Intelligence Center and Web Reports Guide

Axiom

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Syntellis
10 S. Wacker Dr., Suite 3375
Chicago, Illinois 60606
847.441.0022
www.syntellis.com

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Introduction

The Intelligence Center and web reports provide fully web-enabled reporting functionality for Axiom. This guide discusses how to use the Intelligence Center, and how to create and use web reports.

Intended audience

This guide is intended for all users of Axiom, from users who only consume existing reports to web report creators.

What is covered in this guide?

This guide covers the following:

- Using the Intelligence Center to find, open, and create reports
- Using existing web reports to view and explore data
- Creating new web reports using the Report Builder
- Configuring report components in the Report Builder
- Configuring report drilling in the Report Builder
- Creating fixed row structures for use in web reports

What is not covered in this guide?

The following related topics are not covered in this guide:

- **Table setup and administration.** Creating web reports requires general knowledge of your system's data structures, including the available tables and columns and their relationships. For more information, see the *System Administration Guide*.

All documentation for Axiom can also be accessed using the Axiom Help Files.

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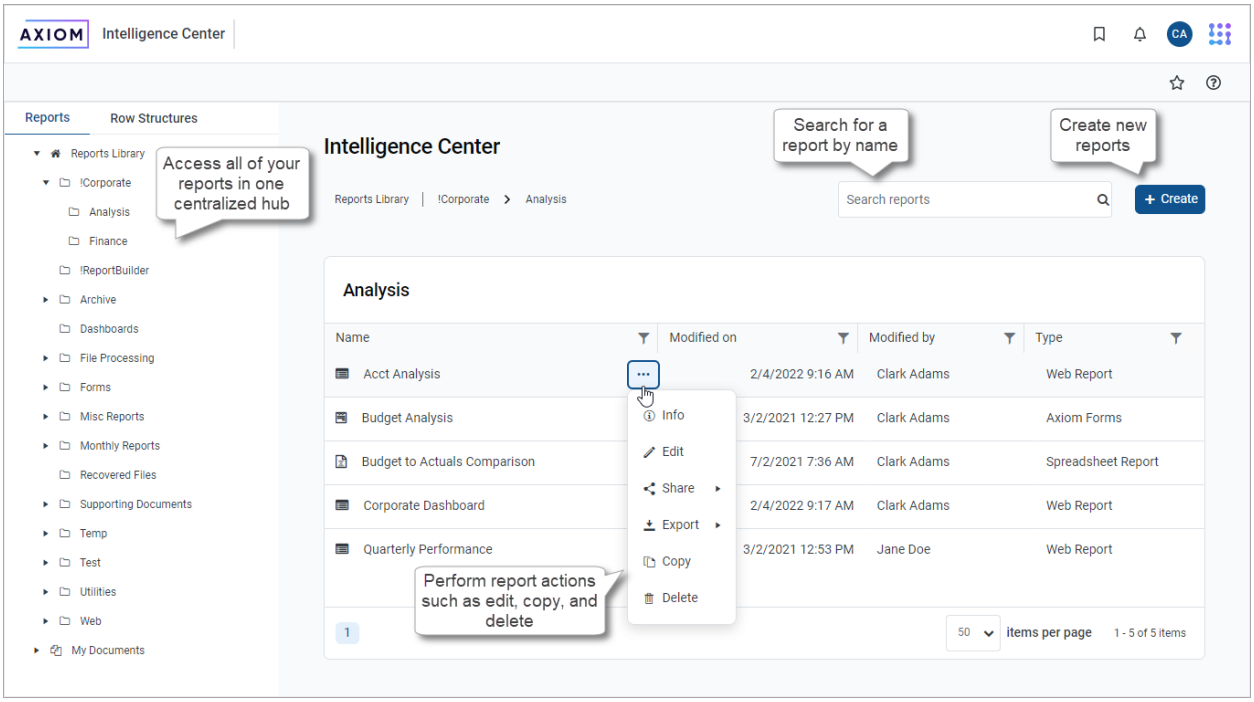
Intelligence Center

The Intelligence Center is a centralized hub where you can view any report that you have access to in the Axiom Reports Library—including web reports, Axiom forms, visualization reports, and spreadsheet reports.

Using the Intelligence Center, you can:

- View any report you have access to, regardless of the report type
- Create new web reports (all clients) and visualization reports (clients with certain product licenses)
- Open reports for editing, in the appropriate editor for the report type
- Export and share web reports
- Perform other report management activities, such as creating and deleting folders, copying and deleting reports, and editing report names and descriptions

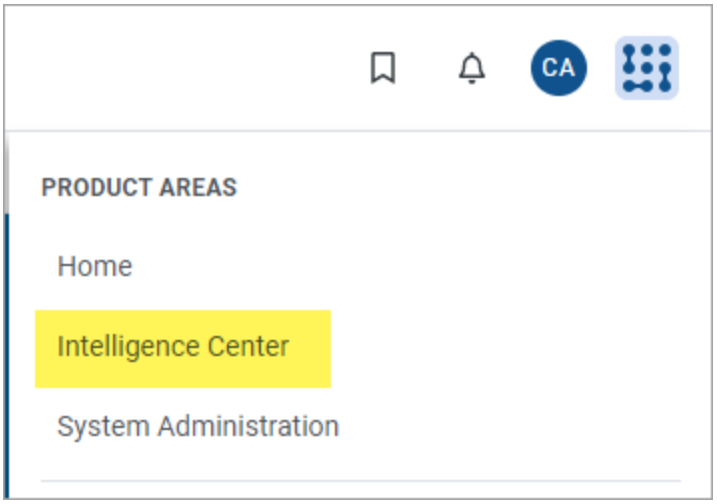


Example Intelligence Center

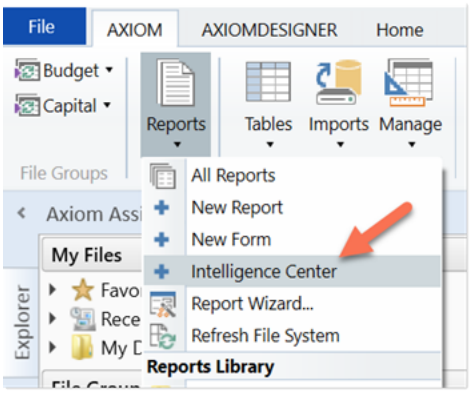
Accessing the Intelligence Center

All users can access the Intelligence Center in the Web Client browser:

- Click the Syntellis icon in the Navigation bar. From the Area menu, select **Intelligence Center**.



In the Desktop Client, you can open the Intelligence Center from the **Reports** menu. By default this menu is present on the **Axiom** tab. If your system has installed products, it may be available to you on the **Main** tab.



Intelligence Center on the default Reports menu

Opening reports

You can open any report that displays in the Intelligence Center. The Intelligence Center is automatically filtered to only show the reports that you have access to.

To open a report from the Intelligence Center:

1. In the left-hand panel, select the **Reports** tab if it is not already selected.
2. Do one of the following to locate the report that you want to open:

- Use the folder tree in the left-hand panel to navigate to the folder where the report is located.

  OR

- Use the Search box to search for the report by name.

For more information on how to search, filter, and sort the Intelligence Center, see Intelligence Center overview.

3. Once the report displays in the Intelligence Center grid, click on the report name to open it.
   - Web reports open in the same browser tab.
   - Other web-enabled reports open in a new browser tab. This applies to Axiom forms, visualization reports, and deprecated web reports.
   - If the report is a spreadsheet report, Axiom attempts to launch the Axiom Desktop Client and open the report. This works as follows:
     - The launch routine uses the Axiom Windows Client by default.
     - If an Axiom client is already open, the launch routine is skipped and the report is opened in that client—regardless of whether the open client is the Excel Client or the Windows Client. Therefore, if you want to open reports in the Excel Client, you must launch the Excel Client first using the Quick Launch menu, then you can open spreadsheet reports from the Intelligence Center.

   NOTE: You must have the appropriate security permissions to use the Axiom Desktop Client in order to open a spreadsheet report. If you do not have either the **Windows Client Access** permission or the **Excel Client Access** permission, then spreadsheet reports are hidden in the Intelligence Center because you cannot launch the client to view them.

If other types of files are present in the Reports Library—such as PDF, Word, or PowerPoint—these files can also be opened from the Intelligence Center if you have a program capable of reading the file type. Axiom attempts to open the file using the same routine that opens the Axiom Desktop Client.

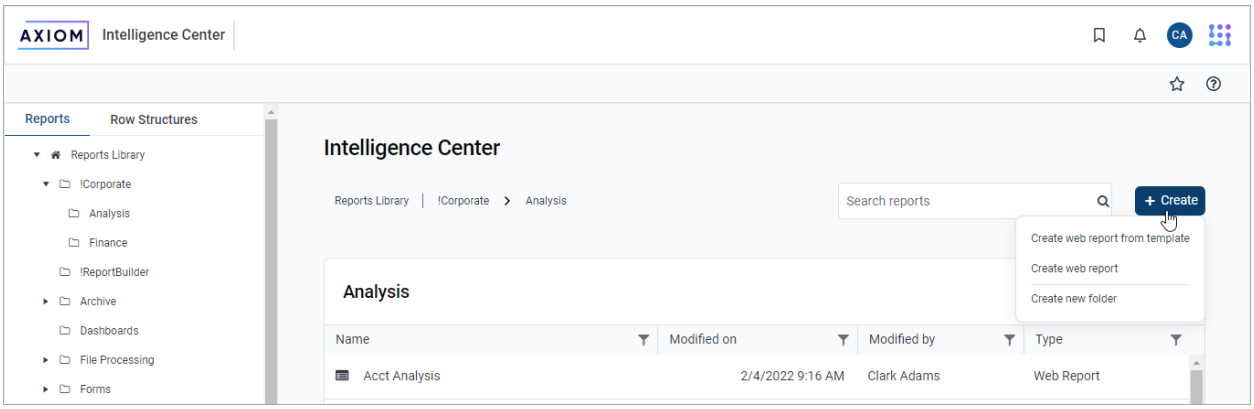
Creating new reports

Using the **Create** button at the top right of the Intelligence Center, you can create new reports and new fixed row structures for use in web reports. This button is context-sensitive, depending on what area you have selected from the left-hand panel.

To create a new report, select the **Reports** area from the left-hand panel, then click the **Create** button. Select one of the following:

- **Create web report**: This option opens the web Report Builder so that you can create a new web report from scratch. For more information, see Creating new web reports.

- **Create web report from template**: This option creates a new web report using a template provided by an installed product. See Creating new web reports from template.
- **Create new visualization**: This option creates a new visualization report. This option is only available in systems where visualization reporting is licensed and enabled.

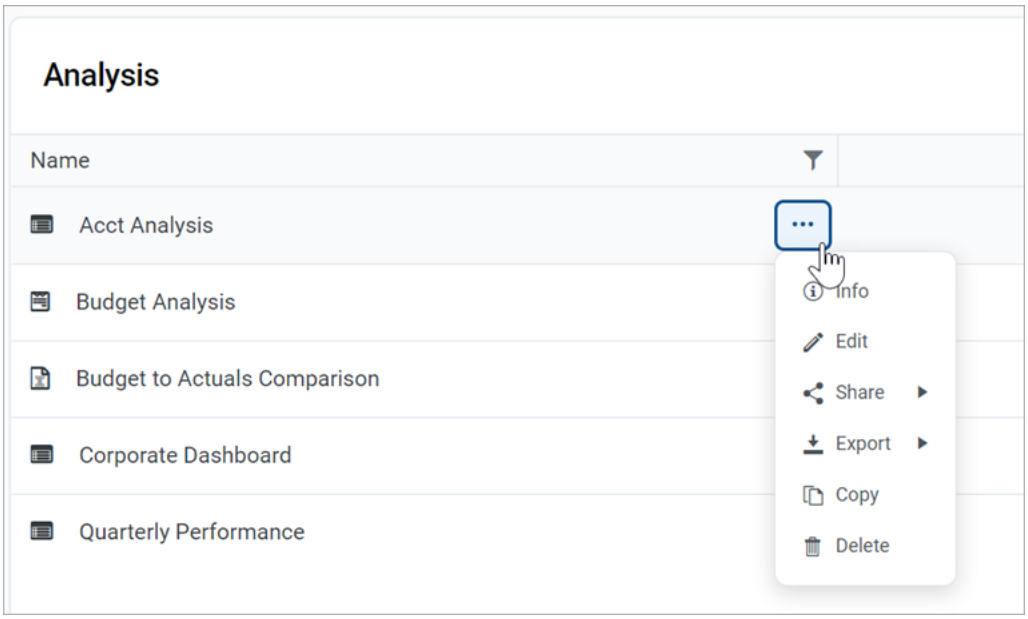


Example Create button to create a new report

To create a new fixed row structure, select the **Row Structures** area from the left-hand panel and then click **Create**. For more information, see Creating fixed row structures.

Other Intelligence Center actions

In the Intelligence Center, you can use the Actions menu to perform other report and folder management activities. To view the available actions, navigate to the item that you want to work with, then hover your cursor over the three dots icon in the right-hand side of the **Name** column. Actions are available for report files, report folders, and fixed row structures.



Example Actions menu

The following actions are available:

Action	Description	More Information
Info	Opens the Settings panel for the current item, displaying the item name and description.	• Changing folder names and descriptions • Changing report names and descriptions • Changing fixed row structure names and descriptions
Edit	Opens the current item in the appropriate editor.	• Editing reports • Editing fixed row structures
Share	Share the current report with other users via email. Only available for web reports.	• Sharing a web report via email
Export	Export the current report as a PDF, Excel, or Delimited file. Only available for web reports.	• Exporting grid data in a web report to a delimited file • Exporting grid data in a web report to Excel • Exporting a PDF copy of a web report
Copy	Generates a copy of the current item. Only available for fixed row structures and web reports.	• Copying web reports • Copying fixed row structures
Delete	Deletes the current item.	• Deleting reports • Deleting folders • Deleting fixed row structures

You can also create new folders by clicking **Create > Create new folder** while you are in the Reports area.

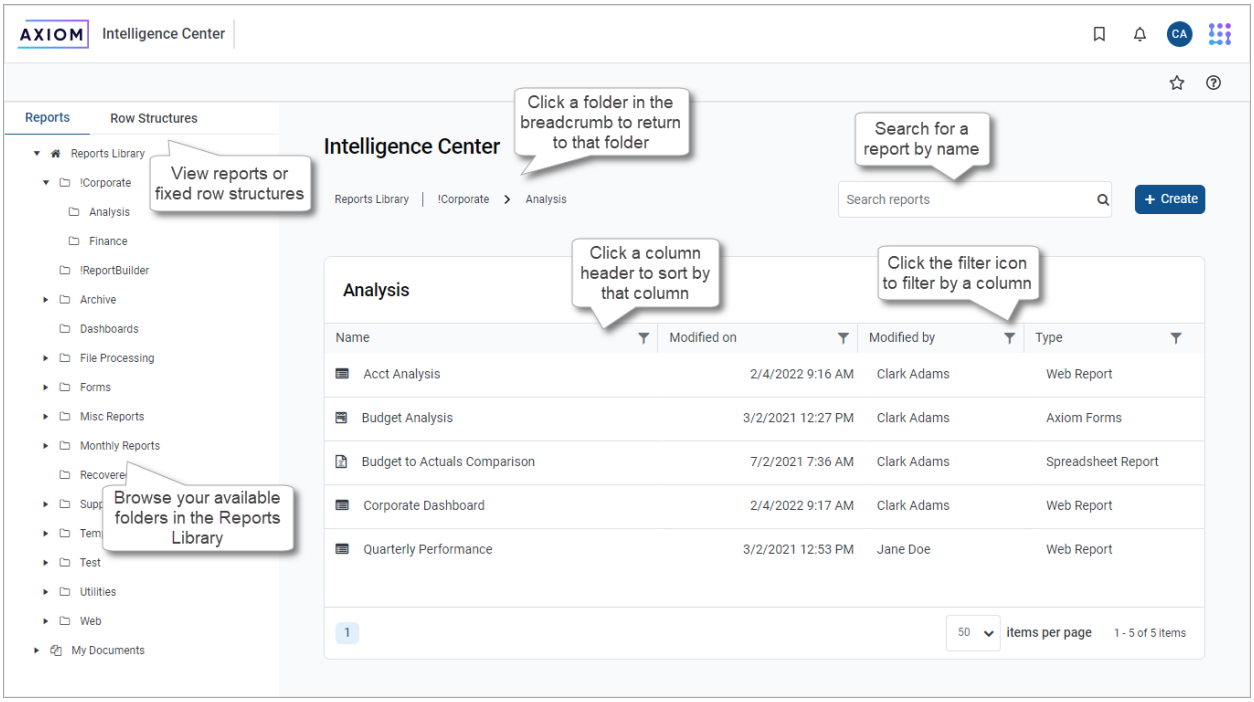
Intelligence Center overview

The Intelligence Center is organized into two main areas. To view an area, select the area name from the left-hand panel:

- The **Reports** area, which contains the **Reports Library** folder tree and your **My Documents** folder (if you have access to it). You can click on folders in this section to navigate through the folder tree. Once a folder is selected, the contents of that folder display in the report grid. You can click on a subfolder name to open that subfolder, or you can click on a report name to open that report.

- The **Row Structures** section, which contains fixed row structures for use in web reports. This section does not have subfolders. You can click on the parent **Fixed Row Structures** folder to view the available fixed row structures, and click on a name to open that structure.

As you navigate, a breadcrumb displays at the top of the report grid. You can click on a folder name in the breadcrumb to move to that folder location.



Navigating the Intelligence Center

Searching the Intelligence Center

You can use the Search box at the top right of the Intelligence Center to find a report or a fixed row structure. The search matches on name only. The search box is context-sensitive as follows:

- If the currently selected area is Reports, then the search can be used to find reports in the Reports Library and your My Documents folder.
- If the currently selected area is Row Structures, then the search can be used to find fixed row structures.

To search for an item by name:

- Type your search text into the Search box, and then click the magnifying glass or hit the Enter key to search.

The grid updates to show a list of all reports or fixed row structures that match your search text. You can open an item or perform other actions using this list. You can also filter and sort this list as described in the following sections.

To clear a search:

- Click the **X** icon in the right side of the Search box.

Your search text is cleared, and you are returned to the folder location that you were viewing when you started the search.

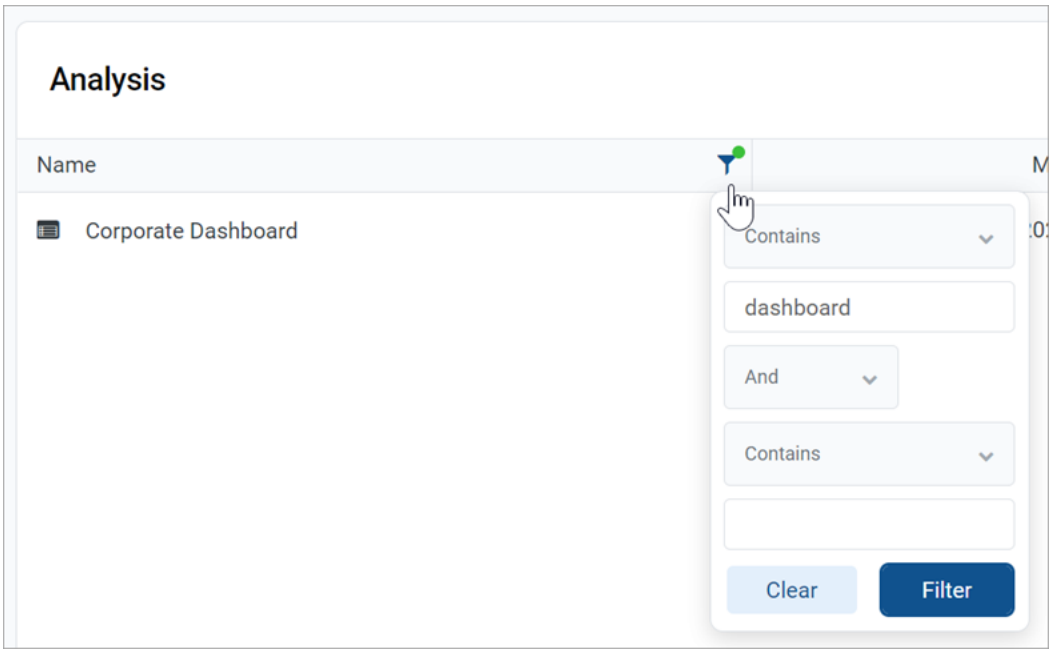
Filtering the grid

When you are viewing a folder in the Intelligence Center (or when viewing search results), you can filter the contents by any column in the grid. For example, you can filter to show all reports of a certain type, or to show all reports created after a certain date.

To filter the grid based on a column:

1. Click the filter icon in the column header to show the filter options.
2. Set the filter options as desired. You can set up to two filter options, combined with either AND or OR.
3. Click **Filter**.

The grid updates to only show items that meet the filter. Additionally, a green dot displays by the filter icon in the column header to indicate that the grid is filtered by this column.



Example Intelligence Center column with a defined filter

If multiple columns are filtered, the filters are combined using AND—meaning the grid only shows items that match all of the filters.

The column filter is retained until you clear it, or until you navigate to a new folder location. If you have filtered the search results, clearing the search results also clears the filter.

To clear a filter:

1. Click the filter icon in the column header to show the filter options.
2. Click **Clear**.

The grid updates to clear the filter.

Sorting the grid

When you are viewing a folder in the Intelligence Center (or when viewing search results), you can sort the list by any column in the grid.

To sort the grid by a column, click on the column header. Each click toggles between ascending sort, descending sort, and no sort. If the grid is currently sorted by a column, the sort direction is indicated by an arrow on the column header (up for ascending, down for descending).

The sort is reset when you move to a new folder location. If you have sorted the search results, clearing the search results also clears the sort.

NOTE: The grid can only be sorted by one column at a time. If you have sorted by a column and then you click the column header of a different column, the sort on the original column is cleared and replaced by the new column sort.

Managing report files in the Intelligence Center

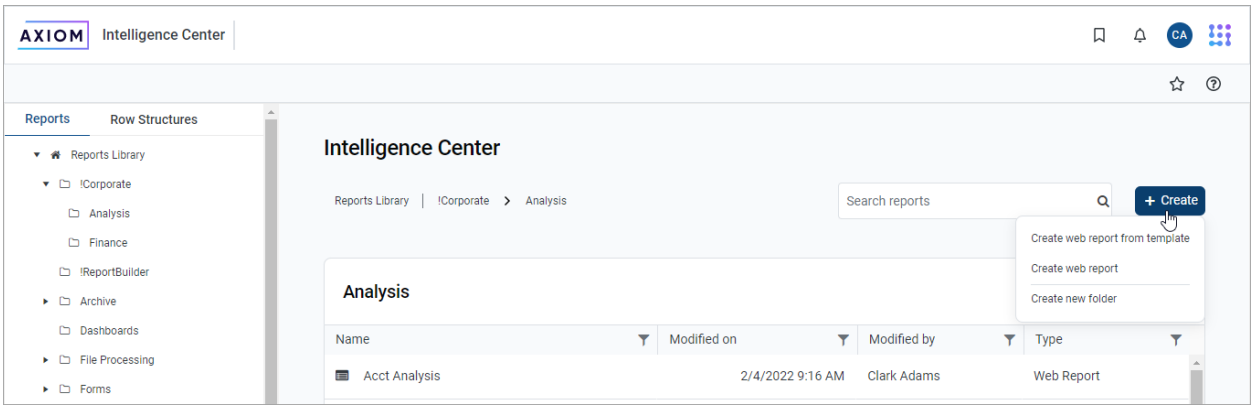
Using the Intelligence Center, you can create, edit, copy, and delete reports in the Reports Library. You can also edit report names and descriptions.

Creating new reports

Using the **Create** button at the top right of the Intelligence Center, you can create new reports and new fixed row structures for use in web reports. This button is context-sensitive, depending on what area you have selected from the left-hand panel.

To create a new report, select the **Reports** area from the left-hand panel, then click the **Create** button. Select one of the following:

- **Create web report**: This option opens the web Report Builder so that you can create a new web report from scratch. For more information, see Creating new web reports.
- **Create web report from template**: This option creates a new web report using a template provided by an installed product. See Creating new web reports from template.
- **Create new visualization**: This option creates a new visualization report. This option is only available in systems where visualization reporting is licensed and enabled.



Example Create button

To create a new fixed row structure, select the **Row Structures** area from the left-hand panel and then click **Create**. For more information, see Creating fixed row structures.

Different security permissions are required to create new web reports versus visualization reports. These security requirements are noted in the relevant topics.

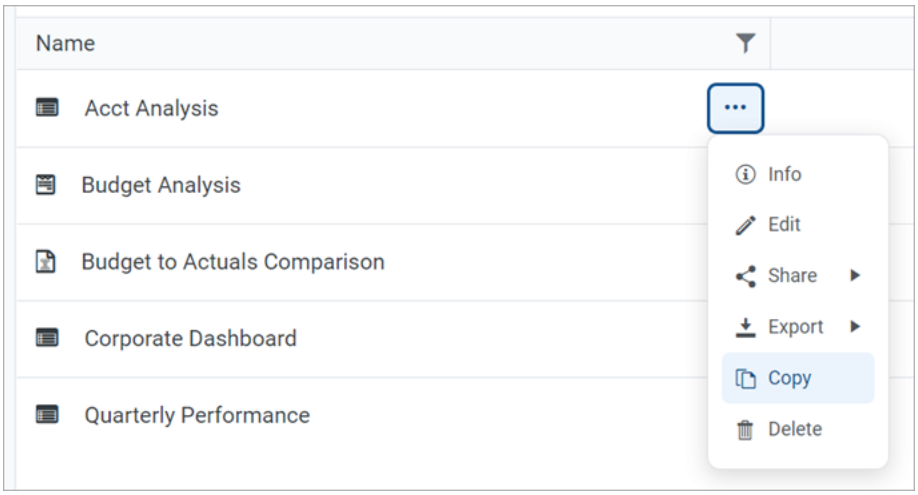
Copying reports

In the Intelligence Center, you can copy existing reports to create new reports. Currently, this functionality is only available for web reports, and only web reports that were created in the Report Builder. Web reports created from template cannot be copied.

In order to copy a web report, you must be an administrator or have the **Create Web Reports** security permission. You must also have read/write access to the current folder, because the copy is created in the current folder.

To copy a report from the Intelligence Center:

1. In the Intelligence Center, locate the web report that you want to copy. You can use folder navigation to find the report, or use the Search box at the top of the page.
2. Once the web report displays in the Intelligence Center grid, hover your cursor over the **Name** column to make the three-dots icon visible. Click the icon then select **Copy** from the menu.



If the Copy action is present but disabled, then you cannot copy this report because you do not have the appropriate security permissions.

3. In the **Copy Report** dialog, enter a name for the copy. By default, the name is **Copy of *OriginalReportName***.
4. Click **OK**.

The copy is created in the current folder, with the specified name.

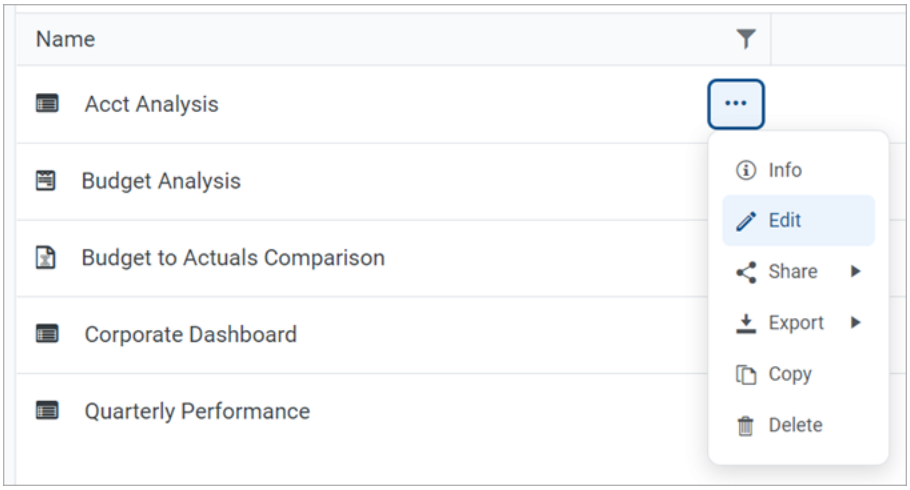
Editing reports

You can open a report for editing from the Intelligence Center if the report is eligible to be edited, and you have read/write permissions to the report.

To edit a report from the Intelligence Center:

1. In the Intelligence Center, locate the report that you want to edit. You can use folder navigation to find the report, or use the Search box at the top of the page.

2. Once the report displays in the Intelligence Center grid, hover your cursor over the **Name** column to make the three-dots icon visible. Click the icon then select **Edit** from the menu.



3. The report is opened for editing as follows, depending on its file type:
    - **Web reports** are opened in the Report Builder, in the current browser tab.
    - **Visualization reports** are opened in the Visualization Report Editor, in a new browser tab.
    - **Spreadsheet reports** and **Axiom forms** are opened in the Axiom Desktop Client, as spreadsheet report files. This works as follows:
        - The launch routine uses the Axiom Windows Client by default.
        - If an Axiom client is already open, the launch routine is skipped and the report is opened in that client—regardless of whether the open client is the Excel Client or the Windows Client. Therefore, if you want to open reports in the Excel Client, you must launch the Excel Client first using the Quick Launch menu, then you can open spreadsheet reports from the Intelligence Center.

    NOTE: You must have the appropriate security permissions to use the Axiom Desktop Client in order to open a spreadsheet report. If you do not have either the **Windows Client Access** permission or the **Excel Client Access** permission, then spreadsheet reports are hidden in the Intelligence Center because you cannot launch the client to view them.

Why is the Edit action missing for some reports?

The following report types *cannot* be opened for editing from the Intelligence Center. The Edit action does not display for these files:

- **Web reports built from template**: If a web report is built from a template, the report is tied to that template and cannot be separately edited. For more information, see Creating new web reports from template.

- **Deprecated web reports**: The prior implementation of web reporting is deprecated. To edit a deprecated web report, click the file name to open the report, then click the wrench icon in the toolbar to open the legacy web report editor.
- **Other non-report file types**: The Reports Library can be used to store other non-report, non-Axiom file types, such as PDF, DOC, PPT, JPG, and others. These file types cannot be edited in Axiom.

Why is the Edit action disabled for some reports?

If the Edit action is present but disabled, this means that although the report type is eligible to be edited, it is not possible for you to edit this particular report. One of the following reasons may apply:

- You do not have edit permissions (Read/Write access) to the file.
- The file is product-controlled and therefore cannot be edited.
- The file is configured to prevent editing (applies to certain visualization reports).

Changing report names and descriptions

If you have read/write access to a report, then you can rename the report or change its description.

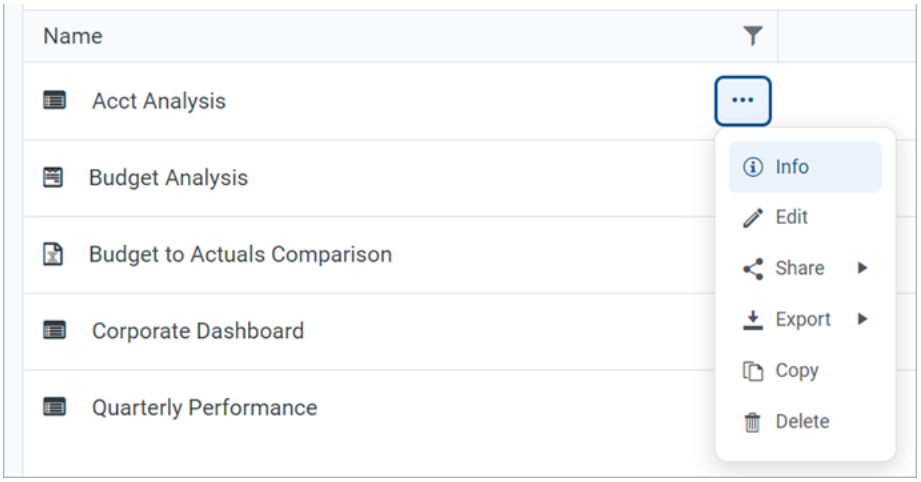
NOTES:

- In systems with installed products, the names and descriptions of product-controlled reports cannot be edited.
- If you have read/write access to a report file, but read-only access to its folder, then you cannot edit the report name.

To change a report name and/or description:

1. In the Intelligence Center, locate the report that you want to edit. You can use folder navigation to find the report, or use the Search box at the top of the page.

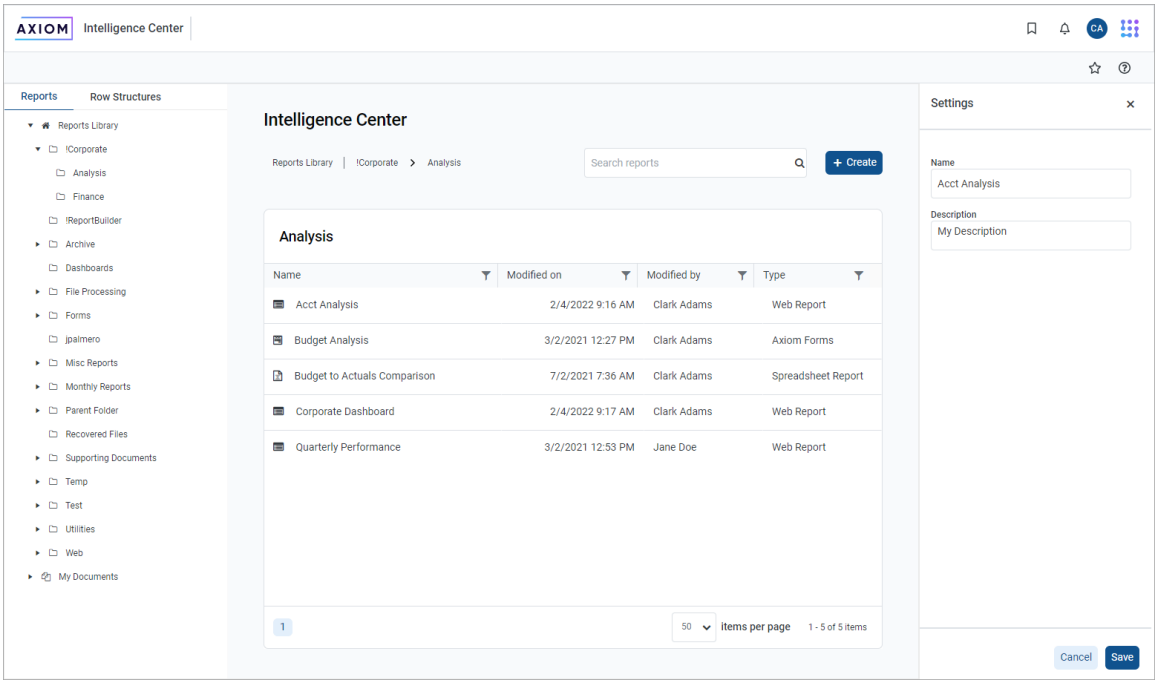
2. Once the report displays in the Intelligence Center grid, hover your cursor over the **Name** column to make the three-dots icon visible. Click the icon then select **Info** from the menu.



The Settings panel opens along the right-hand side of the page.

3. In the Settings panel, edit the report **Name** or **Description** as needed, then click **Save**.

   The name can be up to 250 characters, and the description can be up to 2000 characters.



Example Settings panel

If the report name and description cannot be edited, then the **Apply** button is not available. This may occur because you do not have the necessary permissions, or because the report belongs to an installed product.

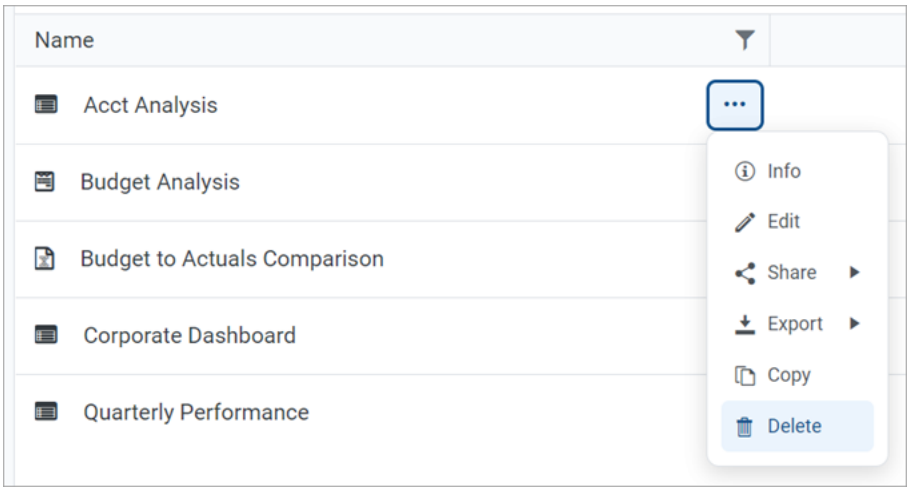
Deleting reports

If a report is no longer needed, you can delete it using the Intelligence Center. In order to delete a report (or any other file that resides in the Reports Library), you must have read-write access to the file and to the folder it resides in.

NOTE: In systems with installed products, product-controlled reports cannot be deleted.

To delete a report:

1. In the Intelligence Center, locate the report that you want to delete. You can use folder navigation to find the report, or use the Search box at the top of the page.
2. Hover your cursor over the row with the report, hover your cursor over the **Name** column to make the three-dots icon visible. Click the icon then select **Delete** from the menu.



   If the report cannot be deleted, the Delete action is disabled. This may occur because you do not have the necessary permissions to delete the report, or because the report belongs to an installed product.

3. When you are prompted to confirm that you want to delete the report, click **OK**.

The report is deleted from the system and no longer displays in the Intelligence Center. If the report was deleted in error, an administrator may be able to restore the report using the **Restore Deleted Files** feature in the Desktop Client.

Managing folders in the Intelligence Center

Using the Intelligence Center, you can create, rename, and delete folders in the Reports Library.

Creating new folders

You can create new folders as needed in the Intelligence Center. In order to create a folder, you must have read-write access to the parent folder.

To create a folder:

1. In the Intelligence Center, navigate to the folder location where you want to create a new folder.

   For example, if you want to create a new top-level folder in the Reports Library, select the Reports Library. If you want to create a new subfolder within a folder, then select that folder.

2. Click **Create > Create new folder**.

3. In the **Create new folder** dialog, enter a name for the new folder, then click **OK**.

The new folder is created in the current location.

Changing folder names and descriptions

If you have read/write access to a folder, then you can rename the folder or change its description.

NOTE: In systems with installed products, the names and descriptions of product-controlled folders cannot be edited.

To change a folder name and/or description:

1. In the Intelligence Center, navigate to the parent folder of the folder that you want to rename, so that the folder you want to rename displays in the Intelligence Center grid.

2. Hover your cursor over the row with the folder, so that the three dots icon is visible the **Name** column. Click the icon then select **Info** from the menu.

   The Settings panel opens along the right-hand side of the page.

3. In the Settings panel, edit the folder **Name** or **Description** as needed, then click **Apply**.

   The name can be up to 250 characters, and the description can be up to 2000 characters.

   If the folder name and description cannot be edited, then the **Apply** button is not available. This may occur because you do not have the necessary permissions, or because the folder belongs to an installed product.

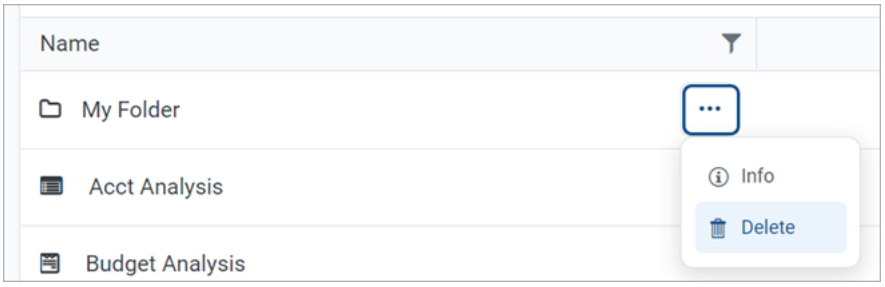
Deleting folders

If a folder is no longer needed, you can delete it using the Intelligence Center. In order to delete a folder, the folder must be empty and you must have read-write access to the folder.

NOTE: In systems with installed products, product-controlled folders cannot be deleted.

To delete a folder:

1. In the Intelligence Center, navigate to the parent folder of the folder that you want to delete, so that the folder you want to delete displays in the Intelligence Center grid.
2. Hover your cursor over the row with the folder, so that the three dots icon is visible the **Name** column. Click the icon then select **Delete** from the menu.



   If the folder cannot be deleted, the Delete action is disabled. This may occur because you do not have the necessary permissions to delete the folder, or because the folder belongs to an installed product.

The folder is deleted from the system and no longer displays in the Intelligence Center. There is no confirmation dialog before deleting an empty folder. If the empty folder was deleted in error, you can create a new folder with the same name.

3

Web Reports

Axiom web reports provide a fully browser-based reporting option for Axiom data. You can create, edit, and view web reports all within the Axiom Web Client.

Web reports are designed to be intuitive for report designers to build, and easy for report viewers to use. The Intelligence Center provides a centralized hub to create new web reports and to view any report that you have access to.

Web reports support two different ways to display reporting data in a grid:

- **Dynamic rows**: Dynamically display data rows based on a specified dimension or grouping.
- **Fixed rows**: Use predefined fixed row structures to organize data rows into sections with headers, totals, and subtotals.

Web reports can be created from scratch using the Report Builder, or you can create them from templates provided by installed Axiom products.

Opening web reports

In order to open an existing web report, you must have at least read-only access to the report, as defined in Axiom security. Web reports can be opened from either the Web Client or the Desktop Client.

This topic discusses the default ways to access and view web reports. Your system may be designed so that you can open web reports in other ways, such as:

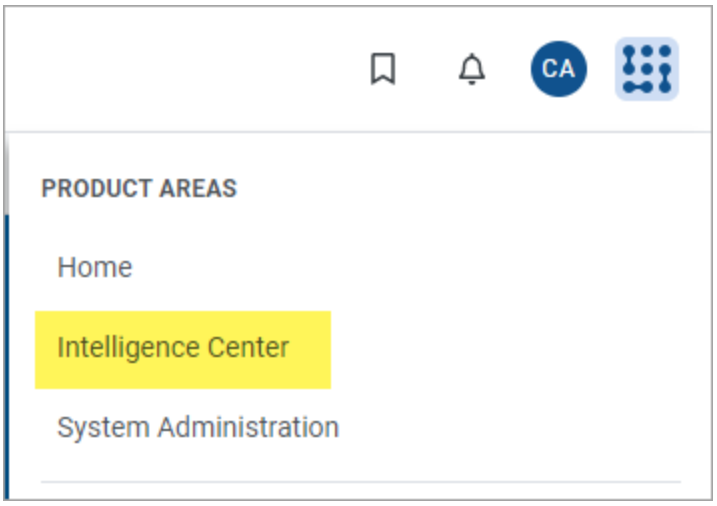
- Using the Navigation menu in the Web Client
- Using links within your home page or product pages
- Using links within a task pane or ribbon tab in the Desktop Client

▶ Opening web reports from the Intelligence Center

The Intelligence Center in the Web Client is a hub where you can access all of your available reports, regardless of the report type. The Intelligence Center is automatically filtered to show only the reports that you have access to.

To open a web report from the Intelligence Center:

1. Click the Syntellis icon in the Navigation bar. From the Area menu, select **Intelligence Center**.



2. In the left-hand panel, select the **Reports** tab if it is not already selected.
3. Do one of the following to locate the report that you want to open:
   - Use the folder tree in the left-hand panel to navigate to the folder where the report is located.

     OR

   - Use the Search box to search for the report by name.

   For more information on how to search, filter, and sort the Intelligence Center, see Intelligence Center overview.
4. Once the report displays in the Intelligence Center grid, click on the report name to open it.

The report opens in the current browser tab. You can now view and explore the data using various features. For more information, see Viewing and exploring data in web reports.

Opening web reports from the Desktop Client

You can open a web report from the Reports Library in the Desktop Client (Excel Client or Windows Client). You can differentiate web reports from other types of Axiom reports using the following icons:

- Web report
- Visualization report
- Axiom form
- Spreadsheet Axiom file

To open a web report from the Desktop Client:

1. On the **Axiom** tab, in the **Reports** group, click **Reports** to bring up the Reports menu.

   NOTE: In systems with installed products, this feature may be present on a different ribbon tab, such as the **Main** tab.

   TIP: You can also open reports from the Explorer task pane or Axiom Explorer.

2. Use the Reports Library folders at the bottom of the menu to navigate to the specific web report that you want to open, and then click on it.

The web report opens in the Web Client using your default browser. You can now view and explore the data using various features. For more information, see Viewing and exploring data in web reports.

Viewing and exploring data in web reports

Once a web report is opened, you may have access to a variety of features to view and explore the data in the report, including filtering, sorting, and drilling. Additionally, web reports may be configured with report parameters, which can be used to dynamically change the data shown in the report.

NOTE: The features described in this topic apply to web reports created in the Report Builder. Web reports created from template may have similar features, but do not work in exactly the same way. For more information on viewing and exploring data in a web report created from template, consult the product documentation for the product that provided the template.

▶ Drilling data

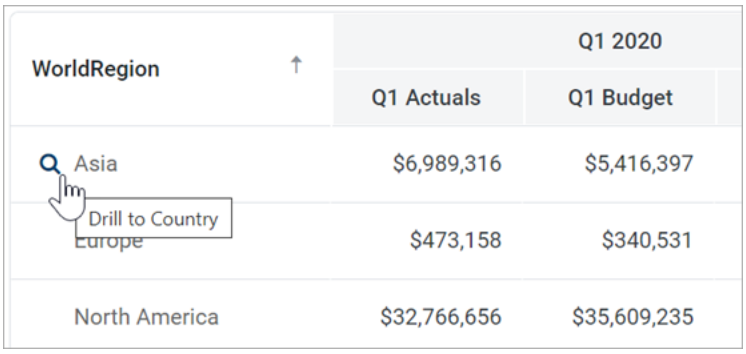
If the web report has been configured to enable drilling, you can drill any data row in the report. Total rows, subtotal rows, and section header rows are not drillable.

To drill a data row:

1. Hover your cursor over the far left column in the report so that a magnifying glass icon appears on the row.

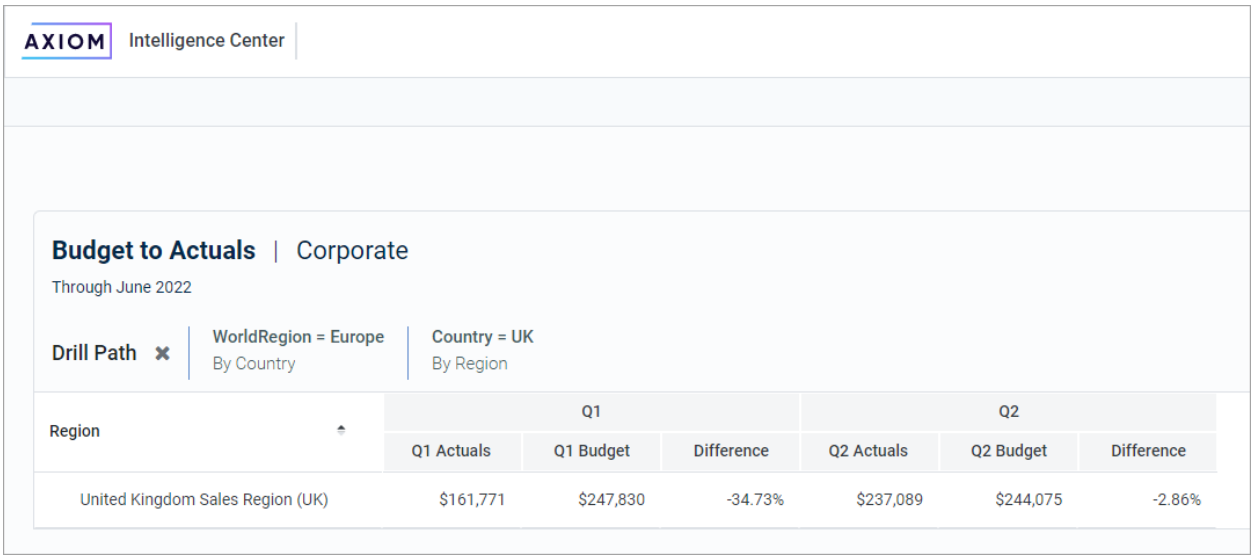
   The tooltip for the magnifying glass will be either "Drill" (if multiple drill paths are available) or "Drill to <path>" (if a single drill path is available). For example, the tooltip will say "Drill to Acct" if the Acct drill path is the only available drill path.

2. Click the icon to drill the row.
   - If multiple drill paths are available, these paths display in a menu when you click the icon. Click the drilling path that you want to view.
   - If a single drill path is available, that path is automatically used when you click the icon to drill.



Hover and click to drill

The drill results are presented within the current tab, replacing the original report. The current row being drilled and the current drill level display at the top of the drill results.

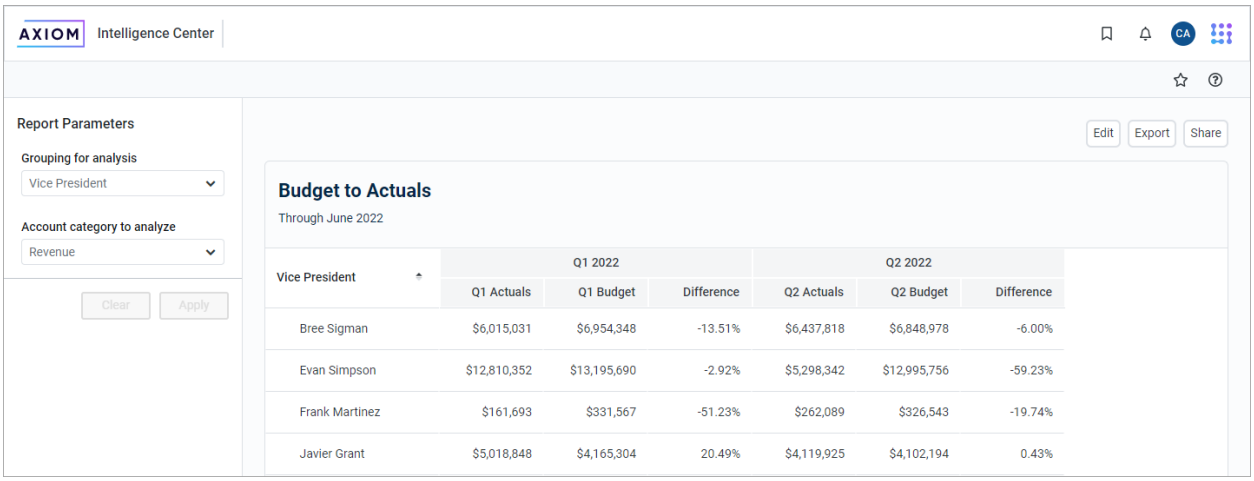


Example drill results with drilling path displayed at the top

You can continue drilling the drill results if additional drill paths are available. You can return to a previous path by clicking on that path name in the header. When you are finished viewing the drill results, you can click the **X** icon in the drill path to clear the drill and return to the original report.

Using report parameters

If the web report is configured with report parameters, you can use the **Report Parameters** panel along the left-hand side of the report to dynamically change the data shown in the report.

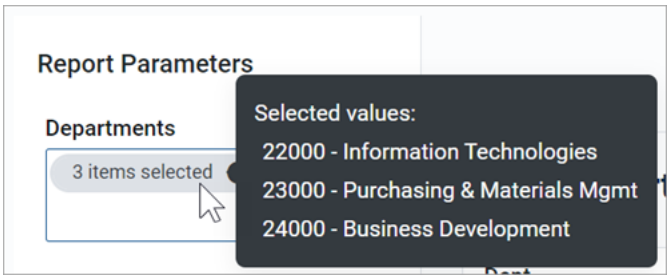


Example report with report parameters

The Report Parameters panel contains one or more parameters that you can set as needed. If the report requires you to select a parameter value in order to refresh data in the report, then when you open the report the message "Waiting for input" displays in the report grid. Otherwise, the report opens and refreshes data using default values defined for report parameters as needed.

You can interact with report parameters as follows:

- You can select one or multiple values for each parameter, depending on the parameter type and configuration. If a parameter allows multiple values to be selected, the parameter box shows text such as "3 items selected". You can hover your cursor over this text to view the selected values in a tooltip.



  If the parameter allows selection of multiple values, and some values are already selected, then using the drop-down list to select more items will add to the current list of items. If instead you want to clear the list of items and start over, click the **X** icon in the selection text.

- A parameter may start out blank (unset), or it may start with a default value, depending on the parameter type and configuration.
- Some parameters may be dependent on other parameters. In this case, the dependent parameter will not become available for use until its parent parameter has a selected value.

- Parameters may be required or optional:
    - If a parameter is optional, then you can leave it unset, or you can clear its value using the **X** icon to the right of it.
    - If a parameter is required, then it cannot be cleared. You can select a different value, but you cannot fully clear the parameter. Exception: If the parameter allows selection of multiple values, then you can click the **X** icon in the selection text to clear the current selections.

Once you have made selections for the parameters, you can apply and clear them as follows:

- Click **Apply** to refresh the report using your parameter selections. The Apply button is not active until all required parameters have selected values.
- Click **Clear** to clear all optional parameters. You can then click Apply to refresh the report with the optional parameters unset.

NOTES:

- When you share or export a report, it does not honor the report parameter selections, with one exception. If the report parameter determines the row dimensions of the report, and the parameter has a default value, the exported report will use that default value.
- The specific parameters available and how they impact the report depends on the report configuration. Contact your system administrator or the report designer if you have any questions about how the parameters affect the report data.

Adjusting column width and order

You can make minor adjustments to the column display as follows:

- To change the column width, hover your cursor along the right edge of the column header, then drag to make the column thinner or wider.
- To reorder columns, click on a column header and then drag it to a new location. Note that columns cannot be moved in or out of a column group (meaning a set of columns grouped under header text). If a column belongs to a column group, you can change its order within the group but you cannot drag it out of the group.

Sorting data

If the web report uses a data grid with dynamic rows, then you can sort the data by any column in the grid. To sort the grid by a column, click on the column header. Each click toggles between ascending sort, descending sort, and no sort. If the grid is currently sorted by a column, the sort direction is indicated by an arrow on the column header (up for ascending, down for descending).

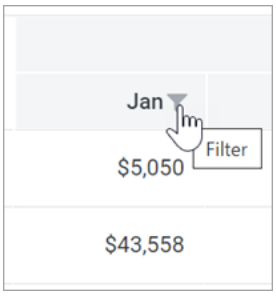
The web report may only allow sorting by a single column, or it may allow sorting by multiple columns. This is configured by the report designer. If the grid uses single-column sorting, then it is not possible to clear the sort on a column. Instead you must click on a different column to change the sort to use that column.

If the web report uses a fixed row structure, then the row values are fixed in position and cannot be sorted.

Filtering by column data

If the web report uses a data grid with dynamic rows, you may be able to filter the report by the column data. For example, you might want to filter a column to hide zero-value records, or to show all records above or below a certain value. You might want to filter a dimension column to hide or show certain dimensions (such as departments, accounts, and so on). The report designer determines whether a column is enabled for filtering.

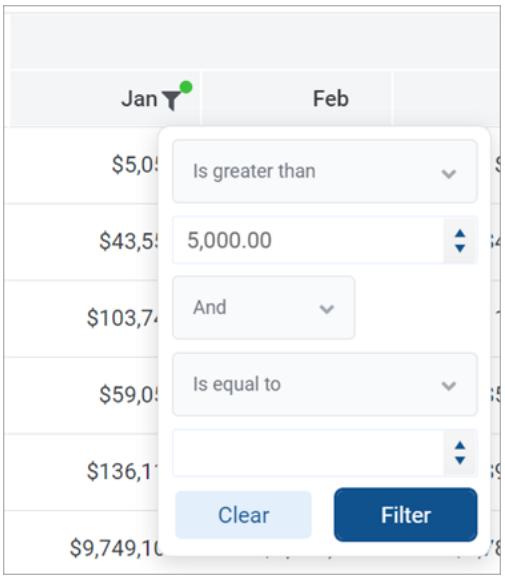
If a column allows filtering, the filter icon displays in the column header when you hover your cursor over the column header.



Filter icon for a column with filtering enabled

To filter the report based on a column:

1. Click the filter icon in the column header to show the filter options.
2. Set the filter options as desired. The options vary depending on the column type.



Example filtering options

3. Click **Filter**.

The report updates to only show records that meet the filter. Additionally, the filter icon in the column header remains visible to indicate that the grid is filtered by this column.

The filter is retained until you clear it, or until the report is refreshed with new data.

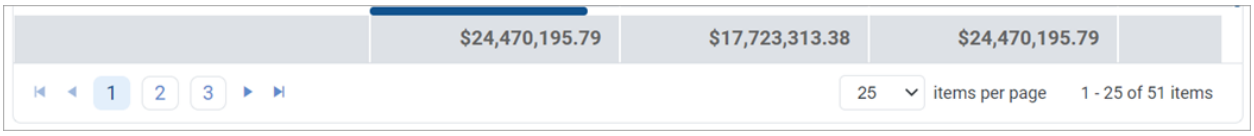
To clear a filter:

1. Click the filter icon in the column header to show the filter options.
2. Click **Clear**.

The grid updates to clear the filter. The filter icon is now only visible when hovering over the column header.

Viewing paged data

If the web report uses dynamic rows, the data is paged to show a specified number of records per page. If the data in the grid exceeds the page limit, you can move between pages using the page controls at the bottom left of the grid.



Page controls for data grids

- Click a page number to move directly to that page.
- Click the single arrow buttons to move one page back or forward.

- Click the double arrow buttons to move to the first page or the last page.

By default, the data grid shows 25 records per page. You can use the drop-down list next to the page controls to change this to 50, 100, or 500 as needed.

4

Managing Web Reports

Using the Intelligence Center in the Axiom Web Client, you can create, edit, copy, and delete web reports as needed. Web reports are designed to be intuitive for report builders to create, and easy for report viewers to use.

Creating new web reports

To create a new web report, select the **Reports** area from the left-hand panel of the Intelligence Center, then click **Create**. From the Create menu, select one of the following:

- New web report: This option opens the Report Builder so that you can create a new web report from scratch.
- New web report from template: This option creates a new web report based on a template provided by an installed product.

If you want to create a web report that uses a fixed row structure, the fixed row structure must be defined separately and then assigned to the report. Using the Intelligence Center, you can create, edit, and delete fixed row structures. For more information, see Managing Fixed Row Structures.

In order to create a web report, you must be an administrator or have the **Create Web Reports** security permission. You must also have read/write access to at least one folder in the Reports Library or My Documents.

Copying web reports

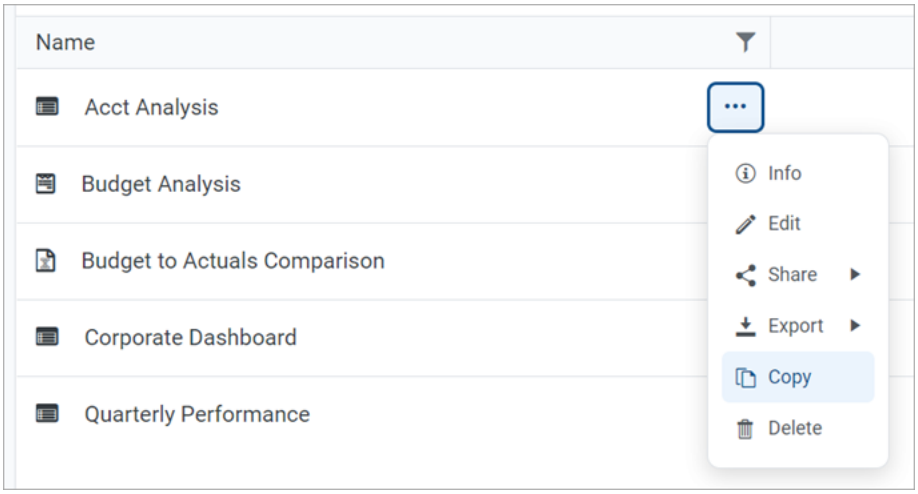
In the Intelligence Center, you can copy existing web reports to create new reports. In order to copy a web report, you must be an administrator or have the **Create Web Reports** security permission. You must also have read/write access to the current folder, because the copy is created in the current folder.

NOTE: Only web reports created in the Report Builder can be copied. Web reports created from template cannot be copied.

To copy a web report from the Intelligence Center:

1. In the Intelligence Center, locate the web report that you want to copy. You can use folder navigation to find the report, or use the Search box at the top of the page.

2. Once the web report displays in the Intelligence Center grid, hover your cursor over the **Name** column to make the three-dots icon visible. Click the icon then select **Copy** from the menu.



   If the Copy action is present but disabled, then you cannot copy this report because you do not have the appropriate security permissions.

3. In the **Copy Report** dialog, enter a name for the copy. By default, the name is **Copy of *OriginalReportName***.
4. Click **OK**.

The copy is created in the current folder, with the specified name. If you want to save a copy in a different folder, then you can **Edit** the report instead and use **Save As** within the Report Builder.

Editing web reports

You can open a web report for editing from the Intelligence Center if the report is eligible to be edited, and you have read/write permission to the report.

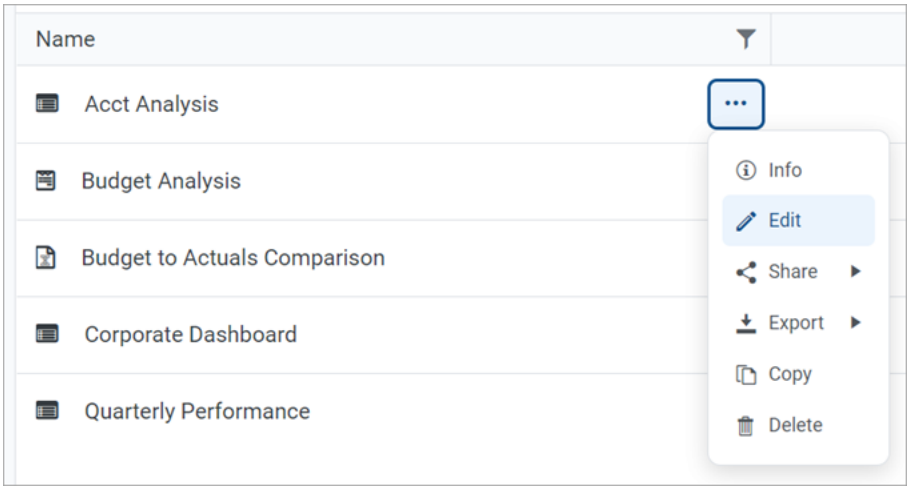
NOTE: Only web reports created in the Report Builder can be edited. Web reports created from template cannot be edited.

Only one user at a time can open a web report for editing in the Report Builder. However, other users can continue to view the report as normal.

To edit a web report from the Intelligence Center:

1. In the Intelligence Center, locate the web report that you want to edit. You can use folder navigation to find the report, or use the Search box at the top of the page.

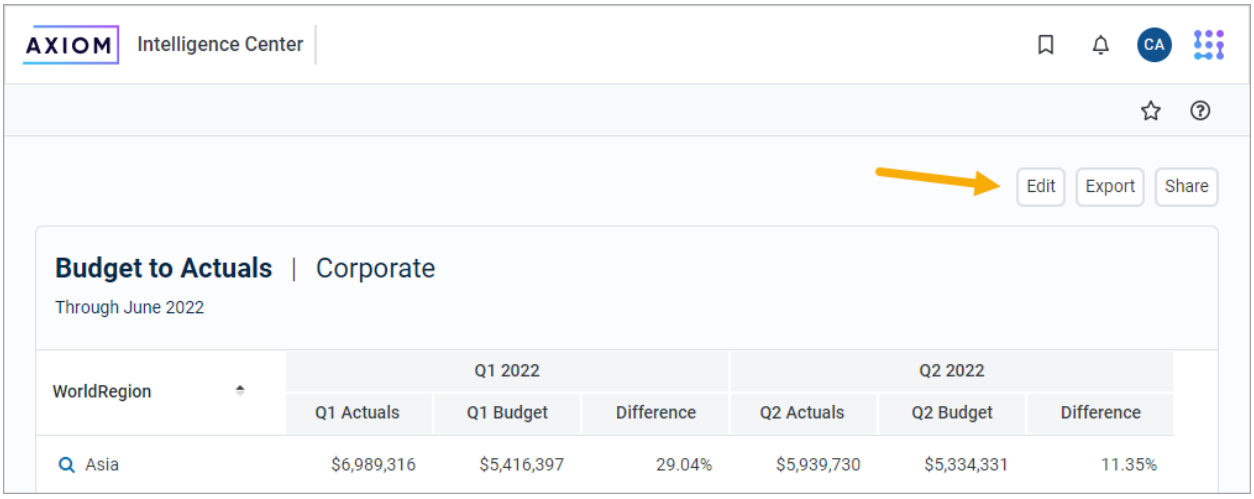
2. Once the web report displays in the Intelligence Center grid, hover your cursor over the **Name** column to make the three dots icon visible. Click the icon then select **Edit** from the menu.



If the Edit action is present but disabled, then you cannot edit this report. This may be because the report belongs to an installed product and cannot be edited, or because you do not have read/write access to the report, or because the report was created from template.

The report opens in the Report Builder, in the current browser tab. You can now edit it as needed. For more information, see Using the Report Builder.

Alternatively, when viewing a web report, an **Edit** button is present in the top right-hand corner if the report is eligible to be edited, and you have read/write permission to the report. You can click the Edit button to open the report in the Report Builder, make and save your changes, then click the Back button on your browser to return to the report.



Example Edit button to open the current report in the Report Builder

Changing web report names and descriptions

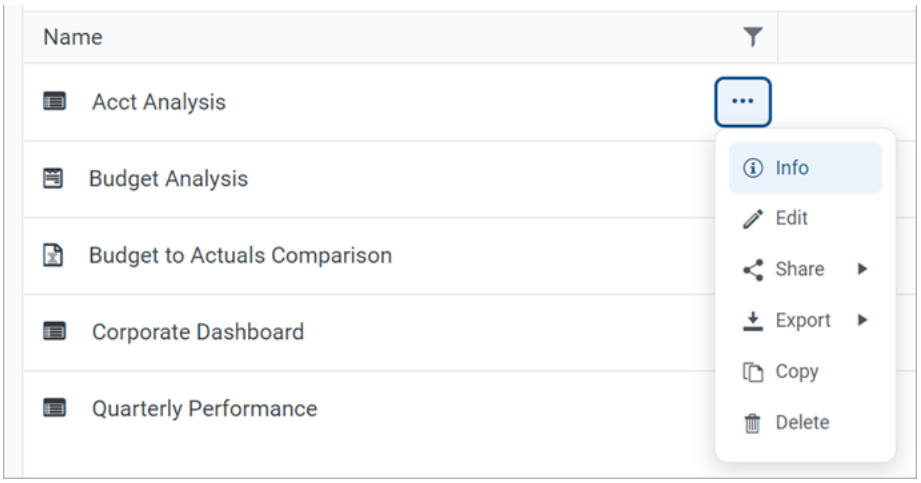
If you have read/write access to a web report, then you can rename the report or change its description.

NOTES:

- In systems with installed products, the names and descriptions of product-controlled reports cannot be edited.
- If you have read/write access to a report file, but read-only access to its folder, then you cannot edit the name or description.

To change a web report name and/or description:

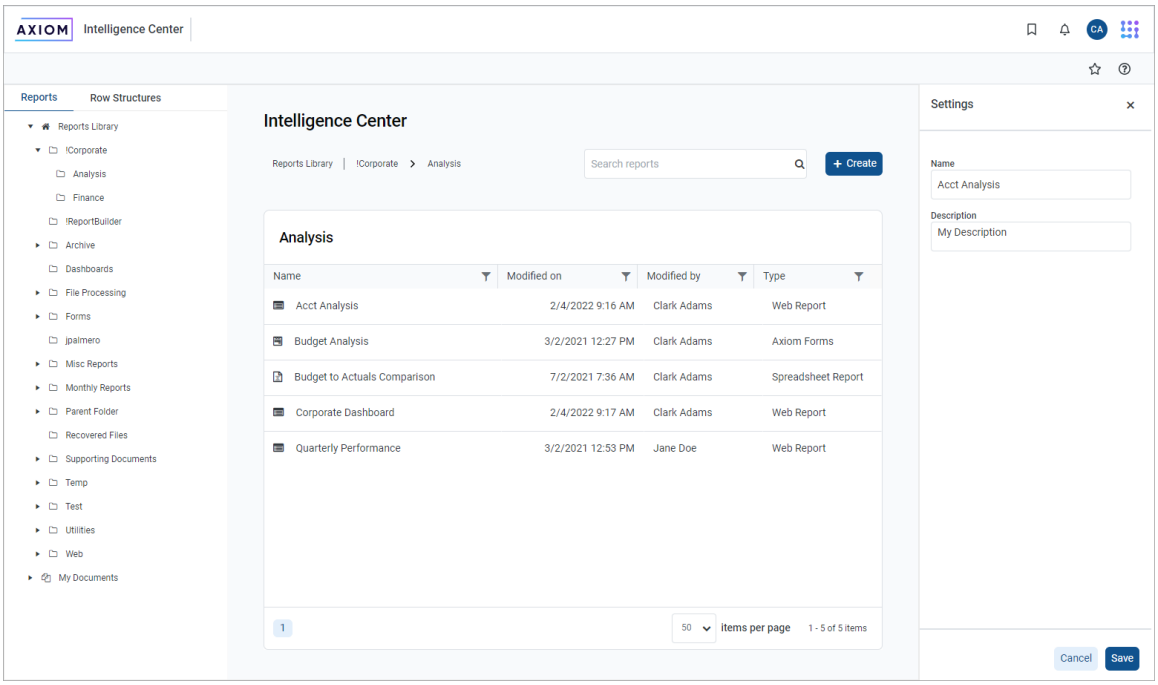
1. In the Intelligence Center, locate the web report that you want to edit. You can use folder navigation to find the report, or use the Search box at the top of the page.
2. Once the web report displays in the Intelligence Center grid, hover your cursor over the **Name** column to make the three-dots icon visible. Click the icon then select **Info** from the menu.



   The Settings panel opens along the right-hand side of the page.

3. In the Settings panel, edit the web report **Name** or **Description** as needed, then click **Save**.

   The name can be up to 250 characters, and the description can be up to 2000 characters.



Example Settings panel

If the web report name and description cannot be edited, then the **Save** button is not available. This may occur because you do not have the necessary permissions, or because the report belongs to an installed product.

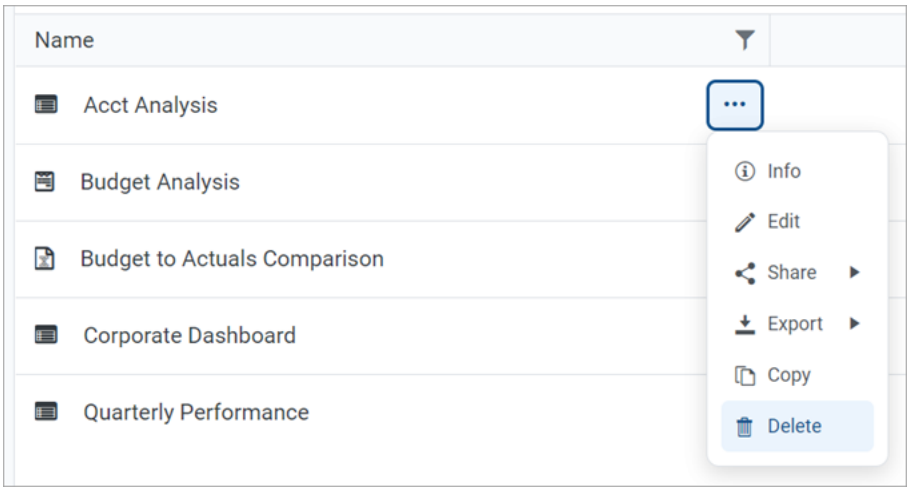
Deleting web reports

You can delete a client-created web report if it is no longer needed. You must have read/write access to the report and its folder in order to delete a report. Product-controlled web reports cannot be deleted.

TIP: If a report is deleted in error, an administrator may be able to restore the report using the **Restore Deleted Files** feature in the Axiom Desktop Client.

To delete a web report from the Intelligence Center:

1. In the Intelligence Center, locate the web report that you want to delete. You can use folder navigation to find the report, or use the Search box at the top of the page.
2. Once the web report displays in the Intelligence Center grid, hover your cursor over the **Name** column to make the three-dots icon visible. Click the icon then select **Delete** from the menu.



If the report cannot be deleted, the Delete action is disabled. This may occur because you do not have the necessary permissions to delete the report, or because the report belongs to an installed product.

3. When you are prompted to confirm that you want to delete the report, click **OK**.

The report is deleted from the system and no longer displays in the Intelligence Center.

TIP: You can also delete a web report in the Desktop Client, using Axiom Explorer or the Explorer task pane.

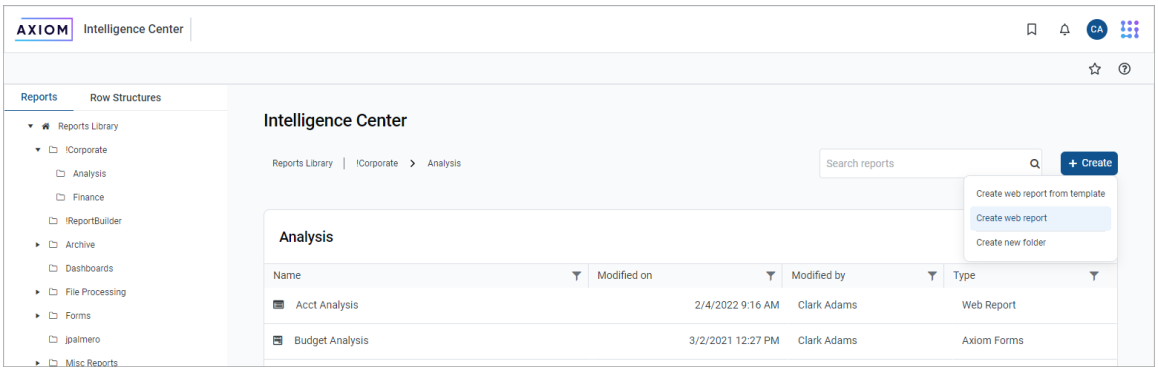
Creating new web reports

Using the Intelligence Center, you can create new web reports from scratch so that you can build the report as needed.

In order to create a web report, you must be an administrator or have the **Create Web Reports** security permission. In order to save the new report you must have read/write access to at least one folder in the Reports Library or access to the My Documents folder. If you do not have permission to create web reports, then the option to create a new web report will not be available from the **Create** button in the Intelligence Center.

To create a new web report:

1. In the Intelligence Center, click **Create** > **Create web report**.



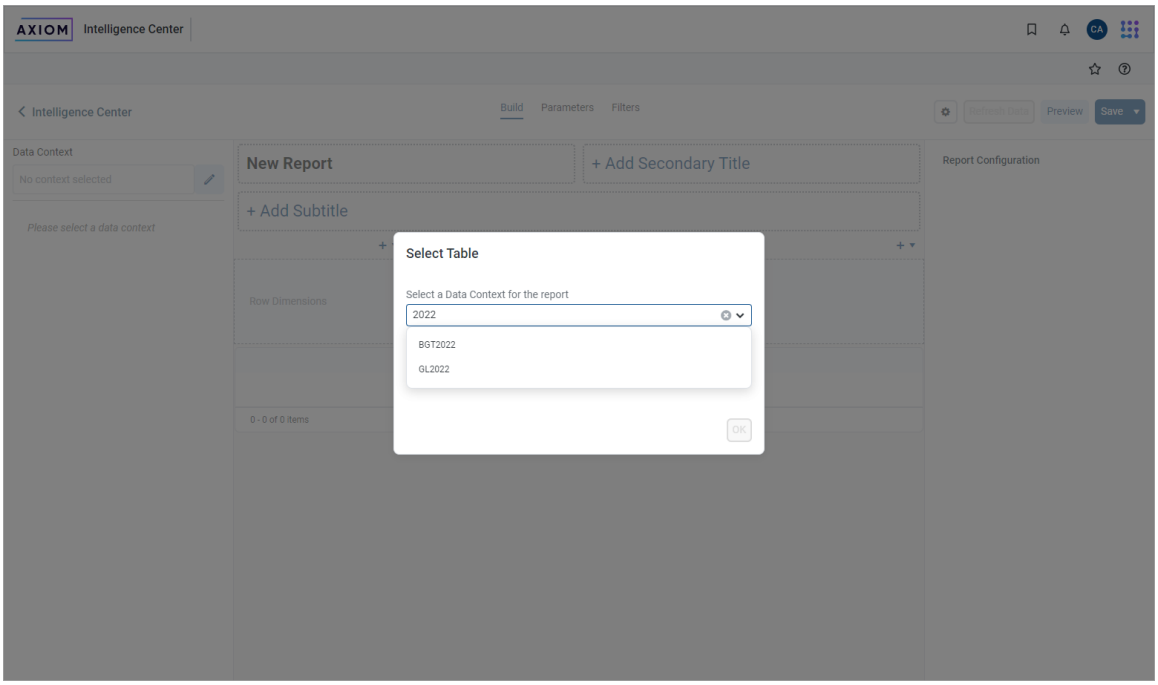
NOTE: The **Reports** area must be selected in the left-hand panel of the Intelligence Center in order to create a new web report.

The Report Builder opens in the current browser tab, displaying a new blank report.

2. In the **Select Table** dialog, select a primary table to determine the data context for the report, then click **OK**.

   The *data context* determines the overall pool of data that is eligible to be included in the report. The selected primary table determines which other tables are eligible for inclusion in the report, based on lookup relationships and shared dimensions. All table columns and filters used in the report must be compatible in the context of the primary table.

   You can select a table from the drop-down list directly, or type into the box to search for a table name. The search uses "contains" matching to return any tables that contain the search text within the table name. Tables that start with the search text are listed first, followed by tables that contain the search text anywhere in the table name. In the following screenshot, the text `2022` has been used to search for tables with the year 2022 in the name.



