
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**.

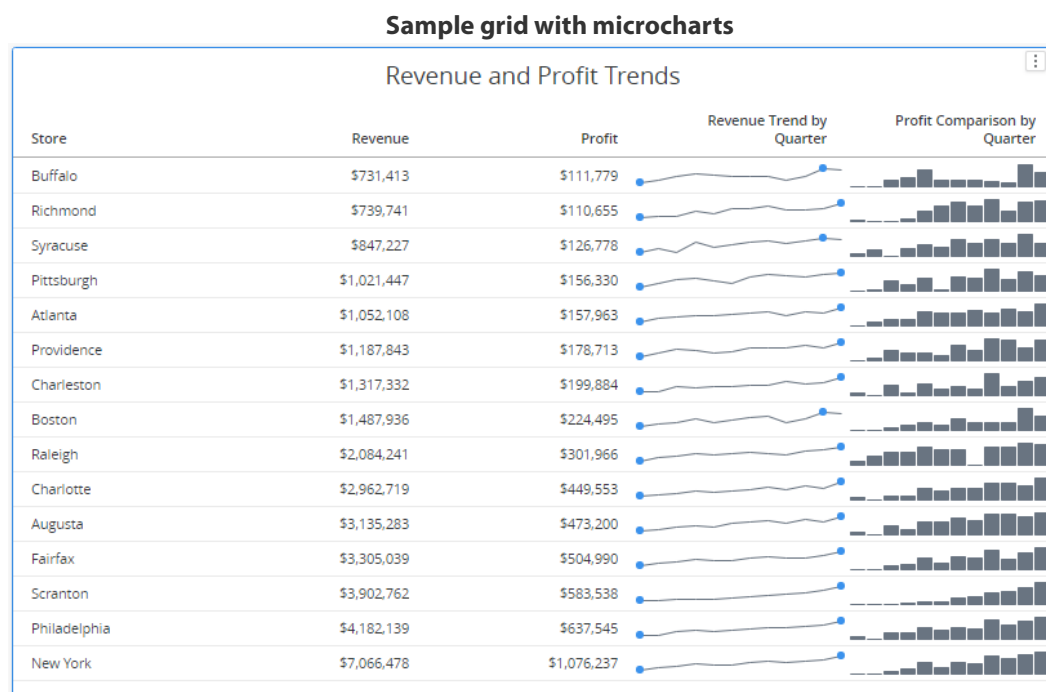
Your Library home page displays.

Exercise: Create a grid with a microchart

As a result of your excellent work and analysis as a store manager, you have been promoted to Vice President. In this new position, you want to understand each store location's performance by analyzing:

- Revenue and profit totals
- How revenue and profit have changed by quarter

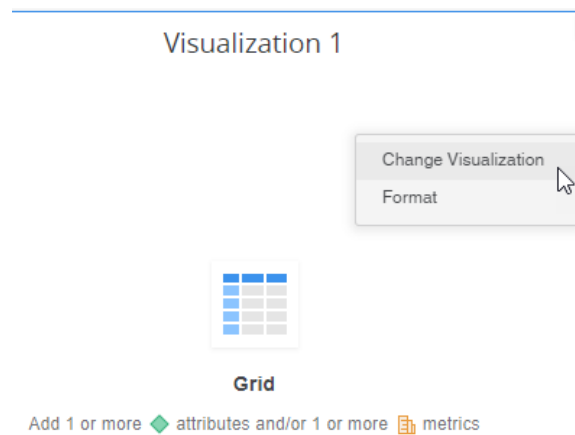
To explore trends in the data while also viewing detailed values in related grid cells, create a modern grid that leverages microcharts. Your completed grid with microcharts looks like the image below.



Create a grid with microcharts

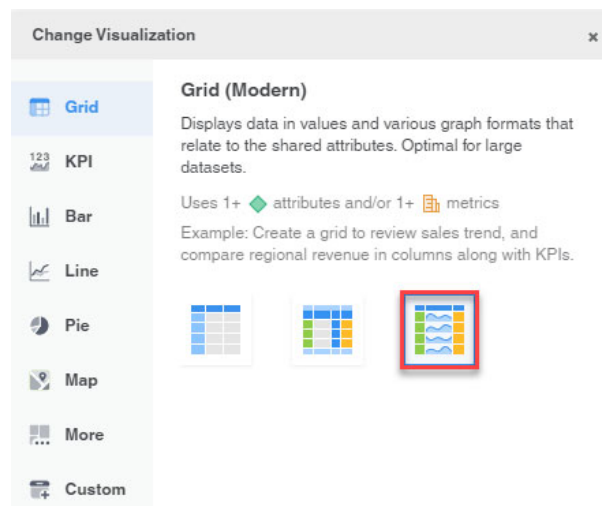
- 1 In the Education sandbox Library, open the **Visualization Types** dossier in Edit mode, if not already there. For a reminder on how to do this, see *Exercise: Access Library in the Education sandbox*, and *Exercise: Add the Visualization Types dossier to MicroStrategy Library*.
 - 2 In the Contents panel on the left, in the Data Details chapter, click the **Grid (Modern) with Microcharts** page.
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- 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.

