Introduction to
Business Insight Advanced

IBM Cognos

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UNIVERSITY CORPORATION FOR ATMOSPHERIC RESEARCH

These materials were customized for UCAR on IBM Cognos 10.

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***** There are Notes pages in the back of this binder for your use.**

Chapter 1 – Getting Started

Introductions

Please share the following information with your classmates so that we can get to know each other better:

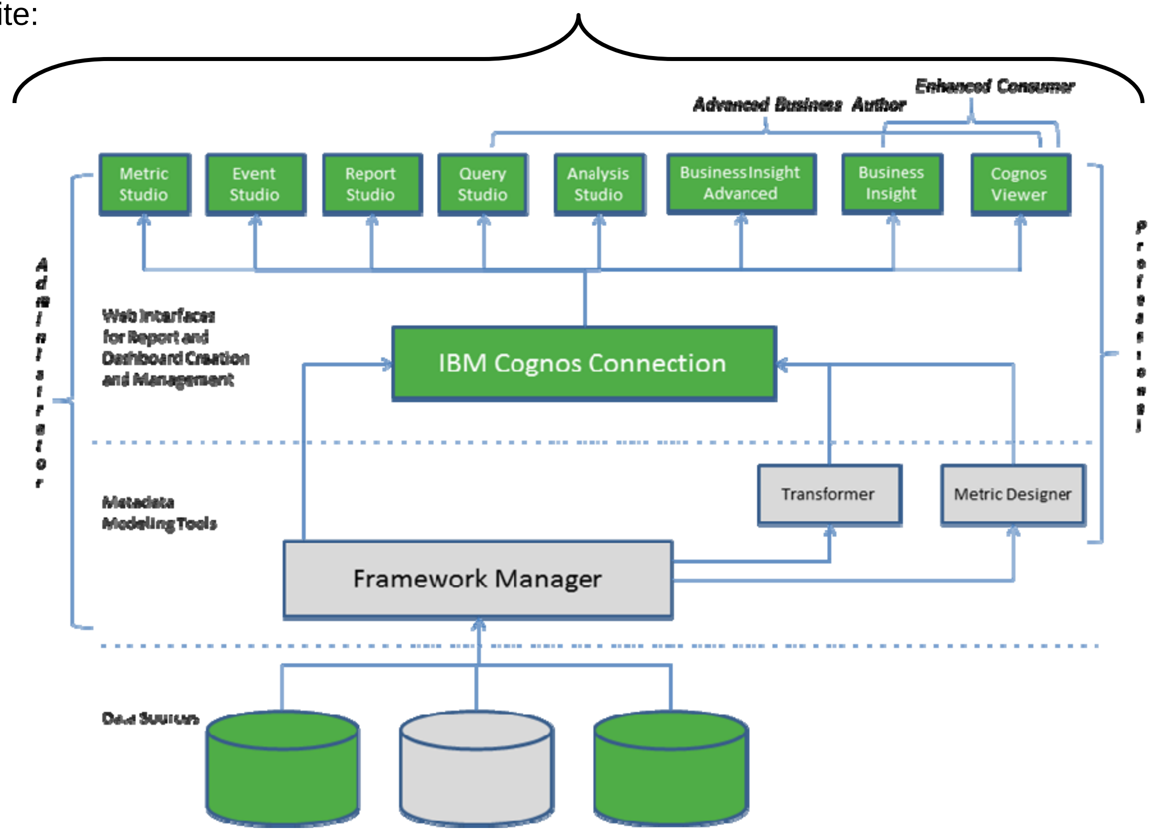
- Name
- Title and Time in Your Current Position

General Housekeeping

- Please put your cell phones on vibrate to minimize classroom distractions.
- You are encouraged to write down and submit questions that the instructor cannot answer. Your instructor will research your questions so that they can be addressed at a later time.
- Your instructor will set break times throughout this course, and the class will begin promptly at the agreed upon start time.

Overview of IBM Cognos 10

Components and license roles in IBM Cognos 10 Business Intelligence (BI) tool suite:

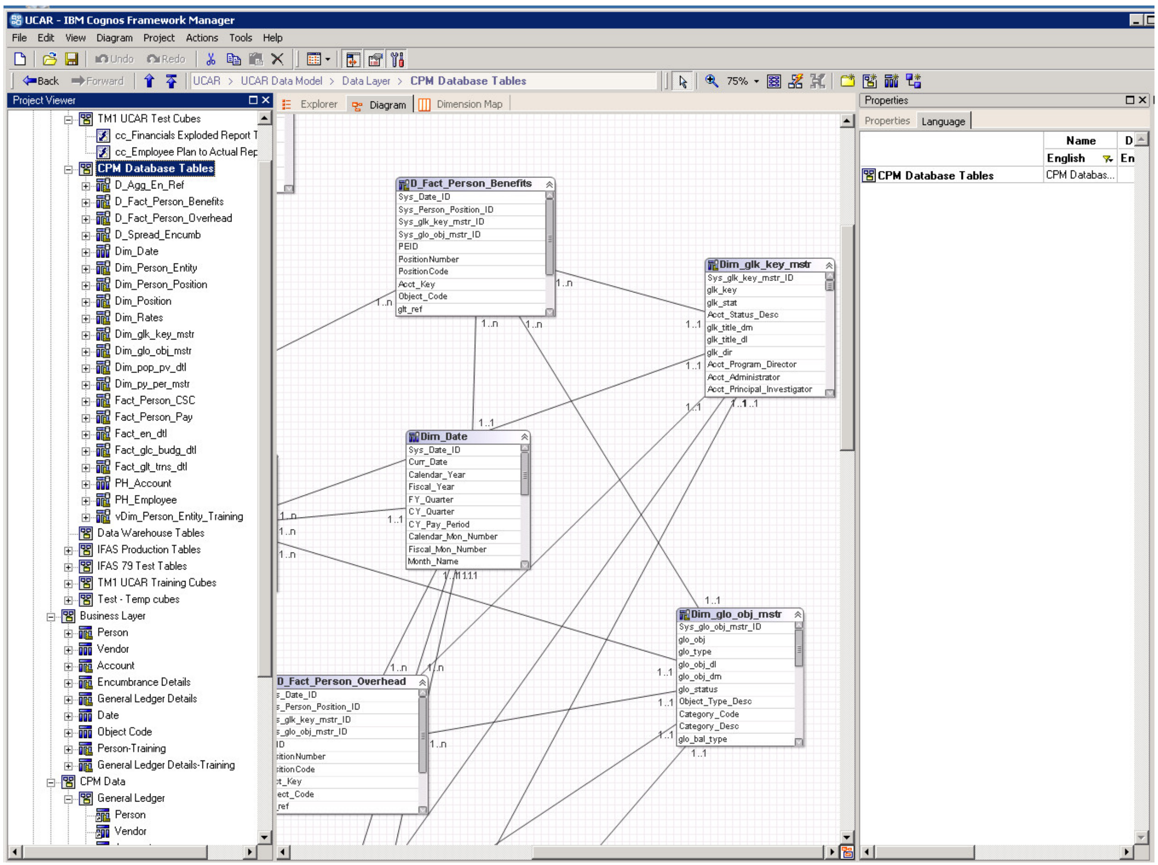


IBM Cognos Component	Use
Metric Studio	Monitor performance against benchmarks and priorities
Event Studio	Invoke tasks, and track events and processes
Report Studio	Create managed reports – most advanced studio
Query Studio	Create ad hoc reports
Analysis Studio	Explore and analyze data
Business Insight Advanced	Author reports with relational or dimensional data and analyze data in lists, crosstabs, and charts
Business Insight	Build and use sophisticated, interactive dashboards using Cognos content as well as external data sources
IBM Cognos Viewer	View results of all reports, queries, and analyses. IBM Cognos Viewer shows report output after a user has interacted with any prompts
IBM Cognos Connection	Access all data available through IBM Cognos
Framework Manager	Create and publish metadata models on which reports are based. Business Insight Advanced, Query Studio and Report Studio can report from all models. All studios can report from dimensionally modeled relational data (which can be created in Framework Manager)
Transformer	Create and publish cubes on which reports are based. Business Insight Advanced, Query Studio, Analysis Studio, and Report Studio all can report from cubes
Metric Designer	Create scorecards and metrics

Let's take a closer look at three of the key components you use to model, access, and analyze your data.

What is Framework Manager?

Framework Manager is the metadata modeling tool that allows you to model relational data. This is a client application (not web-based), as is Transformer, but all other components listed previously are web-based.



The result of a Framework Manager model is a package(s). When packages are published, this is the first time a report developer can create a report against that data using either Business Insight Advanced or Report Studio.

What is IBM Cognos Connection?

IBM Cognos Connection is the portal interface to all of the functionality available in IBM Cognos 10. It is a web application for viewing, creating, and managing queries and reports. In the portal, you can:

- View public reports.
- Create and run reports.
- Perform administrative tasks, such as scheduling and distributing reports.
- Organize data by creating entries and storing the entries in folders.
- Personalize the portal to meet your needs.

Business Insight Advanced or Report Studio?

Determining whether to use Business Insight Advanced or Report Studio to analyze your data and develop reports depends on a number of factors, in addition to your IBM Cognos licensing.

Business Insight Advanced	Business Insight Advanced is an easy-to-use authoring tool with which you can quickly create queries from the data stored in your database or from external data without having the skills of a professional report writer. Business Insight Advanced can also be used for exploring information in multiple dimensions and for deep comparative analysis, enabling business users to get fast answers to business questions by trending or analyzing your organization's information assets. • Limited prompting is available for report design. • Send reports to a professional user for further development in Report Studio
Report Studio	With Report Studio, you can create advanced reports with more flexibility than any other studio available in Cognos. Report Studio reports can contain charts, maps, lists, repeaters, or any other available report types using static data from relational or multi-dimensional data sources. • Use for a more official, published report versus a query or analysis for internal use. • Knowledge of SQL fundamentals is helpful.

Relational or Dimensional Data?

Business Insight Advanced works with both relational and dimensional data. Relational data is structured like tables and columns in a database. Data is available real-time.

IBM Cognos presents dimensional data in one of two ways:

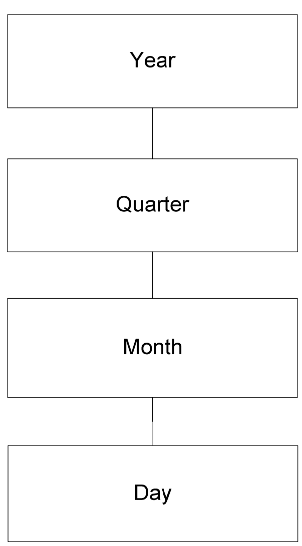
- Dimensionally Modeled Relational (DMR) **packages** that have been modeled in Framework Manager, or
- **PowerCubes** that have been defined in the IBM Cognos client-based Transformer application and published as a package.

Queries or analyses using DMR packages access the data source each time a query is launched and reflect the most current data. PowerCubes are static, which means that they must be updated periodically, but allow for much faster retrieval of data.

The two elements required to build a DMR package or a cube are “dimensions” and “measures”.

Dimensions are the hierarchies or levels by which information can be aggregated. Consider your organizational chart – an employee may work for a Division, which rolls up to an Entity.

Another common example of a dimension is ***time***. A typical illustration of a time rollup may look as follows:



Measures represent quantifiable results in terms of numeric data. Examples of measures include:

- dollar amounts, i.e., Net Amount
- counts, i.e., Account Count
- calculations and measurements, i.e., Travel Expense Average Amount

In general, *dimensions* answer the questions of “who, what, when, where, and how”. *Measures* answer the question of “how much”.

From a well-designed dimensional data source, users can easily and quickly create reports that can be customized to answer questions about specific performance indicators (measures) at levels of detail that reflect the desired perspective (dimension).

NOTE

When an end user asks for a report, it’s often phrased like this:

“I’d like to see incurred actuals by year for a particular division.”

A good rule of thumb: any data element *before* the word “by” is a measure while any data element *after* the word “by” is a dimension. Anything after the word “for” is typically a filter.

NOTE

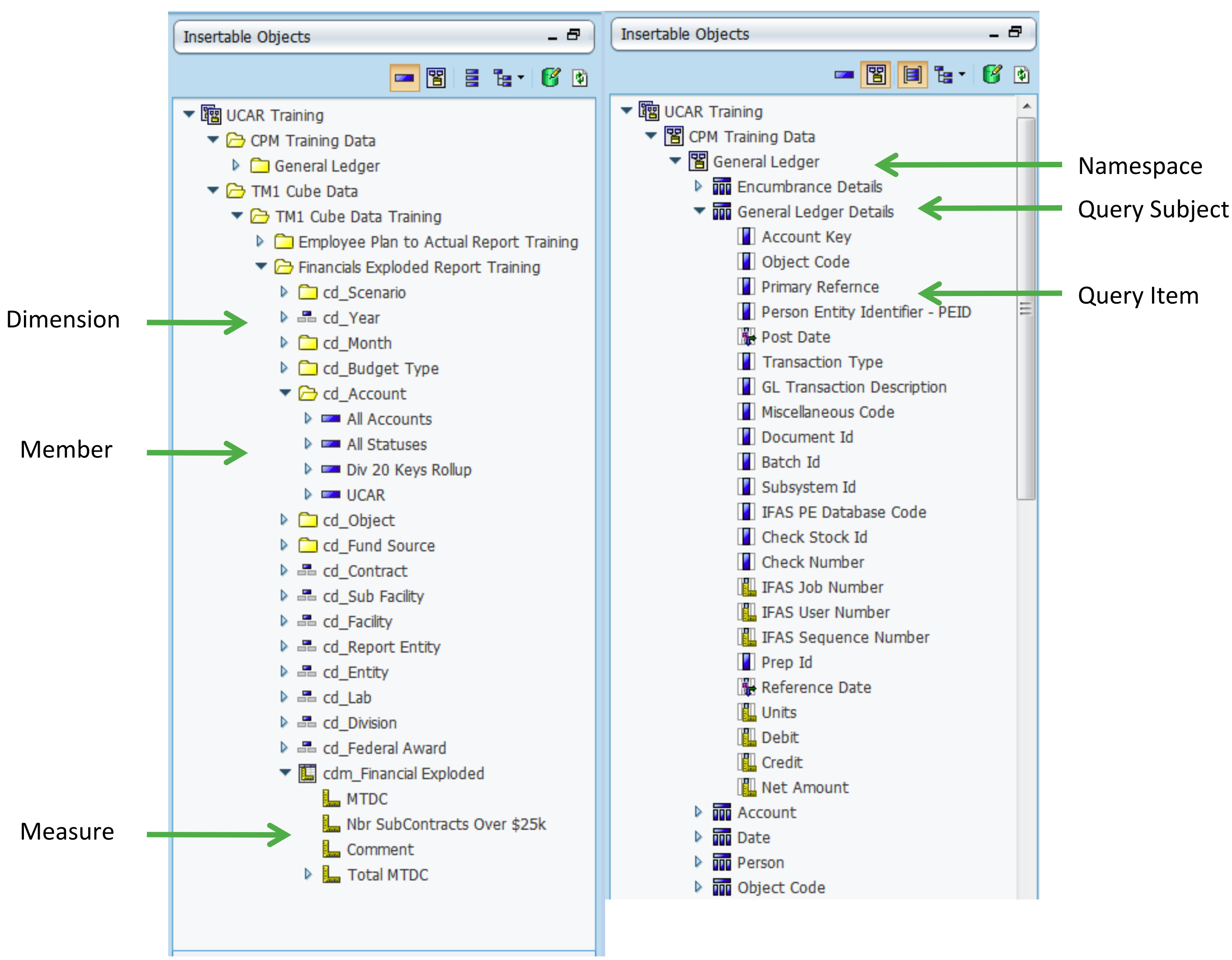
For the first half of this course, we focus on reporting with relational data. In the second half of the course, we report against the UCAR TM1 Cube Data Training cube.

If you are reporting against a cube, the name of the package usually ends in the word “Cube”. For example, a package may be named “Training Data Cube” versus “Training Data”.

Once you have launched an IBM Cognos studio, you see a difference in the look of the packages in the Insertable Objects window.

Cube objects consist of Dimensions, Members, and Measures.

Relational packages consist of Namespaces, Query Subjects, and Query Items as shown:



NOTE

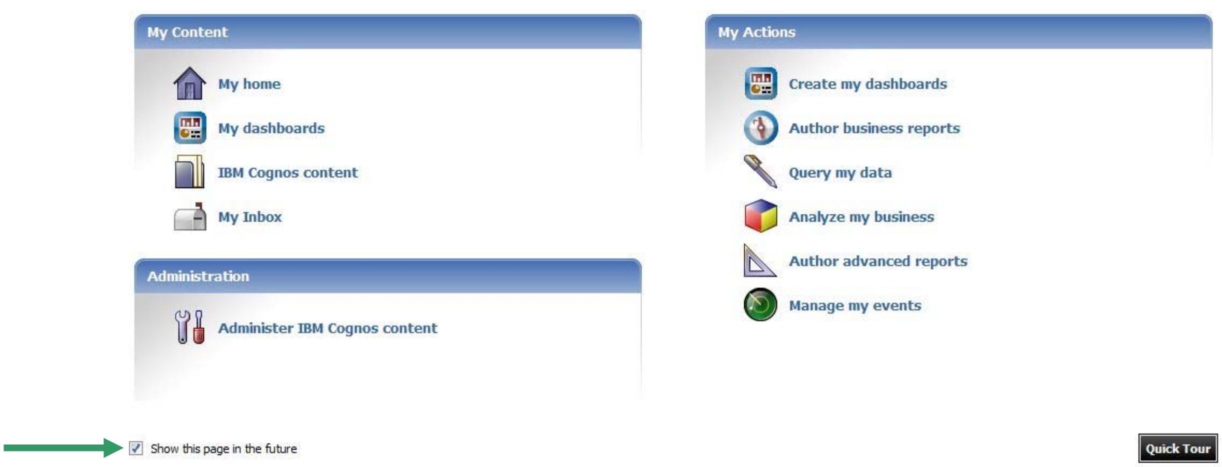
The icons used to denote Dimensions and Levels differ depending on which IBM Cognos studio you are using.

Step-By-Step

Getting Started

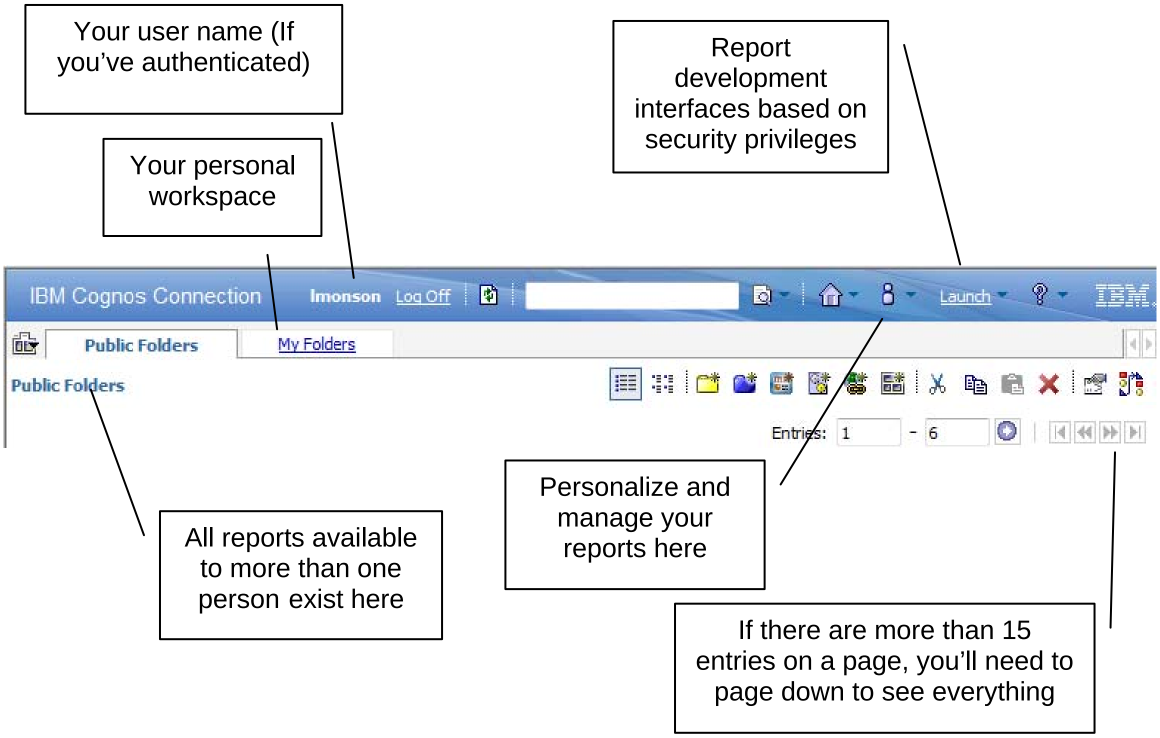
1. From a web browser, type the following URL: https://fagrand.fanda.ucar.edu/ibmcognos. With single source authentication for your environment, the system should recognize your CIT account and grant you access to IBM Cognos.

The **Welcome Page** may appear, with links to IBM Cognos Connection (IBM Cognos content) and the IBM Cognos modules available to you. Note that you have the option to uncheck the Show this page in the future box in order to bypass this page.



Understanding IBM Cognos Connection

Once you have successfully logged into IBM Cognos, or selected IBM Cognos content from the Welcome Page, the portal appears. This is the primary way to access Business Insight Advanced and the associated reports and reporting tools. The web interface means that nothing needs to be maintained on the user's desktop.



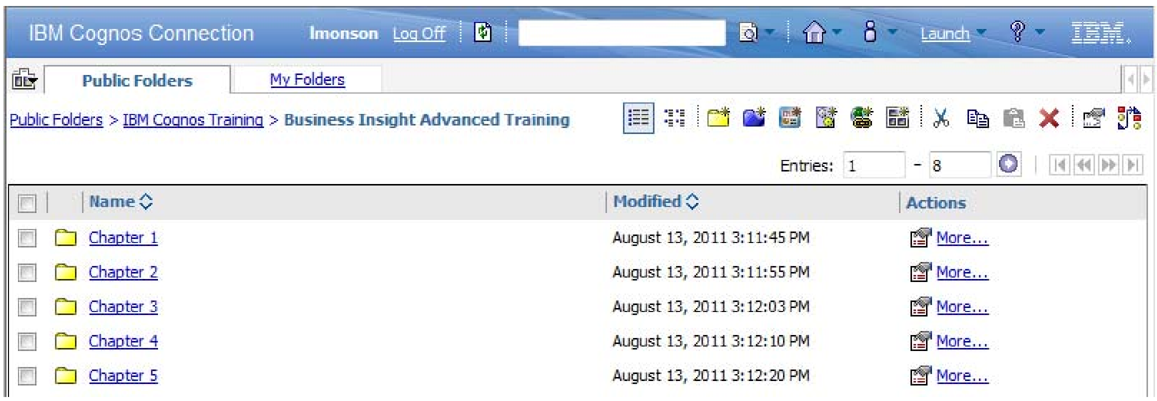
NOTE

The reason the portal is the primary way to access IBM Cognos Business Insight Advanced is that developers can create hyperlinks to reports directly from another application or web page. This bypasses IBM Cognos Connection after authenticating the user.

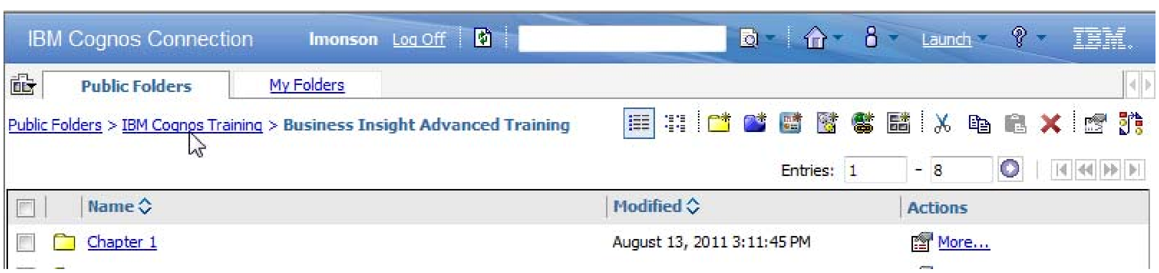
Step-By-Step

Navigating in IBM Cognos Connection

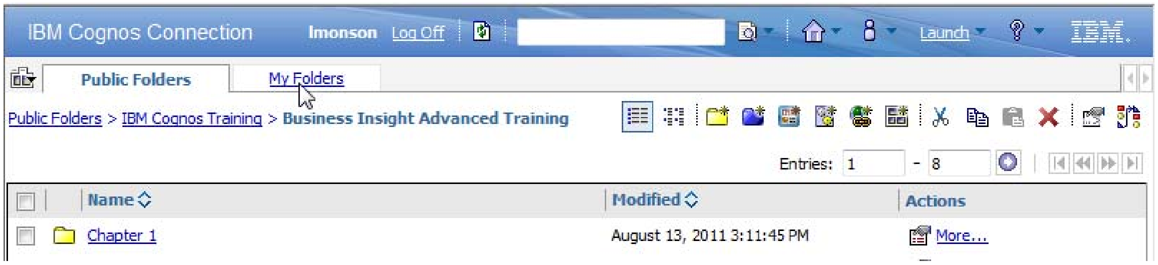
1. Navigate to the **IBM Cognos Training > Business Insight Advanced Training** folder.



2. Click on the **IBM Cognos Training** folder link to navigate back up.



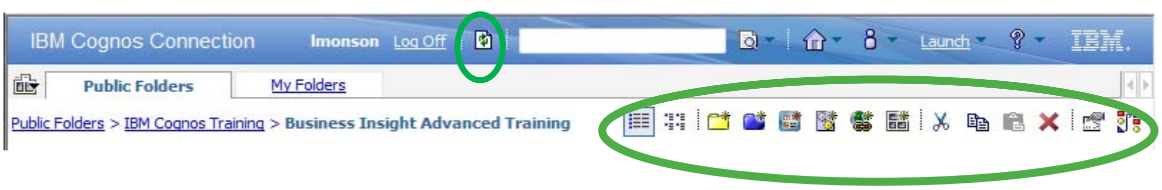
3. Click on the My Folders tab to navigate to your personal work space.



4. Create a personal folder in the My Folders tab.
   a. Click on the New Folder icon.
   b. Type “Business Insight Advanced Training” in the Name box.
   c. Click Finish.

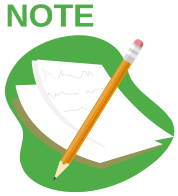
Folder Tools

As you navigate through the Public Folders and My Folders tabs, a Toolbar of available options displays. The Toolbar shows the actions that can be performed in the portal. They are described below.



Refresh the portal	Create a page
Show entries in a list	Cut the selected entries
Show detail information for each entry	Copy the selected entries
Create a folder	Paste clipboard contents to the current location
Create a package	Delete the selected entries
Create a dashboard	Show the properties for the current folder or package
Run multiple reports	Set the order for folders or entries
Create a URL to an external file or web site	

NOTE



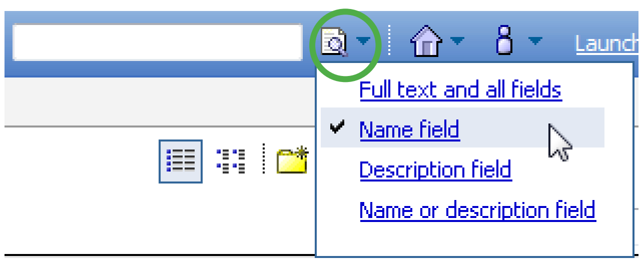
These icons vary based on licensing permissions and only appear where they are relevant. On some pages they are not displayed.

Step-By-Step

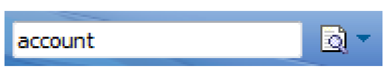
Running a Report

To ensure that we do not make unwanted changes to the original report, let's save a copy of the report from Public Folders to the Business Insight Advanced Training folder that we created earlier in your My Folders tab.

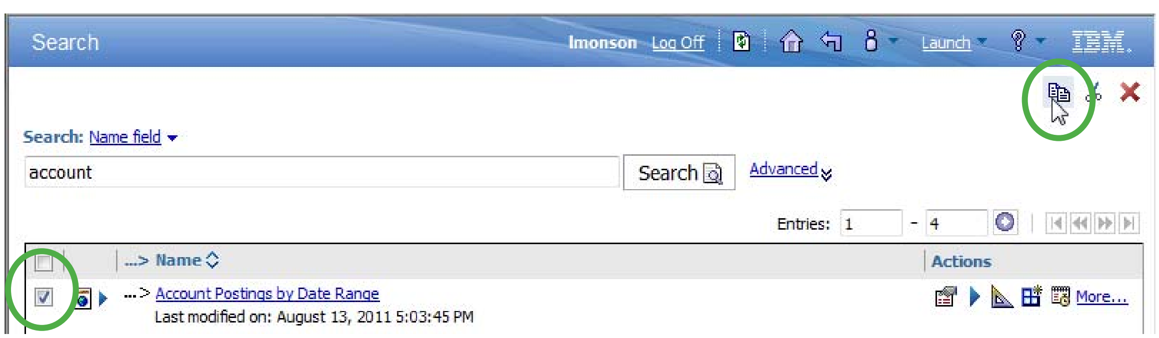
1. Navigate in IBM Cognos Connection to **Public Folders,** and then use the Search feature in IBM Cognos Connection instead of the page scrollers and basic navigation.
2. In Public Folders, click on the down arrow beside the Search box and select Name field.



3. Type "account" in the Search box and click the Search icon.



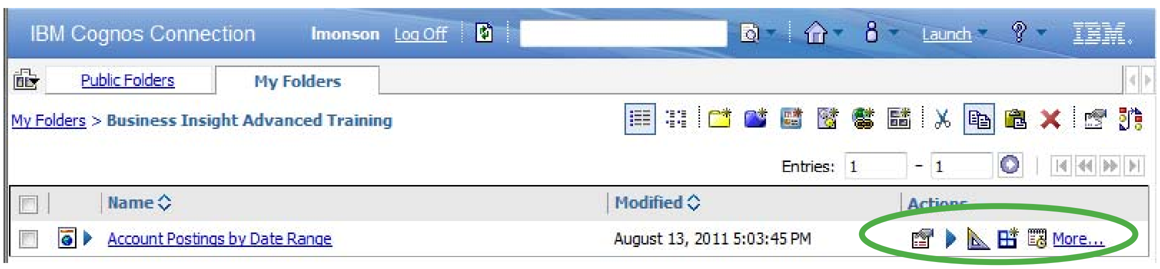
4. Check the box next to the Account Postings by Date Range report and click on the Copy icon in the top right corner of the page.



NOTE

Click the Properties icon in the search result to find the location of that report specification.

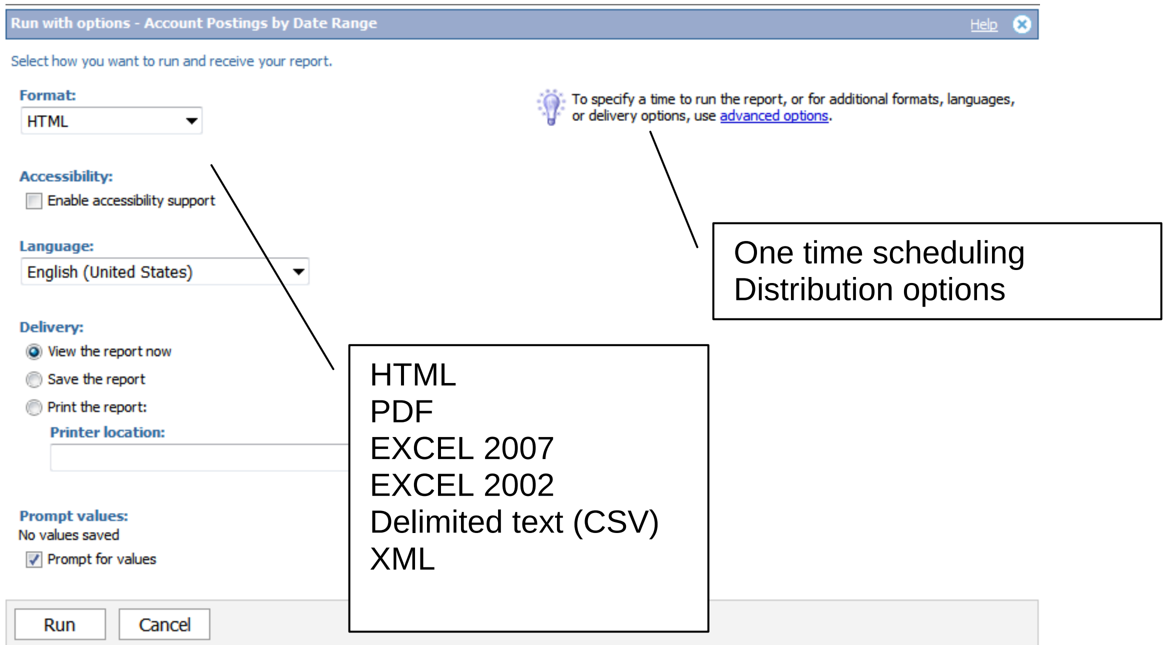
5. Click on the Return icon and navigate to **My Folders > Business Insight Advanced Training** and click on the Paste icon in the Toolbar.
6. Review the report options available in the Actions menu.



	Set/modify properties		Create a report view (shortcut)
	Run with options		Schedule recurring jobs
	Open the report in Report Studio	More...	All available report options

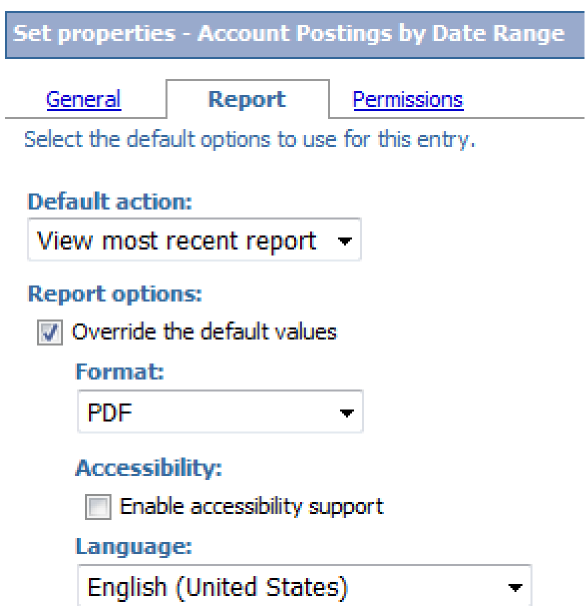
7. Click on the Run with options icon under Actions.

8. Select any options needed for this report execution. For now, select HTML and click Run.



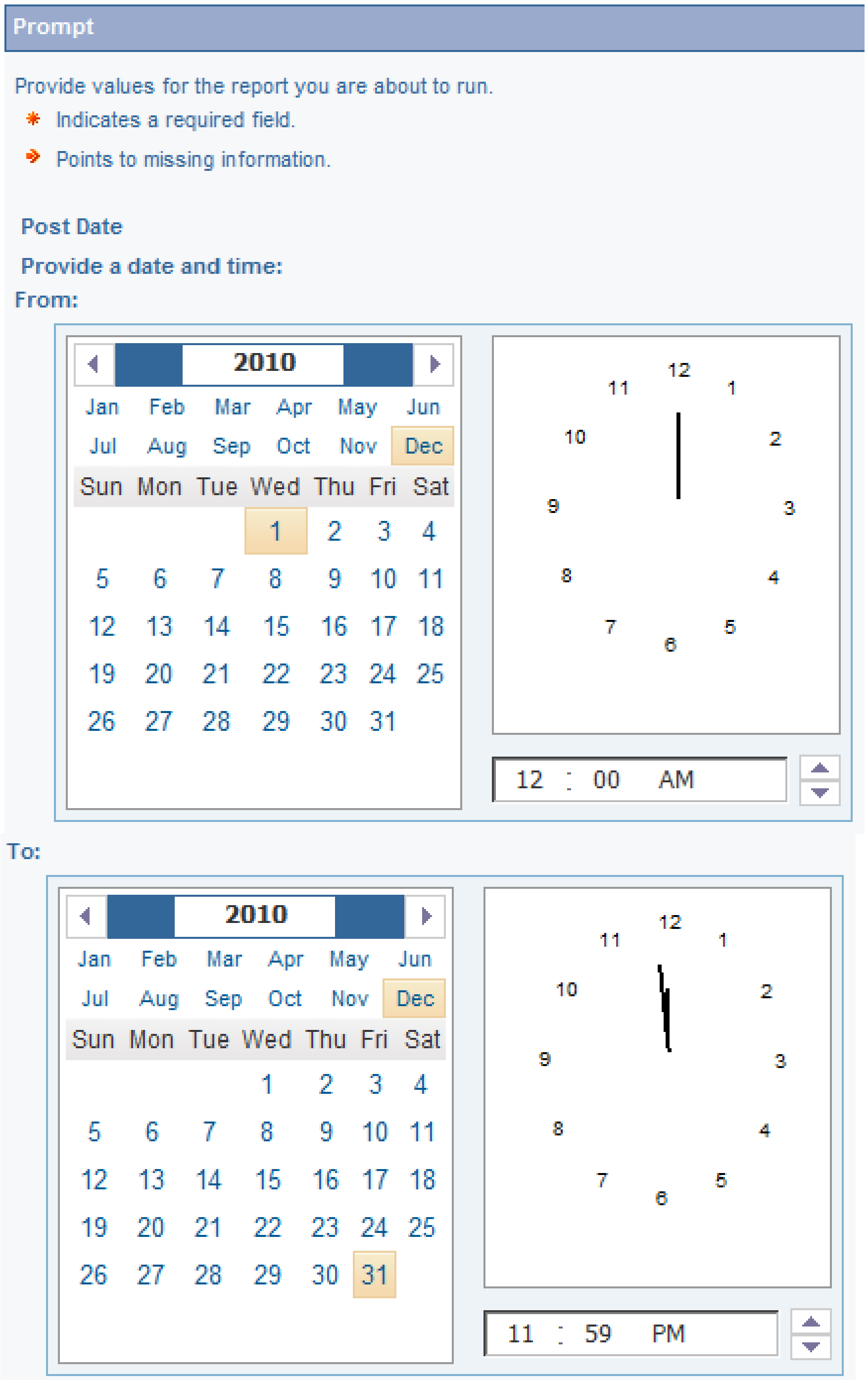
NOTE

Developers can specify a default format in the properties of any report. Selecting the PDF option (as the default or at runtime) requires Adobe Reader on the user's desktop.

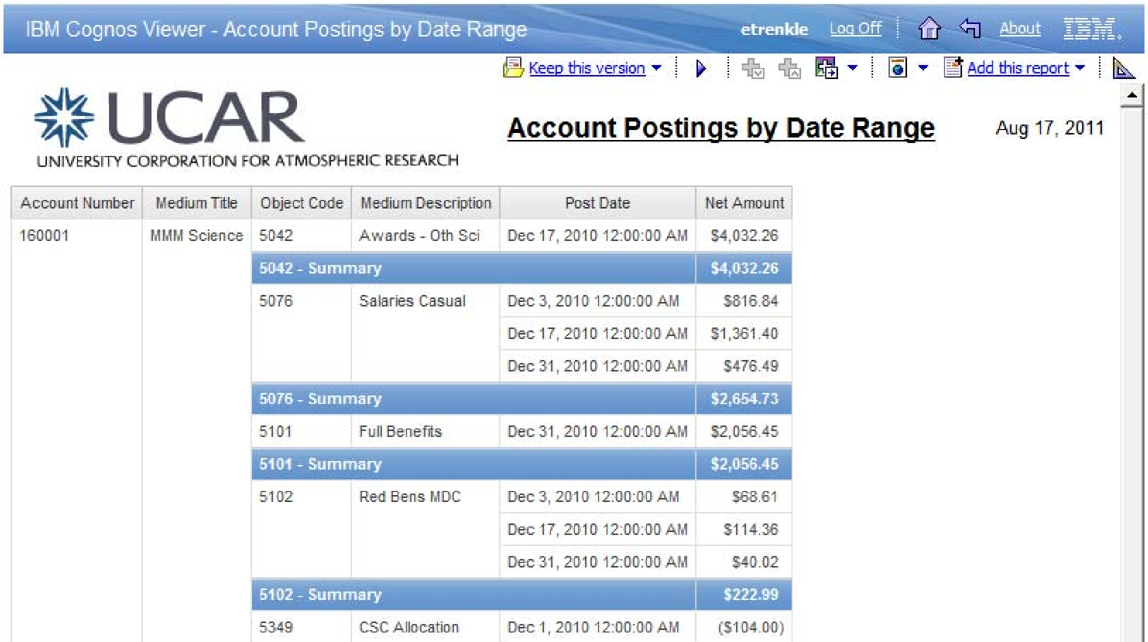


If the report has a prompt page, you see it in HTML as shown below, regardless of the report output format you select (prompting is discussed in more detail later).

9. Select December 1, 2010 as the From date and December 31, 2010 as the To date. Click OK.



Your report executes and displays the results in IBM Cognos Viewer. This is the interface used to display reports regardless of the interface used to develop the report (Business Insight Advanced or Report Studio).



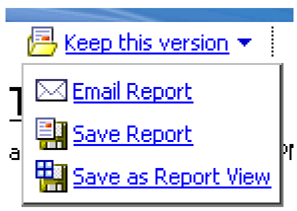
Account Number	Medium Title	Object Code	Medium Description	Post Date	Net Amount
160001	MMM Science	5042	Awards - Oth Sci	Dec 17, 2010 12:00:00 AM	$4,032.26
		5042 - Summary			$4,032.26
		5076	Salaries Casual	Dec 3, 2010 12:00:00 AM	$816.84
				Dec 17, 2010 12:00:00 AM	$1,361.40
				Dec 31, 2010 12:00:00 AM	$476.49
		5076 - Summary			$2,654.73
		5101	Full Benefits	Dec 31, 2010 12:00:00 AM	$2,056.45
		5101 - Summary			$2,056.45
		5102	Red Bens MDC	Dec 3, 2010 12:00:00 AM	$68.61
				Dec 17, 2010 12:00:00 AM	$114.36
				Dec 31, 2010 12:00:00 AM	$40.02
		5102 - Summary			$222.99
		5349	CSC Allocation	Dec 1, 2010 12:00:00 AM	($104.00)

Clicking on the report name link in IBM Cognos Connection displays the report as it was last run; hence it may or may not display the most current data. It is more consistent to always select Run with options ▶ from the Actions menu.

Understanding IBM Cognos Viewer

While viewing a report in IBM Cognos Viewer, you can perform many actions that are available from the Run with options and the Run with advanced options pages.

The Keep this version drop-down box provides options to email or save the report. Saving the report as a Report View is like creating a “shortcut”.

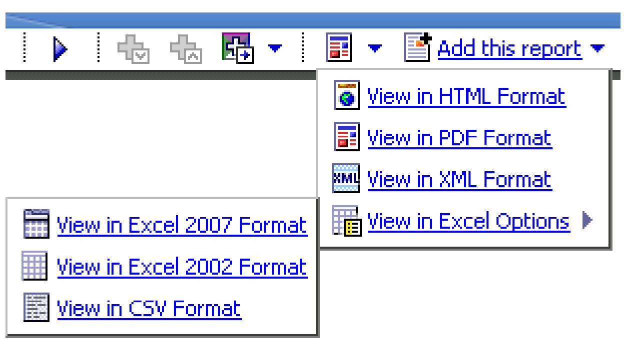


Run the report again with the blue arrow:

Drill down and Drill up allow users to navigate through dimensionally modeled data (Note: This report is not using dimensionally modeled data- thus the buttons are inactive).

Drill-thru takes users to a related report.

The View options are available in another drop-down box:



The Add this report drop-down box allows users to quickly add the report to My Folders or My Bookmarks

You can open the report in Report Studio by clicking on the triangle
Clicking on the arrow returns you to the same folder.
Clicking on Home returns you to IBM Cognos Connection home.
Clicking on the Browser's X button closes IBM Cognos Viewer and IBM Cognos Connection!

NOTE

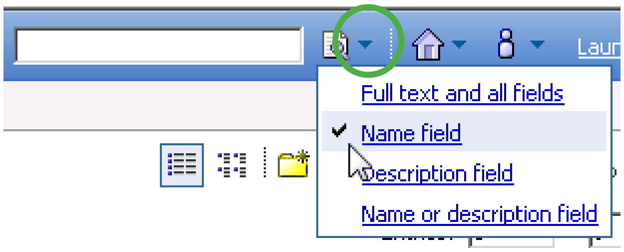
When using IBM Cognos Viewer in HTML output, always check to see if there is a Page Down option in the bottom left of the report. There may be more data that isn't displayed on the initial page.

Step-By-Step

Viewing Public Reports

1. Click on the Home icon to return to IBM Cognos Connection.

2. In Public Folders, click on the down arrow beside the Search box and select Name field.



3. Type “Training” and press Enter or click the Search icon.

4. From the search results, navigate to the **Business Insight Advanced Training > Chapter 1** folder. There is a sample report called **Report View of Account Postings by Date Range**. Click on the output versions as shown below.

Note there are three output formats, all with the same data. This is an option chosen by the creator of the report view.

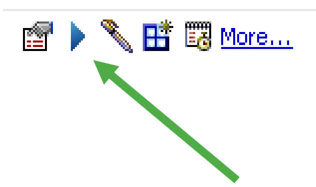
Formats	Languages	Actions
HTML	English (United States)	
PDF	English (United States)	
Excel 2007	English (United States)	

5. Click the Close button.

Demo

Scheduling Reports

The instructor now demonstrates how to click the Run with options button on that same report to schedule it to run.

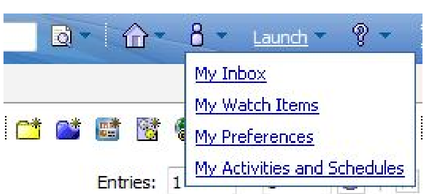


Users can schedule their report to run in the background now or at some date / time in the future on any report. This is useful for longer running reports.

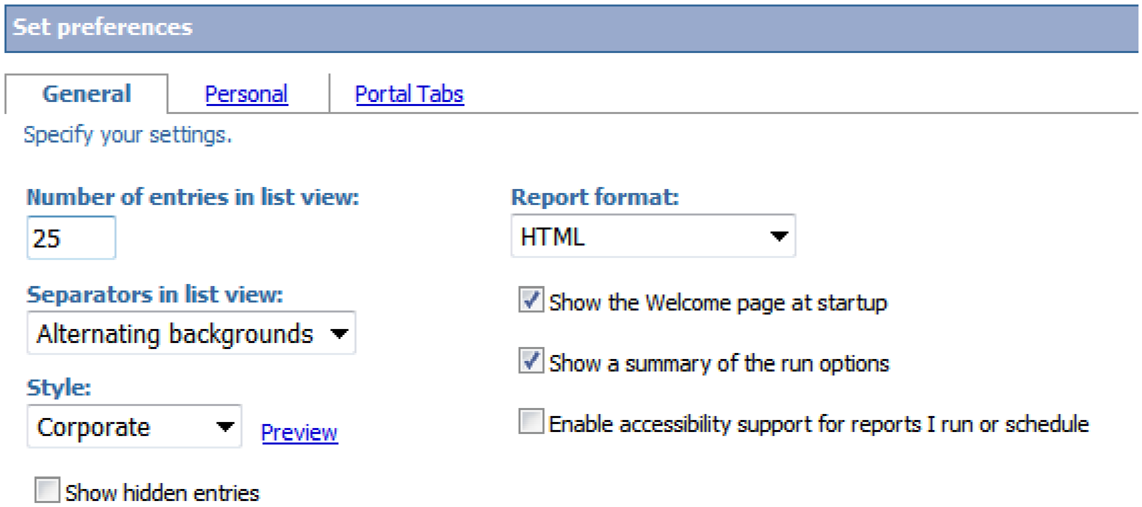
Step-By-Step

Personalizing the Portal

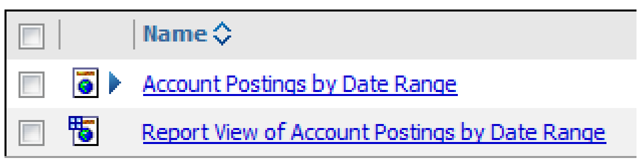
1. Click on the My Area Options drop-down arrow in the upper right section of the portal:



2. In **My Preferences**, you can personalize your portal view with the following options. Please set the Number of entries in list view property to “25”, and the Separators in list view drop-down to **Alternating backgrounds** and click OK.



Note the alternating backgrounds now in this short list of reports.



Chapter 2 – Examining a Business Insight Advanced Report

In the previous chapter we looked at the three main components of IBM Cognos for modeling, accessing, and analyzing data, and became familiar with IBM Cognos Viewer to view a report. We start our examination of Business Insight Advanced with a more detailed summary of how it differs from Report Studio in particular.

How Business Insight Advanced Differs from Report Studio

Our list is not all-inclusive, but should give you a general feel for which module is more appropriate given a user's requirements and/or skills.

- Unlike Report Studio, a Business Insight Advanced developer cannot control the type of prompt that is available to consumers – the default assigned by Framework Manager is the only option.
- A Business Insight Advanced developer cannot modify a join relationship that has been created in Framework Manager, while Report Studio allows this flexibility.
- Limited conditional formatting is allowed in Business Insight Advanced, but it does not offer the same functionality available in Report Studio.

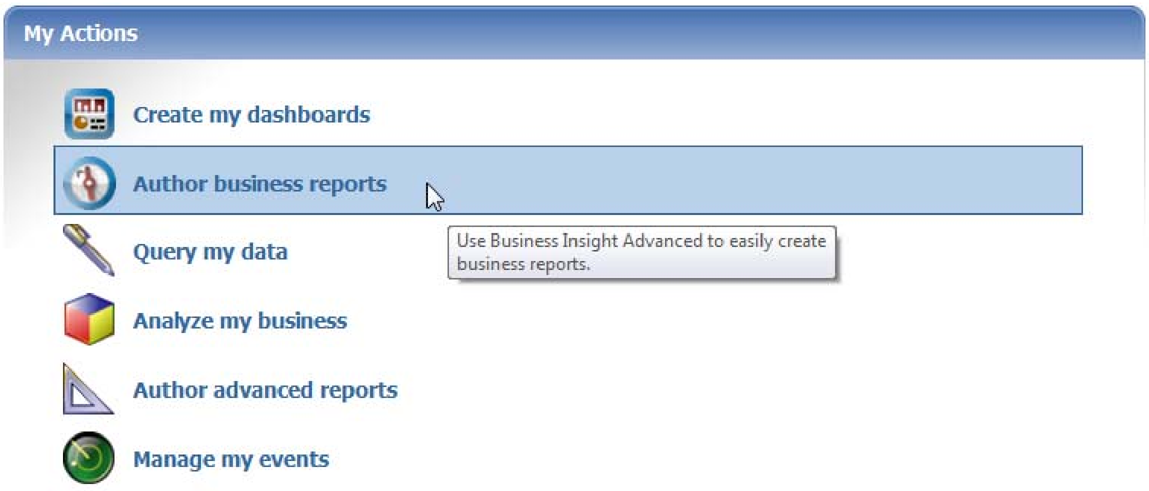
NOTE

A report can be created in Business Insight Advanced and easily opened in Report Studio for further editing and enhancements.

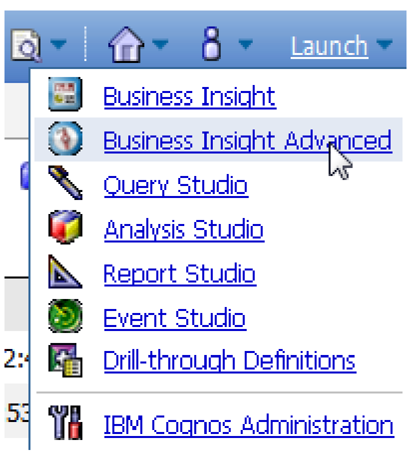
Opening an Existing Report in Business Insight Advanced

IBM Cognos provides several ways to access Business Insight Advanced including:

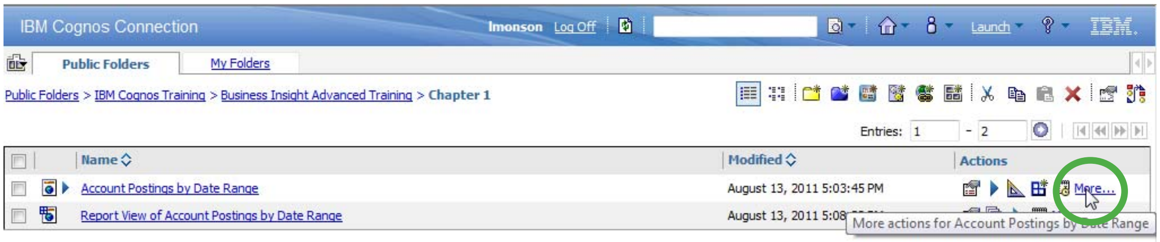
From the Welcome Page:

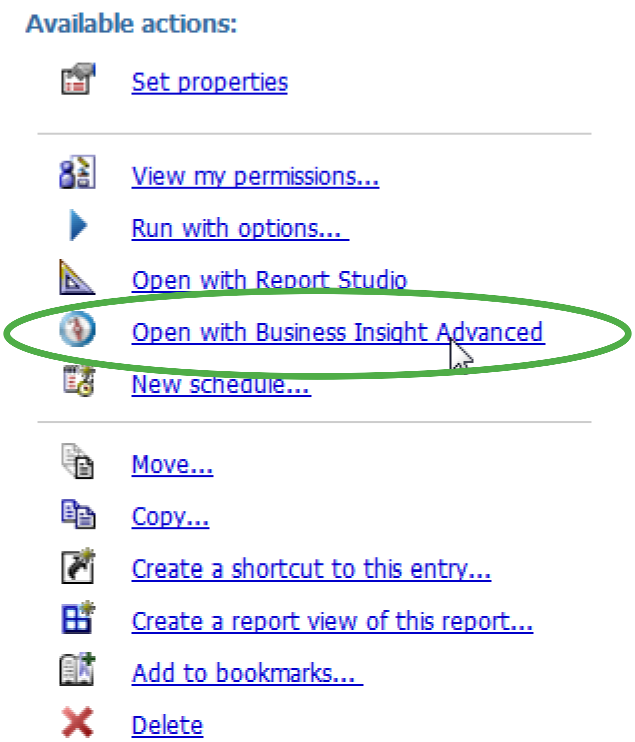


From the Launch drop-down at the top of the IBM Cognos Connection portal:

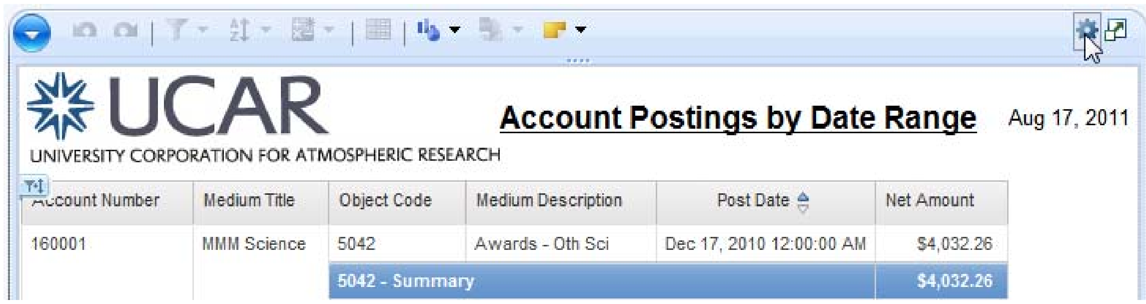


From the Open with Business Insight Advanced icon from the Actions menu in IBM Cognos Connection on a particular report specification: To see this option, click on the More... icon next to the report, then click on the link to Open with Business Insight Advanced.



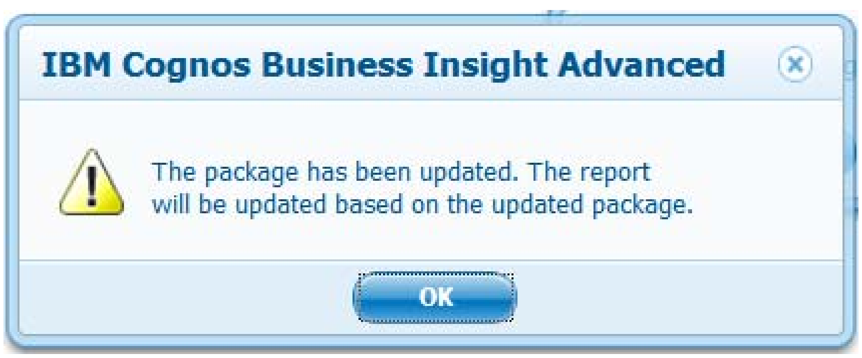


From the Do More button when you drag the report into a dashboard in Business Insight:



NOTE

When you first open a report, you may get the following warning screen which means that developers have made a change and the report needs to be validated. Click OK to proceed.

