

## Building Ad Hoc Reports

Cognos Query Studio enables you to build custom ad hoc reports that you may share with other Cognos users.

This guide explains the basic process of creating and saving a report using Cognos Query Studio. The recommended method is described but *does not replace training*. Query Studio uses data from NUFFinancials that is refreshed nightly.

### Contents

Upon completion of this guide, you should be able to:

- Use essential terms: star, dimension, fact, and element
- Follow the recommended method for building ad hoc reports
- Add filters and prompts to a report
- Find and insert data onto a report
- Apply a report template and other finishing touches
- Save the report to your preferred location
- Run the report in various formats

### Where to get help?

For assistance, contact NUIT Support Center at 847-491-HELP (4357), or email [consultant@northwestern.edu](mailto:consultant@northwestern.edu)

### Who has access?

This application is for experienced financial users with an understanding of their budgets, financial activities, and existing pre-configured reports.

You must request access to Query Studio using the Finance, Facilities, and Research Administration (FFRA) systems security form located on the FFRA website > Security Access. Select from the two security roles below.

*Query Author* security role:

- Build Ad Hoc reports
- Run Ad Hoc reports
- Use the drill-up or down-drill *NU Dept ID Master Tree* functionality

*Ad Hoc Query Runner* security role:

- Run Ad Hoc reports from *Cognos Connection* > Finance, Facilities, and Research Administration Reports > NUFin Ad Hoc Reports folder

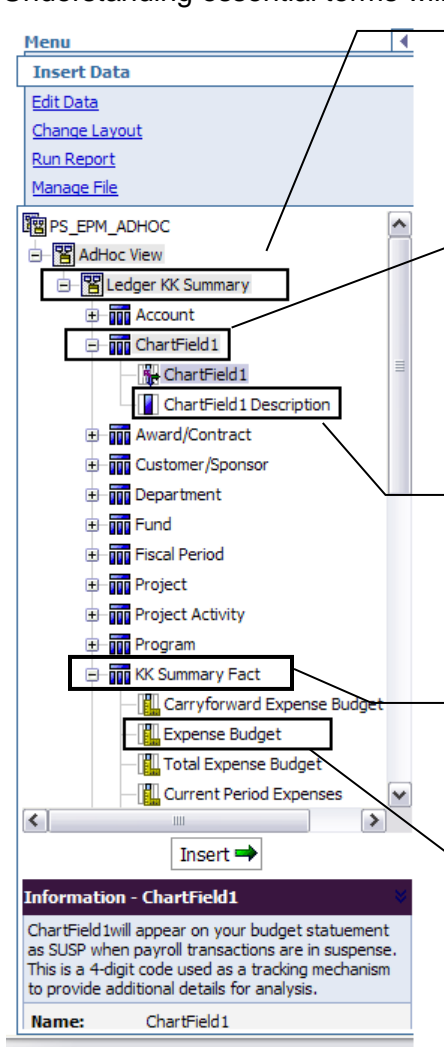
## Step 1: Access Cognos Query Studio


Quick navigation: From the [NUPortal](#), select Financials > System Login > Cognos > Query my data > PS\_EPM\_ADHOC. From the [Financial Applications Gateway](#), click Cognos Reporting.

The screenshot displays the Cognos Business Intelligence web interface. The top header includes the Northwestern University logo, the text "Business Intelligence Reporting and Analytics Solutions for Northwestern University", and the user "projectcafe01" with a "Log Off" link. The main content area is divided into "My Content" and "My Actions". A callout box points to the "Query my data" link in the "My Actions" section, with the instruction "1. Click Query my data." Below this, a "Select a package (Navigate)" dialog box is open. It shows a search bar with "PS\_EPM\_ADHOC" entered. A callout box points to the "PS\_EPM\_ADHOC" link in the "Recently used packages" list, with the instruction "2. Click PS\_EPM\_ADHOC." Below the dialog, a list of all packages is shown, including "Project\_Cafe\_Reports", "Audit", "GO Data Warehouse", "PS\_EPM\_ADHOC", "GO Sales and Retailers", "GO Finance", "Great Outdoors Company", "InfoEd Reporting Pkg 1", and "InfoEd Adhoc".

