



Education

Infor Education:
Ready, Set, Succeed.

Infor BI: Creating Reports and Analyzing Data with Office Plus Training Workbook

Infor BI
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About this workbook

Welcome to this Infor Education course! We hope you will find this learning experience enjoyable and instructive. This Training Workbook is designed to support the following forms of learning:

- Classroom instructor-led training
- Virtual instructor-led training

This Training Workbook is not intended for self-study or as a product user guide.

Activity data

You will be asked to complete some practice exercises during this course. Step-by-step instructions are provided in this guide to assist you with completing the exercises. Where necessary, data columns are included for your reference.

Your instructor will provide more information on systems used in class, including server addresses, login IDs and passwords.

Reference materials

Infor BI reference materials are available from the following locations:

- Infor BI Help menu
- Infor Xtreme

Symbols used in this workbook



Hands-on exercise
("Exercise")



For your reference



Instructor demonstration
("Demo")



Your notes



Can be used for either
"Scenario" or "Discussion"



Question



Note



Answer

Course overview

Course duration

2 days

Learning objectives

Upon completion of this course, you will be able to:

- Identify the basic features and functionality of Office Plus.
- Explain how to log on to Office Plus and identify the main components of the user interface.
- Describe how to create ad hoc reports and browse through data.
- Explain how to use the List Designer to select, sort, and filter data.
- Explain how to write values back to base cells and aggregated cells.
- List the steps to create formula reports.
- List the steps to create Alea ad hoc reports.
- Explain how to use attribute tables, global lists, calculations, and style templates.

Audience

- Customer User
- Pre-Sales Consultant
- Business Consultant
- Technical Consultant
- Support
- System Administrator

System requirements

- Infor BI Training Environment

Course description and agenda

This course introduces the basic features of Infor BI Office Plus and provides learners with the foundational knowledge needed to generate and customize ad hoc and formula reports.

Prerequisite knowledge

To optimize your learning experience, Infor recommends that you have the following knowledge prior to attending this course:

- Basic knowledge of Microsoft® Windows®
- Basic knowledge of Microsoft® Excel®

Lesson	Lesson title	Learning objectives	Day
Course overview		<ul style="list-style-type: none"> • Review course expectations. 	Day 1
Lesson 1	Lesson 1: Office Plus overview	<ul style="list-style-type: none"> • List the main components of Infor BI. • Identify the features and functionality of Infor BI Office Plus. • Describe the Infor BI Office Plus architecture. • Describe repositories, projects, and report catalogs. • Describe data management in spreadsheets. • Describe data management in relational databases. 	Day 1
Lesson 2	Getting started	<ul style="list-style-type: none"> • Explain how to log on to Office Plus. • List the steps to create a database alias. • Identify the main components of the Office Plus user interface. • Identify the major sections of the Office Plus toolbar. 	Day 1
Lesson 3	Ad-hoc reporting	<ul style="list-style-type: none"> • Describe how to create an ad-hoc report. • Define ad-hoc report options. • Explain how to use the Ad-hoc Report Designer. • Describe navigation in an ad hoc report. • Explain how to use the Keep Elements function. • Explain how to suppress zero and empty values. • List the steps to add a chart to an ad-hoc report. • Explain how to save an ad-hoc report. 	Day 1
Lesson 4	Using the List Designer	<ul style="list-style-type: none"> • Describe the functionality of the List Designer. • Identify the List Designer panes. • Explain how to select elements to display in a list. 	Day 1

Lesson	Lesson title	Learning objectives	Day
		<ul style="list-style-type: none"> • Explain how to filter data within a list. • Explain how to sort data within a list. • List the steps to display attributes for a dimension. • Describe the options in the Advanced pane. 	
Lesson 5	Data entry	<ul style="list-style-type: none"> • Explain how write back works. • Identify the different write back methods. • Describe allocation and alteration. 	Day 2
Lesson 6	Formula reports	<ul style="list-style-type: none"> • Identify the differences between ad-hoc reports and formula reports. • Identify common Office Plus formulas. • Describe query-based, cell-based, Excel-aggregated, and value-based formula reports. • List the steps to convert an ad-hoc report to a formula report. • Explain how to create a formula report from a blank Excel worksheet using the Formula Wizard. 	Day 2
Lesson 7	Alea ad-hoc reports	<ul style="list-style-type: none"> • List the steps to create an Alea ad hoc report. • Explain how to use the Dimension browser. • Identify the buttons on the Dimension browser. • Describe the purpose of the Splasher. • Identify the Splasher toolbar buttons. • Explain how to insert a cell note. • Identify common Alea formulas. • Identify the differences between Alea and Office Plus formula groups. • Explain how to use Alea formulas in a report. 	Day 2
Lesson 8	Using other Office Plus features	<ul style="list-style-type: none"> • Describe the use of a global list in a report. • Explain how to use a calculation in a report. • Explain how to use the Style Wizard to create a new template. • List the steps to apply a template to a report. 	Day 2
Course summary		<ul style="list-style-type: none"> • Debrief course. 	Day 2



Lesson 1: Office Plus overview

Estimated time

1 hour

Learning objectives

After completing this lesson, you will be able to:

- List the main components of Infor BI.
- Identify the features and functionality of Infor BI Office Plus.
- Describe the Infor BI Office Plus architecture.
- Describe repositories, projects, and report catalogs.
- Describe data management in spreadsheets.
- Describe data management in relational databases.

Topics

- Introduction to Infor BI
- Introduction to Office Plus
- Office Plus architecture
- Basic concepts

Introduction to Infor BI

Infor BI is a fully integrated solution suite that supports various types of financial, operational, and sales business intelligence requirements. It can be used for standard reporting, flexible ad-hoc reporting and analysis, dashboard creation, business planning, budgeting, forecasting, and financial consolidation.

The following table identifies the components of the Infor BI suite and provides a brief description of each:

Component	Description
Application Studio	A web-based front-end used for visualizing data through reports, analysis, dashboards, and data entry
Office Plus for Microsoft Office Excel	A fully integrated Microsoft Office Excel add-in mainly used for ad-hoc analysis and reporting
OLAP	A real-time, in-memory, online, analytical processing (OLAP) database server for multidimensional analysis, planning, and modeling
Designer	A tool for designing and creating Infor BI OLAP Server databases
Planning	An application for financial, operational, and overall business budgeting and forecasting
Consolidation	A statutory and management consolidation application that leverages the Infor BI OLAP Server
ImportMaster	An extract, transform, and load (ETL) layer that facilitates integration with both Infor and non-Infor source systems
DeltaMiner	A tool providing statistical analysis, data mining, and other advanced analytic capabilities
Business Analytics	An application that includes predefined, role-based content for sales, finance, production, and other functional areas

Introduction to Office Plus

Infor BI Office Plus for Microsoft Office Excel (Office Plus) provides a powerful, flexible, and customizable Microsoft Office Excel add-in used for reporting and analyzing data. By combining the strength and advantages of an Excel spreadsheet with the power of a multidimensional database, Office Plus offers advanced reporting capabilities and sophisticated information analysis to improve collaboration and optimize key business processes.

Advanced reporting capabilities

Using existing Excel functions, Office Plus transforms common analytic views into standard reports. Basic or complex reports can be created. Excel charts or tables can even be added to these reports and connected to existing data sources.

Sophisticated information analysis

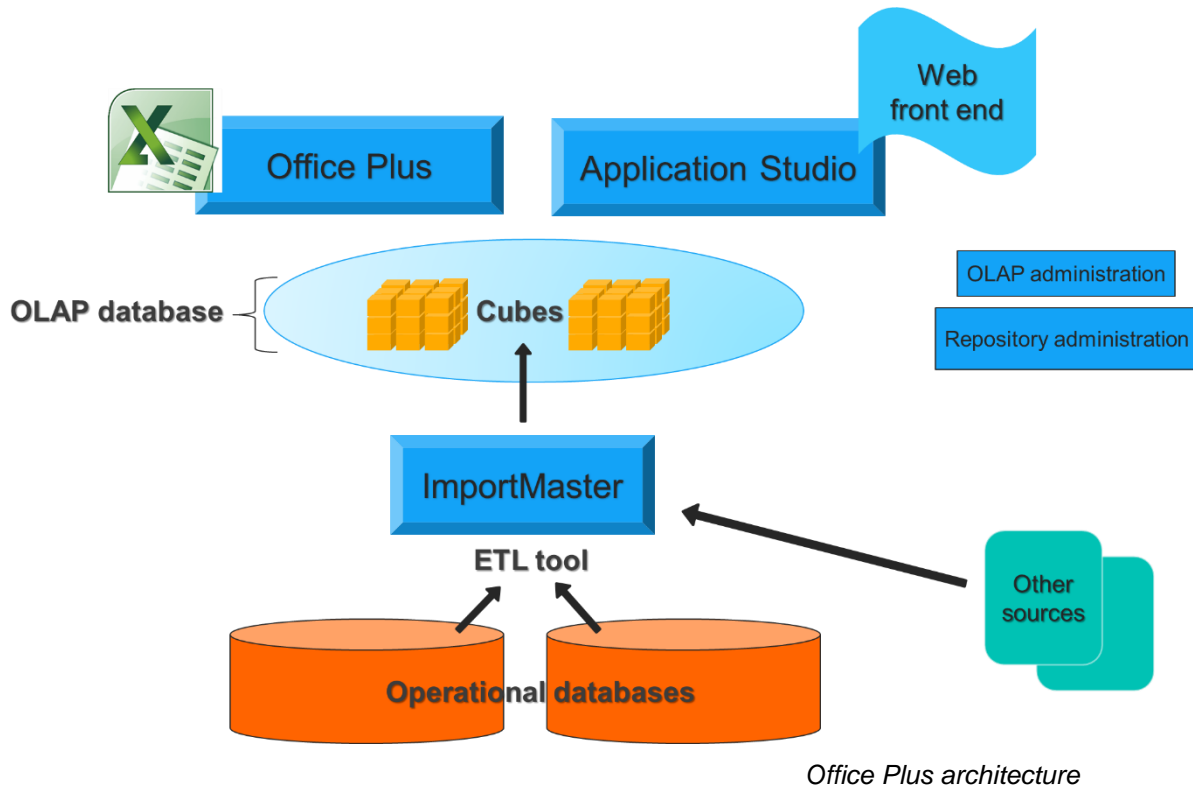
Sorting, ranking, color coding, and other advanced analytic options in Office Plus allow for the quick assessment of business information. And, by dragging and dropping desired elements into Excel using the Office Plus ad-hoc reporting feature, you can easily browse through your business data.



Office Plus architecture

Office Plus is a client/server ad-hoc reporting tool that integrates into Microsoft Excel. It supports connections to a variety of data sources through database aliases. The metadata of Office Plus is stored in a Microsoft® SQL® Server® database or in an Oracle® database. The business data is stored in an OLAP server database.

A presentation layer in pure HTML, compatible with both Internet Explorer® and Firefox®, is available via Application Studio.

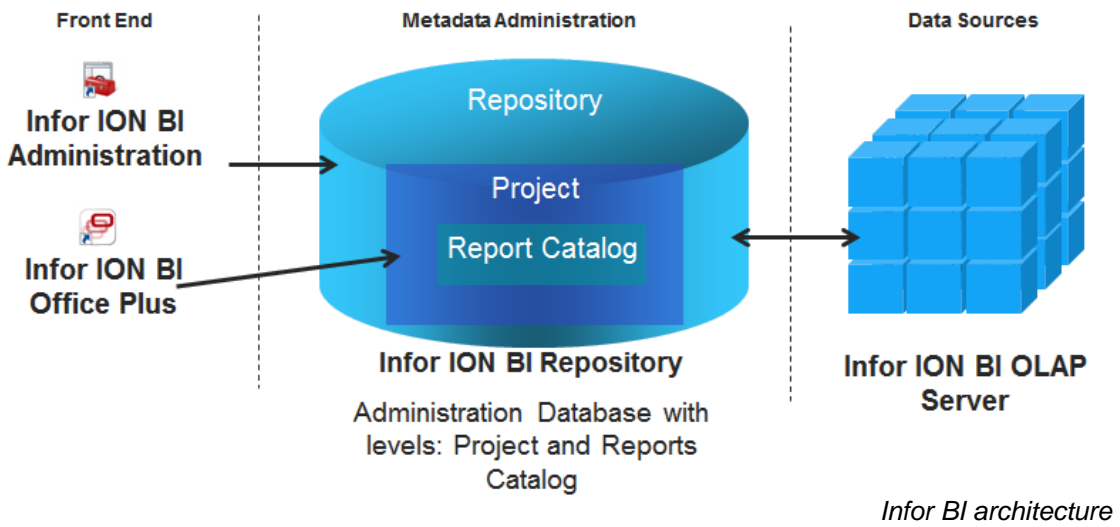


Repository

One component of Infor BI is the repository. The repository is a store for objects that the various Infor BI products have in common. It is created on a SQL database, such as a Microsoft SQL Server or Oracle database.

Office Plus stores the data for connecting to the OLAP Server database, user management, and report layout in a central database - the repository. When you start Office Plus, you connect to a repository, and select a project and a report catalog. You create a database alias in Office Plus to access an OLAP Server. You create reports based on OLAP cube data and store the report definitions in the repository.

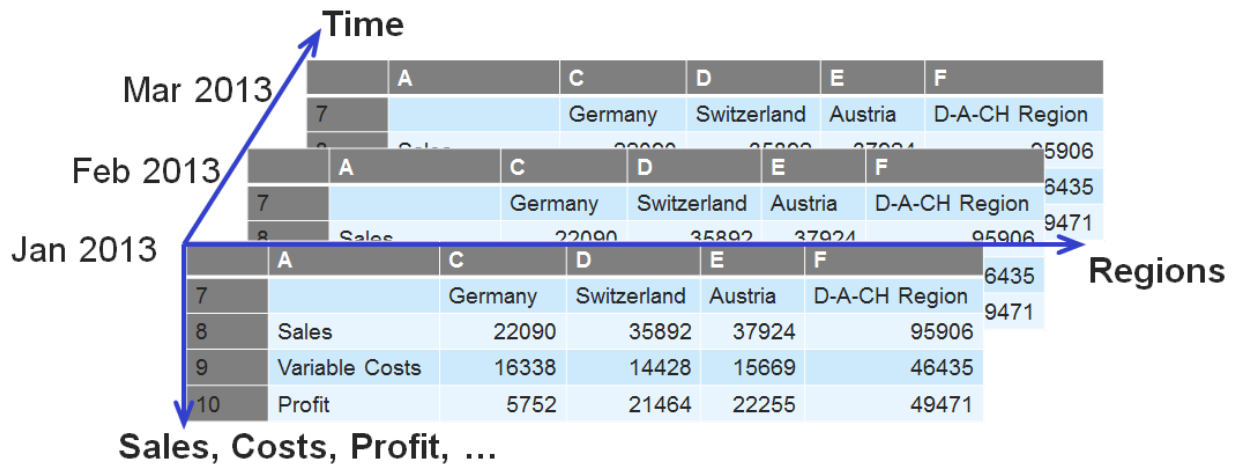
The repository can contain multiple projects. A project contains database aliases, global lists (which can also be used in Application Studio), and user rights. A project can contain multiple report catalogs, which store and organize multiple reports and templates.



Basic concepts

Data management in spreadsheets

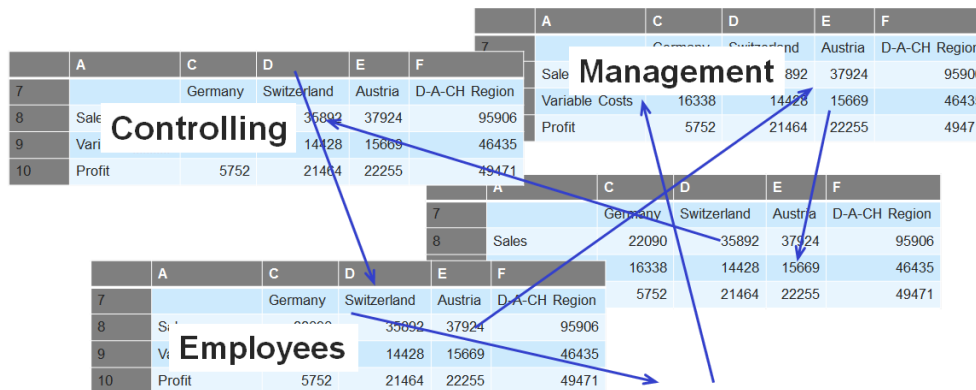
One of the most common uses for a spreadsheet program is to manage lists of data, such as products, customers, regions, and revenue. A list is an organized collection of data stored in rows and columns (two dimensional). This data can be used for analysis purposes. If you use more than one spreadsheet to store data, you can obtain more than two analysis perspectives.