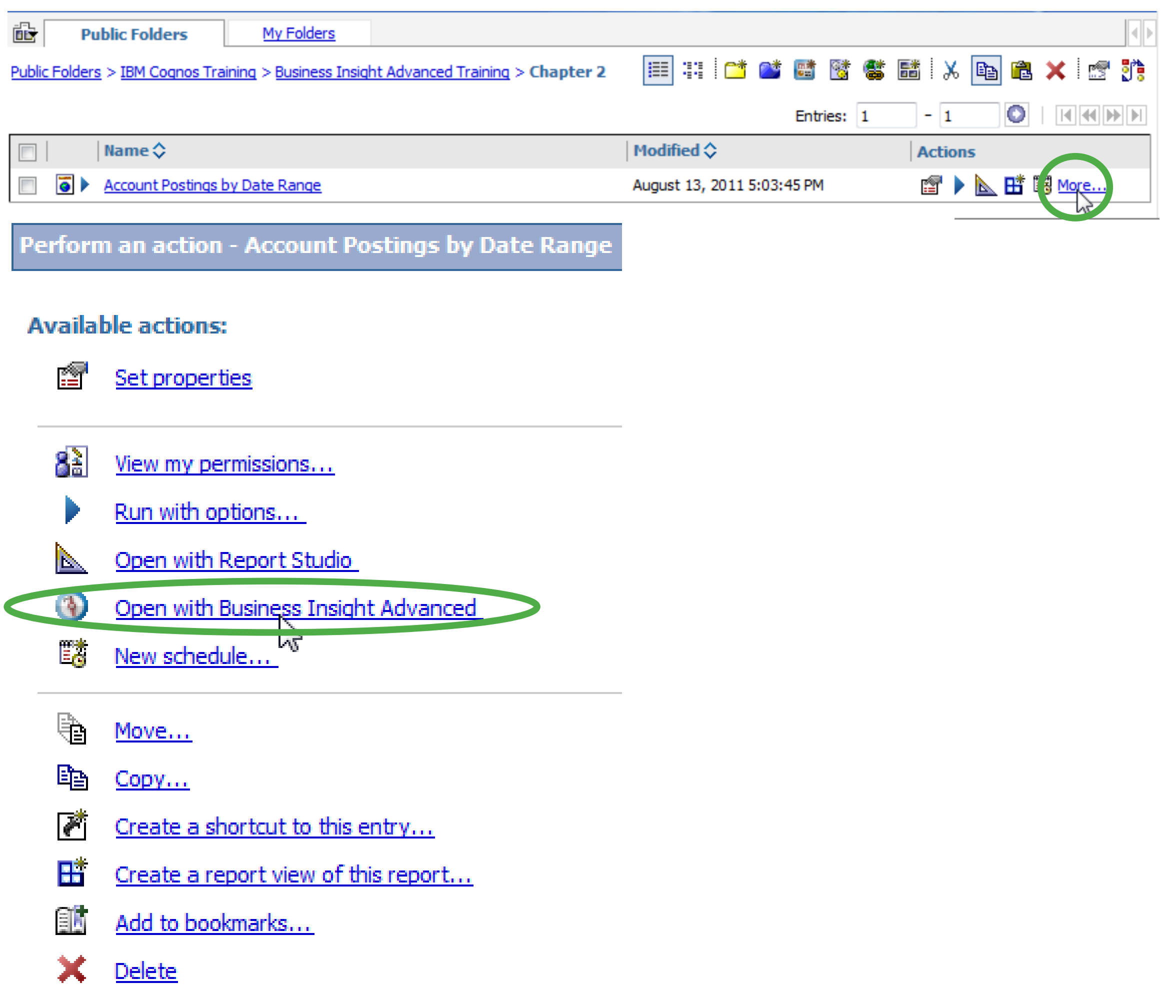


Step-by-Step

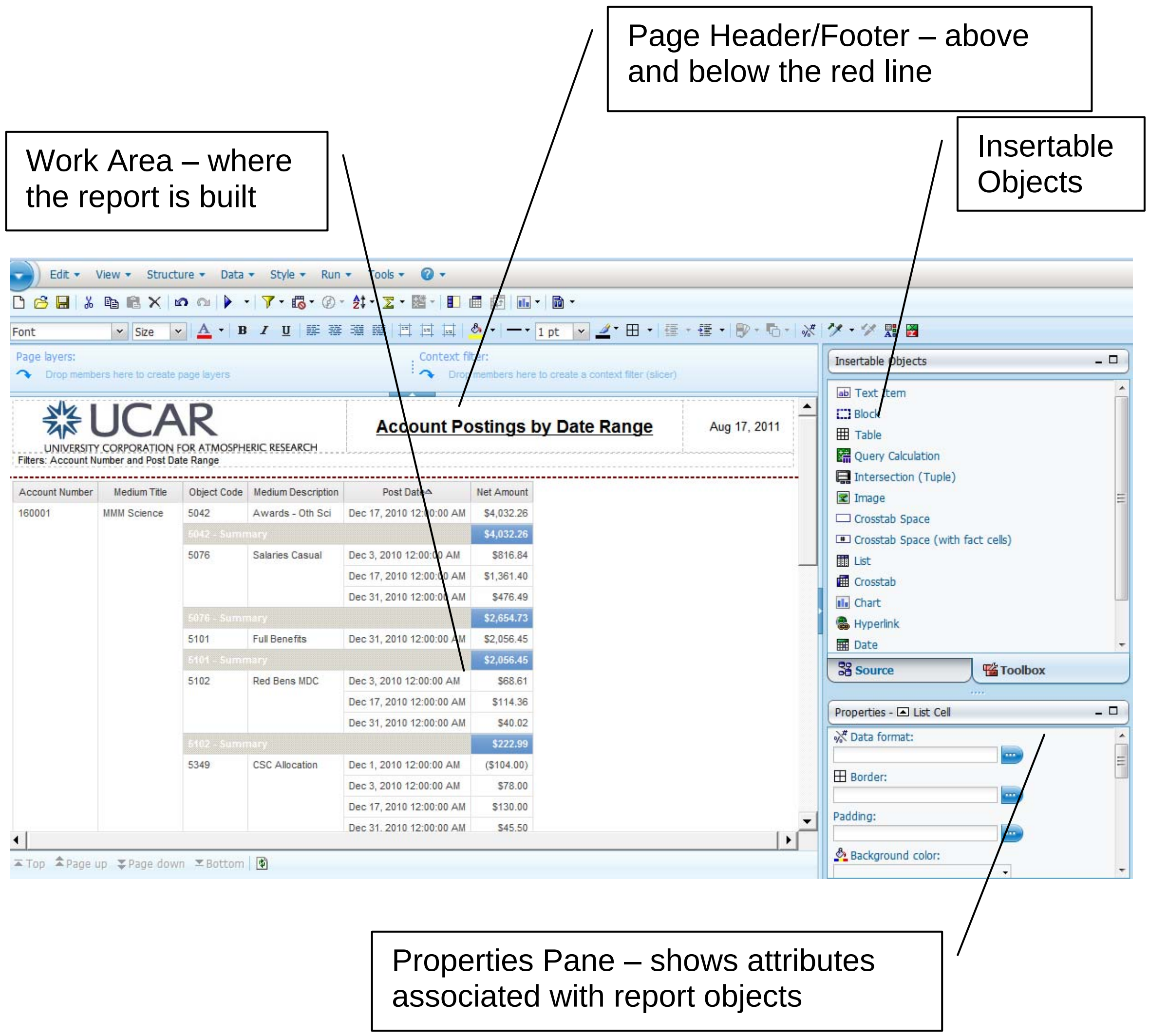
Open an Existing Report in Business Insight Advanced

You can open an existing report in Business Insight Advanced to view the most current data in the query, to make changes to the report, or to use it as the basis of a new report.

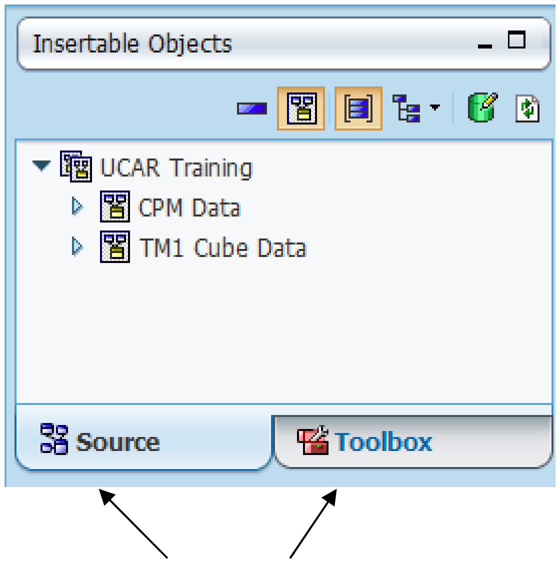
1. Navigate to **Public Folders > IBM Cognos Training > Business Insight Advanced Training > Chapter 2 > Account Postings by Date Range**. In the Actions menu, click on More and then the Open with Business Insight Advanced icon.



The Business Insight Advanced interface is displayed.



Note that the Insertable Objects pane has 2 tabs:



Source and Toolbox

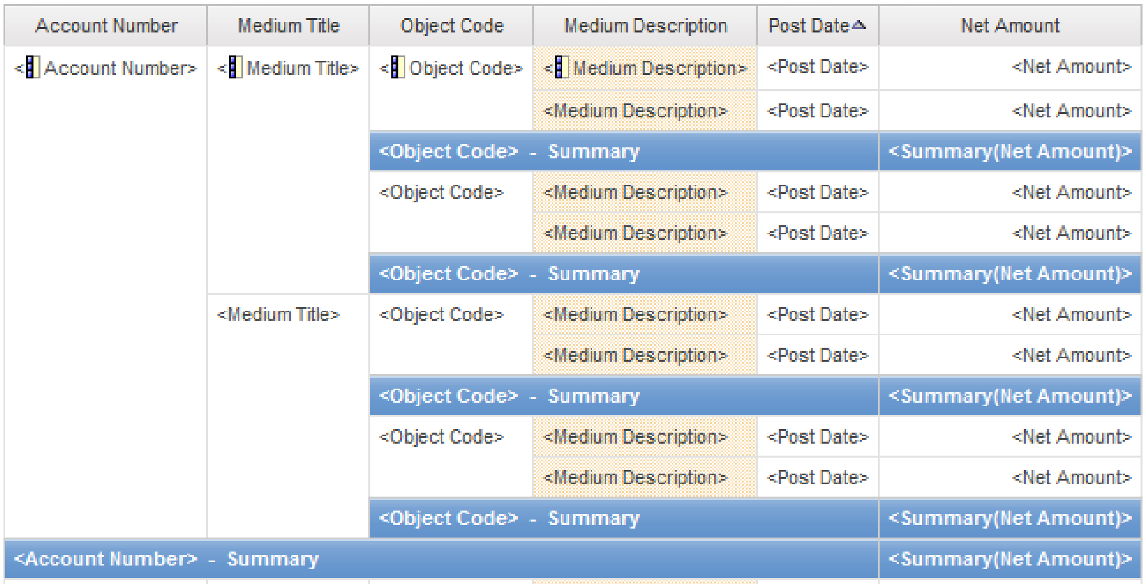
The Source tab allows the developer to insert items directly from the Framework Manager package that was selected.

2. Click on the Source tab to see the different data items than can be inserted into a report.
3. Click on the Toolbox to display all of the special features and formatting options that IBM Cognos provides to add functionality and flexibility to your reports.
4. Highlight different items in the report to see the properties for that item displayed in the Properties pane.

Understanding Business Insight Advanced

While developing reports in Business Insight Advanced, you can perform many actions that are available from the Menu bar.

5. From the **View** menu, select **Page Design** and review the report structure.



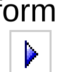
Account Number	Medium Title	Object Code	Medium Description	Post Date	Net Amount
<Account Number>	<Medium Title>	<Object Code>	<Medium Description>	<Post Date>	<Net Amount>
			<Medium Description>	<Post Date>	<Net Amount>
		<Object Code> - Summary			<Summary(Net Amount)>
		<Object Code>	<Medium Description>	<Post Date>	<Net Amount>
			<Medium Description>	<Post Date>	<Net Amount>
		<Object Code> - Summary			<Summary(Net Amount)>
	<Medium Title>	<Object Code>	<Medium Description>	<Post Date>	<Net Amount>
			<Medium Description>	<Post Date>	<Net Amount>
		<Object Code> - Summary			<Summary(Net Amount)>
		<Object Code>	<Medium Description>	<Post Date>	<Net Amount>
			<Medium Description>	<Post Date>	<Net Amount>
		<Object Code> - Summary			<Summary(Net Amount)>
<Account Number> - Summary					<Summary(Net Amount)>

The **Page Design** option allows you to focus on the report layout. It is best to use this option as you are developing queries and until you have determined:

- The specific fields you want to include in the query
- The format you prefer for the report
- How you want to limit the data returned by applying filters

Selecting the **Page Preview** option gives you a better feel for the content of the items you have selected.

Once you are ready to test a report, or to view an existing report, run the report with all data by:

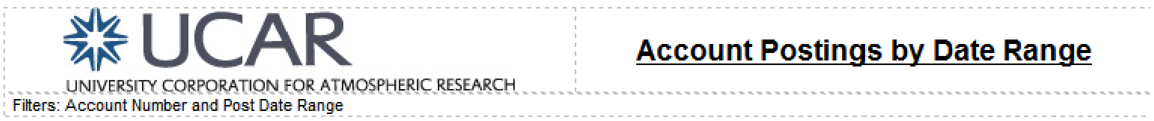
- Selecting your report format from the **Run** menu.
- Using the Run Report  icon in the Toolbar.

Viewing your report using the **Page Preview** option - *before* you are certain that you have selected the correct data items and have applied the appropriate filters - may cause a query to run for a long time before displaying results! In addition, the results may not be accurate or what you expected to see.

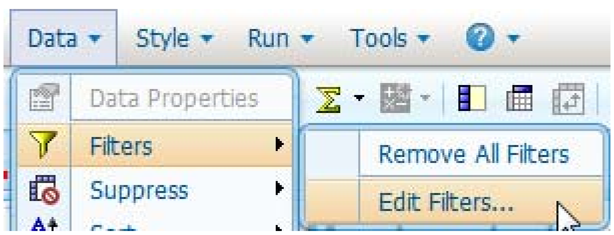
Step-By-Step

Examining the Query Filters

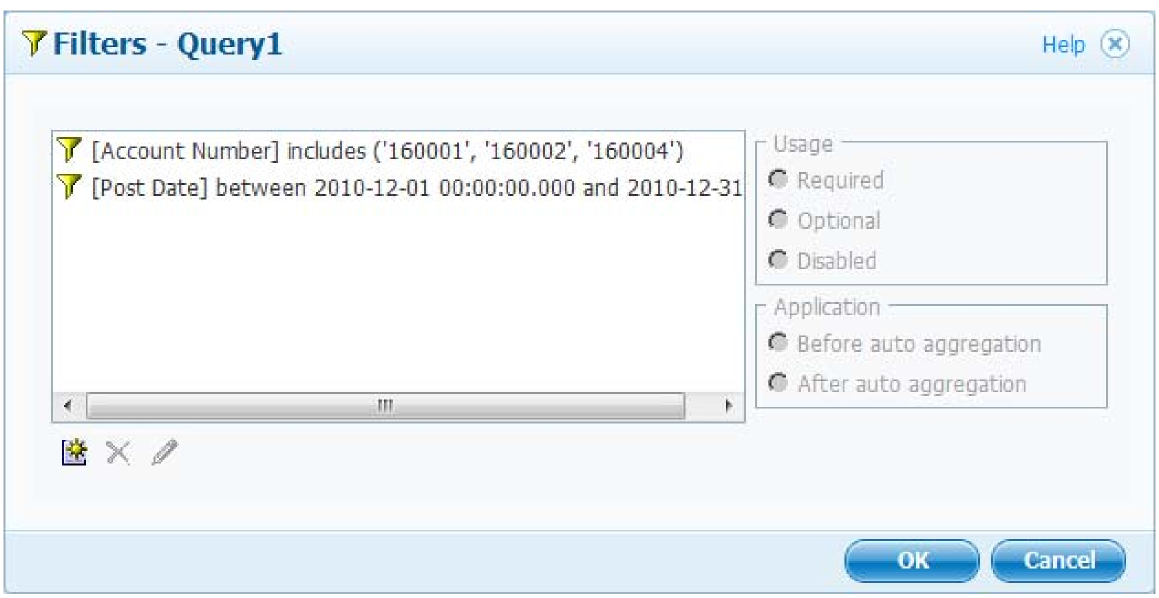
Continuing from the previous exercise, notice that there is a text box under the title of our report that indicates that Filters have been applied to the report:



1. From the **Data** menu, select **Filters**, and then select **Edit Filters**.

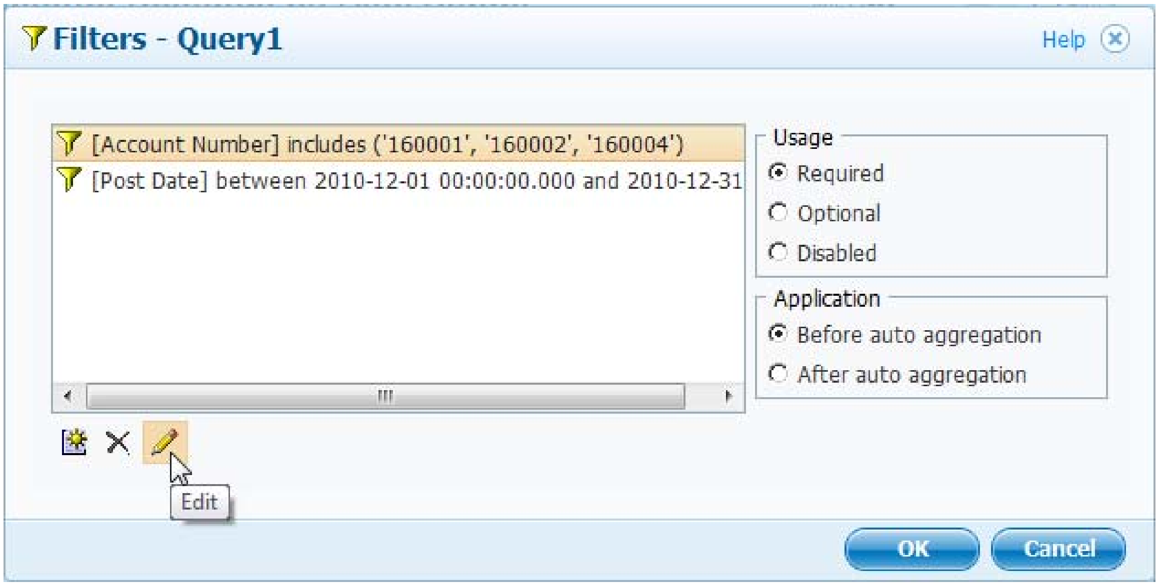


A new dialog box opens displaying the filters applied to the report.

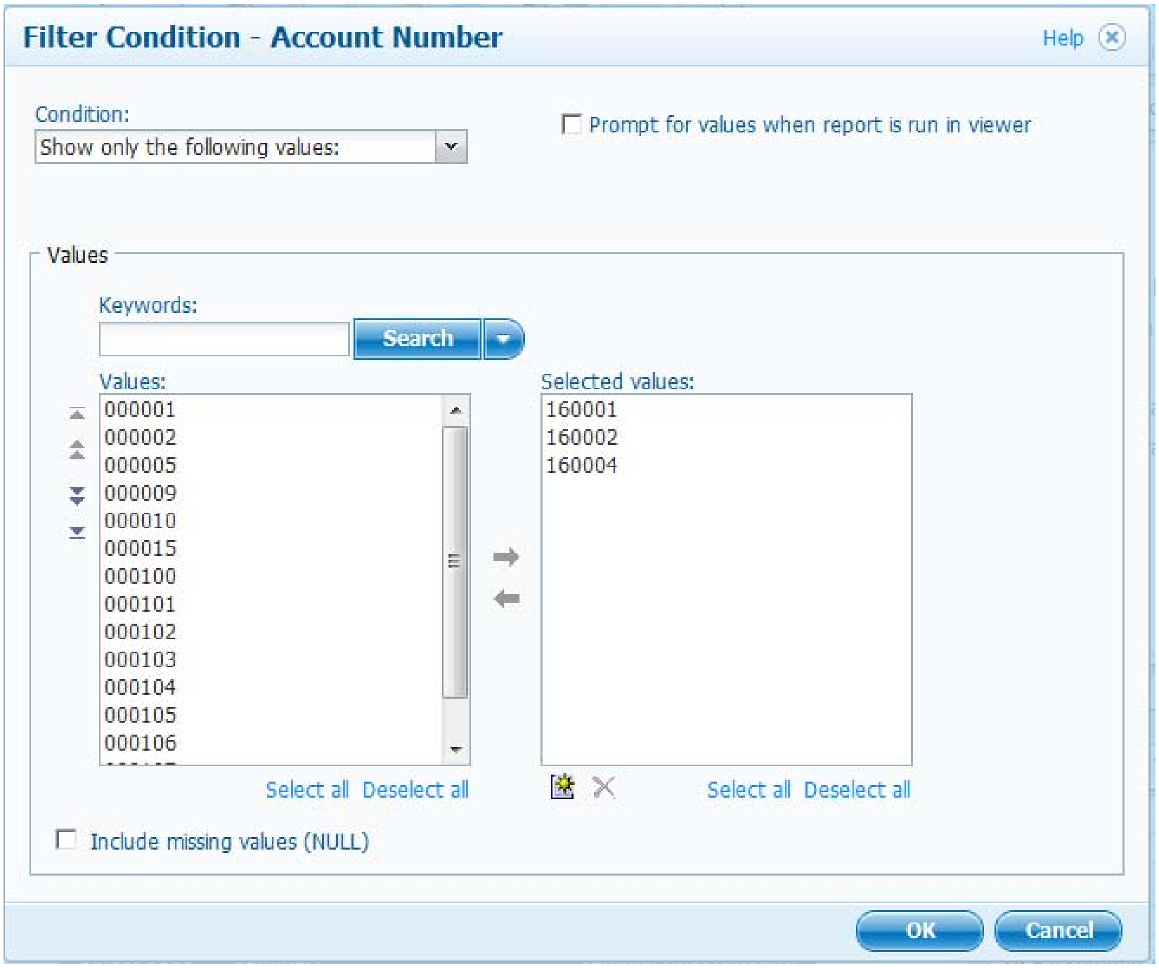


This report has two conditions, both of which must be true.

2. Highlight the first filter and click on the pencil icon to view the filter.

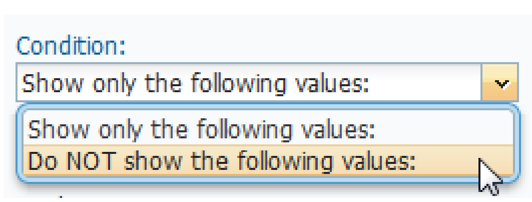


The Filter Condition dialog box displays a list of values from which to choose one or more values for the report. You can see the selected values for Account Number in the right-hand pane.



Note that the combination of including or excluding values and un-checking the Prompt for values when report is run in viewer option is the equivalent of “hard-coding” a filter in your query. **Hard-coding** a filter means that the report runs with the selected values without asking for input from a user.

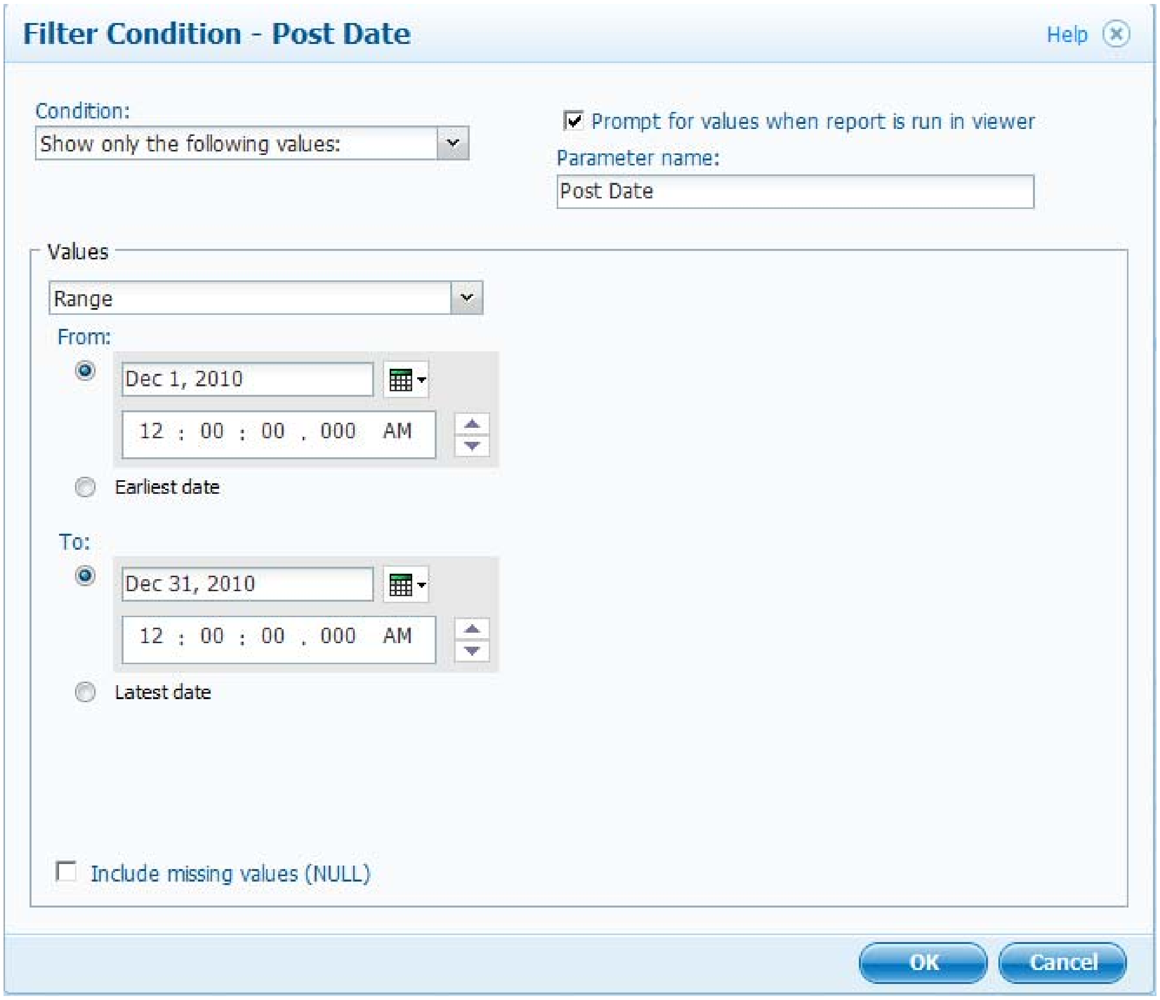
3. Click on the Condition down arrow to see that you also have the option to *NOT show* the filter choices.



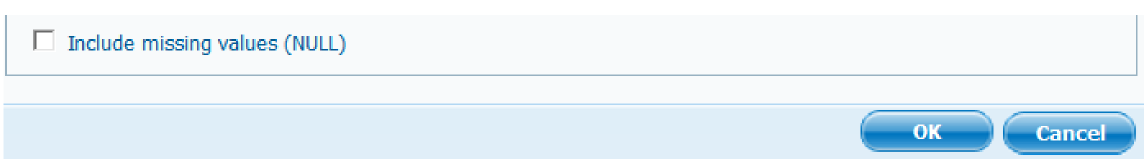
4. Click Cancel.

5. Next, highlight the Post Date filter and click on the Edit icon.

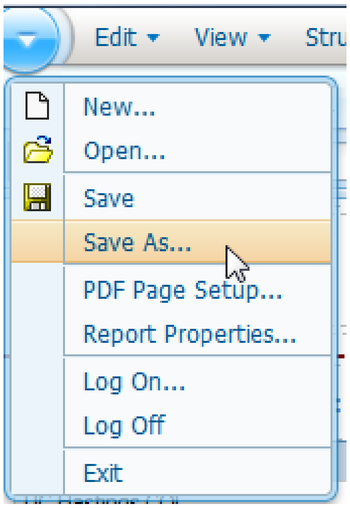
A Values Range prompt appears, giving the user the option to select dates from a Calendar to filter for Post Date. Note that leaving the “Prompt for values when report is run in viewer” option checked is what allows the user to select the Post Date each time the report is run.



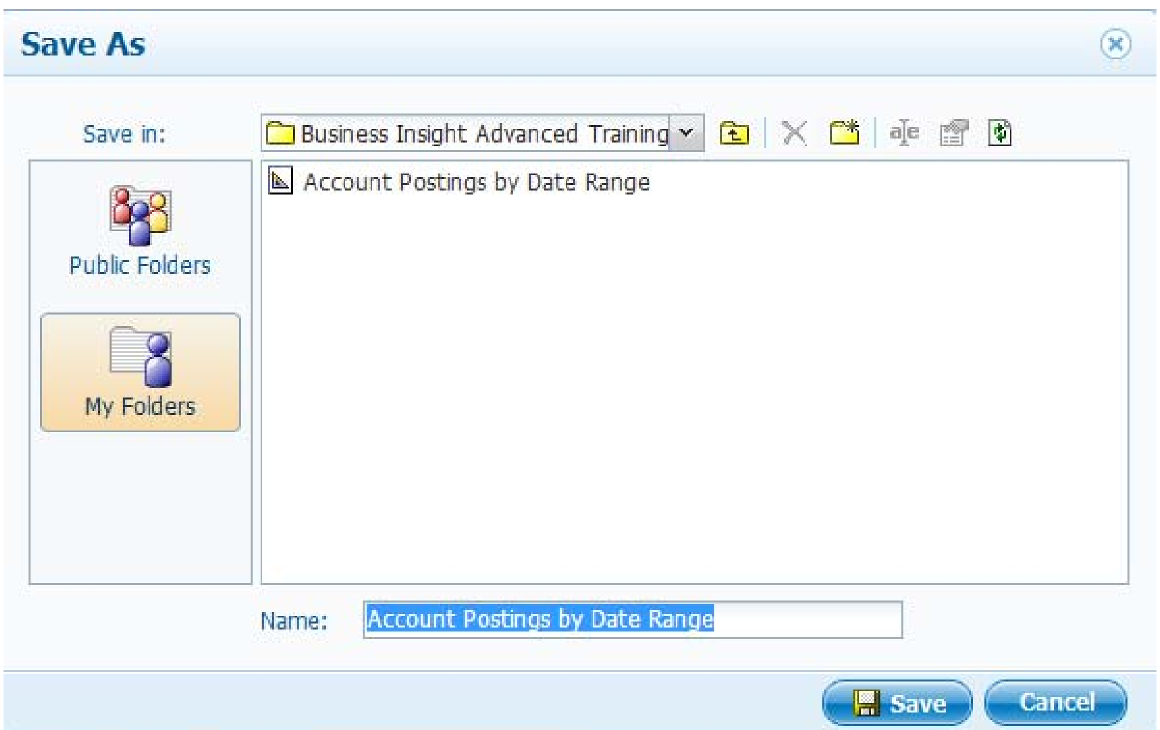
6. Note the check box at the bottom left of the box. Clicking in this box includes missing values. Business Insight Advanced automatically leaves out any missing values. Leave the box blank and click Cancel twice to return to the report.



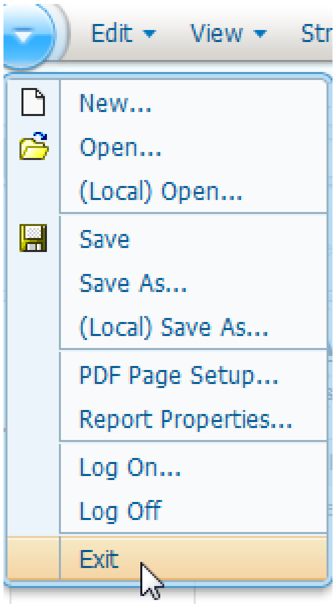
7. From the **Report Actions**  menu, select **Save As** to save this report under a new name in **My Folders > Business Insight Advanced Training**.



8. Verify that the Location is correct – if not; click on My Folders and then the Business Insight Advanced Training folder to modify it.



9. Return to IBM Cognos Connection by clicking on **Exit** in the **Report Actions** menu.



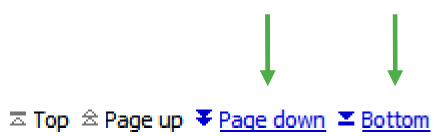
IBM Cognos and Business Insight Advanced Tips

As you work with IBM Cognos and Business Insight Advanced, keep these tips in mind for easier use and better performance.

- **It doesn't work like a browser.** IBM Cognos does not fully support the functionality of the Internet Explorer browser. For example, you may notice that sometimes the Back button works and sometimes you get errors or no response at all. For greater Business Insight Advanced happiness, only use options visible within the IBM Cognos interface and not in your browser.

- **Cancel doesn't really mean Cancel.** When you run a report, you might notice that Cancel is an option while your report is running. Unfortunately, clicking on the Cancel button doesn't cancel the query and can actually contribute to a backlog of data requests if used repeatedly for the same report. Unless you plan to change the report in some way before resubmitting the query, it is better to wait out the report rather than try to interrupt it. As an alternative, you can choose **Select a delivery method.**

- **Navigate to the Bottom for faster performance**. Running a long report in HTML displays navigation options at the bottom of the screen. If you pick **Page down**, the report needs to re-run. Choose **Bottom** instead, which places the entire report into memory (cache) and allows you to more quickly move between pages.



Chapter 3 – Creating a Simple List Report

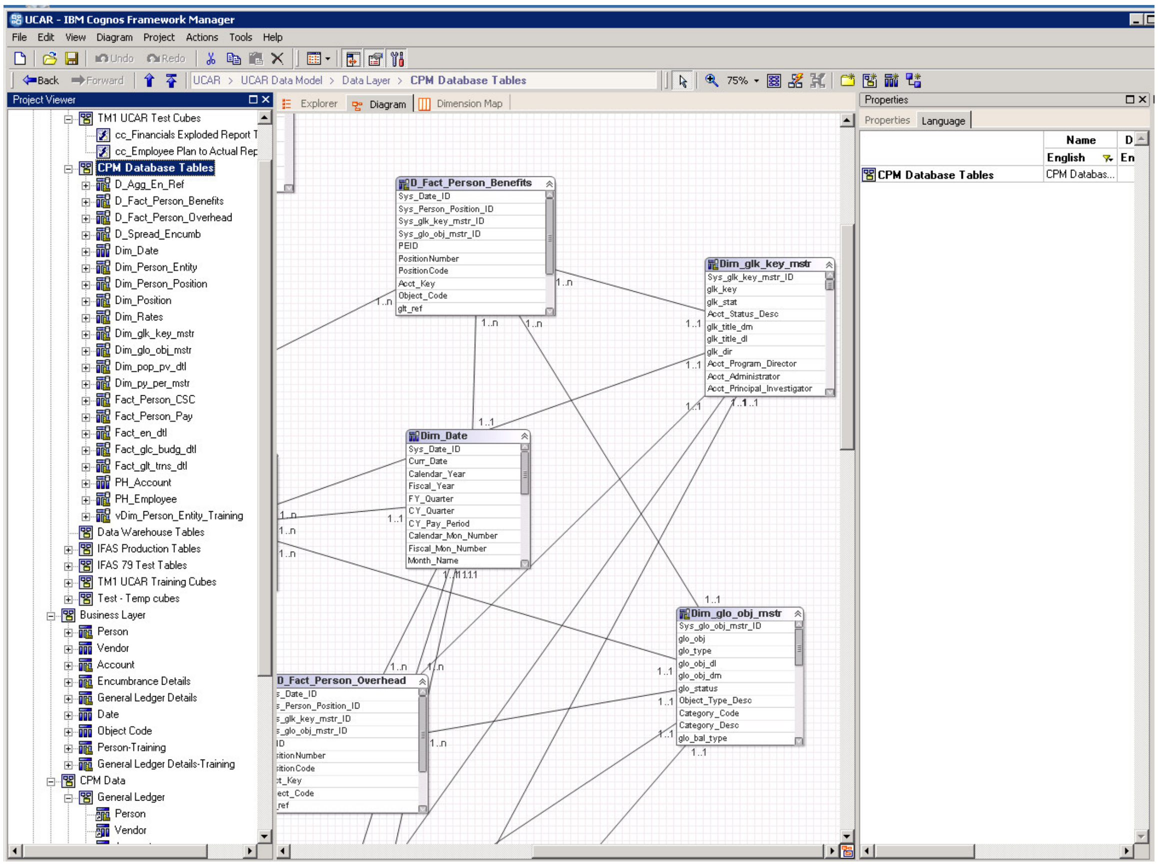
With Business Insight Advanced, you create, view, and run different report types to look at data in different ways or to answer different business questions. Report styles available in Business Insight Advanced include:

Report Style	Description
List	• Shows data row by row • Can show each line of detail in a data set or group similar items together, eliminating duplicate rows (Grouped List Report)
Crosstab	Shows a value at the intersection of each row and column
Chart	Shows data in various graphical formats
Financial	A template based on the Crosstab structure along with a header and footer.

Understanding Packages

New reports are created by inserting items from a "package" into an empty report. Packages are created and "published" from the IBM Cognos Framework Manager application. A Cognos package normally groups data from the organization's underlying data sources into smaller, closely related, and logical subsets. All of the required relational links are created in the package. The Framework Manager administrator has the flexibility to create packages that are much more user-friendly than the underlying data for report and query authors.

You are working with the **UCAR Training** package.



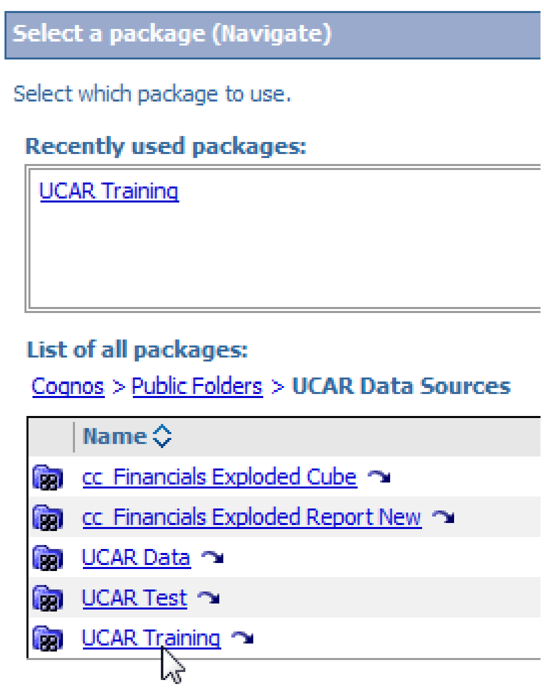
A list report shows data row by row, or record by record. Many users think of this as “detailed data” or “transaction level data”, which is not always the case, depending on the data source and the query populating the list report.

Step-By-Step

Creating a Business Insight Advanced Report

Let’s create a new list report that lists information about transaction postings for selected accounts.

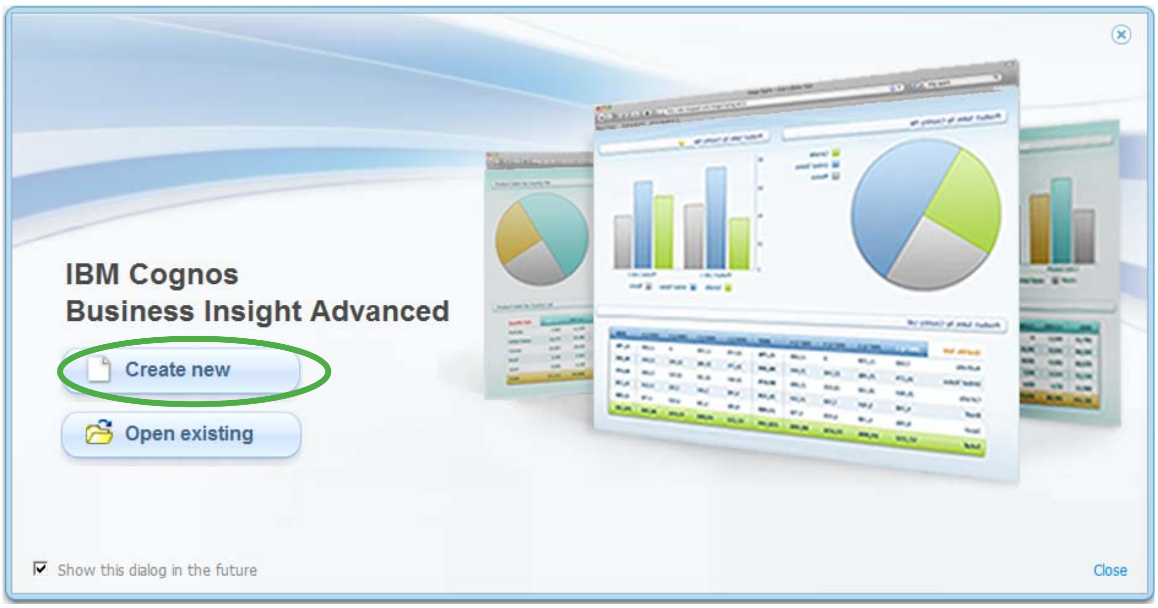
1. To create a simple list report, launch Business Insight Advanced and select the **UCAR Training** package by either selecting it from the Recently used packages list, or scrolling through the folders to **Cognos > Public Folders > UCAR Data Sources > UCAR Training**.



NOTE

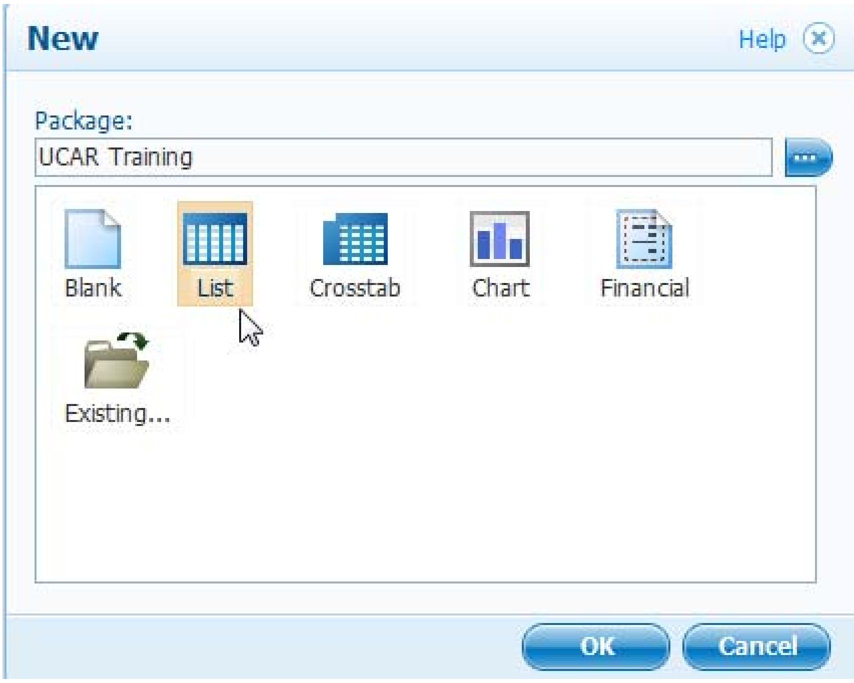
Until you have created queries of your own, you do not see options in the **Recently used packages** list.

2. Choose Create new report.



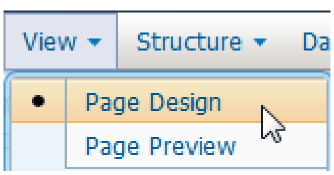
UCAR
UNIVERSITY CORPORATION FOR ATMOSPHERIC RESEARCH

3. Select List and click OK.

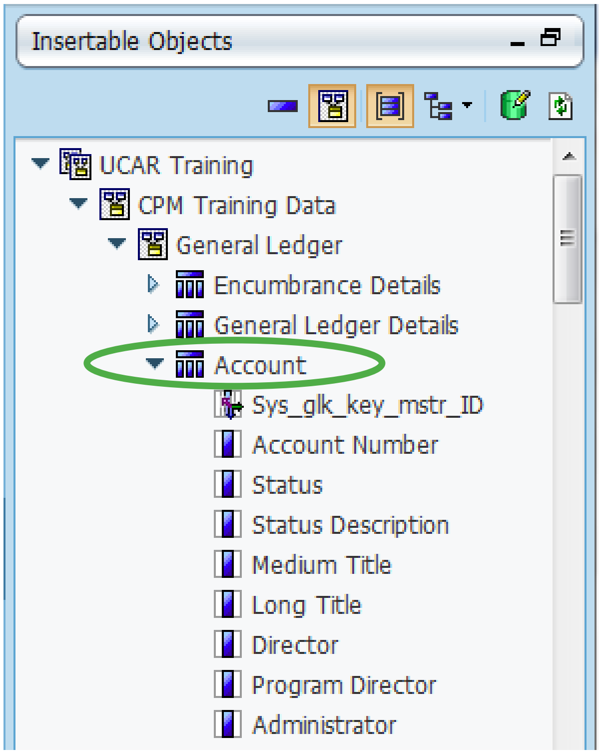


Recall that until appropriate filters have been added to our report, it is more efficient to use the Page Design option.

4. From the **View** menu, select **Page Design**.



5. From the Insertable Objects pane, in the Source tab, navigate to the UCAR Training package, CPM Training Data namespace, General Ledger namespace, Account query subject, and then expand it:



To select items for the report you have the following options:

- Highlight the query subject to select all of the query items in that group.
- Click once to select a single item.
- Ctrl-click to highlight multiple items.
- Shift-click to highlight a contiguous group of items.

You can add the selected item(s) to the report in three ways:

- Drag - When dragging into a list make sure that you see a triple vertical bar at your insertion point. Ctrl-click to select and insert multiple items at a time. When dragging near another object, a dark single bar on the left indicates that the object is placed above the existing object. A bar on the right indicates placement below the existing object.
- Double-click – this inserts the object at the end of the list, or at the current cursor placement.
- Right-click – first select the item, right-click and select Insert. Objects are inserted at the end of the list, or at the current cursor placement.

6. From the Account query subject, add the following query items to your report:
    - Account Number
    - Medium Title

7. Expand the Object Code query subject and add:
    - Object Code
    - Medium Description

8. From the General Ledger Details query subject, add:
    - Net Amount
    - Post Date

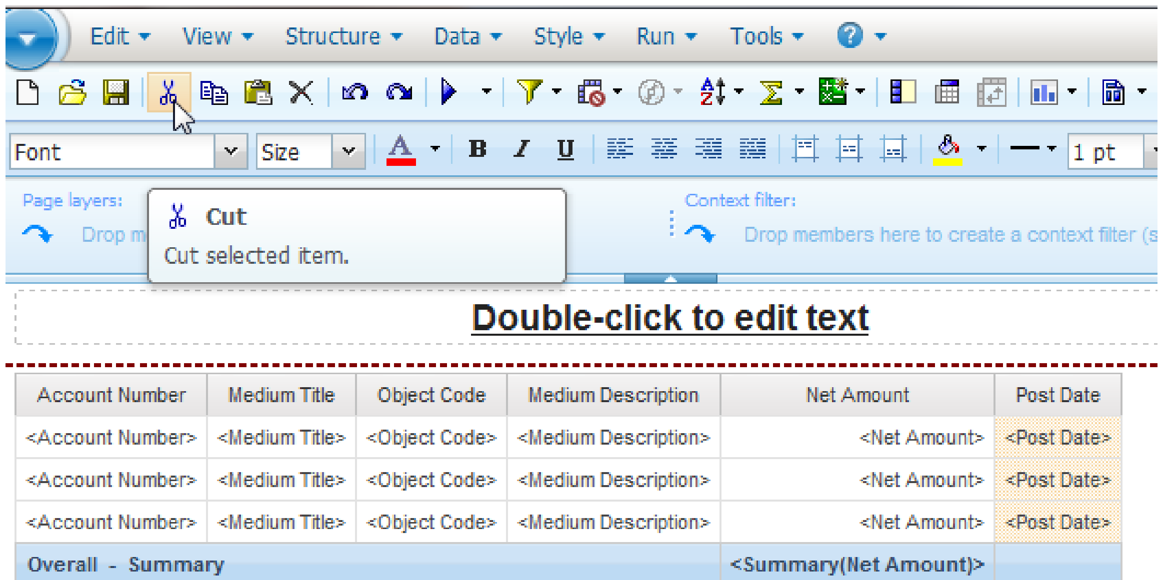
Your report should look like this:

Account Number	Medium Title	Object Code	Medium Description	Net Amount	Post Date
<Account Number>	<Medium Title>	<Object Code>	<Medium Description>	<Net Amount>	<Post Date>
<Account Number>	<Medium Title>	<Object Code>	<Medium Description>	<Net Amount>	<Post Date>
<Account Number>	<Medium Title>	<Object Code>	<Medium Description>	<Net Amount>	<Post Date>
Overall - Summary				**<Summary(Net Amount)>**	

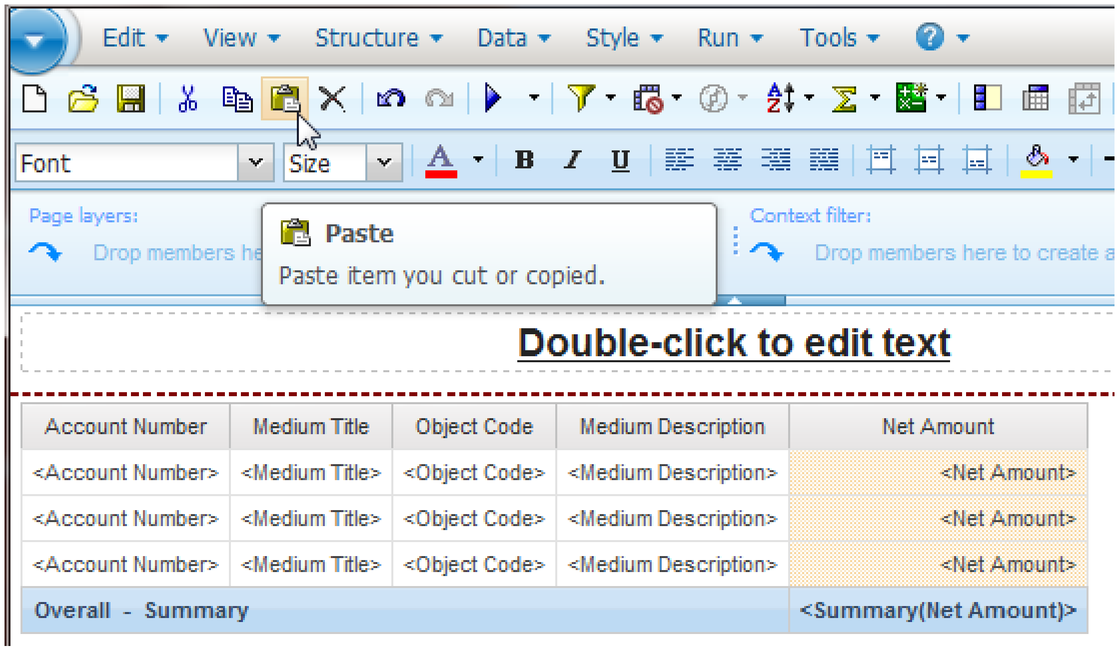
Changing the Column Order

You can reorder columns in a report either by dragging and dropping the columns or by using the Cut and Paste functionality that you know from other programs. Now that you have seen the report layout, you decide you want to move Post Date before Net Amount.

9. Highlight the Post Date column, and click on the Cut icon in the Toolbar.



10. The Post Date column disappears. Next, highlight the Net Amount column and click on the Paste icon in the Toolbar.



The Post Date column is inserted to the left of the selected column.

Account Number	Medium Title	Object Code	Medium Description	Post Date	Net Amount
<Account Number>	<Medium Title>	<Object Code>	<Medium Description>	<Post Date>	<Net Amount>
<Account Number>	<Medium Title>	<Object Code>	<Medium Description>	<Post Date>	<Net Amount>
<Account Number>	<Medium Title>	<Object Code>	<Medium Description>	<Post Date>	<Net Amount>
Overall - Summary					<Summary(Net Amount)>

Now let's move the Medium Description column before the Object Code column.

11. Highlight the Medium Description column and drag it to the left of Object Code.

Account Number	Medium Title	Object Code	Medium Description	Post Date	Net Amount
<Account Number>	<Medium Title>	<Object Code>	<Medium Description>	<Post Date>	<Net Amount>
<Account Number>	<Medium Title>	<Object Code>	<Medium Description>	<Post Date>	<Net Amount>
<Account Number>	<Medium Title>	<Object Code>	<Medium Description>	<Post Date>	<Net Amount>
Overall - Summary					<Summary(Net Amount)>

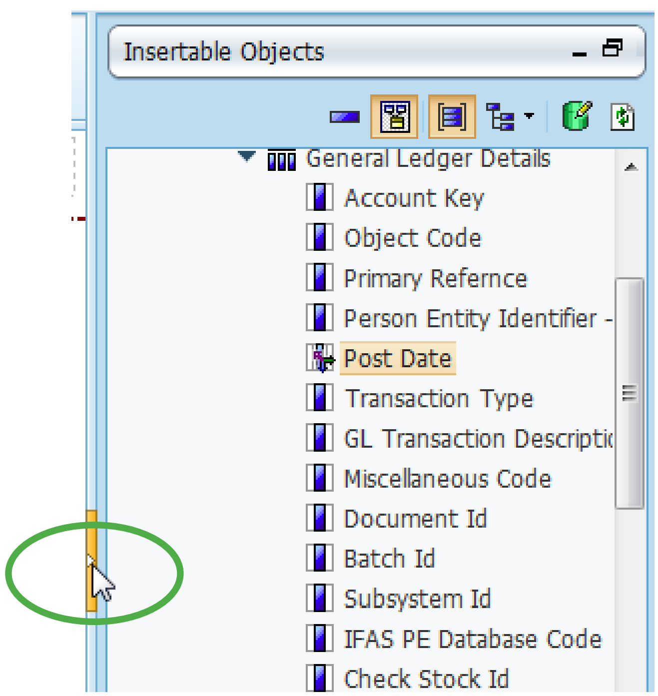
Be sure to wait until you see a triple vertical bar on the left side of Object Code before dropping the Medium Description column into your report.

Account Number	Medium Title	Medium Description	Object Code	Post Date	Net Amount
<Account Number>	<Medium Title>	<Medium Description>	<Object Code>	<Post Date>	<Net Amount>
<Account Number>	<Medium Title>	<Medium Description>	<Object Code>	<Post Date>	<Net Amount>
<Account Number>	<Medium Title>	<Medium Description>	<Object Code>	<Post Date>	<Net Amount>
Overall - Summary					**<Summary(Net Amount)>**

12. Move the Medium Description column back to the right of Object Code.

NOTE

To more easily preview report data and layout, you can temporarily hide the Insertable Objects pane as shown below. Toggle the arrow a second time to show the tab again.



Deleting a Column

13. Highlight the column you want to delete (Medium Title) then:
    - Click the Delete icon in the Toolbar, or
    - Right-click on the column to find **Delete** in the shortcut menu, or
    - Select **Delete** from the **Edit** menu, or
    - Press the Delete key on your keyboard

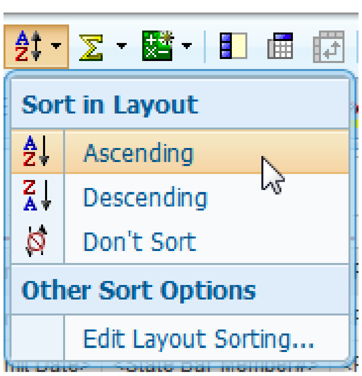
14. We didn't really want to delete this column, so use one of the most useful functions in IBM Cognos – click the Undo icon. If you make any mistakes, either before or after saving (as long as you haven't already closed the query), the **Undo** feature works extremely well and saves the last 10 actions.

Sorting Data

You can sort data in ascending or descending, alphabetical, or numeric order. When sorting grouped data, you can sort the detail values or you can sort by the summary values in the footers.

The default sort order in Business Insight Advanced is ascending order. You can sort by selecting multiple fields; however, the sort priority is from left to right where the leftmost column is sorted first.

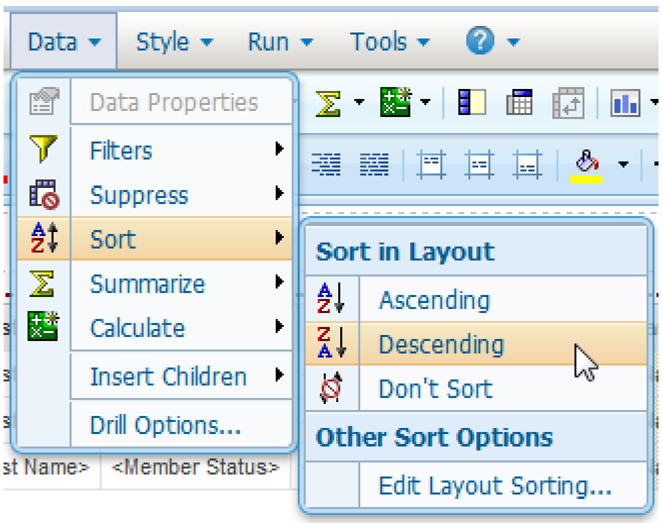
15. Click once in the Post Date column.
16. Click on the Sort icon in the Toolbar and select **Ascending**.



The report sorts on Post Date, and also displays the sort option in the column heading for Post Date.

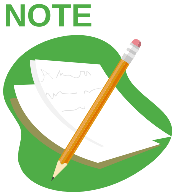
Account Number	Medium Title	Object Code	Medium Description	Post Date▲	Net Amount
<Account Number>	<Medium Title>	<Object Code>	<Medium Description>	<Post Date>	<Net Amount>
<Account Number>	<Medium Title>	<Object Code>	<Medium Description>	<Post Date>	<Net Amount>
<Account Number>	<Medium Title>	<Object Code>	<Medium Description>	<Post Date>	<Net Amount>
Overall - Summary					<Summary(Net Amount)>

17. Select the Post Date column again.
18. This time, open the **Data** menu, select the **Sort** option, and select Descending.



19. To remove sorting, select **Data > Sort > Don't Sort**. For now, change the sorting back to Ascending.

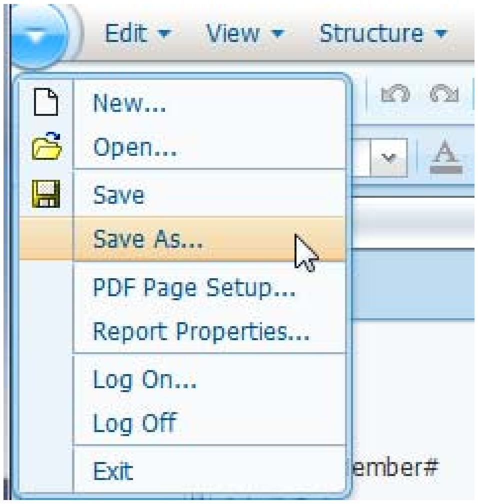
NOTE



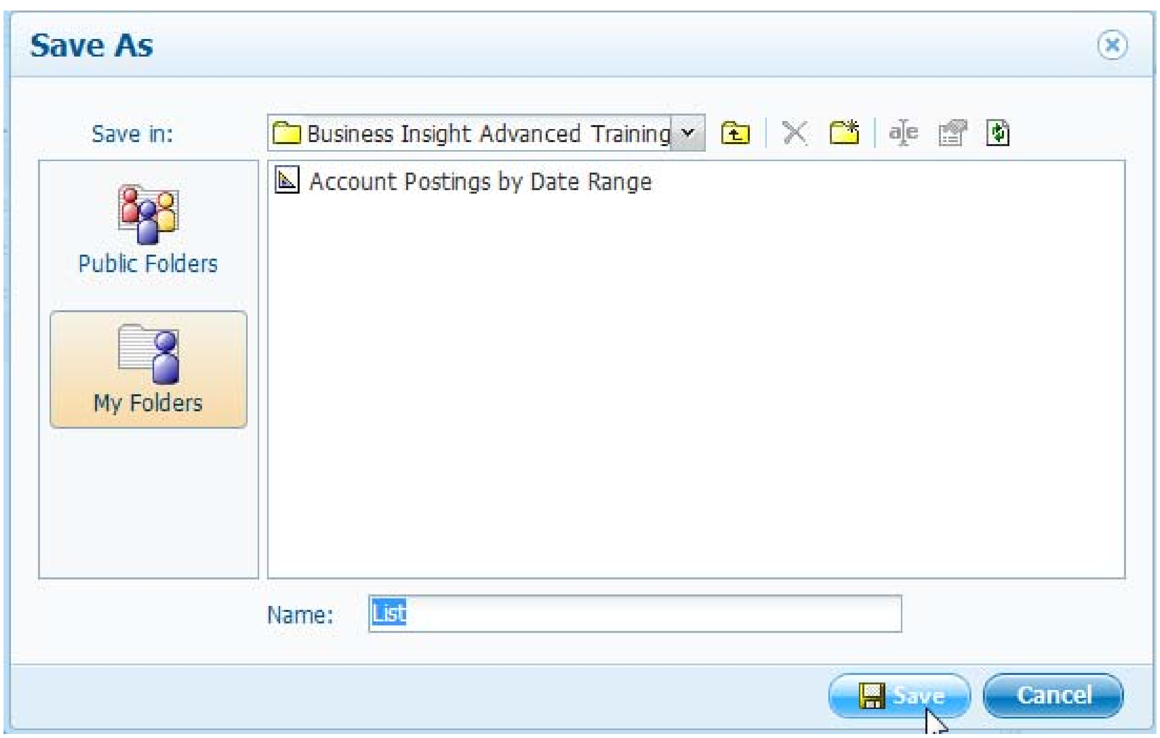
The primary sort in Business Insight Advanced is the field furthest to the left of your list report.

