select in the *Input Parameter* window is transferred to the place where you use the report parameter.

- o The report parameter value is transferred to the filter as a filtering value, so only the quantity in the west cost warehouse is displayed.
- o The report parameter value is transferred to the section as a display value, so *West Cost Warehouse* appears in the *Warehouse* column.

# 5.3.1.2.3 Linking Report Parameters to Data Source Parameters

You can link report parameters to data source parameters. The parameter value you select or enter when you run the report is then transferred to the data source parameter as a data source parameter value. Therefore, you do not need to go to the report designer every time you want to view the report based on different data source parameter values; instead, you can do so by defining the linked report parameter values when you run the report. In the following example, you will create a report to view the unsettled trade receivable or payable amount based on different aging dates for different business partner types using report parameters that are linked to data

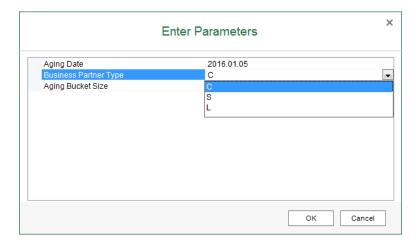
source parameters. The parameter value you select when you run the report will be transferred to the data source parameter as a data source parameter value.



When you link your report parameter to a data source parameter that is a value-list parameter, you can only use the input type *User Input* for the report parameter.

## Procedure

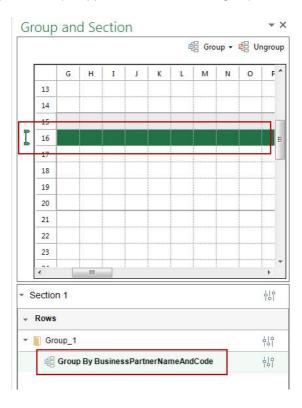
1. Select *Account Receivable & Payable Analysis* as your data source, and in the *Enter Parameters* window, define your specific data source parameter values or take the default values. You can always define specific report parameter values when you run the report and transfer them to the data source parameters.



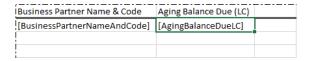
2. Drag Business Partner Name & Code to the worksheet. The New Section window appears.

3. In the *New Section* window, define the section size, select the *Add as a Row Group* radio button, and choose *OK*.

In the Group and Section panel, a staple appears to indicate that a group was created.

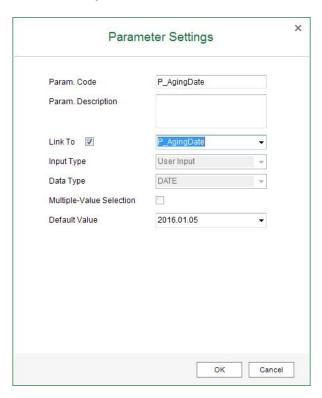


4. Drag Aging Balance Due (LC) to the group, as follows:



5. On the *Report Parameter* tab of the data source panel, choose . The *Parameter Settings* window appears.

6. Select the *Link To* checkbox, and select the data source parameter *P\_AgingDate*. The parameter code is filled automatically.

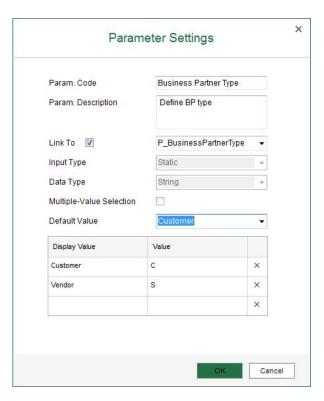


7. In the *Param. Code* field, enter Aging Date, in the *Param. Description* field, enter Define an aging date, and choose *OK*.



- 8. On the *Report Parameter* tab of the data source panel, choose ...

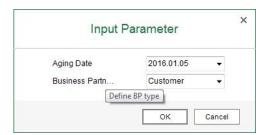
  The *Parameter Settings* window appears.
- 9. Select the *Link To* checkbox, and select the data source parameter *P\_BusinessPartnerType*. The parameter code is filled automatically.
- 10. In the *Param. Code* field, enter **Business Partner Type**, and in the *Param. Description* field, enter **Define BP type**.
- 11. In the value table, define the display values and values according to the values of the data source parameter as follows, and choose *OK*.



#### Result

You can view the report for different business partner types, as follows:

- To view unsettled trade receivable amount for customers, follow the procedure below:
  - 1. In the EXCEL REPORT ribbon, choose Run Report. The Input Parameter window appears, and the default values for the parameters appear in the dropdown lists.



2. In the Input Parameter window, choose OK. The report result looks like the following:

Business Partner Name & Code	Aging Balance Due (LC)	
ADA Technologies (C50000)	1828.5	
Maxi-Teq (C20000)	29446.8	
Mashina Corporation (C42000)	16628.76	
SG Electronics (C60000)	12502.5	
Aquent Systems (C70000)	2082.5	
Microchips (C30000)	7415.13	4
Earthshaker Corporation (C40000)	5790.63	-
<b>A</b>		

The values you select in the *Input Parameter* window are transferred to the data source parameter  $P_BusinessPartnerType$  so only customers are displayed.

- To view unsettled trade payable amount for vendors, follow the procedure below:
  - 1. In the EXCEL REPORT ribbon, choose Run Report. The Input Parameter window appears, and the default values for the parameters appear in the dropdown lists.



2. In the Input Parameter window, select Vendor, and choose OK. The report result looks like the following.

Business Partner Name & Code	Aging Balance Due (LC)	4
SMD Technologies (V70000)	6300.16	4
Blockies Corporation (V30000)	9353.35	
Anthony Smith (V23000)	11465.84	- 4
CTI Computers (V60000)	3620.96	-
Far East Imports (V1010)	2776.62	3
Lasercom (V20000)	681.98	
Acme Associates (V10000)	37649.35	
Lumarx (V50000)	162.38	

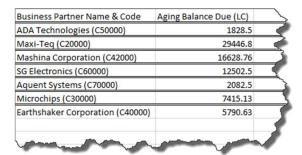
The values you select in the *Input Parameter* window are transferred to the data source parameter  $P\_BusinessPartnerType$  so only vendors are displayed.

You can view the report for different aging dates, as follows:

- To view unsettled trade receivable amount for customers on the aging date of 2016.01.01, follow the procedure below:
  - 1. In the *EXCEL REPORT* ribbon, choose *Run Report*. The *Input Parameter* window appears, and the default values for the parameters appear in the dropdown lists.



2. In the *Input Parameter* window, select *2016.01.01*, and choose *OK*. The report result looks like the following.

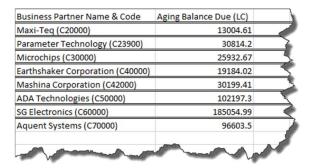


The value you select in the *Input Parameter* window is transferred to the data source parameter  $P\_AgingDate$  so the unsettled trade receivable amount for customers on the aging date of 2016.01.01 is displayed.

- To view unsettled trade receivable amount for customers on the aging date of 2012.01.01, follow the procedure below:
  - 1. In the *EXCEL REPORT* ribbon, choose *Run Report*. The *Input Parameter* window appears, and the default values for the parameters appear in the dropdown lists.



2. In the *Input Parameter* window, select *2012.01.01*, and choose *OK*. The report result looks like the following:



The value you select in the *Input Parameter* window is transferred to the data source parameter  $P\_AgingDate$  so the unsettled trade receivable amount for customers on the aging date of 2012.01.01 is displayed.

## 5.3.1.2.4 Managing Report Parameters

- To edit a report parameter, on the *Report Parameter* tab of the data source panel, select the report parameter, and choose <a></a>...</a>
- To delete a report parameter, on the *Report Parameter* tab of the data source panel, select the report parameter, choose  $\overline{\mathbb{U}}$ , and confirm the message.

## 5.3.2 Working with Filters

i Note

You can filter only by dimensions.

You can set filters on the section or group set level. A group set is a group hierarchy that contains one or more groups that are related to each other.

To see the section or group set information, use the Settings button next to them.

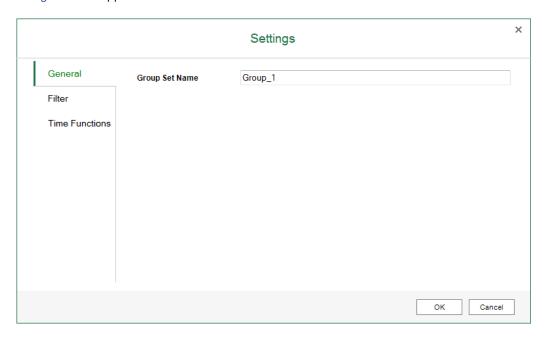


## Procedure

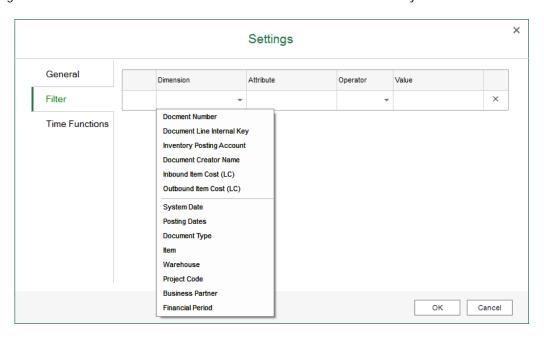
To set a filter for a section or group set, follow the procedure below:

1. In the *Group and Section* panel, choose the *Settings* button next to the section or group set for which you want to set a filter.

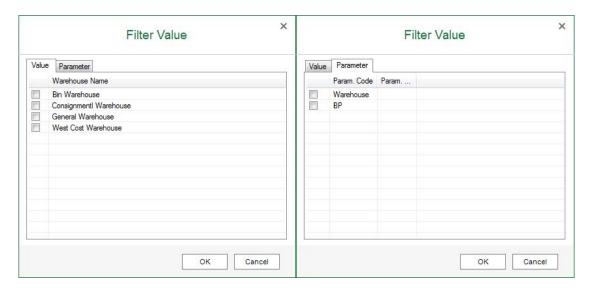
The Settings window appears.



- 2. On the *General* tab, for a section, you can find the data source information; for a group set, you can define its name
- 3. On the *Filter* tab, you can find all the dimensions in this data source, which means that you can filter the data using all the dimension values in the data source. Select a dimension to filter by its values.



- 4. In the *Operator* dropdown list, select an operator for the filter. The following operators are available:
  - o =: the filtered value is equal to the value you select in the *Value* column.
  - o <>: the filtered values are not equal to the value you select in the *Value* column.
  - o >: the filtered values are greater than the value you select in the Value column.
  - o >=: the filtered values are greater than or equal to the value you select in the Value column.
  - o <: the filtered values are smaller than the value you select in the Value column.
  - o <=: the filtered values are smaller than or equal to the value you select in the *Value* column.
  - o IN: the filtered values are equal to one of the values you select in the Value column.
- 5. In the *Value* column, enter or select a value or report parameter, using the date picker (for a date-type dimension), the value list on the *Value* tab of the *Filter Value* window (for all dimensions), or the *Parameter* tab of the *Filter Value* window. For more information about report parameters, see Report Parameters and iaParam Function.



i Note

To display more or fewer values in the value list, use the *Max. Number of List Values* field on the *Value List* tab of the *Application Settings* window. For more information, see EXCEL REPORT Ribbon.

- 6. If you define more than one line in the filter, define the condition *And* or *Or* to combine the filter lines.
  - i Note

You cannot use And and Or in one filter at the same time

7. To save the settings, choose *OK*.

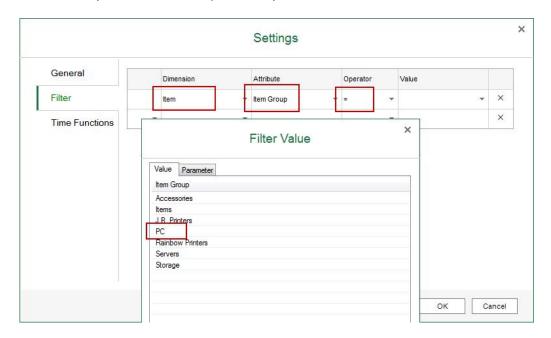


In the report created in Creating the Excel Report, you will filter the item groups to see a specific item group *PC*. To do so, follow the procedure below:

5. In the *Group and Section* panel, choose the *Settings* button next to the group set that contains the *ItemGroup* and *ItemDescriptionAndCode* groups.

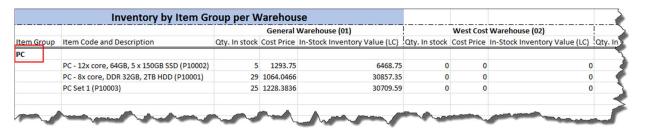


6. On the *Filter* tab of the *Settings* window, select *Item* in the *Dimension* dropdown list, *Item Group* in the *Attribute* dropdown list, = in the *Operator* dropdown list, and *PC* in the *Value* column.