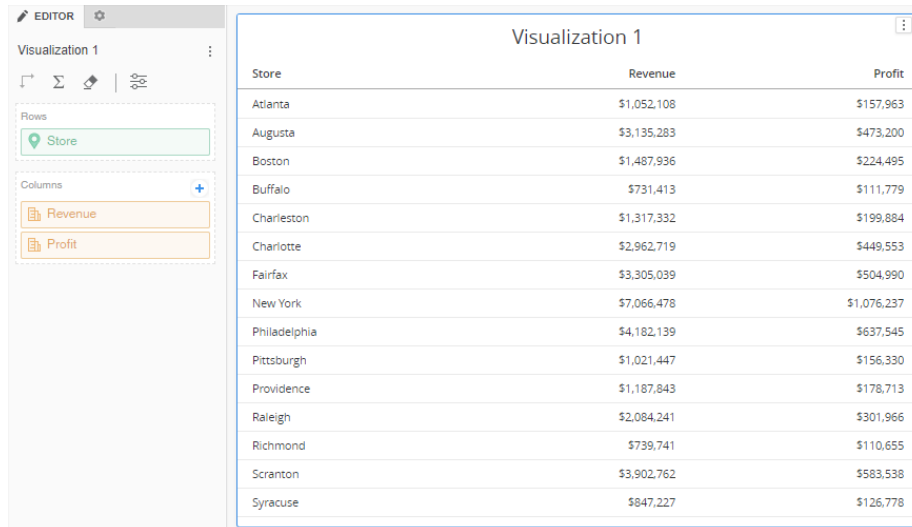
- In the Visualization Gallery, point to **Grid**, and then click the **Grid (Modern)** icon.



The dossier canvas displays a blank grid (modern).

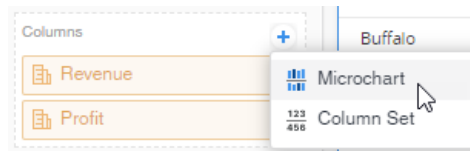
- The data you need for this analysis is stored in the Satisfaction and Performance dataset. In the Datasets panel, click the arrow icon ► to the left of the **Satisfaction and Performance** dataset to expand it, if it isn't already. The dataset's attributes and metrics display.
- To focus on the objects 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 the **Store** attribute to add it to the **Rows** drop zone in the Editor panel.
- 9 Double-click the **Revenue** and **Profit** metrics to add them to the **Columns** drop zone.



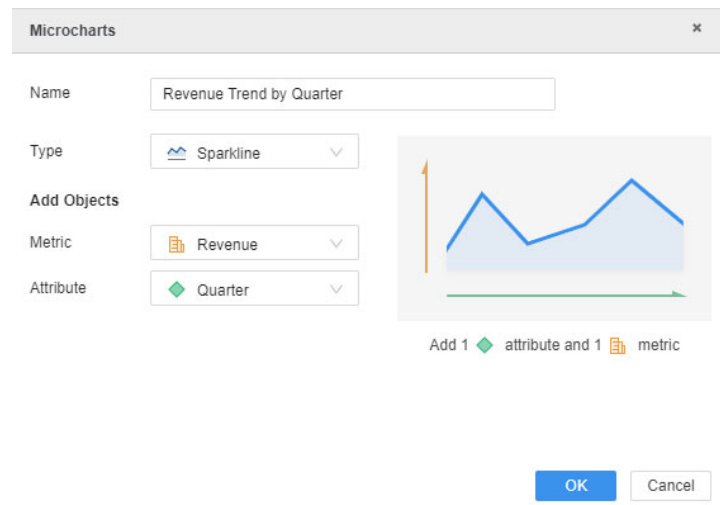
Store	Revenue	Profit
Atlanta	\$1,052,108	\$157,963
Augusta	\$3,135,283	\$473,200
Boston	\$1,487,936	\$224,495
Buffalo	\$731,413	\$111,779
Charleston	\$1,317,332	\$199,884
Charlotte	\$2,962,719	\$449,553
Fairfax	\$3,305,039	\$504,990
New York	\$7,066,478	\$1,076,237
Philadelphia	\$4,182,139	\$637,545
Pittsburgh	\$1,021,447	\$156,330
Providence	\$1,187,843	\$178,713
Raleigh	\$2,084,241	\$301,966
Richmond	\$739,741	\$110,655
Scranton	\$3,902,762	\$583,538
Syracuse	\$847,227	\$126,778

