

eMARS Reporting

MERGED QUERIES OVERVIEW

JANUARY 25, 2018

Merged Queries / Multiple Universes

Sometimes you will not be able to obtain all of the needed objects with a single query. You can create additional queries against the same universe or other universes. Often you will need to *merge* the queries for the data to display correctly.

For example, suppose you want a report showing both budget balances and accounting transactions (encumbrances, expenditures, etc.). Accounting transactions are on the Accounting Journal (in FIN-General Accounting); budget amounts are not. Also, queries for budget transactions are structured very differently than those for accounting transactions.

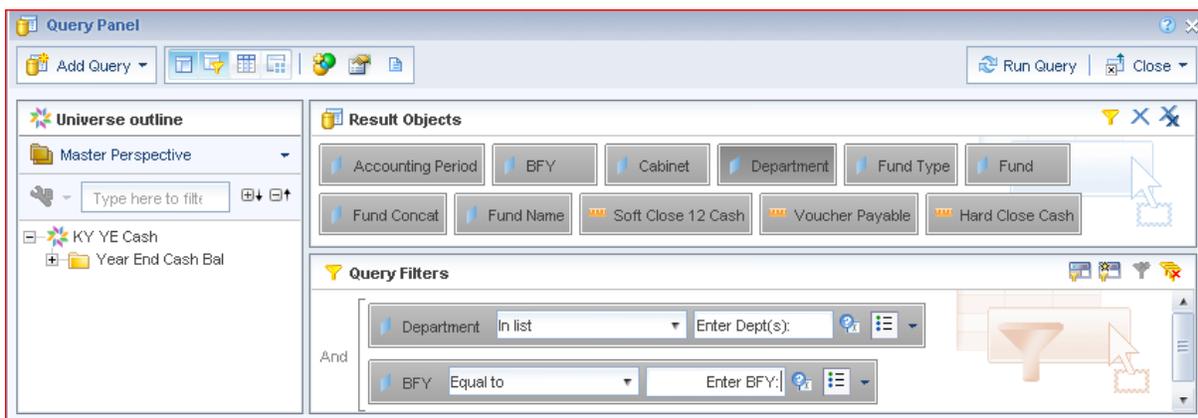
In cases like these you will want to create multiple queries and *merge* the results. In the example of a budget and accounting report, you would need one query to pull the budget transactions and another to pull the accounting transactions. To merge them, you would “link” or “join” the common Chart of Accounts (COA) elements between the two queries. Then you could create a report that contains all of the data in a single table.

Several potential issues can arise when merging data in cases like this:

- **The structure of data in one universe may be very different from that in the other universe.** For example, Budget Structure 3 (used in eMARS for Operational Budgets) is based on Cabinet, Fund Type, and Function Group – COA elements which are inferred (but not entered) for accounting transactions. This makes it difficult to display budget amounts, accounting totals, and budget balances in a way that can be easily interpreted. This issue can usually be resolved by creating formulas in variables in such a way as to make the data compatible.
- **The data from one universe may have to be pulled at a more detailed level than the data in the other universe in order to be meaningful.** This is similar to the issue above, but would be corrected differently in the report. One example of this situation is a Payroll report that combines KHRIS and eMARS data. In KHRIS, payroll is recorded for each Employee within Pay Period, and can be summarized by Department. In eMARS, the total Pay Period amounts for each Department are recorded against their respective budget lines (represented by a COA combinations), without Employee detail. In situations like this, it may be necessary to move objects to section headers in order to combine the data from the two queries. You may potentially need an extra table in the section (if there are objects that cannot be included in the table, and cannot be relocated to the section header).
- **The data retrieved by one merged query may include combinations of table objects not in the other query.** This can result in \$0.00 rows in your table for the query missing the combination, or it can cause data to be left out of your table completely. A good example of this situation is budgets established for which there are no accounting transactions (either because they are new or because they have no activity in the current BFY).

Simple Example Report with Merged Queries: Year-End Cash

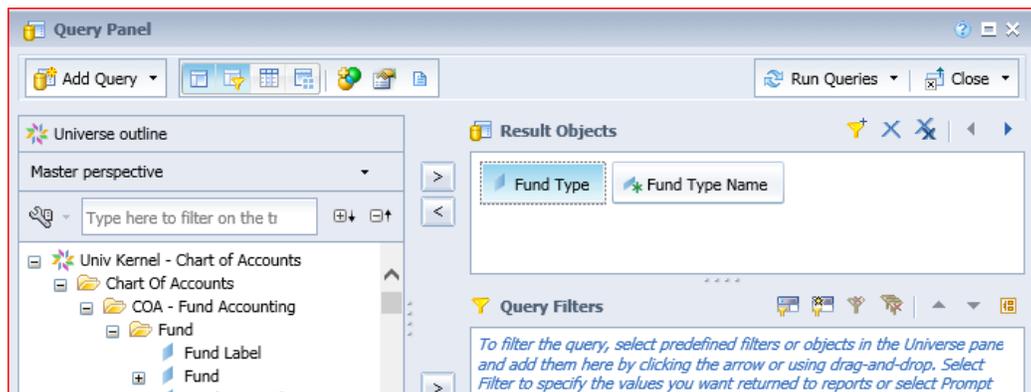
Perhaps the simplest example of a report for which you might merge queries is a Year-End Cash Report where you want to include the Cabinet and Department Names. The first query is straightforward enough: it pulls data from the **KY YE Cash** universe for all of the objects available in the universe, and it is filtered by Department and BFY.



