ADOA – General Accounting Office

AFIS MANUAL: INFOADVANTAGE REPORT DEVELOPER

InfoAdvantage Report Developer

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AFIS MANUAL:

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INFOADVANTAGE REPORT DEVELOPER

Overview

The InfoAdvantage Report Developer class is a two-day course designed as a pre-requisite training for users who will have Report Developer access in InfoAdvantage.

This course focuses on advanced skills required to modify or create reports using InfoAdvantage. This course is not intended to cover skills related to understanding the chart of accounts nor database fundamentals. Developers are expected to have a baseline level of understanding and skill. The primary focus of this course is demonstrating techniques for creating filters, variables and merges.

This course gives very little attention to techniques employed in formatting reports. However, resources are provided to enable developers to format reports that function as effective and efficient communication tools. The State of Arizona General Accounting Office (GAO) encourages developers to develop reports other than **data dump** style reports that export to excel and then have to be modified and formatted to meet business needs. Given the vast tools and resources available for the State of Arizona reporting tool (InfoAdvantage), developers can create reports providing the exact end output required by managers.

Learning Objectives

Upon successful completion of this class, students will be able to develop reports in InfoAdvantage to provide financial data that supports the agency's business needs. This course is not designed to teach coding logic or to provide understanding of the underlying data. This course is designed to present some useful report building skills and problem solving options available for report developers.

Final Exercise

At the end of the class, the student will complete a demonstration of proficiency. The Final Exercise will include a requirement to create a report based on scenarios provided. To pass this course and be granted report developer access, the student will need to successfully create a report that meets certain criteria and also pass a multiple choice test.

Students will be able to create a new report that requires the use of:

- Filters
- Variables
- Merges

Introduction to AFIS InfoAdvantage Report Development

Gain Access to InfoAdvantage

Access to develop reports in InfoAdvantage is controlled by the GAO. All developers must demonstrate that they possess the necessary skills and knowledge. Successful completion of this course is required to gain access. Developers must be assigned the Security Role **INFO_DVLPR** and cannot simultaneously have the role **INFO_INTRCT**.

Security Roles in InfoAdvantage

Description	Security Role (on UDOC)	View Published Reports	Run or Schedule On Demand Reports	Create or Modify Reports	Run 1099AP Confidential Report	Modify 1099AP Confidential Report	Run HRIS Confidential Report	Create or Modify HRIS Confidential Report
Interactive User	INFO_INTRCT	Yes	Yes	No	No	No	No	No
Report Developer	INFO_DVLPR	Yes	Yes	Yes *	No	No	No	No
1099 User	INFO_1099AP	Yes	Yes	No	Yes	No	No	No
Payroll User	INFO_PYRL	Yes	Yes	No	No	No	Yes	No
*Developers can only modify reports that they own (EIN shows in the **Created by** column)								

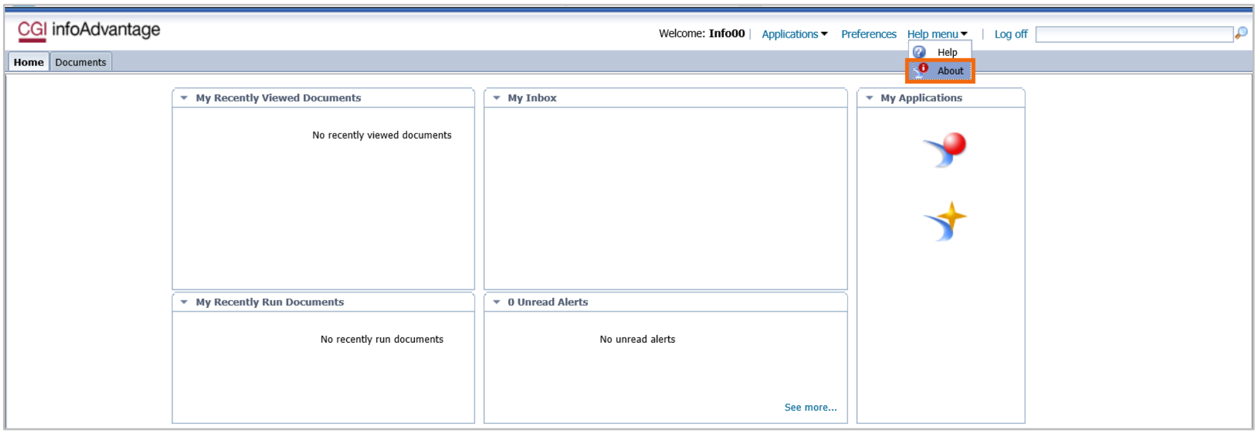
Basics of InfoAdvantage

InfoAdvantage is an SAP Business Objects reporting tool. It was designed to be a user-friendly reporting tool that organizes AFIS data into an understandable format. Report devlopers work with a semantic layer that maps complex data into descriptive business terms called **Universes.** Tables and joins in the universe are hidden from view. InfoAdvantage sits on top of AFIS - that is, it is a separate application from AFIS. The data in the Universes may be either real-time or it may be a day behind. An ETL process (Extract-Transform-Load) runs nightly to pull data from the AFIS system and populate it in a data warehouse, which is accessed via InfoAdvantage universes.

Important points to note are:

- Not all data in AFIS is brought into InfoAdvantage.
- Some data in InfoAdvantage is created only in InfoAdvantage
- Universes are segmented by intended reporting area: Budget, Accounts Payable, Accounts Receivable, Chart of Accounts, Assets, etc
- Not all objects within the Universes are joined
- Universes do not have joins between them

- SAP has a vast resource on the web available to users of their products. When in InfoAdvantage, click on **Help menu > about** in the top of the InfoAdvantage Home tab to see what version of SAP we are using and to find a link to the SAP website



Anticipated availability of InfoAdvantage will be 6 am to 8 pm weekdays, with availability on most weekends as well. InfoAdvantage will not be available until a successful daily ETL completion.

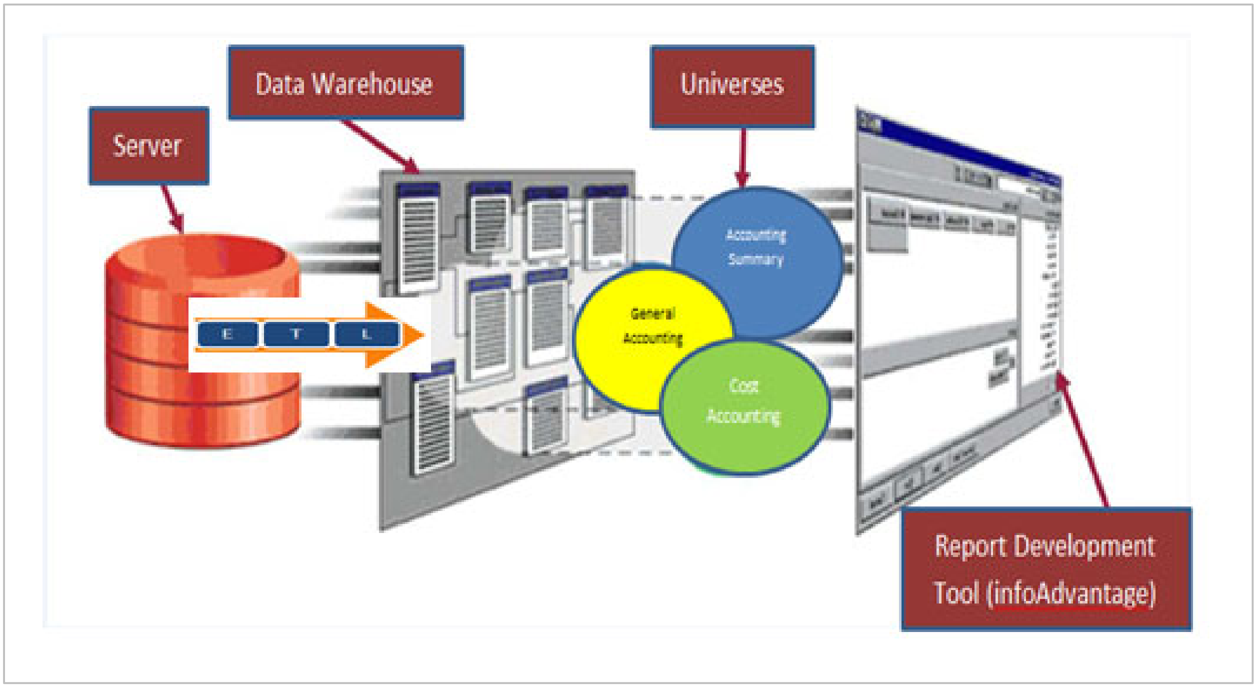
The ETL Process

Each week-night, the following sequence of steps occurs:

- **Extract** - data is extracted from the AFIS Operational System (Advantage)
- **Transform** - the data (fields seen in AFIS) are transformed
- **Load** - logical groups of these objects are loaded into the infoAdvantage data warehouse and are available for access through Universes

Note: AFIS InfoAdvantage will be available only after the daily ETL runs successfully. It will not be up until this happens. In addition, monthly maintenance will occasionally limit user access on some weekends.

A view of the basic underlying structure of InfoAdvantage is shown below. Note that the Universes are between the report developers tool and the data warehouse. Report Developers have direct access to view or utilize Universes.



Note: There are over 1 million fields in the AFIS application; over 380,000 objects in InfoAdvantage; and over 60 universes available in InfoAdvantage. The universes and objects accessible to a user are based upon the user's security and role. CGI develops all the processes above from the Server to the Data Warehouse to Universes.

Test your Knowledge

Answer the following questions based on the information we have gone over so far.

1. All fields in AFIS are also in infoAdvantage. **True / False**
2. Report Developers have direct access to the Data Warehouse. **True / False**
3. InfoAdvantage will be available:
    a. Daily at 6 am
    b. During regular business hours
    c. After successful weekly ETL run
    d. After successful daily ETL run

Reporting Universes

Notes and Tips

The Universes currently available in infoAdvantage are distinguished by the following initial letters/phrase (FIN, OFIN/OADM, and Univ Kernel).

- **FIN** - Financial Universes provide business function financial data that is one day in arrears
- **OFIN and OADM** - Operational Universes provide real-time information directly from the application database (AFIS)
- **Univ Kernel** - Kernel Universes provide information across multiple universes (such as reference tables)

Note: Avoid combining OFIN/OADM and FIN Universes in a single report because this will cause performance issues (slow processing time).

Universes are accessed by the report developer through the Query Panel and objects within the universe are organized by folder structure. The folders within a Universe are visible to developers while working in the Query Panel.

Selection of the Universe(s) most suited to the reporting needs is a critical step in successful report development. Details on universes are listed in the Appendix section named **Reporting Universe Notes and Tips.**

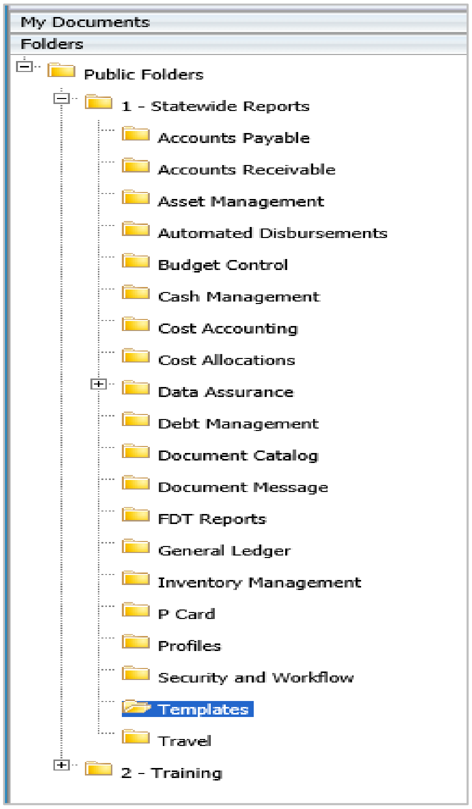
Universe	Possible Reporting Uses	Limitations
FIN - Accounting Summary	1) Trial Balance reporting 2) Reporting where an 'as of' beginning or ending balance is required along with summary activity for a specified fiscal period but not 'as of' a certain date	1) Limited summary level information only - no document information; for further details, use General Accounting 2) COA roll-up values represent what is currently in Advantage (not retained historically)
FIN - General Accounting	1) Expenditures vs. Revenue reporting 2) Transfers between funds and borrowing 3) Cash inflow and outflow reporting	1) Data attributes are limited to data posted to the Accounting Journal 2) COA roll-up values represent what is currently in Advantage (not retained historically)

Folder Structure in InfoAdvantage

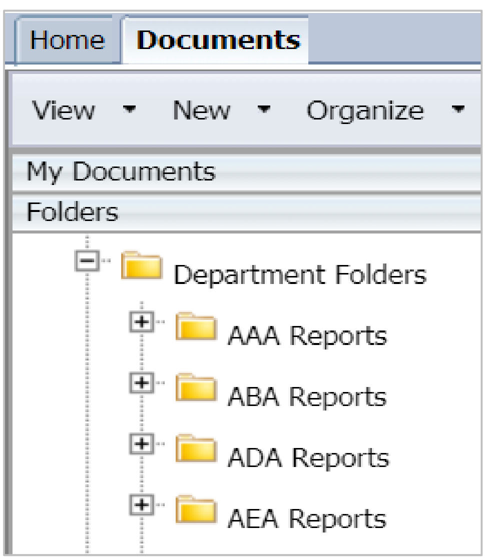
Under Public Folders are both the 1 - Statewide Reports folder and the Department folder.

The *1 - Statewide Reports folder* contains On Demand and Published reports. These reports are organized by functional area as shown below. The content of these reports is controlled by the General Accounting Office. Department users can view, run, copy and/or create shortcuts to these reports.

The Templates folder was created specifically to save time for report developers. Report cover page is pre-built and ready for developers to copy and use as a base for their custom report.



Department folders are separated by agency.



Note: In the Training region, the equivalent of Department folders is represented by the Training folder.

Each Department folder will have four subfolders:

1. On Demand Reports
    - The contents of this folder are controlled by the department users
    - New reports created by a report developer can be saved in the users Department On-Demand folder
2. Payroll Confidential Reports folder
    - These reports are developed by GAO for each agency. Users who are granted INFO_PYRL user roles may view and run reports within this confidential report folder.
3. XXX 1099/AP Reports folder
    - XXX = the three letter agency code. These reports are developed by GAO for each agency. Users who are granted INFO_1099AP user roles may view and run reports within this confidential report folder.
4. XXX Published Reports

XXX = the three letter agency code. These reports are published by GAO for each agency.

Note: InfoAdvantage returns an error message if users do any of the following:

- ***Try to modify and overwrite someone else's report***
- ***Try to save into another agency's On Demand folder***
- ***Try to save into the Statewide Reports folder***
- ***Try to save into a confidential report folder (1099 or Payroll)***

Remember that GAO makes updates to the 1 - Statewide reports occasionally. The two strategies below will assist Department users to manage their On Demand reports affected by any updates.

- Copy and edit a report found under 1 - Statewide – Maintenance required upon GAO update: create a copy of the new report and re-do any edits you had originally implemented
- Use shortcuts – Maintenance required upon GAO update: either none (if the shortcut still works) or creation of a new shortcut

Sign up for updates on the GAO website to stay informed about additions of new reports and edits to existing reports in the 1-Statewide folder.

Report Development Considerations

1. Know the Data
   - Developers need to first understand the source data, the documents, process, etc. click Appendix: Chart of Accounts Information to review, provides several resources available for researching
2. Determine what information to include
   - An example of what the final report should look like (perhaps a sample of a prior report used by the report requestor)
   - A list of the information to be included in the new report
   - An indication of how frequently they will want this information
   - A general explanation of how they will use this information
3. Create a Design
   - Good practice is to get the users to review and approve this before going further
4. Locate information sources
   - Perform as much processing outside of the report as possible
   - Minimize the need to link (to create joins) to other objects
5. Reconcile
   - Within the report (for example, when multiple report tabs are required)
   - To AFIS
6. Format last
   - Changes to a report may also change the formatting, so it is best to wait until the data is correct before formatting

Report Promotion Process

Report developers should build reports in UAT/MA1 (our test environment) and then request promotion to the production environment after the report is working correctly in UAT/MA1. This will reduce the load on the live system, and will provide a back-up of the report.

When the report built in UAT/MA1 is ready for promotion to the production environment, developers will move the report into the **Promotion Reports** folder within the Department's On Demand Folder in UAT/MA1. If the Department's On Demand Folder does not have a **Promotions Reports** folder please send an email request to **AFIS.Reports@azdoa.gov** to have one created.

Once the report is available in the **Promotion Reports** folder the developer will email GAO at **AFIS.Reports@azdoa.gov** to request that the reports be moved. GAO will verify the performance (run time and data volume) of the report and may require additional constraints or filters before promoting. ***GAO will not test the accuracy of the report - that is the responsibility of the department.***

1. Upon completion of building a report in UAT/MA1, move the report into the **Promotion Reports** folder within the Department's On Demand folder in UAT/MA1
2. Report Developer will send an email request to **AFIS.Reports@azdoa.gov**
    - Please ensure that you include your agency name, report name and a sample of the prompt values you intend to use to run the report)
    - Sample Email Content: [Agency Name] has submitted the following report(s) to the **Promotion Reports** folder in the UAT/MA1 environment. Please confirm when moved to Production.
        - Example: [Report Name] - [Prompt Name and Value]
3. Report will be moved into the corresponding **Promotion Reports** within the Department's On Demand Folder in the Production (PROD) environment and GAO will reply to the email request notifying that this is completed
4. GAO will purge reports from the Department's **Promotion Reports** every three weeks. From this folder, the Department will have 15 business days to take a copy of the report in PROD and move it into the desired Department folder. Upon moving the report, email **AFIS.Reports@azdoa.gov** and provide the full file path of the location where you have saved the report in PROD. GAO will move the report in UAT/MA1 out of the **Promotion Reports** folder into the corresponding folder in UAT/MA1.

Note: If the report is edited in UAT/MA1 and then promoted to production, a back-up copy of the report will remain in the UAT/MA1 environment to protect from accidental loss of the report.

Report Delete/Purge Process

GAO has a purge process that looks for large sized reports (saved with data) or unused within the last 15 months. To identify the report owner, the **Created By** property column can be added under **Preferences** (Refer to the AFIS Interactive Training CBT for instruction on how to add properties to display). Report developers and interactive users can delete **On Demand** Reports under their Department folder. GAO can recover reports deleted in error within 30 days of the deletion. To request a report recovery, email afis.reports@azdoa.gov with

- Sample Email Content: [Agency Name] has deleted the following reports listed below and is requesting recovery
    - Example: [Report Name] - [Date Deleted] - [EIN of Employee who deleted]

	Title ▲	Type	Last Run	Instances	Created By	reated On
	Encumbrance Report	Web Intelligence		0	109611	eb 6, 2017 8:55 AM
	Expenditure Report for OSPB BUDDIES 5.16.2017	Web Intelligence		0	62354	ul 19, 2017 4:55 PM
	FIN-AZ-AP-N345 Open Encumbrance	Web Intelligence		0	62354	ul 20, 2016 6:06 AM
	FIN-AZ-BG-N141 Status of Appropriations	Web Intelligence		0	109611	ul 20, 2016 6:06 AM
	FIN-AZ-BG-N144 Appropriation Budget Quarterly Allo	Web Intelligence		0	62354	an 5, 2017 12:35 PM
	FIN-AZ-BG-N149a Expenses by Appropriation Budge	Web Intelligence		0	62354	ec 13, 2016 10:18 AM
	FIN-AZ-BG-N507 Actual Expenditures by Approp Cat	Web Intelligence		0	62354	ct 9, 2016 7:45 PM
	FIN-AZ-BG-N507 Actual Expenditures by Approp Cat	Web Intelligence		0	62354	ct 9, 2016 7:45 PM
	FIN-AZ-DCAT-N383 Document Detail - Payment Doc	Web Intelligence		0	62354	ec 13, 2016 10:18 AM
	FIN-AZ-GL-N339 Cash Flow Report	Web Intelligence		0	62354	ct 9, 2016 7:45 PM
	FIN-AZ-GL-N339 Cash Flow Report[1]	Web Intelligence		0	62354	ar 6, 2017 10:16 AM
	FIN-AZ-GL-N388 Outstanding Open Items	Web Intelligence		0	62354	un 22, 2017 8:14 AM
	FIN-BS-0002 Trial Balance Summary	Web Intelligence		0	131715	ec 13, 2016 10:18 AM
	FIN-GA-0005 Cash Balance	Web Intelligence		0	23336	ul 20, 2016 6:06 AM
	Task and Sub-Task by BFY	Web Intelligence		0	62354	ul 19, 2017 4:55 PM

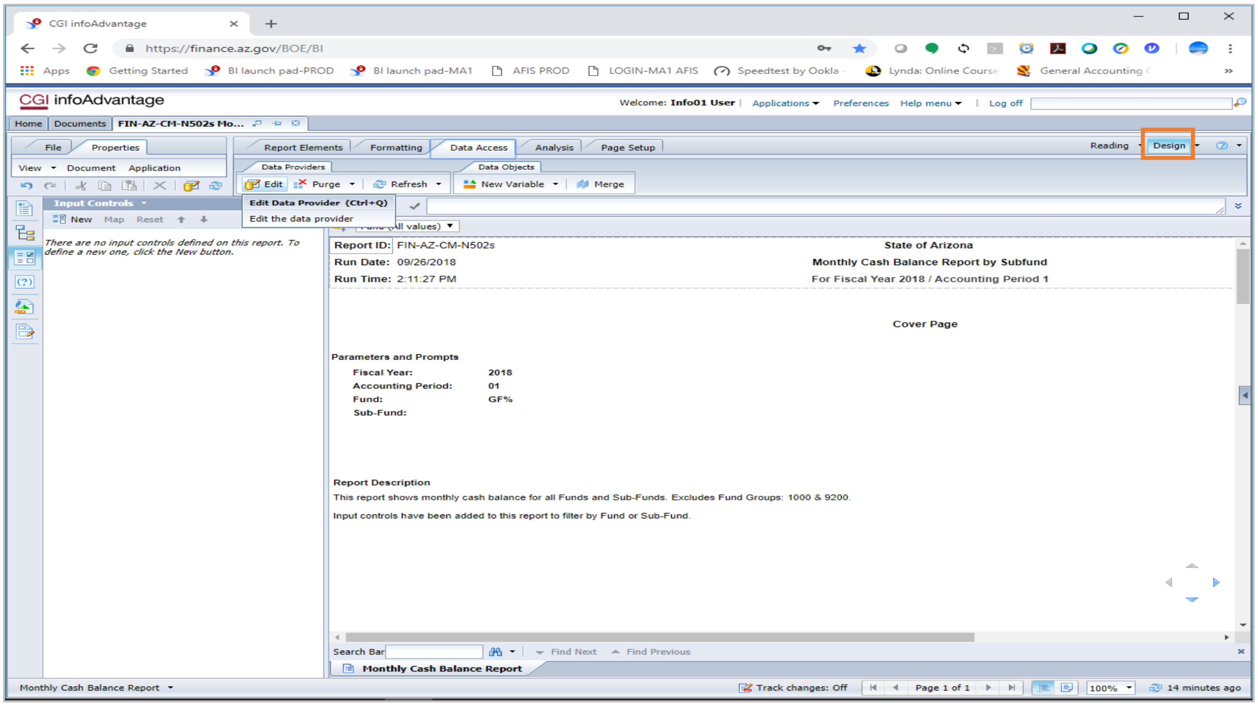
Test your Knowledge

Answer the following questions based on the information we have gone over so far.

1. I can delete reports created by other developers. **True / False**
2. Can GAO recover an accidentally deleted report that was developed in PROD? **Yes / No**
3. GAO will verify my report's data for accuracy before promoting to PROD. **True / False**

Design Mode Introduction

Open a copy of the FIN-AZ-CM-N502s Monthly Cash Balance Report by Subfund which has been saved into the training folder and refresh the report for prompts FY = 2018, APD = 1, Fund = GF%

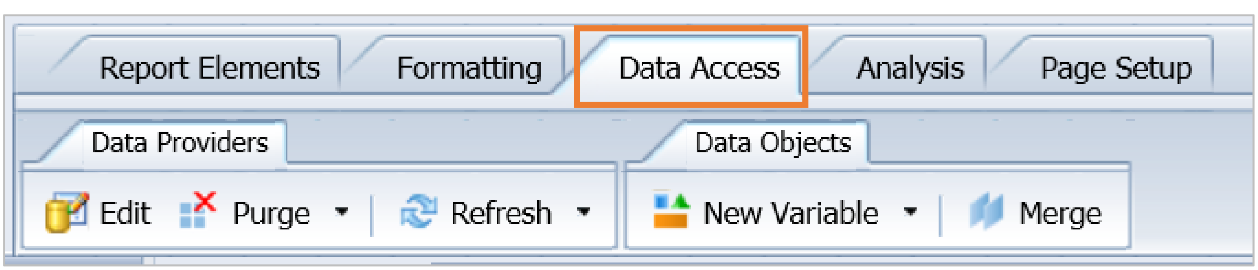


Developers have access to **Design mode** on all reports. Through Design mode developers can edit, format, and test reports in development.

Briefly examine the various elements within the tool bar, the left panel, and the status bar.

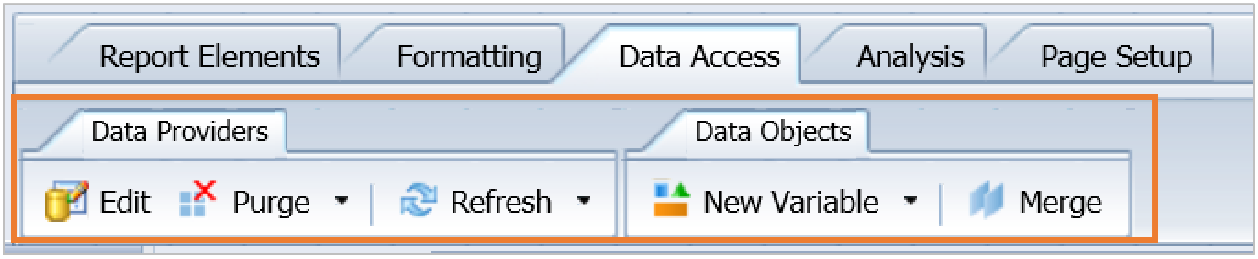
Next, navigate around within the report clicking on various objects and observing changes in the tool bar and shortcut menu options; opened by right-clicking. The tools available both in the tool bar and in the shortcut menu will depend upon the location of the cursor.

Design will open seven tabs that an interactive user does not have access to: File, Properties, Report Elements, Formatting, Data Access, Analysis and Page Setup.



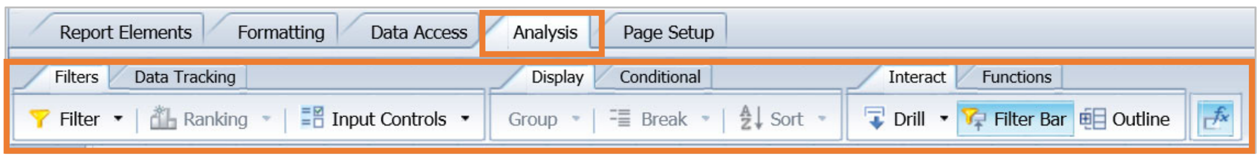
The five tabs Report Elements, Formatting, Data Access, Analysis, and Page Setup are divided into subtabs. Many tools are available under these tabs and subtabs.

This course will focus almost entirely on certain actions found under the Data Access tab and the Analysis tab.



Data Access Tab

Sub-tab	Description
Data Providers	Provides access to the Query Panel, ability to purge report data, ability to refresh one or all queries within the document
Data Objects	Provides ability to merge objects and to create customized variables



Analysis Tab

Sub-tab	Description
Filters	Build Report filters, input controls, and add rankings
Data Tracking	Activate or deactivate tracking mode
Display	Add groups, breaks and sorts
Conditional	Formatting option
Interact	Add drill functionality, a filter bar, or outline view
Functions	Add a sum, count, average, or customized formula

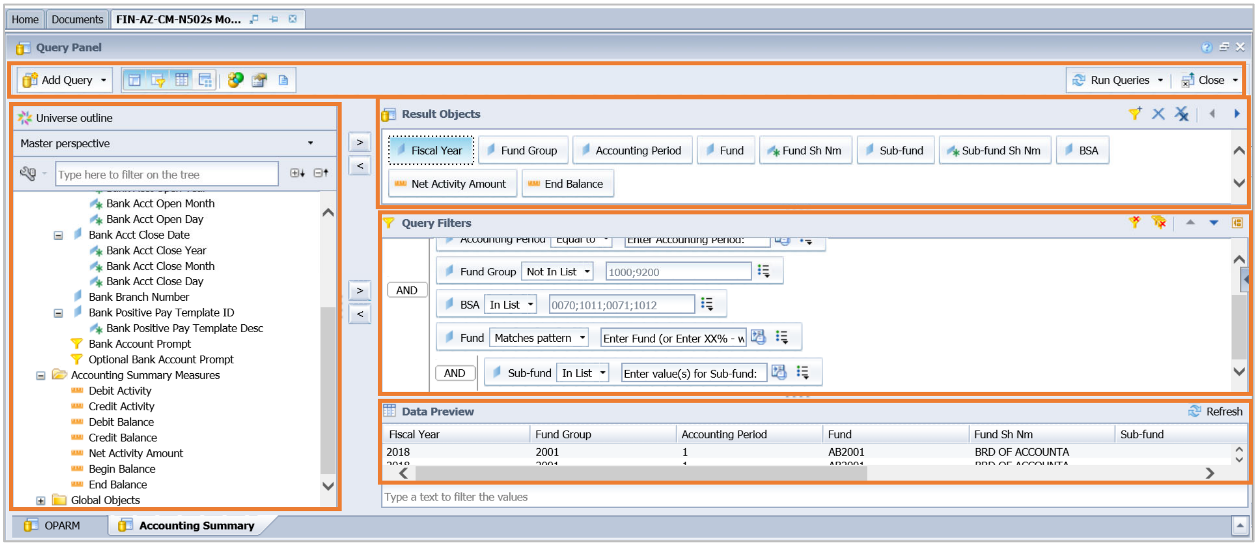
The Query Panel

Development of a new report begins with the Query Panel. The Query Panel is the initial tool that developers use to: select objects from the universe, create report filters, set limits on the size of results, and test results. Users can access the query panel in Design view by selecting (Ctrl + Q) or by navigating to the Data Access tab > Data Providers > Edit Data Providers.