Saving a Report

20. Choose Save or Save As  from the **Report Actions**  menu to save this report.



21. Select My Folders and click OK.
22. Navigate to your **Business Insight Advanced Training** folder and save the report specification as **List**.



NOTE

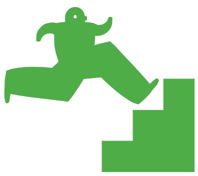
When you save a report in Business Insight Advanced, you are actually saving the report specification: a set of instructions for extracting and formatting a particular set of data. You are not saving a “snapshot” of the data. You can, however, generate the report in another output option, i.e., PDF or Excel, and save it to another location in order to reflect the state of the data at a particular point in time.

Chapter 4 – Filtering Relational Data

A simple list report typically displays rows and rows of detailed data that may or may not be terribly meaningful to the user. Most of the time, users want to narrow the data set by some sort of criteria, and remove redundant data by grouping and summarizing on similar data items.

“Filtering” limits the report to include only the data that matches your criteria.

Step-By-Step



Filtering Data in Business Insight Advanced

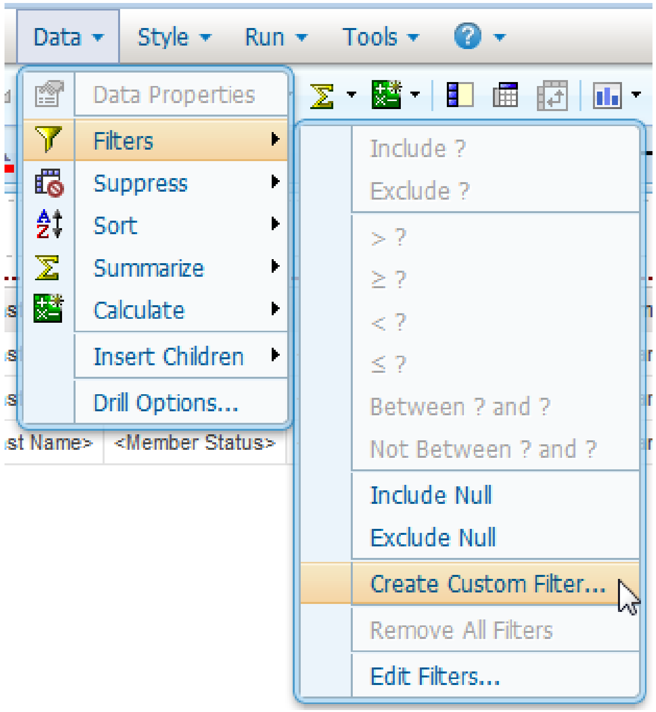
1. Start with your **List** report from Chapter 3.

Account Number	Medium Title	Object Code	Medium Description	Post Date	Net Amount
<Account Number>	<Medium Title>	<Object Code>	<Medium Description>	<Post Date>	<Net Amount>
<Account Number>	<Medium Title>	<Object Code>	<Medium Description>	<Post Date>	<Net Amount>
<Account Number>	<Medium Title>	<Object Code>	<Medium Description>	<Post Date>	<Net Amount>
Overall - Summary					<Summary(Net Amount)>

Before we run this report with actual data, let’s assume that we only want to see this information for specific accounts.

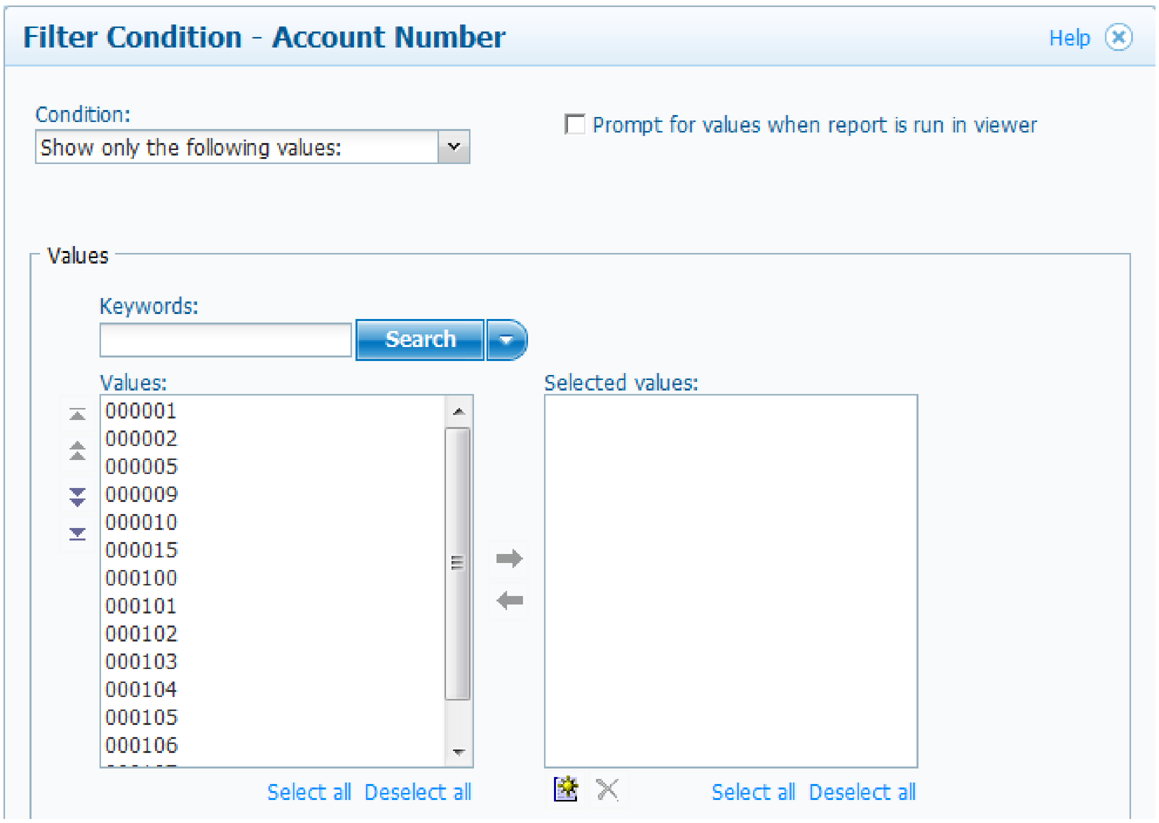
2. We can add a Filter on a specific report item by clicking once in the column of the item by which you want to limit the data. Select the Account Number column.

3. Click on the **Data** menu, select **Filters,** and select **Create Custom Filter.**

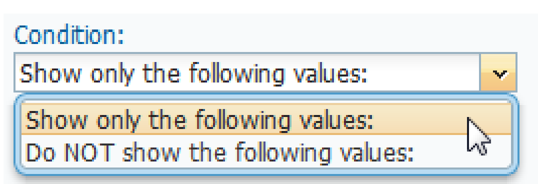


The Filter Condition dialog box appears. This display varies depending on the type of data you are filtering.

- When you filter on a numeric or date report item, you specify values, compare values, or identify a range of acceptable values (for example, 1 to 5).
- When you filter on a non-numeric, non-date column, such as Account Number (which is a character data type), you specify the particular values that are returned when the report is run.

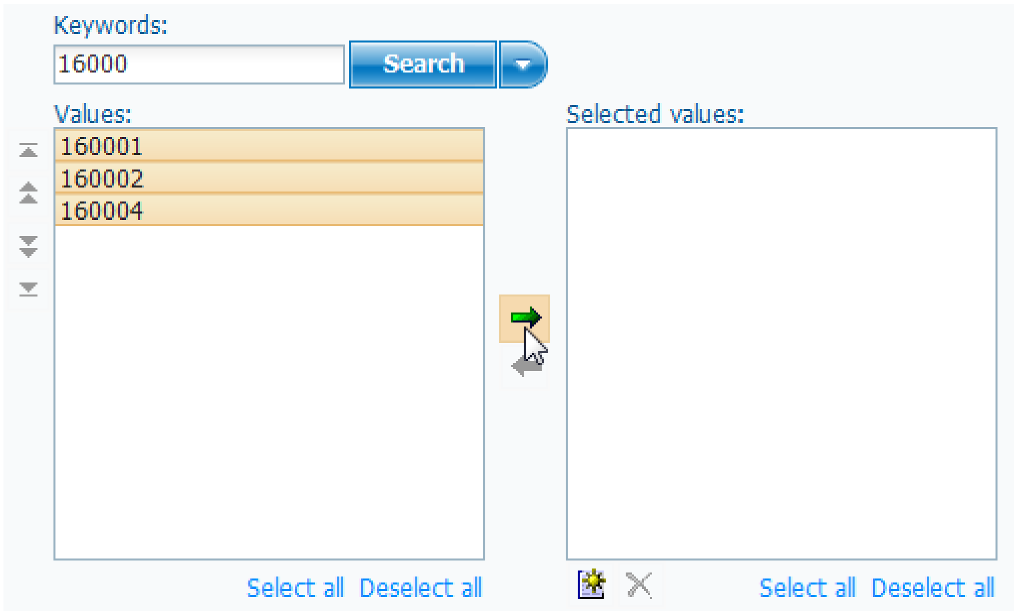


4. There are two different conditions available: either Show only the following values or Do NOT show the following values. Select Show only the following values.

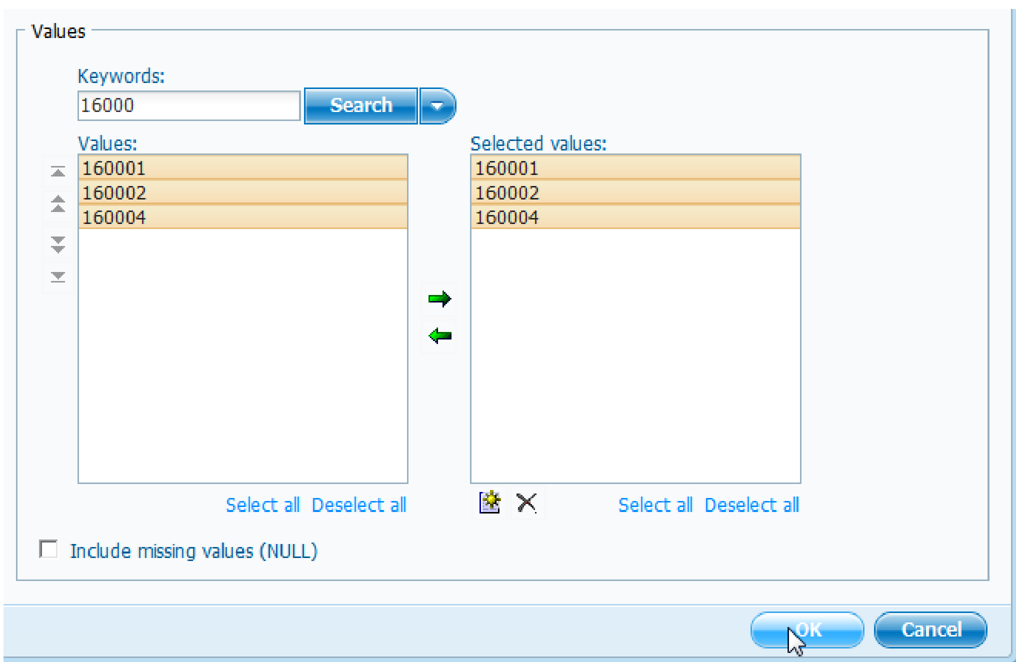


5. Type in "16000" as the Keyword, and click the Search down arrow to see that we are searching for values that start with 16000. Click Search.

6. Select all the values that are returned, and click the green arrow to move them into the Selected values panel.



7. Click OK.

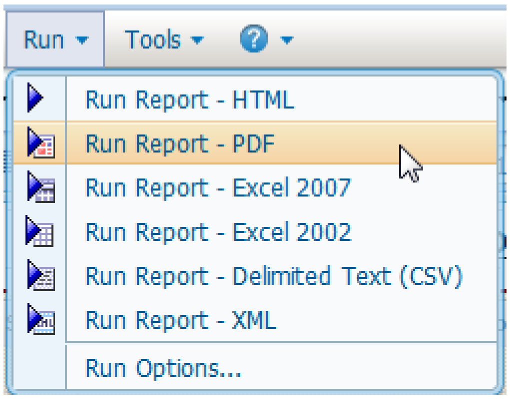


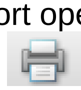
You now have a filter applied to your report that limits the Account Number values.

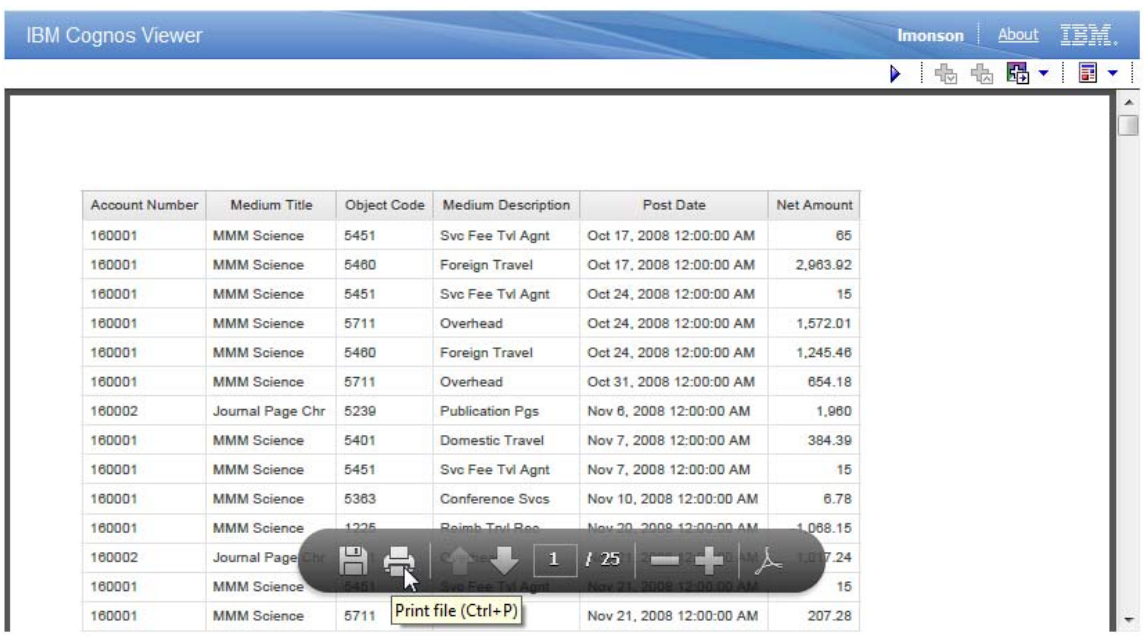
Printing Reports

To print the report, send the report to another output format, such as PDF or Excel, and print from that application.

8. In the **Run** menu, select the **Run Report - PDF** option.



The report opens in PDF format in IBM Cognos Viewer. You would click on the Print file  icon to print the report.

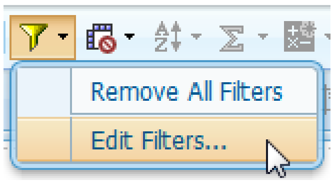


Account Number	Medium Title	Object Code	Medium Description	Post Date	Net Amount
160001	MMM Science	5451	Svc Fee Tvl Agnt	Oct 17, 2008 12:00:00 AM	65
160001	MMM Science	5460	Foreign Travel	Oct 17, 2008 12:00:00 AM	2,963.92
160001	MMM Science	5451	Svc Fee Tvl Agnt	Oct 24, 2008 12:00:00 AM	15
160001	MMM Science	5711	Overhead	Oct 24, 2008 12:00:00 AM	1,572.01
160001	MMM Science	5460	Foreign Travel	Oct 24, 2008 12:00:00 AM	1,245.46
160001	MMM Science	5711	Overhead	Oct 31, 2008 12:00:00 AM	654.18
160002	Journal Page Chr	5239	Publication Pgs	Nov 6, 2008 12:00:00 AM	1,960
160001	MMM Science	5401	Domestic Travel	Nov 7, 2008 12:00:00 AM	384.39
160001	MMM Science	5451	Svc Fee Tvl Agnt	Nov 7, 2008 12:00:00 AM	15
160001	MMM Science	5363	Conference Svcs	Nov 10, 2008 12:00:00 AM	6.78
160001	MMM Science	1225	Reimb Trvl Rec	Nov 20, 2008 12:00:00 AM	1,068.15
160002	Journal Page	[illegible]	[illegible]	[illegible]	[illegible]7.24
160001	MMM Science	5451	Svc Fee Tvl Agnt	Nov 21, 2008 12:00:00 AM	15
160001	MMM Science	5711	[illegible]	Nov 21, 2008 12:00:00 AM	207.28

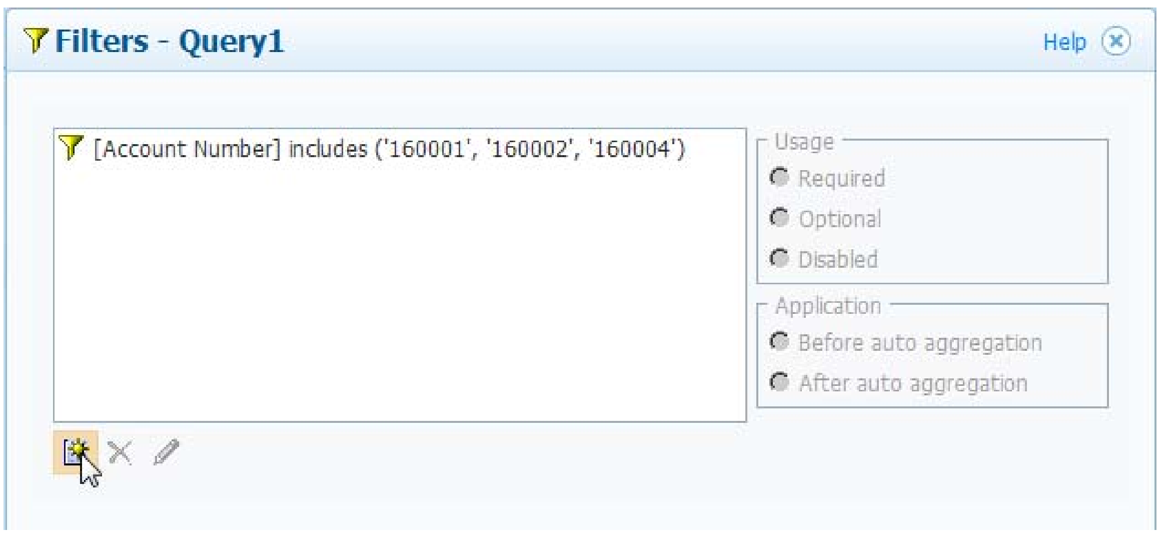
9. Close IBM Cognos Viewer to return to Business Insight Advanced.

Let's now add a combined filter on Net Amount and Post Date. We want to be able to select a specific value comparison on Net Amount when we run the report. Let's also combine the Net Amount filter with an option to select a range for the Post Date.

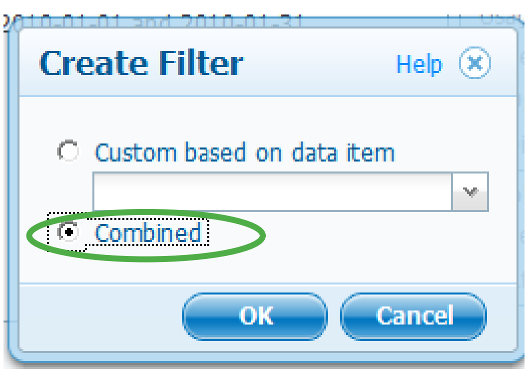
10. Click on the Filter icon in the Toolbar (the Toolbar icons offer alternatives to using the Menu options), and select **Edit Filters**.



11. Click on the New icon to create a new filter.

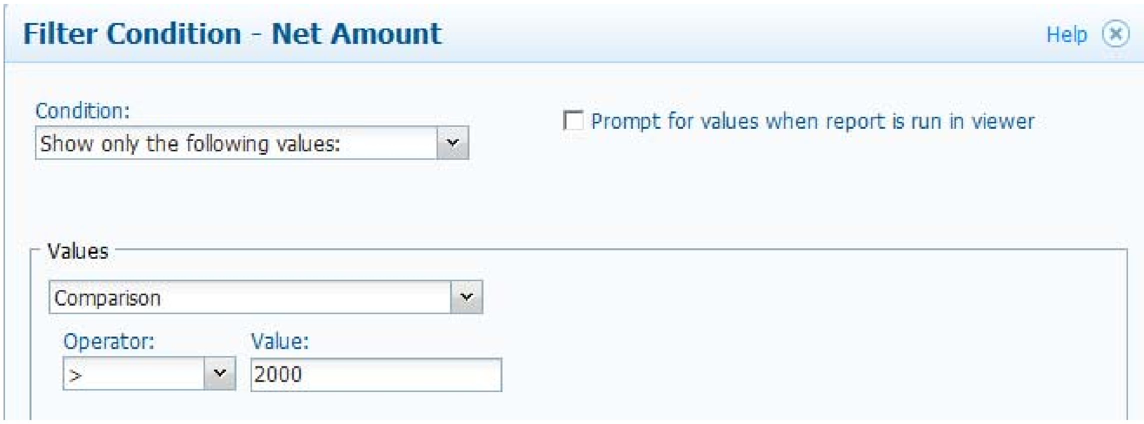


12. You have the option to create a filter on one data item or to create a combined filter. Select Combined and click OK.

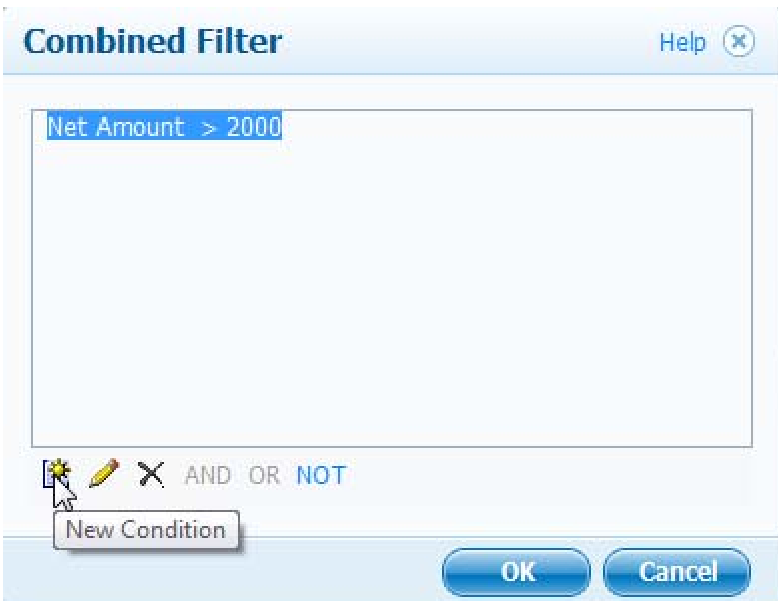


13. Select **Net Amount** and click OK.

14. Complete the Filter Condition to show only Net Amounts greater than $2,000. Click OK.

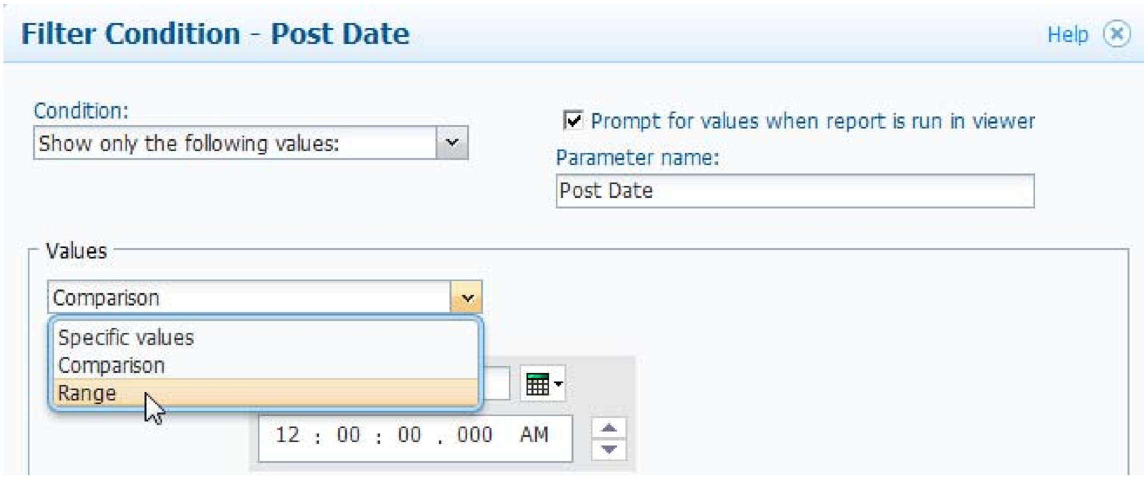


15. In the Combined Filter dialog box, add a new filter.

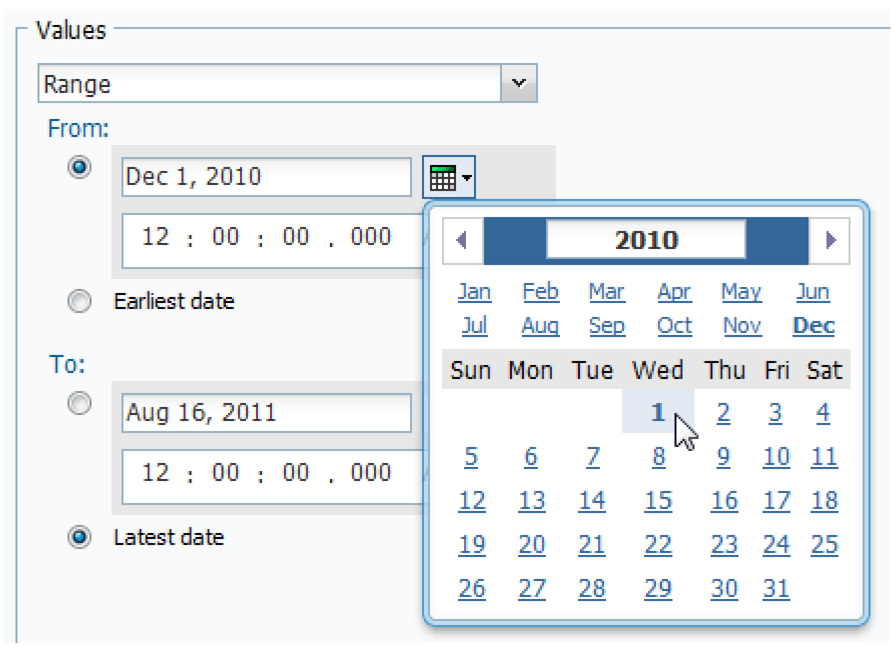


16. Select **Post Date** from the list and click OK.

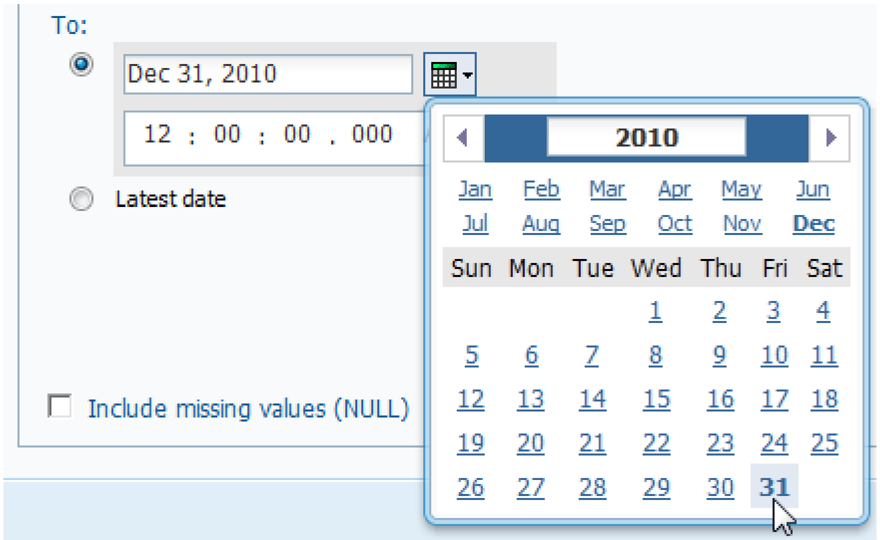
17. For our Post Date filter condition, complete as shown so that the end user is prompted for a date range when the report is run.



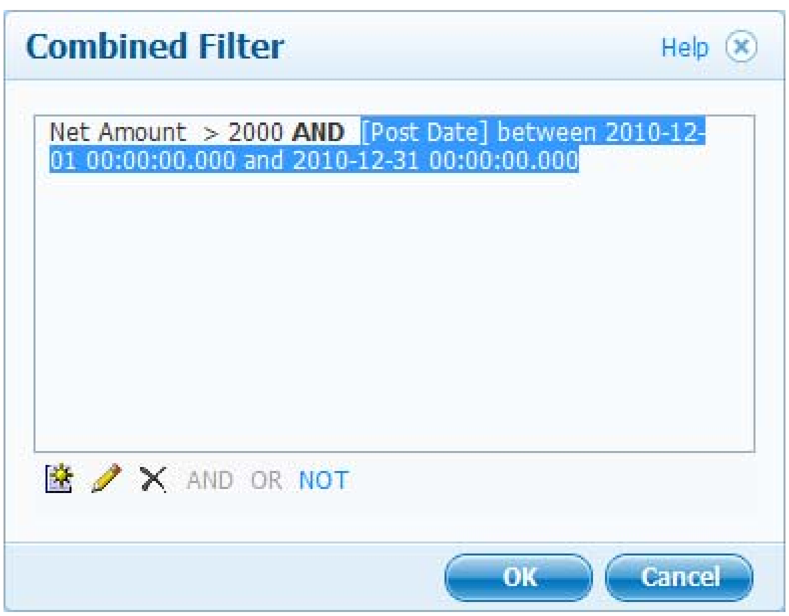
18. Select Dec 1, 2010 as the From value.



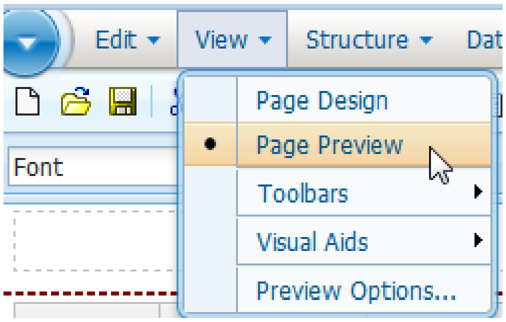
19. Select Dec 31, 2010 as the To value and click OK.



20. Note that we now have a Combined Filter based on a Net Amount **AND** Post Date condition. When creating a combined filter, you have the option to select the operator. Selecting **AND** means that BOTH criteria must be met. Selecting **OR** means that either criterion could be met. Click OK twice to return to the report.



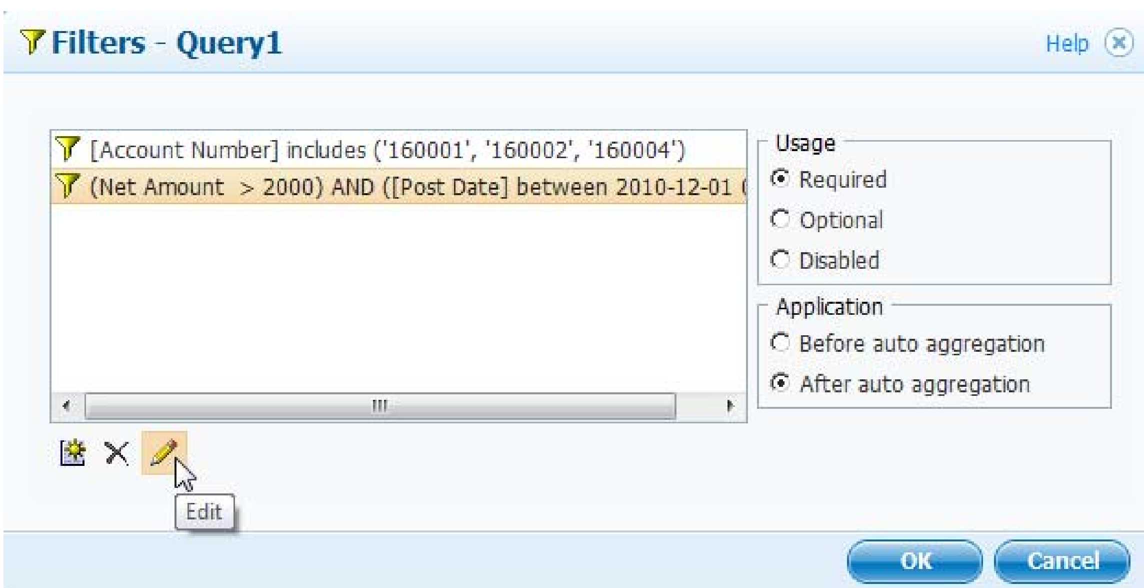
21. From the **View** menu, select **Page Preview**.



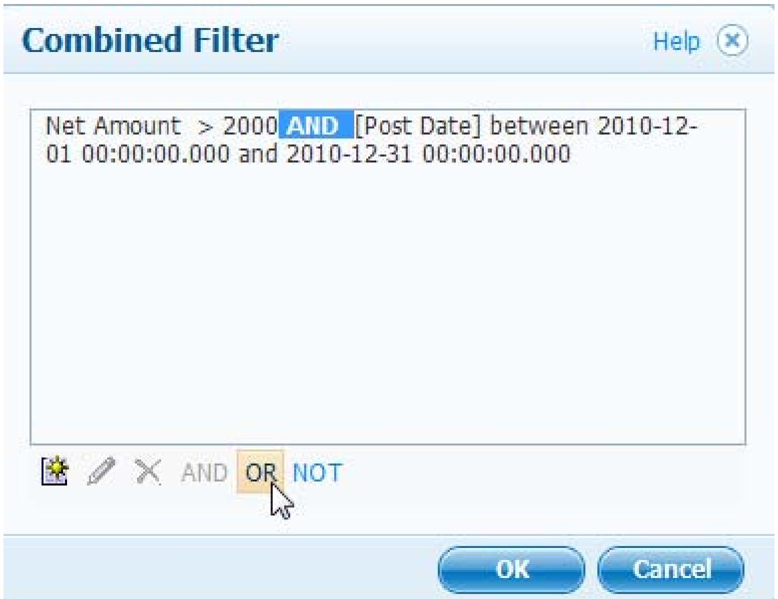
Your report only displays data where the Post Date is in December 2010 and with a Net Amount greater than $2,000.

Account Number	Medium Title	Object Code	Medium Description	Post Date	Net Amount
160001	MMM Science	5042	Awards - Oth Sci	Dec 17, 2010 12:00:00 AM	4,032.26
160001	MMM Science	5712	Overhead	Dec 17, 2010 12:00:00 AM	2,742.99
160001	MMM Science	5101	Full Benefits	Dec 31, 2010 12:00:00 AM	2,056.45
Overall - Summary					8,831.7

22. Run the report using the **Run Report – HTML** menu selection to see the prompt you created on Post Date. Choose December 1 – 31, 2010 as your From and To date range in response to the prompt.
23. Return to **Edit Filters**, select your combined filter, and click the Edit icon.



24. Select the **AND** operator and change it to **OR**. Click OK twice.



Note that your report now has additional records.

- Your report now returns all Post Dates with Net Amounts greater than $2,000.
- Click to the Bottom of the report to see that all December 2010 Post Dates return all Net Amounts.

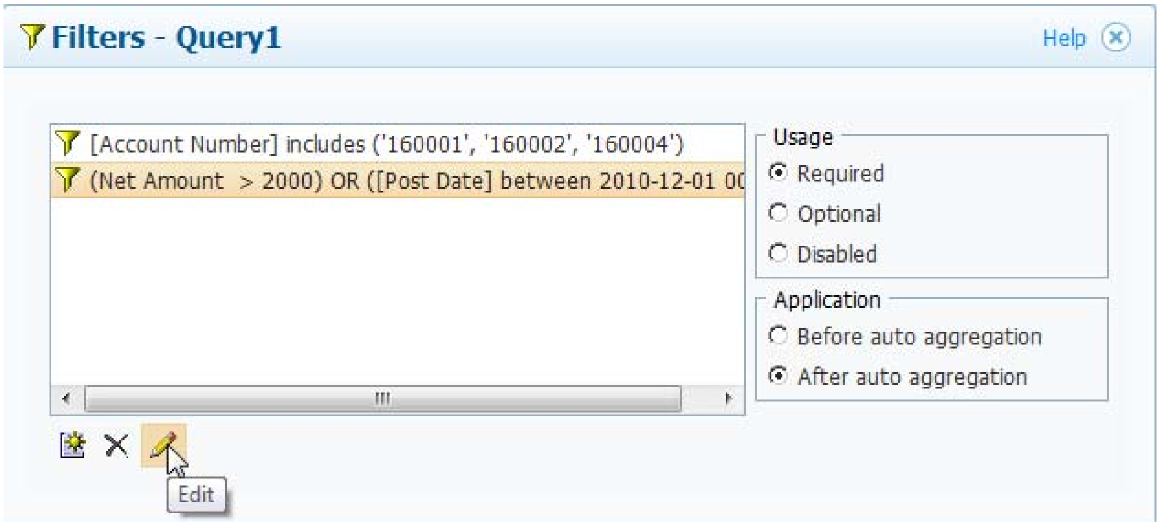
Account Number	Medium Title	Object Code	Medium Description	Post Date	Net Amount
160004	MMM Fld. Pro. Su	5430	Lodging Domestic	Sep 27, 2010 12:00:00 AM	2,554.4
160002	Journal Page Chr	5239	Publication Pgs	Sep 29, 2010 12:00:00 AM	3,085
160001	MMM Science	5712	Overhead	Sep 30, 2010 12:00:00 AM	2,521.29
160002	Journal Page Chr	5239	Publication Pgs	Sep 30, 2010 12:00:00 AM	4,245
160002	Journal Page Chr	5711	Overhead	Sep 30, 2010 12:00:00 AM	5,722.11
160004	MMM Fld. Pro. Su	5584	Tech/Sci. equip.	Sep 30, 2010 12:00:00 AM	2,711.88
160004	MMM Fld. Pro. Su	5711	Overhead	Sep 30, 2010 12:00:00 AM	7,058.23
160002	Journal Page Chr	5239	Publication Pgs	Nov 10, 2010 12:00:00 AM	3,900
160002	Journal Page Chr	5711	Overhead	Nov 19, 2010 12:00:00 AM	2,673.02
160001	MMM Science	5349	CSC Allocation	Dec 1, 2010 12:00:00 AM	-104
160001	MMM Science	5076	Salaries Casual	Dec 3, 2010 12:00:00 AM	816.84
160001	MMM Science	5102	Red Bens MDC	Dec 3, 2010 12:00:00 AM	68.61
160001	MMM Science	5349	CSC Allocation	Dec 3, 2010 12:00:00 AM	78
160001	MMM Science	5712	Overhead	Dec 3, 2010 12:00:00 AM	440.95
160002	Journal Page Chr	5711	Overhead	Dec 3, 2010 12:00:00 AM	0.01
160001	MMM Science	5420	Dom Per Diem-$26	Dec 15, 2010 12:00:00 AM	248.5

NOTE

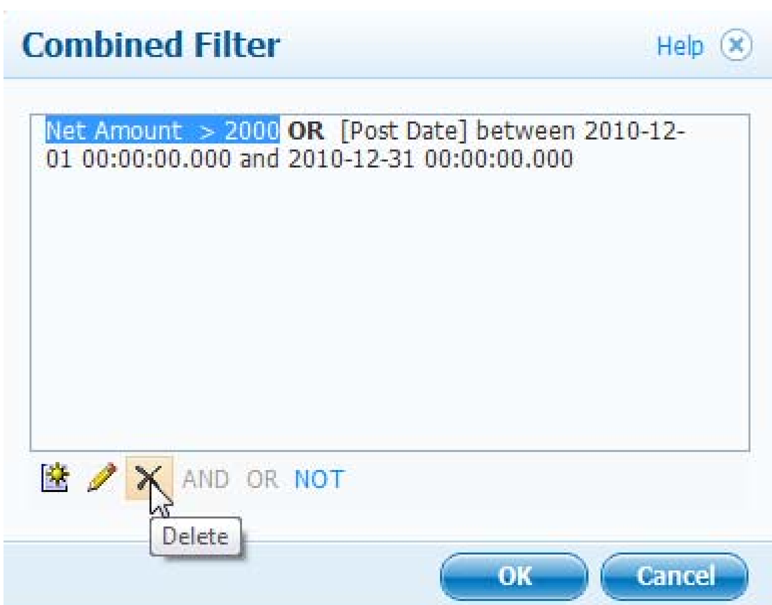
A **Filter** can be set up in the Framework Manager package if it is expected to be used frequently. You can drag the filter in from the Insertable Objects pane instead of setting up the filter as we just did. It can be designed to prompt the user every time the report runs.

Deleting a Filter

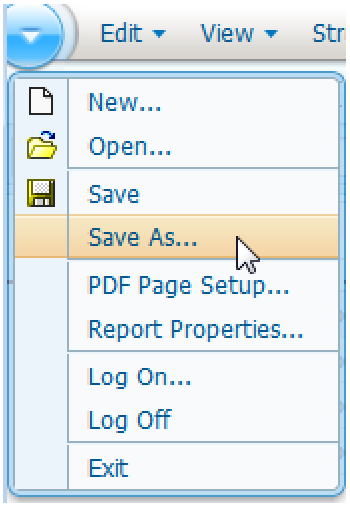
25. We no longer want to limit the report by Net Amount. Remove the filter by navigating to the **Data** menu, **Filters**, **Edit Filters**. Highlight the combined filter, and click on the Edit icon.



26. Highlight the Net Amount filter, click the Delete icon, and click OK twice.

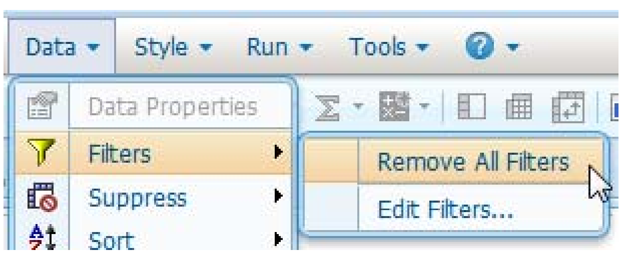


27. From the **Report Actions**  menu, select **Save As** and save the report specification as **Filter**.



NOTE

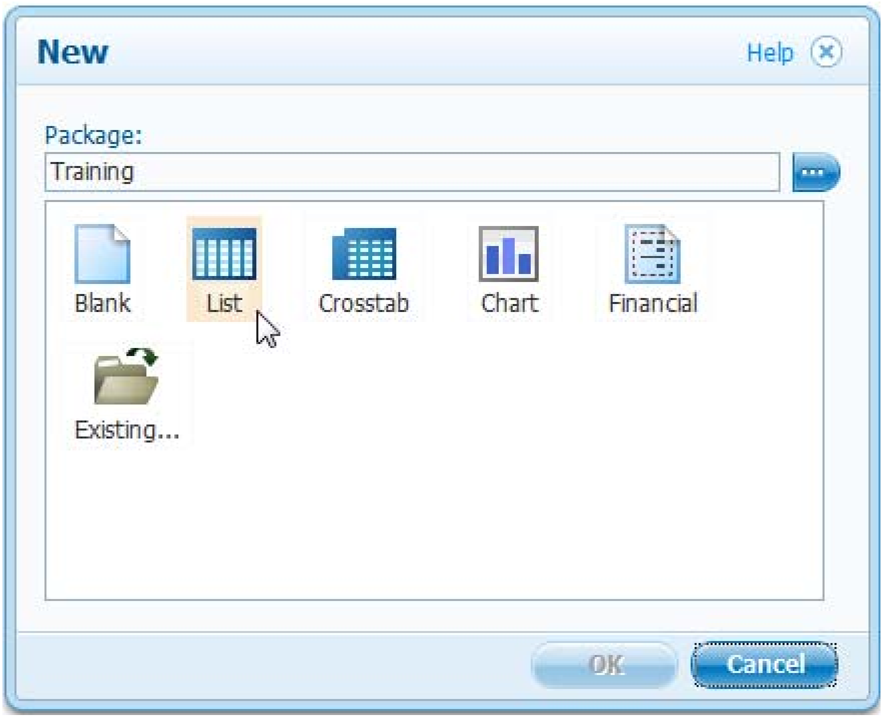
To remove all filters, select **Filters** from the **Data** menu and select **Remove all Filters**.



Step-By-Step

Additional Filtering Techniques

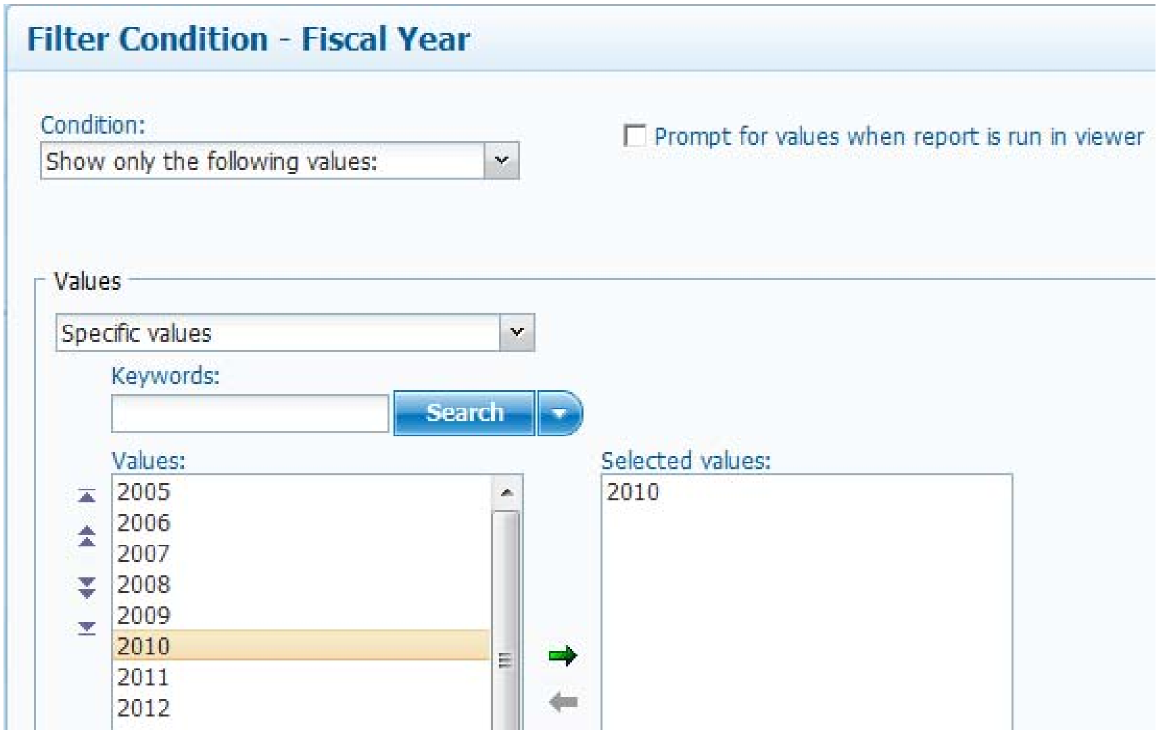
1. Create a new report using the **UCAR Training** package by clicking on the New Report icon in the Toolbar.
2. Select List to create a new List report.



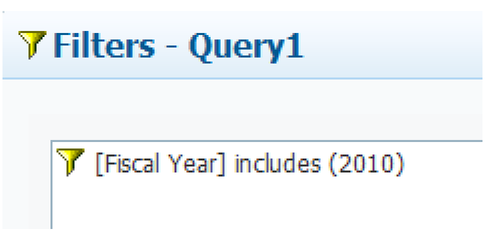
3. From the **View** menu, select **Page Design**.
4. From the CPM Training Data namespace, General Ledger namespace, Account query subject, add the following query items to your report:
    - Lab Code
    - Division_Program Code
    - Division_Program Medium Description
    - IFAS Fund Source Code

5. From the Date query subject, add Fiscal Year to your report.
6. From the General Ledger Details query subject, add Net Amount as your measure.

7. Sort Lab Code Ascending.
8. Create a filter on Fiscal Year for Specific values for 2010.



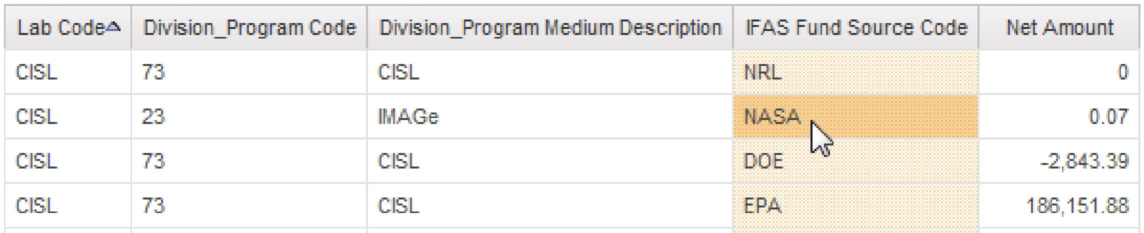
9. Return to your report, highlight the Fiscal Year column, and click Delete in the Toolbar.
10. Open the Edit Filters dialog box again to see that the Fiscal Year filter is retained even though the column has been deleted.



You now have a filter applied to your report without the extra column.

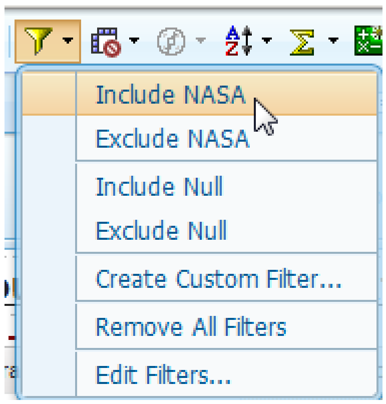
11. Save the report specification as **Additional Filtering Techniques**.
12. Change your **View** to **Page Preview**.

13. Highlight the IFAS Fund Source Code NASA.



Lab Code	Division_Program Code	Division_Program Medium Description	IFAS Fund Source Code	Net Amount
CISL	73	CISL	NRL	0
CISL	23	IMAGe	NASA	0.07
CISL	73	CISL	DOE	-2,843.39
CISL	73	CISL	EPA	186,151.88

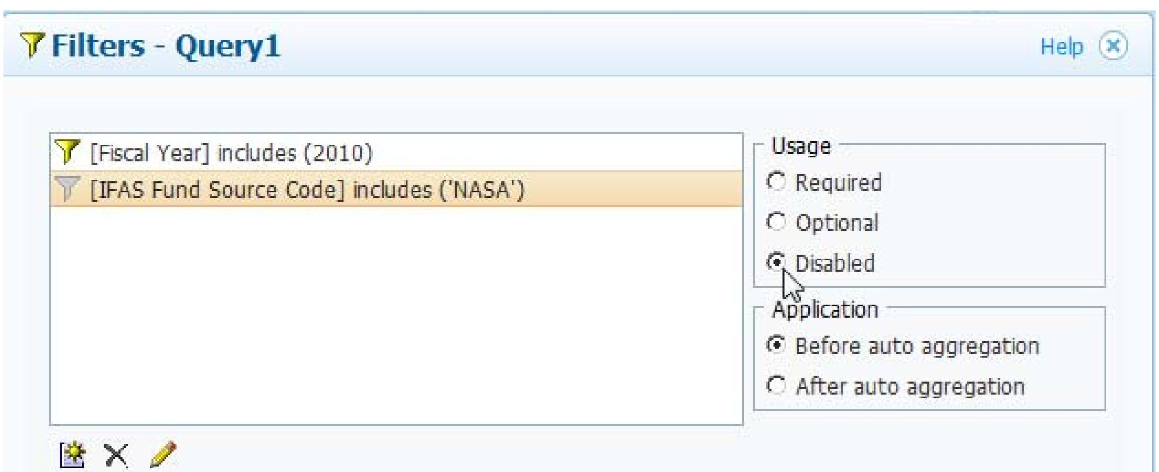
14. Click the Filter icon and select the option to Include NASA. This is another way to set up a filter condition.



Your report now returns records for Fiscal Year 2010 for the NASA fund only.

Lab Code	Division_Program Code	Division_Program Medium Description	IFAS Fund Source Code	Net Amount
CISL	23	IMAGe	NASA	0.07
CISL	13	SCD	NASA	0
EOL	14	ATD	NASA	-14,274.68
EOL	74	EOL	NASA	0
HAO	12	HAO	NASA	404,844.46
NESL	11	ACD	NASA	19,680.31
NESL	10	CGD	NASA	21,564
NESL	16	MMM	NASA	-24,550.02
RAL	17	RAL	NASA	150,018.5
SERE	18	ISSE	NASA	-21,564
ZZ	61	EO	NASA	17,224.42
ZZ	44	VSP	NASA	115,068.97
ZZ	40	JOSS	NASA	622,599.74
ZZ	53	COSMIC	NASA	183,647.21
ZZ	54	GLOBE	NASA	0
ZZ	05	MULTI	NASA	-645,787.96
Overall - Summary				828,471.02

15. Disable this latest filter by opening the Edit Filters dialog box and changing the Usage option to Disabled. Click OK. This may be a useful action when troubleshooting a report or exploring data.



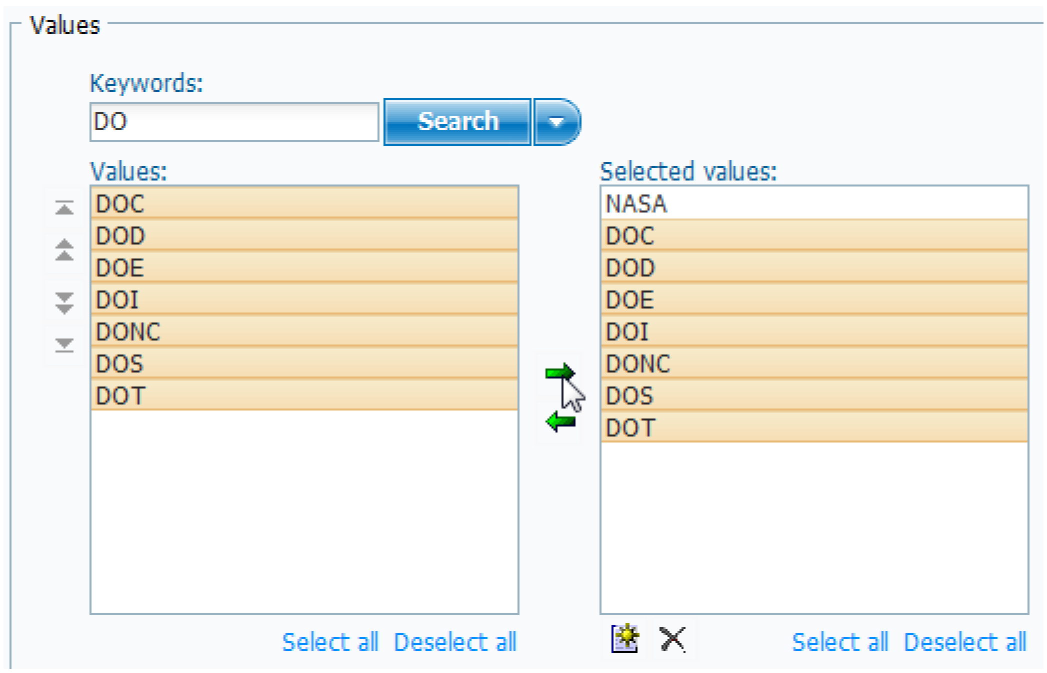
16. Save the report specification again (**Additional Filtering Techniques**).

NOTE

You can paste text from other applications into type-in filters. You can also use wildcards to define filters.

NOTE

Using the Search for values in the Filter Condition dialog box allows for more flexibility in filtering. You can search and select multiple times before running a report.



Chapter 5 – Grouping Data

Grouping a report in Business Insight Advanced makes for a much more user-friendly report by eliminating duplicate values and by displaying subtotals for each grouped item. You can organize the grouped data by row headings or by creating section headings.

Creating a Grouped List Report

Open the **Filter** report from the last chapter and note the duplicate values in the Account Number and Medium Title columns.

Account Number	Medium Title	Object Code	Medium Description	Post Date	Net Amount
160001	MMM Science	5349	CSC Allocation	Dec 1, 2010 12:00:00 AM	-104
160001	MMM Science	5076	Salaries Casual	Dec 3, 2010 12:00:00 AM	816.84
160001	MMM Science	5102	Red Bens MDC	Dec 3, 2010 12:00:00 AM	68.61
160001	MMM Science	5349	CSC Allocation	Dec 3, 2010 12:00:00 AM	78
160001	MMM Science	5712	Overhead	Dec 3, 2010 12:00:00 AM	440.95
160002	Journal Page Chr	5711	Overhead	Dec 3, 2010 12:00:00 AM	0.01
160001	MMM Science	5420	Dom Per Diem-$26	Dec 15, 2010 12:00:00 AM	248.5
160001	MMM Science	5430	Lodging Domestic	Dec 15, 2010 12:00:00 AM	510.9
160001	MMM Science	5440	Misc Domest Exp	Dec 15, 2010 12:00:00 AM	40.9
160001	MMM Science	5473	Registration Fee	Dec 15, 2010 12:00:00 AM	235

When you group a report by query items, Business Insight Advanced:

- Automatically sorts the rows in the report.
- Eliminates duplication of the grouped row heading.
- Creates a footer for each group and displays summarized values for those items where summarization is appropriate (measures).
- Automatically moves the groups to the left of the report after existing groups.