- 10 In the Columns drop zone, click the **Add Microcharts/Column Set** icon , and then select **Microchart**.



- 11 You want to display quarterly revenue as a sparkline. In the Microcharts window, in the **Type** drop-down list, ensure that **Sparkline** is selected.
- 12 Under Add Objects, from the **Metric** drop-down list, select **Revenue**. *You can also type Revenue in the Metric search box to search for it instead of scrolling through the list.*

13 From the **Attribute** drop-down list, select **Quarter**.

















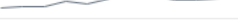
The Microcharts dialog box is shown with the following settings:


- Name: Revenue Trend by Quarter
- Type: Sparkline
- Add Objects: Revenue
- Metric: Revenue
- Attribute: Quarter

A preview of the sparkline chart is displayed on the right, showing a blue line with a light blue shaded area underneath. Below the preview, it says "Add 1 attribute and 1 metric". At the bottom right are "OK" and "Cancel" buttons.

The Name box auto-populates with Revenue Trend by Quarter based on the metric and attribute you selected for the microchart. You can change the name, but for this scenario, keep the auto-populated name.

14 Click **OK**. The sparkline microchart displays as a column in the grid, showing revenue across quarters for each store.

Visualization 1			
Store	Revenue	Profit	Revenue Trend by Quarter
Atlanta	\$1,052,108	\$157,963	
Augusta	\$3,135,283	\$473,200	
Boston	\$1,487,936	\$224,495	
Buffalo	\$731,413	\$111,779	
Charleston	\$1,317,332	\$199,884	
Charlotte	\$2,962,719	\$449,553	
Fairfax	\$3,305,039	\$504,990	
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Scranton	\$3,902,762	\$583,538	
Syracuse	\$847,227	\$126,778	

15 Add another microchart to the grid. In the Columns drop zone, click the **Add Microcharts/Column Set** icon , and then select **Microchart**.

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- 16** You want to display quarterly profit as a bar chart. In the Microcharts window, in the **Type** drop-down list, select **Trend Bars**.
- 17** Under Add Objects, from the **Metric** drop-down list, select **Profit**. *You can also type Profit in the Metric search box to search for it instead of scrolling through the list.*
- 18** From the **Attribute** drop-down list, select **Quarter**.

The screenshot shows the 'Microcharts' window with the following configuration:

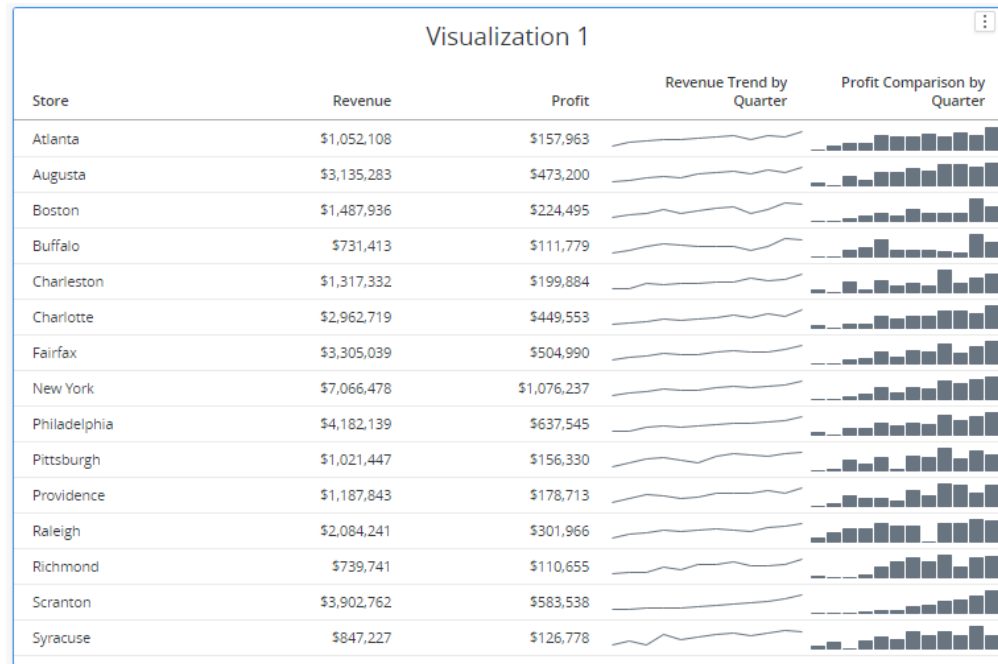
- Name:** Profit Comparison by Quarter
- Type:** Trend Bars
- Add Objects:**
 - Metric:** Profit
 - Attribute:** Quarter