The following screen print identifies 5 areas in the Query Panel on the **Accounting Summary** Query:

- Universe outline
- Result Objects
- Query Filters

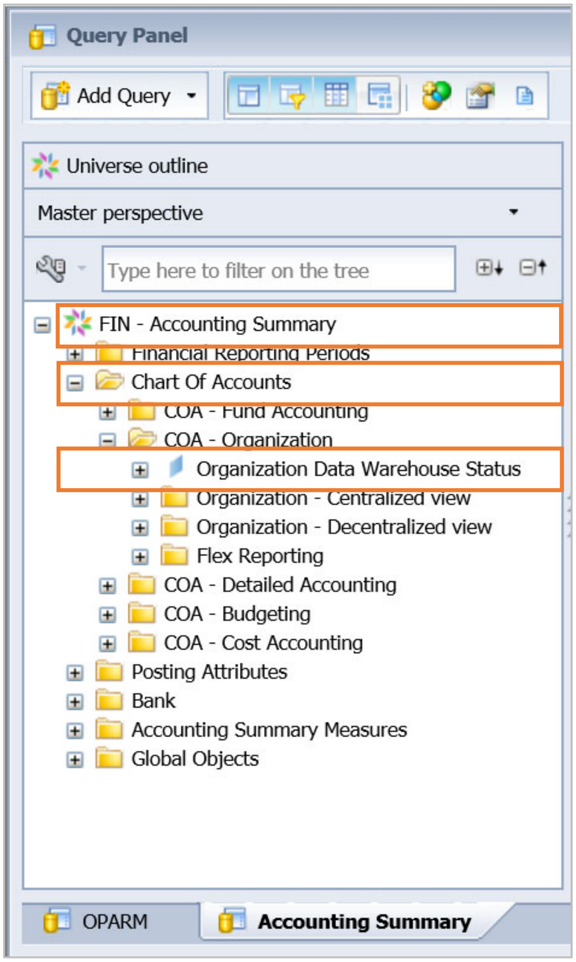
- Data Preview
- Query Panel Tool Bar



Universe outline

The Universe outline panel on the left side of the Query Panel lists all the **Objects** and **Classes** within the Universe. An **Object** represents a column or function from the database. Each **Object** is organized into **Classes** within a **Universe. Objects** are referenced in queries created in the WebI (Web Intelligence) Tool.

Note: Most information available for queries in infoAdvantage is a day behind. An exception is the OFIN universes, which have live operational data.

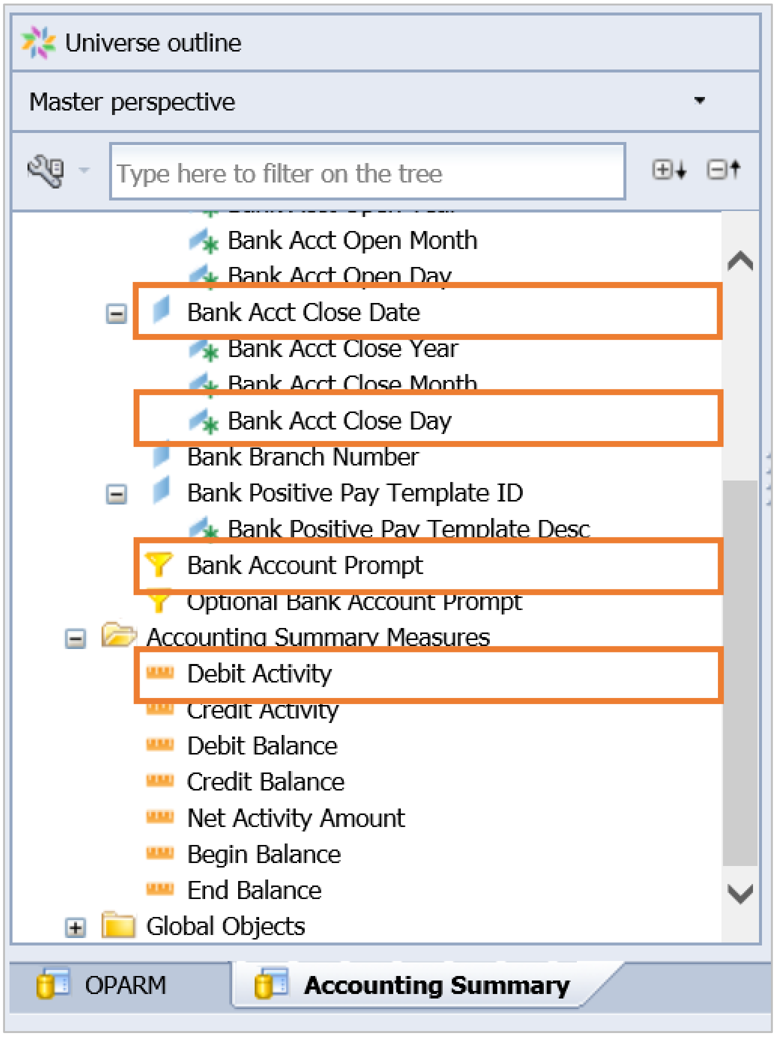


1. Universe
   - A logical group of classes that correspond to functional areas
2. Class
   - A logical group of related objects
   - Sub-classes are more granular groups of related objects
3. Object
   - A selection of data in the data warehouse
   - Can refer directly to a column in the data warehouse or can be developed in the universe

There may be thousands of objects within a single Universe: there are about 2,500 objects in the Accounting Summary Universe and about 21,500 objects in the General Accounting Universe.

Classes and objects are organized by folders in infoAdvantage Universes as shown below.

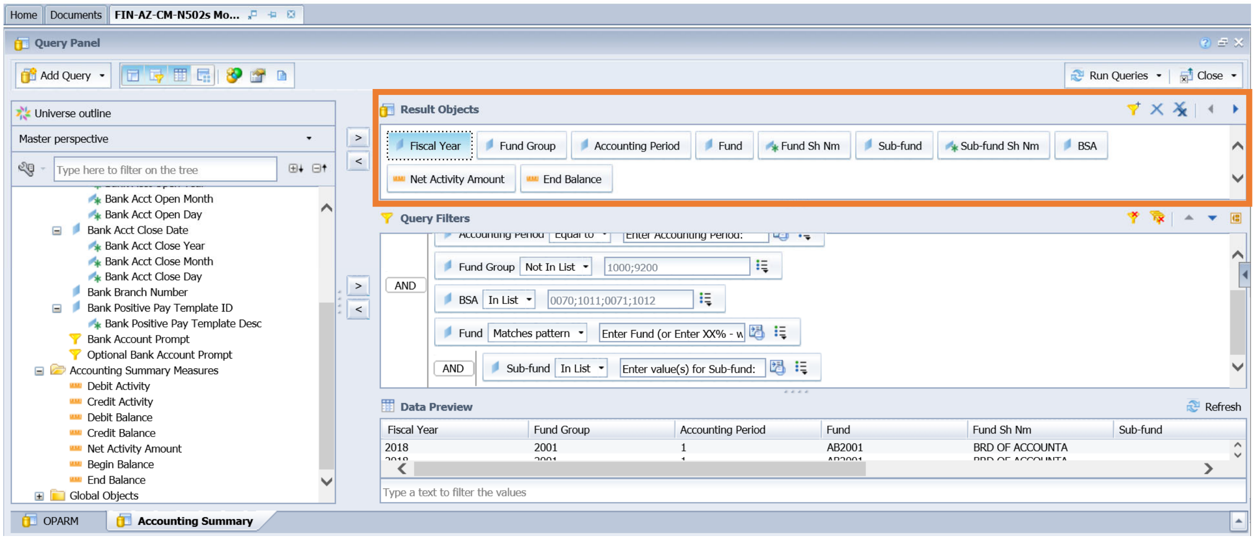
Note: Not all objects within the universe are joined; you may need to create merges within your report.



Object types	Description
Dimension Objects - Blue Diamond	These objects are either text or dates, such as Fiscal Year and Document Record Date. These are the basis for queries and determine the level of detail for the report.
Detail Objects - Green Asterisk	Always associated with a Dimension Object and provides additional descriptive data about the Dimension. Detail Objects such as Start Date, End Date and Closed Flag are objects that could be related to a Fiscal Year Dimension.
Measure Objects - Orange Ruler	Always represents numeric data that is the result of calculations on data in the database. A Measure Object’s value changes depending on the context of the report. Some universes contain various predefined measures.
Predefined Filter - Yellow Funnel	Predefined Filters are time savers that are created by a Universe Designer. They are created for conditions that are complicated and/or commonly used. An example of a predefined filter is Required Fiscal Year Prompt.

Note: In addition to all the objects built within the Universes, report developers can build their own variables (in which you may combine, edit, or make calculations on objects from the universe). Variables are not visible in the Query Panel; they are visible in the Available Objects.

Result Objects



Result Objects form the fundamental basis of the report(s) that will be built in the infoAdvantage document.

Note: Universe objects placed into Result Objects are available for use in the report, but are not automatically placed in the report (except when first building a report). Result Objects will affect the output on the report even if they are not used in the visible report.

Objects from the Universe outline are moved into the Result Objects section of the Query Panel by any of several methods:

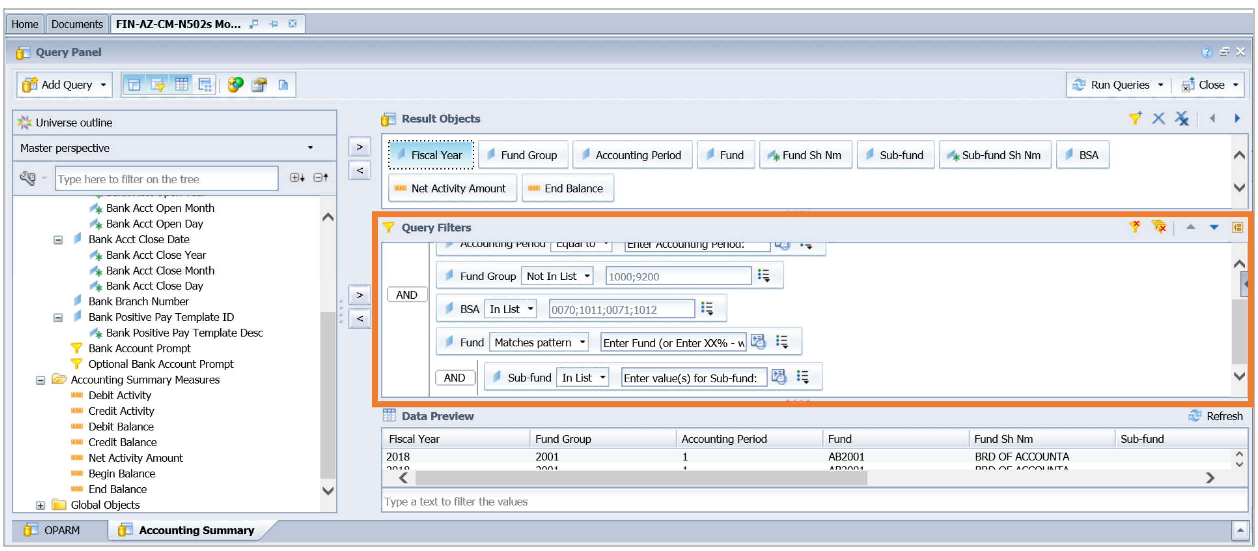
- Double-clicking
- Clicking and dragging
- Clicking and selecting the arrow to move it into the Result Objects

Note: Be careful when double-clicking to move objects into Result Objects: A double-click of a folder will move all objects within the folder into Result Objects.

Actions available in the Result Objects section are listed below.

Action	Description
Add Quick Filter	Takes an object from the Result Objects Panel and adds it to the Query Filters Panel
Remove	Removes object that is currently selected from the Result Objects Panel
Remove All	Removes All objects from the Result Objects Panel
Move Left or Right Arrows	Moves the object selected right or left in the Result Objects Panel

Query Filters

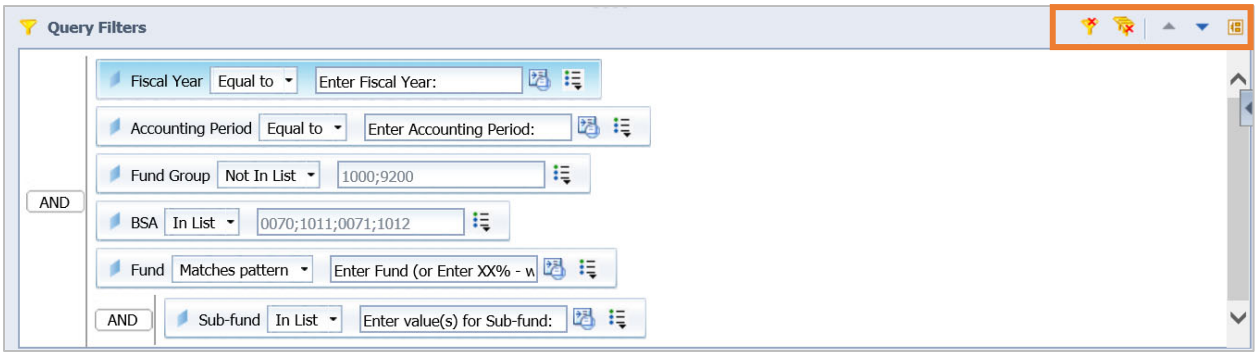


Query filters narrow your data down to the specific information needed. Query filters may be pre-built or may be built by the developer.

1. Query filters
    - Retrieve only the data that is needed to answer a specific business question
    - Optimize performance (run time) by limiting the size of the data
2. Query filters may be added in several ways
    - Double-clicking
    - Clicking and dragging

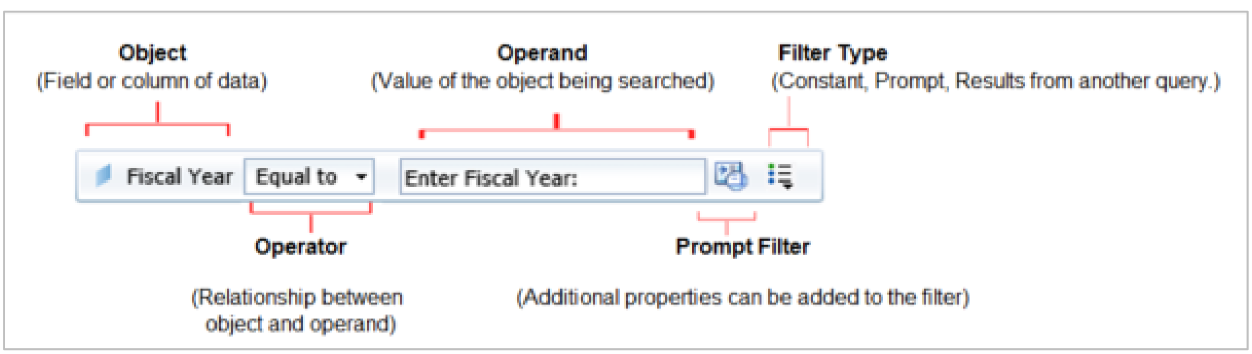
- Clicking and selecting the arrow to move it into the Query Filters
- Selecting an object in Result Objects and then clicking the filter icon

Actions available in the Query Filters section are listed below.



Action	Description
Remove	Removes filter that is currently selected from the Query Filters
Remove All	Removes All filters from the Query Filters
Move up or down Arrows	Moves the Filter selected up or down in the Query Filters
Add nested filter	Allows for a complex filter that allows for an And or Or sub filter

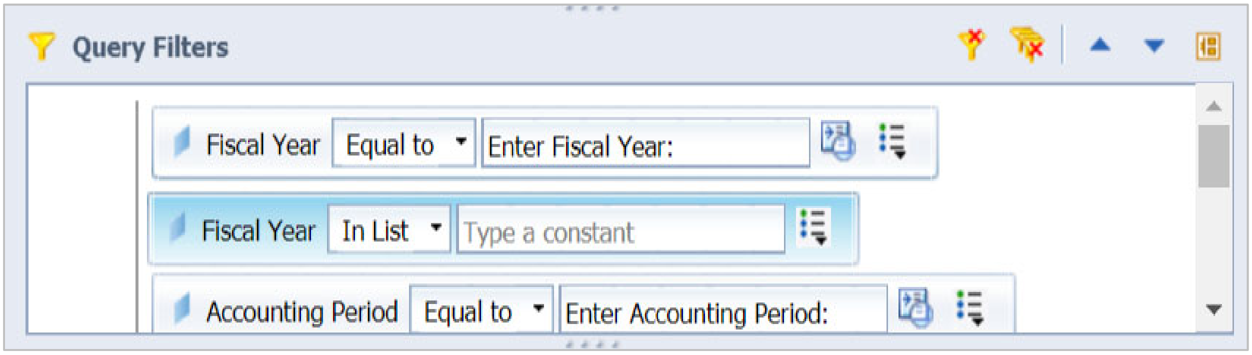
After adding an object (other than a pre-built filter) to the Query filters section, further development is required. The information below details elements of a query filter. Note that **Prompt Filter** will show only if Filter Type is set to **Prompt.**



How to Build a Query Filter

Add the object to the **Query Filters** section of the Query Panel.

1. In the Report CM-N502s, add **Fiscal Year** to the Query filters just below the existing Fiscal Year Prompt



2. Select the Operator from the drop-down list

Note: If this is done after editing the prompt text in prompt properties, then the text will have to be entered again.

Operators available are shown below.

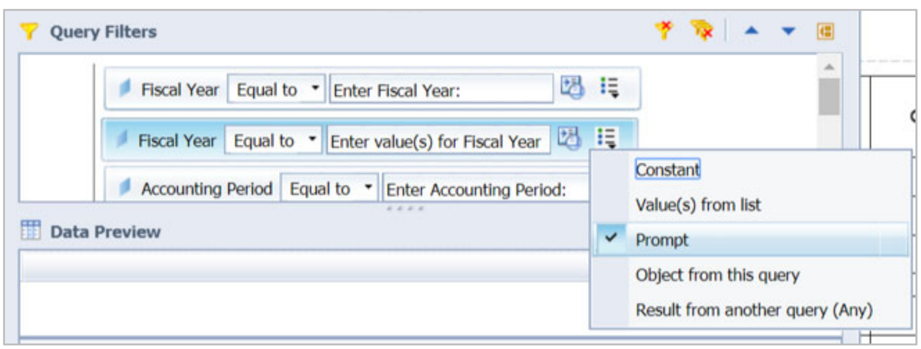
Operator	Description of what data is retrieved
Equal to	Data equal to a specified value
Not equal to	Data different from a specified value
Between	Data between two specified values; also includes values specified
Not Between	Data outside the range of specified values
Matches pattern	Data including a specific string Special Characters in a prompt allow for extra flexibility in report design. Allow users to enter prompt with wildcard options. ▪ % (percentage symbol) is a wildcard for a series of characters ▪ _ (underscore) is a wildcard for a single character
Different from pattern	Data that does not include a specified string Special Characters in a prompt allow for extra flexibility in report design. Allow users to enter prompt with wildcard options. ▪ % (percentage symbol) is a wildcard for a series of characters ▪ _ (underscore) is a wildcard for a single character
Greater than	Data greater than a specified value

Greater than or Equal to	Data greater than or equal to a specified value
Less than	Data lower than a specified value
Less than or Equal to	Data lower than or equal to a specified value
In List	Data for the multiple values specified
Not in List	Data different from the multiple values specified
Both	Data that corresponds to two specified values
Except	Data that corresponds to one specified value and does not correspond to the second specified value
Is null	Data for which there is no value entered in the database
Is not null	Data for which a value was entered in the database

3. In the Report CM-N502s, select the Operator **Equal To**

Next, define the filter type:

The filter type allows the user to select the type of filter they want in the report. Filters available are shown below.



Filter type	Description
Constant	A single value that users will not need to enter when running the report
Value(s) from list	One or more values that users will not need to enter when running the report
Prompt	Users will select the value(s) needed. Selecting this opens Prompt Properties options
Object from this query	Will automatically pull based upon another element in this query. Users will not select the value(s). Also, note that there is a limit as to the number of values in list (99).

Result from another query (Any)	Element will be based on a corresponding element from another query within the report

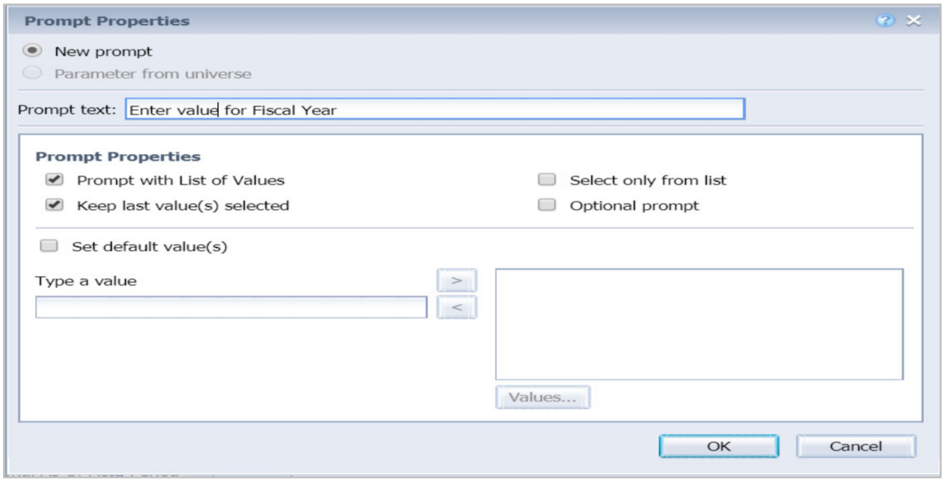
4. In the Report CM-N502s, select **Prompt** from Filter Type drop-down list

The next step in building a prompt depends upon what Filter type is selected:

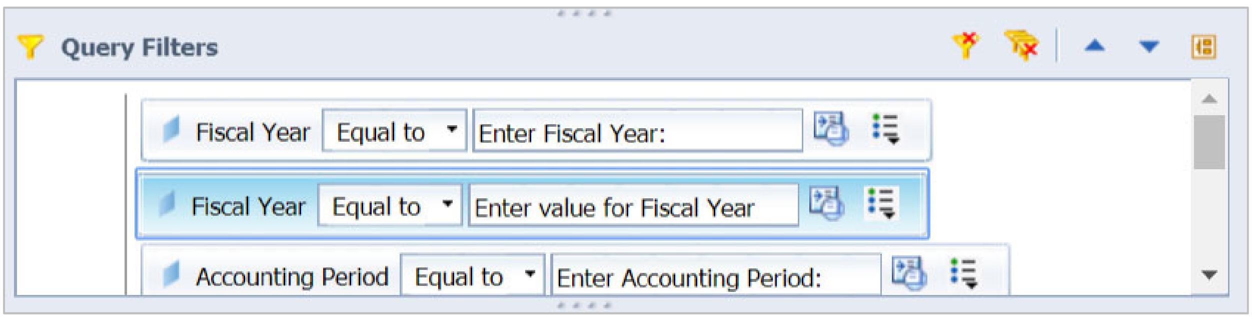
- If a Filter type of Constant is selected, enter the constant into the Operand box
- If a Filter type of Prompt is selected, click the prompt properties icon and make selections

Prompt Properties	Description
Prompt text	The description of the prompt seen by the user when refreshing a report. A default Prompt text is provided but can be modified to make it easier for the user to understand what is needed.
Prompt with List of Values	Is enabled by default whenever an object has an associated list of values. Not recommended on objects where large amounts of data exist in the database such as Document ID, Vendor Number, measures, etc.
Keep last value(s) selected	Stores the last prompt values so when the report is refreshed the prior prompt values are displayed. However, the user still has the option to enter a new value if desired.
Select only from list	Used to help eliminate the entry of wrong date (i.e. format or case of data) and forces the user to select the prompt value from the list. Not recommended on objects where large amounts of data exist in the database such as Document ID, Vendor Number, measures, etc.
Optional prompt	Provides flexibility by not requiring the user to enter a prompt value, while allowing others to enter the necessary value to narrow down the returned data when needed
Set default value(s)	Used to set a default value that will be displayed when the report is refreshed and will also allow the user to enter a new value if desired

5. Click the prompt properties icon, remove the **(s)** in the Prompt text box, select **OK**



6. In the **Report CM-N502s**, view the newly created prompt

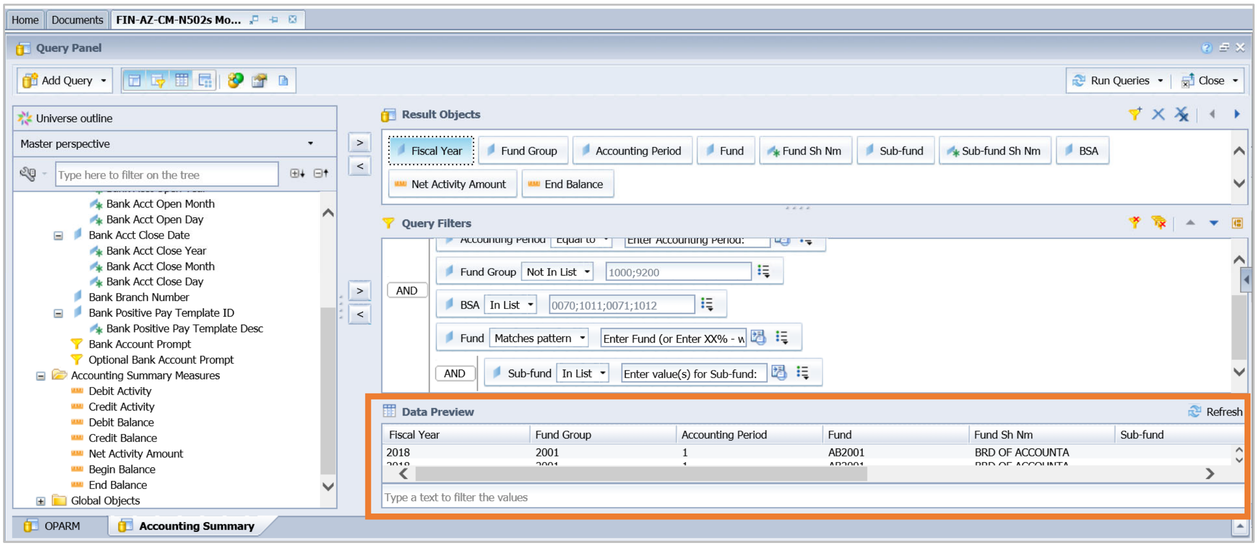


Note: In addition to Query Filters, Report Developers may build other filters that act on the data after the initial Query Filters. Discussion of these other filter types are presented later in this manual.

7. In the Report CM-N502s, close the Query Panel (click on the small **x** in the top right corner) to avoid retaining these changes

Data Preview

Test Data Preview in your report by running for FY 2018 and APD 12 and Fund = AB%

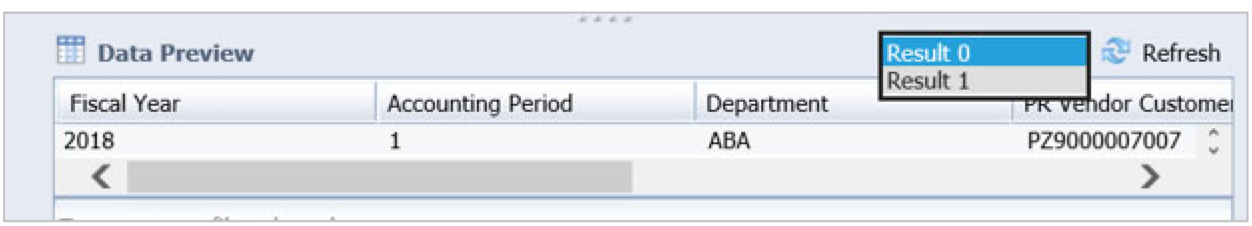


One action is available in the Data Preview section: **Refresh.**

Action	Description
Refresh	Allows for a view or sample of the data for the query displayed

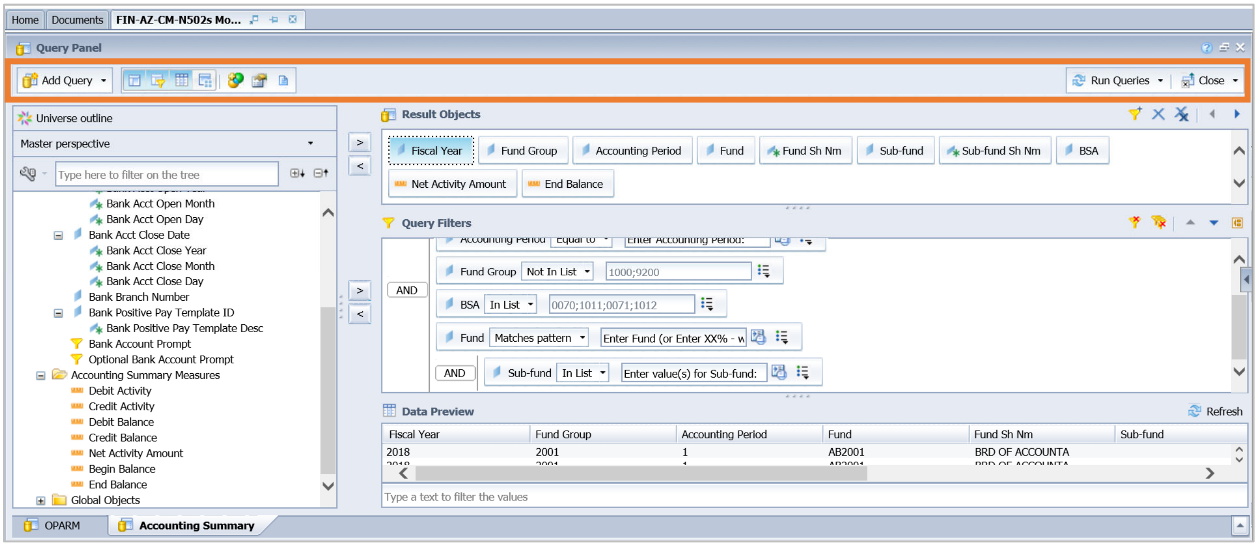
Developers use **Refresh** in Data Preview to test data for joins and to test performance (run time).

