MicroStrategy for Finance Analysts
Beyond the Basics: Part I
**Pre-requisites**

- Basic knowledge of MicroStrategy (MSTR) reporting
- Familiar with MSTR reporting terminology, including schema objects and application objects
- Able to navigate in MicroStrategy Web, browse for reports and share objects
- Able to run existing reports and save modifications
- Able to perform sorting, subtotals, pivoting, page-by
- Able to create blank reports using the Report Editor, fill out the report template and add a report filter
Objectives

• Be able to filter data, define attribute elements, and create metrics on the fly
• Be able to create your own stand-alone metrics, filters and prompts for use in multiple reports
• Be able to format data based on different conditions
• Be able to load the Microsoft Office Plug-in and run, edit and format predefined MicroStrategy reports in Excel (demo only)
View Filters
View filters

- View filters are an OLAP Services feature that enable you to restrict the data being displayed on a report after it has been retrieved from the data source.

**Summary of Differences: Report Filters vs. View Filters**

<table>
<thead>
<tr>
<th>Filter Type</th>
<th>SQL Generated</th>
<th>May Reference</th>
<th>When Applied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Report Filter</td>
<td>Every time a change is made; often affects the SQL Where clause</td>
<td>Any object, whether or not it is part of the report</td>
<td>Before the SQL is generated and sent to the data warehouse</td>
</tr>
<tr>
<td>View Filter</td>
<td>None</td>
<td>Only objects in the Report Objects pane</td>
<td>After the data is retrieved from the data warehouse</td>
</tr>
</tbody>
</table>

- Improves the response time of reports and decreases the database load; but does not allow for advanced qualification options like report filters.
- Report filters and view filters can both be used on the same report (but should not contain contradictory filtering criteria).
Creating a View filter

• Run a report in MicroStrategy Web

• To display the view filter, select View Filter from the Tools menu

• Click Add Condition

• Select the attribute or metric to filter from the Filter On: drop-down

• Complete the filtering criteria using the Qualify option or use the Select option to select desired elements

• Click the Apply button

• To remove a view filter, click the x next to it or choose the Clear All option
View Filters Demo
Exercises – View Filters

1. From the FINANCE REPORTING STEWARD > CLASS 2: BEYOND BASICS folder, run “Demo – View Filters” and Save to your My Objects folder
   - Dynamically filter to display only fiscal year 2015
   - Dynamically filter to display only funds with Actual Amt = 0
   - Remove fiscal year view filter
   - Change filter to display only funds that start with “2” and Budget Balance Avail > 1000
   - Clear all filters

2. Open the P-Card report from the Basics class
   - Dynamically filter for any transaction descriptions starting with “E” (or your choice)
Saved Filters
How to use Filters

- A filter specifies the conditions the data must meet to be included in the report results
- You can create pre-defined filter objects for use on multiple reports
- A selection of pre-defined filter objects are available in the PUBLIC OBJECTS > FILTERS > FINANCE folders
- Filter objects can be used in the Report Filter and in the definition of a Metric
- To incorporate an existing filter in a report, navigate to the filter object in Report Design mode, and drag the filter into the Report Filter area
Types of filters

Attribute qualifications
- Attribute form qualification – filters data related to a business attributes form(s) such as Fund ID or Fund Description
- Attribute element list qualification – filters data related to the elements (values) of a business attribute

Set qualifications
- Metric set qualification – filters data related to a set of attributes that are determined based on the metrics associated with those attributes

Note: adding a metric qualification can have unreliable results when a report attribute has null values. Recommend qualifying metrics in a View Filter if needed

Shortcut qualifications
- Shortcut to a filter qualification – uses an existing filter
- Shortcut to a report qualification – uses the results of an existing report
The Filter Editor

- From the Project Home page, select **Create > New Filter** or click the Create Filter icon.
- The **Filter Editor** opens displaying the Objects panel on the left and an empty workspace on the right.
Attribute form qualifications

• In the pane on the left of the Filter Editor, navigate to the attribute you want to filter on
• Right-click the attribute and select **Add to Filter** or drag and drop the attribute on the right pane
• In the qualification statement, choose the **Qualify** option
• From the first drop-down, select the form you want to filter data based on

  ![Filter Editor Screenshot]