- 7. In the *Settings* window, choose *OK*.
- 8. In the EXCEL REPORT ribbon, choose Run Report.

The report result shows the in-stock information of each item that belongs to the *PC* item group per warehouse.



## 5.3.3 Working with Group, Details Group, and Field

Excel Report and Interactive Analysis provides the following field types:

- Group: this field type retrieves all the values of a dimension from the database and treats each value as a group. The group must be grouped by a dimension.
- Details group: you can treat this field type as a group, as the operations for this field type are almost the same as those for a group. However, this field type does not treat each value as a group; instead, a details group displays every record of all dimensions in the group. The details group does not have a *Group By* attribute.
- · Field: this field type retrieves values depending on the data source.
  - o If the data source is a measure, this field type retrieves the sum of all the values in the database for the corresponding group (if it has a corresponding group).
  - o If the data source is a dimension, this field type retrieves the largest value in the database for the corresponding group (if it has a corresponding group).

## 5.3.3.1 Group and Details Group

i <sub>Note</sub>

When you copy a group hierarchy, all the information is copied, including the *Group By* attribute, the calculated value, and so on.

i Note

You can add paralleled groups only on the first level of group hierarchies.

## 5.3.3.1.1 Adding a Group

When you add a group that is grouped by a dimension, the report result displays all the values of the dimension in the database with the *Group By* attribute, that is, the report treats each value of the dimension as a group.

## Adding a Group When You Start

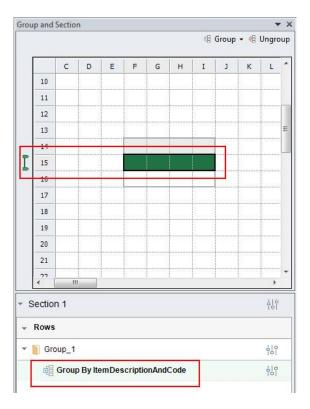
You will create a report that displays the in-stock quantity of each item in the database.

#### Procedure

To add a group when you start designing a report, follow the procedure below:

- 1. Select *Inventory Status* as your data source, and drag *Item Description & Code* to the worksheet. The *New Section* window appears.
- 2. In the New Section window, define the section size, select the Add as a Row Group radio button, and choose

In the *Group and Section* panel, a staple appears to indicate that a group was created.



3. Drag *In-Stock Quantity* to the group, as follows:



## Result

In the EXCEL REPORT ribbon, choose Run Report.

The report result shows the in-stock quantity of each item. The report treats every item as a group.

Item Description & Code	In-Stock Quantity	- 4
LeMon 4029 Printer System Board (LM4029SB)	703	
Server Point 10000 (S10000)	40	
MRP_Item4 (MRP_Item4)	0	-
Rainbow Printer 9.5 Inkjet Cartridge (100007)	947	
Motherboard MicroATX (C00002)	1182	5
J.B. Officeprint 1420 (A00001)	1024	
Mouse USB (C00010)	1071	
MRP_Item5 (MRP_Item5)	0	
Memory DDR RAM 8GB (C00011)	1068	3
Rainbow Nuance Ink 6-Pack and Photo Paper Kit (100008)	986	
Quadcore CPU 3.4 GHz (C00003)	1077	
MRP_BOM (MRP_BOM)	0	3
LeMon 4029 Printer (LM4029)	267	1
MRP_Child1 (MRP_Child1)	0	Į.
J.B. Officeprint 1111 (A00002)	1015	
LeMon 4029 Printer AC Adapter (LM4029ACA)	700	-
SLR PreciseShot PX1500 (I00009)	972	4
PC - 8x core, DDR 32GB, 2TB HDD (P10001)	29	5
Tower Case with lower sup to 160000	110000	man

## Adding a Group During Your Design

You will create a report that displays the in-stock quantity of each item per each warehouse in the database.

## Procedure

When you are in the middle of designing a report, to add a group by using the *Add New Group* option in the *Group* and *Section* panel, follow the procedures below:

1. With the *Inventory Status* data source, you have added *In-Stock Quantity* and *Item Description & Code* as two fields in the worksheet.

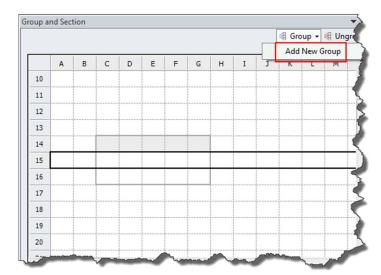
Item Description & Code	In-Stock Quantity		
[ItemDescriptionAndCode]	[InStockQuantity]		
			!

- 2. Select the whole Excel row as follows.
  - i Note

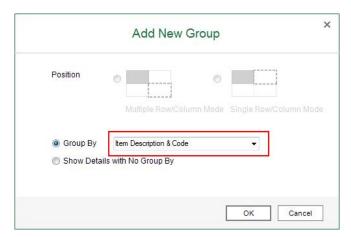
If you want to add a column group, select the whole Excel column.



3. In the *Group and Section* panel, choose  $Group \rightarrow Add New Group$ .

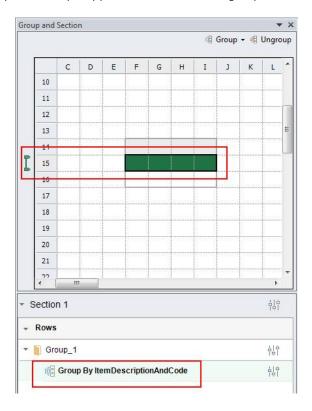


4. In the *Group By* dropdown list of the *Add New Group* window, select *Item Description & Code*, and choose *OK*.



## Result

• In the *Group and Section* panel, a staple appears to indicate that a group was created.



• In the EXCEL REPORT ribbon, choose Run Report.

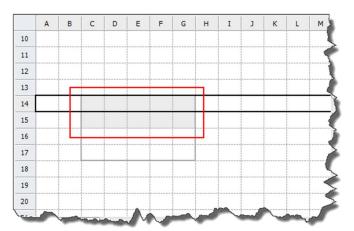
The report result shows the in-stock quantity of each item. The report treats every item as a group.

Item Description & Code	In-Stock Quantity	
LeMon 4029 Printer System Board (LM4029SB)	703	
Server Point 10000 (S10000)	40	
MRP_Item4 (MRP_Item4)	0	4
Rainbow Printer 9.5 Inkjet Cartridge (100007)	947	
Motherboard MicroATX (C00002)	1182	
J.B. Officeprint 1420 (A00001)	1024	
Mouse USB (C00010)	1071	
MRP_Item5 (MRP_Item5)	0	
Memory DDR RAM 8GB (C00011)	1068	1
Rainbow Nuance Ink 6-Pack and Photo Paper Kit (100008)	986	
Quadcore CPU 3.4 GHz (C00003)	1077	
MRP_BOM (MRP_BOM)	0	
LeMon 4029 Printer (LM4029)	267	
MRP_Child1 (MRP_Child1)	0	
J.B. Officeprint 1111 (A00002)	1015	4
LeMon 4029 Printer AC Adapter (LM4029ACA)	700	,
SLR PreciseShot PX1500 (I00009)	972	
PC - 8x core, DDR 32GB, 2TB HDD (P10001)	29	
Tower Case with lower sup to 160000	11	امم

## Procedure

When you are in the middle of designing a report, to add a group by directly dragging a dimension to the section header, follow the procedures below:

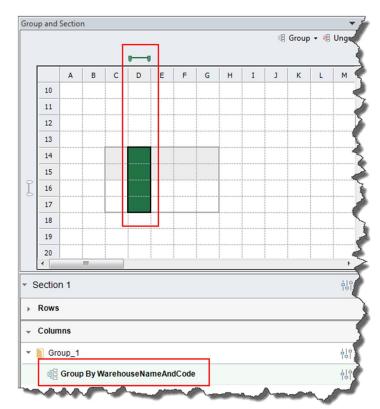
1. In the report created in the previous procedure, insert a row in the section header.



2. Drag Warehouse Name & Code to the section header as follows:

, 	[WarehouseNameAndCode]	 	
Item Description & Code	In-Stock Quantity		
[ItemDescriptionAndCode]	[InStockQuantity]		

A column group is automatically created.



#### Result

In the EXCEL REPORT ribbon, choose Run Report.

The report result shows the in-stock quantity of each item per each warehouse.

	General Warehouse (01)	West Cost Warehouse (02)	Consignmentl Warehouse (04)	Bin Ware
Item Description & Code	In-Stock Quantity	In-Stock Quantity	In-Stock Quantity	In-Stock
MRP_Item3 (MRP_Item3)	0	0	0	
J.B. Officeprint 1420 (A00001)	974	50	0	- 4
SLR M-CAM 40C (100010)	1086	0	0	4
Computer Monitor 24" HDMI (C00008)	1065	50	0	
LeMon 4029 Printer (LM4029)	267	0	0	4
USB Flashdrive 128GB (I00003)	953	0	0	4
MRP_Item4 (MRP_Item4)	0	0	0	
LeMon 4029 Printer System Board (LM4	703	0	0	4
Printer Paper A4 White (R00001)	192	0	0	1
Motherboard BTX (C00001)	1231	50	0	4
J.B. Officeprint 1111 (A00002)	965	50	0	
KG USB Travel Hub (100011)	1066	0	0	- 1
Keyboard Comfort USB (C00009)	1058	50	0	1
LeMon 4029 Printer AC Adapter (LM402	700	0	0	1
MRP_Item5 (MRP_Item5)	0	0	0	4
J.B. Officeprint 1186 (A00003)	1091	0	0	- 1
KG PC-to-Mac Transfer Kit (100012)	1088	0	0	_
Use MEB (Cocco)	1021	50	0	

## Adding a Parent or Child Group

You will create a report that displays the in-stock quantity of each item, and the items are grouped by item group.

#### Procedure

To create the report by adding a parent group, follow the procedure below:

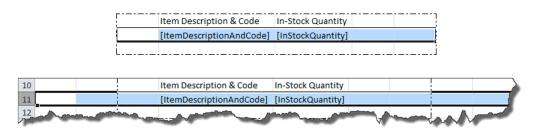
1. With the *Inventory Status* data source, you have added a group that is grouped by *Item Description & Code*, and added *In-Stock Quantity* to the group.

Item Description & Code	In-Stock Quantity
[ItemDescriptionAndCode]	[InStockQuantity]
<u> </u>	

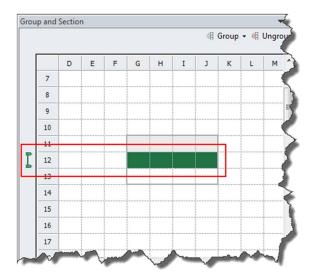
2. Insert a column before the *Item Description & Code* column to reserve a place for the item group column. The section looks like the following:

	Item Description & Code	In-Stock Quantity	
	[ItemDescriptionAndCode]	[InStockQuantity]	
i			

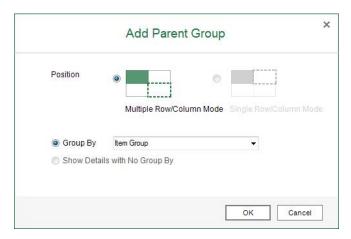
- 3. Select the *ItemDescriptionAndCode* group using either of the following two methods:
  - o In the Group and Section panel, select the staple.
  - o In the worksheet, select the whole *ItemDescriptionAndCode* group row in the section or select the whole Excel row as follows:



In the Group and Section panel, the staple is marked in green, indicating that the group has been selected.



- In the Group and Section panel, choose Group → Add Parent Group.
   The Add Parent Group window appears.
- 5. In the *Group By* dropdown list, select *Item Group*, and choose *OK*.

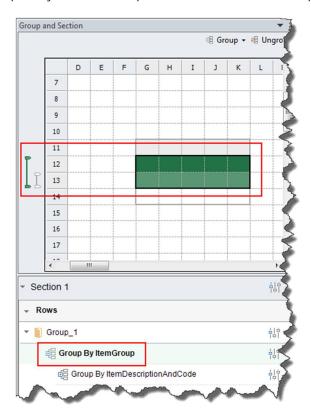


## Result

• In the worksheet, the section looks like the following:

Item Group	Item Description & Code	In-Stock Quantity	
[ItemGroup]			
!	[ItemDescriptionAndCode]	[InStockQuantity]	
!			

• In the *Group and Section* panel, you can find the position and information of the parent group as follows:



· In the EXCEL REPORT ribbon, choose Run Report.

The report result shows the in-stock quantity of each item, and the items are grouped by item group.