Joins: If **Refresh** in the Data Preview panel returns multiple Result pages, this indicates that one or more objects within Result Objects are not joined (meaning no logical relationship has been established) at the universe level. A drop-down box for selecting the page number will populate next to the Refresh button in the Data Preview Panel if multiple pages result from the query. Developers should use Data Preview to test queries. The goal for developers is to not have multiple Result pages in the Data Preview pane after running a test refresh in Data Preview. The picture below indicates to a developer that edits to the query result objects are needed before moving out of the query panel.



Run Time: Developers must determine the correct amount of data to bring into their report: too much data can slow the run time of your report or even bring the system down for everyone. However, not enough data may prevent your ability to reconcile. Use Data Preview to test the run time of your query.

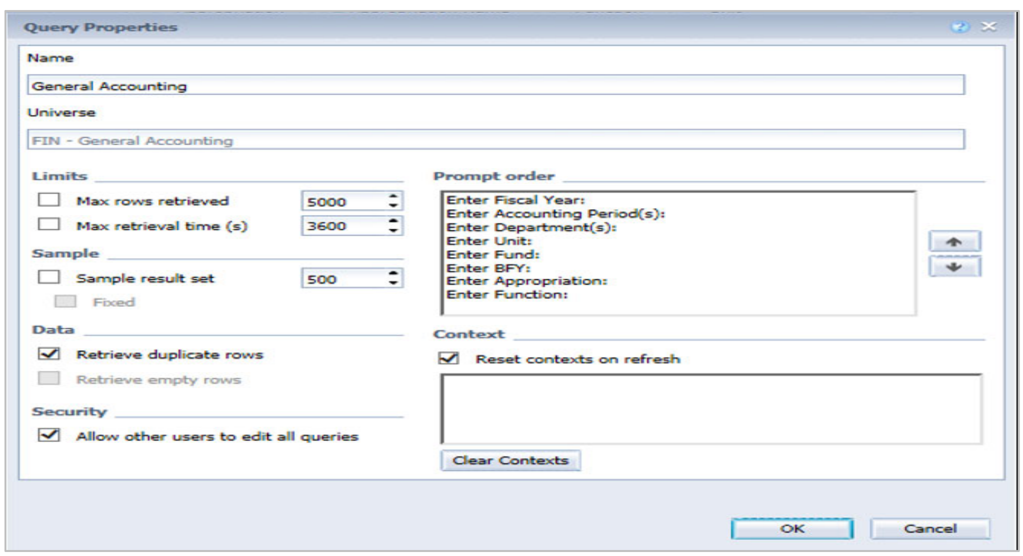
Query Panel Tool Bar

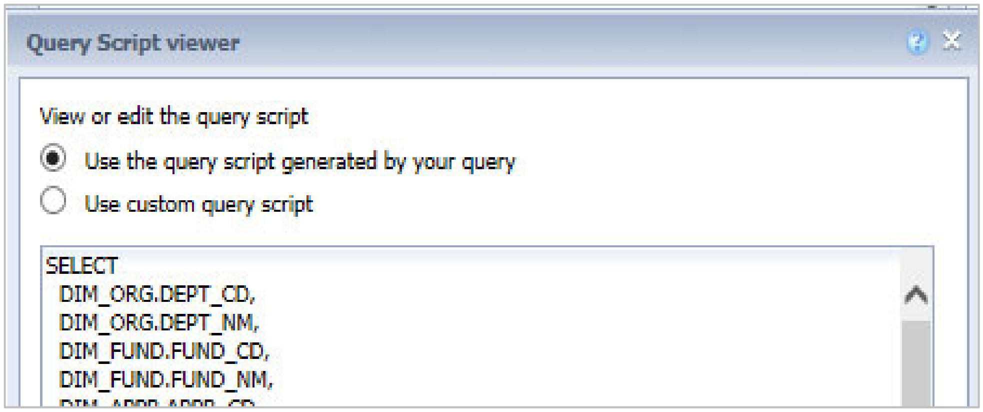


The Query Panel Tool Bar adds further functionality for developers including:

- Run or Close
- Change the view on the Query panel (show or hide panels)
- Add a new query from a different universe
- Add an additional query from the same universe
- Edit the order of prompts
- Limit the report by size or run time
- View SQL query script
- Run some test analysis
- Define the scope of analysis for drill capability

Actions available in the Query Panel Tool Bar section are listed below.

<table>
<tr><th>Action</th><th>Description</th></tr>
<tr><td>Add Query</td><td>From the Universe (allows developers to pull queries from the same universe or from multiple universes) adds tabs to current query</td></tr>
<tr><td>Data Outline</td><td>Shows or hides the Data Outline Panel which consists of the Universe and Classes</td></tr>
<tr><td>Query Filters</td><td>Shows or hides the Filters Panel</td></tr>
<tr><td>Data Preview</td><td>Shows or hides the Data Preview Panel</td></tr>
<tr><td>Scope of Analysis</td><td>Shows or hides the Scope of Analysis Panel. This section allows for objects lower in the hierarchy to be included as a drilling level in a report.</td></tr>
<tr><td>Add a combine query</td><td>Allows for a group of queries that work together to return a single result. (See Appendix for an example.) There are three query relationships:
- Union: takes the data from both queries, eliminates duplicate rows and builds a combined data set
- Intersect: returns the data that is common to both queries
- Minus: returns the data in the first query that does not appear in the second</td></tr>
<tr><td colspan="2">Note: To delete a combined query, click on the query name and hit “Delete” on your keyboard and then Yes to remove.</td></tr>
<tr><td>Query Properties</td><td>Used to set report limits, sample results data, security and prompt order

</td></tr>
</table>

Query Script Viewer	SQL script for the query that can be viewed, copied and customized to generate the query Report Developers will be able to see, but cannot edit the SQL 
Run Queries	Applies the modifications, runs the query and closes the query panel. Can run individually or for all queries
Close	Closes the query panel with either of these options: ▪ Apply Changes and Close: Save changes and closes query panel without running the query ▪ Revert Changes and Close: Closes the query panel without saving the changes made

Filters - Four Types

There are four filter types available to report developers. Query Filters are run first (when the report is refreshed/run). All other filters take effect after the report is run/refreshed.

Filter Type	Affects data when?	Who can Create?	Who can use?
Query Filter	On Run/Refresh	Report Developers	Report Developers and Interactive Users (Prompts Only)
Report Filter	After Run/Refresh	Report Developers	Report Developers
Input Control	After Run/Refresh	Report Developers	Report Developers and Interactive Users
Drill Filter (Filter Bar)	After Run/Refresh	Report Developers and Interactive Users	Report Developers and Interactive Users

A summary of the four Filter Types follows:

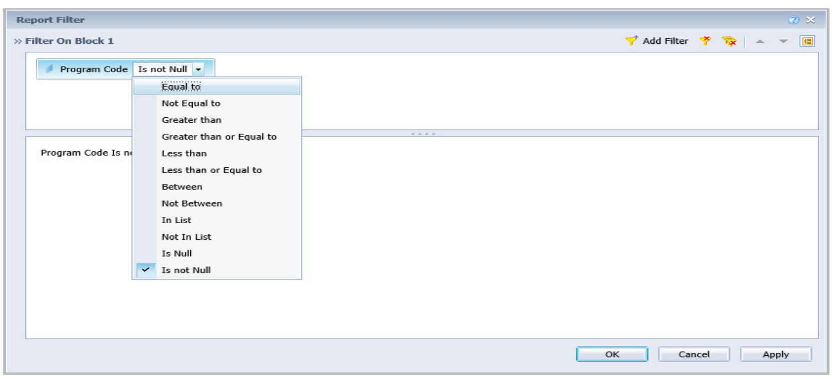
Filter Type	Built/edited by	Build Location Access through	Applies to	Effect	Available for interactive users?	May be hidden	Found under Document Structure and Filters	Found under Auto Filter under Report tab
Query Filter	Developer	Query Panel	Entire query	limits entire query output	No	Yes	No	No
Report Filter	Developer	Analysis tab > Filters or Right - click menu	Specific table	limits data displayed	No	Yes	Yes	Yes
Input Control	Developer	Under Analysis Tab > Filters > Input Controls or right click menu or Input Control button on left of window	Objects within blocks (tables) or the entire report (page)	limits data displayed (may set to allow one, several, or all)	Yes	No	Yes, if applied	Yes, if applied
Drill Filter (Filter Bar)	Interactive user or Developer	Under Analysis tab > Interact	All tables on the report (tab)	limits data displayed (either only one selection or all items in list)	Yes	Yes	Yes if applied , filter bar is hidden and the hide/show icon was selected while viewing. No if filter bar is not hidden and the filter bar was not applied while "Document Structure and Filters" was opened	Yes, if applied

Query Filters:

Are built by the developer in the Query Panel. These filters set the initial limits on data pulled from the Universes. These may be constants or prompts.

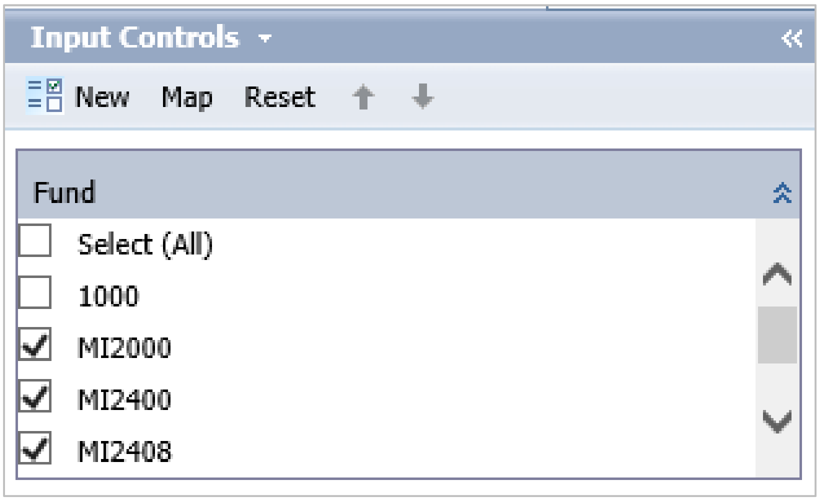
Report Filters:

Are built by the developer in the Design View. They are housed under the Analysis Tab though they may be accessed through the right-click quick menu. These filters allow developers to limit the data for selected object within a single table in a report. Multiple report filters can be added. The filter remains in place and only developers can edit these. An example of a Report Filter window is shown below.



Input Controls:

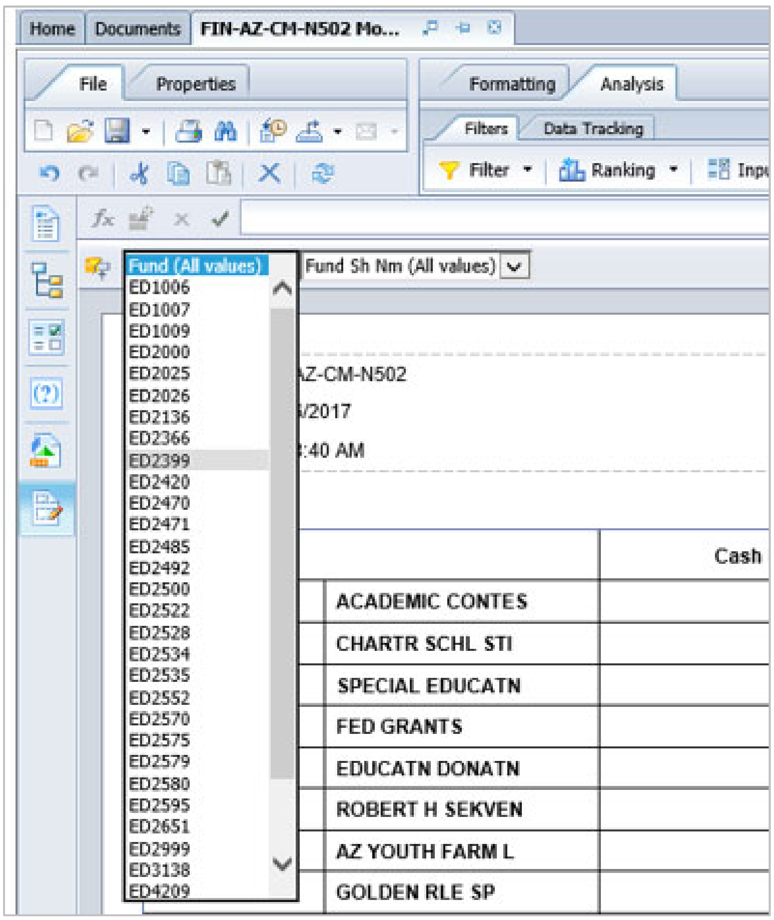
Are built by the developer in Design View. They are housed under the Analysis Tab though they may be accessed through the right-click quick menu and also from the menu on the left of the design window. These filters allow all report users to limit the data for selected objects within selected tables in a report. These are easier to find than Report Filters and allow more customization possibilities. Performance issues may result. An example of an input control is shown below.



Drill Filters (Filter Bar filters):

Are added by either the developer or interactive user. They are housed under the Analysis Tab though they may be accessed through the right-click quick menu or the tool bar. Because users do not need to access **Design** for creating these filters, they are covered in the Interactive training course and are therefore excluded from this course. Users can use the Filter bar to limit the data to single data points for one or many selected object within a report. Multiple filters may be set on the filter bar. This filter applies to all tables on a report. These filters also remain on the report after selected and can be hidden from user view.

An example of a filter bar is shown below:



Finding Report Filters

When troubleshooting a report, developers need to find all filters. Developers have various locations to assist in locating all filters:

- Query Panel
- Document Structure and Filters
- Pre-Defined Cells: Report Filter Summary and Query Summary

Document Structure and Filters: (found under Design > Document Structure and Filters)

This area has disadvantages in that it will not show inactive filters and a long list of filtered objects will not be shown.

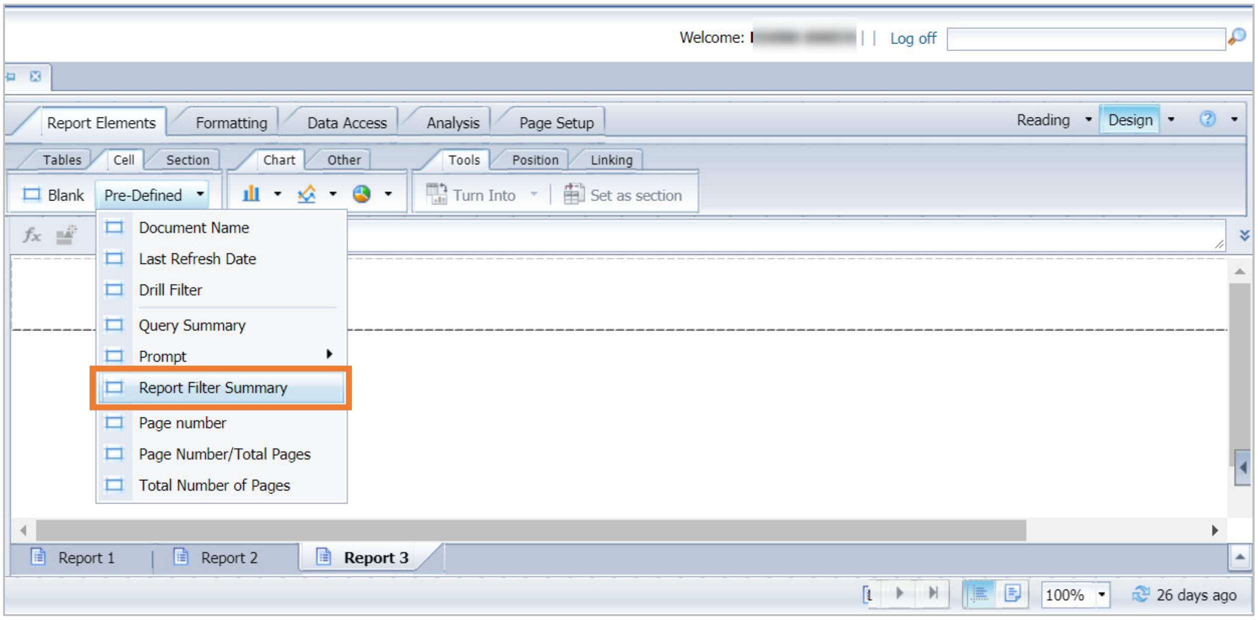
Use of the predefined objects **Report Filter Summary** and **Query Summary** will provide complete details.

Pre-Defined Cells: (found under Report Elements > Cell > Pre-Defined)

These filters require a report tab in which to paste the cell, so the first step is adding a new report tab. Right click on any report tab > Add Report.

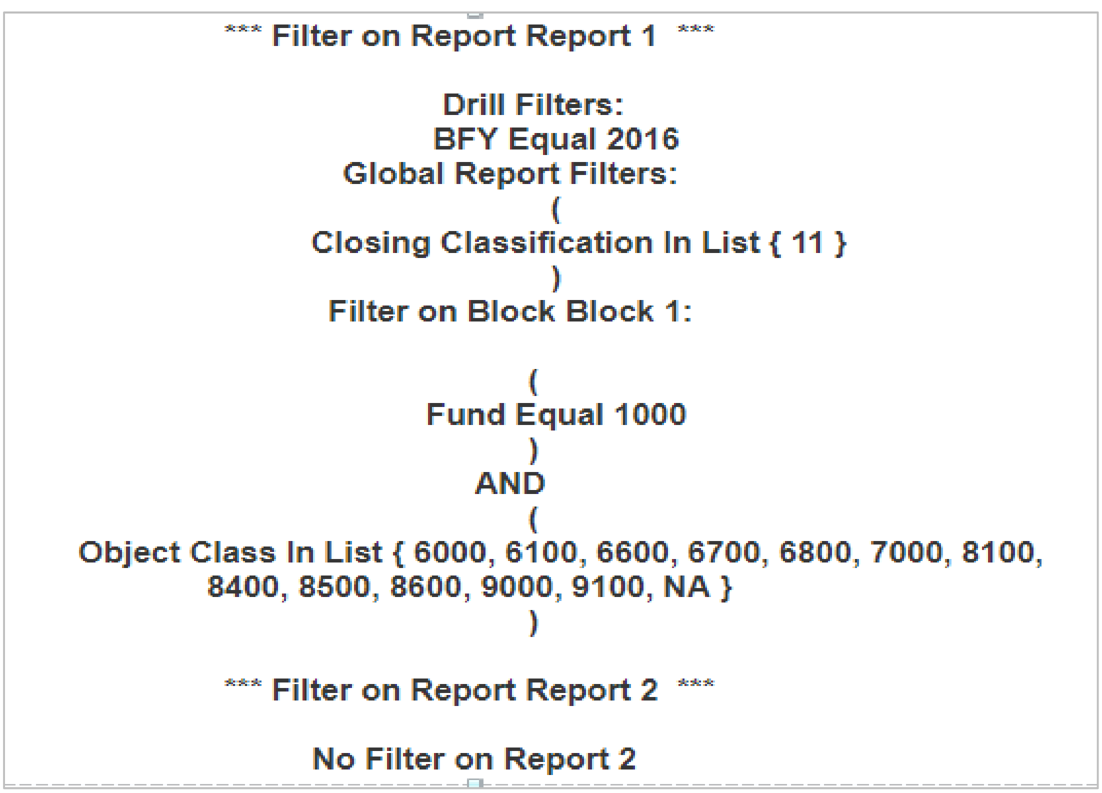
Report Filter Summary

Navigate to Report Elements > Cell > Pre-Defined > Report Filter Summary.



The cursor will change into a small crossbar and the message **Click to insert the cell here** will appear.

Click anywhere in the new report tab and view the Report Filter summary. This will show all filters in a report.



Query Summary

Navigate to **Report Elements > Cell > Pre-Defined > Query Summary**; Click anywhere in the new report tab and view the Query summary. This shows Query Filters as well as other relevant information about the query, such as run time "**Last Execution Duration**" in seconds.

*** Query Name:Query 1 ***

** Query Properties:
Universe:FIN - Accounting Summary
Last Refresh Date:3/20/18 2:28 PM
Last Execution Duration: 111
Number of rows: 150,322
Retrieve Duplicate Row: ON

** Query Definition:
Result Objects: Appropriation, BFY, Fund, Fiscal Year, Accounting Period, Object Class, Closing Classification, Debit Activity, Credit Activity, Net Activity Amount
Filters (Fiscal Year Equal 2,018
AND Closing Classification Name In List { Accrued Expenditures; Cash Expenditures }
)

Create and Modify a Simple Report

This section will cover the following skills:

- Create a new Web Intelligence (WebI) document
- Add Objects
- Remove Objects
- Create Query Filters
- Create an Input Control Filter
- Add Totals and Subtotals
- Create a variable for a title using a user response to a prompt
- Create a variable for calculations

Scenario - Instructor Only

The Central Services Bureau (CSB) has requested a report that provides Accounts Payable and budgeting activities for Fiscal Year 2016, Accounting Period 1 and all Department(s) that begin with the letter A. The report body should include Department, Disbursement Document information (concatenated), Line Amount and 1% Increase Amount. The report should include grand totals along with subtotals by Department. Include a title for the report called "Payments" followed by the User(s) prompt inputs for Fiscal Year and Accounting Period.

The query(s) Result Objects should at least include the following objects: Fiscal Year, Accounting Period, Department, DISB Doc (Code, Dept, ID, Vers), and DISB Actg Line Amount from FIN – Accounts Payable.

Create a filter that allows the end user to filter by one or more Department(s).

The report should include totals for Amount and for a 1% Increase Amount. A variable is needed for the 1% increase. The Amount total for AMA and ANA on this report should be $226.67.

Note: Build ALL of the reports in the UAT/MA1 environment and promote to Production. This will ensure there is a backup of the report should anything happen. It also reduces slowing in the Production system. (It is recommended to use the same procedure when editing an existing report.)

Create a New WebI Document

1. Login to infoAdvantage
2. Go to the Home tab
3. Open the Web Intelligence Application by clicking on the WebI Icon

If an error message related to JAVA appears, follow these steps:

Note: Do not update JAVA on the training computers or your work computer, unless your IT department chooses to do so.

1. Click on Preferences on the top right corner of the screen
2. Select Web Intelligence on the left of the Preferences window
3. Choose the HTML (no download required) option in the Modify section
4. Click Save and Close
5. Click OK on the Preferences Changed window
6. Reload/refresh the page

Note: This workaround will provide almost 90% of all development capabilities. The users will be able to develop new reports as well as modify existing reports. The Data tab which can be used to change the source of the report will not be available.

7. Click on the blank piece of paper to start a new document
8. Select the **Universe** data source
9. Click **OK**
10. Select the **FIN – Accounts Payable** Universe
11. Click **OK**

Add Result Objects

Find objects in the Universe outline panel to add them to the Result Objects panel:

Fiscal Year, Accounting Period, Department, Unit, DISB Doc (Code, Dept, ID, Vers) and DISB Actg Line Amt.

1. Type **Fiscal Year** into the Universe Outline Search box
    - Scroll down to the Class (folder) named **Detail Financial Reporting Periods > Detail Fiscal Year and find Fiscal Year**
    - Add **Fiscal Year** to the Result Objects section by double-clicking, dragging and dropping, or using the arrow keys
2. Repeat the above process, but add **Accounting Period** by navigating to the sub-class **Detail Accounting Period instead of Detail Fiscal Year**

3. Repeat the above process, but add **Department** by navigating to the Class **Chart of Accounts sub-classes COA – Organization > Organization – Centralized View**
4. Type **DISB Doc** into the Universe Outline search box and add **DISB Doc (Code,Dept,ID,Vers)** to the Result Objects
5. Type **DISB Actg** into the Universe Outline search box and add **DISB Actg Line Amt** to Result Objects

Add Query Filters (Prompts and Matches Pattern Constant)

Add Query Filters

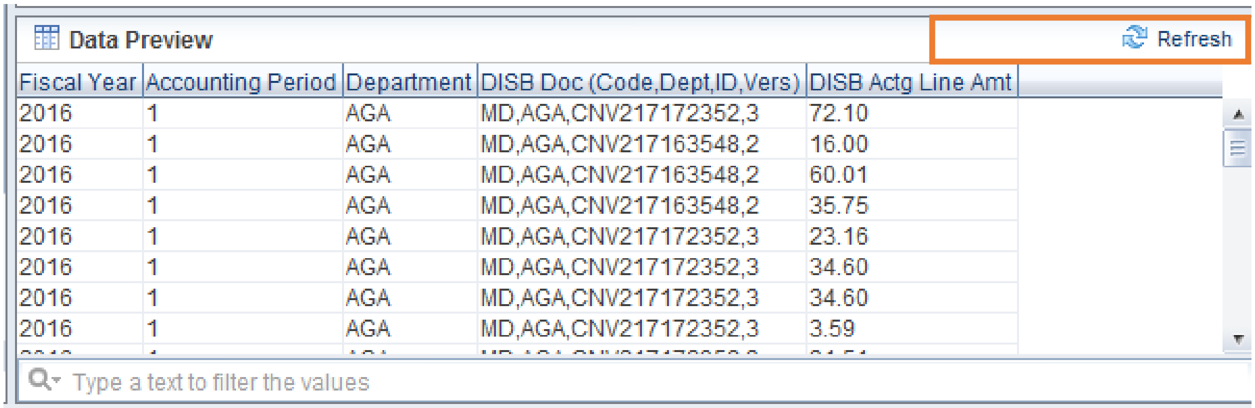
Fiscal Year (prompt), Accounting Period (prompt), Department (Constant with Matches Pattern)

1. Left-click on **Fiscal Year** in Result Objects and drag it into the Query Filters box
   - Release the left-click
   - Select **Equal To** from the drop down list in the operand box
   - In the Filter Type box, select **Prompt**
   - Click on the **Show Prompt Properties** icon
   - View the Prompt Properties but make no changes, then click **OK** to close the window
2. In the Universe Outline search box, type **Accounting Period** then highlight the object under the sub-class **Detail Accounting Period**. Left-click this object and drag it into Query Filters box.
   - As done above for Fiscal Year, change the operand to **Equal to** and the Filter type to Prompt and view the **Prompt** Properties but don't make any changes
3. Select **Department** from Result Objects and left-click to drag it into Query Filters
   - Change the Operand to **Matches Pattern** and in the Constant box type **A%**

Test the Query

1. Check your query for run time and for joins by clicking **Refresh** in the Data Preview panel
2. Enter FY **2016** and APD **1** for prompt values

Note: (as shown in the screen print below) that every column has data and that there is only one page in the Data Preview Panel.



Fiscal Year	Accounting Period	Department	DISB Doc (Code,Dept,ID,Vers)	DISB Actg Line Amt
2016	1	AGA	MD,AGA,CNV217172352,3	72.10
2016	1	AGA	MD,AGA,CNV217163548,2	16.00
2016	1	AGA	MD,AGA,CNV217163548,2	60.01
2016	1	AGA	MD,AGA,CNV217163548,2	35.75
2016	1	AGA	MD,AGA,CNV217172352,3	23.16
2016	1	AGA	MD,AGA,CNV217172352,3	34.60
2016	1	AGA	MD,AGA,CNV217172352,3	34.60
2016	1	AGA	MD,AGA,CNV217172352,3	3.59

3. Close the Query Panel by selecting **Run Queries > OK**
4. Click **Save** > **Save As > Your Name – 1A** in your assigned training folder
5. Close the report tab and then navigate to your report to open it anew

Note: that we are saving with data here by clicking Save after running the query and retrieving data. This is not recommended because it can cause system performance issues in some cases.

Create an Input Control Filter

Add an input control for **Department**

1. Click on **"Design"**
2. Click in the **Department** column so that the data field background turns gre
3. Navigate to **Analysis tab > Filters > Input Controls > Check box** (or List Check Box)
4. Check **Page Body** (This applies the input control to all tables on the report tab)
5. Select **Finish**
6. Verify that the **input control** is visible on the left panel
7. Click **Save**

Alternative method to create an Input Control

1. Select the **Input Controls** icon on the left side of the window
2. Select **New**
3. Select Report Object: Select **Department**

4. Select **Next**
5. Choose Control Type: Select **Check box** on the right side of the screen under **Multiple Selections**
6. Select **Next**
7. Assign Report Elements: Check the box **Page Body** (or the check box next to Block 1) and then Select **Finish**

Test the input control, then purge data and save

1. Refresh or Run the report with Prompts FY **2016** and APD **1**
2. Verify that the input control is visible on the left panel
3. Uncheck **Select (All)** and then select only Department **ABA** in the Input Control window
4. Before leaving this report tab, return the Input Control selection to **Select (All)**
5. Navigate to **Data Access tab > Data Providers > Purge > Purge All > Purge** last selected prompt values > **Yes > OK**

Note: Purging the data in the report will prevent unnecessary space usage in the system.