• From the next drop-down, select the operator that describes how you want to filter data
• In the text box, type the value that should be compared to the data
• Click the **Save As** button on the toolbar, navigate to the desired folder, name your filter and click Ok
Attribute element qualifications

- In the pane on the left of the Filter Editor, navigate to the attribute having the elements you want to filter on
- Right-click the attribute and select **Add to Filter** or drag and drop the attribute on the right pane
- In the qualification statement, choose the **Select** option
- From the drop-down, select **In List** to define the elements to include or **Not In List** to define the elements the filter should exclude
- Move desired elements from the **Available** to **Selected** box and click Apply
- Click the **Save As** button on the toolbar, navigate to the desired folder, name your filter and click Ok
Metric set qualifications

• In the pane on the left of the Filter Editor, navigate to the metric you want to qualify
• Right-click the metric and select Add to Filter or drag and drop the metric on the right pane

![Metric set qualifications](image)

• From the first drop-down, select an operator that describes how you want to filter the data
• In the field on the right, type a value you want to compare to the metric and click the Apply button
• You can also use the Select Metric… option to choose another metric to compare to this one
• Click the Save As button on the toolbar, navigate to the desired folder, name your filter and click Ok

• Tip: it might be best to include metric qualifications in the View Filter instead of Report Filter
Shortcut-to-a-filter qualification

• In the pane on the left of the Filter Editor, navigate to the existing filter you want to use (either through MY OBJECTS or PUBLIC OBJECTS > SHARED FILTERS)

• Right-click the filter object and select Add to Filter or drag and drop the metric on the right pane

• Move additional filter objects to the Filter Editor or add a new qualification

• Click the Save As button on the toolbar, navigate to the desired folder, name your filter and click Ok
Shortcut-to-a-report qualification

• Create a new blank report or open an existing report in Design mode
• From the Objects pane, navigate to the report object you want to use
• Right-click the report and select Add to Filter or drag the object to the Report Filter pane
  ▶ The current report will automatically be based on the results of the report used in the filter

• Add more qualifications to the Report Filter if desired
• Run and save the report as needed
Handling multiple qualifications

- By default multiple qualifications are joined by an “AND” operator – both conditions must be met to be included in the results
- The AND appears in between each condition

```
FIN Chart (Chart Code) Equals "U" AND
Fiscal Year (Fiscal Period Year) Equals FIN Fiscal Year Value AND
FIN Transaction Ledger Indicator (Finance Transaction Ledger Indicator) Equals "O" AND
Elements of FIN 15 - Department - Current
```

- Change the operator by clicking on it:
  - OR: either the first condition or the second condition are true to be included in the results – this will automatically indent the two conditions
  - AND NOT: the first condition must be true and the second condition must not false
  - OR NOT: either the first condition is true OR the second condition is false
- Click the arrow beside the operator to indent two conditions (like placing them in parentheses to be resolved first)
- Click the arrow at the end of the condition to change the order
Exercises – Saved Filters

1. Create a Filter object for fiscal years 2014, 2015, 2016
2. Create a Filter object for expense accounts only
3. Edit your copy of the “Demo – View Filters” report
4. In the Report Filter, replace the Account Group qualification with your expense accounts filter
5. Replace the fiscal year qualification with your last three years filter
6. Run and save the report as “Demo – Saved Filters”
7. Navigate to the PUBLIC OBJECTS > FILTERS > FINANCE > FINANCE CORE folder and view the available filters
8. Optional: Incorporate one of the public filters into the above report (or another report of your choice)
Derived Elements
Derived elements

- Derived elements allow you to create a new element on-the-fly based on attribute elements on the report

- Provides a new view for analysis and formatting purposes

- Defined by using a list, filter, or calculation to combine attribute elements

- Derived elements are only created within a report and cannot be applied to other reports
Creating a Quick Derived Element

- Run a report or document in MicroStrategy Web
- Ctrl-click to select the desired elements
- Right-click and select **Create Group** or select **Create Calculation** and the desired calculation
Using the Derived Elements Editor