Running this query yields a table providing the Year-End Cash balances for the specified Department(s) in the BFY.

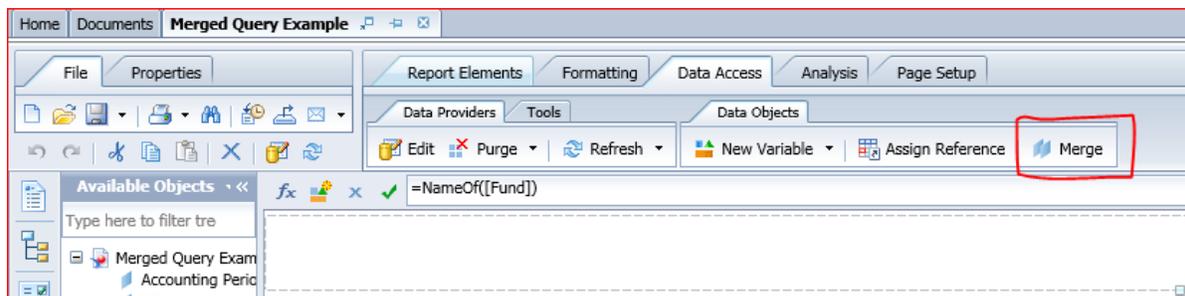
BFY	APD	Cab	Dept	Fund Type	Fund	Fund Name	Hard Close Cash
2016	13	39	785	1200	12FS	American Recovery and Reinvestment Act of 2009	0.00
2016	13	39	785	1300	132H	Finance Facilities Services Fund	1,548,728.02
2016	13	39	785	1300	132J	Finance Federal Surplus Fund	361,558.96
2016	13	39	785	1300	132K	Finance State Surplus Fund	615,297.01
2016	13	39	785	1400	14DV	Fin-Fm Hist Properties Fund	221,325.43
2016	13	39	785	1400	14S2	Sales Tax Fund	4,443.92
2016	13	39	785	3700	3700	Property Management Fund	12,537,287.12
2016	13	39	785	3700	37ZZ	FOR CAFR USE ONLY	0.00

As you can see, the **KY YE Cash** universe includes the Fund Name, but it does not include the Fund Type Name. That detail object is available in the **Univ Kernel-Chart of Accounts** universe. Using the “Add Query” button at the top of the Query Panel, you may choose this universe for the second query. This query only needs to include the BFY, Fund Type and Fund Type Name objects.

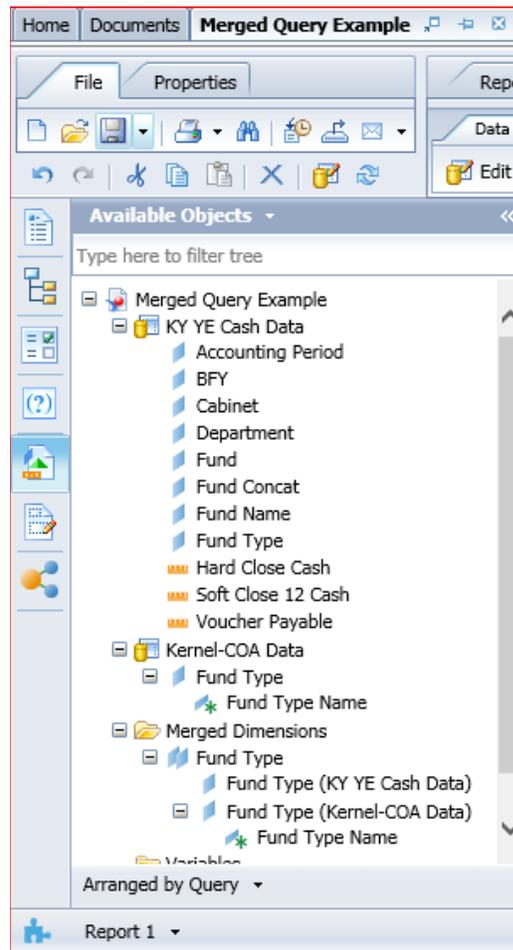
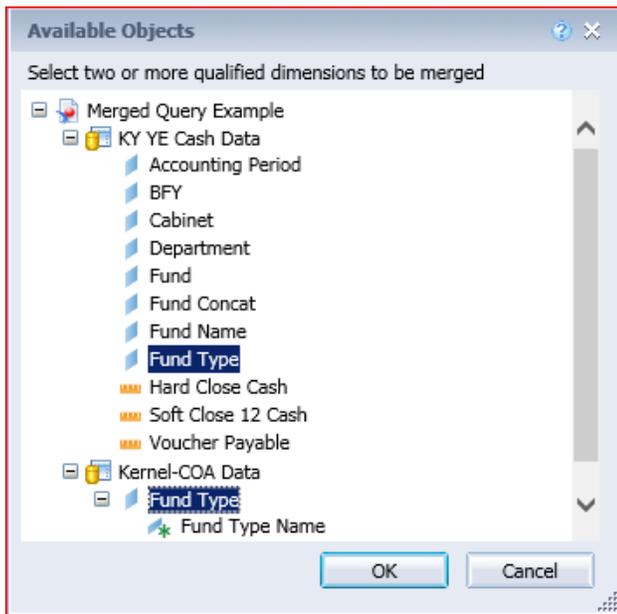