Multiple tables in a spreadsheet

Disadvantages of spreadsheets

If you link spreadsheets in your business and send them across departments, you will undoubtedly develop problems.



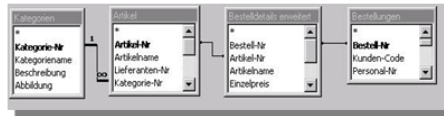
Linked spreadsheets

The following are some of the disadvantages of using spreadsheets:

- Risks:
 - Data redundancy and inconsistency
 - Data inaccuracy, since spreadsheets allow for manually entering data directly into cells
 - Errors when linking numerous tables
- Lack of usability:
 - Data becomes unusable when tracking down a simple figure requires scrolling through hundreds of columns of a spreadsheet
 - Data storage is local with only one write-access possible at the same time
 - Sharing spreadsheets among multiple departments can introduce confusion in determining the latest version of data
 - Spreadsheet memory size limits the amount of data
- Performance and time-consumption:
 - Consolidation creates performance issues and becomes increasingly more time consuming
 - Manual data entry of the same data into multiple spreadsheets is time consuming
- Data security issues

Data management in relational databases

In most systems, the master data and transactional data is managed in relational databases. This data is stored within many tables, which are related to one other. These types of databases have proven to display weaknesses when performing hard-coded analysis or complex queries via Structured Query Language (SQL) statements. This is the reason for developing OLAP technology.



Nr.	Products	Months	Number
1	Product 1	Jan	450
2	Product 2	Mar	700
3	Product 1	Mar	560
4	Product 3	Jan	1500
5	Product 2	Jan	750
6	Product 3	Feb	1800
7	Product 2	Feb	950
8	Product 1	Feb	800
9	Product 3	Mar	1200

Data management in relational databases

Disadvantages of a relational database

- Planning and simulation is difficult
- Knowledge of specific query language is necessary
- Structural changes are complex

Check your understanding



Which of the following is a fully integrated Microsoft Office Excel add-in mainly used for ad-hoc analysis and reporting?

- a) Infor BI Application Studio
- b) Infor BI Office Plus
- c) Infor BI ImportMaster
- d) Infor BI Designer



Lesson 2: Getting started

Estimated time

1 hour

Learning objectives

After completing this lesson, you will be able to:

- Explain how to log on to Office Plus.
- List the steps to create a database alias.
- Identify the main components of the Office Plus user interface.
- Identify the major sections of the Office Plus toolbar.

Topics

- Logging on to Office Plus
- Creating database aliases
- The user interface

Logging on to Office Plus

When you log on to Office Plus you are required to connect to a repository from the Log On dialog box. You must then select an existing project and report catalog or add a new project and catalog.

Training repository

In this course, you will be using the Tutor Repository, which connects to the Tutor_EN (English) database with Academy as its database alias.



Demo: Log on to Office Plus

Your instructor will demonstrate how to start Office Plus, connect to the Tutor Repository, and add a project and report catalog.





Exercise 2.1: Log on to Office Plus

In this exercise, you will start Office Plus, connect to the Tutor Repository, and add a project and report catalog.

Exercise steps

1. Double-click the **Office Plus for Excel** icon on the desktop. Microsoft Excel opens displaying an **Infor BI Office Plus** tab.
2. Click the **Infor BI Office Plus** tab.
3. Click the lower portion of the **Log On** button in the toolbar to display a secondary option.
4. Select **Log On with Options**. The **Log On** dialog box opens.
5. Use the information provided in the table below to type or select the criteria for log on:

Authentication	Basic
User Name	Admin
Password	(Leave this field blank)
Repository	Tutor Repository

6. Click **Connect**.
7. Click **Add** next to the **Project** field in the **Log on** dialog box. The **Add Project** dialog box opens.

8. Type *<your initials> Ex 2.1 Project* in the **Name** field.
9. Click **OK** to return to the **Log On** dialog box.
10. Click **Add** next to the **Report catalog** field. The **Add Report Catalog** dialog box opens.
11. Type *<your initials> Ex 2.1 Report Catalog* in the **Name** field.
12. Click **OK** to return to the **Log On** dialog box.



You can also edit an existing project or report catalog by clicking the down arrow on the Add button and selecting Edit.

13. Click **OK** to log on to Office Plus.

Creating database aliases

Databases are accessed through an alias, so if the database or server name changes, all reports will continue to work. The database alias contains the registration information for the data source, including the server name, database name, and connection method. The alias is stored in the repository, and is available to any user connected to that repository.



Demo: Create a database alias

Your instructor will demonstrate how to create a database alias.





Exercise 2.2: Create a database alias

In this exercise, you will create a database alias.

Exercise steps

1. Click the **New Database Alias** button in the **Database Structure** pane. The **New Database Alias** dialog box opens.
2. Use the information provided in the table below to type or select the database alias:

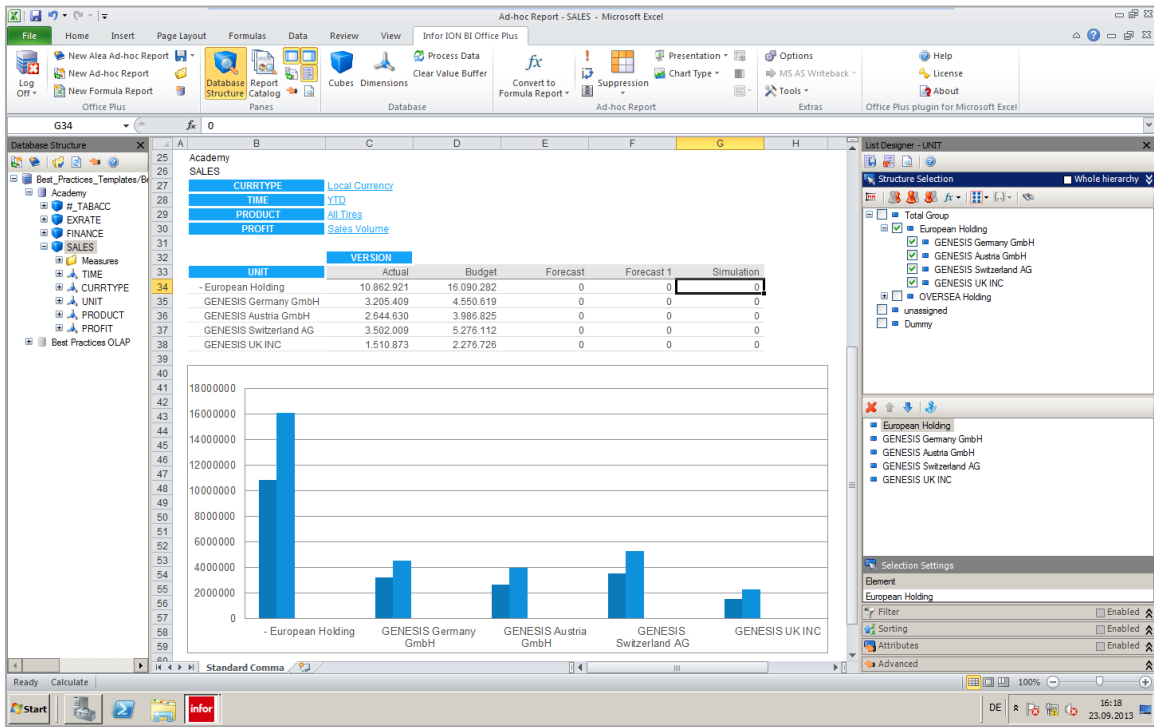
Field name	Data
Name	Academy
Provider	Infor BI OLAP Provider
Driver	XMLA

3. Click the **Advanced** tab.
4. Verify that the **Accept self-signed certificates** option is set to **Yes**; otherwise, select it.
5. Click the **Database** tab.
6. Type *localhost* in the **Server** field.
7. Select **dep2014/Academy over https** from the **Database** drop-down menu.
8. Click **OK**. **Note:** If an **Infor BI Office Plus** dialog box appears prompting you to save the log on settings, click **Yes**.

The user interface

The Office Plus user interface consists of the following main components:

- Office Plus toolbar
- Database Structure pane
- Report Catalog pane
- Properties pane
- Report area
- Ad-hoc Report Designer
- List Designer
- Preview pane



Office Plus user interface

Office Plus toolbar

The following table identifies the major sections of the Office Plus toolbar and provides a brief description of each:

Toolbar section	Description
Office Plus	Log on and off of Office Plus Austria, change your password, create new ad-hoc, Alea ad-hoc, and formula reports, save reports, and create a database alias

Toolbar section	Description
Panes	Shows or hides the following panes: <ul style="list-style-type: none"> • Database Structure • Report Catalog • Ad-hoc Report Designer • List Designer • Properties • Preview • All left-docked panes (Database Structure, Report Catalog, and Properties panes) • All right-docked panes (List Designer and Preview panes)
Database	Opens the Cubes and Data Areas dialog box, opens the Dimensions and Subsets dialog box, processes data, and clears cached results of DBGETC formulas
Write Back	Perform client-side splashing, lock and unlock cells, set constraints, remove all cell locks and constraints, switch between immediate and non-immediate write back modes, save changed values to a database, and refresh data to revert to values from a database
Ad-hoc Report	Convert an ad-hoc report to a formula report, recalculate a report, transpose a report, open the Select Slice Dimensions dialog box, suppress data, use presentation options, and insert a chart into a report Note: This toolbar section will not display until you are working with an ad hoc report.
Alea Ad-hoc Report	Opens the Define Alea Ad-hoc Report dialog box allowing you to edit a report, recalculate a report, keep elements, and convert an Alea ad hoc report to a formula report. Note: This toolbar section will not display until you are working with an Alea ad hoc report
Extras	Opens the Options dialog box, accesses write back features, such as committing and undo changes, and accesses various tools, such as the Cube Wizard and Style Wizard.
Office Plus plugin for Microsoft Excel	Displays Office Plus help, licensing information, and Office Plus version and copyright information.

Database Structure pane

The Database Structure pane contains the database objects. This pane displays the repository you are logged on to and any database aliases registered in that repository. Expanding the alias will display cubes and dimensions within the cube.

To display the Database Structure pane, do one of the following:

- Click the Database Structure button in the Panes group of the Office Plus toolbar.
- Click the Database Structure tab in the left pane.

Database Structure pane buttons

The Database Structure pane buttons vary depending on the level of the database structure you select. For example, the Log On and Log Off buttons may refer to logging on and off of a repository or a database alias.

The following table identifies some of the Database Structure pane buttons and provides a brief description of each:

Toolbar section	Description
Log On	Automatically logs on to the last used repository, project, and report catalog; if the Save Password check box was not selected, the Log On dialog box displays allowing you to select a repository, report catalog, and project
Log On with Options	Opens the Log On dialog box with options allowing you to select a repository, report catalog, and project
Log Off	Logs off the repository
New Database Alias	Opens the New Database Alias dialog box allowing you to create a database alias
New Ad-hoc Report	Creates an ad-hoc report with the selected cubes in the Ad-hoc Report Designer
New Alea Ad-hoc Report	Creates an Alea ad hoc report
New Global List	Creates a global list
Preview	Opens the Preview pane to view a preview of the selected list
Refresh	Refreshes the view of the OLAP Server database structure to which you are connected
Properties	Displays the properties of an object selected in the Database Structure pane
Database Structure Options	Open the Database Structure Options dialog box
New Calculation	Creates a calculation; calculations must be enabled in the Database Structure pane options



By default, the Database Structure pane displays the cubes, dimensions, and hierarchies of each OLAP Server database alias. To display additional structural elements, click the Database Structure Options button and select the elements to display.

Report Catalog pane

The Report Catalog pane allows you to display and administer the different types of reports you create in Office Plus, including ad-hoc reports, formula reports, Alea ad-hoc reports, and templates. The buttons in the Report Catalog pane vary according to which level of the Report Catalog structure is selected.

In this pane, you can create a hierarchy of folders in which to organize your reports by right-clicking an existing folder and selecting New > Folder.



You cannot create a hierarchy of more than eight levels. The default, Global Reports folder is at the first level.

To display the Report Catalog pane, do one of the following:

- Click the Report Catalog button in the Panes group of the Office Plus toolbar.
- Click the Report Catalog tab in the left pane.

Properties pane

The Properties pane displays the properties of an object selected in the Database Structure pane. To open the Properties pane, click the Properties button in the Panes group of the Office Plus toolbar.

Ad-hoc Report Designer

The Ad-hoc Report Designer is used to set parameters for ad hoc reports.

List Designer

The List Designer pane allows you to define lists for use within reports. From here, you specify which elements of a list are shown in the report, how they are sorted, what filters (if any) are applied to them, and what attributes (if any) are used. Changes you make in the List Designer affect the display of data in a report. Similarly, changes you make in a report affect the structure of the list in the List Designer.

The List Designer includes five panes:

- Structure Selection
- Filter
- Sorting
- Attributes
- Advanced

Preview pane

The Preview pane displays the elements of a dimension, hierarchy, or list selected in the Database Structure pane or of a list selected in an ad hoc report. You can search for elements of the dimension or list.

To open the Preview pane, click the Preview button on the Office Plus toolbar.

Check your understanding



Which of the following displays the repository you are logged on to and any database aliases registered in that repository?

- a) Report Catalog pane
- b) Preview pane
- c) List Designer
- d) Database Structure pane



Which section of the Office Plus toolbar opens the Cubes and Data Areas and the Dimensions and Subsets dialog boxes?

- a) The Ad-Hoc Report section
- b) The Alea Ad-Hoc Report section
- c) The Database section
- d) The Extras section



Lesson 3: Ad hoc reporting

Estimated time

2 hours

Learning objectives

After completing this lesson, you will be able to:

- Describe how to create an ad hoc report.
- Define ad hoc report options.
- Explain how to use the Ad-hoc Report Designer.
- Describe navigation in an ad hoc report.
- Explain how to use the Keep Elements function.
- Explain how to suppress zero and empty values.
- List the steps to add a chart to an ad hoc report.
- Explain how to save an ad hoc report.

Topics

- Creating an ad hoc report
- Navigating in ad hoc reports
- Adding a chart to an ad hoc report
- Saving an ad hoc report

Creating an ad hoc report

An ad hoc report provides a way to view multidimensional data. This type of report uses the Excel application as the medium; however, none of the numerical data or formulas, not even Excel formulas, is stored in the ad hoc report.

To create an ad hoc report, do one of the following:

- Click the New Ad-hoc Report button in the Office Plus section of the toolbar.
- Double-click a cube in the Database Structure pane, or select the cube and press Enter.

A default view of the cube will display. By default, the Measure dimension forms the columns in a new ad hoc report and the next dimension in the hierarchy forms the rows. The remaining dimensions are used as slice-dimensions.



If you are logged on as an Administrator, you can specify a different default view by creating an ad hoc report and clicking Save As Default Ad-hoc Report for Cube in the Save Ad-hoc Report As dialog box. If there is already a default ad hoc report, you are prompted to confirm that you want to overwrite it. This specified default ad hoc report is then the default ad hoc report for all users of the cube in the report catalog.

Ad hoc report options

The Options dialog box allows you to specify various ad hoc report settings.

To access the Options dialog box, click the Options button in the Extras section of the toolbar.

On the Ad-hoc Report tab, you can:

- Specify representation settings, such as whether or not to display borders or to resize row captions automatically.
- Specify chart settings, such as whether to display only a chart, or a table and a chart, and what type of chart to display.
- Specify slice dimensions settings, such as whether or not to display slice dimensions on the report, and if so, whether to display the slice dimensions horizontally. Displaying dimensions horizontally can save space; however, column widths may vary based on the length of the element names in the slice dimensions and the value range.

On the General tab, you can:

- Specify language settings.
- Specify local and template folder file path settings.
- Specify suppression settings and slice dimension settings, such as whether to display all slice dimensions, all hierarchies, or to manually add slice dimensions.

Manually add slice dimensions

If you want to manually add slice dimensions, select Add from the Slice Dimensions drop-down list on the General tab of the Options dialog box. When you do, new ad hoc reports will appear with a “Drop lists here” area in the header section of the report design area. You can then drag dimensions from the Database Structure pane or other areas of the report onto this area.

	A	B	C	D
28				
29		Academy	Drop lists here.	
30		SALES		
31				
32			VERSION	
33		TIME	Actual	
34		+ YTD	10.676.694,80	
35		+ All Years	10.676.592,00	
36				

Manually add slice dimensions



Demo: Create an ad hoc report

Your instructor will demonstrate how to set default Office Plus options and create a new ad hoc report.





Exercise 3.1: Create an ad hoc report

In this exercise, you will set default Office Plus options and create a new ad hoc report.