Item Group	Item Description & Code	In-Stock Quantity	1
Accessories			T
	Memory Chip (LM4029MC)	462	4
Items			
	Blu-Ray Disc 10-Pack (100001)	1087	
	Blu-Ray DL Disc 10-Pack (1000	1022	T,
	Computer Monitor 24" HDMI	1115	×
	Gigabit Network Card (C0000	1017	1
	Hard Disk 3TB (C00007)	1110	3
	J.B. Laptop Batteries X1 serie	1014	9
	J.B. Laptop Batteries X2 serie	984	4
	Keyboard Comfort USB (C000	1108	4
	KG PC-to-Mac Transfer Kit (IC	1088	ď
	KG USB Travel Hub (100011)	1066	8
	LeMon 4029 500 sheet paper	772	
	LeMon 4029 Printer (LM4029	267	3
	LeMon 4029 Printer AC Adap	700	Į
	LeMon 4029 Printer AC Powe	650	٩
	LeMon 4029 Printer Head (LN	782	4
	LeMon 4029 Printer Power S	44	I
	LeMon 4029 Printer System E	703	1
V	DDR.RAM 8GB (C000	1068	1

#### Procedure

To create the report by adding a child group, follow the procedure below:

1. With the *Inventory Status* data source, you have added a group that is grouped by *Item Group*.

Item Group	 	[ · · · · · · · · ·
[ItemGroup]		

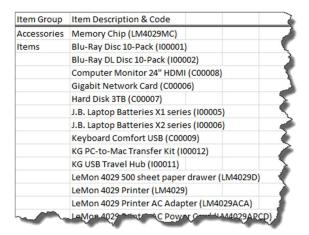
- 2. Select the *ItemGroup* group using either of the two methods provided in the third step of the previous procedure, and in the *Group and Section* panel, choose *Group* → *Add Child Group*.
  - The Add Child Group window appears.
- 3. In the *Position* section, to place the child group in the next row of the parent group, select the *Multiple Row/Column Mode* radio button. You will select this radio button in this procedure. The result looks like the following:

Item Group	Item Description & Code	×
Accessories		
	Memory Chip (LM4029MC)	1
Items	i,	┫
	Blu-Ray Disc 10-Pack (I00001)	4
	Blu-Ray DL Disc 10-Pack (100002)	İ
	Computer Monitor 24" HDMI (C00008)	Ų
	Gigabit Network Card (C00006)	4
	Hard Disk 3TB (C00007)	•
	J.B. Laptop Batteries X1 series (100005)	
	J.B. Laptop Batteries X2 series (100006)	4
	Keyboard Comfort USB (C00009)	1
	KG PC-to-Mac Transfer Kit (100012)	1
	KG USB Travel Hub (I00011)	i
	LeMon 4029 500 sheet paper drawer (LM4029D)	۴

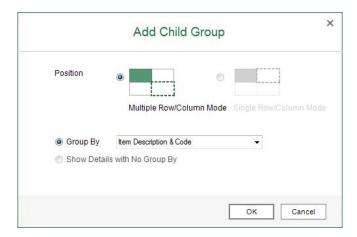
In the *Position* section, to place the child group in the same row as the parent group, select the *Single Row/Column Mode* radio button. The result looks like the following:



The *Add Parent Group* option is not available for the first level group. Therefore, for groups in the single row/column mode, you cannot add a parent group to the first level group.



4. In the Group By dropdown list, select Item Description & Code, and choose OK.



5. Drag In-Stock Quantity to the ItemDescriptionAndCode group.

#### Result

The results are the same as the results for the previous procedure.

## 5.3.3.1.2 Adding a Details Group

When you add a details group, the report result displays all records in the database without the *Group By* attribute, that is, this field does not treat each value as a group; instead, a details group displays every record of all dimensions in the group.

i Note

When there is a column group, you cannot add a details group in the row direction; and when there is a row group, you cannot add a details group in the column direction.

#### Adding a Details Group When You Start

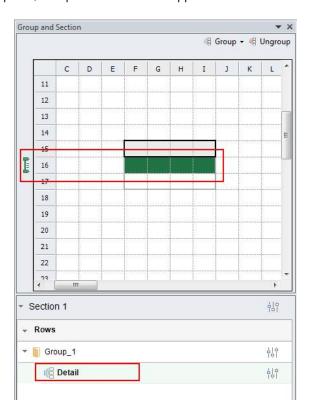
You will create a report that displays the inbound inventory quantity for each item on each posting date.

#### Procedure

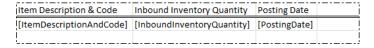
To add a details group when you start designing a report, follow the procedure below:

- 1. Select *Inventory Transaction Documents* as your data source, and drag *Item Description & Code* to the worksheet. The *New Section* window appears.
- 2. In the *New Section* window, define the section size, select the *Add as a Row Group* radio button together with the *Show Details with No Group By* checkbox, and choose *OK*.

In the Group and Section panel, a staple with three lines appears to indicate that a details group was created.



3. Drag Inbound Inventory Quantity and Posting Date to the details group as follows:



#### Result

In the EXCEL REPORT ribbon, choose Run Report.

The report result shows every record in the group, and the sum of inbound inventory quantity for each record.

Item Description & Code	Inbound Inventory Quantity	Posting Date	7
J.B. Officeprint 1420 (A00001	40	12-05-2007	3
J.B. Officeprint 1111 (A00002	40	12-05-2007	3
J.B. Officeprint 1186 (A00003	40	12-11-2007	7
Rainbow Color Printer 5.0 (A	40	12-11-2007	7
Rainbow Color Printer 7.5 (A	40	12-11-2007	3
Motherboard BTX (C00001)	40	12-11-2007	5
Motherboard MicroATX (C00	40	12-11-2007	3
Quadcore CPU 3.4 GHz (C000	40	12-14-2007	Σ
Tower Case with Power supp	40	12-14-2007	Ì
WLAN Card (C00005)	40	12-14-2007	
Gigabit Network Card (C0000	40	12-14-2007	7
Hard Disk 3TB (C00007)	40	12-14-2007	1
Computer Monitor 24" HDMI	40	12-24-2007	₹
Keyboard Comfort USB (C000	40	12-24-2007	1
Mouse USB (C00010)	40	12-24-2007	7
Memory DDR RAM 8GB (C000	40	12-24-2007	3
J.B. Laptop Batteries X1 serie	40	01-16-2008	
J.B. Laptop Batteries X2 serie	40	01-16-2008	1
J.B. Officeprint 1420 (A00001	50	01-30-2008	7
J.B. Officeprint 1111 (A00002	50	01-30-2008	7
J.B. Officeprint 1186 (A00003	50	01-30-2008	5
Rainbow Color Printer 5.0 (A	50	02-04-2008	⋛
Rainbow Color Printer 7.5 (A	50	02-04-2008	3
Motherboard BTX (C00001)	50	02-04-2008	5
Motherboard MicroATX (C00	50	02-04-2008	
Quadcore CPU 3.4 GHz (C000	50	02-04-2008	1
Tower Case with Power supp	50	02-09-2008	
WLAN Card (C00005)		02-00-2008	

### Adding a Details Group During Your Design

This procedure is the same as the one for adding a group when you are in the middle of designing a report by using the *Add New Group* option in the *Group and Section* panel, except that you need to select the *Show Details with No Group By* radio button in the *Add New Group* window. For more information, see the first procedure in Adding a Group During Your Design.



In the *Add New Group* window, when you select the *Show Details with No Group By* radio button, you cannot edit the *Group By* dropdown list, because a details group does not have the *Group By* attribute, and it displays every record of all dimensions in the group.

### Adding a Child Details Group

## i Note

A details group must be in the lowest level of a group hierarchy, so you cannot add a parent details group.

This procedure is the same as the one for adding a child group, except that you need to select the *Show Details* with No Group By radio button in the Add Child Group window. For more information, see the second procedure in Adding a Parent or Child Group.

# i Note

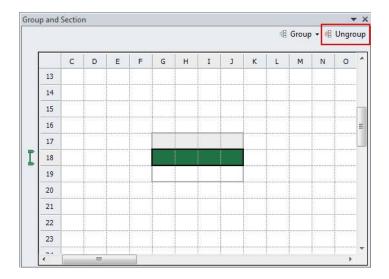
In the Add Child Group window, when you select the Show Details with No Group By radio button, you cannot edit the Group By dropdown list, because a details group does not have the Group By attribute, and it displays every record of all dimensions in the group.

## 5.3.3.1.3 Deleting a (Details) Group

# i Note

In the Single Row/Column Mode, you cannot delete the highest-level group if it has child groups.

To delete a group, in the *Group and Section* panel, select the staple of the group that you want to delete, and choose *Ungroup* as follows:



## 5.3.3.1.4 Modifying and Sorting a (Details) Group



Sorting does not support calculated fields, such as iaGet("Attribute\_A")/iaGet("Attribute\_B")
or MIN(iaCellRef(F10)). Only dimensions and measures, that is, the simple iaGet functions, are supported. For more information about the iaGet function, see iaGet Function.

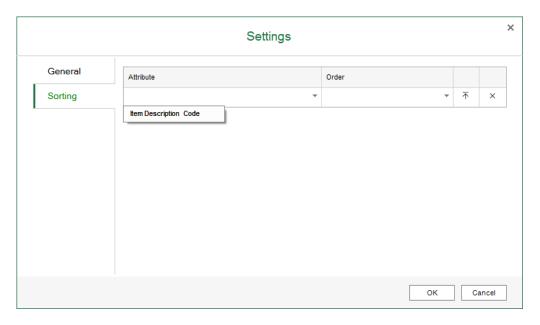
In the *Settings* window of a group, you can define its name, the *Group By* attribute (this is not available for details groups), and the sorting rules. You can define sorting rules for all the dimensions, measures, and the *Group By* attribute in the group, except those that are also in a group on the other direction.



For example, *Qty. In Stock*, *Cost Price*, and *In-Stock Inventory Value (LC)* are included in two groups: the *WarehouseNameAndCode* group, and the *ItenDescriptionAndCode* group.

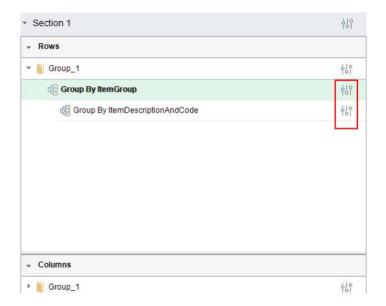


When you choose the *Settings* icon of the *ItenDescriptionAndCode* group, in the *Attribute* dropdown list on the *Sorting* tab, only *Item Description & Code* is available.



When you ungroup the WarehouseNameAndCode group, in the Attribute dropdown list on the Sorting tab of the ItenDescriptionAndCode group, you can see that Item Description & Code, In-Stock Quantity, and In-Stock Inventory Value (LC) are all available. Cost Price is not available because it is a calculated field.

To open the *Settings* window of a group, in the *Group and Section* panel, choose the *Settings* icon of the specific group.

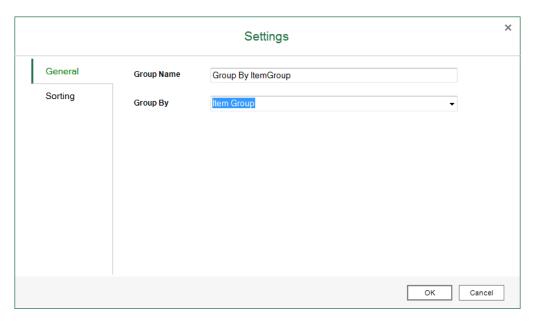


#### Procedure

You will sort the item group in descending order in the query report *Inventory by Item Group per Warehouse*.

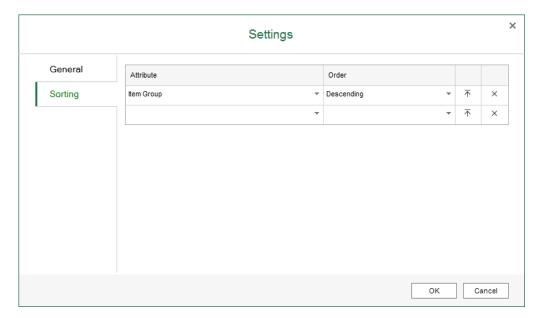
1. In the report created in Creating the Excel Report, in the *Group and Section* panel, choose the *Settings* icon of the *ItemGroup* group.

The Settings window of the ItemGroup group appears.



2. On the Sorting tab, select ItemGroup as the attribute, Descending as the order, and choose OK.

On this tab, you can also move the sorting rules up and down to define their orders, and delete the sorting rules.



### Result

In the EXCEL REPORT ribbon, choose Run Report.

The report result shows the item groups in descending order.