When the second query is ready, use the “Close” button at the upper left to “Apply Changes and Close” the window. (If prompted, choose “Include the result objects in the document without generating a table.”)

The next step is to merge the common objects in the queries. This option is available on the right side of the Data Objects section in the Data Access tab on the toolbar.



When you click the “Merge” button, a list of all objects in the two queries will be displayed. To merge the object from one query to the equivalent object in the second query, select the first object and hold the [Ctrl] key on your keyboard down while selecting the second object. With both objects selected, click **OK**. You will see the Available Objects list change to reflect the merged object. **Tip:** Use the dropdown below the list to arrange the objects “by Query”.



In the simplest cases, you will be able to include a detail object such as Fund Type Name in this example in your table with no further requirements. In other cases, you may have to take additional steps before including objects from your second query in your table. Examples of these additional steps include changing the formulas in your table to use the Merged Dimensions or defining detail variables for dimensions in your second query not included in the first query.

BFY	APD	Cab	Dept	Fund Type	Fund Type Name	Fund	Fund Name	Hard Close Cash
2016	13	39	785	1200	Federal Fund	12FS	American Recovery and Reinvestment Act of 2009	0.00
2016	13	39	785	1300	Agency Revenue Fund	132H	Finance Facilities Services Fund	1,548,728.02
2016	13	39	785	1300	Agency Revenue Fund	132J	Finance Federal Surplus Fund	361,558.96
2016	13	39	785	1300	Agency Revenue Fund	132K	Finance State Surplus Fund	615,297.01
2016	13	39	785	1400	Other Special Revenue Fund	14DV	Fin-Fm Hist Properties Fund	221,325.43
2016	13	39	785	1400	Other Special Revenue Fund	14S2	Sales Tax Fund	4,443.92
2016	13	39	785	3700	Property Management Fund	3700	Property Management Fund	12,537,287.12
2016	13	39	785	3700	Property Management Fund	37ZZ	FOR CAFR USE ONLY	0.00

Operational Budget Report – Start to Finish

This section follows the standard approach to report design detailed in “Basic Concepts” to create a report showing Operational Budget appropriation and allotment amounts (i.e., Budget Structure 3). Here is summary information about this report (following the conventions detailed in “Basic Concepts”):

Item	Name	Filters	Objects/Variables
Document	Operational Budget – Appropriation & Allotment Amounts		
Universe(s)	Budget Execution Universe - KY		
Query(s)	BE-KY Data	Cabinet filter = Prompt BFY filter = Prompt Budget Structure Id = 3 Budget Level Id = 2 Function Group = Prompt (optional) Function Type = Prompt (optional)	Filter objects (& names) Allotment Period Allotment Period Name Fund Type CAFR Fund Type Object Type Line Amount Signed Allotment Line Amount Signed
Report(s)	Appropriations Allotments For Export	Fund Type = “0100” table filter	Prompt variables Quarter dimension Amt-Approp measure Amt-Allot measure Cabinet section Fund Type section Function Group break

I. Query Design

- A. **Name the report and Save it** – The best universe for an Operational Budget report at this time is the Budget Execution Universe - KY universe. Since we need a query with at least one object in it to save our initial report, the first step is to create a query against Budget Execution Universe - KY.
 1. Drag the [Cabinet] and [Cabinet Name] objects (from COA-Organization > Organization-Centralized view) to Result Objects. Rename your query tab to “BE-KY Data”.
 2. Use the “Close” button to “Close and apply changes”. (This takes you to the Report Panel.)
 3. Click the “Save” button to save the report to your “My Favorites” folder with a meaningful name (such as “Operational Budget – Appropriation & Allotment Amounts”).
- B. **FIN-General Accounting universe query** – A report displaying only budget amounts does not require a query against FIN-General Accounting. When we look at a merged report for balances we will need to merge the query from this report with the one from the Encumbrance & Expenditure report.
- C. **Other universe queries** –Edit the BE-KY Data query, pulling the following objects:
 1. *COA - Fund Accounting class* – Pull the following objects:

Description	Sub-Class	Objects
Fund Type	Fund Fund Hierarchy	Fund Type Fund Type Name
CAFR Fund Type	Fund CAFR Fund	CAFR Fund Type CAFR Fund Type Name
Object Type	Object Object Hierarchy	Object Type Object Type Name