6. Click **Save**

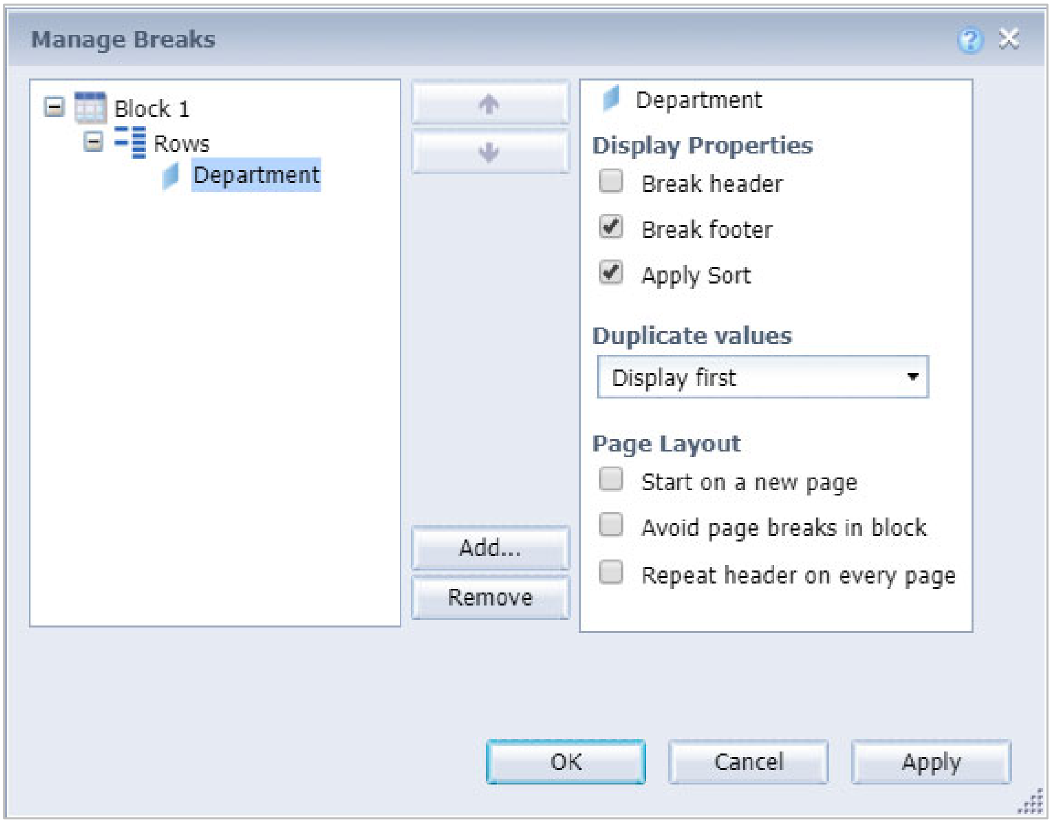
Add Totals and Subtotals

Create Totals

1. Click in the **DISB Actg Line Amt** column so that the column turns grey
2. Navigate to **Analysis > Functions > Sum**
3. Note the Sum row is added to the report
4. Click **Save**

Next, Create Subtotals

1. Right – click in the **Department column > Break > Manage Breaks > Add… > Department > OK >** uncheck **Break Header** > **OK**



- Refresh the report for FY **2016** and APD **1**
- Filter in the Input Controls for **AMA** and **ANA**

Note: the subtotals for Department are not automatically populated.

- The sum function must be re-added to include the subtotals (break) for Department.

2. Click into the **DISB Actg Line Amt** column so that the data field turns grey
3. Navigate to **Analysis > Functions > Sum > Sum** (It is necessary to click **Sum** twice to first remove the prior sum and then to add the new one)

Fiscal Year	Accounting I	Department	DISB Doc (C	DISB Actg Li
2016	1	AMA	WR,AAA,CN\	113.91
		AMA	Sum:	113.91

Fiscal Year	Accounting I	Department	DISB Doc (C	DISB Actg Li
2016	1	ANA	AD,ANA,160(	4.16
2016	1		EFT,ANA,16C	108.60
		ANA	Sum:	112.76
			Sum:	226.67

4. View the subtotal by Department and total for all Departments shown
5. Remove the input control selections by clicking the box for **Select All (or 'Reset')**
6. Purge the report **Data > Purge > Purge All > Purge** Last selected Prompt values > OK
7. Click **Save**

Create a Variable (Using a Prompt Response) and use in Header

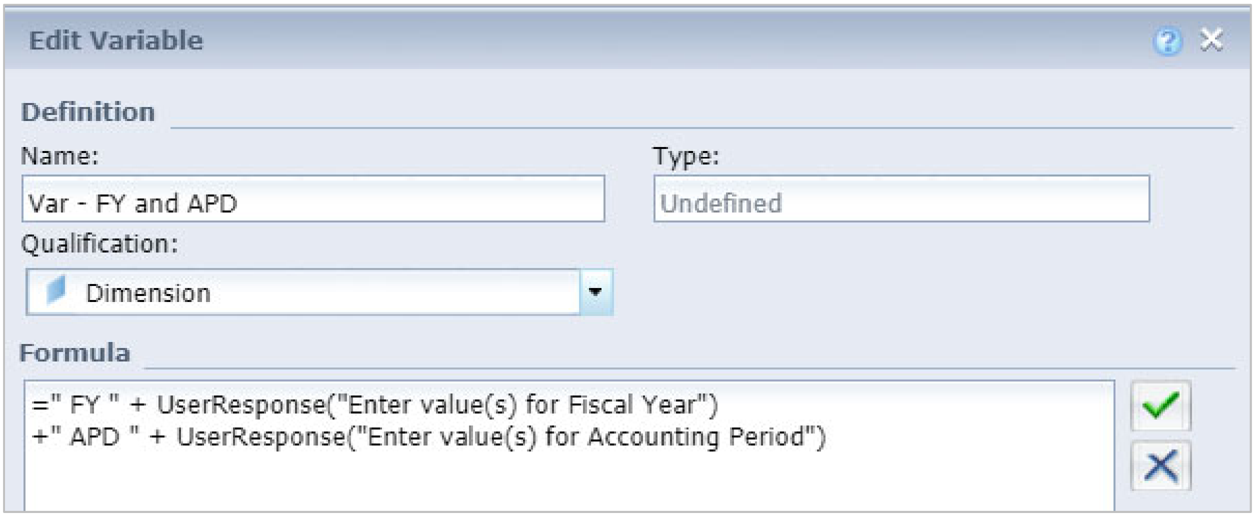
Create a Variable Using a Prompt Response

1. Double-click on the tab named Report 1 (bottom of the window) and type a new name **Payments**

Note: The Report title (in the header) changes to Payments.

2. In Design view, Navigate to **Data Access > Data Objects > New Variable > New Dimension**
3. In the Create Variable window
    - In the Name box, Type **Var – FY and APD**
    - In the Formula box, type the following **(BE SURE TO INCLUDE SPACES BEFORE/AFTER the 'FY')**
        - = " FY " + UserResponse ()
    - With the cursor in between the (), navigate to the **Available Operators** box > Prompts > "**Enter values(s) for Fiscal Year"**
    - Add + " **APD "** + UserResponse()

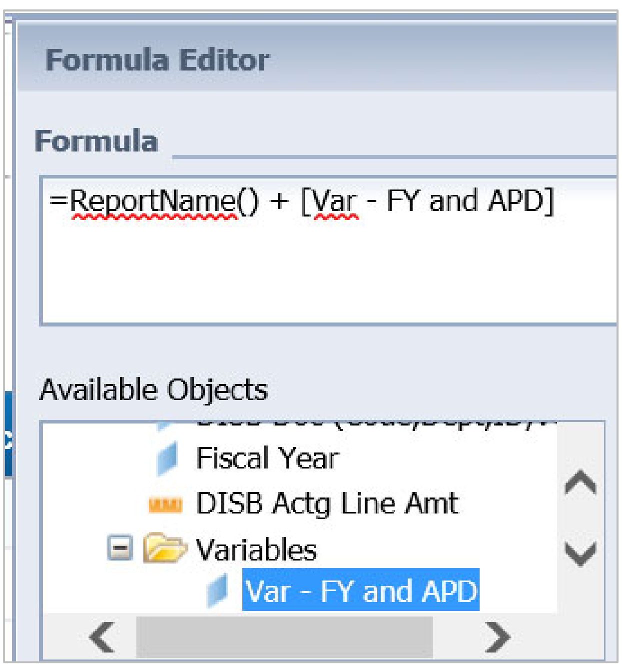
With the cursor in between the (), navigate to the **Available Operators** box > Prompts > “**Enter values(s) for Accounting Period”).**



4. Click on the **Green check mark** > OK > OK

Use a Variable with a Prompt Response in a Report header

1. Click in the report title box **(Payments)** and then on the formula editor icon
2. Add **+ [Var – FY and APD]** to the formula editor box



Note: Variables (and any other formulas) created within a WebI document are saved within the document.They are not available for use within other WebI documents unless recreated within them.

Test the new variable and remove unnecessary objects from the report

1. Run the Report for FY **2016** and APD **1** and Note that the report title reflects the edits
2. Delete the columns for Fiscal Year and Accounting Period by right clicking in each column and selecting **Delete**
3. Navigate in the left panel to **Available Objects** and note that both objects still exist in the document

Note: Available Objects is where a developer finds variables, result objects, and merged objects.

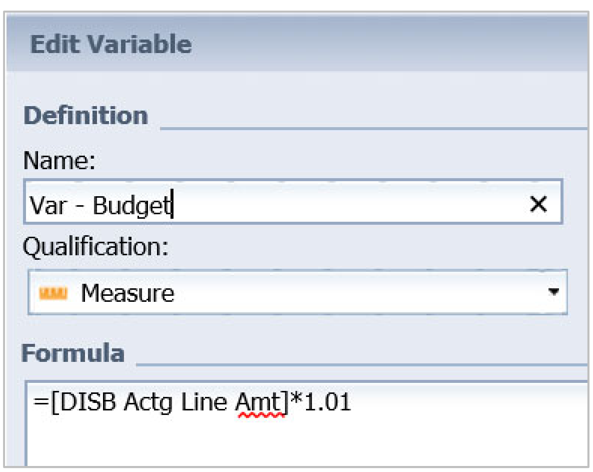
This is by design. The purpose here is to delete the objects only from the table on the report tab, but not to delete these two objects from the entire document. If they were deleted in Result Objects, then the objects would not show in Available Objects and also the variable just created and added to the report header would not work.

4. Click **Save**

Create a Variable (Using Measures for Calculations)

Add a measure variable: showing the expenditures increased by 1%

1. Navigate to **Data Access > Data Objects > New Variable > New Measure**
2. Enter Name = **Var – Budget**
3. Enter Formula box type =
4. In the Available Objects box within this window, double-click **[DISB Actg Line Amt]**
5. Just to the right of [DISB Actg Line Amt] type ***1.01**
6. Click the **green check mark > OK > OK**



7. In Available Objects, left-click on the new variable and drag it and drop it just to the right of **[DISB Actg Line Amt]** (Drop the object when the small vertical rectangle appears.)

Add a sum, resize columns, test results, purge data

1. Click in the newly created column, then navigate to **Analysis > Functions > Sum**
2. Resize the columns by navigating to Formatting > Size > and enter **1.5** in the Width box
3. Verify that the total shows for the new column and the grand totals match this

	WR,AAA,CNV217176729,1	4,000.00	4,040.00
	WR,AAA,CNV217176730,1	639.03	645.42
	WR,AAA,CNV217176731,1	182.50	184.33
AUA	**Sum:**	**469,939.14**	**474,638.53**
	Sum:	**190,406,898.01**	**192,310,966.99**

4. Navigate to **Data Access tab > Data Providers > Purge > Purge All > Purge** last selected prompt values > Yes > OK

Note: Purging the data in the report will prevent unnecessary space usage in the system.

5. Click **Save**

Test your Knowledge

Answer the following questions based on the information we have gone over so far.

1. All available objects will show in the report. **True / False**
2. Result objects that are not used in your report will not affect your report output. **True / False**
3. InfoAdvantage automatically saves after each change. **True / False**

Scenario - Student Only

The Central Services Bureau (CSB) has requested a report that provides Accounts Payable and budgeting activities for Fiscal Year 2018, Accounting Period 1 and the following Departments (ABA, BBA, CBA, EBA, NBA, OBA, PBA, and RBA). The report body should include Fiscal Year, Accounting Period, Department, Fund, Disbursement Document information (concatenated), Line Amount and 20% Increase Amount. The report should include grand totals along with subtotals by Fund. Include a title for the report called Payments followed by the User prompt inputs for Fiscal Year and Accounting Period.

The query Result Objects should at least include the following objects: Fiscal Year, Accounting Period, Department, Fund, DISB Doc (Code, Dept, ID, Vers), and DISB Actg Line Amount from FIN – Accounts Payable.

Create a filter that allows the end user to filter by one or more Departments.

The report should include totals for Amount and for a 20% Increase Amount. A variable is needed for the 20% increase. The Amount total for this report should be $163,720.16.

Save your report in your assigned training folder with the following name: full name – 1B..

Create a Report that Requires Merges

The new skills covered in this section are:

- Introduction to Metadata report
- Merging objects
- Finding Filters

Research is required before developers can know which objects can be used to create merges.

Metadata Report

The Metadata Report enables report developers to locate required data fields. The Metadata Report maps Application Page Codes and Field Names to infoAdvantage Universes and Objects. It also maps objects found only in infoAdvantage to Universes containing them. Field names in infoAdvantage are often different from the name of the equivalent field in the AFIS system (recall that the **transform** part of the ETL process is where fields may be re-named). Not all fields in AFIS are brought into infoAdvantage. Some objects shown in the Metadata report are not available for developers to use (because they are hidden). The Metadata report essentially provides a crosswalk between AFIS and infoAdvantage.

Test your knowledge

Answer the following questions based on the information we have gone over so far.

1. Use the Metadata Report for a crosswalk
    a. From AFIS to infoAdvantage
    b. From infoAdvantage to AFIS
    c. Both a) and b)
2. Do all AFIS fields have a corresponding object available in infoAdvantage?
3. Are all objects found in the Metadata report available for report development?

Scenario – Instructor Only

This section covers some difficult issues encountered when developers need to build a report from objects that are not joined at the Universe level. This section provides important solutions available to developers when creating a new report requiring objects that are not joined at the Universe level.

The Accountancy Board (ABA) has requested a report that provides Payment Requests and Disbursements (not including payroll) for Fiscal Year 2018 and Accounting Period 1. The report body should include Payment Request Document Code, Payment Request Document Department Code, Payment Request Document ID, Vendor Code, Disbursement Document information (concatenated), Check Number (warrant), Line Amount.

The query(s) Result Objects should at least include the following objects: Fiscal Year, Accounting Period, Department, PR Doc Dept Code, PR Doc Code, PR Doc ID, PR Vendor Customer Code, DISB Hdr Check No, DISB Doc (Code, Dept, ID, Vers), DISB Actg Doc Ref Doc Dept Code, DISB Actg Doc Ref Doc Code, DISB Actg Doc Ref Doc ID, and DISB Actg Line Amount from FIN – Accounts Payable.

Remove all records with null vendors from the report.
The PR Doc Code for payroll documents is **PEDF1.**

The report should include totals for Amount. The Amount total on this report should be **$10,710.97.**

Note: Build ALL of the reports in the UAT/MA1 environment and promote to Production. This will ensure there is a backup of the report should anything happen. It also reduces slowing in the Production system (It is recommended to use the same procedure when editing an existing report).

Preliminary Research to Build Merges

In creating merges, developers have to research and find:

- Which objects are not joined
- What commonalities exist between those objects (merges will be built upon the commonalities)
- What are the name(s) of the common fields in the source data
- What are the corresponding Universe and the Object Names in infoADV

The first step is to determine what objects are missing joins. One way to discover this is to examine the multiple pages in the Data Preview pane (and/or examining the differences between the multiple tables produced in cases where the report was run for the first time).

Compare the two results from the Data Preview screen prints below . The results on the screen prints below would show in Data Preview if a developer added all the result objects from the scenario above into a single query and then refreshed in Data Preview. The multiple pages indicate an error in the query: all result objects in the query are not joined at the universe level. Notice the difference between the Result 0 and Result 1: One result contains information pertaining to the DISB Doc and the other contains information pertaining to the PR doc.

Data Preview — Result 0 — Refresh

Fiscal Year	Accounting Period	Department	PR Vendor Customer Code	DISB Doc (Code,Dept,ID,V...	DISB Actg Line Amt	DISB Hdr Check No
2018	1	ABA	VC0000011622	WR,AAA,170000614078,1	500.00	000000218344167
2018	1	ABA	VC0000011287	WR,AAA,170000609606,1	400.00	000000218338442
2018	1	ABA	PCARDABA0001	EFT,ABA,180000018570,1	69.08	201707280429240
2018	1	ABA	PCARDABA0001	EFT,ABA,180000018570,1	9.95	201707280429240

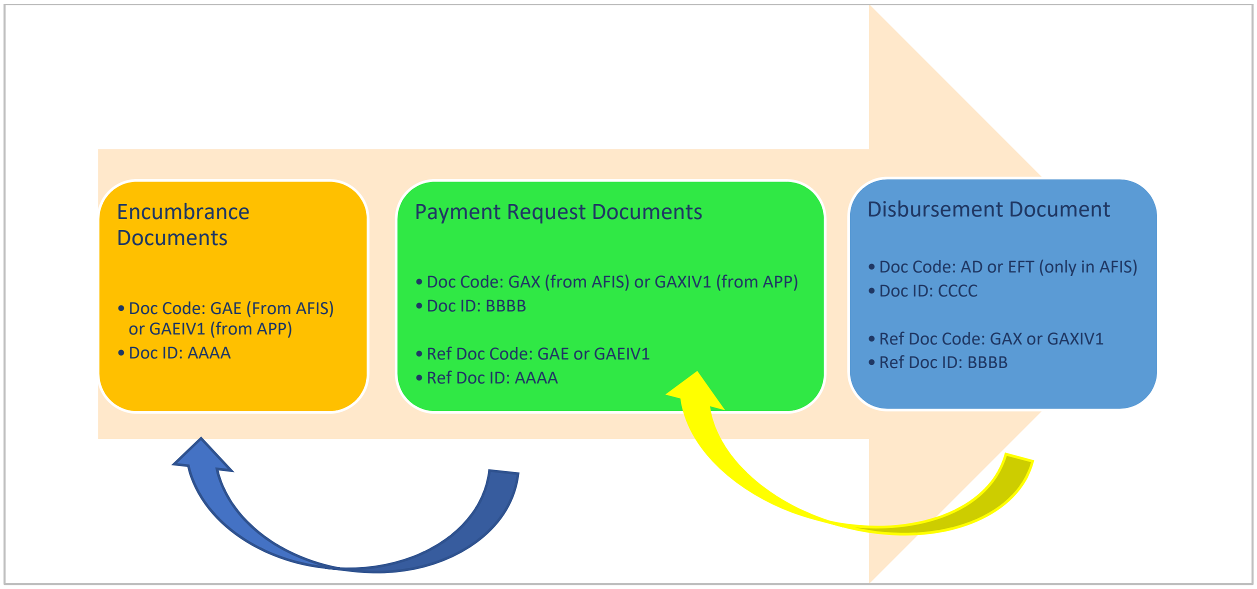
Data Preview — Result 1 — Refresh

Fiscal Year	Accounting Period	Department	PR Vendor Customer Code	PR Doc Code	PR Doc Dept Code	PR Doc ID
2018	1	ABA	PCARDABA0001	GAX	ABA	2AB17264
2018	1	ABA	PCARDABA0001	GAX	ABA	2AB17264
2018	1	ABA	PCARDABA0001	GAX	ABA	2AB17264
2018	1	ABA	PCARDABA0001	GAX	ABA	2AB17264

Whenever a developer receives this kind of result, the developer immediately knows that some objects must be taken out of this query and put into a different query.

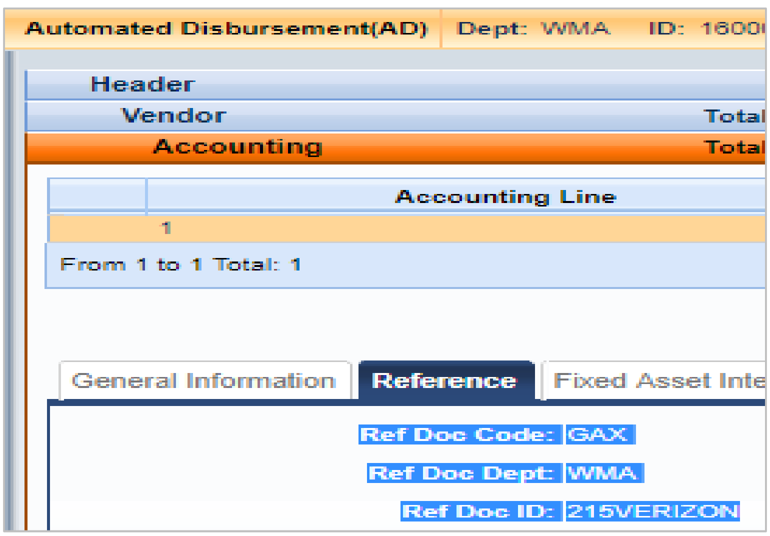
The next step is to research to find any commonalities between the objects that are not joined. . These commonalities will be used to "relate" (ie "merge") the objects within the report.

A developer in this case would need to have researched and discovered the following information…In AFIS, many documents are related to other documents through the information stored on the "Reference" tab of the Accounting Component. The following chart shows how the documents in the Data Preview screen prints above are related.



In the diagram above**: AAAA** and **BBBB** and **CCCC** represent the assigned AFIS document number or agency manually assigned document number.

DISB docs have fields referencing the PR Doc that are found on the **Reference** tab within the Accounting Component of a DISB Doc.



The relationships are shown below.

PR Doc				
1	PR Doc Code	=	4	DISB Actg Doc Ref Doc Code
2	PR Doc Dept Code	=	5	DISB Actg Doc Ref Doc Dept Code
3	PR Doc ID	=	6	DISB Actg Doc Ref Doc ID

Given the relationships above, the developer of the report is now ready to build a report using objects that are not joined at the universe level. The objects will be pulled in separate queries and will then be **“merged”** within the report based on the relationships discovered.

Tip: In creating merges, developers must create separate queries and then merge the objects from the separate queries. The same principle applies when creating reports from multiple data sources (universes): using more than one universe requires a separate query from each universe. Adding more than one query, whether from the same or different universes, means that merges will be required.

Add Query to Create a Report Requiring Merges

Create a New Webl Document from the FIN – Accounts Payable Universe (see earlier instructions)

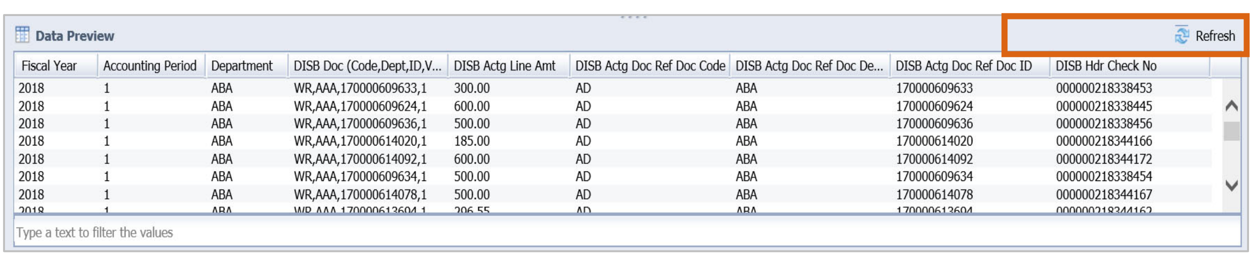
1. Right Click on the tab **Query 1 > Rename > DISB**

Note: If you are not sure that objects will be joined, then add one at a time and stop to check the results in the Data Preview Panel (to be sure that multiple pages are not created) before adding the next object.

2. Add the following Objects to the DISB Query Result Objects Fiscal Year, Accounting Period, Department, DISB Hdr Check No, DISB Doc (Code, Dept, ID, Vers), DISB Actg Doc Ref Doc Dept Code, DISB Actg Doc Ref Doc Code, DISB Actg Doc Ref Doc ID, and DISB Actg Line Amount

Object	Explanation of why to include this in Result Objects
DISB Actg Doc Ref Doc Code	(this is to join to the PR Doc)
DISB Actg Doc Ref Doc Dept Code	(this is to join to the PR Doc)
DISB Actg Doc Ref Doc ID	(this is to join to the PR Doc)
DISB Hdr Check No	(this is what we want to see in the report)

1. Create the Department Query Filter *equal to* (*constant)* **ABA**
2. Create the **Fiscal Year** and **APD Query Filters** (make them required prompts)
3. Refresh in Data Preview using FY **2018** and APD **1** to test the results
   - Notice that there is only one page



Fiscal Year	Accounting Period	Department	DISB Doc (Code,Dept,ID,V...	DISB Actg Line Amt	DISB Actg Doc Ref Doc Code	DISB Actg Doc Ref Doc De...	DISB Actg Doc Ref Doc ID	DISB Hdr Check No
2018	1	ABA	WR,AAA,170000609633,1	300.00	AD	ABA	170000609633	000000218338453
2018	1	ABA	WR,AAA,170000609624,1	600.00	AD	ABA	170000609624	000000218338445
2018	1	ABA	WR,AAA,170000609636,1	500.00	AD	ABA	170000609636	000000218338456
2018	1	ABA	WR,AAA,170000614020,1	185.00	AD	ABA	170000614020	000000218344166
2018	1	ABA	WR,AAA,170000614092,1	600.00	AD	ABA	170000614092	000000218344172
2018	1	ABA	WR,AAA,170000609634,1	500.00	AD	ABA	170000609634	000000218338454
2018	1	ABA	WR,AAA,170000614078,1	500.00	AD	ABA	170000614078	000000218344167

4. Click **Close > Apply Changes and Close > Save**

Next, create, build, test, and name the PR Document Query

1. Open the Data Provider (Query Panel) and Click **Add Query**

Note: In this case, a developer could also right-click on the DISB tab name and click Duplicate and then edit the second query.

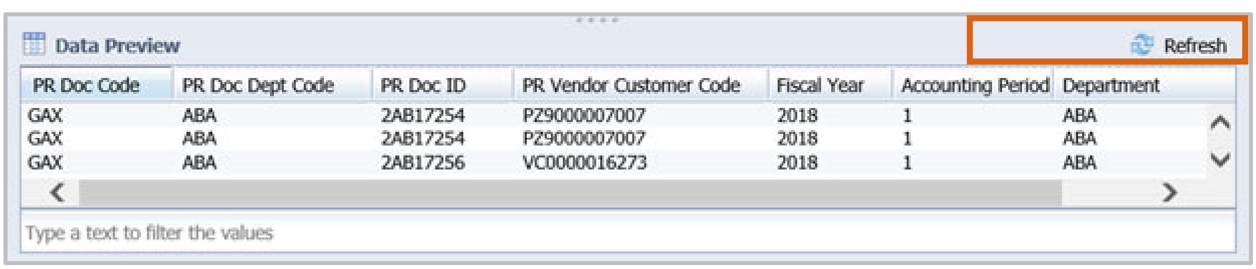
2. Click **From the Universe**
3. Select **FIN – Accounts Payable > OK**
4. Add the following to **Result Objects**

Object	Explanation of why to include this in Result Objects
PR Doc Code	(this is to join to the DISB Doc)
PR Doc Dept Code	(this is to join to the DISB Doc)
PR Doc ID	(this is to join to the DISB Doc)
PR Vendor Customer Code	(this is what we want to see in the report)

Also add the Fiscal Year, Accounting Period, and Department Code (these will be dragged down to become query filters)

5. Create the **Fiscal Year Query Filter** *equal to* (*prompt)* **Enter Fiscal Year:**
   - Make sure the prompt verbiage exactly matches the verbiage for the same prompt on the DISB tab
6. Create the Accounting Period Query Filter *equal to* (*prompt)* **Enter Accounting Period:**
   - Make sure the prompt verbiage exactly matches the verbiage for the same prompt on the DISB tab
7. Create the **Department Query Filter** *equal to* (*constant)* **ABA**
8. Create the **PR Doc Code Query Filter** *not equal to* (*constant)* **PEDF1**
   - Excludes non-vendor payments
9. Refresh in Data Preview using FY **2018** and APD **1**

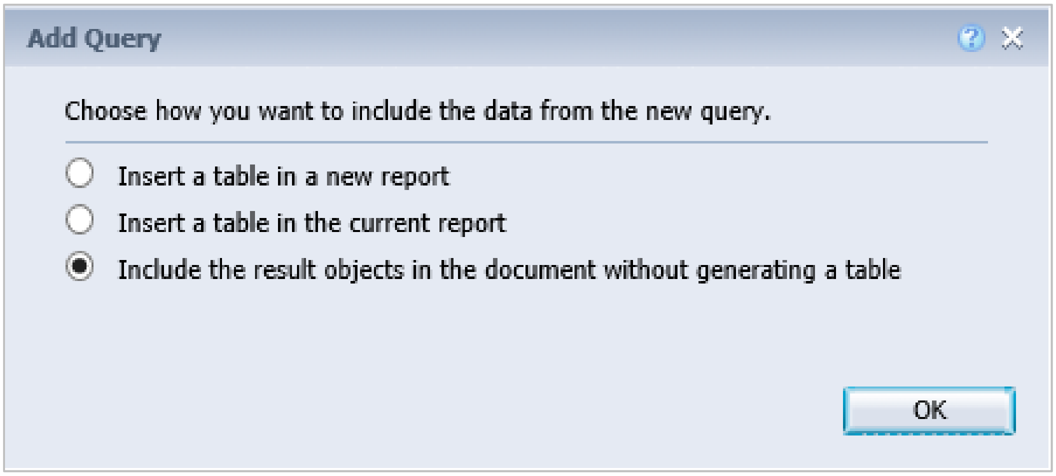
Notice that there is only one page in the Data Preview Panel



PR Doc Code	PR Doc Dept Code	PR Doc ID	PR Vendor Customer Code	Fiscal Year	Accounting Period	Department
GAX	ABA	2AB17254	PZ9000007007	2018	1	ABA
GAX	ABA	2AB17254	PZ9000007007	2018	1	ABA
GAX	ABA	2AB17256	VC0000016273	2018	1	ABA

10. **Right** Click on the newly created query tab > **Rename > PR > OK**
11. Run **Queries**
12. Prompt values FY **2018** and APD **1**

13. In the **Add Query** message box select **Include the result objects in the document without generating a table > OK**



14. Click **Save**

Build Merges

Create three merged objects. Merges applied with Available Objects create an inner join. The name of the merge will be the name of the first object selected when creating the merge. Recall that the objects are related in this way (see section 2A-1).