To the right of the configuration is a preview of a bar chart with 10 blue bars of varying heights. Below the preview, it says 'Add 1 attribute and 1 metric'.


At the bottom right are 'OK' and 'Cancel' buttons.



The Name box auto-populates with Profit Comparison by Quarter based on the metric and attribute you selected for the microchart. Keep the auto-populated name.

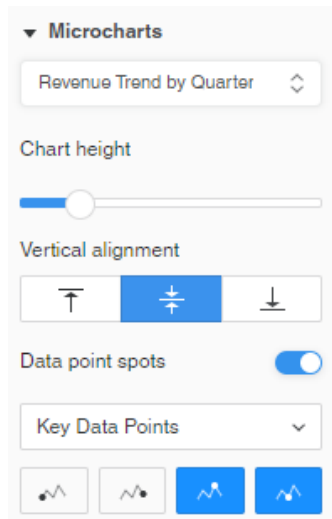
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- 19** Click **OK**. The trend bar microchart displays as a column in the grid, displaying profit across quarters for each store.



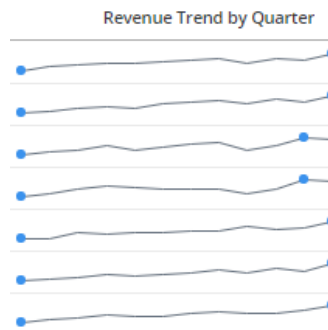
Format the microcharts

- 1 Click the **Format** icon  to display the Format panel.
 - 2 Expand the **Microcharts** area.
 - 3 From the first drop-down list under **Microcharts**, select **Revenue Trend by Quarter**.
 - 4 From the drop-down list under **Data Point Spots**, select **Key Data Points**.
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- 5 Under the Data Point Spots drop-down list, select the **Maximum** icon  and the **Minimum** icon .



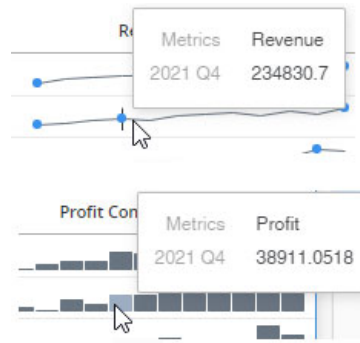
The maximum and minimum revenue values display as points on the Revenue Trend by Quarter sparkline. A portion of the column is shown below.



Displaying the minimum and maximum points on the Revenue Trend by Quarter sparkline microchart helps you quickly understand the following:

- For most stores, the minimum revenue occurred in the first quarter available in the data
 - For most stores, the maximum revenue occurred in the last quarter available in the data.
 - For a few stores, the maximum revenue occurred in a quarter other than the last quarter available in the data.
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- 6 Hover over the sparkline microchart and trend bar microchart to display a tooltip with data details for the quarter and revenue or profit.



The tooltips help you understand the details of the microcharts.

- 7 To rename the visualization, double-click the **Visualization 1** title, and type **Revenue and Profit Trends**. Your grid now looks like *Sample layered map*.
- 8 Click **Save** in the upper right of the dossier toolbar.

Analyze the grid with microcharts

- 1 As you examine the grid with microcharts, answer the following questions:
 - How does displaying microcharts in addition to traditional grid cell values help you understand store performance?
 - Can you add any microcharts or columns to the grid to help you analyze store performance?
 - How else might you manipulate the grid and microcharts to further your analysis?

There are many manipulations you could perform; a few are described below:

You might add a filter to focus on one year of quarters, like the four quarters of 2021, rather than all quarters of all years. This could make the microcharts easier to quickly comprehend by displaying less data at once.

You can also sort the grid by the metric you want to focus on, for example, by ascending profit. This means that stores with the lowest overall profit display at the top of the grid rows.