2. *COA – Organization class* – Pull the following objects:

Description	Sub-Class	Objects
Cabinet	Organization - Centralized view	Cabinet Cabinet Name

3. *Budget Structure class* – Pull the following objects:

Description	Sub-Class	Objects
Budget Structure ID		Budget Structure Id
Budget Level ID	Budget Level	Budget Level Id
Quarter Name	Allotment Option	Allotment Period Name

4. *Financial Reporting Periods*– Pull the following objects:

Description	Sub-Class	Objects
Budget Fiscal Year	Budget Fiscal Year	BFY

5. *Budgeting Journal class* – Pull the following objects:

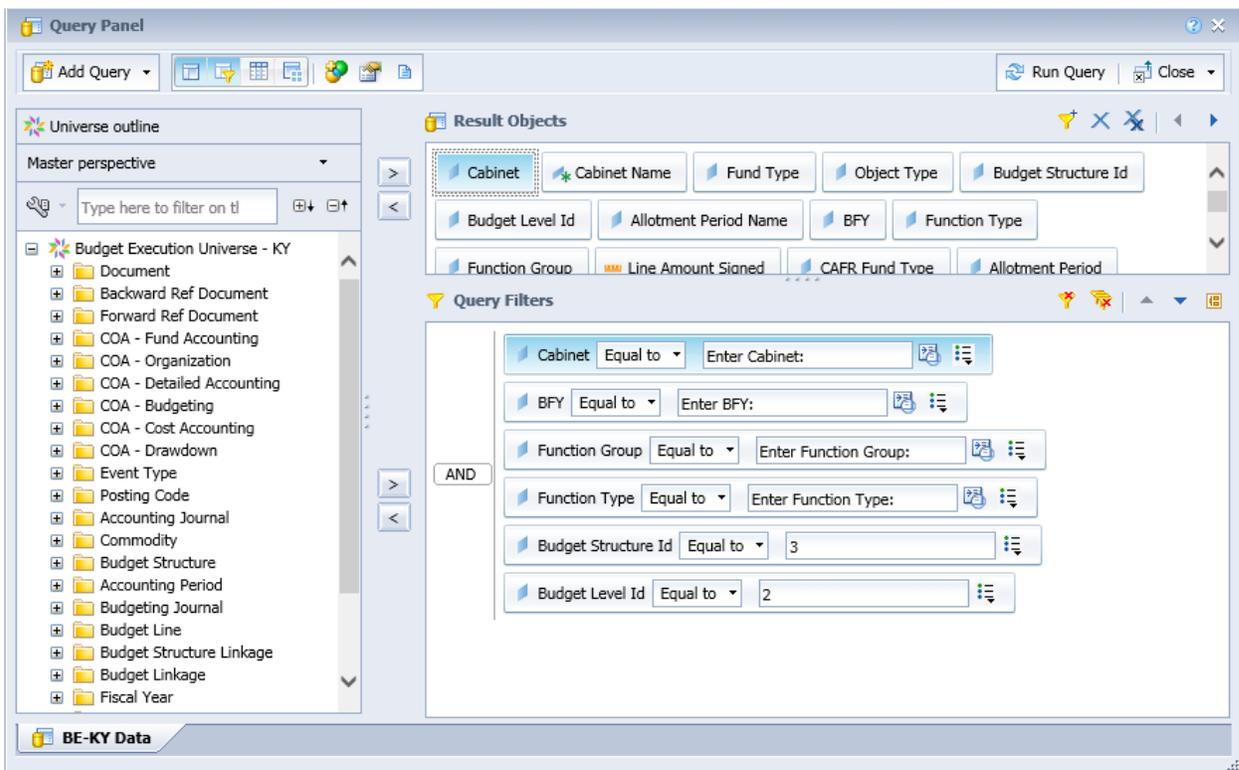
Description	Sub-Class	Objects
Appropriation Amount		Line Amount Signed
Quarter Number	Allotment Information	Allotment Period
Allotment Amount	Allotment Information	Allotment Line Amount Signed

6. *Query Filters* – Drag the following objects from Result Objects to Query Filters to create filters:

Object	Operator	Values	Optional?	Default Values
Cabinet	Equal to	Prompt: Enter Cabinet:	No	
BFY	Equal to	Prompt: Enter BFY:	No	2017 (or current BFY)
Function Group	Equal to	Prompt: Enter Function Group (optional):	Yes	
Function Type	Equal to	Prompt: Enter Function Type (optional):	Yes	
Budget Structure ID	Equal to	3		
Budget Level ID	Equal to	2		

7. *Prompt Order* – Open Query Properties and arrange the prompts in the order shown above.

D. **Save the report** – Once again, use the “Close” button and choose “Apply changes and close”, then save the report with the “Save” button.



II. Report Design – Refresh the report as needed while you design your report.

A. Default report design – Make the following changes to the generated report:

1. Delete the title box and the table block.
2. Rename the report tab from “Report 1” to “For Export”.
3. Save the report.