## Understanding Essential Terms

Understanding essential terms will help you use this system and be understood by others when discussing this system.





 = STAR

Contains everything you can use to build a report. Stars are thematic; they contain certain kinds of information. The star we are using for this guide is the *Ledger KK Summary* star. The *Ledger KK Summary* star contains summary-level financial information. This means you can see totals by chart string, but you cannot see transactional details.

 = DIMENSION

Major category of information. All dimensions use this symbol. However, the *KK Summary Fact* menu also uses this symbol. You can tell the difference between a dimension and the *KK Summary Fact* because the fact only contains calculations. Beneath an expanded dimension menu, you will see element columns that can be inserted into the report. For example, *ChartField1* is a dimension.

 OR  = ELEMENT

Column of information that acts as a descriptor. Elements provide information about the dimension. For example, the *ChartField1 Description* element provides information about the *ChartField1* dimension.

 = FACT

The menu that contains all the calculations. The fact is always beneath the last dimension.

 = CALCULATION


Column of dollar amounts called calculations. These columns of dollar amounts are called calculations because Cognos performs the work of adding, subtracting, or multiplying different numbers together to provide the amount.

## Step 2: Find data to insert into the report

The screenshot shows the IBM Cognos 8 BI Query Studio interface. The title bar indicates the user is logged in as 'projectcafe01'. The 'Menu' dropdown is open, showing options like 'Insert Data', 'Edit Data', 'Change Layout', 'Run Report', and 'Manage File'. Below the menu is a tree view containing 'PS\_EPM\_ADHOC', 'AdHoc View', and 'Ledger KK Summary'. A mouse cursor is hovering over the 'Ledger KK Summary' item, which has a star icon. A callout box with a lightbulb icon contains the text: '1. Click here to expand the *KK\_Summary* star menus and see data you can use in the report.' The main report area is currently empty, showing a 'Title' placeholder and instructions: 'Select and insert items from the tree to fill in the report. You can also drag and drop items into the report.' A large blue arrow points from the tree view to the report area. At the bottom of the report area, it says 'Use Ctrl+click to select multiple items in the tree or report. Right-click report item headings to access commonly used actions.'



### SAVE TIME. . . . .

Set your personal Ad Hoc preferences to build reports using a *limited data* set or *no data* at all. Cognos refreshes the data every time you insert a column, filter, or sort the data. When you limit the data set, it processes only a portion of the data or provides filler data. At any time, you can click  *Run with all data*, and Cognos will run the report and show all the data you requested. Set your preferences at: **Manage File > My Preferences > Select Preview with limited data** or **Preview with no data**.

## Step 3: Filter, filter, filter . . .



Filter your elements before you insert them! Filter on date range, department, department level, and project before you insert the columns. Filters narrow down the data set by excluding data. When elements are not filtered before they are inserted, Cognos must process columns of data against your entire security access for all date ranges. This uses resources and may slow down the system for other users.

1. Click the item (element) that you want to insert into the report. Right-click and filter before you insert it.

2. Click **Filter for report**.

3. Select filter values to narrow the data set.

4. Click **OK**.

If you would rather search for values to filter than pick the values from a list, click here.

This is an example of how to apply a filter without inserting the column.

## Step 3: Filter, filter, filter . . . (continued)

The screenshot shows the IBM Cognos 8 BI Query Studio interface. On the left, a tree view displays the data source structure, including 'PS\_EPM\_ADHOC' and 'AdHoc View'. Under 'AdHoc View', there is a 'Ledger KK Summary' folder containing various columns like 'Account', 'ChartField1', 'Award/Contract', 'Customer/Sponsor', and 'Department'. The 'Department' folder is expanded, showing sub-levels from 'Department ID' to 'Level 5 Description'. The 'Level 3 Description' column is highlighted. Below the tree is an 'Insert' button with a green arrow.

The main workspace shows a report design with a title 'Title' and a filter icon (a yellow triangle) next to the text 'Level 3 Description: Feinberg School of Medicine'. A callout bubble points to the filter icon, stating: 'Applied filters or sorts appear here.' Below the filter, the text 'No data available' is displayed. A second callout bubble explains: 'Because we filtered *Level 3 Department* without inserting the column, this message appears. Continue building the report. As you insert columns, data will appear.'

