Before you begin: Access Library in the Education sandbox

The Education sandbox is a shared, cloud-based environment to help you learn about and experiment with MicroStrategy Web and Library.

Use the Education sandbox to complete various report and dossier exercises. Complete the steps below to access the sandbox.

Access Library in the Education sandbox

1   In your browser, navigate to
    education.microstrategy.com/MicroStrategy/servlet/mstrWeb.

2   Log in to the sandbox with your **MicroStrategy Account** credentials.

    Open the Tutorial project

3   The MicroStrategy landing page opens. Click the **MicroStrategy Tutorial** project.

MicroStrategy Tutorial
MicroStrategy Tutorial project and application set designed to illustrate the platform's rich functionality. The theme is an Electronics, Books, Movies and Music store. Employees, Inventory, Finance, Product Sales and Suppliers are analyzed.
Server name   ENV-218880LAIOUSE1

    The MicroStrategy Tutorial home page opens.

4   Click **Go to MicroStrategy Library**.

5   If prompted, enter your **MicroStrategy Account** credentials, and then click **Log in with Identity**.

    Your Library home page displays.

Exercise: Create a compound grid

After exploring the satisfaction and performance details in the grid you created in *Exercise: Create a basic grid*, you decide to make some adjustments to your analysis. You now want to view differing data for customer satisfaction and employee satisfaction, as described below.

- For customer satisfaction:

  - Revenue and the number of customer complaints by store and customer survey results (satisfied or not satisfied)

- For employee satisfaction:

  - The % of employees promoted by store, year, and employee survey results (not satisfied or satisfied)

Notice that the analysis for customer satisfaction and employee satisfaction require the use of both similar and differing data. For example, regarding attributes, you want to analyze both customer and employee satisfaction by store, but only employee satisfaction by year. Regarding metrics, you want to view the revenue and number of customer complaints for your customer satisfaction analysis but the percent of employees promoted for your employee satisfaction analysis.

Rather than creating two separate grids, display both analyses in a cohesive compound grid by connecting them across the common attribute of Store. Your completed compound grid should look like the image below (only a portion is shown).

Sample compound grid

Customer and Employee Satisfaction

| | Customers Not Satisfied | | Customers Satisfied | | 2019 | | 2020 | | 2021 | |
| | | | | | Employees Not Satisfied | Employees Satisfied | Employees Not Satisfied | Employees Satisfied | Employees Not Satisfied | Employees Satisfied |
Store	Revenue	# of Customer Complaints	Revenue	# of Customer Complaints	% of Employees Promoted	% of Employees Promoted	% of Employees Promoted	% of Employees Promoted	% of Employees Promoted	% of Employees Promoted
Atlanta	$352,628	346	$699,480	255	6.41%	23.96%	7.31%	10.62%	8.45%	14.97%
Augusta	$1,564,245	704	$1,571,038	264	10.83%	4.05%	7.74%	8.17%	1.76%	11.09%
Boston	$677,561	435	$810,376	444	6.06%	20.51%	32.51%	6.15%	11.74%	3.63%
Buffalo	$302,796	566	$428,617	348		62.25%	25.60%	10.19%	11.39%	35.84%
Charleston	$546,754	653	$770,579	635	11.97%	25.94%	12.04%	26.91%	14.90%	9.82%
Charlotte	$1,486,020	796	$1,476,699	322	5.63%	6.28%	11.10%	0.94%	6.41%	3.20%
Fairfax	$1,409,981	521	$1,895,058	403	6.64%	17.45%	6.56%	9.68%		16.29%

1 In the Education sandbox Library, open the **Visualization Types** dossier in Edit mode, if not already there. For a reminder on how to do this, see *Exercise: Access Library in the Education sandbox*, and *Exercise: Add the Visualization Types dossier to MicroStrategy Library*.

2 In the Contents panel on the left, in the Data Details chapter, click the **Compound Grid** page.

3 By default, a new page displays a blank grid visualization on the canvas. To change the visualization to a line chart, right-click inside the visualization, and select **Change Visualization**.
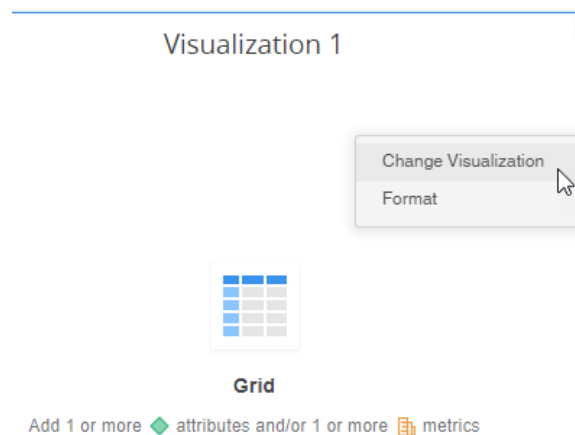
The Change Visualization window opens, displaying the Visualization Gallery.