B. Add table block – Add the table block back as follows:

1. Hold your “Ctrl” key down while you select the following objects, then drag them into the report and arrange them in the following order (add “Name” objects as desired):

Objects for Table Block

Fund Type
Function Group
CAFR Fund Type
Line Amount Signed

Tip: For reports having only one query, the table is automatically created with the objects in the order in which you select them.

2. Format the table to set the position to the top of the page (i.e., Horizontal Position = 0, Vertical Position = 0).

C. Report & Table filters – For simplification, apply the following table filters (if you want other Fund Types, remove this filter once the report design is complete):

Object	Operator	Values
Fund Type	Equal to	0100

D. Report data & variables – Make sure the data is complete and totals are correct. **Tip:** A quick way to compare amounts within the report is to duplicate it, then add breaks and column totals.

1. To make the report easier to understand, create a measure variable named “Amt-Approp” and set it equal to [Line Amount Signed]. Replace [Line Amount Signed] in the table with [Amt-Approp], update the column heading, then save the report.
2. Spot-check the appropriation amounts in the table, comparing them with the Current Budget amounts on the eMARS inquiry page for Appropriations (BQ3LV1) for the BFY and CAFR Fund Type = “GNRL”.
3. Add [Function Type] to the table (after [Function Group]), then save the report. Compare the new amounts with the Current Budget amounts on the eMARS inquiry page for Allotments (BQ3LV2).
4. Create a dimension variable named “Quarter” and set it equal to [Allotment Period]. Add [Quarter] to the table (after [CAFR Fund Type]), then save the report.
5. Create a measure variable named “Amt-Allot” and set it equal to [Allotment Line Amount Signed]. Add [Amt-Allot] to the table (after [Quarter]), update the column heading, then save the report.
6. Compare the allotment amounts to the eMARS inquiry page for Quarterly Allotments (BQ3LV2, click the Allotments link at the bottom of the page).
7. Add [Object Type] to the table (after [Quarter]), then save the report. **Note:** At this stage, there will be no values in the Object Type column, since [Object Type] is only on Budget Level 3 and our query pulls for Budget Level 2.
8. As desired, format all numbers consistently (using “Numbers” options on the “Format” tab).
9. Right-click the report tab and choose “Duplicate Report”. Rename the new report “Allotments” and make it the first report tab.
10. Remove [Object Type] and [Amt-Approp] from the Allotments report.
11. Save the report.

- E. **Report headers and footers** – If you are not using a report template, create a header and a footer for the Allotments report tab according to the standards and conventions in use by your organization. Ideally, these should include the execution date and time for the report, the page number, the report title, and any prompts and responses from the query filters. (Refer to other Start to Finish sections for sample instructions and layout settings.) **Tip:** There are standard cells for all of this information. Select Report Element > Cell > Pre-defined in the toolbars to see a list of them.
- F. **Sections** – Once it is confirmed that the data is complete, create sections on [Fund Type] and [Function Group] by right-clicking on each column and choosing “Set as section”.
- G. **Breaks** – Create a break on [Function Type] by right-clicking the object column and choosing “Break > Add Break”. Whenever possible, create the breaks on objects as you want them to appear from left to right. This will ensure your table’s structure remains intact. Use the “Sum” button (under “Functions” on the “Analysis” tab) to add break totals. Use the “Numbers” options (on the “Format” tab) to format the totals consistently with the other numbers.
- H. **Totals** – Add standalone cells for section totals, and a Grand Total for the report. Use the “Numbers” options (on the “Format” tab) to format the totals consistently with the other numbers.
- I. **Other reports** – Copy the “For Export” report tab (or the “Allotments” report tab) to create additional reports named “Appropriations” and “Object Types” using the same queries and the formatting suggestions above. **Hint:** You will have to change your query to pull amounts from Budget Level 3 instead of Budget Level 2 to obtain amounts for by Object Type.
- J. **Save, review, correct, purge and publish**– Complete formatting the report according to standards and conventions for your organization. (If desired, remember to remove Fund Type = “0100” filter from report tables.) Normally, you would design this report for other users, so in addition to keeping a copy of the report in your “My Favorites” folder (or a sub-folder), you would put a purged copy in your Agency folder (or sub-folder). Remember, your Agency folder is under your cabinet number on the “Folders” tab under Public Folders > eMARS Financial > eMARS Agency Reports.

III. For Review and Discussion

- A. Why do allotment amounts disappear when pulling data from Budget Level 3 instead of Budget Level 2?
- B. Do you think it is safe to define appropriation amounts as a sum of allotment amounts?
- C. How would you develop a report to provide amounts at all three levels of the Budget Structure?

Merged Operational Budget Balance Report – Start to Finish

This section follows the standard approach to report design detailed in “Basic Concepts” to create a report merging the results of an Operational Budget query (Budget Structure 3) with the results of an Encumbrance/Expenditure query for the monitoring of budget balances. **Note:** This report does not include Capital Project funds, which use Budget Structure 43 for spending budgets. There is a separate “Start to Finish” section for a Capital Project budget balance report.