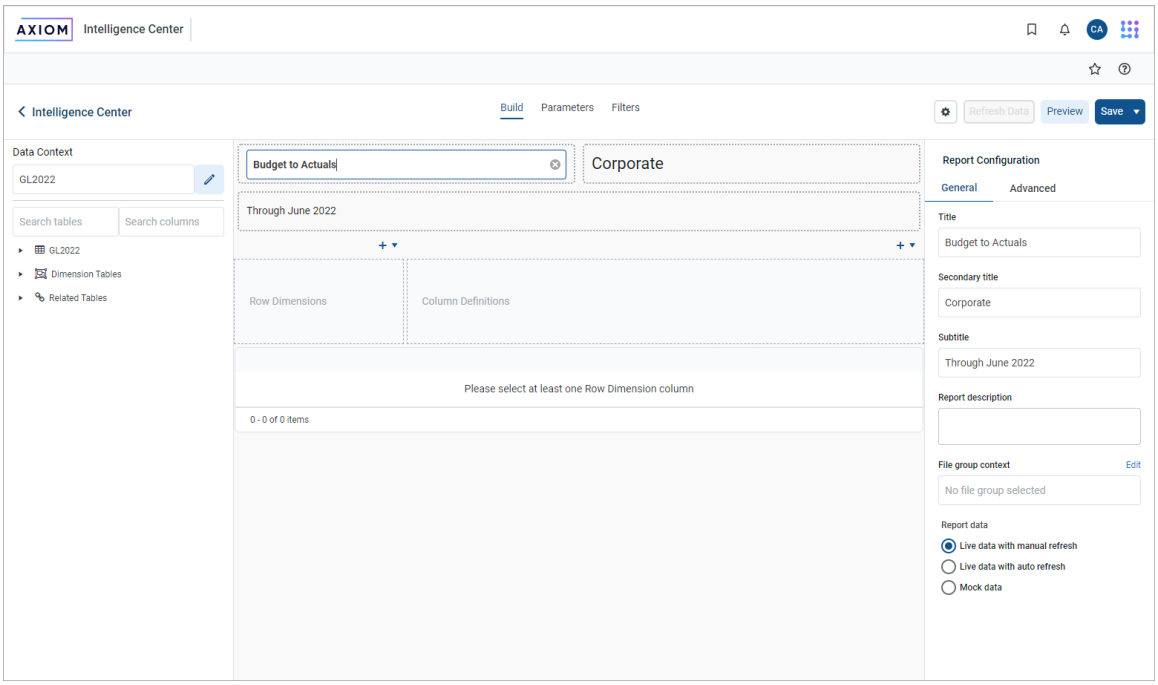
Selecting a primary table for the data context

Once a table is selected for the data context, you can work with the report in the Report Builder. The **Build** tab of the Report Builder is where most of the report creation occurs. The Build tab is organized into three main areas as follows:

- The **Data Panel** on the left side is where you select the data to include in your report.
- The **Report Canvas** in the middle is where you build the report. Columns can be dragged and dropped from the Data Panel to the Report Canvas. You can also create calculations to display in the report columns, and define column groups.
- The **Configuration Panel** on the right side is where you define properties for the report, the data grid, and the individual columns. You can configure properties such as report titles, drilling options, and column formatting.

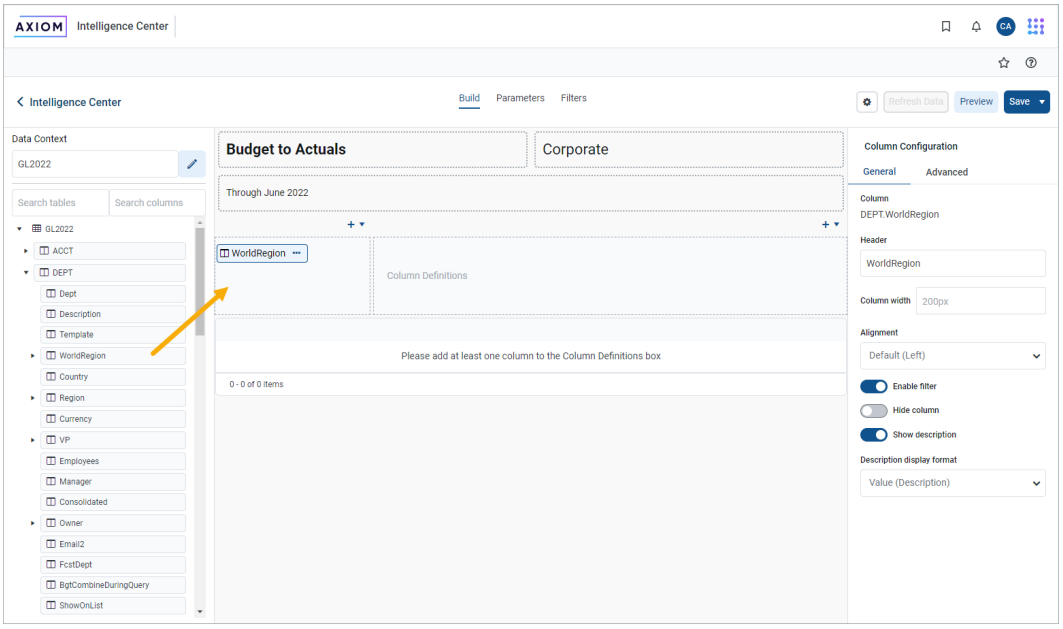
For more information on using the Report Builder, see Using the Report Builder.

3. At the top of the Report Canvas, click inside the title boxes and define the title text as desired. You can also optionally edit the title text within the **Report Configuration** panel. For more information, see Defining report titles and other web report properties.



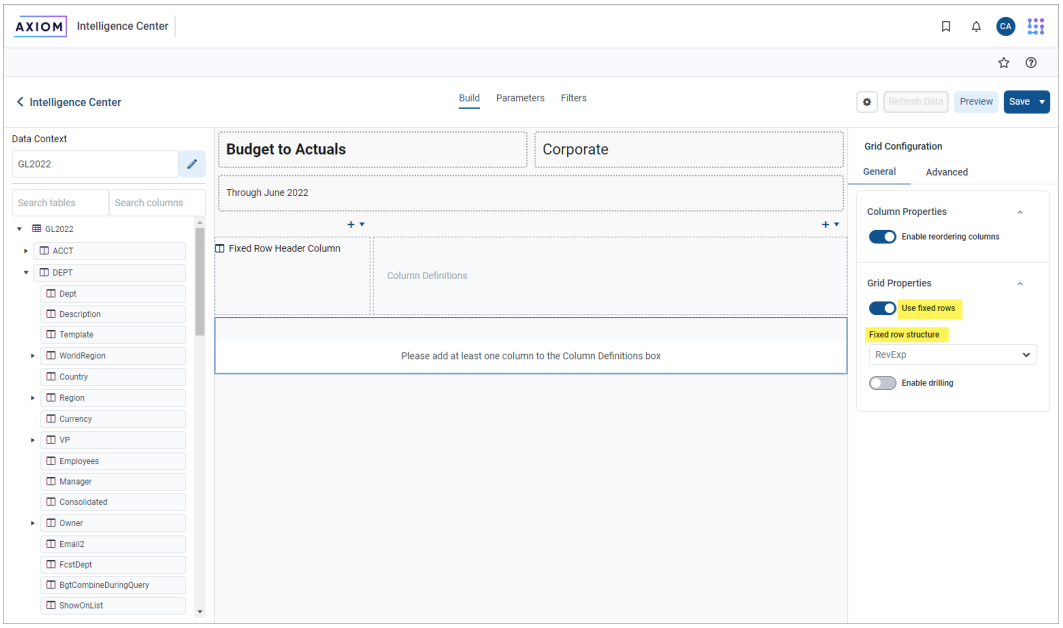
Defining titles for the report

4. Define the rows of the report by doing one of the following, depending on whether you want to generate the rows dynamically or use a fixed row structure:
    - **Dynamic rows**: In the Data Panel, locate the table column that you want to use as the row dimension. Drag and drop the column to the **Row Dimensions** box in the Report Canvas. For more information, see Specifying the row dimension for a web report.



Dragging and dropping a column to use as the row dimension

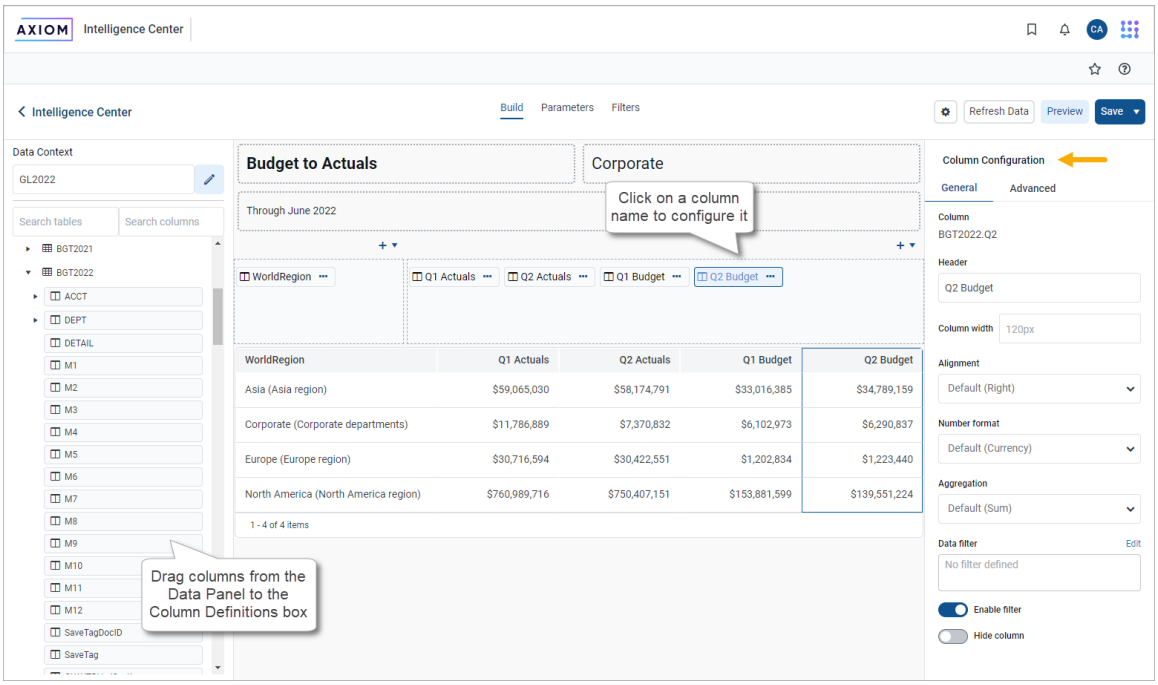
- **Fixed rows**: Select the grid placeholder text in the Report Canvas so that the **Grid Configuration** properties load into the Configuration Panel. On the **General** tab, enable **Use fixed rows** then select an existing **Fixed row structure**. For more information, see Specifying the fixed row structure for a web report.



Specifying a fixed row structure to define the rows

5. Use the Data Panel to locate the data columns that you want to display in the report, then drag and drop those columns out to the **Column Definitions** box in the Report Canvas. Once the columns are added to the grid, you can configure data and display properties for each column.

   For more information, see Adding data columns and calculated columns to a web report and Configuring column properties for a web report.

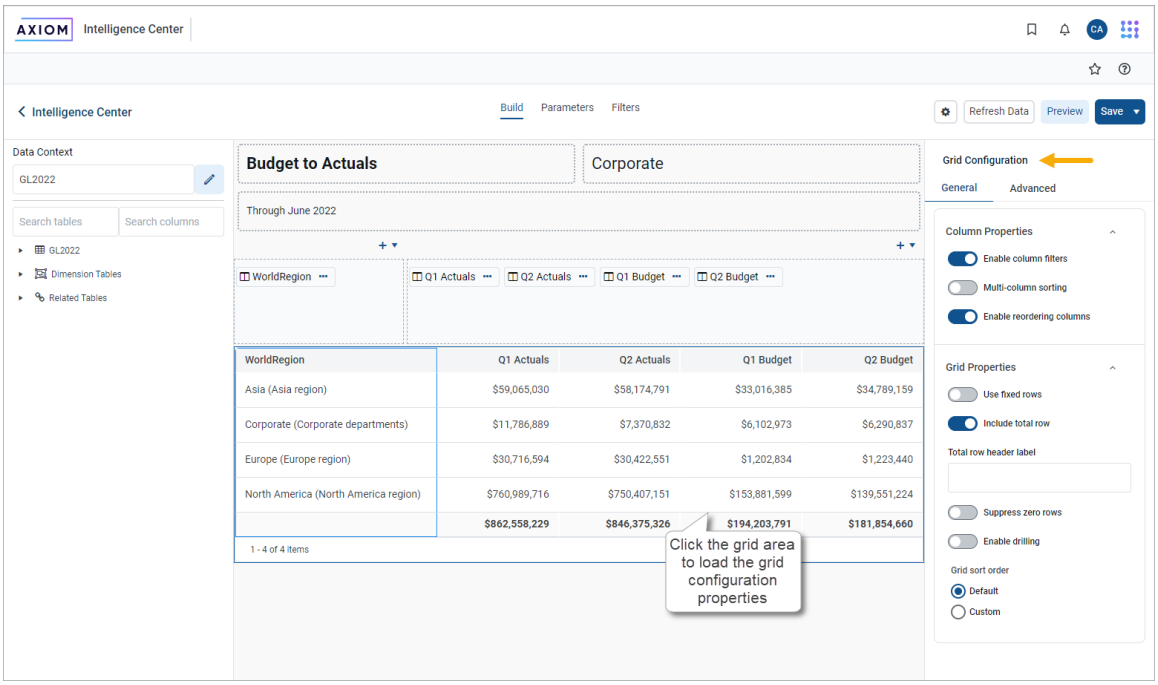


Adding and configuring data columns

NOTE: To populate the grid with data after adding columns to the Column Definitions box, click the **Refresh Data** button. By default, the Report Builder uses live data, but you must manually refresh in order to see the result of any data changes. For more information, see Changing data display options for the Report Builder.

6. Select the grid in the report canvas so that the configuration panel changes to show the **Grid Configuration** settings. Define the grid settings as needed, such as to enable the total row or enable drilling options. For more information, see Configuring grid properties in a web report.

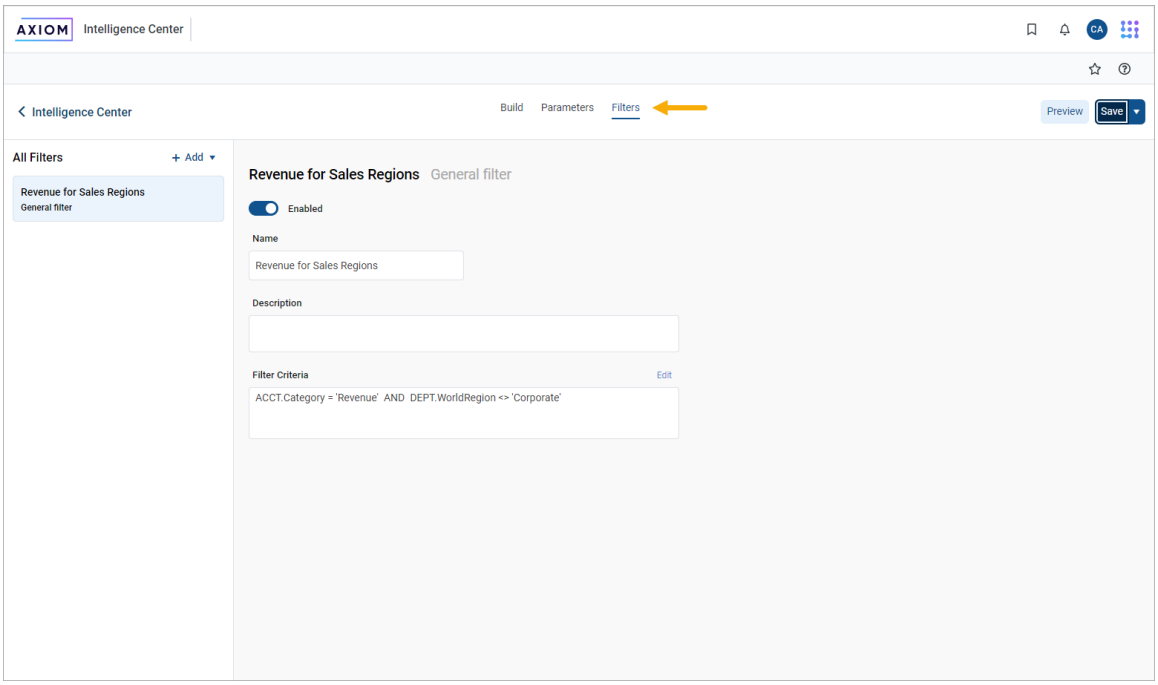
   In the following example, the total row was enabled for the grid.



Configuring grid properties

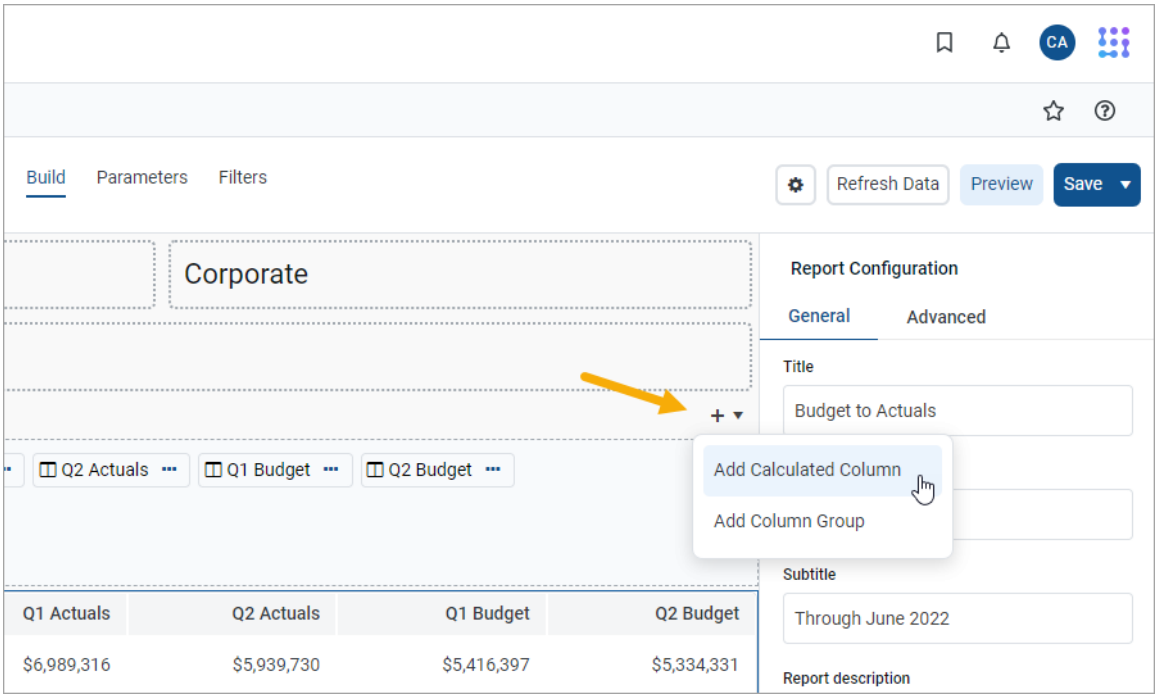
7. Click the **Filters** tab along the top of the page to define report-level filters as needed, to limit the data shown in the report. For more information, see Filtering data in web reports.

   In the following example, a general filter was added to exclude the Corporate world region value from the report and to only show data for revenue accounts.



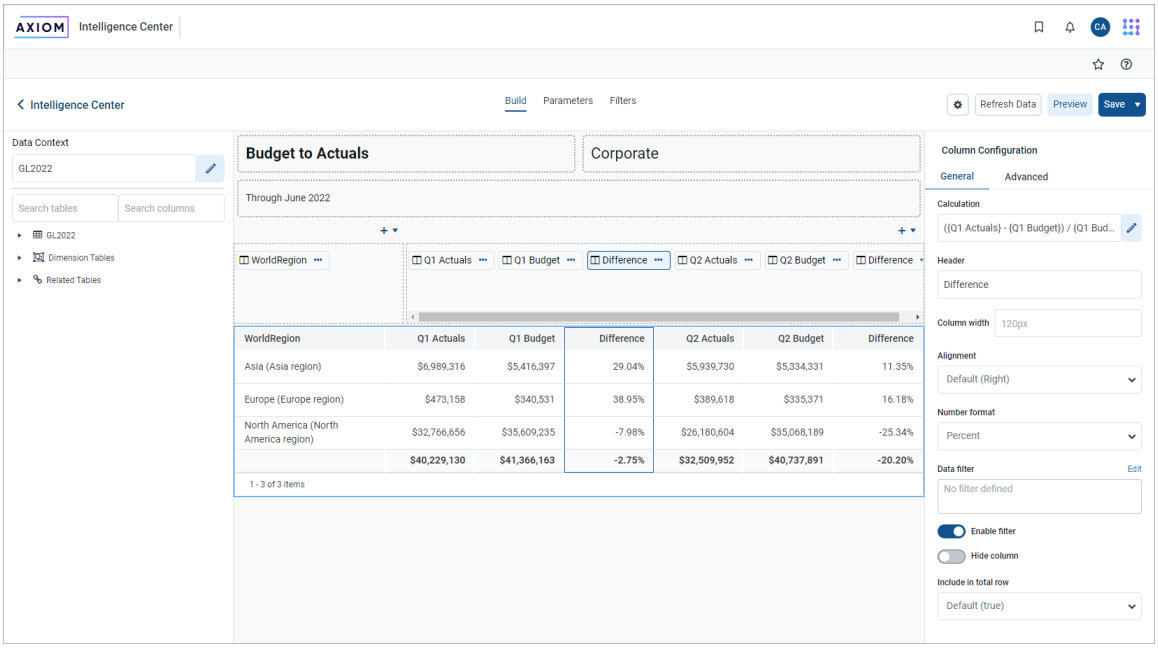
Defining a report-level filter to limit data in the report

8. Return to the **Build** tab, then use the plus icon at the top right of the **Column Definitions** box to add calculated columns to the grid as needed. For more information, see Adding data columns and calculated columns to a web report.



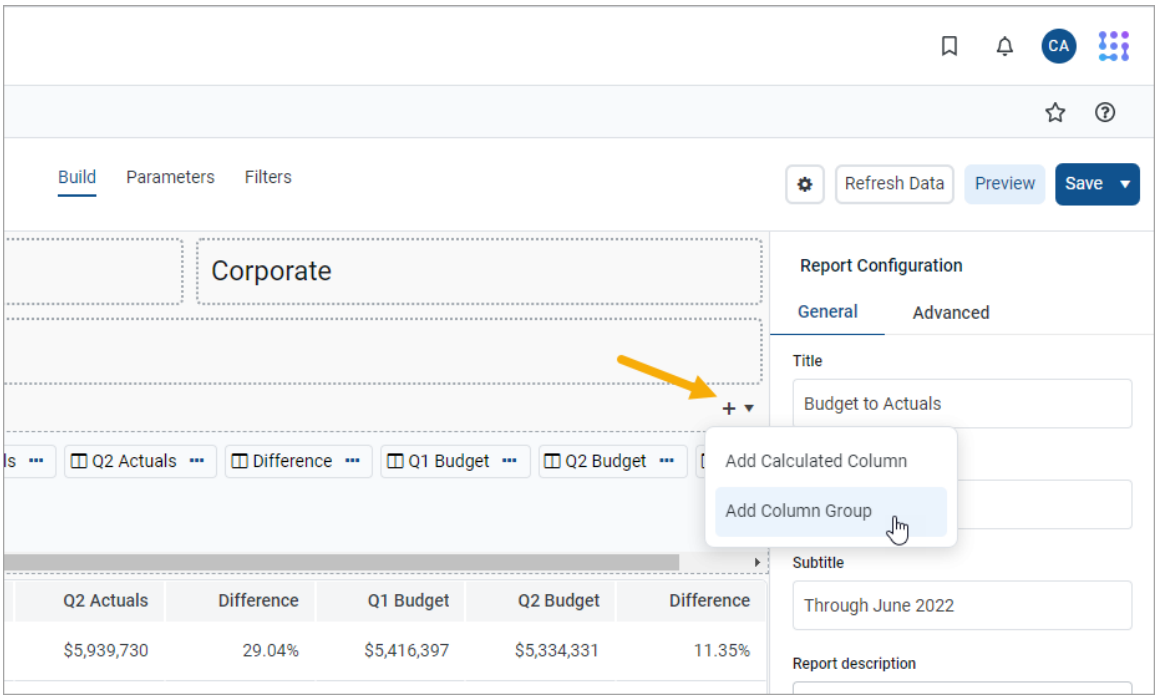
Click the plus icon to add a calculated column

In the following example, two calculated columns have been added to calculate the difference between actuals and budget for each quarter.



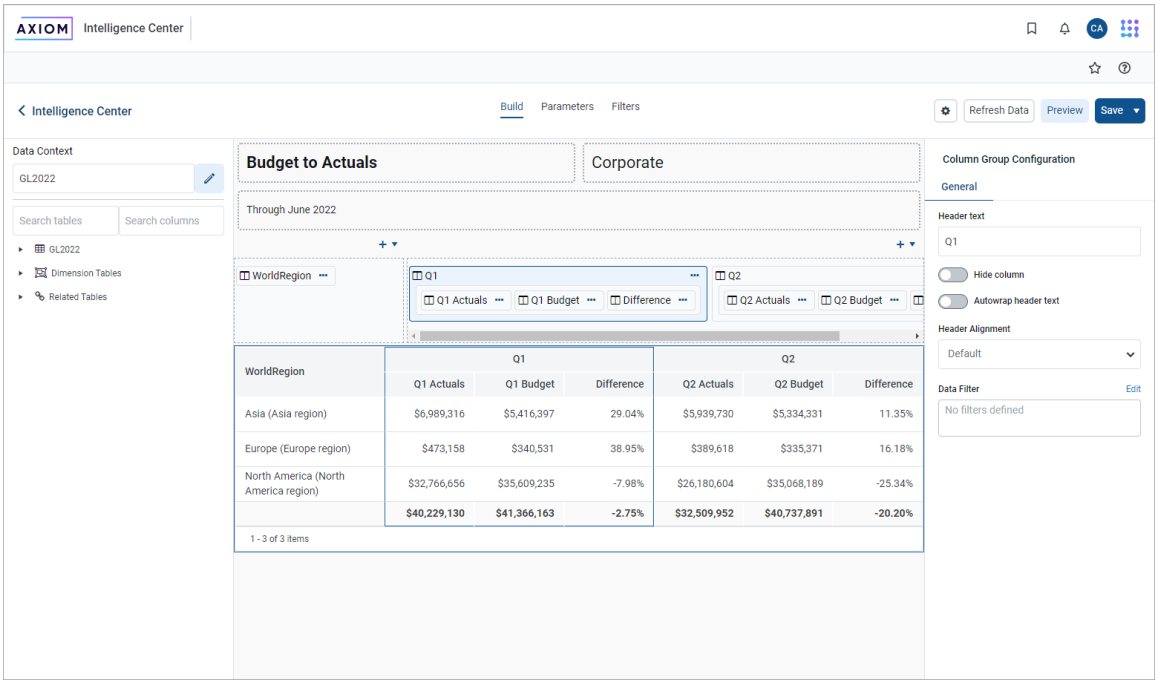
Adding and configuring calculated columns

9. Use the plus icon at the top right of the **Column Definitions** box to add column groups to the grid as needed. Using column groups, you can display multiple columns grouped underneath a header. For more information, see Defining column groups for a web report.



Click the plus icon to add a column group

In the following example, two column groups have been added for Q1 and Q2.



Adding and configuring column groups

10. Optional. If you want the report to dynamically change data based on user selections, then click the **Parameters** tab to add report parameters to the report. For more information, see Using report parameters in web reports.
11. Click **Save** to save the report.
12. In the **Save Report As** dialog, complete the following fields and then click **Save**:

Item	Description
File name	The name of the report file. This is the name that users will see in the Intelligence Center.
Description	Optional. A description of the report. Currently, descriptions do not display in the Intelligence Center, but they can be viewed in the Axiom Desktop Client using Axiom Explorer.
Save to folder	The folder in the Axiom repository where you want to save the report. • Click the folder icon to the right of the field. • In the **Choose output folder** dialog, select a folder in the Reports Library. You can only select folders where you have read/write access to the folder. If a folder name displays with a lock icon, this means you have read-only access to that folder and therefore cannot save a new report there. **NOTE:** If you have access to the My Documents folder, then you can also save reports to that location for your personal use. • Click **OK** to choose the folder and return to the save dialog. The path to your selected folder now displays in the field.

If you use a file name that already exists in the target folder, you will be prompted to choose whether or not to overwrite the existing file. If you choose not to overwrite, the save operation is canceled and you are returned to the Report Builder.

Keep in mind that many of these steps can be done in any order. You can configure the grid settings before defining report titles, and so on. The main dependency is that you must select a primary table for the data context before you can begin adding columns to the report.

Creating new web reports from template

Using the Intelligence Center, you can create new web reports from a template. Currently, templates are only provided by installed Axiom products. For more information about any templates provided by your installed products, see the separate product documentation.

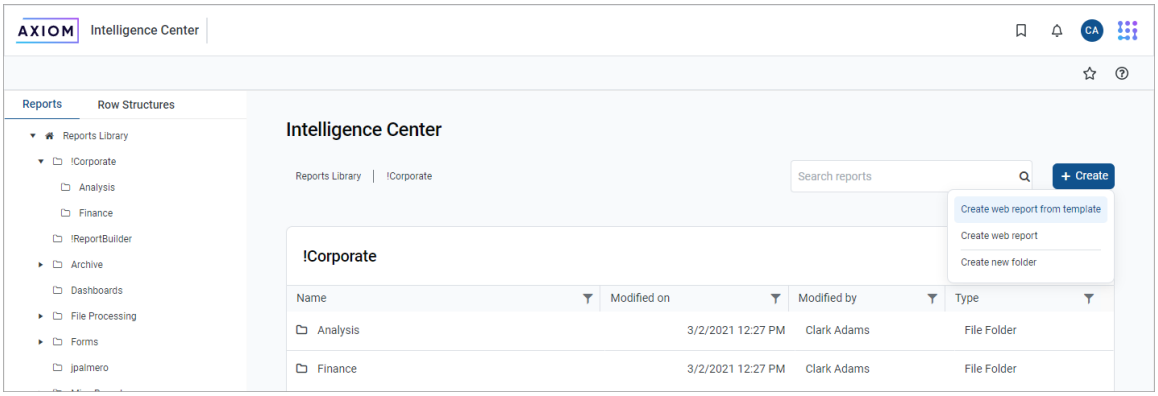
Some report templates require a fixed row structure to define the row dimensions and sections of the report. If you want to create a new web report from a template that requires a fixed row structure, this row structure must already exist so that you can assign it to the report when you create it. For more information, see Managing Fixed Row Structures.

Web reports created from template remain linked to that template. If a template changes, that change is automatically available in all reports created from that template.

In order to create a web report, you must be an administrator or have the **Create Web Reports** security permission. In order to save the new report you must have read/write access to at least one folder in the Reports Library or access to the My Documents folder. If you do not have permission to create web reports, then the option to create a new web report from template will not be available from the **Create** button in the Intelligence Center.

To create a new web report from template:

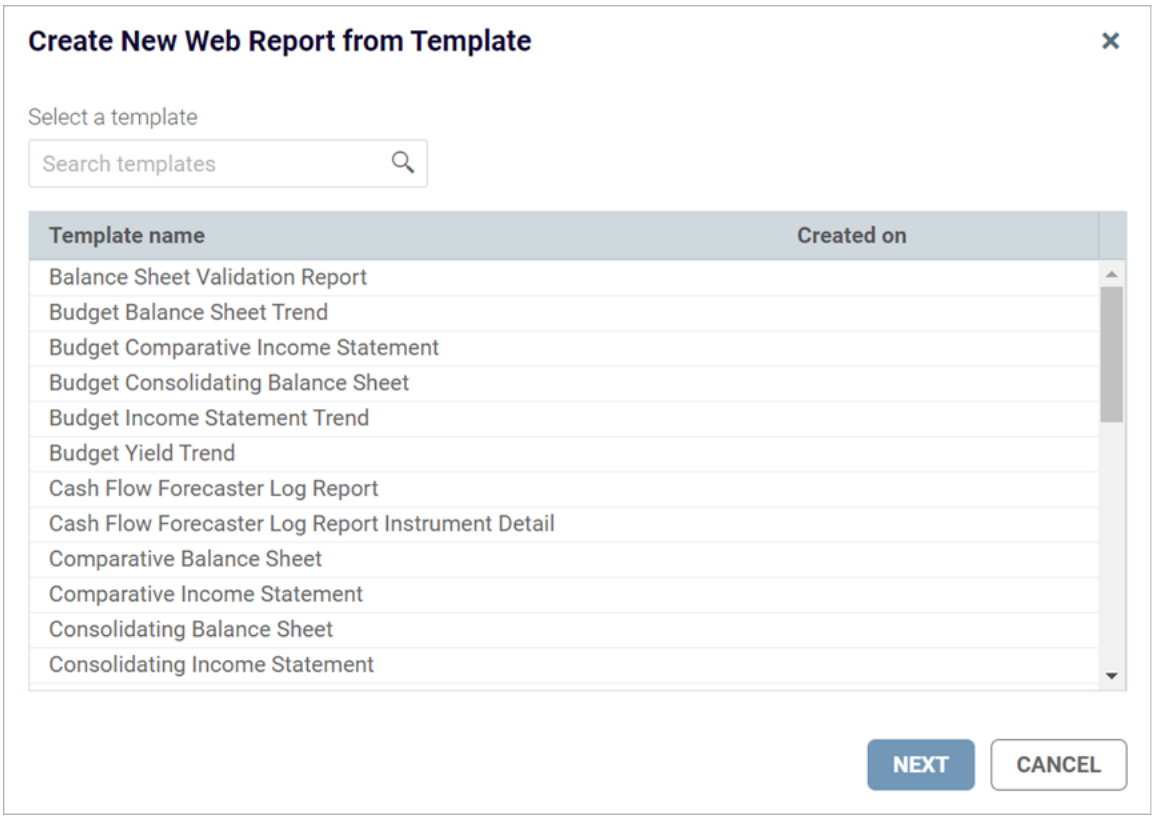
1. In the Intelligence Center, click **Create > Create web report from template**.



NOTE: If your system does not have any product-delivered templates available, then this option will not be present on the **Create** menu.

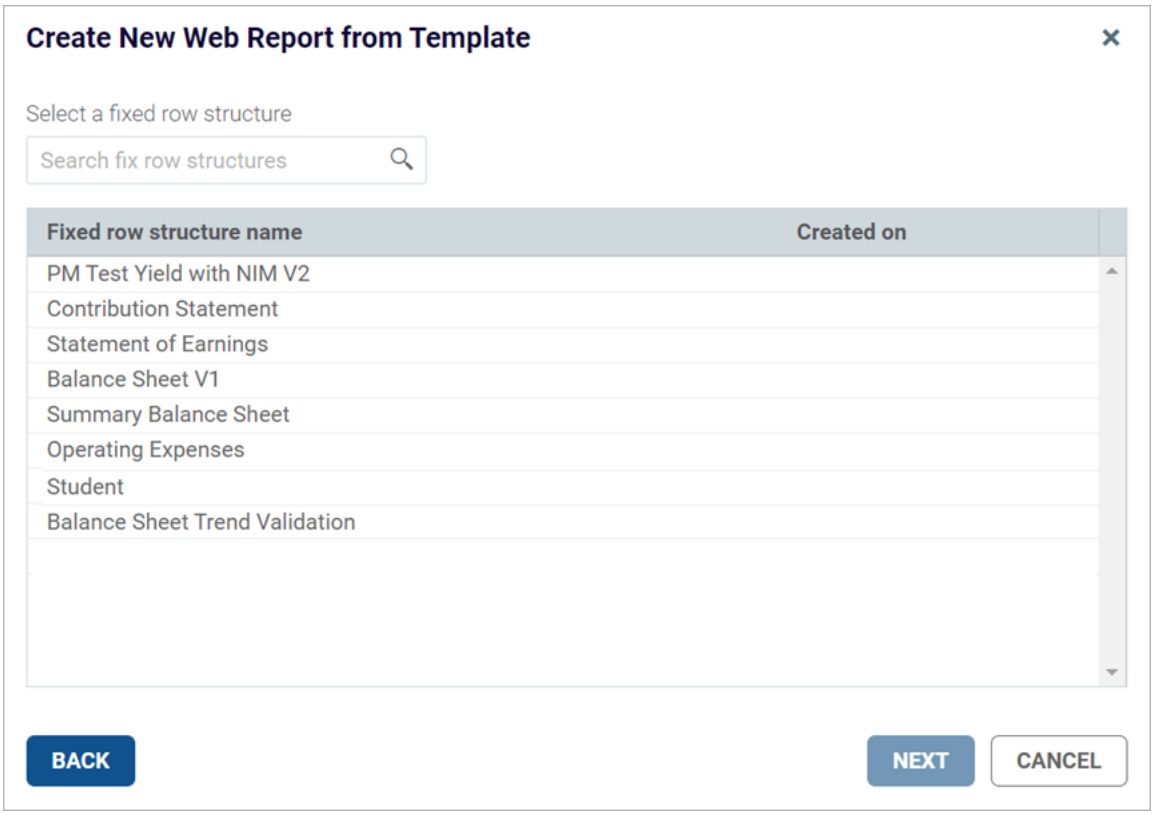
The **Create New Web Report from Template** dialog opens to walk you through the report creation process.

2. On the template screen, select the template that you want to use to create the report, and then click **Next**.



Example template screen showing product-delivered templates

3. On the fixed row structure screen, select the fixed row structure to use in the report, and then click **Next**. If the template you selected does not use a fixed row structure, then this screen does not display and you can skip to step 4.



Example screen showing fixed row structures

NOTE: If no fixed row structures are listed, then your system does not have any available fixed row structures. You must create one before you can create a web report using the selected template. You can click **Back** to select a different template, or you can click **Cancel** to exit the dialog and return to the Intelligence Center. For more information, see Managing Fixed Row Structures.

4. On the final screen, complete the following fields to save the new report, and then click **Create**.

Item	Description
Name	The name of the report file.
Description	Optional. A description for the report.

Item	Description
Save report in	The folder in the Axiom repository where you want to save the report. • Click the folder icon to the right of the field. • In the **Choose output folder** dialog, select a folder in the Reports Library. You can only select folders where you have read/write access to the folder. If a folder name displays with a lock icon, this means you have read-only access to that folder and therefore cannot save a new report there. **NOTE:** If you have access to the My Documents folder, then you can also save reports to that location for your personal use. • Click **OK** to choose the folder and return to the save dialog. The path to your selected folder now displays in the field.

The report is opened in the current browser tab. You can now review the data using a variety of tools available to web reports, such as sorting, filtering, and drilling. For more information, see Viewing and exploring data in web reports.

Once a report is created from template, it cannot be edited—for example, to choose a different fixed row structure. If you want to use a different fixed row structure, create a new report from template again. Remember that any changes to the template or to the fixed row structure will automatically flow through to all reports that use the template or the fixed row structure.

5

Using the Report Builder

Using the Report Builder, you can create and edit web reports using a drag-and-drop interface. Web reports are intended to be intuitive for report builders to create and easy for report viewers to use.

Web reports support two different ways to display reporting data in a grid:

- **Dynamic rows**: Dynamically display data rows based on a specified dimension or grouping.
- **Fixed rows**: Use predefined fixed row structures to organize data rows into sections with headers, totals, and subtotals.

The Report Builder opens when you do either of the following:

- Create a new web report from the Intelligence Center.
- Edit an existing web report from the Intelligence Center or from the report viewer.

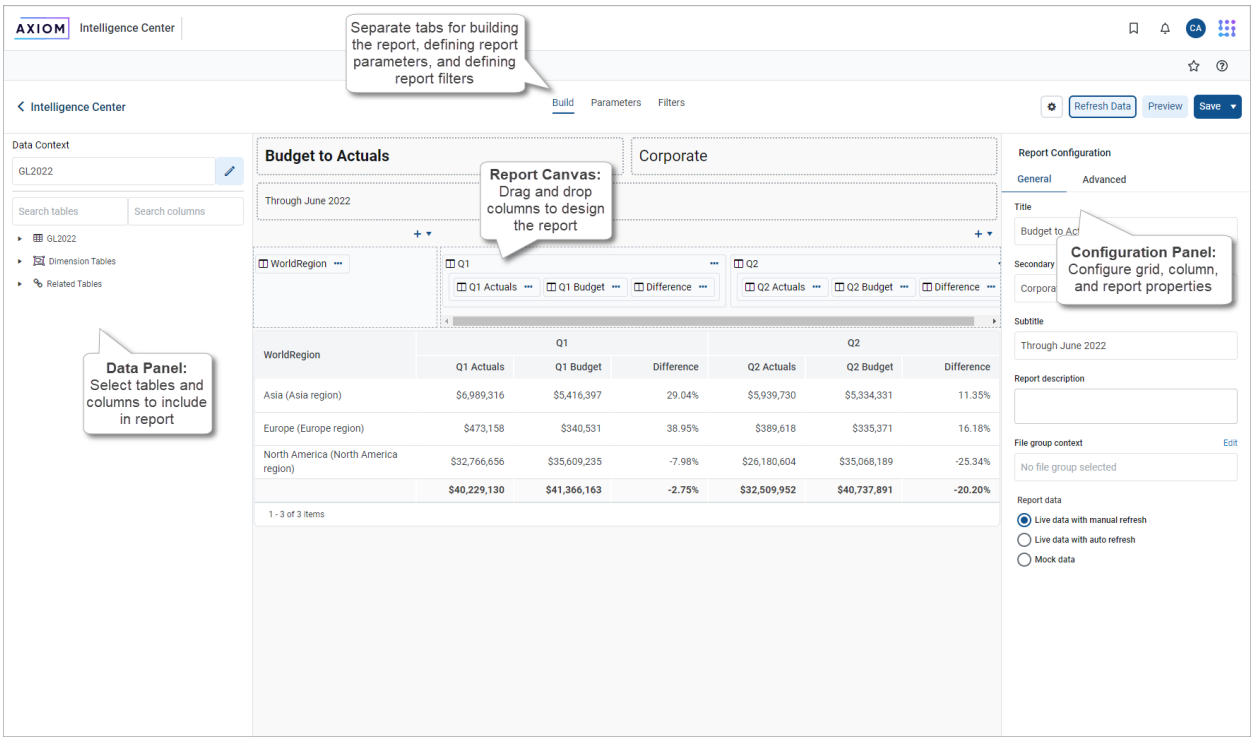
▶ Overview of the Report Builder

The Report Builder is organized into three tabs:

- **Build**: Use this tab to design the report data and configure report properties. This is the default tab.
- **Parameters**: Use this tab to enable and configure interactivity for the report. Report users can dynamically change the data that displays in the report using report parameters.
- **Filters**: Use this tab to define report-level filters, to limit the data shown in the report.

In the Build tab, the Report Builder has three main areas:

- The **Data Panel** on the left side is where you select the data to include in your report.
- The **Report Canvas** in the middle is where you build the report. Columns can be dragged and dropped from the Data Panel to the Report Canvas. You can also create calculations to display in the report columns, and define column groups.
- The **Configuration Panel** on the right side is where you define properties for the report, the data grid, and the individual columns. You can configure properties such as report titles, drilling options, and column formatting.



Overview of the Report Builder

As you build and configure the report, a preview of the grid displays in the Report Canvas area. Several options are available to control how data is shown in this grid. For more information, see Changing data display options for the Report Builder.

Building a report in the Report Builder

The following is an overview of how to build a report in the Report Builder:

- Define a data context: Each report must have a specified primary table to determine the data context for the report. Once the data context is defined, you can build the report using columns from the primary table and from related tables.
- Define report titles: You can define report title text and an optional report description.
- Define the grid rows: Web reports can use dynamically generated rows based on a dimension, or they can use a fixed row structure. Do one of the following depending on the type of report that you want to make:
    - For dynamic rows, add a row dimension to the grid by dragging and dropping a table column.
    - For fixed rows, specify a fixed row structure by modifying the grid properties.

- Add data columns and calculated columns: Drag and drop table columns out to the grid to define the data columns for the report, and define calculated columns as needed. You can also define column groups to create grouped headers in the report.
- Configure grid properties: Configure grid properties such as the total row and user interaction options, including enabling and configuring drilling options as needed. You can also adjust the default formats for various column types.
- Configure column properties: Configure properties for each column such as alignment, width, number format, and column filters.
- Define report filters: You can define general and table-specific filters to limit the data shown in the report grid.
- Define report parameters: You can optionally create and configure report parameters to allow end users to dynamically change the data shown in the report.

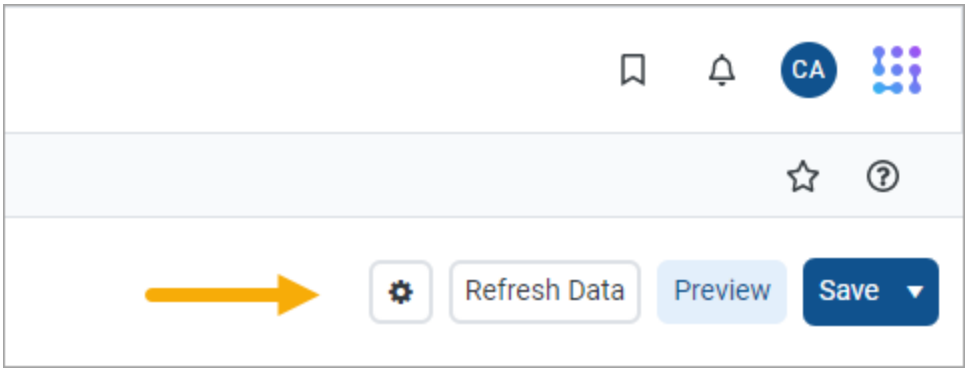
Changing data display options for the Report Builder

As you build and configure the report, a sample of the grid data displays in the Report Canvas area. You can choose how data displays in the sample grid as you build the report.

NOTE: The sample grid is intended to give you an idea of how the report data will display to report viewers, but it is not intended to be an exact representation of the final report. To see the report as it will appear to report viewers, use the Preview feature.

To change how data displays in the Report Builder:

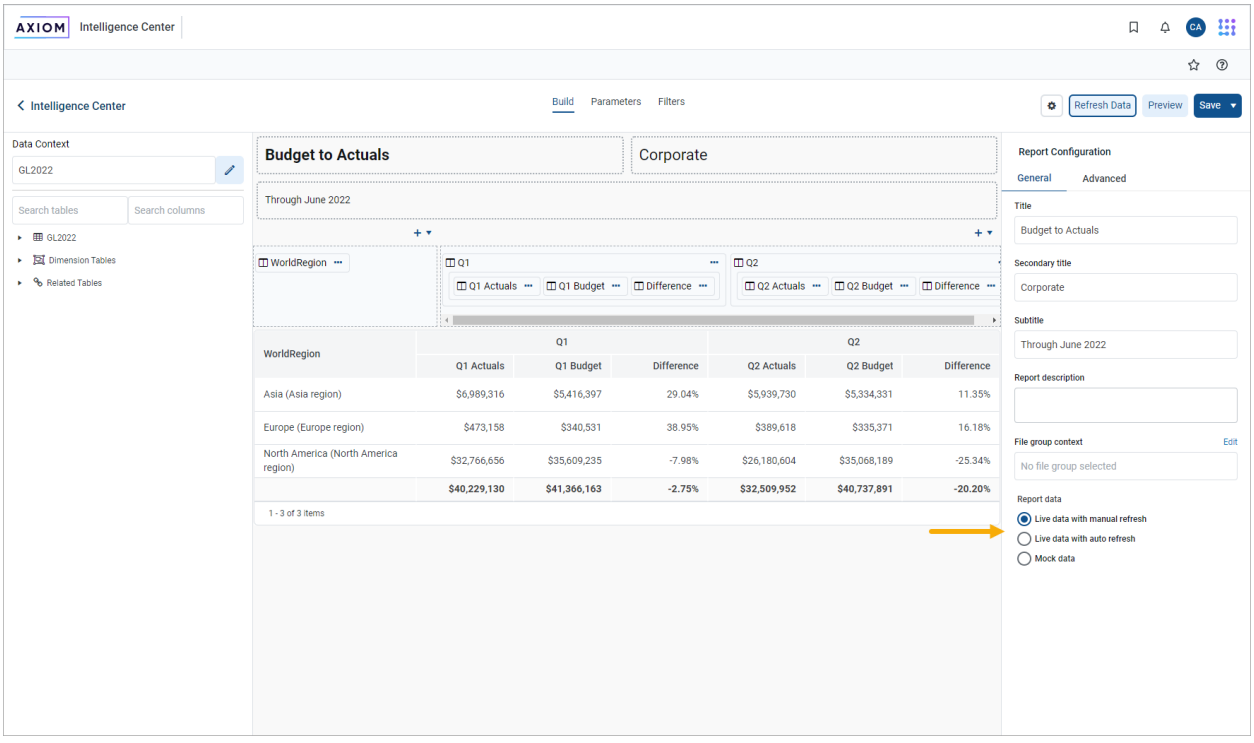
1. On the **Build** tab of the Report Builder, click the gear button at the top of the page to load the **Report Configuration** properties.



2. Select one of the following options for **Report data**:

- **Live data with manual refresh** (default): Live data is shown in the grid, however, you must manually refresh the data after making configuration changes that affect the data shown. This is for performance reasons, so that you do not have to wait for data queries to complete in order to continue working on your report. When using this option, data updates are handled as follows:
    - If you add a new column, or make a configuration change that would affect the data shown in the column, the column will be blank. To populate the grid for data in this column, click the **Refresh Data** button.
    - If you make a configuration change that would affect the data shown in the entire grid, the grid will be blank. To populate the grid with the current data, click the **Refresh Data** button.

  The **Refresh Data** button is only available when using this option.
- **Live data with automatic refresh**: Live data is shown in the grid, and the data automatically updates after you make any configuration changes. Generally speaking, this option should only be used when the report queries a small set of data so that updates will be quick, or when you do not expect to be making many configuration changes that affect data.
- **Mock data**: Mock data is shown in the grid. When using this option, you can get a basic idea of how the report columns and format will display to the user, without viewing actual data. This is a good option if you do not need to made configuration changes that affect the data, or if you do not need to view the data while you are making these changes.



Data display options for the Report Builder

Even if you are viewing live data, keep in mind that the grid shown in the Report Canvas is simply meant as a guide to help you build the report—it is not intended to be a fully functional representation of the report. If you want to see how the report will display to report viewers, click the **Preview** button.

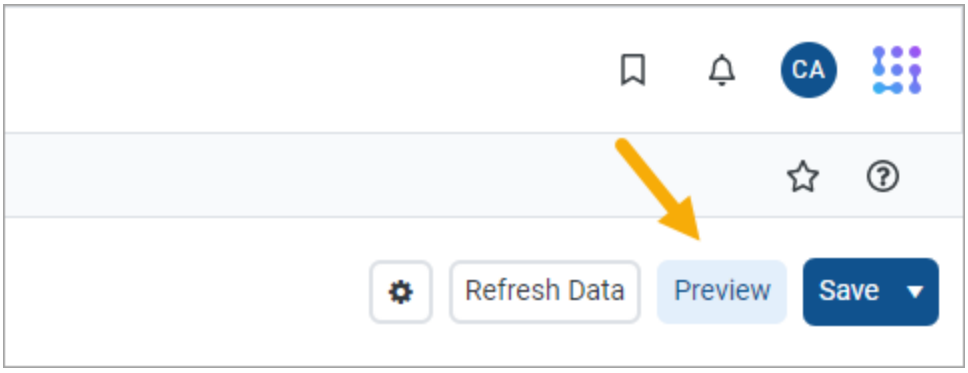
NOTE: The **Report data** option is not saved in the report, and your selection is not saved for future Report Builder sessions. Every Report Builder session defaults to using live data with manual refresh.

Previewing a report

The sample grid in the Report Canvas accurately reflects some report configuration details such as column headers and number format. However, other configuration details are not reflected in the sample grid. For example:

- Column width may not be accurately reflected in the sample grid. Initially, the grid will expand to fit the available space. Once there are enough columns to fill the space, the column width will be honored.
- The sample grid only shows up to ten rows of data (when using dynamic rows) and does not display paging options.
- Drilling options are not available in the sample grid.
- Report viewer options to sort and filter column data are not available in the sample grid
- Report parameters cannot be used on the sample grid.

If you want to see how the report will display to end users in the report viewer, including all user interaction options for the report, click the **Preview** button at the top of the Report Builder.



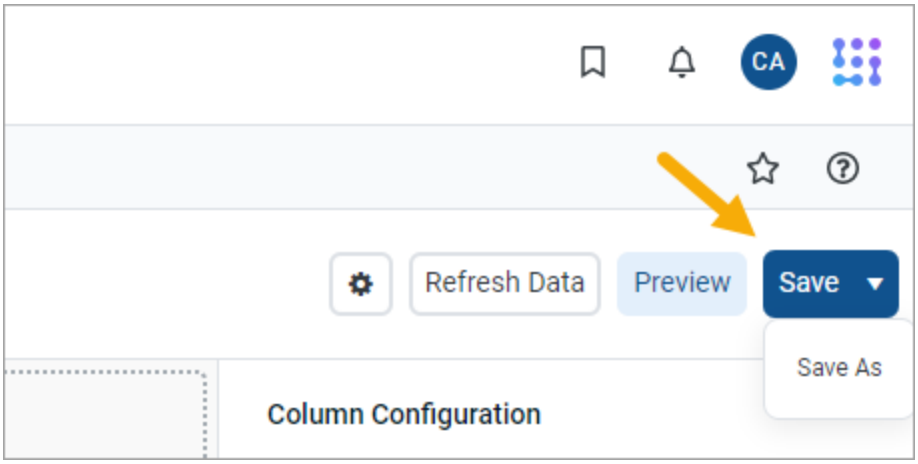
The report preview opens in a separate dialog that overlays the Report Builder. Using this preview, you can view the report data and try out end-user features like sorting, filtering, and drilling the report. When you are done viewing the preview, click **Close** at the bottom of the dialog to return to the Report Builder (or click the **X** in the top right corner).

The report preview does have a few limitations. Export and share options are not available in the report preview. Additionally, if hyperlinks are used in the report, the hyperlinks will always open in a new tab, even if they are configured to open in the same tab—this is done so that clicking a hyperlink will not close the Report Builder.

Saving a report

Use the **Save** button at the top of the Report Builder to save the report. If the report is a brand new report, you will be prompted to define a name and folder location for the report. Otherwise, the existing report is saved.

If you have opened an existing report for editing and you want to save a copy of it with a new name, click the down arrow to the right of the Save button and select **Save As**.



Save button with Save As option

NOTE: The **Create Web Reports** security permission is required in order to use **Save As**.

If you have made changes to the report but have not yet saved, you will be prompted to save when you attempt to close the browser tab or navigate to a new location.

Defining the data context for a web report

The *data context* for a web report determines the overall pool of data that is eligible to be included in the report. To define the data context, you select a *primary table* as the "base" table for the report. This primary table then determines which other tables are eligible for inclusion in the report, based on lookup relationships. All table columns used in the report must be compatible in the context of the primary table.

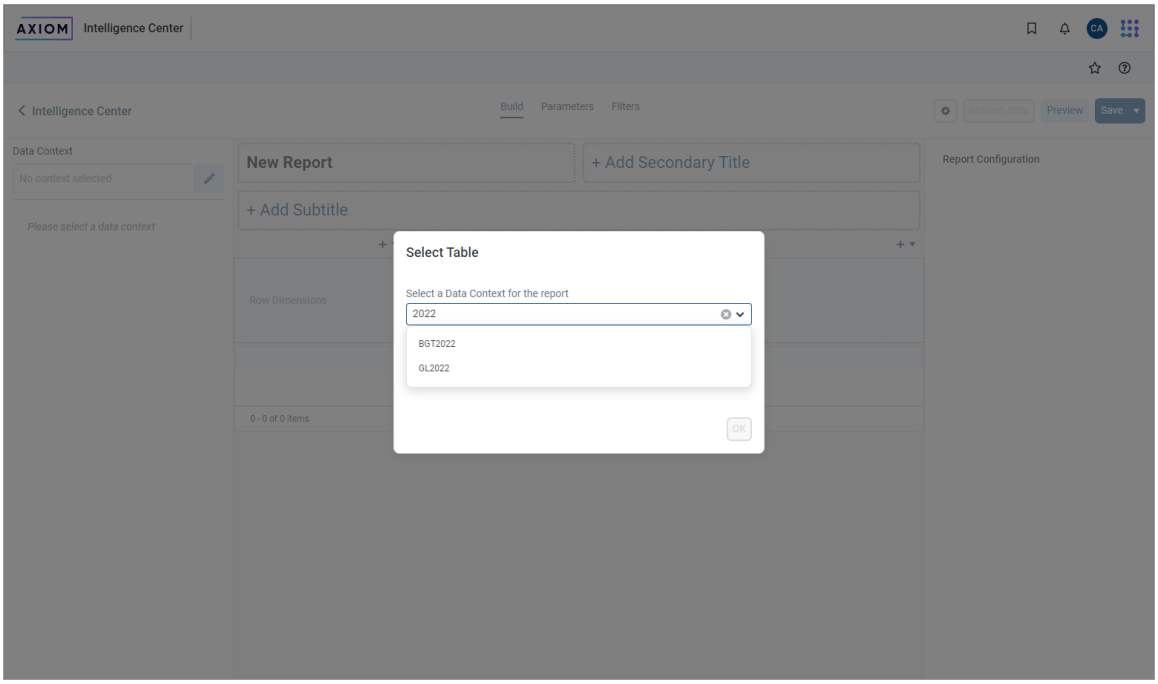
In the Report Builder, the primary table for the data context is specified on the **Build** tab, in the left-hand Data Panel. You must select the primary table before you can drag and drop any table columns out to the grid.

To select a primary table for the data context:

There are two ways to select a primary table for the data context.

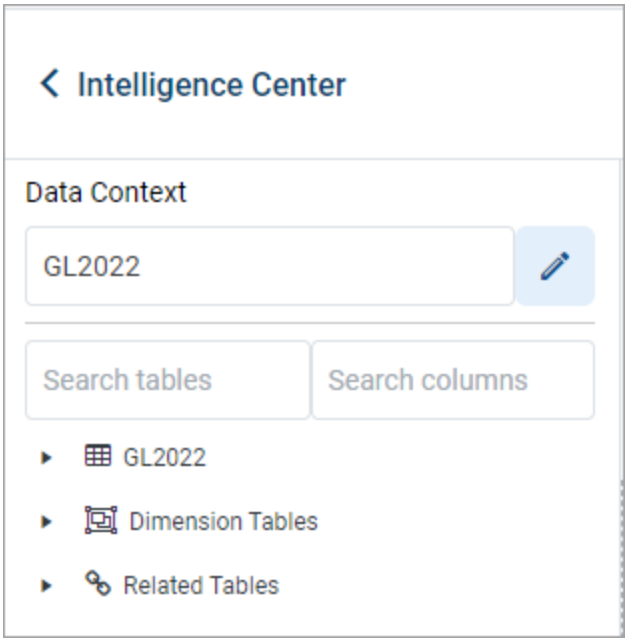
- When you create a brand new report, you are automatically prompted to select a primary table for the data context.

  You can select a table from the drop-down list directly, or type into the box to search for a table name. The search uses "contains" matching to return any tables that contain the search text within the table name. Tables that start with the search text are listed first, followed by tables that contain the search text anywhere in the table name. In the following screenshot, the text `2022` has been used to search for tables with the year 2022 in the name.



Example Select Table prompt when creating a new report

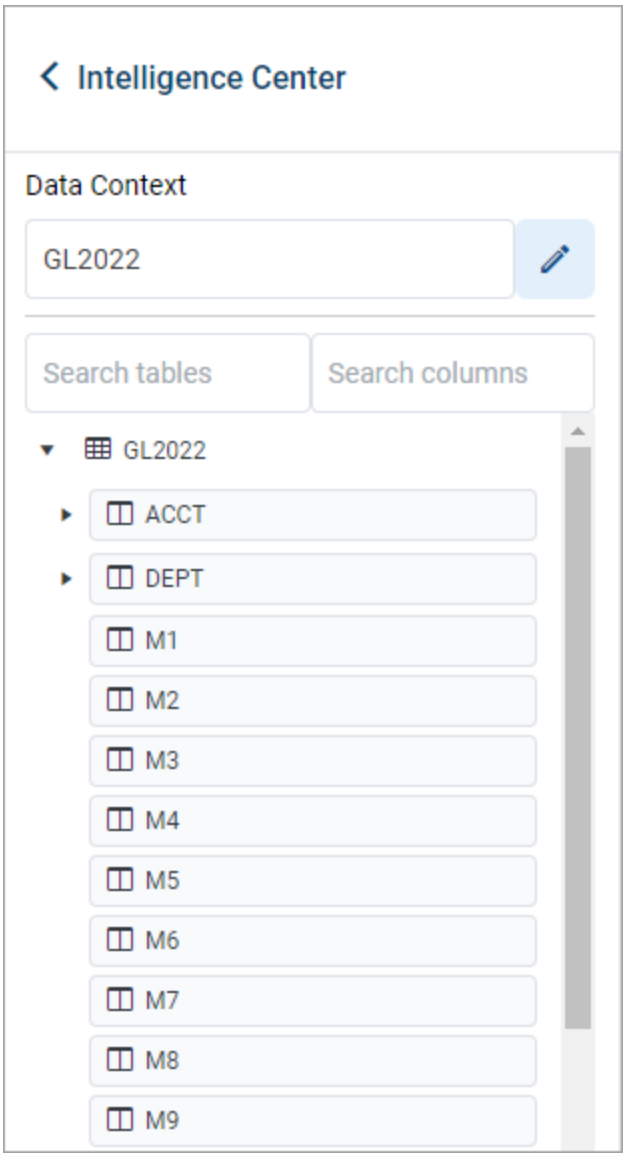
- If you are already in the Report Builder, then you can define or change the primary table using the **Data Context** box at the top of the Data Panel. Click the Edit icon to open the **Select Table** dialog (as shown in the previous screenshot).



Once you have selected a table, that table name is shown in the **Data Context** box, and the Data Panel populates to show a table tree in three expandable/collapsible sections:

- ***TableName***: The selected table and its columns. This table is the primary table.
- **Dimension Tables**: Reference tables that the primary table looks up to. If the reference tables have lookups to other reference tables, these multi-level reference tables are accessible through the first-level reference tables.
- **Related Tables**: The contents of this section depend on the type of table selected as the primary table.
    - If the primary table is a data table, then this section contains other tables that look up to one or more of the same reference tables as the primary table.
    - If the primary table is a reference table, then this section contains tables that look up to the reference table.

You can expand these tables to view the columns, and then drag and drop columns out to the Report Canvas area so that they can be used as row dimensions or data columns.



Expanded table tree

In this example, we have selected GL2022 as the primary table. GL2022 is a data table that looks up to reference tables Dept and Acct. The table tree is populated as follows:

- **GL2022**: This node contains all columns in GL2022, as well as columns in the lookup tables Dept and Acct.
- **Dimension Tables**: This node contains the lookup reference tables Dept and Acct. If the reference tables look up to other downstream reference tables (multi-level lookups), those downstream reference tables can be used through these tables.
- **Related Tables**: This node contains other tables that also look up to Dept or Acct (or to a multi-level lookup through Dept or Acct). This may include tables such as GL2021, BGT2021, and BGT2022.

When you save the report, the data context is saved for that report and will be reloaded into the Data Panel whenever the report is opened in the Report Builder.

NOTES:

- When choosing the data context, the list of tables is automatically filtered to only show tables that you have access to. If you have the **Administer Tables** security permission, all tables will be shown. This means it can be possible to select a primary table where you do not have access to any of the data in the table. You can build the report but it will not populate with data.
- Certain tables can be restricted from showing the in the Report Builder using the system configuration setting **TablesRestrictedFromReportWriter**. If a table that you have access to is not available, it has likely been restricted using this setting.

Changing the data context

You can change the data context freely until you have done either of the following:

- Dragged and dropped columns out to the grid setup boxes in the Report Canvas
- Selected a fixed row structure for use with the report (when using the **Use fixed rows** option in the Grid Configuration properties)

You can still change the data context if needed, but any newly selected primary table must be compatible with the table columns you have already added to the grid, and with the fixed row structure you have selected (if applicable). If the newly selected primary table is not compatible, an error will occur when the Report Builder tries to refresh the grid in the Report Canvas. At this point you have the choice of selecting a different primary table that is compatible (which may mean returning to the original primary table), or removing the incompatible columns from the grid, or choosing a different fixed row structure.

Other settings that must be compatible with the primary table include columns selected as drilling columns for a Directed drilling configuration. If you change the primary table and any of these settings are incompatible with the new primary table, an error will occur.

If you change the data context and save the report, the new primary table is now saved for the report and will be reloaded into the Data Panel whenever the report is opened in the Report Builder.

Specifying the row dimension for a web report

The row dimension for a web report defines the summation level for the row data. For example, you may want the rows in your grid to show data by department, region, entity, account, or some combination of dimensions. You specify a table column to use as the row dimension, and then the rows in the grid are dynamically generated based on the unique values in that column.

NOTE: If you want your report to use a static row structure with multiple sections instead of dynamically generating the rows, then use a fixed row structure instead of a row dimension.

The row dimension for the report is placed in the left-hand box at the top of the Report Canvas, known as the **Row Dimensions** box. The report grid cannot render until you specify either a row dimension or a fixed row structure.

Row Dimensions box at the top of the Report Canvas

Web reports can have multiple row dimensions. If two or more row dimensions are specified, then each row in the report represents a unique combination of the dimensions. For example, if the row dimension is just Dept, then each row shows data for a department. If the row dimension is Dept and Acct, then each row shows data by the unique combinations of department and account.

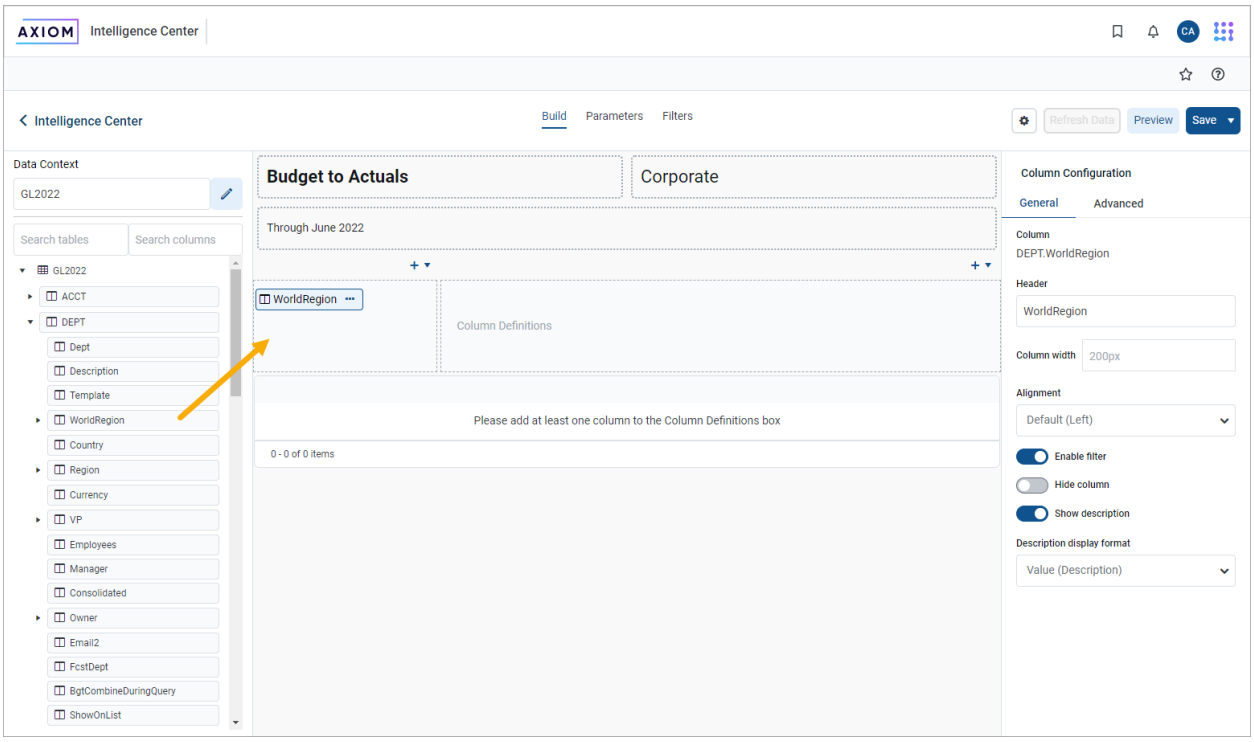
To specify a row dimension for a web report:

1. On the **Build** tab of the Report Builder, in the Data Panel, expand the table tree until you locate the column that you want to use as a row dimension.

   If the Data Panel is empty, this means you must select a primary table first.

2. Drag and drop the column to the **Row Dimensions** box at the top of the Report Canvas.
3. Select the column name in the Row Dimensions box, and then use the **Column Configuration** panel to configure display properties such as column width, alignment, header text, and formatting. For more information, see Configuring column properties for a web report.
4. If multiple columns are present in the Row Dimensions box, you can drag and drop them within the box so that they display in the desired order within the grid.

Once a row dimension is specified, the Data Panel updates to remove any tables that are incompatible with the specified row dimension. You can now build out the data columns of the report by dragging and dropping columns from the Data Panel, and by creating calculated columns. For more information, see Adding data columns and calculated columns to a web report.



Defining a row dimension for a web report

NOTES:

- If you drag and drop a validated column from a data table to use as the row dimension, such as GL2022.Dept, this column reference is automatically "elevated" to point to the lookup table instead, meaning Dept.Dept. This is done so that the column reference is compatible with other data tables that reference the same lookup table. This elevation only occurs if the validated column looks up to a shared dimension table.
- Calculated fields from the database cannot be added as row dimensions.

Using a dynamic column for the row dimension

You may want to design a report where the row dimension is dynamic based on user input. Users can choose the grouping level that they want to see the rows summarized by.

To configure a report to use a dynamic row dimension, you must:

- Create a Column List report parameter, and configure the parameter to use the columns that you want users to be able to choose as the row dimension.
- Add a Dynamic column to the Row Dimensions box, and configure that column to use the Column List report parameter.

When a report user opens the report, they can use the Report Parameters panel to choose the column that they want to use as the row dimension. The report then refreshes to show the data grouped by that column. For more information, see Using report parameters in web reports and Using Column List report parameters.

Displaying descriptions for the row dimension

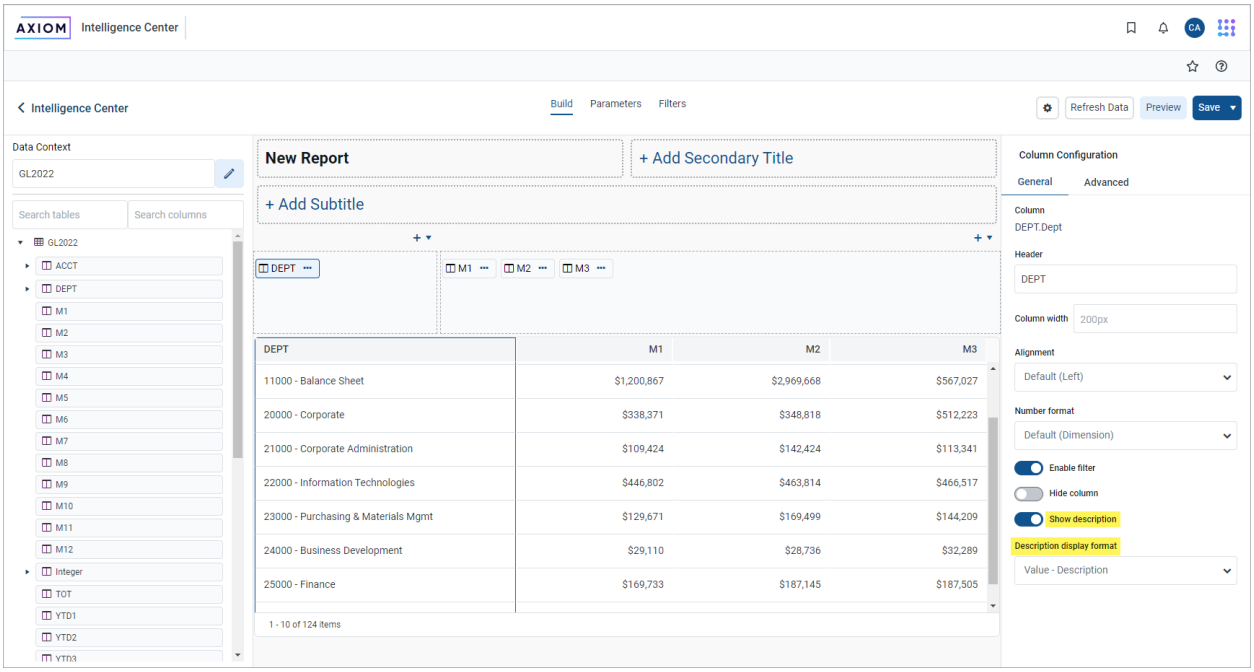
In many cases your row dimension will be a code, such as a department code or an account code, and you want to display the description for the code next to it. By default, any column with an associated description is automatically enabled to show the descriptions appended to the column value. If desired, you can specify a different display format for the descriptions, or you can disable showing descriptions.

This behavior applies to any column with descriptions used in the report, but the most common use case is for the row dimension columns.

To configure the description display formats for row dimensions:

1. On the **Build** tab of the Report Builder, select the row dimension column in the **Row Dimensions** box.
2. In the **Column Configuration** settings, on the **General** tab, enable or disable **Show description** as needed.
3. If descriptions are enabled, then select the desired display format from the **Description display format** list.

In the following example, the Dept column has been configured to show descriptions using the **Value - Description** format. If you select a format that shows descriptions first, such as **Description (Value)**, then the rows will be sorted by the descriptions instead of the underlying values.



Example row dimension column configured to show descriptions

Filtering the row dimension

In some cases you want the report to display a subset of values from the row dimension column, instead of all values. To filter the row dimension values, use the Filters tab to define a general filter for the report.

For example, if the row dimension is Dept but you want the report to only display departments that belong to a specific entity, define a general filter such as `Dept.Entity='Entity 1'`. This will filter the grid so that it only shows data that belongs to Entity 1, including the row dimension values. Department codes that do not belong to Entity 1 will not be included in the data query.

Changing the row dimension

You can change the row dimension at any time by dragging and dropping additional columns to the **Row Dimensions** box, or by removing existing row dimensions.

To remove a row dimension, click the three-dots icon to the right side of the column name and then select **Delete Column**. If you remove the only row dimension, the grid in the Report Canvas cannot be rendered until you specify a new one.

If you change the row dimension after adding data columns and calculated columns, or if you change the primary table after specifying a row dimension, it is possible that some of the selections may be incompatible with each other. In this case, an error will display when the Report Builder attempts to refresh the data in the Report Canvas. You may have to remove incompatible columns, change the row dimension, or change the primary table in order to restore a valid grid configuration.

If you decide that you want to change the report to use a fixed row structure instead of a row dimension, use the **Grid Configuration** properties to enable fixed rows and then choose a fixed row structure. For more information, see Specifying the fixed row structure for a web report. Any columns currently placed in the Row Dimensions box will be ignored while fixed rows are enabled for the report.

Using upstream grouping columns as row dimensions in web reports

Under normal circumstances, row dimension columns can be columns on the primary table for the data context, or columns on lookup dimension tables. However, when the primary table for the web report is a reference table, you can also optionally use columns from related tables as row dimensions. This type of configuration is referred to as *upstream grouping columns*.

Upstream grouping columns can be useful for reporting in certain Axiom products that hold important data in reference tables. For example, the Enterprise Decision Support (EDS) product needs to report on data in the Encounter table, which is a reference table. For some reports, they want to group this data using a related table such as the EncounterPayor table, yet still bring in columns from other related tables that look up to the Encounter table (such as CostDetail). Columns from the EncounterPayor table are considered upstream grouping columns because EncounterPayor looks up to Encounter instead of the other way around.

Identifying upstream grouping columns

A row dimension column is considered an upstream grouping column if both of the following are true:

- The primary table for the data context is a reference table. Reference tables are a particular type of table classification in Axiom that can only have one key column, and can serve as the lookup source for a validated column. Reference tables are also often referred to as dimension tables, as many reference tables are used to define dimensional data such as department, account, or entity.
- The row dimension column is from a related table instead of from a dimension table or the primary table.

Design considerations and limitations when using upstream grouping columns

When upstream grouping columns are used in a report, the data query uses different syntax than when using standard row dimensions. This special syntax causes the following design considerations and limitations:

- **Aggregations**: Average and Distinct Count aggregation types cannot be used in the report.
- **Data impact**: When rendering the report, any data from the primary table that is not referenced by the upstream grouping column is omitted from the report. For example, imagine that the primary table is Encounter, and you are grouping by a column in the upstream EncounterPayor table. If there are records in the Encounter table that the EncounterPayor table does not reference, those records are omitted from the report.
- **Total row**: When the current row dimension is an upstream grouping column, the totals shown in the total row may not match the sum of all the displayed rows. This is because multiple values in the upstream grouping column may reference the same record in the primary table, causing that record to be included multiple times. The total row displays the total as if each record from the primary table is only included once. When this situation occurs, a warning icon displays on the total row, with an explanation of this effect in the tooltip.

  For example, imagine that the primary table is Encounter, and you are grouping by a column in the upstream EncounterPayor table. Payor A and Payor B both reference Encounter 100, so values associated with Encounter 100 are included in both payor rows in the report. Rather than double-count the values from Encounter 100, the total row only counts the values once.

Specifying the fixed row structure for a web report

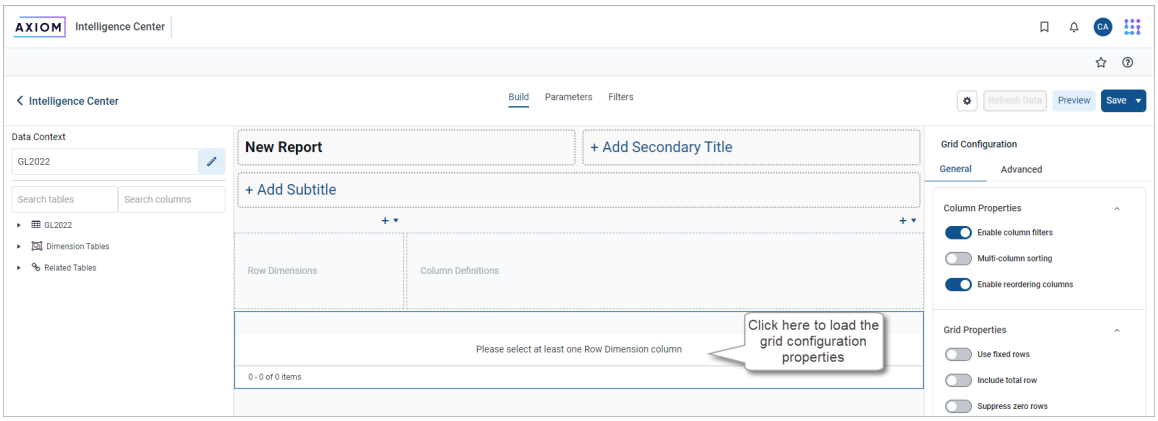
Web reports can optionally use fixed row structures to define the data sections in the report. Instead of dynamically generating the rows based on a table column, fixed row structures individually define each row of data, including section headers, subtotals, and totals.