4 In the Visualization Gallery, point to **Grid**, and then click the **Compound Grid** icon.
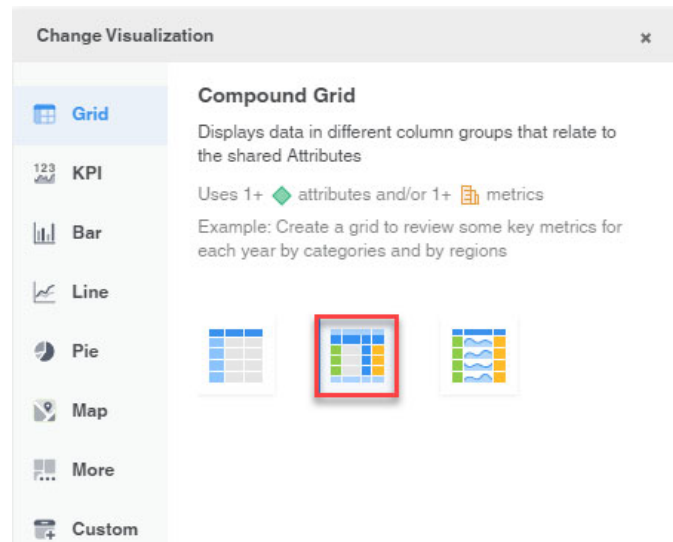
The dossier canvas displays a blank compound grid.

5 The data you need for this analysis is stored in the Satisfaction and Performance dataset. In the Datasets panel, click the arrow icon ▸ to the left of the **Satisfaction and Performance** dataset to expand it, if it isn't already. The dataset's attributes and metrics display.

6 To focus on the objects in the Satisfaction and Performance dataset rather than the other datasets, collapse any other datasets that are expanded by clicking the arrow icon ▾ to the left of the dataset name.

7 Click the **Editor** icon 🖉 to display the Editor panel, if not already displayed.

8 From the Satisfaction and Performance dataset, double-click **Store** to add it to the **Rows** drop zone in the Editor panel. The store locations display in the rows of the grid.
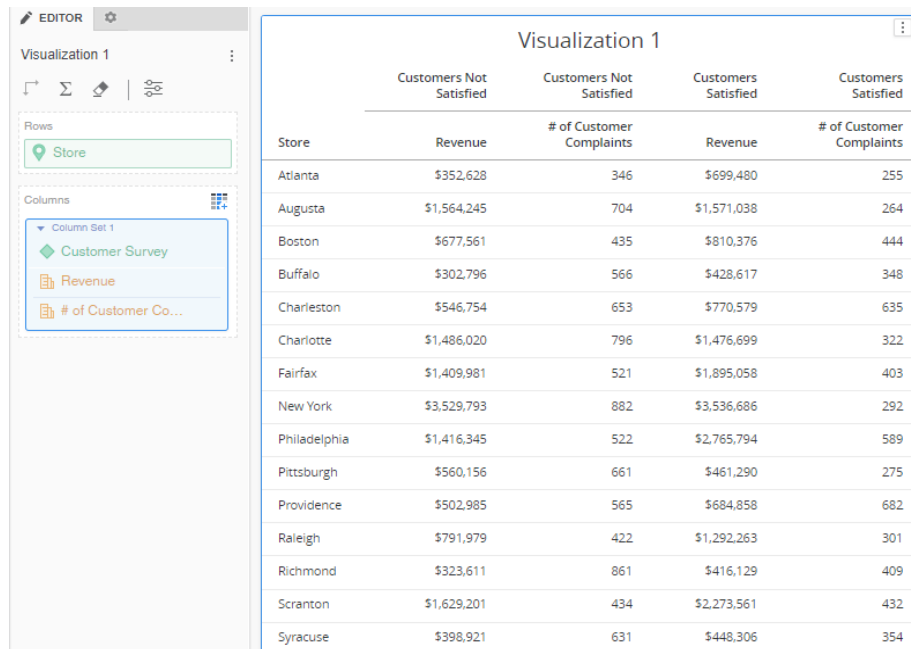
Create the first relationship (column set)

Each quarter, stores send out a customer satisfaction survey. Results from the survey are averaged together for the quarter's total customer satisfaction percentage. If the total customer satisfaction for the quarter is 75% or higher, customers are considered satisfied.

Create the first column set in the compound grid to display the revenue and # of customer complaints by customer survey results (not satisfied or satisfied).

A column set must contain at least one metric, so that the grid can display values. Any attributes that you place in a column set provide context and a level of detail to the metric. You can add multiple metrics and attributes to a column set.