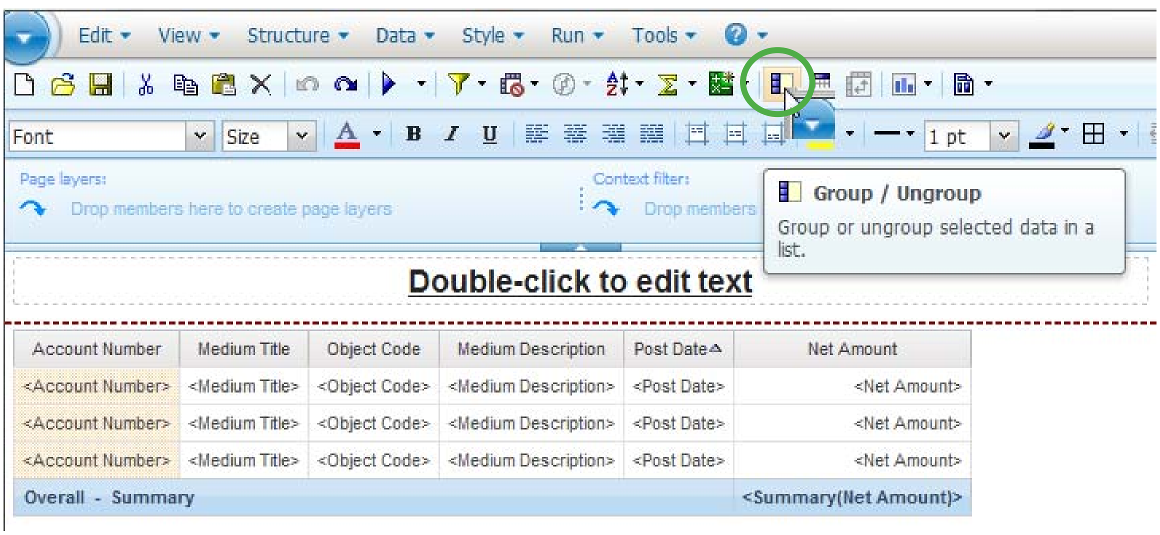
You cannot group by measures, such as Net Amount. You can only group report items containing text data or non-measure numeric data, such as Account Number.

Step-By-Step

Grouping

Let's group our Filter report to improve its readability and to get summary information by accounts and object codes.

1. Continue with your **Filter** report from Chapter 4.
2. Save this report specification as **Grouping**.
3. Set the **View** to **Page Design**.
4. Click in the Account Number column and select the Group icon in the Toolbar.



Notice the Group icon and Summary line added to the Account Number column.

Account Number	Medium Title	Object Code	Medium Description	Post Date	Net Amount
<Account Number>	<Medium Title>	<Object Code>	<Medium Description>	<Post Date>	<Net Amount>
<Account Number> - Summary					**<Summary(Net Amount)>**
<Account Number>	<Medium Title>	<Object Code>	<Medium Description>	<Post Date>	<Net Amount>
<Account Number> - Summary					**<Summary(Net Amount)>**
Overall - Summary					**<Summary(Net Amount)>**

5. Highlight the Medium Title, Object Code, and Medium Description columns (Ctrl-click), and click again on the Group icon.

Account Number	Medium Title	Object Code	Medium Description	Post Date	Net Amount
<Account Number>	<Medium Title>	<Object Code>	<Medium Description>	<Post Date>	<Net Amount>
			<Medium Description> - Summary		<Summary(Net Amount)>
			<Medium Description>	<Post Date>	<Net Amount>
			<Medium Description> - Summary		<Summary(Net Amount)>
		<Object Code> - Summary			<Summary(Net Amount)>
		<Object Code>	<Medium Description>	<Post Date>	<Net Amount>
			<Medium Description> - Summary		<Summary(Net Amount)>
			<Medium Description>	<Post Date>	<Net Amount>
			<Medium Description> - Summary		<Summary(Net Amount)>
		<Object Code> - Summary			<Summary(Net Amount)>
	<Medium Title> - Summary				<Summary(Net Amount)>

6. Run the report. Select December 1 – 31, 2010 as the date range.

Account Number	Medium Title	Object Code	Medium Description	Post Date	Net Amount
160001	MMM Science	5042	Awards - Oth Sci	Dec 17, 2010 12:00:00 AM	4,032.26
			Awards - Oth Sci - Summary		4,032.26
		5042 - Summary			4,032.26
		5076	Salaries Casual	Dec 3, 2010 12:00:00 AM	816.84
				Dec 17, 2010 12:00:00 AM	1,361.4
				Dec 31, 2010 12:00:00 AM	476.49
			Salaries Casual - Summary		2,654.73
		5076 - Summary			2,654.73
		5101	Full Benefits	Dec 31, 2010 12:00:00 AM	2,056.45
			Full Benefits - Summary		2,056.45
		5101 - Summary			2,056.45
		5102	Ded Bens MDC	Dec 3, 2010 12:00:00 AM	68.61

Notice the redundancy in the Summary lines when grouping the descriptions that follow the codes.

7. Close IBM Cognos Viewer.
8. Highlight the Summary lines for Medium Title and Medium Description and click on Delete in the Toolbar to remove the redundant summaries.

9. Set the **View** to **Page Preview**. Note that the grouped columns are now also sorted ascending.

Account Number	Medium Title	Object Code	Medium Description	Post Date	Net Amount
160001	MMM Science	5042	Awards - Oth Sci	Dec 17, 2010 12:00:00 AM	4,032.26
		5042 - Summary			4,032.26
		5076	Salaries Casual	Dec 3, 2010 12:00:00 AM	816.84
				Dec 17, 2010 12:00:00 AM	1,361.4
				Dec 31, 2010 12:00:00 AM	476.49
		5076 - Summary			2,654.73
		5101	Full Benefits	Dec 31, 2010 12:00:00 AM	2,056.45
		5101 - Summary			2,056.45
		5102	Red Bens MDC	Dec 3, 2010 12:00:00 AM	68.61
				Dec 17, 2010 12:00:00 AM	114.36
				Dec 31, 2010 12:00:00 AM	40.02
		5102 - Summary			222.99

10. Save your report specification again (**Grouping**).

Custom Groups

Another way of grouping a report is to create Custom Groups that let you define detail values that are of specific interest to you. Your report presents results in a precise, controlled format.

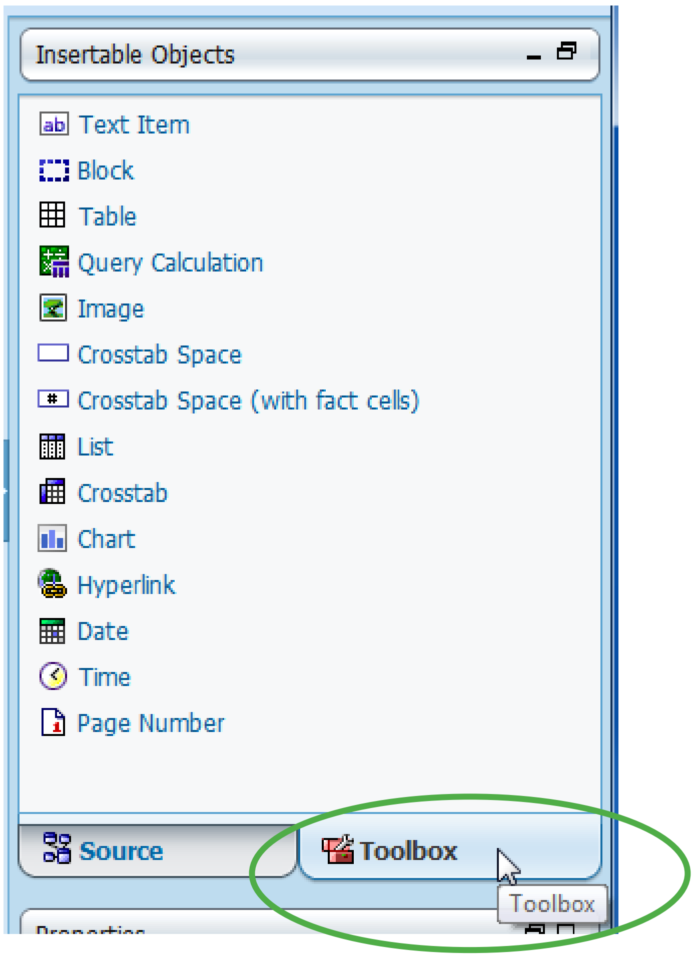
Let's say we want to separate out fund source information for the CISL lab from all other labs.

Step-By-Step

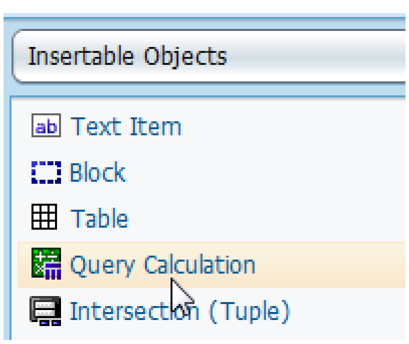
Custom Groups

1. Open the **Additional Filtering Techniques** report from Chapter 4.
2. Set the **View** to **Page Design**.
3. Save this report specification as **Custom Groups**.

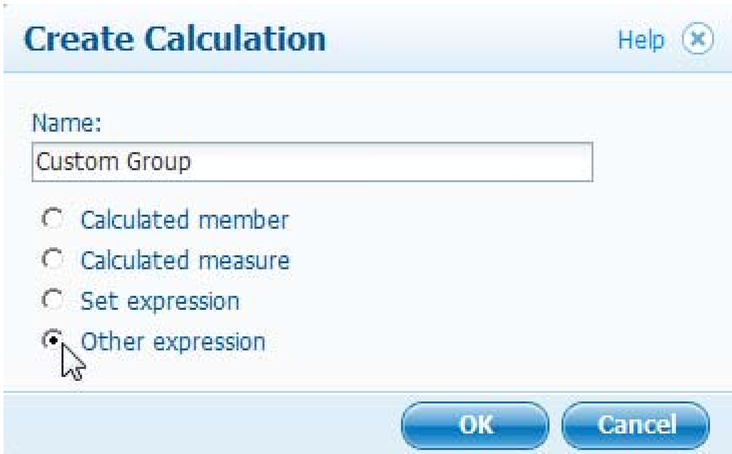
4. Delete the Division_Program Code and Division_Program Medium Description columns.
5. To create a custom group, click the Toolbox tab in the Insertable Objects pane.



6. Drag a Query Calculation from the Toolbox to the beginning of the report.

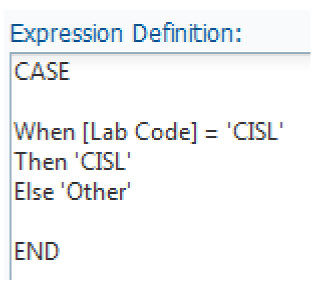


7. This opens a Create Calculation dialog box. Type "Custom Group" as the Name of the calculation, select Other expression (the other choices are options when working with dimensional data), and click OK.



Creating a Calculation brings up the Data Item Expression definition window. Expressions can be used throughout Business Insight Advanced to enhance reporting.

8. Complete the expression as shown and click OK.



When defining expressions, ALWAYS drag query items from the Insertable Objects pane (either from the Source or the Data Items tab) into the window to avoid typing (user) errors!

9. Group the Custom Group and Lab Code columns.
10. Sort Net Amount descending.
11. Save the report specification again (**Custom Groups**).

12. Run your report in PDF.

Your report now contains a new column that groups the labs into two groups: CISL and Other with respective summary lines.

Custom Group	Lab Code	IFAS Fund Source Code	Net Amount
CISL	CISL	NSFRCORE	18,492,963.29
		NSFSPEC	12,108,063.36
		NSFRGC	4,966,019.05
		INDIRECT	1,856,672.07
		UNIV	1,568,721.34
		EPA	186,151.88
		NOAA	144,208.98
		STATEGOV	63,910.46
		NASA	0.07
		FACGAU	0
		COMM	0
		MISCREV	0
		NRL	0
		USGS	0
		DONC	0
		RESIDUAL	-4,942.71
		DOE	-27,450.22
		NSFGRANT	-200,164.98
	CISL - Summary		39,154,152.59
CISL - Summary			39,154,152.59
Other	DIR	NSFRCORE	3,604,987.31
		NSFSPEC	255,662.88
		USDA	41,466.85
		MISCREV	-3,375
		NSFGRANT	-25,433.37

Chapter 6 – Aggregations and Calculations

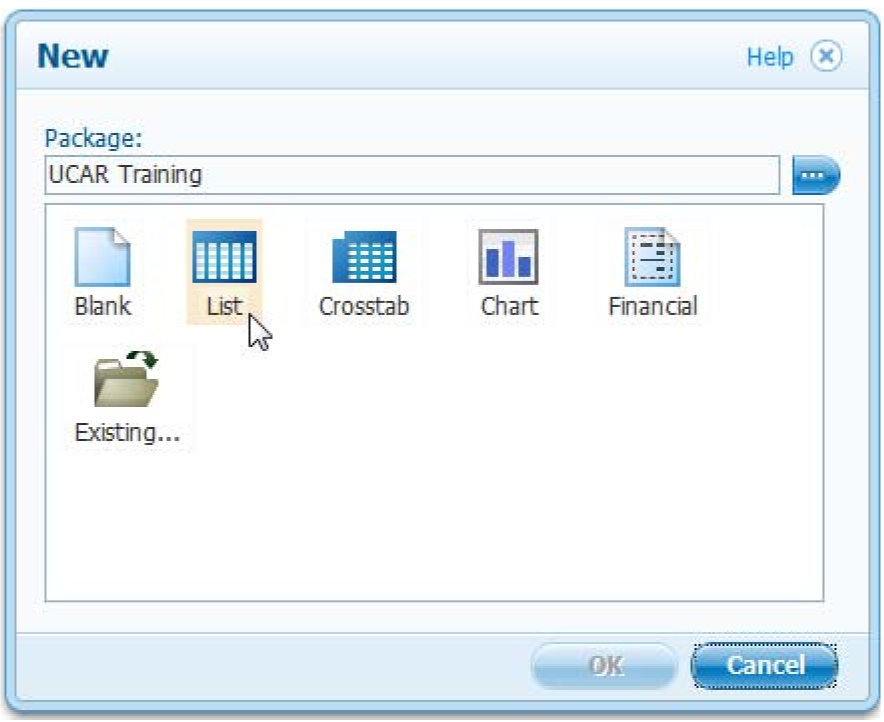
Grouping a report allows you to summarize the data in a variety of ways. One useful summarization type is Count.

Step-By-Step

Counting

Let's create a report to count the number of travel records within a three year range by Account Number.

1. Create a new report using the **UCAR Training** package by clicking on the New Report icon in the Toolbar.
2. Select List to create a new list report.

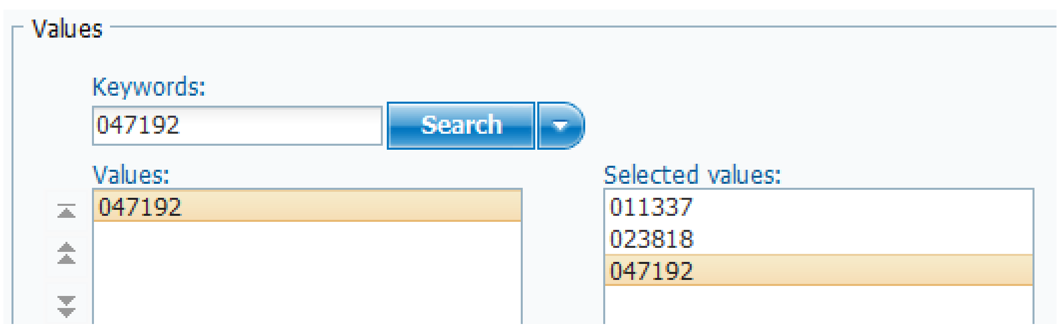


3. Set the **View** to **Page Design**.

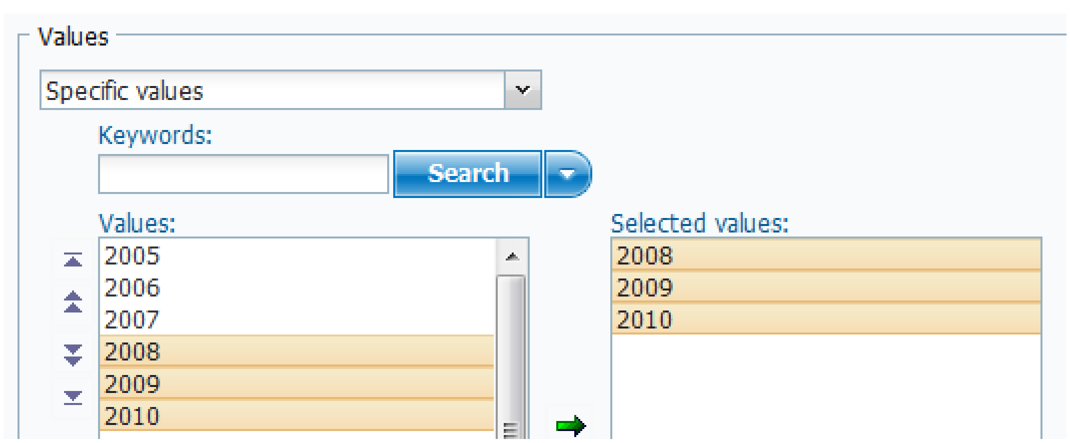
4. From the Insertable Objects pane, CPM Training Data namespace, General Ledger namespace, Person query subject, add the following query items to your report:
   - Person Entity Identifier - PEID
   - Name

5. From the Account query subject, add Account Number.
6. From the General Ledger Details query subject, add the following:
   - Object Code
   - Document Id
   - Net Amount

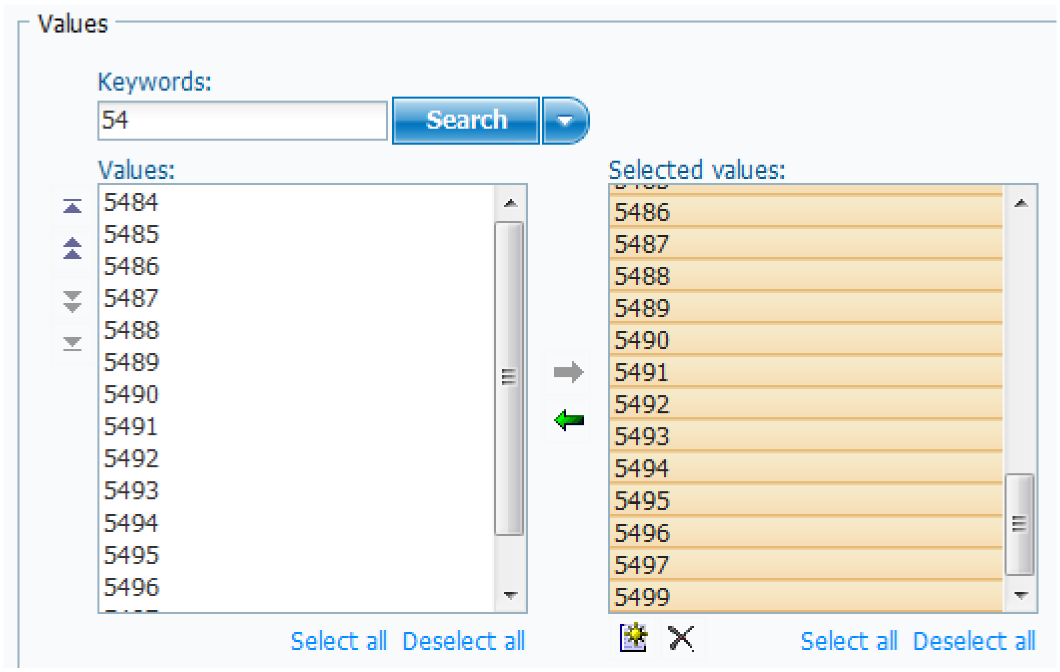
7. From the Date query subject, insert Fiscal Year before Account Number.
8. Group on Person Entity Identifier – PEID, Name, and Fiscal Year.
9. Delete the Summary line for Name. It is redundant with the Person Entity Identifier – PEID Summary.
10. Sort ascending on Account Number.
11. Add the following filters:
    - Custom filter for specific Person Entity Identifier - PEID values as shown here:



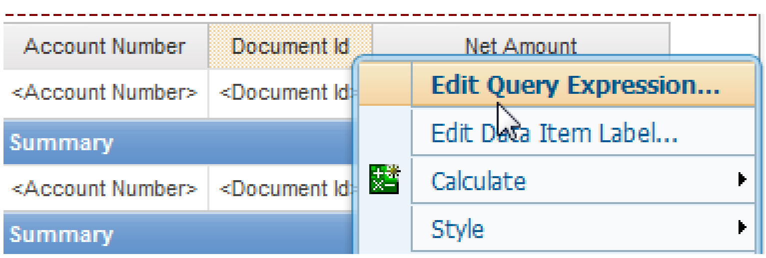
    - Custom filter for specific Fiscal Year values:



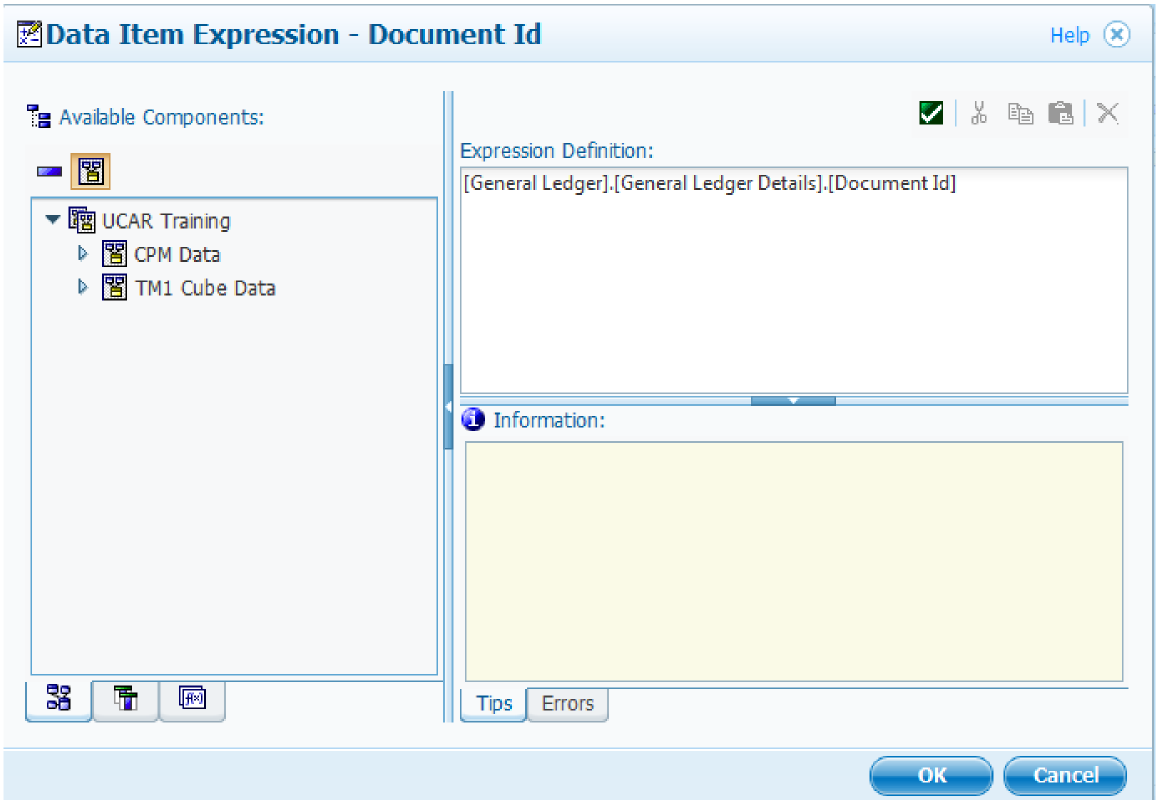
- Custom filter for specific Object Code all travel expense values that start with “54”. Note that the Select all only selects those elements on the visible list. You need to keep paging through to grab them all.



12. Delete the Object Code column.
13. Notice that deleting this column results in another Summary line added for Name. Delete that Summary line again.
14. To create a count of trips, right-click on the Document Id column title and select **Edit Query Expression**.

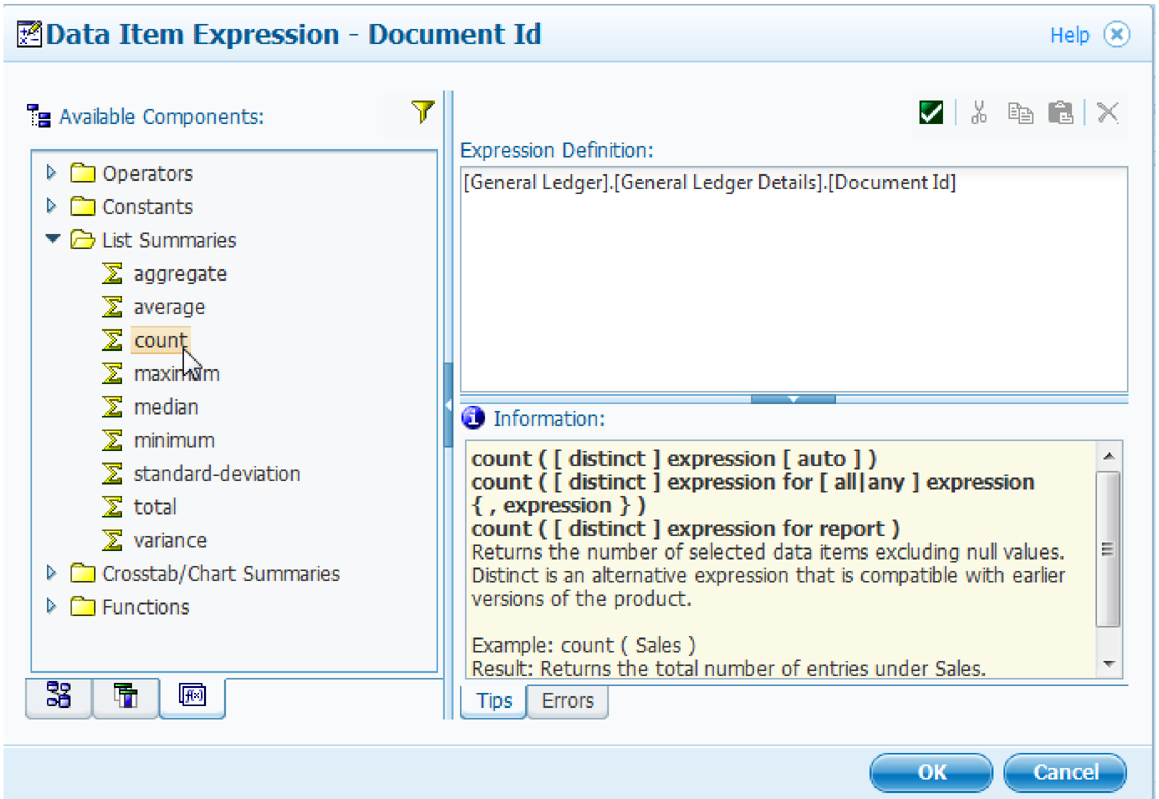


The Data Item Expression window opens.

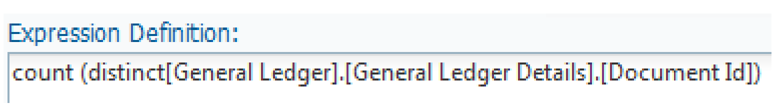


15. Click on the Functions tab to find a list of the expression-building tools that are available to report authors.

16. Highlight the count component as shown below to display the proper syntax in the Tips tab of the Information window.

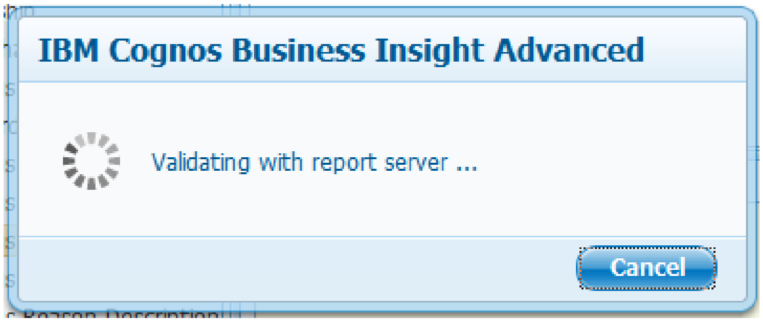


17. Drag the count expression from Available Components into the Expression Definition pane as shown, type in “distinct”, and close the expression with a parenthesis (or drag the closing parenthesis from the Operators folder):



18. Click OK.

Business Insight Advanced automatically validates the expression. If there are any errors, it takes you back to the Expression Definition window. If the expression is correct, it returns you to your report.



Your report design should look like this:

Person Entity Identifier - PEID	Name	Fiscal Year	Account Number	Document Id	Net Amount
<Person Entity Identifier - PEID>	<Name>	<Fiscal Year>	<Account Number>	<Document Id>	<Net Amount>
		<Fiscal Year> - Summary			<Summary(Net Amount)>
		<Fiscal Year>	<Account Number>	<Document Id>	<Net Amount>
		<Fiscal Year> - Summary			<Summary(Net Amount)>
	<Name>	<Fiscal Year>	<Account Number>	<Document Id>	<Net Amount>
		<Fiscal Year> - Summary			<Summary(Net Amount)>
		<Fiscal Year>	<Account Number>	<Document Id>	<Net Amount>
		<Fiscal Year> - Summary			<Summary(Net Amount)>
<Person Entity Identifier - PEID> - Summary					<Summary(Net Amount)>
<Person Entity Identifier - PEID>	<Name>	<Fiscal Year>	<Account Number>	<Document Id>	<Net Amount>
		<Fiscal Year> - Summary			<Summary(Net Amount)>
		<Fiscal Year>	<Account Number>	<Document Id>	<Net Amount>
		<Fiscal Year> - Summary			<Summary(Net Amount)>
	<Name>	<Fiscal Year>	<Account Number>	<Document Id>	<Net Amount>
		<Fiscal Year> - Summary			<Summary(Net Amount)>
		<Fiscal Year>	<Account Number>	<Document Id>	<Net Amount>
		<Fiscal Year> - Summary			<Summary(Net Amount)>
<Person Entity Identifier - PEID> - Summary					<Summary(Net Amount)>
Overall - Summary					<Summary(Net Amount)>

19. Save your report specification as **Count**.

20. Click the Run Report icon in the Toolbar and run your report in HTML.

Person Entity Identifier - PEID	Name	Fiscal Year	Account Number	Document Id	Net Amount
011337	ORR, EDDIE	2008	150008	3	5,004.79
			150011	4	5,317.54
			150022	3	2,808.05
			150953	1	885.69
			150954	4	5,764.7
		2008 - Summary			19,780.77
		2009	150008	3	4,715.54
			150011	6	8,075.08
			150022	8	6,035.97
			150954	2	-816.95
		2009 - Summary			18,009.64
		2010	150011	2	1,952.63
			150022	8	10,720.49
			290001	5	7,763.25
			290003	2	13,067.56
		2010 - Summary			33,503.93
011337 - Summary					71,294.34

The Document Id column is now a count. Let's add a Total count for Document Id.

21. Close IBM Cognos viewer. Highlight the Document Id column, click the Summarize icon, and select **Automatic Summary** (Total is not available).

22. Set the **View** to **Page Preview** and notice that summary values are added for our document count, but that they are not a total of the document counts for the Fiscal Year!

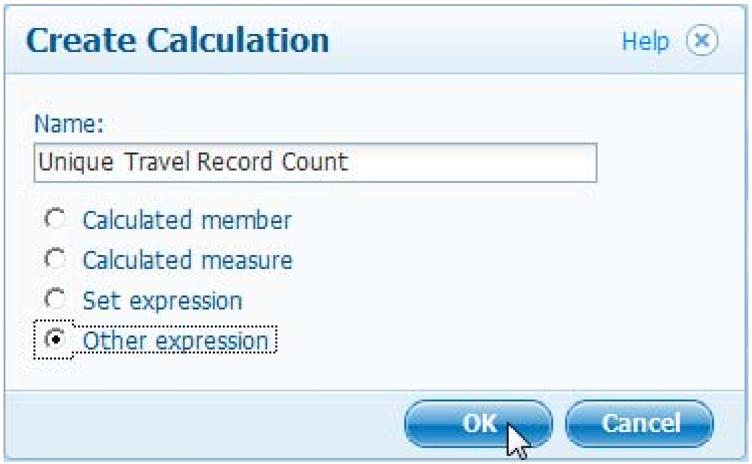
Person Entity Identifier - PEID	Name	Fiscal Year	Account Number	Document Id	Net Amount
011337	ORR, EDDIE	2008	150008	3	5,004.79
			150011	4	5,817.54
			150022	3	2,808.05
			150953	1	385.69
			150954	4	5,764.7
		2008 - Summary		14	19,780.77
		2009	150008	3	4,715.54
			150011	6	8,075.08
			150022	8	6,035.97
			150954	2	-816.95
		2009 - Summary		17	18,009.64
		2010	150011	2	1,952.63
			150022	8	10,720.49
			290001	5	7,763.25
			290003	2	13,067.56
		2010 - Summary		16	33,503.93
	ORR, EDDIE - Summary			44	

The Automatic Summary option for summarizing data may not always produce the expected result in Business Insight Advanced. For our calculated count, the total is logically correct; it is simply doing a count distinct. In the circled example above, Document Id of TE116240 occurs twice – once for Account Number 150022 and again for 150954. Because of the count distinct, these are counted only once on the Summary line

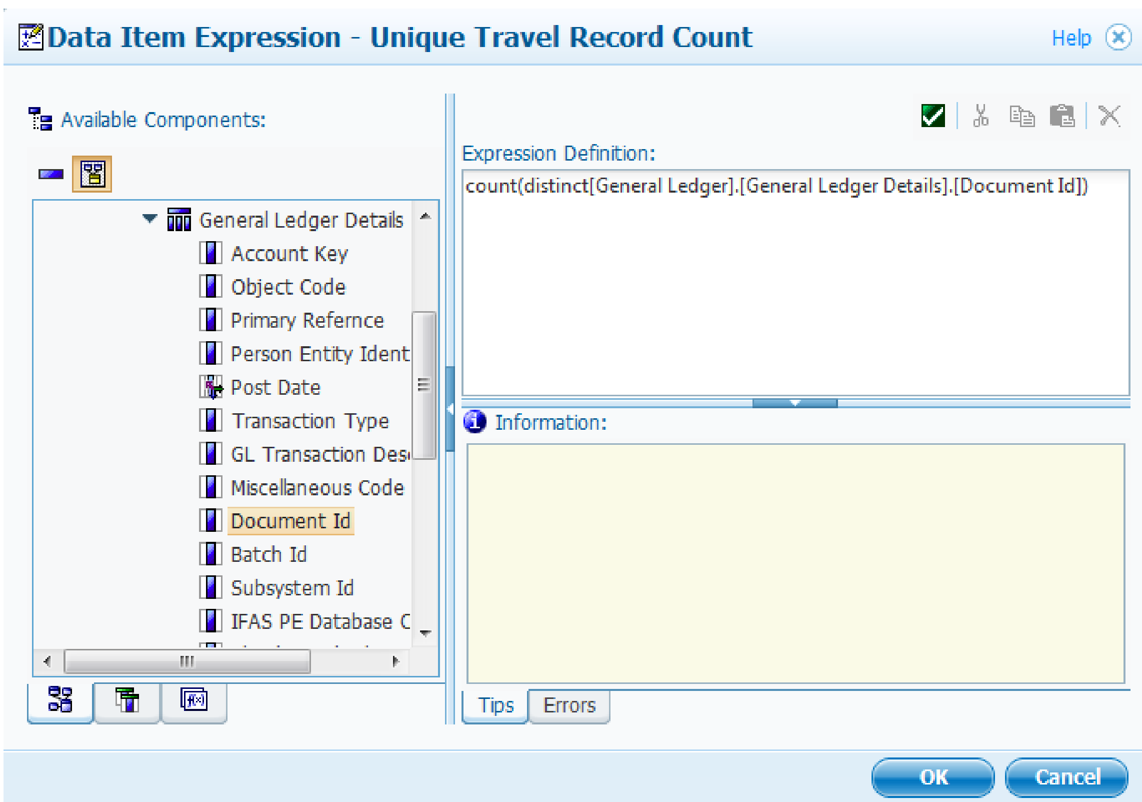
Let's look at an alternative way to get a document count and total across accounts by fiscal year.

23. From the Toolbox, drag a Query Calculation into your report to follow the Document Id column.

24. The Create Calculation dialog box opens. Name the calculation Unique Travel Record Count, choose Other expression, and click OK.



25. In the Data Item Expression window, complete the expression as shown here, pulling Document Id from the Source tab, and click OK:



Notice that this new total count matches the previous total.

Fiscal Year	Account Number	Document Id	Unique Travel Record Count
2008	150008	3	3
	150011	4	4
	150022	3	3
	150953	1	1
	150954	4	4
2008 - Summary		14	14

26. Highlight the Unique Travel Record Count and Net Amount columns. Click the Summarize icon and select **Total**. Notice that a Total line has been added to your report with the total travel records count for each year across Account Number.

Fiscal Year	Account Number	Document Id	Unique Travel Record Count	Net Amount
2008	150008	3	3	5,004.79
	150011	4	4	5,317.54
	150022	3	3	2,808.05
	150953	1	1	885.69
	150954	4	4	5,764.7
2008 - Summary		14	14	19,780.77
2008 - Total			15	19,780.77

27. Delete the Document Id column and all the Summary (not Total) lines.
28. Delete the redundant Total line for Name.

Your report should look like this, with Totals for both the count and Net Amount.

Person Entity Identifier - PEID	Name	Fiscal Year	Account Number	Unique Travel Record Count	Net Amount
011337	ORR, EDDIE	2008	150008	3	5,004.79
			150011	4	5,317.54
			150022	3	2,808.05
			150953	1	885.69
			150954	4	5,764.7
		2008 - Total		15	19,780.77
		2009	150008	3	4,715.54
			150011	6	8,075.08
			150022	8	6,035.97
			150954	2	-816.95
		2009 - Total		19	18,009.64
		2010	150011	2	1,952.63
			150022	8	10,720.49
			290001	5	7,763.25
			290003	2	13,067.56
		2010 - Total		17	33,503.93
011337 - Total				51	71,294.34

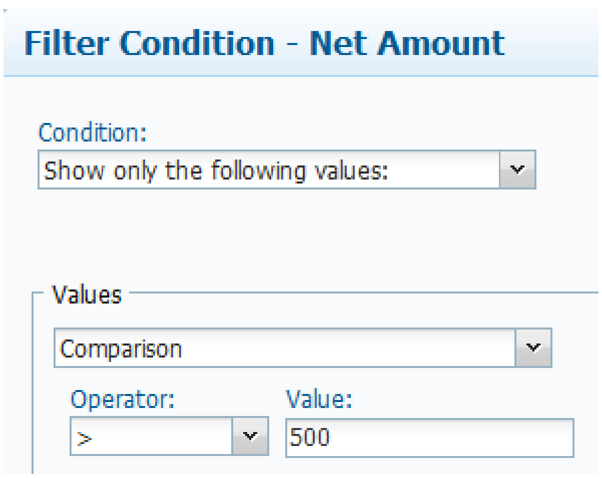
29. Save your report specification again (**Count**).

In Business Insight Advanced, you have the option to choose how you want IBM Cognos to aggregate your data.

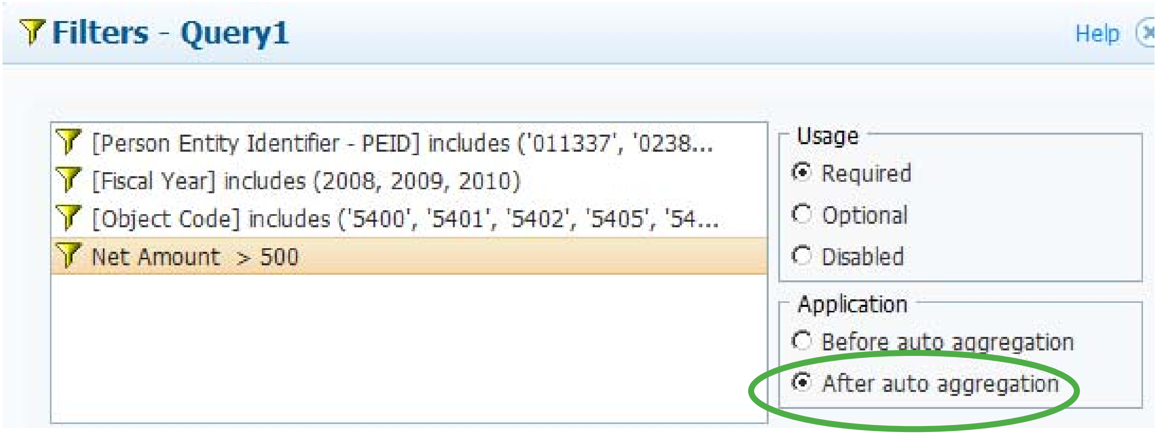
Step-By-Step

Auto Aggregation

1. Continue with your **Count** report.
2. Click on the Filter icon and select **Edit Filters**.
3. Let's create another Custom filter based on Net Amount.
4. Complete the Filter Condition as shown to limit the data returned to amounts greater than $500:



Note that this filter is applied After auto aggregation.



5. Review your report and notice that this filter has decreased the travel record count for Eddie Orr for 2009, for example, from 19 to 17.

Name	Fiscal Year	Account Number	Unique Travel Record Count	Net Amount
ORR, EDDIE	2008	150008	3	5,004.79
		150011	4	5,317.54
		150022	3	2,808.05
		150953	1	885.69
		150954	4	5,764.7
	2008 - Total		15	19,780.77
	2009	150008	3	4,715.54
		150011	6	8,075.08
		150022	8	6,035.97
	2009 - Total		17	18,826.59

6. Return to **Edit Filters** and set the Application of the Net Amount filter to Before auto aggregation.

Name	Fiscal Year	Account Number	Unique Travel Record Count	Net Amount
ORR, EDDIE	2008	150008	2	3,140.05
		150011	2	2,752.33
		150022	1	690.45
		150954	3	2,474.5
	2008 - Total		8	9,057.33
	2009	150008	3	2,861.99
		150011	4	4,892.18
		150022	2	4,214.23
		150954	1	890.56
	2009 - Total		10	12,858.96

With the application of the filter before auto aggregation, it is being applied at the database record level and is therefore returning fewer records for each account.

7. Save your report specification as **Auto Aggregation**.

NOTE

To further clarify this concept, when your filter is set to be applied Before auto aggregation, IBM Cognos filters the detail rows, then adds up the measure. When it is set to After auto aggregation, IBM Cognos summarizes the measure first, then applies the filter.

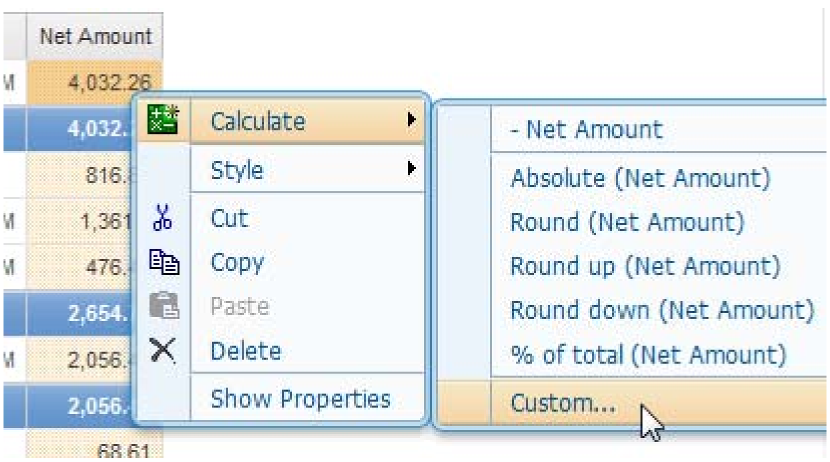
Some of the more advanced functionality in Business Insight Advanced includes the ability to add a calculated field.

Step-By-Step

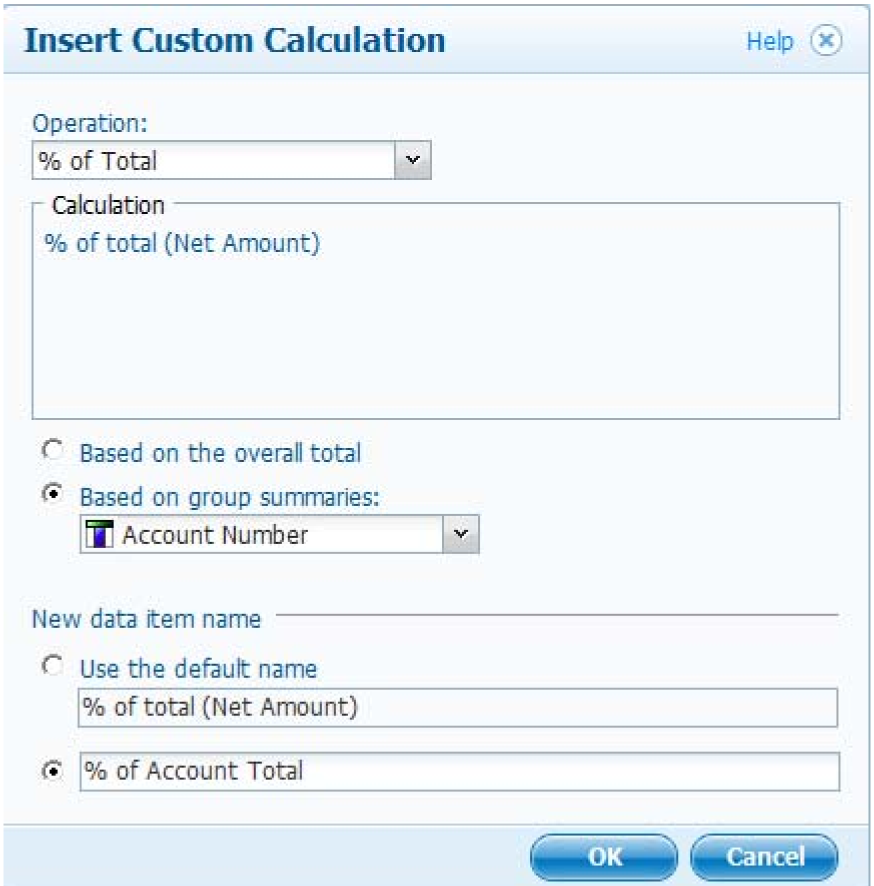
Creating a Calculation

Let's set up a calculation that compares the Net Amount for Object Codes by Account Number.

1. Open your **Grouping** report from Chapter 5.
2. Delete the Medium Title and Medium Description columns.
3. Right-click in the Net Amount column, choose **Calculate** from the shortcut menu, then select **Custom** to create a calculation.



4. Complete the Insert Custom Calculation dialog box as shown and click OK. Note that we are basing our % of Total on the Account Number. We also have the option to base our percentage on the overall total or Object Code, another grouped data item.



Business Insight Advanced inserts the new column into your report.

Account Number	Object Code	Post Date	Net Amount	% of Account Total
160001	5042	Dec 17, 2010 12:00:00 AM	4,032.26	26.16%
	5042 - Summary		4,032.26	26.16%
	5076	Dec 3, 2010 12:00:00 AM	816.84	5.30%
		Dec 17, 2010 12:00:00 AM	1,361.4	8.83%
		Dec 31, 2010 12:00:00 AM	476.49	3.09%
	5076 - Summary		2,654.73	17.22%
	5101	Dec 31, 2010 12:00:00 AM	2,056.45	13.34%
	5101 - Summary		2,056.45	13.34%
	5102	Dec 3, 2010 12:00:00 AM	68.61	0.45%
		Dec 17, 2010 12:00:00 AM	114.36	0.74%
		Dec 31, 2010 12:00:00 AM	40.02	0.26%
	5102 - Summary		222.99	1.45%
	5349	Dec 1, 2010 12:00:00 AM	-104	-0.67%
		Dec 3, 2010 12:00:00 AM	78	0.51%
		Dec 17, 2010 12:00:00 AM	130	0.84%
		Dec 31, 2010 12:00:00 AM	45.5	0.30%

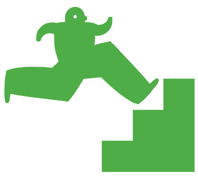
5. Save your report specification as **Calculation.**

Chapter 7 – Report Design

As you create and edit reports, you can enhance the appearance of your report by:

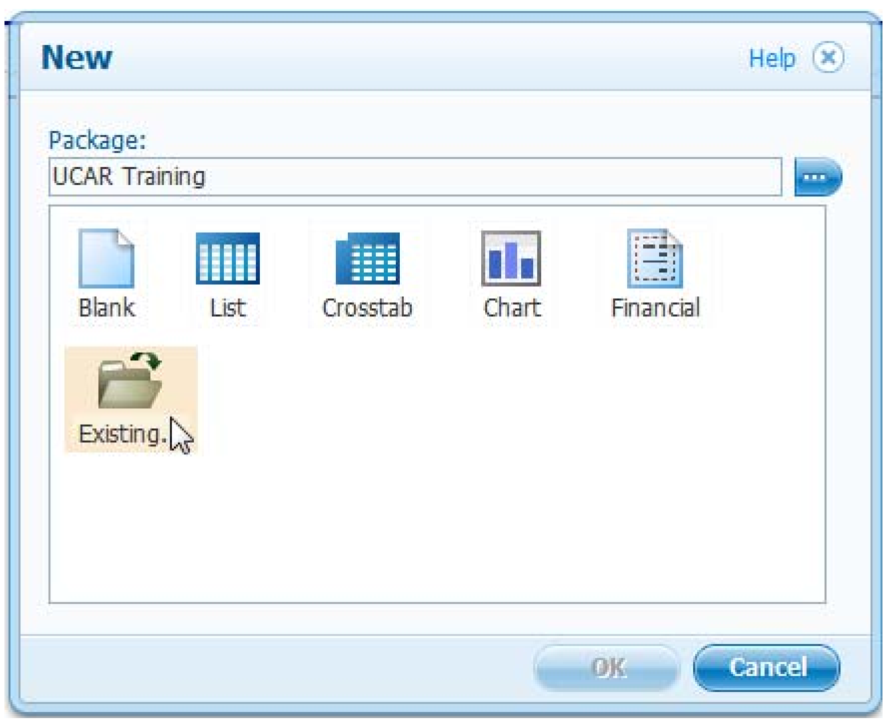
- Formatting text and data
- Editing titles
- Formatting borders

Step-By-Step

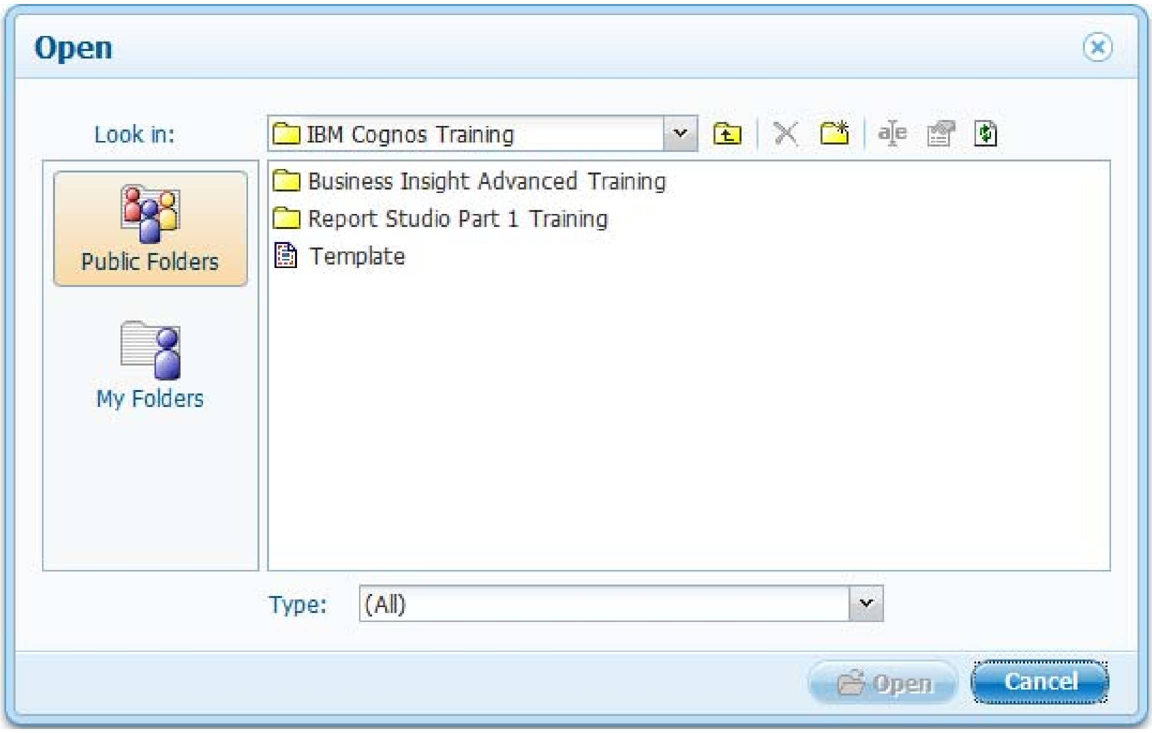


Using a Template

1. Still in Business Insight Advanced, click on the New Report icon.
2. Click on the Existing folder.



3. Navigate to **Public Folders > IBM Cognos Training** and open the **Template** report.



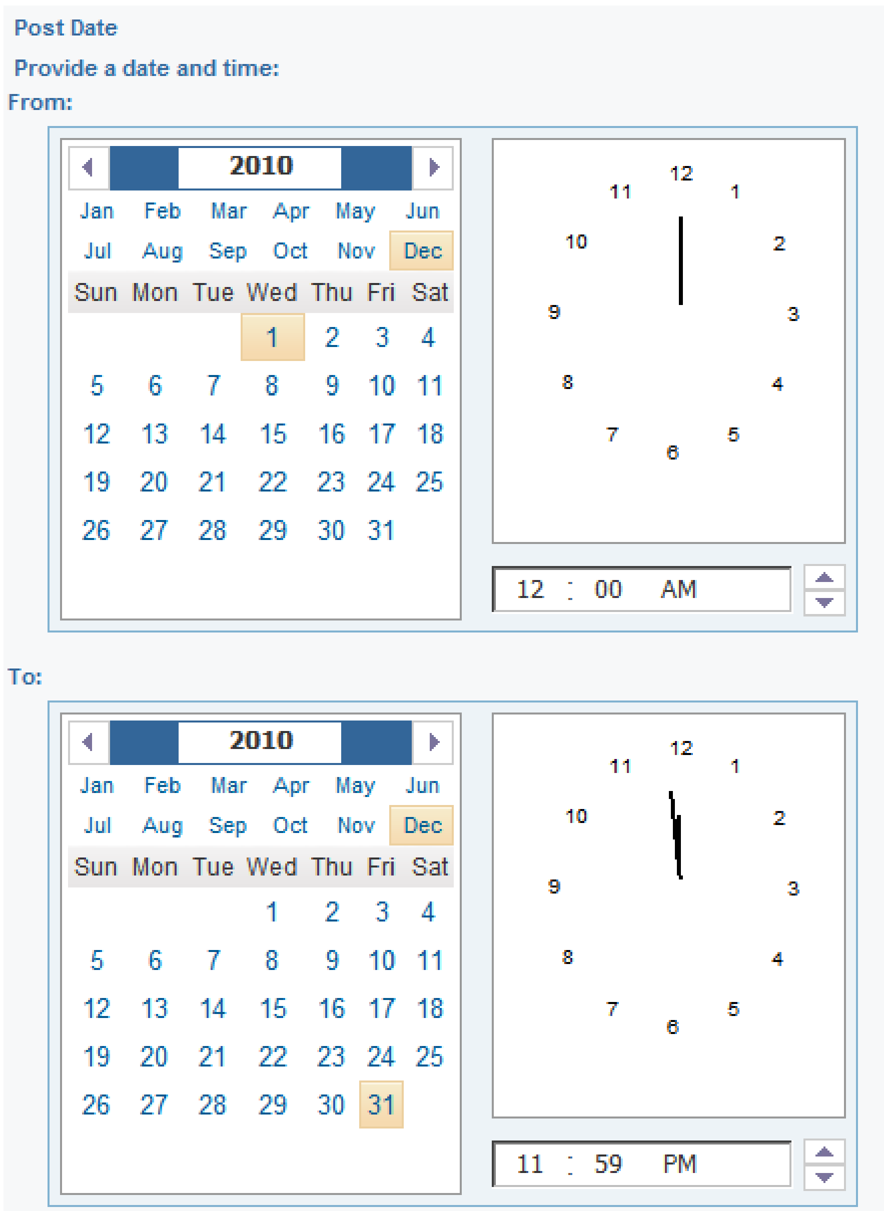
4. Set the **View** to **Page Design**.
5. From the CPM Training Data namespace, General Ledger namespace, Account query subject, add the following query items to the report:
    - Account Number
    - Medium Title

6. From the Object Code query subject, add the following items to the report:
    - Object Code
    - Medium Description

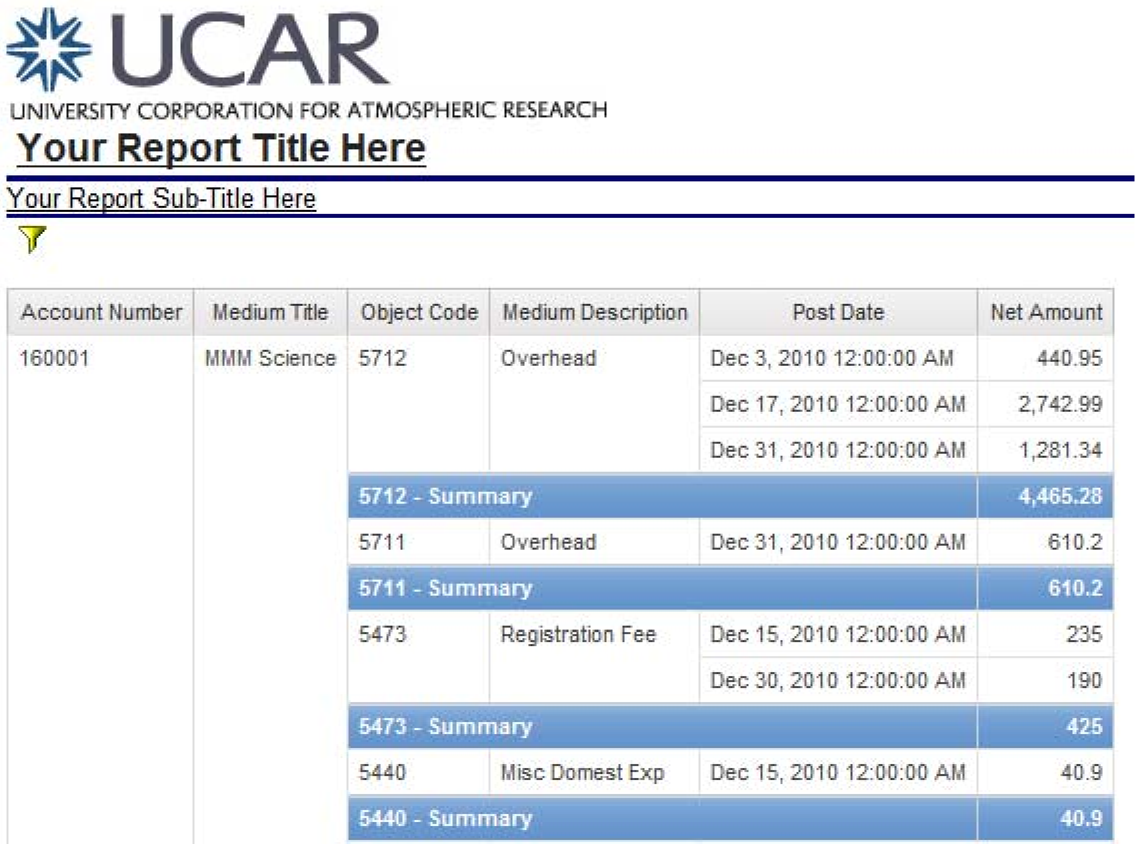
7. From the General Ledger Details query subject, add the following query items to the report:
    - Post Date
    - Net Amount

8. Create a Custom Filter on Account Number to Show only 160001, 160002, and 160004.
9. Create a Custom Filter on Post Date to Show only values between December 1, 2010 and Decemer 31, 2010. Check the box to Prompt for values when report is run in viewer.
10. Click OK twice to return to your report.