Fixed row structures are defined separately so that you can reuse them in different web reports, and so that you can update the row structure in one place and have the changes propagate to all reports that reference the fixed row structure. The fixed row structure that you want to use in the web report must already exist—they cannot be created or edited in the Web Report Builder. For more information, see Managing Fixed Row Structures.

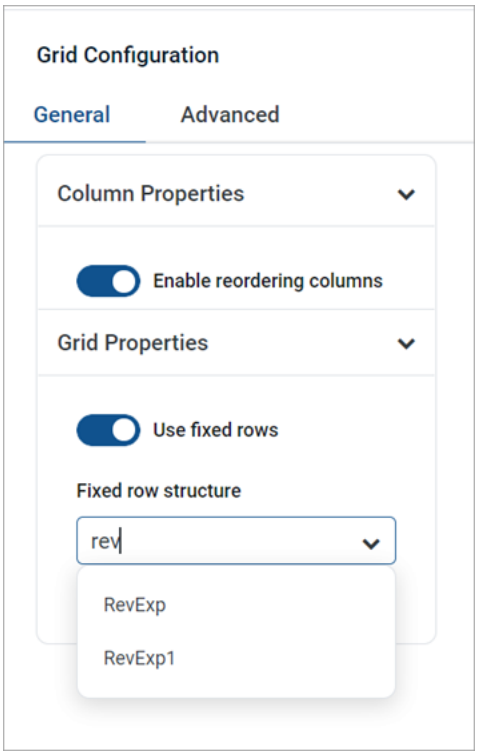
The fixed row structure is specified in the Configuration Panel, using the **Grid Configuration** properties. The grid in the Report Canvas cannot render until you specify either a fixed row structure or a row dimension.

To specify a fixed row structure for a web report:

1. On the **Build** tab of the Report Builder, in the Report Canvas, click the grid area below the column setup boxes. This area displays with placeholder text until either a row dimension or a fixed row structure is specified.

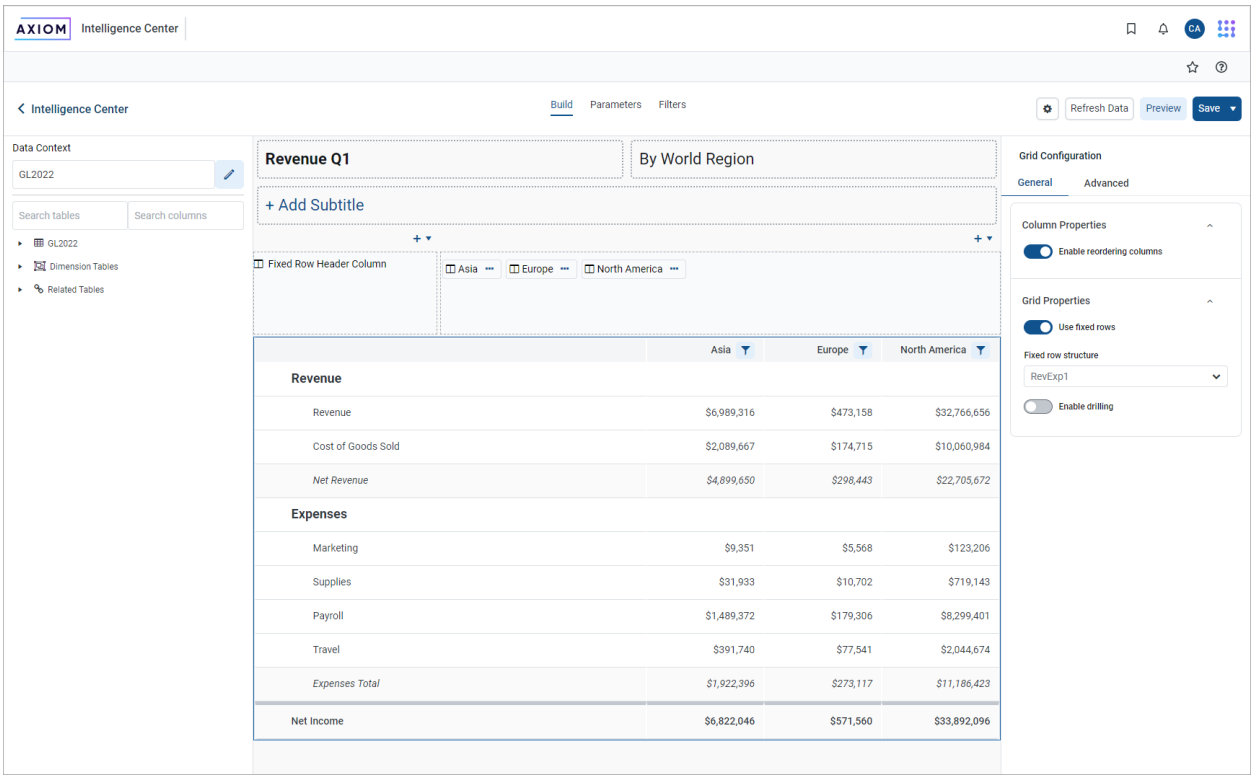


2. In the **Grid Configuration** properties, enable **Use fixed rows**.
3. From the **Fixed row structure** drop-down list, select an existing fixed row structure. You can type into the box to filter the list by name.



After selecting a fixed row structure, the Report Canvas area updates as follows:

- The Row Dimensions box updates to show a placeholder column named **Fixed Row Header Column**. This column is the column that holds the section titles and data row labels as defined in the fixed row structure. You can select this placeholder column in order to configure certain display details about this column within the web report.
- Once you have dragged and dropped at least one data column to the Column Definitions box, you can use **Refresh Data** to update the grid and show the sections and rows as defined in the fixed row structure.



Example web report using a fixed row structure

NOTES:

- If you want to make changes to the fixed row structure, you must edit the structure in the separate fixed row structure editor. Any changes made to the row structure will automatically apply to any web report that uses the fixed row structure.
- The option to **Add Dynamic Column** above the Row Dimensions box is not available when using a fixed row structure. Dynamic columns are only available for use when using row dimensions to generate the rows of the report.
- If you decide that you want to use dynamically generated rows instead of a fixed row structure, you can simply disable **Use fixed rows** and then drag a column to the Row Dimension setup box. For more information see Specifying the row dimension for a web report.

Impact on Grid Configuration options

When **Use fixed rows** is enabled for the grid, multiple grid configuration options become unavailable because they do not apply to web reports that use fixed row structures. If these options were configured before fixed rows were enabled for the grid, the configuration will be ignored.

- **Enable column filters**: Report viewers cannot filter columns when using fixed rows.
- **Multi-column sorting**: Report viewers cannot sort columns when using fixed rows.

- **Include total row** (and related settings): This option does not apply because fixed row structures have their own defined subtotal and total rows.
- **Suppress zero rows**: This option does not apply to fixed row structures; all configured rows will display regardless of whether they return all zero data.
- **Grid sort order**: This option does not apply to fixed row structures.

Configuring the Fixed Row Header Column

Most of the display details for the Fixed Row Header Column are configured within the fixed row structure and therefore cannot be changed within the web report. However, if you select the **Fixed Row Header Column** item in the Row Dimension setup box, you can configure the following:

Item	Description
Column width	The column width of the column in the grid, in pixels. Enter the desired column width as a whole integer between 30 and 600. The default width of the Fixed Row Header Column is 400.

Adding data columns and calculated columns to a web report

When creating a web report, you can add as many columns as needed to define the data that you want to display in the report. You can also define calculated columns, such as to show the difference between two columns.

The data columns and calculated columns for the grid are placed in the right-hand box at the top of the Report Canvas, known as the **Column Definitions** box. This box defines the columns to display in the report. Although it is possible to add columns and calculated columns to the Column Definitions box before specifying a row dimension or a fixed row structure, the grid in the Report Canvas will not populate until the rows are defined.

Column Definitions box at the top of the Report Canvas

Adding data columns

To display data in the report, you can drag and drop table columns from the Data Panel to the Column Definitions box in the Report Canvas. The Data Panel displays the tables and columns that are eligible to be included in the report, based on the selected data context (primary table) and the specified row dimension.

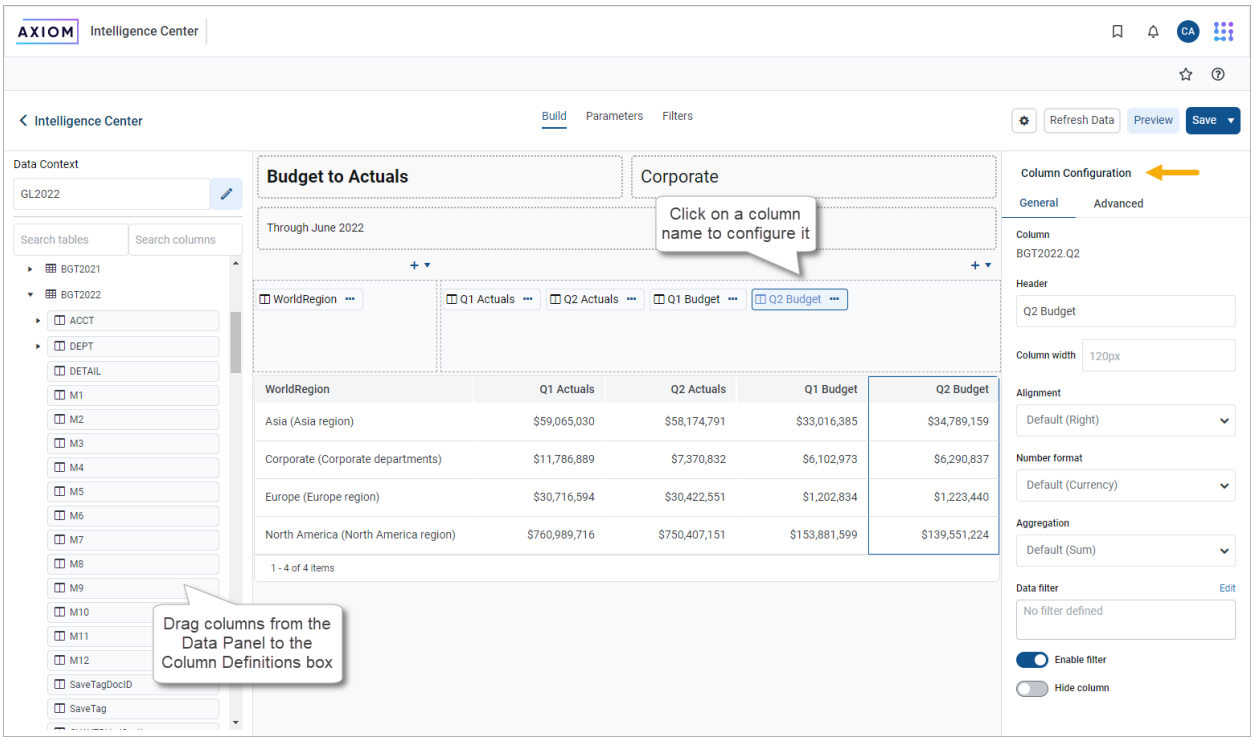
To add a data column to a web report:

1. On the **Build** tab of the Report Builder, in the Data Panel, expand the table tree until you locate the column that you want to add to your report. You can also use the search boxes at the top of the panel to find a particular table or column by name.
2. Drag and drop the column to the **Column Definitions** box at the top of the Report Canvas.

   NOTE: When using the default behavior, the new column will render as blank in the report until you click **Refresh Data**.

3. If the column is not in the desired location within the grid, drag and drop it within the Column Definitions box to reorder the columns.
4. Use the **Column Settings** in the Configuration Panel to configure display properties for the column, such as column width, alignment, header text, and formatting. For more information, see Configuring column properties for a web report.

   By default, when you drag and drop a column to the grid, that column is selected and its column properties display in the Configuration Panel. You can return to the column properties at any time by clicking the column name in the Column Definitions box.



Example web report after adding data columns

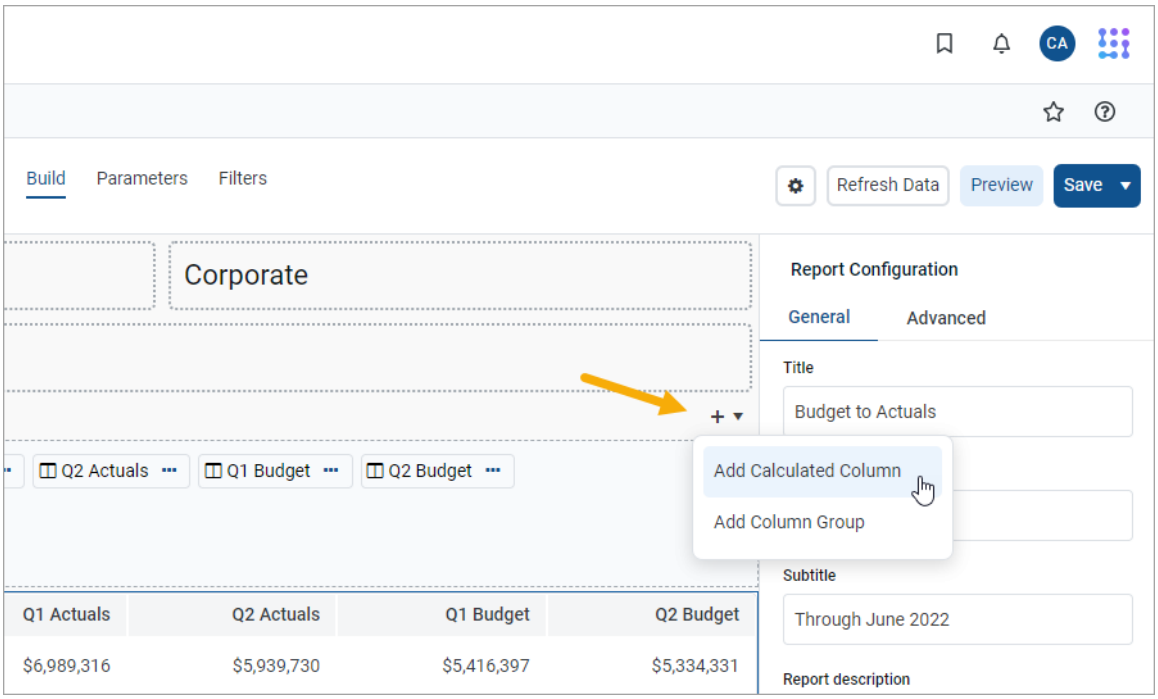
NOTE: If **Use fixed rows** is enabled for the grid, currently the Report Builder does not dynamically update the tables listed in the Data Panel based on the specified fixed row structure. If you drag and drop a column from a table that is not valid in the context of the fixed row structure, a generic error will occur when the Report Builder attempts to populate the grid.

Adding calculated columns

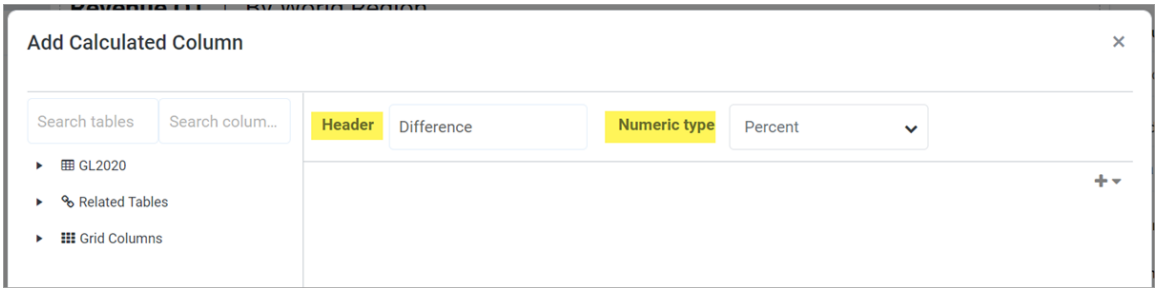
Calculated columns can be used to display totals, differences, percentages, and other calculations within a column of the report. Calculations can be based on columns from related tables that are eligible to be included in the report.

To add a calculated column to a web report:

1. On the **Build** tab of the Report Builder, in the Report Canvas, click the plus sign in the top right corner of the **Column Definitions** box, and then click **Add Calculated Column**.



2. At the top of the **Add Calculated Column** dialog, define the following properties:
   - **Header**: Enter the column header text for the calculated column. This is effectively the name of the calculated column. By default, the header text is "Calculation".
   - **Numeric type**: Select the desired numeric type for the calculated column. If this is left at **Default**, the default numeric type for calculated columns is Currency.



   You can change these properties later using the Column Configuration properties in the Configuration Panel.

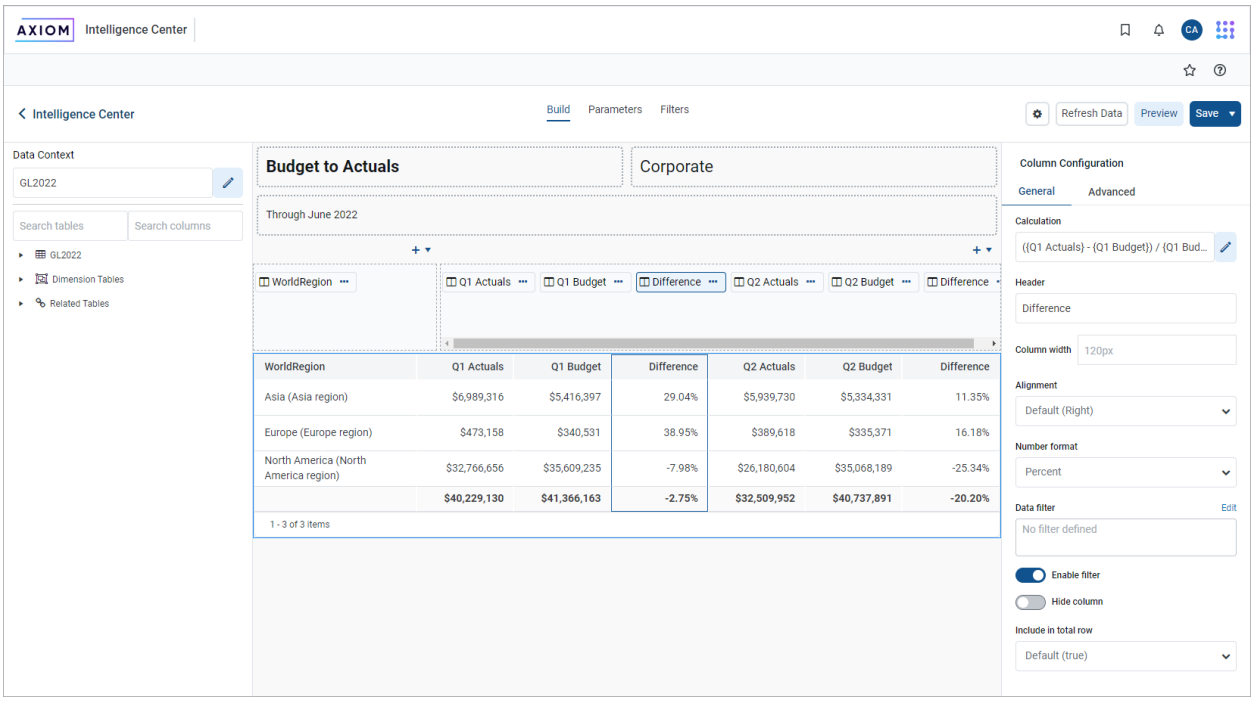
3. To create the calculation, drag and drop columns from the table tree on the left to the calculation canvas. See Defining calculations for more information.

4. When you are finished creating the calculated column, click **OK**.

   The calculated column is added to the Column Definition box. By default, the new column is blank until you click **Refresh Data**.

5. If the calculated column is not in the desired location within the grid, drag and drop it within the Column Definition box to reorder the columns.
6. Use the **Column Configuration** properties in the Configuration Panel to configure display properties for the column, such as column width and alignment. For more information, see Configuring column properties for a web report.

   By default, when you define a calculated column, that column is selected and its column properties display in the Configuration Panel. You can return to the column properties at any time by clicking the column name in the Column Definitions box.



Example web report after creating a calculated column

Defining calculations

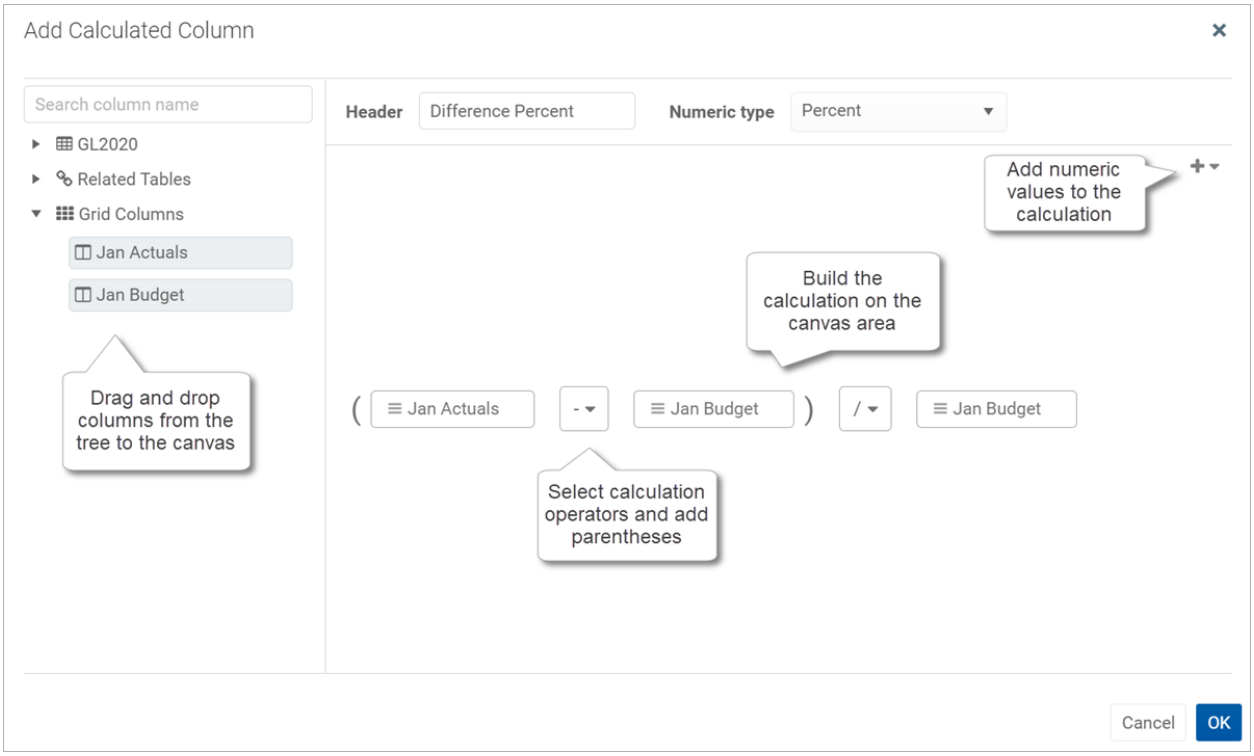
Using the **Add Calculated Column** dialog, you can build a calculation based on columns from related tables that are eligible to be included in the report. The column does not have to be present in the grid in order to be used in a calculation. Numeric values can also be used in the calculation.

The left-hand side of the dialog lists a table tree of available columns, while the right-hand side of the dialog—the calculation "canvas"—is where you build the calculation. To start the calculation:

- Drag and drop two columns out to the canvas. The two columns are separated by an operator selector.
- Select the desired operator.

You can continue building the calculation by dragging and dropping additional columns and selecting the operator. You can also do the following:

- **Numeric values**: To add a numeric value to the calculation, click the plus icon at the top right of the dialog. You can then move, reorder, or delete the numeric value just like columns.
- **Reorder items**: To change the order of columns in the calculation, drag and drop them on the canvas.
- **Parentheses**: To add parentheses to a part of the calculation, select **Add Parentheses** from the operator selector. The two columns affected by the operator will become enclosed in parentheses.
- **Delete items**: To delete an item, hover your cursor over the column and then click the trash can icon.



Example calculation in the calculation editor

Calculations can use the following operators: addition (+), subtraction (-), multiplication (*), and division (/). Use parentheses to determine calculation order, such as: `(GL2022.Q1-BGT2022.Q1)/BGT2022.Q1`.

Calculations can use the following columns:

- Numeric columns from the primary table, whether or not those columns are also in the grid.
- Numeric columns from related tables, whether or not those columns are also in the grid.

- Numeric columns from the grid, including other calculated columns. Grid columns display using the header text defined for the column.

  If you use a table column from the grid instead of from the table itself, then the calculation will use the column as it is configured to display in the grid. For example, if the grid column has a column filter or uses an alternate aggregation, the calculation will be based on that modified version of the column.

NOTES:

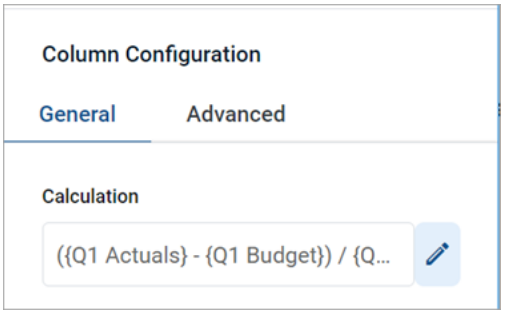
- If you drag and drop a column from the primary table or a related table, it displays on the canvas using the column name only—such as M1. You can hover your cursor over the column box to see a tooltip with the full table.column name—such as GL2022.M1. If you drag and drop the column from the Grid Columns node, then it will display using the defined header text for the column.
- If you use a grid column in the calculation, then the grid column cannot be deleted from the grid because deleting it would cause the calculation to become invalid. An error message will display if you attempt to delete a referenced column from the grid. To resolve the issue, you can do one of the following: edit the calculation to remove the reference, delete the calculated column, or configure the grid column as hidden so that it can still be referenced in the calculation but not display in the report.

Editing calculated columns

You can edit an existing calculated column to change the calculation.

To edit a calculated column in a web report:

1. On the **Build** tab of the Report Builder, in the Report Canvas, click the calculated column in the Column Definitions box.
2. On the **General** tab of the **Column Configuration** properties, click the Edit icon to the right of the **Calculation** box.

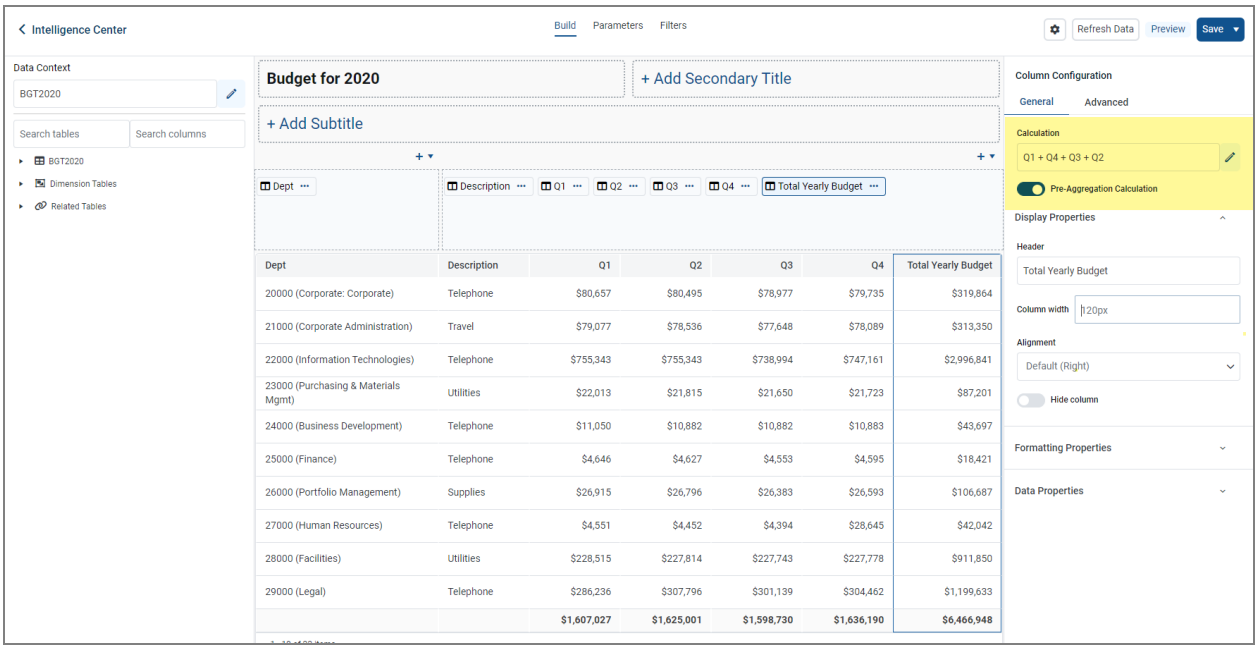


3. In the **Edit Calculated Column** dialog, edit the calculation as needed, then click **OK**.

Pre-aggregation in calculated columns

You can pre-aggregate calculations in a calculated column. A pre-aggregate calculation is applied to data rows in the query before those rows are aggregated by the row dimension.

In this example, the sum of columns Q1 through Q4 have been summed up and presented in a new calculated column, Total Yearly Budget and the **Pre-Aggregation Calculation** button is selected.



se of pre-aggregation calculations impacts the total row, if it is enabled. Behavior is as follows:

- Post-aggregation calculations: The calculation is performed on the total row values of the source columns.
- Pre-aggregation calculations: The values in the calculated column are summed for presentation on the total row.
- Pre-aggregation calculations can use alternate aggregations if desired. The field is unhidden for the calculated column when pre-aggregation is enabled. If an alternate aggregation is set and then pre-aggregation is disabled, the alternate aggregation field is re-hidden and ignored.

Additional column actions

Once data columns and calculated columns have been added to the grid, you can further adjust them as follows:

- **Reorder columns**: To reorder a column in the grid, drag and drop it to any location in the Column Definitions box. Note that you cannot drag and drop a column from the Column Definitions box to the Row Definitions box. If you accidentally dragged a column to the wrong box, you must remove the column and then drag and drop it again from the Data Panel.

- **Remove columns**: To remove a column from the grid, click the three-dots icon to the right of the column name and then select **Delete Column**. Use caution before removing a calculated column—if you later decide you want to re-add the column, you will need to re-create the calculation from scratch.
- **Copy columns**: To copy a column in the grid, click the three-dots icon to the right of the column name and then select **Clone Column**. A copy of the column is created to the right of the original column. The new column has the same properties as the original column, except that the text **(Copy)** is appended to the header text. You can modify the new column as needed in order to differentiate it from the original, such as to define a filter for the column, or to modify the calculation.

  NOTE: If you copy a table column in the grid (as opposed to a calculated column), it is not possible to point the column to a different table column. The purpose of copying a table column is to display multiple instances of the same table column, but using different filters or different aggregation types.

- **Group columns**: If you want a set of columns to display under a group header, you can define a column group and then add the columns to that group. For more information, see Defining column groups for a web report.
- **Configure columns**: To configure display properties for a column, select the column name in the Column Definitions box, then use the **Column Configuration** properties in the Configuration Panel. For more information, see Configuring column properties for a web report.

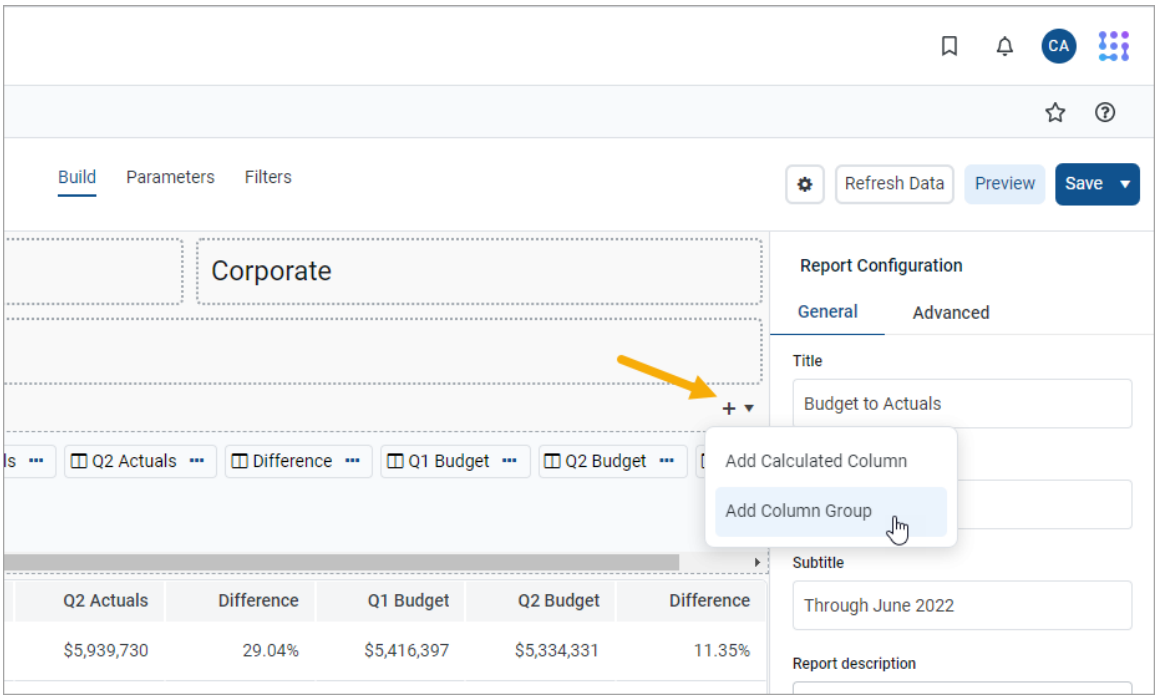
Defining column groups for a web report

You can define column groups in web reports so that certain columns can display together under a group header. For example, your report might have several actuals columns followed by several budget columns, and you want these columns to display under the group headers "Actuals" and "Budget".

To define a column group, first you add the group "container" to the Column Definitions box of the grid, then you add table columns to the group container.

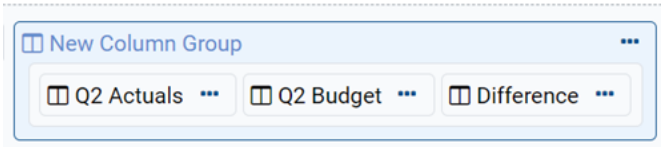
To define a column group:

1. On the **Build** tab of the Report Builder, in the Report Canvas, click the plus sign in the top right corner of the Column Definitions box, and then click **Add Column Group**.



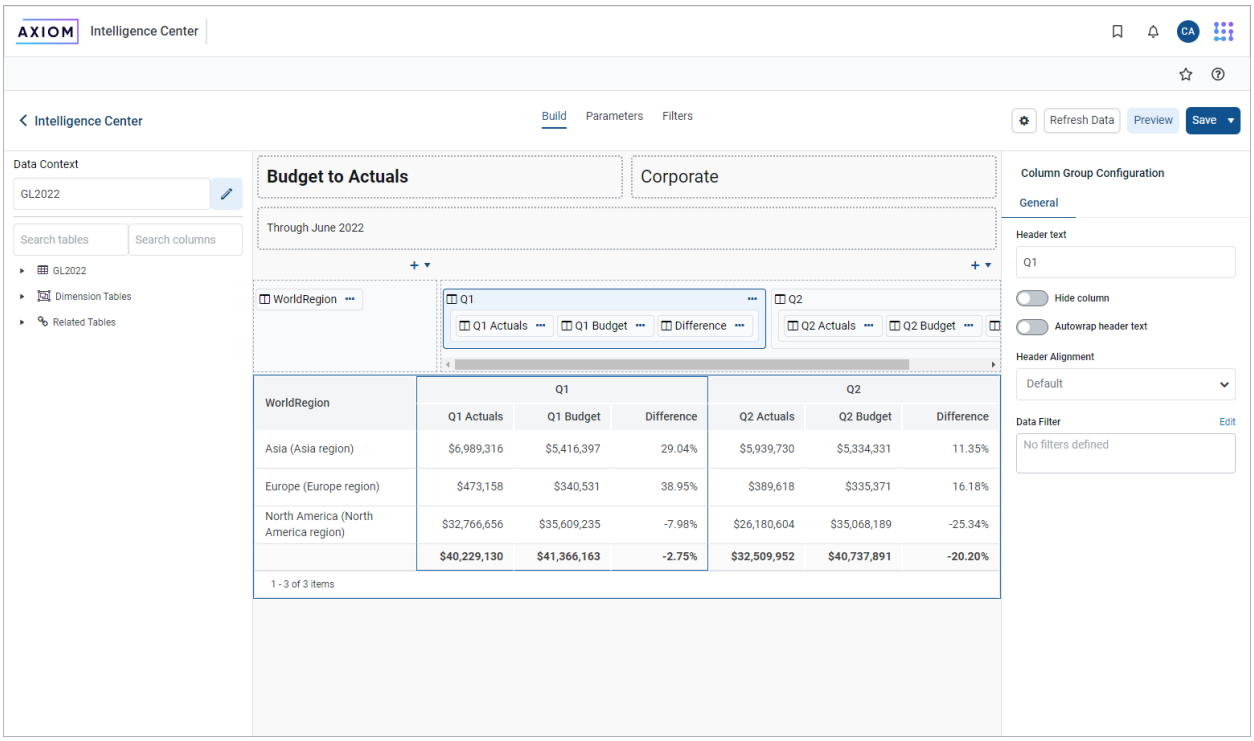
A new empty column group is added to the Column Definitions box.

2. Drag and drop the desired columns into the column group. You can drag and drop columns that are already in the Column Definitions box, or you can drag and drop columns from the Data Panel directly to the group.



3. Select the column group box, and use the **Column Group Configuration** panel to define the header text and other properties. See the following section for more information on the available properties.

The column group displays in the grid with its child columns underneath.



Example web report with column groups

Once a column group has been created, you can work with it as follows:

- **Reordering groups**: To reorder a column group, drag and drop the group to another location within the Column Definitions box.
- **Deleting groups**: To delete a column group, click the three-dots icon in the top right corner of the group box and then select **Delete Group**. However, if you still want to use the columns in the group, you should drag and drop the columns out of the group before deleting the group. If you delete the group with columns in it, all of the columns will be deleted as well.
- **Copying groups**: To copy a column group, click the three-dots icon in the top right corner of the group box and then select **Clone Group**. A copy of the group is created to the right of the original group, including copies of the child columns within the group. The new group has the same properties as the original group, except that the text **(Copy)** is appended to the header text. You can modify the new group as needed in order to differentiate it from the original, such as to define a filter for the group, or to populate the group with different child columns.

  NOTE: If a calculation in the column group references another column in the group, then when the group is cloned the calculation in the new group is updated to point to the corresponding column in the new group.

- **Configuring groups**: To configure display properties for a column group, select the group in the Column Definitions box, then use the **Column Group Configuration** properties in the Configuration Panel.
- **Nested groups**: Currently, nested groups are not allowed. You cannot drag and drop a group within another group.

You can work with columns within the group as follows:

- **Adding columns**: You can continue to add columns by dragging and dropping them into the group box. You can also copy columns within the group.
- **Removing columns**: You can drag and drop columns out of the column group box to remove them from the group. If you don't want the column to be in the report at all, you can delete the column as normal.
- **Reordering columns**: You can reorder columns in the group by dragging and dropping them within the group box.
- **Configuring columns**: Columns in a column group can be configured as normal. Select the column box within the group box to bring up the **Column Configuration** properties in the Configuration Panel.

Column group properties

The following column group properties are available for web reports on the **General** tab of the **Column Group Configuration** panel:

Item	Description
Header	The header text to display on the group header. Enter the desired header text.
Hide column	Specifies whether the column group is hidden in the report: • If enabled, then the group is hidden in the report. The group remains visible in the Column Definitions box so that you can continue to configure the group as needed. • If disabled (default), then the group is visible.
Autowrap header text	Specifies whether header text wraps: • If enabled, then header text that exceeds the group width will wrap. • If disabled (default), then header text that exceeds the group width is truncated. The user can resize the group wider to view the full header text.
Header alignment	The alignment of the header text over the columns in the group. Select one of the following: **Default**, **Left**, **Right**, **Center**. Group headers use center alignment by default.

Item	Description
Data filter	Optional. Defines a filter to limit the data shown in the columns within this group. This is equivalent to defining the same data filter at the column level for each column in the group. For more information, see Using group filters.

Using group filters

The **Data filter** property can be used to filter the data coming into the columns within a particular group. This filter only impacts the data in the group columns; it has no impact on the rest of the report.

To filter the data in a group:

1. On the **Build** tab of the Report Builder, in the Report Canvas, select the group that you want to filter.
2. In the **Column Group Configuration** panel, click the **Edit** link over the **Data filter** box to open the Filter Wizard.
3. In the Filter Wizard, create the filter as needed. For more information on how to use the Filter Wizard to create a filter, see Using the Filter Wizard in the Report Builder.

   The tables available in the Filter Wizard depend on whether the current group consists of columns from a single table or multiple tables, and the primary table specified as the Data Context of the report:

   - If the group consists of columns from a single table, the Filter Wizard shows that table and its dimension tables.
   - If the group consists of columns from multiple tables, the Filter Wizard shows the following tables:
     - If the group uses columns from multiple tables, and the primary table is a data table, the Filter Wizard shows the common dimension tables for the tables involved in the calculation.

       EXCEPTION: If the group includes a column from a dimension table, then the Filter Wizard shows the common dimension tables for all related tables used in the report, regardless of whether the related table is used in this particular group.
     - If the group uses columns from multiple tables, and the primary table is a reference table, the Filter Wizard shows the primary table and its dimension tables.

       EXCEPTION: If the group only consists of columns from related tables (no columns from the primary table or its dimension tables), then the Filter Wizard shows the common dimension tables for all related tables used in the group.

   If the group contains a calculated column, the columns used in the calculation are considered as part of the group.

You can create a filter using any column on the available tables. If you choose to use a predefined global filter from the Filter Library, the global filter must be based on the same eligible table columns.

4. Once the filter statement is complete, click **OK** to close the Filter Wizard and add the filter to the **Data filter** box.

Once a filter has been defined for a group, you can modify it as follows:

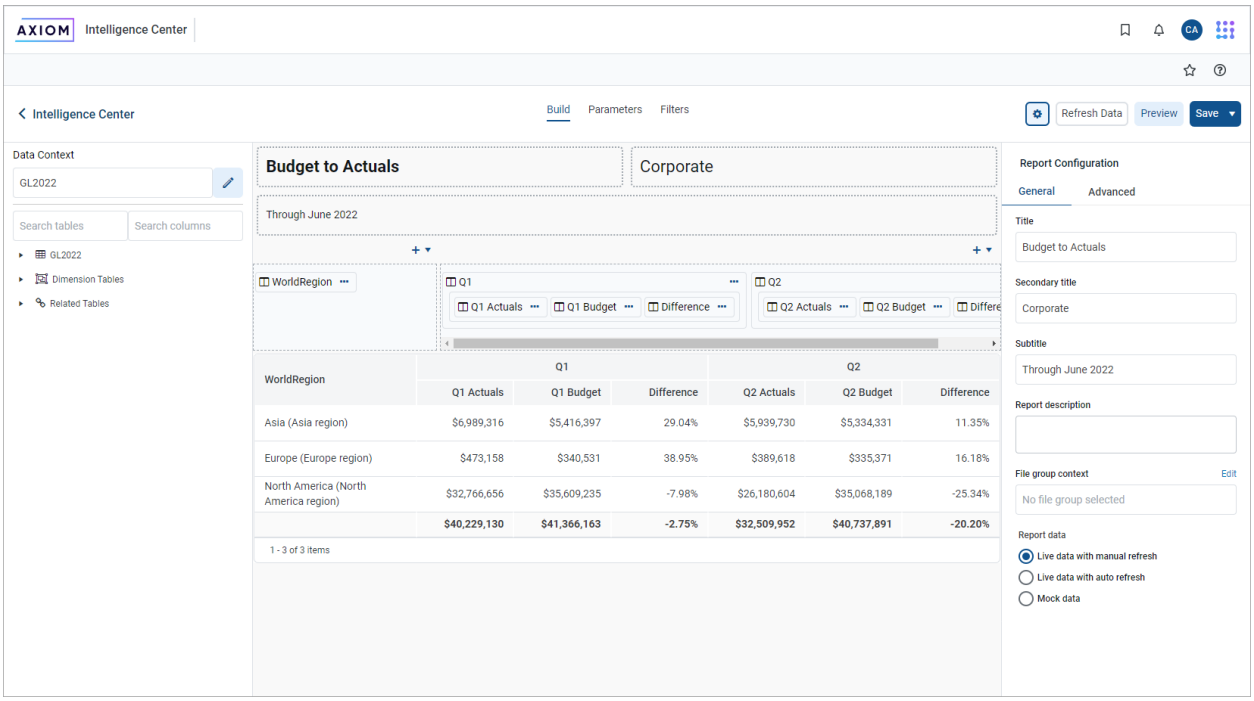
- To edit the filter, click the **Edit** link over the **Data filter** box again and change the filter within the Filter Wizard.
- To delete the filter, click the **Clear** link over the **Data filter** box.

Data filters defined at the group level are combined with any filters defined at the column level. If the group contains calculated columns, the group filter is applied to all columns referenced in the calculation. If the calculated column references grid columns, the group filter is combined with any other filters applied to the grid columns (either at the column level or at the group level, if the column belongs to a different group). Additionally, if a data filter is defined at the report level, it is also applied. All relevant filters are combined using AND to determine the data that can display in a particular column.

If a group has a defined filter, then a filter icon displays next to the group name in the sample grid of the Report Canvas. This icon is intended to let report builders know about the group filter at-a-glance. The icon does not display in the report viewer.

Defining report titles and other web report properties

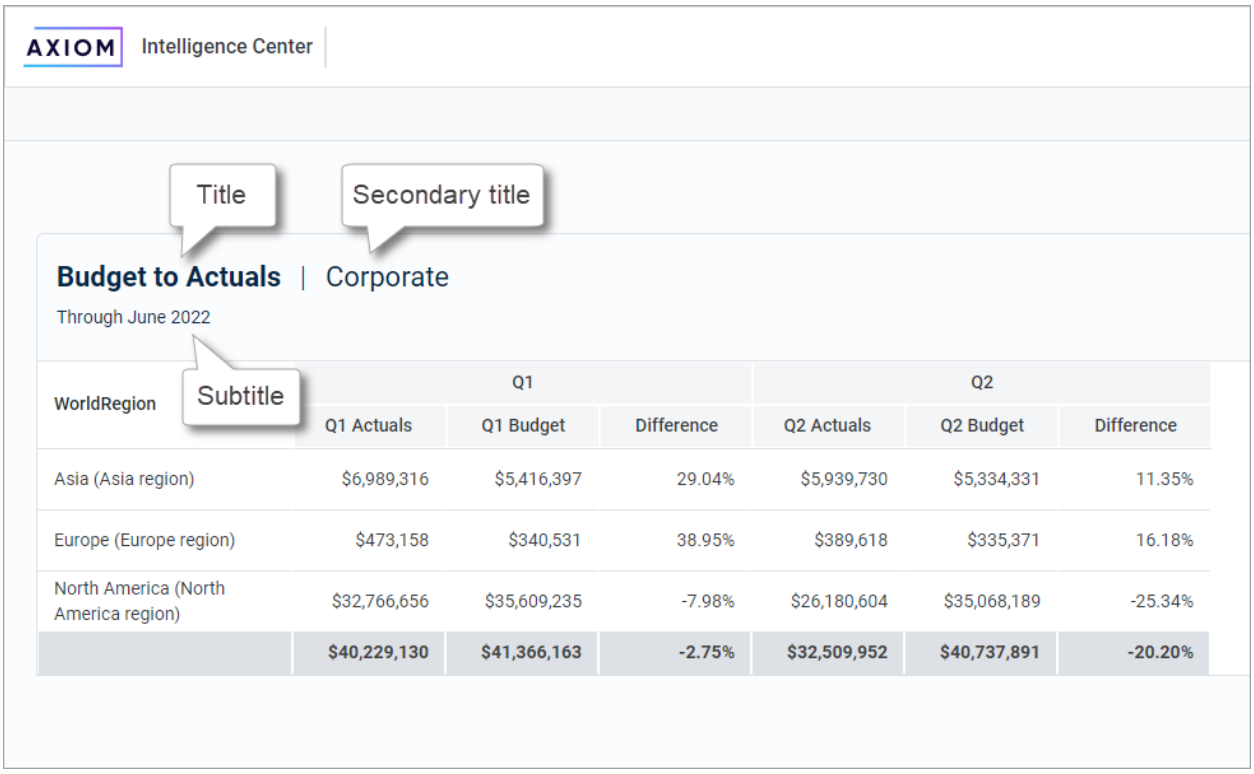
Using the **Report Configuration** panel in the Report Builder, you can define titles for web reports and configure other web report properties.



Example Report Configuration panel

Defining report titles

Each web report can have a defined title, subtitle, and secondary title. You can also define an optional report description.



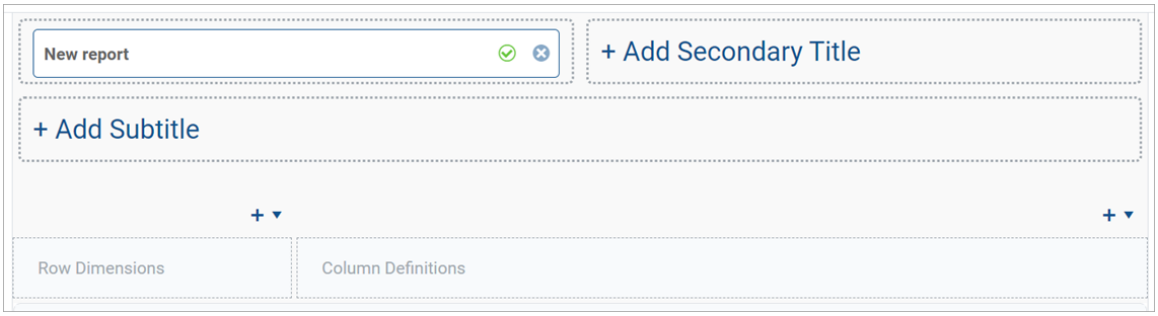
WorldRegion	Q1			Q2		
	Q1 Actuals	Q1 Budget	Difference	Q2 Actuals	Q2 Budget	Difference
Asia (Asia region)	$6,989,316	$5,416,397	29.04%	$5,939,730	$5,334,331	11.35%
Europe (Europe region)	$473,158	$340,531	38.95%	$389,618	$335,371	16.18%
North America (North America region)	$32,766,656	$35,609,235	-7.98%	$26,180,604	$35,068,189	-25.34%
	$40,229,130	**$41,366,163**	**-2.75%**	**$32,509,952**	**$40,737,891**	**-20.20%**

Example titles as they display in a rendered report

To configure report titles for a web report:

- On the **Builder** tab of the Report Builder, in the Report Canvas, click on the box for the title text that you want to edit, then type the desired title text. Once you are finished, you can press Enter to exit the box (or press Tab, or click outside of the box).

  The Title, Secondary Title, and Subtitle are all defined in separate boxes that roughly correspond to where the titles display in the rendered report.

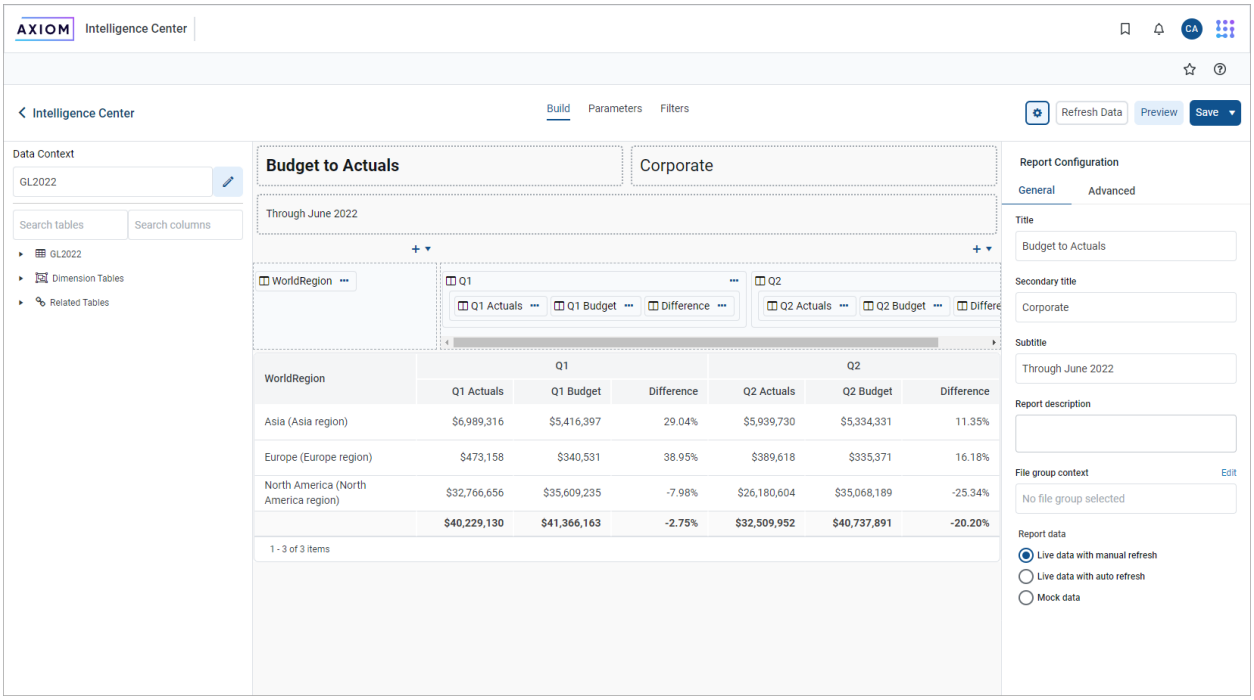


Click on the title boxes to edit the report titles

When you click on a report title box to make it active, the **Report Configuration** properties load in the right-hand Configuration Panel. The titles defined for the report also display in this panel, and can also

be edited here. Any edits made in the title boxes are reflected in the Report Configuration properties, and vice versa. An optional **Report description** can be defined in this panel, or you can define it when saving the report.

NOTE: Currently, it is not possible to use variables in web report titles.



Report Configuration properties

Using the **Report Configuration** panel, you can define a variety of properties for the web report, such as to associate the report with a file group or to configure database properties for the report. The following table provides a reference for each property in the panel.

To access the **Report Configuration** panel, select the **Build** tab in the Report Builder and then click the gear button in the top right. The panel is organized into two tabs, **General** and **Advanced**.

General report configuration properties

Item	Description
Title	The main title for the report. This text displays at the top of the report, over the grid.

Item	Description
Secondary title	Optional. The secondary title for the report. If defined, this text displays in the same line as the main title, separated by a horizontal pipe character. For example: *Title* | *Secondary Title*
Subtitle	Optional. The subtitle for the report. This text displays in smaller font underneath the main title.
Description	Optional. A description for the report.
File group context	Optional. The file group associated with the report. The file group context can be used to report on process management information, or to generate hyperlinks to plan files in the file group.
Report data	Specifies the data display behavior for the Report Builder. This option only applies to the current Report Builder session, and is not saved in the report.

NOTE: If you created a web report using the Report Builder in version 2021.2 or 2021.3, that report may have had one or more **Report Filters** defined in the Report Configuration properties. These filters are now defined on the Filters tab. Your existing filters have been migrated to this new location.

Advanced report configuration properties

The **Advanced** tab is only visible to administrators and support users.

Item	Description
Current Data Required	This setting is for a pre-release feature that is not yet generally available.

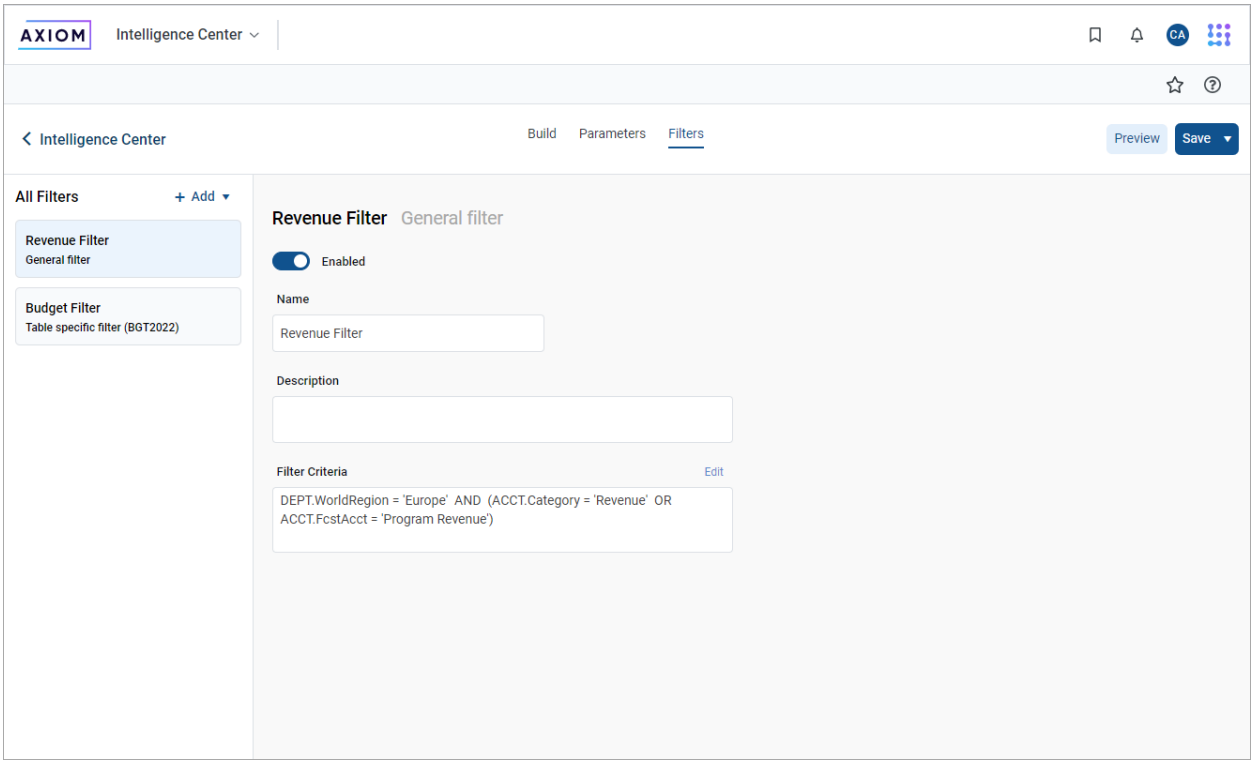
Filtering data in web reports

You can define report-level filters to limit the data shown in a web report. There are three different types of report filters:

- **General filters**: General filters are based on reference tables, and impact all tables in the report that look up to the reference tables used in the filter.
- **Table-specific filters**: Table-specific filters only impact a single specific table used in the report. For example, if a report has data from GL2022 and BGT2022, you can define a table-specific filter that only filters one of those tables.

- **Column value filters**: Column-specific filters only impact a single specific table used in the report. A Filter field displays in the Column Value Configuration area. This filter only works for columns with a static source type. Column filters are ignored if the column source type is changed to dynamic.

Report-level filters are defined on the **Filters** tab of the Report Builder. Any existing filters are displayed in the left-hand pane. You can select a filter to view and edit its properties in the right-hand pane.



Filters tab of Report Builder

NOTE: Filters cannot be reordered in the Filters tab. Filters are listed in the order they are created. The order has no impact in how the filters are applied.

Filters can also be defined at the individual column level and group level. In this case, the filter only applies to the data in the affected column or group. For more information, see Using column filters and Using group filters.

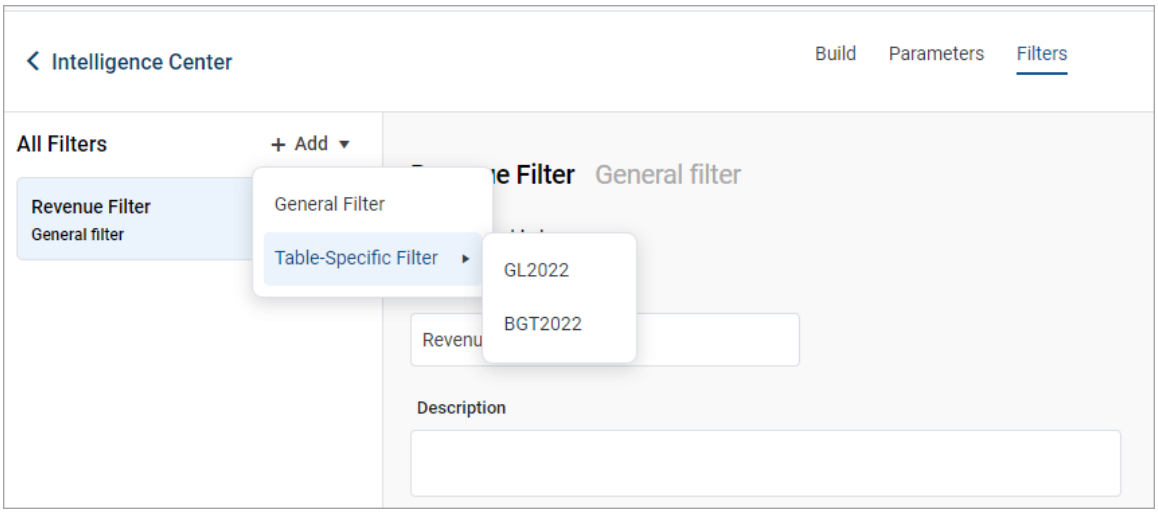
▶ Creating report filters for a web report

You can create as many filters as needed for your web report.

To create a report filter:

1. On the **Filters** tab of the Report Builder, click the **Add** button and then select the type of filter that you want to create:

    - **General Filter**: Define a filter that is based on one or more dimension tables, to filter all tables in the report that look up to the dimension tables.
    - **Table-Specific Filter**: Define a filter that only impacts a specific table used in the report. Select the table from the fly-out menu. This menu only lists non-dimension tables that are used in the report. The primary table is only listed if it is a data table.



Creating a report-level filter

The Filter Wizard opens automatically after you make your selection.

2. In the Filter Wizard, create the filter as needed. For more information on how to use the Filter Wizard to create a filter, see Using the Filter Wizard in the Report Builder.

    The tables available in the Filter Wizard depend on the type of filter you are creating, and the primary table specified as the Data Context of the report:

    - If you are defining a general filter, the Filter Wizard shows the following tables:
        - If the primary table is a data table, the Filter Wizard only shows the dimension tables for the report.
        - If the primary table is a reference table, the Filter Wizard shows the primary table of the report and the dimension tables for the report.
    - If you are defining a table-specific filter, the Filter Wizard shows the table that you selected from the menu and its dimension tables.

    Additionally, if the report is configured to report on Process Management columns, then these columns are also available to define general or table-specific filters. For more information, see Reporting on process information in web reports.

You can create a filter using any column on the available tables or on the Process Management columns (if present). If you choose to use a predefined global filter from the Filter Library, the global filter must be based on the same eligible table columns.

3. Once the filter statement is complete, click **OK** to close the Filter Wizard and add the filter to the Filters tab.
4. Optional. Edit the filter properties as desired. You can give the filter a specific name, define an optional filter description, and toggle the filter as enabled or disabled. By default, the newly created filter is enabled and will filter the report data. See the following section for more information on editing the filter properties.

Editing existing filters

You can edit all filter properties except for the filter type. It is not possible to convert a general filter to a table-specific filter or vice versa.

To edit an existing filter:

1. On the **Filters** tab of the Report Builder, in the left-hand pane, select the filter box for the filter that you want to edit.

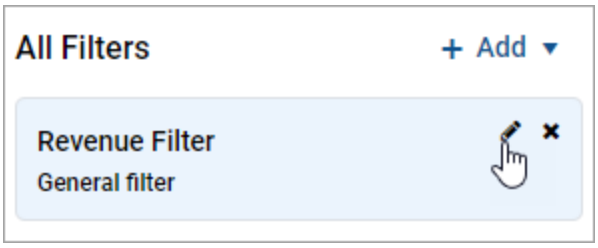
   The properties for the selected filter display in the right-hand pane.
2. Edit the filter properties as needed.

Filter properties

Item	Description
Name	The name of the filter. By default, the name is set as follows: • General filters use the name **General Report Filter**. • Table-specific filters use the name ***TableName* Filter**. You can change this name to something more descriptive as needed. Filter names only display in the Report Builder.
Description	Optional. If desired, you can define a description to document the purpose and scope of the filter.

Item	Description
Enabled	Specifies whether the filter is enabled. By default, filters are enabled and will impact the data shown in the report. If desired, you can toggle the filter to disabled in order to keep the filter in the report properties for future use, but temporarily disable it. When you are ready to use the filter again, you can toggle it back to enabled. While the filter is disabled, the filter box in the left-hand pane is grayed out. The filter will not be applied to the data queries in the report. However, you can continue to edit the other filter properties while the filter is disabled.
Filter Criteria	The filter criteria statement for the filter. Click **Edit** to edit the filter within the Filter Wizard.

If you only want to edit the filter criteria statement, you can hover your cursor over the top right corner of the box, and click the Edit icon to open the Filter Wizard directly.

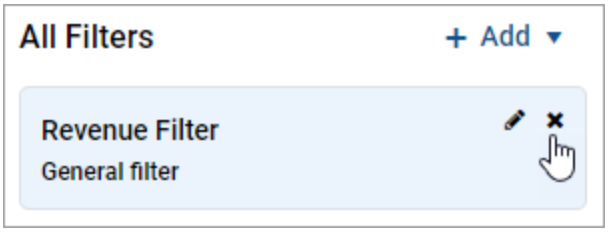


Deleting existing filters

You can delete a report filter if it is no longer needed. Remember that you can disable the filter instead, if you want to temporarily remove the filter without deleting it from the report.

To delete an existing filter:

1. On the **Filters** tab of the Report Builder, in the left-hand pane, locate the filter that you want to delete.
2. Hover your cursor over the top right corner of the box, then click the Delete icon to delete the filter.



The filter is deleted from the report.

Filter notes

General filters and table-specific filters have certain setup and behavior differences.

General filters

General filters are based on reference tables:

- If the primary table is a data table, you can define a general filter using any reference table that the primary table looks up to. Basically, this means the tables listed in the Dimension Tables node of the report.
- If the primary table is a reference table, you can define a general filter using the primary table itself, or using any reference table that the primary table looks up to.

When creating the filter, you can use any column on the reference table, including multi-level lookups through the reference table. For example, if the primary table looks up to Dept, the filter could be `Dept.Dept=24000` or `Dept.Region='West'` or `Dept.Region.RegionType=1`.

The general filter applies to all tables in the report that look up to the reference table (as well as the reference table itself). For example, imagine that you have a report that compares GL2022 to BGT2022. You want to define a filter so that the report only shows data for the West Region. In this case you can define a general filter on the Dept table of `Dept.Region='West'`. Since both tables look up to the Dept table, the general filter will apply to both tables and limit the data in the report.

NOTES:

- If the primary data table looks up to multiple reference tables, the general filter can be a compound filter that uses multiple reference tables. In this case, the filter will only apply to data tables that look up to both reference tables. For example, imagine you define a general filter of `Dept.Region='West' and Acct.Category='Revenue'`. If the report contains a table that only looks up to the Acct table but not the Dept table, then the filter will not apply to that table and no error will occur.
- If you define a general filter and then change the primary table of the report to a table that has different dimension tables, the filter will not cause an error. If the existing filter does not apply to any tables in the report, it will simply be ignored.
- If the report uses process management columns, you can create a general filter with these columns.

Table-specific filters

Table-specific filters apply only to the selected table for the filter. All other tables are unaffected by the filter.

The table-specific filter can use any column in the table or its dimension tables. For example, if the selected table is BGT2020, the filter could be `BGT2020.m1<>0` or `BGT2020.Acct.Category='Revenue'` or `Dept.Region='West'`.

Table-specific filters can be defined on any table used in the report, except for the following tables. General filters can be defined for these tables instead.

- Reference tables that are Dimension Tables for the report.
- The primary table, if the primary table is a reference table.

NOTE: If you define a table-specific filter and then later edit the report configuration so that the table no longer has any columns in the report, the filter will not cause an error. It will simply be ignored.

Using report parameters in web reports

Using report parameters, you can enable end users to dynamically change the data showing in the report. The advantages of using report parameters include:

- You can more efficiently cover your reporting needs using fewer reports, which means less time needed to develop and maintain reports.
- Report users are more in control over the data they want to see in the report.

What can report parameters impact in the report?

Report parameters can be used to dynamically impact the following items in the report:

- The row dimensions used in the report can change dynamically by using Column List report parameters. For example, the user can dynamically change the row dimension to show data by different groupings such as department, account, region, entity, and so on.
- The data in the report can be dynamically filtered by using Column Value report parameters. For example, the user can select one or more values in a column—such as departments, accounts, or entities—and the report is dynamically filtered to show only the data for the selected values.

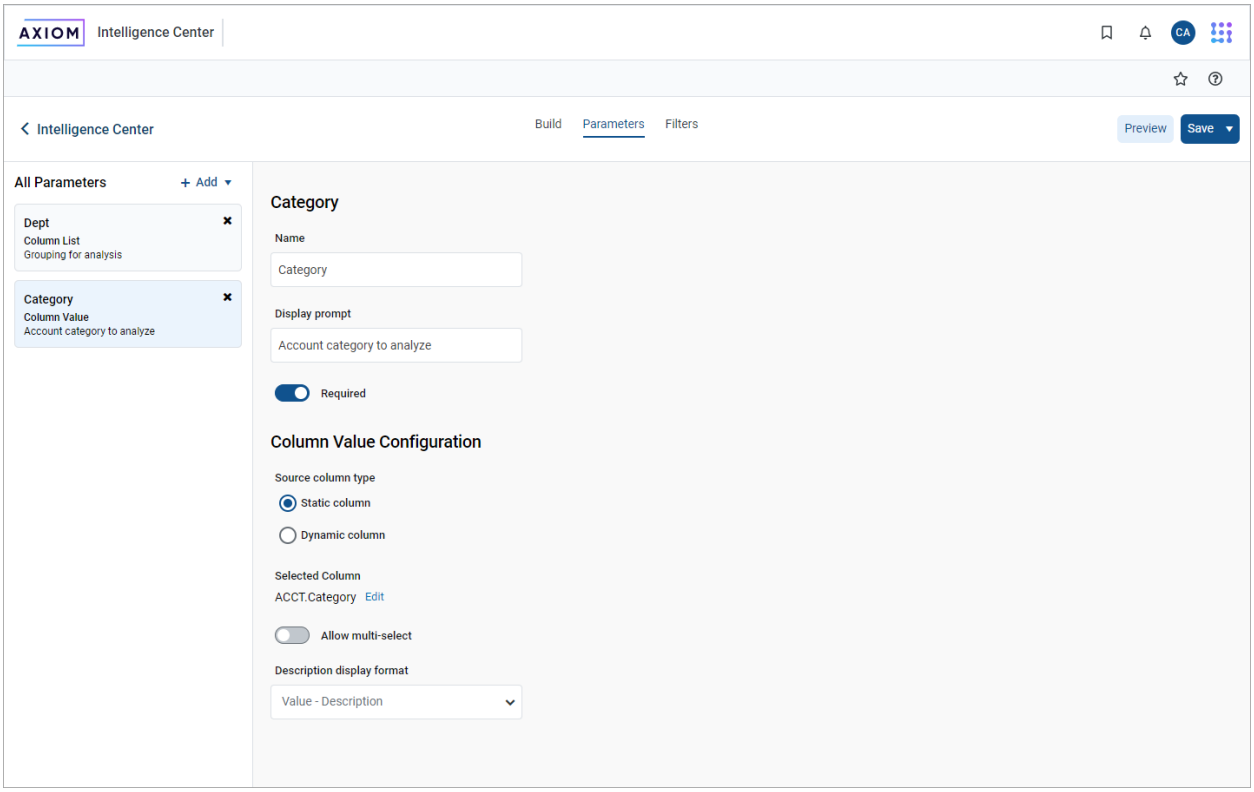
Reports can use either or both types of parameters as needed to provide the desired level of interactivity.

How are report parameters defined?

Report parameters are defined in the Report Builder using the **Parameters** tab. Using this tab, you can create, configure, and delete parameters as needed. When configuring parameters, you define properties such as:

- The type of parameter, Column List or Column Value
- The name of the parameter and the display text to use when presenting parameters to report users
- Whether the parameter is optional or required—if required, then the report does not display data until the user makes a selection

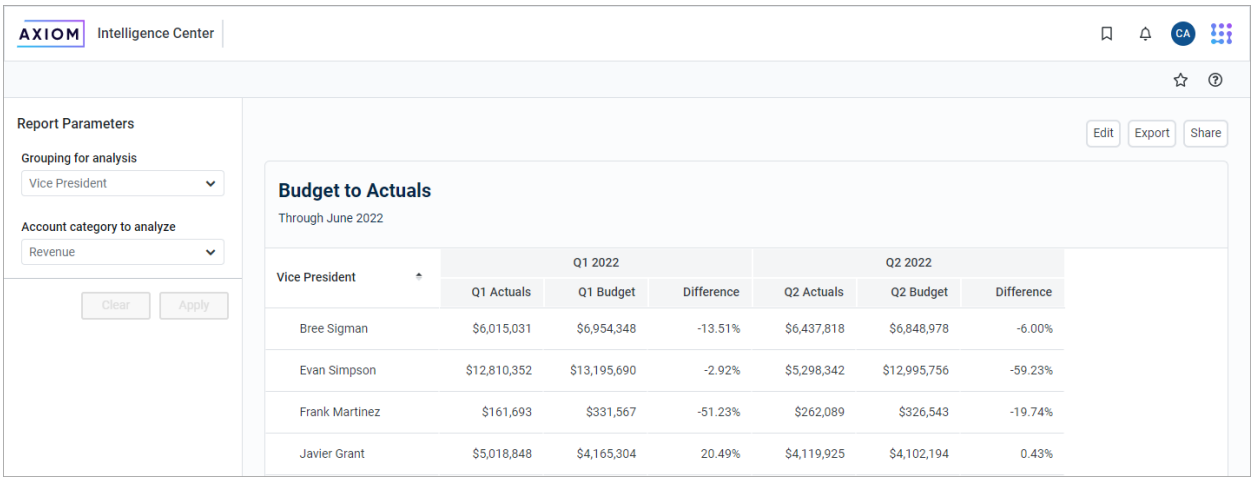
- For Column List parameters, the list of table columns to associate with the parameter, and an optional default column selection
- For Column Value parameters, the column to associate with the parameter:
    - You can select a specific column or you can tie the Column Value parameter to a Column List parameter, so that Column Value parameter dynamically uses the selected column
    - You can specify whether users can select a single value in the column or multiple values



Example Parameters tab to define report parameters in the Report Builder

How do users interact with report parameters?

When users view a report with report parameters, the parameters display in a panel along the left-hand side of the report. Users can make selections and apply them to dynamically refresh the report with data that meets their selections. If a parameter is required, then the user must interact with the report parameter panel before the report shows any data.

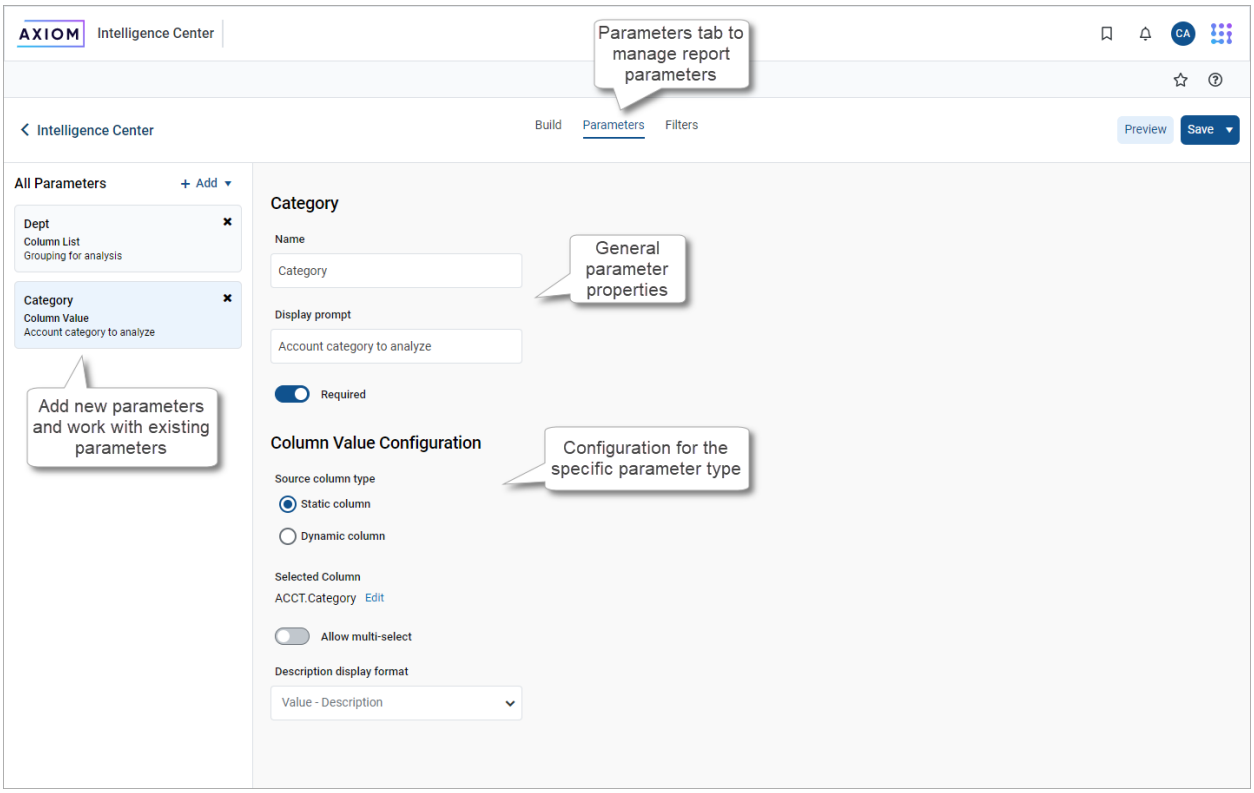


Example web report using report parameters

Managing report parameters

Using the **Parameters** tab in the Report Builder, you can add, edit, reorder, and delete report parameters. Report parameters enable reports to update dynamically based on selections made by report users.

When you select the Parameters tab in a report, any existing parameters display in the **All Parameters** panel along the left-hand side. You can select a parameter box to view the properties for that parameter.