• Run a report or document in MicroStrategy Web
• Right-click on the applicable attribute header and select Derived Elements…
• In the editor, click New and choose the type of derived element
• Type a display name for the element and define as follows:
  • List – in the Definition area, move the desired elements from the Available to Selected box and click Apply
  • Calculation – in the Definition area, move the desired elements from the Available to Selected box, choose the desired Function, and click Apply
  • Filter – in the Definition area, enter the desired criteria and click Apply
• To remove derived elements, right-click on the applicable attribute and select the Clear Derived Elements option
Derived Elements Demo
Exercises – Derived Elements

1. Execute the shared report “Demo – Derived Elements” and SAVE to your My Reports > Class 2 folder
   • Run the new report
   • Create Derived Elements for FIN Account – Current to group expenses on the same row as budget data
     ➢ Use the Create Group and/or the Derived Element editor
   • Save the revised report

2. Create a report to display the FIN Program and Actual Amt, selecting only expense accounts for one fiscal year and the department level of your choice
   • Run report and create derived elements to group together a subset of similar program elements (your choice).
   • Save the report as “My Derived Elements”
Derived Metrics
What is a Metric?

- Metrics are dynamic calculations that represent business measures and key performance indicators.

<table>
<thead>
<tr>
<th>FIN Fiscal Year</th>
<th>FIN L3 - Account Group - Current</th>
<th>FIN Actual Amt</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>LD Labor and Benefits - Direct Costs</td>
<td>6,690,075.82</td>
</tr>
<tr>
<td></td>
<td>CO Operating Expenditures-Direct Costs</td>
<td>1,151,252.96</td>
</tr>
<tr>
<td></td>
<td>CH Overhead - Indirect Costs</td>
<td>379,506.27</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>8,210,838.05</td>
</tr>
<tr>
<td>2015</td>
<td>LD Labor and Benefits - Direct Costs</td>
<td>7,300,518.32</td>
</tr>
<tr>
<td></td>
<td>CO Operating Expenditures-Direct Costs</td>
<td>1,248,625.87</td>
</tr>
<tr>
<td></td>
<td>CH Overhead - Indirect Costs</td>
<td>257,248.01</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>8,806,393.20</td>
</tr>
<tr>
<td>2016</td>
<td>LD Labor and Benefits - Direct Costs</td>
<td>4,311,592.87</td>
</tr>
<tr>
<td></td>
<td>CO Operating Expenditures-Direct Costs</td>
<td>675,903.70</td>
</tr>
<tr>
<td></td>
<td>CH Overhead - Indirect Costs</td>
<td>117,004.10</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>5,103,960.76</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>22,121,192.01</td>
</tr>
</tbody>
</table>

- They are the focus of almost any report!

- A variety of pre-built metrics are available in the FINANCE > FINANCE REPORTING folder.

- You can create your own metrics dynamically within a report or create stand-alone metrics for use on multiple reports.
Derived metrics

• Derived metrics allow you to perform new calculations on-the-fly using the data available on the report

• Calculations are evaluated in-memory

• Derived metrics are only created within a report and cannot be applied to other reports
Creating a Quick Derived Metric

- Run a report or document in MicroStrategy Web
- Right-click on the metric to base the new metric on
- Select from available formulas (Percent to Total, Rank) and choose the level
Creating a Derived Metric in the Formula Editor

• Run a report or document in MicroStrategy Web
• Right-click on the metric to use in the REPORT OBJECTS pane
• Select **Insert Metric > New**… Or, select **Insert New Metric** from the Data menu
• The **Metric Editor** opens in Formula mode

![Metric Editor](image)

- Enter the name for the Metric
- Double-click on the attribute or metric to use
- Double-click on the Function you want to use from the list
- Switch to Function mode if desired
- The resulting formula displays and can be edited here
- Click Validate to verify the formula
Creating a Derived Metric in the Function Editor

- Using the **Metric Editor** in Function mode is handy when you want to change the metric calculation level.

