Kibana Workshop

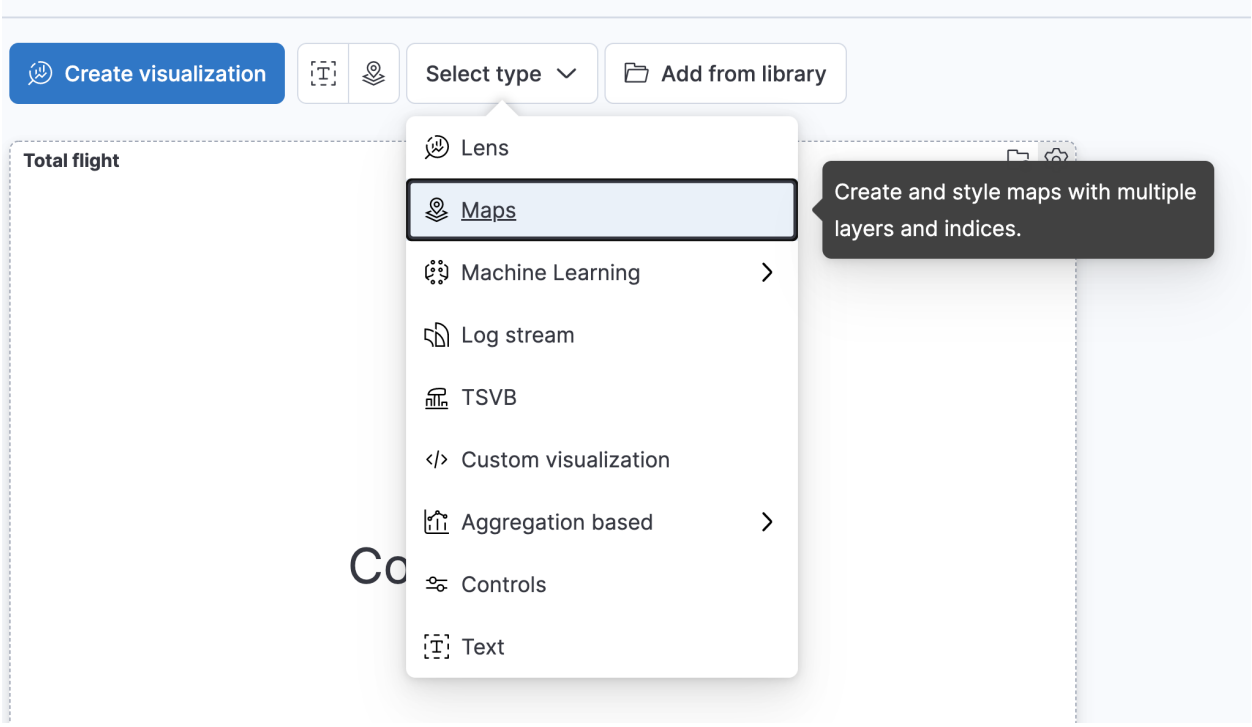
Lab 5 - Maps

Maps

Getting started with maps

In this exercise, you will build map visualizations. You will learn how to use different layer options to change the way how data points are represented on a map.

1. First, you're going to create a new dashboard. Click on the menu button located at the top left. This brings up the main menu, where you can select the "Dashboard" option under "Analytics".
2. Click on "Create dashboard" to create a new dashboard. This brings you to an empty dashboard.
3. Then click on "Select Type" and select "Maps". This will bring you to an empty map, to which you will be adding a layer.