Example Parameters tab in the Report Builder

This topic describes the basic features available to manage report parameters in a report. For more information on how to configure and use specific parameter types, see the following topics:

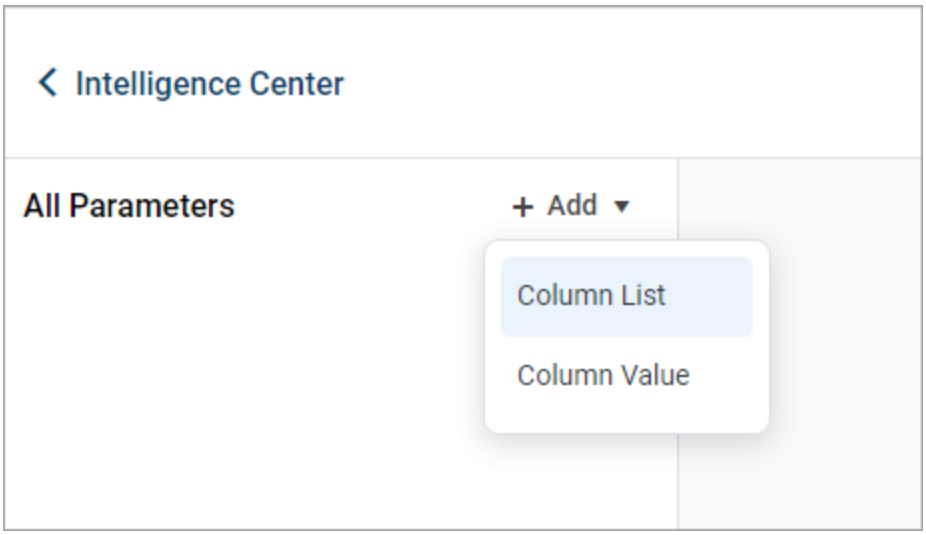
- Using Column List report parameters
- Using Column Value report parameters

Adding report parameters

You can add as many report parameters as needed to provide the desired interactivity for the report. Keep in mind that all report parameters in the report are active and will display to end users.

To add a report parameter:

- On the **Parameters** tab of the Report Builder, click **Add**, then select the type of parameter to create.
    - **Column List**: Define a list of columns that report users can select from. The selected column can be used as dynamic row dimension in the report, or as the column for a Column Value parameter.
    - **Column Value**: Select a column that report users can select values from. The selected values are then applied to the report as a report filter.



The new parameter is added to the **All Parameters** panel along the left-hand side. You can now configure the properties for the parameter, which display in the main area to the right.

General parameter properties

Item	Description
Name	The name of the parameter. By default, this is set to **Report Parameter (Type)**. You can edit this name as needed. The parameter name does not display to report users; it is solely for use in the Report Builder. You should give the parameter a name that indicates its purpose.
Display prompt	The prompt text to display to report users in the Report Parameters panel. By default, this is set to **Report Parameter (Type)**. You can edit this name as needed. You should define display prompt text that helps users understand the purpose of the parameter. For example, "Select a department".

Item	Description
Required	Specifies whether the parameter is required. • If enabled, then the report does not refresh with data until this parameter has a value. The message "Waiting for input" displays in the report grid until all required parameters have a value. In the Report Parameters panel, the **Apply** button does not become available until all required parameters have a value. Additionally, required parameters cannot be cleared. • If disabled (default), then users can optionally leave this parameter blank (unset) when applying parameter values. The report can refresh data without this parameter.

Parameter-specific properties

The remaining parameter properties depend on the parameter type. For more information, see:

- Using Column Value report parameters
- Using Column List report parameters

▶ Editing report parameters

You can edit existing report parameters as needed.

To edit a report parameter:

- On the **Parameters** tab of the Report Builder, select the parameter that you want to edit in the **All Parameters** panel.

The current configuration for the parameter displays in the main area. You can edit the parameter properties as needed.

▶ Reordering report parameters

When users view a report with parameters, the parameters are listed in the Report Parameters panel in the order that they display in the Report Builder. You can reorder the parameters as needed to change how they display to report users.

To reorder report parameters:

- On the **Parameters** tab of the Report Builder, select the parameter box that you want to move, then drag and drop the box to a new location in the list.

NOTE: If you have a Column Value parameter that is dependent on a Column List parameter, the Column List parameter should be located before (above) the Column Value parameter.

Deleting report parameters

You can delete existing report parameters if they are no longer needed. Remember that all parameters are active and will display to report users, so if a parameter is not needed the only option to hide it from report users is to delete it.

To delete a report parameter:

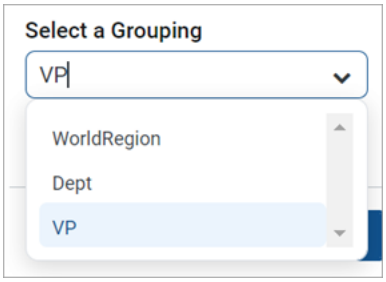
- On the **Parameters** tab of the Report Builder, in the **All Parameters** panel, click the **X** icon in the right-hand corner of the parameter that you want to delete.

Using Column List report parameters

When you use a Column List report parameter, you define a list of table columns to allow the report user to select a column. The user's selected column can then be applied to the report in one of the following ways:

- The selected column can be applied to the report as a row dimension. This allows the report user to dynamically change the row dimension for the report, so that the same report can be used to view data by different dimensional groupings such as department, region, or entity. In order to do this, you must configure the report with a dynamic column for the row dimension, and then link the dynamic column to the Column List report parameter.
- The selected column can be applied to a Column Value parameter. This allows the report user to select a value or values from the column to be dynamically applied as a report filter and change the data shown in the report. In order to do this, you must configure the report with a Column Value parameter, then link the Column Value parameter to the Column List parameter.

When a user views the report with a Column List report parameter, the list of columns is displayed in a drop-down list, using the header text as defined for the column.



Example Column List parameter in the Report Parameters panel

Defining a Column List report parameter

Column List report parameters are defined on the **Parameters** tab of the Report Builder. You can define as many Column List parameters as needed for the report.

To create a Column List parameter:

1. In the Report Builder, select the **Parameters** tab.

2. Click **Add > Column List**.

   The new parameter is added to the **All Parameters** panel along the left-hand side. The properties for the parameter now display in the main area.

3. Complete the following general properties for the parameter:

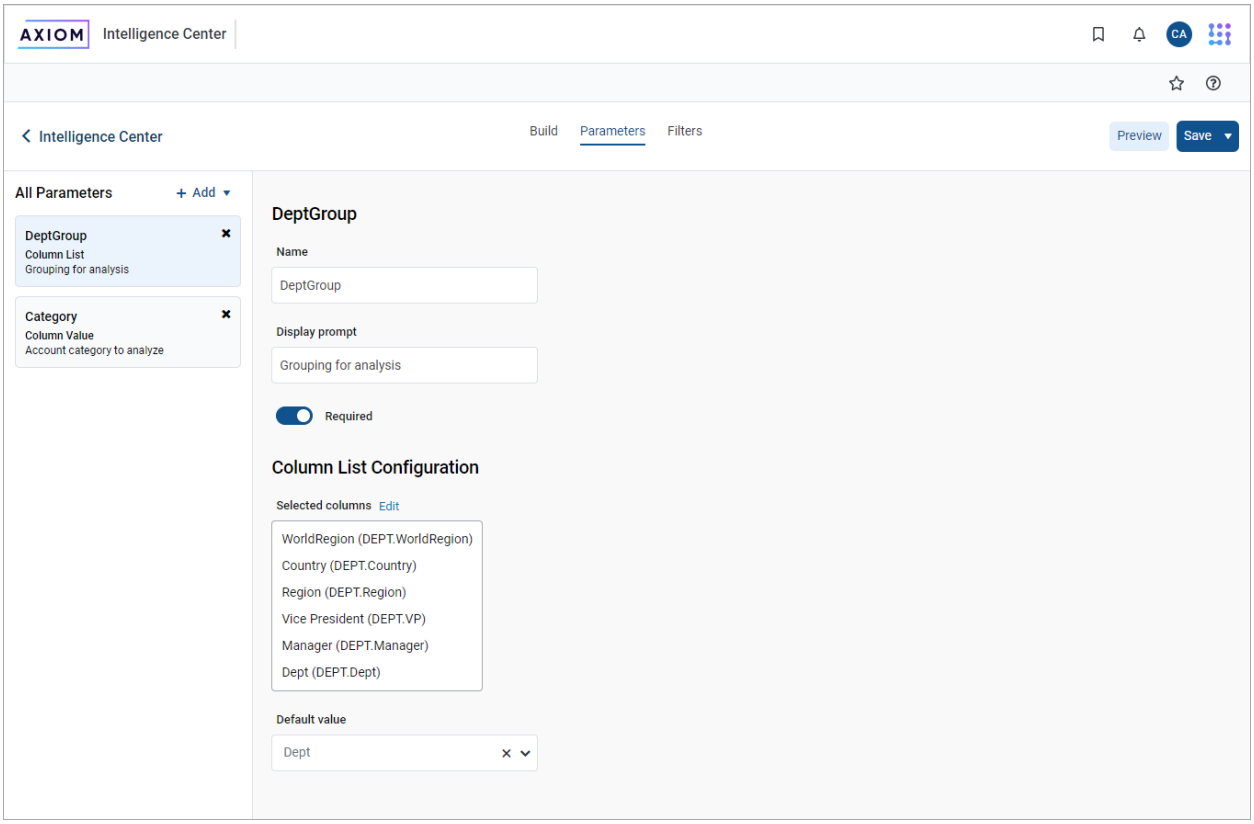
Item	Description
Name	The name of the parameter. By default, this is set to **Report Parameter (Type)**. You can edit this name as needed. The parameter name does not display to report users; it is solely for use in the Report Builder. You should give the parameter a name that indicates its purpose.
Display prompt	The prompt text to display to report users in the Report Parameters panel. By default, this is set to **Report Parameter (Type)**. You can edit this name as needed. You should define display prompt text that helps users understand the purpose of the parameter. For example, "Select a department".
Required	Specifies whether the parameter is required. • If enabled, then the report does not refresh with data until this parameter has a value. The message "Waiting for input" displays in the report grid until all required parameters have a value. In the Report Parameters panel, the **Apply** button does not become available until all required parameters have a value. Additionally, required parameters cannot be cleared. • If disabled (default), then users can optionally leave this parameter blank (unset) when applying parameter values. The report can refresh data without this parameter.

NOTE: If the Column List parameter is linked to a dynamic column, the parameter must have a value in order to refresh data, regardless of whether the parameter is configured as required.

4. In the **Column List Configuration** section, complete the following parameter-specific properties:

Item	Description
Selected columns	The selected columns for the parameter. Click **Edit** to select columns in the **Select Columns** dialog. • Use the table treeview in the left-hand panel of the dialog to locate the columns that you want to use. You can select any column from the primary table, a dimension table, or a related table. You can use the search boxes at the top of the panel to search by table names or by column names. • Once you locate a column that you want to use, drag the column to the middle **Selected Columns** panel. • For each selected column, define **Header** text in the right-hand **Column Properties** panel. This header text is displayed in the Column List drop-down when users select a column from the list. If the Column List parameter is linked to a dynamic column, this text is also used as the header text for the dynamic column within the report grid. • When the columns are presented to report users in a drop-down list, they will be displayed in the order listed here (top to bottom). To reorder columns, click on the drag handle in the left-hand side of the column box, and then drag and drop the column to a new location within the list. • After selecting and configuring the columns, click **OK** to return to the Report Builder. The selected columns now display in the **Selected columns** box. **NOTE:** If the primary table is a data table, and a selected column looks up to a dimension table for the primary table, the column reference is automatically "elevated" so that it uses the lookup dimension table instead of the source table. For example, if the primary table is GL2021, and you select either GL2021.Acct or BGT2021.Acct, the column reference is elevated to Acct.Acct. This elevation is done so that the column is valid for use as a row dimension, and so that any filter resulting from the column is applied as a general filter affecting all tables that look up to the dimension table.
Default value	Optional. The default value for the parameter. When a report user opens the report, the parameter will use this value by default. You can select any of the columns in the **Selected columns** list to use as the default value, or you can leave it blank to have no default value.

IMPORTANT: The columns selected for the Column List parameter must be valid within the context of how you intend to use the parameter. If the parameter will be used with a dynamic column, then all of the selected columns must be valid as row dimensions within the report configuration. If the parameter will be used with a Column Value parameter, then all of the selected columns must be valid to be used as filters within the report configuration. If a column in the list is not valid for use as a row dimension or a filter, an error message will display when the user attempts to apply that parameter selection to the report. As the report designer, you should test your parameters to verify that they work as intended within the report.



Example Column List parameter with a list of columns and a specified default value

Using a Column List parameter with a dynamic column

In order to use a Column List parameter to dynamically change the row dimension of the report, you must:

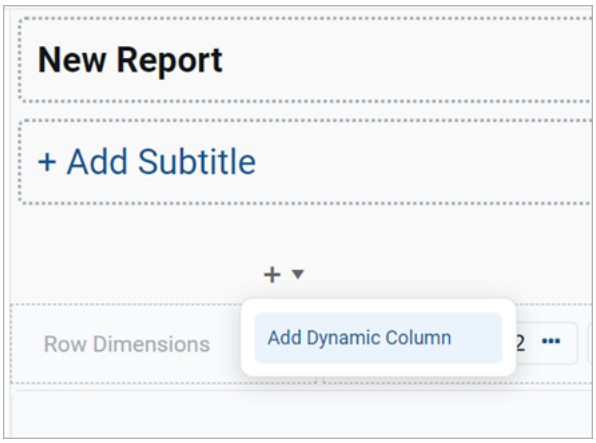
- Add a dynamic column as a row dimension for the report
- Link the Column List parameter to the dynamic column

This configuration is only possible when using row dimensions, meaning the report rows are dynamically generated based on the row dimension columns. If you are using a fixed row structure in the report, then the option to add a dynamic column is not available.

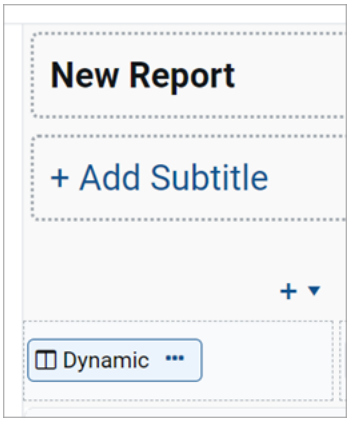
Web reports can use one or more row dimension columns. When using dynamic columns, all of the row dimensions can be dynamic, or you can have a mix of dynamic and fixed row dimensions.

To define a dynamic column:

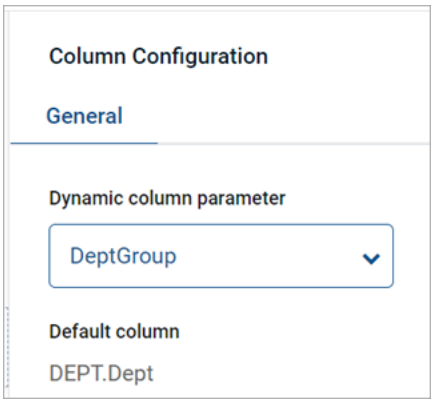
1. In the Report Builder, select the **Build** tab.
2. Click the plus icon over the Row Dimensions box, then select **Add Dynamic Column**.



A column box labeled Dynamic is added to the **Row Dimensions** box.



3. In the right-hand **Column Configuration** panel, from the **Dynamic column parameter** list, select the Column List parameter to use with the dynamic column. Parameters are listed by name as defined on the Parameters tab.

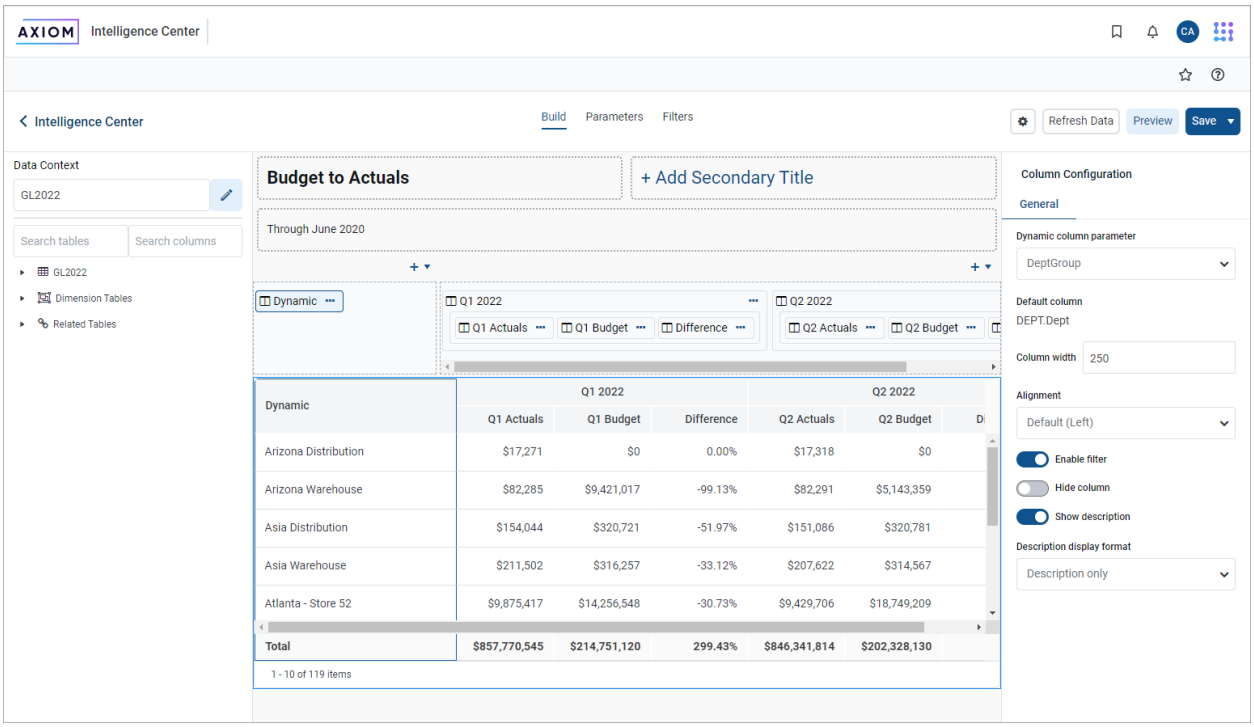


By default, Axiom automatically selects the first available Column List parameter and uses the default value defined for that parameter. If the parameter does not have a defined default value, the Report Builder uses the first column in the list of columns defined for the parameter. This is because the Report Builder must be able to associate the dynamic column with an actual table column in order to refresh data.

If no Column List parameters are defined, or if the Column List parameter does not have a defined list of columns, then the report cannot be refreshed with data until this issue is resolved.

4. Complete the remaining Column Configuration properties as needed. Note the following:
    - The **Header** property and the related header properties on the Advanced tab are not available for dynamic columns. The column header text for each column in the column list is defined when configuring the Column List parameter.
    - You can optionally enable **Show description** and select a **Description display format** for the dynamic column. These options will apply if the selected column for the Column List parameter has an associated description column.

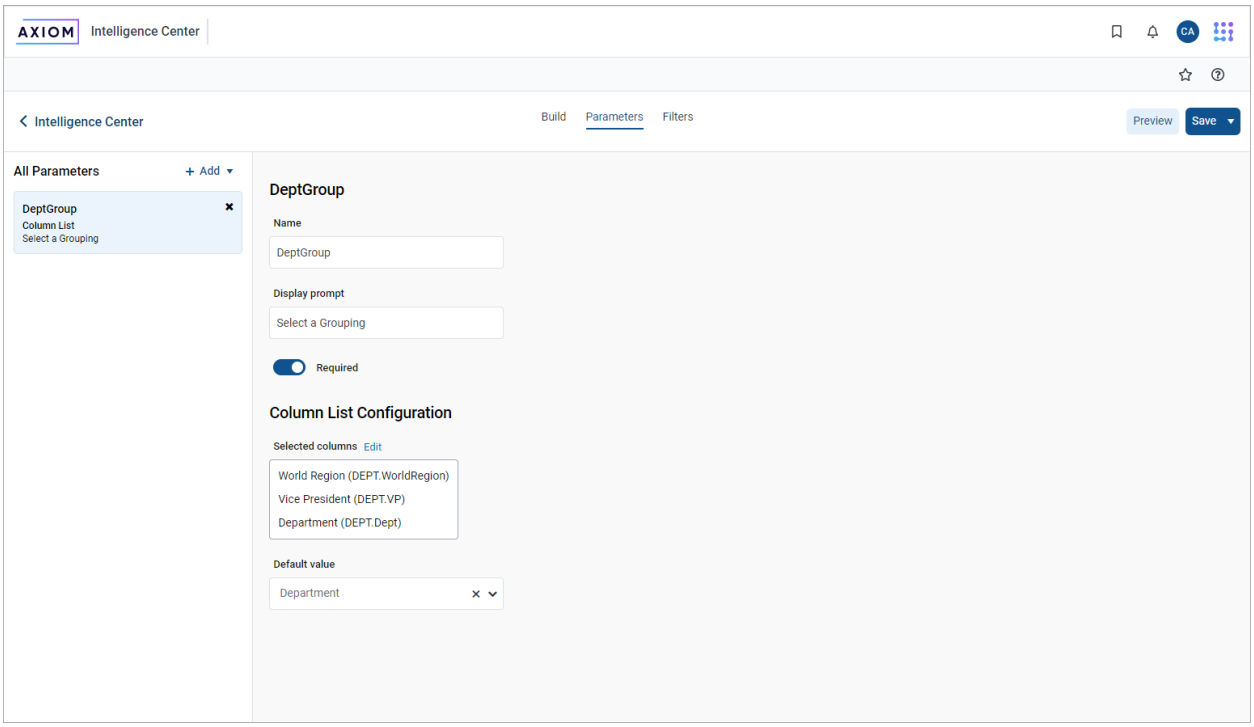
The following example shows a web report configured with a dynamic row dimension column, linked to a Column List report parameter. The grid is refreshed with data using the default column specified for the report parameter.



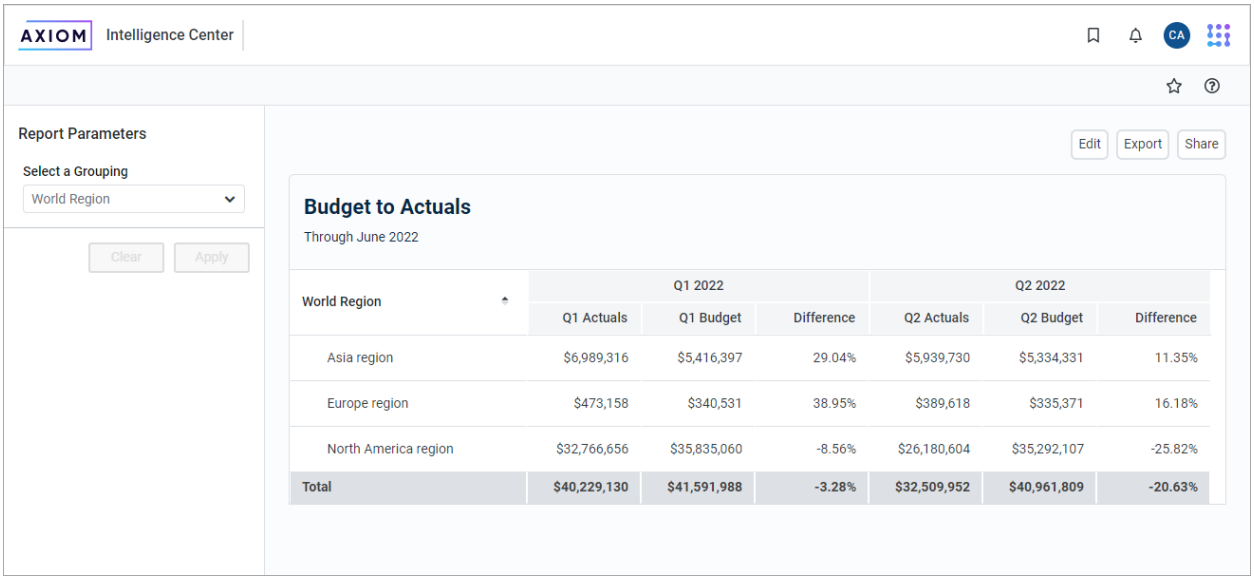
Example Report Builder with dynamic row dimension

NOTE: In the Report Canvas, the dynamic column displays in the grid using the header text **Dynamic**. This only occurs in the Report Builder, so that you know which column is the dynamic column. When previewing or viewing the report, the dynamic column uses the header text defined for the currently selected column, as defined in the Column List parameter configuration.

In this example the Column List report parameter lets the user select from three different grouping levels—Dept.Dept, Dept.WorldRegion, or Dept.VP. The report will refresh with data and use the selected column as the row dimension.



Example Column List parameter providing column options for the dynamic row dimension



Example end user experience to select and change the row dimension

Design considerations for the report user experience

When using a dynamic column with a Column List parameter, you must decide whether you want the report to refresh using a default column selection, or if you want to require the user to make a selection before the report refreshes with data.

- If the Column List parameter does not have a specified default column, then when a user opens the report, it will not refresh with data and instead displays the message "Waiting for input". The user must select a value for the Column List parameter and apply before the report is refreshed with data.
- If the Column List parameter has a specified default column, then when a user opens the report, it refreshes with data using the default column. The user can then optionally change the selected column in order to refresh the report using a different row dimension.

NOTE: If the Column List parameter that drives the dynamic column does not have a default value, then the report cannot be exported or shared because it does not have a column to use as the row dimension. Although report parameter selections made by users are not honored when exporting or sharing web reports, the default value is honored for the dynamic column when exporting or sharing the report.

Design considerations for drilling

If you want to use a dynamic column and also enable directed drilling for the report, you must be careful to ensure that all of the drill columns are compatible with the Column List columns. If the user can select a column for the Column List parameter that is not compatible with the drill columns, an error will occur when the user attempts to drill the report.

Alternatively, you can enable drilling and use key column drilling, which will continue to work as long as all of the columns defined the Column List parameter are valid as row dimension columns.

Using DateParts in a Column List parameter

You can use DateParts when setting parameters for a ColumnList. Click **Parameters** from your report and click **Add** to add a Column List.

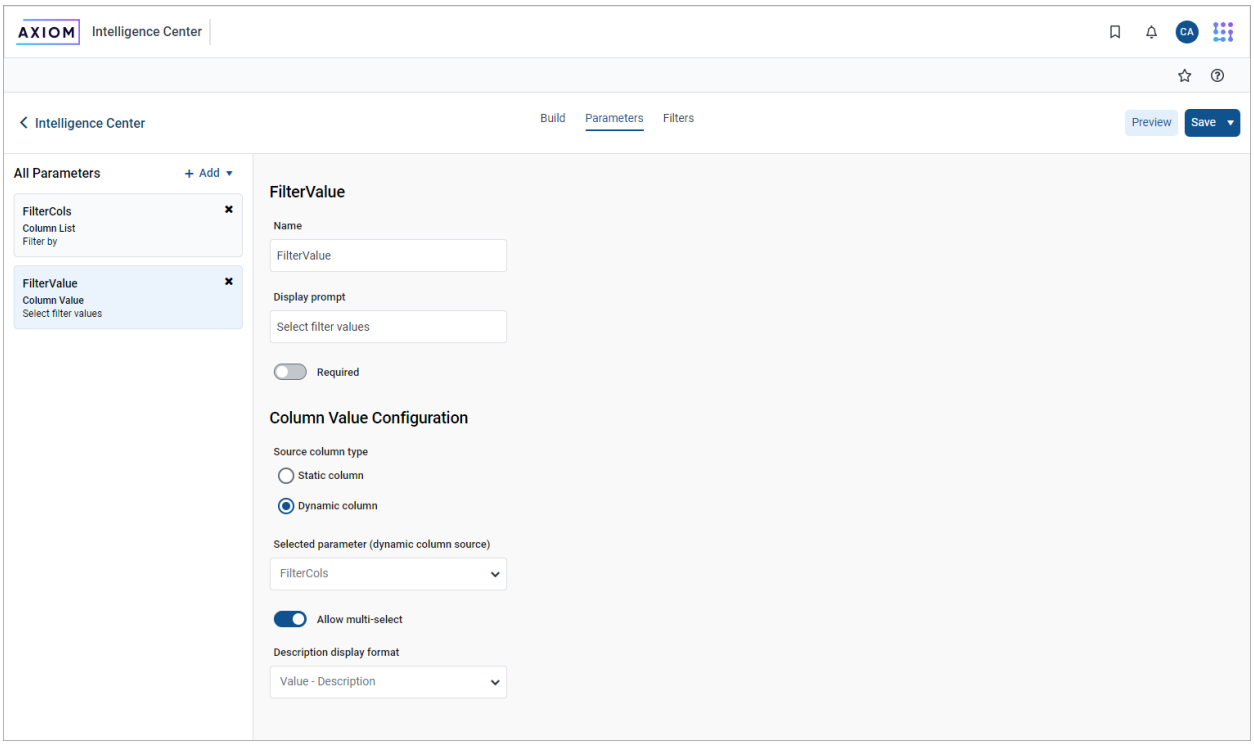
In the Column List Configuration section, click **Edit** to select a column and then drag the column name to the Selected columns section. Then use the **Date part to retrieve** menu to select a date part and click **OK**.

Using a Column List parameter with a Column Value parameter

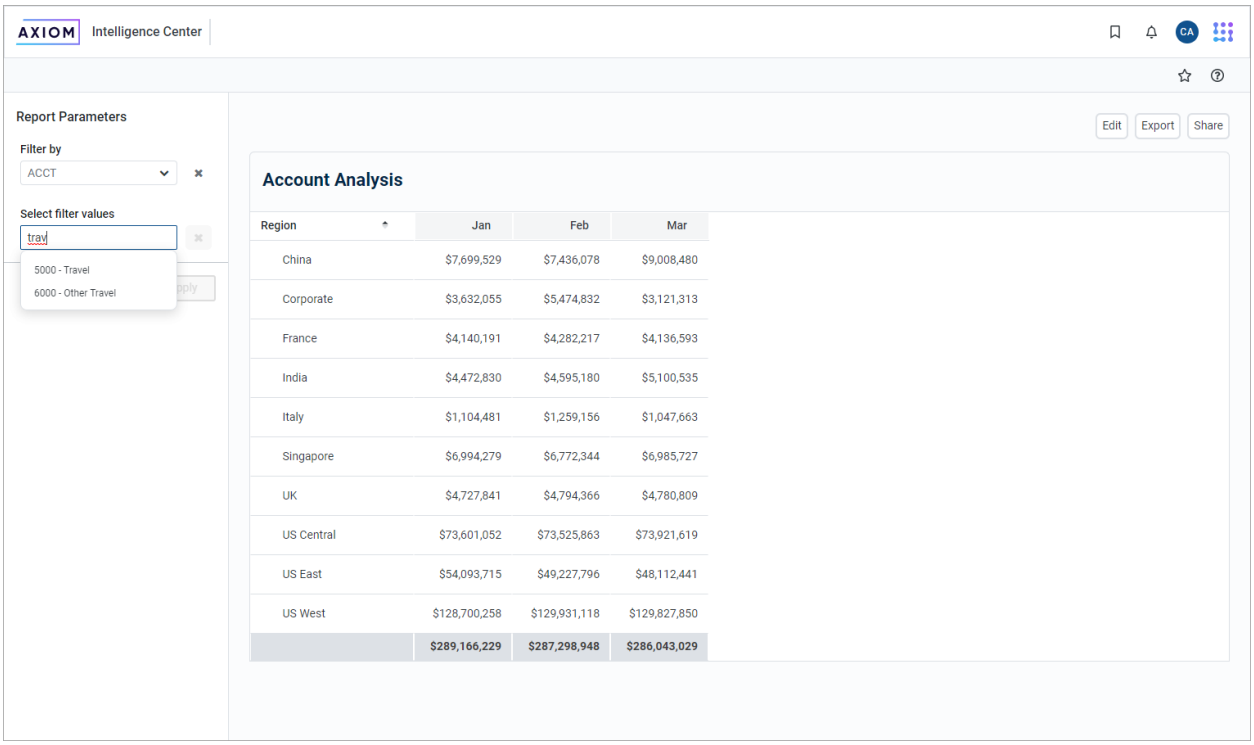
In order to use a Column List parameter to populate the source column for a Column Value parameter, you must:

- Define a Column Value parameter
- Configure the parameter as dynamic and select the Column List parameter as the source

In the following example, the Column Value parameter is configured to use the FilterCols Column List parameter. First the user will select a column from the Column List parameter, then the user will select a value or values in that column from the Column Value parameter.



Example Column Value parameter using a Column List parameter to provide the source column



Example end user experience to choose the filter column and values

For more information on how to configure Column Value parameters and how the selected values are applied as report filters, see Using Column Value report parameters.

Design considerations for the report user experience

When a Column Value parameter is linked to a Column List parameter, the Column Value parameter is automatically dependent on the other parameter. This means that the Column Value parameter will not become active in the Report Parameters panel until a value has been selected for the Column List parameter. The Column Value parameter will then become active and allow the user to select a value or values from the column selected for the Column List parameter.

NOTE: Because of this automatic dependency, you should make sure that the Column List parameter is ordered before (above) the Column Value parameter.

Additionally, you must decide whether you want the Column Value parameter to start with a default column or not:

- If the Column List parameter does not have a specified default column, then the Column Value parameter will be disabled until a value is selected for the Column List parameter.
- If the Column List parameter has a specified default column, the Column Value parameter is enabled and uses the default column. The user can optionally select a different value for the Column List parameter to change the column used by the Column Value parameter.

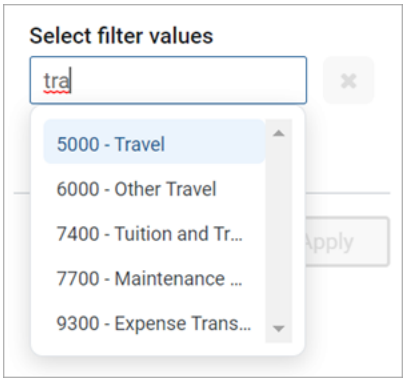
Using Column Value report parameters

When you use a Column Value report parameter, you specify a column from which the user can select one or more values. The user's selected values for the column are then applied to the report as a report filter. This allows the user to dynamically change the data shown in the report.

For example, you may design a report that is intended to display financial results for a selected department or entity. You can create a Column Value report parameter that uses the department or entity column. The user can select the departments or entities that they want to view, and then apply the parameter values to refresh the report with the selected data.

When users view the report with a Column Value report parameter, the column values are displayed in a drop-down list:

- Column values are displayed with descriptions if applicable.
- Users can type text into the drop-down list to filter the list and find a specific value.
- Users can select one value from the list, or multiple values, depending on the parameter configuration.



Example Column Value parameter in the Report Parameters panel

Defining a Column Value report parameter

Column Value report parameters are defined on the Parameters tab of the Report Builder. You can define as many Column Value parameters as needed for the report.

To create a Column List parameter:

1. In the Report Builder, select the **Parameters** tab.
2. Click **Add > Column Value**.

   The new parameter is added to the **All Parameters** panel along the left-hand side. The properties for the parameter now display in the main area.
3. Complete the following general properties for the parameter:

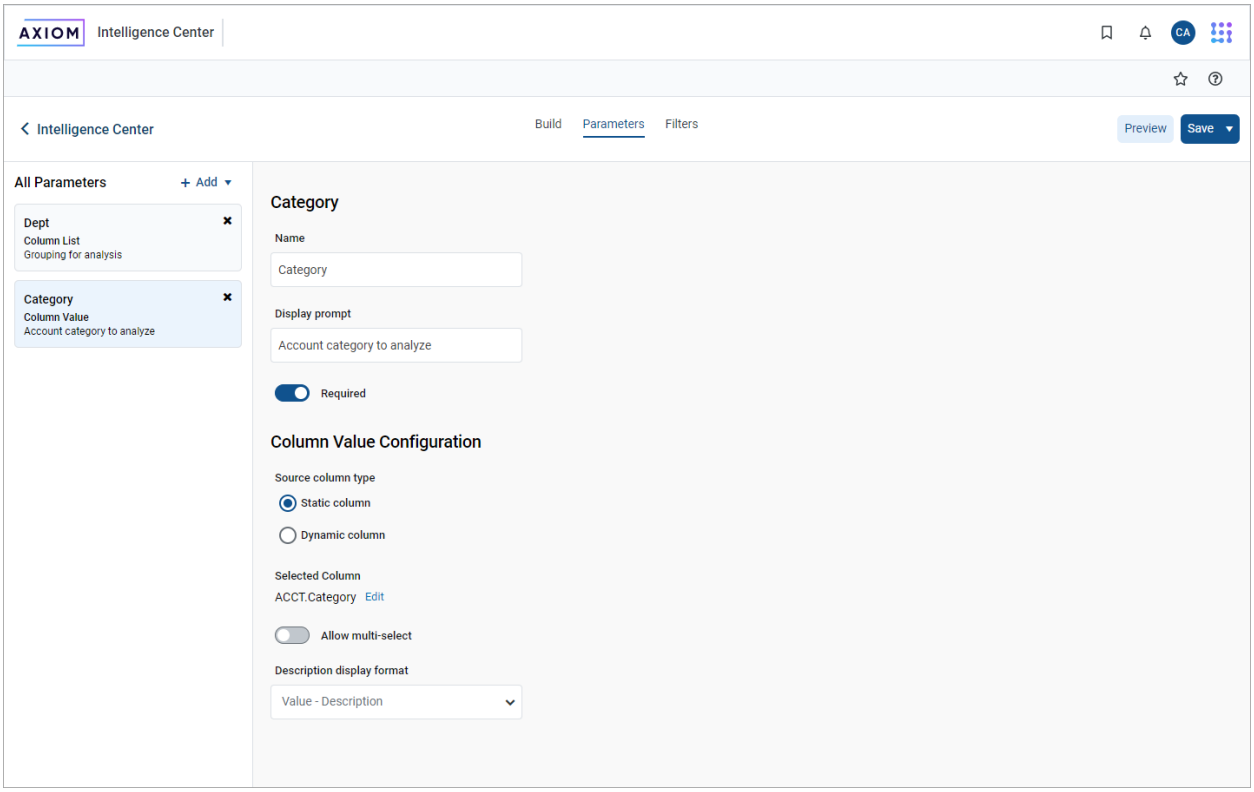
Item	Description
Name	The name of the parameter. By default, this is set to **Report Parameter (Type)**. You can edit this name as needed. The parameter name does not display to report users; it is solely for use in the Report Builder. You should give the parameter a name that indicates its purpose.
Display prompt	The prompt text to display to report users in the Report Parameters panel. By default, this is set to **Report Parameter (Type)**. You can edit this name as needed. You should define display prompt text that helps users understand the purpose of the parameter. For example, "Select a department".
Required	Specifies whether the parameter is required. • If enabled, then the report does not refresh with data until this parameter has a value. The message "Waiting for input" displays in the report grid until all required parameters have a value. In the Report Parameters panel, the **Apply** button does not become available until all required parameters have a value. Additionally, required parameters cannot be cleared. • If disabled (default), then users can optionally leave this parameter blank (unset) when applying parameter values. The report can refresh data without this parameter.

4. In the **Column List Configuration** section, complete the following parameter-specific properties:

Item	Description
Source column type	Select one of the following to determine the source of the column for the Column Value parameter: • **Static column**: Select this option if you want to select a specific column to use as the source column. • **Dynamic column**: Select this option if you want to dynamically use the selected column for a Column List parameter as the source column.

Item	Description
Selected column	If the specified **Source column type** is **Static column**, click the **Edit** link to select a column from the **Select Column** dialog. • Use the table treeview in the left-hand panel to locate the column that you want to use. You can select any column from the primary table, a dimension table, or a related table. You can use the search boxes at the top of the panel to search by table names or by column names. • Once you locate a column that you want to use, select it and then click **OK**. The selected column name now displays under the **Selected column** header. **NOTE:** If the primary table is a data table and the selected column looks up to a dimension table for the primary table, the column reference is automatically "elevated" so that it uses the lookup dimension table instead of the source table. For example, if the primary table is GL2021, and you select either GL2021.Acct or BGT2021.Acct, the column reference is elevated to Acct.Acct. This elevation is done so that the column is applied as a general filter affecting all tables that look up to the dimension table.
Selected parameter (dynamic column source)	If the specified **Source column type** is **Dynamic column**, then select the desired Column List parameter to use as the source. This means that the user will first select a column from the designated Column List parameter, then the user can select one or more values from that column using the Column Value parameter. The Column Value parameter will not be active until the Column List parameter has a selected value. If the Column List parameter has an assigned default value, this value will be used as the initial source column for the Column Value parameter when the report is opened.
Allow multi-select	Specifies whether the parameter allows selecting multiple values from the column. By default, this is disabled, which means users can only select a single value at a time.
Description display format	The display format to use for the column values in the drop-down list. By default, this is set to **Description only**. This setting applies when the column used by the Column Value parameter has an associated description column. If the column used by the parameter does not have an associated description column, then this setting is ignored and the column values will display as is.

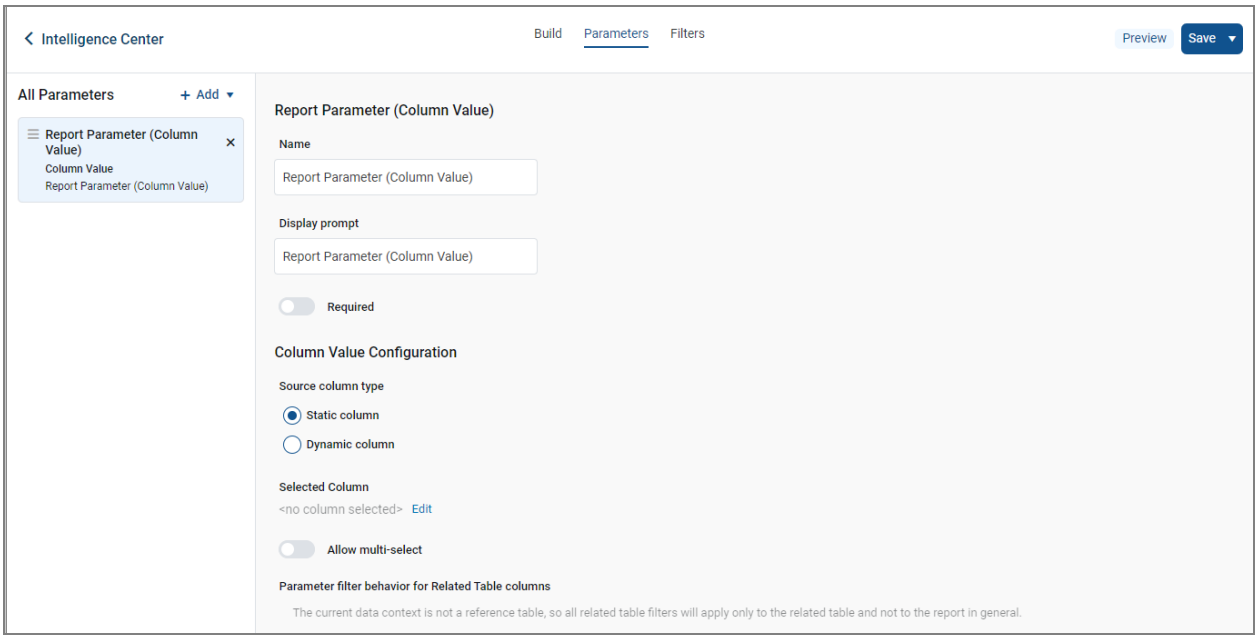
IMPORTANT: The column used by the Column Value parameter must be valid as a filter column for the current report configuration. If a column in the list is not valid for use as a filter column, then an error message will display when the user attempts to apply the parameter selection to the report. As the report designer, you should test your parameters to verify that they work as intended within the report.



Example Column Value parameter allowing report users to filter the report by the source column

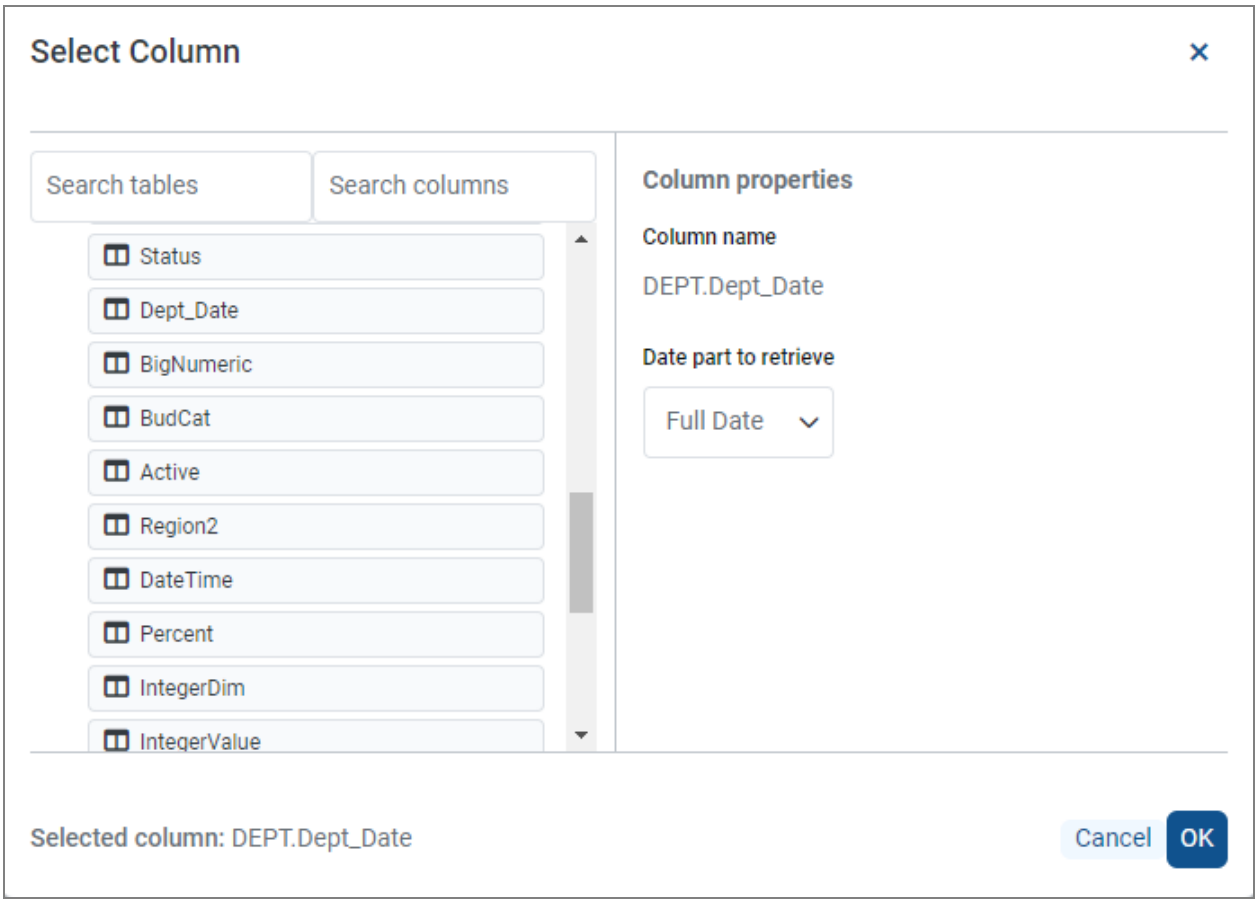
Using DateParts with ColumnValue parameters

You can use DateParts when setting parameters for a ColumnValue. Click **Parameters** from your report and click **Add** to add a Column Value.



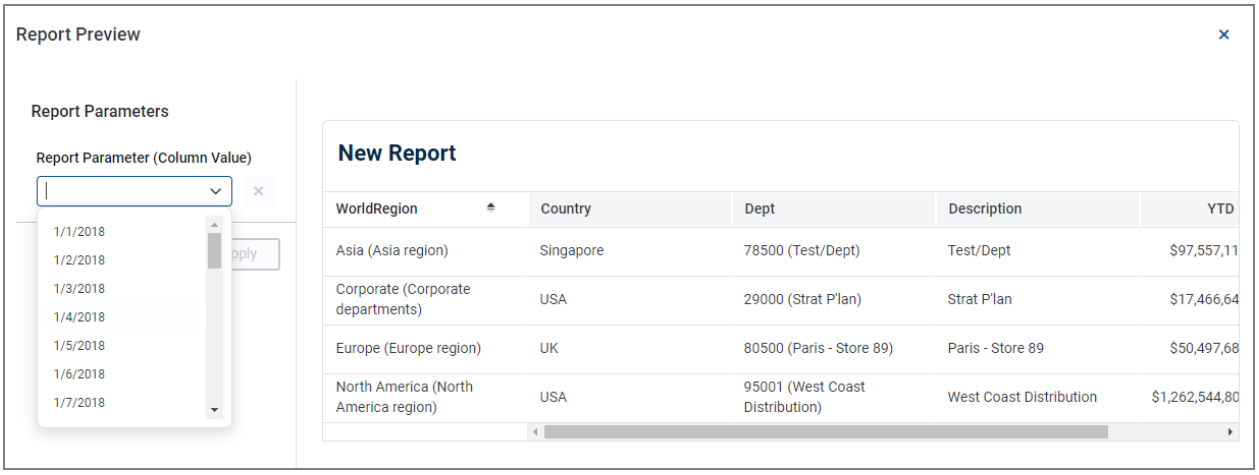
Parameters view

In the Column Value Configuration section, select **Static column**. In the Selected Column section, click **Edit** and the select the column you want to use. Then, select which date part to use, such as Full Date.



Specifying column and date part

When you view the report, you can select a date to apply to the results of the report.



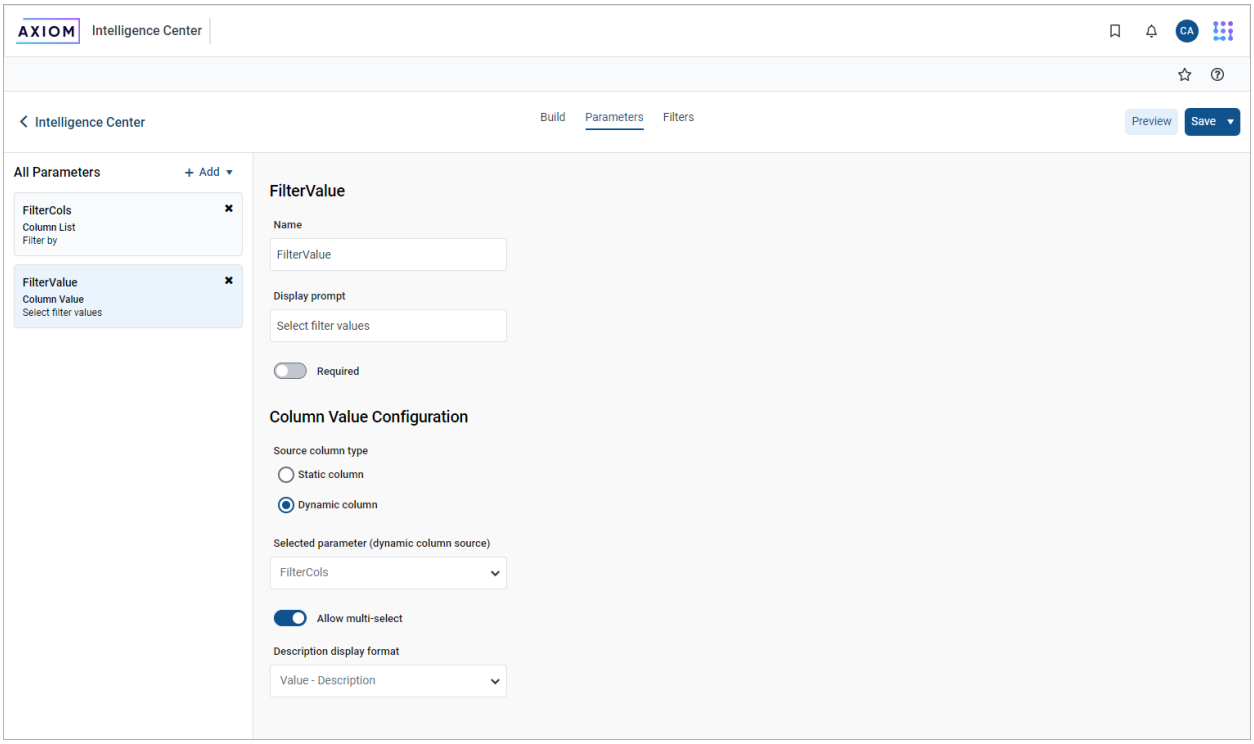
Report with column value drop-down list

Using a Column List parameter with a Column Value parameter

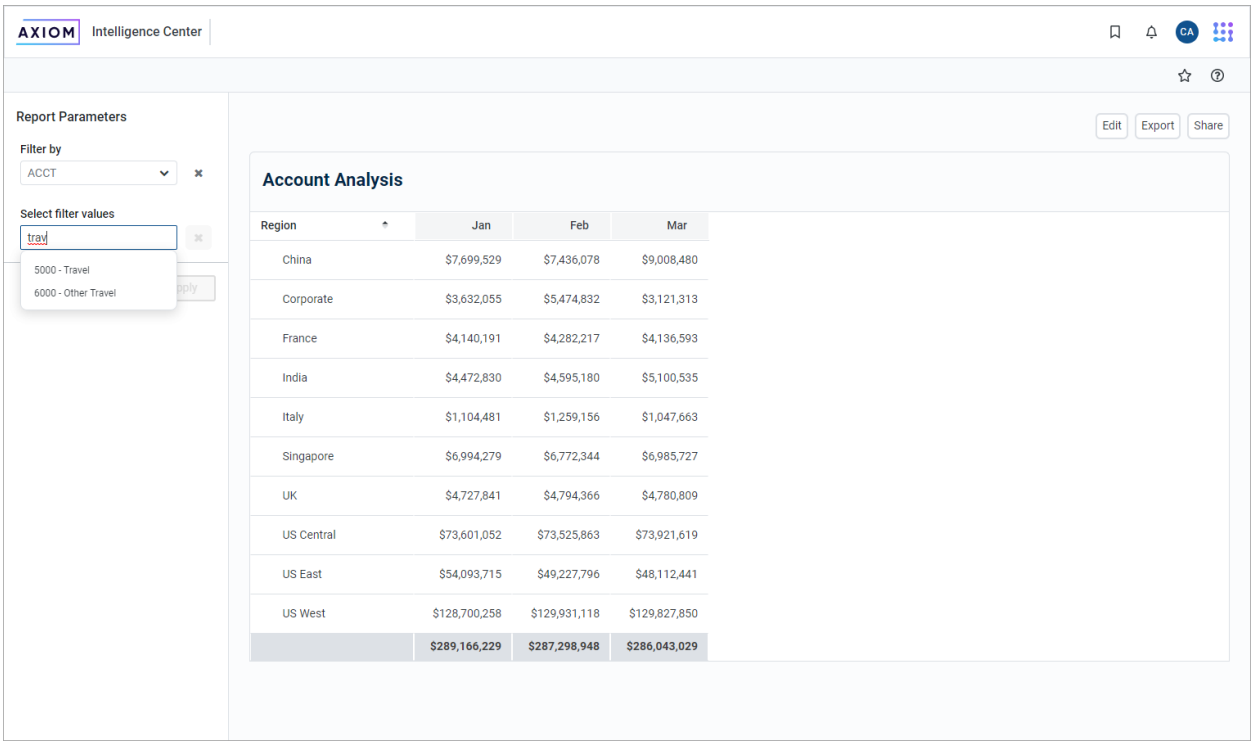
In order to use a Column List parameter as the source for a Column Value parameter, you must:

- Create and configure a Column List parameter
- Configure the Column Value parameter as dynamic and select the Column List parameter as the source

In the following example, the Column Value parameter is configured to use the FilterCols Column List parameter. First the user will select a column from the Column List parameter, then the user will select a value or values in that column from the Column Value parameter.



Example Column Value parameter using a Column List parameter to provide the source column



Example end user experience to choose the filter column and values

For more information on how to configure Column List parameters, see Using Column List report parameters.

Design considerations for the report user experience

When a Column Value parameter is linked to a Column List parameter, the Column Value parameter is automatically dependent on the other parameter. This means that the Column Value parameter will not become active in the Report Parameters panel until a value has been selected for the Column List parameter. The Column Value parameter will then become active and allow the user to select a value or values from the column selected for the Column List parameter.

NOTE: Because of this automatic dependency, you should make sure that the Column List parameter is ordered before (above) the Column Value parameter.

Additionally, you must decide whether you want the Column Value parameter to start with a default column or not:

- If the Column List parameter does not have a specified default column, then the Column Value parameter will be disabled until a value is selected for the Column List parameter.
- If the Column List parameter has a specified default column, the Column Value parameter is enabled and uses the default column. The user can optionally select a different value for the Column List parameter to change the column used by the Column Value parameter.

How Column Value parameter selections are applied as filters

When a Column Value parameter selection is applied to the report, the filter is applied as follows:

- If the source column is from a related table, or if the source column is from the primary table when the primary table is a data table, then the filter is applied as a table-specific filter.
- Otherwise, the filter is applied as a general report filter.

NOTE: Because columns that look up to dimension tables are automatically "elevated" to the dimension table when the primary table is a data table, it is not possible to apply table-specific filters with these columns when using a Column Value parameter. For example, it's not possible to use BGT2021.Acct in a Column Value parameter, because the column reference is always elevated to Acct.Acct and therefore applied as a general filter. In the majority of use cases involving columns that look up to dimension tables, the general filter is the intended filter.

The filters resulting from Column Value parameter selections are applied in the same way as report-level filters defined in the Report Configuration panel. For more information on the difference between table-specific filters and general report filters, see Filtering data in web reports.

The syntax used for filters depends on whether the parameter allows single selection or multiple selection. For example, if the source column is Dept.Dept, filters are created as follows:

- **Single selection**: A filter will be created such as `Dept.Dept=20000`.
- **Multiple selection**: A filter will be created such as `Dept.Dept IN (20000,21000,45000)`.

To make your variable narrow the list displayed to only the departments used in a single table (for example, GL 2020), enter `GL2020.Dept.Dept`.

This filter statement is not visible to report users—the users only see their selected value(s) for the column.

Keep in mind the following:

- It is possible that the source column used by the Column Value parameter is not valid as a filter column for the report, depending on the report configuration. In this case an error will occur when the user attempts to apply the parameter.
- It is possible that the Column Value parameter uses a source column that is valid as a filter column for the report, however, the filter has no effect. For example, if the column is applied as a table-specific filter but the report does not use any columns from that table, then the table-specific filter will have no effect and no error will occur.

All report parameters should be tested by the report designer to ensure that they are working as intended, before rolling out the report to end users.

Configuring grid properties in a web report

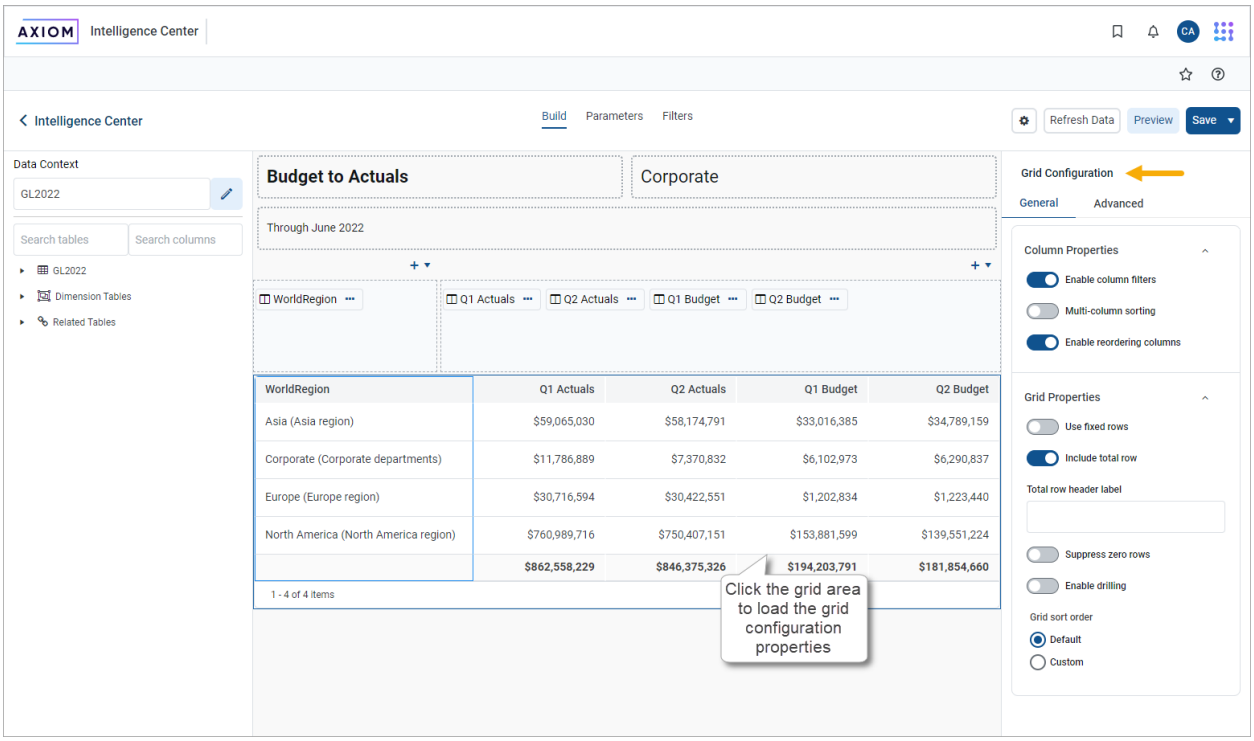
The grid properties define the available features and the overall presentation of data in a web report. Using the grid properties, you can configure:

- User interaction properties such as whether users can filter columns, sort columns, and reorder columns
- Display properties such as whether the grid has a total row and whether rows with all zero values display
- Drilling properties such as what type of drilling is enabled and configuration for directed drilling

In the Report Builder, the grid properties are defined in the right-hand Configuration Panel.

To configure grid properties for a web report:

1. On the **Build** tab of the Report Builder, in the Report Canvas, click the grid that displays below the column setup boxes.
2. In the right-hand Configuration Panel, complete the **Grid Configuration** properties as needed.



Example Grid Configuration properties

The grid configuration properties are separated into two tabs:

- **General**: Basic grid properties that should be reviewed and configured for all web reports.
- **Advanced**: Advanced grid properties such as default column formats for the grid.

General grid properties

The following grid properties are available for web reports on the **General** tab of the **Grid Configuration** panel:

Column Properties

Item	Description
Enable column filters	Specifies whether users can filter columns in the grid. Only applies to grids with dynamic rows; users cannot filter columns in grids where **Use fixed rows** is enabled. • If enabled (default), then filter icons display on columns where **Enable filter** is enabled in the column configuration properties. Report users can use these icons to filter the data shown in the column. If **Enable filter** is disabled on a column, the filter icon is not available for that column. • If disabled, then filter icons do not display on any columns, regardless of whether **Enable filter** is enabled for the column.
Multi column sorting	Specifies whether users can sort by multiple columns in the grid. Only applies to grids with dynamic rows; users cannot filter columns in grids where **Use fixed rows** is enabled. • If enabled, then users can sort the grid by multiple columns. If the grid is already sorted by a column and a user clicks another column to sort, then the grid is first sorted by the most recent column and then sorted by the original column. Columns will remain sorted until the user toggles the sort disabled for that column. • If disabled (default), then users can sort the grid by a single column. If the grid is already sorted by a column and a user clicks another column to sort, then the sort is disabled on the original column and the grid becomes sorted by the most recent column. Users can sort columns by clicking on the column header. Each click toggles through sort ascending, sort descending, and no sort. **NOTE:** The ability to clear the sort is only available if multi-column sorting is enabled. Otherwise, clicking a column header will toggle between sort ascending and sort descending. You can click a different column header to sort by that column, but you cannot clear the sort.
Enable reordering columns	Specifies whether users can reorder columns in the grid. • If enabled (default), then users can drag and drop columns within the grid to temporarily reorder them. • If disabled, then users cannot reorder columns in the grid.

Grid Properties

Item	Description
Use fixed rows	Specifies whether the grid uses dynamic rows or a fixed row structure. • If enabled, then the grid uses a fixed row structure to define the rows. Select the structure using the **Fixed row structure** field. For more information, see Specifying the fixed row structure for a web report. • If disabled (default), then the grid dynamically generates rows based on a table column specified as the row dimension. The row dimension is specified by dragging and dropping the desired table column into the Row Dimensions box at the top of the Report Canvas. For more information, see Specifying the row dimension for a web report.
Fixed row structure	Specifies the fixed row structure to use in the grid. Only applies when **Use fixed rows** is enabled. Select an existing fixed row structure to define the rows of the grid. You can type into the box to filter the list of fixed row structures by name. Fixed row structures can be created from the Intelligence Center. For more information on creating fixed row structures, see Managing Fixed Row Structures.
Include total row	Specifies whether a total row is present on the grid. Only applies to grids with dynamic rows; if **Use fixed rows** is enabled then the grid uses subtotal and total rows as defined in the fixed row structure. • If enabled, then a total row displays at the bottom of the grid. If the grid data is paged, the total row shows the total of all rows across all pages. Use the **Total row header label** field to define label text for the total row, such as "Total". This text displays in the last row dimension column. Columns displaying numeric, non-dimensional data are included in the total row by default. If desired, you can exclude a numeric column from the total row using the column configuration properties. • If disabled (default), then the grid does not have a total row.

Item	Description
Suppress zero rows	Optional. Specifies whether data rows with all zeros are suppressed from showing in the grid. Only applies to grids with dynamic rows; all zero rows cannot be suppressed in grids where **Use fixed rows** is enabled. Non-key columns that meet both of the following criteria are evaluated to determine whether a row should be hidden: • The column data type is Integer (all types) or Numeric. • The column is from the primary table or an additional data table. If the primary table is a data table, Integer and Numeric columns on lookup reference tables are ignored—meaning these columns may have values, but the row is still suppressed if all applicable data table columns have zero values. There is one exception: reference table columns are considered if the column classification is Values and the numeric type is Currency. Calculated columns defined in the grid are not evaluated for this purpose and do not prevent a row from being suppressed.
Enable drilling	Specifies whether users can drill down rows in the grid to view the underlying data. • If enabled, then users can drill rows in the grid. Use the **Drilling type** property to specify what type of drilling options are present: ◦ **Key columns** (default): Users can drill down to the key column level of the data. These drilling options are automatically generated based on the validated key columns of the primary table. No additional setup is required. ◦ **Directed**: Users can drill down predefined drilling paths. Use the **View/Edit Configuration** link underneath the **Directed** option to configure the drilling paths. For more information, see Configuring drilling for web reports. • If disabled (default), then users cannot drill rows in the grid.

Item	Description
Grid sort order	Specifies the sort order for data in the grid. • **Default**: Data is sorted by the row dimension columns specified for the grid, in ascending order. If multiple row dimension columns are present, the first row dimension column is the primary sort column, followed by the second row dimension column, and so on. • **Custom**: Specify one or more columns to sort the grid data, in either ascending or descending order. Use the **View/Edit Configuration** link underneath the **Custom** option to select the drill columns. ◦ The **Edit Sorting Configuration** dialog lists all columns in the grid. It is not currently possible to sort by a column that is not present in the grid. If necessary, you can add a column to the grid in order to sort by that column, then configure the column as hidden so that it does not show in the grid. ◦ To add a column to the sorting configuration, drag the column from the left-hand panel to the right-hand panel, and then select **Asc** (default) or **Desc** for the sort order. To remove a column from the sorting configuration, click the **X** icon on the right-hand side of the column box. ◦ If multiple columns are added to the sorting configuration, the top-most column is the primary sort column, followed by the next column, and so on. You can reorder the columns in the list by clicking the drag handle on the left-hand side of the column box and then dragging and dropping it to a new location. If a custom sort is specified but no columns are added to the sorting configuration, the grid will revert to using the default sort order. **NOTES:** • If **Multi column sorting** is not enabled for the grid, the grid will still honor a multi-column sort configuration when the report is initially rendered. However, if a user sorts by any column, the grid reverts to single-column sorting with no way to return to the previous sort configuration other than by reloading the report. • Process columns cannot be added as custom sort columns. • If a dynamic column is added to the sort configuration, it displays in the list with its assigned Column List report parameter name in parenthesis. If you hover your cursor over the column name in the sort configuration, the current column used by the dynamic column is shown in the tooltip.

NOTE: If you created a web report using the Report Builder in version 2021.1, that report may have had a defined **Data Filter** in the Grid Configuration properties. These filters are now defined at the report level, on the Filters tab. Any existing grid filter will be automatically converted to a general report filter. In rare cases, this conversion may result in report errors if the grid-level filter is not valid as a general report filter. If this occurs, you can delete the converted filter and re-create it as a table-specific filter.

Advanced grid properties

Using the properties on the **Advanced** tab of the **Grid Configuration** panel, you can view and edit **Default column formats** for columns in the current report. Select a column **Data type** that you want to configure, and this section will populate with the properties for the selected data type.

All columns added to the report will inherit the settings defined here. By default, columns will continue to inherit any changes made to the default column formats unless the format has been overridden at the column level.

For example, the default alignment for String columns is Left. When String columns are added to the grid, they are configured to use the Default alignment, meaning Left. If desired, you can change the default alignment for String columns to Center, and all String columns in the grid that are using the Default alignment will now update to use Center alignment. However, if you have manually configured a particular String column to use Right alignment instead of the Default alignment, that column will continue to use its configured alignment of Right.

Item	Description
Data type	Select a column data type to view and edit the default column formats for that type. The following data types are available: • **String**: Columns containing text or alphanumeric values. Includes table columns using the String data type. • **Date**: Columns containing dates. Includes table columns using the Date data type. • **DateTime**: Columns containing date-time values. Includes table columns using the DateTime data type. • **Boolean**: Columns containing True or False values. Includes table columns using the Boolean data type. • **Dimension**: Columns containing numeric dimension codes. Includes table columns using Numeric, Integer, or Identity data types, where the Column Classification is Dimension. • **Decimal**: Columns containing decimal numeric values. Includes table columns using the Numeric data type, where the column has a Numeric Type of Number. • **Number**: Columns containing whole integer numeric values. Includes table columns using Integer or Identity data types, where the Column Classification is Value. • **Currency**: Columns containing currency numeric values. Includes table columns using the Numeric or Integer data types, where the column has a Numeric Type of Currency. • **Percent**: Columns containing percent numeric values. Includes table columns using the Numeric or Integer data types, where the column has a Numeric Type of Percent. Additionally, when you create a calculated column, you can specify its data type as one of the numeric data types. The column will then use the default column formats for that data type. The default data type for calculated columns is Currency. **NOTE:** Columns that would normally be treated as Number data type are treated as Dimension data type if they are used as row dimension columns or drill columns.

Item	Description
Column width	The default column width for the selected **Data Type**, in pixels. Enter the desired column width as a whole integer between 30 and 600. The default width for each data type is as follows: • Currency, Decimal, Percent, Date, Boolean: 120 • Number: 150 • DateTime, String, Dimension: 200
Alignment	The default alignment of the column values for the selected **Data Type**. If you want to change the default alignment for a data type, select one of the following: **Left**, **Right**, **Center**. The default alignment for each data type is as follows: • String, Date, DateTime, Boolean, Dimension: Left • Decimal, Number, Currency, Percent: Right

Numeric default properties

The following default properties only display if the selected **Data type** is a numeric data type. These properties can be used to define the default numeric format by column data type.

For example, the default number format for the Currency data type uses 0 decimal places, with a thousands separator, and a negative number format of red parentheses. When a Currency column is added to the grid, the contents automatically display using this number format. If desired, you can change the default number format for Currency so that it uses 2 decimal places, and all Currency columns in the grid will now update to show 2 decimal places. This applies to columns that use the Currency number format by default, as well as columns that you have manually configured to use the Currency format. However, if you have manually configured a particular Currency column so that it now uses a Custom number format instead of the Currency number format, then it will continue to use its custom configuration.

Item	Description
Decimal places	The number of decimal places used by the selected **Data Type**. Enter any whole number from 0 to 10. You can also use the arrow keys to move the number up or down. The default number of decimal places for each numeric data type is as follows: • Currency: 0 • Decimal, Percent: 2 The Number data type does not use decimals.

Item	Description
Use 1000's separator	Specifies whether the selected **Data Type** uses a thousands separator: • If enabled (default), numbers show with a thousands separator, such as 1,000. • If disabled, numbers do not use a thousands separator, such as 1000.
Negative number format	The format used by the selected **Data Type** to display negative numbers. Select the desired format from the drop-down list. Available formats use the minus sign, or parentheses, or red text (or a combination of these formats). The default negative number format for each numeric data type is as follows: • Decimal, Number, Percent: Minus sign • Currency: Red text in parentheses

Date and Date Time default properties

The following default properties only display if the selected **Data type** is a date data type. These properties can be used to define the default date format by column data type.

For example, the default format for Date columns is Month/Day/Year (such as "10/152022"). When a Date column is added to the grid, the contents automatically display using this format. If desired, you can change the default format for Date so that it displays as "October 15, 2022" instead, and all Date columns in the grid will now update to use this format. However, if you have manually configured a particular Date column so that it uses a different date format instead of the default format, then it will continue to use its custom configuration.

Item	Description
Date format or Date Time format	The format used by the selected **Data Type** to display date or date-time values. You can select any of the "full date" formats supported by Date and DateTime columns, including custom formats. By default, the formats are: • Date: 10/15/2020 • Date Time: 10/15/2020 13:25 **NOTE:** Only "full date" formats are supported as the default format. If you configure an individual Date or DateTime column to use a different date part, such as Year or Quarter, then the default date format no longer applies, and the column is treated as a Dimension data type.
Custom Date format or Custom Date Time format	Use this field to define the custom date or date-time format, if **Custom** is specified as the **Date format** or **Date Time format**. For more information on the syntax to define custom date and date-time formats, see Custom formats.

Frequently asked questions

Can I disable paging for a dynamic row grid?

Currently, if the grid uses dynamic rows then the grid is automatically paged if it exceeds 25 rows. This paging cannot be disabled.

How do I define a grid-level filter to limit the data in the report?

If you want to filter the data in the grid, you can define a report-level filter. Select the **Filters** tab of the Report Builder to define one or more report-level filters.

Configuring column properties for a web report

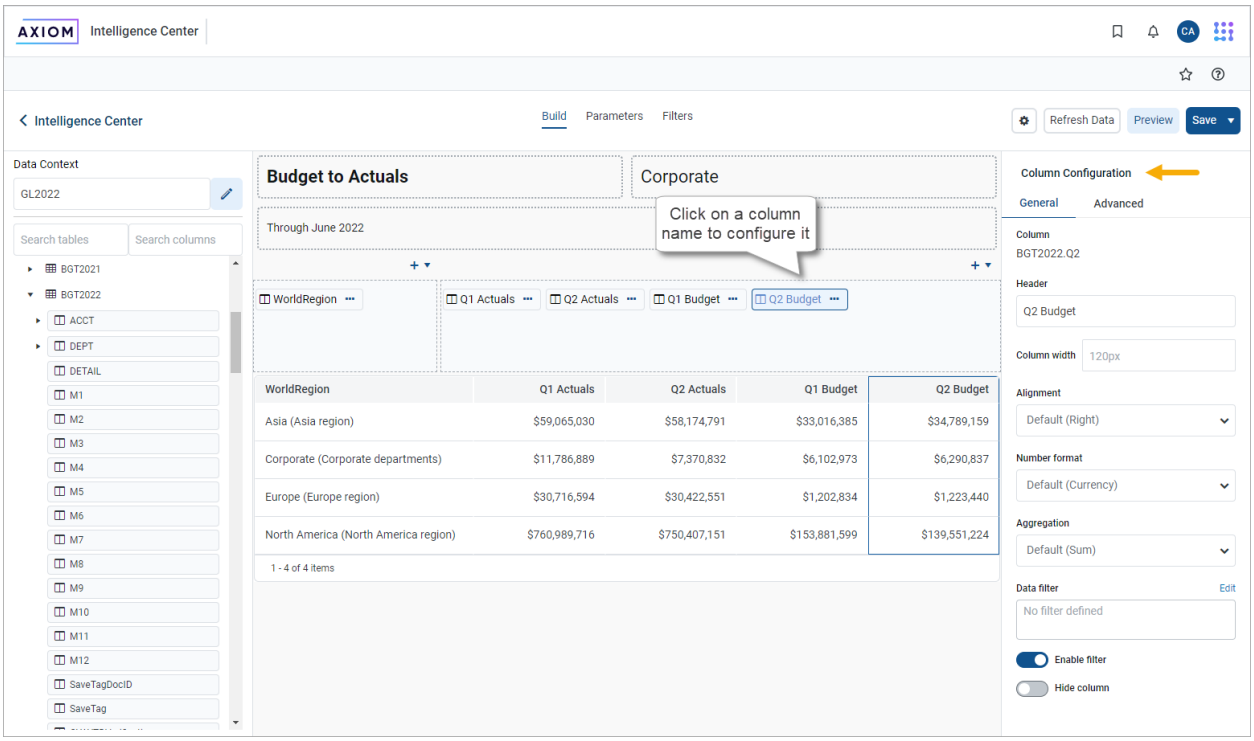
The column properties define the presentation of each column in the grid. Using the column properties, you can configure:

- Display properties such as header text, column width, alignment, and number formatting
- Data properties such as column filters, alternate aggregation, and display formats for data
- Grid behavior properties such as inclusion in the total row, and whether end users can sort and filter using the column

In the Report Builder, the column properties are defined in the right-hand Configuration Panel. The column properties can be defined for both table columns and calculated columns.

To configure column properties for a column in a web report:

1. On the **Build** tab of the Report Builder, in the Report Canvas, click a column name in either the Row Dimensions box or the Column Definitions box to select that column.
2. Complete the **Column Configuration** properties that display in the Configuration Panel.