- Click the **Save** button when finished.
Derived Metric Demo
Exercises - Derived Metrics

1. Execute the shared “Demo – Derived Metrics” report and SAVE to your My Reports folder
   - Insert Metric to compute the actual amount from Debit Amt and Credit Amt
   - Add FIN Actual Amt to report to verify your metric
   - Add totals and compute the Percent to Total for each fiscal year (to Grand Total)
   - Add FIN Fiscal Period as a row
   - Compute the Percent to Total within each fiscal year
   - Compute the Rank (1=highest) of actual amount within each fiscal year
   - Rename your metric headers
   - Save the report
Saved Metrics
Required Components of a Metric

Mathematical formula

- Identifies the data to be used from the data source
  - Can be made up of facts in the data source, business attributes in the data source, or other metrics that have already been created
- Defines the calculations to be performed on that data
  - The default function for every formula made up of facts is \textit{Sum}
  - The default function for every formula made up of attributes is \textit{Count}

Business level to calculate the formula

- By default, a metric is calculated at the “report level” (the level of the lowest-level attribute on the report)
The Function Editor

- To create a metric from the project home page, click Create > New Metric
- The Metric Editor opens in Function Editor mode
**Metric Types**

**Simple**
The most basic metric. Simple metrics can be used to create other metrics.

- Example: My Actual Amt
  - $\text{Sum}([\text{FIN Transactions Actual Amt}])$
- Based on one or more facts or attributes
- Include one or more aggregation functions
- Include the specified level at which they will be calculated
- Conditions and transformations are optional
Metric Types, cont’d

Compound
Combine one or more existing metrics with mathematical operators

• Example: My % to Total = [My Actual Amt]/[My Actual - Year Level]

Conditional
Place a filter or condition directly in a metric. The filter screens only the data related to that individual metric

• Example: FIN Actual Amt (Operating Expenditures Only) =
  \[ \text{Sum}([\text{FIN Transactions Actual Amt}])\{\sim+}\text{<}[\text{FIN AcctGroupNotOH}]\text{;}@2;\rightarrow \]
Determining the metric level

- By default, a metric is calculated at the report level, meaning the level of the lowest-level attribute on the report.
- You can change the metric’s level to calculate at the level of a specified attribute or object instead.
  - Example: My Actual – Year Level

<table>
<thead>
<tr>
<th>FIN Fiscal Year</th>
<th>FIN Fiscal Period</th>
<th>My Actual Amt</th>
<th>My Actual - Year Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>201401</td>
<td>489,629</td>
<td>5,326,314</td>
</tr>
<tr>
<td></td>
<td>201402</td>
<td>780,395</td>
<td>5,326,314</td>
</tr>
<tr>
<td></td>
<td>201403</td>
<td>256,877</td>
<td>5,326,314</td>
</tr>
<tr>
<td></td>
<td>201404</td>
<td>547,178</td>
<td>5,326,314</td>
</tr>
<tr>
<td></td>
<td>201405</td>
<td>390,857</td>
<td>5,326,314</td>
</tr>
<tr>
<td></td>
<td>201406</td>
<td>343,902</td>
<td>5,326,314</td>
</tr>
<tr>
<td></td>
<td>201407</td>
<td>875,844</td>
<td>5,326,314</td>
</tr>
<tr>
<td></td>
<td>201408</td>
<td>60,434</td>
<td>5,326,314</td>
</tr>
<tr>
<td></td>
<td>201409</td>
<td>249,195</td>
<td>5,326,314</td>
</tr>
<tr>
<td></td>
<td>201410</td>
<td>481,457</td>
<td>5,326,314</td>
</tr>
<tr>
<td></td>
<td>201411</td>
<td>199,064</td>
<td>5,326,314</td>
</tr>
<tr>
<td></td>
<td>201412</td>
<td>010,793</td>
<td>5,326,314</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>5,326,314</td>
<td>5,326,314</td>
</tr>
</tbody>
</table>
Saved Metrics Demo
Exercises - Saved Metrics

1. Create a Metric object for Actual Amount at the report level
2. Create a Metric object for Actual Amount at the Fiscal Year level
3. Create a Metric object to calculate the Percent to Total of the Actual Amount at the report level divided by the Actual Amount at the Fiscal Year level
4. View your saved metrics
5. Execute the “Demo – Saved Metrics” report and SAVE to your My Reports folder
   • Add your Actual Amount metric
   • Add your Actual Amount per Fiscal Year metric
   • Add your Percent to Total metric
   • Format the Percent to Total on the report
   • Review the results and Save
6. Format your Metric – Actual Expense object to display decimals on all reports
7. Navigate to the Finance Reporting metric folder and explore the various metric options
Saved Prompts
What is a Prompt?