			General 1	Warehouse (01)	!	West Cost	Warehouse (02)
Item Group	Item Code and Description	Qty. In stock	Cost Price	In-Stock Inventory Value (LC)	Qty. In stock	Cost Price	In-Stock Inventory Va
Storage							
	SDHC 64 GB CLASS 10 (100013)	0	0	0	0	0	
Servers							
	Server Point 10000 (S10000)	40	1085.8065	43432.26	0	0	
Rainbow Pri	inters						
	Rainbow 1200 Laser Series (A00006)	70	324.79971	22735.98	0	0	
	Rainbow Color Printer 5.0 (A00004)	1031	366.90431	378278.34	30	500	
	Rainbow Color Printer 7.5 (A00005)	1106	282.26824	312188.67	30	400	
PC							
	PC - 12x core, 64GB, 5 x 150GB SSD (P10002)	5	1293.75	6468.75	0	0	
	PC - 8x core, DDR 32GB, 2TB HDD (P10001)	29	1064.0466	30857.35	0	0	
	PC Set 1 (P10003)	25	1228.3836	30709.59	0	0	
J.B. Printers							
	J.B. Officeprint 1111 (A00002)	965	146.68368	141549.75	50	200	
	J.B. Officeprint 1186 (A00003)	1091	220.75989	240849.04	0	0	
	J.B. Officeprint 1420 (A00001)	974	298.82159	291052.23	50	400	
Items							
	Blu-Ray Disc 10-Pack (I00001)	1087	2.1303772	2315.72	0	0	
	Blu-Ray DL Disc 10-Pack (100002)	1022	8.4780039	8664.52	0	0	
	Computer Monitor 24" HDMI (C00008)	1065	142.50098	151763.54	50	200	
	Gigabit Network Card (C00006)	967	10.168821	9833.25	50	15	
	Hard Disk 3TB (C00007)	1060	354.48218	375751.11	50	500	
	J.B. Laptop Batteries X1 series (100005)	1014	61.177702	62034.19	0	0	
	J.B. Laptop Batteries X2 series (100006)	984	58.006128	57078.03	0	0	
	Keyboard Comfort USB (C00009)	1058	14.118677	14937.56	50	20	
	KG PC-to-Mac Transfer Kit (100012)	1088	31.889458	34695.73	0	0	
	KG USB Travel Hub (I00011)	1066	8.4042214	8958.9	0	0	
	LeMon 4029 500 sheet paper drawer (LM402	772	23.86035	18420.19	0	0	
	LeMon 4029 Printer (LM4029)	267	193.20951	51586.94	0	0	

### 5.3.3.2 Field

When you add a measure or dimension as a field, the report result displays the following:

- If the data source is a measure, this field type retrieves the sum of all the values in the database for the corresponding group (if it has a corresponding group).
- If the data source is a dimension, this field type retrieves the largest value in the database for the corresponding group (if it has a corresponding group).

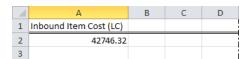
### 5.3.3.2.1 Adding a Field

#### Procedure

You can use the following procedures to add a measure or dimension as a field.

- To add a measure or dimension as a field by dragging when you start designing a report, follow the procedures below:
  - o In the following example, you will add a measure as a field.
    - 1. Select *Inventory Transaction Documents* as your data source, and drag *Inbound Item Cost (LC)* to the worksheet. The *New Section* window appears.
    - 2. In the *New Section* window, define the section size, select the *Add as a Field* radio button, and choose *OK*.
    - 3. In the EXCEL REPORT ribbon, choose Run Report.

The report result shows the sum of all the values in the database.



- o In the following example, you will add a dimension as a field.
  - 1. Select *Inventory Transaction Documents* as your data source, and drag *Item Description & Code* to the worksheet. The *New Section* window appears.
  - 2. In the *New Section* window, define the section size, select the *Add as a Field* radio button, and choose *OK*.
  - 3. In the EXCEL REPORT ribbon, choose Run Report.

The report result shows the largest value in the database, which starts with the letter W.



- When you are in the middle of designing a report, to add a measure or dimension as a field by dragging, drag the dimension of measure inside the section.
- To add a measure or dimension as a field by entering it in the cell or formula bar, see iaGet Function.

# 5.3.3.3 Differences Between Group, Details Group, and Field

The following example will explain the differences between the three field types. The section looks like the following:

Item Description & Code	Inbound Inventory Quantity	Posting Date	j
[ItemDescriptionAndCode]	[InboundInventoryQuantity]	[PostingDate]	
!			!

Select *Inventory Transaction Documents* as your data source, add *Item Description & Code* as a row group, and drag *Inbound Inventory Quantity* and *Posting Date* to the worksheet. The report result shows the sum of inbound inventory quantity and the largest value of the posting date of each item. Every item is treated as a group.

Item Description & Code	Inbound Inventory Quantity	Posting Date	
J.B. Officeprint 1420 (A00001	1883	08-26-2012	7
J.B. Officeprint 1111 (A00002	1818	12-08-2012	4
J.B. Officeprint 1186 (A00003	1963	12-08-2012	
Rainbow Color Printer 5.0 (A	1755	12-08-2012	2
Rainbow Color Printer 7.5 (A	1807	09-21-2012	- 3
Motherboard BTX (C00001)	1893	11-09-2012	_
Motherboard MicroATX (C00	1884	10-18-2012	
Quadcore CPU 3.4 GHz (C000	1926	11-12-2012	
Tower Case with Power supp	2001	10-28-2012	~
WLAN Card (C00005)	1895	09-01-2012	
Gigabit Network Card (C0000	1898	11-09-2012	- 4
Hard Disk 3TB (C00007)	2005	10-18-2012	
Computer Monitor 24" HDMI	1992	08-17-2012	_ 5
Keyboard Comfort USB (C000	2011	10-07-2012	3
Mouse USB (C00010)	2038	10-21-2012	1
Memory DDR RAM 8GB (C000	2119	08-22-2012	)
J.B. Laptop Batteries X1 serie	1253	07-09-2012	1
J.B. Laptop Batteries X2 serie	1211	08-08-2012	
Rainbow Printer 9.5 Inkjet Ca	1218	09-21-2012	- (
Rainbow Nuance Ink 6-Pack	1252	11-09-2012	3
SLR PreciseShot PX1500 (1000	1268	10-06-2012	3
Memoprohip MAD VC)	2107	2022	and the

 Select Inventory Transaction Documents as your data source, add Item Description & Code as a details group, and drag Inbound Inventory Quantity and Posting Date to the details group. The report result shows every record in the group and the sum of inbound inventory quantity for each record.

Item Description & Code	Inbound Inventory Quantity	Posting Date
J.B. Officeprint 1420 (A00001	40	12-05-2007
J.B. Officeprint 1111 (A00002	40	12-05-2007
J.B. Officeprint 1186 (A00003	40	12-11-2007
Rainbow Color Printer 5.0 (A	40	12-11-2007
Rainbow Color Printer 7.5 (A	40	12-11-2007
Motherboard BTX (C00001)	40	12-11-2007
Motherboard MicroATX (C00	40	12-11-2007
Quadcore CPU 3.4 GHz (C000	40	12-14-2007
Tower Case with Power supp	40	12-14-2007
WLAN Card (C00005)	40	12-14-2007
Gigabit Network Card (C0000	40	12-14-2007
Hard Disk 3TB (C00007)	40	12-14-2007
Computer Monitor 24" HDMI	40	12-24-2007
Keyboard Comfort USB (C000	40	12-24-2007
Mouse USB (C00010)	40	12-24-2007
Memory DDR RAM 8GB (C000	40	12-24-2007
J.B. Laptop Batteries X1 serie	40	01-16-2008
J.B. Laptop Batteries X2 serie	40	01-16-2008
J.B. Officeprint 1420 (A00001	50	01-30-2008
J.B. Officeprint 1111 (A00002	50	01-30-2008
J.B. Officeprint 1186 (A00003	50	01-30-2008
Rainbow Color Printer 5.0 (A	50	02-04-2008
Rainbow Color Printer 7.5 (A	50	02-04-2008
Motherboard BTX (C00001)	50	02-04-2008
Motherboard MicroATX (C00	50	02-04-2008
Quadcore CPU 3.4 GHz (C000	50	02-04-2008
Tower Case with Power supp	50	02-09-2008

Select *Inventory Transaction Documents* as your data source, add *Item Description & Code* as a field, and drag *Inbound Inventory Quantity* and *Posting Date* to the worksheet. The report result shows the largest value of item, the sum of inbound inventory quantity, and the largest value of posting date.

Item Description & Code	Inbound Inventory Quantity	Posting Date	
WLAN Card (C00005)	61223	12-08-2012	
!			!

# 5.3.4 Working with Functions

Excel Report and Interactive Analysis provides the following three functions:

- iaGet: Use this function to retrieve values from the data source.
- iaCellRef: Use this function to retrieve values from the cells in the worksheet.
- · iaParam: Use this function to retrieve values from the report parameter when you run the report.

To view the formulas in all the cells, in the *Formulas* ribbon, select *Show Formulas*, and the section looks like the following:

	Inventory by Item Group per Warehouse				
!		=iaGet("WarehouseNameAndCode")			
Item Group	Item Code and Description	Qty. In stock	Cost Price	In-Stock Inventory Value (LC)	
=iaGet("ItemGroup")					
	=iaGet("ItemDescriptionAndCode")	=iaGet("InStockQuantity")	=IF(iaCellRef(D7)=0,0,iaCellRef(F7)/iaCellRef(D7))	=iaGet("InStockInventoryValueLC")	
İ					
1					
i					

### 5.3.4.1 iaGet Function

The iaGet function retrieves values from the data source.

The retrieved value depends on the data source:

- If the data source is a measure, the iaGet function retrieves the sum of all the values in the database for the corresponding group (if it has a corresponding group).
- If the data source is a dimension, the iaGet function retrieves the largest value in the database for the corresponding group (if it has a corresponding group).

Syntax: iaGet("<name of the dimension or measure>")

For example:

- =iaGet("OrderedQuantity")
- =iaGet("ItemCode")

Argument	Description
<name dimension="" measure="" of="" or="" the=""></name>	The name of the dimension or measure in the data source. To see the name of the dimension or measure, you can use either of the two following methods:
	Drag the dimension or measure to the section, and the name appears in both the cell and formula bar.
	Look for How to Work with Semantic Layers in SAP Business     One on sappartneredge.com. In the package, you can find the     Semantic Layer Model Package Reference guide, in which you     can find the corresponding attribute and measure for the UI     label you see in the data source panel.

In formulas, the usage of the iaGet function is as follows:

• You can combine the iaGet function for a measure with numbers or other iaGet functions for measures, and the expressions can be "+" (plus sign); "-" (minus sign); "\*" (multiply sign); "/" (divide sign).

• You can combine the iaGet function of a dimension with strings or other iaGet functions of dimensions, and the expression can be "+" (plus sign).



In the data source *Inventory Status*, the sum of ordered quantity is 356, and the sum of committed quantity is 810. The largest value of item code is Z00002.

Formula	Description
=iaGet("OrderedQuantity")	Retrieves the sum of ordered quantity. The result is 356.
=iaGet("ItemCode")	Retrieves the largest value of item code. The result is Z00002.
=iaGet("OrderedQuantity")+iaGet ("CommittedQuantity")	Adds the sum of ordered quantity and sum of committed quantity. The following expressions are supported: "+" (plus sign); "-" (minus sign); "*" (multiply sign); "/" (divide sign). The result is 1166.
=iaGet("OrderedQuantity")+100	Add the sum of ordered quantity and 100. The following expressions are supported: "+" (plus sign); "-" (minus sign); "*" (multiply sign); "/" (divide sign). The result is 456.
=iaGet("ItemCode")+"abc"	Combines the largest value of item code and string "abc". The result is Z00002abc.

## 5.3.4.1.1 Tips to Get the Subtotal Using iaGet

As the iaGet function retrieves the sum of all the values in the database for the corresponding group, you can use it to calculate the subtotal of a group as in the following example.

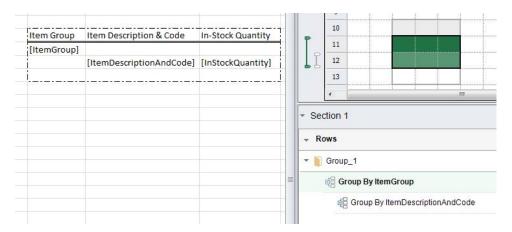
In the report designer, you want to see the subtotal of in-stock quantity of each item group.

The report result looks like the following, displaying the in-stock quantity for each item, and the items are grouped by item group.