Exercise steps

1. Click the **Options** button on the **Extras** section of the toolbar. The **Options** dialog box opens.
2. Click the **General** tab.
3. Verify that **All dimensions** is selected in the **Slice-dimensions** field. Otherwise, select it.
4. Click the **Report** tab, if it is not already displayed.
5. Select **Table** in the **Display mode** drop-down menu.
6. Select the **Show slice-dimensions horizontally** check box.
7. Click **Apply**.

8. Click **Yes** to confirm that you want to save the property change as a default. This ensures your changes will be reflected each time you create a new ad hoc report.
9. Click **OK** to close the **Options** dialog box.
10. Verify that the **Database Structure** button is already selected (highlighted) in the **Panes** section of the toolbar, which displays the **Database Structure** pane. Otherwise, click the button.
11. Click the **plus sign (+)** next to **Tutor Repository** to expand it, if it is not already selected.
12. Click the **plus sign (+)** next to **Academy** to expand it.
13. Double-click the **SALES** cube. Sales data displays in the report design area.

The Ad-hoc Report Designer

When working with an ad hoc report, the ad hoc report displays in the right pane. The Ad-hoc Report Designer consists of the following:

- Database alias and cube name
- Slice dimensions
- Column dimensions
- Row dimensions
- Data area

The Database alias and cube name area show the selected database and the selected cube. The remaining panes display the slice dimensions, the dimensions used in the rows of the report, and the dimensions used in the columns of the report.

Drag and drop dimensions, hierarchies, and lists between the sections to specify the design of the ad hoc report.

- To exchange two dimensions, drop one dimension on top of the other.
- To display both dimensions, drop one dimension adjacent to the other.
- To select a different element from a slice dimension, click the element name in the Slice-dimensions pane to open the Select Elements dialog box.

The ad hoc report area

Two dimensions form an ad hoc report's columns and rows on the report design area. This is called the value range. The other dimensions are above the value range in the header area. They are presented as selection lists and marked as slice dimensions.

PRODUCT	Sales Volume	Sales Deduction in percent	Price per Unit
- All Tires	760,545.00	0.03	237.21
+ All Season Tires	31,912.00	0.03	250.33
+ Summer Tires	229,712.00	0.03	225.70
+ Winter Tires	299,823.00	0.04	235.70
+ Van Tires	55,053.00	0.04	235.70
+ Special Offers	88,692.00	0.02	266.64
+ SUV (4x4) Tires	55,353.00	0.03	385.85
Not Analysed	0.00	0.00	0.00
Dummy	0.00	0.00	0.00

Just as you use the drag and drop method in the Ad-hoc Report Designer, you can use this same method to move dimensions between different areas on the actual report.

- To exchange two dimensions between two areas, drag one dimension to the cell where the name of the other dimension is shown and drop it when the cell is framed.
- To show multiple dimensions in the rows or columns, drag a dimension next to the existing one.

You can also switch the dimensions shown in the rows and columns of a value range by clicking the Transpose Report button in the Ad-hoc Report group of the toolbar.



Demo: Work with an ad hoc report

Your instructor will demonstrate how to use the Ad-hoc Report Designer, the Ad-hoc Report section of the toolbar, and the Select Elements dialog box to work with an ad hoc report.





Exercise 3.2: Work with an ad hoc report

In this exercise, you will use the Ad-hoc Report Designer, the Ad-hoc Report section of the toolbar, and the Select Elements dialog box to work with an ad hoc report.

Exercise steps

1. Drag the **Product** dimension in the **Slice-dimensions** pane of the **Ad-hoc Report Designer** onto the **Time** dimension in the **Rows** pane. Release the mouse button when the red line displays around the cell. The **Product** slice-dimension is switched with the **Time** dimension in the value area.
2. Click the **Transpose Report** button in the **Ad-hoc Report** section of the toolbar. This switches the dimensions shown in the rows and columns of the value range so that **Product** is displayed across and **Version** is displayed down.
3. Click the **Sales Volume** element below the **PROFIT** dimension in the header area. The **Select Elements** dialog box opens.
4. Select the check box to the left of **Production Volume**.
5. Click **OK**.
6. Click the **YTD** element below the **Time** dimension in the header area. The **Select Elements** dialog box opens.

7. Clear the **YTD** element check box.
8. Click the **Multiple Selection** button in the toolbar of the **Select Elements** dialog box (fourth button from the right).



By default, slice dimensions show a single element. By enabling multiple selection, you can select two or more elements in a slice dimension. The value range will show an aggregation of the selected elements. When you enable multiple selection, the header area will display every selected element for the slice dimension and the value range will show the sum of the selected elements.

9. Click the **plus sign (+)** to the left of **All Years** to expand its contents.
10. Click the **plus sign (+)** to the left of **2012** to expand its contents.
11. Select the check boxes to the left of **2012_Q1** and **2012_Q2**.
12. Click **OK**. Both selected quarters are displayed below the **Time** dimension and the values in the value range display a summation of the first two quarters, as shown in the screen shot below. If it does not, review the previous steps and make the necessary corrections.

	A	B	C	D	E	F
28						
29	Academy		CURRTYPE	UNIT	TIME	PROFIT
30	SALES		<u>Local Currency</u>	<u>Total Group</u>	2012_Q1,2012_Q2	<u>Production Volume</u>
31						
32			PRODUCT			
33		VERSION	+ All Tires	Not Analysed		Dummy
34		Actual	2.543.282,00	#N/A		#N/A
35						

Navigating in ad hoc reports

In an ad hoc report, you can vary the data displayed by selecting different slice elements and by expanding and collapsing the dimensions that form the columns and rows of the report.

When a dimension is used to form the columns or rows of a report, its top-level element is displayed. Elements with a plus sign (+) can be expanded or drilled-down to reveal further elements.

- Expanding maintains the hierarchical view of the dimension. As you display elements at lower levels, the elements at the higher levels remain visible.
- Drilling down displays all the elements at the next level down, without displaying the parents.

Expanding/Collapsing

Expanding an element that has child elements expands the hierarchy below the selected element to display the next level of the hierarchy and its elements. To expand an element, do one of the following:

- Double-click a parent element in the value range. Parent elements have a plus sign (+) to the left of the element name.
- Right-click the parent element and select Expand or Expand All. Expand All will expand all levels of the hierarchy and display their elements, not just the selected one.

Collapsing an element hides the children of the selected element. To collapse a hierarchy, do one of the following:

- Double-click an expanded element. Expanded elements have a minus sign (-) to the left of the element name.
- Right-click the expanded element and select Collapse.

Drilling down/Rolling up

The Drill-down and Roll-up functions are similar to Expand and Collapse but display only the child elements, in isolation from their parent and the other elements of the hierarchy. For example, expanding an element displays the expanded element and its children within the existing element list; while drilling-down replaces the element list with the children of the selected element.

- To drill-down on an element, right-click a consolidated element and select Drill-down.
- To roll -up, right-click the element list, and select Roll-up. The list will revert to the level above the existing element list.

Resetting a list

To return a list to its original state, right-click an element and select Reset List. For the Measures dimension, this resets the list and displays the default element. For the remaining dimensions, the list is reset and displays the root element.

Using the Keep Elements function

The Keep Elements function allows you to isolate one part of a hierarchy from the rest of the hierarchy. You can then expand, collapse, and drill down within the selected part of the hierarchy, but not in other parts of the hierarchy. This is a very useful function to reduce the size of the displayed elements.

- To keep elements, right-click the parent element of the part you want to isolate and select Keep Elements.
- To return to the whole hierarchy, right-click and select Show Root Level.



Demo: Use Expand, Collapse, Drill-Down, and Keep Elements functions

Your instructor will demonstrate how to navigate in an ad hoc report using the Expand, Collapse, Drill-Down, and Keep Elements functions, and also reset a list.





Exercise 3.3: Use Expand, Collapse, Drill-Down, and Keep Elements functions

In this exercise, you will navigate in an ad hoc report using the Expand, Collapse, Drill-Down, and Keep Elements functions, and also reset a list.

Exercise steps

1. Click the **Transpose Report** button in the **Ad-Hoc Report** section of the toolbar.
2. Double-click **All Tires** below the **PRODUCT** dimension. **All Tires** expands to display its children and the icon to the left of the name changes to a minus sign (-) to indicate that it is expanded.
3. Double-click **Winter Tires** to display its children. **Winter Tires** expands to display its children and the icon to the left of the name changes to a minus sign (-) to indicate that it is expanded.
4. Double-click **Winter Tires** again. The hierarchy collapses and the icon to the left of **Winter Tires** changes to a plus sign (+) to indicate that it can be expanded.
5. Right-click **Summer Tires**.
6. Select **Drill-down** from the shortcut menu. Instead of expanding, only the children of **Summer Tires** display. **Note:** Subsequent steps will combine the right-click action with the selection of the shortcut menu option.
7. Right-click **<any of the elements>** in the row headers and select **Roll-up**.
8. Right-click **<any of the elements>** in the row headers and select **Reset List**.
9. Right-click **All Tires** and select **Expand All**.
10. Hold down the **Ctrl** key and select **<any three elements>**.
11. Right-click and select **Keep Element**. The report displays only the elements from which the selected values are derived.
12. Right-click **<any of the elements>** displayed and select **Reset List** to return the list to the original selection.



Resetting the list will return the list to its original state, not the configuration it was in immediately before you used the Keep Element function.

Displaying top or bottom values

You can sort data to display only the top or bottom values, for example, show the top revenue products. You can specify whether to limit the values to a specific number of elements (5, 10, 25, 50, or 100), or a specific percentage of elements.

To show top or bottom values, right-click a value in a column to sort and select Only Show Top Values or Only Show Bottom Values. Then, select a value or percentage from the shortcut menu. A white triangle in the column indicates that the data is sorted. To show all elements again, right-click the column and select Only Show Top/Bottom Values > Show All.

When you display top or bottom values, the Sorting pane of the List Designer is enabled. In the Sorting pane, you can see how the sort is defined. The definition changes as you select different top or bottom values. Changes that you make to the definition in the Sorting pane are reflected in the report.

Suppressing empty and zero cell values

A common feature of multidimensional databases is that for many combinations of rows and columns, there is no data. Reports can include a large number of empty cells (represented by default as #N/A) or zero values. In an ad hoc report, you can exclude columns and rows that contain only zero values or columns and rows that do not contain any values (empty).

When you suppress zero values, any column or row that contains only zero values is hidden. If the column or row contains at least one non-zero value, the zero values in that column/row will still be displayed. You can automatically suppress values to ensure they are never displayed in a report or manually suppress them when they are displayed.

Automatic suppression

To automatically prevent zero values from being displayed, click Options in the toolbar and go to the General tab. There you can specify the mode of suppression as the default for new ad hoc reports.

Manual suppression

To manually suppress zero and empty values, do one of the following:

- Right-click the data area of the report and select Suppress Empty and Zero Rows and Columns or Suppress Empty Rows and Columns. **Note:** Suppressing empty and zero rows and columns will suppress both empty and zero values. Suppressing empty rows and columns will only suppress empty values, but not zero values.

Click the Suppression button in the Ad-hoc Report section of the toolbar and select the appropriate option from the drop-down menu that displays.



Demo: Suppress empty and zero cell values and display top elements

Your instructor will demonstrate how to manually suppress zero and empty cell values and display the top five elements.





Exercise 3.4: Suppress empty and zero cell values and display top elements

In this exercise, you will manually suppress zero and empty cell values and display the top five elements.

Exercise steps

1. Double-click the **All Tires** row header to expand it.
2. Right-click the **All Tires** row header and select **Suppress Zero and Empty Rows**. All rows that display **Not Analysed** and **Dummy** are removed.
3. Right-click the **All Tires** row header and select **No Suppression on Rows**.
4. Right-click the **All Tires** row header and select **Only Show Top Values > 5**.
5. Right-click the All Tires row header and select Only Show Top Values > Show All to return to the original list. Your screen should look like the screen shot below. If it does not, review the previous steps and make the necessary corrections.

	A	B	C	D	E	F
28						
29	Academy		CURRTYPE	UNIT	PROFIT	TIME
30	SALES		Local Currency	Total Group	Production Volume	2012 Q1,2012 Q2
31						
32			VERSION			
33		PRODUCT	Actual			
34		- All Tires	2,543,282.00			
35		+ All Season Tires	701,523.00			
36		+ Summer Tires	527,702.00			
37		+ Winter Tires	700,454.00			
38		+ Van Tires	262,725.00			
39		+ Special Offers	175,536.00			
40		+ SUV (4x4) Tires	175,342.00			
41		Not Analysed	0.00			
42		Dummy	0.00			
43						

Adding a chart to an ad hoc report

The Presentation button in the Ad-hoc Report section of the toolbar can be used to add a chart to an ad hoc report. You can drill down, roll up, collapse and expand the data series of a chart in the same way as in the table. The data in a table expands and collapses with the data in a chart.



Demo: Add a chart to an ad hoc report

Your instructor will demonstrate how to add a chart to an ad hoc report.



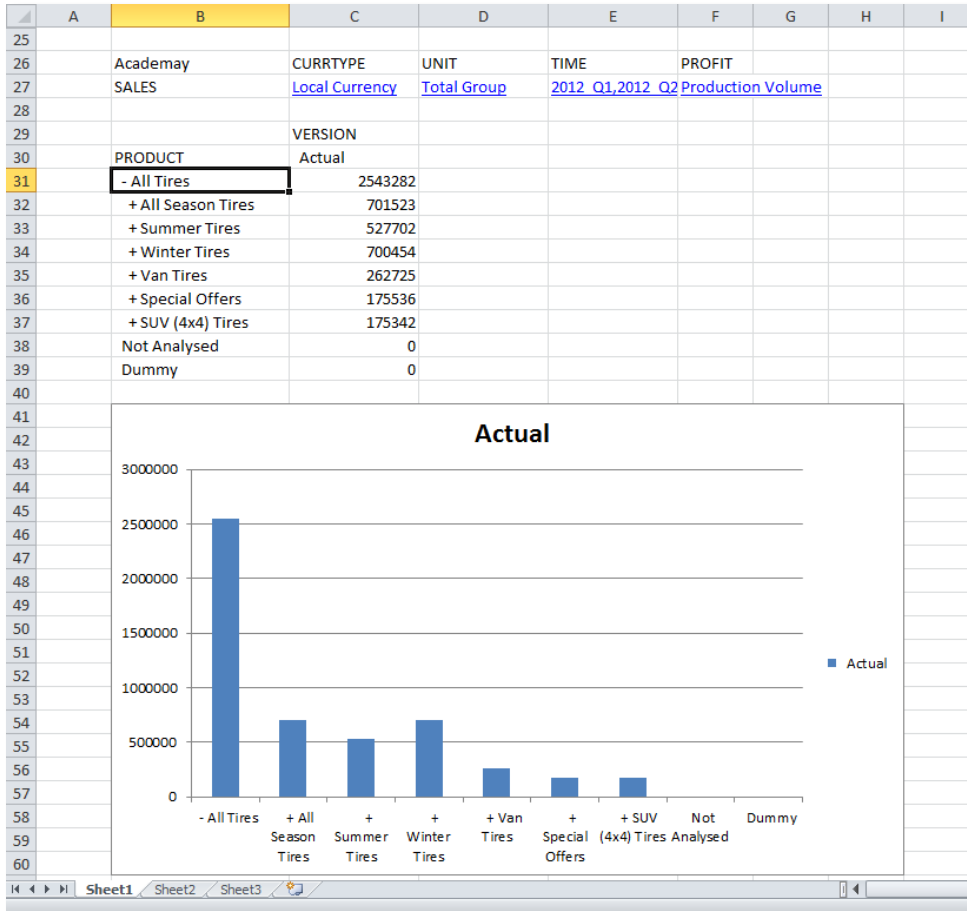


Exercise 3.5: Add a chart to an ad hoc report

In this exercise, you will add a chart to the ad hoc report.

Exercise steps

1. Click **Presentation** on the toolbar.
2. Select **Table and Chart** from the drop-down menu. A bar chart displays below the table and the **Chart Type** toolbar button becomes activated.
3. Click the **Chart Type** toolbar button.
4. Select **Column** from the drop-down menu. The bar chart changes to a chart displaying columns. Your screen should look like the screen shot below. If it does not, review the previous steps and make the necessary corrections.



5. Select **Presentation > Table**. This removes the chart and returns the report to a table-only view.
Note: If you do not perform this step, several upcoming exercises will not work properly.

Saving an ad hoc report

You can choose to save a report as a global report in the repository on the server or you can save it as a local report on your local computer. Ad hoc reports are saved as .XLSX files; they can be stored in, and opened from, any disk location.



You can specify the default location for saving local reports on the General tab of the Options dialog box.