At the bottom, the 'Information - Level 3 Description' pane is open, showing details for the selected column: 'Area, School, Mjr Unit Level for Northwestern'. A callout bubble points to this pane, stating: 'The description of the element column appears here. For example, filtering at *Level 3* of the *NU Master Dept ID* tree means restricting data to the school or major unit level.'

## Step 4: Insert element columns *before* you insert calculation (\$) columns

Insert filters and non-dollar columns first to limit the data. Non-dollar columns include anything that is *not* contained in the *KK Summary Fact* menu. Inserting dollar amounts first taxes the system because Cognos must re-calculate each dollar amount every time you change anything.

The screenshot shows the IBM Cognos 8 BI Query Studio interface. On the left is a 'Menu' pane with 'Insert Data' selected. Below it is a list of dimensions: Account, ChartField1, Award/Contract, Customer/Sponsor, Department, Fund, Fiscal Period, Project, Project Activity, Program, and KK Summary Fact. The main workspace shows a report titled 'Level 3 Description: Feinberg School of Medicine AND Accounting Periods between 1 and 12'. A 'Combine filters' dialog box is open, showing a list of filters: 'Level 3 Description: Feinberg School of Medicine', 'AND Accounting Periods between 1 and 12', and 'AND Year: 2009'. A callout bubble points to the 'OK' button with the text '1. Click OK to insert the filter.' The dialog also has 'Cancel' and 'Apply' buttons.



### WARNING:

Never insert a whole dimension such as Department or Project into the report.

Instead, select specific elements from a dimension. Inserting the whole dimension inserts every element column contained in that dimension. This may harm system performance for all users if your security access includes a lot of data.

## Step 5: Insert calculation (\$) columns

The screenshot shows the IBM Cognos 8 BI Query Studio interface. The 'Insert Data' menu is open, showing options like 'Edit Data', 'Change Layout', 'Run Report', and 'Manage File'. The 'AdHoc View' pane on the left shows a tree structure of data objects, with 'Total Expenses' highlighted. The main data table displays columns for Fund, Department ID, Project ID, Activity ID, Account, Year, Level 5 Description, Total Expenses, and Expense Budget. Callouts provide instructions: '1. Insert \$ amount columns. \$ columns (calculations) are beneath the KK\_Summary\_fact menu.', '2. Click Insert. All highlighted items are inserted.', 'To insert 2 or more items: Hold CTRL and click each item. Selected items are highlighted.', and 'The \$ columns appear here.' The 'Information' pane at the bottom states: 'Expense Budget is the dollar amount budgeted for spending.'

Fund	Department ID	Project ID	Activity ID	Account	Year	Level 5 Description	Total Expenses	Expense Budget
610	5114100	601636	01	60010	2009	Dept of Preventive Medicine	\$0.00	\$105,626.00
610	5114100	601636	01	60011	2009	Dept of Preventive Medicine	\$34,868.42	
610	5114100	601636	01	60030	2009	Dept of Preventive Medicine	\$3,478.48	
610	5114100	601636	01	60100	2009	Dept of Preventive Medicine	\$0.00	\$16,798.00
610	5114100	601636	01	60101	2009	Dept of Preventive Medicine	\$27,243.44	
610	5114100	601636	01	60104	2009	Dept of Preventive Medicine	\$27,360.00	
610	5114100	601636	01	60111	2009	Dept of Preventive Medicine	\$115.00	
610	5114100	601636	01	60180	2009	Dept of Preventive Medicine	\$0.00	\$35,023.00
610	5114100	601636	01	60181	2009	Dept of Preventive Medicine	\$7.59	
610	5114100	601636	01	60186	2009	Dept of Preventive Medicine	\$20,356.13	
610	5114100	601636	01	60200	2009	Dept of Preventive Medicine	\$0.00	\$30,565.00
610	5114100	601636	01	60210	2009	Dept of Preventive Medicine	\$0.00	
610	5114100	601636	01	73000	2009	Dept of Preventive Medicine	\$0.00	
610	5114100	601636	01	73310	2009	Dept of Preventive Medicine	\$340.18	
610	5114100	601636	01	75000	2009	Dept of Preventive Medicine	\$0.00	\$1,200.00
610	5114100	601636	01	75001	2009	Dept of Preventive Medicine	\$0.00	\$4,096.00
610	5114100	601636	01	75002	2009	Dept of Preventive Medicine	\$0.00	
610	5114100	601636	01	75510	2009	Dept of Preventive Medicine	\$45.07	
610	5114100	601636	01	76761	2009	Dept of Preventive Medicine	\$0.00	\$5,592.00
610	5114100	601636	01	77000	2009	Dept of Preventive Medicine	\$0.00	