• Prompts allow a report to have a dynamic definition – the specific content is defined at run time

• A prompt is a question the system presents to a user during report execution; how the user answers determines what data is displayed on the report

• Prompts can be put on a report and saved as part of a report definition, and they can be used in a filter, metric, or custom group

• Prompt components:
  • Answer requirement
  • Default prompt answers
  • Personal answers
  • Title and instructions
Answer requirement

• You can either require users to answer a prompt when they execute a report, or you can make an answer optional

  • **Required** – means at least one prompt answer must be selected from the available choices, or the report cannot be executed
    ❖ If a prompt is required consider also providing a default answer

  • **Optional** – means that the user can execute the report without providing an answer to the prompt

• To specify whether an answer is required or optional, select the **Prompt answer is required** check box on the New Prompt page
Default prompt answers

• Providing default answers allows user to execute prompted reports more quickly

• Default answers are particularly useful if a large percentage of your users will answer the prompt the same way

• To specify a default prompt answer:
  • Run a prompted report, and provide the answers you want to be default
  • Select Save As…
  • In the Save As dialog, select Advanced Options… to expand the box and display the Prompts section
  • Check the box Set the current prompt answers to be the default prompt answers
  • Click OK
Personal answers

- Enabling personal answers allows the user to save prompt answers for a specific prompt and then reuse that answer on other reports using the same prompt.
- Users can save personal prompt answers without having to save the report itself.
- Options for **Personal answers allowed**:
  - **None** – no personal answers can be saved; user must manually answer each prompt or ignore it (if optional).
  - **Single** – only one personal answer can be saved for this prompt; when the prompt is used again, the user can keep the personal answer or manually provide a new answer.
  - **Multiple** – multiple personal answers can be named and saved, allowing different answers for the same prompt; when the prompt is used again, the user can select from the list of saved answers to manually provide a new answer.
Title and instructions

• You should customize a prompt’s title and instructions with the users in mind.
• The title should tell the user what information needed.
• The instructions should tell the user how to go about providing an answer.
• Bad example:
  • Title: “Attribute element prompt”
  • Instructions: “Choose an attribute element”
• Better example:
  • Title: “Fiscal Year(s)”
  • Instructions: “Select one or more years for your report results”
Creating a prompt

• To create a stand-alone prompt, on the Project Home page, select **Create > New Prompt** or click the **Create Prompt** icon

• Select the type of prompt you want to create:
  
  • **Hierarchy Qualification Prompt** – users select the elements to filter the report from within one or more hierarchies that you specify
  
  • **Attribute Qualification Prompt** – users select the attribute and elements to filter the report from a list of one or more attributes that you specify
  
  • **Attribute Element List** – users select the elements to filter the report from a listing of all elements in the attribute you specify or from a predefined list of elements
  
  • **Metric Qualification Prompt** – users define a qualification to filter the report using one or more metrics that you specify
  
  • **Value Prompt** – allows users to enter a specific value for the type of data requested
  
  • **Object Prompt** – allows users to select objects such as attributes or metrics they want to add to the report
The Prompt Definition Tab

- Presents the user with a specific attribute to choose elements
- Allows the user to choose elements from a list of attributes that you specify
- Searches for and displays specific project objects when user executes the report
- Allows you to select the attribute to use for the prompt
- Allows you to select attributes to add to the predefined list
- Deletes any highlighted attributes from the predefined list
- Removes all attributes from the predefined list
- Allows you to browse and select a previously created search object
The Prompt General Tab

- Enter a customized title
- Set the prompt to require an answer
- Specify a minimum number of qualifications
- Specify a maximum number of qualifications
- Enter customized instructions for the user
- Specify if personal answers are allowed
- Specify a minimum number of qualifications
- Specify a maximum number of qualifications
- Personal answers allowed:

  Multiple
The Prompt Style Tab

- Check box to set a fixed width or height for the prompt’s text fields and options.
- Specify the number of answers displayed.
- Use to display prompt choices in a folder structure for search objects if applicable.
- Choose to display in the Tree or Shopping Cart style.
- Specify a fixed width or height to ensure that the prompt’s text fields and options display as desired.
- Specify how the prompt options are arranged.
- Specify whether to display a search box if applicable.
The Prompt Qualification Tab

- Use to limit the number of elements displayed per list
- Use to allow users to import elements
- Allow users to change the logical operator