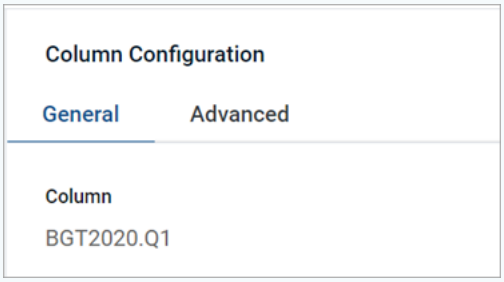
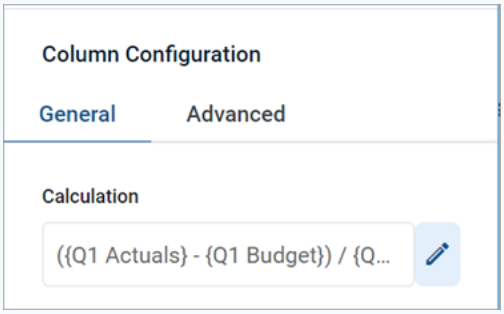
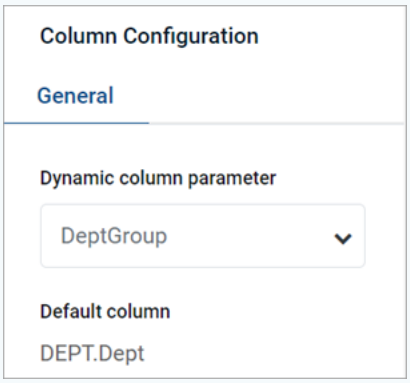


The column configuration properties are separated into two tabs:

- **General**: Basic column properties that should be reviewed and configured for all columns in the grid.
- **Advanced**: Advanced column properties to be configured as needed.

General column properties

The following column properties are available for web reports on the **General** tab of the **Column Configuration** panel. These properties apply to table columns, calculated columns, and dynamic columns.

Item	Description
Column or Calculation or Default Column	The following information displays at the top of the panel to identify the column: • **Column**: If the column is a table column, the full Table.Column path displays for your reference.  • **Calculation**: If the column is a calculated column, a text representation of the calculation displays for your reference. You can click the Edit icon to the right of the box to open the **Edit Calculated Column** dialog and edit the calculation as needed.  • **Default column**: If the column is a dynamic column, the currently used Table.Column path displays for your reference. This column is determined by the configuration for the Column List parameter that is associated with the dynamic column. 

Item	Description
Dynamic column parameter	The Column List report parameter to associate with the dynamic column. Only applies when the current column is a dynamic column. For more information, see Using Column List report parameters.
Header	The header text to display on the column header. Enter the desired header text. • If the column is a table column, the column name is used as the header text by default. • If the column is a calculated column, the text "Calculation" is used as the header text by default. If the column is a dynamic column, the header text is defined in the Column List parameter settings, for each column that is available to be selected. Within the Report Canvas only, the dynamic column displays using the header **Dynamic**.
Column width	The width of the column in the grid, in pixels. Enter the desired column width as a whole integer between 30 and 600. The default width depends on the column data type, and is configured at the grid level. If you do not enter a custom width, then the default width displays in the **Column width** box in gray text. If you leave this default width and the grid-level defaults are changed, then column will update to use the new default width. For more information, see Configuring grid properties in a web report.
Alignment	The alignment of the column values. Select one of the following: **Default**, **Left**, **Right**, **Center**. The default alignment depends on the column data type, and is configured at the grid level. If a column is set to use Default and the grid-level defaults are changed, the column will update to use the new default alignment. For more information, see Configuring grid properties in a web report.

Item	Description
Number Format	Select **Formatting Properties** to work with number formats. The number format used by the column. Only applies to columns that hold numeric data. Select one of the following: • **Default**: The column uses the default number format as defined for the column's data type at the grid level. If a column is set to use **Default** and the grid-level defaults are changed, the column will update to use the new default number format. For more information, see Numeric default properties. • **Currency**, **Decimal**, **Number**, **Percent**, or **Dimension**: The column uses the default number format as defined for the selected data type. For example, you may have a column that is natively a Decimal column, but you want it to display using Currency format in a particular report. If a column is assigned to a different number format, it will also inherit the default column width and alignment set for the associated data type, if the column is using the default column with and alignment. • **Custom**: The column uses a custom number format as defined in the column properties. Click **Override default formatting** to work with custom number formats. When Custom is selected, then several additional properties become available to configure the number format. In this case, the column is no longer tied to any particular default number format. ◦ **Decimal places**: Specify the number of decimal places to display, from 0 to 10. ◦ **Use 1000's separator**: Specify whether the number uses a thousands separator or not. ◦ **Negative number format**: Specify the format to use for negative numbers. This option is not available for use with dynamic columns.
Aggregation	Select **Data Properties** to configure Aggregation. The aggregation type used to aggregate data queried from the database column. Does not apply to calculated columns or to columns used as row dimensions. If you want to override the default aggregation type for a database column, select an aggregation type.
Data filter	Select **Data Properties** to configure the optional Data filter. Defines a filter to limit the data shown in this column. The column-level data filter should be used instead of a grid-level data filter when you want the filter to impact just this column. For more information, see Using column filters.

Item	Description
Enable filter	Specifies whether report viewers can filter the report based on the column contents. • If enabled (default), and if **Enable Column Filters** is enabled in the Grid Configuration properties, then a filter icon is available on the column in the rendered report. Report viewers can use this column to filter the grid based on the column contents. • If disabled, then the filter icon is not available on the column. This property does not apply to any column in the grid if **Use fixed rows** is enabled in the Grid Configuration properties. Fixed row reports do not support end-user column filtering.
Hide column	Specifies whether the column is hidden in the report. Does not apply to columns used as row dimensions. • If enabled, then the column is hidden. The column remains visible in the Report Builder so that you can continue to configure the column as needed. • If disabled (default), then the column is visible.
Show description	Select **Display Properties** to work with configure the description text. Specifies whether you want descriptions to display for dimension values. This option only applies to key columns, alternate key columns, and validated columns that have an associated description column. • If enabled (default), then descriptions display alongside the dimension values or instead of the dimension values. For example, if the column is Acct then you likely want the account descriptions to display along with the account codes. When this option is enabled, the **Description display format** field becomes available. Select the desired display format from this list. By default, the format **Description (Value)** is used. • If disabled, then only the dimension values display. For example, if the column is Acct then only the account codes will display. **NOTE:** If the dimension table has multiple description columns (meaning columns where **Describes Key** is **True**), then the first description column is used. If the column is a dynamic column, then this option will be applied when the currently selected column has a description column, and ignored when it does not.

Item	Description
Include in total row	Specifies whether the column is included in the total row, if a total row is enabled in the Grid Configuration properties. Does not apply to columns used as row dimensions. Select one of the following: • **Default**: The column is included or not based on its data type. All numeric columns are included by default unless they are the Dimension data type. All other non-numeric columns are not included by default, unless you change the aggregation so that the column returns a number (such as using Count aggregation on a String column). • **Include**: Override the default behavior and include the column in the total row. • **Exclude**: Override the default behavior and exclude the column from the total row. If a column is included in the total row, it is treated as follows: • Table columns use their default or configured aggregation in the total row. For example, if a numeric column uses the default aggregation of sum, the column will be summed in the total row. • Calculated columns apply their calculation to the total row. This option does not apply if **Use fixed rows** is enabled in the Grid Configuration properties. Columns will be included or excluded in subtotal or total rows using the default behavior.
Date part to retrieve	Specifies the date or date-time part to retrieve, if the column is a Date or Date Time column. For example, you can return the full date value, or just the year or month, or the fiscal year or month. For more information, see Date part and format options.
Date format	Specifies the format to display the date values, if the column is a Date or Date Time column. The available format options depend on the specified **Date part to retrieve**. For more information, see Date part and format options. The label and visibility of this setting varies depending on the selected date part. For example, if you select **Month** as the date part, then the label for this setting is **Month format**. If you select a date part that does not have any formatting options, such as **Year**, then this setting is hidden.

Advanced column properties

The following column configuration properties are available for web reports on the **Advanced** tab of the **Column Configuration** panel. These properties apply to table columns and calculated columns. Dynamic columns do not use these properties.

Header Properties

Item	Description
Header text (row 1)	The header text to display on the column header. Enter the desired header text. **NOTES:** • This is the same property that displays on the **General** tab as **Header**. The header text can be edited from either tab. • The **(row 1)** label only displays if **Multi-row header** has been enabled. In this case, the property defines the header text for the top row of the multi-row header.
Header text (row 2)	The header text to display on the second row of the column header. Enter the desired header text. This property is only available if **Multi-row header** has been enabled.
Multi-row header	Specifies whether the column header has multiple rows: • If enabled, then the header text property updates so that there are two properties: **Header text (row 1)** and **Header text (row 2)**. The default header text populates row 1. You can define additional text to display on row 2. • If disabled (default), then only one row of header text can be defined. Keep in mind that enabling a multi-row header is different than wrapping header text. If you enable multi-row headers, then you can define two separate rows of header text. A line break separates each row. If autowrap is enabled, then each row of header text wraps individually. If you just want a single row of header text that wraps, you can leave this option disabled and then enable **Autowrap header text**.
Autowrap header text	Specifies whether header text wraps: • If enabled, then header text that exceeds the column width will wrap. If **Multi-row header** is enabled, both rows of header text will wrap individually. • If disabled (default), then header text that exceeds the column width is truncated. The user can resize the column wider to view the full header text.

Item	Description
Header alignment	The alignment of the header text. Select one of the following: **Default**, **Left**, **Right**, **Center**. All column headers use **Default** alignment by default. By default, the header text uses the same alignment as the column contents (as determined by the **Alignment** property on the **General** tab). If you leave the header alignment set to Default, then the header alignment will adjust to match the column alignment. If, however, you want the header alignment to be different than the column alignment, you can configure this property.

Link Properties

For more information on using hyperlink columns in web reports, see Displaying hyperlinks in web reports.

Item	Description
Enable link	Specifies whether the column displays hyperlinks. Select this option if you want each row of this column to contain a hyperlink that dynamically incorporates the current column value. If this option is enabled, then the additional link properties in this section become available; otherwise they are hidden.
Link type	Specifies the type of link to display in the column: • **Custom**: You specify the relative URL for the hyperlink, including using variables to dynamically incorporate the current column value in the URL. • **Plan file**: Axiom dynamically generates a hyperlink to the plan file associated with each row. In order to use this option, the report must have a specified **File group context** in the Report Configuration properties, and the row dimension must be the key column of the plan code table for that file group. **NOTE:** This option only displays if the report meets the requirements to support plan file links. Otherwise, all links are custom links by default, and this option does not display.

Item	Description

URL	Specifies the URL to use in the hyperlink column. Enter a relative location in the Axiom system. The URL can use variables as needed so that the URL value is dynamic per row of the report.
	
	For example, imagine that the report contains the key column of a plan code table (such as Dept), and you want each plan code to link to the Process Routing page for a particular plan file process. The full URL to the Process Routing page uses the following syntax:
	
	`https://mycompany.axiom.cloud/process/`
	`*processdefinitionID*/planfile?planvalue=*plancode*`
	
	The process definition ID will be constant for the URL, but the plan code value needs to be the current row's department value. The `{value}` variable can be used for this purpose. The following relative URL with a variable would be entered into the URL field:
	
	`/process/16682/planfile?planvalue={value}`
	
	NOTE: The relative URL can be entered with or without the beginning forward slash.
	
	When the report is viewed, the column will resolve to use the full URL with the current column value. For example, the row showing Dept 22000 will have the following URL:
	
	`https://mycompany.axiom.cloud/process/16682/planfile?planvalue=22000`
	
	When the user clicks on the hyperlink in this row, they will be taken to the Process Routing page for Dept 22000, for the plan file process associated with process definition ID 16682.
	
	NOTE: The URL property only displays if the specified link type is custom, or if the **Link type** option is not present because all links in the report are custom. When using the plan file link type, the URL to the plan file is automatically generated by Axiom.

Item	Description
Link text	Specifies the display text for the hyperlink column. Enter the desired text, using variables as needed. Keep in mind the following: • If you want the link text to be the column value—meaning the same value that would display in the column if the column was not enabled as a link column—then you can leave this field blank. The current column value is automatically used as the link text. • The variable `{value}` displays the raw column value from the database. For example, if the column is a numeric column, the value will not have numeric formatting and will show all decimal places. • The variable `{formattedvalue}` displays the column value with formatting—such as default formatting based on the column type, or applied formatting in the Column Configuration properties. It is only necessary to use the `{formattedvalue}` variable if you want to display the formatted column value along with other link text. If you just want to display the formatted value by itself, you can leave the field blank as previously noted.
Link tooltip	Specifies the tooltip to show when a user hovers the cursor over the hyperlink. Enter the desired text, using variables as needed. The same variable behavior noted previously for the **Link text** property also applies to this property.
Open link in new tab	Specifies whether the hyperlink opens in the same tab (replacing the report) or in a new tab. By default, the hyperlink opens in the same tab. Enable this option if you want the hyperlink to open in a new tab.

Using column filters

The **Data filter** property can be used to filter the data coming into a particular column. This filter only impacts the data in the current column; it has no impact on the rest of the report.

To filter the data in the current column:

1. Click the **Edit** link over the **Data filter** box to open the Filter Wizard.
2. In the Filter Wizard, create the filter as needed. For more information on how to use the Filter Wizard to create a filter, see Using the Filter Wizard in the Report Builder.

   The tables available in the Filter Wizard depend on whether the current column is a table column or a calculation, and the primary table specified as the Data Context of the report:

   - If the current column is a table column, the Filter Wizard shows that table and its dimension tables.
   - If the current column is a calculated column, the Filter Wizard shows the following tables:
     - If the calculated column only uses columns from a single table, the Filter Wizard shows that table and its dimension tables.

- If the calculated column uses columns from multiple tables, and the primary table is a data table, the Filter Wizard shows the common dimension tables for the tables involved in the calculation.

  EXCEPTION: If the calculation includes a column from a dimension table, then the Filter Wizard shows the common dimension tables for all related tables used in the report, regardless of whether the related table is used in this particular calculation.

- If the calculated column uses columns from multiple tables, and the primary table is a reference, the Filter Wizard shows the primary table and its dimension tables.

  EXCEPTION: If the calculation only consists of columns from related tables (no columns from the primary table or dimension tables), then the Filter Wizard shows the common dimension tables for all related tables used in the calculation.

You can create a filter using any column on the available tables. If you choose to use a predefined global filter from the Filter Library, the global filter must be based on the same eligible table columns.

3. Once the filter statement is complete, click **OK** to close the Filter Wizard and add the filter to the **Data filter** box.

Once a filter has been defined for a column, you can modify it as follows:

- To edit the filter, click the **Edit** link over the **Data filter** box again and change the filter within the Filter Wizard.
- To delete the filter, click the **Clear** link over the **Data filter** box.

Data filters defined at the column level are combined with any filters defined at the column group level and at the grid level. All relevant filters are combined using AND to determine the data that can display in a particular column.

If a column has a defined filter, then a filter icon displays next to the column name in the sample grid of the Report Canvas. This icon is intended to let report builders know about the column filter at-a-glance. The icon does not display in the report viewer.

NOTES:

- If a data filter is defined for a calculation, the filter is applied to the columns referenced in the calculation, then the calculation occurs.
- Column-level data filters cannot be defined for columns used as row dimensions. To limit the rows shown in the grid, use a report-level filter in the Report Configuration properties.

Frequently asked questions

I defined a column filter but it isn't impacting the grid data as I expected—why do I still see rows that don't match the column filter?

A column filter only filters the data coming into that specific column. If you want to define a filter that impacts the entire report, including the row data, then you should define a filter at the report level. Select the report title and then use the Report Configuration properties to define one or more **Report filters**.

To illustrate the difference, imagine the following uses of a filter to only show data from the West region:

- **Report**: When the general filter `Dept.Region='West'` is defined for the report, the entire grid is filtered to only show data from the West region. Row dimension values (such as departments) will only display if they belong to the West region, and column data is limited to only show data for the West region.
- **Column**: When the filter `Dept.Region='West'` is defined on a column, that single column is filtered to only show data from the West region. Other columns and row dimension values are not limited by this filter. You might do this if you want to create a report that shows the different region data in different columns, such as to compare data from the West, East, North, and South regions side-by-side.

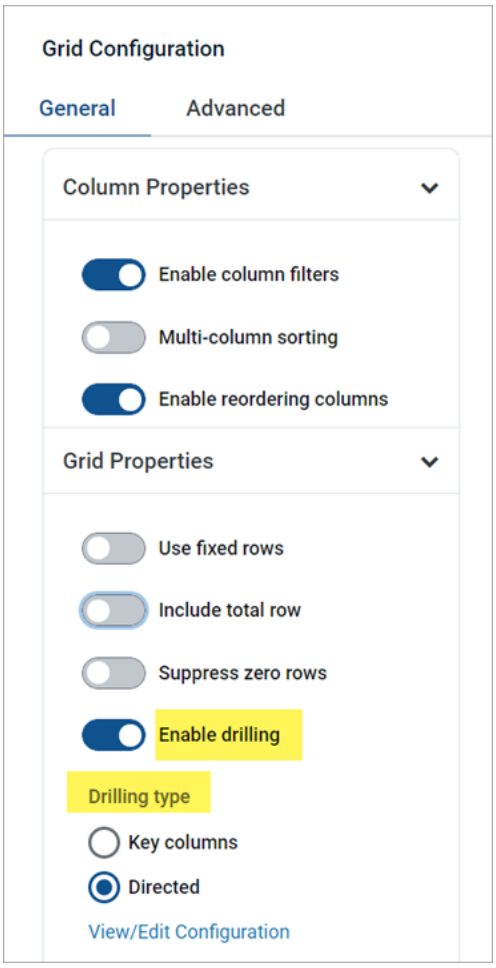
Configuring drilling for web reports

You can enable two types of drilling for web reports:

- **Key columns**: Users can drill to view the underlying data based on the key columns of the table specified as the **Data Context**. This option provides limited "out-of-the-box" drilling functionality that does not require any further setup.
- **Directed**: Users can drill to view the underlying data based on predefined drilling paths. The report designer defines the available drilling paths and can configure certain display attributes for the drill.

To enable either drilling option:

1. On the **Build** tab of the Report Builder, in the Report Canvas, select the grid so that the **Grid Configuration** properties display in the Configuration Panel.
2. On the **General** tab of the **Grid Configuration** properties, enable **Enable Drilling**.
3. For **Drilling type**, select either **Key columns** or **Directed**.
4. If you selected **Directed**, click the **View/Edit Configuration** link to define the directed drilling paths.



Example drill options enabled for the grid

Configuring directed drilling paths

Use the **Edit Drilling Configuration** dialog to define the drilling paths for directed drilling.

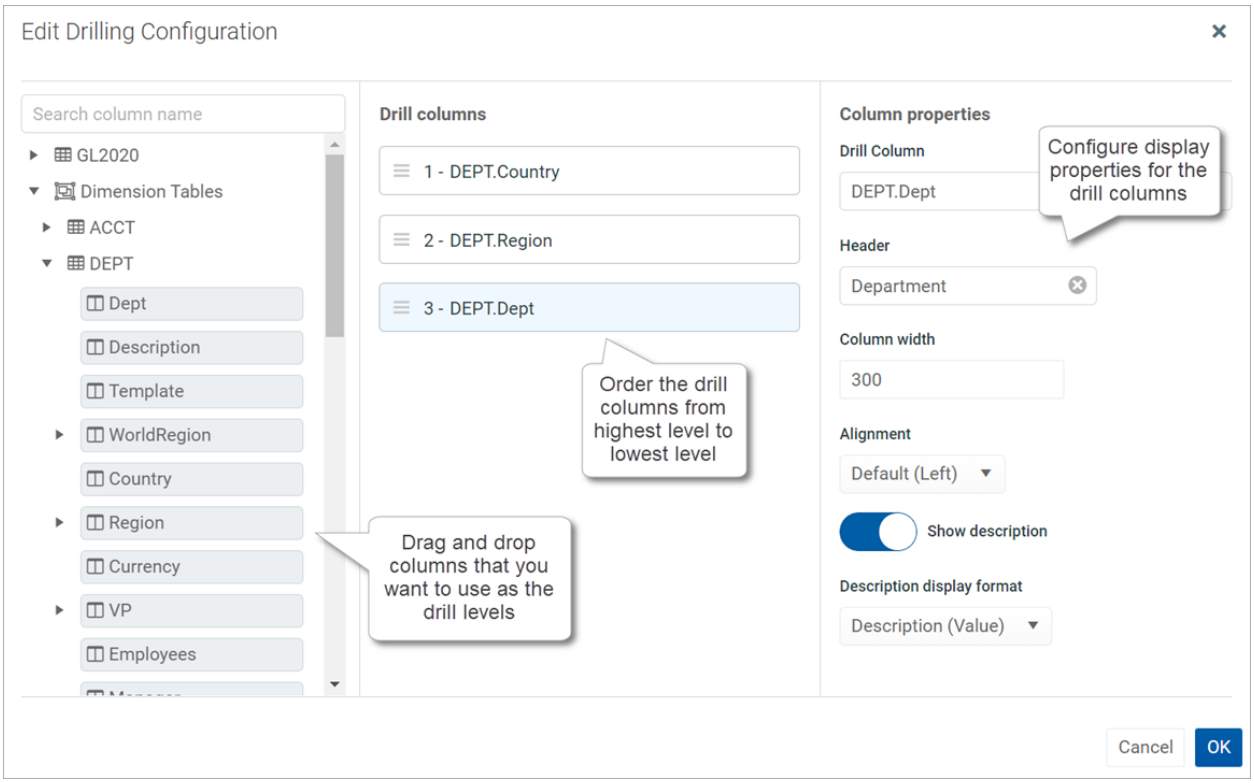
To define drilling paths:

1. In the **Grid Configuration** properties, click the **View/Edit Configuration** link under the **Directed** drilling option.
2. Drag and drop columns from the table tree to the **Drill Columns** area in the middle of the dialog. The available columns for drilling depend on the table specified as the primary table for the data context:
    - If the primary table is a data table, then you can use any column on the primary table or on a lookup reference table (the Dimension Tables).

- If the primary table is a reference table, then you can use either of the following:
  - Any column on the primary table, including multiple-level lookup references to the dimension tables.
  - Any column on a table that looks up to the primary table (the Related Tables). This option is not available if the report uses a fixed row structure.

    NOTE: If you use a column from a related table, you are effectively using *upstream grouping columns* in your drilling path. This means that any special considerations and limitations that apply to upstream grouping columns also apply to the drill results. For more information, see Using upstream grouping columns as row dimensions in web reports.

3. Place the drill columns in the desired order for the directed drilling. Users can drill from the column at the top of the list down to the column at the bottom of the list. Generally speaking, the lowest level of detail should be at the bottom—for example: VP > Director > Manager > Dept.
   - To reorder columns, click the handle on the left side of the column box to drag and drop the column to a new position.
   - To remove a column, hover your cursor over the column and then click the **X** on the right side of the column box.
4. Select each drill column and configure the drill properties in the right side of the dialog. See the following table for information on these properties.
5. Click **OK** to complete the drill configuration and return to the Report Builder.



Example drilling configuration dialog

Drill Column Properties

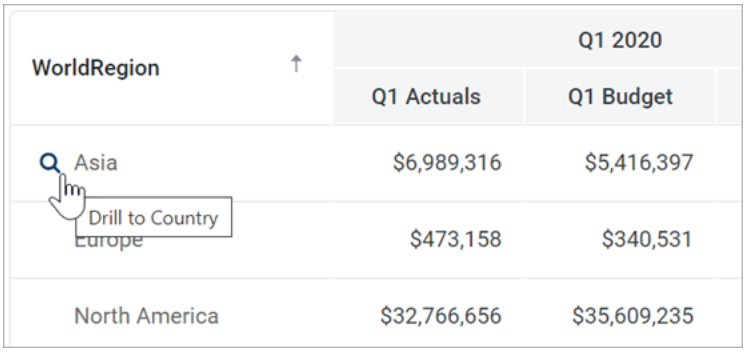
Item	Description
Drill column	The full Table.Column path of the drill column displays for your reference, so that you know which column you are configuring.
Header	Header text for the column in the drill results. Enter the desired text. The column name is used by default.
Column width	The width of the column in the drill results, in pixels. Enter the desired column width as a whole integer between 30 and 600. By default, the width is 300 for all drill columns, regardless of data type.
Alignment	The alignment of the column values. Select one of the following: **Default**, **Left**, **Right**, **Center**. The default alignment depends on the column data type. If a column is set to use Default and the grid-level defaults are changed, the column will update to use the new default alignment. For more information, see Configuring grid properties in a web report.

Item	Description
Show description	Specifies whether you want descriptions to display for dimension values. This option only applies to key columns, alternate key columns, and validated columns that have an associated description column. • If enabled (default), then descriptions display alongside the dimension values or instead of the dimension values. For example, if the column is Acct then you likely want the account descriptions to display along with the account codes. When this option is enabled, the **Description display format** field becomes available. Select the desired display format from this list. By default, the format **Description (Value)** is used. • If disabled, then only the dimension values display. For example, if the column is Acct then only the account codes will display. **NOTE:** If the dimension table has multiple description columns (meaning columns where **Describes Key** is **True**), then the first description column is used.

Using directed drilling

If directed drilling is enabled and configured, you can drill down the predefined drilling paths to view the underlying data. Directed drilling works as follows:

- When you view the report, you can hover your cursor over a row to show the magnifying glass icon on the left side of the row.



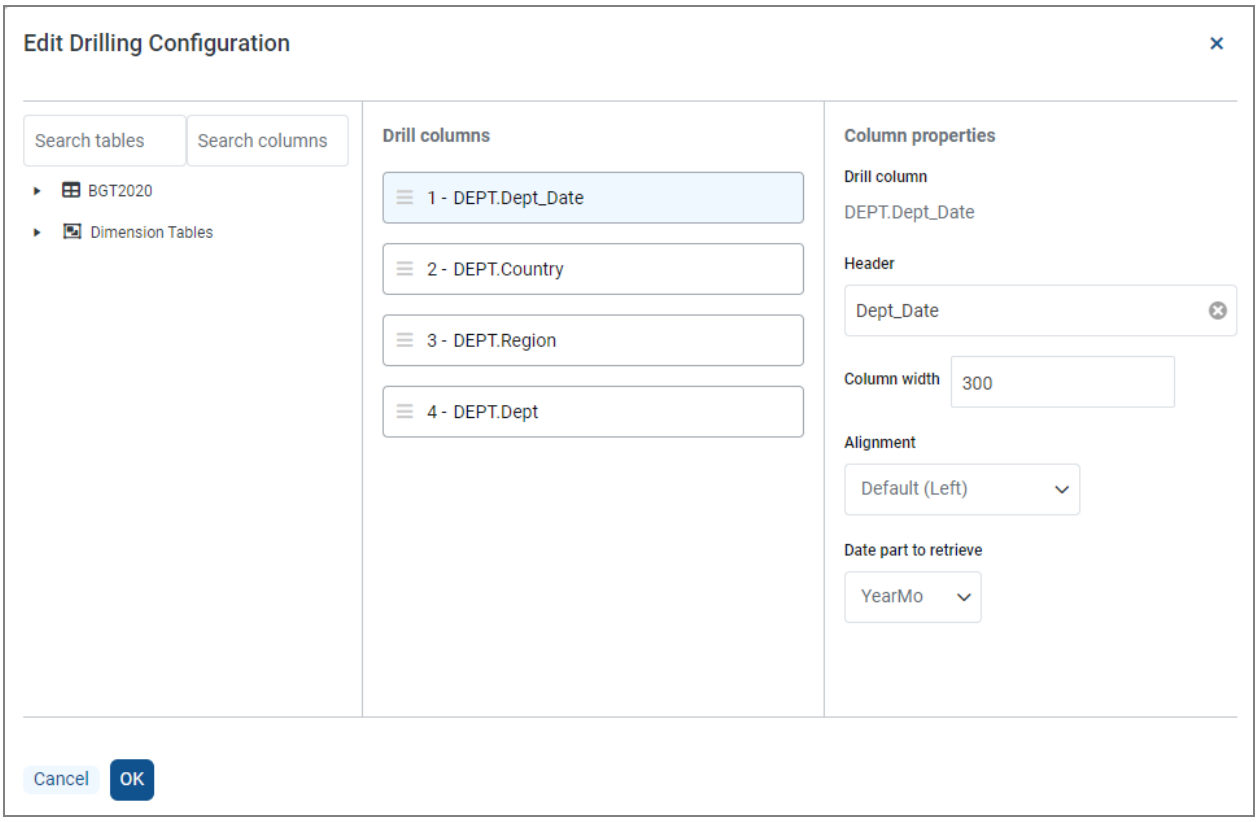
- Click the magnifying glass to drill to the first level of the drill. This is the column positioned at the top of the **Drill Columns** list in the **Edit Drilling Configuration** dialog. The drill results open in a new browser tab.
- From here, you can continue to drill by hovering over a row and clicking the magnifying glass to go to the next level of the drill. All subsequent drills are performed in the same browser tab.
- Once you reach the final level of the drill, no more drilling options are available and the magnifying glass no longer displays.

NOTE: If a particular drill level has data that cannot be associated with any grouping values, then the drill results contain a row labeled **<No value>**. This row cannot be further drilled. This situation may occur if the drill level contains records with a blank or empty string value, or if some of the underlying data in the row being drilled does not have a reference to the current drill level.

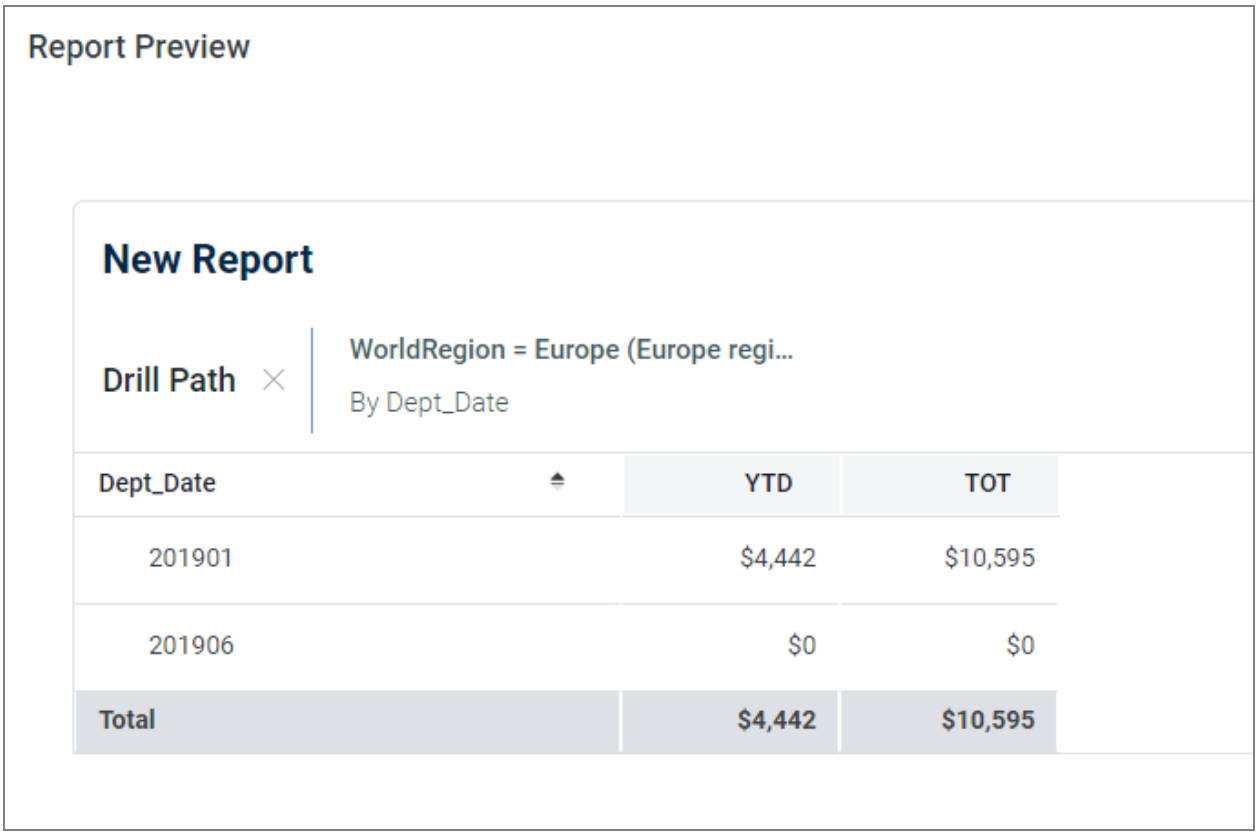
UsingDateParts in drill column configurations

Use directed drilling to configure a datepart in a drill column configuration.

In Grid Properties in the right sidebar, enable drilling and select the **Directed** drilling type to configure. Choose the **Directed** option and click **View/Edit Configuration**to open the Edit Drilling Configuration dialog box. This example shows how DEPT.Dept_Date was configured to retrieve by YearMo.



Once configured, the values are shown by the year and month.



Using key column drilling

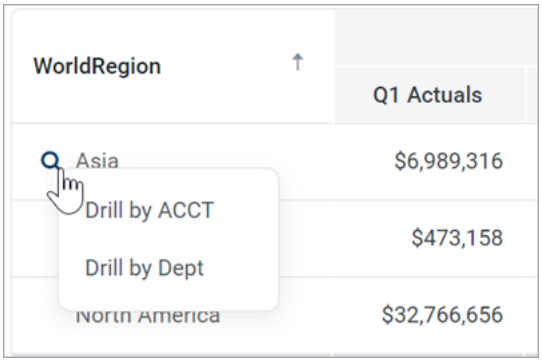
If key column drilling is enabled, you can automatically drill to the key column level to view the underlying data. The available key columns are determined as follows:

- If the primary table used as the data context is a data table, you can drill to the validated key columns on the table. However, any key column used as a row dimension will not be available for drilling, since the report already shows data at that level.
- If the primary table used as the data context is a reference table, you can drill to the key of the reference table, unless the key is used as the row dimension.

When you view the report, you can hover your cursor over a row to show the magnifying glass icon on the left side of the row. From here you can drill as follows:

- If there is only one available key for drilling, click the magnifying glass to drill.

- If multiple keys are available for drilling, click the magnifying glass to show a list of the available keys, then click on the key you want to drill.



The drill results open in a new browser tab. If multiple keys were available for drilling, you can optionally drill the drill results to view the other key(s).

If no keys are available for drilling, then the magnifying glass does not display when you hover your cursor over the row.

Presentation of drill results

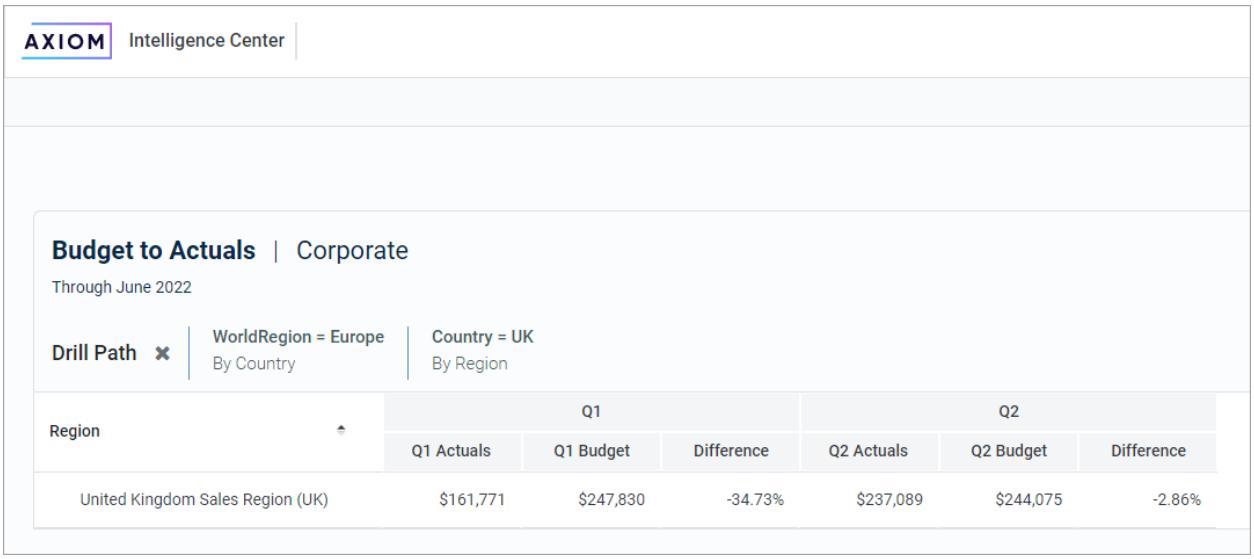
When you drill, the drill results display in the same browser tab, replacing the original report grid. The data contents of the drill results are as follows:

- The row dimension(s) of the original report are removed from the grid and replaced with the current drill column. The drill column is either the current column of a directed drilling path, or the selected key column.
- All other columns of the report are included in the drill results and show data for the current drill level.
- If the drill results contain multiple rows of data, the grid includes a total row. If the drill results contain a single row of data, the total row is omitted.
- Drill results are paged if the results contain many rows.

The current drill path displays along the top of the page. The drill path identifies the row that was drilled and the current drill level. If you have drilled the drill results, the previous drill levels also display in the drill path. You can click a previous drill level to return to that level, or you can click the **X** icon to clear the drill and return to the original report grid.

The drill column displays as follows:

- For key column drilling, the column alignment and width are determined by the column data type. The header text is the key column name. Key column values are presented as Description (Value).
- For directed drilling, the column alignment, width, and header text are as configured in the **Edit Drilling Configuration** dialog.



Example drill results with drilling path displayed at the top

Displaying date and date-time values in web reports

When using Date or DateTime columns in web reports, you can display the values in a variety of different ways:

- You can choose to report on the full date or date-time value, or you can choose to report on just a part of the value by selecting a *date part*. When you use a date part you are extracting a specific portion of the date, such as Year, Month, Quarter, and so on.
- You can choose various formatting options for the date or date-time value. For example, you can display the full date as 10/10/2022 or as October 10, 2022. Many of the date part options also support various formats. For example, you can display the Month date part as 10 or Oct or October.

Using date formatting versus date parts

There is a significant difference between defining a display format for a date or date-time value, versus using a date part. When you choose a date part, then for the purposes of this report you are effectively changing the column data type and contents to match the selected date part. For example, if you specify the date part as Month, the column is now treated as if it contains values from 1 to 12 representing each month. All of the other information about the date or date-time value is ignored. This means that you can use the column as a row dimension, and the values will be grouped by month instead of by the underlying date or date-time value.

Date formatting, on the other hand, is primarily for display only. The display format does not fundamentally change the way the values are treated. For example, you can choose to format a full date value as simply October 2022, but in this case the column values in the report are still the full date. If you use this column as a row dimension, you will likely see multiple instances of October 2022 as rows,

because the underlying column values are different dates in October 2022 such as 10/102022, 10/11/2022, and so on. You are really grouping the report by the full date values and not by the display format. If instead you want to group the report by month and year (or "yearmo"), then you can select the YearMo date part. Now the column values are effectively transformed to integer yearmo values for purposes of the report, enabling the report data to be grouped by unique yearmo combinations.

Other benefits of using date parts include:

- Column values are sorted by the date part and its chosen display format. For example, if the date part is Month, the column will be sorted as expected whether you choose to display the month as 1-12 or as January-December. Full date or date-time values are always sorted by the full date or date-time regardless of display format.
- If end-user filtering is enabled for the column, the filtering options match the configured date part. For example, if the date part is Quarter, the user can filter by selecting from the list of Q1-Q4 values.
- Date parts can also be used when defining filters for the report data, such as general filters or column filters. This makes it easier to construct filters based on a portion of the date or date-time value. For more information, see Using date part filtering.
- Date parts support the concept of a fiscal year calendar. For example, you can choose to return the calendar month or the fiscal month, if they are different for your organization.

Configuring date parts and display formats for Date and DateTime columns

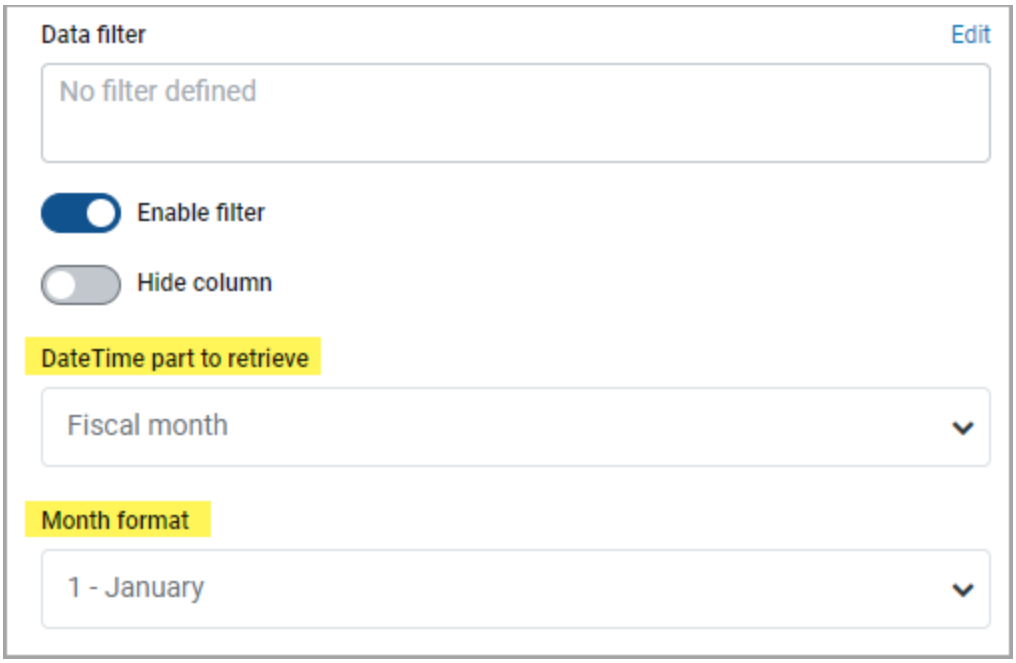
Use the Column Configuration properties to specify the date part and display format for any Date or DateTime columns in your report.

To configure the date part and display format for a Date or DateTime column:

1. On the **Build** tab of the Report Builder, in the Report Canvas, click a column name in either the Row Dimensions box or the Column Definitions box to select that column.
2. Complete the following **Column Configuration** properties in the Configuration Panel, on the **General** tab:

Item	Description
Date part to retrieve	Specifies the date or date-time part to retrieve for this column. For example, you can return the full date value, or just the year or month, or the fiscal year or month. By default, this property is set to **Full Date** or **Full DateTime**, which means the column will return the full date or date-time value. You can then use the **Date format** property to specify how this value should display in the report. You can optionally chose a different date part in order to extract and retrieve a specific aspect of the date or date-time value. When a date part is selected, the column data is effectively transformed into the date part values for purposes of this report. For more information on the available date part options, see Date part and format options.
Date format	Specifies the display format for the date or date-time values. The available formatting options depend on the specified **Date part to retrieve**. Some date parts, such as Year, do not have additional formatting options, in which case this property does not display. The label of this property varies depending on the selected date part. For example, if you select **Month** as the date part, then the label for this setting is **Month format**. For more information on the available formats for each date part, see Date part and format options.
Custom Date Format	Specifies the custom format to use for the full date or date-time value, if the **Date format** property is set to **Custom**. For more details on the available options to define default custom formats, see Custom formats.

NOTE: The labels for these properties vary depending on whether the column is a Date or DateTime column. For example, if the column is DateTime, then the properties are labeled **DateTime part to retrieve**, **DateTime format**, and **Custom DateTime Format**.



Example date part and format properties in the Column Configuration panel

Date part and format options

You can configure Date and DateTime columns to display in various ways using the date part and format options:

- **Date part**: Specify the part of the date or date-time value that you want to display—such as the full date or date-time, the year or fiscal year of the date, the month or fiscal month of the date, or the hour or minute from the time.
- **Format**: Specify the format to display the selected date part. For example, if you select full date, you can display it as 10/15/2022 or October 2022 or Thursday, October 15, 2022. If you select Month, you can display it as 10 (the month number), Oct, or October.

The following tables detail the date part and format options. Where multiple formats are available, the default format is shown in bold. If only one format is available for a particular date part, then the **Date format** property does not display.

Standard date and time options

Date Part	Description	Format
Full Date	Use the full date stored in the column. Only applies to Date columns. This option is the default date part for Date columns.	• **Default** • Custom • ShortMonth Year (Oct 2022) • Month Year (October 2022) • Month/Date/Year as Date (10/15/2022) • Day, Month Date, Year (Thursday, October 15,2022) • YearMonth as Number (202210) • YearMonthDay as Number (20221015) Date data types have a configured default that is set at the grid level. If a column is set to use Default and the grid-level defaults are changed, the column will update to use the new default format. For more information, see Configuring grid properties in a web report.
Full DateTime	Use the full date-time stored in the column. Only applies to DateTime columns. This option is the default date part for DateTime columns.	Same as Full Date, plus the following additional options: • Month/Date/Year Hour:Minute as DateTime (10/15/2022 13:25) • Month/Date/Year Hour:Minute:Second DayPeriod as DateTime (10/15/2022 1:25:00 PM) • Day, Month Date, Year Hour:Minute:Second DayPeriod (Thursday, October 15, 2022 1:25:00 PM) • YearMonthDate Hour:Minute as Number (20221015 13:25) Date Time data types have a configured default that is set at the grid level. If a column is set to use Default and the grid-level defaults are changed, the column will update to use the new format. For more information, see Configuring grid properties in a web report.
Date Only	Use the date part of the date-time. Only applies to DateTime columns.	Same formats that are available for Full Date.

Date Part	Description	Format
YearMo	Use the combined year and month of the date.	Year and Month combined (202210)
Year	Use the year part of the date.	Full year (2022)
Quarter	Use the quarter for the date.	• Number of the Quarter (1-4) • **Number of the Quarter with Prefix (Q1)** • Text Description (1st quarter)
Month	Use the month part of the date.	• Number of the Month (1-12) • Number of the Month with 2-Digits (01) • Short Name of the Month (Jan) • **Name of the Month (January)**
Week	Use the number of the week for the date, within the year.	Number of the Week (1-52)
Day of Year	Use the day of the year for the date.	Number of the Day (1-365)
Day of Month	Use the day of the month for the date.	Number of the Date (1-31)
Day of Week	Use the day of the week for the date. The first day of the week is Sunday.	• Number of the Day (1-7) • 2-Letter Abbreviation for the Day (Su) • Short Name of the Day (Sun) • **Name of the Day (Sunday)**
Hour	Use the hour of the date-time. Only applies to DateTime columns.	• 24-Hour Clock Number (0-23) • **12-Hour Clock with Day Period (1 AM)** • 24-Hour Clock as Hundreds (100)
Minute	Use the minute of the date-time. Only applies to DateTime columns.	Number of the minute (0-59)

NOTES:

- If a column is configured to display the full date or date-time, but the selected format only shows a part of it, the column sorting and filtering remains based on the full date or date-time value.
- If a DateTime column is configured to display the hour, the column filtering is always based on 0-23, regardless of the display format. For example, if the display format is a 12-hour clock with day period, filtering by 13 displays values of 1 PM.
- If a Date or DateTime column is configured to use a date part that is not the full date part—such as Year, Quarter, or Month—the column becomes a Dimension date type for purposes of inheriting the default alignment and column width.

Fiscal year options

The fiscal year for your system is determined by the system configuration setting **ClientFiscalYearEndMonth**. By default, this is set to 12, which means the fiscal year is the same as the calendar year. If your organization uses a different fiscal year end, your implementation consultant should adjust this setting accordingly.

For example, if your organization's fiscal year ends in June, the **ClientFiscalYearEndMonth** setting should be changed to 6. This means:

- A date of 6/1/2022 is in fiscal year 2022 and represents month 12 of the 2022 fiscal year.
- A date of 7/12022 is in fiscal year 2023 and represents month 1 of the 2023 fiscal year.

When the fiscal year is different than the calendar year, the fiscal year options will return different date information than the corresponding standard date options. Continuing the example where the fiscal year end is June, the following return values apply to a date of 7/1/2022:

- The Year part will return 2022, whereas the Fiscal Year part will return 2023.
- The Quarter part will return Q3, whereas the Fiscal Quarter part will return Q1.
- The Month part will return 7, whereas the Fiscal Month part will return 1.

Date Part	Description	Format
Fiscal YearMo	Use the combined fiscal year and month that the date belongs to.	Year and Month combined (202310)
Fiscal Year	Use the fiscal year that the date belongs to.	Full year (2023)
Fiscal Quarter	Use the fiscal quarter that the date belongs to.	• Number of the Quarter (1-4) • **Number of the Quarter with Prefix (Q1)** • Text Description (1st quarter)

Date Part	Description	Format
Fiscal Month	Use the fiscal month that the date belongs to.	• **Number of the Month (1-12)** • Number of the Month with 2-Digits (01) • Number And Short Name of the Month (1 - Jan) • Number And Name of the Month (1-January)

Custom formats

When using the Full Date or Full DateTime parts, you can optionally specify a custom format to display the date or date-time value. When you select **Custom** as the format, a **Custom Date Format** box becomes available so that you can enter the custom format syntax. The following case-sensitive syntax can be used in the custom format:

Desired Date/Time Part	Syntax	Notes
Day Period	a	Returns the day period AM or PM.
Day of Month	d	For the day number (1), use one or two letters (d or dd). dd enforces 2 digits.
Day of Week	E or e	• For the abbreviated day name (Sun), use one upper-case letter (E). • For the full name (Sunday), use four upper-case letters (EEEE). • For the numerical day of the week (1), use one lower-case letter (e). Sunday is the first day.
Hour	H or h	• For the hour in the 12-hour clock (1-12), use one or two lower-case letters (h or hh). hh enforces two digits. • For the hour in the 24 hour clock (0-23), use one or two upper-case letters (H or HH). HH enforces two digits. **NOTE:** Use k if you want to display the 24 hour clock as 1-24 instead of 0-23.
Minutes	m	For the minutes number (1), use one or two letters (m or mm). mm enforces 2 digits.
Month	M	• For the numerical month (1), use one or two letters (M or MM). MM enforces 2 digits. • For the short name (Jan), use three letters (MMM). • For the wide name (January), use four letters (MMMM).

Desired Date/Time Part	Syntax	Notes
Seconds	s	For the seconds number (1), use one or two letters (s or ss). ss enforces 2 digits.
Quarter	Q	• For the numerical quarter (1), use one or two letters (Q or QQ). QQ enforces 2 digits. • For the abbreviation (Q1), use three letters (QQ). • For the text description (1st quarter), use four letters (QQQQ).
Year	y	• To render the full year (2022), use one letter (y). • To render a two-digit year (20), use two letters (yy).

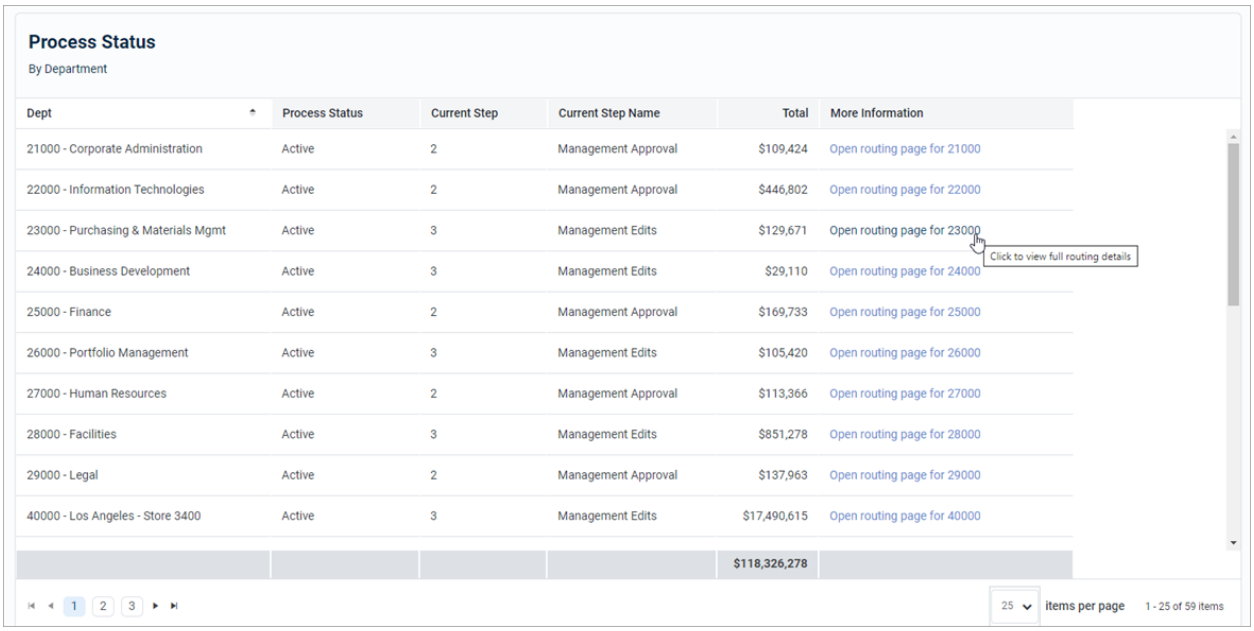
For example, to render a date as 2022 Oct 10, you would enter the following into the **Custom Date Format** box: `y MMM d`.

Example custom date format

Displaying hyperlinks in web reports

Web reports can display hyperlinks within a column, so that each row can link to a designated page or plan file relating to the current row of the report. You can define two different types of links:

- **Custom**: Link to any page in the Axiom system by entering a relative URL. Variables can be used in the URL so that it is unique per row of the report.
- **Plan File**: Link to any set of plan files in the Axiom system. When using this option, Axiom dynamically generates the URL to each plan file on a per row basis, given a file group context. The row dimension of the report must be the key column of the plan code table in order to generate the links.



Example report with a hyperlink column

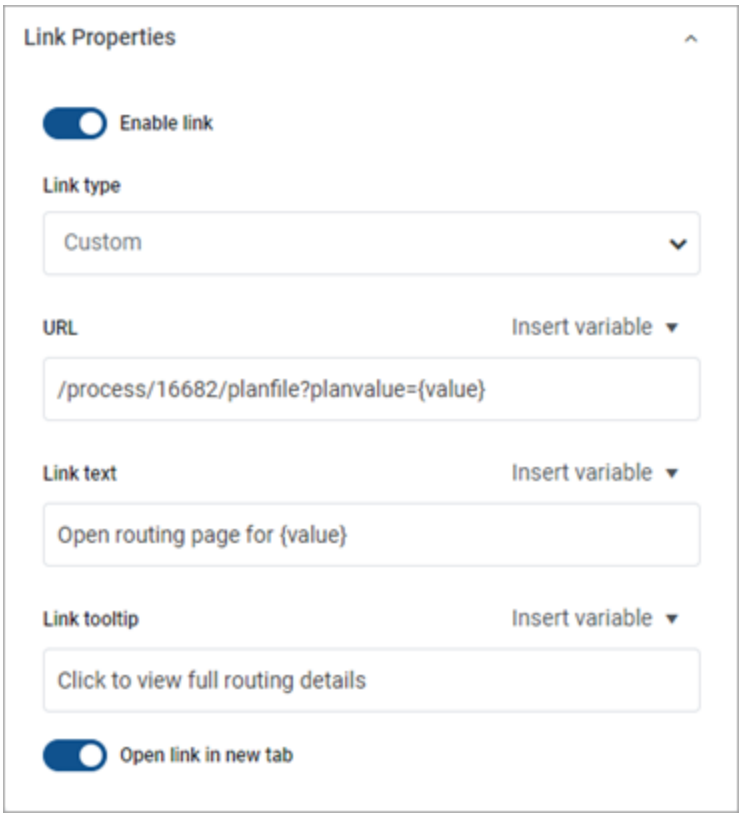
To configure a column in a web report to show hyperlinks:

1. On the **Build** tab of the Report Builder, in the Report Canvas, click a column name in either the Row Dimensions box or the Column Definitions box to select that column.

   You must select the column name in the setup boxes and not the column name in the grid below. Selecting a column name in the preview grid causes the Grid Configuration to display instead of the Column Configuration.

   NOTE: The ability to display hyperlinks within a column is not available if the report uses fixed rows. Additionally, the following column types cannot be enabled to display hyperlinks: dynamic columns and process columns.

2. In the **Column Configuration** panel, select the **Advanced** tab.
3. In the **Link properties** section, select **Enable links**.
4. Complete the **Link properties** as needed.



Example hyperlink properties

Once a column is enabled to show links, the column will display the contents of the **Link text** property. If the **Link text** property is left blank, the normal column contents display. Column contents are styled as hyperlinks with blue underlined text when the report is viewed in Preview mode or in the report viewer.

NOTES:

- Hyperlinks do not show on the column within the Report Canvas grid. You must view the report in Preview mode or the report viewer in order to see and interact with the hyperlinks.
- If you click a hyperlink while viewing the report in Preview mode, the link always opens in a new tab, regardless of the link property configuration. This is done so that clicking the hyperlink does not cause you to exit the Report Builder.
- Hyperlinks are not preserved when exporting a report. If you export to PDF, the column displays the link text without an active hyperlink. If you export to Excel or a delimited file, the link configuration is ignored, and the regular column value is exported (as if the column were not enabled to show links).

Link properties

The following properties are available in the **Advanced** tab of the **Column Configuration** panel when **Enable links** is enabled.

Item	Description
Link type	Specifies the type of link to display in the column: • **Custom**: You specify the relative URL for the hyperlink, including using variables to dynamically incorporate the current column value in the URL. • **Plan file**: Axiom dynamically generates a hyperlink to the plan file associated with each row. In order to use this option, the report must have a specified **File group context** in the Report Configuration properties, and the row dimension must be the key column of the plan code table for that file group. For more information, see Setting up a report for plan file links. **NOTE:** This option only displays if the report meets the requirements to support plan file links. Otherwise, all links are custom links by default, and this option does not display.

Item	Description

URL	The URL to link on each row. The URL must be to a relative location within the Axiom system. When the report is viewed, the full URL will be generated by appending the relative URL to the current Axiom system address.
	
	To make the link dynamic, use the **Insert Variable** menu above the box to insert a variable for use within the URL. For more information, see Using variables in the link properties.
	
	For example, imagine that the report contains the key column of a plan code table (such as Dept or CapReq), and you want each plan code to link to the Process Routing page for a particular plan file process. The full URL to the Process Routing page uses the following syntax:
	
	`https://mycompany.axiom.cloud/process/`
	`*processdefinitionID*/planfile?planvalue=*plancode*`
	
	The process definition ID will be constant for the URL, but the plan code value needs to be the current row's department value. The `{value}` variable can be used for this purpose. The following relative URL with a variable would be entered into the URL field:
	
	`/process/16682/planfile?planvalue={value}`
	
	NOTE: The relative URL can be entered with or without the beginning forward slash.
	
	When the report is viewed, the column will resolve to use the full URL with the current column value. For example, the row showing Dept 22000 will have the following URL:
	
	`https://mycompany.axiom.cloud/process/16682/planfile?planvalue=22000`
	
	When the user clicks on the hyperlink in this row, they will be taken to the Process Routing page for Dept 22000, for the plan file process associated with process definition ID 16682.
	
	NOTE: The URL property only displays if the specified link type is custom, or if the **Link type** option is not present because all links in the report are custom. When using the plan file link type, the URL to the plan file is automatically generated by Axiom.

Link text	Optional. Specifies the display text for the hyperlink column. Enter the desired text, using variables as needed. For more information, see Using variables in the link properties. If you want the link text to be the regular column value—meaning the same value that would display in the report if the column was not enabled as a link column—then you can leave this field blank. The regular column value is automatically used as the link text.

Item	Description
Link tooltip	Optional. Specifies the tooltip to show when a user hovers the cursor over the hyperlink. Enter the desired text, using variables as needed. For more information, see Using variables in the link properties.
Open link in new tab	Specifies whether the hyperlink opens in the same tab (replacing the report) or in a new tab. By default, the hyperlink opens in the same tab. Enable this option if you want the hyperlink to open in a new tab. **NOTE:** If the link type is **Plan file** and the plan files are spreadsheets that will open in the Axiom Desktop Client, then you should *not* enable this option because it does not apply. The links will work either way, but if you enable the option to open in a new tab, then Axiom will first open an empty browser tab and then launch the Desktop Client.

Using variables in the link properties

The following variables can be used in the **URL**, **Link text**, and **Link tooltip** properties, so that these values can be unique per row of the report. To insert a variable, use the **Insert Variable** menu above each field. Once the variable has been inserted into the field, you can enter any additional text as needed.

Item	Description
`{value}`	Resolves as the raw column value for the current row. For example, if the column is a numeric column, the value will not have numeric formatting and will show all decimal places. This variable is most appropriate for use in the URL property, when the URL contains the column value. For example, the URL to the Process Routing page contains the plan code value.
`{formattedvalue}`	Resolves as the formatted column value for the current row, honoring any default formats for the column type and applied formatting in the Column Configuration properties.
`{column:` `TableName.ColumnName}`	Resolves as the raw value in the specified table column, for the current row. This can be used if you need to reference a value from a different column than the current column in any of the URL properties. Edit the variable to replace the *TableName.ColumnName* text with the desired table column name. For example: `{column:Dept.Description}`

Item	Description
`{column:TableName.ColumnName:format}`	Resolves as a formatted value in the specified table column, for the current row. This can be used if you need to reference a numeric value from a different column than the current column in any of the URL properties, and you need to apply formatting to that numeric value. Edit the variable as follows: • Replace the *TableName.ColumnName* text with the desired table column name. • Replace the *format* text with syntax that indicates the desired numeric format. See the following table for details on this syntax. For example: `{column:BGT2022.m1:$#,#}`

NOTE: If you use a variable to display values from a different column as the **Link text**, the total row will continue to display the total of the actual column values. It is recommended to omit the column from the total row in this case.

Number format syntax

Number format syntax is case-sensitive. All examples assume the raw value is 1234.5678

Syntax	Description	Examples
0 (zero)	The zero placeholder replaces the zero with the corresponding digit if such is present. Otherwise, zero appears in the result string.	0 returns 1234 00000 returns 01234
# (pound)	The digit placeholder replaces the pound sign with the corresponding digit if one is present. Otherwise, no digit appears in the result string.	# returns 1234 ##### returns 1234
. (period)	The decimal placeholder determines the location of the decimal separator in the result string.	0.00 returns 1234.57 #.## returns 1234.57
, (comma)	The group separator placeholder inserts a localized group separator between each group.	0,0 returns 1,234 #,# returns 1,234
% (percent)	The percentage placeholder multiplies a number by 100 and inserts a localized percentage symbol in the result string.	#% returns 123456%

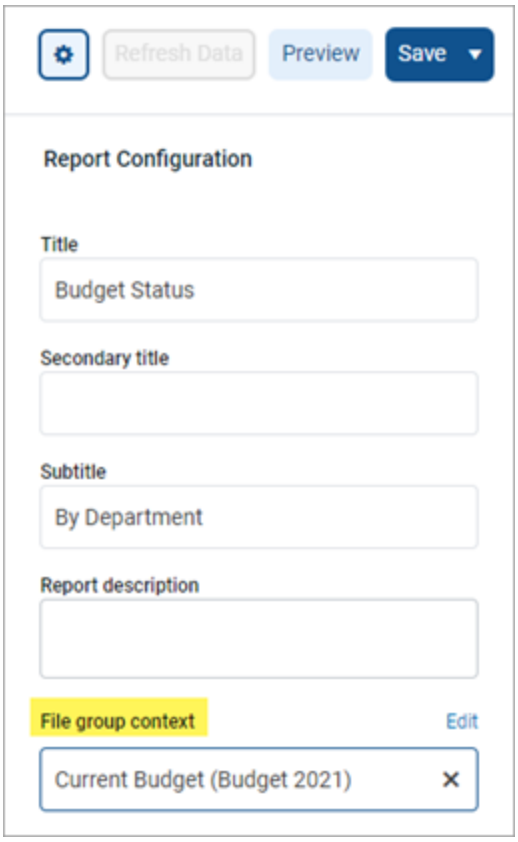
Syntax	Description	Examples
$ (dollar)	The currency placeholder specifies that the number will be formatted by using the currency culture settings. The $ symbol is replaced with the localized currency symbol. $ is interpreted as a format specifier in the format string.	$#,#.00 returns $1234.57

Setting up a report for plan file links

You can enable a column to link to plan files in a file group, without needing to manually create the necessary URLs to the plan files. The application will automatically generate the correct URL syntax to each plan file.

In order to do this, the report must be set up as follows:

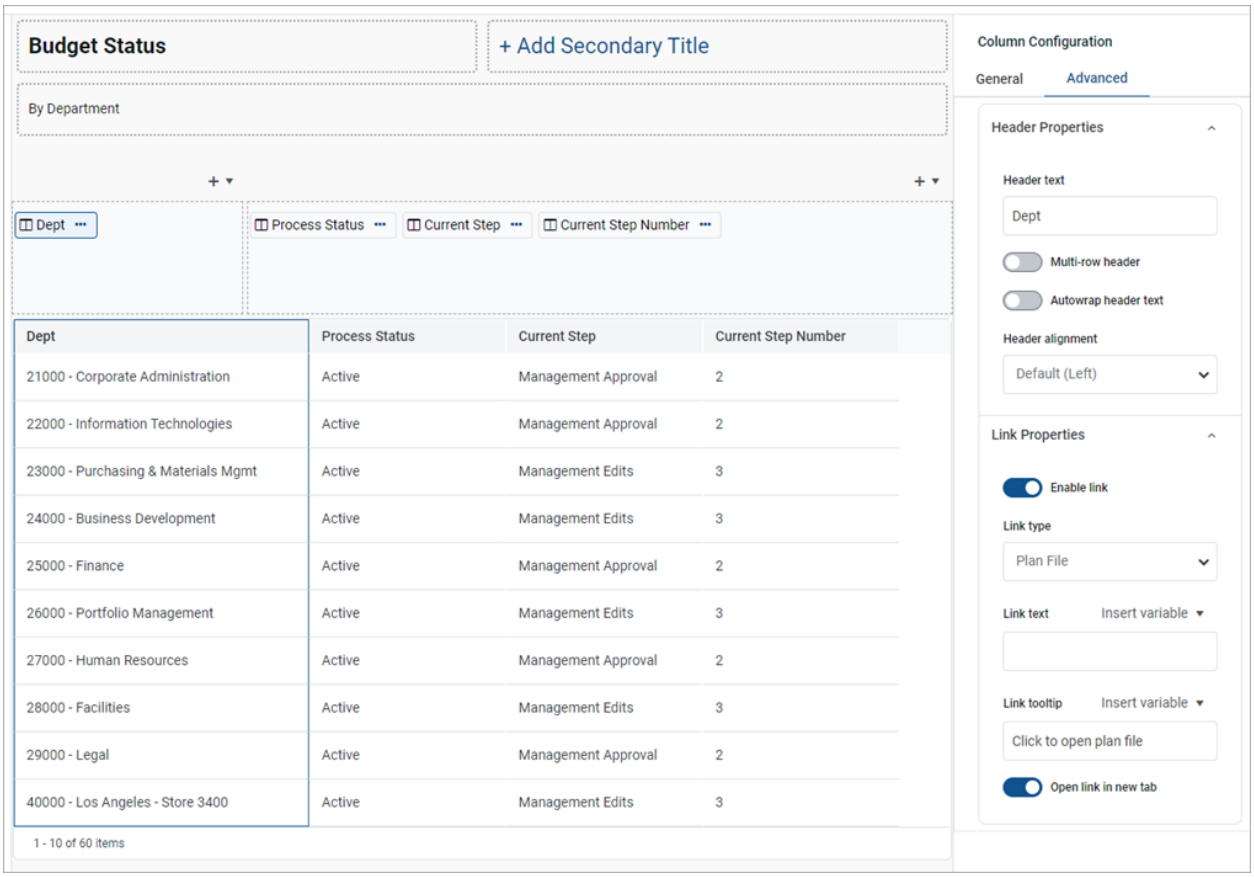
- A file group must be specified as the **File group context** for the report. The plan file hyperlinks will open the plan files in the designated file group.
    - Click the gear icon to view the **Report Configuration** panel.
    - Click **Edit** over the **File group context** field.
    - Select a file group or file group alias, then click **OK**. Selecting a file group alias means the report will be dynamically associated with the file group that is currently assigned to the alias. For example, if the Current Budget alias is updated so that it points to the Budget 2023 file group instead of the Budget 2022 file group, the report will update to link to plan files in the Budget 2023 file group.
- The row dimension for the report must be the key column of the plan code table. For example, if the plan code table of the file group is Dept, the row dimension for the report must be Dept.Dept.



Example Report Configuration panel with a designated file group context

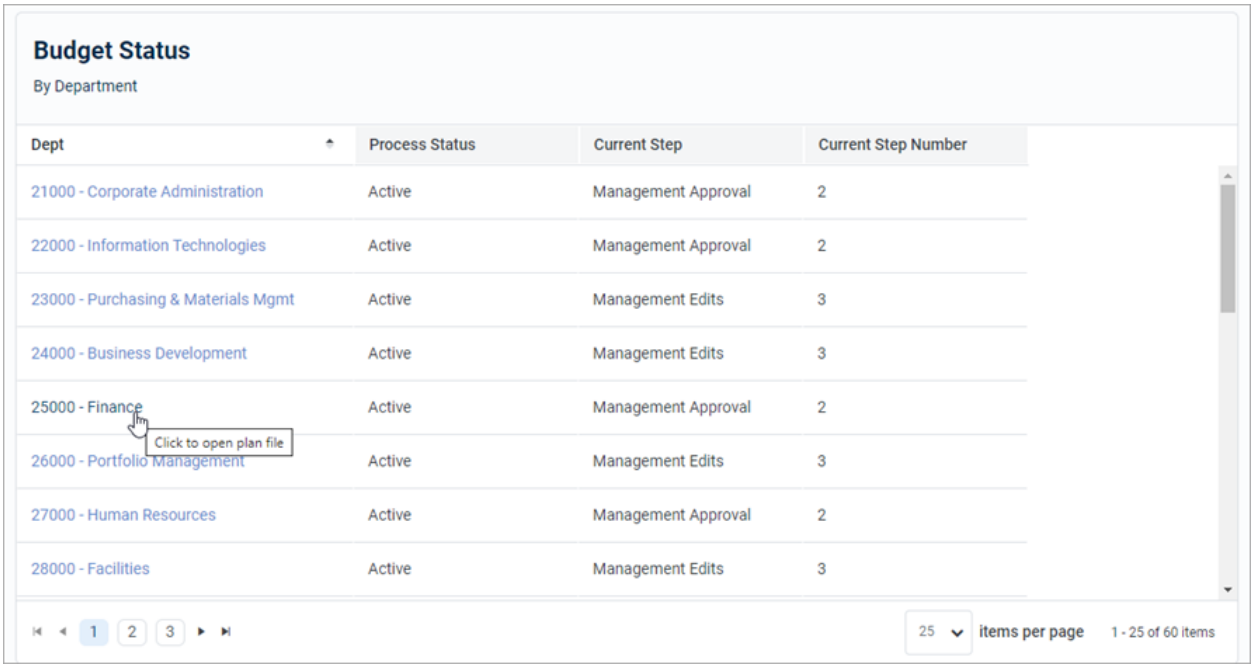
Once the report is configured so that plan file links are possible, then the **Plan file** link type becomes available as an option in the **Link properties**. Once this option is selected, the URL field becomes hidden because Axiom will automatically generate the necessary URL to the plan files.

In the following example, the Dept column has been enabled to contain hyperlinks to plan files. The **Link text** field has been left blank to use the column values in the Dept column, which have been configured to show descriptions.



Example link properties to use plan file links

When the report is viewed, the column enabled for plan file links will contain hyperlinks to the plan files in the designated file group. If the plan files are web-enabled, the hyperlinks open the plan files in the browser. If the plan files are spreadsheet-based, the hyperlinks open the plan files in the Axiom Desktop Client.



Example report with a column enabled for plan file links

NOTES:

- If the designated file group has a Show On List column, the row dimension is *not* automatically filtered to only show plan codes where the Show On List column is true (1). You should define a general filter for the report to exclude plan codes where the Show On List column is false (0). The row dimension will only be filtered automatically if you have also chosen to include process management columns in the report.
- If a plan file has not been created for a plan code, the row will still contain a hyperlink but the hyperlink will fail with a "plan file has not been created" error.
- You can select the **Plan file** link type for any column in the report that you want to link to the plan files. The column with the hyperlinks does not have to be the key column of the plan code table.

Reporting on process information in web reports

You can include process columns in a web report in order to display status information for plan files in a plan file process. You can display information such as:

- Current process status for a plan file, including the current step name and number
- Process step history per plan file, including the name and number of each step the plan file has been active in, the plan file's step status, and the time spent in the step
- Step statistics, such as average time spent in each step and number of workbooks in each step

In order to report on process information, the web report must be associated with a file group. The process columns are then available to be added to the report, and will return information on the designated plan file process for the file group.

Configuring a web report to use process columns

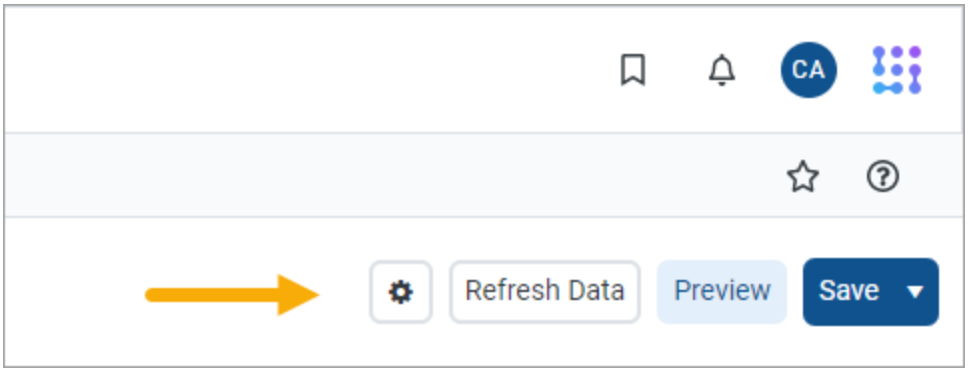
Process columns are not available for use in the Report Builder unless the report is associated with a file group. This association is made in the Report Configuration properties.

Primary table prerequisite

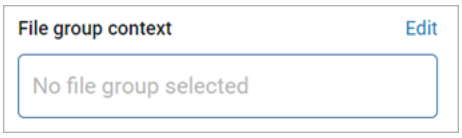
Process reporting will only work if the primary table selected as the **Data Context** for the report is compatible with the plan code table for the file group. In the majority of cases you should select the plan code table itself. For example, if the plan code table is Dept, then you should select Dept as the primary table for the report. However, if needed you can use a table with a lookup to the plan code table instead.

To associate a web report with a file group:

1. On the **Build** tab of the Report Builder, click the gear button at the top of the page to load the Report Configuration properties.

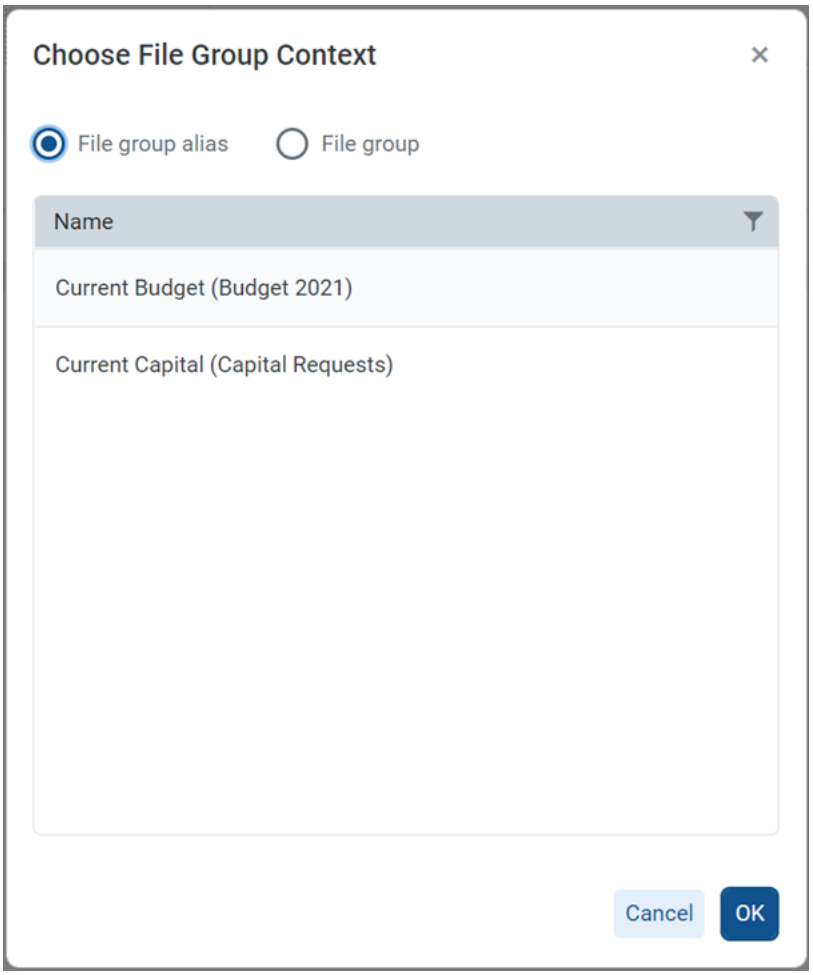


2. In the **Report Configuration** properties, click the **Edit** link above the **File group context** box.



3. In the **Choose File Group Context** dialog, select a file group or a file group alias, then click **OK**.

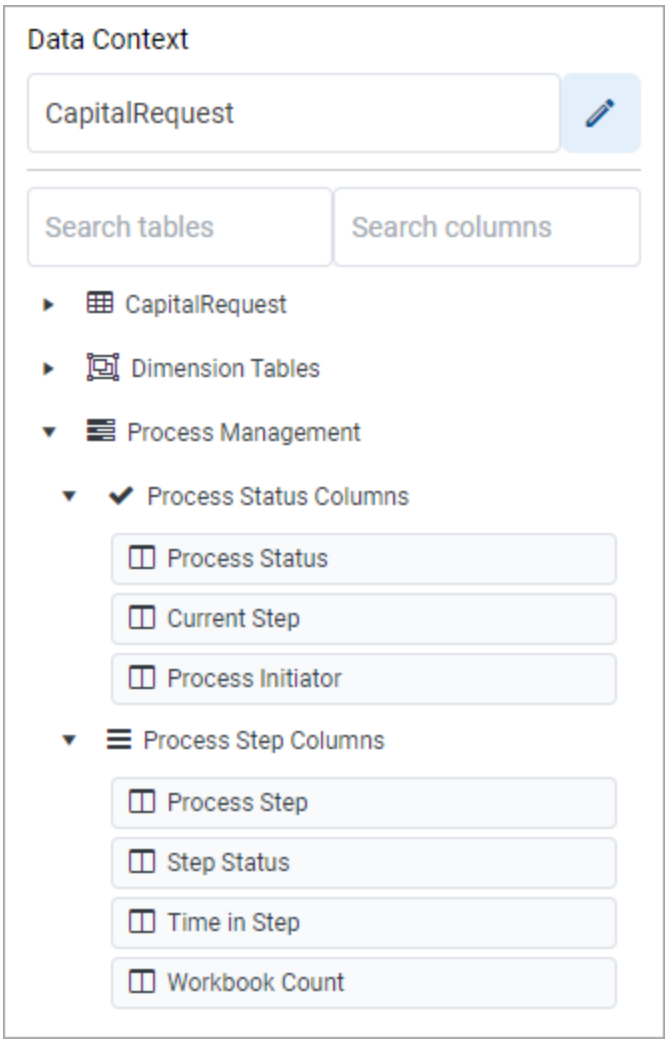
   Use the radio buttons at the top of the list to toggle between viewing file group aliases or file groups. When viewing file group aliases, the name of the file group that is currently assigned to the alias displays in parentheses after the alias name.