### Please remember:

- Understand what the calculation (\$) is before you use it.
- Each \$ calculation is a unique number made up of other specific numbers.
- Refer to *Data Definitions* documents for a comprehensive list of elements and calculations.
- You may rename any column title, but there is no way to determine which \$ type you inserted after the column has been renamed. This may be an issue if you require support from the Help Desk for an Ad Hoc report.



## Step 6: Give the report a title

The screenshot shows the IBM Cognos 8 BI Query Studio interface. A report titled "Medical School Expenses" is displayed, showing a table of financial data. The table has columns for Department ID, Year, Account, Fund, Project ID, Activity ID, Level 5 Description, Expense Budget, and Total Expenses. The data is filtered by "Level 3 Description: Feinberg School of Medicine AND Grants Projects AND Year: 2009".

Callouts in the image provide instructions:

- 1. Click title to create a report title that appears here.
- 2. Type a title name here.
- 3. Select items you want to show on the report header.
- 4. Click OK.

The report header shows the following information:

Title: Medical School Expenses  
 Subtitle: Fiscal Year 2009  
 Show filters  
 Show sorts  
 Show suppression

### Additional formatting tips:

- If you want to delete a filter after it is inserted, right-click it and select delete.
- To hide filters or sorts double-click title and deselect filters and sorts.
- Use the cut and paste buttons to move columns.
- Select a column and click to remove duplicates and group like values.
- Click to suppress zeros and items multiplied by zeros. (To view the entire report, click Change Layout > Set Webpage Size > change Number of rows to 50.)
- Click to format the look of the numbers.

## Step 7: Apply a template

**Medical School Expenses**  
Fiscal Year 2009  
Level 3 Description: Feinberg School of Medicine AND Grants Projects AND Year: 2009

Department ID	Year	Account	Fund	Project ID	Activity ID	Level 5 Description	Expense Budget	Total Expenses
5013401	2009	40856	110	601636	01	Dean's Administration	\$0.00	\$0.00
5013401	2009	40856	110	601643	01	Dean's Administration	\$0.00	\$0.00
5013401	2009	40856	110	601644	01	Dean's Administration	\$0.00	\$0.00
5013401	2009	40856	110	601646	01	Dean's Administration	\$0.00	\$0.00
5013401	2009	40856	110	601647	01	Dean's Administration	\$0.00	\$0.00
5013401	2009	40856	110	601649	01	Dean's Administration	\$0.00	\$0.00
5013401	2009	40856	110	601651	01	Dean's Administration	\$0.00	\$0.00
5013401	2009	40856	110	601652	01	Dean's Administration	\$0.00	\$0.00
5013401	2009	40856	110	601653	01	Dean's Administration	\$0.00	\$0.00
5013401	2009	40856	110	601654	01	Dean's Administration	\$0.00	\$0.00
5013401	2009	40856	110	601655	01	Dean's Administration	\$0.00	\$0.00
5013401	2009	40856	110	601657	01	Dean's Administration	\$0.00	\$0.00
5013401	2009	40856	110	601665	01	Dean's Administration	\$0.00	\$0.00
5013401	2009	40856	110	601718	01	Dean's Administration	\$0.00	\$0.00
5013401	2009	40856	110	601719	01	Dean's Administration	\$0.00	\$0.00
5013401	2009	40856	110	601720	01	Dean's Administration	\$0.00	\$0.00
5013401	2009	40856	110	601722	01	Dean's Administration	\$0.00	\$0.00

**Apply template**

Apply a template to

Do not apply a template

Apply a template:  
(None) [Select a template...](#)

Reset all styles to template defaults

3. Click **OK**.

OK Cancel

### Template options:

- A template applies a header, formatting, and header image to the report.
- The default template is the Northwestern University template.
- Certain school or unit templates are also available.
- If you want to upload a school or unit template into Ad Hoc, contact the help desk (1-HELP).