9 Drag the following attribute and metrics from the Satisfaction and Performance dataset to the **Column Set 1** drop zone:

- **Customer Survey**

- **Revenue**

- **# of Customer Complaints**

Add another relationship

Similar to the customer satisfaction surveys, each quarter, stores send out a employee satisfaction survey. Results from the survey are averaged together for the quarter's total employee satisfaction percentage. If the total employee satisfaction for the quarter is 75% or higher, employees are considered satisfied.

Create the second column set in the compound grid to display the percentage of employees promoted by year and employee survey results (not satisfied or satisfied).

10 In the Editor panel, click the **Add Column Set** icon ⊞.

11 Drag the following attributes and metric from the Satisfaction and Performance dataset to the **Column Set 2** drop zone:

- **Year**

- **Employee Survey**

- **% of Employees Promoted**

Column Set 2 displays on the grid, to the right of Column Set 1. A single grid now shows two different relationships with the store locations.

Store	Revenue	# of Customer Complaints	Revenue	# of Customer Complaints	2019 % of Employees Promoted	2019 % of Employees Promoted	2020 % of Employees Promoted	2020 % of Employees Promoted	2021 % of Employees Promoted	2021 % of Employees Promoted
					Employees Not Satisfied	Employees Satisfied	Employees Not Satisfied	Employees Satisfied	Employees Not Satisfied	Employees Satisfied
	Customers Not Satisfied	Customers Not Satisfied	Customers Satisfied	Customers Satisfied						
Atlanta	$352,628	346	$699,480	255	6.41%	23.96%	7.31%	10.62%	8.45%	14.97%
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Fairfax	$1,409,981	521	$1,895,058	403	6.64%	17.45%	6.56%	9.68%		16.29%
New York	$3,529,793	882	$3,536,686	292	2.47%	7.20%	5.53%	2.66%	3.96%	3.64%

12 To make it easier to remember which column set is which, rename them. In the Editor panel, double-click **Column Set 1**, and type **Customers**. Double-click **Column Set 2**, and type **Employees**.

Format the compound grid

1 To make it easier to quickly identify the different column sets in the grid, change the background color of the Employees columns. Click the **Format** icon 🔧 to display the Format panel.

2 In the Format panel, click **Text and Form** 🔲.

3 From the first drop-down list on the Text and Form tab, select **Values**.

4 From the second drop-down list, select the **Employees** column set.
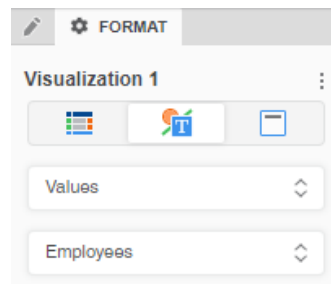

5 In the **Cells** area, from the **Fill** drop-down palette, select **Iceberg #DCECF1**
.
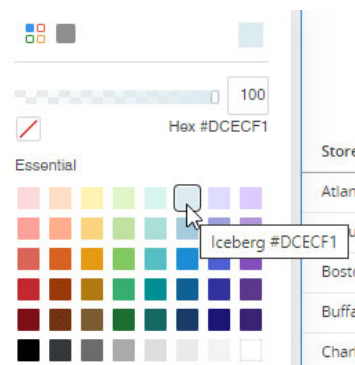
The Employees columns display with a light-blue background, and the Customers columns still display with the default white background.

6 To emphasize the headings, change their background color. From the first drop-down list on the Text and Form tab, select **Column Headers**.

7 From the second drop-down list, select **All Columns**.

8 In the Cells area, from the **Fill** drop-down palette, select **Smoke White #F4F4F4** .
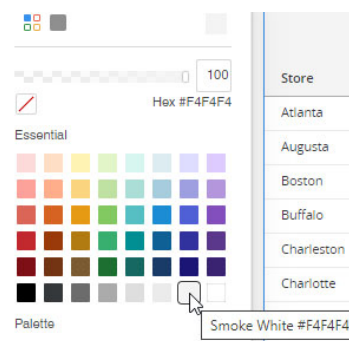
All of the column headers display with a light-gray background.

9 Merge repeated column headers to provide a cleaner look and make the grid easier to read. On the Format panel, click **Visualization Options** , and then expand the **Layout** area.

10 In the Layout area, under **Column headers**, select the check box for **Merge repetitive cells**.

11 To rename the visualization, double-click the **Visualization 1** title, and type **Satisfaction Analysis**. Your compound grid now looks like *Sample compound grid*.

12 Click **Save** in the upper right of the dossier toolbar.

Analyze the compound grid

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1 As you examine the compound grid, answer the following questions:

- What do you think is the most important information in this grid, and is it emphasized? If not, how might you emphasize it?

  The most important information could vary based on your organization's analysis goals, but understanding revenue values when customers are satisfied or not satisfied is likely important. For example, is revenue higher when customers are satisfied? You could apply a threshold to revenue values to draw attention to them and help users quickly visually understand where and when revenue values are high or low.

- Can you add any column sets or modify any of the existing column sets? How might your changes improve the analysis experience?