11. Group the Account Number, Medium Title, Object Code, and Medium Description columns.
12. Highlight the Summary Line for Medium Title and Medium Description and click Delete from the Toolbar to remove the redundant summary lines.
13. Sort Object Code Descending.
14. Save the report specification as **Formatting**.
15. Run the report in HTML from the Toolbar. Enter December 1, 2010 to December 31, 2010 in the prompt page and click OK.



Your report has been created within a pre-designed template.



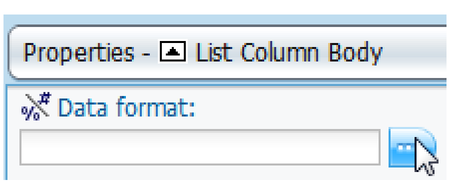
UCAR
UNIVERSITY CORPORATION FOR ATMOSPHERIC RESEARCH
Your Report Title Here
Your Report Sub-Title Here

Account Number	Medium Title	Object Code	Medium Description	Post Date	Net Amount
160001	MMM Science	5712	Overhead	Dec 3, 2010 12:00:00 AM	440.95
				Dec 17, 2010 12:00:00 AM	2,742.99
				Dec 31, 2010 12:00:00 AM	1,281.34
		5712 - Summary			4,465.28
		5711	Overhead	Dec 31, 2010 12:00:00 AM	610.2
		5711 - Summary			610.2
		5473	Registration Fee	Dec 15, 2010 12:00:00 AM	235
				Dec 30, 2010 12:00:00 AM	190
		5473 - Summary			425
		5440	Misc Domest Exp	Dec 15, 2010 12:00:00 AM	40.9
		5440 - Summary			40.9

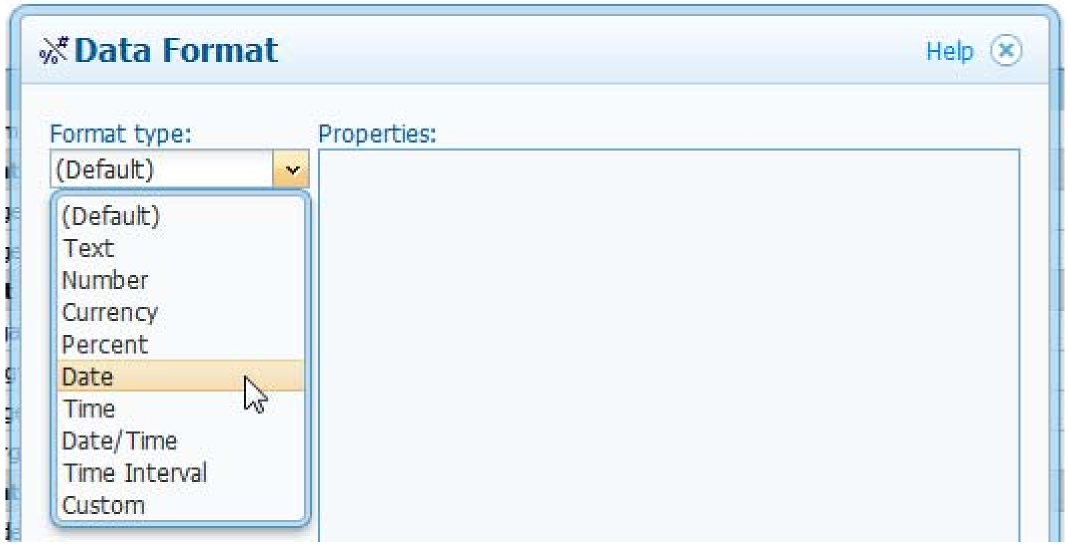
Step-By-Step

Formatting Data

1. Highlight the Post Date column, right-click, and select **Show Properties.**
2. In the Properties Pane, click on the button under Data Format.



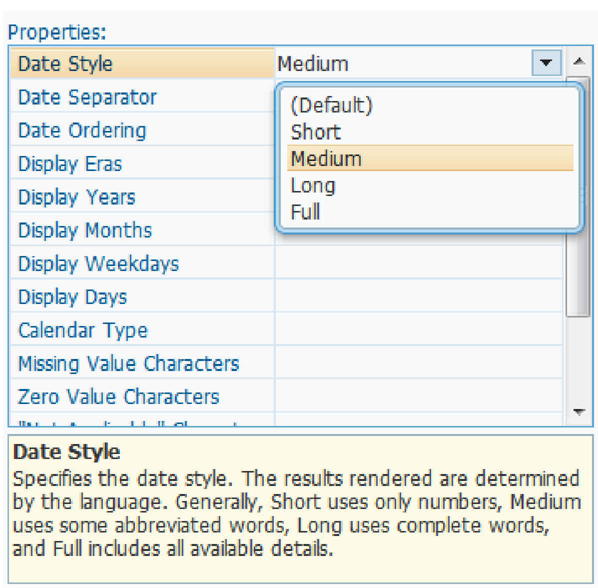
3. In the Data Format window, change the Format type from **Default** to **Date**.



NOTE

Other options for the Data Format include Text, Number, Currency, and Percent. These formats allow you to select how many decimal places to include, whether to "scale" the numbers, how to reflect negative numbers, and whether you want a comma separating the thousands.

4. In the Properties, change the Date Style to **Medium.** Notice the Date Style information box that explains the different date formats available. Click OK.

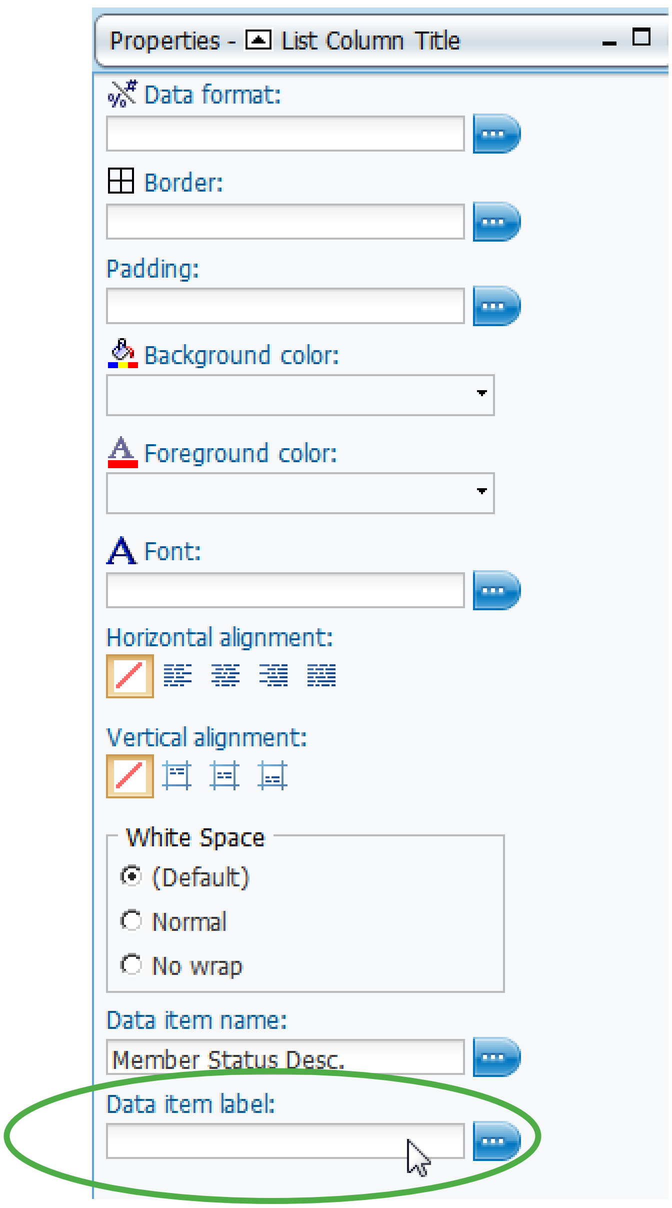


5. Highlight the Net Amount column, and click on the Data Format  icon in the Toolbar.
6. Change the Format type to **Currency** and change the number of decimal places to 2. Click OK.

Editing Column Headings and Titles

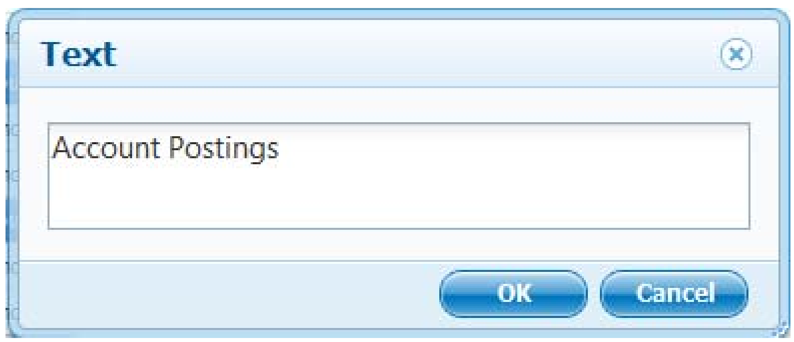
7. Highlight the Medium Title column heading.

8. In the Properties Pane, click in the Data item label to edit the column title.

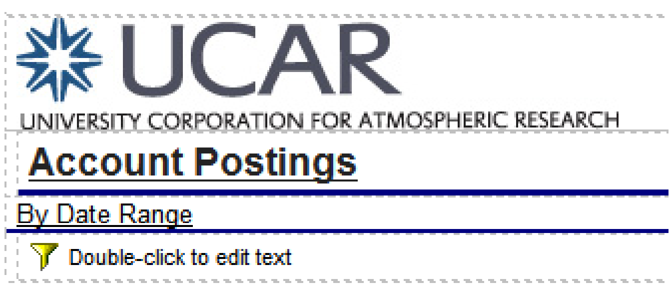


9. Type “Account Description” in the Data Item Label window and click OK.

10. Change the Medium Description column heading to “Object Code Description”.
11. To edit the title of the report:
    a. Click on the text box <Your Report Title Here> and edit the Text property, or
    b. Double-click on the text box and type “Account Postings”.

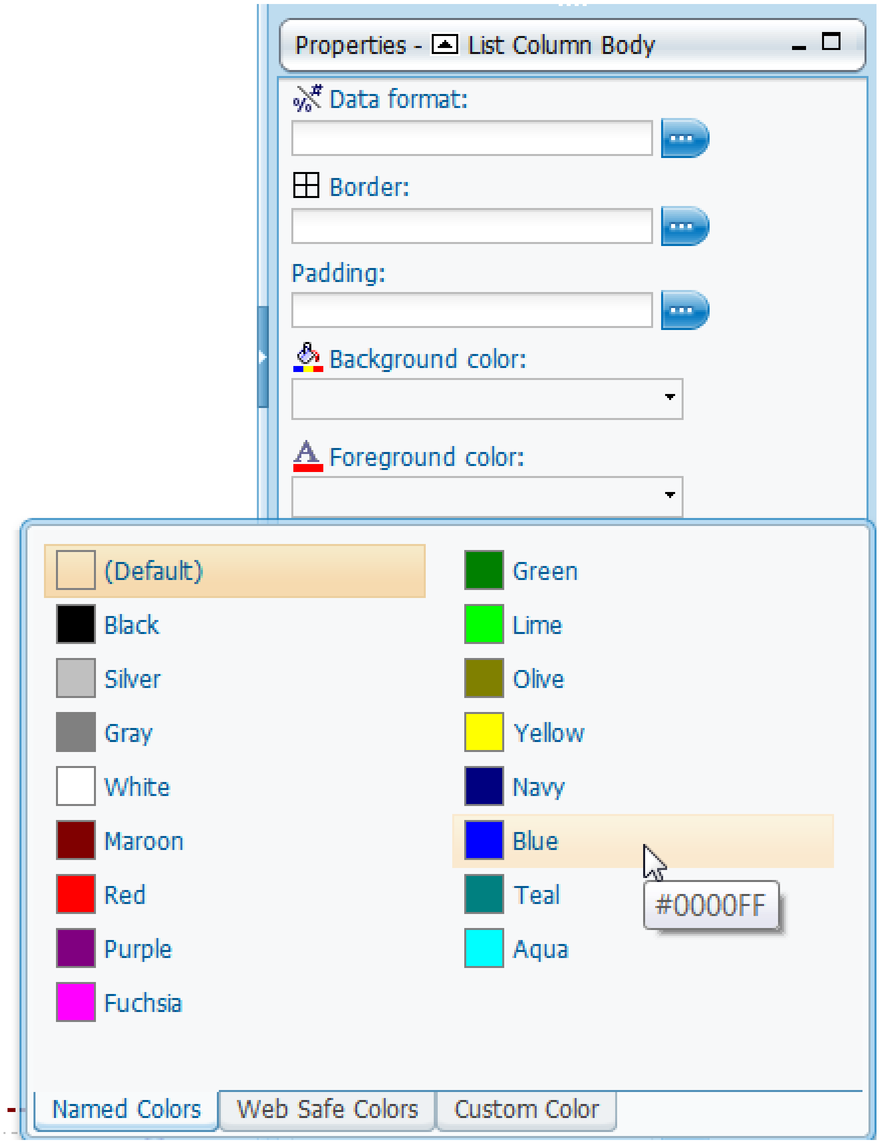


12. Change the Sub-Title to “By Date Range”.
13. Click OK.

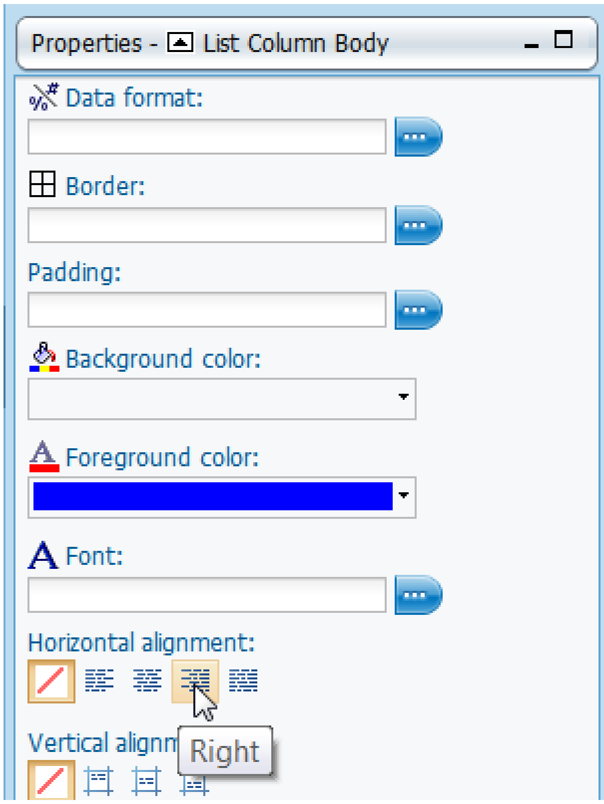


Modifying Font Styles

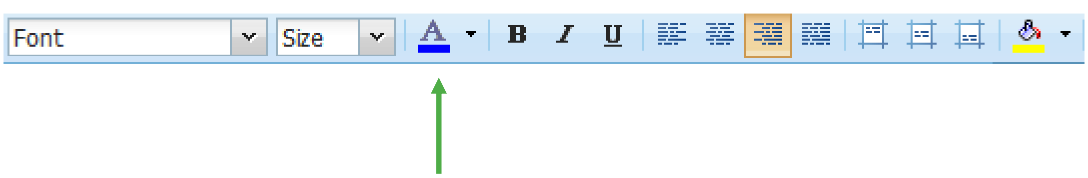
14. Highlight the Net Amount column in your report, and change the Foreground color to Blue in the Properties Pane.



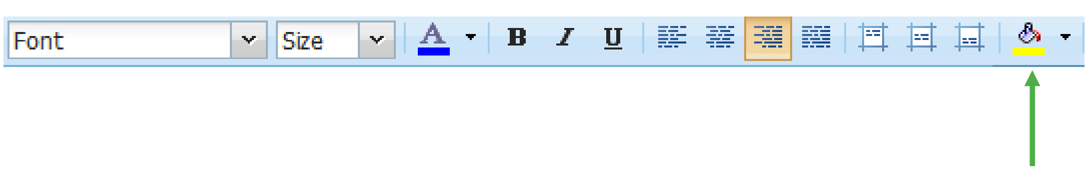
15. Still in the Properties pane, change the Horizontal alignment to the right.



The font styles options are also available in the Style Toolbar.



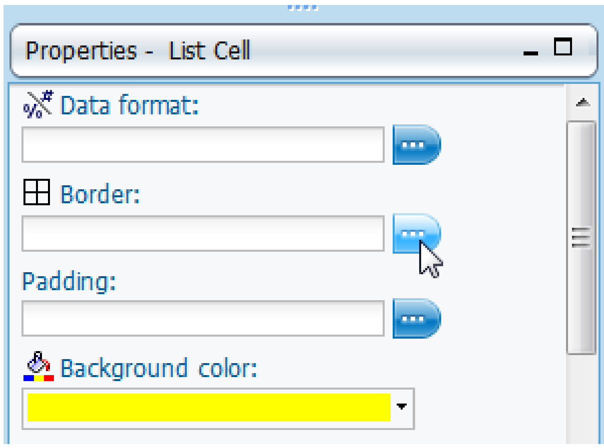
16. Ctrl-click on the Summary row descriptions, select the Background Color icon in the Toolbar, and change the color to Yellow.



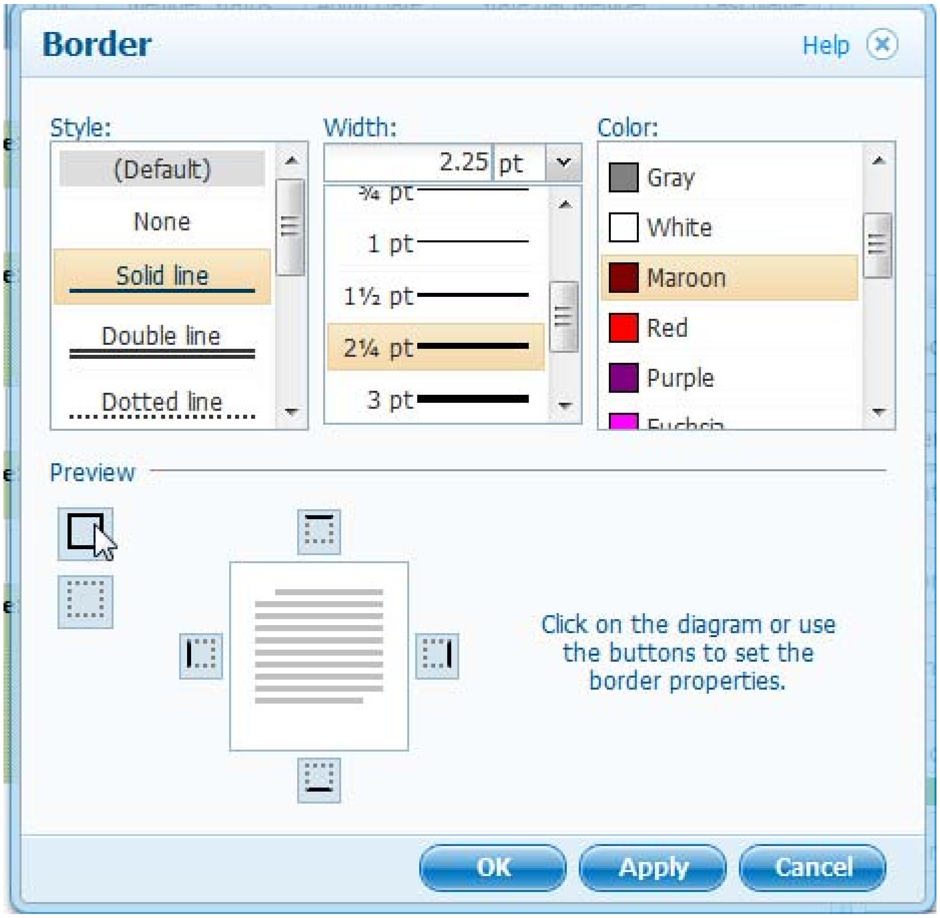
17. Change the foreground color to Black.

Modifying Border Styles

18. To change the borders around the summary row lines, Ctrl-click on the Summary row descriptions and the Summary Net Amount cells. In the Properties Pane, click on the ellipsis button under Border:



19. Change the Style to Solid Line, the Width to 2.25 pt, and the Color to Maroon. Apply the style to All Borders. Click OK.



20. Run your report in HTML. (Select December 2010.)

The result is as shown here:

UCAR
UNIVERSITY CORPORATION FOR ATMOSPHERIC RESEARCH

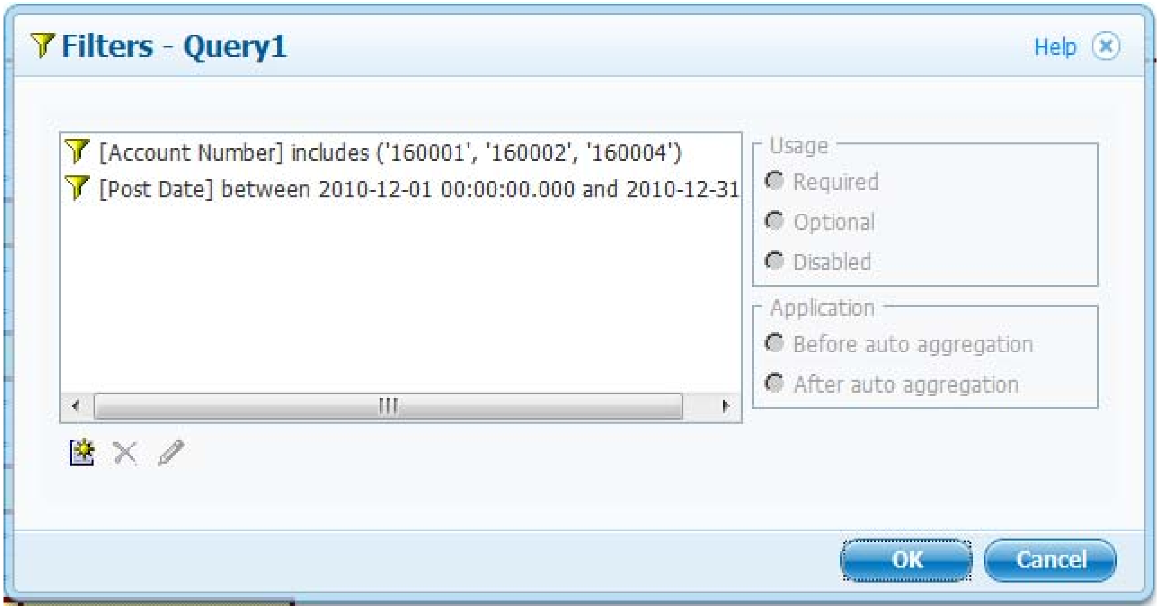
Account Postings

By Date Range

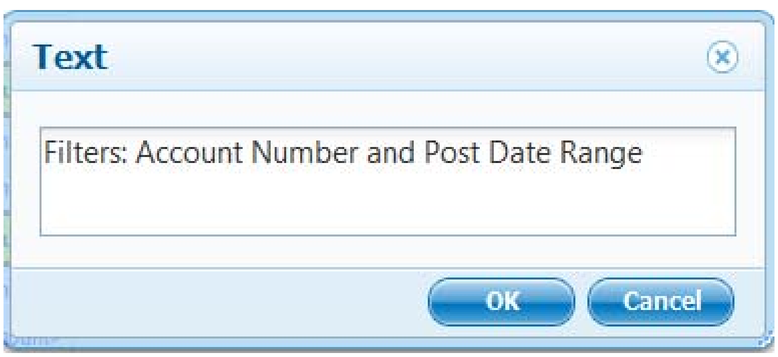
Account Number	Account Description	Object Code	Object Code Description	Post Date	Net Amount
160001	MMM Science	5712	Overhead	Dec 3, 2010	$440.95
				Dec 17, 2010	$2,742.99
				Dec 31, 2010	$1,281.34
		5712 - Summary			**4,465.28**
		5711	Overhead	Dec 31, 2010	$610.20
		5711 - Summary			**610.2**
		5473	Registration Fee	Dec 15, 2010	$235.00
				Dec 30, 2010	$190.00
		5473 - Summary			**425**
		5440	Misc Domest Exp	Dec 15, 2010	$40.90
		5440 - Summary			**40.9**
		5430	Lodging Domestic	Dec 15, 2010	$510.90
		5430 - Summary			**510.9**
		5420	Dom Per Diem-$26	Dec 15, 2010	$248.50
		5420 - Summary			**248.5**

21. Close the IBM Cognos Viewer to return to Business Insight Advanced.

22. From the **Data** menu, select **Filters**, **Edit Filters**, and review the filters in place. Click Cancel.



23. Double-click in the text box next to the Filter icon on the page header and enter text as shown here describing the filters applied. Click OK.



Now the filters are displayed between the Title block and the List report.

UCAR
UNIVERSITY CORPORATION FOR ATMOSPHERIC RESEARCH

Account Postings

By Date Range

Filters: Account Number and Post Date Range

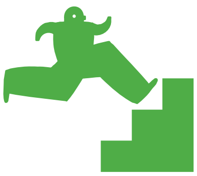
Account Number	Account Description	Object Code	Object Code Description	Post Date	Net Amount
160001	MMM Science	5712	Overhead	Dec 3, 2010	$440.95
				Dec 17, 2010	$2,742.99
				Dec 31, 2010	$1,281.34
		5712 - Summary			**4,465.28**
		5711	Overhead	Dec 31, 2010	$610.20
		5711 - Summary			**610.2**
		5473	Registration Fee	Dec 15, 2010	$235.00
				Dec 30, 2010	$190.00
		5473 - Summary			**425**
		5440	Misc Domest Exp	Dec 15, 2010	$40.90
		5440 - Summary			**40.9**
		5430	Lodging Domestic	Dec 15, 2010	$510.90
		5430 - Summary			**510.9**

24. Save your report specification again (**Formatting**).

Chapter 8 – Additional Report Options

Crosstabs are a very effective way to view typically aggregated (summarized) data in rows and columns. Generally speaking you analyze one or more measures across two or more dimensions. In this section we demonstrate the creation of 2 Dimension, 1 Measure crosstabs in Business Insight Advanced.

Step-By-Step



Crosstab Report with Count

Let's create a report to explore another way to view the count of travel records by Fiscal Year and Entity Code.

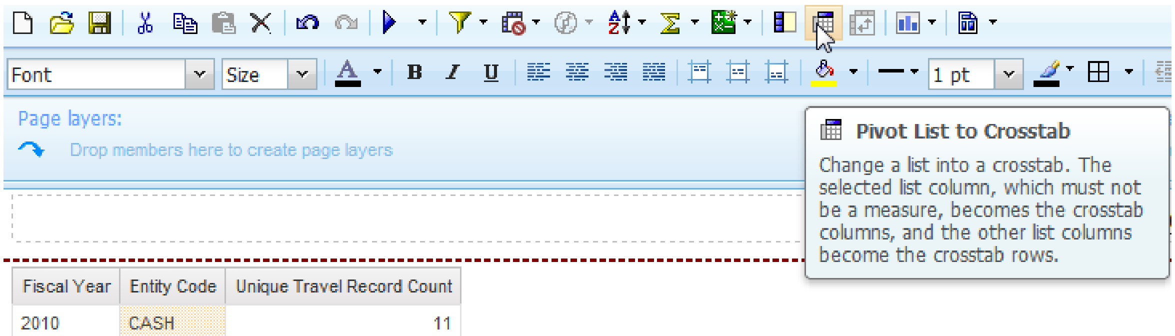
1. Create a new List report with the **UCAR Training** package.
2. Set the **View** to **Page Design**.
3. From the CPM Training Data namespace, General Ledger namespace, Date query subject, insert the Fiscal Year query item into your report.
4. From the Account query subject, insert the Entity Code query item into your report.
5. From the General Ledger Details query subject, insert Object Code into your report.
6. Click in the Object Code column, and create a filter to Show all values that start with "54" and insert them into the Selected Values pane. Note that the Select all only selects those elements on the visible list. You need to keep paging through to grab them all.
7. Delete the Object Code column from the report page.
8. From the Toolbox, drag a Query Calculation to the end of the report. Name the Calculation "Unique Travel Record Count", and select Other expression.
9. Complete the expression as shown here (pulling Document Id from the Source tab), and click OK.

Expression Definition:

```
count (distinct [General Ledger].[General Ledger Details].[Document Id])
```

10. Set the **View** to **Page Preview**.

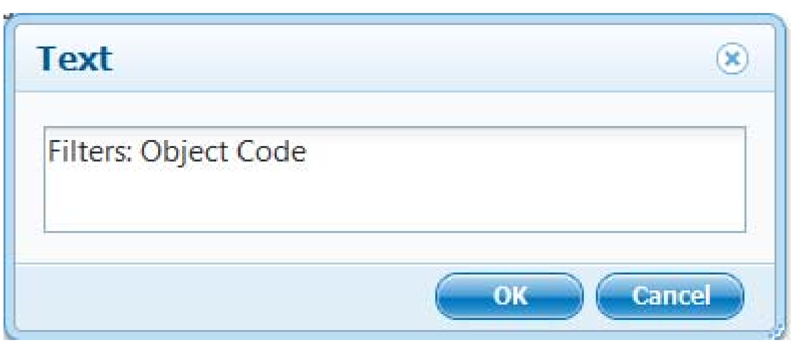
11. Click on the Entity Code column, and click the Pivot List to Crosstab icon.



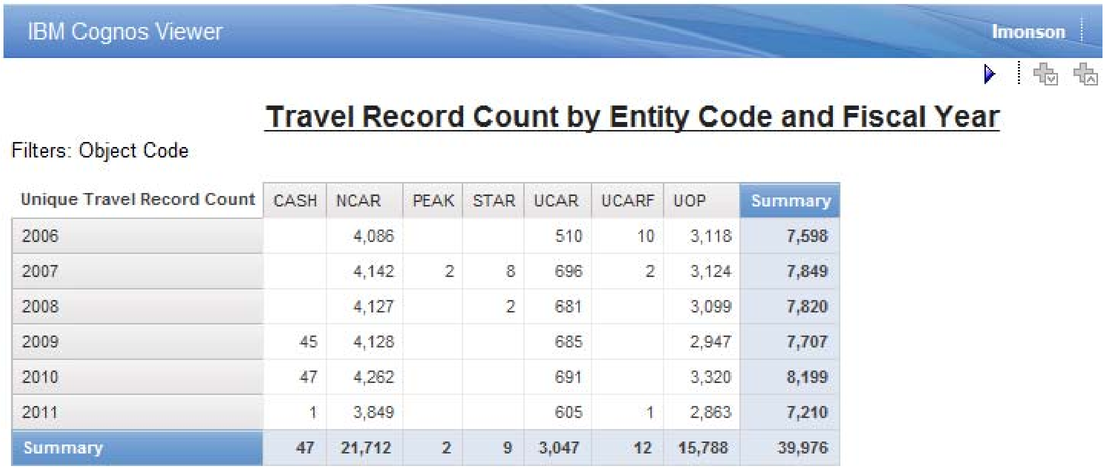
IBM Cognos creates a crosstab report as shown:

Unique Travel Record Count	PEAK	UCARF	UOP	UCAR	NCAR	CASH	STAR	Summary
2007	2	2	3,124	696	4,142		8	7,849
2006		10	3,118	510	4,086			7,598
2011		1	2,863	605	3,819	1		7,180
2010			3,320	691	4,262	47		8,199
2008			3,099	681	4,127		2	7,820
2009			2,947	685	4,128	45		7,707
Summary	2	12	15,788	3,047	21,682	47	9	39,946

12. Sort Fiscal Year Ascending.
13. Sort Entity Code Ascending.
    Edit the Title of the report and type "Travel Record Count by Entity Code and Fiscal Year".
14. From the Toolbox, drag a Text Item into your header below the title and type a description of the filters:



15. Save your report specification as **Crosstab – Count**.
16. Run the report in HTML.

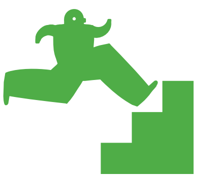


Travel Record Count by Entity Code and Fiscal Year

Filters: Object Code

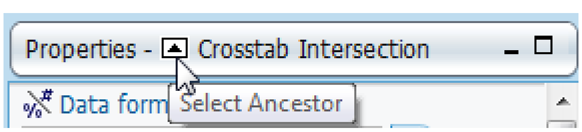
Unique Travel Record Count	CASH	NCAR	PEAK	STAR	UCAR	UCARF	UOP	Summary
2006		4,086			510	10	3,118	7,598
2007		4,142	2	8	696	2	3,124	7,849
2008		4,127		2	681		3,099	7,820
2009	45	4,128			685		2,947	7,707
2010	47	4,262			691		3,320	8,199
2011	1	3,849			605	1	2,863	7,210
Summary	47	21,712	2	9	3,047	12	15,788	39,976

Step-By-Step

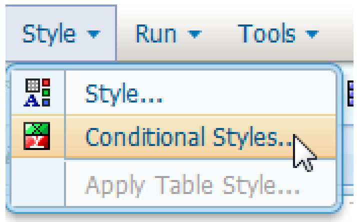


Conditional Formatting

1. Open the **Crosstab – Count** specification and save it as **Conditional Formatting**.
2. Set the **View** to **Page Design**.
3. Click in the crosstab measures area of the crosstab (check the Select Ancestor arrow in the Properties pane to be sure you have selected Crosstab Intersection.).

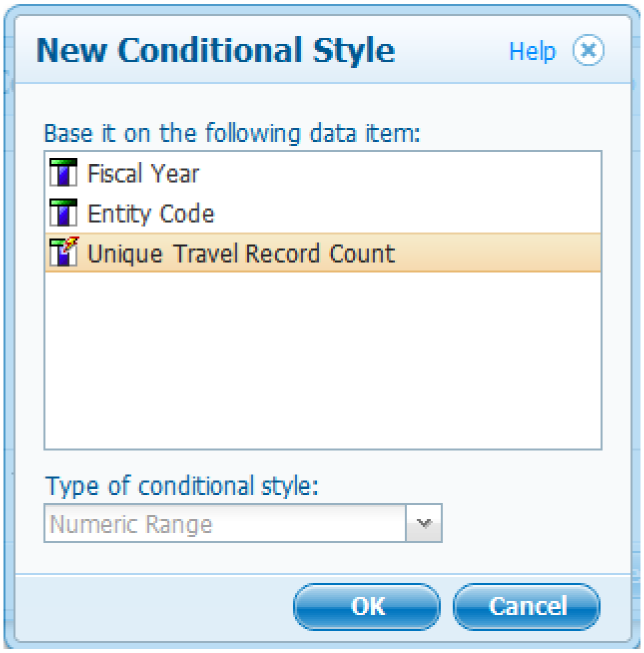


4. To access conditional formatting,
   - Click on the Conditional Styles icon in the Toolbar, or
   - Select **Conditional Styles** from the **Style** menu

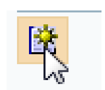


5. In the Conditional Styles window, click on the New icon to create a New Conditional Style.

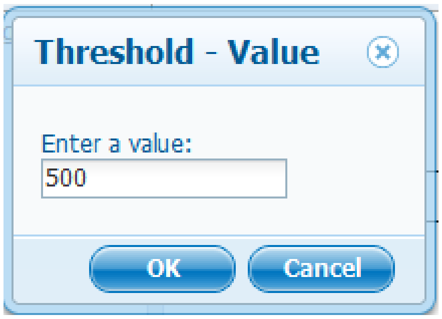
6. Select Unique Travel Record Count as the Data Item. Click OK.



We want to differentiate the Unique Travel Record Counts in the intersections of the crosstab report by ranking them from lowest to highest. Let's break down the Unique Travel Record Counts into three categories and associate each with a particular formatting style.

7. Click on the New  icon to create a New Value.

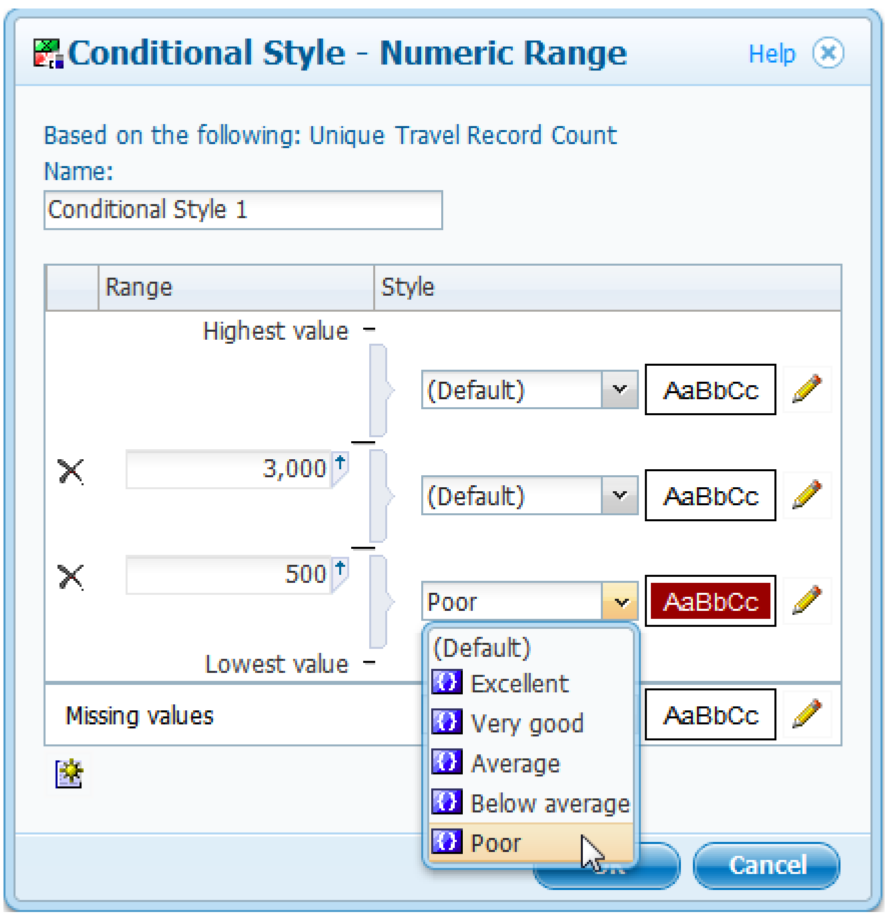
8. Type “500” into the New value box, and click OK.



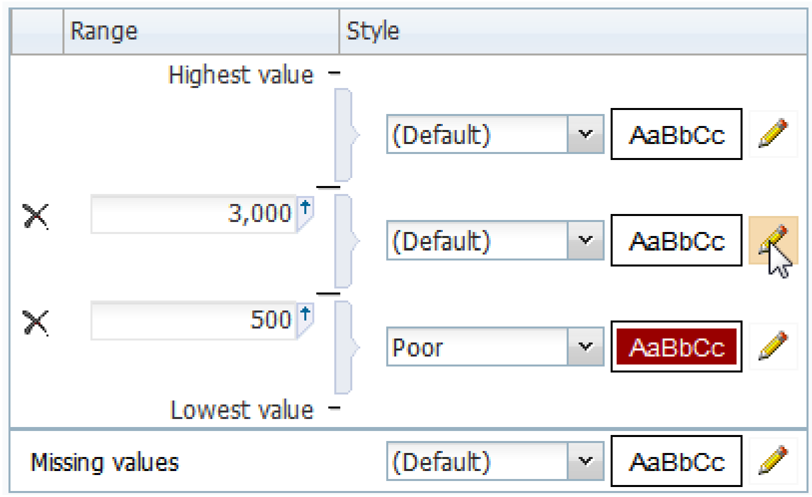
9. Click on the New icon and create a New Value of “3000”.

You can reposition the values by using the Up and Down arrows.

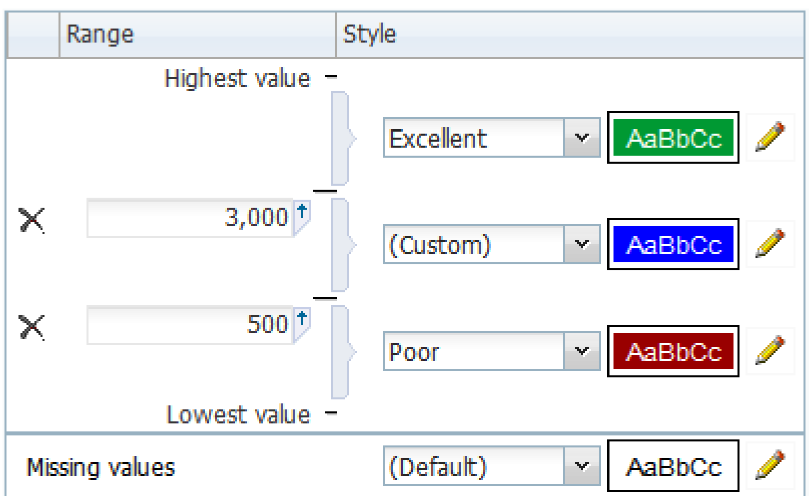
10. For the bottom Style, select **Poor** from the drop-down box as shown here to give a Red background to those low values.



11. For the middle Style, click the Edit Style icon to choose a Blue background and White foreground color.



12. For anything above 3,000, select **Excellent** from the drop-down box.



13. Click OK twice to apply the formatting.
14. Save the report specification again (**Conditional Formatting**).
15. Run your report.

Your report now highlights the highest counts in green and the lowest in red.

Travel Record Count by Entity Code and Fiscal Year

Filters: Object Code

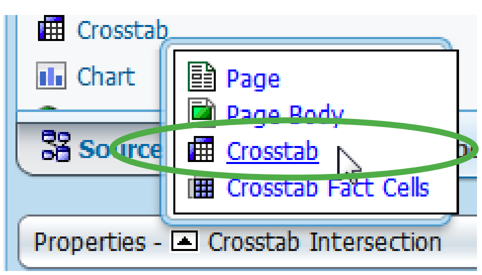
Unique Travel Record Count	CASH	NCAR	PEAK	STAR	UCAR	UCARF	UOP	Summary
2006		4,086			510	10	3,118	7,598
2007		4,142	2	8	696	2	3,124	7,849
2008		4,127		2	681		3,099	7,820
2009	45	4,128			685		2,947	7,707
2010	47	4,262			691		3,320	8,199
2011	1	3,849			605	1	2,863	7,210
Summary	47	21,712	2	9	3,047	12	15,788	39,976

It is often useful, and more illustrative, to view a graphic representation of your analysis. Users may find it easier to spot trends or relationships by reviewing a chart instead of a series of numbers. Business Insight Advanced provides a variety of chart types from which to choose when displaying data graphically.

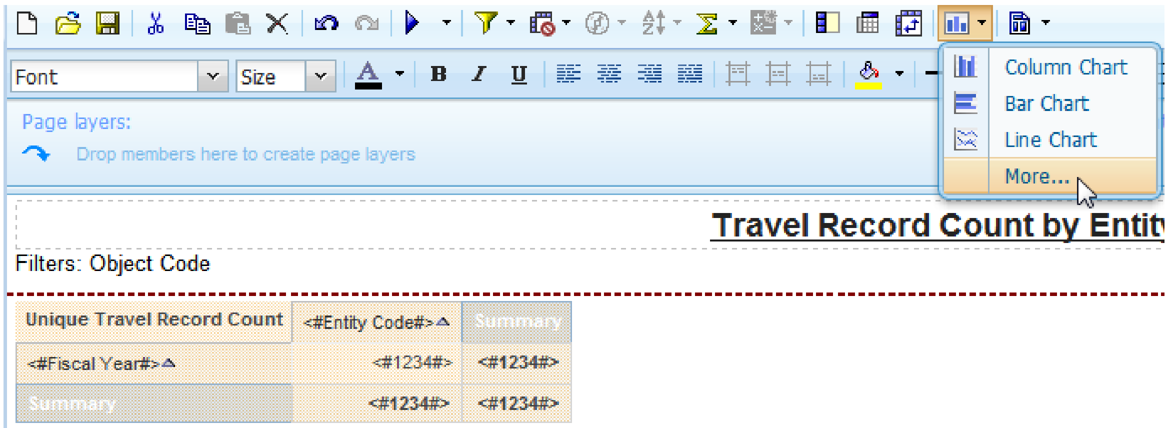
Step-By-Step

Charts

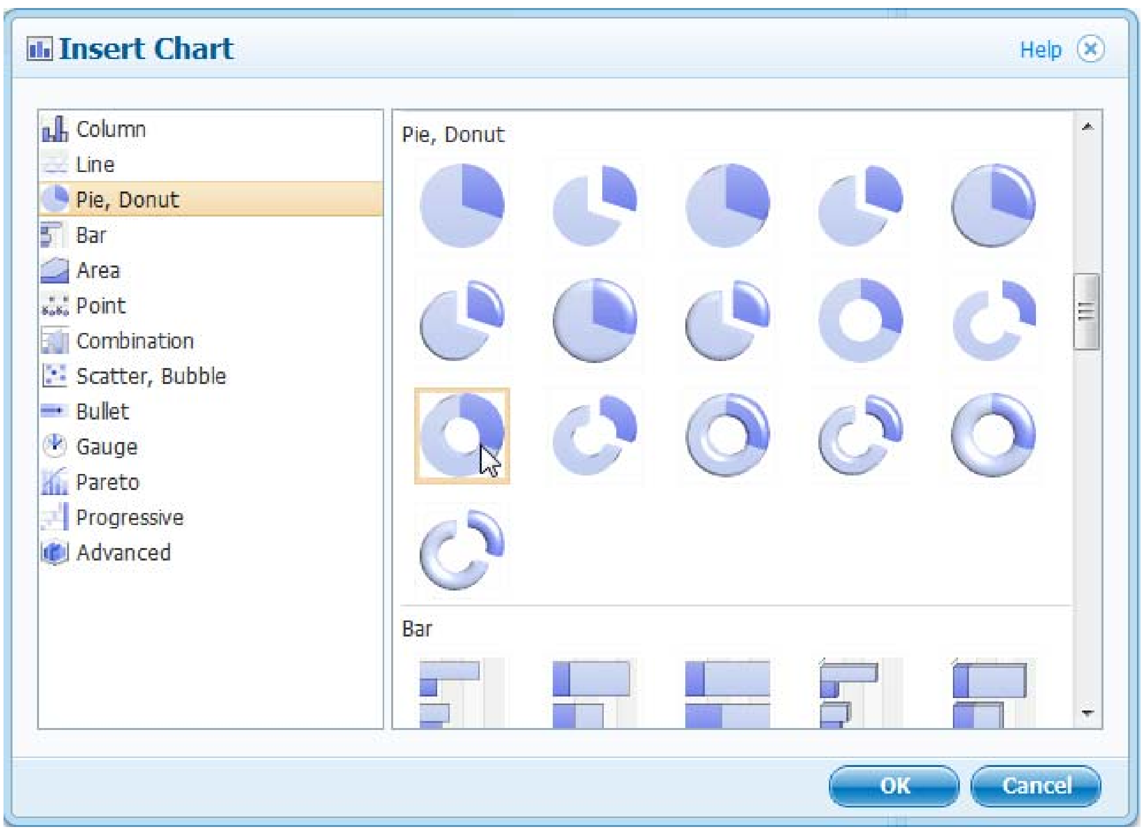
1. Continue with the **Conditional Formatting** report specification.
2. Save this report specification as **Page Layout and Chart**.
3. Click in the crosstab on the report page.
4. Use the Select Ancestor arrow in the Properties pane to ensure you select the entire crosstab.



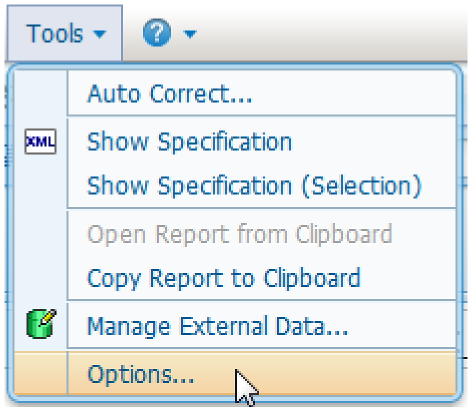
5. With the entire crosstab highlighted, click on the Chart icon and select **More**.



6. Scroll through the different types of charts available. Click Cancel.

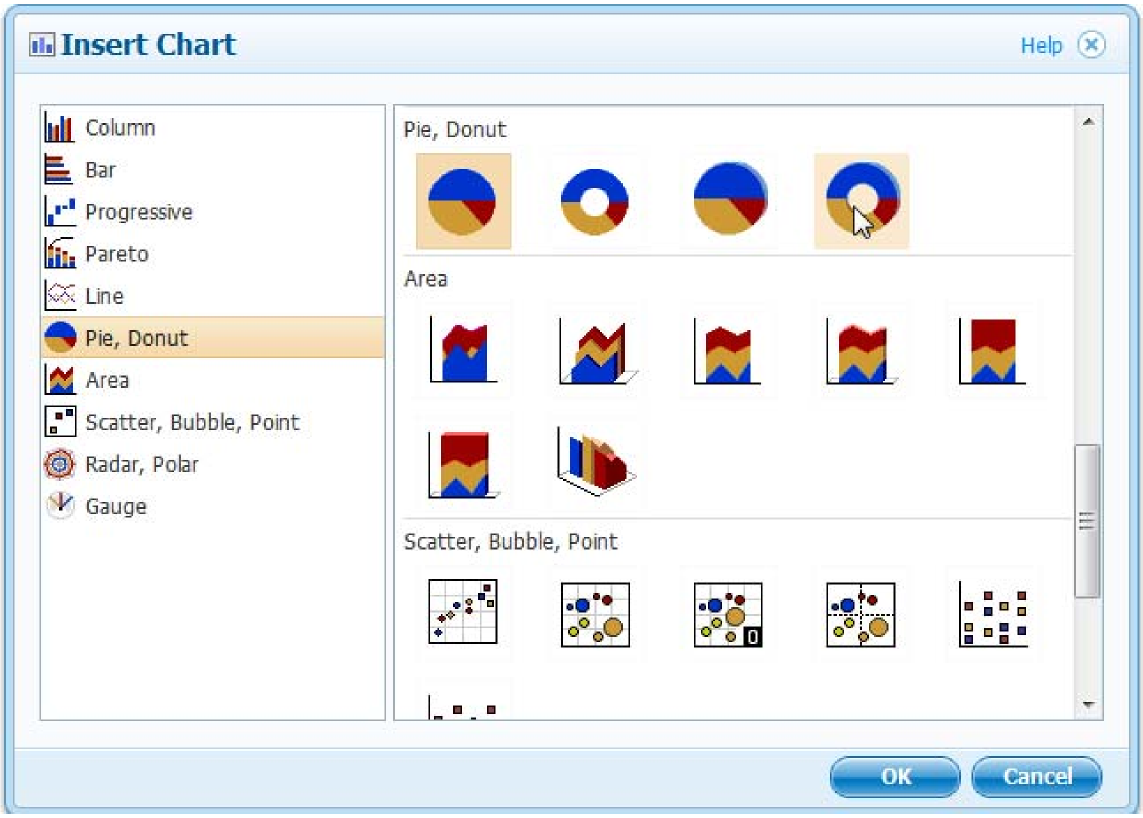


7. Back on the report page, in the **Tools** menu, select **Options**.



8. Click on the Advanced tab, check the box next to Use legacy chart authoring, and click OK. This provides you access to create new reports using the legacy Report Studio charts instead of the default Business Insight Advanced charts.

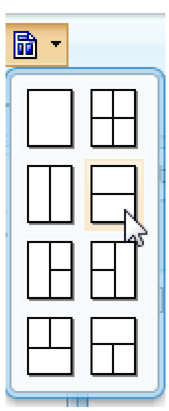
9. Now click on the Chart icon in the Toolbar, select **More**, and review the charting options. Select the Donut with 3D Effects. Click OK.



The Donut chart is inserted above the Crosstab report.

Business Insight Advanced gives you the option to control page layout. Let's create a layout to display both the chart and the crosstab on the same report page.

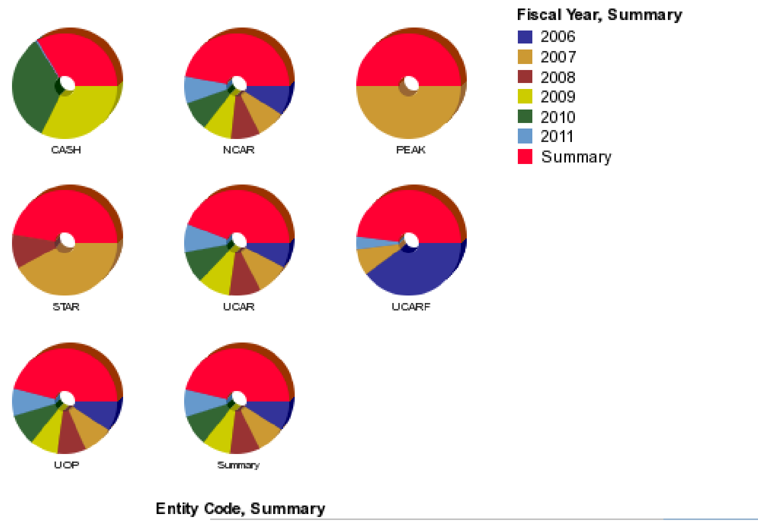
10. Select the following page layout by clicking on the Page Layout  icon in the Toolbar:



11. Save your report specification again (**Page Layout and Chart**).
12. Run the report in HTML from the Toolbar.

Travel Record Count by Entity Code and Fiscal Year

Filters: Object Code

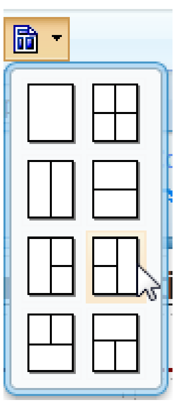


Unique Travel Record Count	CASH	NCAR	PEAK	STAR	UCAR	UCARF	UOP	Summary
2006		4,086			510	10	3,118	7,598
2007		4,142	2	8	696	2	3,124	7,849
2008		4,127		2	681		3,099	7,820
2009	45	4,128			685		2,947	7,707
2010	47	4,262			691		3,320	8,199
2011	1	3,849			605	1	2,863	7,210
Summary	47	21,712	2	9	3,047	12	15,788	39,976

Step-By-Step

Additional Chart Options

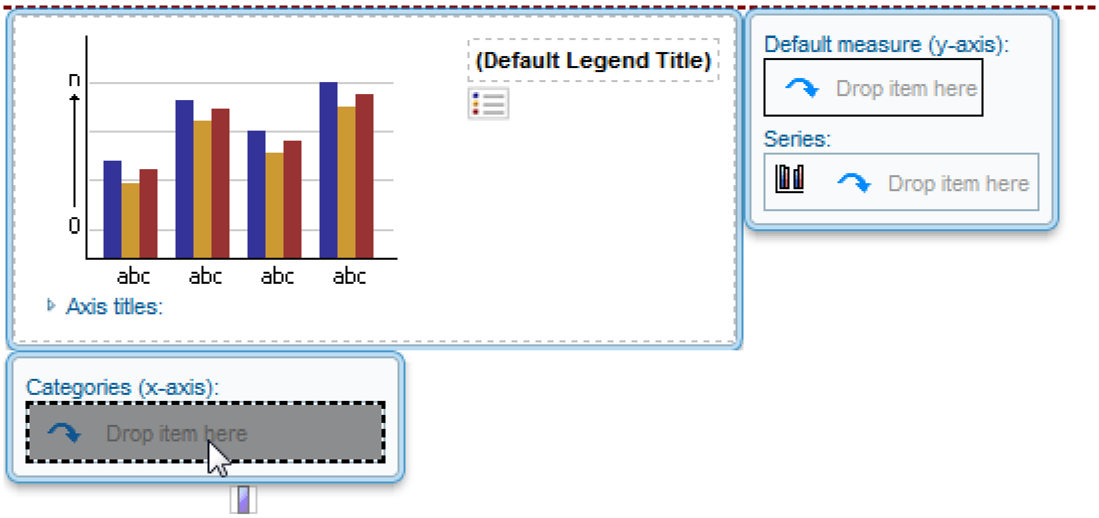
1. Continue with your **Page Layout and Chart** report.
2. Save the report specification as **Charts**.
3. Click in the page body, click the Page Layout icon, and select the following page layout:



A new column is inserted to the right of the existing Crosstab and Chart.

4. From the Insertable Objects pane, Toolbox tab, drag a Chart into the new column.
5. Choose a Column chart and click OK.
6. Click in the new layout column, and align the chart Horizontal **Center** and Vertical **Middle**.
7. Click on your new chart to display the drop zones.

8. From the CPM Training Data namespace, General Ledger namespace, General Ledger Details query subject, drag the Person Entity Identifier - PEID query item into the Categories (x-axis).