Demo: Save an ad hoc report

Your instructor will demonstrate how to save an ad hoc report.





Exercise 3.6: Save an ad hoc report

In this exercise, you will save the ad hoc report and then reopen the report to ensure it has been saved.

Exercise steps

1. Click the **Save** button in the Office Plus section of the toolbar. The **Save Ad-hoc Report As** dialog box opens.
2. Verify the **Global Reports** folder is selected in the **Report location** pane. Otherwise, select it.
3. Click the **Create a new folder in the current location** toolbar button of the **Save Ad-hoc Report As** dialog box. A new folder displays.
4. Type *Office Plus Basic Training <your initials>* as the name of the folder.
5. Press **Enter**.
6. Double-click the **Office Plus Basic Training <your initials>** folder to open it.
7. Type *<your initials> Ex 3.6 Report* in the **Report name** field.
8. Click **Save**.
9. Select **File > Close** to close the report.
10. Click **Report Catalog** in the **Panes** group to display the **Report Catalog** pane.
11. Expand the **Global Reports > Office Plus Basic Training <your initials>** folders.
12. Double-click your saved *<your initials> Ex 3.6 Report* ad hoc report to open it.
13. Close the ad hoc report.



Scenario: Create an ad hoc report

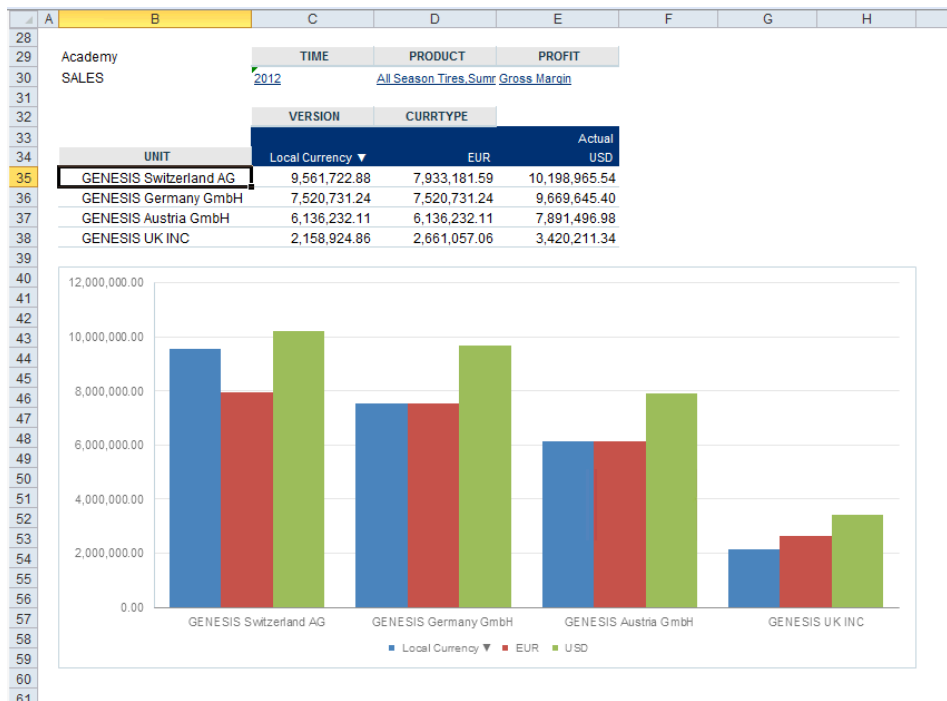
In this scenario, you will practice creating an ad hoc report. This scenario does not include detailed steps so that you have the opportunity to apply the knowledge and skills you have learned in this Lesson.

For this scenario:

- Use the Sales cube to create a new ad hoc report with the following specifications:

Row dimension	Unit
Column dimensions	<ul style="list-style-type: none"> VERSION CURRTYPE
Slice dimension selections	<ul style="list-style-type: none"> Year <ul style="list-style-type: none"> 2012 Products <ul style="list-style-type: none"> All Season Tires Summer Tires Winter Tires Profit <ul style="list-style-type: none"> Gross Margin

- Drill-down to the base level of the rows.
- Suppress the null and zero values at the row level.
- Sort by local currency in descending order.
- Add a column chart below the table. Your screen should look like the screen shot below. If it does not, review the information above or the appropriate steps in previous exercises and make the necessary corrections.



- Save the report as **<your initials> L3 Scenario Report** in your **Office Plus Basic Training** folder within the **Global Reports** folder.

Check your understanding



You can specify representation settings, chart settings, and slice dimension settings on which tab of the Options dialog box in Infor BI Office Plus?

- a) Ad-hoc Report
- b) Captions and Error Values
- c) Calculation
- d) General



The Ad-hoc Report Designer in Office Plus consists of which of the following? Select all that apply.

- a) Slice-dimensions
- b) Column dimensions
- c) Row dimensions
- d) Cube name



In Infor BI Office Plus, expanding an element that has child elements expands the hierarchy below the selected element to display the next level of the hierarchy and its elements.

- a) True
- b) False



Lesson 4: Using the List Designer

Estimated time

1 hour

Learning objectives

After completing this lesson, you will be able to:

- Describe the functionality of the List Designer.
- Identify the List Designer panes.
- Explain how to select elements to display in a list.
- Explain how to filter data within a list.
- Explain how to sort data within a list.
- List the steps to display attributes for a dimension.
- Describe the options in the Advanced pane.

Topics

- List Designer overview
- The Structure Selection pane
- The Filters pane
- The Sorting pane
- The Attributes pane
- The Advanced pane

List Designer overview

Lists include the elements that you use in ad hoc reports. The List Designer is used to specify which elements of a hierarchy are shown in a report, through the use of structure selection, filters, sorting, attributes, and other advanced features. Changes you make in the List Designer affect the display of data in a report. Similarly, changes you make in a report affect the structure of the list in the List Designer.

To display the List Designer, do one of the following:

- Click the List Designer button in the Panes section of the toolbar.
- Click a dimension cell.

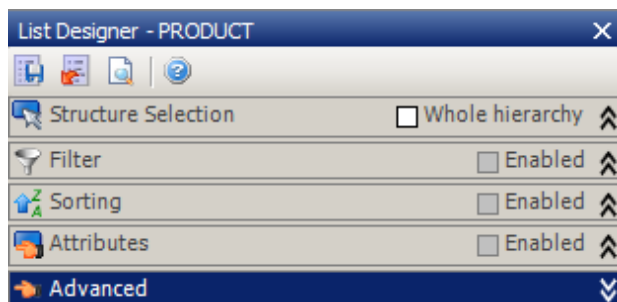


Lists can become invalid if the cube to which they are assigned is deleted.

List Designer panes

The List Designer includes the following five panes:

- Structure Selection
- Filter
- Sorting
- Attributes
- Advanced



List Designer panes

- To open a pane, click its title.
- To close a pane, click the double-arrow icon.
- To disable a filter, a sort, or an attribute selection without deleting the definition, clear the Enabled check box.

List Designer toolbar

The List Designer includes four toolbar buttons that can be used with each of the individual panes. The following table identifies the toolbar buttons and provides a brief description of each:

Toolbar button	Description
Apply changes to the list	Updates the list in the actual report with any changes made in the List Designer.
Discard list changes	Discards any changes made in the List Designer.
Preview	Allows you to preview the results of your changes before saving them.
Help	Displays Office Plus Help topics about the List Designer.



The Structure Selection pane

The Structure Selection pane of the List Designer allows you to specify which elements of a hierarchy are displayed in an ad hoc report. Elements can be selected individually or by reference to their position in a hierarchy. Similarly, changes to the element selection in a report (by expanding, collapsing, drilldown, or keep elements) are reflected in the Structure Selection pane of the List Designer.

In the Structure Selection pane of the List Designer, each element and level of a selected hierarchy includes a check box. To select individual elements or hierarchy levels, select their check boxes in the Structure Selection pane of the List Designer. You then apply the changes to view the updates to the list.

Structure Selection pane toolbar

You can use the Structure Selection pane toolbar buttons to select elements. The following table identifies the toolbar buttons on the Structure Selection pane and provides a brief description of each:

Toolbar button	Description
Suppress Empty Elements	<p>This button suppresses empty elements. This feature does not actually remove empty elements from a report; rather, it allows you to identify, and exclude from the list, elements that do not have associated data.</p> <ul style="list-style-type: none"> Clicking this button displays only those elements that are associated with data. Unclicking this button displays all the elements of the list, including ones without values. <p>Note: When an element selected in the List Designer refers to an empty cell, #NA is displayed in the report.</p>
Select Children	Selects elements under a common parent
Select Parent	Selects elements above a selected element
Select Siblings	Selects elements at the same level with a common parent
Function (fx) <ul style="list-style-type: none"> Range 	<p>This feature selects elements from one point in the hierarchy to another point and include all the items in between, which are on the same level. For example, selecting the range FROM 2009 TO 2013 displays 2009, 2010, 2011, 2012, and 2013 in the report.</p>
<ul style="list-style-type: none"> Elements Underneath <ul style="list-style-type: none"> All, Including Parent All, Excluding Parent All Base Elements Descendants Periods to Date 	<p>This feature selects all elements under a selected element, including the element itself.</p> <p>This feature selects all elements under a selected element, but not the element itself.</p> <p>This feature selects all elements that do not have children - ones that do not have elements underneath them in the hierarchy.</p> <p>This feature allows you to select a specific level of the list as the parent and returns the descendants.</p> <p>This feature selects all elements within the same level, up to, and including, the selected element, related to a parent. As the name suggests, the Periods to Date function is intended for use with time-based lists.</p>

Toolbar button	Description
<ul style="list-style-type: none"> • Previous Periods 	This feature allows you to select an element and specify how many elements before it you want to return. For example, if you select May, and specify 3 as the index, March and April are returned.
Select Level	This feature selects all elements on a hierarchy level, based on your selection. For example, you can select all tire product groups or all tire sizes. In this example, level refers to level-based hierarchies (top down) and not to aggregation levels (bottom up).
Select Set	This feature selects all elements based on the selected set.
Find Element	Opens the Find Element dialog box allowing you to search for a specific element
Remove	Deletes the selection criteria
Up and Down	Moves the selection criteria up or down

Note: You can also right-click an element to display a drop-down menu with the same structure selection options as the toolbar button.

As you navigate in the ad hoc report, selections automatically appear in the lower part of the Structure Selection pane. Therefore, when applying structure selection changes, the existing selections may need to be deleted.

Using the Whole hierarchy check box in the Structure Selection pane, allows you to ignore your existing selections and use the whole hierarchy in the list instead. This feature can be useful when you have created a complex selection of elements and want to disable it temporarily, without deleting your selections. Infor does not recommend using the Whole hierarchy check box on very large dimensions.



Demo: Use the Structure Selection pane to select elements

Your instructor will demonstrate how to use the Structure Selection pane to select elements.





Exercise 4.1: Use the Structure Selection pane to select elements

In this exercise, you will use the Structure Selection pane to select elements.

Exercise steps

1. Open the saved <your initials> Ex 3.6 Report ad hoc report.
2. Double-click **All Tires** below the **PRODUCT** dimension header to collapse the hierarchy.
3. Click the **PRODUCT** dimension header to display the **PRODUCT** dimension in the **Structure Selection** pane of the **List Designer**.
4. Click the **List Designer** button in the **Panes** group of the toolbar, if the **List Designer** is not visible.
5. Click the **Level:All** element in the pane in the bottom half of the **Structure Selection** pane.
6. Click the **Delete** toolbar button to delete the **Level:All** element.
7. Click **All Tires** in the **Structure Selection** pane of the **List Designer**. **Note:** Click the **All Tires** text, but do not select the check box.
8. Click the **Select Children** button in the toolbar of the **Structure Selection** pane. **All Tires** displays below **Element** in the **Selection Settings** area of the **Structure Selection** pane.
9. Click the **Apply changes to the list** toolbar button in the **List Designer**. The six children of **All Tires** display in the **PRODUCT** dimension.
10. Expand **Winter Tires** in the **Structure Selection** pane.
11. Select **W7000 Icetrack** in the **Structure Selection** pane.
12. Click the **Select Siblings** toolbar button.
13. Click the **Apply changes to the list** toolbar button. The six children of **All Tires** and the children of **Winter Tires** are displayed.
14. Select <each element> individually in the bottom half of the **Structure Selection** pane.
15. Click the **Delete** toolbar button to delete each selected element from the pane.
16. Select **All Tires** in the **Structure Selection** pane.
17. Click the **fx** (Functions) button.
18. Select **Elements underneath All Tires (base elements)**.
19. Click the **Apply changes to the list** toolbar button. Only the base elements appear in the value range.
20. Select **Elements underneath All Tires (base elements)** in the bottom half of the **Structure Selection** pane.
21. Click the **Delete** button to remove the selection.
22. Select **Van Tires** in the **Structure Selection** pane.
23. Click the **fx** button.
24. Select **Descendants**.
25. Select **Tire** from the **Level** field drop-down menu in the **Selection Settings** pane.
26. Leave **Flag** set to **Self**.
27. Click the **Apply changes to the list** toolbar button. Notice the elements that display in the value range. These settings cause C2001 Citycruiser, C2002 Citynet, and C3000 Loader to display. Below Van Tires, these elements are at Level 3. Because the flag is set to **Self**, only those three elements display. Your screen should look like the screen shot that follows. If it does not, review the previous steps and make the necessary corrections.

	A	B	C	D	E	F
28						
29		Academy	CURRTYPE	UNIT	PROFIT	TIME
30		SALES	<u>Local Currency</u>	<u>Total Group</u>	<u>Production Volume</u>	<u>2012 Q1,2012 Q2</u>
31						
32			VERSION			
33		PRODUCT	Actual			
34		+ C2001 Citycruiser	86,835.00			
35		+ C2002 Citynet	88,570.00			
36		+ C3000 Loader	87,320.00			
37						

28. Save the report as **<your initials> Ex 4.1 Ad Hoc Report** in your **Office Plus Basic Training** folder within the **Global Reports** folder.
29. Close the ad hoc report.

The Filter pane

Use filters to determine whether or not to include specific elements in a report. You can include or exclude elements with a caption, unique name, attribute, or value that matches criteria you specify. You can also enter an MDX statement to define a filter.

To open the Filter pane, click its heading in the List Designer.

Filter pane toolbar

You can use the Filter pane toolbar buttons to filter elements. The following table identifies the toolbar buttons on the Filter pane and provides a brief description of each:

Toolbar button	Description
New Filter	Create a new filter.
New AND operation	Add an AND operation to the filter.
New OR operation	Add an OR operation to the filter.
New NOT operation	Add a NOT operation to the filter
Operator	Change a logical operator, for example, from AND to OR
Remove	Deletes the filter definition.
Up and Down	Moves the selected filter criteria up or down.

Note: You can also right-click a filter in the Filter pane to display a drop-down menu with the same options as the toolbar button.

Filters can be combined using the operators AND, OR, NOT so that a report displays, for example, values between “x” and “y,” and not less than “z.”



The Enabled check box in the Filter and pane enables or disables all filters. You can also manually enable or disable filters by selecting the filter and then selecting False from the Enabled list in the Filter Settings.

Filter by

You can filter elements by:

- Caption
- Unique name
- Attribute
- Value
- Custom MDX

The following table identifies methods for filtering data and provides a brief description of each method:


Filter Method	Description
Caption	This method filters elements by caption. For example, you can filter elements that begin with “W” in the Product Dimension.
Unique name	This method filters elements by the unique names that were generated by the database, or by the name of the element displayed in the report. Use the text filter to search for texts and strings.
Attribute	Filters by attribute values
Value	Filters by values Note: You will filter automatically by the values you see in the current slice of the ad hoc report. If you want to filter the row elements, and you see several columns, then you need to indicate which column’s values you want to filter.
Custom defined MDX	Creates a filter using an MDX statement

Filter type

When you filter by caption, unique name, or attribute, you select one of the following filter type options. The choices available depend on the selected filter type:

- String
- Wildcard
- Regular Expression
- Number

The following table identifies the filter types and provides a brief description of each method:

Filter type	Description
String	Filters for elements identical to the complete value entered.
Wildcard	This type filters using wildcards. You can use the question mark (?) to replace single characters and the asterisk (*) to replace parts of strings.
Regular Expression	Filters by regular expressions  Office Plus Help Filters
Number	Filters by numerical value entered

Condition

The following table identifies the filter condition operators and provides a brief description of each:

Condition	Description
*	This condition indicates that there is no restriction: no condition is set (default setting). The input box is disabled.
=	The entered value will be considered.
>=	Values greater than the entered value and the value itself will be considered.
<=	Values smaller than the entered value and the value itself will be considered.
>	Values greater than the entered value will be considered.
<	Values smaller than the entered value will be considered.
<>	Values greater and smaller than the entered value will be considered.
Contains	Strings or numbers containing the entered value will be considered.
Does not contain	Strings or numbers which do not contain the entered value will be considered.