Item Group	Item Description & Code	In-Stock Quantity	4
Accessories			4
	Memory Chip (LM4029MC)	462	-
Items		i	
	Blu-Ray Disc 10-Pack (100001	1087	- 4
	Blu-Ray DL Disc 10-Pack (1000	1022	- 5
	Computer Monitor 24" HDM	1115	- 4
	Gigabit Network Card (C0000	1017	1
	Hard Disk 3TB (C00007)	1110	1
	J.B. Laptop Batteries X1 serie	1014	- ₹
	J.B. Laptop Batteries X2 serie	984	1
	Keyboard Comfort USB (C000	1108	- 4
	KG PC-to-Mac Transfer Kit (IC	1088	- 4
	KG USB Travel Hub (100011)	1066	- 1
	LeMon 4029 500 sheet paper	772	
	LeMon 4029 Printer (LM4029	267	_
	LeMon 4029 Printer AC Adap	700	1
	LeMon 4029 Printer AC Powe	650	
	LeMon 4029 Printer Head (LN	782	
	402 Vinter Parver S	44	

#### Prerequisite

You have added *Item Description & Code* as a group, *Item Group* as its parent group, and *In-Stock Quantity* as a field, as follows:



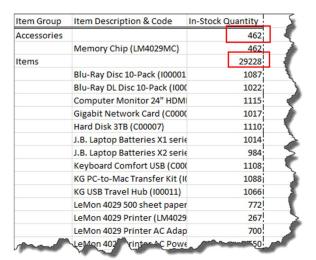
#### Procedure

To get the subtotal of in-stock quantity for each item group, drag *In-Stock Quantity* to or enter =iaGet("InstockQuantity") in the cell above the current *In-Stock Quantity* field as follows.



#### Result

The report result looks like the following, displaying the subtotal of in-stock quantity of each item group.



### 5.3.4.2 iaCellRef Function

The iaCellRef function retrieves values from the cells in the worksheet.

Syntax: iaCellRef("<name of the cell>")

For example:

- =iaCellRef("E7")
- =iaCellRef("G16")

Argument	Description
<name cell="" of="" the=""></name>	A cell name such asB6.

In formulas, you can combine the iaCellRef function with all the functions in Microsoft Excel.



In Excel Report and Interactive Analysis, you cannot use the iaCellRef function in a group to retrieve values from cells that are in its upper-level groups and not in the group itself.



In the report designer, you want to see the sum of in-stock quantity for all items. The name of the InStockQuantity cell is E10. Add =SUM(iaCellRef(E10)) to the sum cell as follows:

Item Description & Code	In-Stock Quantity
[ItemDescriptionAndCode]	[InStockQuantity]
sum	=SUM(iaCellRef(E10))

The report result looks like the following:

PC Set 2 (P10004)	12
USB Flashdrive 128GB (100003)	953
Rainbow 1200 Laser Series (A00006)	70
Printer Paper A4 White (R00001)	192
USB Flashdrive 256GB (100004)	970
Computer Monitor 24" HDMI (C00008)	1115
Printer Label (B10000)	500
Printer Paper A4 Recycled (R00002)	180
Keyboard Comfort USB (C00009)	1108
J.B. Laptop Batteries X1 series (100005)	1014
Motherboard BTX (C00001)	1281
L.B. Laptop Batteries X2 series (100006)	984
sum	35186

### 5.3.4.2.1 iaCellRef and Cell Reference

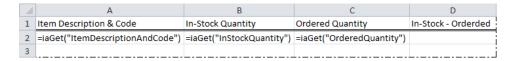
The iaCellRef function is somewhat similar to a cell reference in regular Excel operations. They both retrieve values from the cells. However, the regular cell reference function retrieves values from fixed cells, and the iaCellRef function automatically references the expanded cells in the group result, thus retrieving values on a dynamic basis. In general, the iaCellRef function can replace the cell reference function, and works better in

groups. The following example will explain the differences between the iaCellRef function and regular cell references.

In the report designer, you want to see the in-stock quantity, ordered quantity and their difference for each item.

#### Prerequisite

You have added *Item Description & Code* as a group, and added *In-Stock Quantity* and *Ordered Quantity* as two fields, as follows:



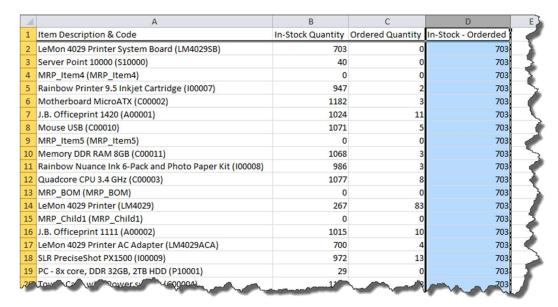
#### Procedure

Add a regular cell reference and the iaCellRef function to see the different results as follows.

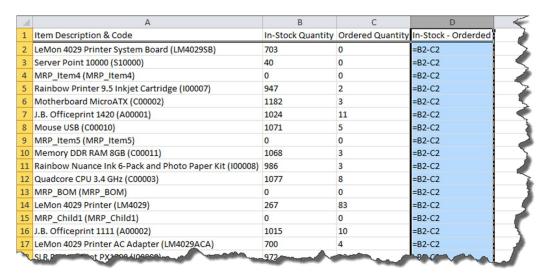
• In the first scenario, you added a regular cell reference to D2: =B2-C2.



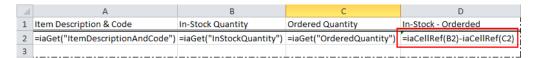
In the report, the *In-Stock - Ordered* column always displays the result of *B2* minus *C2*.



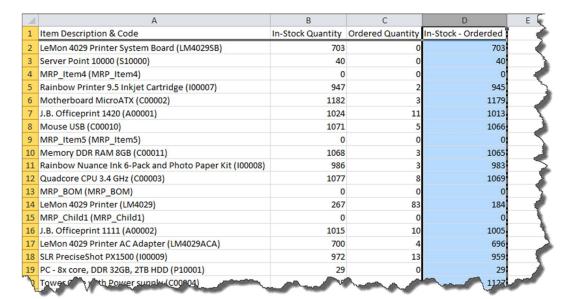
The following screenshot shows the result in a clearer way.



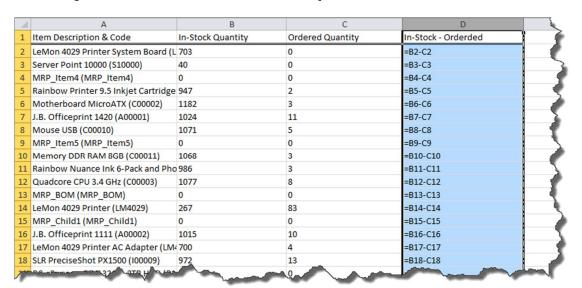
In the second scenario, you added the iaCellRef function to D2:=iaCellRef(B2)-iaCellRef(C2).



In the report, the *In-Stock - Ordered* column displays the result for each corresponding row.



The following screenshot shows the result in a clearer way.



### 5.3.4.3 iaParam Function

The iaParam function retrieves values from the report parameter when you run the report.

Syntax: iaParam("<report parameter code>")

For example:

- =iaParam("Warehouse")
- =iaParam("BP")

Argument	Description
<report code="" parameter=""></report>	The code of a report parameter.

You can use the iaParam function in the section or filters to retrieve values from the report parameter when you run the report, and transfer the values to the section as a display value, or to the filter as a filtering value.

For more information about using the iaParam function, see Using Report Parameters.



You cannot combine the iaParam function with functions in Microsoft Excel.

## 5.3.5 Working with Calculations

You can use all the functions in Microsoft Excel together with the iaCellRef function. For more information about the iaCellRef function, see iaCellRef Function. However, to use the various functions in Microsoft Excel together with the iaCellRef function, you need to enter them manually in cells. For quicker utilizations of Microsoft Excel

functions in Excel Report and Interactive Analysis, you can use the following five quick calculation methods in the *Calculation* section:

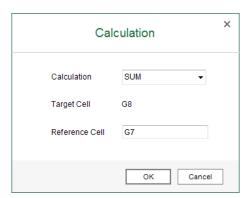
- · SUM: adds all of its arguments
- · COUNT: counts the number of cells that contain numbers, and counts numbers within the list of arguments
- · AVERAGE: returns the average (arithmetic mean) of the arguments
- MIN: returns the smallest number in a set of values
- MAX: returns the largest value in a set of values

For more information about the above Microsoft Excel functions, see the documentation that came with Microsoft Excel. One way to find the help is to select the cell that uses the function, and choose  $f_{\epsilon}$  in the formula bar. In the Function Arguments window, choose the Help on this function link.

#### Procedure

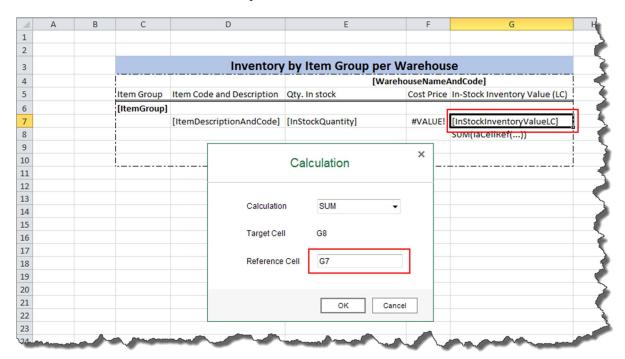
To use the quick calculation methods, follow the procedure below:

1. In the *Calculation* section, drag a function to the cell that you want to display the function results. The *Calculation* window appears.



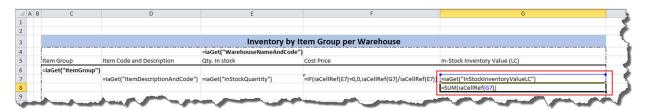
2. In the *Calculation* dropdown list, you can change the functions.

3. In the *Reference Cell* field, enter the name of the cell to which you want to refer, or select a cell in the section, and the name of that cell is automatically entered.



4. To save the calculation, choose OK.

The Microsoft Excel function, together with the iaCellRef function, appears in the cell to which you drag the quick calculation method.



## 5.3.6 Working with Time Functions

This feature enables you to retrieve dates and financial period codes dynamically as a list based on your available statistics in the database, and to filter your data with the dates and financial period codes it retrieves. You can apply the functions via two approaches, either by dragging them to the section, or by setting them up in the *Settings* window of the section or group sets.

For time functions, SAP provides the following two types, date functions and period functions. You can apply them accordingly as follows:

- · Apply date functions to dimensions of date and datetime types.
- Apply period functions to the *Financial Period Code* dimension.

# 5.3.6.1 Date Functions and Period Functions

#### **Date Functions**

Name	Description	Parameter	Example
YTD	Retrieves available dates in the current calendar year up to the day you run the report	N/A	Running on July 7, 2016, YTD() returns available dates in 2016 up to July 7, 2016.
QTD	Retrieves available dates in the current calendar quarter up to the day you run the report	N/A	Running on July 7, 2016, QTD() returns available dates in the third quarter of 2016 up to July 7, 2016.
MTD	Retrieves available dates in the current calendar month up to the day you run the report	N/A	Running on July 7, 2016, MTD() returns available dates in July 2016 up to July 7, 2016.
Calendar Month	Retrieves available dates in the calendar month that covers the given date	A date in the format of YYYYMMDD. When empty, the default value is the date on which you run the report.	CalendarMonth(20160707) returns available dates in July 2016. Running on June 7, 2015, CalendarMonth() returns available dates in June 2015.
CalendarQuarter	Retrieves available dates in the calendar quarter that covers the given date	A date in the format of YYYYMMDD. When empty, the default value is the date on which you run the report.	CalendarQuarter(20160707) returns available dates in the third quarter of 2016. Running on June 7, 2015, CalendarQuarter() returns available dates in the second quarter of 2015.
CalendarYear	Retrieves available dates in the calendar year that covers the given date	A date in the format of YYYYMMDD. When empty, the default value is the date on which you run the report.	CalendarYear (20160707) returns available dates in 2016. Running on June 7, 2015, CalendarYear () returns available dates in 2015.
SameMonthLastYear	Retrieves available dates in the same month as that covering the given date, of the previous year	A date in the format of YYYYMMDD. When empty, the default value is the date on which you run the report.	SameMonthLastYear(2016070 7) returns available dates in July 2015. Running on June 7, 2015, SameMonthLastYear() returns available dates in June 2014.