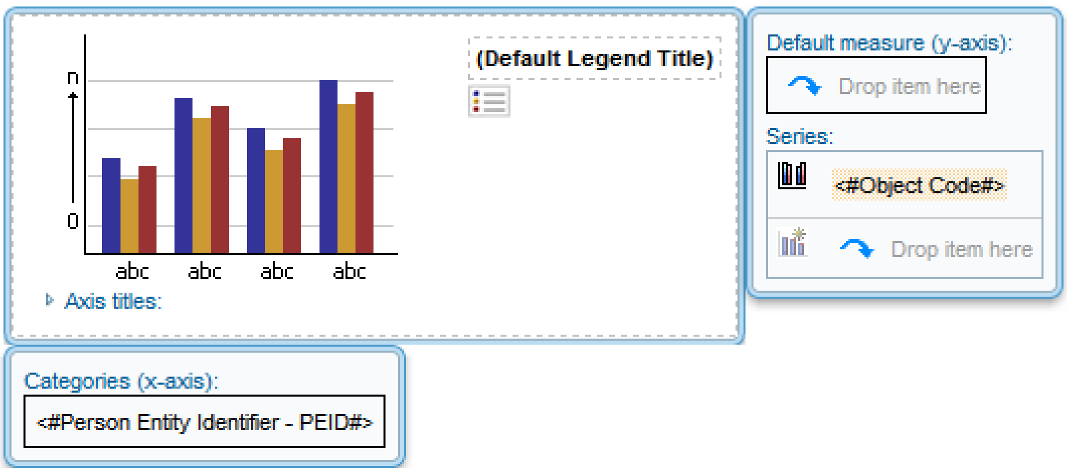


9. Create a new Custom Filter on Person Entity Identifier – PEID to Show only 011337, 023818, and 047192.

NOTE

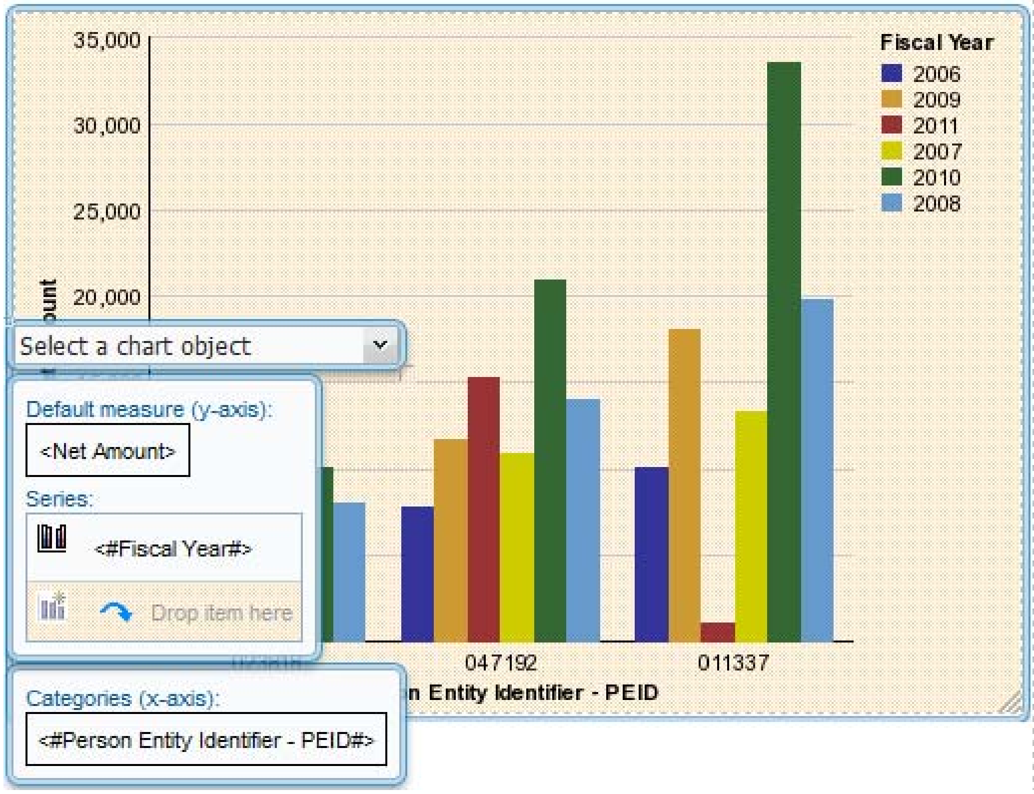
The Categories (x-axis), Default measure (y-axis), or Series (primary axis) drop zones do not appear until you drag a query item over the empty chart or click into the chart.

10. From the Object Code query subject, drag the Object Code query item into the Series (primary axis).

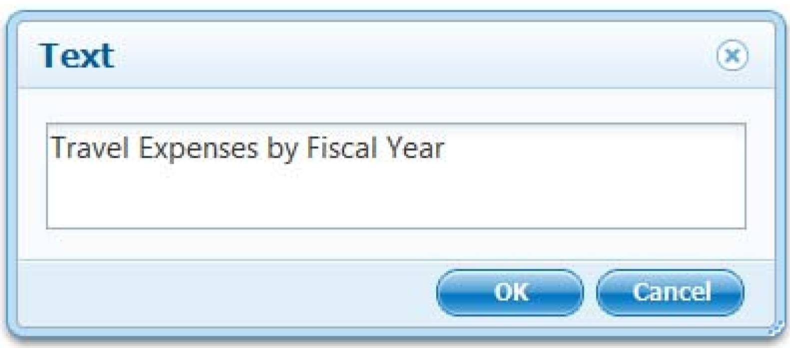


11. Create a Custom Filter on Object Code to Show only values starting with “54”.
12. Delete the Object Code from the Series.
13. From the Date query subject, drag Fiscal Year into the Series.
14. From the General Ledger Details query subject, drag Net Amount into the Default measure (y-axis) area of the chart.

15. Set the **View** to **Page Preview**.

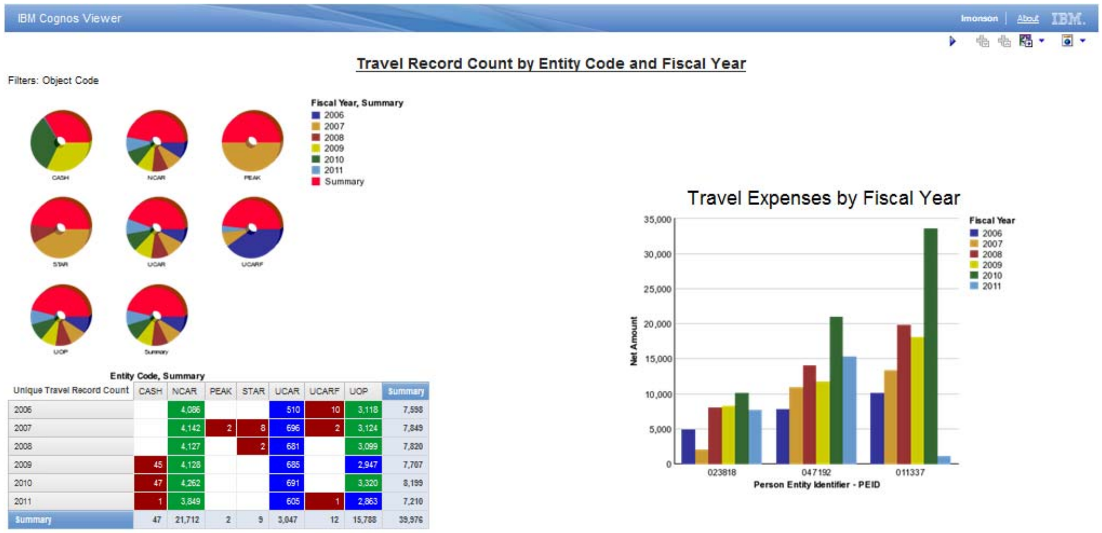


16. Sort Fiscal Year Ascending.
17. From the Insertable Objects pane, Toolbox tab, drag a Block into the right column of the report page, and drag the Chart below the Block.
18. Drag a Text item into the Block, type in a title for the report, and click OK.



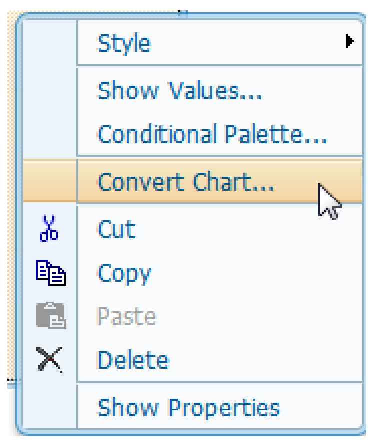
19. Change the Font size to 18.

20. Run the report in HTML.



We decide we want to switch this new chart's style. Close IBM Cognos Viewer.

21. Right-click in the chart, and select **Convert Chart**.



22. Select the Stacked Bar with 3-D Effects chart style and click OK.
23. Save the report specification again (**Charts**).

NOTE

Hover the mouse over each of the bars to view the detail.

Chapter 9 – Examining a Report with Dimensional Data

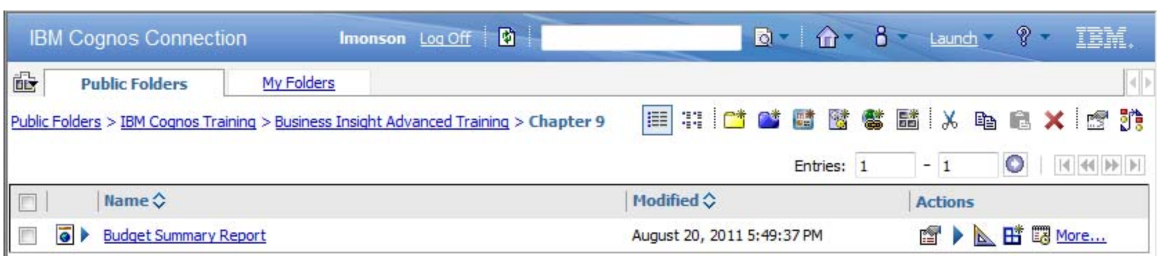
In this chapter, we get acquainted with the Business Insight Advanced interface for reports with dimensional data by viewing an existing report.

Step-By-Step

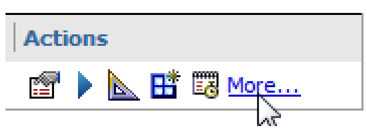
Examining a Report with Dimensional Data

First we again make a copy of the original report and save it in My Folders.

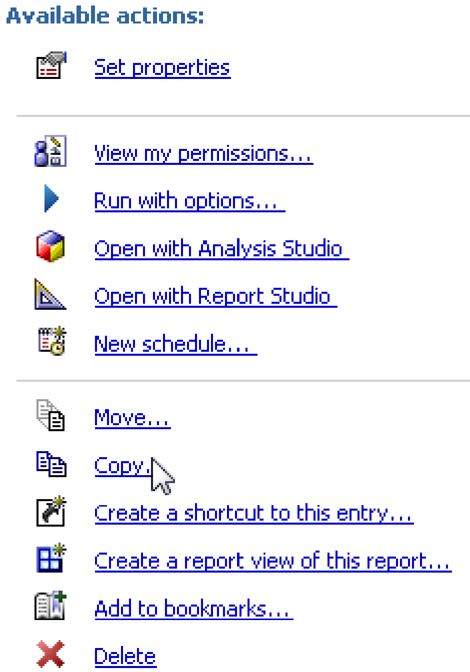
1. Navigate in Public Folders to the Budget Summary Report (**Public Folders > IBM Cognos Training > Business Insight Advanced Training > Chapter 9 > Budget Summary Report**).



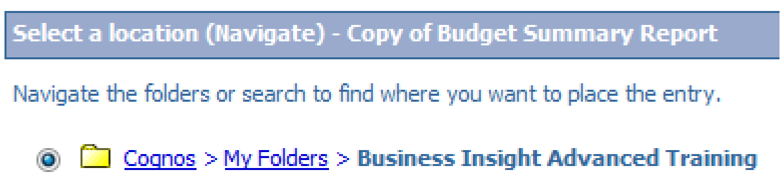
2. In the Actions menu, click on the More link.



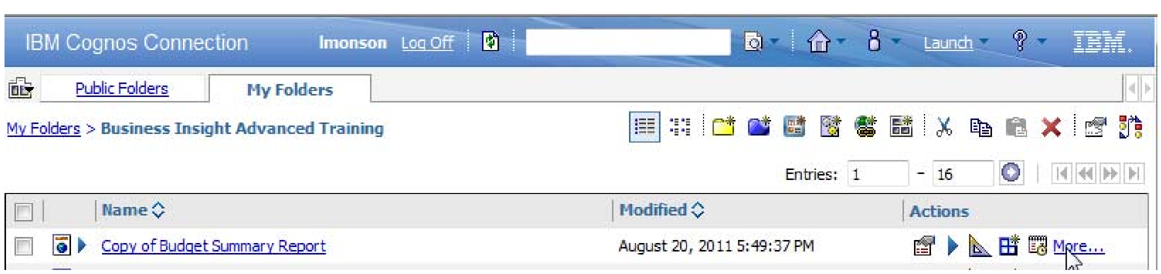
3. From Available actions, click on Copy.



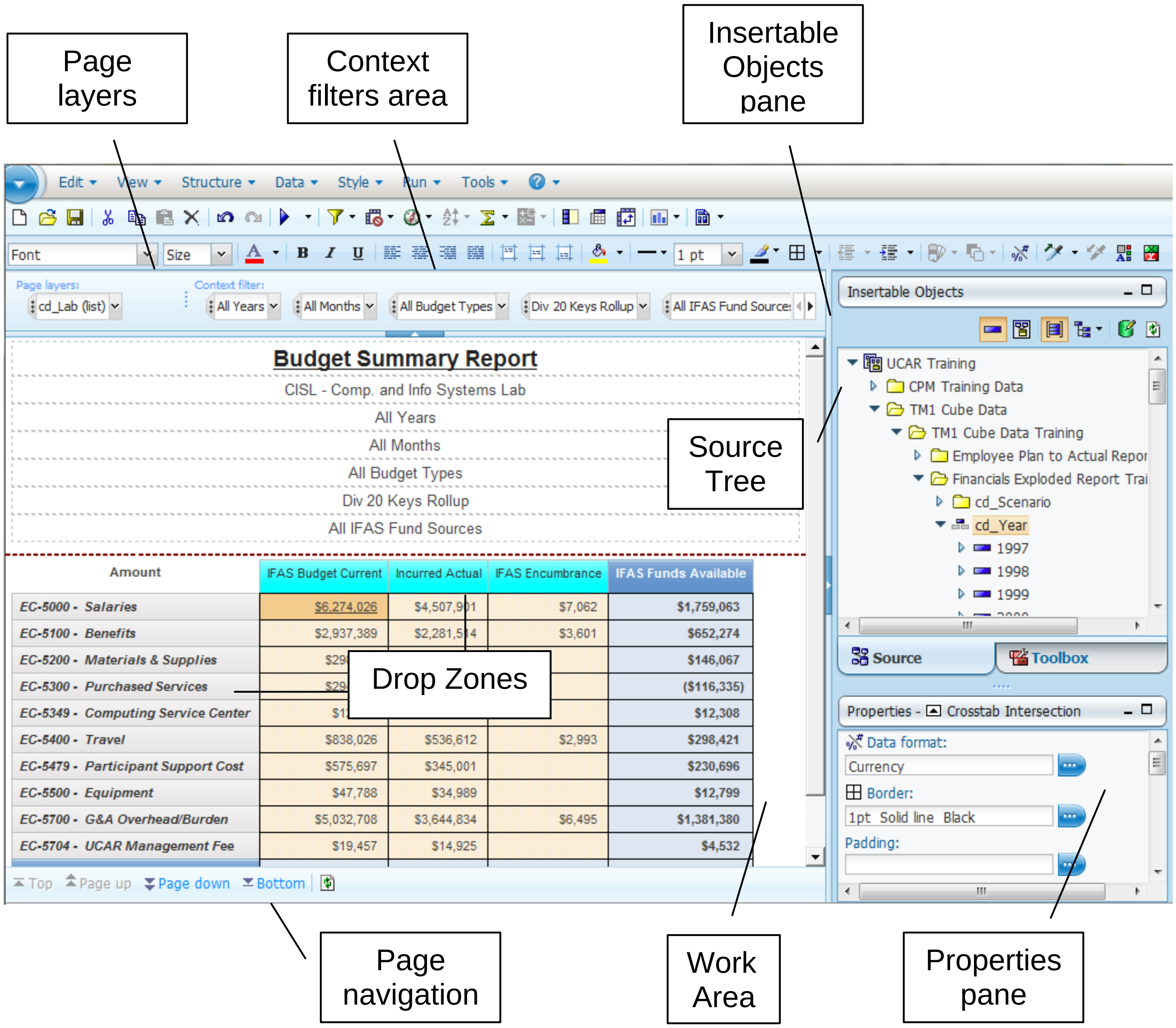
4. Navigate to your Business Insight Advanced Training folder in My Folders and click OK twice.



5. Navigate to this new Copy of Budget Summary Report and launch Business Insight Advanced by clicking on More in the Actions Menu and selecting Open with Business Insight Advanced.

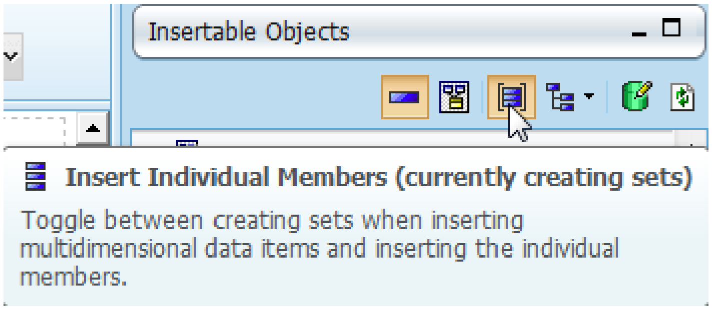


6. Explore the user interface.

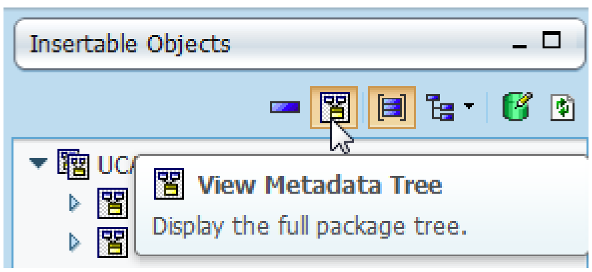


Much of the interface is familiar from our work with reporting on relational data. We will look at the Page layers and Context filters areas in more depth in the following chapters as we work with dimensional data.

7. Notice the icons at the top of the Insertable Objects pane. Hover over each one to see its purpose:



8. Click on the View Members Tree and View Metadata Tree icons to see how they change the view of the Insertable Objects.



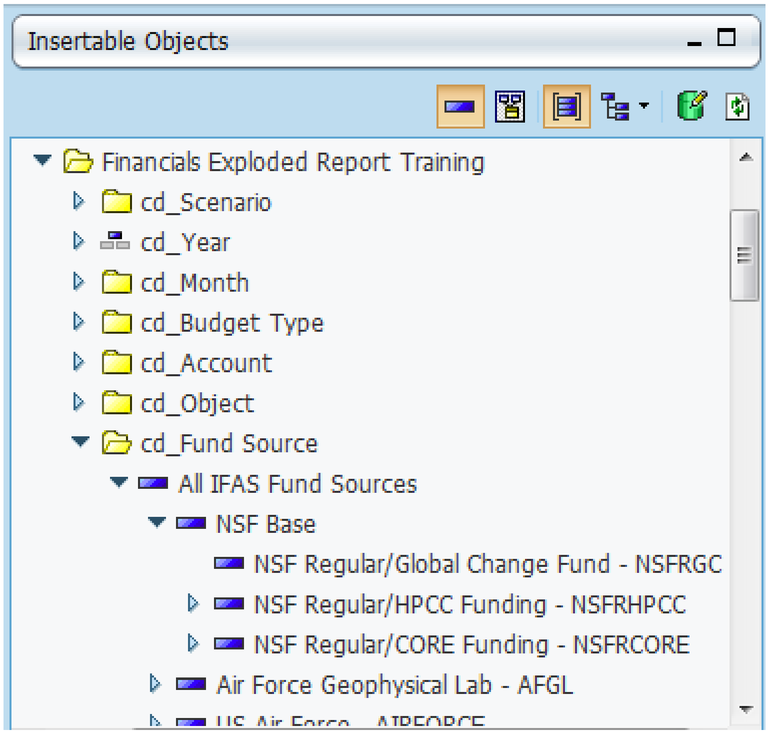
We will work more with members, sets, and external data in later chapters.

NOTE

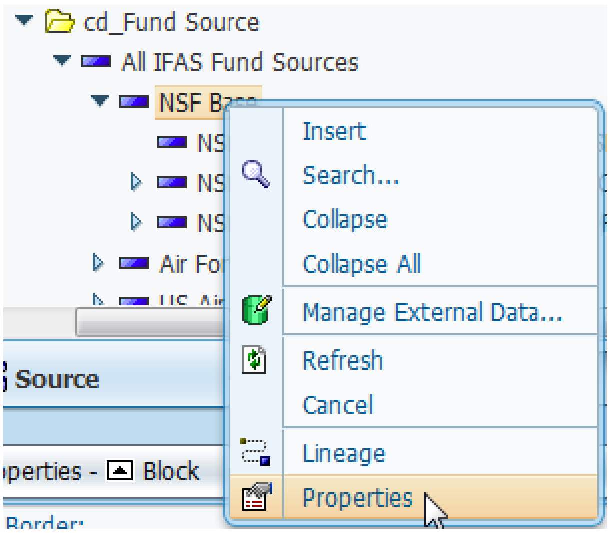
Why do some dimensions have folders while others do not? Folders can be used to organize dimensions, or can signify that there is an "alternate drill path" for a particular dimension. You cannot drag a dimension folder or the Measures folder 

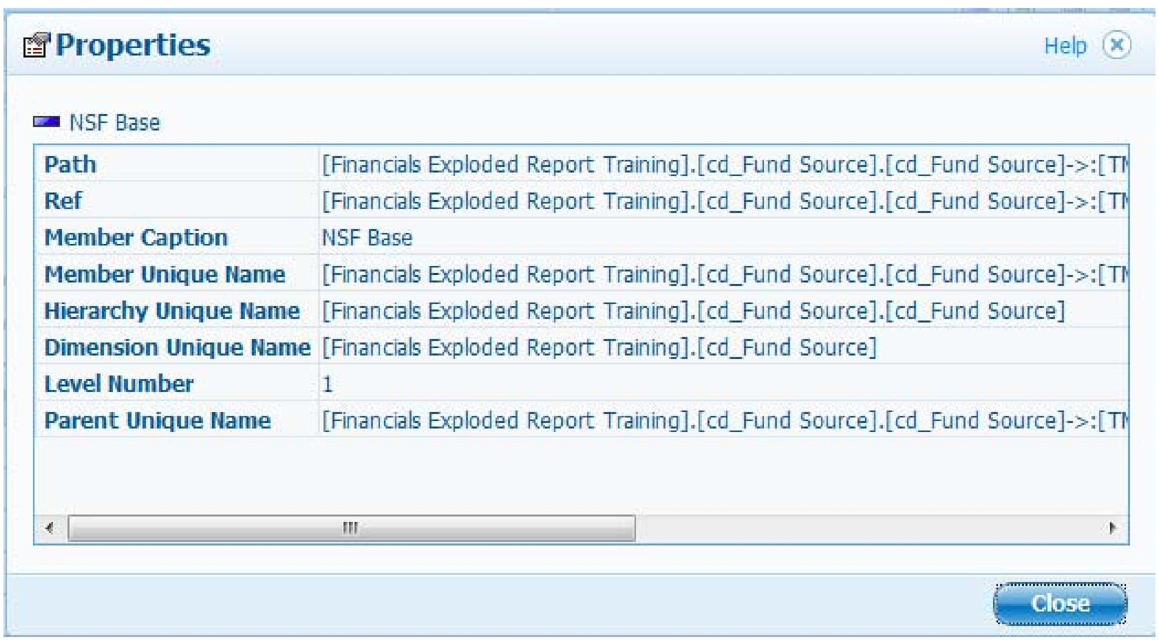
into a Business Insight Advanced report. You must select from one of the drill paths contained within those folders.

9. In the Source tab, click on the Expand arrow next to the TM1 Cube Data folder, and navigate to the TM1 Cube Data Training folder, Financials Exploded Report Training folder, cd_Fund Source folder. Continue to expand the Fund Source dimension to view this dimensional hierarchy.

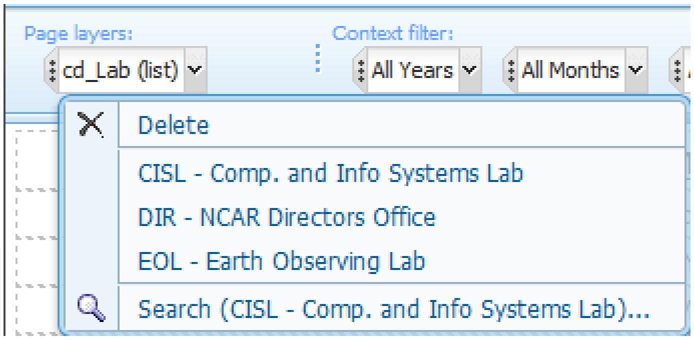


10. Right-click on various members in the tree to view their properties.

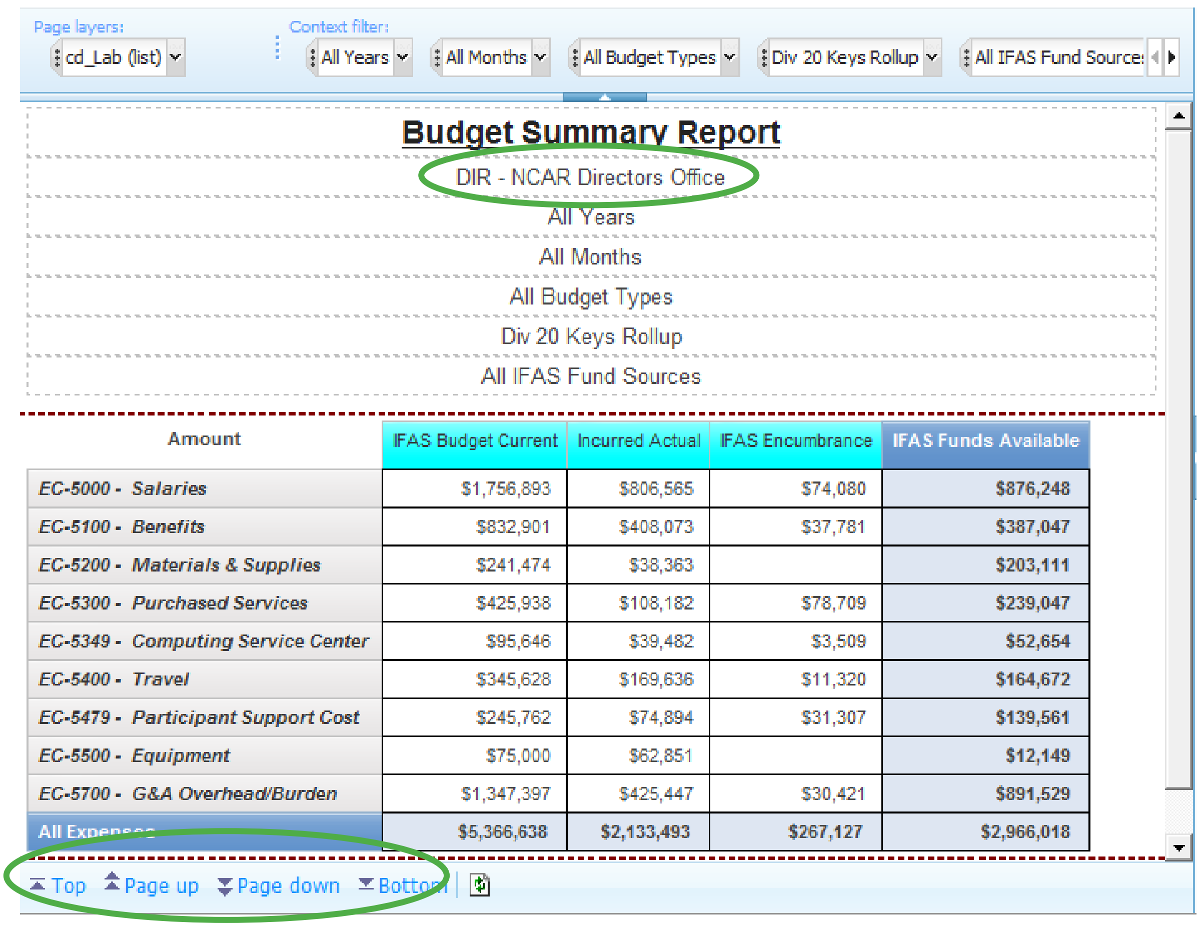




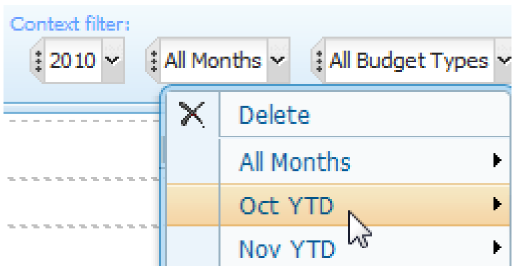
The Page layers area shows the dimension and members of that dimension on which the report is displaying page breaks. Values for each member display on a separate page.



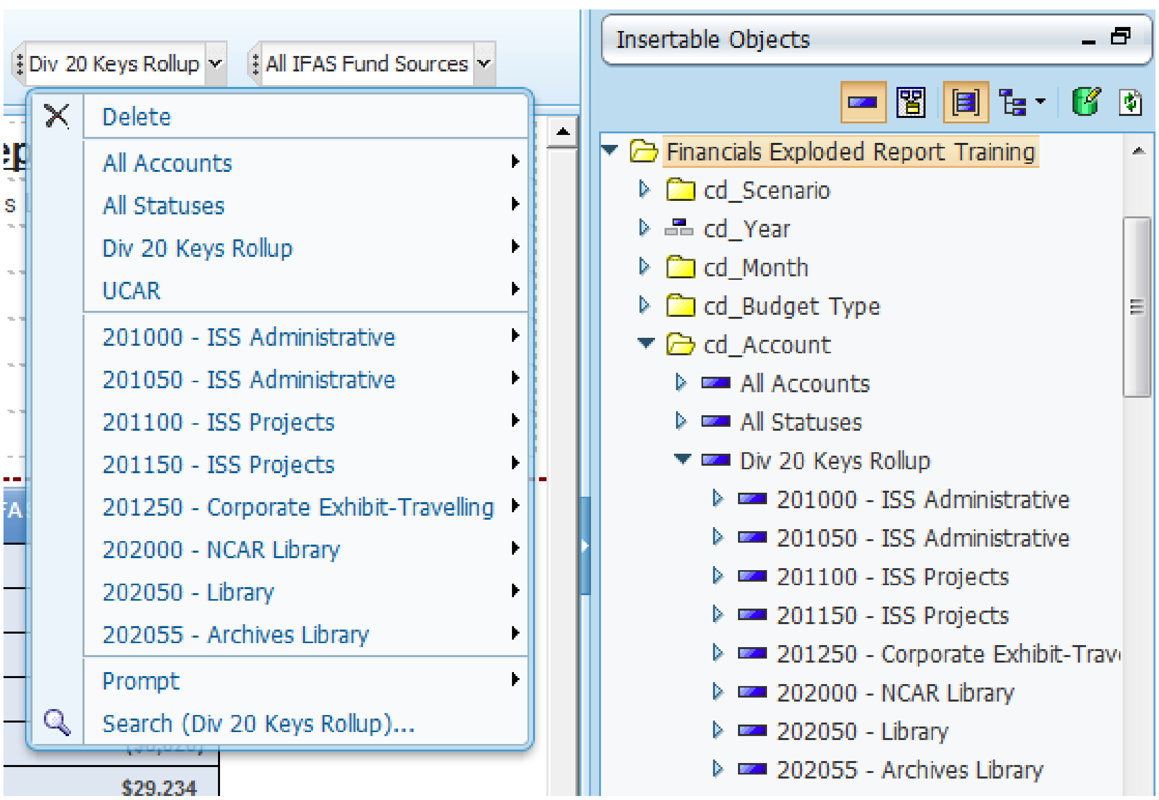
11. Use the Page navigation to Page up and down to see the report for the different labs.



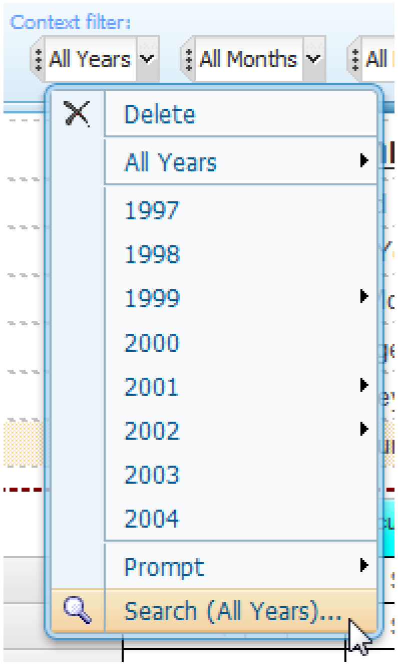
12. In the Context filters area, you can also easily explore and change the contents of the analysis. Specific data items in this area filter your report to show values, or context, only for that data item. This is an easy way to apply a filter to your report without adding it to your report view (Work area).Click on the All Months context filter and select **Oct YTD** to change the values in the report.



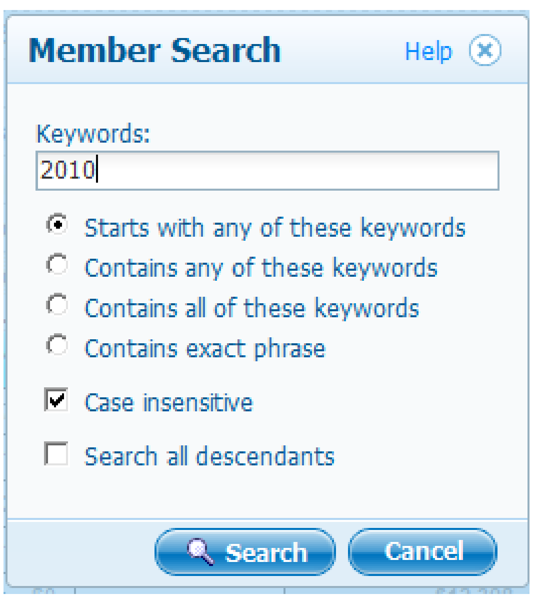
13. Click Undo to return to All Months.
14. Click on the Div 20 Keys Rollup context filter to see the options available. Expand the Insertable Objects cd_Account dimension to get a better picture of their meaning.



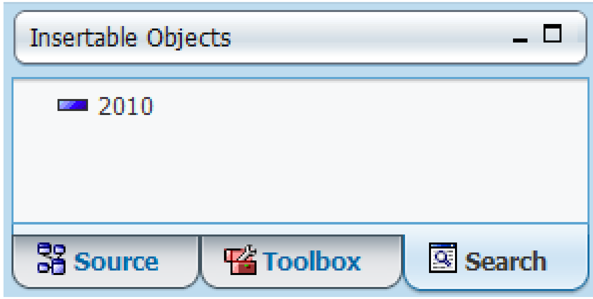
15. Click on the All Years context filter. Select **Search** so that we can look at 2010 values.



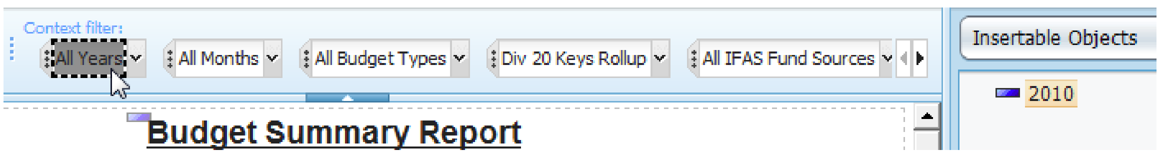
16. Complete the Member Search dialog box and click Search.



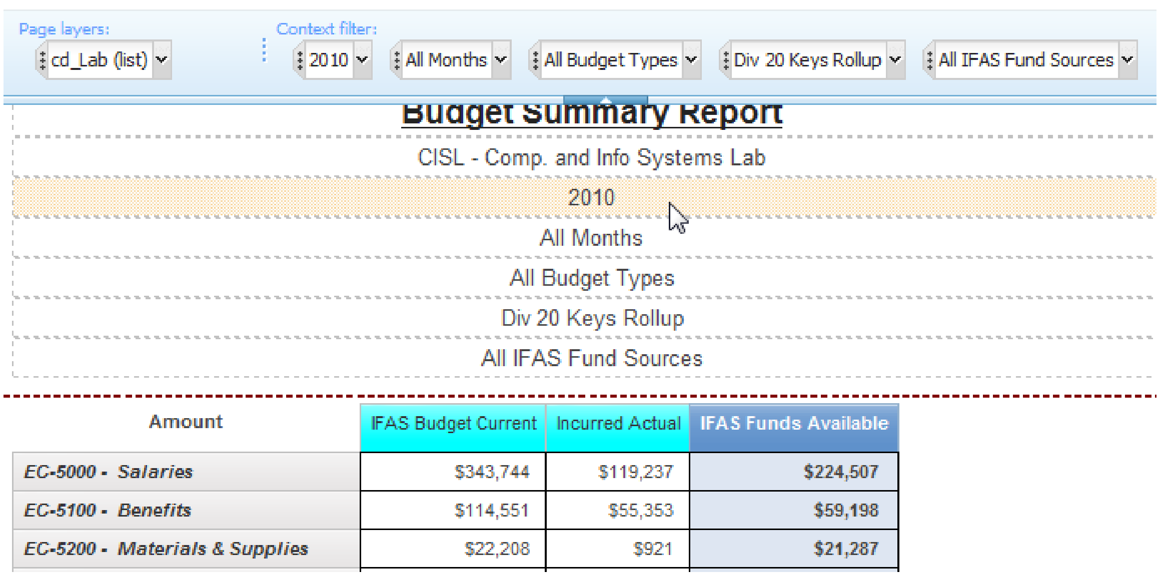
The member 2010 displays in the Insertable Objects Search tab.



17. Drag 2010 to replace the All Years context filter:



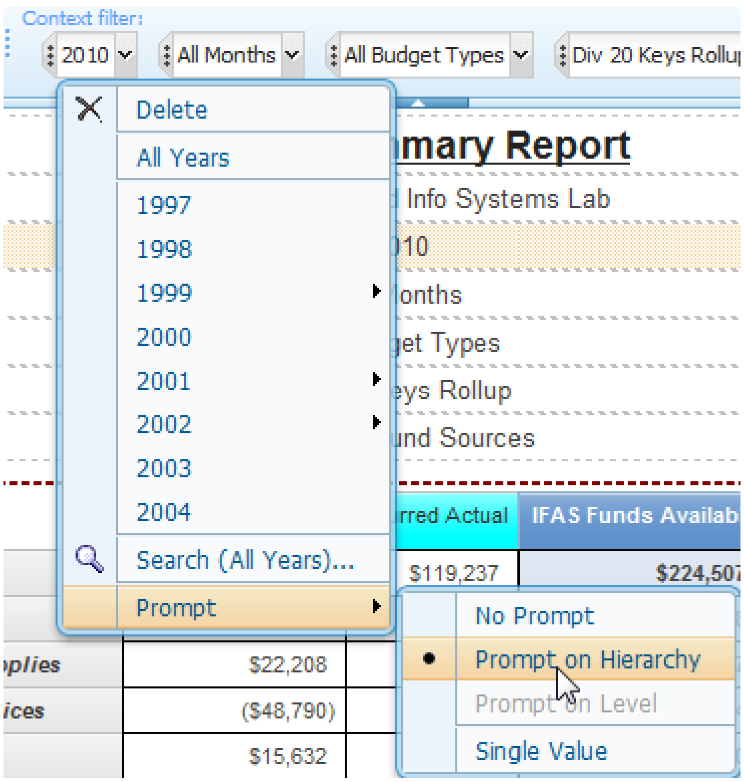
Notice the context filter, the report values, and the report header have changed to reflect the new selected member.



NOTE

Changing the focus of a context filter changes the data item values in a report. It does not limit or change the items in the rows or columns. Members that are used as a context filter appear in the report header when you run the report.

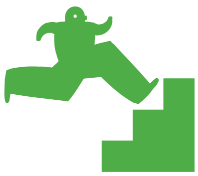
18. Let's expand the 2010 context filter one more time and select the option to prompt for this hierarchy when the report is run:



19. To view your prompt, run your report in HTML, expand the All Years hierarchy, and select 2011 in response to the prompt.
20. Return to your report. Save your report specification as **Analysis**.

Chapter 10 – Creating a Simple Analysis

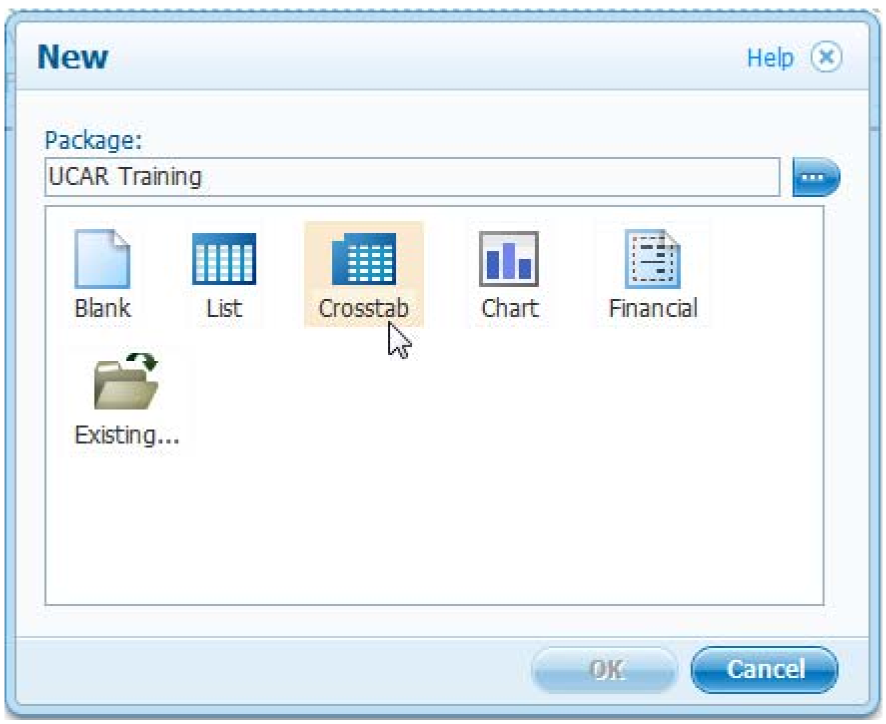
Step-By-Step



Creating a Simple Analysis

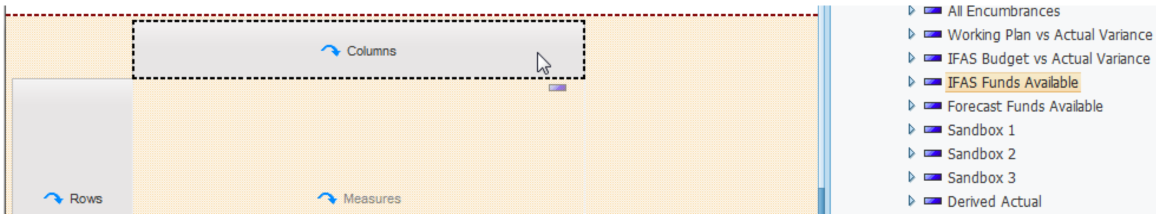
Let's create a budget summary report using the financials dimensional data.

1. Create a new Crosstab report based on the **UCAR Training** package.

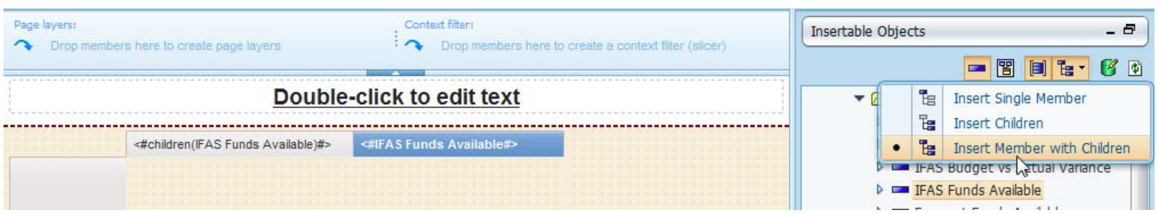


2. Set the **View** to **Page Design**.

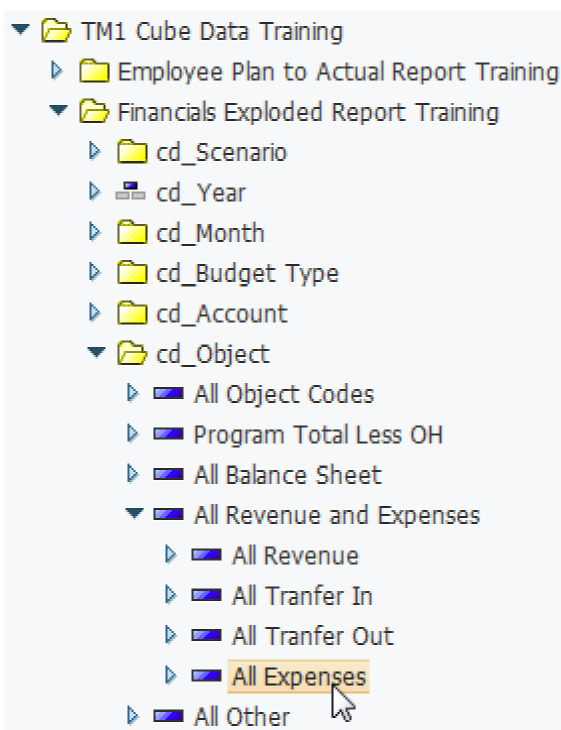
3. Expand the TM1 Cube Data folder, Financials Exploded Report Training folder, cd_Scenario folder. Drag the IFAS Funds Available member to the Columns drop zone.



Notice we are inserting the IFAS Funds Available member with its children as a set, the default in Business Insight Advanced.



4. Highlight the Rows drop zone, expand the cd_Object folder and navigate to the All Expenses member in All Revenue and Expenses.



5. Right-click and select **Insert** to insert All Expenses as the rows in your report.

6. Expand the cdm_Financial Exploded measures folder, Total MTDC measure, and drag Amount into the Measures drop zone.

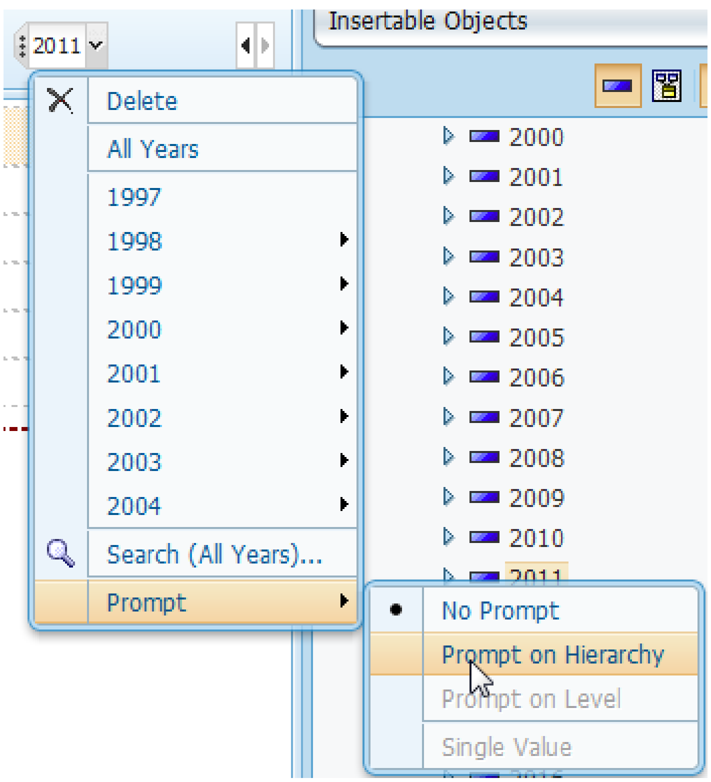
Your report should look like this:

Amount	<#children(IFAS Funds Available)#>	<#IFAS Funds Available#>
<#children(All Expenses)#>	<#1234#>	<#1234#>
<#All Expenses#>	<#1234#>	<#1234#>

Remember that we need to select from the remaining dimension folders to filter the data correctly. We select those dimensions and insert them as context filters.

7. Drag over the following members as context filters:
   - From the cd_Month folder, All Months
   - From cd_Budget Type, All Budget Types
   - From cd_Account, Div 20 Keys Rollup
   - From cd_Fund Source, All IFAS Fund Sources

8. Let's drag 2011 from the cd_Year level, insert is as a context filter, and create a prompt so that end users can choose the year of interest when they run the report.



9. Edit the report title to read "Budget Summary Report".

10. Save the report specification as **Suppression**.
11. Set the **View** to **Page Preview**.
12. Run your report in HTML. Choose 2011 in response to the prompt.

IBM Cognos Viewer

Budget Summary Report

All Months

All Budget Types

Div 20 Keys Rollup

All IFAS Fund Sources

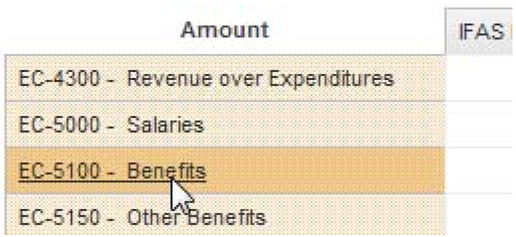
2011

Amount	IFAS Budget Current	Incurred Actual	IFAS Encumbrance	IFAS Funds Available
EC-4300 - Revenue over Expenditures				
EC-5000 - Salaries	$3,221,136	$2,197,529	$597,417	**$426,189**
EC-5100 - Benefits	$1,576,658	$1,107,333	$304,683	**$164,642**
EC-5150 - Other Benefits				
EC-5160 - Post Retirement Obligation				
EC-5180 - Post Retirement Obligation				
EC-5200 - Materials & Supplies	$689,052	$624,242	$39,000	**$25,810**
EC-5300 - Purchased Services	$927,475	$459,281	$550,180	**($81,987)**
EC-5317 - Interest Expense	$160			**$160**
EC-5349 - Computing Service Center	$374,617	$217,354	$63,067	**$94,195**

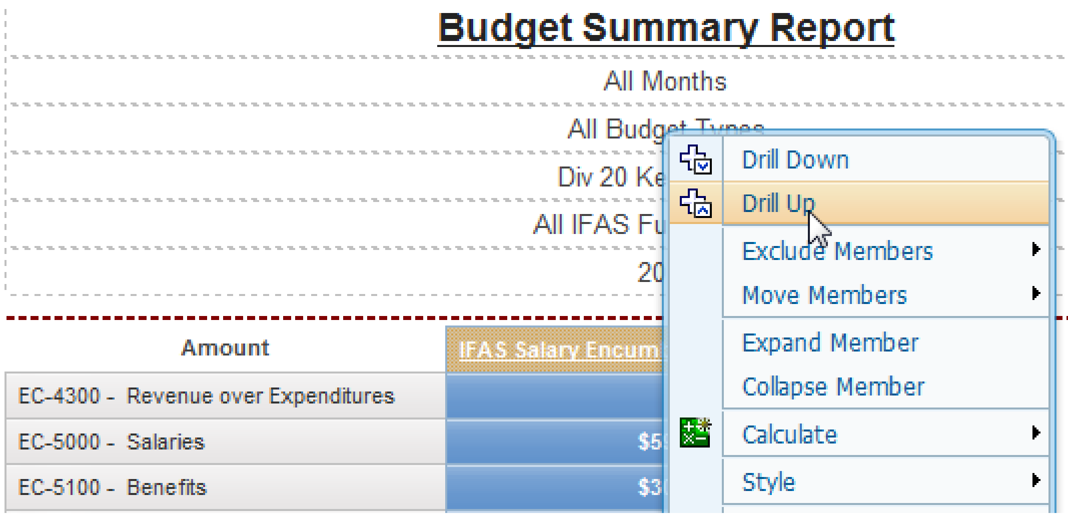
Drilling Up and Down
In Business Insight Advanced

There are a number of ways to quickly change the focus of your analysis by drilling up and down through the levels of your data. Drilling allows the user to examine the organization's performance at a very high level, and then explore more and more of the detail in order to isolate specific issues and answer specific questions. Business Insight Advanced allows drilling in either the rows or columns of the crosstab, or on both rows and columns simultaneously.

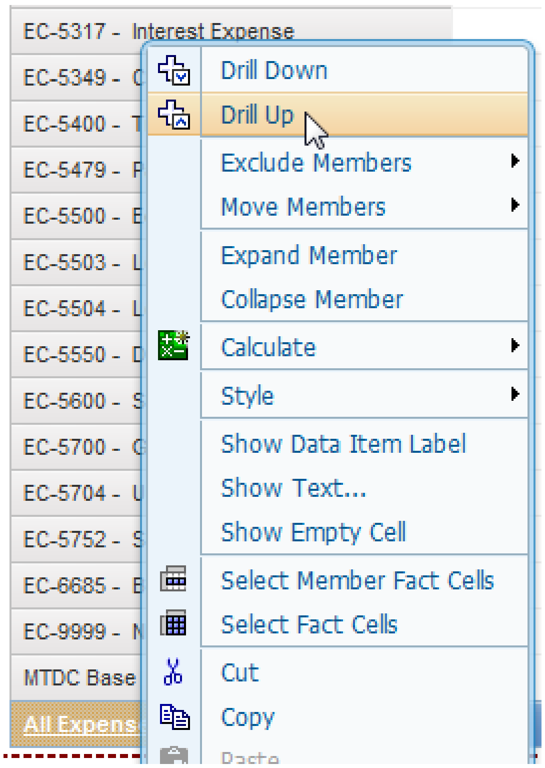
13. Close IBM Cognos Viewer to return to the report page.
14. Click on the Benefits cell to see the link that indicates that we can drill, and click on that link.



15. Double-click on Full Benefits – Applied to see that you have reached the lowest level in the dimension. Click on the summary row links to return to the All Expenses view.
16. Double-click on the IFAS Encumbrance column header cell to drill down through the levels.
17. Right-click on the summary column header and select **Drill Up** twice to return to our original IFAS Funds Available view.



18. Highlight the All Expenses summary row, right-click, and select **Drill Up**.



This displays the next level up in the cd_Object dimension.

Amount	IFAS Budget Current	Incurred Actual	IFAS Encumbrance	IFAS Funds Available
All Revenue	$493,698	($285,387)		$779,085
All Tranfer In				
All Tranfer Out				
All Expenses	$9,519,261	$6,492,464	$2,041,058	$985,739
All Revenue and Expenses	$10,012,959	$6,207,077	$2,041,058	$1,764,824

Note that this All Revenue and Expenses is the highest level member in the cd_Object drill path.

Next we drill down using both a column and a row to filter the data.

19. Highlight the cell at the intersection of All Expenses and Incurred Actual. Click the link.

Amount	IFAS Budget Current	Incurred Actual	IFAS Encumbrance	IFAS Funds Available
All Revenue	$493,698	($285,387)		$779,085
All Tranfer In				
All Tranfer Out				
All Expenses	$9,519,261	$6,492,464	$2,041,058	$985,739
All Revenue and Expenses	$10,012,959	$6,207,077	$2,041,058	$1,764,824

Your report should appear as follows:

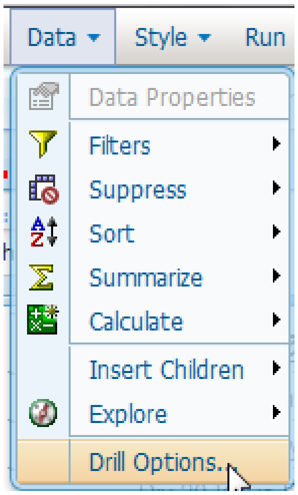
Amount	Incurred Actual
EC-4300 - Revenue over Expenditures	
EC-5000 - Salaries	$2,197,529
EC-5100 - Benefits	$1,107,333
EC-5150 - Other Benefits	
EC-5160 - Post Retirement Obligation	
EC-5180 - Post Retirement Obligation	
EC-5200 - Materials & Supplies	$624,242
EC-5300 - Purchased Services	$459,281
EC-5317 - Interest Expense	
EC-5349 - Computing Service Center	$217,354
EC-5400 - Travel	$253,928

20. Click Undo to return to the previous view.

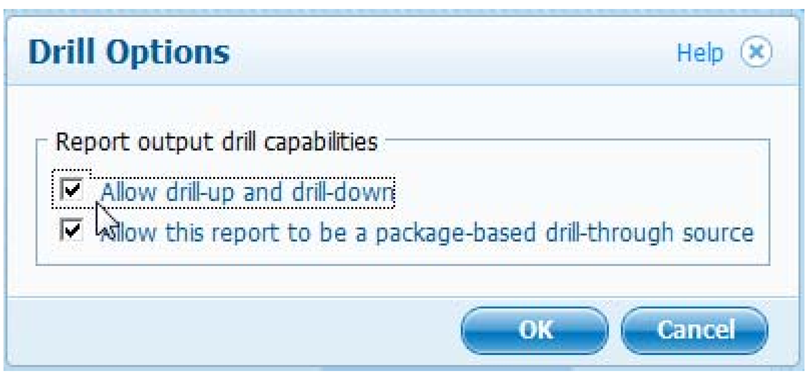
In IBM Cognos Viewer

You must choose to allow drilling in a report when run in IBM Cognos Viewer.

21. In the Data menu, select **Drill Options**.



22. Allow drill-up and drill-down and click OK.



23. To demonstrate the differences between drilling in IBM Cognos Viewer versus Business Insight Advanced, run your report in HTML. (Select 2011.)

IBM Cognos Viewer

Budget Summary Report

All Months

All Budget Types

Div 20 Keys Rollup

All IFAS Fund Sources

2011

Amount	IFAS Budget Current	Incurred Actual	IFAS Encumbrance	IFAS Funds Available
All Revenue	$493,698	($285,387)		$779,085
All Tranfer In				
All Tranfer Out				
All Expenses	$9,519,261	$6,492,464	$2,041,058	$985,739
All Revenue and Expenses	$10,012,959	$6,207,077	$2,041,058	$1,764,824

24. Click on the All Expenses link.

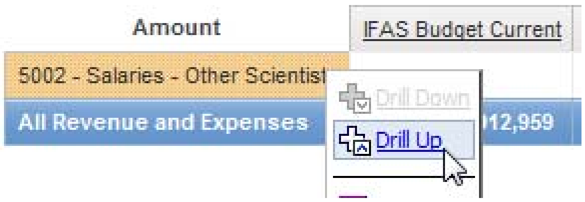
Note that there is not an option to drill up from the Row or Column summary cells.