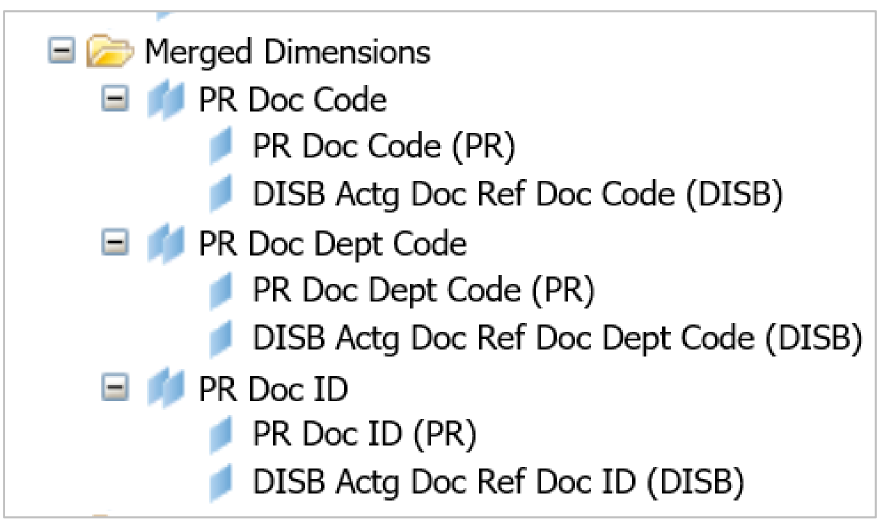
PR Doc			DISB Doc	
1	PR Doc Code	=	4	DISB Actg Doc Ref Doc Code
2	PR Doc Dept Code	=	5	DISB Actg Doc Ref Doc Dept Code
3	PR Doc ID	=	6	DISB Actg Doc Ref Doc ID

1. In Available objects, click **Arranged by Query** (use the drop down arrow found at the bottom of the Available object pane)
2. Click on **[PR Doc Code]**
3. Hold the Ctrl key and click on **[DISB Act Doc Ref Doc Code]**
4. Release the **Ctrl key** after both objects are selected
5. With the cursor still hovering above **the [DISB Act Doc Ref Doc Code]**, Right - click > Merge

Note: that a new folder Merged Dimensions appears in the Available Objects panel and it has the merged object in it.

Repeat steps 1-5 to create two more merges between the following objects

6. **PR Doc Dept Code** and **DISB Actg Doc Ref Doc Dept Code**
7. **PR Doc ID** and **DIS Actg Doc Ref Doc ID**



Build Report with Merged Objects

Add a new report tab and build a new table starting with the merged objects

Add a new report:

1. Right - Click on the tab (at the bottom of your window) named **Report 1**
2. Select **Add Report**
3. A new report named **Report 2** should appear
4. Select the following objects in this sequence and hold down the control key so all remain selected
    - Merged **PR Doc Code**
    - Merged **PR Doc Dept Code**
    - Merged **PR Doc ID**
    - **DISB Doc** (Code,Dept,ID,Vers)
    - **DISB Actg Line Amt**
5. Drag the selected items into the blank report (below the header section) and release

PR Doc Cod	PR Doc Dept	PR Doc ID	DISB Doc (C	DISB Actg Li
AD	ABA	17000060951	WR,AAA,170	700.00
AD	ABA	1700006096(	WR,AAA,170	400.00
AD	ABA	1700006096z	WR,AAA,170	400.00
AD	ABA	1700006096z	WR,AAA,170	600.00

6. Before saving delete the unused report tab named **Report1**
7. Click **Save**

Create Detail Variable to Resolve #DATASYNC Error

Add objects to the report ONE AT A TIME and use a detail variable for an object that is not joined

1. Left - Click on and drag **DISB Hdr** Check No into the report just to the right of **DISB Doc** (Code,Dept,ID,Vers) (release the click when the small vertical rectangle shows). The object drops easily into the report.

2. Left - Click on and drag **PR Vendor Customer Code** into the report just to the left of **DISB Doc** (Code,Dept,ID,Vers)

   - Several objects under the DISB Doc query become italicized when PR Vend**or Customer Code** is selected. This is a sign that objects are not joined.
   - It will not drop into the report. This is a sign that objects are not joined.

3. Try to force the object **PR Vendor Customer Code** into the report by adding a new column

   - Right click on **DISB Doc** (Code,Dept,ID,Vers) in the **report > Insert > Columns on Left**
   - Click within the new column so that the records turn grey
   - Select the **formula editor > PR Vendor Customer Code**
   - Click on the **green check mark** and verify the formula is defined correctly
   - Click **OK > OK**

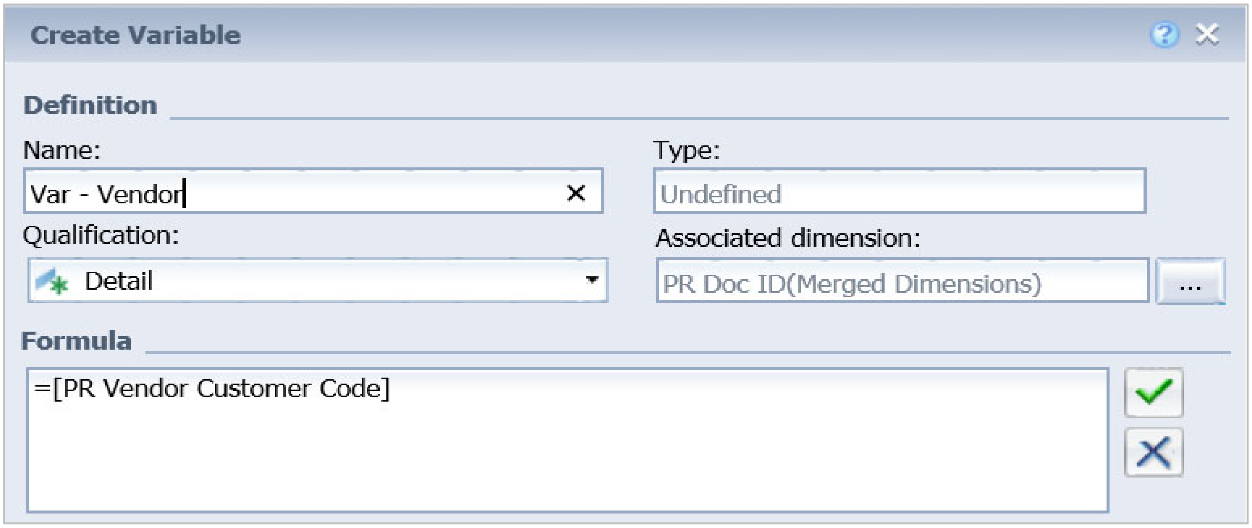
Note: the #DATASYNC error. This is a sign that objects are not joined within the report.

PR Doc ID	PR Doc Dept	PR Doc Code		DISB Doc (C	DISB Hdr Ch	DISB Actg Li
#DATASYNC	#DATASYNC	#DATASYNC	#DATASYNC	#DATASYNC	#DATASYNC	#########

Create a detail variable to place an object into a table when there is nothing to join on at the query level

1. **PR Vendor Customer Code** can be converted from a dimension to a detail through use of a variable
2. Select **Data Access** tab on the top of the window
3. Select **New Variable > New Detail**
4. In the Create Variable window – fill-in the following fields:

   - Name: **Var – Vendor**
   - Qualification: **Detail**
   - Type: **Default value**
   - Associated dimension: **PR Doc ID** (Merged Dimensions)
   - Formula: **=[PR Vendor Customer Code]**



5. Click the **green check mark** to make sure formula was entered correctly
6. Select **OK** on the Web Intelligence pop up window
7. Select **Ok** on the Create Variable window
8. Validate that the new **[Var – Vendor]** Variable appears in the "Available Objects" section
9. In the table, replace **[PR Vendor Customer Code]** with **[Var – Vendor]**
10. Click in the column header of the new column and rename to "Vendor"

Notice the records with a null **[Var – Vendor]**

Add a report filter to remove records with no vendor

1. Click in the column **[Var – Vendor]** (the column should turn grey)
2. Select **Analysis (tab at top) > Filters > Filter > Add Filter**
3. In the Report Filter window, select **Is not Null** for the [Var – Vendor] detail
4. Click **OK**
5. Click **Save**

Test the total DISB Actg Line Amt (should be $10,710.97)

1. Click in the **DISB Actg Line Amt Column** so that all records turn grey
2. Navigate to **Analysis > Functions > Sum**
3. Click on **Sum**

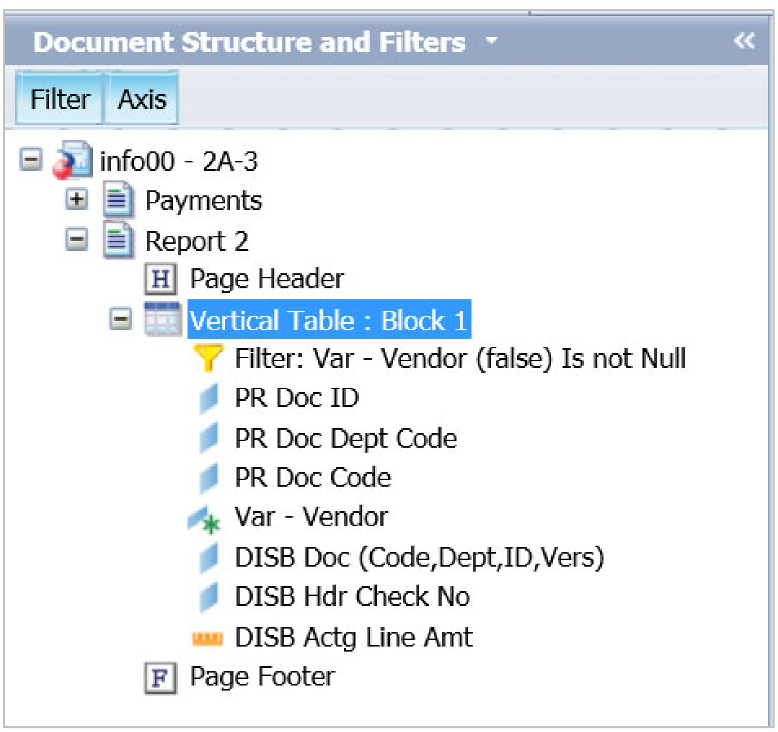
PR Doc ID	PR Doc Dept	PR Doc Code	Vendor	DISB Doc (C	DISB Hdr Ch	DISB Actg Li
2AB17254	ABA	GAX	PZ90000070(	EFT,ABA,180	20170710041	739.20
2AB17255	ABA	GAX	PZ00001526!	EFT,ABA,180	20170710041	3,252.57
2AB17256	ABA	GAX	VC00000162	AD,ABA,180C	0000002183E	400.00
2AB17257	ABA	GAX	PZ00005407!	EFT,ABA,180	20170728042	653.83
2AB17262	ABA	GAX	VC00000162	AD,ABA,180C	0000002183E	400.00
2AB17263	ABA	GAX	VC00000183	AD,ABA,180C	0000002183E	300.00
2AB17264	ABA	GAX	PCARDABAC	EFT,ABA,180	20170728042	2,439.91
2AB18001	ABA	GAX	PZ90000031!	AD,ABA,180C	0000002183E	1,344.00
2AB18002	ABA	GAX	PZ90000031!	AD,ABA,180C	0000002183E	1,080.00
2AB18003	ABA	GAX	VC00000274	AD,ABA,180C	0000002183E	101.46
					Sum:	**10,710.97**

Find Report Filters

Click on the Document Structure and Filters icon on the left panel.

1. Verify the filters on **Report 2** tab
2. Click on the + symbol for **Report 2**
3. Click on the + symbol for Vertical Table: **Block 1**

Notice that the filter is shown here



4. Double-click on the **Filter: Var – Vendor (false) Is not Null** and view the Report Filter window
5. Close the window

Test your Knowledge

Answer the following questions based on the information we have gone over so far.

1. Filters can be found at four levels. **True / False**
2. All filters are visible after clicking the Document Structure and filters icon. **True / False**
3. Variables______
4. Are built by the report developer
5. Are built into universes
6. Allow vast customization possibilities
7. More than one of the above. Which ones ______.

Scenario - Student Solo

The Board of Barbers (BBA) has requested a report that provides Payment Requests and Disbursements (not including payroll) for Fiscal Year 2018 and Accounting Period 3. The report body should include Payment Request Document Code, Payment Request Document Department Code, Payment Request Document ID, Disbursement Document information (concatenated), Check Number (warrant), Record Date, Vendor Code, and Line Amount.

The query(s) Result Objects should at least include the following objects: Fiscal Year, Accounting Period, Department, PR Doc Dept Code, PR Doc Code, PR Doc ID, PR Vendor Customer Code, DISB Hdr Check No, DISB Doc (Code, Dept, ID, Vers), DISB Actg Doc Ref Doc Dept Code, DISB Actg Doc Ref Doc Code, DISB Actg Doc Ref Doc ID, DISB Hdr Record Date, and DISB Actg Line Amount from FIN – Accounts Payable.

Create a filter that allows the end user to filter by one or more Vendors(s).
Remove all records with null vendors and **MISCPAYVEND** from the report.
The PR Doc Code for payroll documents is PEDF1.

The report should include totals for Amount. The Amount total on this report should be $2,513.02.

Save your report in your assigned training folder with the following name: **full name – 2B**.

Appendix

Metadata Report

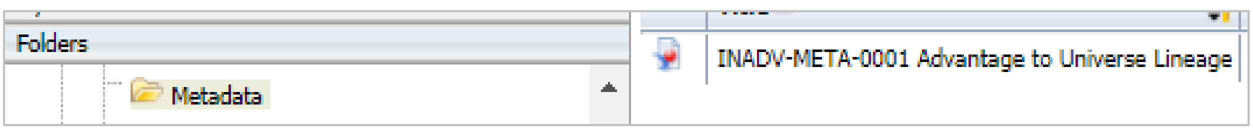
The Metadata Report enables report developers to locate required data fields. The Metadata Report maps Application Page Codes and Field Names to infoAdvantage Universes and Objects. It also maps objects found only in infoAdvantage to Universes containing them. Field names in infoAdvantage are often different from the name of the equivalent field in the AFIS system (recall that the **transform** part of the ETL process is where fields may be re-named). Not all fields in AFIS are brought into infoAdvantage. The Metadata report essentially provides a crosswalk between AFIS and infoAdvantage.

Queries can be developed by entering prompts in various ways:

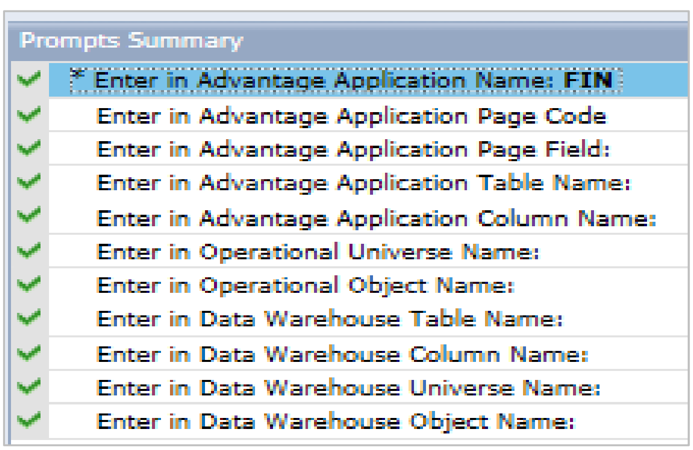
- Given an AFIS Page and Field, find the infoAdvantage Universes that contain this information
- Given an AFIS Field, find the infoAdvantage Universes that contain this information
- Given an infoAdvantage Universe/Class/Object, find the AFIS Page and Field it comes from

The Metadata report is located on MA1 (Testing Environment) only.

Location: MA1 > Folders > Public Folders > 1-Statewide Reports> Metadata > INADV-META-0001



Several prompts shown in the listing below are available for users.



1. Advantage Application - prompts are data in the AFIS application
2. Operational - prompts are from **OFIN-… and OADM-**… universes
3. Data Warehouse - prompts are from **FIN-…** universes

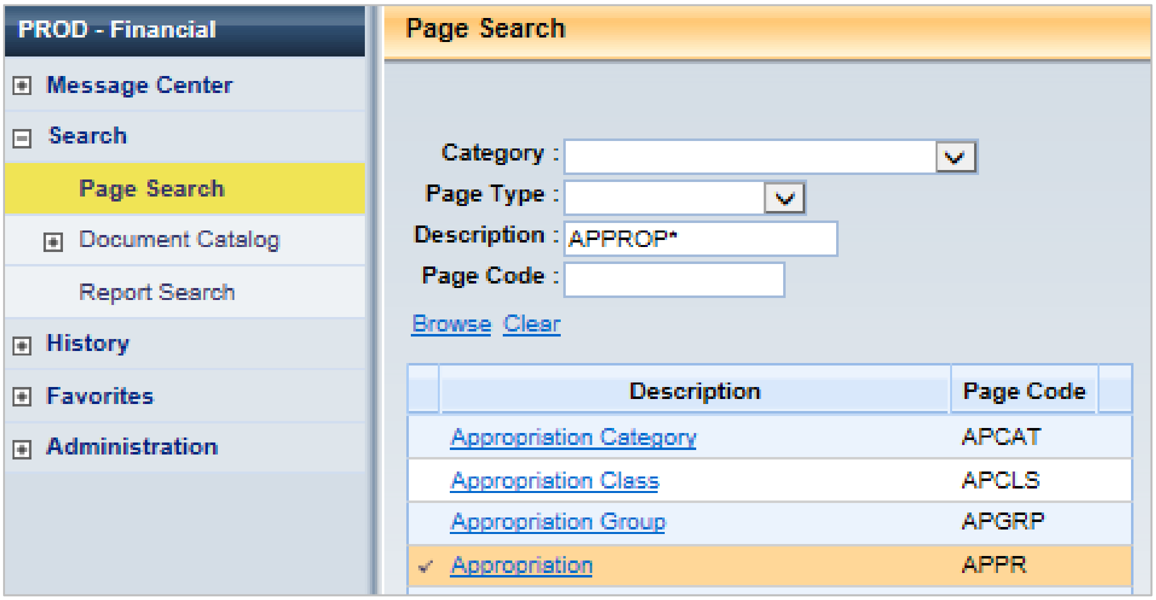
Note: All Metadata prompts are optional, however at least one prompt (in addition to the first prompt that defaults to FIN) should be used. The full report should not be run without this additional prompt selection as it will cause performance issues and may bring down the MA1 environment.

Metadata Report - Scenario

Find an infoADV Universe that contains the **Name** field on the **Appropriation** page in AFIS. Before using the Metadata report, the exact Page Code and Column Name in AFIS must be located.

Find the Application Page Code

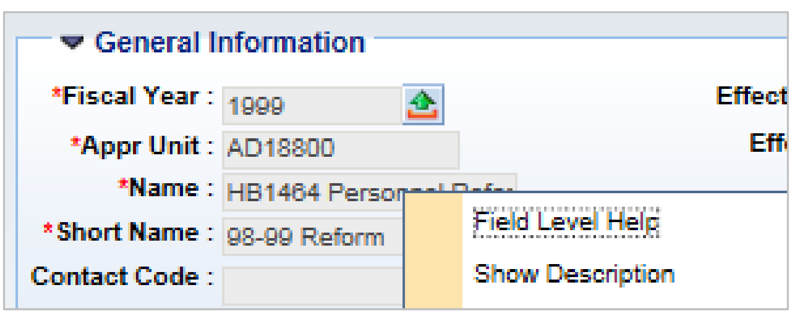
1. In the AFIS application, go to **Page Search**



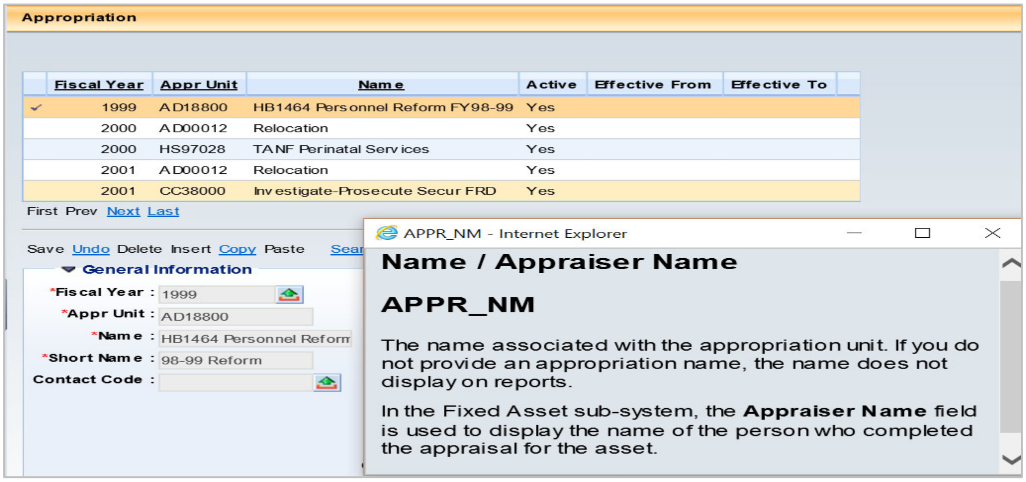
2. The Advantage Application Page Code is **APPR**

Find the Application Column Name:

1. Click on the hyperlink for **Appropriation** and locate the **Name** field (aka column)



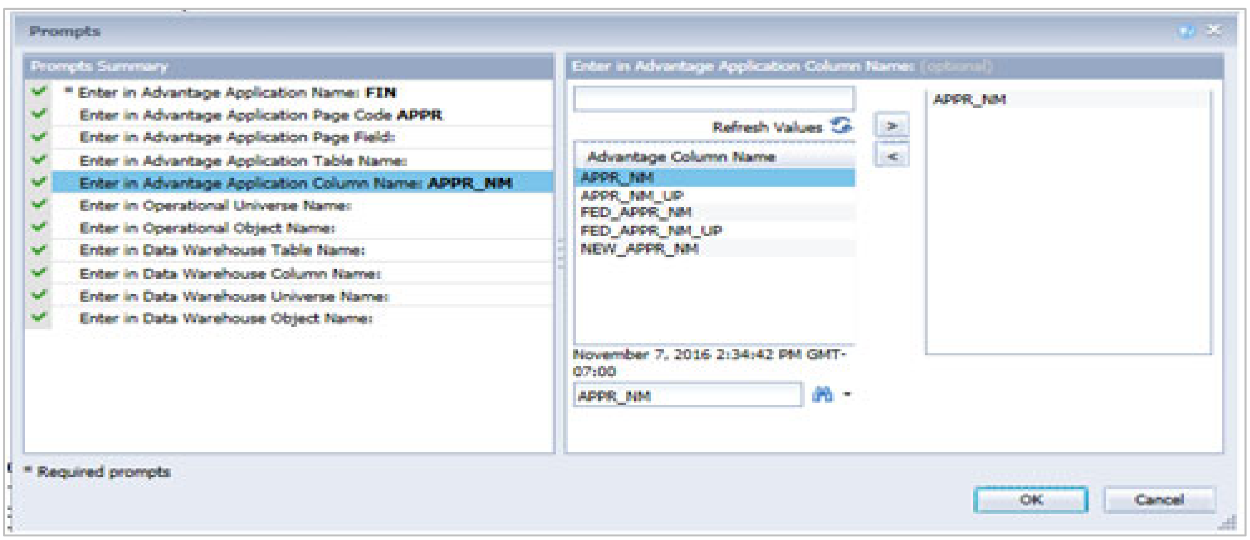
2. Right-click in the **Name** field and select either **Field Level Help** or **Show Description**



3. The Advantage Application Column Name is **APPR_NM**

Given the AFIS application Page Code and the Application Column Name, a search for corresponding infoADV Universe(s) and Object(s) can be run using the Metadata report.

Run the Metadata report (MA1 > Public Folders > 1-Statewide Reports> Metadata> INADV-META-0001) using the prompts.



Note: Some fields displayed in the Metadata report may not be available to users. This may occur because of the user access level (determined by security granted) or because the field may be hidden.

View results and select the Universe that best suits the reporting need – There are both OFIN (Operational) and FIN (Data Warehouse) Universes that contain objects corresponding to **Appropriation Name** on the Appropriation page in AFIS.

Report ID :INADV-META-0001
Run Date :11/7/2016
Run Time :2:35:37 PM

State of Arizona

Page 1 of 4

Universe Type Data Warehouse Universe

Advantage Information				infoAdvantage Information						
Application Page Code	Application Page Field	Application Table Name	Application Column Name	Data Warehouse Table Name	Data Warehouse Column Name	Reference Table Name	Reference Column Name	Universe Name	Class Name	Object Name
APPR	Name	R_APPR	APPR_NM	DIM_APPR	APPR_NM			FIN - Accounting Summary	Appropriation	Appropriation Label
APPR	Name	R_APPR	APPR_NM	DIM_APPR	APPR_NM			FIN - Accounting Summary	Appropriation	Appropriation Name
APPR	Name	R_APPR	APPR_NM	DIM_APPR	APPR_NM			FIN - Accounts Payable	Appropriation	Appropriation Label
APPR	Name	R_APPR	APPR_NM	DIM_APPR	APPR_NM			FIN - Accounts Payable	Appropriation	Appropriation Name
APPR	Name	R_APPR	APPR_NM	DIM_APPR	APPR_NM			FIN - Accounts Receivable	Appropriation	Appropriation Label
APPR	Name	R_APPR	APPR_NM	DIM_APPR	APPR_NM			FIN - Accounts Receivable	Appropriation	Appropriation Name
APPR	Name	R_APPR	APPR_NM	DIM_APPR	APPR_NM			FIN - Bond Registry	Appropriation	Appropriation Label
APPR	Name	R_APPR	APPR_NM	DIM_APPR	APPR_NM			FIN - Bond Registry	Appropriation	Appropriation Name
APPR	Name	R_APPR	APPR_NM	DIM_APPR	APPR_NM			FIN - Budget Vs Actual	Appropriation	Appropriation Name
APPR	Name	R_APPR	APPR_NM	DIM_APPR	APPR_NM			FIN - Charge Documents	Accruals Ref Appropriation	Accruals Ref Appropriation Label
APPR	Name	R_APPR	APPR_NM	DIM_APPR	APPR_NM			FIN - Charge Documents	Accruals Ref Appropriation	Accruals Ref Appropriation Name
APPR	Name	R_APPR	APPR_NM	DIM_APPR	APPR_NM			FIN - Charge Documents	Appropriation	Appropriation Label

There are many universes to choose from and the corresponding classes and Object Names are also provided. Please be aware that the Objects have various names.

Metadata Report - Alternate Method

If no data returns, try another approach: Leave the application prompts blank and enter the AFIS Application Column name into the **Data Warehouse Column Name** prompt.

As an example, **CAN_REAS_CD** is the field (column) name for the Cancellation Reason on the Check reconciliation (CHREC) page in AFIS. Entering **CAN_REAS_CD** in the **Application Column Name** prompt on the Metadata report will not return any data.

However, it will return data if **CAN_REAS_CD** is entered for the prompt **Data Warehouse Column Name**. The Operational Universe Name is set to **NA.**

Report ID :INADV-META-0001
Run Date :10/3/2018
Run Time :9:46:15 AM

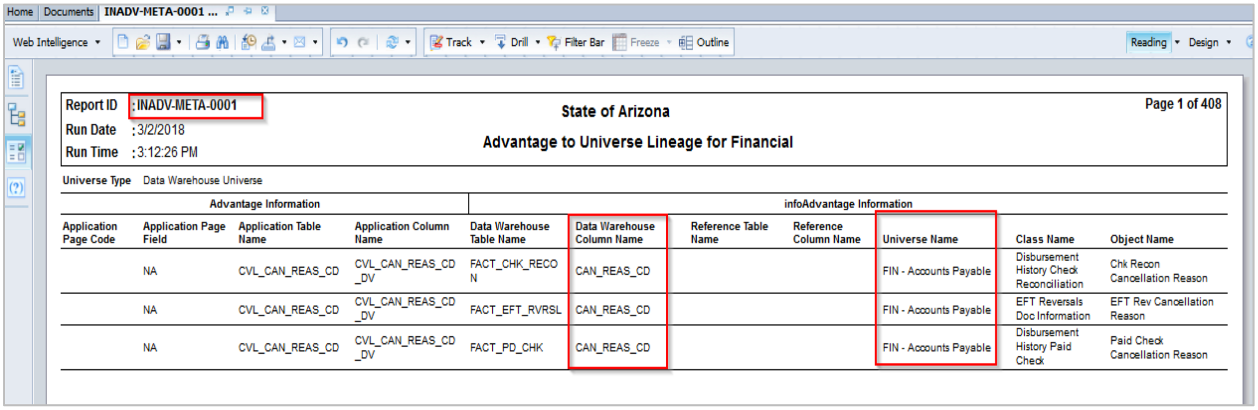
State of Arizona

Advantage to Universe Lineage for Financial

Cover Page

Parameters and Prompts

Common	
Advantage Application Name	FIN
Advantage Application Page Code	
Advantage Application Page Field	
Advantage Application Table Name	
Advantage Application Column Name	
Operational Data Source	
Operational Universe Name	NA
Operational Object Name	
Data Warehouse Data Source	
Data Warehouse Table Name	
Data Warehouse Column Name	CAN_REAS_CD
Data Warehouse Universe Name	
Data Warehouse Object Name	



Home | Documents | INADV-META-0001 ...