Name	Description	Parameter	Example
SameQuarterLastYear	Retrieves available dates in the same quarter as that covering the given date, of the previous year	A date in the format of YYYYMMDD. When empty, the default value is the date on which you run the report.	SameQuarterLastYear(201607 07) returns available dates in the third quarter of 2015. Running on June 7, 2015, SameQuarterLastYear() returns available dates in the second quarter of 2014.
LastNMonths	Retrieves available dates in the N calendar months before that of the given date	<ul> <li>A date in the format of YYYYMMDD. When empty, the default value is the date on which you run the report.</li> <li>The number of previous months. When empty, the default value is 1.</li> </ul>	LastNMonths(20160707, 3) returns available dates in April, May, and June 2016. LastMonths(20160707) returns available dates in June 2016. Running on June 7, 2015, LastNMonths() returns available dates in May 2015. Running on October 31, 2017, LastNMonths(, 2) returns available dates in August and September 2017.
LastNQuarters	Retrieves available dates in the N calendar quarters before that of the given date	A date in the format of YYYYMMDD. When empty, the default value is the date on which you run the report.     The number of previous quarters. When empty, the default value is 1.	LastNQuarters(20160707, 3) returns available dates in the first and second quarters of 2016, and the fourth quarter of 2015.  LastNQuarters(20160707) returns available dates in the second quarter of 2016.  Running on June 7, 2015,  LastNQuarters() returns available dates in the first quarter of 2015.  Running on October 31, 2017,  LastNQuarters(, 2) returns available dates in the second and third quarters of 2017.
LastNYears	Retrieves available dates in the N calendar years before that of the given date	<ul> <li>A date in the format of YYYYMMDD. When empty, the default value is the date on which you run the report.</li> <li>The number of previous years. When</li> </ul>	LastNYears (20160707, 3) returns available dates in the years of 2013, 2014, and 2015. LastNYears (20160707) returns available dates in 2015. Running on June 7, 2015, LastNYear () returns available dates in 2014.

Name	Description	Parameter	Example
		empty, the default value is 1.	Running on October 31, 2017, LastNYears (, 2) returns available dates in 2015 and 2016.

#### Period Functions

Name	Description	Parameter	Example
YTDPeriodsThisFiscalYear	Retrieves the financial period codes in the current fiscal year up to the day you run the report	N/A	Running on July 7, 2016, YTDPeriodsThisFiscalYear() returns the financial period codes in the fiscal year that covers July 7, 2016 up to July 7, 2016.
FiscalPeriod	Retrieves the code of the financial period that covers the given date	A date in the format of YYYYMMDD. When empty, the default value is the date on which you run the report.	FiscalPeriod(20160707) returns the code of the financial period that covers July 7, 2016. Running on June 7 2015, FiscalPeriod() returns the code of the financial period that covers June 7, 2015.
SamePeriodLastFiscalYear	Retrieves the code of the same financial period as that covering the given date, of the previous fiscal year	A date in the format of YYYYMMDD. When empty, the default value is the date on which you run the report.	SamePeriodLastFiscalYear(201 60707) returns the code of the same financial period as that covering July 7, 2016, of the previous fiscal year.  Running on June 7, 2015, SamePeriodLastFiscalYear() returns the code of the same financial period as that covering June 7, 2015, of the previous fiscal year.
LastNPeriods	Retrieves the codes of the N financial periods before that of the given date	<ul> <li>A date in the format of YYYYMMDD. When empty, the default value is the date on which you run the report.</li> <li>The number of previous financial periods. When empty, the default value is 1.</li> </ul>	LastNPeriods (20160707, 3) returns the codes of the three financial periods before that covering July 7, 2016. Running on June 7, 2015, LastNPeriods () returns the code of the financial period before that covering June 7, 2015.
AllPeriodsThisFiscalYear	Retrieves all financial period codes in the fiscal year that covers the day you run the report	N/A	Running on July 7, 2016, AllPeriodsThisFiscalYear() returns all financial period codes in the fiscal year that covers July 7, 2016.

Name	Description	Parameter	Example
AllPeriodsLastFiscalYear	Retrieves all financial period codes in the fiscal year before that covering the day you run the report	N/A	Running on July 7, 2016, AllPeriodsThisFiscalYear() returns all financial period codes in the fiscal year before that covering July 7, 2016.

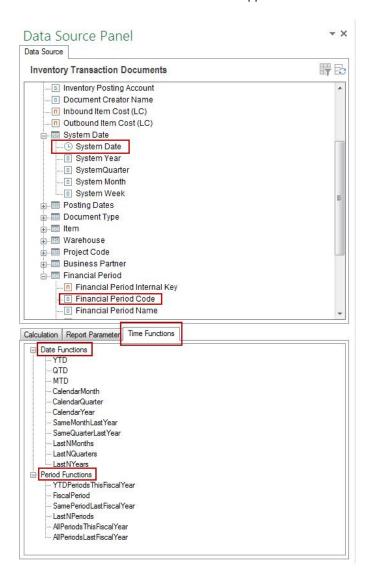
## 5.3.6.2 Using Time Functions

This section will provide a general procedure together with two examples of using time functions.

i Note

The *Time Function* tab appears only when one of the following dimensions exists in the data source you selected:

- o Dimensions of date type. Date functions appear when this type of dimension exists.
- o Dimensions of datetime type. Date functions appear when this type of dimension exists.
- o The Financial Period Code dimension. Period functions appear when this dimension exists.



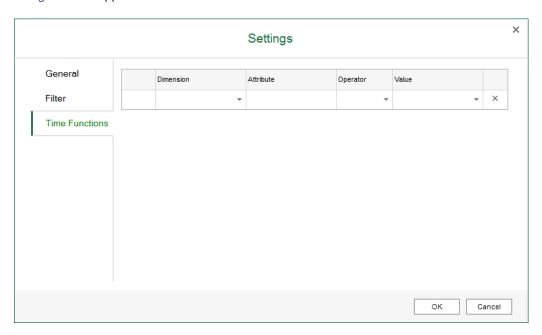
#### Procedure

To use time functions in a section or group set, follow the procedure below:

1. In the *Group and Section* panel, choose the *Settings* button next to the section or group set in which you want to use time functions.



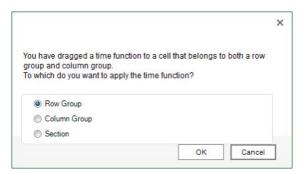
The Settings window appears.



Alternatively, the *Settings* window also appears when you drag a certain time function into the section. Different *Settings* windows appear based on the place of the cell to which you drag the time function:

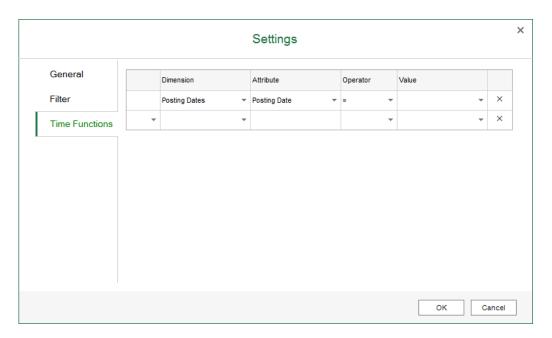
- o If you drag the time function into the section but not into any group set, the *Settings* window of the section appears.
- o If you drag the time function into a group set, the Settings window of the group set appears.

o If you drag the time function to a cell that belongs to both a row and column group, you can choose to open the *Settings* window of the row group set, the column group set, or the section.



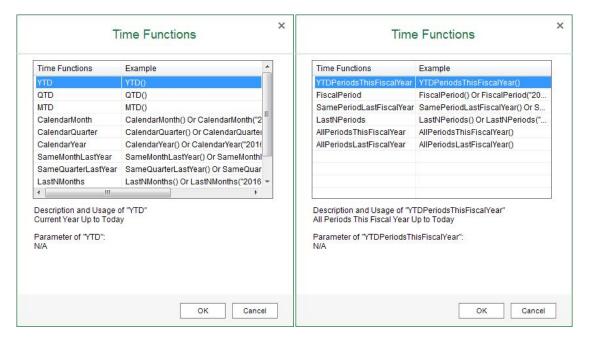
2. On the *Time Functions* tab, you can find all the available dimensions in the data source, i.e., all dimensions of date and datetime types, and the *Financial Period Code* dimension.

In the *Dimension* and *Attribute* columns, specify the dimension from which you want to retrieve the time-related data.



3. In the *Operator* column, the equal sign (=) is automatically entered.

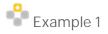
4. In the *Value* column, enter the time function or choose the triangle next to the field, and select a time function in the *Time Functions* window. Date functions or period functions appear in the window based on the dimension you select in the previous columns. The descriptions of the time function and parameters also appear in the window when you select a specific time function.



- 5. In the bracket of the time function, enter the parameter if it has any.
- 6. If you define more than one function for the section of group set, define the condition *And* or *Or* to combine them.
  - i Note

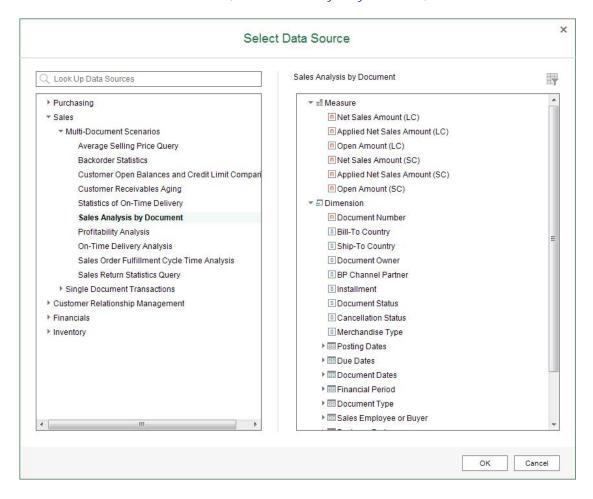
You cannot use And and Or on the same Time Functions tab at the same time.

7. To save the settings, choose *OK*.



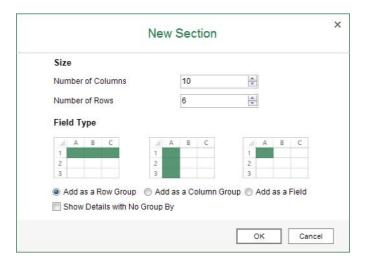
In this example, you will create a report to see the net sales amount for each business partner in specific financial periods. To do so, follow the procedure below:

- 1. In the EXCEL REPORT ribbon, choose New Excel Report.
- 2. In the Select Data Source window, select Sales Analysis by Document, and choose OK.

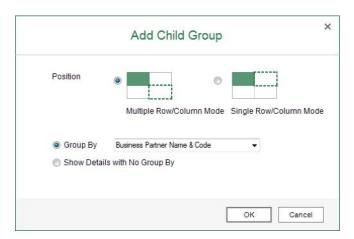


3. In the data source panel, under Financial Period, drag Financial Period Code to the worksheet.

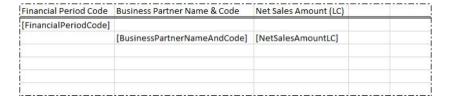
4. In the *New Section* window, define the section size, select the *Add as a Row Group* radio button, and choose *OK*.



- 5. Select the *FinancialPeriodCode* group, and in the *Group and Section* panel, choose *Group* → *Add Child Group*.
- 6. In the *Add Child Group* window, in the *Group By* dropdown list, select *Business Partner Name & Code*, and choose *OK*.



7. Drag measure Net Sales Amount (LC) from the data source panel to the worksheet as follows:



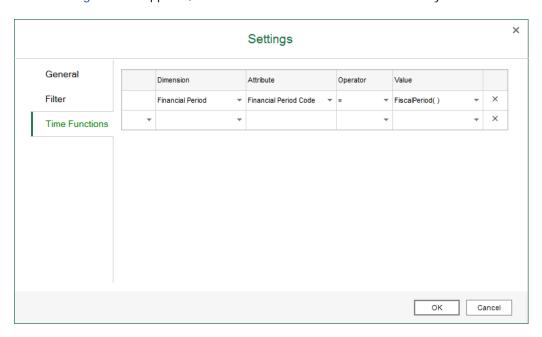
The report result now shows the net sales amount of each business partner in all financial periods as follows:

Financial Period Code	Business Partner Name & Code	Net Sales Amount (LC)
2006-01		
	Earthshaker Corporation (C40000)	11500
	Mashina Corporation (C42000)	17350
	Maxi-Teq (C20000)	40500
	Microchips (C30000)	8250
	Parameter Technology (C23900)	7050
2006-02		
	Earthshaker Corporation (C40000)	32700
	Mashina Corporation (C42000)	34700
	Maxi-Teq (C20000)	6600
	Microchips (C30000)	8125
	Parameter Technology (C23900)	14100
2006-03		
	ADA Technologies (C50000)	34125
	Aquent Systems (C70000)	35175
	Earthshaker Corporation (C40000)	19400
	Maxi-Teq (C20000)	13200
	Microchips (C30000)	16250
	Parameter Technology (C23900)	29700
	SG Electronics (C60000)	32775
2006-04		
	ADA Technologies (C50000)	88450
	Aquent Systems (C70000)	105560
	Earthshaker Corporation (C40000)	113175
	Mashina Corporation (C42000)	7750
	SG Electronics (C60000)	76755
2006-05		
	ADA Technologies (C50000)	40400
	Aquent Systems (C70000)	70420
	Mashina Corporation (C42000)	3875
	Maxi-Teq (C20000)	24600
	Microchips (C30000)	23200
	Parameter Technology (C23900)	21660

You will narrow the financial periods down to only the financial period covering 2012.01.01.