Demo: Filter by Value

Your instructor will demonstrate how to use the Filter pane to filter elements by Value.





Exercise 4.2: Filter by Value

In this exercise, you will use the Filter pane to create a filter that displays Unit dimension elements with values above 500,000.

Exercise steps

1. Open the **<your initials> Ex 3.6 Report**.
2. Swap the **UNIT** slice-dimension with the **PRODUCT** row.
3. Expand all elements of the **UNIT** dimension.

4. Select the **Filter** pane in the **List Designer**.
5. Click the **New Filter** button. A **Filter Settings** area displays within the **Filter** pane.
6. Specify the following criteria in the **Filter Settings** area:
 - Set the **Filter By** field to **Value**.
 - Set the **Condition** to **Equal or greater than**.
 - Set the **Value** to **500000**.
7. Click the **Fill** button to specify the values in the **Data Area**. You will leave the default **Data Area**, which matches the data slice shown on the report.
8. Click **Apply changes to the list** in the toolbar of the **List Designer**. The value range displays only those elements whose values are equal to or greater than 500,000. Your screen should look like the screen shot below. If it does not, review the previous steps and make the necessary corrections.

	A	B	C	D	E	F
28						
29	Academy		CURRTYPE	PRODUCT	TIME	PROFIT
30	SALES		Local Currency	All Tires	2012 Q1.2012 Q2	Production Volume
31						
32			VERSION			
33		UNIT *	Actual			
34		- Total Group	2.543.282,00			
35		- European Holding	2.543.282,00			
36		GENESIS Germany GmbH	718.647,00			
37		GENESIS Austria GmbH	630.186,00			
38		GENESIS Switzerland AG	835.860,00			
39						

The Sorting pane

Sorting arranges the elements of a list. The sorting with cut-off criteria can influence the number of elements displayed in the report.

Sorting pane toolbar

You can use the Sorting pane toolbar buttons to sort elements. The following table identifies the toolbar buttons on the Sorting pane and provides a brief description of each:

Toolbar button	Description
New Sorting Criterion	Creates a sorting criterion
Break Hierarchy	With this non-hierarchical ordering, the elements are arranged without reference to their position in the hierarchy. In an unbroken hierarchy, elements are first ordered by their position in the hierarchy and then ordered within each level.
Remove	Deletes the sorting definition
Up and Down	Moves the selected sorting criteria up or down



The Enabled check box in the Sorting pane enables or disables all sorts. You can also manually enable or disable a single sorting criterion by selecting it and then selecting False from the Enabled list in the Sorting Criteria Settings.

Sorting by

You can sort data by the following:

- Caption
- Unique name
- Attribute
- Value
- Custom MDX

The following table identifies sorting types and provides a brief description of each:

Sorting Types	Description
Caption	Sorts elements by their captions
Unique name	Sorts elements by their unique names
Attribute	Sorts elements by their attributes

Sorting Types	Description
Value	This type sorts the elements by value. When you sort by value, you must define the cut-off type, cut-off value, and the Dataspace. For example, you can sort by value with a cut-off type of Top Count. The cut-off value you enter should specify how many top elements should display. For example, you can specify that the top 5 products display. If you select None as the cut-off type, the list elements are sorted in ascending or descending order.
Custom MDX	Sorts elements defined in an MDX statement

Sorting order

You can sort data in ascending or descending order.



Demo: Sort by Caption

Your instructor will demonstrate how to use the Sorting pane to sort elements by caption in ascending order.





Exercise 4.3: Sort by Caption

In this exercise, you will use the Sorting pane to sort elements by caption in ascending order.

Exercise steps

1. Select **False** from the **Enabled** drop-down menu in the **Filter Settings** area to disable the filter you applied to the **UNIT** dimension in the previous exercise.
2. Expand all elements of the **UNIT** dimension.
3. Select the **Sorting** pane in the **List Designer**.
4. Click the **New Sorting Criterion** button.
5. Select **Caption** from the **Type** drop-down menu in the **Sorting Criterion Settings** area, if it is not already selected.
6. Select **Ascending** from the **Order** drop-down menu, if it is not already selected.
7. Click **Apply changes to the list** in the toolbar of the **List Designer**. The sorting criteria is applied to the list. Notice the elements in the value range are still not listed alphabetically. This is because

the elements under **European Holding** are sorted alphabetically, but other elements have different parents than **European Holding**. Therefore, they are sorted separately.

8. Click the **Break Hierarchy** button in the **Sorting** pane toolbar to sort all four elements as a group.
9. Click **Apply changes to the list**. All elements are sorted as a group. The **Break Hierarchy** feature treats all of the elements equally, regardless of whether they have the same parent.
10. Save the report as **<your initials> Ex 4.3 Report** in your **Office Plus Basic Training** folder within the **Global Reports** folder.

The Attributes pane

Elements are often assigned different attributes, which can also be used in reports. Attributes are stored in the OLAP Server database and can be used to add further information to a list. For example, you can assign the name of a product manager as an attribute to the Products dimension, so you can easily see who is responsible for which products. These assignments are made using attribute tables.

Attribute table 3				
Attribute 1	Attribute 2	Attribute 3	...	Attribute 49
xxx	yyy	zzz	...	ooo

Attribute table 2				
Attribute 1	Attribute 2	Attribute 3	...	Attribute 49
xxx	yyy	zzz	...	ooo

Attribute table 1				
Attribute 1	Attribute 2	Attribute 3	...	Attribute 49
xxx	yyy	zzz	...	ooo

Attribute tables

To display the attributes of an element, select them in the Attributes pane of the List Designer. In the list of attributes, select the check box for each attribute you want to be displayed. You can change the order of the attributes with the Up and Down toolbar buttons



You can also choose to display attributes in place of element names.

To show attributes only:

1. Open the Options dialog and go to the Captions and Error Values tab.
2. Choose Attributes from the Caption style drop-down menu.

Attributes pane toolbar

The following table identifies the toolbar buttons on the Attributes pane that are available in Office Plus.

Toolbar button	Description
Up and Down	Moves the selected attribute up or down



Demo: Include attributes

Your instructor will demonstrate how to use the Attributes pane to include attributes on a report.





Exercise 4.4: Include attributes

In this exercise, you will use the Attributes pane to include attributes on a report.

Note: Refer to previous exercises for assistance if you are unsure how to perform certain steps.

Exercise steps

1. Remove the **Sorting Criterion** you applied to the **UNIT** dimension in the previous exercise.
2. Swap the **PRODUCT** slice dimension with the **UNIT** row.
3. Select **PRODUCT**.
4. Select the **Attributes** pane in the **List Designer**.
5. Select the **ID** attribute check box.
6. Click **Apply changes to the list** in the toolbar of the **List Designer**. The **ID** attribute displays next to **PRODUCT** in the value range.
7. Save the report as **<your initials> Ex 4.4 Report** in your **Office Plus Basic Training** folder within the **Global Reports** folder.



Notice that the Enabled check box is selected in the Attributes pane. Clearing this check box will no longer display the attribute in the value range. However, because the ID attribute is still selected in the Attributes pane, you can easily re-display it by selecting the Enabled check box again.

The Advanced pane

The following table identifies the sections available on the Advanced pane and provides a brief description of each:

Toolbar button	Description
General	Displays the data source of the list (database alias, cube, dimension and hierarchy).
Hierarchy	Allows you to specify: <ul style="list-style-type: none"> • If elements that exist several times in a list are displayed only once (DISTINCT = TRUE). • If the hierarchy displays by levels (HIERARCHIZED = TRUE). • If the hierarchy should be inverted (INVERT HIERARCHY = TRUE). Use this to get totals at the end of every level • “Secure structure when drilling down”: not applicable (Application Studio only).
List	Allows you to specify whether a list is cacheable, displays its version, and provides a description.
MDX	Allows advanced users to create customized structural filters, text filters, and sorts using MDX statements. These can be used or combined with the List Designer functionality. For example, you can use structure selection in the List Designer to structure a list, and use an MDX statement to sort a list.
Subset	When this function is set to True, the following parameters are enabled: <ul style="list-style-type: none"> • Count • Base Element • Start You can define a subset to control which elements of a local list are displayed using these parameters. You define the number of elements to be displayed in the subset (Count). You then specify the point in the hierarchy where the subset should start (Start) in relation to an element you select (Base Element). The start point can be the same as the base element or it can be a number of elements below it.



Demo: Use Hierarchy and Subset functions

Your instructor will demonstrate how to use the Hierarchy pane to display elements.





Exercise 4.5: Use Hierarchy Functions

In this exercise, you will use the Advanced pane to display hierarchies in different ways.

Exercise steps

1. Create a new ad hoc report for the **SALES** cube. Refer to exercise 3.1 for assistance if you are unsure how to create a new ad hoc report.
2. Expand **All Tires**.
3. Set **Invert Hierarchy** to **True** for the **PRODUCT** dimension in the **Advanced** pane.
4. Click **Apply changes to the list** in the toolbar of the **List Designer**. The **All Tires** element will be displayed at the bottom in the list.
5. Set **Hierarchized** to **False** in the **Advanced** pane.
6. Click **Apply changes to the list** in the toolbar of the **List Designer**. The plus and minus signs will disappear and all elements will be displayed left-aligned.
7. Close the report without saving.

Check your understanding



Which Infor BI Office Plus function allows you to isolate one part of a hierarchy from the rest of the hierarchy?

- a) Expand/Collapse
- b) Keep Elements
- c) Reset List
- d) Only Show Top Values



In Office Plus, how are empty cells represented by default?

- a) Error
- b) #N/A
- c) 0
- d) Empty



Structure Selection, Filter, Sorting, Attributes, and Advanced are all areas in which component of the Infor BI Office Plus user interface?

- a) The Database Structure pane
- b) The List Designer
- c) The Office Plus toolbar
- d) The Ad-hoc Report Designer



Lesson 5: Data entry

Estimated time

1 hour

Learning objectives

After completing this lesson, you will be able to:

- Explain how write back works.
- Identify the different write back methods.
- Describe allocation and alteration.

Topics

- Writing back values
- Using the Write Back dialog box
- Write back commands
- Reallocation
- Immediate and non-immediate write back

Writing back values

In a multidimensional cube, all data is stored in base cells. Therefore, by editing these cells, you can write back values to these base cells. You also can write back values to aggregated data cells using Office Plus. The values will then be distributed to all underlying base cells. This ensures consistency of the entire cube at all times.



No particular settings are needed to write to the cube. However, the user has to have the appropriate rights to write to the database.



Demo: Write back values to base cells

Your instructor will demonstrate how to how to write back values to base cells.





Exercise 5.1: Write back values to base cells

In this exercise, you will write back values to base cells.

Exercise steps

1. Open a new ad hoc report for the **SALES** cube. Refer to previous exercises for assistance if you are unsure how to open a new report.
2. Configure the report using the following criteria:

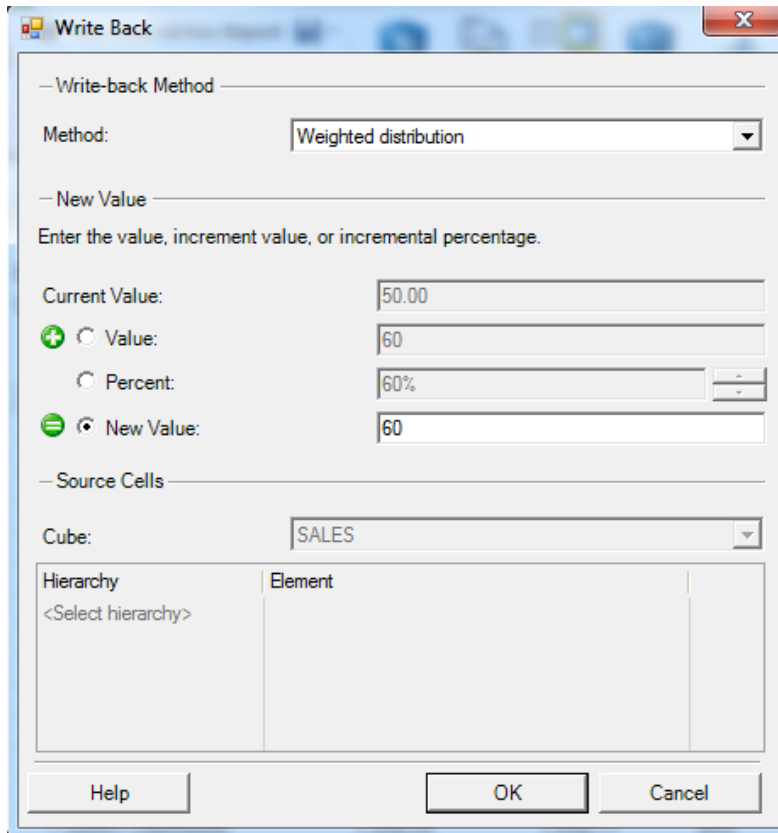
Dimension	Location or Element
PRODUCT	Rows in value grid (Expand all)
YEARS	Columns in value grid 2014, Jan. 2014, Feb.2014.... (All months)
CURRTYPE	Local Currency
UNIT	Genesis Germany GmbH
PROFIT	Sales Volume
VERSION	Forecast

3. Enter the following values for **Tires** in **Jan 2014** and **Feb 2014**:
 - AS600/175: Jan 2014: 100 Feb 2014: 200
 - AS600/185: Jan 2014: 200 Feb 2014: 400

4. Press **Enter**. The values are aggregated in the **Product** dimension to “AS600 Aquachrono”, “All Season Tires”, and “All Tires”. In the **Time** dimension they are aggregated to Year 2014.

Using the Write Back dialog box

If a value is entered in an aggregated cell, a Write Back dialog box will open, similar to the one shown below:



Write Back dialog box

Write-back Method field

The following table identifies the write-back methods that can be used in the Write Back dialog box, along with the result and a brief example for each method.

Write-back method	Result	Example
Weighted Distribution	The proportions of child values to each other are maintained when the value of their parent is increased or decreased.	The value of the parent cell is 6 and the value of each of its three children is 1, 2 and 3. You write 12 to the parent cell and choose "New Value." The value of each child cell will be doubled. So, the value of the three children will be 2, 4, and 6.
Equal Distribution	Values entered in parent cells are distributed equally to their children.	A parent cell has three children. You write 12 to the parent cell and choose "New Value." The value of each child cell becomes 4.

Write-back method	Result	Example
To each leaf	A value that you write to a parent cell is written to each child cell. The value of the parent cell changes accordingly.	A parent cell has three children. You write 2 to the parent cell. The value of each child cell becomes 2. The value of the parent cell becomes 6.
LIKE	<p>You can splash* values to the children of a consolidated cell in the same proportions as the values of the children of another consolidated cell.</p> <p>*Splashing refers to the distribution of values according to a variety of rules. See lesson 7 for more information.</p>	<p>The first quarter sales figures in 2005 are 60. The figures for the individual months are October 10, November 20, and December 30.</p> <p>You enter 120 in the second quarter, choose "New Value" and select the first quarter as the element to refer to in the Source Cells Area of the Write Back dialog box. The figures for the second quarter will be October 20, November 40, and December 60.</p>
COPY	You can copy values from one area of a cube to another, such as the actual figures for one year to the budget for another year. Values that you copy from one area of a cube to another replace existing values.	<p>The first quarter sales figures in 2005 are 60. The figures for the individual months are October 10, November 20, and December 30.</p> <p>You enter #C in the second quarter, choose "New Value" and select the first quarter as the element to refer to in the Source Cells Area of the Write Back dialog box. The figures for each month in the second quarter will be the same as in the first quarter.</p>
COPYFULL	The COPYFULL command works in the same way as COPY, but it also copies values that are calculated by rules.	

New Value section

The new value can be achieved by adding an absolute value, adding a percentage, or setting a new absolute value. **Note:** When you use the Value and New Value options in this section, it is the same as using the allocate (#) and alter (\$) commands discussed in the Write back commands topic.

Source Cells section

Some write back methods (e.g. Weighted reallocation, Equal reallocation, LIKE, and COPY) require the definition of related hierarchies and elements.

Write back commands

Instead of using the Write Back dialog box, you have the option of typing commands into cells to initiate the spreading. This allows you to skip the Write Back dialog box and can save time.

The following table provides the methods and codes that can be used to initiate the spreading.

Method	Code
Weighted	W
Equal	E
Base (to each leaf)	B
COPY	C
LIKE	L
(Allocate Value)	#
(Alter Value)	&

Each write back method supports two or three syntaxes. For example, #W[value] and #@[value] are equivalent.