Web Intelligence | Track | Drill | Filter Bar | Freeze | Outline | Reading | Design

Report ID :INADV-META-0001
Run Date :3/2/2018
Run Time :3:12:26 PM

State of Arizona

Advantage to Universe Lineage for Financial

Page 1 of 408

Universe Type Data Warehouse Universe

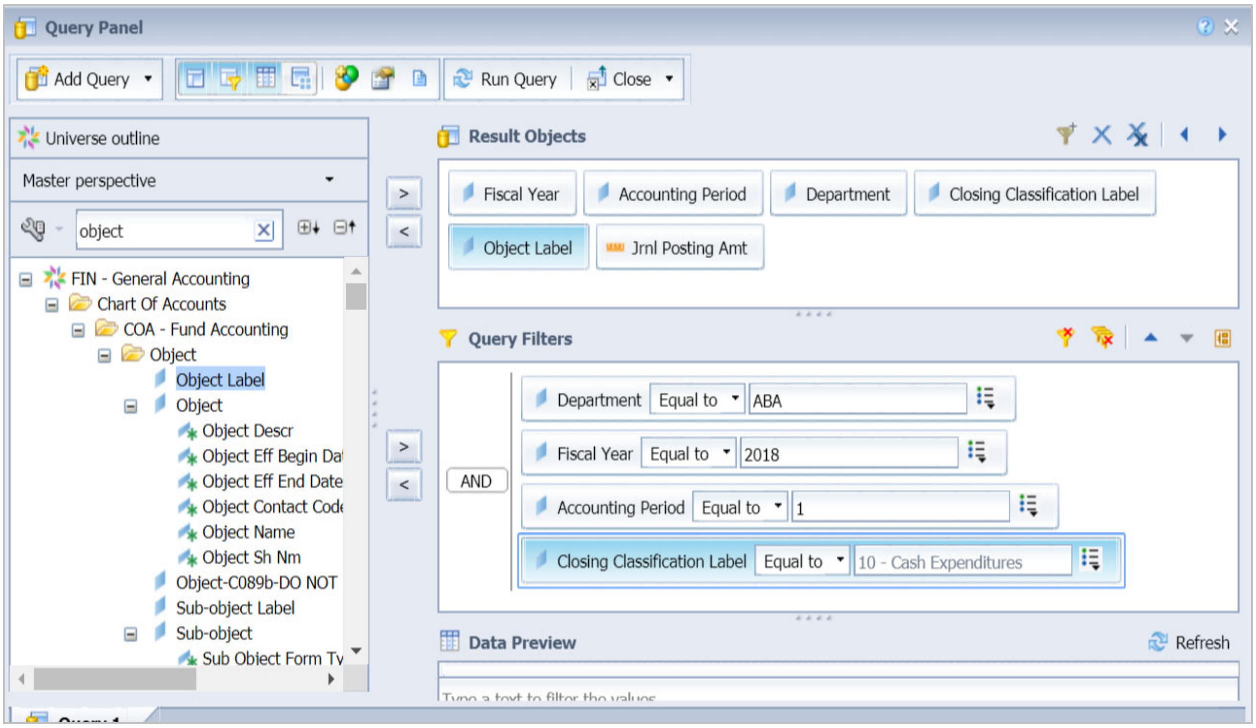
Advantage Information					infoAdvantage Information					
Application Page Code	Application Page Field	Application Table Name	Application Column Name	Data Warehouse Table Name	Data Warehouse Column Name	Reference Table Name	Reference Column Name	Universe Name	Class Name	Object Name
	NA	CVL_CAN_REAS_CD	CVL_CAN_REAS_CD_DV	FACT_CHK_RECON	CAN_REAS_CD			FIN - Accounts Payable	Disbursement History Check Reconciliation	Chk Recon Cancellation Reason
	NA	CVL_CAN_REAS_CD	CVL_CAN_REAS_CD_DV	FACT_EFT_RVRSL	CAN_REAS_CD			FIN - Accounts Payable	EFT Reversals Doc Information	EFT Rev Cancellation Reason
	NA	CVL_CAN_REAS_CD	CVL_CAN_REAS_CD_DV	FACT_PD_CHK	CAN_REAS_CD			FIN - Accounts Payable	Disbursement History Paid Check	Paid Check Cancellation Reason

Only the FIN-Accounts Payable Universe contains this object. Within the FIN –Accounts Payable Universe, three Classes contain the data and each Object is uniquely named.

Combined Queries

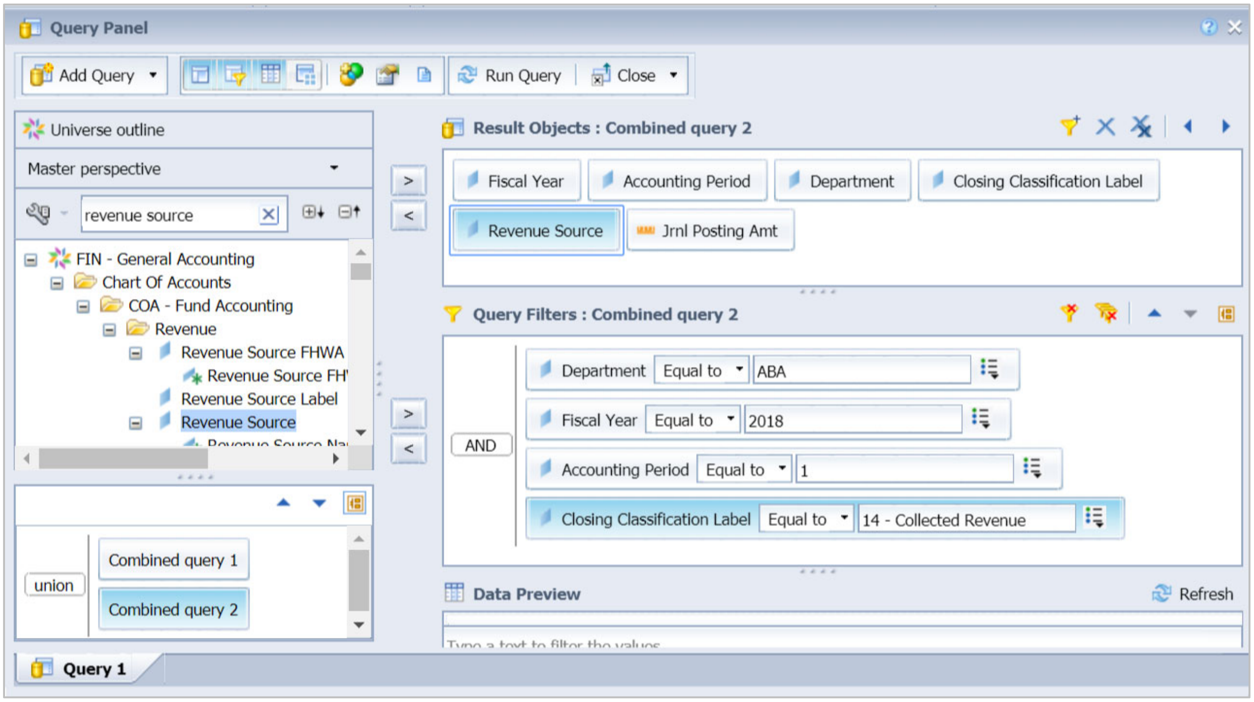
Combined queries are multiple queries running on a single Data Provider in a single Universe that returns a single set of data. Find more info on SAP's website: https://SAP.com/LearnBI

Suppose you want to show object and revenue source in the same column on a report. Follow the example below to build this. For practice, build the query shown below to bring in cash expenditures reported by object.

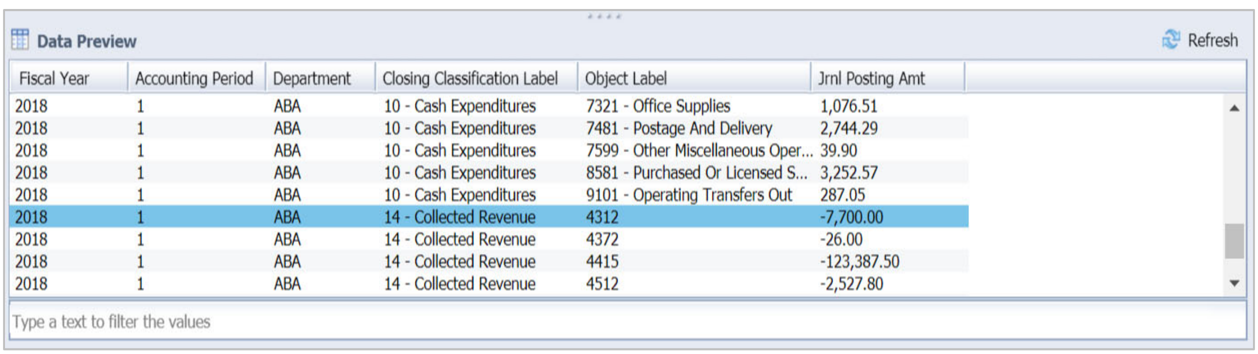


Next, click on Combined Queries in the top tool bar

In the new query, replace **Object** with **Revenue Source** (not with label) and keep it in the exact same position in the Result Objects pane. Add the Query filters (note in the second query the Closing Classification Label changes to 14 – Collected Revenues).



Notice, in Data Preview, the results of both queries are combined in the output and the first query entered provides the name assigned to the combined column (Object Label).



Fiscal Year	Accounting Period	Department	Closing Classification Label	Object Label	Jrnl Posting Amt
2018	1	ABA	10 - Cash Expenditures	7321 - Office Supplies	1,076.51
2018	1	ABA	10 - Cash Expenditures	7481 - Postage And Delivery	2,744.29
2018	1	ABA	10 - Cash Expenditures	7599 - Other Miscellaneous Oper...	39.90
2018	1	ABA	10 - Cash Expenditures	8581 - Purchased Or Licensed S...	3,252.57
2018	1	ABA	10 - Cash Expenditures	9101 - Operating Transfers Out	287.05
2018	1	ABA	14 - Collected Revenue	4312	-7,700.00
2018	1	ABA	14 - Collected Revenue	4372	-26.00
2018	1	ABA	14 - Collected Revenue	4415	-123,387.50
2018	1	ABA	14 - Collected Revenue	4512	-2,527.80

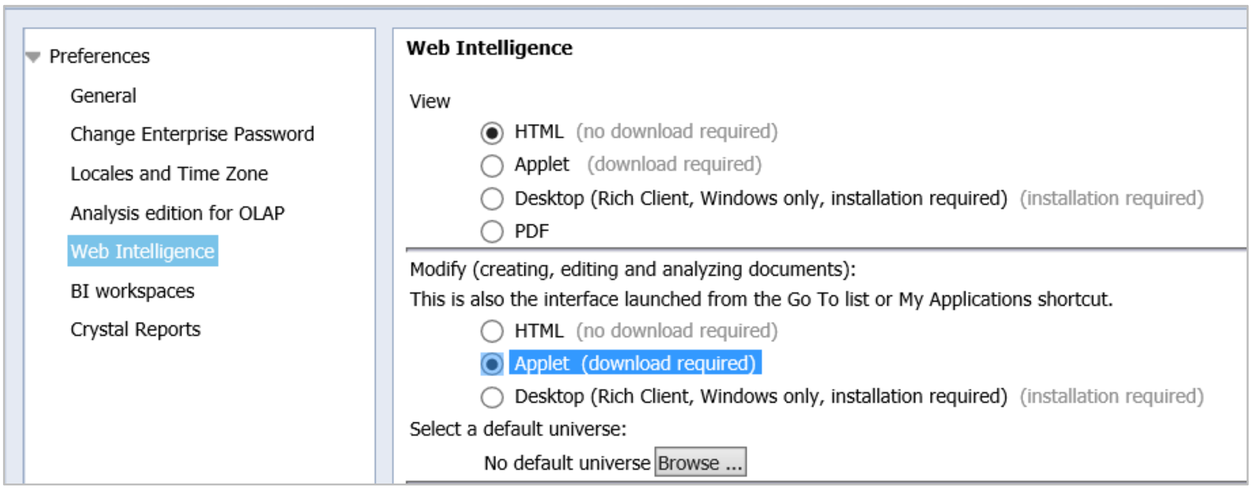
Type a text to filter the values

Using the Applet to Modify a Report

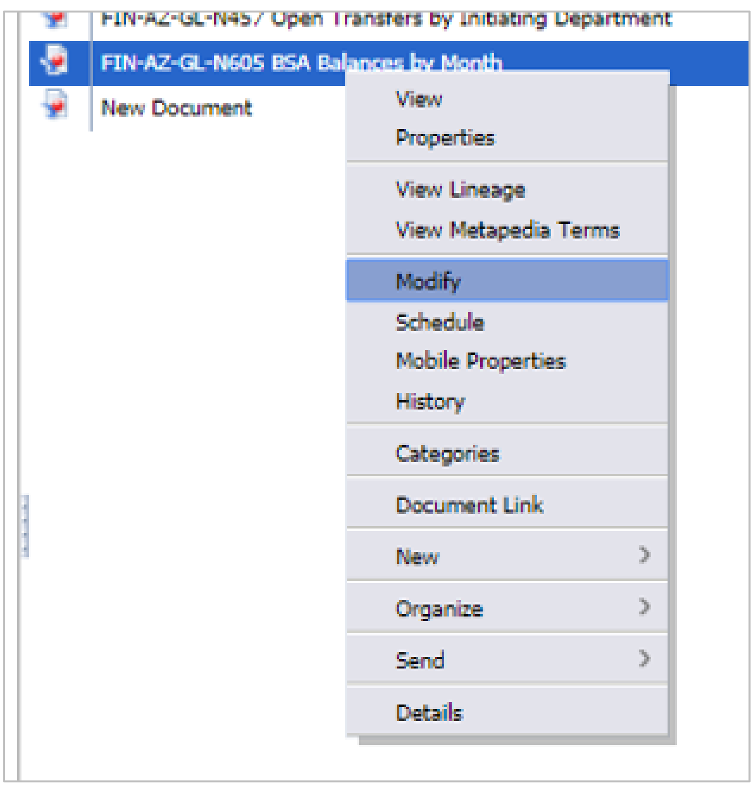
To access the Applet, developers first need to have the following in place:

1. Have a current version of **JAVA** installed, and
2. Set the Applet as the default for **Modify** (Under **Preferences** > Web Intelligence > Modify as shown below)

Note: You will need to log off and re-log in for the changes to take effect.

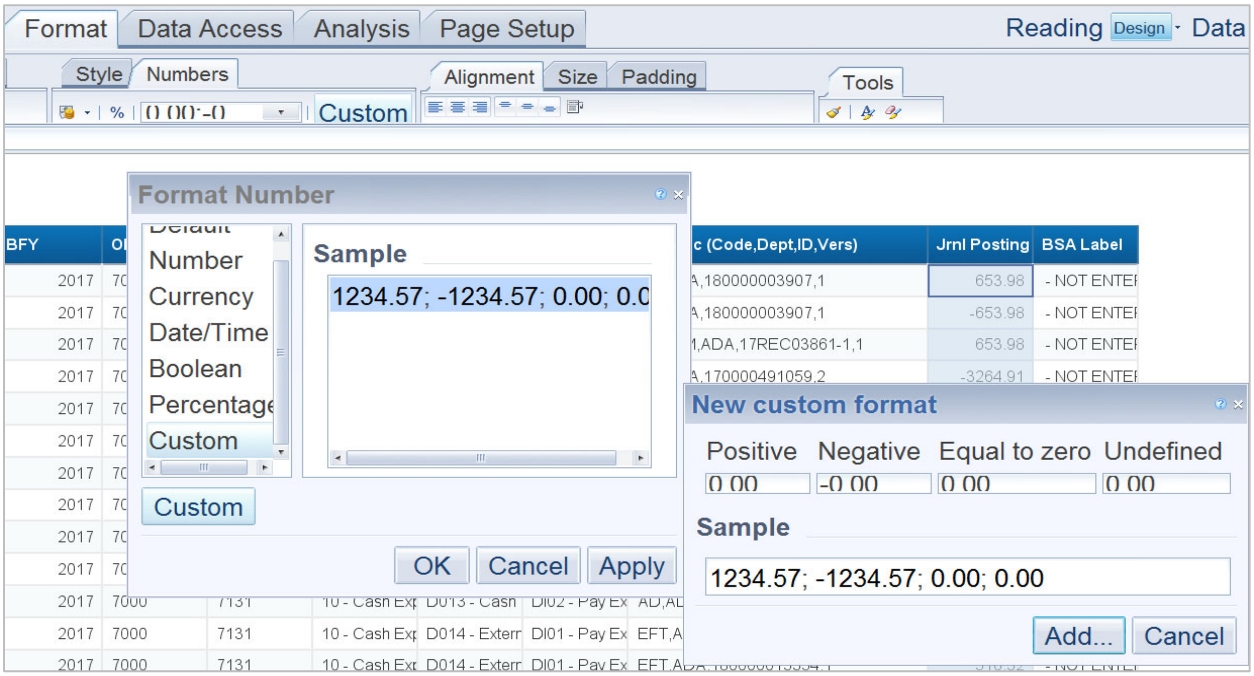


After these are in place, open Internet Explorer and navigate to the folder containing the report you want to work on. Right click on the report and select **Modify**.

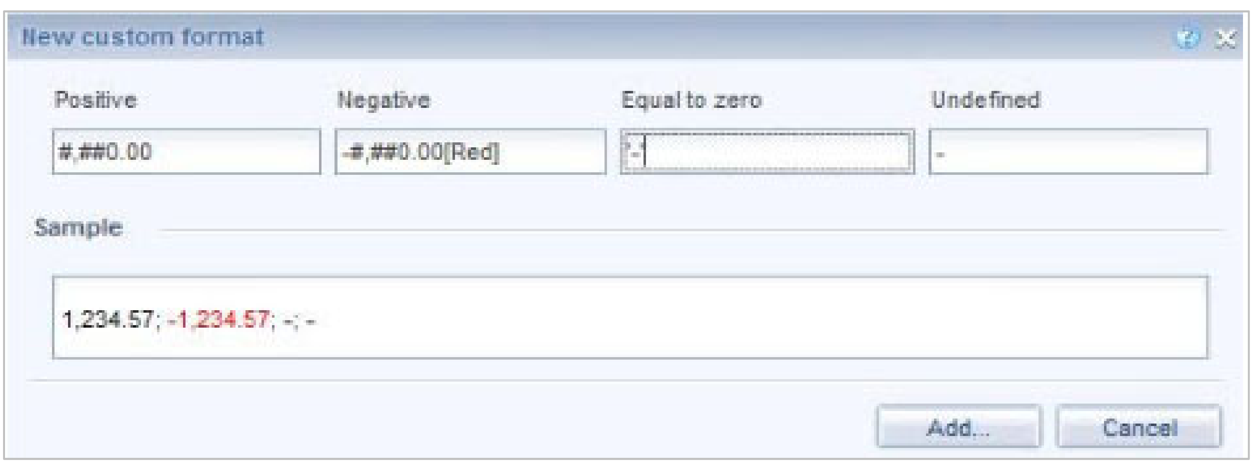


1. **Copy and save** a copy of the **CM-N502s** into your folder (this is necessary to have a version that is owned by your user ID - because users can only modify objects that they own)
2. Right click on the **report > Modify**
3. Click **Design**
4. In the report, click in one of the columns with numbers in it
5. Under **Design mode > Format > Numbers > Custom > Custom**

The number format in this report was custom made and is shown below.



6. Create a new custom format by editing as shown below **> Add > Apply**

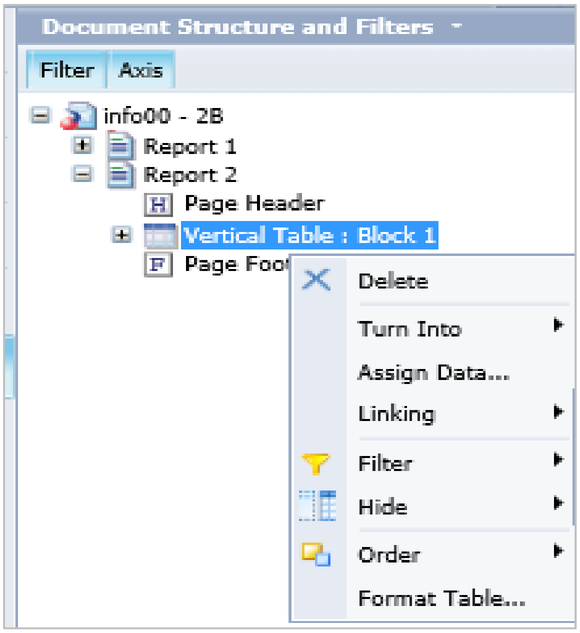


7. View the result in your report

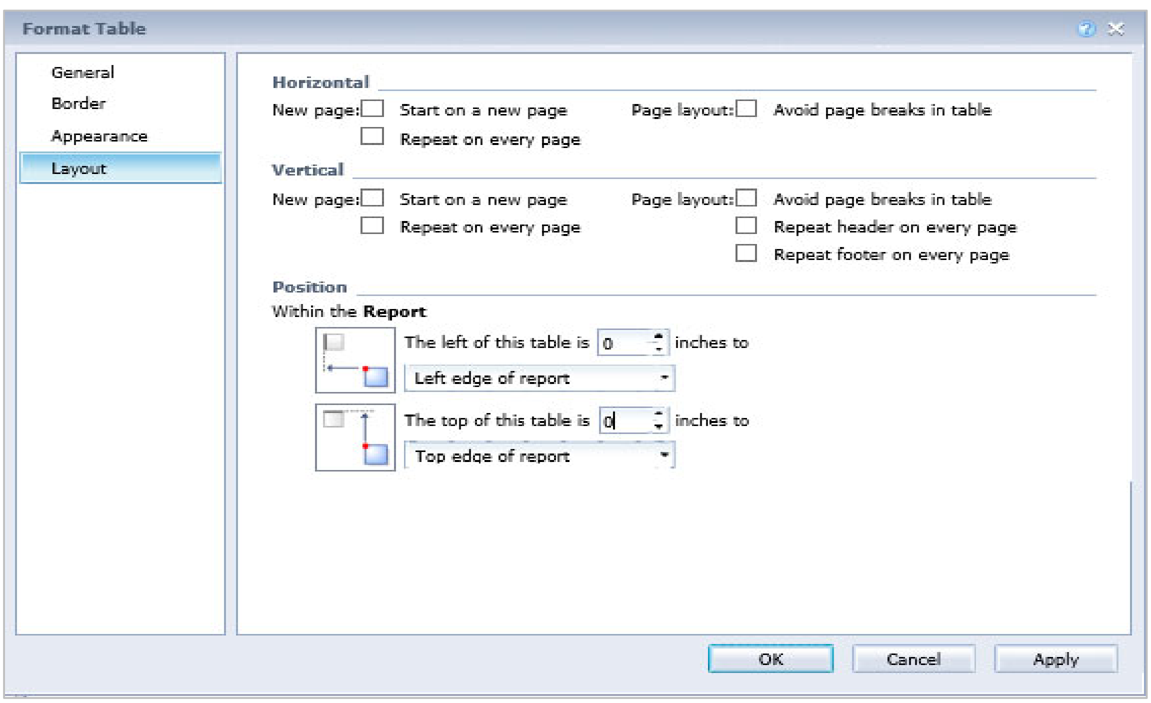
Other Useful Skills

Export to Cell A1 in Excel

1. In the report, Navigate to Document Structure and Filters > right click on **Vertical Table: Block 1 > Format Table >**



2. Select **Layout** and move the position within the report to 0 inches from the left edge of the report and 0 inches from the top edge of the **report > OK > Save**

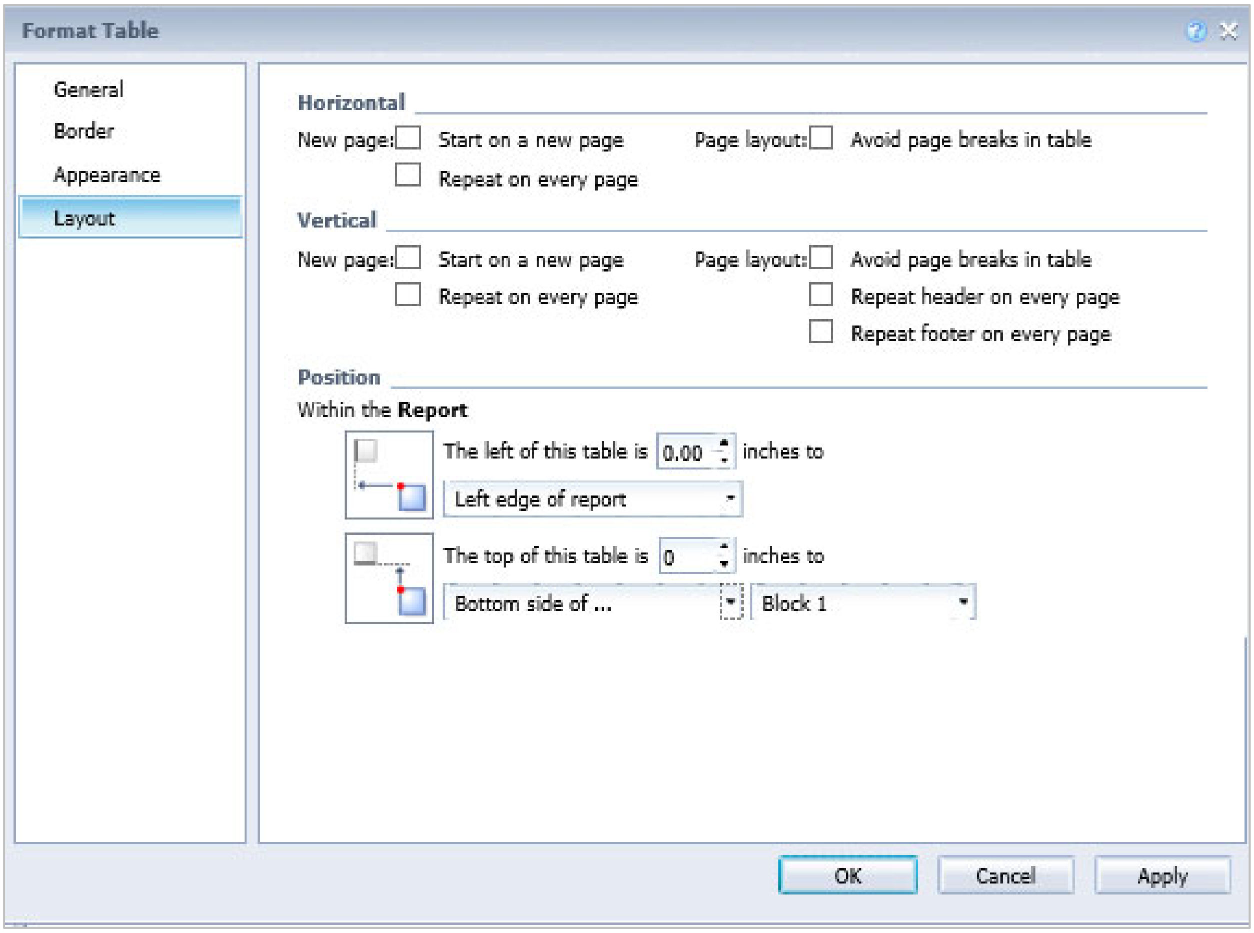


The report will export to cell A1 if exported to excel.

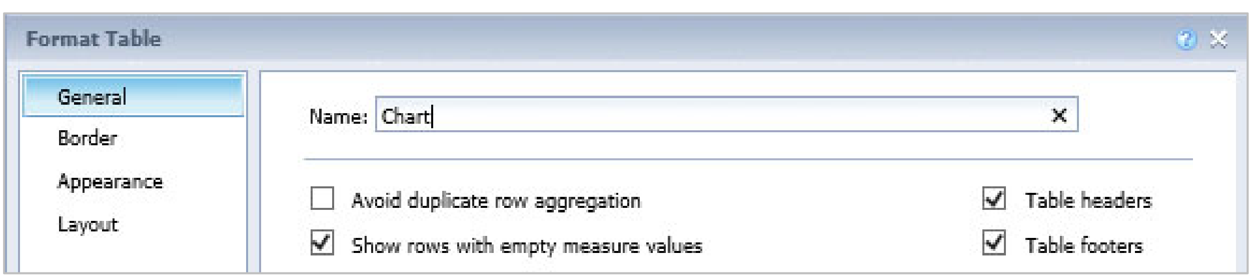
Create a Graph

Right click on the table created in **scenario 2B > Copy > Paste** (just below your current table).

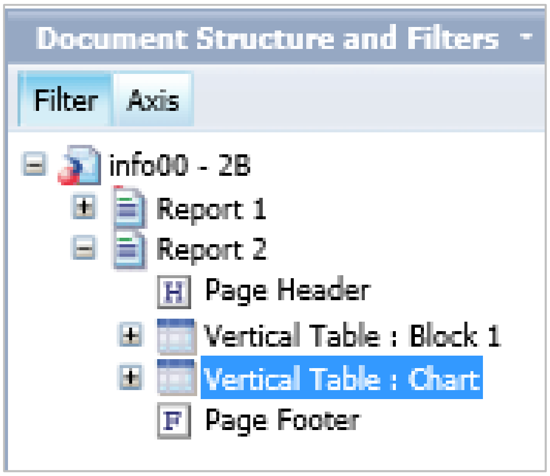
Move the new table using the instructions above (plus the changes shown below) to locate it exactly below the first one.