Here is summary information about this report (following the conventions detailed in “Basic Concepts”):

Item	Name	Filters	Objects/Variables
Document	Operational Budget – Balances		
Universe(s)	Budget Execution Universe – KY, FIN-General Accounting		
Query(s)	BE-KY Data	Cabinet filter = Prompt BFY filter = Prompt Budget Structure Id = 3 Budget Level Id = 2 Function Group = Prompt (optional) Function Type = Prompt (optional)	Filter objects (& names) Allotment Period Name Fund Type CAFR Fund Type Line Amount Signed
	FIN-GA Data	Cabinet filter = Prompt BFY filter = Prompt Function Group = Prompt (optional) Function Type = Prompt (optional) Closing Classification = 10;11;12	Filter objects (& names) Fiscal Quarter Fund Type CAFR Fund Type Jrnl Doc Code Jrnl Doc Dept Code Jrnl Doc ID Jrnl Record Date Jrnl Posting Amt
Report(s)	Appropriations Allotments For Export	Fund Type = “0100” table filter Jrnl Doc Code NotInList (AD;EFT)	Prompt variables Flag-Enc dimension Flag-Acc Exp dimension Flag-Cash Exp dimension Amt-Allot measure Amt-Enc measure Amt-Acc Exp measure Amt-Cash Exp measure Cabinet section CAFR Fund Type section Function Group break

IV. Query Design

- A. **Name the report and Save it** – Create the “BE-KY Data” query according to the instructions in the “Operational Budget Report – Start to Finish” section, but without [Allotment Period] or [Allotment Line Amount Signed]. Stop short of the “Report Design” steps. Save the results in your “My Favorites” folder with a meaningful name such as “Operational Budget – Balances”.
- B. **FIN-General Accounting universe query** – Using “Add Query” button (choosing the “From Universe” option), select the FIN-General Accounting universe to create the “FIN-GA Data” query as follows:
 1. *Chart of Accounts > COA - Fund Accounting class* – Pull the following objects:

Description	Sub-Class	Objects
Fund Type	Fund	Fund Type
	Fund Hierarchy	
CAFR Fund Type	Fund	CAFR Fund Type
	CAFR Fund	

2. *Chart of Accounts > COA – Organization class* – Pull the following objects:

Description	Sub-Class	Objects
Cabinet	Organization - Centralized view	Cabinet Cabinet Name

3. *Chart of Accounts > COA – Detailed Accounting class* – Pull the following objects:

Description	Sub-Class	Objects
Function Group	Function Function Hierarchy	Function Group Function Group Name
Function Type	Function Function Hierarchy	Function Type Function Type Name

4. *Financial Reporting Periods*– Pull the following objects:

Description	Sub-Class	Objects
Budget Fiscal Year	Budget Fiscal Year	BFY

5. *Posting Attributes class* – Pull the following objects:

Description	Sub-Class	Objects
Closing Classification	Posting Code	Closing Classification

6. *Accounting Journal class* – Because our query includes Document Numbers, we must use the Accounting Journal for our amounts. Pull the following objects:

Description	Sub-Class	Objects
Document Code	Jrnl Doc Identification	Jrnl Doc Code
Document Department Code	Jrnl Doc Identification	Jrnl Doc Department Code
Document ID	Jrnl Doc Identification	Jrnl Doc ID
Record Date	Jrnl Doc Dates	Jrnl Doc Record Date
Enc/Exp Amount	Jrnl Doc Amounts	Jrnl Posting Amt

7. *Query Filters* – Drag the following objects from Result Objects to Query Filters to create filters:

Object	Operator	Values	Optional?	Default Values
Cabinet	Equal to	Prompt: Enter Cabinet:	No	
BFY	Equal to	Prompt: Enter BFY:	No	2017 (or current BFY)
Function Group	Equal to	Prompt: Enter Function Group (optional):	Yes	
Function Type	Equal to	Prompt: Enter Function Type (optional):	Yes	
Closing Classification	In List	10;11;12 (= Encumbrances, Accrued Expenditures, Cash Expenditures)		

8. *Prompt Order* – Open Query Properties and arrange the prompts in the order shown above.

- C. **Other universe queries and merging** – No other queries are required for a budget balance report, but the BE-KY Data and FIN-GA Data queries must be *merged*:

- Before merging the queries in your report, use “Apply changes and close” to close the queries, and save the report. (Do not run the queries or refresh the report.) If asked, choose “Include the result objects in the document without generating a table”.
- In the “Data Access” tab, select the “Merge” button (in the “Data Objects” section).
- Holding down the “Ctrl” key on your keyboard, select [BFY] from each query, then click the “OK” button to merge those objects. (You will see the two query objects moved under a single “merged object” in the “Available Objects” list in the left panel.)