## Step 7: Apply a template (continued)

IBM Cognos 8 BI Query Studio - New projectcafe01 projectcafe01 Log Off

Menu  
 Insert Data  
 Edit Data  
 Change Layout  
 Run Report  
 Manage File  
 Chart...  
 Define Conditional Styles...  
 Change Font Styles...  
 Change Border Styles...  
 Reset Font and Border Styles  
 Apply Template...  
 Edit Title Area...  
 Set Web Page Size...  
 Set Page Breaks  
 Group  
 Pivot  
 Ungroup  
 Create Sections  
 Swap Rows and Columns  
 Collapse Group  
 Expand Group

### Medical School Expenses

Fiscal Year 2009  
 Level 3 Description: Feinberg School of Medicine AND Grants Projects AND Year: 2009

Department ID	Year	Account	Fund	Project ID	Activity ID	Level 5 Description	Expense Budget	Total Expenses
5013401	2009	40856	110	601636	01	Dean's Administration	\$0.00	\$0.00
5013401	2009	40856	110	601643	01	Dean's Administration	\$0.00	\$0.00
5013401	2009	40856	110	601644	01	Dean's Administration	\$0.00	\$0.00
5013401	2009	40856	110	601646	01	Dean's Administration	\$0.00	\$0.00
5013401	2009	40856	110	601647	01	Dean's Administration	\$0.00	\$0.00

Top Page up Page down Bottom

#### Select a template (Navigate)

Navigate the folders or search to find the template

Cognos > Public Folders > PS\_EPM\_ADHOC

Entries: 1 - 8

- 1. Scratch
- 2. Ready to Move
- PeopleSoft\_Template\_Final
- PS\_Feinberg\_Template\_Final
- PS\_Kellogg\_Template\_Final
- PS\_McCormick\_Template\_Final
- PS\_NU\_Law\_Template\_Final
- PS\_SOC\_Template\_Final

OK

2. Select a template.

1. Navigate to Cognos > Public Folders > PS\_EPM\_ADHOC. Templates are saved here.

3. Click OK.

## Step 8: Apply final touches

IBM Cognos 8 BI Query Studio - New projectcafe01 projectcafe01 Log Off

Menu  
Insert Data  
Edit Data  
Change Layout  
Run Report  
Manage File  
Chart...  
Define Conditional Styles...  
Change Font Styles...  
Change Border Styles...  
Reset Font and Border Styles  
Apply Template...  
Edit Title Area...  
Set Web Page Size...  
Set Page Breaks  
Group  
Pivot  
Ungroup  
Create Sections  
Swap Rows and Columns  
Collapse Group  
Expand Group

Font B I U

2. Click **Delete**.

NORTHWESTERN UNIVERSITY FEINBERG SCHOOL of MEDICINE

Budget Year: N/A  
Fiscal Year: N/A  
Accounting Period: N/A  
Department ID: N/A  
Project ID: N/A  
Fund Code: N/A

Expenses

Level 3 Description: Feinberg School of Medicine 2009 AND Grants & Contract Funds

Fund	Department ID	Project ID	Activity ID	Account	Year	Level 5 Description	Expense Budget	Total Expenses
610	5114100	601636	01	60010	2009	Dept of Preventive Medicine	\$105,626.00	\$0.00
610	5114100	601636	01	60011	2009	Dept of Preventive Medicine		\$34,868.42
610	5114100	601636	01	60030	2009	Dept of Preventive Medicine		\$3,478.48
610	5114100	601636	01	60100	2009	Dept of Preventive Medicine	\$16,798.00	\$0.00
610	5114100	601636	01	60101	2009	Dept of Preventive Medicine		\$27,243.44
610	5114100	601636	01	60104	2009	Dept of Preventive Medicine		\$27,360.00
610	5114100	601636	01	60111	2009	Dept of Preventive Medicine		\$115.00
610	5114100	601636	01	60180	2009	Dept of Preventive Medicine	\$35,023.00	\$0.00

Top Page up Page down Bottom

Delete

There is a filter or sorting associated with one or more of the selected items. You can choose to keep these in your report.