For each write back method, you must specify either allocation (#) or alteration (&) of values, as follows:

- Allocate replaces existing values
 - Example: If a cell contains a value of 1 and you write 2 using allocate, then the cell value becomes 2.
- Alter amends existing values by value entered
 - Example: If a cell contains a value of 1 and you write 2 using alter, then the cell value becomes 3.

Additive and subtractive syntax

By default, write back methods are additive; they increase existing values in a variety of ways. However, the default syntax of each write back method can be amended to subtract values and to specify values by a percentage.

Examples using additive and subtractive values

Syntax example	Explanation
&W20	Adds 20 to the cell value
&W-20	Subtracts 20 from the cell value
&W5%	Increases the cell value by 5%



The plus (+) sign is implied and does not need to be entered; however, you can enter it. For example &W+20.

Spreading syntax

Spreading syntax allocates values written to aggregated cells to base cells. The method of allocation depends on the following situations:

- If the base cells contain values, the ratio of each value to the value of the aggregated cell is calculated. Values written to the aggregated cell are allocated to the base cells in the same ratios.
- If the cells are empty, the amount written to the aggregated cell is allocated equally between the base cells.
- If the base cells contain values and one or more base cells is locked, the ratio of each unlocked value to the value of the aggregated cell is calculated. The value of the locked cell is subtracted from the amount to be allocated. The remainder is allocated to the unlocked cells in the ratios calculated.
- If the cells are empty and one or more base cells is locked, the amount written to the aggregated cell is allocated equally to the unlocked base cells.

The following table displays the write-back syntax supported by the Infor OLAP server.

Method	Reallocation = No		Reallocation = Yes	
	Allocate	Alter	Allocate	Alter
Weighted	#W[value]	&W[value]	#W[value]?[set]	&W[value]?[set]
Equal	#E[value]	Not supported	#E[value]?[set]	Not supported
Base	#B[value]	Not supported		
COPY	#COPY[tuple] #C[tuple]	Not supported		
LIKE	#LIKE[tuple] #L[tuple]	Not supported		

Example using a tuple

You want to copy the fourth quarter budget for 2008 to the actual results for the same quarter. Select the cell containing the actual figures for the quarter and specify:

```
#COPY [VERSION].[Budget];[TIME].[All Years].[2008].[Q4_2008]
```



Demo: Write back to aggregated cells

Your instructor will demonstrate how to write back to aggregated cells using the Equal Distribution and Weighted Distribution methods.





Exercise 5.2: Write back to aggregated cells

In this exercise, you will write back to aggregated cells using the Equal Distribution and Weighted Distribution methods.

Exercise steps

1. Open the <your initials> Ex 3.6 Report.
2. Add the **Forecast** element to the **VERSION** dimension.
3. Select **GENESIS UK INC** in the **UNIT** dimension.
4. Select **January 2012** in the **TIME** dimension.
5. Select the **whole hierarchy** check box in the **PRODUCT** dimension in the List Designer.
6. Click **Apply changes to the List**.
7. Type *800* in the **Forecast** field for **All Season Tires**.
8. Press **Enter**. The **Write Back** dialog box opens with **800** in the **New Value** field.
9. Select **Equal distribution** from the **Method** field.
10. Click **OK**. The value is distributed equally to all base elements of **All Season Tires**.
11. Type the values *0, 0, 2, 1, 2, 1, 2, 1* into the **Forecast** field of the base elements of **Winter Tires**. These are not the actual values for the products, but will be used to weight the distribution.
12. Type *8100* into the **Forecast** field for **Winter Tires**.
13. Press **Enter**. The **Write Back** dialog box opens.
14. Select **Weighted distribution** from the **Method** field.
15. Click **OK**. The value is distributed among the base elements of **Winter Tires** in the proportion determined by the values you entered (0, 0, 2, 1, 2, 1, 2, 1,).
16. Type *5400* into the **Forecast** field for **Summer Tires**.
17. Press **Enter**. The **Write Back** dialog box opens.
18. Select **LIKE** from the **Method** field.

19. Select **VERSION** from the **Hierarchy** drop-down in the **Source Cells** area of the **Write Back** dialog box.
20. Click the **Element** button that displays next to the **VERSION Hierarchy** in the **Source Cells** area.
21. Select **Actual** as the element for the **VERSION Hierarchy** field.
22. Click **OK**. The value **5400** is distributed among the children of **Summer Tires** based on the proportion determined by the same elements in the actual field.
23. Save the report as **<your initials> Ex 5.2 Report** in your **Office Plus Basic Training** folder within the **Global Reports** folder.

Rounding syntax

In Office Plus 10.5, a new rounding command is available for use when writing back to aggregated cells to control how many decimals end up in the leaf cells of the cube. This is useful when you want to plan how many whole units of something you want to sell.

This option is not available in the Write Back dialog box.

Examples using rounding

Syntax example	Explanation
#E10[[0]]	Distributes equally the new value of 10 and displays no decimals
#E10[[2]]	Distributes equally the new value of 10 and displays two decimals
&W20[[2]]	Adds 20 to the cell value and displays two decimal places



Demo: Write back rounding values to aggregated cells

Your instructor will demonstrate how to use rounding syntax to write back rounding values to aggregated cells.





Exercise 5.3: Write back rounding values to aggregated cells

In this exercise, you will use rounding syntax to write back rounding values to aggregated cells.

Exercise steps

1. Open the <your initials> **Ex 5.2 Report** if it is not still open from the previous exercise.
2. Type `#E4000[[0]]` in the **Forecast** field for **Summer Tires**.
3. Press **Enter**. The value is distributed equally among the base elements of **Summer Tires**, and each base figure is rounded to a whole number with no decimals. As such, all base elements except the last one will get a value of 667, while the last element will get a value of 665. This distribution occurs in order to reach the total value of 4000.
4. Type `&W2500[[2]]` in the **Forecast** field for **Summer Tires**.
5. Press **Enter**. The value is distributed equally among the base elements of **Summer Tires**, and each base figure is rounded to two decimal points.
6. Close the report without saving it.

Reallocation

Reallocation is not a write-back method; rather, it is an option that can be used with the different write back methods.

- In Ad-hoc reports and formula reports, reallocation commands open the Write Back dialog in reallocation mode.
- In Alea Ad-hoc reports, reallocation commands open the Reallocator dialog box.

Reallocation changes the values of base and consolidated elements without changing the value of their parents. You can enter a new value and specify where the difference between the old and new values should be allocated.

Example:

In an Ad-hoc report, your fourth quarter forecast for a year is 36000, to which October, November and December each contribute 12000. You want to change the forecast for the individual months without changing the overall forecast for the quarter.

Type #W14000? in the cell for October.

The Write Back dialog box opens with Weighted reallocation selected as the method. In the Reallocator section of the dialog box, select the Time hierarchy. November and December are listed as siblings.

You can allocate to one or both siblings the 2000 difference between the old and new value. To allocate the difference to both siblings, select them both and click OK.

The forecast for October is 14000 and the forecasts for both November and December become 11000. The overall budget for the quarter remains 36000.

Immediate and non-immediate write back

Office Plus can be used in a reporting role or in a planning role. Planning requires the ability to write back different values to the database in order to see the effects and to save or discard the changes.

In immediate write-back mode, changes are written to the database immediately. In non-immediate write-back mode, values that you enter are cached and can be saved to the database or discarded by allowing you to revert to the current values stored in the database. Non-immediate write-back mode can be selected in any report based on the CELL.GET formula. However, it is typically only used in reports that were converted with the Excel-Aggregated option.

You can toggle between immediate and non-immediate write-back modes in Formula reports by clicking the Non-immediate Writeback/Immediate Writeback button in the toolbar.

To commit your changes to the database, click Save to database. To revert to the current values stored in the database, click Refresh from database.



If you write back on a value that is calculated by Excel, the write back methods available in the Write Back dialog box are restricted to Weighted Distribution, Equal Distribution, and To each leaf.

If you write back on a value that is calculated by the CELL.GET formula, all of the write-back methods are available.



Scenario: Enter data

In this scenario, you will enter data into base and aggregated cells. As product manager, you are responsible for the sales planning in the UK for 2016.

This scenario does not include detailed steps so that you have the opportunity to apply the knowledge and skills you have learned in this lesson and previous lessons. You are encouraged to experiment in this scenario as a means to better understand system behavior.

For this scenario:

- Create a base report for planning that shows your products together with the TIME dimension as rows.
- Show both Sales Volume and Production Volume as columns.
- Show monetary values in Local Currency.
- Show budget values of 2015 and 2016.
- Create the budget values of 2016 by augmenting 2015 values overall by:
 - 3 % for the Sales Volume
 - 2 % for the Production Volume
- Save the report as **<your initials> L5 Scenario Report**.

Check your understanding



Which of the following write-back commands are available for use in the Write Back dialog box?

- a) Weighted Distribution
- b) Rounding
- c) Equal Distribution
- d) To each leaf



What is the result of rounding syntax #E8400[[2]] when it writes back values to aggregate cells?

- a) It increases each cell value by 84 percent, displayed as two decimal points
- b) It distributes equally a value of 8400 and displays cell values with two decimals
- c) It adds a value of 8400 to parent cells and reduces cell values to two decimals
- d) It subtracts equally a value of 8400 and displays cell values with two decimals



Lesson 6: Formula reports

Estimated time

2 hours

Learning objectives

After completing this lesson, you will be able to:

- Identify the differences between ad hoc reports and formula reports.
- Identify common Office Plus formulas.
- Describe query-based, cell-based, Excel-aggregated, and value-based formula reports.
- List the steps to convert an ad hoc report to a formula report.
- Explain how to create a formula report from a blank Excel worksheet using the Formula Wizard.

Topics

- Ad-hoc reports vs. formula reports
- Converting an ad hoc report to a formula report
- Creating a formula report from a blank worksheet

Ad hoc reports vs. formula reports

Ad hoc reports allow you to browse a database and provide an easy way to manipulate the dimensions and elements that display. For example, you can expand or drill down on data, swap or nest dimensions, or select elements using the List Designer. The data that is displayed within the report is constrained by the parameters of the ad hoc report and cannot incorporate native Excel functionality.

Formula reports, however, are true .XLSX worksheets, and support Excel functionality. These customizable reports use formulas to pull data from a database into a worksheet. While formula reports can provide more control over the design of a report, they cannot do everything that an ad hoc report can do. For example, in a formula report, you can double-click slice dimension elements to change them, but you cannot expand or drill down on the value range dimensions like you can with an ad hoc report.



Office Plus Help Formula Reports

The following table provides a quick overview of how ad hoc and formula reports are created and the advantages and disadvantages of each:

	Ad hoc report	Formula report
How to create	Using the Ad-hoc Report Designer	<ul style="list-style-type: none"> • Converting from an ad hoc or Alea ad hoc report • From an empty worksheet
Advantages	Allows for data analysis using the List Designer (dynamics included)	<ul style="list-style-type: none"> • Allows for the use of Excel functionality • Individual modifications possible
Disadvantages	Individual modifications not possible	Limited dynamics of structure

Why use a formula report?

Formula reports allow for greater customization and control of the report. Instead of being limited to an ad hoc report template, formula reports can place data in specific areas of reports. They can also incorporate Excel functionality, combine data from different cubes or data sources, and include several worksheets within a single report - all tasks that ad hoc reports cannot perform.

Office Plus formulas

Formula reports use Office Plus formulas in addition to standard Excel formulas. The following table identifies some common Office Plus formulas and provides a brief description of each:

Formula	Description
MEMBER.CNAME	Returns the caption of an element, opens the member browser if double clicked.
CELL.GETC	Returns the value of an element
KEY.GET	Returns the last argument of a formula as string. (used to get the caption out of the unique name)

Formula	Description
AT.GET	Returns the attribute for a specified element in a field of an attribute table

Converting an ad hoc report to a formula report

You can create a formula report from a blank worksheet or by converting an existing ad hoc or Alea ad hoc report. Converting an existing ad hoc report is the easiest method for creating a formula report.

You can convert ad hoc reports to four types of formula reports, including:

- Query-based (MDX.EXECUTE)
- Cell-based (CELL.GET)
- Excel-aggregated
- Values

The query-based, cell-based, and Excel-aggregated reports differ in the type of formula by which the report values are calculated. In a values report, the values are displayed, but not calculated.



Before converting an ad hoc report to a formula report, you should open the ad hoc report and configure it the way you want the formula report to appear. This should include rotating dimensions and selecting value range elements.

Query-based formula reports

Query-based formula reports have a dynamic structure that is saved in a single MDX.EXECUTE formula. This means that only one query needs to be sent to the database. You cannot write back data in an MDX.EXECUTE formula report.

When converting an ad hoc report to a query-based formula report, the MDX.EXECUTE formula is hidden in columns A and B. In order to access the formula, you must unhide the columns.

	A	B	C	D	E	F	G	H
24	mdx	WITH						
25	edSet] as "[[_TIME_DrilledDownMembersNamedSet]]", visible=0			GENESIS	POS	PRODUCT	REGION	CHANNEL
26	mbers_Fast] As 'AddCalculatedMembers([TIME].RootMembers'			ANALYSIS	All POS	All Tires	All Regions	All Channel
27	SET [_TIME_DrilledDownMembers] As '{[TIME].[All Years]}'							
28	ers], {AddCalculatedMembers([TIME].CurrentMember.Children))}'							
29	tion([_TIME_RootMembers_Fast],[_TIME_VisibleChildren]))}'							
30	ET [__Rows] as' {[_TIME_DrilledDownMembersNamedSet]}'							
31	Members_Fast] as "[_MEASURE_RootMembers_Fast]", visible=0							
32	rs_Fast] As 'AddCalculatedMembers([MEASURE].RootMembers'							
33	SET [__Columns] as' {[MEASURE_RootMembers_Fast]}'							
34		SELECT						
35] DIMENSION PROPERTIES PARENT_UNIQUE_NAME on columns,							
36	ows] DIMENSION PROPERTIES PARENT_UNIQUE_NAME on rows							
37		FROM [ANALYSIS]						
38		WHERE						
39		(
40		[POS].[All POS],						
41		[PRODUCT].[All Tires],						
42		[REGION].[All Regions],						
43		[CHANNEL].[All Channels],						
44		[VALTYPE].[Variance]						
45)						
46		CELL PROPERTIES format_string,value						
47								
48	TE							

	MEASURE				
TIME	Gross Margin	Net Revenue	Revenue	Disc	
- All Years	-321,400.061	-291,217.366	-253,518.475	28.862	
+ 2002	-22,471.612	-11,871.386	-192,464	8.916	
+ 2003	-20,252.151	-13,574.874	-2,021.172	8.727	
+ 2004	-35,849.573	-22,944.381	-8,478.114	11.218	
+ 2005	-242,826.725	-242,826.725	-242,826.725	#N/A	
+ 2006	#N/A	#N/A	#N/A	#N/A	

MDX.EXECUTE formula report

Cell-based formula reports

In cell-based formula reports, each data cell contains an Office Plus CELL.GETC formula, or variation of CELL.GETC formula. Each formula requires a separate database query.

A CELL.GETC formula reads the content of a data cell and each value is requested separately.

You can write back data in a cell based report. The write back operation is handled by the server.

The screenshot shows a spreadsheet interface with a formula bar at the top containing the formula: `=CELL.GETC(B29;B30;D$38;$C39;C31;C32;C33;C34)`. Below the formula bar is a table with the following structure:

PRODUCT	TIME		
	- All Years	+ 2006	+ 2007
- All Tires	295.135.523,67	44.638.359,63	41.416.645,34
- All Season Tires	20.181.693,03	3.183.042,60	2.864.162,97
+ AS600 Aquachrono	2.336.348,74	536.910,11	306.034,88
+ AS700 Supersport	9.049.003,58	1.352.621,22	1.306.652,96
+ AS800 Touring	8.796.340,72	1.293.511,27	1.251.475,14
+ Summer Tires	12.423.197,68	2.088.300,77	1.250.689,56

Cell-based formula report

Office Plus formulas require that elements are in a unique name format. In this form, the name of the element includes the dimension and the full hierarchy path. Each component is enclosed in square brackets [] and separated by a period.

Because the CELL.GETC formula requires unique names as parameters, the slice dimension element names as shown cannot be used. They must be converted into unique names.

It would be confusing to display unique names, as well as element names. Therefore, they are hidden, either by hiding the rows or columns, or by formatting the cell to not display any text as with the slice dimensions.