4. Select the “Merge” button again, hold down your “Ctrl” key, and choose the two [Cabinet] objects. Click the “OK” button to merge them.
5. Repeat for [Cabinet Name], [CAFR Fund Type], [Function Group], [Function Type], and [Fund Type].
6. At the bottom of the “Available Objects” list in the left panel, change “Arranged by:” to “Query” (from “Alphabetical Order”) to more clearly see which objects are merged.

D. **Save the report** – Save the report with the “Save” button.

I. **Report Design** – Refresh the report as needed while you design your report.

K. **Default report design** – Make the following changes to the generated report:

1. Delete the title box and the table block.
2. Rename the report tab from “Report 1” to “For Export”.
3. Save the report.

L. **Add table block** – Add the table block back as follows:

1. Drag the merged objects and the amount objects into the report and arrange them in the following order:

Objects for Table Block

BFY (merged object)
 Cabinet (merged object)
 CAFR Fund Type (merged object)
 Function Group (merged object)
 Function Type (merged object)
 Line Amount Signed
 Jrnl Posting Amt

Notice that the [Posting Amount] column shows \$0.00 (or no value at all) for most of the rows. This is because Cash Expenditures usually cancel out Accrued Expenditures, resulting in a net amount of \$0.00. **Note:** When objects are pulled from more than one query, they must be rearranged to obtain the desired order.

2. Format the table to set the position to the top of the page (i.e., Horizontal Position = 0, Vertical Position = 0).
3. Save the report.

M. **Report & Table filters** – For simplification, apply the following table filters (if you want other Fund Types, remove this filter once the report design is complete):

Object	Operator	Values
Fund Type (merged object)	Equal to	0100

N. **Report data & variables** – Make sure the data is complete and totals are correct. **Tip:** A quick way to compare amounts within the report is to duplicate it, then add breaks and column totals.

1. To make the report easier to understand, create a measure variable named “Amt-Allot” and set it equal to [Line Amount Signed]. Replace [Line Amount Signed] in the table with [Amt-Allot], update the column heading to “Allotment Amount”.
2. Save the report.
3. Spot-check allotment amounts in the table, comparing them with the Current Budget amounts on the eMARS inquiry page for Allotments (BQ3LV2) for the BFY and CAFR Fund Type = “GNRL”.
4. Create dimension variables to help break out the FIN-GA results using the following formulas:

Flag-Enc = If([Closing Classification]= “12”; “Yes”; “No”)
Flag-Acc Exp = If([Closing Classification]= “11”; “Yes”; “No”)
Flag-Cash Exp = If([Closing Classification]= “10”; “Yes”; “No”)

5. Save the report.
6. Create measure variables to break out the [Jrnl Posting Amt] values using the following formulas:

Amt-Enc = [Jrnl Posting Amt] Where ([Flag-Enc]= "Yes")

Amt-Acc Exp = [Jrnl Posting Amt] Where ([Flag-Acc Exp]= "Yes")

Amt-Cash Exp = [Jrnl Posting Amt] Where ([Flag-Cash Exp]= "Yes")

7. Save the report.
 8. Add [Amt-Enc], [Amt-Acc Exp], and [Amt-Cash Exp] to the table (after [Jrnl Posting Amt]). (Now you should be able to see how these variables break out the [Jrnl Posting Amt] value, and also why [Jrnl Posting Amt]=\$0.00 in most cases.)
 9. Update the column headings for the new amounts to "Encumbrances", "Accrued Expenditures", and "Cash Expenditures".
 10. Spot-check the new amounts against the corresponding amounts on the eMARS inquiry page for Allotments (BQ3LV2).
 11. Save the report.
 12. Create balance measure variables using the following formulas:

Amt-Unobl = [Amt-Allot]-[Amt-Enc]-[Amt-Acc Exp]-[Amt-Cash Exp]

Amt-Unexp = [Amt-Allot]-[Amt-Acc Exp]-[Amt-Cash Exp]
 13. Remove [Jrnl Posting Amt] from the table and add [Amt-Unobl] and [Amt-Unexp], renaming those columns "Unobligated" and "Unexpended", respectively. **Note:** [Amt-Unobl] corresponds to the "Unobligated" bucket on BQ3LV2, and [Amt-Unexp] as corresponds to the "Unexpended Accrued" amount (that is, it reflects the "Current Budget" less "Actual Expenses").
 14. Right-click the "For Export" report tab and choose "Duplicate Report". Rename the new copy "Allotment Balances" and make it the first report tab.
 15. Save the report.
- O. **Report headers and footers** – If you are not using a report template, create a header and a footer for the Allotments report tab according to the standards and conventions in use by your organization. Ideally, these should include the execution date and time for the report, the page number, the report title, and any prompts and responses from the query filters. (Refer to other Start to Finish sections for sample instructions and layout settings.) **Tip:** There are standard cells for all of this information. Select Report Element > Cell > Pre-defined in the toolbars to see a list of them.
- P. **Sections** – Follow these steps to create sections on [Cabinet] and [CAFR Fund Type]:
1. Right-click the Cabinet column and choose "Set as section".
 2. Replace the function in the Cabinet section cell with:

= "Cabinet: "+[Cabinet]+ " – "+ [Cabinet Name]
 3. Right-click the CAFR Fund Type column and choose "Set as section".
 4. Replace the function in the CAFR Fund Type section cell with:

= "CAFR Fund Type: "+[CAFR Fund Type]
 5. Format the cells for each section using Ariel 10pt black bold font, and adjust the widths. **Tip:** You can format both cells at once by holding down your "Ctrl" key while selecting them.
 6. Use the Document Structure and Filters tab in the left panel to navigate to the Cabinet section. Right-click it and choose "Format section...".
 7. In the "Layout" section of the "Format Section" window, set the Relative Position of the table to the upper left corner of the section: Horizontal Position = 0, Vertical Position = 0.
 8. Repeat the previous two steps for the CAFR Fund Type section, the Cabinet cell, and the CAFR Fund Type cell. **Tip:** When setting the position of the cells, choose "Format cell..." instead of "Format section...".

- Q. **Breaks** – Create a break on [Function Group] by right-clicking the object column and choosing “Break > Add Break”. Use the “Sum” button (under “Functions” on the “Analysis” tab) to add break totals. Use the “Numbers” options (on the “Format” tab) to format the totals consistently with the other numbers.
- R. **Totals** – If desired, add totals for the Cabinet section and Grand Totals for the report. Refer to the “Capital Project Report – Start to Finish” section for details.
- S. **Other reports** – Follow these steps to create a “Documents” report tab containing document data:
 1. Select the “For Export” report tab.
 2. Add the following objects to the table (after the amount columns):

Objects for Table Block

Jrnl Doc Code
 Jrnl Doc Dept Code
 Jrnl Doc ID
 Jrnl Doc Record Date

3. Save the report.
4. Right-click the “For Export” report tab and choose “Duplicate report”. Name the new report tab “Documents” and make it the second tab in the document.
5. In the “Documents” report tab, follow these steps to organize the data:
 - a. Move [Jrnl Doc Code] so that it appears after [Function Type].
 - b. Move [Jrnl Doc Dept Code], and [Jrnl Doc ID] so that they are after [Jrnl Doc Code].
 - c. Remove [Allotment Amount], [Amt-Unobl] and [Amt-Unexp] from the table, since they have no meaning when looking at document data.
 - d. Remove [Fund Type] from the table since it duplicates the [CAFR Fund Type] information.
 - e. Save the report.
 - f. Right-click [Cabinet] and select “Set as Section” to create a section.
 - g. Replace the function in the Cabinet section cell with:

=“Cabinet: “[+][Cabinet]+ “ – ”+ [Cabinet Name]
 - h. Right-click the CAFR Fund Type column and choose “Set as section”.
 - i. Replace the function in the CAFR Fund Type section cell with:

=“CAFR Fund Type: “[+][CAFR Fund Type]
 - j. Format the cells for each section using Ariel 10pt black bold font, and adjust the widths. Tip: You can format both cells at once by holding down your “Ctrl” key while selecting them.
 - k. Save the report.
 - l. Use the Document Structure and Filters tab in the left panel to navigate to the Cabinet section. Right-click it and choose “Format section...”.
 - m. In the “Layout” section of the “Format Section” window, set the Relative Position to the upper left corner of the section: Horizontal Position = 0, Vertical Position = 0.
 - n. Repeat the previous two steps for the CAFR Fund Type section, the Cabinet cell, and the CAFR Fund Type cell. Tip: Choose “Format cell...” instead of “Format section...” for cells.
 - o. Save the report.
 - p. Create a break on [Function Group] by right-clicking the object column and choosing “Break > Add Break”. Use the “Sum” button (under “Functions” on the “Analysis” tab) to add break totals. Use the “Numbers” options (on the “Format” tab) to format the totals consistently with the other numbers.
 - q. Add section totals and grand totals as desired.
 - r. Save the report.

6. Add the following objects to the “For Export” report tab table to complete your report design:

Objects for Table Block

Fund Type (after Cabinet)
CAFR Fund Type (merged object)
Function Group (merged object)
Function Type (merged object)
Line Amount Signed
Jrnl Posting Amt

- T. **Save, review, correct, purge and publish**– Complete formatting of your report tabs according to the standards and conventions for your organization. (If desired, remember to remove the Fund Type = “0100” filter from your report tables, otherwise you will not see the other Fund Types.) Normally, you would be designing this report for other users, so in addition to keeping a copy of the report in your “My Favorites” folder (or a sub-folder), you would want to put a purged copy in your Agency folder (or sub-folder). Remember, your Agency folder is under your cabinet number on the “Folders” tab under Public Folders > eMARS Financial > eMARS Agency Reports.

II. For Review and Discussion

- A. Does this report provide the information needed to manage the Operational Budgets for your agency?
- B. What report tabs might you create to help meet the needs of your agency, using only the existing data?
- C. Which is more useful to you: “Unobligated”, “Unexpended Cash”, or “Unexpended Accrued”? Why?