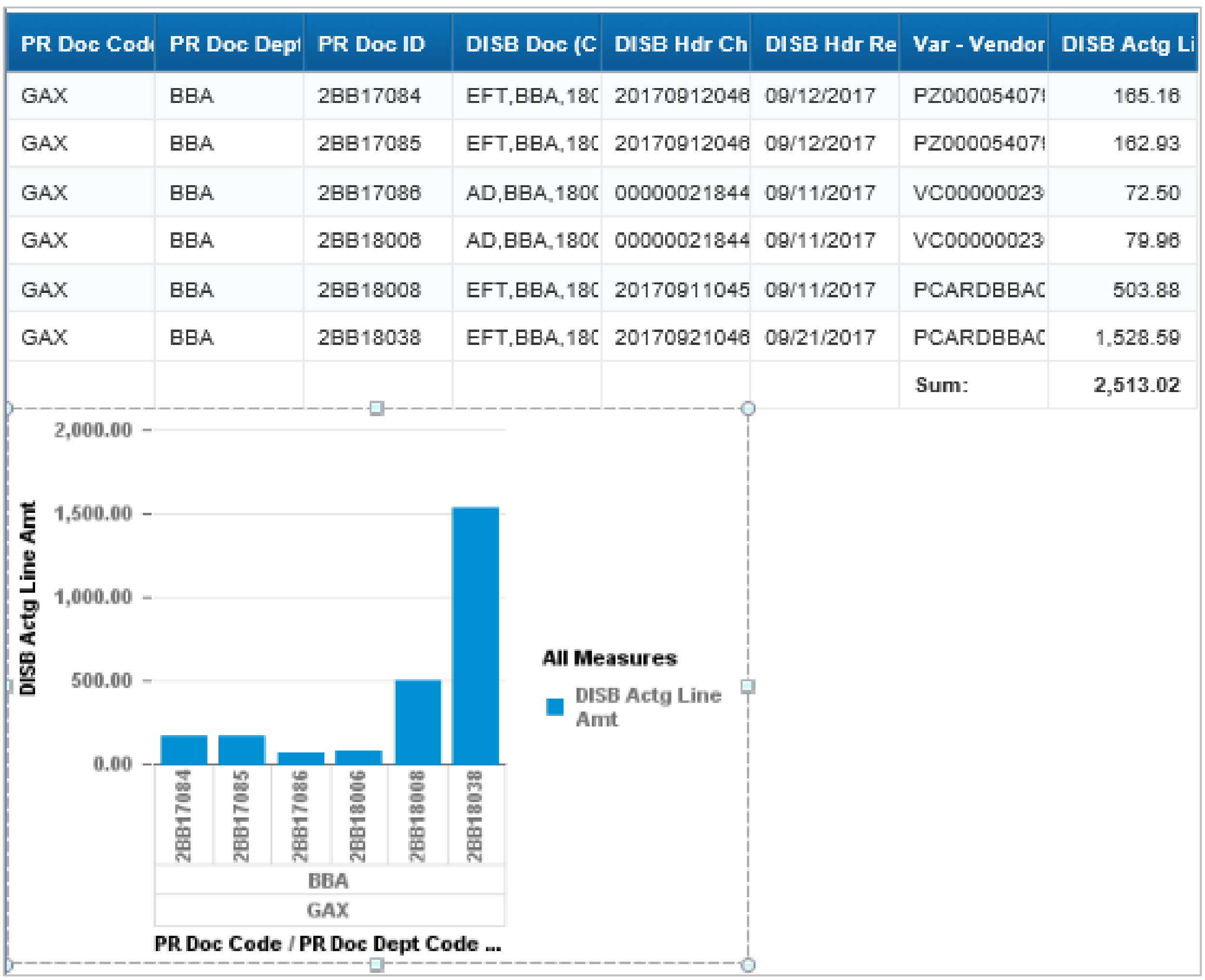
On the **General tab,** give the new table a name: **Chart > OK**



Notice the name showing under Document Structure and Filters.



Right click within the bottom table **> Turn Into > Column Chart**

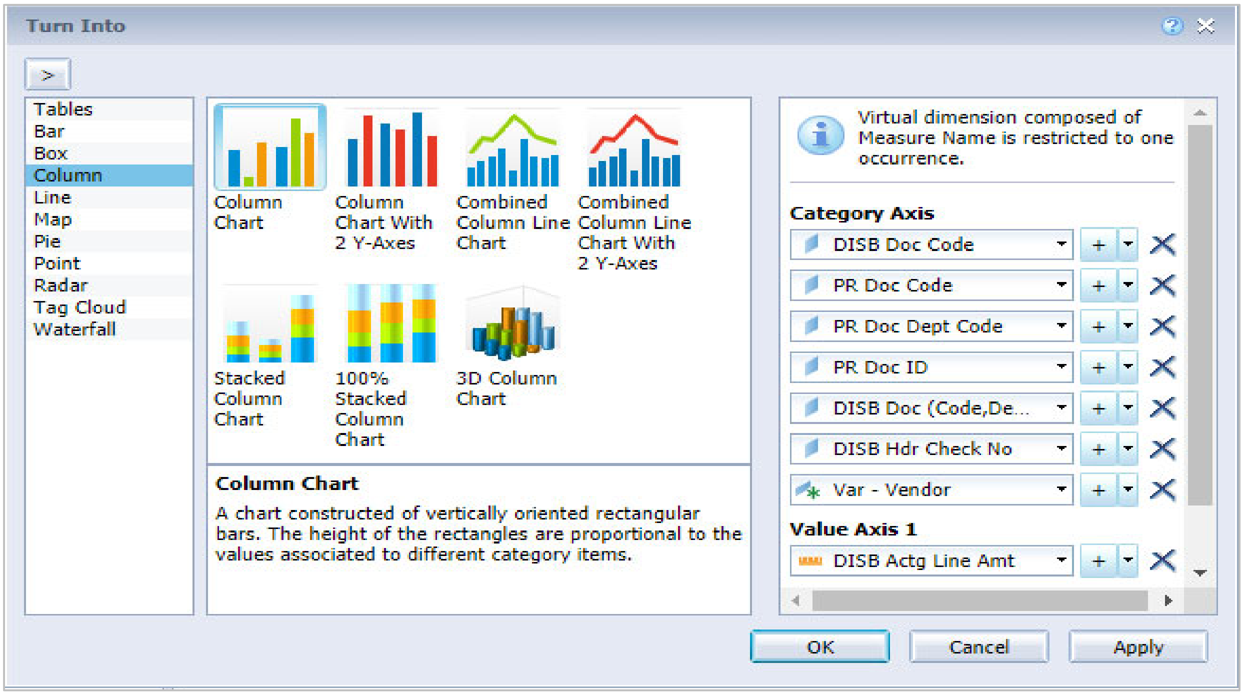


PR Doc Code	PR Doc Dept	PR Doc ID	DISB Doc (C	DISB Hdr Ch	DISB Hdr Re	Var - Vendor	DISB Actg Li
GAX	BBA	2BB17084	EFT,BBA,180	20170912046	09/12/2017	PZ00005407	165.16
GAX	BBA	2BB17085	EFT,BBA,180	20170912046	09/12/2017	PZ00005407	162.93
GAX	BBA	2BB17086	AD,BBA,1800	00000021844	09/11/2017	VC00000023	72.50
GAX	BBA	2BB18006	AD,BBA,1800	00000021844	09/11/2017	VC00000023	79.96
GAX	BBA	2BB18008	EFT,BBA,180	20170911045	09/11/2017	PCARDBBA	503.88
GAX	BBA	2BB18038	EFT,BBA,180	20170921046	09/21/2017	PCARDBBA	1,528.59
						Sum:	2,513.02

Right Click on the outermost border of the **chart > Format Chart.**

Many formatting options will appear in the window.

For more formatting options, Right – click on the graph > Turn into > More Transformations.

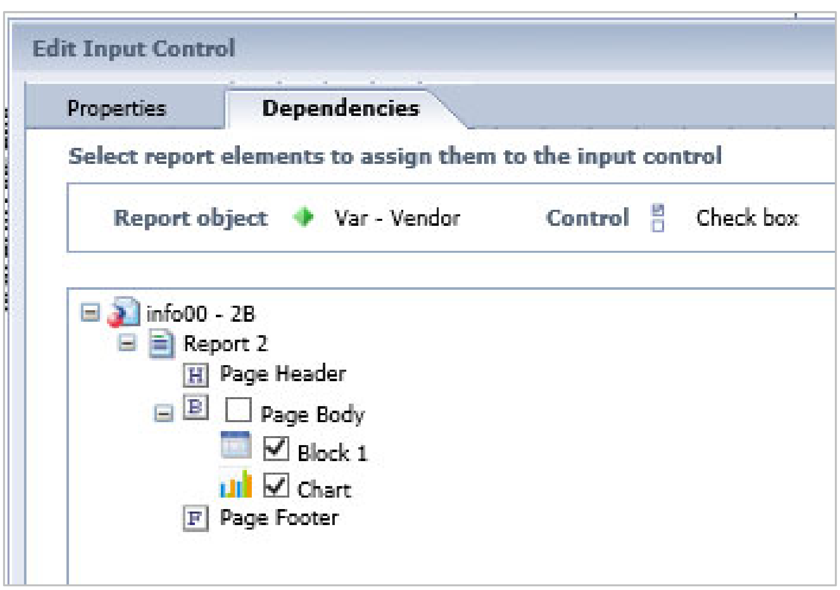


Add Input Controls to a Graph and the Related Table

Continuing with the example above, navigate to the **Input Controls**.

Select only **PCARDBBA0001.** Notice that this only changed the data in the table, but not the related chart.

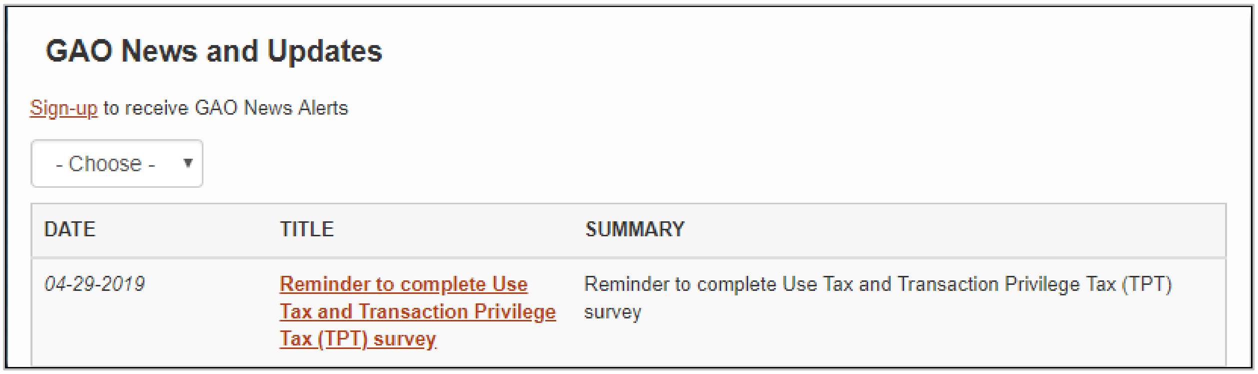
Place your cursor over the grey bar showing the name of the input control and select the wrench symbol that appears. Select the **Dependencies tab** > check the box just to the left of the word **Chart > OK**



Notice that the input control now effects both the chart and the table on this report.

General Accounting Office (GAO) Website

https://gao.az.gov/resources/news



GAO News and Updates

Sign-up to receive GAO News Alerts

- Choose -

DATE	TITLE	SUMMARY
04-29-2019	Reminder to complete Use Tax and Transaction Privilege Tax (TPT) survey	Reminder to complete Use Tax and Transaction Privilege Tax (TPT) survey

On the News and Updates page, be sure to register so that you are kept informed:

https://gao.az.gov/register-updates

ADOA-GAO
General Accounting Office

Google Custom

PUBLICATIONS AFIS PAYROLL / RASL FINANCIALS TRAVEL RESOURCES SYSTEMS TRAINING/EVENTS FEDERAL/COST ACCOUNTING

Register for Updates

Email Address *

First Name

Last Name

Agency

NON-STATE EMPLOYEE

EIN

Title

Work Phone Number Extension

E-Newsletter *

GAO eNewsletter

Also, check the Availability of infoAdvantage on the GAO home page: https://gao.az.gov/

Contact GAO with Report Requests or Suggestions

Statewide Reports – Reporting Incorrect Reports

Email GAO at **AFIS.Reports@azdoa.gov** and include the report name, location, prompts used and what is in error.

Statewide Reports – Suggestions for Improvements

Email GAO at **AFIS.Reports@azdoa.gov** with a copy of what is suggested.

Agency Reports – Requesting Creation of a New Report or Modify/Analyze an Agency Report

When custom reports are needed, and cannot be developed by the AFIS Report Developers within the agency, a Change Request can be submitted for the State's Report Developers to help create it.

1. Identify an existing report that is as similar as possible to the custom report.
2. Submit a sample of the report that you would like to be built.
3. Find the AFIS & TRIRIGA Change Control Form and the AFIS Change Request & Defect Resolution Procedures on the GAO Website at the following address: https://gao.az.gov/afis/afis-information
4. Submit your Change Request as indicated on the PDF fillable form.

Appendix: Answers to Review Questions

Test your Understanding (pg 8)

Answers

1. All fields in AFIS are also in infoAdvantage (**False**)
2. Report Developers have direct access to the Data Warehouse (**False**)
3. infoAdvantage will be available
   a. Daily at 6 am
   b. During regular business hours
   c. After successful weekly ETL run
   d. **After successful daily ETL run**

Test your Knowledge (pg 14)

Answers

1. I can delete reports created by other developers. **(False)**
2. Can GAO recover an accidentally deleted report that was developed in PROD? (**No)**
3. GAO will verify my report's accuracy before promoting to PROD. (**False)**

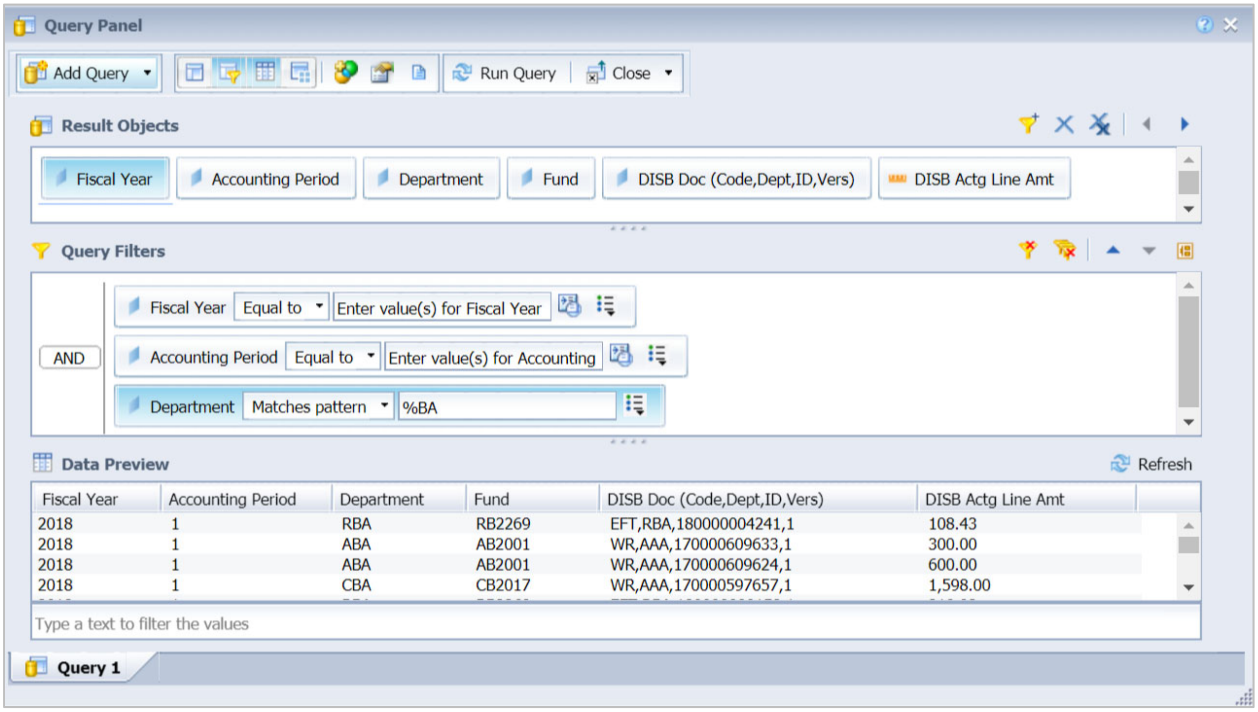
Test your Knowledge (pg 47)

Answers

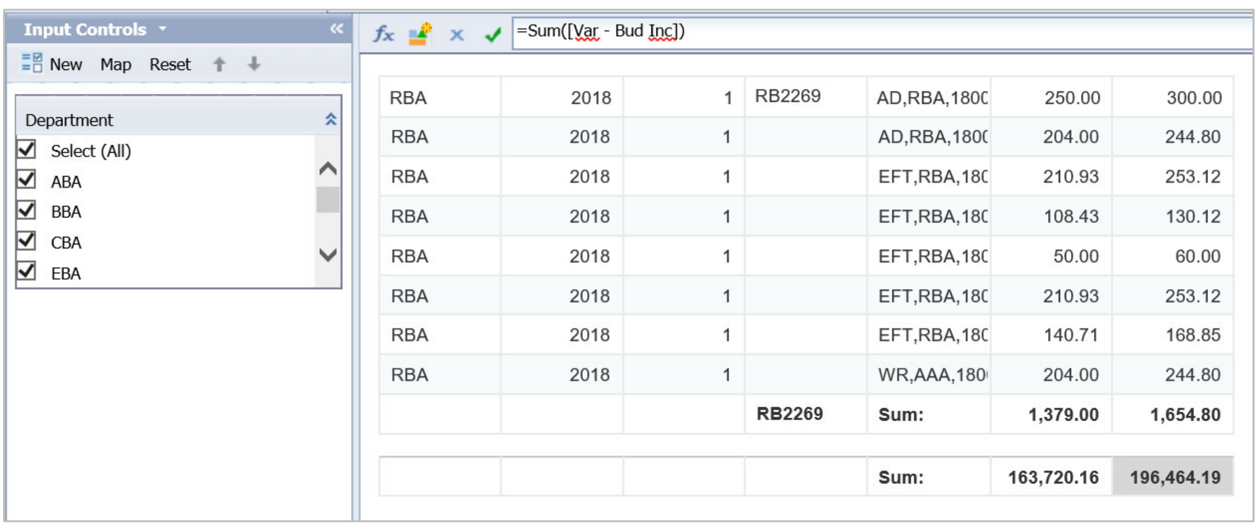
- All available objects will show in the report. (**False) – Objects are listed under Available objects, but are not necessarily placed in the report. For instance, some objects are included only to create joins.**
- Result objects that are not used in your report will not affect your report output. (**False) – All objects in result objects can affect report output. This is why it is best to include only necessary objects in the report design.**
- InfoAdvantage automatically saves after each change. **(False)**

Scenario - pg. 48

Query Panel with refresh for FY **2018** and APD **1** showing in Data Preview:



Last Page of Report with input control showing:



Test your Knowledge (pg. 49)

Answers

1. Use the Metadata Report for a crosswalk
   - From AFIS to infoAdvantage
   - From infoAdvantage to AFIS
   - **Both A and B**
2. Do all AFIS fields have a corresponding object available in infoAdvantage? **(No)**
3. Are all objects found in the Metadata report available for report development? **(No, some are hidden)**

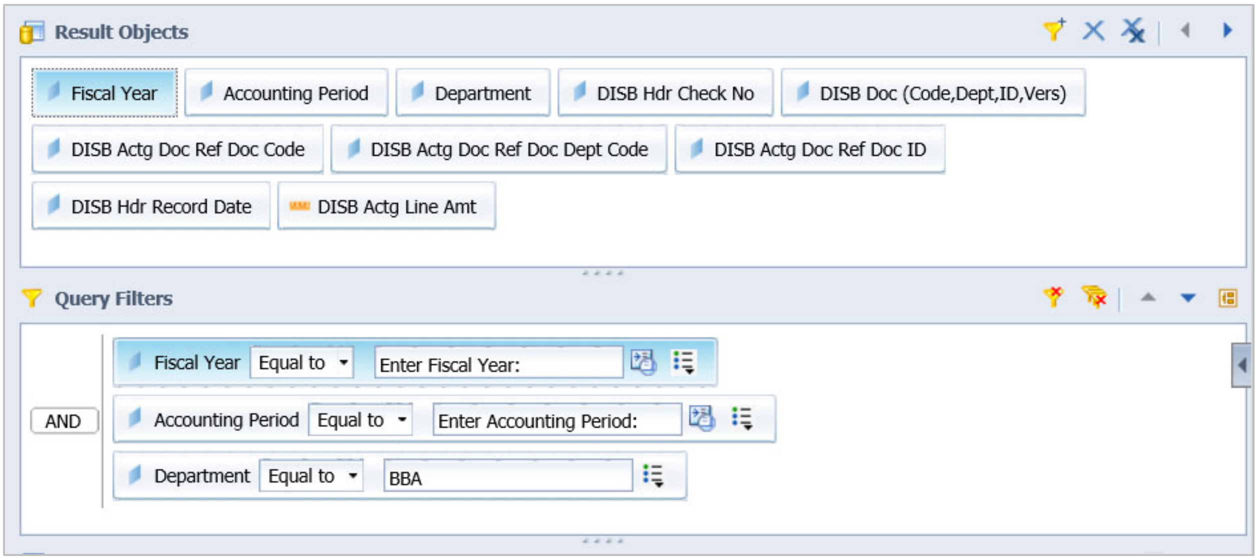
Test your Knowledge (pg 61)

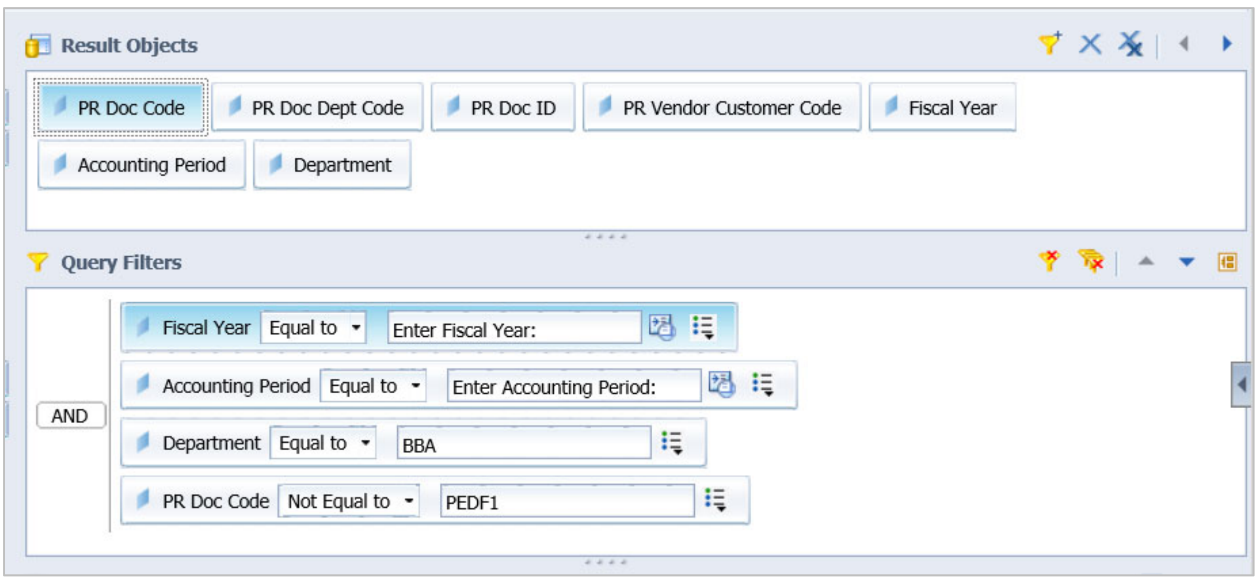
Answers

1. Filters can be found at four levels. **(True - Query, Report, Filter Bar, Input Control)**
2. All filters are visible after clicking the Document Structure and filters icon. **(False - Missing Query filters)**
3. Variables _____
   a. Are built by the report developer
   b. Are built into universes
   c. Allow vast customization possibilities
   d. **More than one of the above. Which ones A and C**

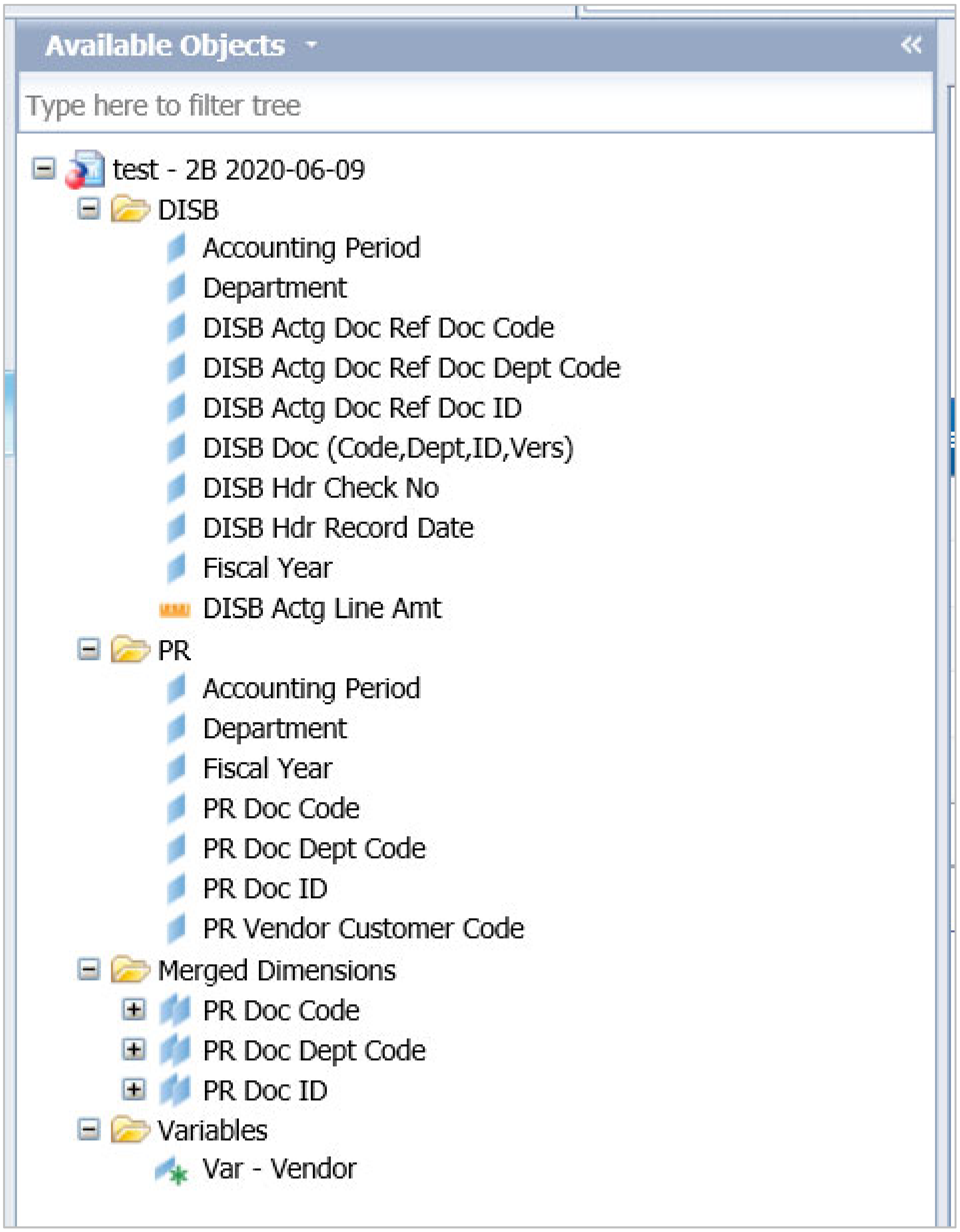
Scenario – pg. 61

Query Panel:

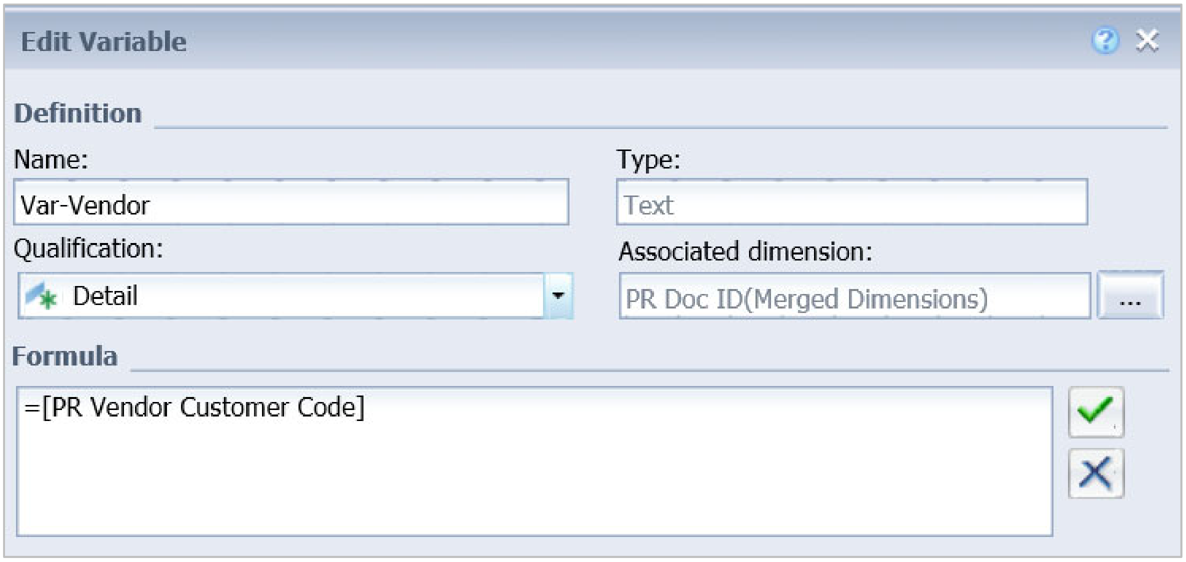




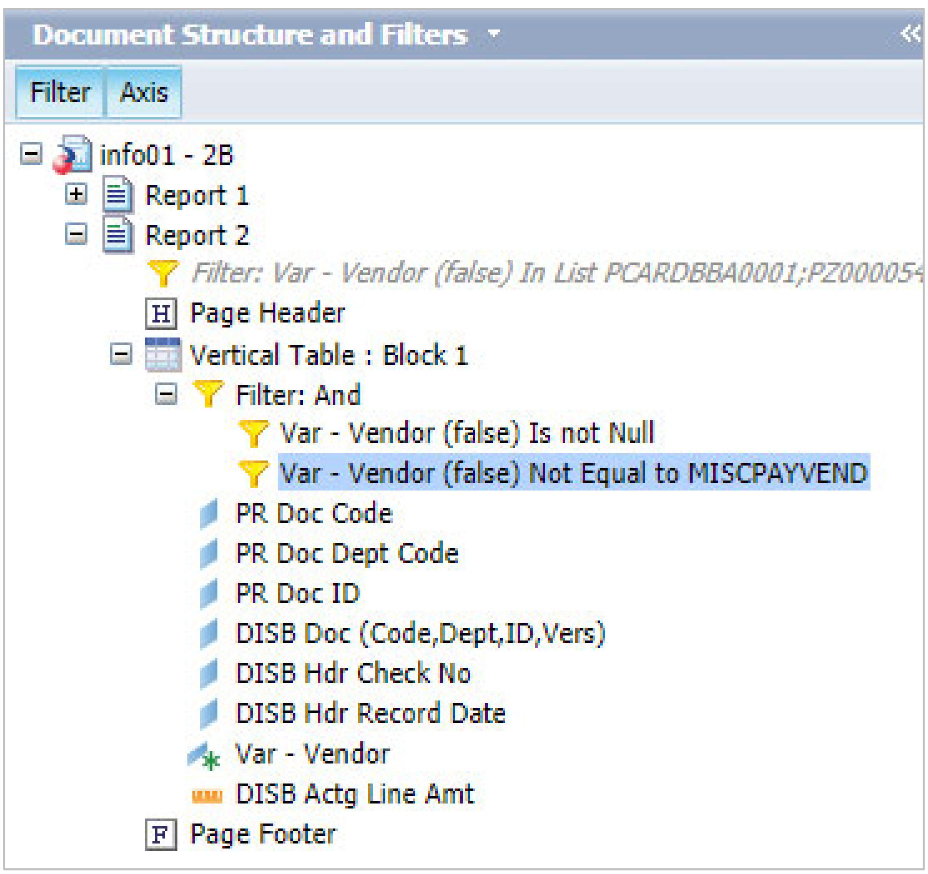
Available Objects:



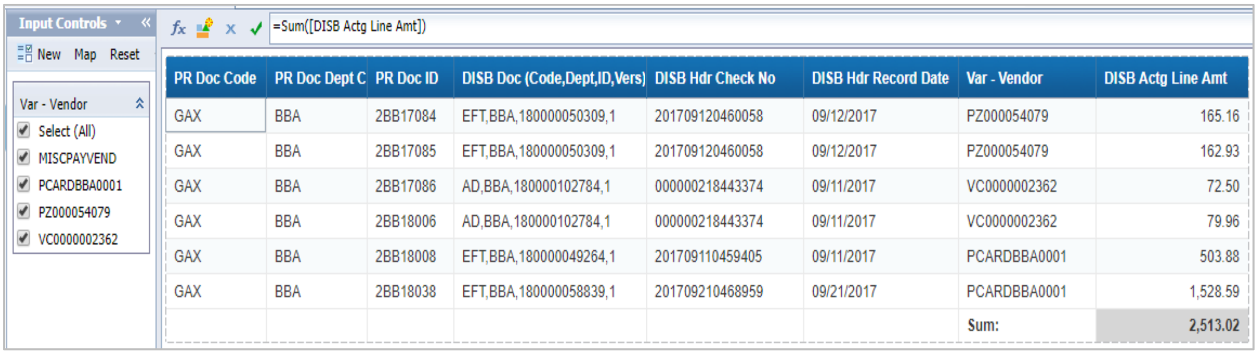
Variables:



Filters:



Report with input controls showing:

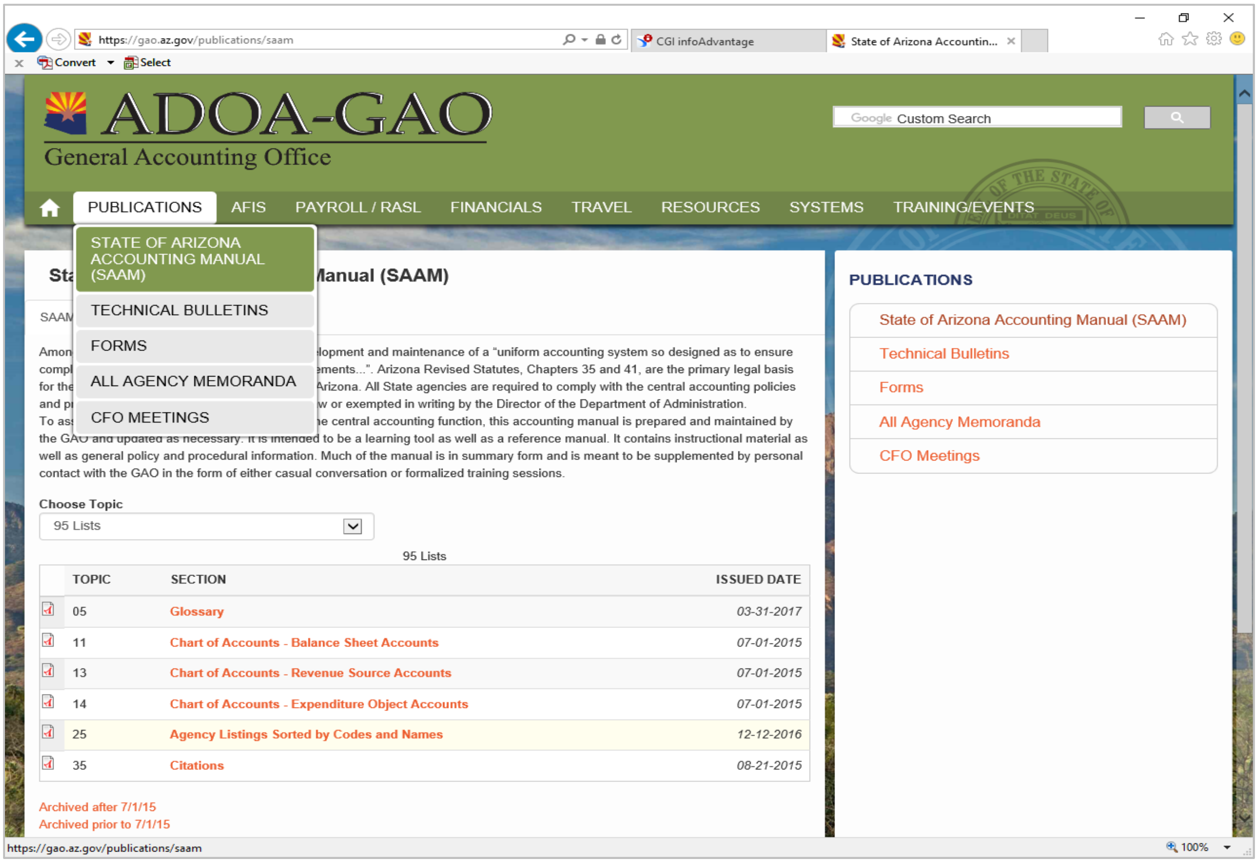


PR Doc Code	PR Doc Dept C	PR Doc ID	DISB Doc (Code,Dept,ID,Vers)	DISB Hdr Check No	DISB Hdr Record Date	Var - Vendor	DISB Actg Line Amt
GAX	BBA	2BB17084	EFT,BBA,180000050309,1	201709120460058	09/12/2017	PZ000054079	165.16
GAX	BBA	2BB17085	EFT,BBA,180000050309,1	201709120460058	09/12/2017	PZ000054079	162.93
GAX	BBA	2BB17086	AD,BBA,180000102784,1	000000218443374	09/11/2017	VC0000002362	72.50
GAX	BBA	2BB18006	AD,BBA,180000102784,1	000000218443374	09/11/2017	VC0000002362	79.96
GAX	BBA	2BB18008	EFT,BBA,180000049264,1	201709110459405	09/11/2017	PCARDBBA0001	503.88
GAX	BBA	2BB18038	EFT,BBA,180000058839,1	201709210468959	09/21/2017	PCARDBBA0001	1,528.59
						Sum:	2,513.02

Notice that the MISCPAYVEND still shows in the input controls even when it is filtered out by a report filter.

Chart of Accounts Information

Obtain useful information (Chart of Accounts) here: https://gao.az.gov/publications/saam



Developers will find many reports proving Chart of Account information in infoAdvantage here:

Public Folders > 1 – Statewide Reports > Profiles

	Title ▲
	OFIN-AZ-COA-N553 Activity by Department and Fiscal Year
	OFIN-AZ-COA-N554 Appropriations by Fiscal Year
	OFIN-AZ-COA-N555 Balance Sheet Accounts by Fiscal Year
	OFIN-AZ-COA-N556 Department Object by Department and Fiscal Year
	OFIN-AZ-COA-N557 Department Revenue Source Code by Department and Fiscal Year
	OFIN-AZ-COA-N558 Division(s) by Department and Fiscal Year
	OFIN-AZ-COA-N559 Function Inference(s) by Department and Fiscal Year
	OFIN-AZ-COA-N560 Function Listing by Department and Fiscal Year
	OFIN-AZ-COA-N561 Fund(s) by Fiscal Year

Users will also find useful COA information on the JACTGC page in AFIS. (including Closing Classification).

Reporting Universe Notes and Tips

Universe	Universe Description	Possible Reporting Uses	Limitations
FIN - Accounting Summary	Universe enables the summarized reporting of debit and credit activity and beginning and ending balances of nominal and real accounts for a given financial period.	1) Trial Balance reporting	1) Limited summary level information only - no document information; for further details, use General Accounting
		2) Reporting where an 'as of' beginning or ending balance is required along with summary activity for a specified fiscal period but not 'as of' a certain date	2) COA roll-up values represent what is currently in Advantage (not retained historically)
FIN - Accounts Payable	Universe enables the reporting of transactions related to Payments, Disbursement, Check Reconciliation, Intercepts and 1099 reporting. Reporting can be performed at the document and document line (accounting, vendor, commodity, etc.) levels. The universe does not contain encrypted bank account number information.	1) Payment and invoice performance tracking	1) PRs and referencing disbursements are not chained here; use Procurement Document Chain
		2) Check reconciliation	2) Only documents in Final and Historical (Final) phases
		3) Accrual management and analysis	3) COA roll-up values represent what is currently in Advantage (not retained historically)
		4) EFT usage	
		5) 1099 and 1042-S Reporting	
		6) Aged Open Payment Requests	
		7) Vendor intercepts and payment holds analysis	
FIN - Accounts Receivable	Universe enables the reporting of transactions of the governmental accounts	1) Reconcile receivables with cash deposited	1) Only docs in Final and Historical (Final) phases

	receivables function including revenue documents such as billed and unbilled receivables, cash receipts, collections, and write-offs. In addition, this universe enables the reporting of deposits, customer financial and credit history, and receivables billing setup.	2) Track payment performance of customers	2) COA roll-up values represent what is currently in Advantage (not retained historically)
		3) Aged open receivable analysis	3) Linking multiple document types requires multiple data providers; use Revenue Document Chain
FIN - Bond Registry	Universe enables the reporting of processing related to Debt Authorization, Debt Instrument, Debt Scheduling, Debt Cost and Accounting related to Authorization, Lender and Borrower of a Bond Instrument. Reporting can be performed at the Registry level, as well as at individual component level like Authorization, Instrument, Lender, Borrower, Schedule and Debt Cost level. Also, additional reporting capabilities have been provided for Call/Put Schedule related information on bonds.	1) Report on Bond Lender	1) No historical information retained on Bond Instrument.
		2) Report on Bond Borrower	2) Only Final and Historical Final documents available
		3) Report on Bond Schedules	
FIN - Budget Vs Actual	Universe enables the reporting of budget and accounting transactions that are associated with a budget (the posting codes for budget and accounting transactions must have either an Expense or a Revenue budget bucket ID associated). It also contains information from the accounting and budget	1) Budget Control and Monitoring	1) Accounting Journal postings are limited to Revenue and Expense; for all Accounting Journal postings, use General Accounting
		2) Budget vs. Actual Variance Analysis	2) All document postings & measures are final; use Pending Amounts for pending document postings

	journals. The reporting can be performed at the posting line level for both budget and accounting documents or summarized to the budget structure level.	3) Budget document tracking for given period	3) COA roll-up values represent what is currently in Advantage (not retained historically)
		4) Actuals document tracking against a budget structure	
FIN - Cash Summary		Report Cash Balances by Fund as of the end of a period	Unknown
FIN - Charge Documents	Universe deals with information pertaining to Accruals in Advantage Financials	1) Accrual document by department, BFY, and appropriation	1) Only info related to transactions involved in the accrual process; for charge documents used in Cost Accounting, use Cost Accounting
		2) Payment requests accrued but not cleared	2) Only documents in Final and Historical (Final) phases
		3) Manual accruals not yet fully cleared	3) COA roll-up values represent what is currently in Advantage (not retained historically)
FIN - Commodity Journal	Universe contains the Commodity Line details on the finalized documents that have commodity lines in Advantage Financial Procurement Business Function Universe.	1) List commodity based transactions by commodity code	1) No info related to non-commodity based documents
		2) Report on commodity based transactions by procurement folder	2) No accounting info; use General Accounting
		3) List inactive commodities	3) Only docs in Final and Historical (Final) phases
FIN - Cost Accounting	Universe enables the reporting of accounting events that are associated with a special purpose, such as a project or grant. Contains	1) Enables reporting of accounting events associated with a special purpose, such as a project or grant	1) Historical COA roll-up values are not captured for the transaction details in this universe

	cost accounting journal and ledger information and allows reporting to be performed at the posting line and debit/credit amounts levels. The cost accounting transactions with the baseline posting codes of C001, C002, and C003 are present in this universe along with all other general accounting posting codes.	2) Report based on the REIMHIST page in Advantage for such topics as expenditures by reimbursement and reimbursements for billed customers	2) COA roll-up values retained represent the current roll-up values defined in Advantage
FIN - Document Catalog	Universe enables the reporting of header, vendor, commodity and accounting line objects that are common amongst the document types for all documents in the document catalog. The universe is structured into classes for each of the document components and their respective sections. Within each section, the universe also contains sub-classes to support reporting on limited document specific objects for the following areas (and Doc Types), Procurement (RQ, PO,RC), Payment Request\Expense (ABS, PR), Disbursements (AD, MD, DC) Receivables and Cash Receipts (RE,CR), Journal Vouchers (JV), Fixed Assets (FA), Cost Accounting (CH), and Investments (IV).	1) Track document usage across departments	1) Most objects are restricted to data elements generic across document types; to report on data unique to certain documents, use the specific business-area universe (e.g., Accounts Payable)
		2) Document listings across business areas	2) Only docs in Final and Historical (Final) phases; for docs in other phases (e.g., Draft, Pending), use OFIN-Financial Document Catalog
		3) Reporting on document processing statistics for accepted documents	3) COA roll-up values represent what is currently in Advantage (not retained historically)
FIN - Fixed Asset Documents	Universe enables the reporting of information related to a Fixed asset document, including Intent documents, and responsibility center chart of account elements	1) List all the docs related to a specific FA	1) Limited info on the FA registry and no info on the FA journal; use Fixed Assets universes
		2) Display all FAs by responsibility center chart of accounts	2) Only docs in Final and Historical (Final)

		3) Report warranty expiration dates by fixed asset	3) COA roll-up values represent what is currently in Advantage (not retained historically)
FIN - Fixed Assets	Universe contains facts related to the Fixed Asset Registry, Fixed Asset Construction Program amounts, Fixed Asset Shell status and the Fixed Asset Journal. The universe also contains dimensions to support these facts. Measure objects such as asset-related dollar amounts and tracking dates are present in this universe.	1) List FAs by geographical location or classification	1) Does not contain extensive info on the docs involved in FA activities; use the Fixed Asset Documents universe
		2) Analyze FA depreciation over a specific period of time	2) COA roll-up values represent what is currently in Advantage (not retained historically)
		3) Display equity sources by FA component	
		4) Track shell generated FA information	
FIN - Future Document Triggering	Universe enables reporting on documents that are generated based on the type of trigger classified as: Reversals, Reclassifications and Recurring. It also allows reporting on the source documents used to generate the trigger documents. The universe is structured into classes for various details such as document information, dates, flags and document generating frequency information.	1) Research Documents for Reversals, Reclassifications, and Recurring Transactions	1) Only useful for reporting on future documents
		2) Research Source documents used to generate the trigger documents	
FIN - General Accounting	Universe enables the reporting of accounting transactions and postings processed in Advantage Financial. Contains general accounting journal and ledger information and allows reporting to be performed at the posting line and debit/credit amounts levels.	1) Expenditures vs. Revenue reporting to ensure that the two balance	1) Data attributes are limited to data posted to the Accounting Journal
		2) Transfers between funds and borrowing	2) COA roll-up values represent what is currently in Advantage (not retained historically)

		3) Cash inflow and outflow reporting	
FIN - General Accounting Documents	Universe enables the reporting of accounting based (i.e. non-commodity based) documents used for procurement and accounts payable accounting where commodity level detail is not needed or desired, and internal exchange transfer documents to collect information on two or more internal parties into a single document, usually entered by only one of the parties involved.	1) Track open external pre-encumbrances, encumbrances, out year contracts, accrued expenditures, payments out of balance sheets, and revenue refunds	1) Only info on accounting based documents; not suitable for reporting on commodity based transactions
		2) Track internal accounting activity (e.g., purchases, transfers, and loans) with or without a referenced pre-encumbrance or encumbrance	2) Only documents in Final and Historical (Final) phases
			3) COA roll-up values represent what is currently in Advantage (not retained historically)
FIN - Grants Tracking	Universe enables the detailed reporting of Grant opportunities. The Grant application, awards and close-out details along with alerts and Grant document status can be reported on through this universe.	1) Track grant activity	1) Only grant information available
		2) Track grant-related documents	2) Only documents in Final and Historical (Final) phases
FIN - Internal Costing	Universe enables the reporting of the Internal Costing functionality of Advantage that is built to track various types of non-expenditure costs, which may eventually be charged to accounting distributions.	Monitor Internal cost activity	1) Only internal cost documents in final and historical final phases available
			2) Chart of account roll-ups are the current roll-ups defined in the operational system. No historical values are retained.
FIN - Journal Voucher Documents	Universe enables the reporting of information related to Journal Voucher documents (document type JV) which record accounting	Track accounting adjustments, reversals, corrections, and other miscellaneous activities	1) Only contains JV document info
			2) Only documents in Final and Historical (Final) phases

	activities that cannot be accomplished with other documents or do not fit the business function of any other document.		3) COA roll-up values represent what is currently in Advantage (not retained historically)
FIN - Lease Registry	Universe enables the reporting of processing related to debt Authorization, Debt Instrument, Debt Scheduling, Debt Cost and Accounting related to Authorization, Lender and Borrower of a Loan Instrument. Reporting can be performed at the Registry level, as well as at individual component level like Authorization, Instrument, Lender, Borrower, Schedule and Cost level.	1) Reports concerning Lender	1) No retainage of historical Lease instrument information
		2) Reports concerning Borrower	2) Only documents in Final and Historical (Final) phases
		3) Reports on lease schedule	
FIN - Loan Registry	Universe enables the reporting of processing related to Debt Authorization, Debt Instrument, Debt Scheduling, Debt Cost and Accounting related to Authorization, Lender and Borrower of a Loan Instrument. Reporting can be performed at the Registry level, as well as at individual component level like Authorization, Instrument, Lender, Borrower, Schedule, and Cost level.	1) Reports concerning Lender	1) No retainage of historical Loan instrument information
		2) Reports concerning Borrower	2) Only documents in Final and Historical (Final) phases
		3) Reports on loan schedule	
FIN - Pending Amounts	Universe enables the reporting of transactions that are in Pending phase that may potentially increase or decrease Expense or Revenue buckets, This universe includes Expense measures (e.g. Pre Encumbered, Encumbered, Accrued expenses & Cash expenses)	Track pending amounts against expense budget or expected revenue	1) Only expense and revenue documents with a document phase of Pending
			--For documents in Final or Historical (Final) phase, use Budget vs. Actual or Document Catalog

	and Revenue measures (e.g. Billed Earned revenue, Collected revenue & Earned revenue).		--For other documents in Pending or Draft phase, user OFIN-Financial Document Catalog
			2) COA roll-up values represent what is currently in Advantage (not retained historically)
FIN - PR and Enc Aging	Universe enables point-in-time reporting of the aging of open encumbrance or payment request activities. Provides a subset of the Accounting Journal for encumbrances, payment request, and their respective liquidation postings.	1) Aged Open Encumbrances	1) Subset of JACTG for encumbrances, PRs, and their liquidations; for all JACTG postings, use General Accounting
		2) Aged Open Payment Requests	2) COA roll-up values represent what is currently in Advantage (not retained historically)
FIN - Procurement Card	Universe contains the Procurement Card transaction details. It contains objects associated with reporting of Procurement Card spending trends, Paid Procurement Card Transaction details and Unprocessed Procurement Card Activity details.	Monitor Payment Request	1) Excludes information in the procurement chain
		Research paid/unpaid transactions by P-card	2) No retainage of historical COA information (reporting is based on current roll-ups in the operational system)
		Activity analysis by COA element	3) Only documents in Final and Historical (Final) phases
FIN - Procurement Document Chain	Universe contains objects that facilitate Document Chain Reporting. The universe contains objects related to Requisition, Award, Retainage, Payment Request, and Disbursement. User can do document chain reporting starting at Requisition or	1) List chain of docs related to specific RQ and/ or award doc	1) Only basic info re RQ, award, PR, and disbursement docs
		2) Report on disbursements and cancellations for PR or award docs	2) No non-commodity RQ doc info from ABS doc with pre-encumbrance (GAP) sub-doc type

	Award documents. Disbursement table includes disbursement cancellation document; therefore, a report listing disbursement cancellation for Award or Payment Request can also be generated.		3) MA / blanket contract reference to the DO chain not captured here
			4) Only docs in Final and Historical (Final) phases
FIN - Revenue Document Chain	Universe enable the reporting of transactions of the government accounts receivables function including revenue documents such as billed and unbilled receivables, cash receipts, collections, and write-offs within a single data provider. In addition, this universe enables the reporting on billing profile set up for the customer along with other financial and bank details.	1) Track receivables written off	1) Only docs in Final and Historical (Final) phases
		2) Track receivables sent to collections	2) COA roll-up values represent what is currently in Advantage (not retained historically)
		3) Aged open receivable analysis	3) Only contains basic info about RE, CR, CL, and WO docs; use Accounts Receivable for more detailed info
FIN - Travel and Expense Management	Universe enables the reporting on information related to the travel documents, traveler and trip details. The reporting can be performed at the document and document line (Traveler, Trip detail, Accounting etc.) levels.	1)Track travel authorization or travel advance or travel expense reports	1) Only docs in Final and Historical (Final) phases
		2) Track trip detail information by trip id and traveler id	2) COA roll-up values represent what is currently in Advantage (not retained historically)
		3) Track travel expenses	
FIN - Treasury Accounting	Universe enable the reporting of transactions related to Cash Sweep, Investment Journal vouchers, Journal Voucher Cash Sweep, Investment Allocation Journal Vouchers, Pool Fund Cash Investment Earning and income allocation.	1)Track investment sweeps	1) Only docs in Final and Historical (Final) phases
			2) limited to basic information related to cash sweeps and investments
		2) Track investment income allocations	

OADM - Derived Universe		unknown	
OADM - Document Message	Universe contains dimensions related to document messages. When a document reports a message, the message is stored with details of the component and attribute that caused the message. Each message can be identified with message code, message text, severity, override level, and an explanation. Messages can be error messages, warnings or just informational messages.	1) Research documents with errors	Only contains documents with errors (not in final phase)
		2) Research users on documents with errors	
OADM - Security and Workflow	Universe is a collection of tables that relate to Advantage security	1) Research application security roles.	
		2) Research application workflow roles.	Only contains security and workflow information from the administration application tables.
		3) Report on security access.	
OFIN - Annual Close	Universe enables the reporting of the records which are going to be closed during the annual end. These records will be present in TEMP_FTDAD table of Advantage Financial. Records on this table are actual journal voucher accounting lines for the closing based on accounting entries that are currently in the input ledger to the chain, typically the Fiscal Year Details Ledger (LDGR_FYDAD)	Review and verify trial balance and accounts prior to annual close	Only contains Master closing object and revenue accounts
OFIN - Chart of Accounts with Fiscal Year		Identify Chart of Account elements in the operational system by fiscal year.	Unknown

OFIN - Cost Allocation		unknown	Unknown
OFIN - Data Assurance	Universe includes information from the Advantage Financial Operating system tables on which data assurance reports will be created. Only reporting columns will be exposed to the universe.	*to be used by GAO only	Unknown
OFIN - Financial Document Catalog	Universe enables the reporting of header, vendor, commodity and accounting line objects that are common amongst the document types for all documents in the document catalog to the online application database. The universe is structured into classes for each of the document components and their respective sections. Within each section, the universe also contains sub-classes to support reporting on limited document specific objects for the following areas (and Doc Types): Procurement (RQ,PO,RC), Payment Requests (ABS< PR), Disbursement (AD, MD,DC), Receivables and Cash Receipts (RE,CR), Journal Vouchers (JV), Internal Exchanges (IET), Charges (CH), Payrolls (PYRL), Inventory (CI, IA, OC, SN), and Investments (IV).	1) Research document usage 2) Research rejected and pending documents	Most objects are limited to data elements that are common to all document types.
OFIN - Fund Balance	Universe provides Inception-to-Date balance details for Balance Sheet, Cash Balance and Fund Balance.	unknown	Unknown
OFIN - Reimbursement	Universe includes allows user to report on reimbursement activities.	unknown	Unknown

OFIN - Travel and Expense Management	Universe enables the reporting on information related to the travel documents, traveler and trip details. The reporting can be performed at the document and document line (Traveler, Trip detail, Accounting etc.) levels.	1) Research by traveler the travel authorization, travel advance, travel expense information	1) Limited to Travel and Trip Detail documents: Excludes traveler details.
		2) Research detail travel information by trip id or traveler id	2) Lacks document workflow details
OFIN - VCC and VCM Documents	Universe enables the reporting of information related to the vendor/customer creation documents (VCC) and vendor/customer modification documents (VCM).	Track vendor/customer creation and updates	Limited to VCC and VCM documents
OPARM - Reporting Parameters	Universe contains parameters used by data warehouse reports. For example, Report Header is a configurable parameter that client can change the text and display on all reports.	unknown	Unknown
Univ Kernel - Accounting Journal	Universe includes the Accounting Journal and Cost Accounting Journal information from Advantage Financial. Only cost accounting transactions with the baseline posting codes of C001, C002, and c003 are present in universe.	Research activity posting to the Accounting Journal and/or Cost Accounting Journal	Limited to cost accounting transactions with posting codes C001, C002, and C003
Univ Kernel - Budget Vs Actual Measures	Universe includes predefined measures for budgeting and actual amounts for all budget structures and levels. The universe must be configured at installation time to match the budget structures defined in Advantage Financial	Report by pre-defined measurers related to budgets and related actual expenditures.	Must be configured at installation time
Univ Kernel - Chart of Accounts	Universe containing Chart of Account elements, sub-elements and roll-ups.	Research the chart of accounts available by Department.	Only current chart of account roll-ups in the operational system are available

Univ Kernel - Commodity	Universe contains dimensions related to the commodities, commodity groups, commodity details such as active indicator, fixed asset indicator, master agreement indicator as well as commodity related units of measure, and inventory warehouse. The information contained in the Commodity Universe is used in conjunction with Accounts Payable, Fixed Asset, Procurement and Inventory functionality.	Research commodity details and measures.	Limited to transactions posted with commodity information
Univ Kernel - Common Reference	Universe holds the objects associated with areas that are common over multiple infoAdvantage universes. The dimensions and detail objects in this universe define various global attributes such as User and Cited Authority information. No measure objects are present in this universe.	Research objects that are included in multiple universes.	Unknown
Univ Kernel - Document Catalog	Universe includes information related to the documents processed in Advantage Financial. Only documents in Final and Historical (Final) phases are represented in this universe	Research information on documents process to final phase.	Only docs in Final and Historical (Final) phases
Univ Kernel - GA Measures	Universe includes predefined measures for actual amounts for the accounting transactions. The universe must be configured at installation time to match the amounts in journals defined in Advantage financial.	Report on predefined measures pertaining to accounting transactions	Must be configured at installation time
Univ Kernel - Geographic Location	Universe includes information about geographic location set-up in Advantage Financial, such as country and state.	Report information by country or state	Unknown

Univ Kernel - Pend Actual Measures	Universe includes predefined expense and revenue measures for pending amounts. The universe must be configured at installation time to match the amounts in journals defined in Advantage Financial	Report on pending amounts by predefined expense and revenue measures	Must be configured at installation time
Univ Kernel - Procurement Reference Info	Universe holds dimension and fact objects associated with Procurement Folders and Procurement Documents. This universe holds classes and objects that define Procurement attributes such as Procurement Type, Procurement Complexity, Procurement Range, Free on Board, Shipping Method, Procurement Staff and Procurement Card. It also holds Procurement Completion Date, Procurement Complete Flag, Buyer, Manager, Buyer Team and Manager Team on the Procurement Folder.	Report on procurement folders and documents	Unknown
Univ Kernel - Time	Universe containing Time elements of Advantage 3.3 Financial.	Enables reporting by on calendar date, hour and second, month or year	unknown
Univ Kernel - Vendor	Universe includes information about the Vendors set-up in Advantage Financial.	Report on Vendor and Customer information	Unknown