The screenshot shows a spreadsheet interface with a table that has hidden unique element names. The table structure is as follows:

PRODUCT		TIME			
		- All Years	+ 2006	+ 2007	+ 2008
- All Tires	[PRODUCT].[All Tires]	295.135.523,67	44.638.359,63	41.416.645,34	44.705.816,81
- All Season Tires	[PRODUCT].[All Tires].[Car Tires]	20.181.693,03	3.183.042,60	2.864.162,97	3.040.042,05
+ AS600 Aquachrono	[PRODUCT].[All Tires].[Car Tires]	2.336.348,74	536.910,11	306.034,88	316.355,87
+ AS700 Supersport	[PRODUCT].[All Tires].[Car Tires]	9.049.003,58	1.352.621,22	1.306.652,96	1.373.657,33
+ AS800 Touring	[PRODUCT].[All Tires].[Car Tires]	8.796.340,72	1.293.511,27	1.251.475,14	1.350.028,85
+ Summer Tires	[PRODUCT].[All Tires].[Car Tires]	12.423.197,68	2.088.300,77	1.250.689,56	2.195.283,81
+ Winter Tires	[PRODUCT].[All Tires].[Car Tires]	149.004.469,62	22.329.771,88	21.178.421,17	22.515.724,36
+ Van Tires	[PRODUCT].[All Tires].[Commen]	662.298,79	203.289,07	48.077,67	-44.409,78
+ Special Offers	[PRODUCT].[All Tires].[Special C	59.405.242,60	8.846.231,75	8.483.011,48	8.973.230,76
+ SUV (4x4) Tires	[PRODUCT].[All Tires].[SUV (4x4	53.458.621,95	7.987.723,56	7.592.282,49	8.025.945,62

Formula report with hidden unique element names



To format an Excel cell to not display text, use the Format Cells dialog box.

Cell-based vs. query-based reports

Deciding on the type of formula report to use depends on the needs of the application. Cell-based formulas can write back to the database, and can be more customizable because data cells can be placed individually. Query-based formulas, on the other hand, are faster, especially with large reports because only one query is being sent to the server. They are also more dynamic because changes to dimension elements will automatically be reflected in the data returned. However, you cannot write back to MDX.EXECUTE tables or control the layout completely.



If you need the ability to do off-line calculations and/or non-immediate write back, then you will need the Excel Aggregated formula reports.

Excel-aggregated formula reports

An Excel-aggregated report is similar to a cell-based report, except that it uses Excel formulas in place of the CELL.GET formulas to calculate aggregated elements whenever possible. This means that aggregated elements are calculated in the spreadsheet instead of being called from the server.

Excel-aggregated reports allow the user to enable non-immediate write back and offline calculations.

Values formula reports

A values report is a snapshot/copy of values in an ad hoc report. The values are not connected to any database anymore. As an example, you can use this to send a sheet of values to colleagues who don't have an Office Plus license.



Demo: Convert an ad hoc report to a cell-based formula report

Your instructor will demonstrate how to convert an ad hoc report to a cell-based formula report.





Exercise 6.1: Convert an ad hoc report to a cell-based formula report

In this exercise, you will convert an ad hoc report to a cell-based formula report.

Exercise steps

1. Double-click the **<your initials> Ex 3.6 Report** in the **Report Catalog** pane.
2. Click **Convert to Formula Report** on the **Ad-Hoc Report** section of the toolbar to verify that **Cell Based** is selected. Otherwise, select **Cell Based**.
3. Click the **fx** button on the **Ad-Hoc Report** section of the toolbar. Office Plus completes the conversion and a new window opens with the formula report. Because the report is cell-based, the unique names of the dimension elements are hidden in column C.
4. Save the report as **<your initials> Ex 6.1 Report** in your **Office Plus Basic Training** folder within the **Global Reports** folder.
5. Close the report.

Creating a formula report from a blank worksheet

In addition to converting an existing ad hoc report or Alea ad hoc report, you can create a formula report by starting with a blank Excel spreadsheet.

If you decide to create a report from a blank Excel worksheet, Office Plus provides a Formula Wizard to help insert Office Plus formulas. You can also use the Excel Formula dialog box or the Formula bar to insert and edit Office Plus formulas.



By using drag and drop from the preview and the database pane, you can easily add database names and cube names to the spreadsheet.

Using the Formula Wizard

You can use the Office Plus Formula Wizard to insert formulas into a worksheet.



Demo: Create a formula report using the Formula Wizard

Your instructor will demonstrate how to create a formula report using the Formula Wizard.

Demo steps

1. Click **New Formula Report**.
2. Drag and drop the **Academy** database from the **Database Structure** into cell **A2**.
3. Drag and drop the **SALES** cube from the **Database Structure** into cell **A3**.
4. Expand the **SALES** cube in the **Database Structure** to see its dimensions.
5. Drag and drop the **UNIT** dimension into cell **A5**. The **Insert Elements** dialog box displays.
6. Select **Vertical** as the **Insert element list** option.
7. Confirm **Unique Name** is selected as the **Output Format**; otherwise, select it.
8. Click **OK**.
9. Expand the width of column **A** for better visibility of the values.
10. Drag and drop the **UNIT** dimension into cell **B5**. The **Insert Elements** dialog box displays.
11. Select **Caption** as the **Output Format**.
12. Click **OK**.
13. Right-click to delete any rows containing **UNIT** elements except for those with the following values:
 - Germany
 - Austria
 - Switzerland

14. Type the values in the cells noted:

Cell	Value
B3	Sales Volume
C3	2012
C4	Q1

15. Right-click cell **C5** to select **Formula Wizard > Office Plus Formulas > Values > Cell.GETC**. The **Formula Wizard** opens.
16. Click **Autofill**. The values for **Database Alias**, **Cube**, and the first element will be populated automatically.
17. Click the **ellipsis** button next to the empty field to fill the value for the second element.
18. Click the **Time** dimension.
19. Click **OK**.
20. Select **2012_Q1** in the **Select Elements** window.
21. Click **OK**.
22. Click the **ellipsis** button next to the empty field to fill the value for the third element.
23. Click the **Profit** dimension.
24. Click **OK**.
25. Select **Sales Volume** in the **Select Elements** window.
26. Click **Finish** in the **Formula Wizard**. You have created a formula that shows the value for **Sales Volume** in **2012 Q1** for **GENESIS Germany**.
27. Expand the frame of cell **C5** over cells **C6** and **C7**.
28. Press **F9** to adapt the formula to cells **C6** and **C7** and display the values for **GENESIS Austria** and **GENESIS Switzerland**.
29. Copy column **C** into column **D**.
30. Change the value in **D4** to **Q2**.
31. Change the **TIME** portion of the formula in cell **D5** from **[20121]** to **[20122]**.
32. Press **Enter**.
33. Expand the frame of cell **D5** over cells **D6** and **D7**.
34. Press **F9** to adapt the formula to cells **D6** and **D7**.
35. Hide column **A**.
36. Add a total line to cell **B8**.
37. Use **AutoSum** to total cells **C8** and **D8**.

38. Format the cells using basic Excel functions, such as bolding headings. Your screen should look like the screen shot below. If it does not, review the previous steps and make the necessary corrections.

Sales Volume	2012	2012
	Q1	Q2
GENESIS Germany GmbH	107,782	107,463
GENESIS Austria GmbH	94,497	94,593
GENESIS Switzerland AG	124,008	124,663
Total	326,287	326,719





Scenario: Working with formula reports

In this scenario, you will create a report containing budget values, actual values and calculated variance values.

This scenario does not include detailed steps so that you have the opportunity to apply the knowledge and skills you have learned in this Lesson and previous Lessons. You are encouraged to experiment in this scenario to find out the best way to receive the required result.

Your report should look like the screen shot below. If it does not, review the information above or the appropriate steps in previous exercises and make the necessary corrections:

CURRTYPE	EUR								
UNIT	GENESIS Germany GmbH								
PRODUCT	Summer Tires								
	TIME	VERSION							
	+ 2011				+ 2012				
PROFIT	Budget	Actual	Variance	%	Budget	Actual	Variance	%	
Sales Volume	123.975,00	120.260,00	-3.715,00	-3,00	134.776,00	130.048,00	-4.728,00	-3,51	
+ Gross Margin	591.636,29	626.823,26	35.186,97	5,95	495.222,05	465.237,47	-29.984,58	-6,05	
Revenue	14.566.592,66	13.785.445,29	-781.147,37	-5,36	17.080.923,95	16.026.825,09	-1.054.098,85	-6,17	
Gross Margin in percent	4,06	4,55	0,49	11,95	2,90	2,90	0,00	0,12	

Check your understanding



Briefly describe the differences between an ad hoc report and a formula report.





Which of the following formula reports have a dynamic structure that is saved in a single MDX.EXECUTE formula?

- a) Cell-based
- b) Query-based
- c) Excel-aggregated
- d) Value-based



Which toolbar button on the Ad-Hoc Report section of the Infor BI Office Plus toolbar converts an ad hoc report to a formula report?

- a) Options
- b) Tools
- c) fx
- d) New Formula Report



Lesson 7: Alea ad hoc reports

Estimated time

2 hours

Learning objectives

After completing this lesson, you will be able to:

- List the steps to create an Alea ad-hoc report.
- Explain how to use the Dimension browser.
- Identify the buttons on the Dimension browser.
- Describe the purpose of the Splasher.
- Identify the Splasher toolbar buttons.
- Explain how to insert a cell note.
- Identify common Alea formulas.
- Identify the differences between Alea and Office Plus formula groups.
- Explain how to use Alea formulas in a report.

Topics

- Creating Alea ad hoc reports
- Using the Splasher
- Converting an Alea ad hoc report to a formula report

Creating Alea ad hoc reports

Alea ad hoc reports are similar to ad hoc reports; however, they support different functions and formulas and can only be created on OLAP data sources.

To create an Alea ad hoc report, do one of the following:

- Click the New Alea Ad-hoc Report button in the Office Plus section of the toolbar.
- Click the Cubes button on the toolbar and double-click a cube in the Cubes and Data Areas dialog box. This method enables you to base a report on a data area, as well as on a cube.



To create Alea ad hoc reports, the OLAP Server add-in must be enabled. If you deselect the OLAP add-in you cannot create Alea ad hoc reports.

To enable or disable the OLAP Server add-in, select Tools > Run OLAP add-in and then restart Office Plus. This tool is selected by default and enables Alea support in Office Plus. If you have problems enabling the add-in, you should add the install path of Office Plus to the Excel Trusted Locations.



Office Plus Help
Alea Formulas

Using the Dimension browser

You can change the view of the data by selecting different elements from the dimensions. To select elements from dimensions, click the Dimension in the Alea Ad-Hoc Report to open the Dimension Browser. You can use the Dimension browser to display single elements from each slice-dimension and multiple elements from each of the column and row dimensions.

Dimension browser buttons

The following table identifies the Dimension browser buttons and provides a brief description of each:

Button	Description
Show Top-Level Elements	This button displays all elements that do not have any parents (usually the top-level elements of the dimension).
Show All Elements	This button displays all of the elements of the dimension in hierarchical or non-hierarchical order, depending on the display order.
Key Query	This button analyzes the values in the dimension to find which elements will yield non-zero values in combination with the active elements of the other dimensions. This button is enabled only when the Dimension browser is opened from an Alea ad hoc report.
Hide Lowest Level	This button displays hides all elements at the lowest level currently displayed, when in hierarchical view.

Button	Description
Show Next Level	This button shows all children of the elements currently displayed when in hierarchical view.
Quick Selection <ul style="list-style-type: none"> • Mark All Elements • Remove Marks • Mark Elements without Parents • Mark Elements of a Given Level 	This button displays another toolbar with the following options: <ul style="list-style-type: none"> • Marks all elements displayed. • Clears any marks. • Marks all displayed elements that do not have any parents. • Marks all elements at a specified level of the hierarchy. The number of buttons matches the number of levels in the hierarchy.
Keep Marked Elements	This button displays only elements that are marked.
Cut Marked Elements	This button removes the marked elements from the list of displayed elements.
Undo	This button undoes the preceding action.
Find	This button searches for elements or attributes and marks those elements that match the search. The Next/Previous buttons are enabled after a search and can be used to scroll through the result of the search.
Flat View <ul style="list-style-type: none"> • Sort Ascending/Descending • Hierarchical View 	This button displays the dimension structure non-hierarchically. In flat view, the toolbar has additional buttons: <ul style="list-style-type: none"> • Sorts the displayed elements in ascending or descending order. • Resets the dimension structure to show elements hierarchically.

Using the Splasher

In Alea-ad hoc reports and formula reports created from converting an Alea ad hoc report, the Infor BI Splasher must be enabled in order for a cell to allow data to be written back to the database. Splashing refers to the distribution of values according to a variety of rules.

Because data is only stored in base elements, you cannot write back data to consolidated elements. However, with the Splasher, you can specify how values written back to base elements affect the consolidated elements they form. The Splasher uses non-immediate write back of data and analyzes the value and cell coordinates, as well as applies algorithms. This modifies the data of the base elements that define the input cell. For example, you can create a forecast for a year by increasing the values in a previous year by a specific percentage.



If you try to enter a value in an aggregated cell when the Splasher is not enabled, a message will display informing you that you “cannot write to a calculated cell.”

Splasher toolbar buttons

The Splasher toolbar buttons are located next to the Database section of the toolbar and they are only visible when you are working with an Alea ad hoc report.

The following table identifies the Splasher toolbar buttons and provides a brief description of each:

Toolbar button	Description
Undo	Undoes the last splashing operation.
Undo with Options	This button opens a dialog box displaying a list of the recent splashing operations, which can each be selected and undone individually. The number of splashing operations that can be undone is specified in Splasher Options.
Copy Values	This button displays the Copy Values dialog box allowing you to copy data and structures from one data area to another.
Options	This button opens the Splasher Options dialog box allowing you to select the following options: <ul style="list-style-type: none">• Enable splashing: Activates the splashing mode• Recalculate sheet after splashing operation: New calculation after each input splashing operation• Rounding: Calculated values are rounded Decimal Places: Number of decimal places used for the calculation (maximum: 6)• Error correction: Correction of rounding errors• Enable Undo buffer for: Activates the Undo and Undo with Options functions and allows a specified number of splashing operations to be undone



Office Plus Help
Infor BI Splasher – Writing Back in Alea Ad-Hoc Reports

Using cell notes

Alea ad hoc reports support cell notes. In the Cell Note Editor, you can add notes to the data cells of Alea ad hoc reports created on the BI OLAP database.

To insert a cell note, double-click a data cell to display the Cell Note Editor and enter the desired text.

In Alea ad hoc reports, cells that contain notes are indicated by a red triangle in the upper-right corner and the note is displayed as a tooltip.



Demo: Create an Alea ad hoc report

Your instructor will demonstrate how to create an Alea ad hoc report.





Exercise 7.1: Create an Alea ad hoc report

In this exercise, you will create an Alea ad hoc report.

Exercise steps

1. Create a new Alea ad hoc report from the **SALES** cube with the following specifications:

Row Dimension	<ul style="list-style-type: none">• UNIT
Column Dimensions	<ul style="list-style-type: none">• VERSION• CURRTYPE
Slice Dimension Selections	<ul style="list-style-type: none">• TIME<ul style="list-style-type: none">• 2012• PRODUCT<ul style="list-style-type: none">• Car Tires All Season• PROFIT<ul style="list-style-type: none">• Gross Margin

2. Double-click the **G0000 Unit** dimension to drill-down to the child cells of **G0000**.
3. Double-click the **C1100** child cell to display the base cells. **Note:** It is not necessary to double-click on **C1200** because all base cells have 0 values.
4. Click the **ellipsis** button next to the **UNIT** dimension.
5. Select **Zero suppression**.
6. Click **OK**.

7. Click the **Version** dimension.
8. Clear the check boxes for all values except **Actual** and **Budget**.
9. Click the **Keep Marked Elements** (green check mark) button.
10. Click **OK**.
11. Click on the **CURRTYPE** dimension.
12. Clear the check box for **Local Currency**.
13. Click the **Keep Marked Elements** (green check mark) button.
14. Click **OK**.
15. Click on the **UNIT** dimension. The **UNIT** dialog box opens.
16. Click the **Attribute** button in upper-left corner of the display (below the toolbar).
17. Select **Attribute Table 1**.
18. Click the **Configure Columns** button on the far right of the toolbar. The **Configure Columns** dialog box opens.
19. De-select all **Attribute column** names except the **Name** column.
20. Click **OK**.
21. Click **OK** in the **UNIT** dialog box. The **UNIT** elements list now displays the proper element names.
22. Save the report as **<your initials> Ex 7.1 Report** in your **Office Plus Basic Training** folder within the **Global Reports** folder.