- Expression type allowed:
  - Qualify and Select
  - Select
  - In List

- Default condition operator:
- Maximum number of elements per list:
- Allow element import

- Default operator between conditions:
  - AND

- Determine the qualification expressions allowed in the prompt
- Determine the default condition displayed
- Determine the default operator displayed
- Specify the maximum number of elements if enabled
- Determine the logical operator between conditions
Adding a Stand-alone Prompt to a report

- Save the Prompt object to a folder of your choice (i.e. MY OBJECTS)
- Open a report in Design mode
- Choose ALL OBJECTS in the Objects Panel
- Navigate to the folder with the saved prompt
- Drag prompt to the REPORT FILTER
Saved Prompts Demo
Exercises - Prompts

1. Create a Prompt object for the user to enter the Fiscal Year

2. Create a Prompt object for the user to select the Fiscal Year from a predefined list of 10 years

3. Create a Prompt object for the user to select one or more elements from any organization level

4. Edit your copy of the “Demo – Saved Filters” report
   - Replace the last 3 years filter with the saved 10 year Prompt
   - Replace the organization qualification in the Report Filter with the saved organization hierarchy prompt
   - Run the report and Save as “Demo – Saved Prompts”

5. Go to Design mode

6. Navigate to the shared prompts and test some out
Thresholds
Thresholds

- Using thresholds allows you to format certain data differently based on your defined conditions
- Data that is highlighted using special cell formats, symbols, images, or replacement text calls attention to itself and is easier to locate for analysis
- Threshold conditions can be as simple or complex as you want
- You can use attributes or other metrics on the report to define a threshold’s condition
- The special formatting is applied dynamically whenever the report is re-executed
- You can also use certain types of threshold formatting on a graph report
Options to create and apply Thresholds

• MicroStrategy Web comes with several default thresholds
  
  • **Quick thresholds** – allow you to apply green, red, or yellow colors or symbols to metric values on your report based on built-in ranges
  
  • **Visual thresholds** – allow you to use range expressions to determine when a metric has met the condition and the formatting to apply
  
  • **Advanced thresholds** – allow you to apply formatting based on multiple metrics and expressions that are more complex than visual thresholds; this allows for very specific conditions to be defined
Quick Thresholds

• Green, red, or yellow colors or symbols are applied automatically to metric values on the report according to the following ranges

  • Green – the top 20% of the metric values
  • Red – the bottom 20% of the metric values
  • Yellow (optional) – the middle range of the metric values
To create Quick Thresholds on a grid report

• Run your report in Grid view or Grid and Graph view

• Select one or more metric headers on the report (hold CTRL key to select multiple)

• Select Data on the menu bar to display the Data toolbar icons

• Click the arrow next to the Quick Thresholds icon and select an option depending on the way you want to format the values

• One you have selected an option from the list, you can simply click the Quick Thresholds icon to apply the same formatting to other metrics or select a new option

• When a quick threshold has been defined for a metric, you can turn it off and on using the Toggle Thresholds icon on the toolbar
Visual Thresholds

- Visual thresholds can be defined for a metric based on that metric or another metric.
- Visual thresholds consist of one range expression (such as greater than, less than, between, top, bottom, etc.) and apply special formatting to the values that meet the condition.
- You can define your own visual thresholds with custom formatting for a report.
To create a Visual Threshold

- In MicroStrategy Web, run a report in Grid view or Grid and Graph view
- From the Data menu, select Visual Threshold Editor

- Select the desired metric from the Thresholds for drop-down list
- In the Properties area, click the underlined Type and select the type of condition to use and whether the condition is based on this metric or another metric on the report
- Click the Apply ✓ icon
- Enter a value in the text box and click the check or use the horizontal slider bar to define the value
To add or delete Visual Threshold thumbs

• You can add additional thresholds, if desired, by clicking on **Add Threshold** from the icon that appear above the thumb.

• You can click on a thumb and add a new value in the **Enter Value** field or slide the thumb to a new value.

• To delete a thumb, click on the **Delete Threshold** icon; to delete them all click **Remove All** at the top of the Visual Threshold Editor.

• To reset the formatting for a threshold, click the **Clear Format** icon.