Selecting a file group alias means the report will be dynamically associated with the file group that is currently assigned to the alias. For example, if the Current Budget alias is updated so that it points to the Budget 2023 file group instead of the Budget 2022 file group, the report will update to show the process information for the Budget 2023 file group.

NOTE: The selected file group must have a designated **Plan File Process** in the file group properties.

Once a file group context has been selected, a new node appears in the Data Panel named **Process Management**. The process columns are listed under this node, organized into **Process Status Columns** and **Process Step Columns**. To use a process column in the report, drag and drop it to the setup boxes at the top of the Report Canvas just like any other column.



Process columns available in the Data Panel

Using process columns

The following tables detail what each process column returns, as well as usage and configuration guidance for each column. Additionally, note the following:

- When a process column is used in a report, the plan code values are automatically filtered to only return codes that have any activity in the plan file process. It is not necessary to filter the report by a ShowOnList column in order to suppress plan code values that are not active in the file group.
- Process columns can be used as row dimensions or as column definitions, however, only certain process columns make sense to use as row dimensions. See the column details for more information.

Process status columns

The process status columns can be used to display current process status information for plan codes in the file group. These columns are best used if you want to create a report that shows the current step and status for each plan file.

When using the process status columns, the row dimension for the report should be just the key column of the plan code table for the file group. For example, if the plan code table is Dept, the row dimension should be the Dept key column of that table. This means that each row of the report will be a plan code in the file group, showing the process status for that plan code. Note the following:

Column Name	Description
Process Status	Returns the current process status for each plan code. For example: Active, Stalled, Completed, or Aborted.
Current Step	Returns the name and/or number of the current step of the plan file. • By default, the column is configured to show as Value (Description), where Value is the step number and Description is the step name. • You can use the **Description display format** option in the **Column Configuration** panel to change the display format—for example, to display as Description Only or as Value - Description. • If you want to display just the step number, disable the **Show description** option in the **Column Configuration** panel.
Process Initiator	Returns the name of the user who initiated the process for the plan file. This column is only available if the associated file group is an on-demand file group.

NOTE: Reports created prior to version 2022.1 may have a column named Current Step Number—this column has been deprecated but it will continue to work in existing reports.

Process step columns

The process step columns can be used to return process information for each step that a plan file has been active in. When using process step columns, you should set the row dimension as follows, depending on the goal of the report:

- If the goal of the report is to see step detail by plan code, then the row dimension should be set to both the key column of the plan code table and the Process Step column. This means that the report will contain a separate row for each combination of plan code and step.
- If the goal of the report is to see grouped information about the step, then the sum level for the query should be set to just the Process Step column. This is useful to see information such as average time in step, and the count of workbooks that have been active in the step.

Column Name	Description
Process Step	Returns the name and/or number of the step. When using process step columns, this column should be a row dimension for the report. • By default, the column is configured to show as Value (Description), where Value is the step number and Description is the step name. • You can use the **Description display format** option in the **Column Configuration** panel to change the display format—for example, to display as Description Only or as Value - Description. • If you want to display just the step number, disable the **Show description** option in the **Column Configuration** panel. Sub-steps are returned using decimals, such as 2.1 and 2.2. Even though this column is a string column, if the report is sorted by the Step Number column the numbers will be sorted in the correct order.
Step Status	Returns the status of the step per plan file. This column is only useful when the row dimension is set to both the key column of the plan code table and the Process Step column.
Time In Step	Returns the time spent in each step per plan file. Although the raw value for this column is seconds, the total seconds are translated into the highest useful time value for display in the report—whether that is seconds, minutes, hours, or days. Therefore, one plan file may list the time in step as "25 minutes" while another plan file may list the time in step as "2 days". If the row dimension for the report is set to just the Process Step column, then the **Aggregation** for the Time In Step column should be changed to **Average** so that the column returns the average time spent in the step (for all plan codes that were ever active in the step). Otherwise the column will return the total time spent by all plan codes in the step, which is likely not a useful value. **NOTE:** If you use this column in a calculation, the calculation will be based on the raw seconds value. Therefore if you want to return the time in step using the same time unit for all plan codes, regardless of how long they have been in the step, you can use a calculation to do so. For example, divide the time in step by 86400 to convert the seconds to days.

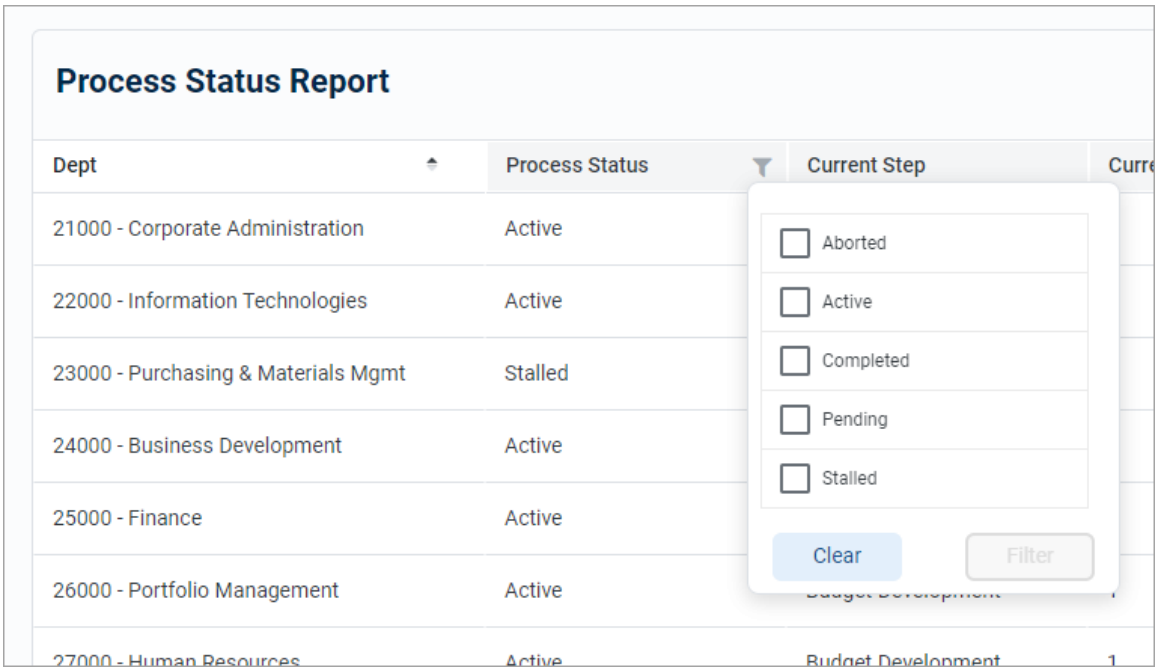
Column Name	Description
Workbook Count	Returns the count of workbooks that have been active in the step. This column is only useful when the row dimension is set to just the Process Step column, so that you can see the count for all plan codes that have been active in the step. If the key column of the plan code table is included as the row dimension, then the Workbook Count will always return 1 for each plan code / step combination, which is likely not a useful value. This column always uses Count aggregation and cannot be changed.

NOTE: Reports created prior to version 2022.1 may have columns named Step Number and Step Name—these columns have been deprecated but will continue to work in existing reports.

Filtering based on process columns

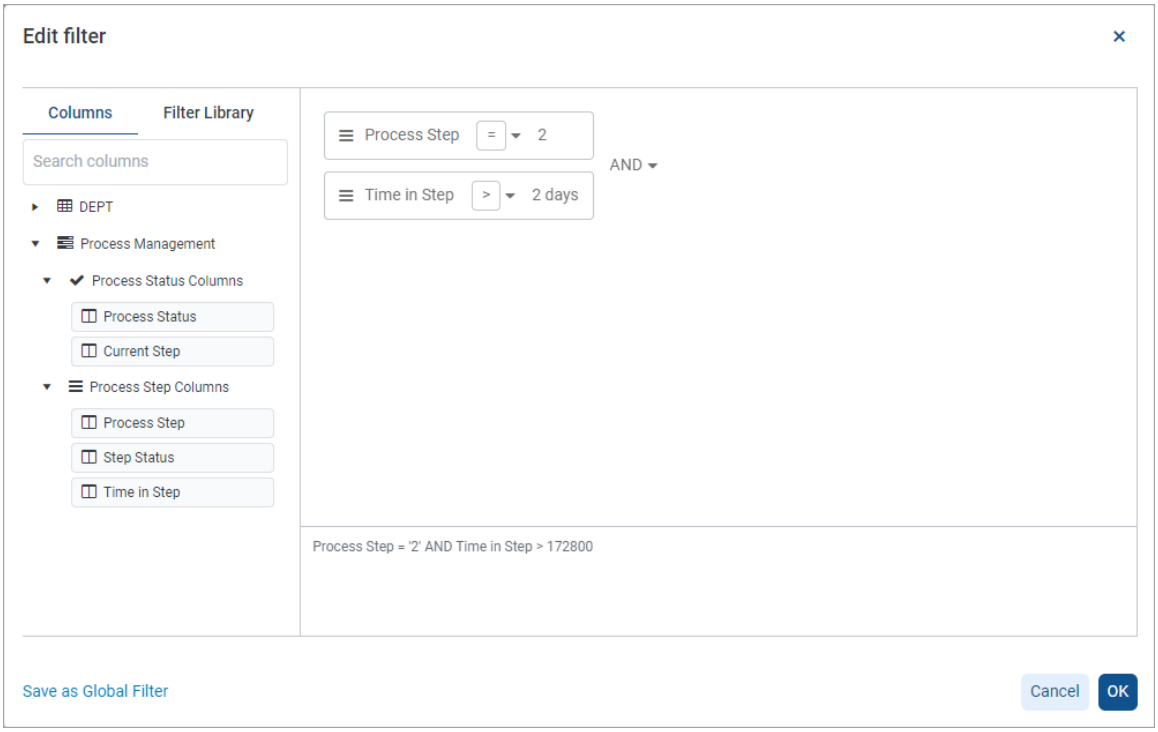
When a report uses process columns, the report can be filtered based on these columns.

- **End user filtering**: If a process column is enabled for end user filtering (**Enable filter** is enabled for the column), then users viewing the report can filter it on the fly. For example, a user may want to filter the Process Status column to only see plan files that are currently stalled in the process.



Example end user filtering on process columns

- **Report filtering**: Process columns can be used to define a general report filter or a table-specific report filter, to limit the data shown in the report. For example, you may want to filter the report to only show plan files in a certain step or with a certain status. The Process Management columns are only available in the Filter Wizard dialog when the report is configured to enable use of process columns.



Example filter using process columns

Process Management columns cannot be used as column filters on columns or calculations, or on groups. The Process Management columns node is hidden when the Filter Wizard is opened in these contexts.

NOTES:

- When filtering by process columns, you should base the filter on the same set of columns that you are using in the report (Process Status Columns or Process Step Columns). Although it is possible to cross-filter, the results may not be as expected since these two sets of columns are looking at the process information from two different angles.
- If you are filtering by Time in Step, input the number as seconds. The Filter Wizard will then convert that number to the largest relevant time unit for display in the dialog.

Example process reports

The following screenshots show some of the reports that can be created using process columns. These examples only use process columns, but the reports could contain additional columns from the plan code table or from related data tables, in cases where it makes sense to show this additional information.

The first example shows a report using process status columns, for the purpose of viewing the current status of each plan code. The row dimension is the key column of the plan code table (CapitalID).

Process Status

Capital Request	Process Status	Current Step	Process Initiator
11 - New machinery	Active	1 - Initial Request	Wendy Hunter
13 - Equipment maintenance	Active	2 - Manager Inputs	Wendy Hunter
14 - Warehouse remodel	Active	1 - Initial Request	Rufus Xavier Sasparilla
16 - Computer upgrades	Active	4 - Executive Approval	Wendy Hunter

Web report with process status columns

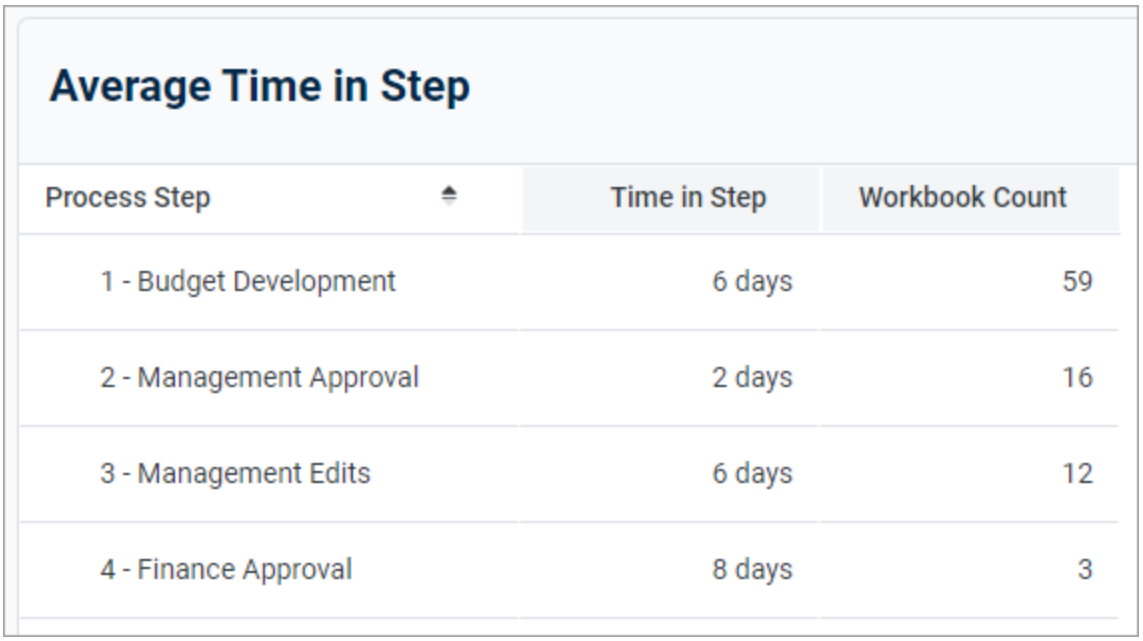
The second example shows a report using process step columns, for the purpose of viewing process history for each plan code. The row dimension is set to the step name and the key column of the plan code table (Dept). The end user could filter the Dept column to view the history for a specific plan code.

Step History per Plan File

Dept	Process Step	Step Status	Time in Step
21000 - Corporate Administration	1 - Budget Development	Active	6 days
22000 - Information Technologies	1 - Budget Development	Completed	32 minutes
22000 - Information Technologies	2 - Management Approval	Skipped	0 seconds
22000 - Information Technologies	3 - Management Edits	Active	6 days
23000 - Purchasing & Materials Mgmt	1 - Budget Development	Completed	32 minutes
23000 - Purchasing & Materials Mgmt	2 - Management Approval	Skipped	0 seconds

Web report with process step columns, grouped by key column and step

The third example shows a report using process step columns, for the purpose of viewing process statistics. The row dimension is set to the step number only, so that the process data is aggregated at the step level. The columns show the count of workbooks that have been active in each step, as well as the average time in step per workbook.



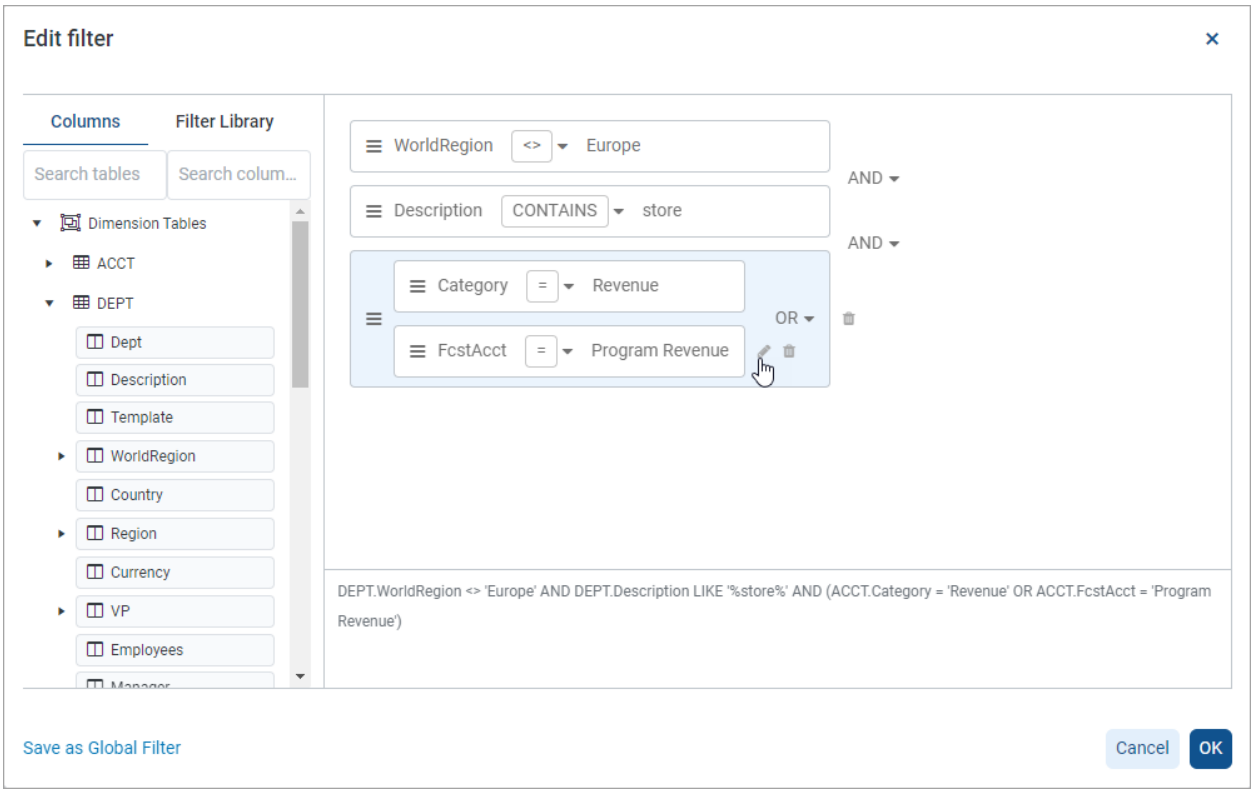
Average Time in Step

Process Step	Time in Step	Workbook Count
1 - Budget Development	6 days	59
2 - Management Approval	2 days	16
3 - Management Edits	6 days	12
4 - Finance Approval	8 days	3

Web report with process step columns, grouped by step

Using the Filter Wizard in the Report Builder

The Filter Wizard displays when you create or edit a filter in the Report Builder. The same dialog is used for report filters, column filters, and column group filters. The dialog provides a user-friendly way to build data filters using your current system's data structures.



Example Filter Wizard in the Report Builder

Using the Filter Wizard, you can:

- Browse and search table columns to create a new filter, or, use a global filter from the Filter Library.
- Select the operator for the filter such as equals, not equals, greater than, less than, and so on.
- Select existing column values to filter by, or manually enter values.
- Easily combine and group multiple filter statements using AND and OR.

Creating a filter

Each filter that you create in the Filter Wizard can consist of one or more *filter statements*. Multiple filter statements are combined using OR or AND to create compound filters. Each filter statement consists of a Table.Column name, an operator, and one or more values. For example, the following are all filter statements:

```
Dept.Region='US West'

Acct.Acct IN (1250, 1300, 1400)

Encounter.AdmitDate BETWEEN 1/1/2020 and 12/31/2021

GL2022.M1 > 0
```

The following steps describe the general process of creating a new filter from scratch. For more information on specific aspects of the Filter Wizard, see the other sections in this topic.

To create a filter in the Filter Wizard:

1. In the Filter Wizard dialog, on the **Columns** tab, use the table tree to find the column that you want to use for the first column filter statement. Note the following:
    - The table tree is automatically filtered to only show tables that are relevant to the current context. For example, if you are creating a table-specific report-level filter, the table tree is filtered to only show the selected table.
    - You can use the search boxes over the table tree to search for a particular table or column by name.
2. Select the column and drag it over to the right-hand area of the dialog. This area is known as the *filter canvas*. Once you drop the column to the filter canvas, it creates a filter statement "box" that is structured as follows:

    ColumnName *Operator* *Values*

3. If the column is a Date or DateTime column, select the date part that you want to use for the filter. For more information on this choice, see Using date part filtering.

    By default, when you drag over a Date or DateTime column, the date part menu automatically opens. If you press the Escape key or otherwise close the date part menu without making a selection, the default is Full Date or Full DateTime. If you select a date part from the menu, the operator menu automatically opens next.
4. From the operator menu, select the operator that you want to use for the filter statement. By default, when you drag over the column, the operator menu automatically opens. The data type of the column determines the default operator and the list of available operators. For more information, see Using operators.
5. Select or input one or more values for the column filter statement. If you selected an operator from the operator menu, the following occurs:
    - If the operator is equals or not equals, the **Select Values** dialog automatically opens so that you can select one or more values. If you select multiple values, the operator will automatically adjust to IN or NOT IN to accommodate the multiple values. For more information on using this dialog, see Using the Select Values dialog.
    - If the operator is anything else, an input box becomes focused so that you can input or select one or more values. In most cases, this will be a single input box where you can type the desired value. Note the following:

- If the column is a String column and you are manually typing in text instead of selecting values in the column, do not type quotation marks or wildcard characters. The Filter Wizard will automatically add quotation marks or wildcard characters as needed.
- If the operator is BETWEEN or NOT BETWEEN, two input boxes become available so that you can input or select both values.
- If the column is a Boolean column, the input becomes a drop-down menu for selecting True or False.
- If the column is a Date or Date time column, the input becomes a calendar control to select a date or date/time from a calendar.

If instead you closed the operator menu without making an explicit selection, then the default operator is used and the column filter statement is set to `<no values>`. You can manually click on the `<no values>` text to specify one or more values using the same behavior described previously.

6. Repeat the previous steps as needed to create more filter statements.

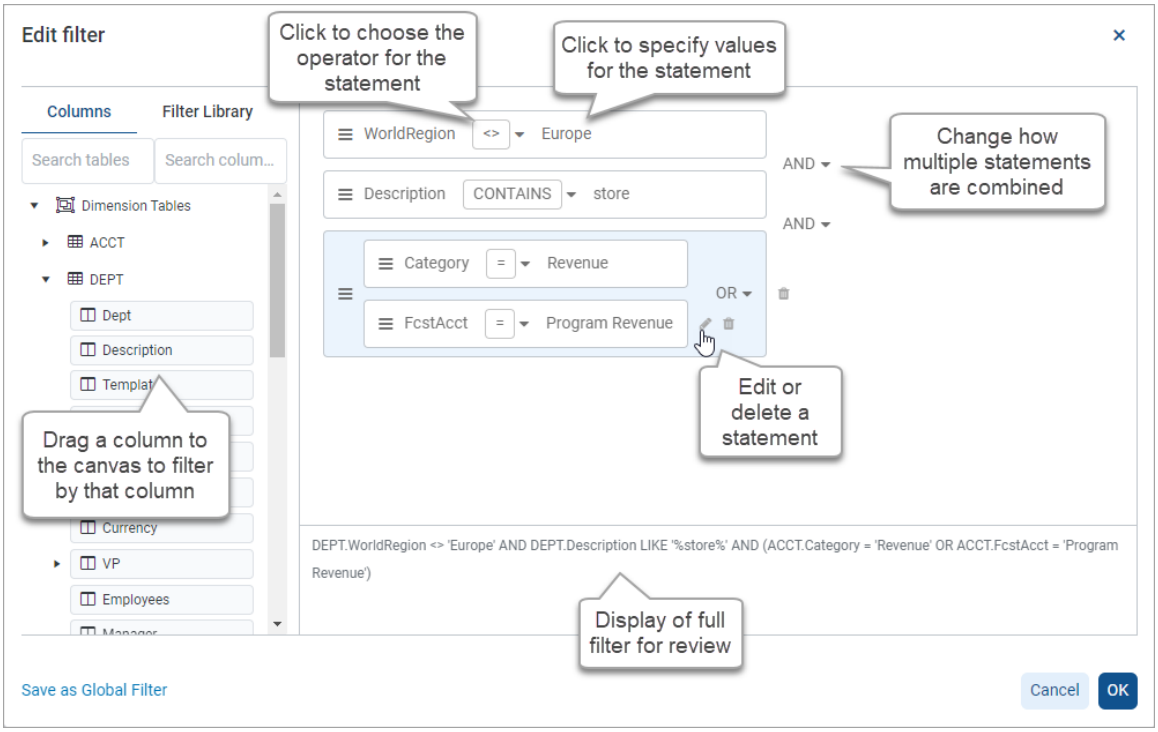
   NOTE: You can use preexisting global filters instead of creating filter statements, or use global filters in combination with filter statements. Select the **Filter Library** tab, locate the desired filter, and drag and drop it to the filter canvas. For more information, see Using global filters in the Report Builder.

7. If your filter consists of multiple filter statements and/or global filters, these are combined using AND or OR. By default, all statements in the filter are combined using AND. You can group multiple statements together and change the compound operator as needed. For more information, see Creating compound filters.
8. Review the complete filter as shown at the bottom of the Filter Wizard.
9. Click **OK** to complete the filter and apply it to the current context.

When building a filter, or when editing an existing filter, you can:

- **Change the operator:** Click on the operator to open the operator menu and select a different operator. In most cases your current value or values are preserved and will apply to the new operator if applicable.
- **Change the value(s):** Click on the value to select or input a different value or values. You can also hover your cursor to the right of the filter statement and click the pencil icon to edit the value.
- **Add more statements:** Drag additional columns or global filters to the canvas, then specify how these statements are combined. You can group and reorder statements by selecting and dragging them.

- **Remove statements:** Hover your cursor over an existing filter statement or global filter, then click the trash can icon to remove it from the filter. Note that if you want to clear a filter, this is not achieved by deleting all the filter statements within the filter. Instead you should delete the filter from the current context. For example, if the filter is a column filter, click the **Clear** option for the filter in the **Column Properties**.



- **Add values manually:** You can type values manually or paste from other sources, such as spreadsheets. For pasted content, the filter wizard will recognize most filter delimiters (such as spaces and semi-colons) and correctly create the SQL statement. However, if you are typing values manually, use commas. When you enter simple string values, you do not have to place the quotes around the string because they are added automatically. In this example, the string contains several countries (France, Italy, US, UK) without quotes. In the case of Costa Rica, you must add quotes because that country has two words.

Filter wizard with manually entered strings

Notes about manual entries:

- If your string has leading or trailing spaces, use quotes that include those spaces (for example, ' a ').
- If you search for a value in a large table (such as the EDS Encounters table), you can type the first few characters or numbers in the search field to retrieve those results more quickly.
- You cannot directly edit the SQL statement for your filter. If you need to make changes or additions, use the filter options to select or manually enter the values needed.

Using operators

When you initially drag and drop a column to the filter canvas, it is assigned a default operator based on the column data type. For example, Integer and String columns default to equals, while Date, DateTime, and Numeric columns default to greater than. You can accept the default or choose any valid operator from the operator menu. At any time, you can click the operator to open the operator menu.

The available operators depend on the column data type. Most columns can use the following operators:

- Equals (=) and not equals (<>)

- IN and NOT IN
- Greater than (>) and greater than or equals to (>=)
- Less than (<) and less than or equals to (<=)
- BETWEEN and NOT BETWEEN (both inclusive of the specified values)

In addition, Numeric columns has this operator:

- IS NULL AND IS NOT NULL

Additionally, String columns have the following options—all of which generate LIKE or NOT LIKE filter statements with the appropriate wildcard syntax:

- STARTS WITH and DOES NOT START WITH
- ENDS WITH and DOES NOT END WITH
- CONTAINS and DOES NOT CONTAIN
- IS EMPTY and IS NOT EMPTY

For example, if you select CONTAINS and then specify a value of `store`, the filter will be created such as `Description LIKE '%store%'`. You can see the created filter at the bottom of the Filter Wizard dialog.

NOTES:

- CONTAINS and ENDS WITH (and the DOES NOT versions) are not available for tables that use the Large Data index scheme, for performance reasons.
- The operator menu displays equals/not equals or IN/ NOT IN depending on whether multiple values are currently selected. The operator will be automatically adjusted for single or multiple values depending on your selections. It is not necessary to manually select the appropriate operator.

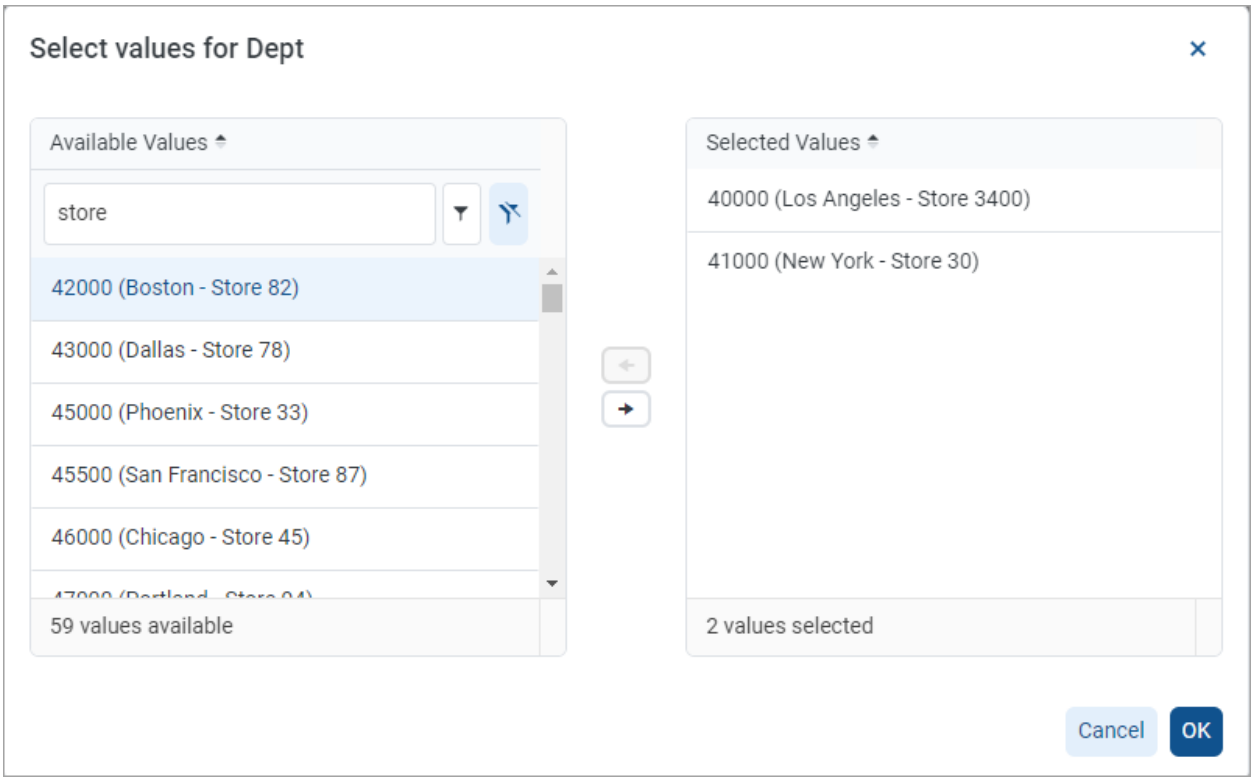
Using the Select Values dialog

When creating an equals or not equals filter statement, the **Select Values** dialog is available to select one or more values in the column. This dialog opens automatically when you initially select the equals or not equals operator. You can manually open the dialog by clicking the currently selected values (or the `<no values>` placeholder text), or by hovering your cursor to the right of the filter statement and clicking the pencil icon.

The available values in the column display in the left-hand side of the **Select Values** dialog, and the currently selected values for the filter statement display in the right-hand side of the dialog. You can:

- Search for a particular value using the search box over the **Available Values** list. Only the first 100 column values show in the dialog for performance reasons, but you can find any value in the column using the search box.
    - You can use the filter icon to the right of the search box to change how the search matches values. The default matching behavior depends on the column type. String columns and validated columns with descriptions default to "contains" matching, while numeric columns default to "equals" matching.
    - To clear the search text, use the Clear icon to the right of the filter icon. This icon only displays when search text is present. You can also manually select and delete the search text.
- Select values by moving them from the **Available Values** list to the **Selected Values** list. You can double-click values to move them between lists, or you can use the arrow keys in the middle to move values. You can select multiple values in either list using the SHIFT or ALT keys, and then move those values using the arrow keys.

When you click **OK**, all values in the **Selected Values** list are included in the filter statement. The operator automatically adjusts as needed for single or multiple values—for example, if you selected the equals operator but then chose multiple values, the operator automatically changes to IN (and vice versa).



Example Select Values dialog for the Filter Wizard

NOTES:

- If you want to use an equals operator but the value does not currently exist in the column, then you must first switch the operator to greater than or less than, manually type the value, then switch back to equals. It is not currently possible to manually type multiple values for use with the IN operator.
- If the column is a validated column with descriptions, the descriptions display next to the column values in parentheses. You can search for values using the actual column values or the descriptions. However, when you select values, keep in mind that you are selecting the actual column values and not the descriptions. If you want to create a filter that is based on the description values, you must base this filter on the actual Description column.
- The Select Values dialog is not available for calculated fields from the database. When the equals operator is used with a calculated field, you can type the desired value for the filter. Currently, it is not possible to create an IN filter for multiple values in a calculated field. If necessary, you can create multiple filter statements and combine them with OR as a workaround.

Creating compound filters

You can drag any number of columns over to the filter canvas and create filter statements for each one. When multiple filter statements are present, they are combined using either AND or OR to create a compound filter.

- AND means that records must match both filter statements to be included or excluded by the filter.
- OR means that records must match one of the filter statements to be included or excluded by the filter.

By default, filter statements are combined using AND. You can change this to OR as needed by using the drop-down menu on the AND/OR operator to the left of the filter statements.

If the operator change could create an ambiguity in how the statements are combined, you will be prompted to choose whether to group or split the statements when changing the operator. For example, if you choose to group the statements, the two statements associated with the operator will become grouped. If you choose to split the statements, one statement will be separated while the other statement is grouped with the statement next to it. Grouped statements are the equivalent of using parentheses in SQL.

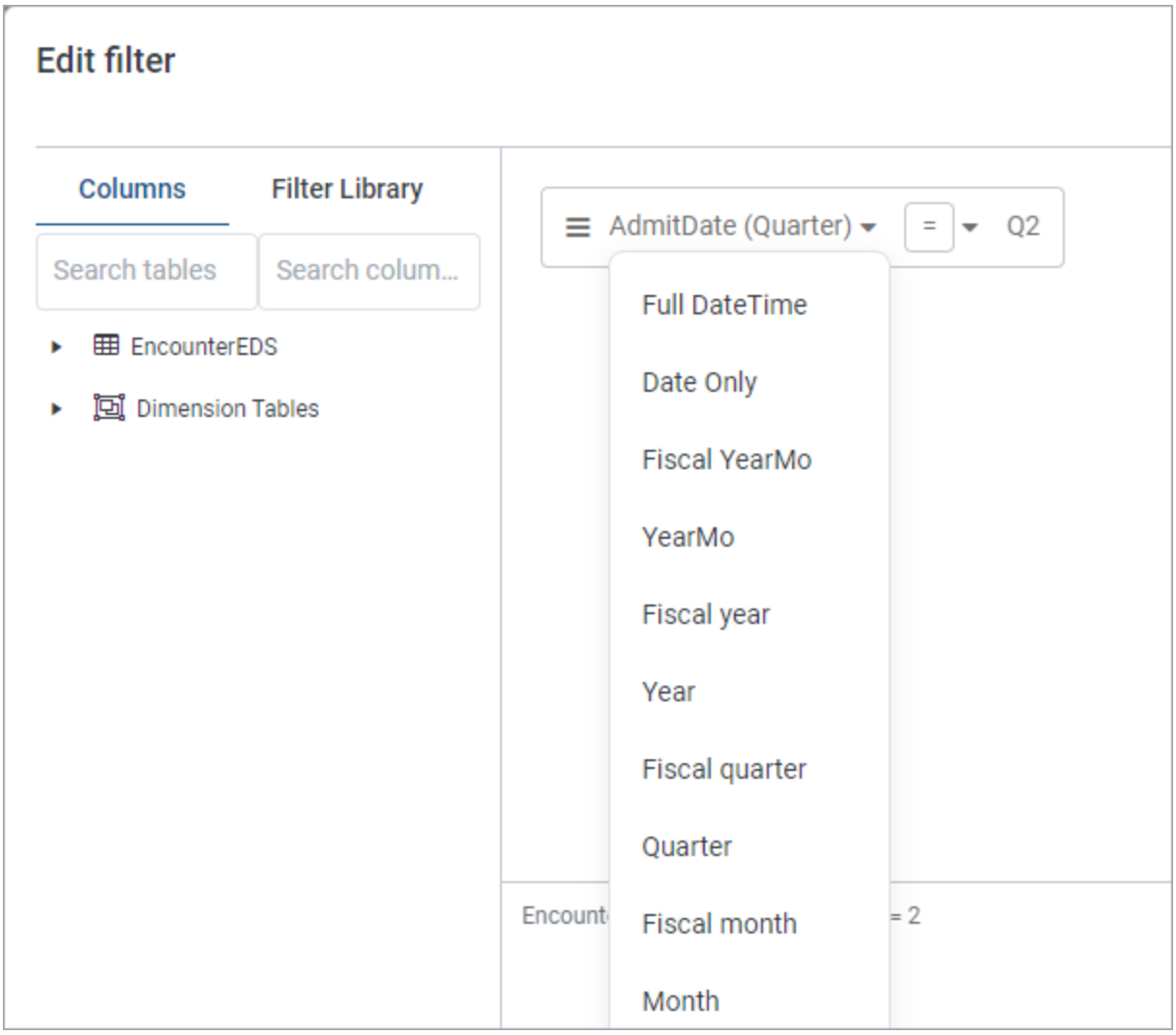
Multiple filter statements can be grouped, combined, and reordered by dragging and dropping the statements, and by changing the AND/OR operator.

NOTE: The Filter Wizard will automatically place parentheses as needed in filters that use multiple filter statements. There is no way to manually add or remove parentheses.

Using date part filtering

When the column used in the filter is a Date or DateTime column, you can filter based on the full date or date-time as saved in the column, or you can filter based on a date part such as the year or quarter. For example, you can create a filter statement such as StartDate > 2019, when the StartDate column contains full date or date-time values. Using date parts makes it easier to construct filters that restrict data based on a particular aspect of the date or date-time value.

- By default, the filter is based on the full date or date-time.
- You can click the name of the column to open the date part menu and select a specific date part for filter. The same date part options that are available in the **Column Configuration** properties for Date and DateTime columns are available for use in filter statements.
- If you select a date part other than the Full Date or Full DateTime, the selected date part displays in parentheses next to the column name. For example: **StartDate(Year)** when Year is the selected date part.
- If you select a date part with a finite set of available values—such as Quarter or Month—then the **Select Values** dialog displays those values.
- If you select a date part with an open-ended set of available values—such as Year or YearMo—then the **Select Values** dialog converts the actual dates or date-times in the column into the selected date part and displays those values. This means that if you want to create an equals or not equals filter which uses a value that is not currently present in the column, you must first change the operator to greater than, type the desired value using the correct format for the date part, and then change the operator back to equals or not equals.
- When using the following date parts, only the equals/not equals and IN/NOT IN operators are available: Quarter, Fiscal Quarter, Month, and Day of Week. For example, it is not possible to create a filter such as StartDate(Quarter)>Q2. Instead you would select the specific values of Q3 and Q4, which would create the filter StartDate(Quarter) IN (Q3,Q4). For all other date parts, the normal set of operators can be used.



Example date part menu for Date and DateTime columns

Limitations and known issues

The following limitations and known issues currently apply to the Filter Wizard:

- If a String column has a blank entry (empty string), this displays in the **Select Values** dialog as a blank entry. This blank entry cannot be selected, and it is not currently possible to create a filter statement that includes or excludes empty strings. However, if a report with an empty string filter statement was created in a previous version, this filter statement will be preserved and will continue to work.

- If a column contains null values, this displays in the **Select Values** dialog as `<no value>`. This no-value entry cannot be selected, and it is not currently possible to create a filter statement that includes or excludes null values. However, if a report with a null value filter statement was created in a previous version (using operators IS NULL or IS NOT NULL), this filter statement will be preserved and will continue to work.
- If you want to create a filter statement using equals/not equals or IN/ NOT IN, it is not currently possible to manually type the desired value or values. You must use the **Select Values** dialog. For single values, a workaround is available as follows: you can change the operator to greater than, type the desired value, then change the operator back to equals or not equals. There is no equivalent workaround for multiple values.
- Filter statements that directly compare two columns, such as `Column1 > Column2`, are not currently supported in the Filter Wizard. However, if a report with a column comparison statement was created in a previous version, this filter statement will be preserved and will continue to work.

When viewing reports that were created in previous versions, you may find other filter statements that use syntax which is not currently supported in the Filter Wizard. Generally speaking, if the report does not error and the filter statement is not flagged as invalid, these filter statements will continue to work as they did in previous versions, although you may not be able to edit the filter statement or newly create it in exactly the same way.

Using global filters in the Report Builder

A *global filter* is a report filter that is stored in the Filter Library. These filters can be referenced in various reports as needed. Storing the filters separate from the reports has the following advantages:

- A filter that is commonly used can be defined once and then used in all reports that need it.
- If the filter needs to be modified, you can edit the global filter once, instead of needing to modify all of the reports that use the filter.

When you are defining filters for a web report, you can use an existing global filter, or you can build a filter in the report and then save it as a global filter so that it is available for others to use. If a web report references a global filter, and that filter is modified, the report automatically uses the current version of the global filter.

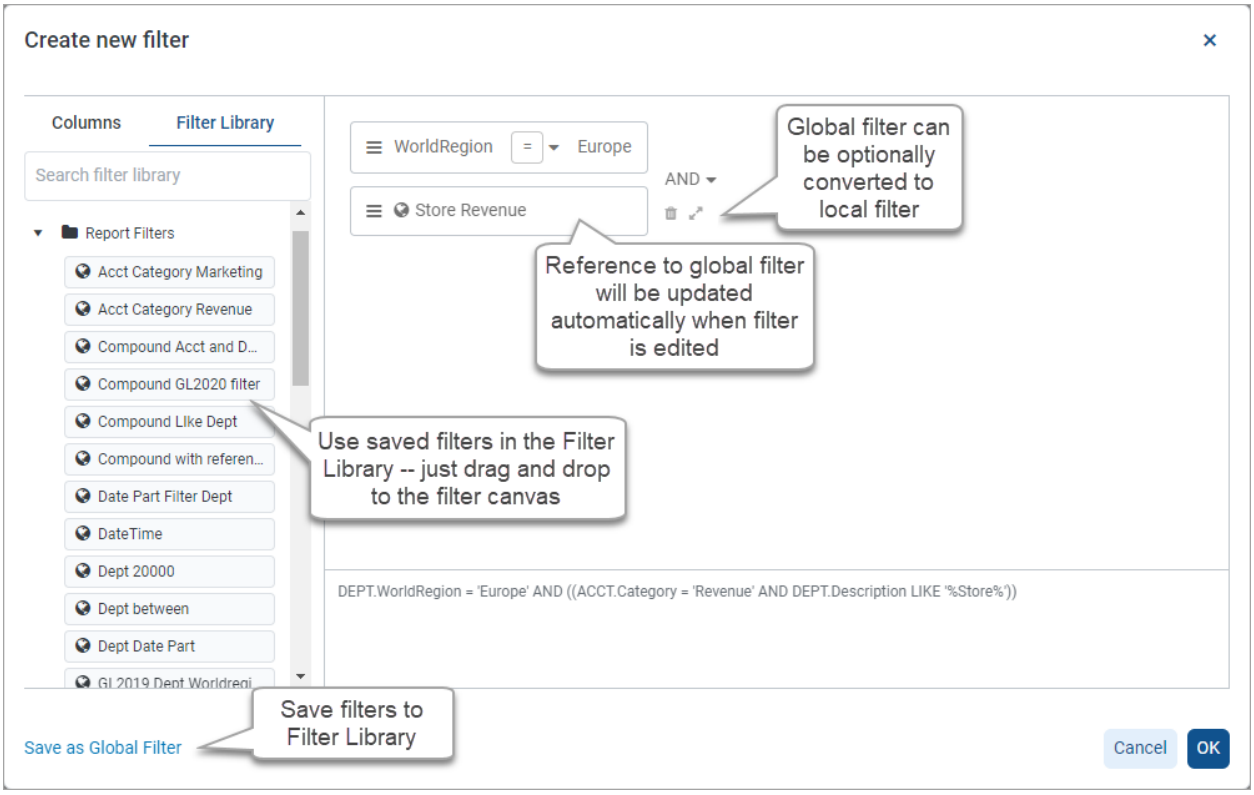
Global filters can also be used as starting points to create a local report-level filter. For example, there may be an existing global filter that is almost exactly what you need to filter the current report. In this case you can do either of the following:

- Add the global filter to the report, then convert the filter to a local filter. This conversion breaks the reference with the global filter and copies the filter statement into the current report. You can then edit the filter as needed for use in the current report.

  OR

- Add the global filter to the report, then combine that filter with additional filter statements in the report to arrive at the overall desired filter. In this case the global part of the filter will continue to be linked to the Filter Library and will update as needed, while the rest of the filter provides the additional context needed in the report. This approach only works if you need to extend the global filter, not fundamentally change the global filter to use a different operator or values.

All of these global filter actions can be done in the Filter Wizard dialog in web reports. The Filter Wizard is available when defining report-level filters on the Filters tab, or when defining filters for individual columns or column groups on the Build tab.



Global filter features in the Filter Wizard

Using a global filter in a web report

When you are creating or editing a filter in a web report using the Filter Wizard, you can add a global filter to the filter statement. You can add any of the following filter types that are stored in the Filter Library:

- **Report filters**: Filters created in web reports using the new Filter Wizard.
- **Legacy standard filters**: Filters created using the legacy Filter Wizard (in any location of the application). Basically, a "standard filter" means any regular Axiom filter that is not a limit filter and not a visualization filter.

Limit filters and visualization filters cannot be used as global filters in web reports. Visualization filters do not display in the Filter Wizard. Limit filter statements display in the Filter Wizard, however, if you attempt to use one as a global filter, an error will occur regarding the unsupported filter format.

You can use a global filter on its own, or in combination with locally defined filter statements and other global filters. In order to use a global filter, you must have read-only access to at least one filter in the Filter Library, as determined by your security permissions.

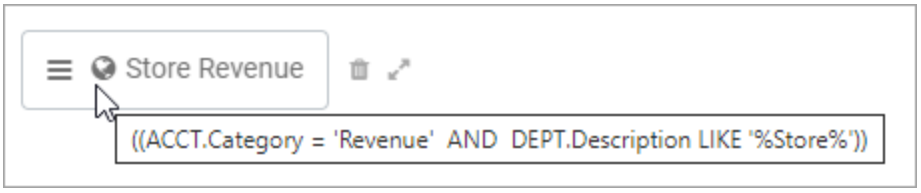
To add a global filter to a filter statement:

1. In the Filter Wizard, in the left-hand pane, select the **Filter Library** tab.
2. Locate the global filter that you want to use in the Filter Library. You can use the search box above the folder tree to search for a specific filter by name.

   This area shows all folders and filters that you have permission to access in the Filter Library. If you do not have access to the Filter Library, then the tab is still present in the dialog but it will be empty.
3. Drag the desired filter over to the right-hand pane (the filter canvas).

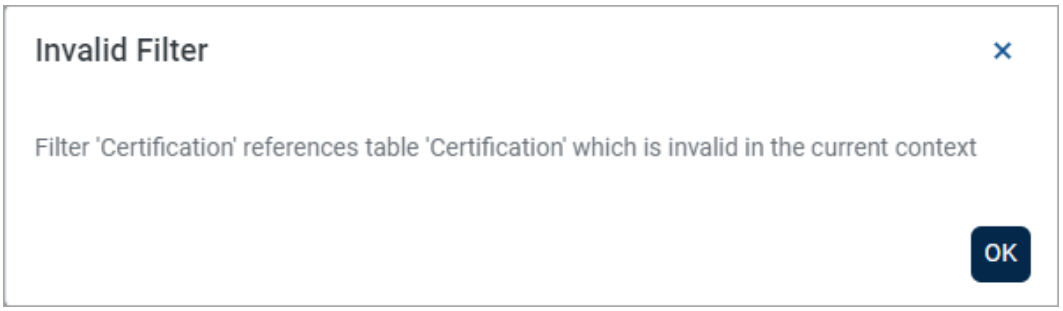
   Before the global filter is added to the filter canvas, it is validated to make sure the contents of the global filter are valid in the current context.

   - If the filter is valid, then the filter is added to the filter canvas. The filter box displays the filter name with a globe icon. You can see the actual underlying filter statement in the tooltip, or by viewing the filter shown at the bottom of the dialog.

     NOTE: When displaying the filter statement for a global filter in the Filter Wizard, the statement is always wrapped in parentheses, even if it is the only statement used in the filter. If the global filter itself is a compound filter statement that is wrapped in parentheses, you may see double parentheses displayed in the Filter Wizard. These "extra" parentheses do not cause an issue and only serve to identify the global filter statement within the overall filter.

   - If the filter is not valid, an error message will display and the global filter will not be added to the canvas. Generally speaking, the global filter must use columns from the same tables that display on the **Columns** tab of the Filter Wizard.



Once the global filter is added to the filter canvas, it becomes a filter statement that can be combined and rearranged just like the locally defined filter statements. The only difference is that you cannot modify the contents of the global filter, unless you want to break the association with the global filter in the Filter Library and convert it to a local filter (see the next section).

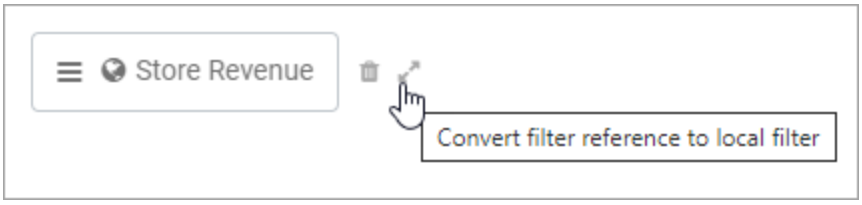
Although security permissions to the Filter Library are required in order to add a global filter to a report, once the filter is present in the report it is treated like part of the report and governed by the report's permissions. It is not necessary to grant filter permissions to users who only need to view or edit the report.

Converting a global filter to a local report filter

Once a global filter has been added to the Filter Wizard, you can optionally convert the filter to a "local" filter. This will break the association with the global filter and copy the filter statement into the report. You can then edit the filter statement as needed.

To convert a global filter to a local filter:

1. In the Filter Wizard, locate the global filter that you want to convert.
2. Hover your cursor to the right of the global filter, then click the Convert icon.



3. At the confirmation prompt, click **Yes** to convert the filter.

The filter statement for the global filter is copied into the report, and now displays like a regular filter statement created in the Filter Wizard. The filter statement is no longer associated with the global filter, and will not update if the global filter is changed. You can now edit the filter statement as needed for use in the report.

Saving a global filter to the Filter Library

After creating a filter in the Filter Wizard, you can optionally save that filter to the Filter Library. Saving the filter to the Filter Library allows the filter to be used by other web reports, so that all of the reports reference the same global filter.

Currently, filters created in the Report Builder's Filter Wizard and saved to the Filter Library can only be used in web reports. Future releases may expand the use of this Filter Wizard, so that its filters can be used in other places.

Any filter that can be created in the Filter Wizard can be saved as a global filter. The filter can contain multiple filter statements, and can even contain references to other global filters. The context where the filter was created does not matter for purposes of saving it as a global filter. For example, you can create a filter for use as a General report-level filter, save the filter as a global filter, then later use the global filter as a column filter in a different report. As long as the filter statement is valid in both contexts, it does not matter where the global filter was initially created.

In order to save a global filter to the Filter Library, you must have read/write access to at least one folder in the Filter Library. If you do not have this permission, then the **Save as Global Filter** option is not present in the Filter Wizard.

To save a global filter:

1. In the Filter Wizard, create the filter that you want to save to the Filter Library.
2. Click **Save As Global Filter** in the bottom left of the dialog.
3. In the **Save As Global Filter** dialog, complete the following fields and then click **Save**:

Item	Description
File name	The name of the filter. This is the name that users will see when finding filters in the Filter Library, and when editing web reports that use the global filter. Keep in mind that when users add the global filter to a report, they cannot see the actual filter statement—they can only see the filter name. Because of this, it is recommended to include the table name used by the filter statement in the filter name, so that users can understand whether the filter will be valid in the current context.
Description	Optional. A description of the filter. Currently, filter descriptions do not display in Filter Wizard, but they can be viewed in the Axiom Desktop Client using Axiom Explorer.
Save to folder	The folder in the Filter Library where you want to save the filter. • Click the folder icon to the right of the field. • In the **Choose output folder** dialog, select a folder in the Filter Library. You can only select folders where you have read/write access to the folder. If a folder name displays with a lock icon, this means you have read-only access to that folder and therefore cannot save a new report there. • Click **OK** to choose the folder and return to the save dialog. The path to your selected folder now displays in the field.

If you use a name that already exists in the target folder, you will be prompted to choose whether or not to overwrite the existing filter. If you choose not to overwrite, the save operation is canceled and you are returned to the Filter Wizard.

4. After the filter is saved to the Filter Library, you are prompted to copy the global filter into the report to replace the current filter. Click **Yes** if you want to reference the newly created global filter in the current report. If you do not want to reference the global filter in this report, click **No**.

The global filter is saved to the Filter Library and is now available for use in other web reports. Additionally, if you chose Yes at the prompt after saving, the current filter in the Filter Wizard is replaced with a reference to this newly created global filter.

Editing an existing global filter

If a global filter is edited, all web reports that reference this global filter will now use the updated filter statement. For example, a healthcare organization may have a filter that limits the report to codes associated with COVID-19. If later a new code is added, you can edit the filter to include the new code, and this new code will now be applied to all reports that reference the global filter.

Currently, there is no user interface to edit a global filter directly. Instead, global filters can be edited as follows:

- Open the Filter Wizard and add the global filter to the filter canvas.
- Convert the global filter to a local filter.
- Edit the local filter as needed.
- Save the local filter as a global filter, using the same name as the existing global filter.

This process will overwrite the existing global filter with the newly saved version of the filter. All reports that reference the global filter will now use the updated version of the filter statement.

NOTE: If a web report is being viewed or edited when the global filter is changed, the report will not reflect the changed filter until the report is closed and reopened (or until it is reloaded by refreshing the browser).

Deleting a global filter

If a global filter is no longer needed within a particular report, you can delete it from the filter. Hover your cursor to the right of the global filter and then click the Delete icon. This action simply removes the reference to the global filter from the current filter. It has no impact on the global filter in the Filter Library.

If a global filter is no longer needed at all, you can delete it from the Filter Library. Currently, this can only be done from the Desktop Client. In order to delete a global filter, you must have permission to use the Windows Client or the Excel Client, and read/write permission to the folder that the global filter resides in.

To delete a global filter from the Filter Library:

1. From the **Area** menu  , click **Windows Client** or **Excel Client** to launch the Desktop Client.
2. On the **Axiom** tab, in the **Administration** group, click **Manage > Axiom Explorer**.

   NOTE: In systems with installed products, this feature may be accessible from the **Admin** tab. Click **System Browser** to open Axiom Explorer.

   TIP: You can also use the Explorer task pane to delete a global filter.
3. Navigate to the **Filter Library**, and then locate the filter that you want to delete.
4. Right-click the filter and then select **Delete**.

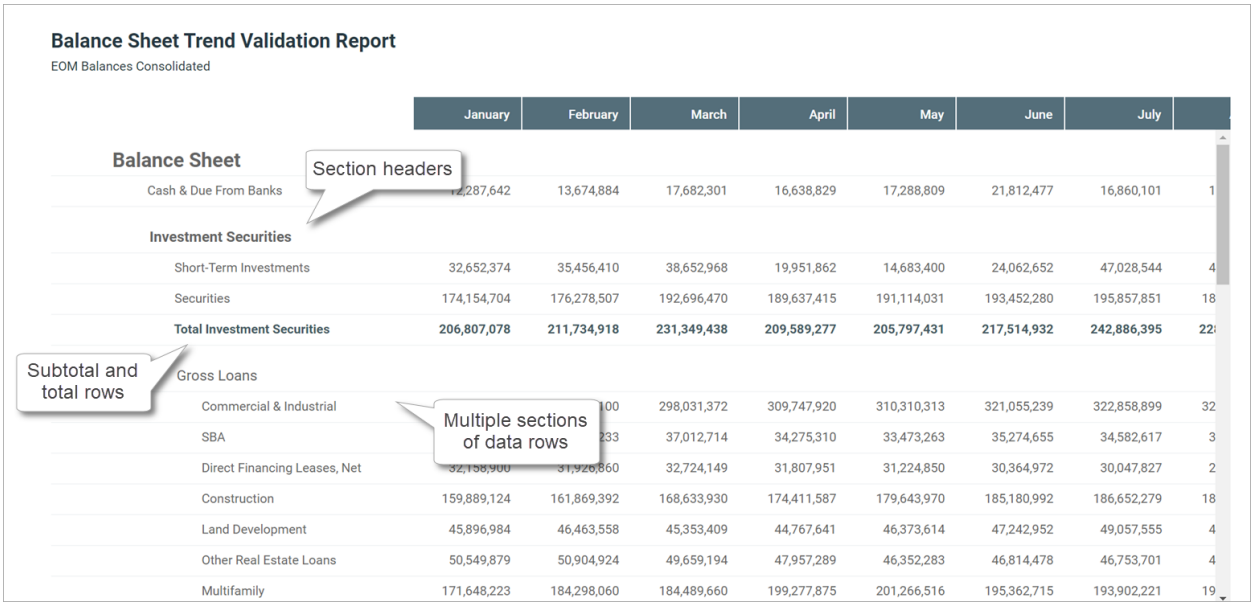
If any web reports reference the deleted filter, these reports will display an error about the missing global filter. You must edit the reports to remove the reference in order to refresh the reports again.

6

Managing Fixed Row Structures

Fixed row structures can be used to define data sections for a web report, including section headers, data rows, subtotals, and totals. Fixed row structures are defined separately so that you can reuse them with different web reports, and so that you can update the row structure in one place and have the changes propagate to all reports that reference the structure.

Fixed row structures can be used with "custom" web reports created in the Report Builder, and with web report templates provided by installed Axiom products. The fixed row structure defines the data sections in the report, while the web report defines other report properties such as the data columns, filters, and drilling options.



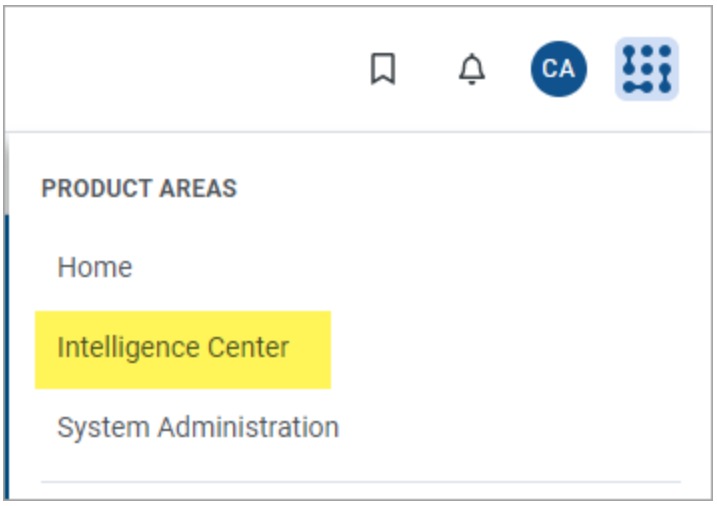
	January	February	March	April	May	June	July
Balance Sheet							
Cash & Due From Banks	12,287,642	13,674,884	17,682,301	16,638,829	17,288,809	21,812,477	16,860,101
Investment Securities							
Short-Term Investments	32,652,374	35,456,410	38,652,968	19,951,862	14,683,400	24,062,652	47,028,544
Securities	174,154,704	176,278,507	192,696,470	189,637,415	191,114,031	193,452,280	195,857,851
Total Investment Securities	**206,807,078**	**211,734,918**	**231,349,438**	**209,589,277**	**205,797,431**	**217,514,932**	**242,886,395**
Gross Loans							
Commercial & Industrial			298,031,372	309,747,920	310,310,313	321,055,239	322,858,899
SBA			37,012,714	34,275,310	33,473,263	35,274,655	34,582,617
Direct Financing Leases, Net			32,724,149	31,807,951	31,224,850	30,364,972	30,047,827
Construction	159,889,124	161,869,392	168,633,930	174,411,587	179,643,970	185,180,992	186,652,279
Land Development	45,896,984	46,463,558	45,353,409	44,767,641	46,373,614	47,242,952	49,057,555
Other Real Estate Loans	50,549,879	50,904,924	49,659,194	47,957,289	46,352,283	46,814,478	46,753,701
Multifamily	171,648,223	184,298,060	184,489,660	199,277,875	201,266,516	195,362,715	193,902,221

Example report using a fixed row structure

You can define as many different fixed row structures as you need. A row structure can be used with any web report where the structure's row dimensions are compatible with the report's columns, filters, drilling options, and any other report property that impacts queried data. Row structures can be created, edited, and deleted using the Intelligence Center.

To access the Intelligence Center:

- Click the Syntellis icon in the Navigation bar. From the Area menu, select **Intelligence Center**.



Fixed row structures are not file-based—they are stored directly in the database. There is no file type or library folder for fixed row structures, and you cannot see them in Axiom Explorer. The only place to view and manage fixed row structures is using the Intelligence Center.

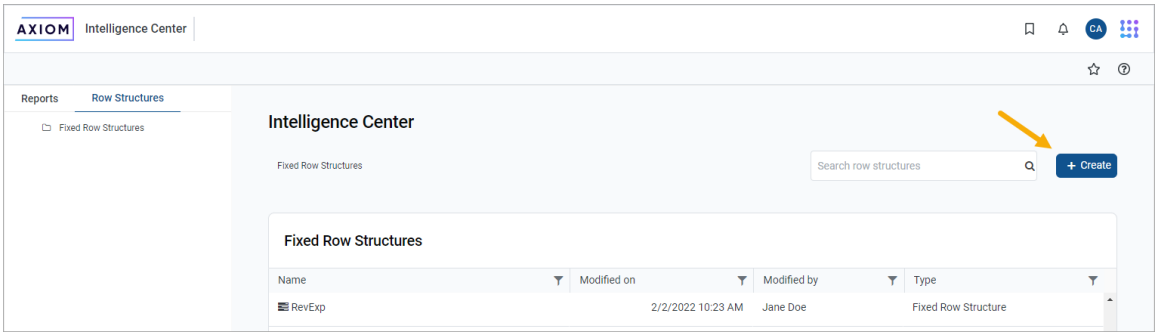
Creating fixed row structures

You can create new fixed row structures as needed for use in web reports.

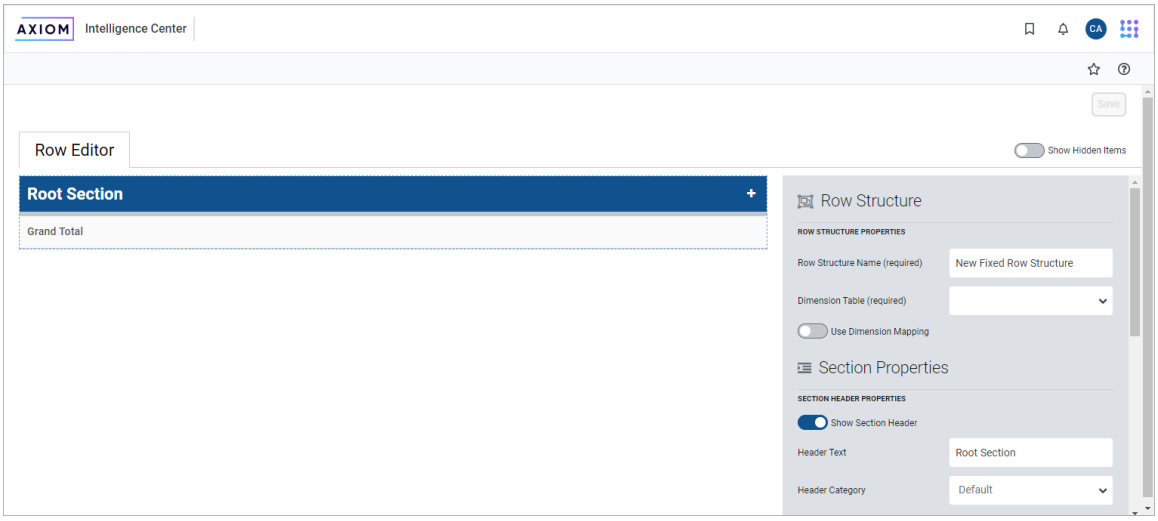
In order to create a fixed row structure, you must be an administrator or have the **Create Web Reports** security permission. If you do not have permission to create web reports, then the option to create a new fixed row structure will not be available in the Intelligence Center.

To create a new fixed row structure:

1. In the Intelligence Center, select the **Row Structures** area from the left-hand panel, then click **Create**.



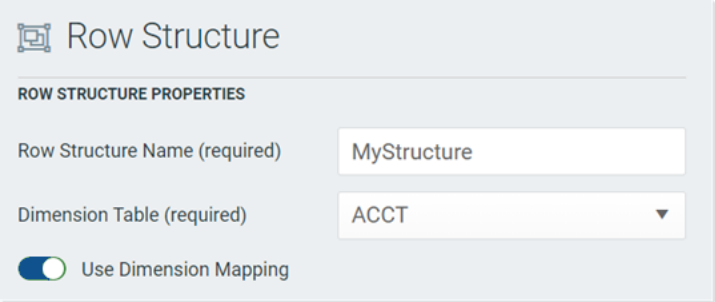
The row structure editor opens in the current browser tab, showing a new blank row structure. The row structure starts with just a top-level section header and a grand total row.



Example new blank row structure

2. In the top of the right-hand panel, complete the following required properties for the row structure:

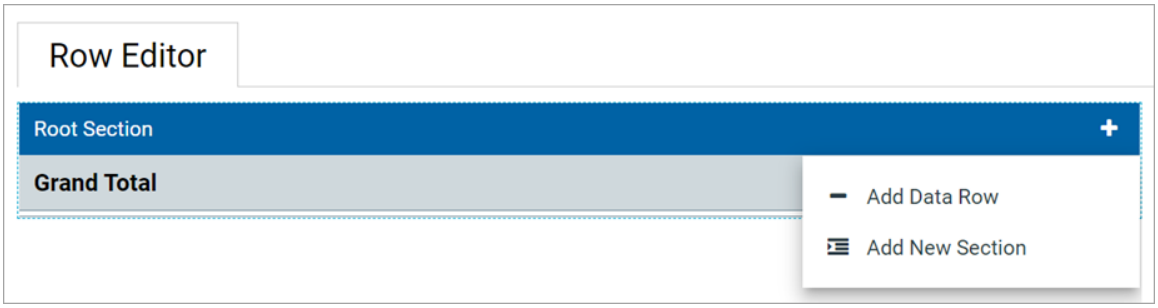
Item	Description
Row Structure Name	Enter the name of the row structure. The name identifies the row structure so that users can select it when creating a new fixed report.
Dimension Table	Specify the dimension table to use for the Filter Wizard when defining row data. For example, if rows will be defined using accounts or account groupings, select the ACCT table.
Use Dimension Mapping	Enable this toggle switch if you want to map specific items in the dimension table to specific rows in the structure. When using dimension mapping, all row data is defined at the key column level of the dimension table, and each dimension item can only be assigned to a single row. The toggle switch shows as green when enabled and as gray when disabled. If this option is not enabled, then row data is determined by defining filter criteria statements at the row and section level. For more information, see Using dimension mapping versus row filters in a fixed row structure.



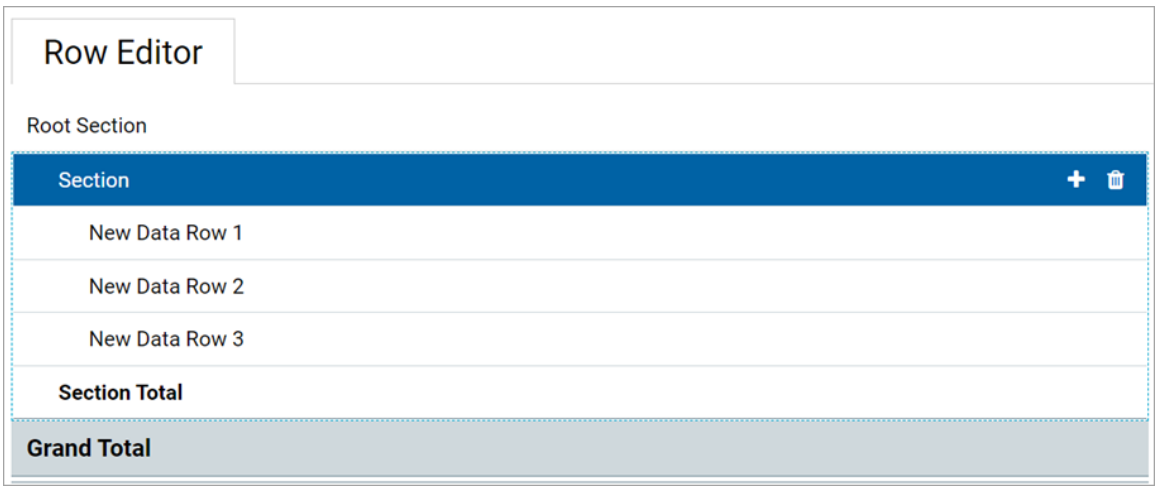
Example required properties with dimension mapping enabled

Once these items are completed, you can use the **Save** button to save the row structure.

3. In the left-hand row editor, add sections and data rows as desired to create the overall row structure. Think of the Root Section as the overall "wrapper" in which all row sections are placed. To create the first row section, click the plus icon on the **Root Section** header and then select **Add New Section**.



Your row structure will now look like this:



You can then continue to add data rows or additional sections:

- **To add a section**, select the section header where you want to add the section, then click the plus icon > **Add New Section**. The new section is added as a subsection to the current section. By default, all new sections contain a section header row, three data rows, and a total row. You can add or remove data rows as needed.
- **To add a data row within a section**, select the section header where you want to add the data row, then click the plus icon > **Add Data Row**. The new data row is added to the current section.

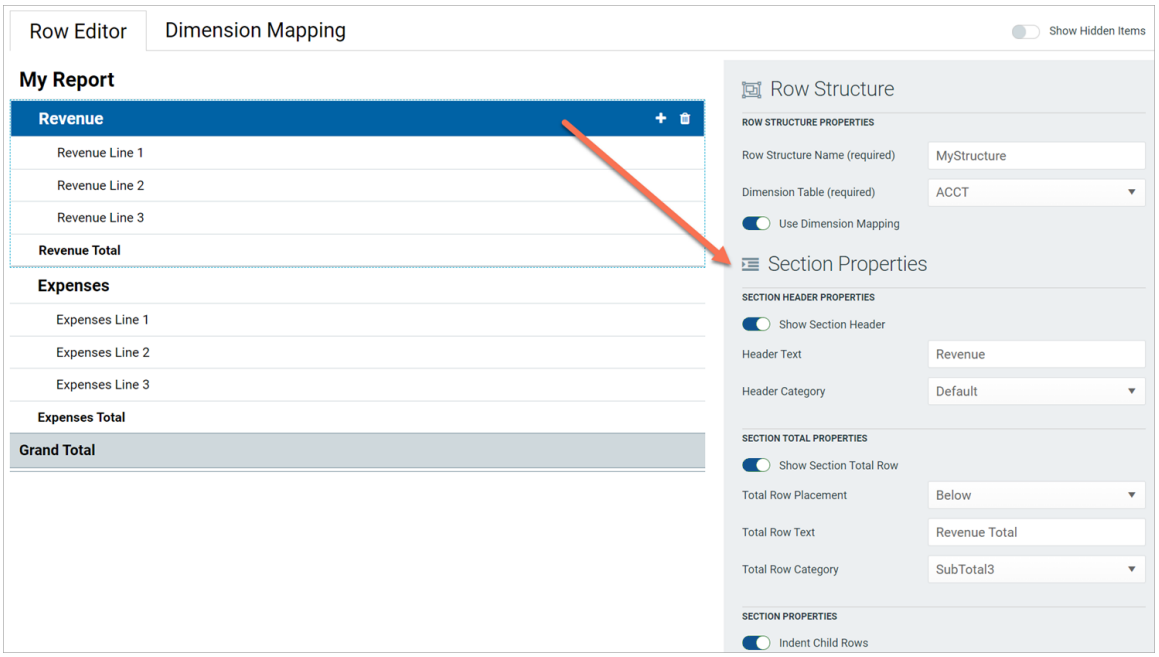
When you add a new data row or section, it is always added at the bottom of the current section. You can drag and drop the row or section to a different location within the section as needed (but not to a different section).

If a data row or a section is not needed, select the row or section header and then click the trash can icon. The row or section is deleted from the row structure.

NOTE: Header rows and total rows cannot be deleted from a section. The trash can icon on a section header row is used to delete the entire section, not the header row. If you do not want a particular section to display a header row or a total row, you can hide these rows on a per section basis using the Section Properties.

4. For each section in the report—including the Root Section—configure the properties for that section. To configure a section, select the section header and then complete the **Section Properties** in the right-hand panel. The section properties control the following:
   - Visibility, text, and style of the section header row
   - Visibility, text, placement, and style of the section total row
   - Whether data rows are indented from the parent section
   - Whether section data is added or subtracted when calculating the parent total
   - An optional data filter to apply to all data rows in the section (only available if the structure does not use dimension mapping)

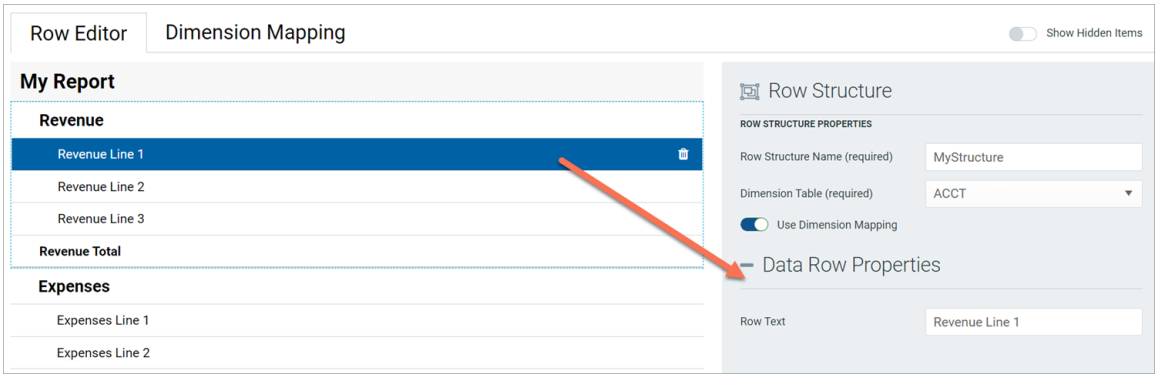
   For more information on all of the section properties, see Section properties.



In most cases, the row structure immediately updates to reflect section properties that affect the display. For example, if you define header text, that text is immediately shown on the row structure. However, if you hide the section header row, the row will continue to display in the row structure unless you disable the option **Show Hidden Items**. This option is located at the top right of the row editor, under the Save button. By default, the row editor continues to show hidden section headers so that you can use the Add Data Row and Add New Section actions on the header row.

5. For each data row in the report, configure the properties for that row. To configure a row, select the row and then complete the **Row Properties** in the right-hand panel.

   At minimum, the row properties define the label text for the row. If the structure does not use dimension mapping, then the row properties also define a data filter to determine the data to be shown on the row. For more information on defining the row properties, see Row properties.



6. If **Use Dimension Mapping** is enabled for the row structure, click the **Dimension Mapping** tab to map dimension elements to each row. This mapping determines the data to be shown on each row, instead of defining a filter. For more information on mapping dimension elements, see Using the Dimension Mapping editor.
7. Click **Save** to save the row structure.

The new row structure can now be used when creating or editing web reports.

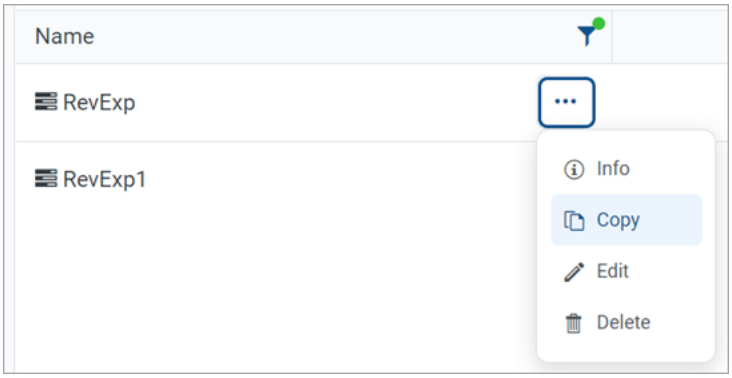
Copying fixed row structures

You can copy existing fixed row structures as needed to create additional fixed row structures.

In order to copy a fixed row structure, you must be an administrator or have the **Create Web Reports** security permission. If you do not have permission to create web reports, then the Copy action is disabled.

To copy a fixed row structure:

1. In the Intelligence Center, select the **Fixed Row Structure** area from the left-hand panel.
2. Locate the fixed row structure that you want to copy, then hover your cursor over the **Name** column to make the three dots icon visible. Click the icon then select **Copy** from the menu.



3. In the **Copy Fixed Row Structure** dialog, enter a **Name** for the new fixed row structure, then click **OK**. By default, the name is **Copy of *OriginalName***.

The fixed row structure is copied with the specified name. You can now open this fixed row structure for editing.

Editing fixed row structures

Any user can edit a fixed row structure. The **Create Web Reports** permission is not required.

Keep in mind that when a row structure is assigned to a report, that report always uses the most current version of the row structure. Any edits that you make to a row structure are immediately available in any reports that use the row structure.

To edit a fixed row structure:

1. In the Intelligence Center, select the **Fixed Row Structure** area from the left-hand panel.
2. Locate the fixed row structure that you want to edit, then click on the row structure name to open it.