Delete the following:

Year: 2009

4. Click **OK**.

Select all Deselect all

OK Cancel

3. Click to uncheck the box next to the filters you want to keep.

1. Select the column you want to delete.

- Adding final touches:**
- Get rid of duplicate values by applying grouping. Click a column then click to group data by like values.
  - To break the report into sections, click a column, and then click .

## Step 9: Save the report

IBM Cognos 8 BI Query Studio - training guide

Menu  
Insert Data  
Edit Data  
Change Layout  
Run Report  
Manage File

Font Size B I U

1. Click Save.

NORTHWESTERN UNIVERSITY FEINBERG SCHOOL of MEDICINE

**Medical School Expenses**  
Fiscal Year 2009

Level 3 Description: Feinberg School of Medicine AND Grants Projects AND Year: 2009 AND Grants & Contract Funds

Fund	Department ID	Project ID	Activity ID	Account	Level 5 Description	Expense Budget	Total Expenses
610	5114100	601636	01	60010	Dept of Preventive Medicine	\$105,626.00	\$0.00
610	5114100	601636	01	60011	Dept of Preventive Medicine		\$34,868.42

2. Name the report (using your school/unit naming conventions). Then type a description.

**Save As**

Specify a name, description and screen tip.

Name:  
PrevM\_expenses\_2009

Description:  
Type a description of the report here . . .

Screen tip:

Location:  
Public Folders > PS\_EPM\_ADHOC > 1. Scratch > Provost > Feinberg School of Medicine  
[Select another location...](#) [Select My Folders](#)

3. Click OK to save the report at this location.

OK Cancel

## Step 9: Save the report (continued)

**Medical School Expenses**  
Fiscal Year 2009

Level 3 Description: Feinberg School of Medicine AND Grants Projects AND Year: 2009 AND Grants & Contract Funds

Fund	Department ID	Project ID	Activity ID	Account	Level 5 Description	Expense Budget	Total Expenses
610	5114100	601636	01	60010	Dept of Preventive Medicine	\$105,626.00	\$0.00
					of Preventive Medicine		\$34,868.42
					of Preventive Medicine		\$2,479.18

1. The path to the last place you saved the report appears. Click **Cognos** to navigate to a new location.

2. Choose a folder for your major unit and then click **OK** to save the report in the *Scratch* or *Ready to Move* folder.


### Save the report in one of these locations:

If you want to...	Then save the report here...
Save a report for your own use	Cognos > My Folders
Save a report that other Query Authors may view or modify (not final)	Cognos > Public Folders > PS_EPM_ADHOC > Scratch > Select the appropriate folder and subfolder
Copy a final version of the report to production, so that Query Runners may view it	Cognos > Public Folders > PS_EPM_ADHOC > NUFin AdHoc Reports > Select the appropriate folder and subfolder  Reports saved in NUFin Ad Hoc Reports are available to view in production immediately.

## Step 10: Run the report

### For Query Builders

Query Builders may build and run reports.

1. Find the report.
  - Finalized report: Public Folders > Finance Facilities and Research Administration Reports > NUFin Ad Hoc Reports > Select the appropriate school/unit folder and subfolder.
  - A report that is not final is saved in one of two locations:
    - Cognos > My Folders
    - Cognos > Public Folders > PS\_EPM\_ADHOC > Scratch > Select the appropriate school/unit folder and subfolder.
2. Run the report.
  - a. Click on the report name to open the report. The report opens in Query Studio.
  - b. Enter any required prompts. The report runs automatically. To refresh the data you can click Run  from the toolbar. The report runs to HTML.
  - c. To change the format of the report, click the **Run Report** menu link. Choose the pdf or Excel output.

### For Query Runners

Query Runners may only run reports from Cognos Connection.

1. Open the report from Cognos Connection: Public Folders > Finance Facilities and Research Administration Reports > NUFin Ad Hoc Reports.
2. Enter any required prompts and run the report using the Finish or OK buttons.