Amount	IFAS Budget Current	Incurred Actual	IFAS Encumbrance	IFAS Funds Available
EC-4300 - Revenue over Expenditures				
EC-5000 - Salaries	$3,221,136	$2,197,529	$597,417	$426,189
EC-5100 - Benefits	$1,576,658	$1,107,333	$304,683	$164,642

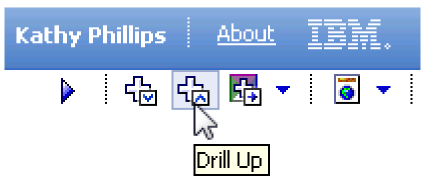
25. Click on the Salaries link, then the Salaries – Other Scientists link to drill down two more levels.

Amount	IFAS Budget Current	Incurred Actual	IFAS Encumbrance	IFAS Funds Available
5002 - Salaries - Other Scientists		$384,750	$104,269	($489,020)
All Revenue and Expenses	$10,012,959	$6,207,077	$2,041,058	$1,764,824

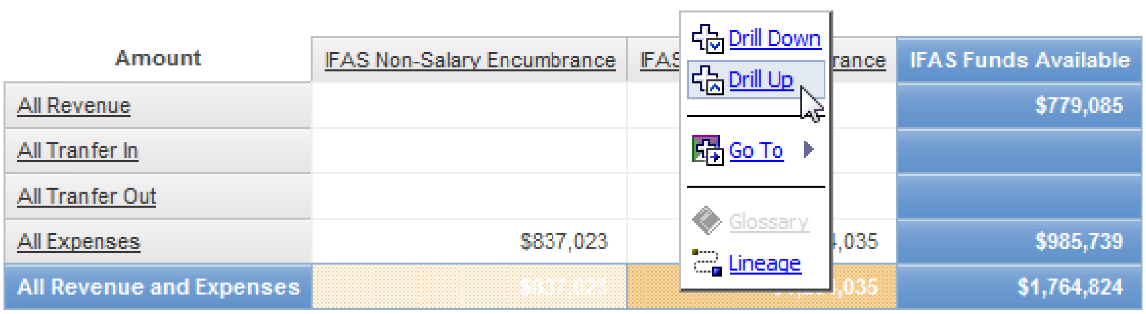
26. Since there is again not a live link, drill up by right-clicking on the Salaries – Other Scientists row, and selecting **Drill Up**.



27. Drill up again by highlighting any of the Salary rows, and clicking on the Drill Up icon in the Toolbar until you return to our original report.



28. Click on the IFAS Encumbrance link to drill down in the columns.
29. Highlight a column summary cell, right-click, and click on the **Drill Up** to move back up a level.



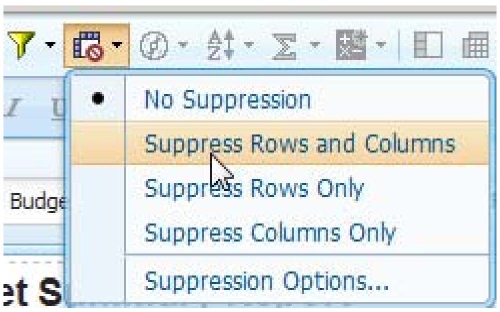
30. Close IBM Cognos Viewer to return to Business Insight Advanced.

Suppression

31. Drill down on All Expenses to return to the original view of our report.

Note that the several rows have null values, so we would like to eliminate them from this view of our Analysis.

32. From the Toolbar, click on the Suppress icon, and select **Suppress Rows and Columns**.



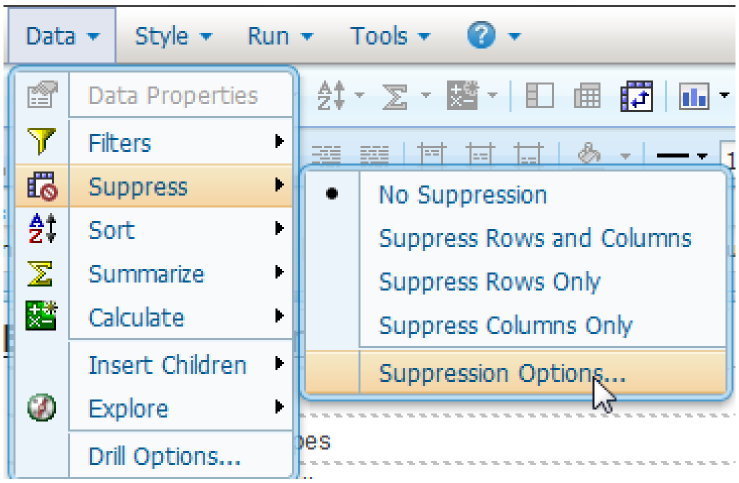
Notice that no message is added to the report to indicate that Suppression is applied. The report summary for All Expenses amount stays the same.

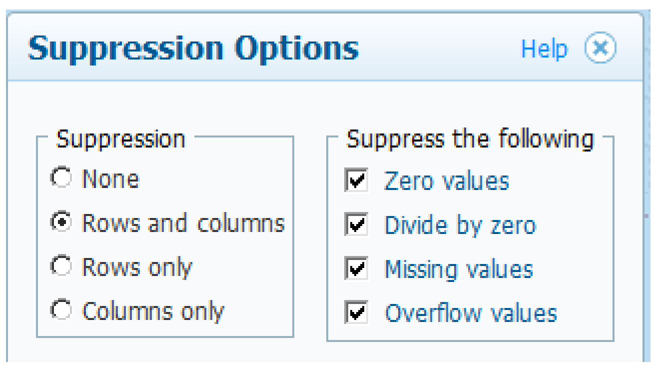
All Months
All Budget Types
Div 20 Keys Rollup
All IFAS Fund Sources
2011

Amount	IFAS Budget Current	Incurred Actual	IFAS Encumbrance	IFAS Funds Available
EC-5000 - Salaries	$3,221,136	$2,197,529	$597,417	$426,189
EC-5100 - Benefits	$1,576,658	$1,107,333	$304,683	$164,642
EC-5200 - Materials & Supplies	$689,052	$624,242	$39,000	$25,810
EC-5300 - Purchased Services	$927,475	$459,281	$550,180	($81,987)
EC-5317 - Interest Expense	$160			$160
EC-5349 - Computing Service Center	$374,617	$217,354	$63,067	$94,195
EC-5400 - Travel	$276,676	$253,928	$29,803	($7,056)
EC-5479 - Participant Support Cost	$250,104	$91,558	$32,730	$125,816
EC-5500 - Equipment	$276,595	$99,918	$34,528	$142,149
EC-5550 - Depreciation & Amortization	$1,250	$938		$312
EC-5700 - G&A Overhead/Burden	$1,900,636	$1,418,220	$389,649	$92,767
EC-5704 - UCAR Management Fee	$24,904	$22,163		$2,741
All Expenses	$9,519,261	$6,492,464	$2,041,058	$985,739

NOTE

You can also suppress from the Data menu. Note the options to apply Suppression. Calculations are performed before suppression is applied.



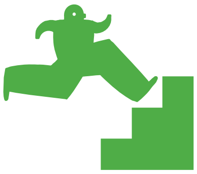


33. Save your report specification again (**Suppression**).

UNIVERSITY CORPORATION FOR ATMOSPHERIC RESEARCH

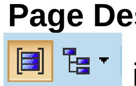
Chapter 11 – More Analysis Techniques

Step-By-Step

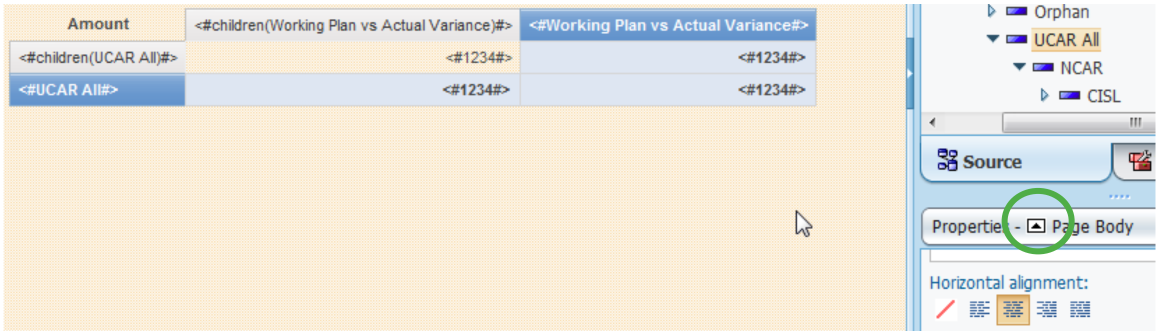


Changing Rows, Columns, and Measures

The flexibility to change any or all of the objects in a Business Insight Advanced report easily gives users the ability to compare and analyze any number of different combinations of factors or views of the organization. Let's look at salary details.

1. Create a new Crosstab report based on the **UCAR Training** package.
2. Set the **View** to **Page Design**.
3. Hover over the  icons at the top of the Insertable Objects pane to see that we are inserting sets and members with children.
4. Expand the TM1 Cube Data folder, TM1 Cube Data Training folder, Employee Plan to Actual Report Training folder, cd_Scenario folder. Drag the Working Plan vs Actual Variance member to the Columns drop zone.
5. Expand the cd_Employee folder, and drag UCAR All to the Rows drop zone.
6. Expand the cdm_Employee Plan to Actual measures folder, and drag Amount to the Measures drop zone.
7. From the Insertable Objects pane, drag over the following members as context filters:
    - From cd_Budget Type, All Budget Types
    - From cd_Object Employee, All Salary-related Expenses
    - From cd_Fund Source, All IFAS Fund Sources
    - From cd_Date, 2011
    - From cd_Account, All Accounts

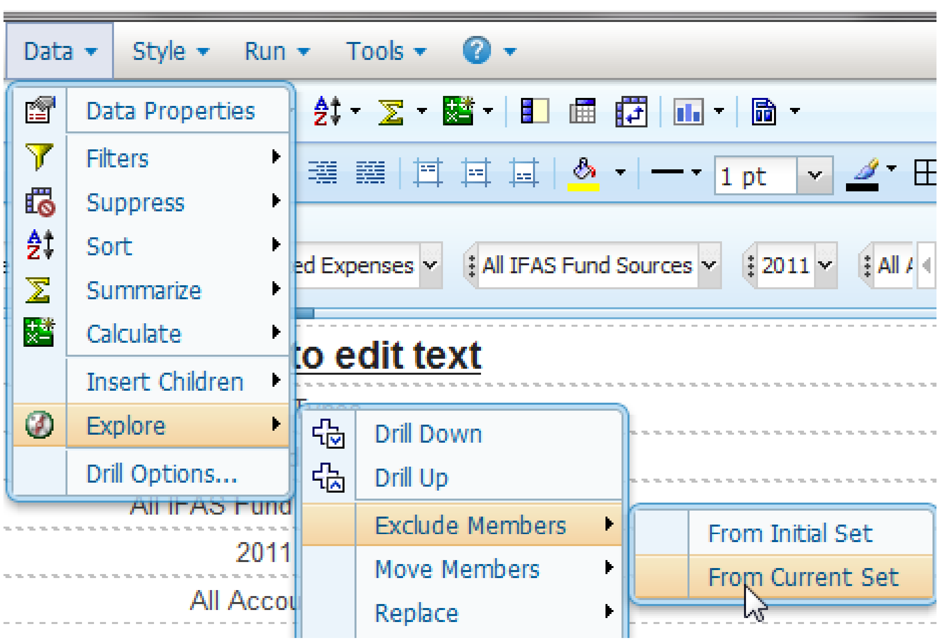
8. Highlight the Page Body of your report (confirm your selection by checking the Select Ancestor arrow at the top of the Properties pane), and in the Properties pane, change the Horizontal alignment to Center.



9. Save this report specification as **Changing Rows, Columns, and Measures**.
10. Change to the **Page Preview** view and review your report.

Let's exclude the Sample HR Org from the report, since it has no data.

11. Highlight the Sample HR Org cell, click on the **Data** menu, and navigate to **Explore**, **Exclude Members**, **From Current Set**.



Your report should now look like this:

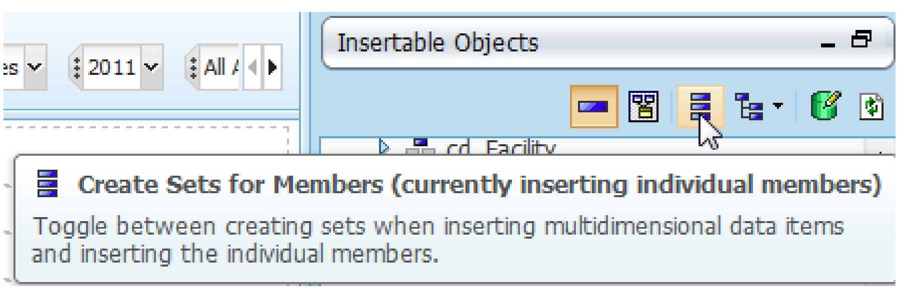
Amount	Working Plan	Incurred Actual	Working Plan vs Actual Variance
NCAR	$127,116,609	$116,699,062	$10,417,547
UCP	$23,740,904	$25,565,150	($1,824,246)
UCAR	$20,700,753	$15,014,165	$5,686,588
UCAR All	**$171,558,266**	**$157,278,377**	**$14,279,888**

Selection Sets

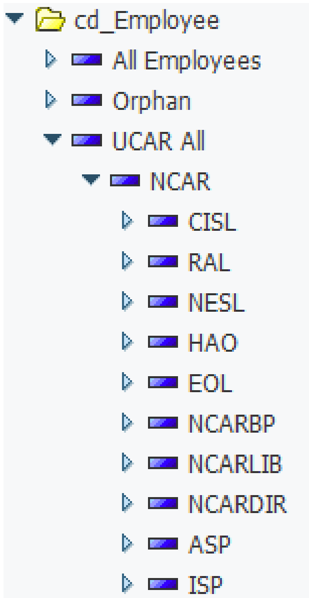
Another way to change your analysis is to create a set by explicitly selecting items from the Cube. Sets can contain items from any level within the dimension.

Let's compare inserting members individually versus members as sets. Remember that Business Insight Advanced inserts members as sets by default. You can see in the report above that all of the UCAR All members are highlighted as one set.

12. Navigate to the icon at the top of the Insertable Objects pane and toggle it to insert individual members.



13. From the cd_Employee folder, expand UCAR All and NCAR members.

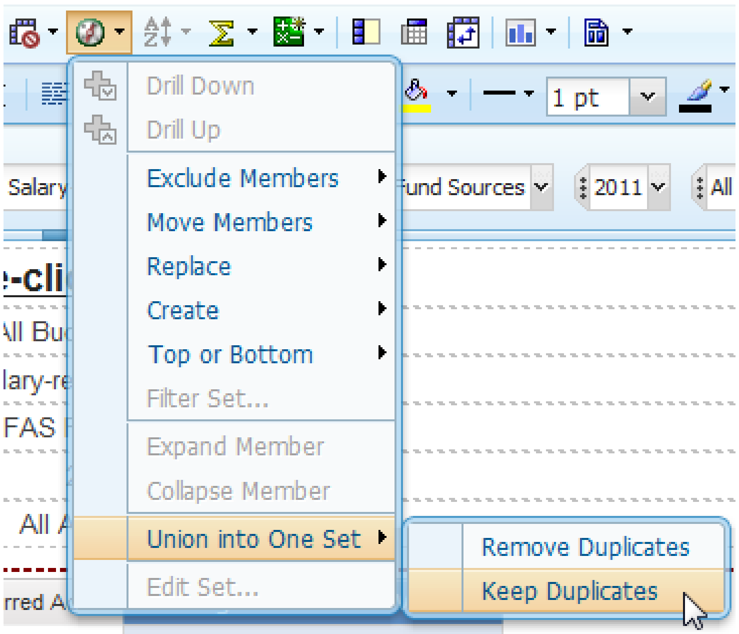


14. Ctrl-click CISL, RAL, and NESL. Drag them to the Rows drop zone, making sure to replace all the rows indicated by the dark block.

Amount	Working Plan	Incurred Actual	Working Plan vs Actual Variance
CISL	$20,786,541	$20,179,963	$606,578
RAL	$30,876,973	$26,941,834	$3,935,138
NESL	$40,154,249	$36,324,608	$3,829,641

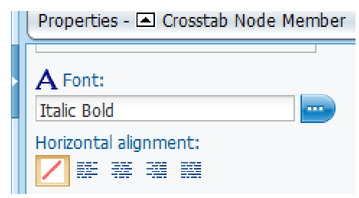
15. Run your cursor over the row header cells to see that they stand individually and cannot be selected as a set.

16. Ctrl-click the three members, click on the Explore icon (a shortcut for the **Explore** selection in the **Data** menu), and navigate to select **Union into One Set** and **Keep Duplicates**.



17. You can now select the rows as a set. Highlight the row header cells and in the Properties pane, change the Font to Italic Bold:

Amount	Working Plan	Incurred Actual	Working Plan vs Actual Variance
CISL	$20,786,541	$20,179,963	$606,578
RAL	$30,876,973	$26,941,834	$3,935,138
NESL	$40,154,249	$36,324,608	$3,829,641



Let's next change the columns.

18. From the cd_Scenario folder, expand the Working Plan vs Actual Variance member and drag Incurred Actual into the Columns drop zone (again be sure to replace all the columns as indicated by the dark block).

Our analysis would be even more useful if we could see both Amount and Hours together.

19. From the cdm_Employee Plan to Actual measures folder, Ctrl-click Amount and Hours, and drag them both to the Measures drop zone.

Your report should now look like this:

Amount	Incurred Actual	
	Amount	Hours
CISL	$20,179,963	230,124.75
RAL	$26,941,834	278,319.76
NESL	$36,324,608	352,614.31

You have now changed the rows, columns, and measures of your original report.

20. Save your report specification again (**Changing Rows, Columns, and Measures**).

Chapter 12 - Applying Filter Conditions with Dimensional Data

We have essentially been “filtering” or limiting the amount of data returned in our reports thus far in a number of ways by using the basic functionality available in Business Insight Advanced:

- Drilling up and down to focus on different views.
- Using context filters.
- Using the Search function.
- Selecting members from different levels from the Insertable Objects.
- Using Suppress.

Additional filtering options in Business Insight Advanced include:

- User-defined filters.
- Editing a set.

Step-By-Step

Applying a User-Defined Filter

Let’s examine salaries above a specific threshold.

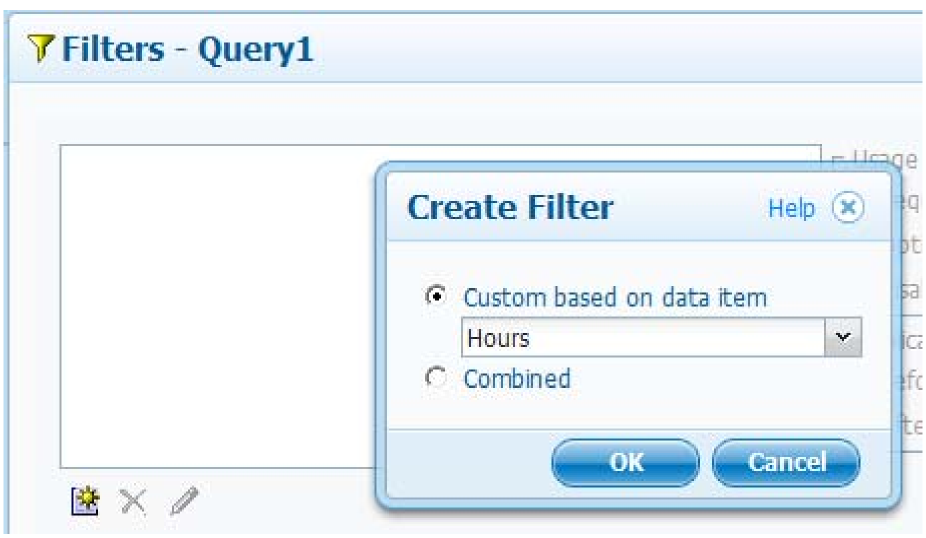
1. Continue with your **Changing Rows, Columns, and Measures** report from Chapter 11.
2. Save this report specification as **Filtering with Dimensional Data**.
3. Navigate to the TM1 Cube Data, TM1 Cube Data Training, Employee Plan to Actual Report Training, cd_Employee, All Employees member.
4. Drag All Employees into the Rows drop zone.
5. Suppress the rows and columns.

Your report should look like this:

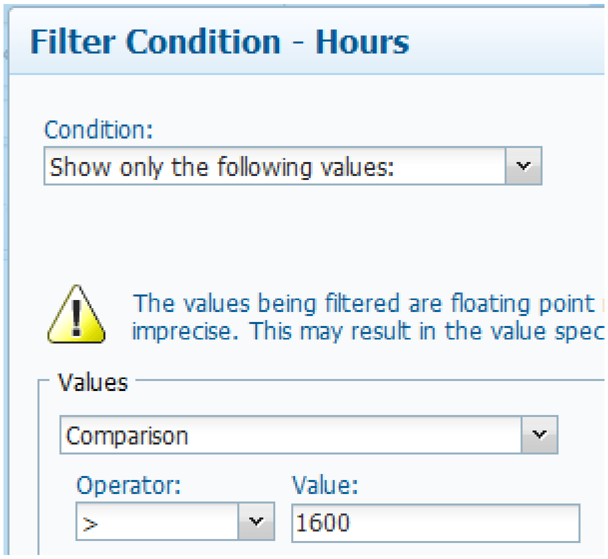
Amount	Incurred Actual	
	Amount	Hours
010001 - SMITH, JAMES	$93,445	1,280.00
010011 - JOHNSON, PATRICIA	$61,967	1,397.20
010018 - TM	$58,279	638.00
010020 - WILLIAMS, ROBERT	$406	31.50
010026 - JONES, BARBARA	$73,494	1,297.70
010035 - BROWN, WILLIAM	$118,470	1,277.60
010046 - DAVIS, JENNIFER	$109,335	1,103.84
010053 - MILLER, RICHARD	$88,246	1,361.00
010054 - WILSON, SUSAN	$24,238	1,428.30
010057 - MOORE, JOSEPH	$30,802	1,429.00

Next, assume we only want to see employees who have worked more than 1600 hours in the year.

6. Navigate to **Edit Filters**, and create a custom filter based on Hours:



7. Keep the Comparison option, and type “1600” as the Value.

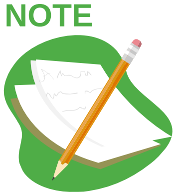


8. Click OK twice.

The report is filtered, but note that the summary values remain the same. Although we are filtering the employees from the report view, the overall summary values are not affected.

Amount	Incurred Actual	
	Amount	Hours
010170 - ROGERS, TERESA	$92,447	1,605.30
011165 - BURNETT, ELIZABETH	$109,966	1,749.65
024735 - LE, MANDY	$85,412	1,629.30
032688 - HOLMES, LUCILLE	$98,051	1,710.15
046957 - SINGLETON, VAN	$129,368	1,642.80
All Employees	$154,227,901	1,845,336.76

NOTE

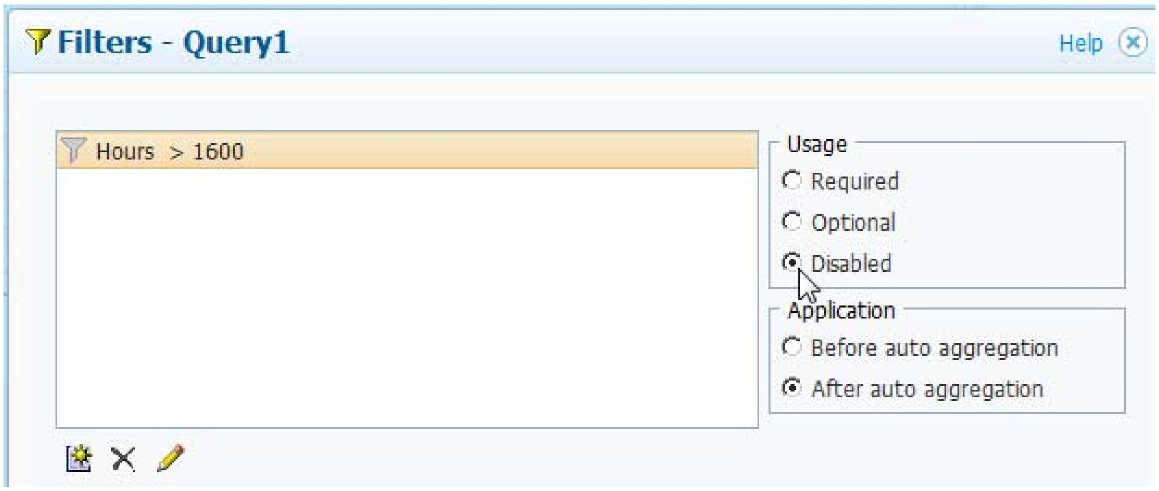


To add a summary line for only the employees who worked over 1600 hours, click on your new set, click on the Summarize icon in the Toolbar, and select **Total**.

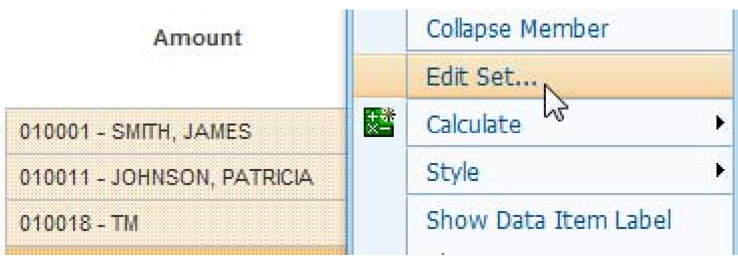
Editing a Set

Business Insight Advanced provides the ability to filter a report by editing a set.

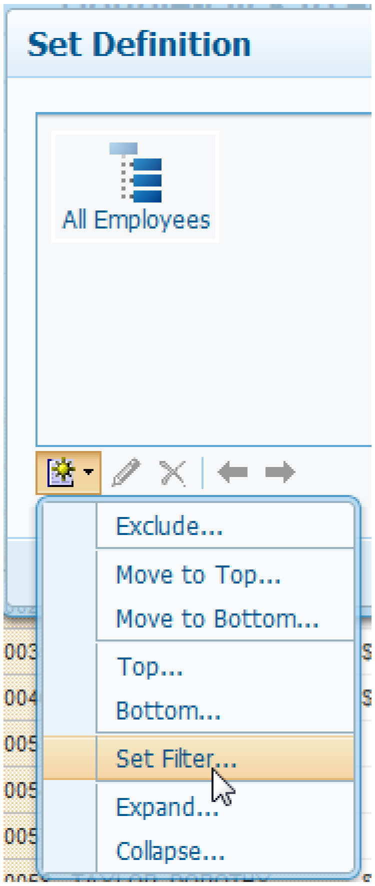
9. Change the **View** to **Page Design**.
10. Open **Edit Filters** and disable the Hours filter.



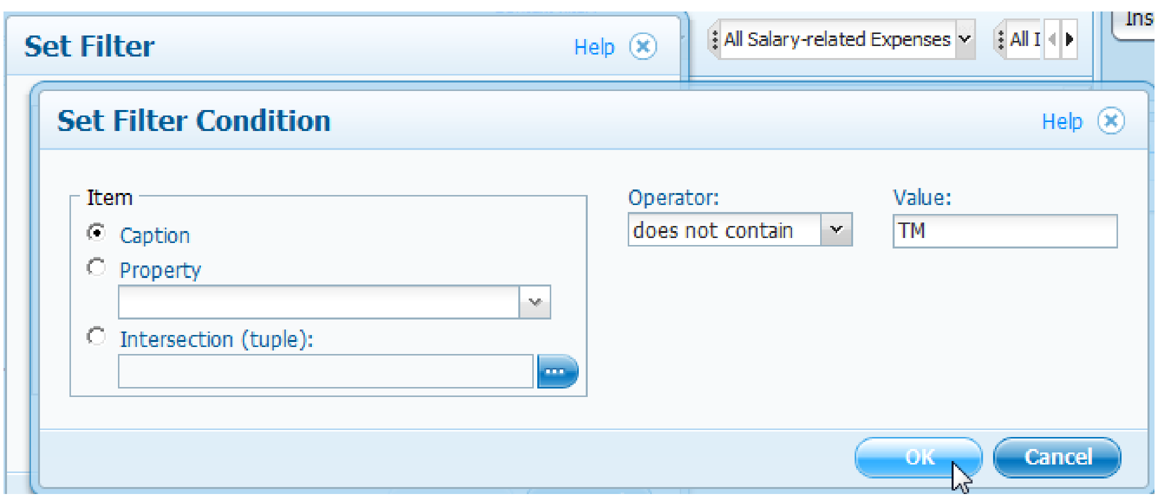
11. Highlight the row title cells, right-click, and select **Edit Set**.



12. Select the New icon to add a new filter to the set.



13. Complete the Set Filter Condition dialog box as shown:



14. Click OK three times to return to the report.
15. Set the **View** to **Page Preview**.

Your report now displays data for all employees except those with “TM” in the caption.

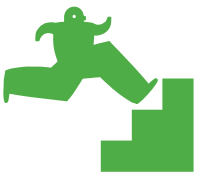
Amount	Incurred Actual	
	Amount	Hours
010001 - SMITH, JAMES	$93,445	1,280.00
010011 - JOHNSON, PATRICIA	$61,967	1,397.20
010020 - WILLIAMS, ROBERT	$406	31.50
010026 - JONES, BARBARA	$73,494	1,297.70
010035 - BROWN, WILLIAM	$118,470	1,277.60
010046 - DAVIS, JENNIFER	$109,335	1,103.84
010053 - MILLER, RICHARD	$88,246	1,361.00
010054 - WILSON, SUSAN	$24,238	1,428.30
010057 - MOORE, JOSEPH	$30,802	1,429.00
010058 - TAYLOR, DOROTHY	$132,129	1,287.60

16. Save your report specification again (**Filtering with Dimensional Data**).

Chapter 13 – Advanced Techniques and Reports

Thus far, we have been drilling down to view different levels within dimensions individually. At times, users may want to view and group multiple levels in a hierarchy, multiple sets, or multiple measures simultaneously together on the same report.

Step-By-Step

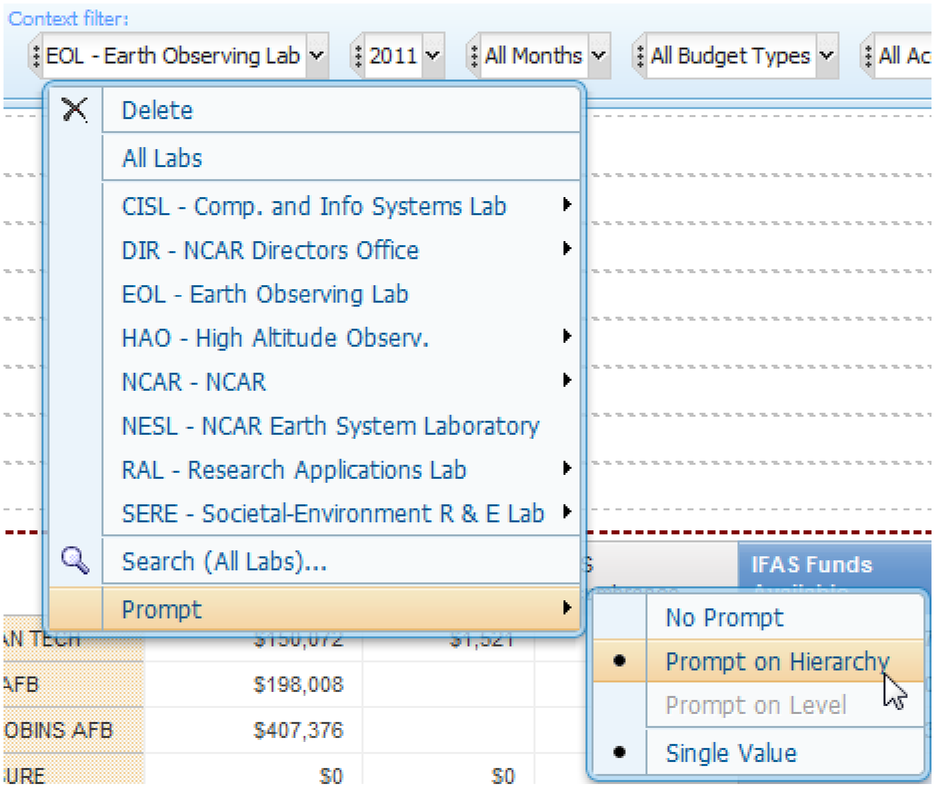


Nesting

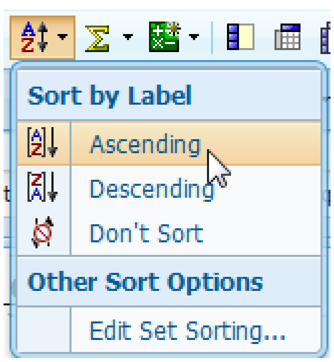
Let's set up a Contract Status Detail report that we can filter by lab.

1. Create a new Crosstab report based on the **UCAR Training** package.
2. Set the **View** to **Page Design**.
3. Hover over the  icons at the top of the Insertable Objects pane to see that we are inserting sets and members with children.
4. Expand the TM1 Cube Data folder, TM1 Cube Data Training folder, Financials Exploded Report Training folder, cd_Scenario folder. Drag the IFAS Funds Available member to the Columns drop zone.
5. Drag the cd_Contract level to the Rows drop zone.
6. Expand the cdm_Financial Exploded measures folder, Total MTDC measures,and drag Amount to the Measures drop zone.
7. From the Insertable Objects pane, drag over the following members as context filters:
    - From the cd_Year level, 2011
    - From cd_Month, All Months
    - From cd_Budget Type, All Budget Types
    - From cd_Account, All Accounts
    - From cd_Object, All Revenue and Expenses
    - From cd_Fund Source, All IFAS Fund Sources
    - From cd_Lab, EOL – Earth Observing Lab
8. Suppress rows and columns.

9. Set the EOL context filter to be a prompt. First select **Prompt on Hierarchy**, then return to select **Single Value** – we only want to report on one lab at a time.



10. Sort the contracts ascending by label.



11. Save your report specification as **Nesting**.

12. Set the **View** to **Page Preview**.

EOL - Earth Observing Lab
2011
All Months
All Budget Types
All Accounts
All Revenue and Expenses
All IFAS Fund Sources

Amount	IFAS Budget Current	Incurred Actual	IFAS Encumbrance	IFAS Funds Available
090474Z1 - 090474Z1 MICHIGAN TECH	$150,072	$1,521	$10,791	$137,760
109C0018 - 109C0018 Robins AFB	$198,008			$198,008
110C0010 - FA852110C0010 ROBINS AFB	$407,376			$407,376
12025 - 12025 DROPLET MEASURE	$0	$0		$0
135560 - 135560 BATTELLE	$17,940	$5,838		$12,102
138371 - 138371 BATTELLE	$13,735	$0		$13,735
211164 - 211164 CSU	$0			$0
41010620 - N000141010620 ONR	$3,299	$0		$3,299

13. Return to the **Page Design** view.
14. From the cd_Account folder, drag All Accounts into your report and “nest” them in your rows. Look for the flashing bar.

Amount	<#children(IFAS Funds Available)#>	<#IFAS Funds Available#>
<#children(All Contracts)#>	<#1234#>	<#1234#>
<#All Contracts#>	<#1234#>	<#1234#>

15. Delete the All Accounts context filter, since we have moved that dimension into the report.

16. Return to **Page Preview** to see the results.

Amount		IFAS Budget Current	Incurred Actual	IFAS Encumbrance	IFAS Funds Available
090474Z1 - 090474Z1 MICHIGAN TECH	746505 - MTU HOLODEC 2	$150,072	$1,521	$10,791	$137,760
	All Accounts	$150,072	$1,521	$10,791	$137,760
109C0018 - 109C0018 Robins AFB	742696 - NASA Pallets WB57F Aircraft	$198,008			$198,008
	All Accounts	$198,008			$198,008
110C0010 - FA852110C0010 ROBINS AFB	742667 - NASA Pressurized Pallets WB57F	$407,376			$407,376
	All Accounts	$407,376			$407,376

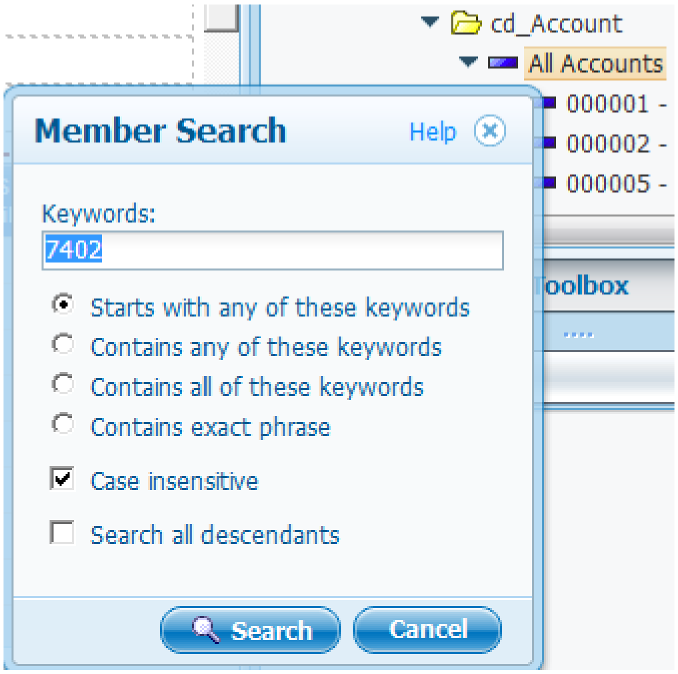
Note that all the Accounts are now nested under each Contract. Note that the Accounts belonging to each Contract are listed and have been subtotaled.

17. Click the Swap Rows and Columns icon to see that this feature works with nested columns as well as rows.

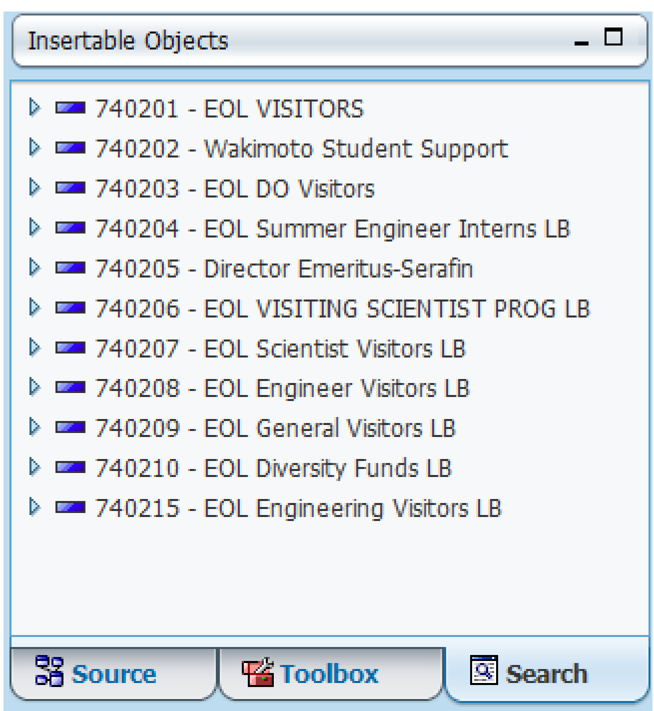
Amount	090474Z1 - 090474Z1 MICHIGAN TECH		109C0018 - 109C0018 Robins AFB		110C0010 - FA852110C0010 ROBINS AFB		12025 - 12025 DROPLET MEASURE		135560 - 135560 BATTELLE		13 BA
	746505 - MTU HOLODEC 2	All Accounts	742696 - NASA Pallets WB57F Aircraft	All Accounts	742667 - NASA Pressurized Pallets WB57F	All Accounts	742670 - Droplet Measure 3 nose cones	All Accounts	743505 - RAWINSONDE Battelle DM	All Accounts	74 PN HI Ra Br
IFAS Budget Current	$150,072	$150,072	$198,008	$198,008	$407,376	$407,376	$0	$0	$17,940	$17,940	$
Incurred Actual	$1,521	$1,521					$0	$0	$5,838	$5,838	
IFAS Encumbrance	$10,791	$10,791									
IFAS Funds Available	$137,760	$137,760	$198,008	$198,008	$407,376	$407,376	$0	$0	$12,102	$12,102	$

18. Click Swap Rows and Columns again to get back to the original view (or click Undo).
19. Let's assume that we originally were really only interested in accounts beginning with 7402. Let's delete the level as shown below. Right-click one of the All Accounts row header cells and select **Delete**. Do the same for the All Accounts summary line.

20. This time, instead of selecting All Accounts from the cd_Account folder, right-click on All Accounts, and select **Search**. Type “7402” in the Member Search dialog box, keep Starts with any of these **keywo**rds, and click Search.

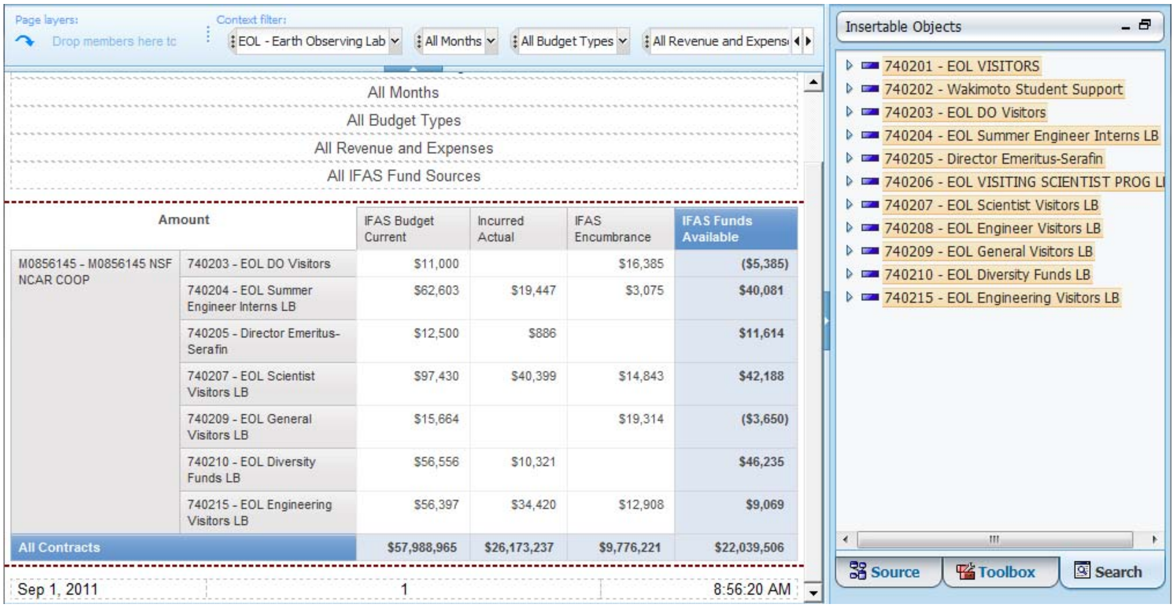


The results of your search are displayed in the Search tab in the Insertable Objects pane.



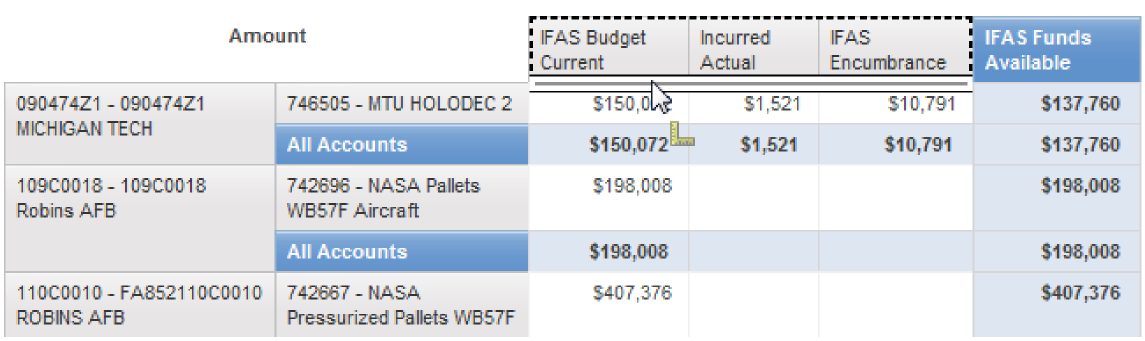
21. Shift-click to select all of the 7402 accounts and nest them into our report rows.

Your report should now look like this:



The report now has nested only the members belonging to the accounts starting with 7402.

22. Again delete the nested rows and let's examine our data from a different perspective.
23. Drag All Accounts from Insertable Objects pane to the end of the Rows drop zone and find the flashing bar.
24. Add yet another level of complexity by nesting both Amount and Total MTDC Excl as measures. In Insertable Objects, in the Financials Exploded Report Training folder, expand the cdm_Financial Exploded, Total MTDC folder. Ctrl-click the Amount and Total MTDC Excl measures and drag them to the bottom of the Columns drop zone until you find the flashing bar.



Your report now has nested rows and columns. Note that the default measure, Amount, is shown in the upper left corner.

Amount		IFAS Budget Current		Incurred Actual		IFAS Encumbrance		IFAS Funds Available
		Amount	Total MTDC Excl	Amount	Total MTDC Excl	Amount	Total MTDC Excl	
090474Z1 - 090474Z1 MICHIGAN TECH	746505 - MTU HOLODEC 2	$150,072	$150,072	$1,521	$1,521	$10,791	$10,791	$137,760
	All Accounts	$150,072	$150,072	$1,521	$1,521	$10,791	$10,791	$137,760
109C0018 - 109C0018 Robins AFB	742696 - NASA Pallets WB57F Aircraft	$198,008	$10,222					$198,008
	All Accounts	$198,008	$10,222					$198,008
110C0010 -	742667 - NASA	$407,376	$407,376					$407,376

25. Save your report specification again (**Nesting**).

Step-By-Step

Calculations

Let's take a brief look at calculations with the **UCAR Training** package, **TM1 Cube Data**.

1. Create a new Crosstab report based on the **UCAR Training** package.
2. Set the **View** to **Page Design**.
3. Hover over the icons at the top of the Insertable Objects pane to see that we are inserting sets and members with children.
4. Expand the TM1 Cube Data folder, TM1 Cube Data Training folder, Financials Exploded Report Training folder, cd_Object folder. Drag the All Revenue and Expenses member to the Columns drop zone.
5. Drag the cd_Entity level to the Rows drop zone.
6. Expand the cdm_Financial Exploded measures folder, Total MTDC measures, and drag Amount to the Measures drop zone.

7. From the Insertable Objects pane, drag over the following members as context filters:
    - From cd_Scenario, IFAS Funds Available
    - From the cd_Year level, 2011
    - From cd_Month, All Months
    - From cd_Budget Type, All Budget Types
    - From cd_Account, All Accounts
    - From cd_Fund Source, All IFAS Fund Sources

8. Suppress rows and columns.

Your report should look as follows:

IFAS Funds Available

2011

All Months

All Budget Types

All Accounts

All IFAS Fund Sources

Amount	<#children(All Revenue and Expenses)#>	<#All Revenue and Expenses#>
<#children(All Entities)#>	<#1234#>	<#1234#>
<#All Entities#>	<#1234#>	<#1234#>

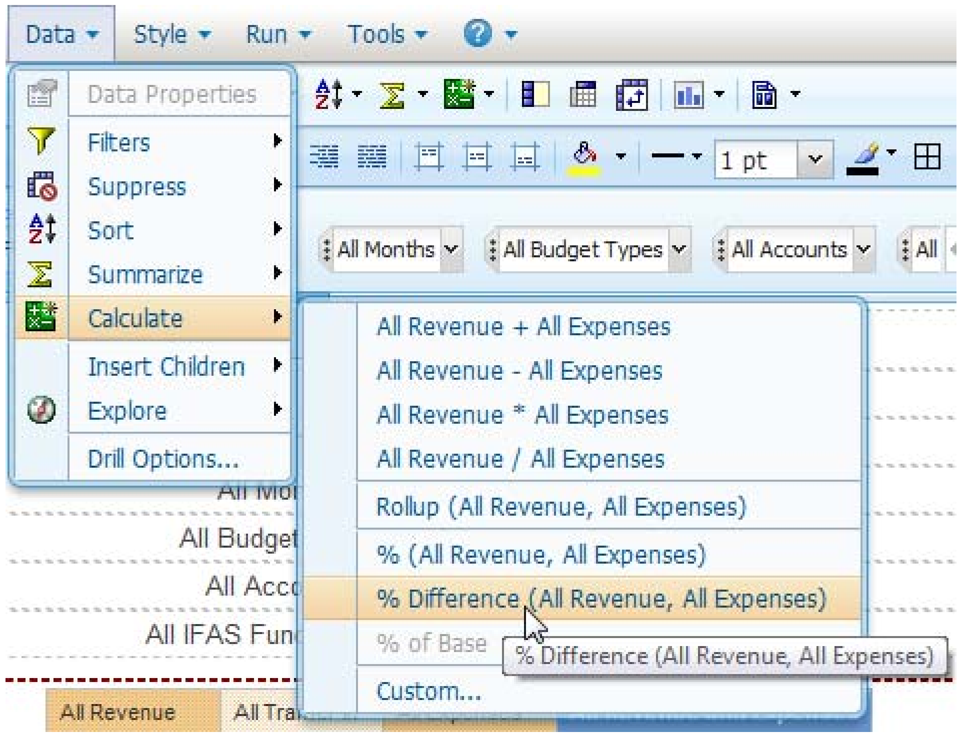
9. Change the **View** to **Page Preview**.

Amount	All Revenue	All Tranfer In	All Expenses	All Revenue and Expenses
CASH - Cash Fund	($522,929)		$0	($522,929)
LLC - LLC	$116,760		$9,493	$126,253
NCAR - Natl Center Atmospheric Res	$448,947,122		$124,055,305	$573,002,427
PROPERTY - UCAR Owned Fixed Asset Group	($35,291,732)	$55,837,684	($23,935,640)	($3,389,687)
UCAR - University Corp Atmos. Res	($3,222,458)		$39,536,503	$36,314,045
UCARF - UCAR Foundation	$54,039		($52,289)	$1,750
UOP - UCAR Community Programs	$104,122,237		$38,164,733	$142,286,970
All Entities	$514,203,040	$55,837,684	$177,778,104	$747,818,828

Business Insight Advanced provides the capability to perform simple calculations.

10. Ctrl-click to highlight the two column title cells: All Revenue and All Expenses.

11. From the Data menu, select **Calculate**, **% Difference (All Revenue, All Expenses)**. Note the other calculation options.



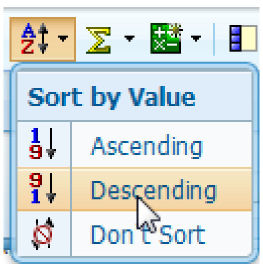
Notice that Business Insight Advanced adds the new calculated column to your report.

Amount	All Revenue	All Tranfer In	All Expenses	*% Difference (All Revenue, All Expenses)*	**All Revenue and Expenses**
CASH - Cash Fund	($522,929)		$0	*100.00%*	**($522,929)**
LLC - LLC	$116,760		$9,493	*-91.87%*	**$126,253**
NCAR - Natl Center Atmospheric Res	$448,947,122		$124,055,305	*-72.37%*	**$573,002,427**
PROPERTY - UCAR Owned Fixed Asset Group	($35,291,732)	$55,837,684	($23,935,640)	*32.18%*	**($3,389,687)**
UCAR - University Corp Atmos. Res	($3,222,458)		$39,536,503	*1,326.91%*	**$36,314,045**
UCARF - UCAR Foundation	$54,039		($52,289)	*-196.76%*	**$1,750**
UOP - UCAR Community Programs	$104,122,237		$38,164,733	*-63.35%*	**$142,286,970**
All Entities	**$514,203,040**	**$55,837,684**	**$177,778,104**	***-65.43%***	**$747,818,828**

NOTE

When you Ctrl-click items from the Insertable Objects pane, the column you choose first displays first. This is also true for calculations when you Ctrl-click columns in the Work area.

12. Sort the analysis by All Revenue and Expenses by clicking in the Column title cell, clicking on the Sort icon in the Toolbar, and then selecting **Sort by Value**, **Descending**.



Amount	All Revenue	All Tranfer In	All Expenses	% Difference (All Revenue, All Expenses)	All Revenue and Expenses
NCAR - Natl Center Atmospheric Res	$448,947,122		$124,055,305	-72.37%	**$573,002,427**
UOP - UCAR Community Programs	$104,122,237		$38,164,733	-63.35%	**$142,286,970**
UCAR - University Corp Atmos. Res	($3,222,458)		$39,536,503	1,326.91%	**$36,314,045**
LLC - LLC	$116,760		$9,493	-91.87%	**$126,253**
UCARF - UCAR Foundation	$54,039		($52,289)	-196.76%	**$1,750**
CASH - Cash Fund	($522,929)		$0	100.00%	**($522,929)**
PROPERTY - UCAR Owned Fixed Asset Group	($35,291,732)	$55,837,684	($23,935,640)	32.18%	**($3,389,687)**
All Entities	**$514,203,040**	**$55,837,684**	**$177,778,104**	**-65.43%**	**$747,818,828**

13. Save your report specification as **Calculating with Dimensional Data**.

Step-By-Step

Viewing Data Graphically with Charts

Let's look at salary information by entity.

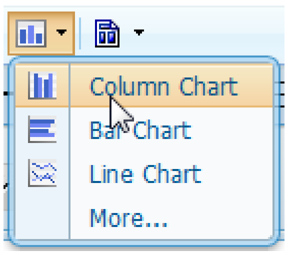
1. Create a new Crosstab report based on the **UCAR Training** package.
2. Set the **View** to **Page Design**.
3. Hover over the  icons at the top of the Insertable Objects pane to see that we are inserting sets and members with children.
4. Expand the TM1 Cube Data folder, TM1 Cube Data Training folder, Employee Plan to Actual Report Training folder, cd_Scenario folder. Drag the Working Plan vs Actual Variance member to the Columns drop zone.
5. Expand the cd_Employee folder, and drag UCAR All to the Rows drop zone.
6. Expand the cdm_Employee Plan to Actual measures folder, and drag Amount to the Measures drop zone.
7. From the Insertable Objects pane, drag over the following members as context filters:
   - From cd_Budget Type, All Budget Types
   - From cd_Object Employee, All Salary-related Expenses
   - From cd_Fund Source, All IFAS Fund Sources
   - From cd_Date, 2011
   - From cd_Account, All Accounts

8. Suppress rows and columns.
9. In the **Tools** menu, **Options**, Advanced tab, be sure the Use legacy chart authoring option is unchecked.
10. Save your report specification as **Charting with Dimensional Data**.

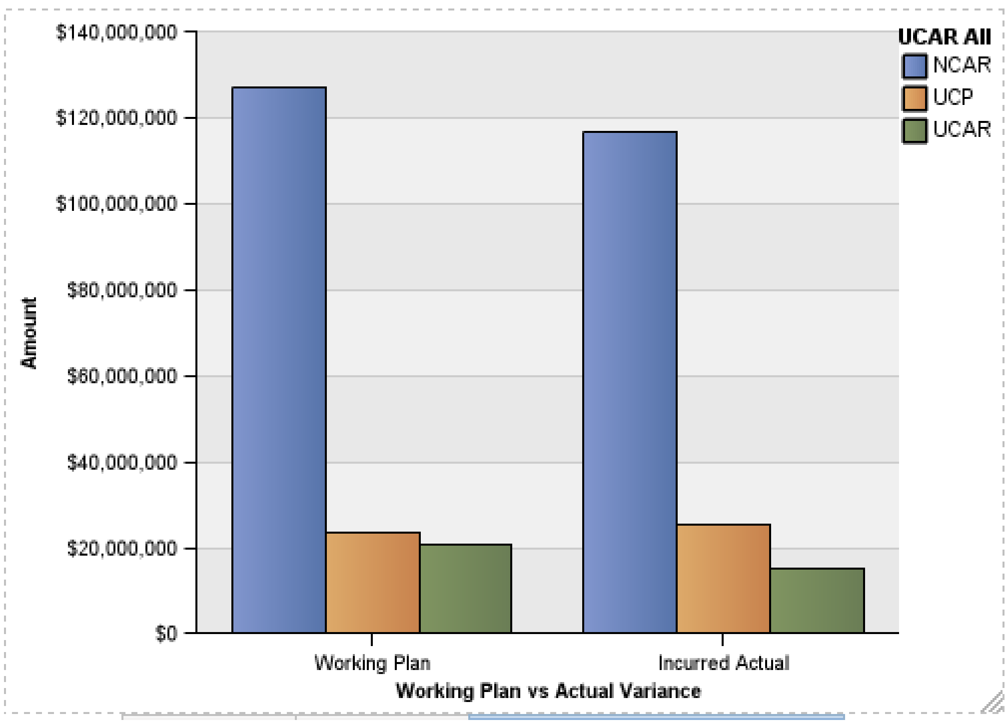
11. Change the **View** to **Page Preview**.

Amount	Working Plan	Incurred Actual	Working Plan vs Actual Variance
NCAR	$127,116,609	$116,699,062	$10,417,547
UCP	$23,740,904	$25,565,150	($1,824,246)
UCAR	$20,700,753	$15,014,165	$5,686,588
UCAR All	$171,558,266	$157,278,377	$14,279,888

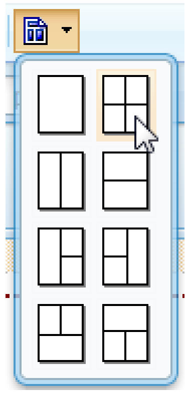
12. Click the Insert Chart icon and select Column Chart.



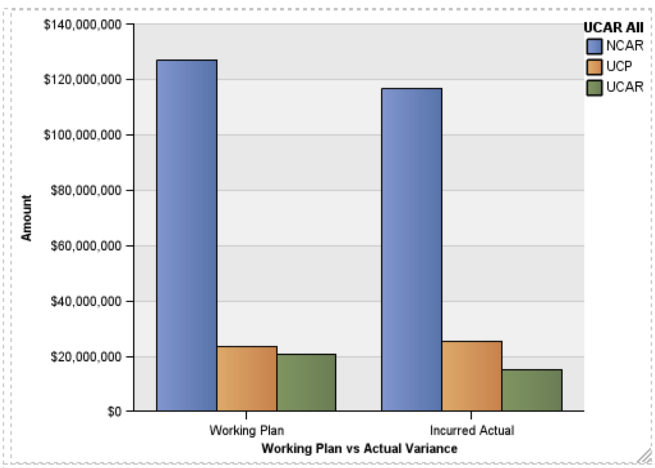
The chart is added to the Work area.