   TIP: You can also select **Edit** from the actions menu (using the three dots icon) to edit the fixed row structure.

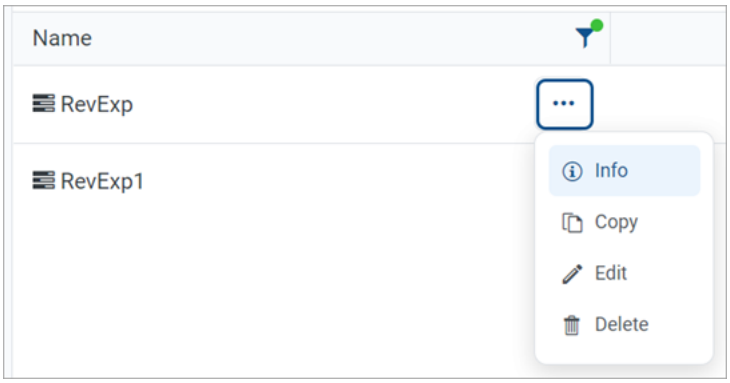
   The row structure opens in the row structure editor, in the current browser tab.
3. Using the row structure editor, make changes to the row structure as needed.
4. Click **Save** to save your changes.

Changing fixed row structure names and descriptions

You can rename a fixed row structure or change its description. If existing reports use the fixed row structure, those reports will continue to reference the renamed structure.

To change a fixed row structure name and/or description:

1. In the Intelligence Center, select the **Fixed Row Structure** area from the left-hand panel.
2. Locate the fixed row structure that you want to edit, then hover your cursor over the **Name** column to make the three dots icon visible. Click the icon then select **Info** from the menu.



   The Information panel opens along the right-hand side of the page.
3. In the Information panel, edit the fixed row structure **Name** or **Description** as needed, then click **Apply**.

   The name can be up to 250 characters, and the description can be up to 2000 characters.

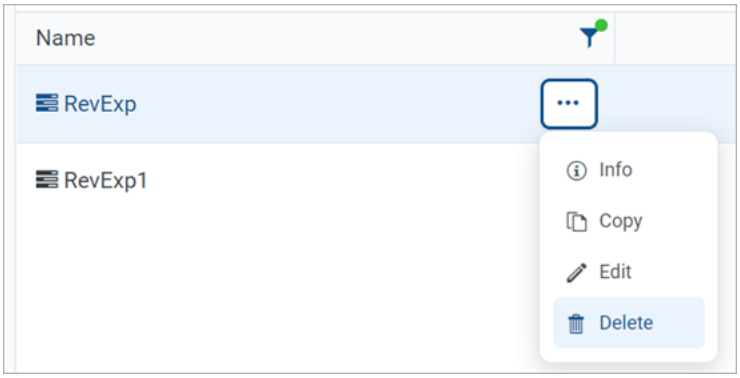
Deleting fixed row structures

Any user can delete a fixed row structure. The **Create Web Reports** permission is not required. If the fixed row structure was used by any web reports, those reports will no longer function correctly until they are edited to use a different fixed row structure.

IMPORTANT: If the deleted fixed row structure was used by a web report built from a template, that report will no longer work. Currently, there is no way to edit the row structure assignment for template-based reports. If the report is still needed, it must be re-created from template with a different fixed row structure.

To delete a fixed row structure:

1. In the Intelligence Center, select the **Fixed Row Structure** area from the left-hand panel.
2. Locate the fixed row structure that you want to delete, then hover your cursor over the **Name** column to make the three dots icon visible. Click the icon then select **Delete** from the menu.



3. When you are prompted to confirm that you want to delete the structure, click **OK**.

The structure is deleted from the system and no longer displays in the Intelligence Center.

Using the Row Editor

Using the Row Editor, you can define fixed row structures for use in web reports. Fixed row structures define the following:

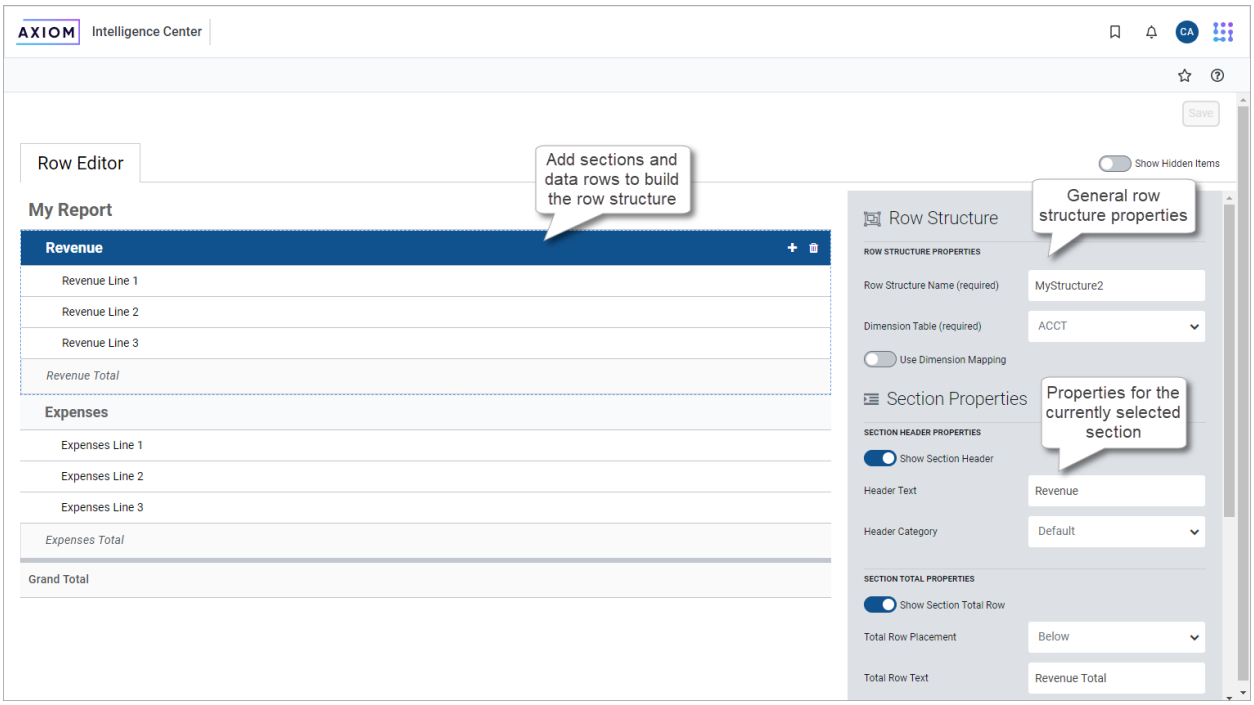
- The sections to be displayed in the report, including section titles and subtotal rows
- The data rows to be displayed within each section

When you use the Intelligence Center to create a new fixed row structure or to edit an existing fixed row structure, it opens in the fixed row structure editor.

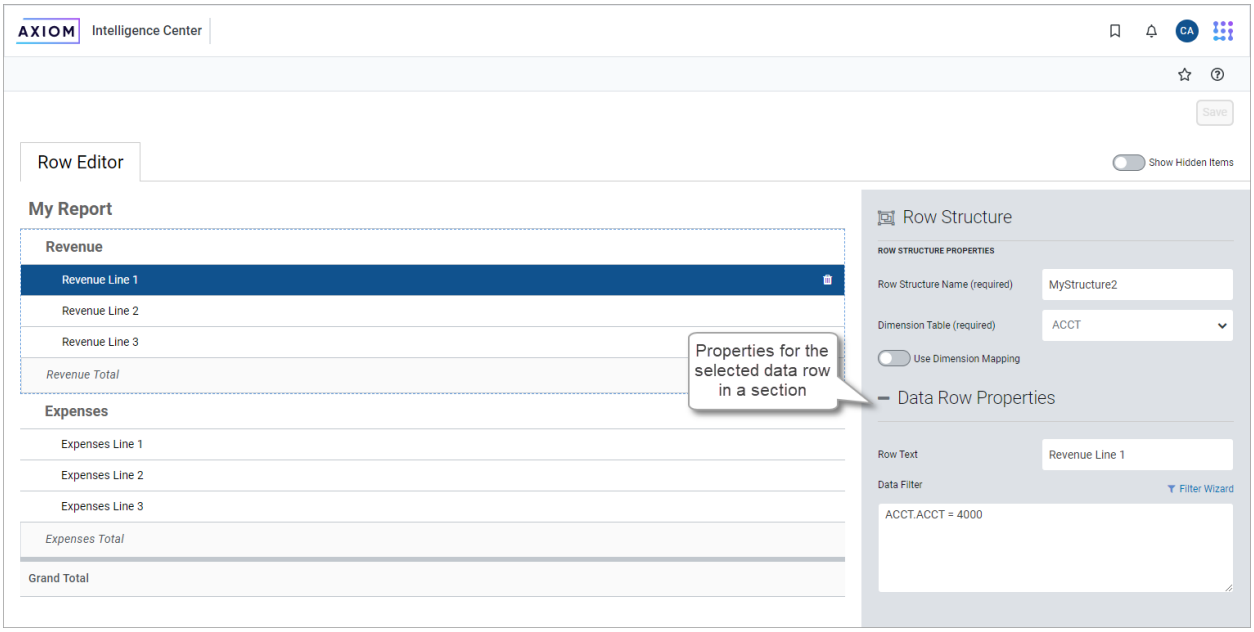
▶ Overview

By default, the Row Editor consists of two primary areas:

- The section editor on the left-hand side, where you can add, reorder, and remove sections and data rows
- The property editor on the right-hand side, where you can define properties for the overall row structure, the selected section, or the selected row

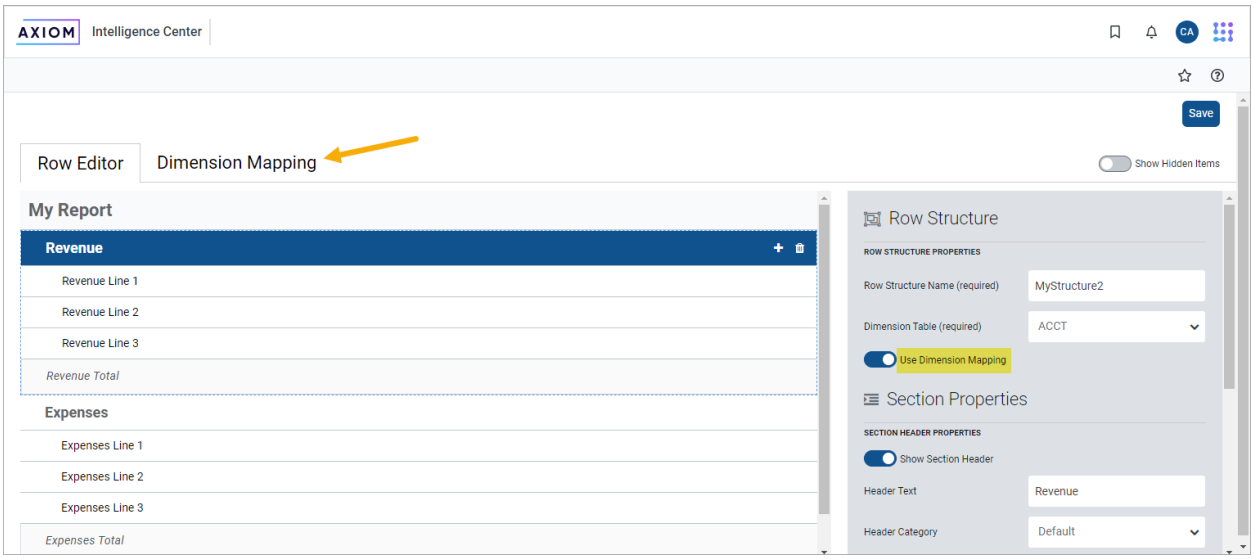


Row structure editor with a selected section



Row structure editor with a selected data row

If the row structure is configured to **Use Dimension Mapping** to define the row data, then another area is available via the **Dimension Mapping** tab. You can use the Dimension Mapping area to map dimension items to individual data rows. For more information on using dimension mapping, see Using the Dimension Mapping editor.



Row structure editor with Dimension Mapping tab

To save the row structure after making changes, use the **Save** button located at the top right of the editor.

Certain parts of the row structure can be configured as hidden, such as section header rows or total rows. By default, these hidden items no longer display in the editor. If you need to view these items so that you can work with them and configure them, you can toggle the option **Show Hidden items** at the top right of the editor.

Using dimension mapping versus row filters in a fixed row structure

When you build a fixed row structure, there are two different ways to define the data to be shown each in row:

- **Filters**: Each row can have a filter criteria statement that defines the data for that row. For example, `Acct.Acct=4100` or `Acct.Category='Revenue'`.
- **Dimension mapping**: Each row can be assigned one or more items in a specified dimension. For example, if Acct is the specified row dimension, then you can view the list of accounts and map them to specific rows in the report as needed.

The filter option is the most flexible way to build a fixed row structure, because:

- You can use any valid filter criteria statement to define the data in each row, including compound statements using AND or OR, and referencing any table (not just the specified dimension table).
- You can define filters at the section level, which then combine with all row-level filters in the section.
- You can repeat dimension elements within the row structure—for example, to create multiple sections that show revenue for different regions or lines of business.

However, because the filter option is more flexible, it also requires a more advanced level of knowledge about your data structures. You must take care not to create invalid or conflicting filters, and make sure that your filters result in the data that you want to display in the report.

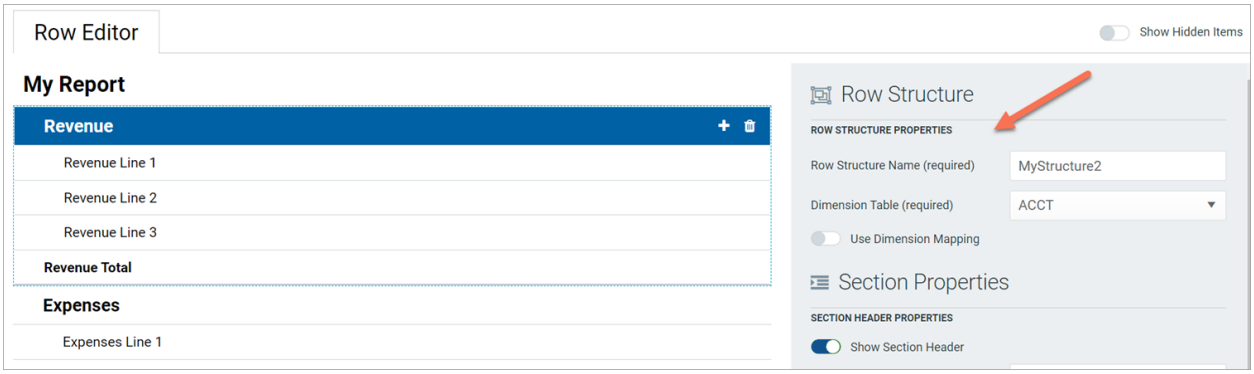
In contrast, the dimension mapping option is the easiest to set up, because:

- You are presented with a full list of all items in the specified dimension, which you can search and filter as needed.
- To assign an item to a row in the report, you simply select the item and then click the arrow button to move it over to the row. Each row can be assigned as many items in the dimension as needed.
- It is very easy to see exactly which dimension items will display on each row, and to see which items have not yet been assigned to rows.

However, the dimension mapping option is less flexible. Rows can only display data from the specified row dimension, and each item in the dimension can only be assigned to a single row.

Row structure properties

The following required properties at the top of the right-hand pane apply to the entire row structure.



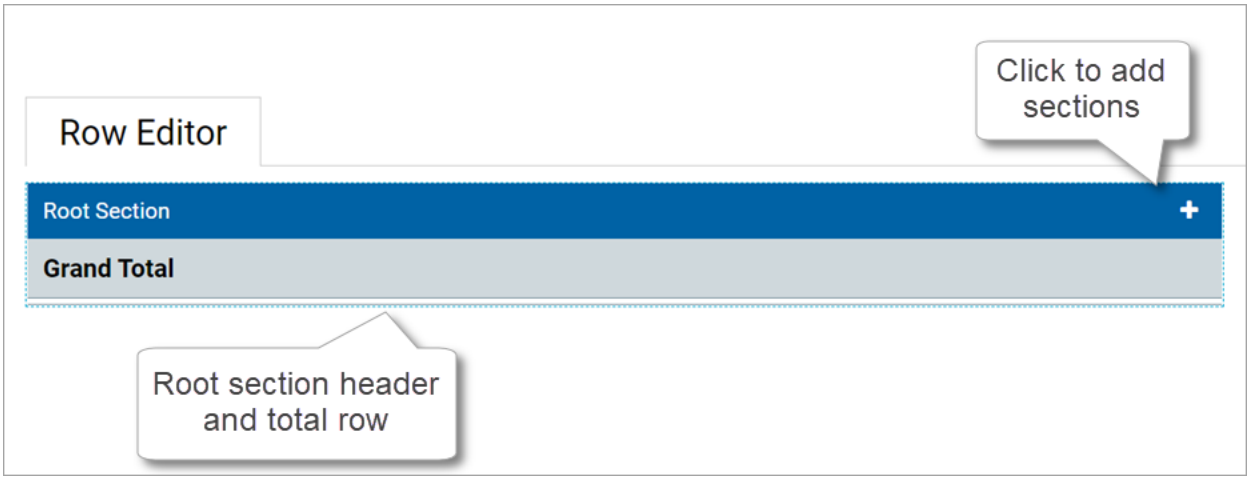
Example Row Structure properties area

Item	Description
Row Structure Name	The name of the row structure. The name identifies the row structure so that it can be selected when creating or editing a web report.

Item	Description
Dimension Table	The primary dimension table to be used on the data rows. You can select any reference table in your system. This selection is used as follows: • By default, it determines the table available to the Filter Wizard when defining filters for sections and data rows. For example, if the dimension table is Acct, then you can use the Filter Wizard to build filters based on Acct. **NOTE:** When using filters to define the data in sections and rows, the dimension table is simply a default table. If you want to define a filter using a different dimension, then you can manually enter a filter criteria statement using that dimension. • If **Use Dimension Mapping** is enabled, then it determines the dimension table for the row mappings. For example, if the dimension table is Acct, then you can map one or more accounts to each data row. In this case, data rows can only use the dimension table.
Use Dimension Mapping	Specifies whether the data in data rows is defined by using filters or by using dimension mapping. By default, this is disabled, so data is defined using filters. If instead you want to use dimension mapping for the rows, click the toggle switch to enable this option. The toggle switch shows as green when enabled and as gray when disabled. If **Use Dimension Mapping** is enabled, the row structure editor updates as follows: • A new tab named **Dimension Mapping** becomes available next to the **Row Editor** tab. You can use this tab to define dimension mappings for the rows. Typically, you should define the sections and rows in the structure first, then go to the **Dimension Mapping** tab to assign mappings to each row. • The **Filter** fields in the **Section Properties** and the **Row Properties** become hidden, because they do not apply when using dimension mapping. If a filter is defined for a section or a row before dimension mapping is enabled, the filter is retained in the properties (assuming it was saved) but it will be ignored in reports. For more information on the differences between using filters or dimension mapping to define data rows, see Using dimension mapping versus row filters in a fixed row structure.

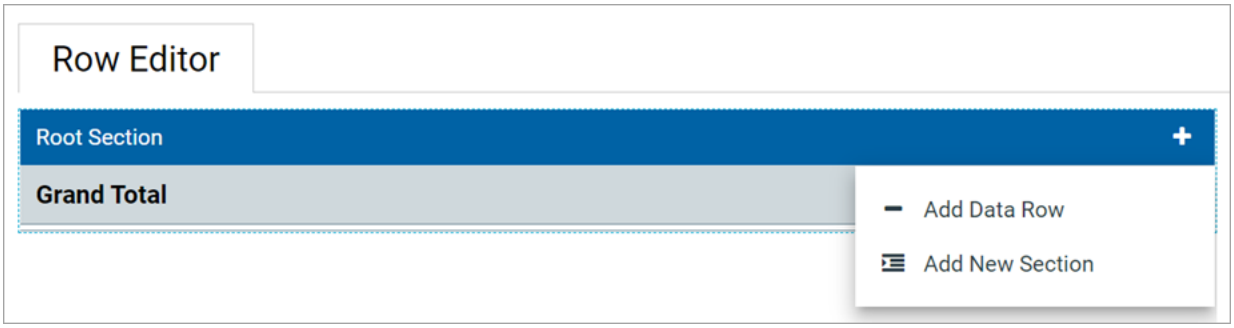
Adding, removing, and reordering sections

Using the **Row Editor** tab, you can build your row structure by adding, removing, or reordering sections. Each row structure starts with a top-level root section that includes an optional header and an optional grand total.



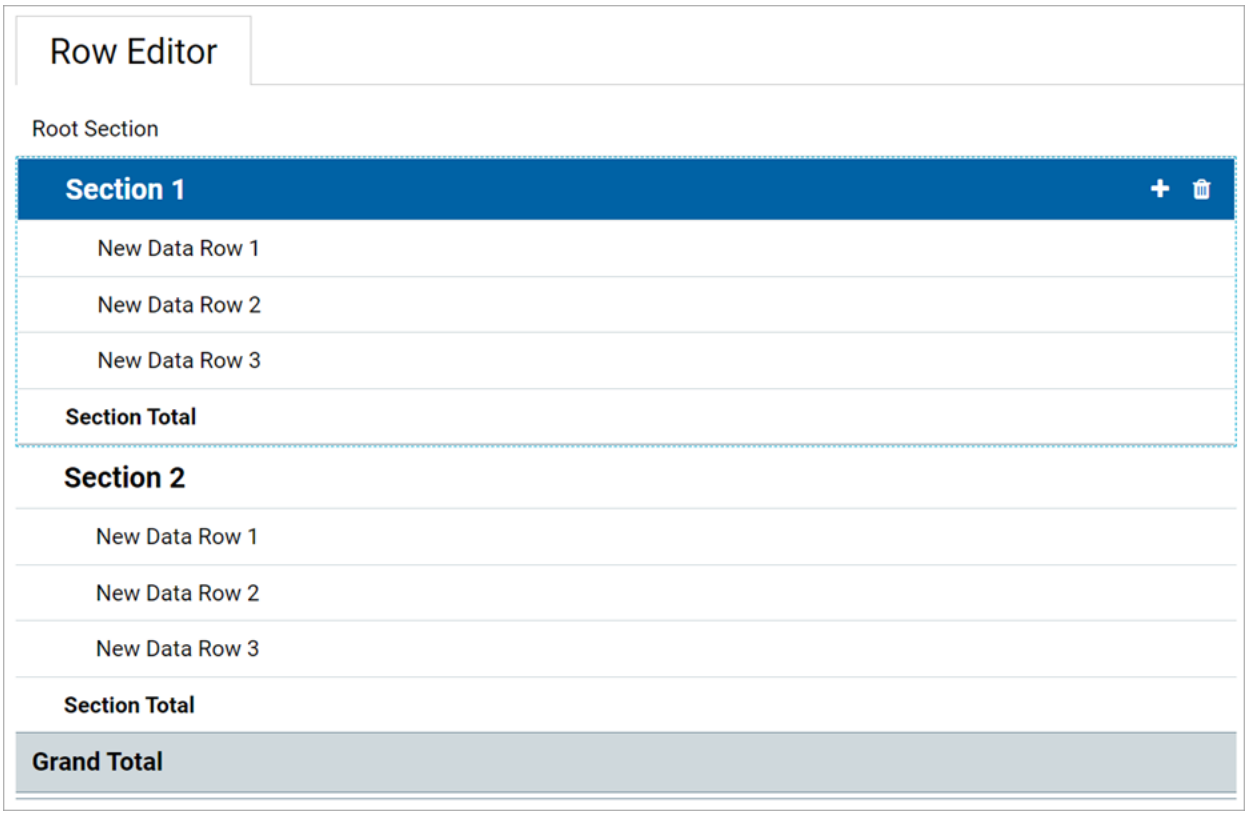
Row editor with starting root section

To add new sections to the row structure, select the section header row—the **Root Section** row—and then click the plus sign and select **Add New Section**.



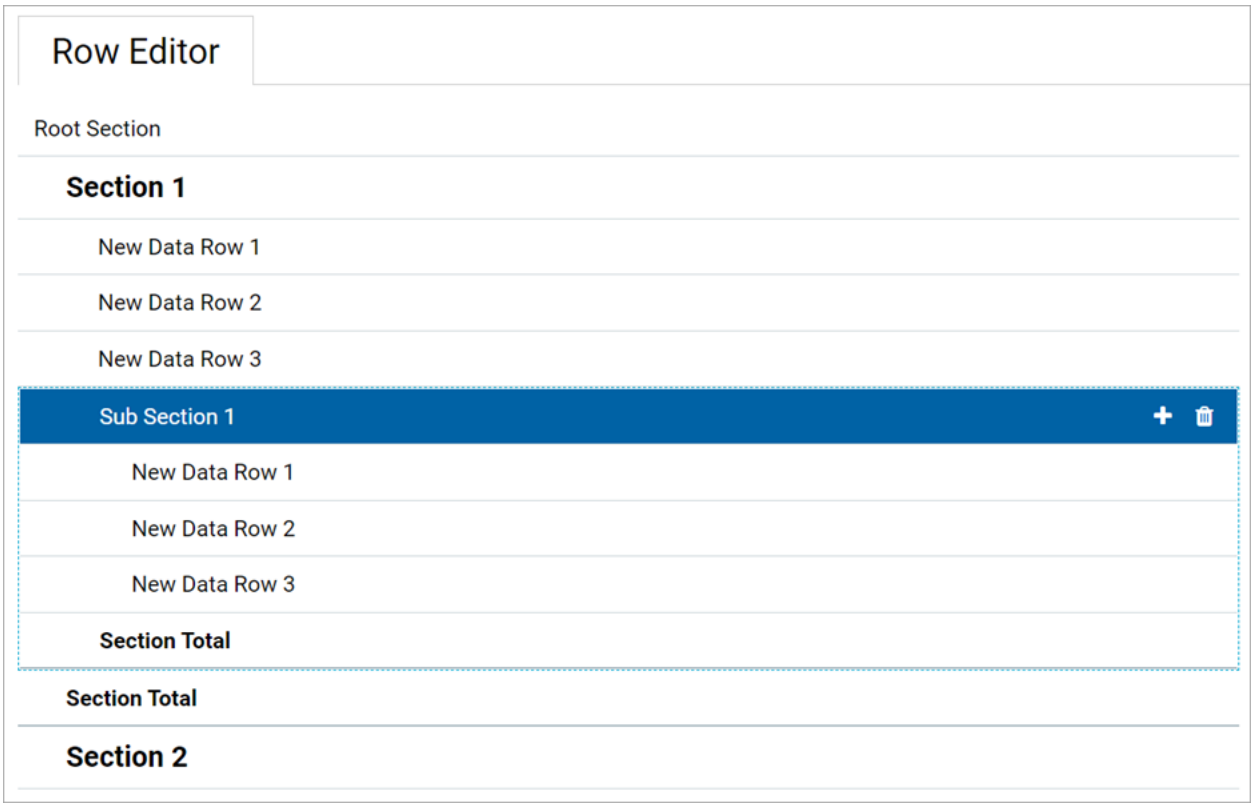
Option to add a new section

The new section is added within the root section. You can continue to add as many sections as needed at this level.



Row editor with two newly added sections

To add subsections within a section, select the section header row for any section, and then click the plus sign and select **Add New Section**. The new subsection is added to the current section. You can nest as many section levels as you need by adding subsections to sections.



Row editor with newly added subsection

Newly added sections use default text and styling, which can be configured for each section. Each newly added section consists of the following by default:

- A **header row** to display optional header text for the section. If you do not want a header row to display for a particular section (including the root section), you can hide it by disabling **Show Section Header** when configuring the section properties.
- Three **data rows** to display queried data in the section. You can add or remove data rows as needed.
- A **total row** to display the totaled data for the section. If you do not want a total row for this section (including the root section), you can hide it by disabling **Show Section Total Row** when configuring the section properties.

Once you have added sections, you can make further section changes as follows:

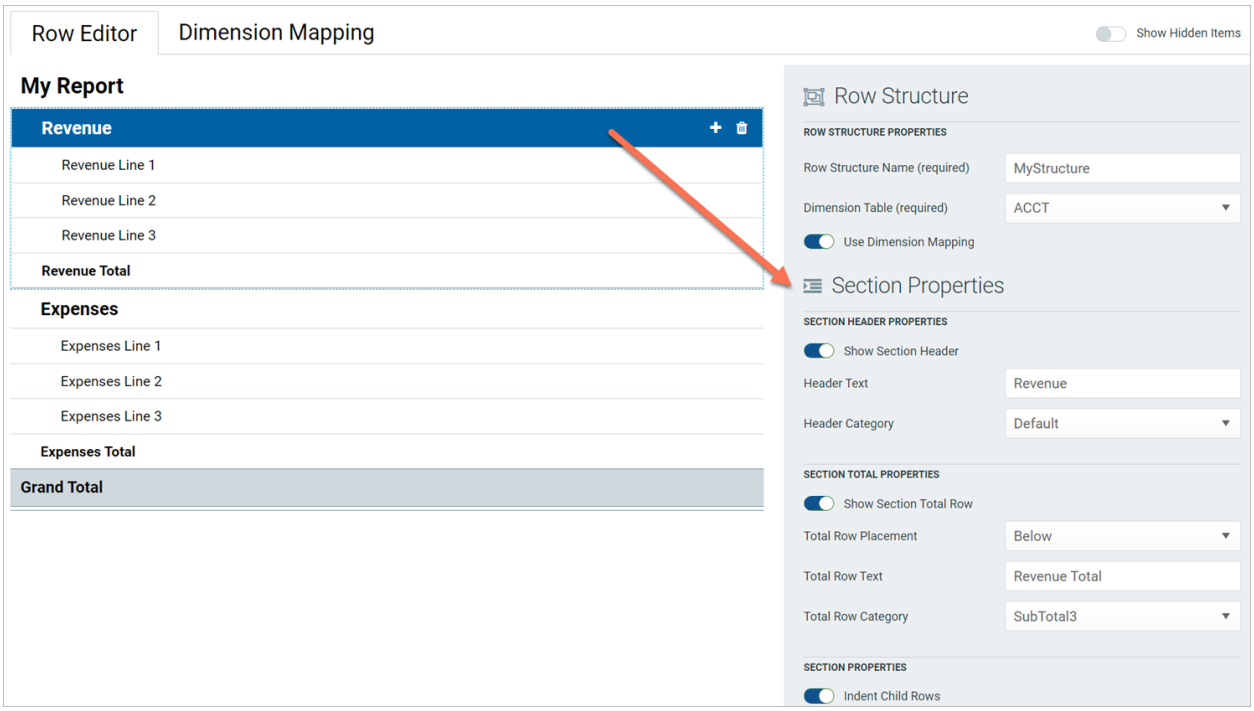
- **To reorder sections**: Select the header row of a section and then drag and drop it to a new location within the same level of the structure. For example, if you have three sections at the same level, you can drag and drop these three sections to change their order. But you cannot drag and drop one of these three sections to a lower level or a higher level.

- **To delete a section**: Select the header row of the section and then click the delete icon (trash can). The section and all of its subsections are deleted. Note that the root section is required and cannot be deleted.

  IMPORTANT: Make sure you no longer need the section before clicking the delete icon. The section will be deleted immediately with no confirmation prompt. If you deleted a section by accident, then you can exit the row structure editor without saving, but you will also lose any other unsaved changes that you have made during the current session.

Section properties

To configure the properties for a section, select the section header and then complete the **Section Properties** in the right-hand pane.



Example Section Properties area

Section Header Properties

Item	Description
Show Section Header	Specifies whether the section header row is visible when the row structure is used in a report. By default, this option is enabled, so the section header row is visible. If you do not want this section to have a header row, disable this option. The toggle switch shows as green when enabled and as gray when disabled. If this option is disabled, then the remaining section header properties become hidden because they do not apply. Note that you may want to define header text before disabling the option, to make it easier to identify the section when working within the row structure editor. **NOTE:** If you hide the section header, then you will no longer be able to select the header row in the editor for purposes of adding rows or subsections, configuring the section, reordering the section, or removing the section. If you need to work with the section header row, you can enable the option **Show Hidden Items**, located at the top right of the editor. This will cause all hidden items to show in the row structure, so that they can be selected and configured.
Header Text	The text to display on the section header row. By default, this is set to "Root Section" for the root section header and "Section" for all other newly added sections. The header text should be edited to reflect the data shown in this section.
Header Category	The style to use on the section header row. The style determines display attributes such as font size and font weight. Select one of the following: • **Header1** through **Header6**: These styles apply specific formatting to the header row. Although Header1 is designed to be used as the top-level section header, followed by Header2, and so on, you can assign these styles to any section header row as needed. • **Default**: Axiom automatically applies the appropriate header style depending on the section's placement in the row structure hierarchy. The header row for the root section uses Header1, sections in the next level use Header2, and so on. By default, the header category is set to **Header1** for the root section header, and **Default** for all newly added sections.

Section Total Properties

Item	Description
Show Section Total Row	Specifies whether the section total row is visible when the row structure is used in a report. By default, this option is enabled, so the section total row is visible. If you do not want this section to have a total row, disable this option. The toggle switch shows as green when enabled and as gray when disabled. If this option is disabled, then the remaining section total properties become hidden because they do not apply.
Total Row Placement	The location of the total row in the section, either **Below** the data rows or **Above** the data rows. The total row is located below the data rows by default.
Total Row Text	The text to display on the section total row. By default, this is set to "Grand Total" for the root section total and "Section Total" for all other newly added sections.
Total Row Category	The style to use on the section total row. The style determines display attributes such as font size, font weight, shading, and borders. Select one of the following: • **Grand Total** or **Total**: These styles are intended to be used for "final" total rows. Both styles use shading and top and bottom borders. The bottom border of the Grand Total is a double border. • **SubTotal1** through **SubTotal4**: These styles are intended to be used for subtotal rows. These options provide varying combinations of bold and regular text, shading or no shading, and border or no border. By default, the total row category is set to **Grand Total** for the root section total row, and **Subtotal3** for all newly added sections.

Section Properties

Item	Description
Indent Child Rows	Specifies whether the rows in this section are aligned with the section header row or indented. By default, this is enabled, so the rows are indented. If instead you want the rows to be aligned with the section header row, disable this option. The toggle switch shows as green when enabled and as gray when disabled.

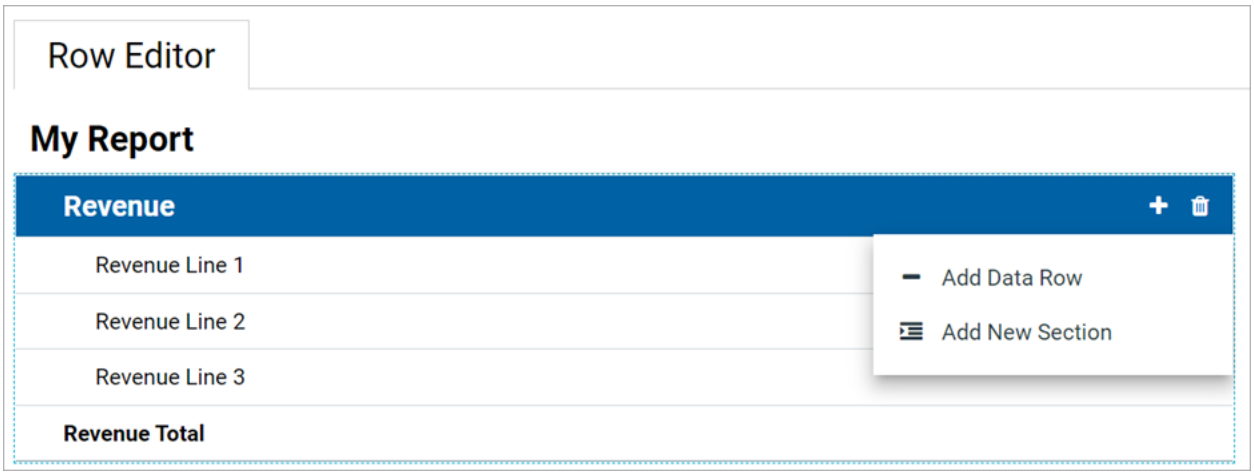
Item	Description
Parent Total Row Behavior	Specifies how the data in this section is treated when computing the total row of the parent section. Select one of the following: • **Add**: The data in this section is added when computing the parent total. This is the default behavior. • **Subtract**: The data in this section is subtracted when computing the parent total. • **Ignored**: The data in this section is ignored when computing the parent total. You might do this if the rows in this section contain supporting detail that should not impact the overall totals. Although this option displays on the root section, it does not apply because the root section does not have a parent section. For example, imagine that you have a parent section with two subsections. Subsection A totals 5000, and Subsection B totals 1000. • If both subsections are set to add, then the total of the parent section is 6000. • If Subsection A is set to add but Subsection B is set to subtract, then the total of the parent section is 4000. • If Subsection A is set to add but Subsection B is set to ignore, then the total of the parent section is 5000.
Section Data Filter	Optional. A data filter to apply to all of the data rows in this section, including any subsections. This is intended to be used when all rows in the section need to be filtered by a particular dimension or grouping, so that you do not need to repeat that dimension grouping on each individual data row. Only applies when **Use Dimension Mapping** is disabled. Enter the filter criteria statement to apply to the data rows in this section. Section data filters use normal filter syntax for Axiom. Although you can use the Filter Wizard to create the filter criteria statement, it is limited to creating filters based on the specified dimension table for the row structure. In many cases the section data filter needs to use a different dimension, so you must manually create the filter criteria statement. For example, imagine that you want to show revenue accounts in the rows of your report, but you want to split the data into two sections reflecting two different sales regions. You can create two sections and define section filters for each, such as `Dept.Region='East'` and `Dept.Region='West'`. All of the data rows in those sections will be filtered by the specified region in addition to the specific account filters listed on each row.

Adding, removing, and reordering data rows

Using the **Row Editor** area, you can add data rows to a section, remove unneeded rows, and reorder rows. Each data row represents a record of data that you want to query from the database and display within the report.

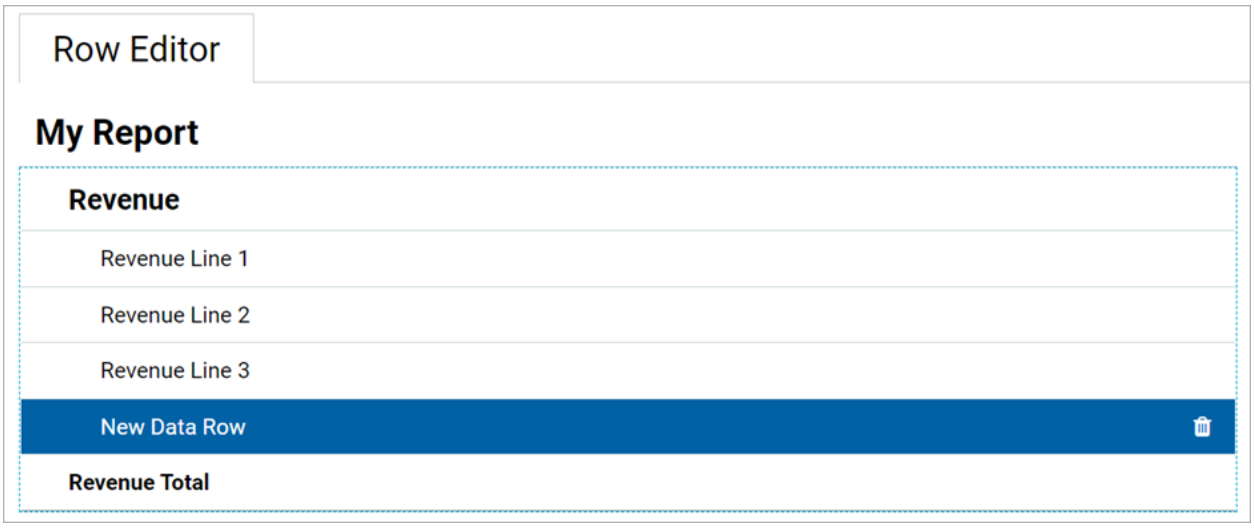
To add new data rows to a section:

- Select the section header row, then click the plus sign and select **Add Data Row**.



Option to add a new data row

The new row is added to the bottom of the section. You can continue to add as many new rows to the section as needed.



Section with a newly added data row

Once you have added data rows, you can make further row changes as follows:

- **To reorder rows**: Select the data row that you want to move, and then drag and drop it to a new location within the same section. For example, if you want a newly added row to be at the top of the section instead of the bottom, then you can drag and drop it to that location. But you cannot drag and drop the row to a different section, not even to subsections of the current section.
- **To delete a row**: Select the data row that you want to delete and then click the delete icon (trash can). The row is deleted.

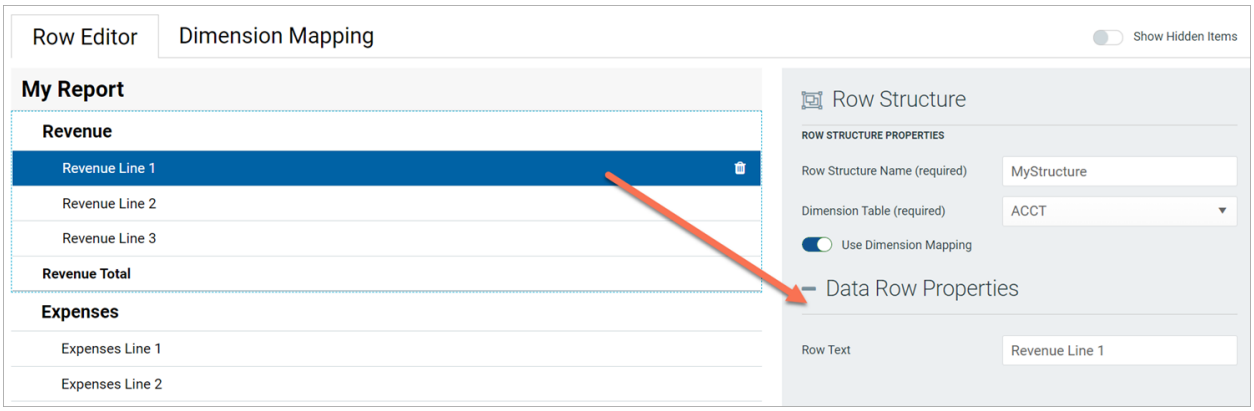
  IMPORTANT: Make sure you no longer need the row before clicking the delete icon. The row will be deleted immediately with no confirmation prompt. If you deleted a row by accident, then you can exit the row structure editor without saving, but you will also lose any other unsaved changes that you have made during the current session.

Only data rows can be individually added, deleted, and reordered. Section header rows and section total rows are not considered to be data rows and are managed as part of the section. Note the following:

- The delete icon on section header rows does not delete the header row; it deletes the entire section. If you do not want a particular section to have a header row, you can configure the section to hide the header row.
- Section total rows do not have delete icons. If you do not want a particular section to have a total row, you can configure the section to hide the total row.
- Section header rows are always located at the top of the section. When you drag and drop a section header row you are moving the entire section, not just the header row. It is not possible to move just the header row.
- Section total rows can be located at either the top or bottom of the section, but not by dragging and dropping. When you configure the section, you can specify the location of the total row.

Row properties

To configure the properties for a data row, select the row and then complete the **Row Properties** in the right-hand pane.



Example Row Properties area

Item	Description
Row Text	The text to display on the data row. By default, this is set to "New Data Row". The row text should be edited to reflect the data shown on this row. For example, if this row is going to display data for the Travel account, the row text should be something like "Travel" or "Account 5000 - Travel".
Data Filter	A filter criteria statement to define the data to query into this row. Only applies when **Use Dimension Mapping** is disabled. If dimension mapping is enabled, then use the Dimension Mapping tab to map the data for this row. Row filters use normal filter syntax for Axiom. You can type the filter, or you can use the Filter Wizard to create a filter based on the specified Dimension Table for the row structure. For example, if the data filter is `Acct.Category='Revenue'`, then this row will display data for all revenue accounts when this row structure is used in a report. The specific data returned will depend on the data columns used in the report, and any other filters applied to the report. Each row's data filter is independent from any other row, and does not need to use the same grouping level or even the same dimension as other rows. For example, one row can be `Acct.Acct=4000`, while another row is `Acct.Category='Marketing'`, and a third row is `Fcst.Acct=670`. However, keep in mind the following: • If you use the Filter Wizard to make the filter, it is limited to the table selected as the **Dimension Table** for the row structure. If you want to use a different table for a particular row, you must manually write the filter. • Although there are no restrictions on the individual row filters, all of the filters used must be compatible with the eventual primary table selected for the report, when the fixed row structure is used in a report.

If the row uses a data filter, then the row's data filter will be combined with any upstream section data filters (using AND). For example, imagine the row structure has sections and rows configured as follows:

Parent Section Filter	`Dept.Company='Company A'`
Current Section Filter	`Dept.Region='US West'`
Row Filter	`Acct.Acct=4000`

Then the data for this row is determined as follows:

```
Dept.Company='Company A' AND Dept.Region='US West' AND Acct.Acct=4000
```

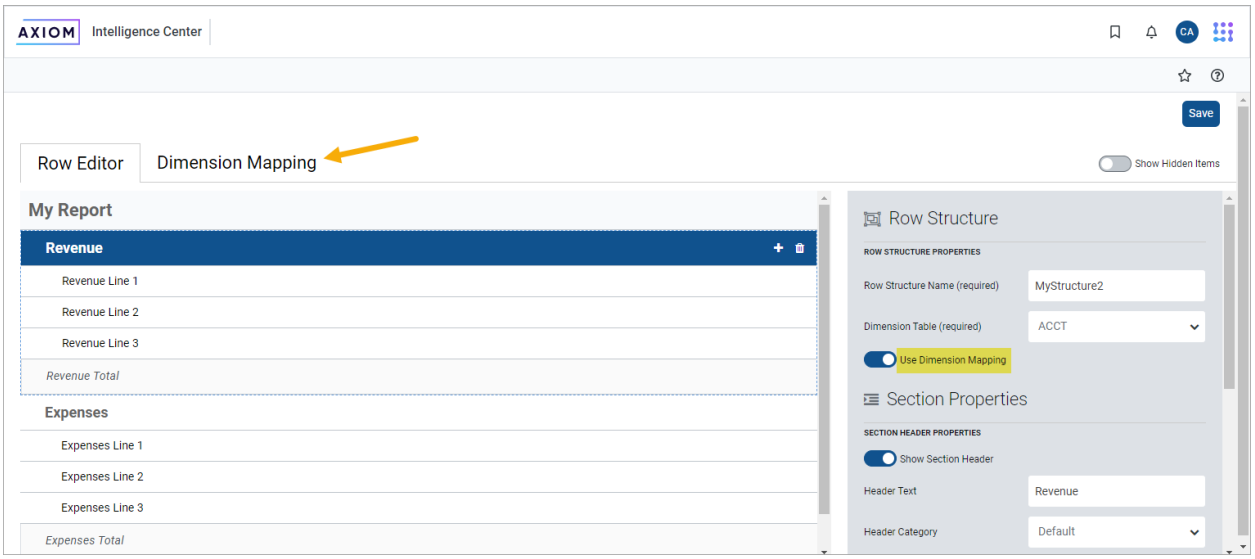
Using the Dimension Mapping editor

Using the Dimension Mapping editor, you can assign dimension items to specific rows of a fixed row structure. When the row structure is used in a web report, the rows will display data for the assigned dimension items.

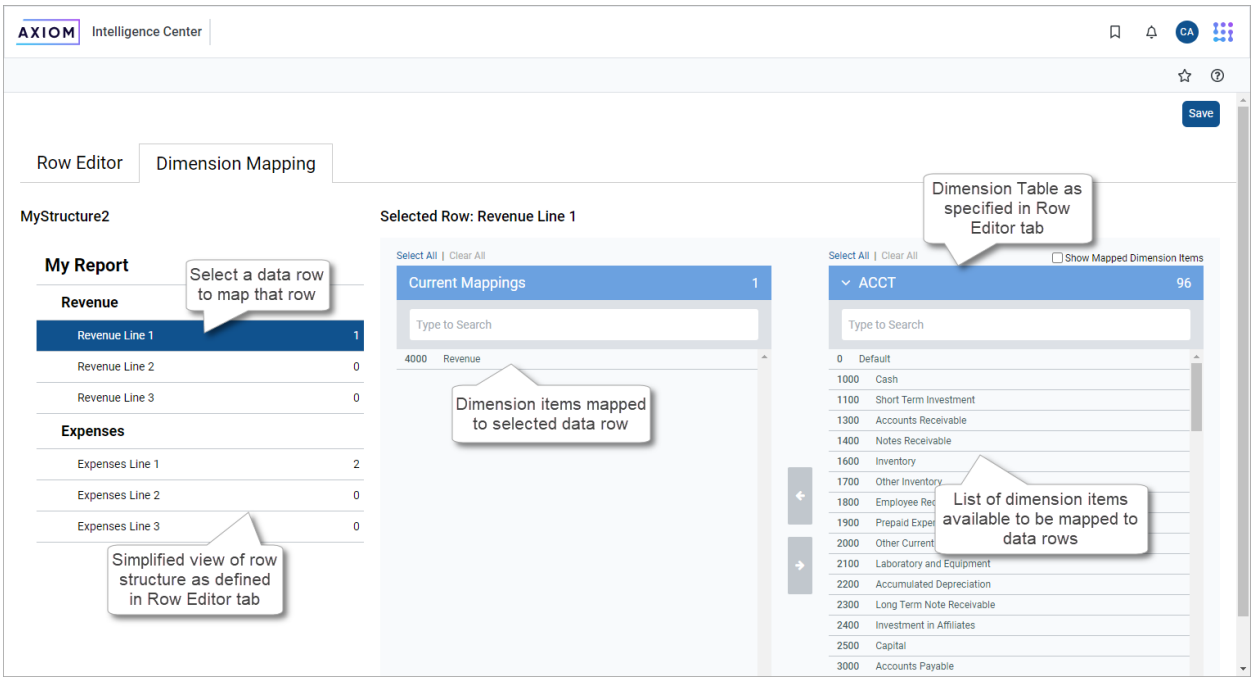
For example, if the row dimension is Acct, you can assign one or more accounts to each row in the row structure. If a row is assigned Acct 4000, then that row will display data for Acct 4000, for each of the columns used in the report.

Dimension Mapping editor overview

The Dimension Mapping editor is only accessible when creating or editing a row structure. If **Use Dimension Mapping** is enabled for the row structure, then a **Dimension Mapping** tab displays next to the **Row Editor** tab. You can click this tab to open the Dimension Mapping editor and assign dimension items to each row.



Dimension Mapping tab available in row structure when Use Dimension Mapping is enabled



Example Dimension Mapping editor

- The left side of the Dimension Mapping editor displays a simplified view of the row structure defined on the **Row Editor** tab. You can select a data row in the row structure in order to map dimension items to that row.
    - Each data row must be assigned at least one dimension item when using dimension mapping. It is not possible to mix use of data filters and dimension mappings.
    - The number to the left of the row label shows how many dimension items have been assigned to that row.
- The two columns on the right side of the Dimension Mapping editor are used to map dimension items.
    - The **Current Mappings** column in the middle of the page shows the dimension items mapped to the currently selected data row.
    - The dimension column on the right side of the page shows the remaining unmapped dimension items. The dimension used for the mappings is determined by the specified **Dimension Table** in the **Row Editor** tab. In this example, the dimension table is **Acct** and the column shows the list of accounts defined in that table.
    - You can use the arrow buttons between the columns to move dimension items from the dimension column to the Current Mappings column and vice versa.

Each dimension item can only be assigned to a single row in the row structure. Once a dimension item is moved to the Current Mappings column, it is removed from the list of unmapped dimension items and cannot be assigned to another row.

NOTE: When building a fixed row structure with large tables (such as the EDS Encounter table) dimension mapping is disabled, as it can cause performance issues. Instead, you can use the filter wizard to define that row in a report. See Specifying the row dimension for a web report for more information.

Assigning dimension items to data rows

Each data row in the row structure must be assigned at least one dimension item. When the row structure is used in a report, the dimension mappings determine what data displays in each row.

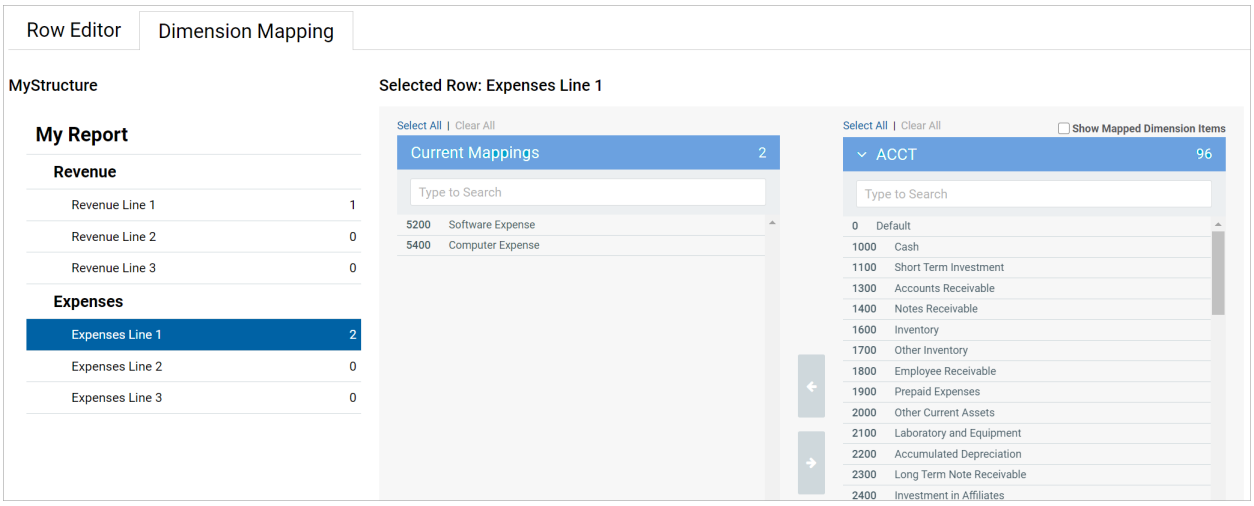
To assign one or more dimension items to a data row:

1. In the row structure on the left side of the page, select the data row that you want to map. If any dimension items are already mapped to this row, those dimension items display in the **Current Mappings** column.
2. In the dimension column on the right side of the page, select the dimension item or items that you want to map to the data row.
    - Click a dimension item once to select it. If you select a dimension item by accident, click it again to de-select it.
    - Note that using the Shift key or the CTRL key to select multiple dimension items at once does *not* work here. You must individually click on each dimension item that you want to assign.

    You can search and filter the dimension list to help find the desired dimension items.
3. Once all of the dimension items that you want to assign are highlighted, click the left arrow to move the selected dimension items to the **Current Mappings** column.

If you want to remove a mapped dimension item from a data row, you can select the item in the Current Mappings column and then click the right arrow to move it back to the dimension column.

In the following example, two accounts have been mapped to the Expenses Line 1 data row. When this row structure is used in a report, this row will display summed data for the Software Expense and Computer Expense accounts. (In a real report, the label text for this data row would likely be defined as "Software and Computer Expenses" or something similar.)



Example data row with mapped dimension items

The two accounts that are mapped to this data row no longer display in the dimension column and cannot be mapped to any other row. You can optionally enable **Show Mapped Dimension Items** to see all items in the dimension column, but mapped items will display as grayed out and cannot be selected.

Searching and filtering the dimension column

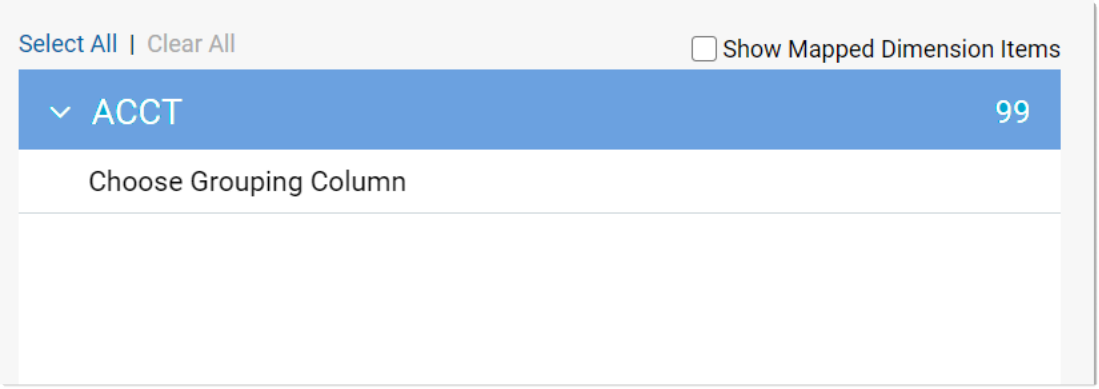
You can search and filter the dimension column to more easily find the dimension items that you want to map.

- You can type into the search box at the top of the column to find items by dimension value. The search matches any dimension value that contains the search text. Currently, the description text is not included in the search.
- You can select a grouping column so that the dimension column is filtered to only show values for a particular grouping. For example, you may have a grouping column of Category, which you can use to show accounts within a particular category—such as Revenue, Capital, or Marketing.

If you use **Select All** when the list is filtered by a search or by a grouping value, then only the currently visible items are selected. This can be a convenient way to find, select, and map multiple dimension items at a time.

To filter the dimension column by a grouping value:

1. Click the down arrow icon in the column header, and then click **Choose Grouping Column**.

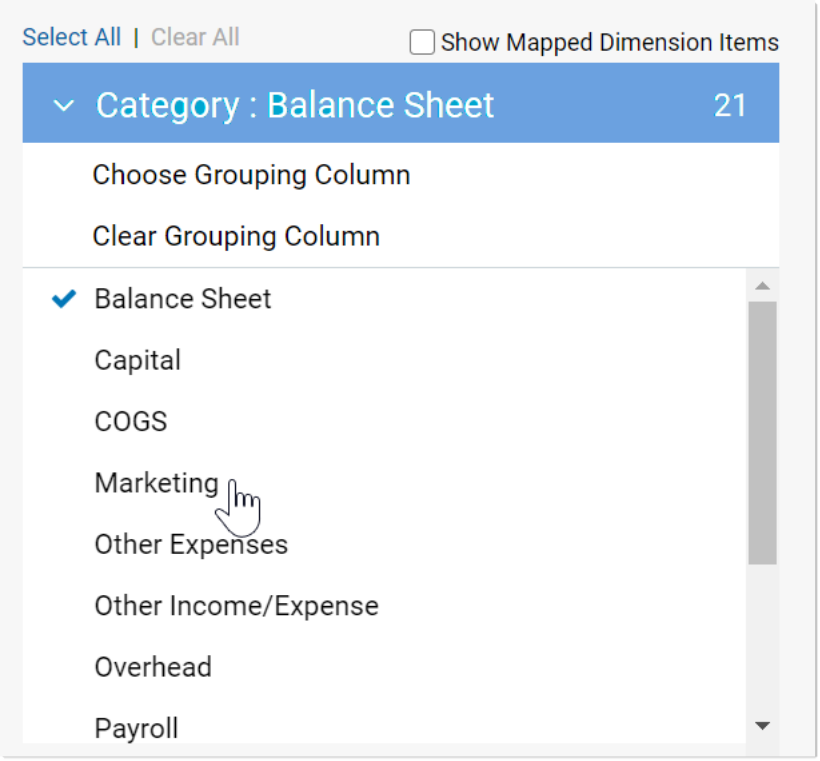


2. In the **Choose a Grouping Column** dialog, select the grouping column that you want to use, and then click **OK**.

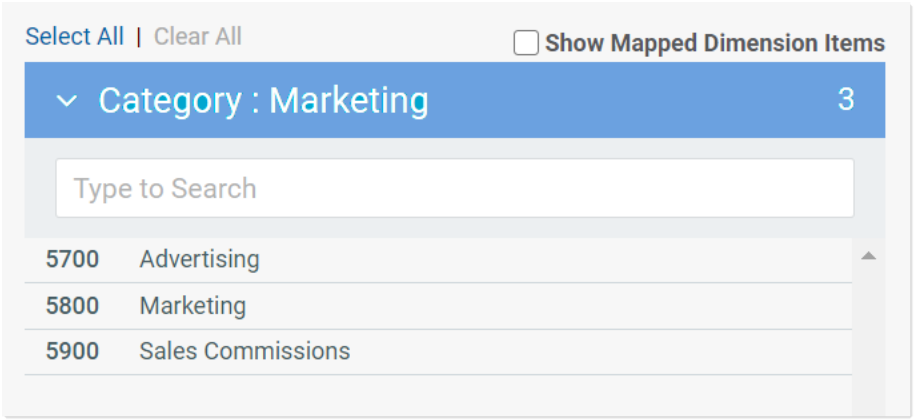
   The dimension column becomes filtered by the first value in the selected grouping column. This value displays in the column header.

3. To filter the dimension column by a different value in the grouping column, click the down arrow icon in the column header, and select the desired value.

   In the following example, "Balance Sheet" was the automatically-selected value from the grouping column, and we are now going to select "Marketing" instead.



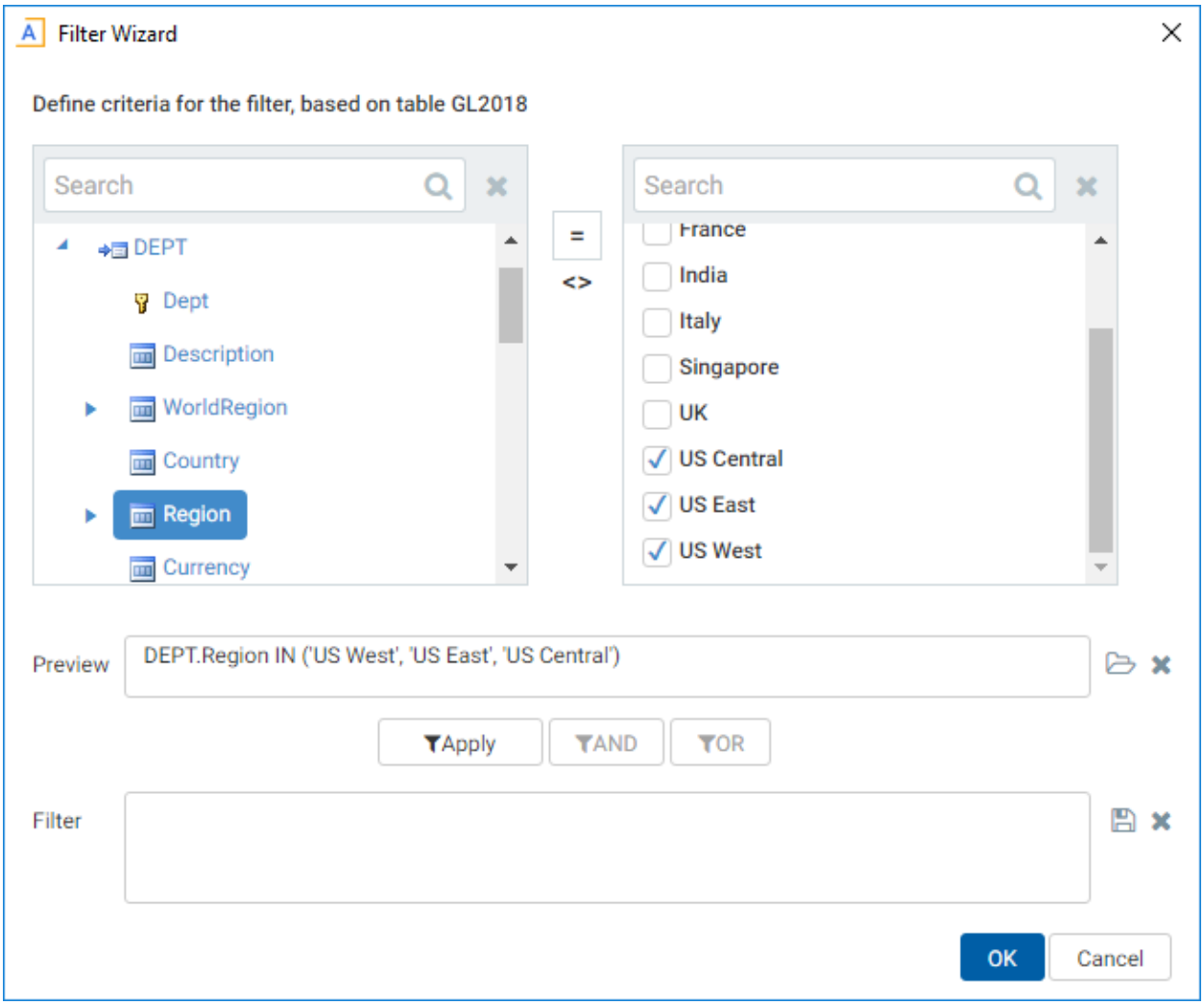
   The dimension column is now filtered to only show accounts that belong to the Marketing category.



If you want to clear the grouping column filter, click the down arrow icon in the column header, and select **Clear Grouping Column**.

Using the Filter Wizard in the Fixed Row Structure editor

The Filter Wizard is available in the Fixed Row Structure editor to assist you in building a valid filter criteria statement.



Example Filter Wizard

The tables available in the wizard depend on the table specified as the dimension table for the fixed row structure.

To create a filter:

1. In the left-hand side of the dialog, select the table column on which you want to base the filter.

   For example, if you want to create a filter such as `DEPT.DEPT>=5000`, then you must select the DEPT column from the DEPT table.

   To find the desired table and column, you can filter the list by typing into the Search box. The filter matches based on table and column names.

   Once you select a table column, the values in that column display in the right-hand side of the dialog.

TIP: Alternatively, you can use the folder icon to the right of the **Preview** box to load a previously saved filter from the Filters Library. If you do this, your selected filter is placed in the Preview box, overwriting any current content in the preview. Skip to step 4.

2. In the right-hand side of the dialog, select the value(s) on which you want to base the filter. You can type into the filter box above the list of values to filter the list.
3. In the space between the two selection boxes, select the operator to use for the filter criteria statement, such as equals, not equals, greater than, or less than. By default, the filter statement uses equals (=).

   Note the following about filter operators:

   - Greater than / less than options are only available if the column data type holds numbers or dates.
   - If multiple items are selected, then IN and NOT IN syntax is automatically used for equals and not equals respectively.
   - If the column is a string column and the value contains an apostrophe (such as O'Connor), the wizard automatically converts this value to double apostrophes so that it is valid for use in the filter (O''Connor). Apostrophes in string values must be escaped this way so that they are not interpreted as the closing apostrophe for the filter criteria statement.
   - The LIKE operator is supported, but is not available for selection in the Filter Wizard. You must manually edit the filter criteria statement if you want to use it. Only advanced users with knowledge of valid SQL LIKE syntax should do this.
4. Review the filter criteria statement in the **Preview** box to ensure that it is as intended. If you need to make changes, you can manually edit the statement, or you can start again with a new statement. If you want to clear the statement, click the **X** icon to the right of the Preview box.

   For more information on valid syntax, see Filter criteria syntax.
5. If no filter is currently present in the **Filter** box, click **Apply** to move the filter down to the Filter box. If a filter is currently present in the Filter box, you can do one of the following:
   - Click **Replace** to overwrite the current filter with the preview filter.
   - Click **AND** or **OR** to add the preview filter to the current filter. This creates a compound criteria statement.

   You can repeat the filter creation process as many times as necessary to create the desired statement. You can also manually modify the filter in the Filter box as needed, such as to add parentheses to group statements.
6. When the filter in the Filter box is complete, click **OK**.

TIP: If you want to save the filter you have created for future use, click the save icon to the right of the Filter box. You can select a folder location in the Filters Library (or My Documents if applicable), and specify a name for the filter. This option is only available if you have read/write access to at least one location where filters can be stored.

Web report sharing, export, and distribution

The information in web reports can be distributed throughout the organization using a variety of features:

- You can export a web report as a PDF, Excel, or delimited file, and save it locally or to the Axiom repository.
- You can share a web report via email to other users, by sending a link to the live file in the system, or by attaching a PDF or Excel file.
- You can process web reports iteratively over a dimension, and then automatically save and/or email the report to designated recipients.

Exporting a PDF copy of a web report

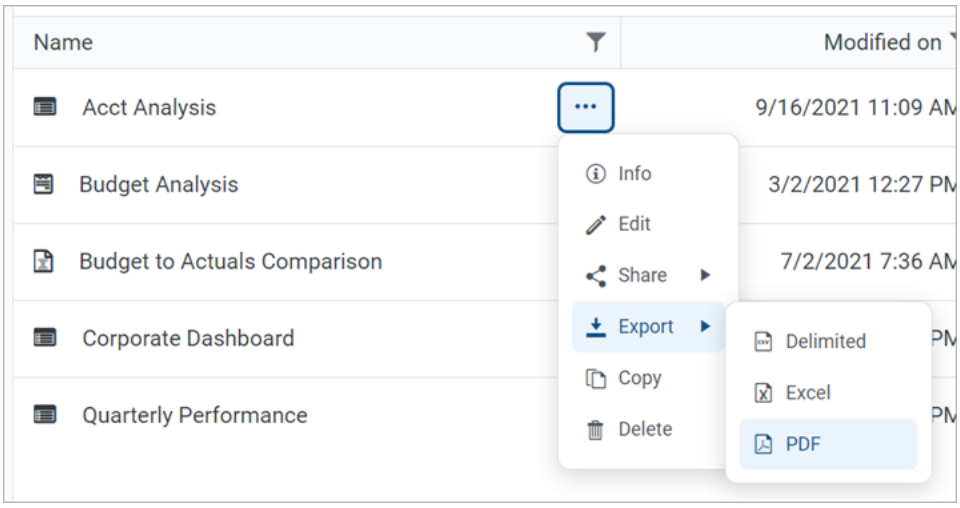
You can export a web report as a PDF file, and save the file locally or to the Axiom repository. The export can be performed while viewing the report, or from the Reports Library in the Intelligence Center.

- When exporting the report from the Intelligence Center, it is exported using default settings. If the report requires user input to return data, you should instead open the report and export from the report viewer.
- When exporting the report from the report viewer, the export honors the current report state such as sorting, filtering, and drilling.

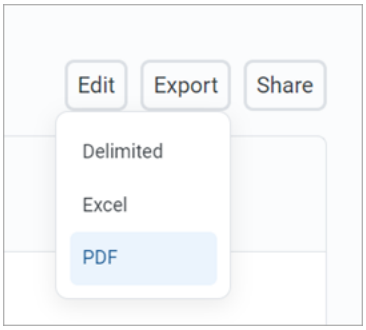
Any user who can view the report can export to PDF and save it to a local folder location. In order to save a PDF copy to the Axiom repository, you must have read/write access to at least one folder in the Reports Library.

To export a web report as a PDF file:

1. In the Intelligence Center, locate the report in the folder tree, or search to find it.
2. Do one of the following:
    - Hover your cursor over the **Name** column to make the three-dots icon visible. Click the icon then select **Export > PDF** from the menu.



- Click the report name to open the report. In the top right corner of the report, click **Export > PDF**.



3. In the **Export Report** dialog, enter a file name into the **File name** field. By default, the file name is the same as the web report file name.
4. Select the export destination from the **Export to** drop-down:
    - **My computer**: Save the PDF to your computer.
    - **Axiom repository**: Save the PDF to a folder in the Axiom Reports Library, or to your My Documents folder.

NOTES:

- If you save the PDF to a folder in the Reports Library, any user with at least read-only access to that folder will be able to view the PDF. You should be sure that it is acceptable for users with permission to the target folder to view the data in the PDF.
- If you do not have read/write access to any folders in the Axiom repository, then the **Export to** option is not available and does not display in the dialog. The PDF will be automatically saved to your computer.
- If you save the PDF to your computer, keep in mind that Axiom does not enforce any security on the exported file.

5. If you are saving to the Axiom repository, select an **Output folder**:
    - Click the folder icon 🗁 to the right of the field.
    - In the **Choose output folder** dialog, select a folder in the Reports Library. The dialog only shows folders where you have read/write access to that folder or a child folder.

      NOTE: If you have access to the My Documents folder, then you can also save reports to that location for your personal use.

    - Click **OK** to choose the folder and return to the **Export to PDF** dialog.

    The path to your selected folder now displays in the **Output folder** field.
6. In the **Configuration Settings** section, select the following:

Item	Description
Pages	If you are exporting from the report viewer and the report has paged data, select one of the following: • **Current Page**: The export will contain the current page of data only. For example, if you are currently viewing page 2 of the data in the report, the export will contain that data only. • **All Pages**: The export will contain all pages of data, up to 10 pages maximum. A "page" refers to a page of data as displayed in the report, not PDF pages. Report pages can be configured to show 25 (default), 50, or 100 rows. For example, if you select to export the current page and the page size is 100, the PDF will contain those 100 rows which may span several PDF pages. **NOTES:** • If you are exporting from the Intelligence Center, this option does not display and the PDF will contain all data pages (up to the maximum). • If the report uses a fixed row structure, data is not paged and this option does not apply. The PDF will contain the full contents of the report.
Layout	Select the page size for the PDF. You can choose from the following standard page sizes: **A3**, **A4**, **A5**, **Legal**, **Letter**, or **Tabloid**. Letter is the default size.
Orientation	Select the orientation for the PDF, either **Portrait** or **Landscape**. Portrait is the default orientation.
Margin	Specifies the PDF page margins. Select one of the following: • **None**: No margin • **Narrow**: 0.5 inch margins all around • **Normal**: 1 inch margins all around (default)
Header Footer	Specify optional header and footer text. The variables `{page_number}` and `{total_pages}` can be used in the header or footer. You can select from several predefined header and footer options using variables, or you can type text into the Header or Footer box. **NOTE:** If the margin is set to None, then the Header, Footer, and Alignment options are not available because there is no room to display a header or footer.
Alignment	Specify the alignment of the header and footer text, if defined: **Left**, **Center** (default), or **Right**.

7. Click **Export** to create the PDF.

    - If you are saving to the Axiom repository, and you used a file name that already exists in the target folder, you are prompted to choose whether or not to overwrite the existing file. If you choose not to overwrite, you are returned to the Export to PDF dialog so that you can use a different name and/or output folder.
    - If you are saving to your computer, the exact behavior is determined by your browser settings. The default behavior for most browsers is to save the file to the **Downloads** folder on your computer.
    - In either case, a notification message displays at the top of the page to indicate whether the PDF creation succeeded or failed.

Export behavior

When you create the PDF, the web report contents are handled as follows:

- If the grid in the web report has paged data, the PDF will contain either all rows shown on the current page, or all rows in the report up to 10 pages of data. The number of rows in a page of data depends on the paging selection in the report (25, 50, or 100).
    - Column headers are present on the first PDF page only; headers do not repeat on PDF pages.
    - If the report has a total row, that row is always included in the PDF and always displays the full total, even if the PDF only contains a partial set of data.
    - If exporting from the Intelligence Center, the PDF contains all data pages up to the maximum, using the default of 25 rows per page.
- If you have sorted, filtered, or drilled the data displayed in the report, these changes are reflected in the PDF. The exception is if you have reordered columns—columns display in their original order.

  NOTE: Drill results can only be saved as a PDF if the report was created in the Report Builder. Web reports created from template display drill results slightly differently, and these results cannot be saved to PDF.

- If the report uses report parameters, those parameter selections are not reflected in the export. Exception: If the report uses a dynamic column tied to a Column List report parameter, the default value for that parameter will be used for the export.

  NOTE: For reports created from template, refresh variable selections are applied to the export.

- If the report contains a column with links, the column displays the link text without an active hyperlink.

Exporting grid data in a web report to Excel

You can export grid data in a web report to a spreadsheet, so that you can further examine the data using spreadsheet features. You can save the spreadsheet locally, or save it to the Axiom repository.

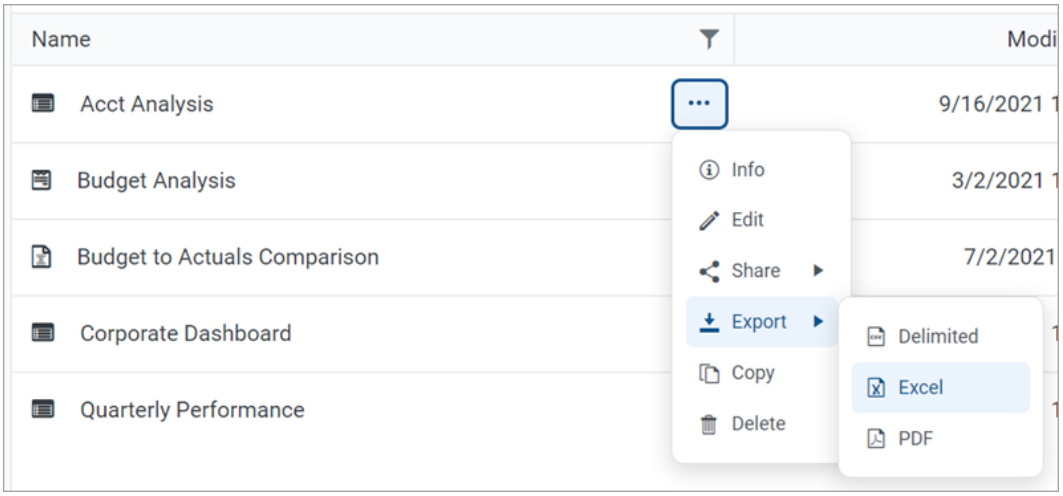
The export can be performed while viewing the report, or from the Reports Library in the Intelligence Center.

- When exporting the report from the Intelligence Center, it is exported using default settings. If the report requires user input to return data, you should instead open the report and export from the report viewer.
- When exporting the report from the report viewer, the export honors the current report state such as sorting, filtering, and drilling.

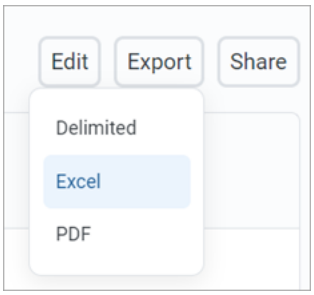
Any user who can view the report can save the spreadsheet export locally. In order to save the spreadsheet export to the Axiom repository, you must have read/write access to at least one folder in the Reports Library.

To export grid data to an Excel spreadsheet:

1. In the Intelligence Center, locate the report in the folder tree, or search to find it.
2. Do one of the following:
   - Hover your cursor over the **Name** column to make the three-dots icon visible. Click the icon then select **Export > Excel** from the menu.



   - Click the report name to open the report. In the top right corner of the report, click **Export > Excel**.



3. In the **Export to Excel** dialog, enter a file name into the **File name** field. By default, the file name is the same as the web report file name.
4. Select the export destination from the **Export to** drop-down:
   - **My computer**: Save the spreadsheet to your computer.
   - **Axiom repository**: Save the spreadsheet to a folder in the Axiom Reports Library, or to your My Documents folder.