• To open the Format dialog box:
  - Click on the **Format** icon or double-click on the thumb of a specific threshold.
  - Or, to format a range, double-click anywhere in the space between two thumbs.
To format Visual Thresholds

• Make appropriate selections within the Font, Number, Alignment, and Color and Lines tabs to format the data that meets the threshold.

• To replace the data with text, an image or quick symbol, click the **Replace Data** check box and select from the drop-down:
  
  • **Replace Text** – type the text in the corresponding text field that you want to display in place of the metric value.
  
  • **Quick Symbol** – select from the corresponding drop-down the symbol (e.g. a plus or minus) you want to appear instead of the metric value.
  
  • **Image** – type the path for the image file in the corresponding text field.

• Click **OK** to apply changes and close the editor.
Threshold Demo
Exercises - Thresholds

1. Run the shared “Direct Balance by Fund” report and SAVE to your My Reports > Class 2 folder

2. Create a quick threshold to highlight the top 20% and bottom 20% funds (on budget balance available)

3. Create a visual threshold to highlight all actual expenses over a certain amount (you choose)

4. Open the Advanced Thresholds Editor

5. Add a threshold to display “exceeding budget!” on all funds where the budget balance available is less than zero

6. Optional: run another saved report and add a threshold of your own choice
Microsoft Office Plug-in
Installing the MSTR Office Plug-in

- MSTR Office allows you to run, edit, and format MSTR reports and documents from Microsoft Excel, PowerPoint, Word, and Outlook
- To install the plug-in, you must have administrator access to your computer
- Go to the main Projects page in MSTR and clink the link on the right side of the title bar
- Select either the 32 bit or 64 bit version based on your Office installation and click Install
- Accept the prompts until the install is finished
Setting up the Excel link

• Open Excel and select the MicroStrategy add-in on the toolbar

• Select Options from the MSTR menu
Setting up the Excel link

- Select Server under the General menu and enter the Web Services URL

  • URL: https://webapps.es.vt.edu/MicroStrategyWS/services/MSTRWSJ

- Click test to ensure success and click Apply and OK
Using the Excel Add-in

- Select the Office option from the MicroStrategy add-in menu
- Enter your PID and password
- Click Get Projects when the button is enabled
- Production will display (the only project)
- Select Production and click OK
Using the Excel Add-in

• You will see the same folder options as when you log into the Web

• Access reports using the My Reports or Shared Reports shortcuts on the sidebar

• Shared Reports requires drilling down on the folders in the explorer window

• Navigate to the desired folder and double-click on a report to run
Using the Excel Add-in

- The results drop into a new Excel worksheet and you can modify the presentation or add other calculations as needed
Important things to note

• The add-in cannot detect changes to the cells in Excel – so do not add your own content within the cell area of the MicroStrategy report
  • If the number of columns is fixed, add your metrics to the left or right
  • If the number of rows is fixed, add metrics to the top or bottom
  • If both vary, add you metrics to a different worksheet

• Always create the reports that you need in MicroStrategy Web before pulling them into Excel
  • You can choose to save prompt answers so you will not be prompted again
  • Not doing this will make the Excel workbook prompt you every time you open it
  • Remember to “merge headers” in the MSTR report before adding to Excel
Office Plug-in Summary

• MicroStrategy add-in is very powerful and can pull in any data from the intelligent server into Office products.

• It is easy to use, but it is “static” – none of the powerful MicroStrategy OLAP capabilities can be used such as pivot, drilling, etc.

• You must plan your layout ahead of time since the add-in might overlay custom metrics if the number of rows or columns changes during a refresh.

• Be careful about the amount of data you are pulling.
  ➢ Remember that data is moving from the database across network servers and the local network to your desktop/laptop.
Demo – Office Plug-in
Exercises – Office Plug-in

• Install the Excel Plug-in
  URL: https://webapps.es.vt.edu/MicroStrategyWS/services/MSTRWSJ

• Connect to Production

• Navigate to shared FINANCE REPORTING STEWARD > CLASS 2: BEYOND BASIC S folder

• Run “Dept Budget Analysis FY2016” -- select one of your departments and enter a fiscal period (i.e. 201608)

• On a separate tab in Excel, create formulas linking to the retrieved data and whatever other formulas you want

• On the Dept Budget Analysis tab, Refresh and Re-prompt the Workbook using different values