8. In the data source panel, on the *Time Functions* tab, under *Period Functions*, drag *FiscalPeriod* to the *FinancialPeriodCode* field.

The *Settings* window appears, with the dimension and time function already entered.



9. In the bracket of the time function, enter 20120101, and choose *OK*.

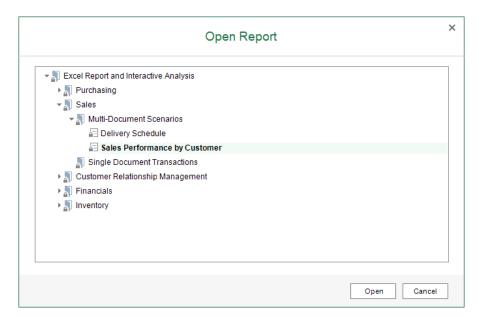
The report result now shows the net sales amount of each business partner in the financial period of 2012-01 as follows:

Financial Period Code	Business Partner Name & Code	Net Sales Amount (LC)	
2012-01			
	ADA Technologies (C50000)	1725	
	Aquent Systems (C70000)	3923.5	
i	Earthshaker Corporation (C40000)	1000	
İ	Mashina Corporation (C42000)	450	
ĺ	Maxi-Teq (C20000)	11730	
į	Microchips (C30000)	9312.5	
	Parameter Technology (C23900)	297	
<u> </u>	SG Electronics (C60000)	441	

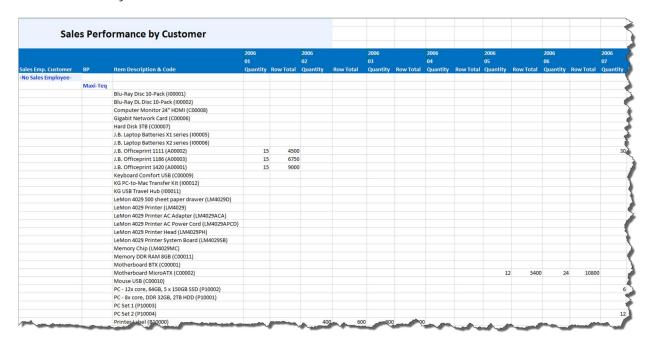


In this example, for the predefined report *Sales Performance by Customer*, you will add a time function to see the data in the year 2012 specifically.

- 1. In the EXCEL REPORT ribbon, choose Open Report.
- 2. In the Open Report window, select Sales Performance by Customer, and choose Open.

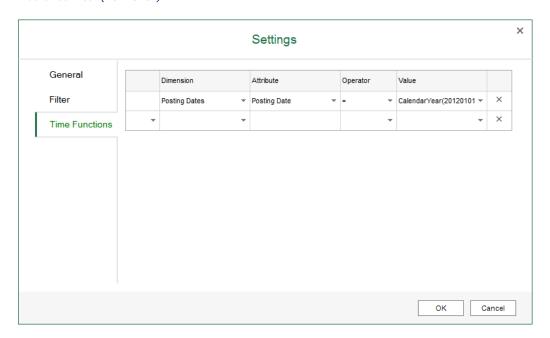


The report result now shows the sales quantity and amount of each item for each customer in all history as follows:



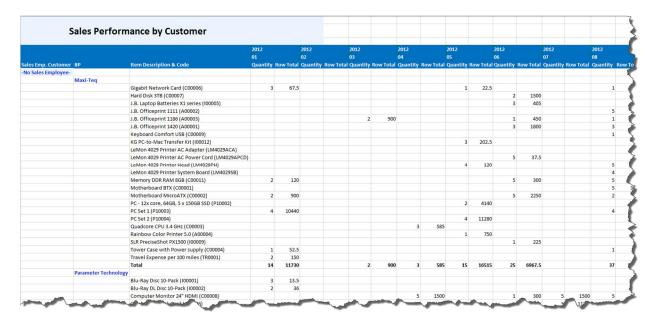
You will narrow the history down to only the year 2012.

- 3. In the Group and Section panel, choose the Settings button next to the section or group set.
- 4. On the *Time Functions* tab of the *Settings* window, select *Posting Dates* in the *Dimension* dropdown list and *Posting Date* in the *Attribute* dropdown list, and in the *Value* column, define *CalendarYear* (20120101).



5. In the *Settings* window, choose *OK*.

The report result now shows the sales quantity and amount of each item for each customer in only the year 2012, as follows:



# 5.3.7 Exporting and Importing Report Packages

You can export and import the reports as a report package for the purposes of backup, report sharing, and so on.

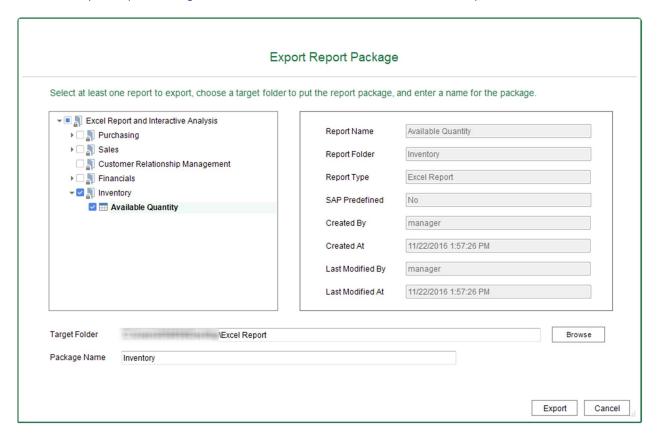
## 5.3.7.1 Exporting Report Packages



You cannot export predefined Excel reports.

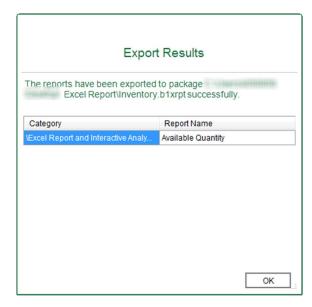
#### Procedure

- 1. On the EXCEL REPORT tab, choose Repository Management and Export Report Package.
- 2. In the Export Report Package window, follow the instructions and choose the Export button.



### Result

The Export Results window displays the specific reports that you have exported and their respective category.

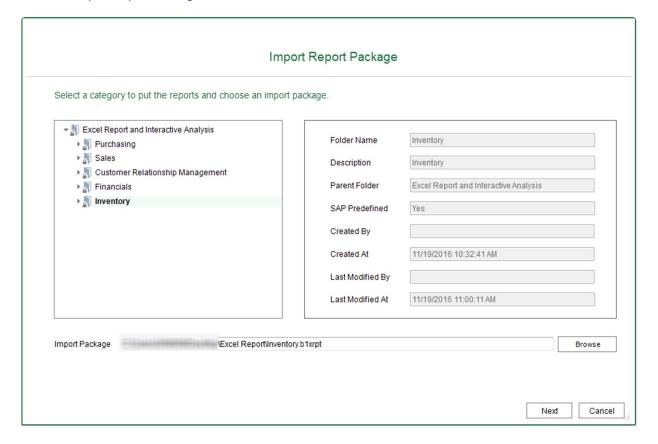


## 5.3.7.2 Importing Report Packages

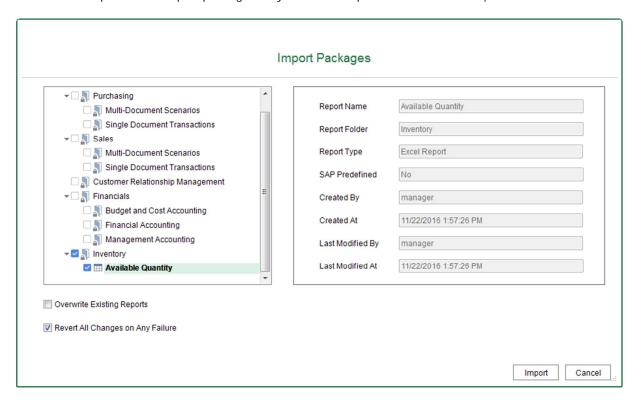
As long as you have the same semantic layers in your database as those used by the reports you want to import, you can import the reports successfully.

#### Procedure

- 1. On the EXCEL REPORT tab, choose Repository Management and Import Report Package.
- 2. In the *Import Report Package* window, follow the instructions and choose the *Next* button.

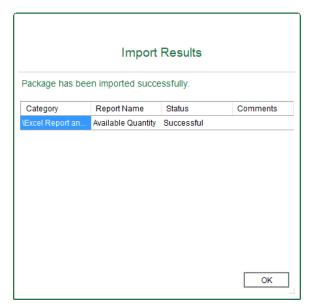


3. Select the reports in the report package that you want to import and choose the Import button.



#### Result

The Import Results window displays the specific reports that you have imported and their respective category.



### 5.3.8 Managing Excel Reports

You can manage the Excel reports in the Repository Management window.

To open this window, in the EXCEL REPORT ribbon, choose Repository Management.

The Repository Management window appears, listing the following:

- On the left side of the window, you can find the default Excel Report and Interactive Analysis folder structure, with any new folders that you have created.
- On the right side of the window, you can find the information for the folder or report. A predefined folder or report is tagged Yes in the SAP Predefined field.
  - o For a predefined folder or report, you cannot change anything.
  - o For a folder or report that is not predefined, you can change the name and description of the folder, or the name of the report. After modification, choose *Update* to save the changes.
- In the bottom of the window, you can use the following two buttons to modify the report structure:
  - o Use the New Folder button to add a child folder to the folder that you selected.
  - o Use the *Delete* button to delete reports or empty folders that are not predefined.

### 5.3.8.1 Predefined Excel Reports

In Excel Report and Interactive Analysis, SAP provides the following predefined Excel reports:

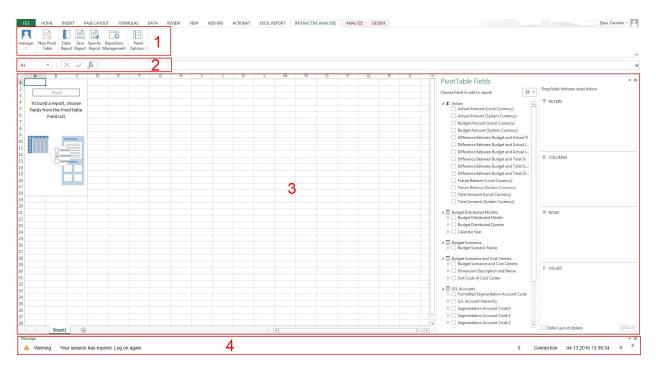
- · Sales Performance by Customer: displays the sales performance of each customer for each sales employee.
- *Delivery Schedule*: displays the delivery schedule of each item for each business partner from each warehouse.
- · Purchase Analysis Report: displays the purchasing information of each document for each business partner.
- *Inventory by Item Group per Warehouse*: displays the in-stock inventory quantity, cost price, and in-stock inventory value of items for each item group in each warehouse.
- · Sales Opportunities Report: displays the information for each sales opportunity.
- Cost Center Budget Versus Actual: compares the budget and actual amounts of each cost center in each dimension.
- · Financial Analysis Transactions by Project: displays every transaction for each project.

## 6 INTERACTIVE ANALYSIS Tab

### 6.1 Tab Overview

This section introduces different parts of the main window of the *INTERACTIVE ANALYSIS* tab, and their respective functions.

You can find the screenshot of the main window as follows:



### 6.1.1 INTERACTIVE ANALYSIS Ribbon

This section is section 1 in the overview screenshot. It contains the following commands:

- Log On (<User ID>): choose this command to log on to a specific company database. For more information, see Logging on to a Company.
- New Pivot Table: choose this command to create a new pivot table. For more information, see Creating the Pivot Table.
- · Open Report: choose this command to open an existing pivot table.
- · Save Report: choose this command to save changes to the current pivot table.
- · Save As Report: choose this command to save the pivot table as a new one.
- Repository Management: choose this command to open the Repository Management window. For more information, see Managing Pivot Tables.

- Panel Options: choose this command to display or hide the message panel.
- Application Settings, About, Help: these commands are the same as those in the EXCEL REPORT ribbon. For more information, see EXCEL REPORT Ribbon.