Converting an Alea ad hoc report to a formula report

Just as you can convert an existing ad hoc report to a formula report, you can also convert an existing Alea ad hoc report to a formula report. A converted Alea ad hoc report is simply a formula report that includes Alea formulas. Formula reports, as you have already learned, support Excel functionality. Values in formula reports that are converted from Alea ad hoc reports are calculated by different formulas from those in reports that are converted from ad hoc reports.

You can convert Alea ad hoc reports to three types of formula reports, including:

- DBGETC – clustered
- DBGET
- Values

A DBGET formula reads the content of a data cell and each value is queried separately. A DB.GETC formula reads the content of data cells and the requests are bundled in a cluster algorithm.

The difference between DBGET and DBGETC is that DBGETC groups all of the DBGETC formulas in a report into one database request. Therefore, DBGETC generally returns results faster than DBGET. You can write back data in DBGET and DBGETC formula reports.

In a Values report, the values are displayed, but are not calculated by any formula.

Alea formulas

Alea formula reports use Alea formulas in addition to standard Excel formulas. You can use the Alea Formula Wizard to insert Alea formulas, such as the DBGET and DBSET formula families, which read values from, or write values back to a cube.

The following table identifies common Alea formulas and provides a brief description of each:

Formula	Description
DE.NAME	Returns the name of a dimension element; opens the Dimension browser when double-clicked
SE.CNAME	Returns the name of an element in a subset, opens the Dimension browser when double-clicked
AT.GET	Returns the attribute of the specified element from a field of the attribute table
AT.SET	Writes information for the specified element in the field of the attribute table

Alea and Office Plus formula groups

The following table identifies similar Alea and Office Plus formula groups:

Alea	Office Plus
DBGET(x)	CELL.GET(x)
DE.NAME	MEMBER.CNAME
AT.GET	MDX.GET
AT.SET	-

Alea	Office Plus
AT.HEAD	-
NGET, NSET	-



Alea formulas use simple names (captions) of elements, unlike Office Plus formulas, which use unique names.



Demo: Convert an Alea ad hoc report to a formula report

Your instructor will demonstrate how to convert an Alea ad hoc report to a formula report and then use Alea formulas in the report.





Exercise 7.2: Convert an Alea ad hoc report to a formula report

In this exercise, you will convert an Alea ad hoc report to a formula report and then use Alea formulas in the report.

Exercise steps

1. Open the **<your initials> Ex 7.1 Report** that you saved in the previous exercise, if it is not already open.
2. Click the **Convert to Formula Report** button on the **Alea Ad-Hoc Report** section of the toolbar.
3. Select **DBGETC - clustered**.
4. Click the **fx** button. Office Plus completes the conversion and a new window opens with the Alea formula report. Each cell of the converted report is populated by the selected formula.
5. Click in any cell with a value (e.g. B37) to see the formula displayed in the Excel **fx** (formula) bar that displays above the data.
6. Insert two columns to the end of the existing table.
7. Type the following formula in cell **G39** to calculate the variance between **Actual** and **Budget** for **EUR** values:
 - =C39-E39
8. Click and drag the corner of cell **G39** over the remaining value cells in column **G** to apply the formula to those cells.

9. Type *Variance EUR* in cell **G38** to label the new column.
10. Type the following formula in cell **H39** to calculate the variance between **Actual** and **Budget** for **USD** values:
 - =D39-F39
11. Type *Variance USD* in cell **H38** to label the new column.
12. Click and drag the corner of cell **H39** over the remaining value cells in column **H** to apply the formula to those cells.
13. Right-click in cell **D31** display the shortcut menu.
14. Select **Formula Wizard > Alea Formulas > Attributes > AT.GET** to insert the formula.
15. Specify the following parameters for the formula in the **Formula Wizard** dialog box:

Field	Data
Database Alias	Academy
Dimension	PRODUCT
Attribute Table ID	2
Element	C31
Field	GERMAN
	Note: This displays the German name of the selected Product.

16. Click **Finish** in the **Formula Wizard**.
17. Double-click **Car Tires All Season** in the **Slicer** area to open the **Product** dialog box.
18. Double-click **Car Tires Summer** in the **Product** dialog box. The table shows all values for **Summer Tires** and it added the **German** name for the selected tires. **Note:** If you did not achieve these results, verify or do the following:
 - Click the **Options** menu in the **Infor BI Office Plus** tab. The **Options** dialog box opens.
 - Click the **Calculation** tab.
 - Select **Recalculate Alea Ad-hoc reports automatically**.
 - Click **OK**. The **Options** dialog box closes.
 - Select **File > Options**. The **Excel Options** dialog box opens.
 - Select **Formulas**.
 - Select **Automatic** under **Workbook Calculation** in the **Calculation options** section.
 - Click **OK**.

19. Verify that your screen looks like the screen shot that follows. If it does not, review the previous steps and make the necessary corrections.

	A	C	D	E	F	G	H
28	Academy						
29	SALES						
30	TIME	2012					
31	PRODUCT	Car Tires Summer	Sommerreifen	Sommerreifen			
32	PROFIT	Gross Margin					
33							
34							
37		Actual		Budget		Variance	
38		EUR	USD	EUR	USD	EUR	USD
39	Total Group	1,730,787.29	2,223,125.47	1,468,413.78	1,883,219.30	-262,373.51	-339,906.17
40	European Holding	1,730,787.29	2,223,125.47	1,468,413.78	1,883,219.30	-262,373.51	-339,906.17
41	GENESIS Germany GmbH	465,237.47	595,763.84	495,222.05	630,862.66	29,984.58	35,098.83
42	GENESIS Austria GmbH	610,400.40	785,964.98	377,592.06	481,786.18	-232,808.34	-304,178.80
43	GENESIS Switzerland AG	279,814.07	358,997.66	164,819.20	212,837.02	-114,994.87	-146,160.63
44	GENESIS UK INC	375,335.34	482,398.99	430,780.48	557,733.43	55,445.13	75,334.44

20. Save the report as **<your initials> Ex 7.2 Report** in your **Office Plus Basic Training** folder within the **Global Reports** folder.

Check your understanding



When creating Alea ad hoc reports in Infor BI Office Plus, what button in the Dimension browser displays all elements that have no parents?

- a) Show Top-Level Elements
- b) Show All Elements
- c) Key Query
- d) Hide Lowest Level



Alea ad hoc reports can be converted to which of the following types of formula reports? Select all that apply.

- a) DBGETC - clustered
- b) DBGET
- c) Values
- d) MEMBERC.NAME



Which feature allows you to add notes to the data cells of Alea ad hoc reports created on the BI OLAP database?

- a) Cell Note Manager
- b) Cell Note Editor
- c) Data Cell Editor
- d) Options Editor



Which of the following Alea formulas is used to return an attribute of the specified element from a field of the attribute table?

- a) DBGET(x)
- b) AT.GET
- c) DE.NAME
- d) CELL.GET(x)



Lesson 8: Using other Office Plus features

Estimated time

1 hour

Learning objectives

After completing this lesson, you will be able to:

- Describe the use of a global list in a report.
- Explain how to use a calculation in a report.
- Explain how to use the Style Wizard to create a new template.
- List the steps to apply a template to a report.

Topics

- Global Lists
- Calculations
- Style Wizard

Global lists

Lists in the Database Structure are global lists that are valid for an entire report catalog. When they are inserted into reports, these global lists are copied into local lists, which are valid only for that report. Global and local lists can be designed independently.

To create a global list, right-click a hierarchy or dimension in the Database Structure pane and select **New > Global List**. To use a global list in a report, drag the list from the Database Structure pane on to the worksheet.



- Global lists are stored in the OLAP database.
- Users will need the appropriate rights to be able to add Global lists.
- All users will be able to see the Global lists created in an OLAP database.



Demo: Create and use a global list

Your instructor will demonstrate how to create and use a global list in a report.

Demo steps

1. Right-click the **UNIT** dimension in the **SALES** cube in the **Database Structure** pane.
2. Select **New > Global List**.
3. Name the global List **DACH**. DACH is a country group containing the countries D, A and CH.
4. Double-click the **DACH Global List** to open the **List Designer** and **Structure Selection** panes.
5. Select the following base elements:
 - **GENESIS Germany GmbH**
 - **GENESIS Austria GmbH**
 - **GENESIS Switzerland AG**
6. Click **Apply changes to the list**.
7. Create a new ad hoc report from the **Sales** cube.
8. Drag **UNIT** to the rows.
9. Drag the **DACH Global List** from the **Database Structure** pane on to the worksheet to replace the **UNIT** dimension. Only the elements defined in the Global list will be displayed.

	A	B	C	D	E	F
28						
29		Academy	CURRTYPE	TIME	PRODUCT	PROFIT
30		SALES	Local Currency	YTD	All Tires	Sales Volume
31						
32			VERSION			
33		DACH		Actual		
34		GENESIS Germany GmbH	3,205,408.80			
35		GENESIS Austria GmbH	2,644,630.00			
36		GENESIS Switzerland AG	3,502,009.00			



Calculations

A calculation is an element that is calculated when you open a report. Calculations are displayed in the List Designer and can be selected as list elements in the Structure Selection pane.

Calculations can also be displayed and created in the Database Structure pane. To display calculations in the Database Structure pane, click the Options button on the toolbar and select the Show Calculations check box in the Database Structure Options dialog box.

To use a calculation in a report, drag the list from the Database Structure pane on to a dimension in the worksheet. The calculation will automatically be used in new reports that include that dimension.



- Calculations are stored in the OLAP database.
- Users will need the appropriate rights to be able to add calculations.
- All users will be able to see the calculations created in an OLAP database.



Demo: Create and use a calculation

Your instructor will demonstrate how to create and use a calculation in a report.

Demo steps

1. Click the **Database Structure Options** folder button on the toolbar in the **Database Structure** pane. The **Database Structure Options** dialog box opens.
2. Select the **Show Calculations** check box in the **Database Structure Options** dialog box.
3. Click **OK**.
4. Expand the **TIME** dimension in the **Database Structure** pane.
5. Expand the **TIME** hierarchy.
6. Right-click the **Calculations** folder to select **New > Calculation**.
7. Type *First half of 2012* over the **New Calculation** label to change the name of the calculation. The **Edit Calculation** dialog box opens.
8. Double-click the **2012_Q1** element to add it to the right pane.
9. Type **+** at the end of the formula that displays in the right pane.
10. Double-click the **2012_Q2** element to add it to the right pane. The new calculated element will be the sum of elements **2012_Q1** and **2012_Q2**.
11. Click **OK**.
12. Create a new ad hoc report from the **Sales** cube.
13. Notice that the new **First half of 2012** calculated element is automatically listed under the **TIME** dimension showing the values for the first half of the year 2012. **Note:** The new calculated element can be removed from the list using List Designer.

	A	B	C	D	E	F
28						
29	Academy		CURRTYPE	UNIT	PRODUCT	PROFIT
30	SALES		<u>Local Currency</u>	<u>Total Group</u>	<u>All Tires</u>	<u>Sales Volume</u>
31						
32			VERSION			
33		TIME		Actual		
34		+ YTD	10,862,920.80			
35		+ All Years	10,862,818.00			
36		First half of 2012	380,178.00			
37						



Style Wizard

When you create an ad hoc report, you can use a template to manage the fonts and colors used in the report. Or you can format the report manually. By default, if you use a template, the Standard template is applied. The Style Wizard is used to create and edit templates for ad hoc reports.

Each step of the Style Wizard asks you to specify the font, font color and background of the different components of a report (for example, headers, columns, rows).

To use a template style in a report, click Options in the toolbar to display the Ad-hoc Report tab of the Options dialog box. Select the Use template check box and click the Browse button to browse to the template to use.



Demo: Create and use a template

Your instructor will demonstrate how to create a template using the Style Wizard and then apply the template to a report.





Exercise 8.1: Create and use a template

In this exercise, you will create a template using the Style Wizard and then apply the template to a report.

Exercise steps

1. Select **Tools > Style Wizard** in the **Extras** group. The **Office Plus Style Wizard** opens.
2. Verify that **New Style** is selected. Otherwise, select it.
3. Click **Next**. From this screen, you can specify the font, font color, and background color of the report headers.
4. Click the **Font** button. The **Font** dialog box opens.
5. Select **Times New Roman** from the **Font** list.
6. Select **14** from the **Size** list.
7. Click **OK**.
8. Click the **Font Color** button. The **Color** dialog box opens.
9. Select **<a color>**.
10. Click **OK**.
11. Click the **Background Color** button. The **Color** dialog box opens.

12. Select a color.
13. Click **OK**. Notice a preview of the report header displays in the **Office Plus Style Wizard**.
14. Click **Next**.
15. Select the fonts and colors for the **Column 1** heading.
16. Click **Gradient** to lighten the color gradually from dark to light across the report.
17. Select the **Identical for Rows and Columns** check box to apply the same formatting to the row headings.
18. Click **Next**. **Note:** If you did not select the **Identical for Rows and Columns** check box, a screen will display allowing you to format the row headings.
19. Specify the font, font color, background color, and number format to apply to the data in the report.
20. Click **Next**.
21. Select the font, font color, and background color of the non-data area. The non-data area is defined as the adjacent area to the data area of a report that has only one column or one row.
22. Click **Next**.
23. Select a default style for the remaining areas of the report; as in, those areas not formatted in any of the previous steps.
24. Click **Next**.
25. Select the number format of any currency, percent, and the short date or short time values in the data area.
26. Click **Next**.
27. Specify the colors and gradients to use in exception reporting.
28. Click **Next**.
29. Click **Finish**. The **Save Formula Report As** dialog box opens.
30. Select **My Desktop** as the **Report location**.
31. Type *<your initials> Ex 8.1 Template* in the **File Name** field.
32. Click **Save**.
33. Click **Yes** when the **Close Workbook** dialog box displays.
34. Click the **Report Catalog** button.
35. Right-click **Templates** in the **Report Catalog** pane.
36. Select **Import**.
37. Select the *<your initials> Ex 8.1 Template* from the **Desktop** to import your template.



Scenario: Use other Office Plus features

In this scenario, you will create an ad hoc report with the Sales cube, create a sales calculation, and show the calculation in the report. As final steps, you will apply a template to the report and then save the report.

This scenario does not include detailed steps so that you have the opportunity to apply the knowledge and skills you have learned in this Lesson and previous Lessons.

- Create a new ad hoc report for the **SALES** cube for **January 2012**.
- Create a **Net Revenue Per Sales** calculation using the following formula:
 - $[\text{PROFIT}].[Gross Margin].[Net Revenue] / [\text{PROFIT}].[Sales Volume]$
- Show the new calculated element as a column in the report, together with **Sales Volume** and **Net Revenue**.
- Your report should look like the screen shot below. If it does not, review the information above or the appropriate steps in previous exercises and make the necessary corrections:

	A	B	C	D	E	F
28						
29	Academy		CURRTYPE	UNIT	TIME	VERSION
30	SALES		Local Currency	Total Group	Jan 2012	Actual
31						
32			PROFIT			
33		PRODUCT	Sales Volume	+ Net Revenue	et Revenue per Sales	
34		- All Tires	126,039.00	14,584,199.37	115.71	
35		+ All Season Tires	5,244.00	649,545.41	123.86	
36		+ Summer Tires	38,134.00	4,400,031.04	115.38	
37		+ Winter Tires	49,385.00	4,905,886.00	99.34	
38		+ Van Tires	9,232.00	1,028,876.55	111.45	
39		+ Special Offers	14,720.00	1,888,383.02	128.29	
40		+ SUV (4x4) Tires	9,324.00	1,711,477.35	183.56	
41		Not Analysed	0.00	0.00	0.00	
42		Dummy	0.00	0.00	0.00	

- Apply the **<your initials> Ex 8.1 Template** to the report.
- Save the report as **<your initials> L8 final scenario** in your **Office Plus Basic Training** folder within the **Global Reports** folder.

Check your understanding



Which of the following is used to create and edit templates for ad hoc reports in Infor BI Office Plus?

- a) The Formula Wizard
- b) The Cube Wizard
- c) The Style Wizard
- d) The Template Wizard



Course summary

Estimated time

30 minutes

Course objectives

Now that you have completed this course, you should be able to:

- Identify the basic features and functionality of Office Plus.
- Explain how to log on to Office Plus and identify the main components of the user interface.
- Describe how to create ad hoc reports and browse through data.
- Explain how to use the List Designer to select, sort, and filter data.
- Explain how to write values back to base cells and aggregated cells.
- List the steps to create formula reports.
- List the steps to create Alea ad hoc reports.
- Explain how to use attribute tables, global lists, calculations, and style templates.

Topics

- Course review

Course review



What are five methods for manipulating the display of data in an ad hoc report?





When writing back values to aggregated cells, what does selecting the percent option for the equal distribution method do?





What are the three basic types of Office Plus formula reports?





When sorting data, what does the Break Hierarchy feature do?