13. Click the Page Layout icon, and select the following layout:

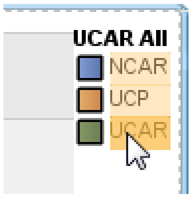


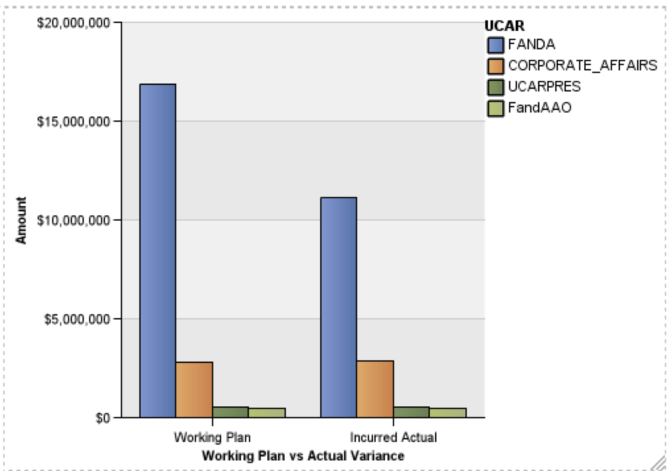
Now our chart and crosstab are side-by-side and at the top of the page for easier viewing, particularly when we run the report in IBM Cognos Viewer.

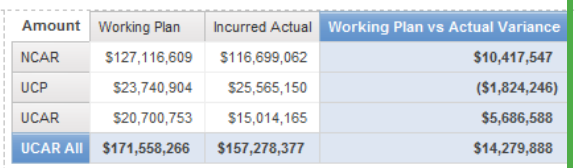


Amount	Working Plan	Incurred Actual	Working Plan vs Actual Variance
NCAR	$127,116,609	$116,699,062	$10,417,547
UCP	$23,740,904	$25,565,150	($1,824,246)
UCAR	$20,700,753	$15,014,165	$5,686,588
UCAR All	$171,558,266	$157,278,377	$14,279,888

14. Double-click on UCAR in the chart legend to drill down a level.



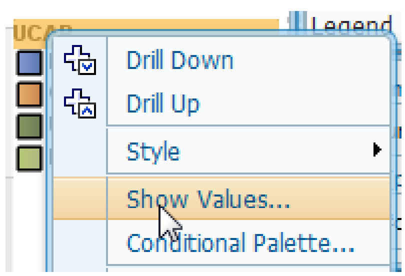




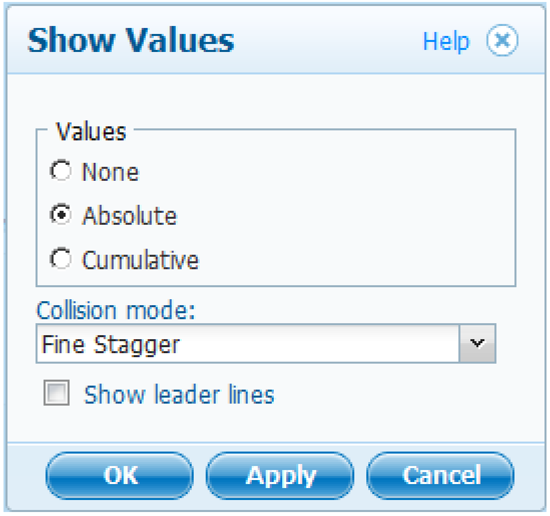
Amount	Working Plan	Incurred Actual	Working Plan vs Actual Variance
NCAR	$127,116,609	$116,699,062	$10,417,547
UCP	$23,740,904	$25,565,150	($1,824,246)
UCAR	$20,700,753	$15,014,165	$5,686,588
UCAR All	$171,558,266	$157,278,377	$14,279,888

Note that drilling in the Chart is not also reflected in the Crosstab (and vice versa).

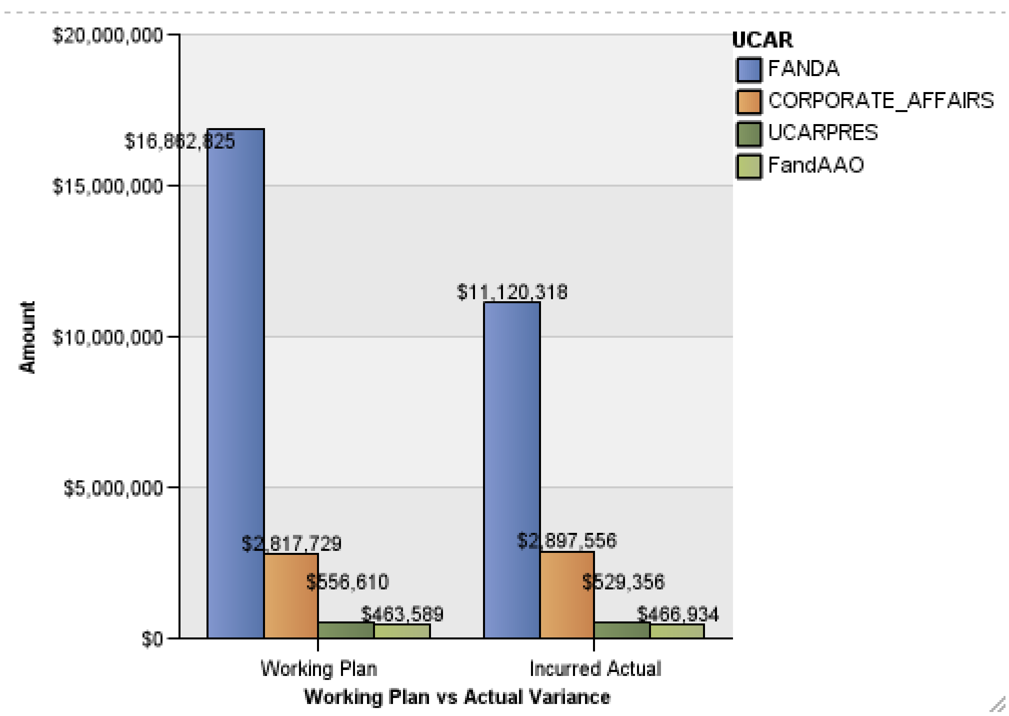
15. Right-click on UCAR in the chart legend and select **Show Values**.



16. Complete the Show Values dialog box as shown here:

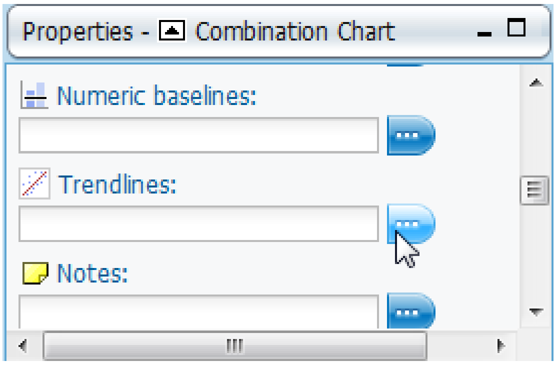


Now your chart shows each column's value.

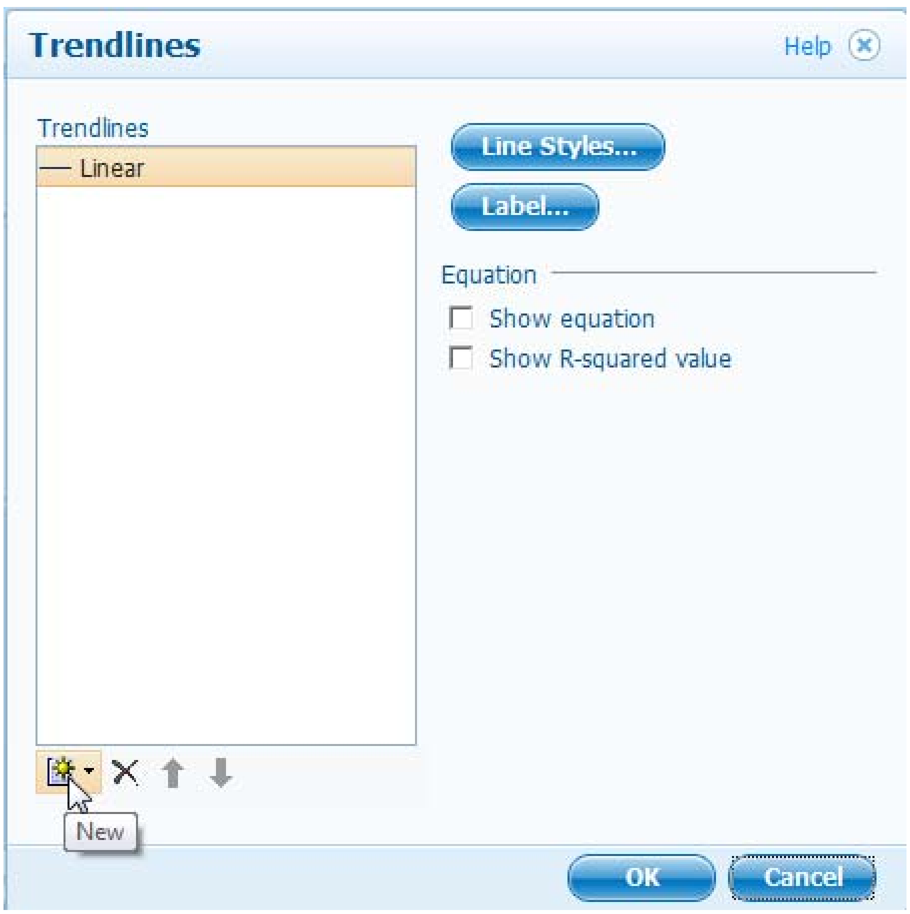


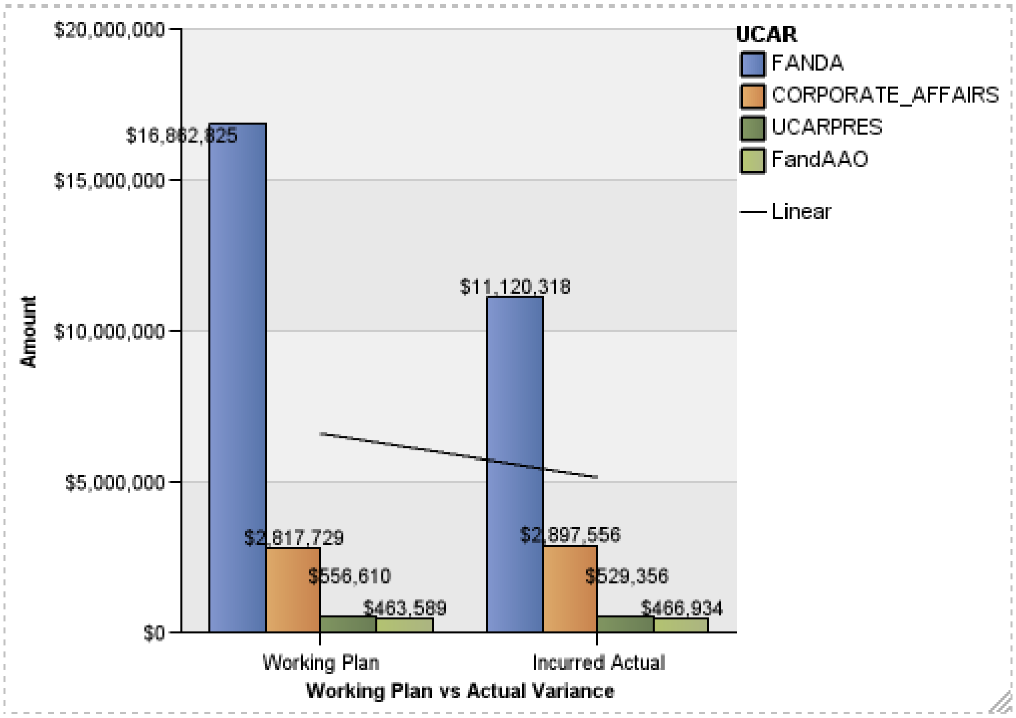
17. Click on a bar in the chart and note the change in focus in the Properties pane.
18. Open the Properties pane, and select the Combination Chart using the Select Ancestor arrow. Scroll down to see the options available for your use in tailoring a chart.

19. Click on the Trendlines ellipsis.

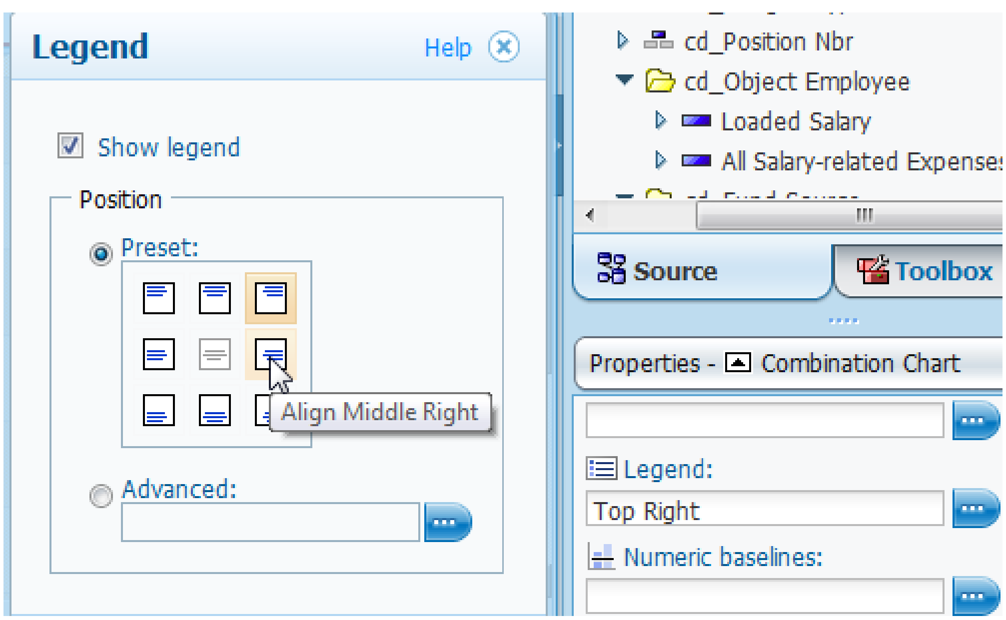


20. Add a new linear trendline to your chart.

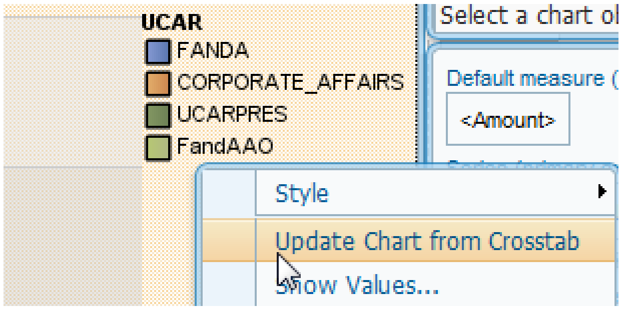




21. Explore some of the other chart options. Click the Undo arrow when done with each action.
22. With the focus on the Combination Chart, change the Legend property from Top Right to Align Middle Right:



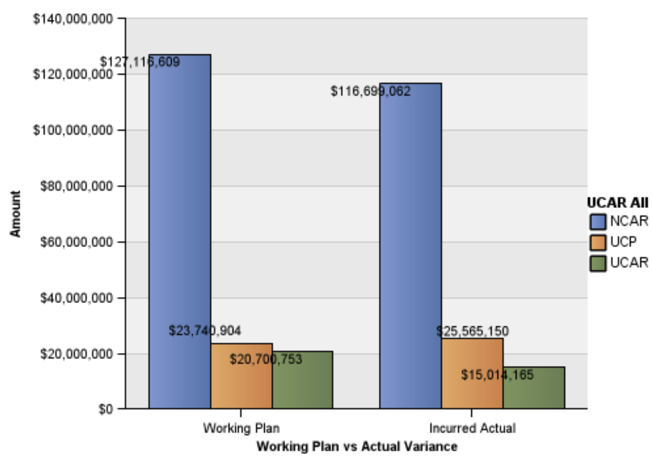
23. Right-click on your chart, and select **Update Chart from Crosstab**. This allows you to drill back up to the UCAR All level.



24. From the Data menu, select **Drill Options**, and check the box to allow drill-up and drill-down.
25. Add a title to your report: “Salary Information by Entities”.
26. Save your report specification again (**Charting with Dimensional Data**).
27. Run your report in HTML in IBM Cognos Viewer.

Salary Information by Entities

All Budget Types
All Salary-related Expenses
All IFAS Fund Sources
2011
All Accounts



Amount	Working Plan	Incurred Actual	Working Plan vs Actual Variance
NCAR	$127,116,609	$116,699,062	$10,417,547
UCP	$23,740,904	$25,565,150	($1,824,246)
UCAR	$20,700,753	$15,014,165	$5,686,588
UCAR All	$171,558,266	$157,278,377	$14,279,888

28. Explore the expanded chart drill capabilities offered in IBM Cognos Viewer. Be careful not to drill down to the individual employee level!

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Chapter 14 – Advanced Functionality

Business Insight Advanced includes the ability to supplement the data in your package with external data. This allows you to bring a spreadsheet of your personal data into IBM Cognos to create reports.

When you import your external data into a package, you are creating a new package that includes the original data, the new external data, and any links or relationships that you define between the two. After importing the file into an existing IBM Cognos package, you can create reports from both your data and the package data.

The following type of files can be imported:

- Microsoft Excel (.xls) files
- Tab-delimited text (.txt) files
- Comma-separated (.csv) files
- XML files

NOTE

Before importing your own external data file, your IBM Cognos administrator must grant you permission for the **Allow External Data** capability found within the Report Studio captability.

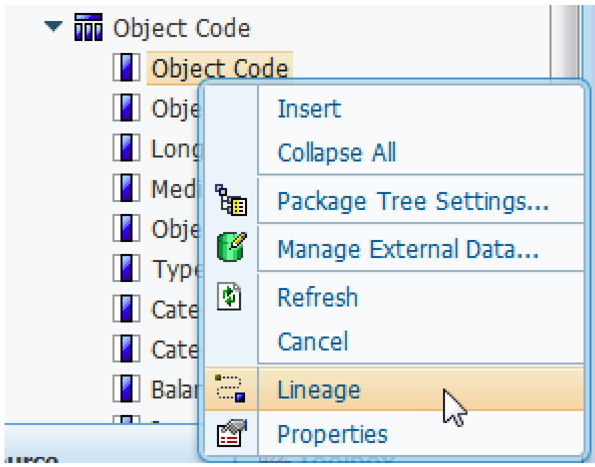
***** Please watch the instructor do this exercise.**

Demo

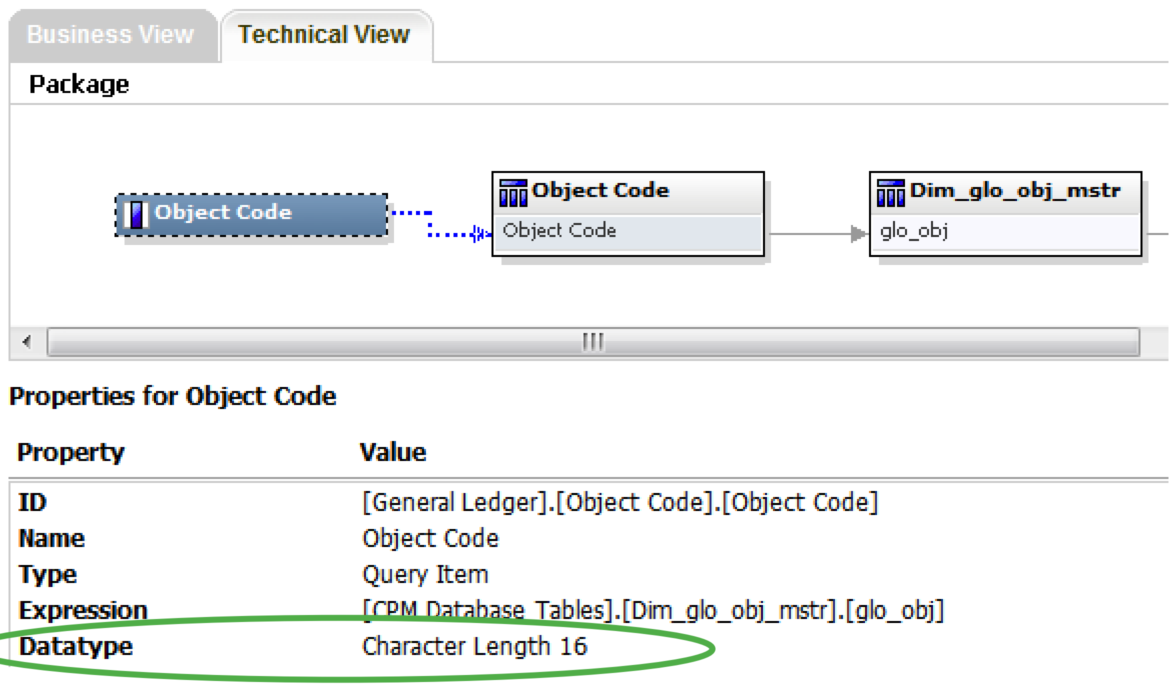
Integrating External Data

1. Start with your **Filter** report from Chapter 4. Ensure that the **View** is set to **Page Design**.
2. Prepare your external data for import.
3. Navigate to the CPM Training Data namespace, General Ledger namespace, Object Code query subject, and right-click on the Object Code query item.

4. Select **Lineage** from the shortcut menu to view the properties for the Object Code.



5. Click on the Technical View tab and note the Datatype is Character Length 16.



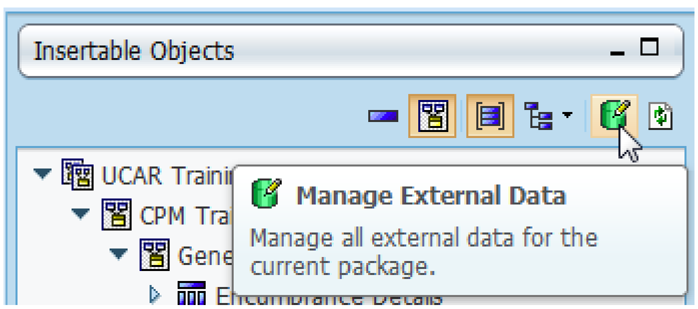
To successfully work with external data, verify that your external data matches your enterprise data for reporting needs. For example, when bringing in supplemental information about State Bar Members, be sure that a field (such as State Bar Member#) matches the formatting used in your enterprise data source.

6. Navigate to the Object Code Type CSV file and make sure to save a copy where you can locate it.

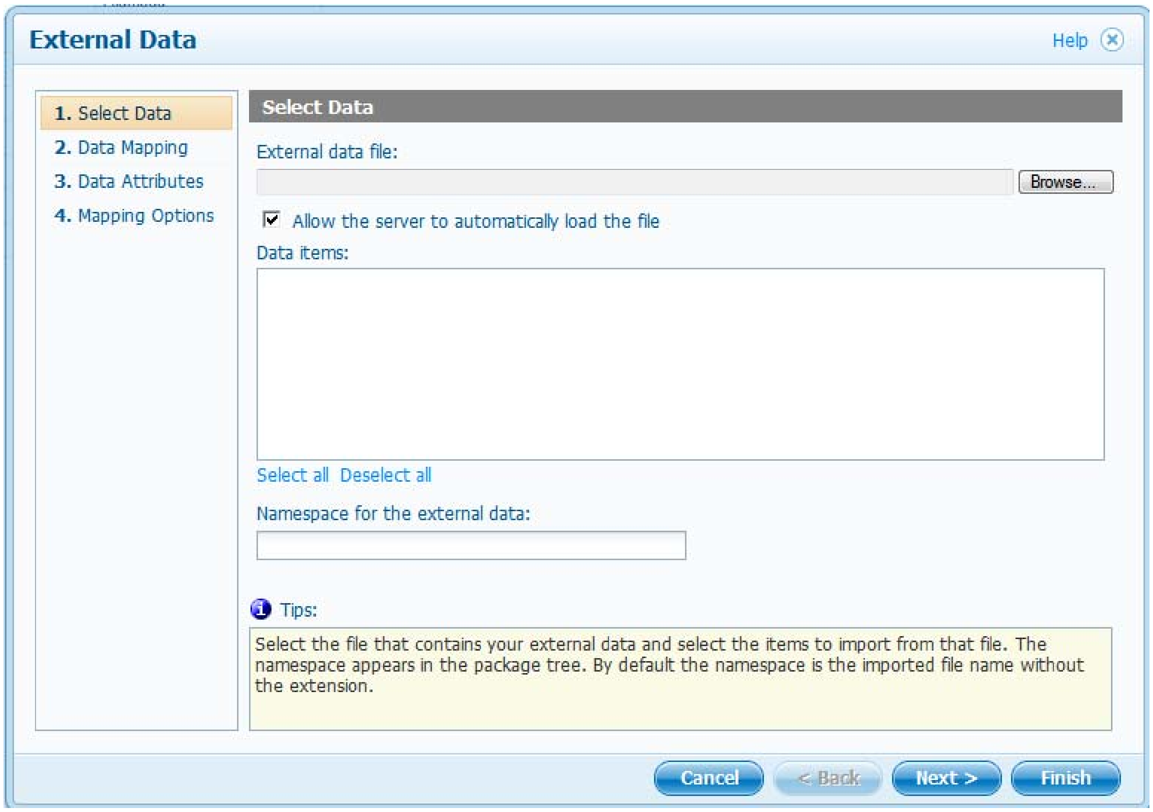
NOTE

The maximum file size that can be imported into IBM Cognos is 2.5 MB, with a maximum of 20000 rows. Comma-separated (CSV) files are the most reliable file type to import.

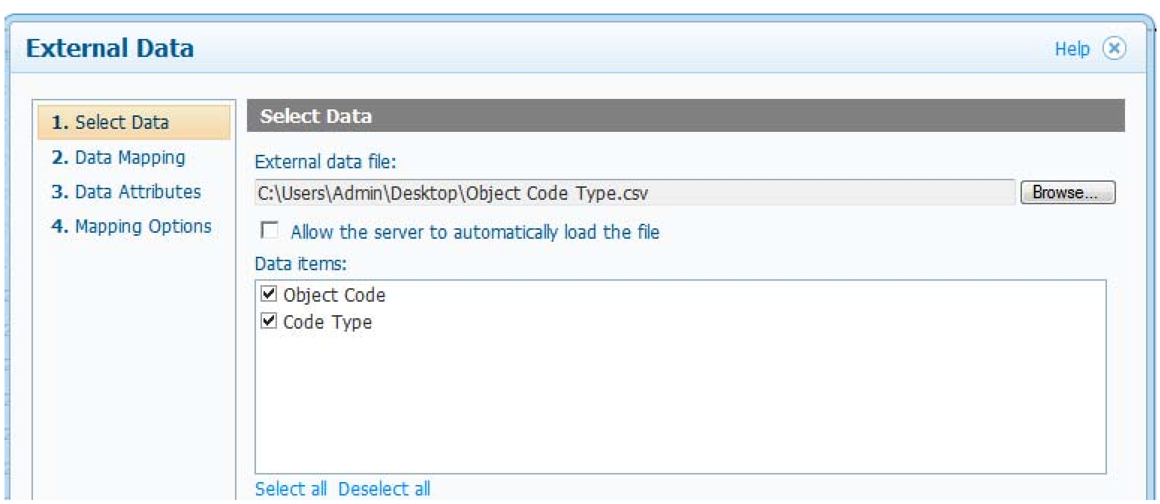
7. Click on the Managed External Data  icon in the Insertable Objects pane.



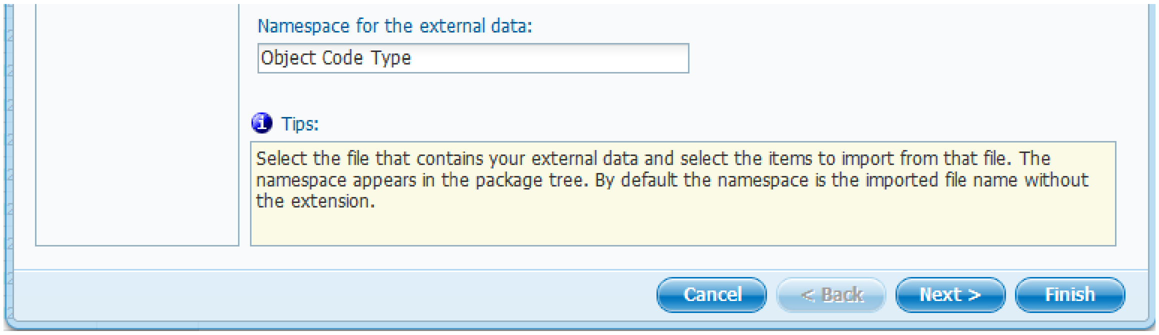
A step-by-step wizard opens that guides you through importing external data.



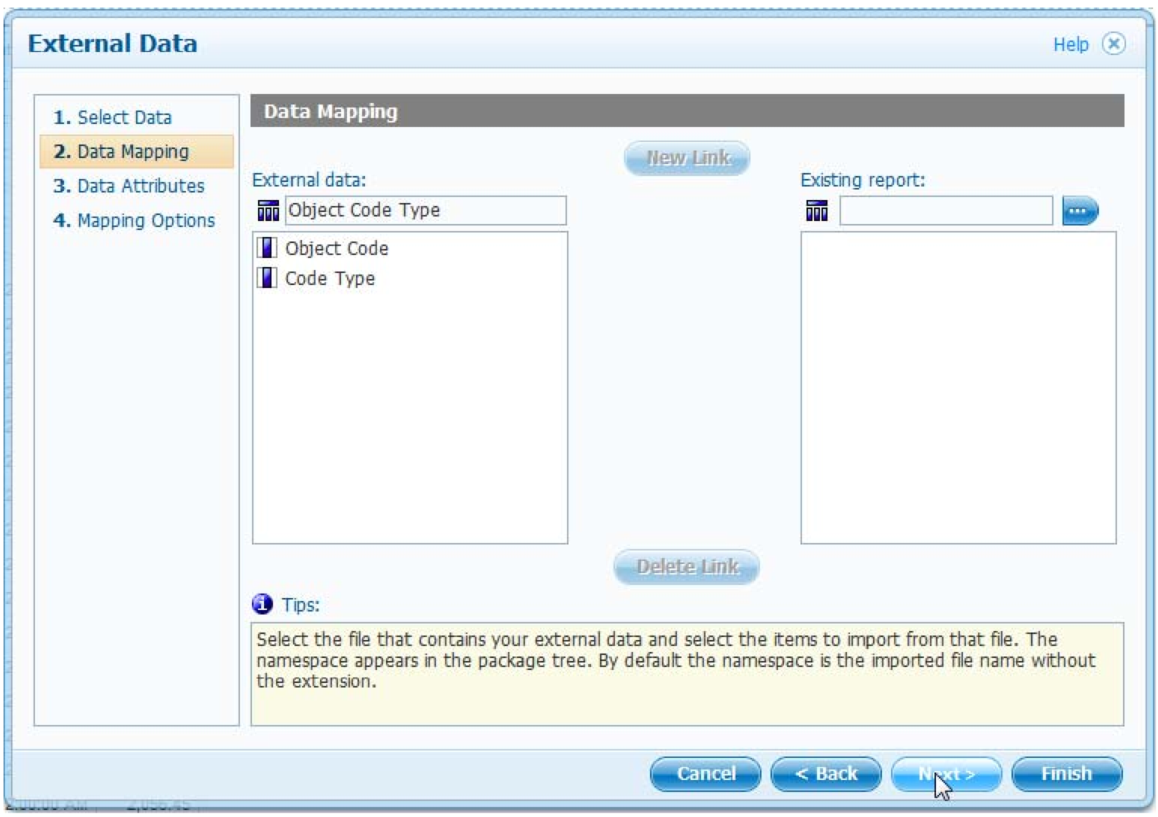
8. Click on the Browse button, navigate to the Object Code Type file, and click Open.
9. Business Insight Advanced imports the file and lists the Data Items from the external file. Select All.



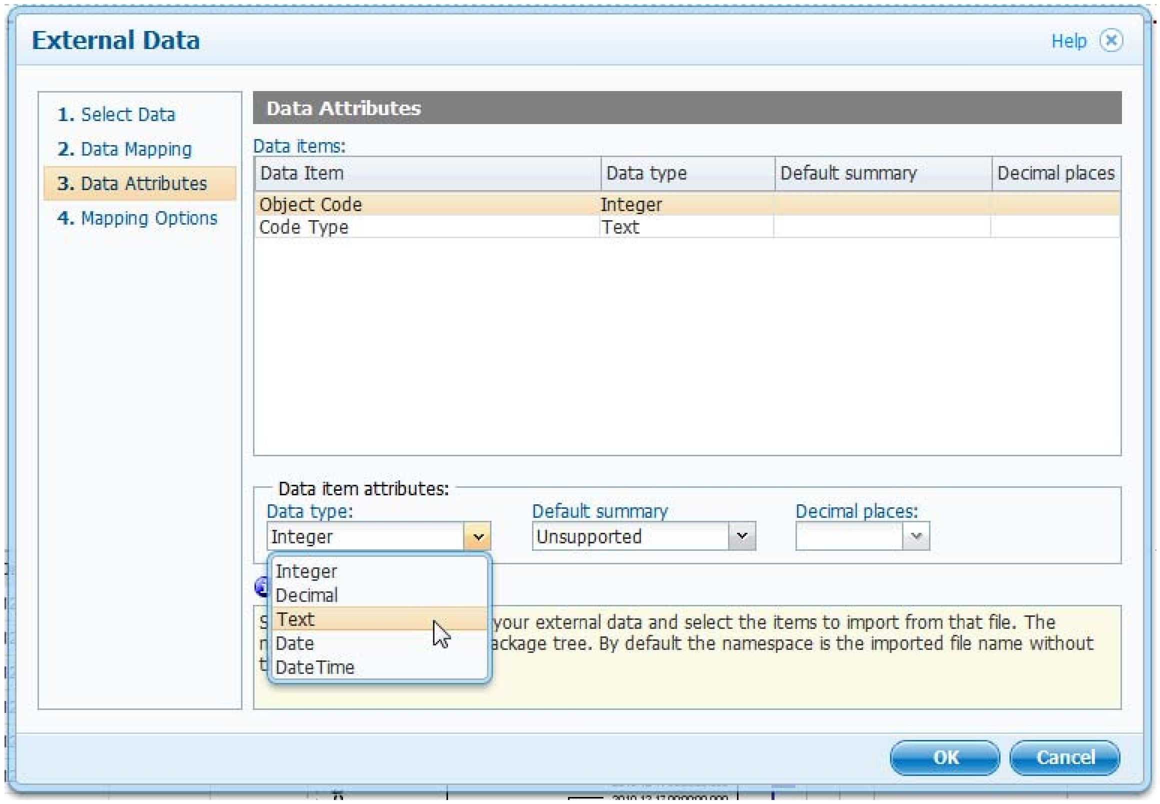
10. Leave the Namespace for the external data as Object Code Type. Click Next.



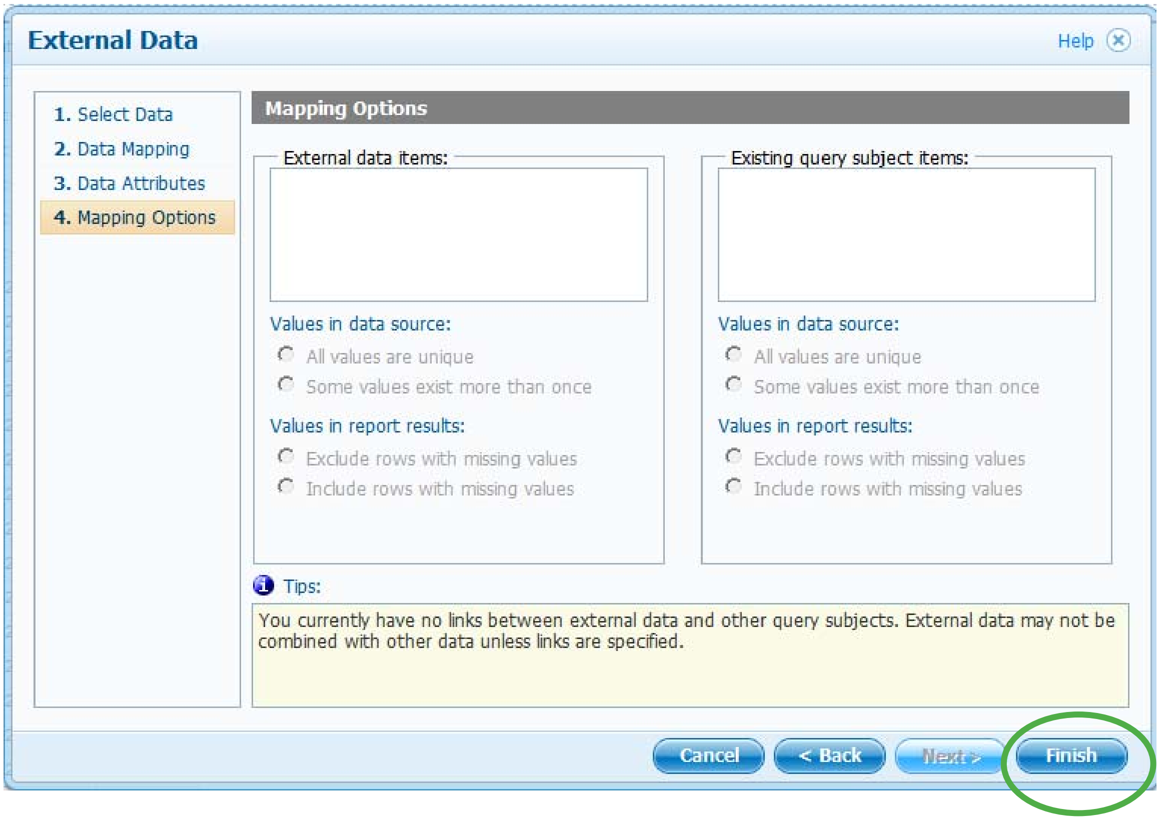
11. In the Data Mapping window, note that the Object Code Type query subject is being created with two query items: Object Code and Code Type. Click Next.



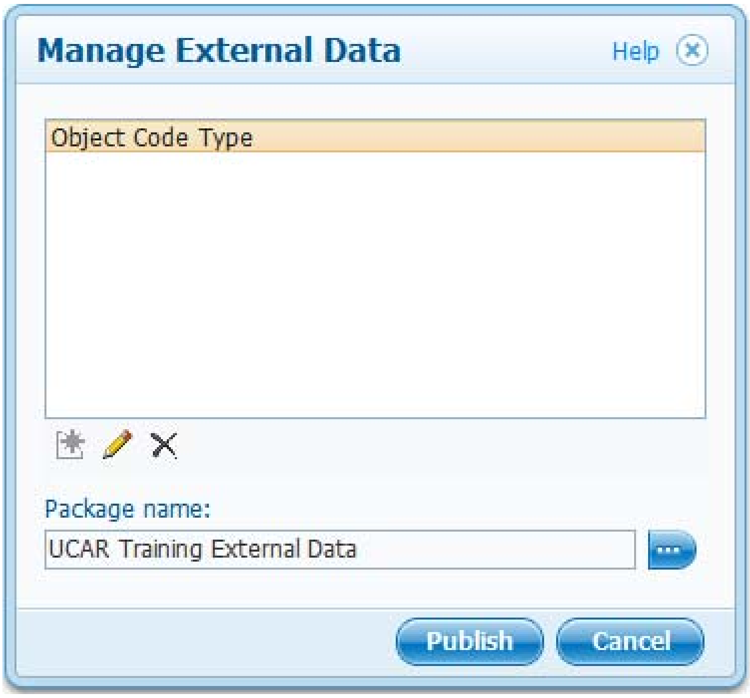
12. In Data Attributes, change the Data type for Object Code to Text and click Next.



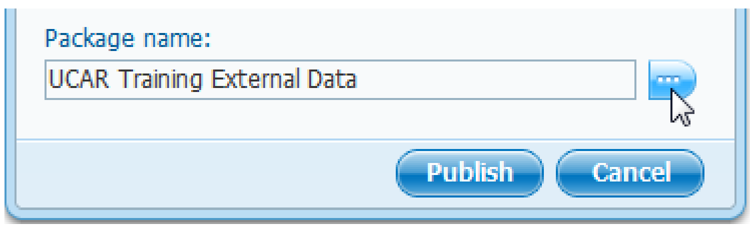
13. In Mapping Options, leave the settings in their defaults and click Finish.



In the Manage External Data window, notice that our Object Code Type namespace has been created and that our new package appends “External Data” to the original package name.

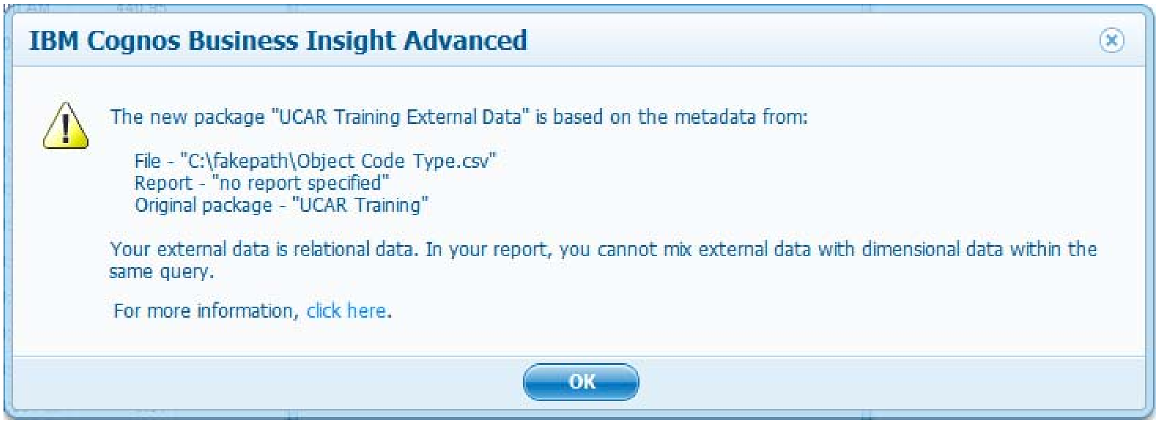


14. Click on the ellipsis next to the new package to see that the package is automatically published in My Folders.

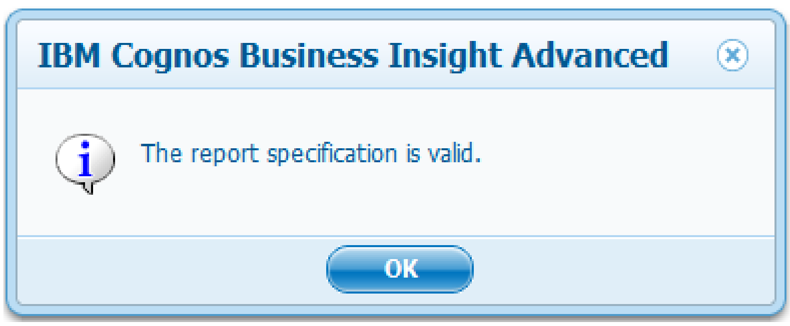


15. Cancel to exit out of the Save As window, then click Publish.

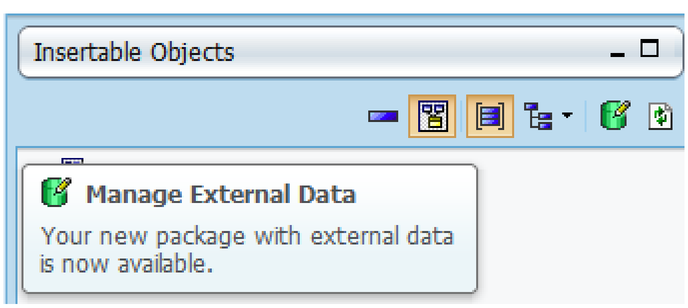
16. The Business Insight Advanced wizard warns that the external data we are uploading is relational and cannot be mixed with dimensional data in the same query. Click OK.



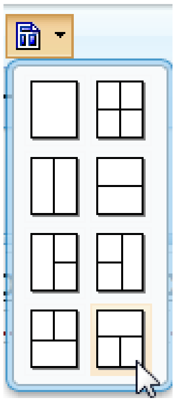
17. After Business Intelligence Advanced publishes the package, you should get a notification that the report specification is valid. Click OK to return to your report.



Note the message in the Insertable Objects pane stating that the new package is available:



18. Select the following page layout from Page Layout  icon from the Toolbar.



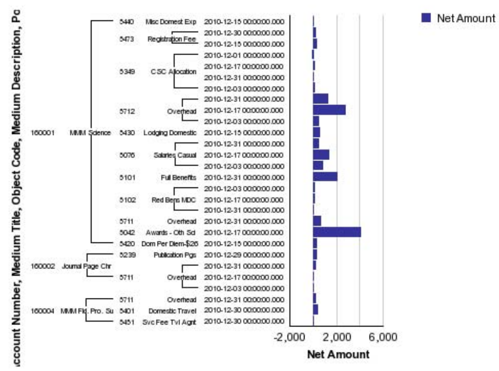
19. Drag the existing List report into the bottom left section of the report page.
20. With the entire List selected, click on the Chart icon and add a Bar Chart to your report page.
21. Drag the new chart into the bottom right section of the report page.
22. From the Toolbox, drag a new List report into the top section of the page.
23. From the Training External Data package, Object Code Type namespace, Object Code Type query subject, drag the Code Type query item and the Object Code query item into your new query.

24. Run your report from the Toolbar. (Select December 1, 2010 to December 31, 2010.)

IBM Cognos Viewer etrenkle

Code Type	Object Code
Invalid	5239
	5711
	5712
Valid	5042
	5076
	5101
	5102
	5349
	5401
	5420
	5430
	5440
	5451
	5473

Account Number	Medium Title	Object Code	Medium Description	Post Date	Net Amount
160001	MMM Science	5349	CSC Allocation	Dec 1, 2010 12:00:00 AM	-104
160001	MMM Science	5076	Salaries Casual	Dec 3, 2010 12:00:00 AM	816.84
160001	MMM Science	5102	Red Bens MDC	Dec 3, 2010 12:00:00 AM	68.61
160001	MMM Science	5349	CSC Allocation	Dec 3, 2010 12:00:00 AM	78
160001	MMM Science	5712	Overhead	Dec 3, 2010 12:00:00 AM	440.95
160002	Journal Page Chr	5711	Overhead	Dec 3, 2010 12:00:00 AM	0.01



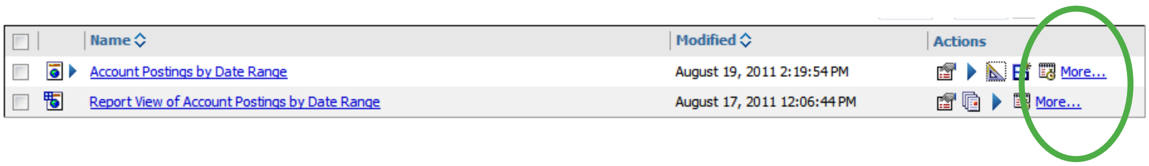
25. Save your report specification as **External Data**.

Demo

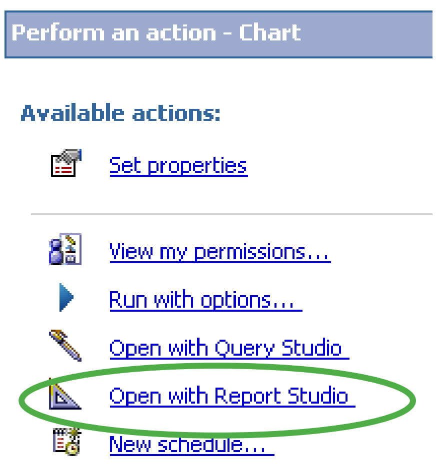
Extending a Business Insight Advanced Report in Report Studio

If you require additional functionality, or prefer to work in Report Studio, open the report in Report Studio.

1. In Public Folders, navigate to **Public Folders > IBM Cognos Training > Business Insight Advanced Training > Chapter 1 > Account Postings by Date Range,** and click on the **More** link in the Actions Menu.



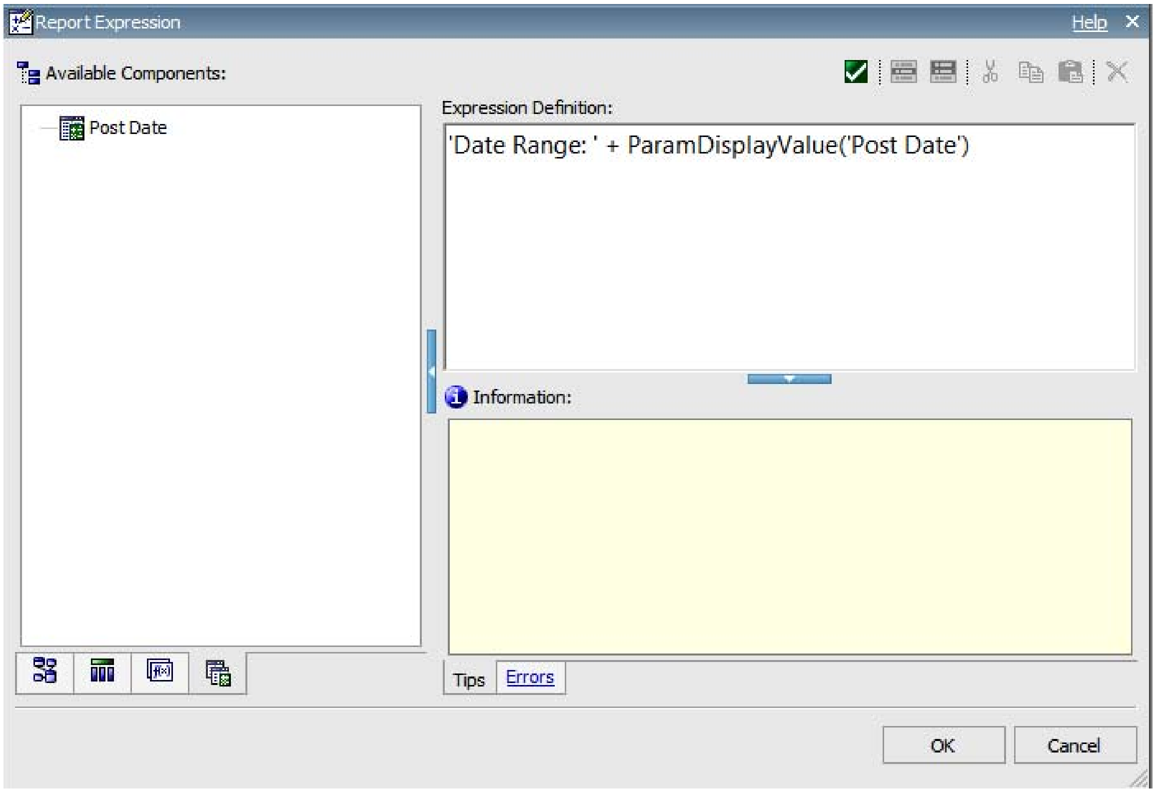
2. Click on the **Open with Report Studio** link.



IBM Cognos opens the query in Report Studio, maintaining all of the existing filters, formatting, and other specifications. You may then use Report Studio to revise and refine the query as you choose.

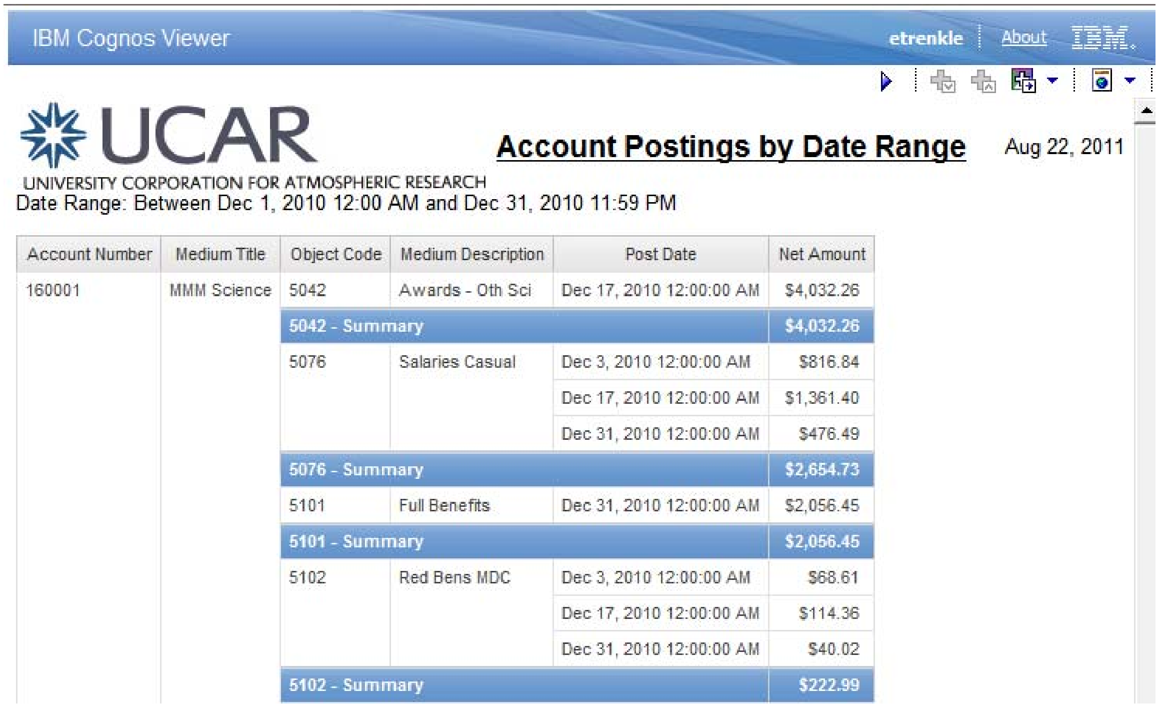
3. From the Insertable Objects pane, Toolbox tab, drag a Layout Calculation into the page header.

4. In the Report Expression window, complete the expression as shown:



5. Run your report in HTML (Select December 2010).

Your report displays with the date range selected in the prompt:


IBM Cognos Viewer etrenkle About IBM.

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Account Postings by Date Range Aug 22, 2011

Date Range: Between Dec 1, 2010 12:00 AM and Dec 31, 2010 11:59 PM

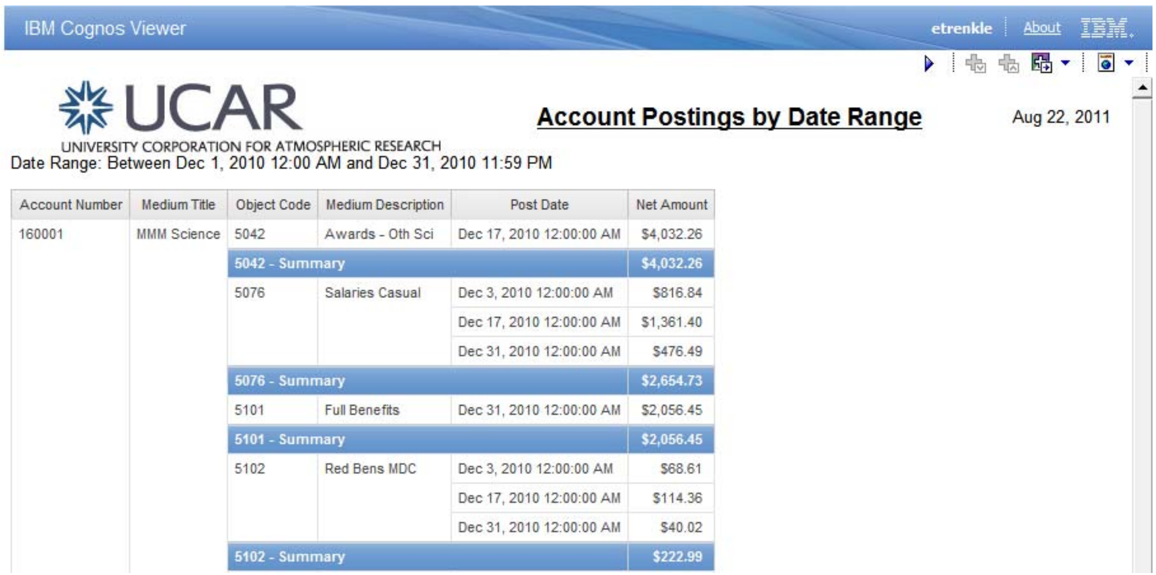
Account Number	Medium Title	Object Code	Medium Description	Post Date	Net Amount
160001	MMM Science	5042	Awards - Oth Sci	Dec 17, 2010 12:00:00 AM	$4,032.26
		5042 - Summary			$4,032.26
		5076	Salaries Casual	Dec 3, 2010 12:00:00 AM	$816.84
				Dec 17, 2010 12:00:00 AM	$1,361.40
				Dec 31, 2010 12:00:00 AM	$476.49
		5076 - Summary			$2,654.73
		5101	Full Benefits	Dec 31, 2010 12:00:00 AM	$2,056.45
		5101 - Summary			$2,056.45
		5102	Red Bens MDC	Dec 3, 2010 12:00:00 AM	$68.61
				Dec 17, 2010 12:00:00 AM	$114.36
				Dec 31, 2010 12:00:00 AM	$40.02
		5102 - Summary			$222.99

6. Save your report specification as **Report Studio.**
7. Close the report and launch Business Insight Advanced from IBM Cognos Connection.
8. Select the **UCAR Training** package.
9. Select to Open existing, and open your **Report Studio** report.
10. Set the **View** to **Page Design**.

11. Notice that the Layout Calculation created in Report Studio is still present, but that you cannot edit the calculation in Business Insight Advanced.

Reports edited in Report Studio can still be modified in Business Intelligence Advanced, but the elements added to the report that are specific to Report Studio cannot be changed in Business Insight Advanced.

12. Run the report in HTML (select December 2010).



Account Number	Medium Title	Object Code	Medium Description	Post Date	Net Amount
160001	MMM Science	5042	Awards - Oth Sci	Dec 17, 2010 12:00:00 AM	$4,032.26
		5042 - Summary			$4,032.26
		5076	Salaries Casual	Dec 3, 2010 12:00:00 AM	$816.84
				Dec 17, 2010 12:00:00 AM	$1,361.40
				Dec 31, 2010 12:00:00 AM	$476.49
		5076 - Summary			$2,654.73
		5101	Full Benefits	Dec 31, 2010 12:00:00 AM	$2,056.45
		5101 - Summary			$2,056.45
		5102	Red Bens MDC	Dec 3, 2010 12:00:00 AM	$68.61
				Dec 17, 2010 12:00:00 AM	$114.36
				Dec 31, 2010 12:00:00 AM	$40.02
		5102 - Summary			$222.99

NOTE

Your organization must have granted access to Report Studio in order for you to use it.

NOTE

Run options only apply when you run an analysis in IBM Cognos Viewer or open it in Report Studio.

Drill-Through

If drill through has been set up from the cube, you can drill down to a related detail report from Business Insight Advanced.

The instructor will discuss this feature.

NOTES

NOTES