#### 6.1.2 Formula Bar

This section is section 2 in the overview screenshot. It displays the name and content of the cell you select in the worksheet. For more information about the formula bar, see the documentation that came with Microsoft Excel.

#### 6.1.3 Worksheet

This section is section 3 in the overview screenshot. For more information about the worksheet, see the documentation that came with Microsoft Excel.

Note

Only one worksheet is supported.

## 6.1.4 Message Panel

The behavior is the same as that in the EXCEL REPORT ribbon. For more information, see EXCEL REPORT Ribbon.

## 6.2 Basic Operations

This section provides an introduction to the *INTERACTIVE ANALYSIS* tab of the report designer with the *Sales Analysis by Document* semantic layer as an example. For more information about using the pivot table tools, refer to the documentation that came with Microsoft Excel.

If you encounter problems when creating or opening pivot tables, refer to Troubleshooting.

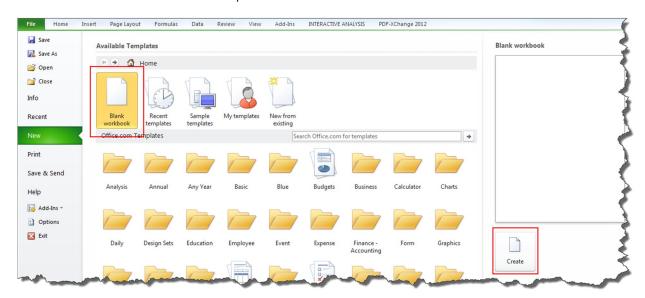
## 6.2.1 Creating the Pivot Table

Use the blank workbook as a starting point for creating the pivot table.



For blank workbooks that are NOT opened using one of the two launching methods provided above, you may encounter errors while using Excel Report and Interactive Analysis.

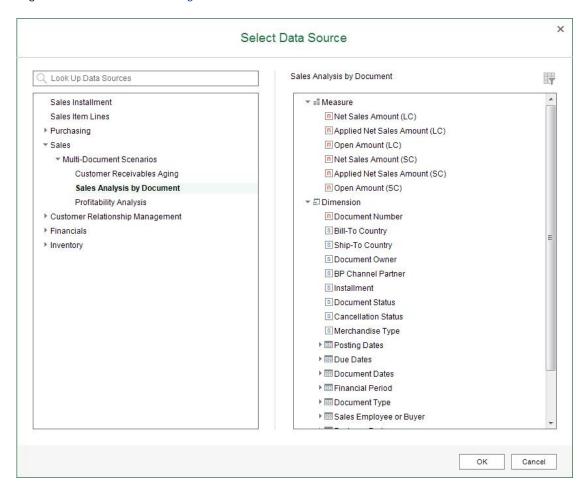
For example, you may encounter errors while using Excel Report and Interactive Analysis if you open a blank workbook from the *New* option on the *File* tab of Microsoft Excel as follows:



#### Procedure

1. In the INTERACTIVE ANALYSIS ribbon, choose New Pivot Table.

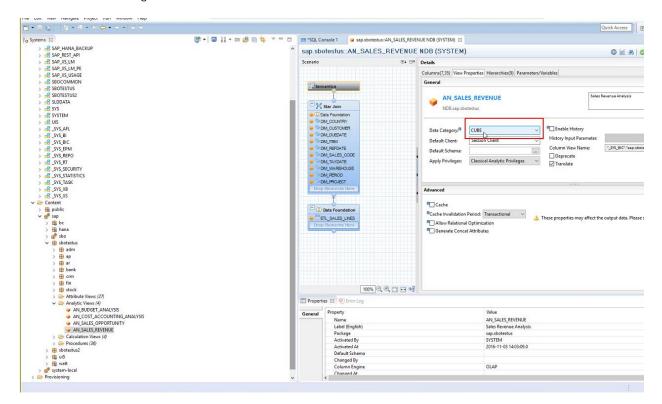
The Select Data Source window appears, displaying all the calculation views and analytic views in the deployed predefined model package and the customized SAP HANA model packages that you have deployed using the SAP HANA Model Management window in the SAP Business One, version for SAP HANA client.



The predefined model package was deployed during the database initialization, and for more information about customized SAP HANA model packages, see *Managing SAP HANA Models* in the online help of SAP Business One, version for SAP HANA.

### 1 Note

The data category of the calculation views and analytics views must be *CUBE* in the SAP HANA studio, as in the following screenshot.

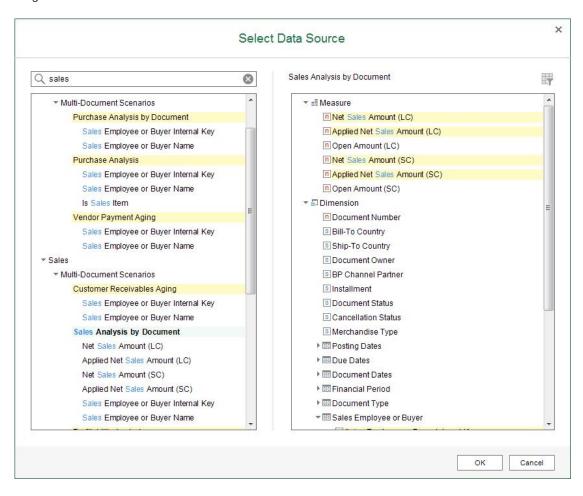


## i Note

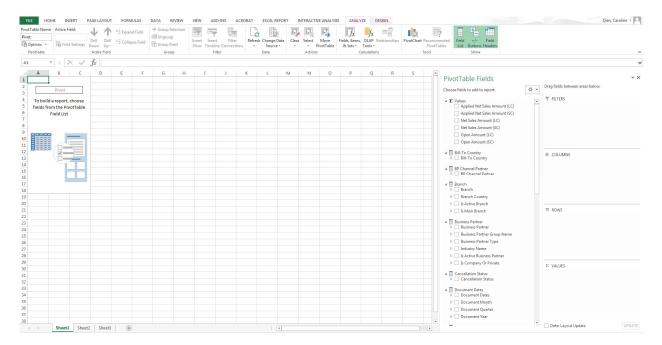
You must have authorizations for the data sources that you want to use. To check the authorizations, from the SAP Business One, version for SAP HANA  $Main\ Menu$ , choose  $Administration \rightarrow System\ Initialization \rightarrow Authorizations \rightarrow General\ Authorizations$ . In the Authorizations window, select the user for whom you want to check authorizations, and select  $Analytics \rightarrow Semantic\ Layers$  to find the specific data source.

2. In the Select Data Source window, select Sales Analysis by Document under Multi-Document Scenarios under Sales, and choose OK.

[Optional] You can use the search bar at the top of the tree list on the left to look for data sources. To search for data sources, enter the semantic layer name, part of the semantic layer name, the name of the dimension or measure, or part of the dimension or measure name, and choose <code>Enter</code>. Results that match your search query appear highlighted in the tree list, and you can choose the data source to see its contents in the table on the right.

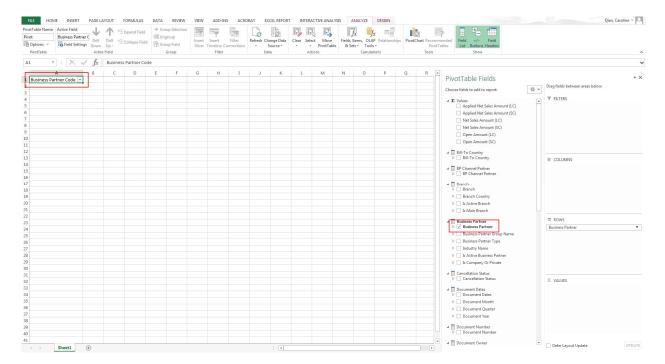


The measures and dimensions of the *Sales Analysis by Document* semantic layer appear in the *PivotTable Fields* section.



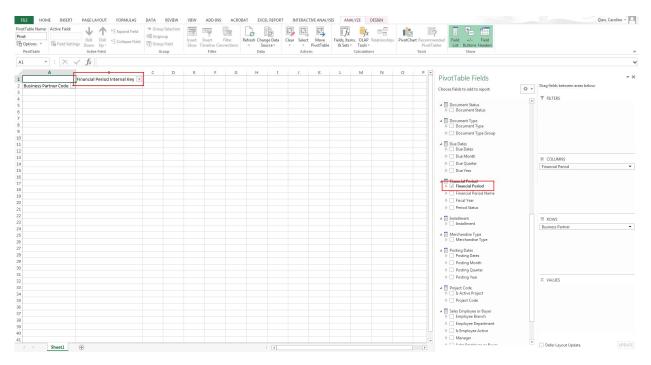
3. In the *PivotTable Fields* section, from the dimensions list, drag *Business Partner* to the *Rows* quadrant.

The *Business Partner* item appears in the worksheet, and the *Business Partner* checkbox in *PivotTable Fields* is selected.



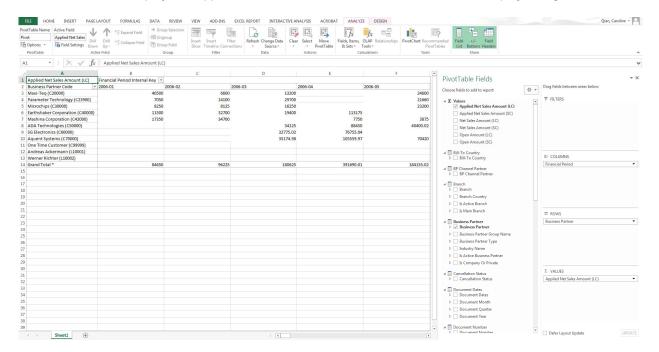
4. Drag Financial Period to the Columns quadrant.

Note that you do not see any numerical data for now, because you have not selected any measure item.



5. Drag Applied Net Sales Amount (LC) to the Values quadrant.

Microsoft Excel displays the applied net sales amount (LC) in each field, and also displays the grand totals.



## 6.2.2 Saving the Pivot Table

To save the pivot table, follow the procedure below.

- 1. In the INTERACTIVE ANALYSIS ribbon, choose Save Report.
- 2. In the Save window, select the folder in which to place the pivot table, define a name, and choose OK.

#### Result

All the changes, including the selection of values, dimensions, and filters, are saved. After saving the pivot table, you can perform the following:

• To open the saved pivot tables, in the *INTERACTIVE ANALYSIS* ribbon, choose *Open Report*. Alternatively, you can open the saved pivot tables under the menu entry of *Excel Report and Interactive Analysis* in the SAP Business One, version for SAP HANA client.



For newly saved pivot tables to appear in the SAP Business One, version for SAP HANA client, you need to log off the client and log on again.

i Note

When you open a saved pivot table, the data is refreshed automatically.

• To manage the saved reports, in the *INTERACTIVE ANALYSIS* ribbon, choose *Repository Management*. For more information, see Managing Pivot Tables.

## 6.3 Managing Pivot Tables

You can manage the pivot tables in the *Repository Management* window.

To open this window, in the INTERACTIVE ANALYSIS ribbon, choose Repository Management.

The *Repository Management* window appears, listing the following:

- On the left side of the window, you can find the default Excel Report and Interactive Analysis folder structure, with any new folders that you have created.
- On the right side of the window, you can find the information for the folder or pivot table. A predefined folder is tagged Yes in the SAP Predefined field.
  - o For a predefined folder, you cannot change anything.
  - o For a folder that is not predefined or a pivot table, you can change the name and description of the folder, or the name of the pivot table. After modification, choose *Update* to save the changes.
- In the bottom of the window, you can use the following two buttons to modify the report structure:
  - o Use the New Folder button to add a child folder to the folder that you selected.
  - o Use the *Delete* button to delete pivot tables or empty folders that are not predefined.

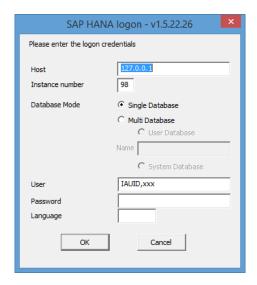
# 7 Troubleshooting

If Excel Report and Interactive Analysis does not work as expected, you can check the following troubleshooting information to identify your issues and find solutions, before contacting technical support.

### Cannot Create or Open Pivot Tables

#### Problem

On the INTERACTIVE ANALYSIS tab, after you choose the *OK* button in the *Select Data Source* or *Open Report* window, the following window appears, and you cannot continue creating or opening pivot tables.



#### Solution

Restart the SAP Business One Services on Linux:

To restart the server tools, log on to the Linux server as root or the <sid>adm user (for example, ndbadm) and then run the following command:

/etc/init.d/sapblservertools restart

In addition, to stop or start the server tools, run the following commands respectively:

- · /etc/init.d/sapblservertools stop
- · /etc/init.d/sapb1servertools start



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