

Grant Balance Report – Start to Finish (Combined Union Query)

This section follows the standard approach to report design detailed in “Basic Concepts” to create a report merging the results of a Grant Budget query (Budget Structure 39) with the results of Cash Expenditure and Charges query for the monitoring of grant balances. **Note:** Revenue Credits are not included in this report design. Revenue Credits do affect grant budget balances, but they are relatively infrequent. Contact an eMARS Reporting system administrator if you need assistance to include Revenue Credits in your report.

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

Item	Name	Filters	Objects/Variables
Document	Grants – Balances		
Universe(s)	Budget Execution Universe – KY, FIN-General Accounting		
Query(s)	BE-KY Data	Department filter In List Prompt Budget Structure Id = 39 Budget Level Id = 2 Major Program In List Prompt (optional) Program Code In List Prompt (optional) Program Period Code In List Prompt (optional)	Filter objects (& names) Department Name Major Program Name Program Name Funding Profile Code Funding Priority Code Funding Line Code Line Amount Signed Federal Catalog Agency Federal Catalog Suffix Drawdown Group
	FIN-GA Data (Combined Query 1)	Department filter In List Prompt Major Program In List Prompt (optional) Program Code In List Prompt (optional) Program Period Code In List Prompt (optional) Closing Classification = 10 (cash expenditures) Fiscal Year = Prompt (for performance) Accounting Period = Prompt (optional, for performance)	Filter objects (& names) Jrnl Doc Code Jrnl Doc Dept Code Jrnl Doc ID Jrnl Record Date Jrnl Posting Amt
	FIN-GA Data (Combined Query 2)	Department filter In List Prompt Major Program In List Prompt (optional) Program Code In List Prompt (optional) Program Period Code In List Prompt (optional) Event Type In List Prompt (default value “CA01, XXPI, XXP3”) Fiscal Year = Prompt (for performance) Accounting Period = Prompt (optional, for performance)	Filter objects (& names) Jrnl Doc Code Jrnl Doc Dept Code Jrnl Doc ID Jrnl Record Date Jrnl Posting Amt
Report(s)	Major Programs Program/PPCs For Export		Prompt variables BOOL-Is Cash Exp dimension AMT-Grant Budget measure AMT-Cash Exp measure Department section Major Program section

I. Query Design

- A. **Name the report and Save it** – The best universe for a Grant Budget query at this time is the Budget Execution Universe - KY universe. Since at least one object is needed to save our initial report, the first step is to create a query against Budget Execution Universe - KY.
1. Drag the [Department] and [Department 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 “Grants – Balances”).

***PAUSE & REFLECT:** Why did we save a query with only one object?*

- 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 – Organization class* – Pull the following objects:

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

2. *Chart of Accounts > COA - Cost Accounting class* – Pull the following objects:

Description	Sub-Class	Objects
Major Program	Major Program	Major Program Major Program Name
Program	Major Program Program	Program Code Program Name
Program Period	Program Period	Program Period Code
Funding Profile Structure	Reimbursement Funding	Funding Profile Code Funding Priority Code Funding Line Code

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

Description	Sub-Class	Objects
Closing Classification	Posting Code	Closing Classification

4. *Accounting Journal class* – Because our query includes grant Chart of Accounts Elements, we must use the Accounting Journal for our amounts. Pull the following objects:

Description	Sub-Class	Objects
Enc/Exp Amount	Jrnl Doc Amounts	Jrnl Posting Amt

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

Object	Operator	Values	Optional?	Default Values
Department	In List	Prompt: Enter Department(s):	No	
Major Program	In List	Prompt: Enter Major Program(s) (optional):	Yes	
Program Code	In List	Prompt: Enter Program(s) (optional):	Yes	
Program Period Code	In List	Prompt: Enter Program Period(s): (optional):	Yes	
Closing Classification	Equal to	10 (=Cash Expenditures)		
Fiscal Year	Equal to	Prompt: Enter Fiscal Year:	No	
Accounting Period	In List	Prompt: Enter Accounting Period(s) (optional):	Yes	

6. *Prompt Order* – Open Query Properties and arrange the prompts in the order shown above.
7. *Create Combined Query* – Click the “Add a Combined Query” button (next to Query Properties) to created Combined query 2 in union with the original FIN-GA Data query. Note that the query automatically contains the same result objects as the original FIN-GA Data query.
8. *Query Filters for Combined Query* – Drag the following objects from Result Objects to Query Filters to create filters:

Object	Operator	Values	Optional?	Default Values
Department	In List	Prompt: Enter Department(s):	No	
Major Program	In List	Prompt: Enter Major Program(s) (optional):	Yes	
Program Code	In List	Prompt: Enter Program(s) (optional):	Yes	
Program Period Code	In List	Prompt: Enter Program Period(s): (optional):	Yes	
Event Type	In List	CA01;XXP3;XXPI (= Charges such as Indirect costs, Vendor Refunds, & Program Income)	No	
Fiscal Year	Equal To	Prompt: Enter Fiscal Year:	No	
Accounting Period	In List	Prompt: Enter Accounting Period(s) (optional):	Yes	

PAUSE & REFLECT: *Could the FIN-GA data be pulled using a regular query (instead of a Combined query)?*

- C. **Other universe queries and merging** – Complete the BE-KY Data query, pulling the following objects:
1. *COA – Organization class* – Pull the following objects:

Description	Sub-Class	Objects
Department	Organization – Centralized view	Department Department Name

2. *COA - Cost Accounting class* – Pull the following objects:

Description	Sub-Class	Objects
Major Program	Major Program	Major Program Major Program Name
Program	Major Program Program	Program Code Program Name
Program Period	Program Period	Program Period Code Program Period Name
CFDA Number	Funding Identification	Federal Catalog Agency Federal Catalog Prefix
Funding Profile Structure	Reimbursement Funding	Funding Profile Code Funding Priority Code Funding Line Code

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

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

Description	Sub-Class	Objects
Grant Budget Amount		Line Amount Signed

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

Object	Operator	Values	Optional?	Default Values
Department	In List	Prompt: Enter Department:	No	
Major Program	In List	Prompt: Enter Major Program (optional):	Yes	
Program Code	In List	Prompt: Enter Program (optional):	Yes	
Program Period Code	In List	Prompt: Enter Program Period Code (optional):	Yes	
Budget Structure ID	Equal to	39		
Budget Level ID	Equal to	2		

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

7. *Merge Queries* – Follow these steps to merge the two queries:

- 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 [Department] 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.)
- Select the “Merge” button again, hold down your “Ctrl” key, and choose the two [Major Program] objects. Click the “OK” button to merge them.
- Repeat for [Program Code], [Program Period Code], [Funding Profile Code], [Funding Priority Code], and [Funding Line Code].
- 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.

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

Objects for Table Block

Department (merged object)
Major Program (merged object)
Program Code (merged object)
Program Period Code (merged object)
Funding Profile Code (merged object)
Funding Priority Code (merged object)
Funding Line Code (merged object)
Line Amount Signed

Note: 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).
3. Save the report.

C. **Report & Table filters** – No report or table filters are required for this report.

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-Grant Budget” and set it equal to [Line Amount Signed]. Replace [Line Amount Signed] in the table with [AMT-Grant Budget], update the column heading to “Budget Amount”.
2. Save the report.
3. Spot-check budget amounts in the table, comparing them with Current Budget amounts on the eMARS inquiry page for Funding Lines (BQ39LV2) for the Department, Major Program, Program Code, Program Period Code, Funding Profile Code, Funding Priority Code and Funding Line Code.
4. To make the report easier to understand, create a measure variable named “AMT-Costs” and set it equal to [Jrnl Posting Amt]. Replace [Jrnl Posting Amt] in the table with [AMT-Costs], update the column heading to “Costs”. **Note:** No flag variables are required for this report unless the non-accounting transactions from Combined Query 2 need to be broken out separately.
5. Spot-check [AMT-Costs] amounts against the corresponding amounts on (BQ39LV2). **Note:** You will have to add the Cash Expenditure and Charge amounts on BQ39LV2 to tally with the report amounts if your report picks up any Charge documents.
6. Save the report.

PAUSE & REFLECT: *Why do you think the variable here is named [AMT-Costs] (instead of [AMT-Expenditures])?*

7. Create a balance measure variable using the following formula:

$$\text{AMT-Balance} = [\text{AMT-Budget}] - [\text{AMT-Costs}]$$
 8. Add [AMT-Balance] to the table, renaming the column "Balance".
 9. Spot-check the [AMT-Balance] amounts against the eMARS Inquiry page for Funding Lines (BQ39LV2). **Note:** "Balance" does not correspond directly to any of the amounts on BQ39LV2. You will have to add Cash Expenditures to Charges, then subtract that total from Current Budget to arrive at the amount that should match [AMT-Balance].
 10. Right-click the "For Export" report tab and choose "Duplicate Report". Rename the new copy "Level 2" and make it the first report tab.
 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 Level 2 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** – Follow these steps to create sections on [Department] and [Major Program]:
1. Right-click the Department column and choose "Set as section".
 2. Replace the function in the Department section cell with the following formula:

$$=\text{Department: "+"[Department]+ " - "+ [Department Name]}$$
 3. Right-click the Major Program column and choose "Set as section".
 4. Replace the function in the Major Program section cell with the following formula:

$$=\text{Major Program: "+"[Major Program]+ " - "+ [Major Program Name]}$$
 5. Format the cells for the sections using Ariel 10pt black bold font, and adjust the widths.
 6. Right-click each cell and choose "Format cell...".
 7. In the "Layout" section of the "Format Cell" window, set the Relative Position of each cell to the upper left corner of its section: Horizontal Position = 0, Vertical Position = 0.
 8. Use the Document Structure and Filters tab in the left panel to navigate to the Major Program section. Right-click it and choose "Format section...".
 9. In the "Layout" section of the "Format Section" window, set Minimum Top Offset = 0 and Top Margin = 0.
- G. **Breaks** – Create a break on [Program Code] by right-clicking each 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.

***PAUSE & REFLECT:** Why is a break used for [Program Code] rather than another section?*

- H. **Totals** – If desired, add totals for the Department and Major Program sections, and Grand Totals for the report. Refer to "Start to Finish – Capital Project Report" for details.

- I. **Other reports** – Follow these steps to create a “Level 1” report tab containing data at the Funding Priority level:
 1. Select the “Level 2” report tab. Right-click it and choose “Duplicate Report”, then rename the new report “Level 1” and make it the first report tab.
 2. Remove the following object from the table in the “Level 1” report tab:

Objects for Table Block

Funding Line

3. Make any desired formatting changes and save the report.

***PAUSE & REFLECT:** What is the value of the Level 1 report?*

- J. **Save, review, correct, purge and publish**– Complete formatting of your report tabs according to the standards and conventions for your organization. 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.

I. For Review and Discussion

- A. Does this report provide the information needed to manage the Grant 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. Does your agency use Charge (CH) documents? If so, for what purpose?