   NOTES:
   - If you save the spreadsheet to a folder in the Reports Library, then any user with at least read-only access to that folder will be able to view the spreadsheet. You should be sure that it is acceptable for users with permission to the target folder to view the data in the spreadsheet.
   - If you do not have read/write access to any folders in the Axiom repository, then the **Export to** option is not available and does not display in the dialog. The spreadsheet will be automatically saved to your computer.
   - If you save the spreadsheet to your computer, keep in mind that Axiom does not enforce any security on the exported file.

5. If you are saving to the Axiom repository, select an **Output folder**:
   - Click the folder icon 🗁 to the right of the field.
   - In the **Choose output folder** dialog, select a folder in the Reports Library. The dialog only shows folders where you have read/write access to that folder or a child folder.

     NOTE: If you have access to the My Documents folder, then you can also save reports to that location for your personal use.

   - Click **OK** to choose the folder and return to the **Export to Excel** dialog.

   The path to your selected folder now displays in the **Output folder** field.

6. If the current report is enabled for directed drilling, you can optionally choose to **Export all drill levels**. If this option is enabled, then the report data is "flattened" using all drill levels. For example, if the report is currently showing rows by Acct, and the report has configured drilling levels of Region and Dept, then the exported report contains data rows by unique combination of Acct/Region/Dept.

   NOTES:
   - If this option is enabled, the export ignores any sorting, filtering, or drilling in the report. The directed drilling columns are added to the report as row dimensions, and all data is exported at this level.
   - This option is not available if the report uses a fixed row structure, or if the report is built from template.

7. Click **Export** to create the spreadsheet.
   - If you are saving to the Axiom repository, and you used a file name that already exists in the target folder, you are prompted to choose whether or not to overwrite the existing file. If you choose not to overwrite, you are returned to the Export to Excel dialog so that you can use a different name and/or output folder.
   - If you are saving to your computer, the exact behavior is determined by your browser settings. The default behavior for most browsers is to save the file to the **Downloads** folder on your computer.
   - In either case, a notification message displays at the top of the page to indicate whether the spreadsheet creation succeeded or failed.

Export behavior

When the grid data is exported, the behavior is as follows:

- If the data is paged in the report, the export contains all pages of data.
- By default, the basic number format applied to the column is preserved in the export. The exception is negative numbers, which will always be shown using a minus sign regardless of the configured format. Other formats such as background colors and borders are not applied to the exported data.
- Date and DateTime columns are exported as follows:
  - Columns configured to display the full date part are exported using the default date or date-time format, regardless of the format configured to display in the report.
  - Columns configured to display other date parts display the numeric value of the date part only. For example, if the column is configured to display the Quarter part as Q1 format, the value is exported as only the number (1 for Q1).

- If you have sorted, filtered, or drilled the data displayed in the report, these changes are reflected in the export. The following exceptions apply:
    - Reordered columns are ignored. Columns are exported in their original order.
    - Drill results can only be exported to Excel if the report was created in the Report Builder. Web reports created from template display drill results slightly differently, and these results cannot be exported.
    - If **Export all drill levels** is enabled, the export ignores any sorting, filtering, or drilling in the report. The directed drilling columns are added to the report as row dimensions, and all data is exported at this level.
- If the report uses report parameters, those parameter selections are not reflected in the export. Exception: If the report uses a dynamic column tied to a Column List report parameter, the default value for that parameter will be used for the export.

  NOTE: For reports created from template, refresh variable selections are applied to the export.

- Column group headers are omitted from the export. Additionally, if a column has a 2-row header, only the first row of that header is exported.
- If the report contains a column with links, the link configuration is ignored, and the regular column value is exported (as if the column were not enabled to show links).
- Export to Excel is capped at 150,000 rows. If a report contains over 150,000 rows, only partial data is exported, and the total row is omitted.

Exporting grid data in a web report to a delimited file

You can export grid data in a web report to a delimited file such as comma-separated (CSV). You can save the delimited file locally, or save it to the Axiom repository.

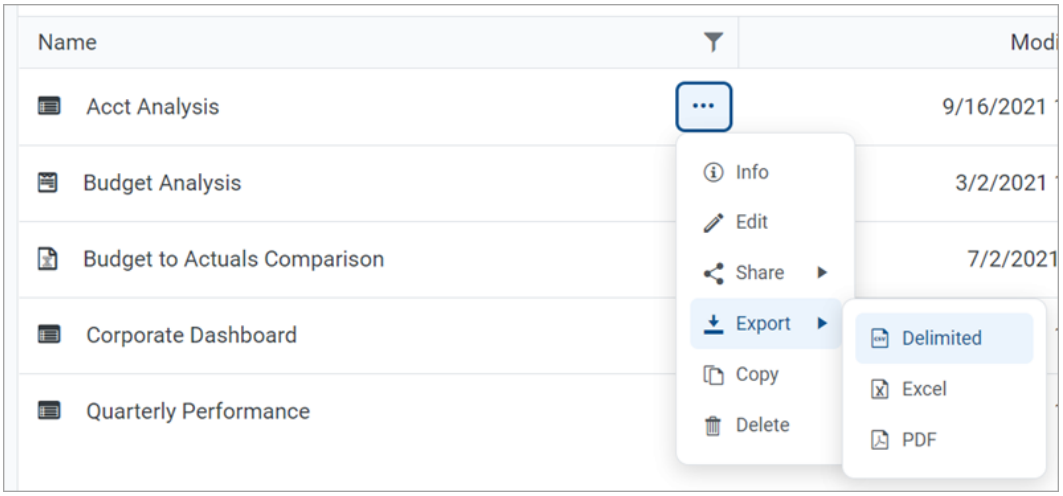
The export can be performed while viewing the report, or from the Reports Library in the Intelligence Center.

- When exporting the report from the Intelligence Center, it is exported using default settings. If the report requires user input to return data, you should instead open the report and export from the report viewer.
- When exporting the report from the report viewer, the export honors the current report state such as sorting, filtering, and drilling.

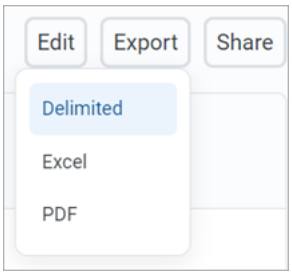
Any user who can view the report can save the delimited file locally. In order to save the delimited file to the Axiom repository, you must have read/write access to at least one folder in the Reports Library.

To export grid data to a delimited file:

1. In the Intelligence Center, locate the report in the folder tree, or search to find it.
2. Do one of the following:
    - Hover your cursor over the **Name** column to make the three-dots icon visible. Click the icon then select **Export > Excel** from the menu.



    - Click the report name to open the report. In the top right corner of the report, click **Export > Excel**.



3. In the **Export Report** dialog, enter a file name into the **File name** box. By default, the file name is the same as the web report file name.
4. For **Export to**, select the export destination:
    - **My computer**: Save the delimited file to your computer.
    - **Axiom repository**: Save the delimited file to a folder in the Axiom Reports Library, or to your My Documents folder.

NOTES:

- If you save the delimited file to a folder in the Reports Library, then any user with at least read-only access to that folder will be able to view the file. You should be sure that it is acceptable for users with permission to the target folder to view the data in the file.
- If you do not have read/write access to any folders in the Axiom repository, then the **Export to** option is not available and does not display in the dialog. The file will be automatically saved to your computer.
- If you save the file to your computer, keep in mind that Axiom does not enforce any security on the exported file.

5. If you are saving to the Axiom repository, select an **Output folder**:
   - Click the folder icon to the right of the field.
   - In the **Choose output folder** dialog, select a folder in the Reports Library. The dialog only shows folders where you have read/write access to that folder or a child folder.

     NOTE: If you have access to the My Documents folder, then you can also save reports to that location for your personal use.

   - Click **OK** to choose the folder and return to the **Export to Excel** dialog.

   The path to your selected folder now displays in the **Output folder** field.
6. In the **Configuration options** section, select the desired **Delimiter**. You can select any of the following: **Comma** (default), **Space**, **Period**, **Pipe**, **Tab**, **Semi-Colon**, **Colon**.

   If the delimiter is a comma, the file format for the exported file is CSV. For any other delimiter, the file format is TXT.
7. If the current report is enabled for directed drilling, you can optionally choose to **Export all drill levels**. If this option is enabled, then the report data is "flattened" using all drill levels. For example, if the report is currently showing rows by Acct, and the report has configured drilling levels of Region and Dept, then the exported report contains data rows by unique combination of Acct/Region/Dept.

NOTES:

- If this option is enabled, the export ignores any sorting, filtering, or drilling in the report. The directed drilling columns are added to the report as row dimensions, and all data is exported at this level.
- This option is not available if the report uses a fixed row structure, or if the report is built from template.

8. Click **Export** to create the delimited file.

    - If you are saving to the Axiom repository, and you used a file name that already exists in the target folder, you are prompted to choose whether or not to overwrite the existing file. If you choose not to overwrite, you are returned to the Export Report dialog so that you can use a different name and/or output folder.
    - If you are saving to your computer, the exact behavior is determined by your browser settings. The default behavior for most browsers is to save the file to the **Downloads** folder on your computer.
    - In either case, a notification message displays at the top of the page to indicate whether the file creation succeeded or failed.

Export behavior

When the grid data is exported, the behavior is as follows:

- If the data is paged in the report, the export contains all pages of data.
- If the report uses row dimensions, then the first row of data in the file contains the column headers. Group headers are omitted from the export. Additionally, if a column has a 2-row header, only the first row of that header is exported. The total row is excluded from the export.
- If the report uses a fixed row structure, all rows are included in the delimited file, including header rows and subtotal rows.
- The raw data is exported to the delimited file. No formatting is applied. For example, this means number formats are not applied, date formats are not applied, and the Show Description option is not applied. The Description will only display if you click the **Show description** toggle in the **Formatting Properties** area of your report's column configuration settings.
- If a data value in the export contains the delimiter, that value is escaped in double quotation marks. For example, if the delimiter is a space character, then values with spaces are wrapped in double quotation marks (such as "Finance Department").
- If the report contains a column with links, the link configuration is ignored, and the regular column value is exported (as if the column were not enabled to show links).

- If you have sorted, filtered, or drilled the data displayed in the report, these changes are reflected in the export. The following exceptions apply:
    - Reordered columns are ignored. Columns are exported in their original order.
    - Drill results can only be exported to file if the report was created in the Report Builder. Web reports created from template display drill results slightly differently, and these results cannot be exported.
    - If **Export all drill levels** is enabled, the export ignores any sorting, filtering, or drilling in the report. The directed drilling columns are added to the report as row dimensions, and all data is exported at this level.
- If the report uses report parameters, those parameter selections are not reflected in the export. Exception: If the report uses a dynamic column tied to a Column List report parameter, the default value for that parameter will be used for the export.

  NOTE: For reports created from template, refresh variable selections are applied to the export.

Sharing a web report via email

You can share a web report with other Axiom users via email. The report can be shared as a link to the live report, or as a PDF or Excel attachment. Sharing can be done while viewing the report, or from the Reports Library in the Intelligence Center.

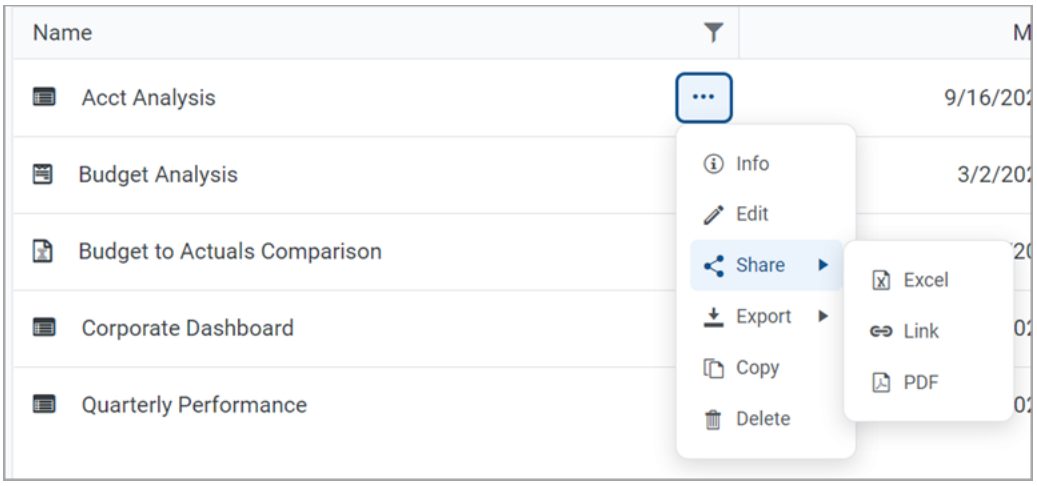
- When sharing the report from the Intelligence Center as a PDF or Excel attachment, the attachment is generated using default settings. If the report requires user input to return data, you should instead open the report and share from the report viewer.
- When sharing the report from the report viewer as a PDF or Excel attachment, the attachment honors the current report state such as sorting, filtering, and drilling. Exception: report parameter selections are not honored unless the report is built from template.
- When sharing the report as a link, the email recipient can click the link to log in to Axiom and view the report within the application. The recipient must have at least read-only security permission to the report in order to view it. When using the link, the report is opened in its default state, and the user can explore the report as needed.

Any user who can view the report can share it. The report can be shared with any user in Axiom, or any email address that the Axiom system can send email to.

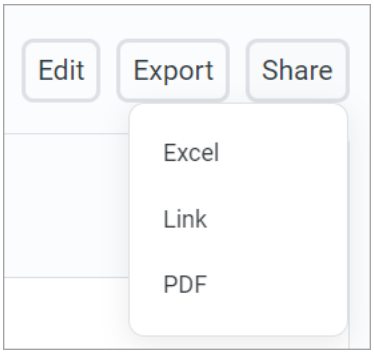
NOTE: When sharing a web report as a PDF or Excel attachment, keep in mind that Axiom does not enforce any security on these attachments. Any user who receives the email can view the attachment.

To share a web report via email:

1. In the Intelligence Center, locate the report in the folder tree, or search to find it.
2. Do one of the following:
    - Hover your cursor over the **Name** column to make the three-dots icon visible. Click the icon and select **Share** from the menu, then select either **Excel**, **Link**, or **PDF**.



    - Click the report name to open the report. In the top right corner of the report, click **Share**, then select either **Excel**, **Link**, or **PDF**.



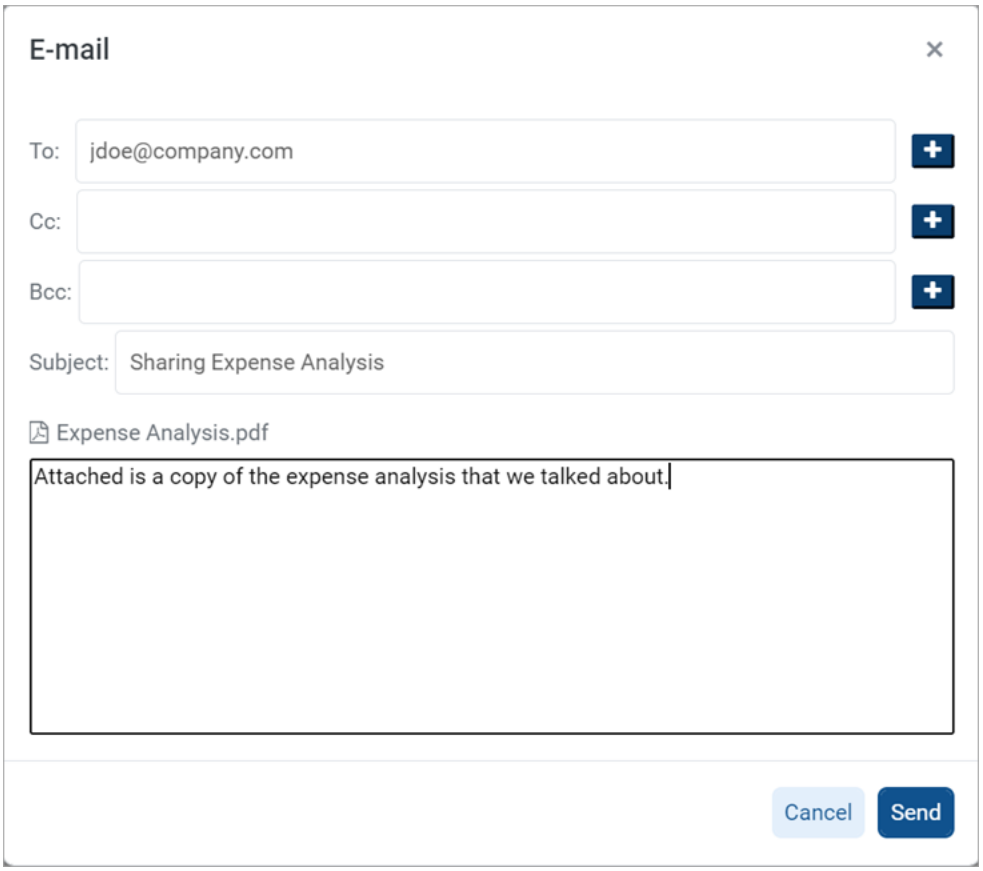
3. If you selected to share as either **Excel** or **PDF**, then complete the settings in the **Share Report** dialog, and then click **Share**. The settings are the same as when exporting to Excel or PDF, except that you do not specify a location to save the exported file—the file will be attached to the sharing email. For example:
    - For PDF, you can specify the file name, layout, orientation, margin size, and header/footer content.
    - For Excel, you can specify the file name and whether to export all drilling levels.

NOTES:

- The Share Report dialog for Excel only displays if you are sharing from within the report viewer, and only if the report is configured for directed drilling. Otherwise, the dialog does not display and the file name of the Excel attachment will always be the report file name.
- The PDF or Excel attachment is generated using the same behavior as when exporting the file to PDF or Excel. For more information, see Exporting grid data in a web report to Excel or Exporting a PDF copy of a web report.
- If you selected to share as a link, this dialog does not display and you are taken directly to the E-mail dialog.

4. In the **E-Mail** dialog, select the recipients of the email. You can type email addresses into the **To**, **CC**, and **BCC** boxes, or you can click the plus icon next to the recipient box to look up email addresses for Axiom users:
   - In the **Select Users** dialog, select the check boxes next to the users that you want to share the report with.
   - You can search on the user first or last name to find users.
   - Once you have selected one or more users, click **OK**. The recipient box is populated with the email addresses for the selected users. If the box already contained one or more email addresses, the newly selected addresses will be added to the existing list.

   If you are manually typing email addresses, separate multiple addresses with semicolons.



Example E-mail dialog

5. In the **E-Mail** dialog, complete the **Subject** and body text as needed.
    - By default, the subject is set to "Sharing *FileName*".
    - If you are sharing a link, the link is pre-populated into the body text.
6. Click **Share** to share the report and send the email.
    - If you are sharing the report as a PDF or Excel file, the attachment is generated at this point. If the report is large, there may be a delay while the attachment is generated.
    - A notification message displays at the top of the page to indicate whether the email and its attachment (if applicable) was generated successfully. Once the email is generated, it will sent by the Axiom server using the standard System.SMTPMessageDelivery job.

Production reporting for web reports

Using production reporting features with web reports, you can generate and deliver report "snapshots" to various audiences as needed.

- You can perform multipass processing on a web report over a specified dimension, such as by department, region, or entity. The report is iteratively refreshed—one "pass" for each value of the dimension—and during each pass a filter is automatically applied to limit the data to the current dimension value.
- The output of each pass is a filtered PDF or Excel "snapshot" of the report. This static snapshot is then saved to a target folder location—either a local folder in your network or the Axiom repository—and/or emailed to a specified recipient. Folder locations and email recipients can be determined dynamically so that the location and recipient changes as needed for each pass.
- Multiple PDF or Excel snapshots can be optionally collected into larger "report books" and then dynamically saved and/or emailed as needed. For example, you might process three different web reports by entity, and then collect the three resulting entity snapshots into a single file per entity.

To perform multipass processing on a web report, use the Scheduler task **Web Report Processing**. This task will process a target report by a specified dimension, and then save and/or email the output files as configured in the task.

To collect output files into report books, use the File Collect option of File Processing. To do this, you must create a spreadsheet report, enable it for file processing, and then configure file collect options. Once it is configured, file collect processing can be run manually in the Desktop Client, or can be run using the Scheduler task **File Processing**.

IMPORTANT: In phase one of production reporting for web reports, processing is only supported for web reports created from product-delivered templates. Ad hoc web reports created in the Report Builder cannot be processed yet. Support for ad hoc report processing may be added in a future release.

Setting up web report processing

You can perform production reporting for web reports using multipass processing. The report can be processed multiple times over a dimension, generating a filtered PDF or Excel copy of the report for each value of the dimension. The report copies can be saved to a designated location and/or emailed to designated recipients.

To perform multipass processing on a web report, use the Scheduler task **Web Report Processing**. When you set up this task, you configure the following:

- The web report to process. You can process any web report created from a product-delivered template.

- The output format of the processing. Each pass will generate a filtered PDF or Excel output file. The name of the file can be set dynamically using processing variables and job variables.
- The delivery option for the processing. Each output file can be saved to a folder location, emailed to a recipient, or both.
    - If the output is saved, you specify the location of the target folder (local or Axiom repository) and the folder path. The folder path can be set dynamically using processing variables and job variables.
    - If the output is emailed, you specify the recipients of the email, and the email subject and body text. The recipients can be manually entered into the task settings (and can optionally use job variables), or you can specify a table column to dynamically look up the recipients. Recipients can be email addresses, or you can list user and role names to look up email addresses from Axiom security. The email subject and body text can be set dynamically using processing variables and job variables.
- The dimension to process. You can specify any dimension that will be compatible against the data queried in the target web report. The web report will be processed once for each value in the dimension. If desired, you can define a filter to limit the dimension values to process.

Configuring a web report processing task

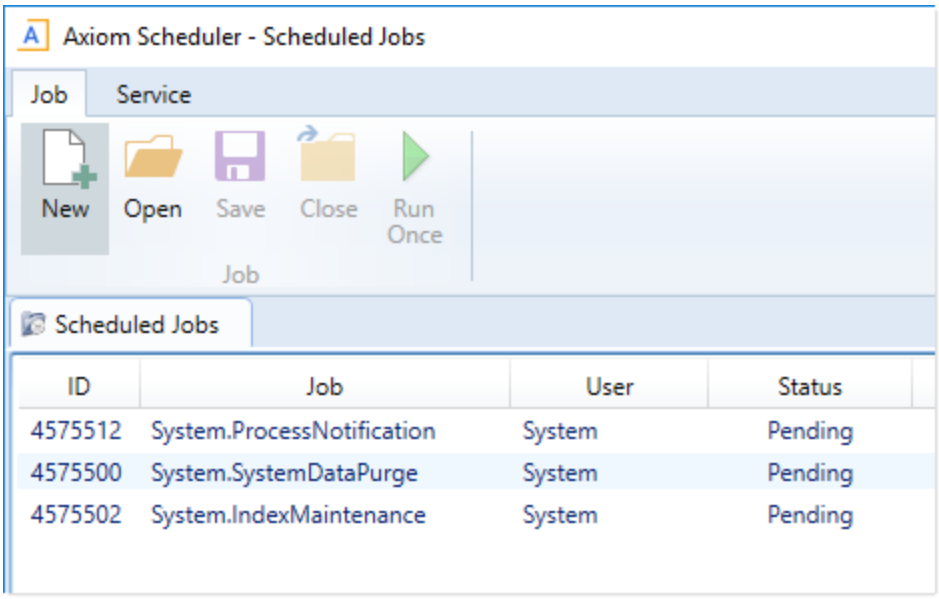
In order to create a Scheduler job with a Web Report Processing task, you must be an administrator or a user with the **Scheduled Jobs User** permission. You must also have read/write access to at least one folder in the Scheduler Jobs Library to save the job. Scheduler jobs can only be created in the Desktop Client.

To create a Scheduler job with a web report processing task:

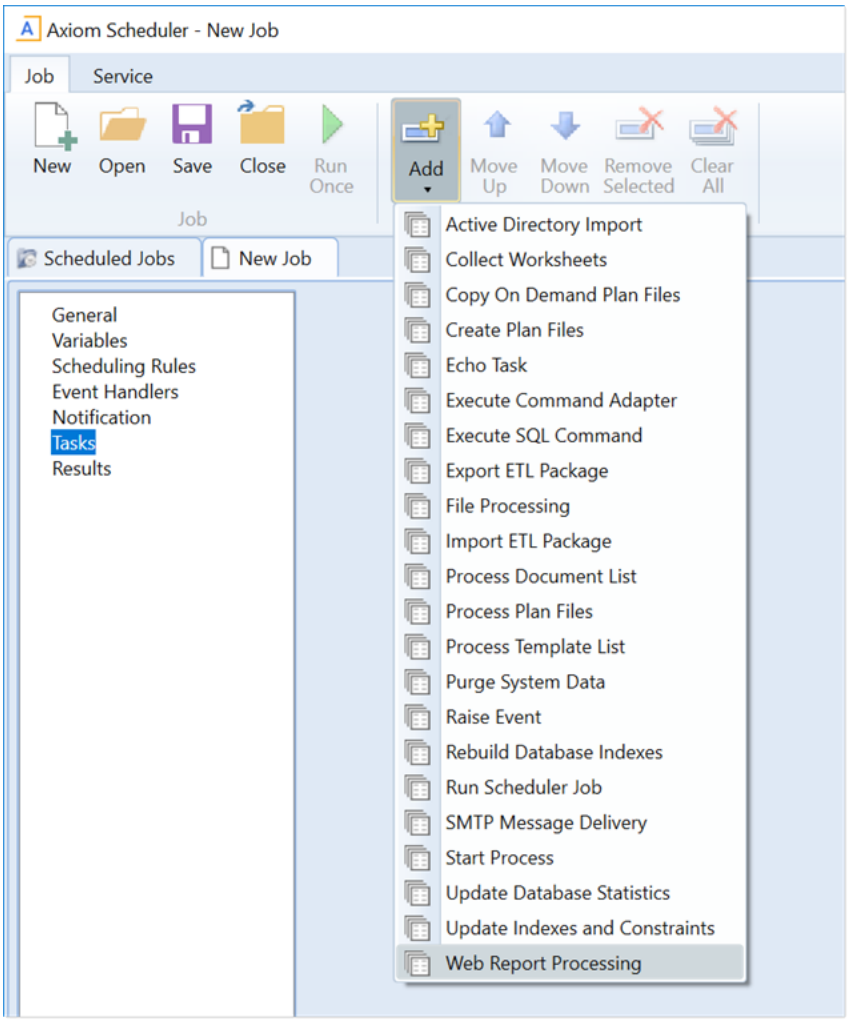
1. On the **Axiom** tab, in the **Administration** group, click **Manage > Scheduler**.

    NOTE: In systems with installed products, this feature may be located on the **Admin** tab. In the **System Management** group, click **Scheduler**.

2. In the **Scheduler** dialog, on the **Job** tab, click **New**.



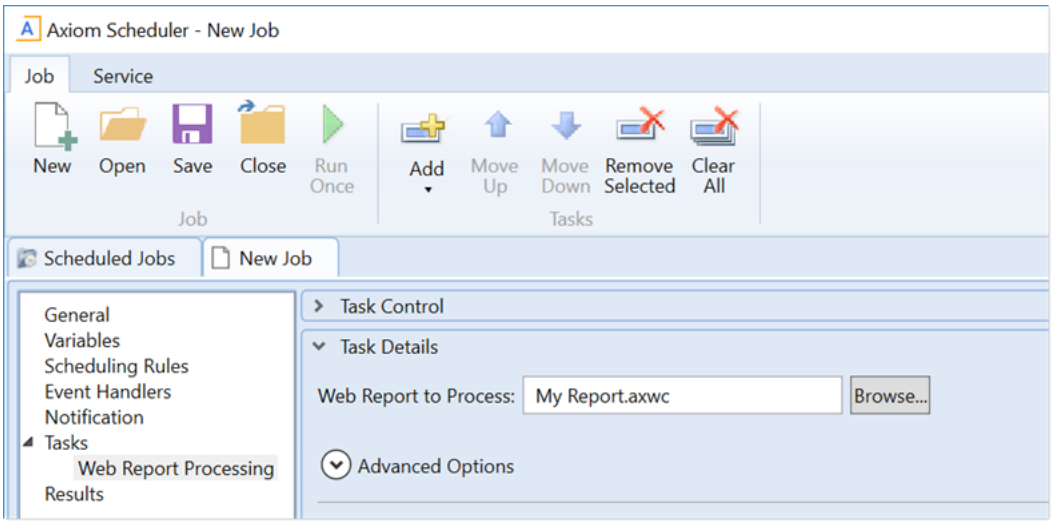
3. Select the **Tasks** section of the job, then on the **Job** tab, click **Add > Web Report Processing**.



4. Select the **Web Report to Process**. This is the report that will be processed by the task.
    - Click the **Browse** button to open the Axiom Explorer dialog.
    - Navigate to the web report that you want to process, then select the report and then click **Open**.

    The selected report is listed in the Web Report to Process box.

> **IMPORTANT:** Remember, only web reports that are created from a product-delivered template can be processed. The Axiom Explorer dialog is filtered to only show reports that were created from template.



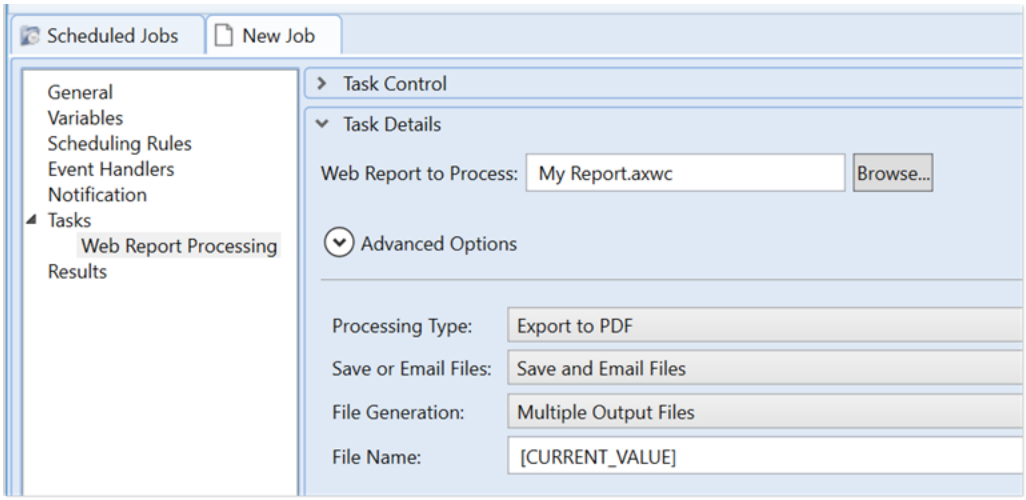
Example task with report selected for processing

5. Complete the general processing properties that determine the processing type and the output:

Item	Description
Processing Type	Select one of the following to determine the output format of each pass: • **Export to Excel** (default): The contents of the report are exported to a spreadsheet (XLSX) file. The output uses the same behavior as when you export to spreadsheet while viewing the web report. • **Export to PDF**: The report is saved as a PDF file. The output uses the same behavior as when you save to PDF while viewing the web report.
Save or Email Files	Select one of the following to determine the delivery method for the output: • **Save Files** (default): The output files are saved to the specified output folder. • **Email Files**: The output files are emailed to the specified recipients. The output files are not saved anywhere on the file system. • **Save and Email Files**: The output files are both saved and emailed.

Item	Description
File Generation	Select one of the following to determine whether the output is saved as a single file or multiple files: • **Multiple Output files** (default): The results of each pass are saved as individual output files. For example, if the multipass settings result in 10 passes, then 10 output files are created (one file for each pass). • **Single Output File**: The results of each pass are collected into a single output file. For example, if the multipass settings result in 10 passes, then the results of all 10 passes are placed in a single output file. If the output type is Excel, then each pass is a separate sheet in the Excel file. If the output type is PDF, then the PDF for each pass is combined into one large PDF file.
File Name	Specify how the output file (or files) should be named. You can do the following: • You can use processing variables and/or Scheduler job variables to generate dynamic file names. • You can type a "hard-coded" file name. If the task will generate multiple output files, then the file name (or the output folder path) must use a processing variable so that the output of each pass is unique. If the task will generate a single output file, then variables are not required. To use a processing variable, you can type the variable or you can click the pencil icon to open a text editor. From the **Insert Variable** list, select the variable that you want to use. For example, you could set the file name to `Income Statement [Current_Value]`. If the report is being processed by region to multiple output files, this will generate file names such as `Income Statement West`, `Income Statement East`, and so on (where "East" and "West" are region names). **NOTE:** Processing variables and Scheduler variables use different syntax. Processing variables are enclosed in square brackets. Scheduler job variables are enclosed in curly brackets.

Item	Description
Sheet Name	Specify how the sheet for each pass should be named. This property only applies when the processing type is **Export to Excel**. You can do the following: • You can use processing variables and/or Scheduler job variables to generate dynamic sheet names. • You can type a "hard-coded" sheet name. If the task will collect all of the output into a single spreadsheet file, then the sheet name must use a processing variable so that the output of each pass is unique. If the task will generate multiple output files, then variables are not required. To use a processing variable, you can type the variable or you can click the pencil icon to open a text editor. From the **Insert Variable** list, select the variable that you want to use. For example, you could set the sheet name to `[Current_Value]`. If the report is being processed by region, this will generate sheet names such as `West`, `East`, and so on (where "East" and "West" are region names). **NOTE:** Processing variables and Scheduler variables use different syntax. Processing variables are enclosed in square brackets. Scheduler job variables are enclosed in curly brackets.



Example task with general processing properties configured

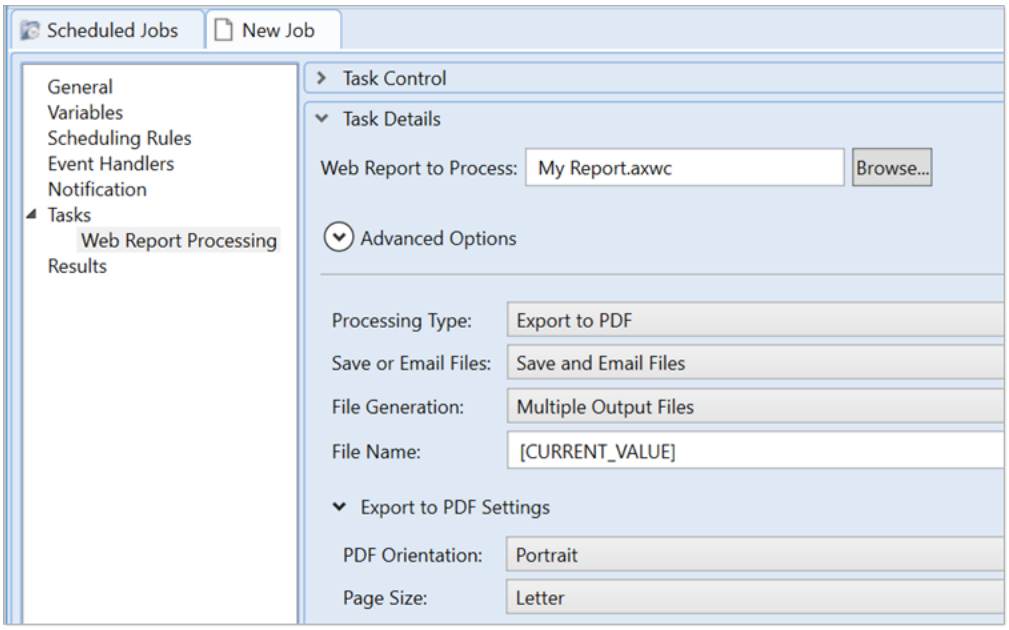
6. Depending on the selected processing type (PDF or Excel), complete the properties specific to that processing type:

Export to PDF Settings

Item	Description
PDF Orientation	Select the orientation for the PDF, either **Portrait** or **Landscape**. Portrait is the default orientation.
Page Size	Select the page size for the PDF. You can choose from the following standard page sizes: **A3**, **A4**, **A5**, **Legal**, **Letter**, or **Tabloid**. Letter is the default size.

Export to Excel Settings

Item	Description
Include Column Headers	Specifies whether column headers are included in the file output. By default this is set to **On**, which means column header text is included in the first row of the spreadsheet. Column grouping headers and multi-row headers are not included. If this option is set to **Off**, then column headers are omitted from the file output and the data starts in the first row of the spreadsheet.
Include total row	Specifies whether the total row is included in the file output. By default this is set to **On**, which means that the total row is included in the spreadsheet. If this option is set to **Off**, then the total row is omitted from the file output. **NOTE:** This option only applies when the web report being processed is a dynamic row report with the total row enabled. If the web report being processed uses a fixed row structure, then the total and subtotal rows defined in the fixed row structure are always included in the spreadsheet.



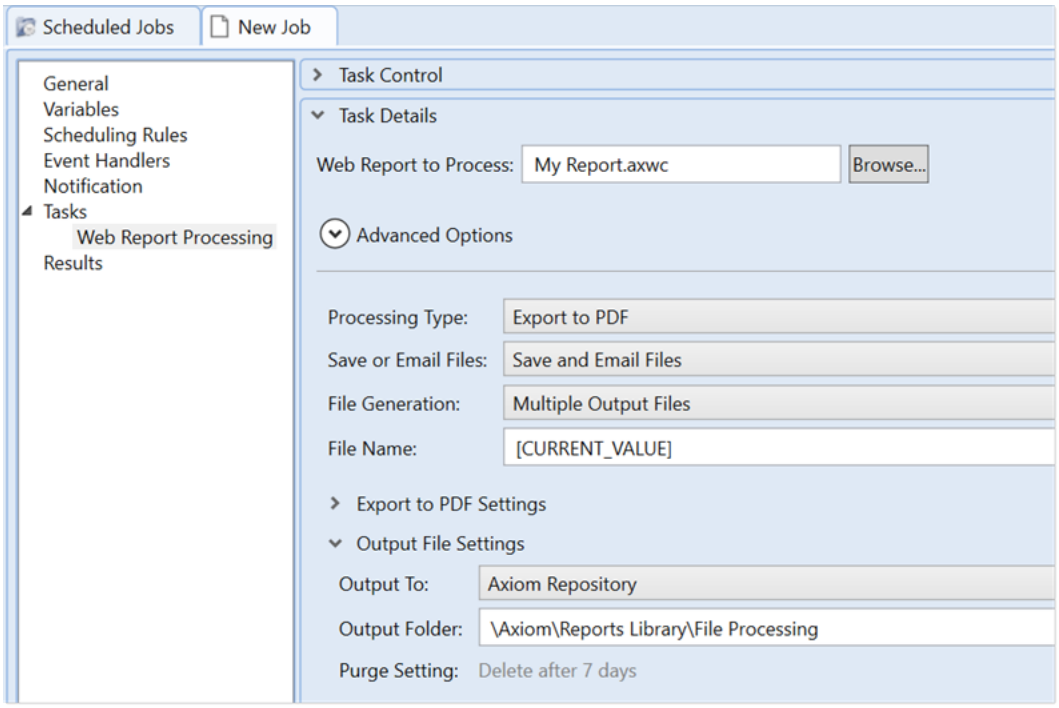
Example task with PDF-specific settings

7. If the processing is set to **Save Files** or **Save and Email Files**, complete the **Output File Settings**:

Item	Description
Output To	Select one of the following: • **Local File System** (default): The output location is outside of Axiom, to a location on your local network share. The specific path is detailed in the **Output Folder** setting. Access to output files is not controlled by Axiom. • **Axiom Repository**: The output location is the Axiom file system, within the Reports Library. The specific path is detailed in the **Output Folder** setting. Access to output files is controlled by security access to the designated folder within Axiom.

Item	Description
Output Folder	Specify the folder location for the file output. You can type a folder path, or you can click the folder icon to browse to the folder location. The browse dialog will display either your local file system or the Axiom file system, depending on what you selected for **Output To**. The output folder can be made dynamic as follows: • If **File Generation** is set to **Multiple Output Files**, then processing variables can be used in the output folder path. For example, you can include `[Current_Value]` in the output folder path, and this will be replaced with the current multipass value. Processing variables are not valid in the output folder path if the task is configured to generate a single output file. • Scheduler job variables can be used in the output folder path. **NOTE:** Processing variables and Scheduler variables use different syntax. Processing variables are enclosed in square brackets. Scheduler job variables are enclosed in curly brackets. **Local file system** The output folder location must be entered as a UNC path, and must be accessible by the Scheduler service user account (for on-premise systems) or the Axiom Cloud Integration Service (for cloud systems). The ability to save files to the specified location and access them after saving is controlled by local network security. **Axiom repository** The specified location in the Axiom file system must be within the Reports Library, and the location must use the full path (meaning: `\Axiom\Reports Library\...`). The ability to save files to the specified location and to create new folders (if necessary) depends on the Axiom security permissions for the user processing the file. Users can only create new folders if they have read/write permissions to the parent folder, and they can only create new files if they have read/write permissions to the target folder. Once the files are created within the Axiom file system, access to those files is dependent on the user's permissions to the output folder. Typically you should create the output folder in advance (or if you want to create output folders on-the-fly, create a parent folder to hold the output folders), and then set permissions for that folder as appropriate in Axiom security, so that the appropriate users will be able to access the files after they are created.

Item	Description
Remote Data Connection	This option only applies when the file output is being saved to your local file system, and only for Axiom Cloud systems that are using remote data connections. Select the name of the remote data connection to use for the file processing operation. The designated remote data connection will be used to access the local file system and save output file(s) to the designated location. A remote data connection is required to save files locally from an Axiom Cloud system. For more information, see the section on remote data connections in the *Scheduler Guide*.
Purge Setting	This option only applies when the file output is being saved to the Axiom Repository. If you want the file output to be automatically deleted after a specified period of time, then click the pencil icon to open the **Choose Date** dialog. • **No purge date** (default): File output is not automatically deleted. • **Static purge date**: Select a specific date, after which the output will be deleted. • **Relative purge date**: Specify a number of days to keep the output after it has been generated. The output will be deleted after the specified number of days have passed.



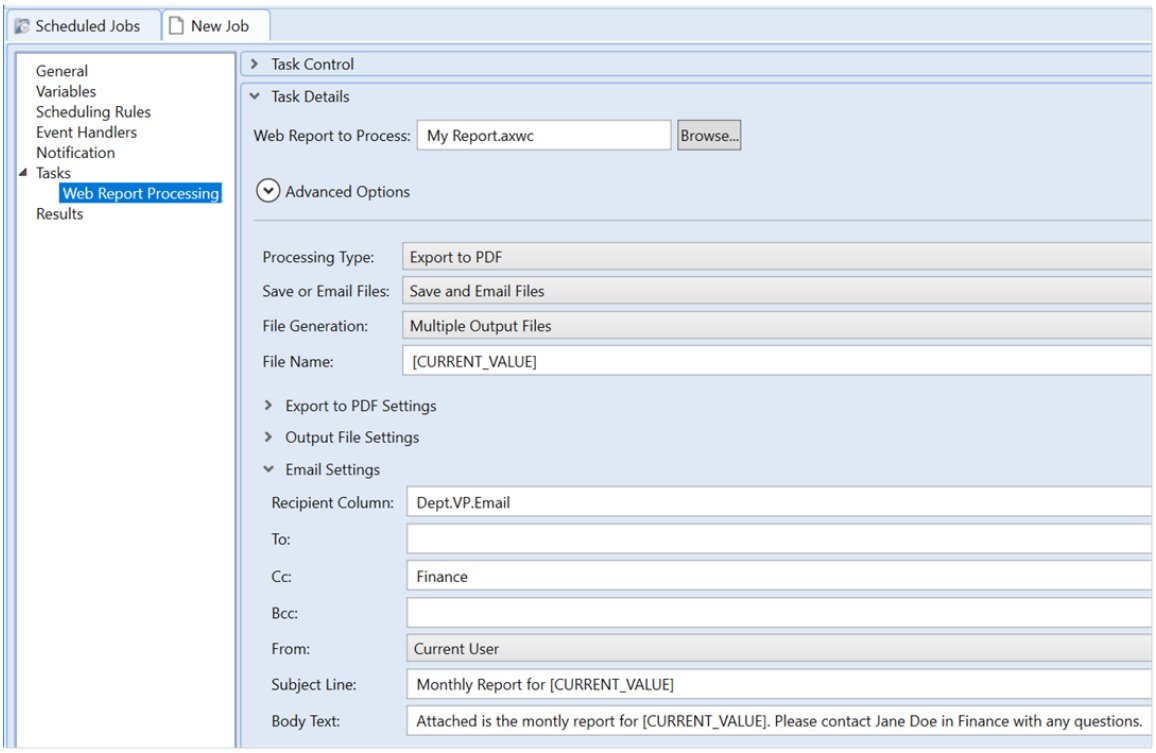
Example task saving output to the Axiom Repository

8. If the processing is set to **Email Files** or **Save and Email Files**, complete the **Email Settings**:

Item	Description
Recipient column	Optional. Specify a table column that holds the desired email recipients for each pass. This option only applies if **File Generation** is set to **Multiple Output Files**, so that each pass will be sent a separate email. You can type the name of a table column, or click the column button to select a column from the multipass table or a lookup table. (You must select a multipass column first before you can use the column button to select a column.) For example, if the multipass column is Dept.VP, the recipient column might be Dept.VP.Email. The specified column can contain any of the following: email addresses, user login names, and/or role names. The column can contain multiple values separated by a semicolon. The recipients listed in the column will be used as the To address for the email (in addition to any recipients listed directly in the To field). If the column contains a user login name, that user's email address as defined in security will be used. If the column contains a role name, the email will be sent to all users in the role. To verify that the recipient column will resolve as you expect for each pass, you can click the **Preview Multipass List** button in the **Multipass Data Settings** section. The specified recipient column displays in this preview so that you can see the recipient column values associated with the multipass column values. **NOTE:** The recipient column must have a one-to-one relationship with the values in the specified multipass column.
To	Specify the To recipient(s) for the email. This is required if a recipient column is not specified. If a recipient column is specified, the recipients listed here will be added to the recipients listed in the column for each pass. You can type one or more email addresses, user login names, and/or role names. Separate multiple recipients with semicolons. If a user login name is listed, that user's email address as defined in security will be used. If a role name is listed, the email will be sent to all users in the role. **NOTE:** If **File Generation** is set to **Multiple Output Files**, the recipients in the To field will receive a separate email for each pass. The only way to dynamically send the emails to different recipients per pass is to use the **Recipient Column** option.
CC	Optional. Specify the CC recipient(s) for the email. This field follows the same rules as the To field.

Item	Description
BCC	Optional. Specify the BCC recipient(s) for the email. This field follows the same rules as the To field.
From	Select one of the following to specify the From address for the email: • **Current User**: The email will be sent from the user who executes the Scheduler job. • **System User**: The email will be sent from the designated From user for Scheduler. This is the same value returned by the `{Scheduler.FromEmailAddress}` job variable.
Subject Line	Enter the subject line for the email. Processing variables can be used in the subject line when **File Generation** is set to **Multiple Output Files**. To use a processing variable, you can type the variable or you can click the pencil icon to open a text editor. From the **Insert Variable** list, select the variable that you want to use. For example, you could set the subject line to `Monthly report for [Current_Value]` in order to include the current pass value in the subject line.
Body Text	Enter the body text for the email. Processing variables can be used in the body text when **File Generation** is set to **Multiple Output Files**. To use a processing variable, you can type the variable or you can click the pencil icon to open a text editor. From the **Insert Variable** list, select the variable that you want to use.

Scheduler job variables can be used in any of the email settings except the From setting.



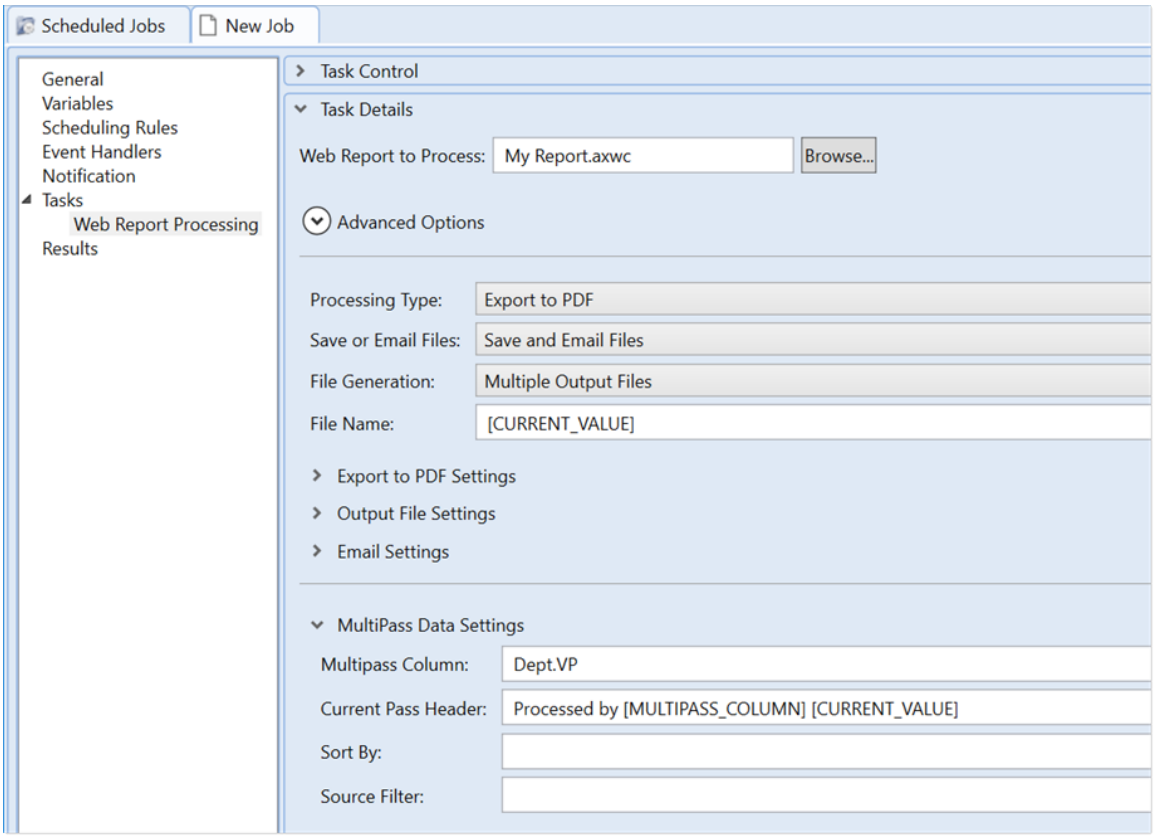
Example task looking up email addresses from a recipient column

9. Complete the multipass settings for processing:

Item	Description
Multipass Column	Specify the column to use for multipass processing. You can type a Table.Column name, or click the column icon to select the column from a dialog. You can select any column on a data or reference table, though typically processing is performed by a dimension such as Dept.Dept, or a grouping such as Dept.Region. The report will be processed once for each unique value in the specified column (except for any values excluded by the Source Filter). A filter is applied to the data query in the report so that the data is limited to the current pass value. For example, if you are processing by Dept.Dept, then the report will be processed once for each department, and the report data will be limited to only the data for that department. Keep in mind the difference between processing by a data table column such as GL2022.Dept, versus a dimension table column such as Dept.Dept. When processing by GL2022.Dept, the report will be processed by each department with data in the GL2022 table. When processing by Dept.Dept, the report will be processed by each department in the Dept table. To verify the list of values for processing, click the **Preview Multipass List** button to view the list of items. The first 100 values are shown, in the order they will be processed. If the task configuration includes a **Recipient Column** (in the email settings) or a **Sort By** column, these columns are also shown in the preview.

Item	Description
Current Pass Header	Optional. Define a header to display in the report output file. This option only applies if the processing type is **Export to PDF**. The current pass header should use processing variables to display information about the current pass. To use a processing variable, you can type the variable or you can click the pencil icon to open a text editor. From the **Insert Variable** list, select the variable that you want to use. For example, you can define a header such as: `Processed by [MULTIPASS_COLUMN] [CURRENT_VALUE]` When processing by Dept.Dept, this would resolve such as **Processed by Dept 22000** By default, if the current pass header is left blank, then the PDF output will not include a header to indicate the current pass information. However, it is possible that the template used to create the report may have been designed with a dynamic header that will display this information.
Sort By	Optional. Specify one or more sort columns for the list of multipass values. You can type a Table.Column name, or click the column icon to select the column from a dialog. You can also optionally specify `Asc` or `Desc` after the column name (ascending order is used if not specified). For example: `Dept.Dept Desc`. Separate multiple values with semicolons. By default, the values are sorted by the multipass column in ascending order. The Sort By field only needs to be used if you want the values to be sorted in descending order instead, or if you want the values sorted by a different column in the same table. The processing order is only relevant when **File Generation** is set to **Single Output File**, since it determines the order of each individual pass within the single file. When outputting to **Multiple Output Files**, the order is still used during processing but it has no useful impact on the outcome.
Source Filter	Optional. Specify a filter to limit the multipass list of items. You can type a filter, or you can click the filter icon to use the Filter Wizard. When the multipass list of values is generated, any value that does not meet the source filter will be excluded from processing. By default, all values in the specified multipass column are processed if the source filter is left blank.

Scheduler job variables can be used in any of the multipass settings.



10. Complete the remaining task and job settings as desired. For more information, see the Scheduler documentation. Note the following:
    - Generally speaking, the **Advanced Options** displayed at the top of the Web Report Processing task should only be modified as advised by Axiom Support.
    - If you want to schedule the job for execution at a later date and/or time, including setting up recurring execution, use the **Scheduling Rules** section of the job.
    - If you want to use Scheduler job variables in any task settings, these variables should be defined in the **Variables** section of the job.
    - It is recommended to review the **Notification** settings for the job and adjust them as needed. By default, Scheduler jobs are configured to send an email to the user who executed the job when the job completes, regardless of the job status.
11. On the **Job** tab, click **Save** to save the job.
12. In the Axiom Explorer dialog, select a folder location in the Scheduler Jobs Library and define a name for the job, then click **Save**.

If the job settings included an active scheduling rule, this rule is evaluated when the job is saved and the next scheduled execution is added to the Scheduler job queue.

Executing web report processing

Once you have set up a Scheduler job with a Web Report Processing task, you can execute the web report processing by executing the Scheduler job. Scheduler jobs can be executed on demand by using the **Run Once** feature within Scheduler, or you can schedule the job for future execution by defining and saving a scheduling rule in the job. Scheduler jobs can also be executed on demand using RunEvent, such as to kick off the Scheduler job from a custom task pane, Axiom form, or spreadsheet Axiom report.

When web report processing is executed, the following occurs:

- The list of multipass values to process is obtained using the Multipass Column limited by the Source Filter, sorted in the default or specified sort order.
- The specified report is processed once for each value in the multipass list.
    - The report data query is filtered by the current pass value and the report data is refreshed.
    - A PDF or Excel copy of the report is generated, depending on the specified Processing Type.
- If the File Generation is Multiple Output Files, then the output file for each pass is saved and/or emailed according to the task configuration.
- If the File Generation is Single Output File, then the result of each pass is saved in temporary storage and then merged into a single file once all passes are complete. This single file is then saved and/or emailed according to the task configuration.

Each pass of multipass processing can succeed or fail independently without affecting the other passes. For example, imagine the multipass list has 10 items. Pass 1 fails because the specified recipient column does not contain a valid email address, user name, or role for the pass 1 value. This pass-level failure does not stop passes 2-10 from being processed. The job status will report partial success in this case.

A Scheduler job can contain multiple Web Report Processing tasks, followed by a File Processing task to collect the various output files into "report books", and then save and/or deliver the collected books. For more information, see Setting up file collect with web report processing.

Using processing variables

The following processing variables can be used in various settings within the Web Report Processing task, in order to dynamically change the setting using information for the current pass.

Item	Description
[CURRENT_VALUE]	This variable returns the current multipass processing value. For example, if you are processing by Dept.Dept, and the current pass is for department 20000, the variable will be replaced by the value "20000" for this pass. This variable is typically used in settings such the file name, sheet name (when generating Excel output), and folder path.
[CURRENT_PASSNUMBER]	This variable returns the current pass number. For example, if the current pass is number 20 of 35 passes, the variable will be replaced by the value "20" for this pass.
[MULTIPASS_COLUMN]	This variable returns the name of the multipass column. For example, if you are processing by Dept.Dept, the variable will be replaced by the value "Dept" for all passes. This variable could be used whenever you want to reference the name of the dimension processed. For example, instead of just referencing the current value in the file name, you might want to reference the column name and the value. A variable construction like `[MULTIPASS_COLUMN] [CURRENT_VALUE]` would resolve to "Dept 20000" when processing by Dept.Dept and the current pass is for department 20000.

Processing variables can only be used in certain settings, and sometimes only when the output is multiple files (versus a single file). See the documentation for each individual setting to see if processing variables are supported in that setting.

NOTE: Processing variables and Scheduler variables use different syntax. Processing variables are enclosed in square brackets. Scheduler job variables are enclosed in curly brackets.

Using Scheduler job variables in task settings

Scheduler job variables can be used in any Web Report Processing task setting that you can directly type into, such as the file name, sheet name, folder path, and various email settings. To use a Scheduler job variable, you first define the variable on the **Variables** tab of the job, then you enter the variable in the desired setting using curly brackets. For example, if the variable name as defined on the Variables tab is `columnname`, then enter `{columnname}` in the task setting. When the job is executed, the variable in curly brackets will be replaced by the current value of the variable.

Scheduler job variables are useful when you want a task setting to change dynamically based on a variable value that gets passed to the Scheduler job. Various processes in Axiom can trigger a Scheduler job for execution and pass variable values to the job. Additionally, previous tasks in the job can set a variable value that is then passed to subsequent tasks in the job.

NOTE: Processing variables and Scheduler variables use different syntax. Processing variables are enclosed in square brackets. Scheduler job variables are enclosed in curly brackets.

Using Scheduler job variables to pass refresh variable values

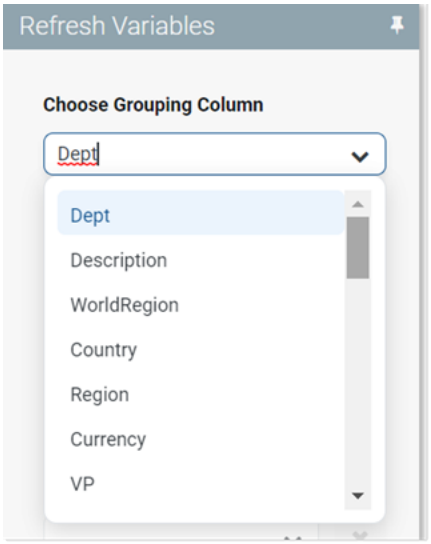
If the web report uses refresh variables, Scheduler job variables can be used to pass variables to these variables. For example, in some cases the report may require certain refresh variables to be set before data can be queried. In this case, the Scheduler job must pass values for these required refresh variables. The refresh variables will be used to refresh data for each pass, in addition to the multipass filter for the current pass.

In order to pass a Scheduler job variable value to the report as a refresh variable value, special syntax is used for the job variable:

`ReportVariable.`*`VariableID`*

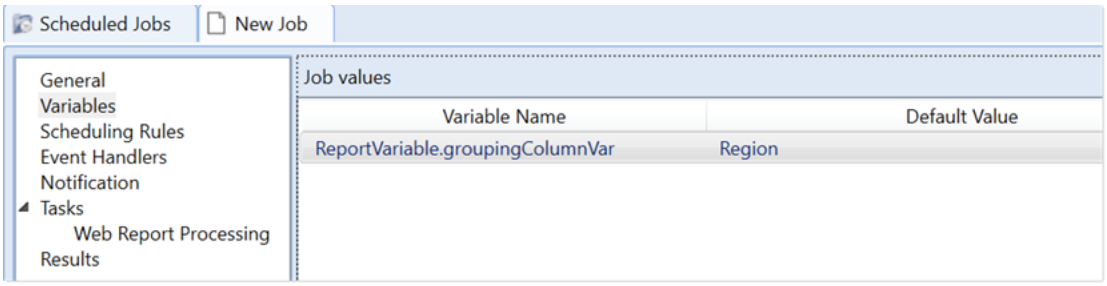
Where ReportVariable is a dedicated keyword that tells processing to apply the variable as a report parameter, and VariableID is the name of the specific report parameter.

For example, the report may contain a refresh variable that specifies the grouping level (row dimension) of the report. This refresh variable takes values such as Dept, WorldRegion, Country, and so on.



Example refresh variable

In this example, the ID of this refresh variable is `groupingColumnVar`. Therefore to pass a value to this refresh variable, a Scheduler job variable named `ReportVariable.groupingColumnVar` can be used. This variable must be assigned a value that exactly corresponds to a value that can be selected for the refresh variable within the Refresh Variables panel.



When this report is processed, the value for this refresh variable will be set to Region.

NOTES:

- The processing variable `[Current_Value]` can be used as the variable value, if it will resolve to a valid value for the refresh variable. In this case, the value of the variable will change dynamically for each pass.
- Because the variable IDs are not exposed on the report, this feature is primarily useful for product developers to deliver a pre-configured Scheduler job with a product.

Setting up file collect with web report processing

You can combine web report processing with the File Collect feature to create and deliver "report books". For example, you may have three different reports that you want to process by region, then you want to collect the output into region-specific report books to deliver to each regional manager.

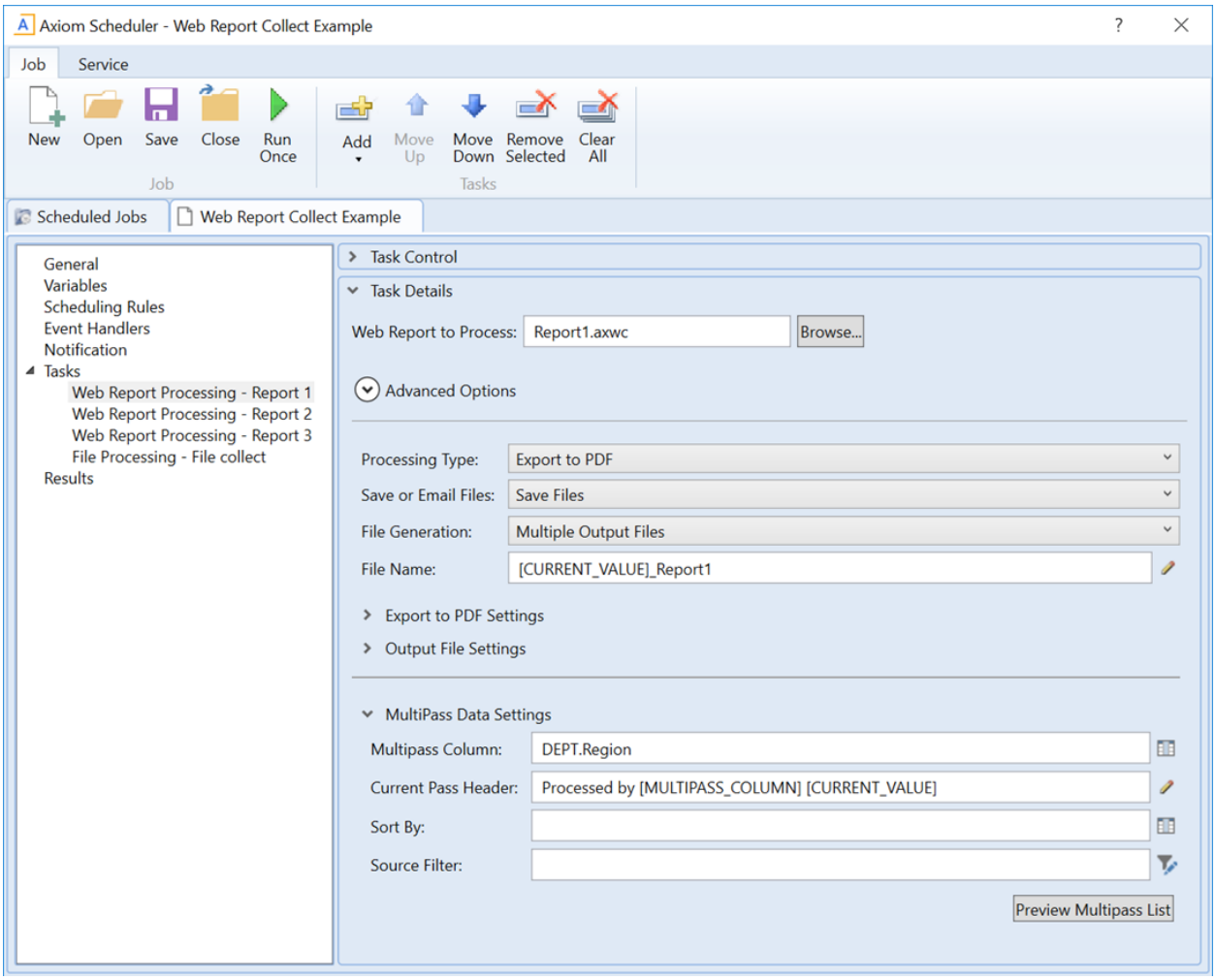
This process works as follows:

- You set up multiple Web Report Processing tasks in Scheduler to process the web reports and save the output to a designated location. The output can be PDF or Excel.
- You set up File Collect in a separate spreadsheet utility to collect the output from the Web Report Processing tasks. This configuration specifies:
  - The type of files to collect, PDF or Excel.
  - The source folder(s) from which to gather the files to collect.
  - The file filter to specify the files to collect.
  - The file name of the output file, and the file type if applicable—PDF files can only be collected as PDF, but Excel files can be collected as either PDF or Excel.
  - The delivery method of the output file—save only, email only, or save and email—as well as the output folder and email settings (as applicable).
  - Optional common files to include in each output file, such as a cover page.
  - Optional multipass column to perform the file collect operation iteratively over a dimension

- You set up a File Processing task in Scheduler and configure it to run the File Collect report utility. Typically all of the tasks would be in a single Scheduler job, so that the Web Report Processing tasks are run first, then the File Processing task runs afterward to perform the final collect operation.

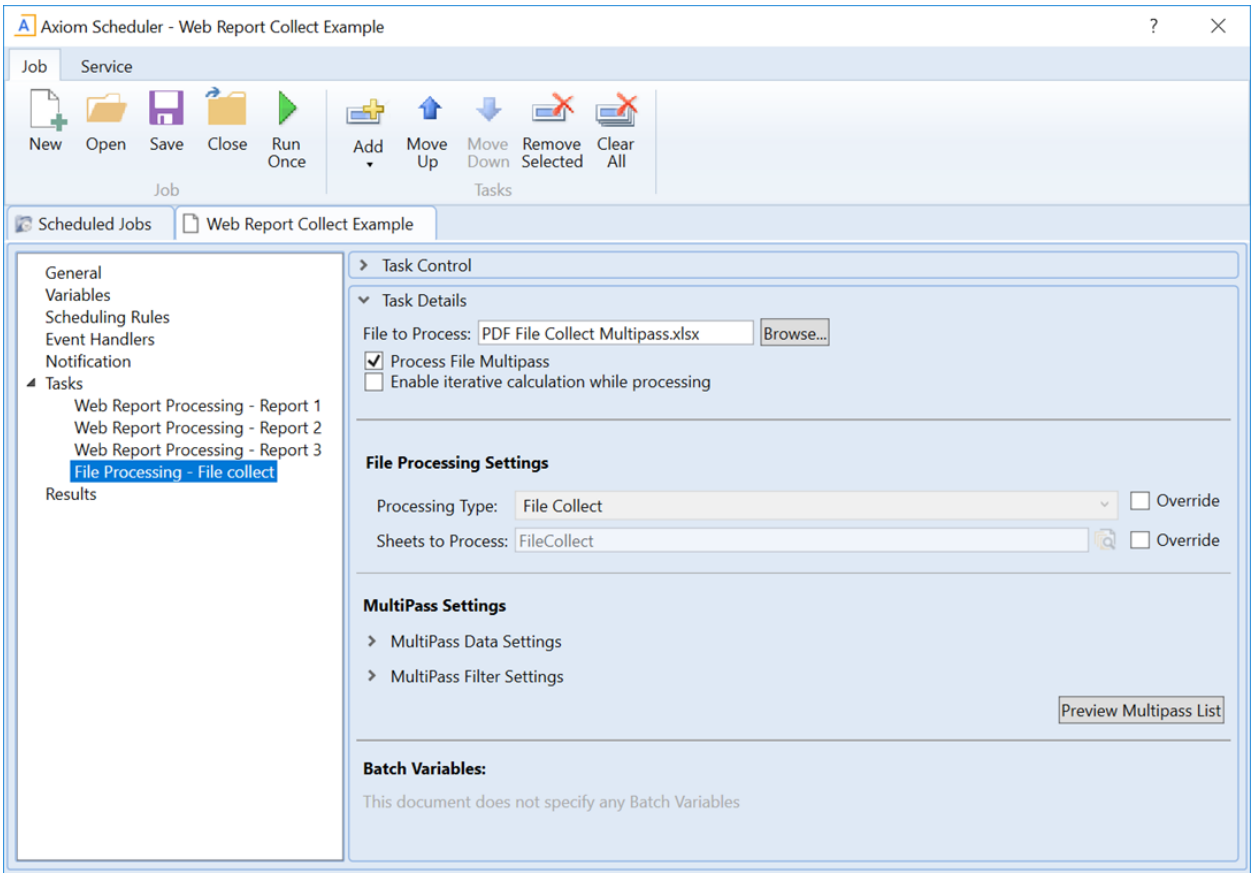
File Collect is an option of File Processing. It can be used to collect any PDF or Excel files, regardless of how they are generated. For more information on how to configure file collect, see the File Collect documentation.

The following example shows a Scheduler job with three Web Report Processing tasks and one File Processing task. The three Web Report Processing tasks are used to process three different web reports by region and then save the output files to a designated folder in the Axiom repository.



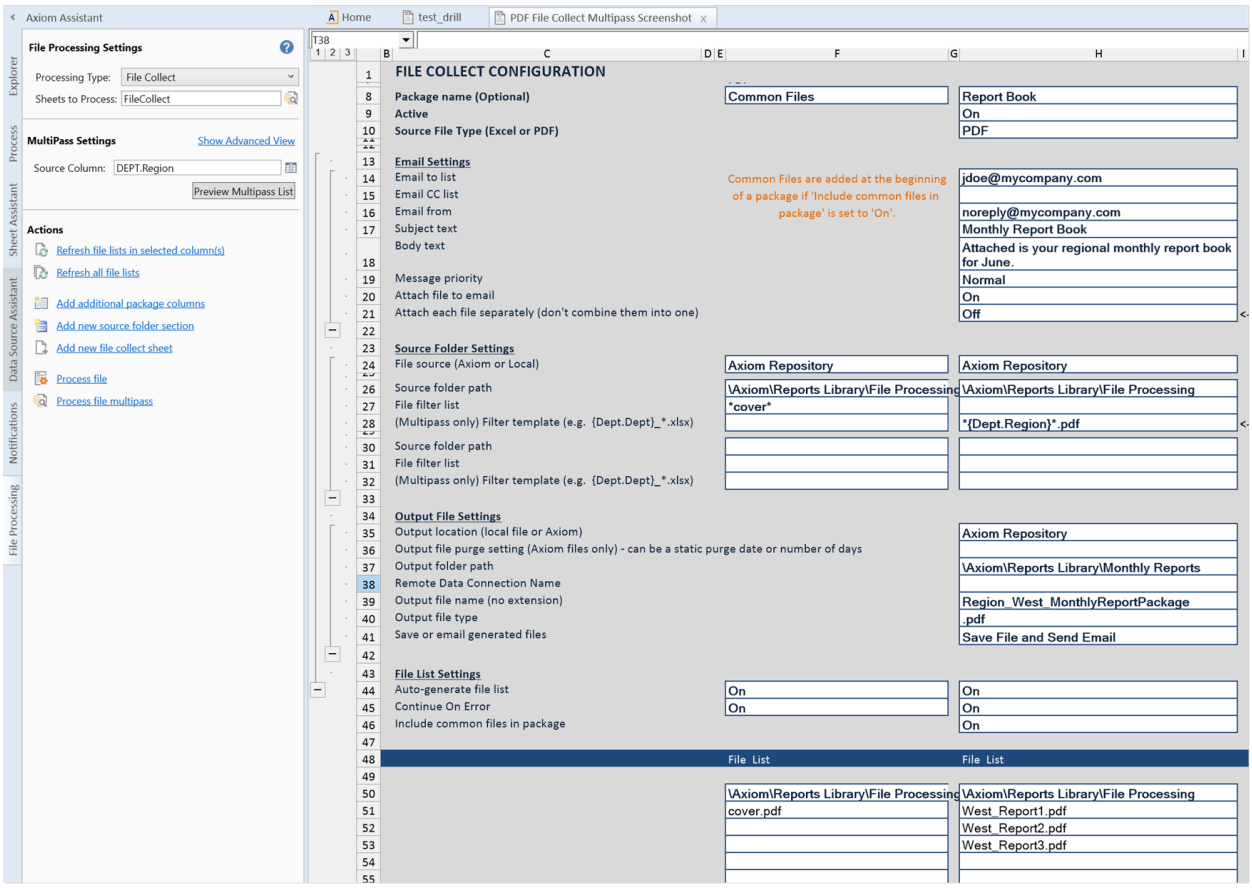
Example Scheduler job with multiple Web Report Processing tasks

The File Processing task is used to run the File Collect report utility once all of the Web Report Processing tasks are completed. Note that the File Processing task simply points to the spreadsheet report that contains the File Collect configuration; the settings are not defined within the Scheduler job.



Example Scheduler job with File Processing task to run the File Collect operation

The following screenshot shows an example of how the File Collect settings could be configured within the spreadsheet report. The File Collect operation will be performed using multipass processing by region. The file filter will collect all files in the source folder location based on the current pass region name, then save and email the output file. The email address and file name settings use a formula with a GetCurrentValue function in order to dynamically set the email address and file name for each pass.



Example File Collect configuration to collect the PDF output into a PDF report book

Reference

Filter criteria syntax

Several areas of Axiom use criteria statements to define a set of data. The syntax for these criteria statement is as follows:

```
Table.Column='Value'
```

- *Table* is the name of the database table.
- *Column* is the name of the column in the database table.
- *Value* is the value in the column.

If the column is String, Date, or DateTime, the value must be placed in single quotation marks as shown above. If the column is Numeric, Integer (all types), Identity, or Boolean, then the quotation marks are omitted.

For example:

- To filter data by regions, the filter criteria statement might be: `DEPT.Region='North'`. This would limit data to only those departments that are assigned to region North in the Region column.
- To filter data by a single department, the filter criteria statement might be: `DEPT.Dept=100`. This would limit data to only department 100.

If the table portion of the syntax is omitted, then the table is assumed based on the current context. For example, if the filter is used in an Axiom query, then the primary table for the Axiom query is assumed. If the current context supports *column-only syntax*, and the specified column is a validated key column, then the lookup table is assumed.

Operators

The criteria statement operator can be one of the following: =, >,<,<>,<=,>=. For example:

```
ACCT.Acct>1000
```

SQL IN, LIKE, and BETWEEN syntax can also be used. For example:

```
DEPT.Region IN ('North','South')
```

Compound criteria statements

You can use `AND` and `OR` to combine multiple criteria statements. If you are creating long compound criteria statements with multiple ANDs or ORs, you can use parentheses to group statements and eliminate ambiguity. For example:

```
(DEPT.Region='North' OR DEPT.Region='South') AND (ACCT.Acct=100 OR
ACCT.Acct=200)
```

NOTES:

- When filtering on multiple values in the same column, you must use OR to join the statements, not AND. In the example above, if the statement was instead `DEPT.Region='North' AND DEPT.Region='South'`, that statement would return no data because no single department belongs to both the North and South regions. When you use OR, the statement will return departments that belong to either the North or the South regions.
- Alternatively, you can use the SQL IN syntax to create a compound statement for values in the same column. For example, the statement `DEPT.Region='North' OR DEPT.Region='South'` can also be written as `DEPT.Region IN ('North','South')`. The Filter Wizard uses IN syntax by default.

Using criteria statements in functions

If you are using a criteria statement in a function, such as GetData, you must place the entire criteria statement in double quotation marks. For example:

```
=GetData("Bud1","DEPT.Region='North'","GL1")
```

You can also place the criteria statement in a cell and then use a cell reference in the function. In this case, you do not need to use double quotation marks in the function, unless you are concatenating text and cell reference contents within the function.

Referencing blank values in filters

If a string column contains a blank value (an empty string), you may want to create a filter that includes or excludes records with these blank values. This empty string is indicated with empty quotation marks in the filter. For example: `ACCT.CMAssign=''` or `ACCT.CMAssign<>''`

If you use the Filter Wizard to construct the filter, it will automatically use the appropriate syntax.

If the blank value is actually a null instead of an empty string, the filter should use the syntax IS NULL or IS NOT NULL. String columns should not allow null values, but Date and DateTime columns often allow null values. For example: `Project.StartDate IS NULL` or `Project.StartDate IS NOT NULL`

Referencing values with apostrophes in filters

If a string column contains a value with an apostrophe (such as O'Connor), then that apostrophe must be escaped with another apostrophe so that it is not read as the closing apostrophe for the filter criteria statement. For example:

`Dept.VP='O'Connor'`

Invalid. This construction does not work because Axiom reads it as Dept.VP='O' and then does not know what to do with the rest of the text.

`Dept.VP='O''Connor'`

Valid. The extra apostrophe tells Axiom that the apostrophe is part of the string value and is not the closing apostrophe.

NOTE: This syntax must use two apostrophe characters in sequence and *not* a double quotation mark. If you create the filter using the Filter Wizard, Axiom will construct the appropriate syntax for you.

Referencing Date or DateTime values in filters

If your locale uses a date format where the first value is the day, filters using that date or date-time value will not process correctly. Instead, the date or date-time value must be in standard format. Standard format is `YYYY-MM-DDTHH:MM:SS` for DateTime and `YYYY-MM-DD` for Date.

If you use the Filter Wizard to construct the filter, it will automatically convert the date or date-time value to the appropriate syntax.

Validating filters

When you are entering a filter criteria statement into an Axiom dialog, you can validate the filter to ensure that it uses correct syntax.

Filter validation  is available in the various dialogs throughout the system, such as:

- Security Management
- Open Table in Spreadsheet
- GetData Function Wizard
- Copy Table Data

The validation feature only validates the filter syntax; it does not validate the logic of the filter or ensure that it will return the desired data. For example, it would detect if you misspelled a column name and allow you to correct it.

If the syntax is correct, the message "Filter is valid" appears in the dialog.

If the syntax has errors, the message "Filter is invalid" appears in the dialog. You can click this link to bring up a **Filter Error** message box that contains more information about the error. In the **Filter Error** message box, click **Show Details** to see the specific error message.

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