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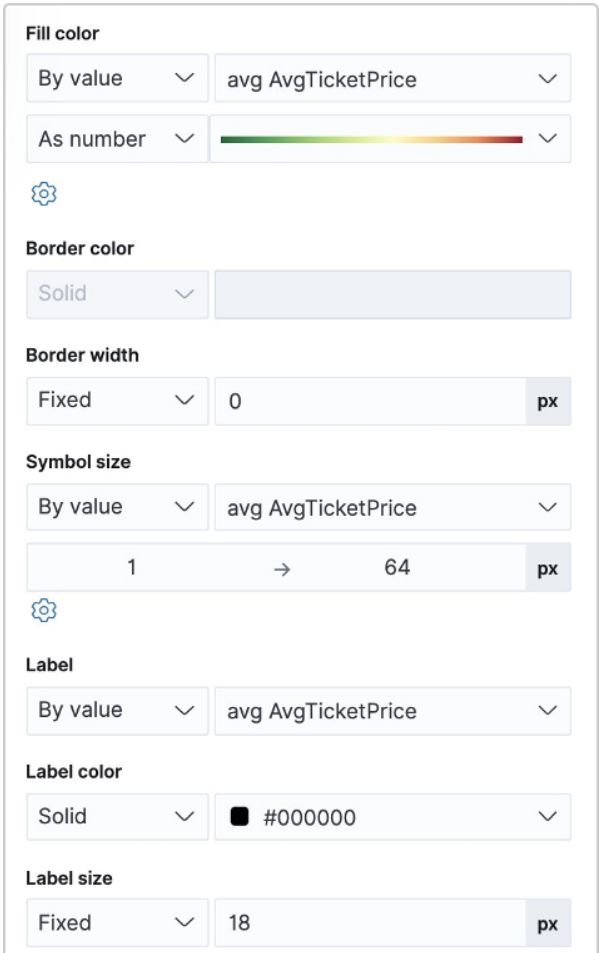
4. If necessary, adjust the time filter in the top right so you see the last 10 days of data
5. Click "Add Layer" then select "Clusters and grids".
6. Select `kibana_sample_data_flights` from the "Index pattern" dropdown.
7. Change "Geospatial field" to "OriginLocation".
8. Under "Show as", keep "clusters" selected.
9. Click the "Add layer" button in the bottom right. This layer shows the origin locations as clusters. The size of each cluster represents the number of occurrences of each location in our data.
10. Next, you will configure the layer you have just added. Under "Metrics", Select "Average" aggregation over the field"AvgTicketPrice".
11. Scroll down to "Layer Style" and change the following:
    a. Fill color: By Value: "avg AvgTicketPrice" and change the color to full rainbow
    b. Symbol size: By Value: "avg AvgTicketPrice" and change the pixel size to 1-64
    c. Label: By Value: "avg AvgTicketPrice"
    d. Label Size: Fixed "18"



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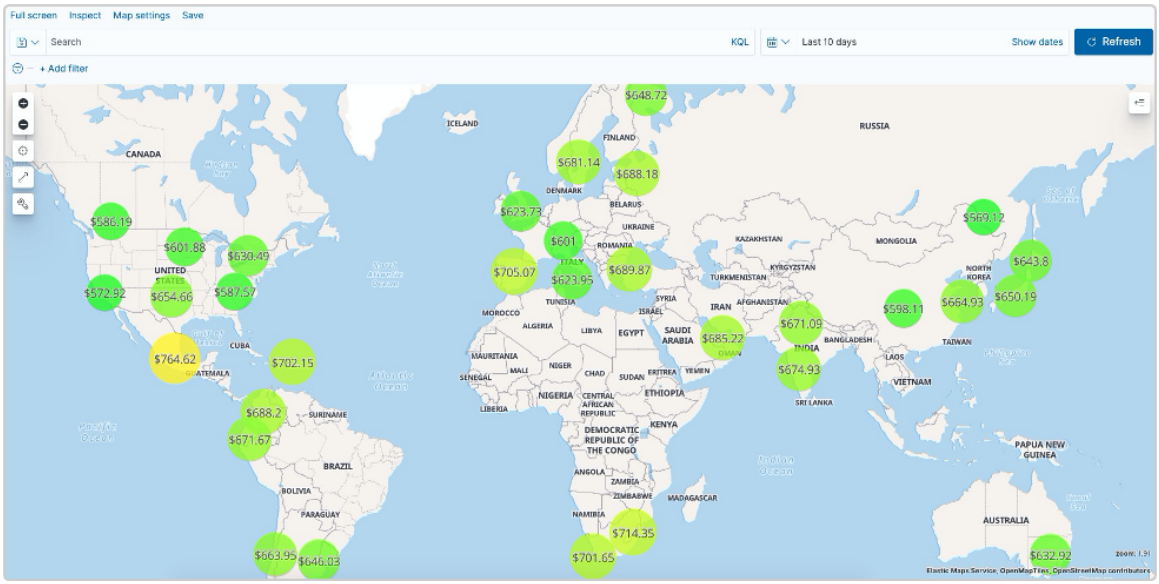
12. The resulting map should shows the size of each cluster represents the average ticket price for that origin location.
13. Click on "Save to maps"
14. Add a title and then click on "Save and return", to save the visualization to return to the dashboard.

Multiple layers

It's possible to create multiple layers on one map. That's what you will do in this exercise.

1. From your dashboard, click on "Select Type" and select "Maps". This will bring you to an empty map, to which you will be adding a layer.
2. Click "Add layer".
3. Select "Documents".
4. Set index pattern to `kibana_sample_data_flights`
5. Keep `DestLocation` selected under "Geospatial field" and click "Add layer". This layer shows individual destinations as a dot on the map.
6. Click on "Add" under "Tooltip fields" and select the "DestAirportID" field.



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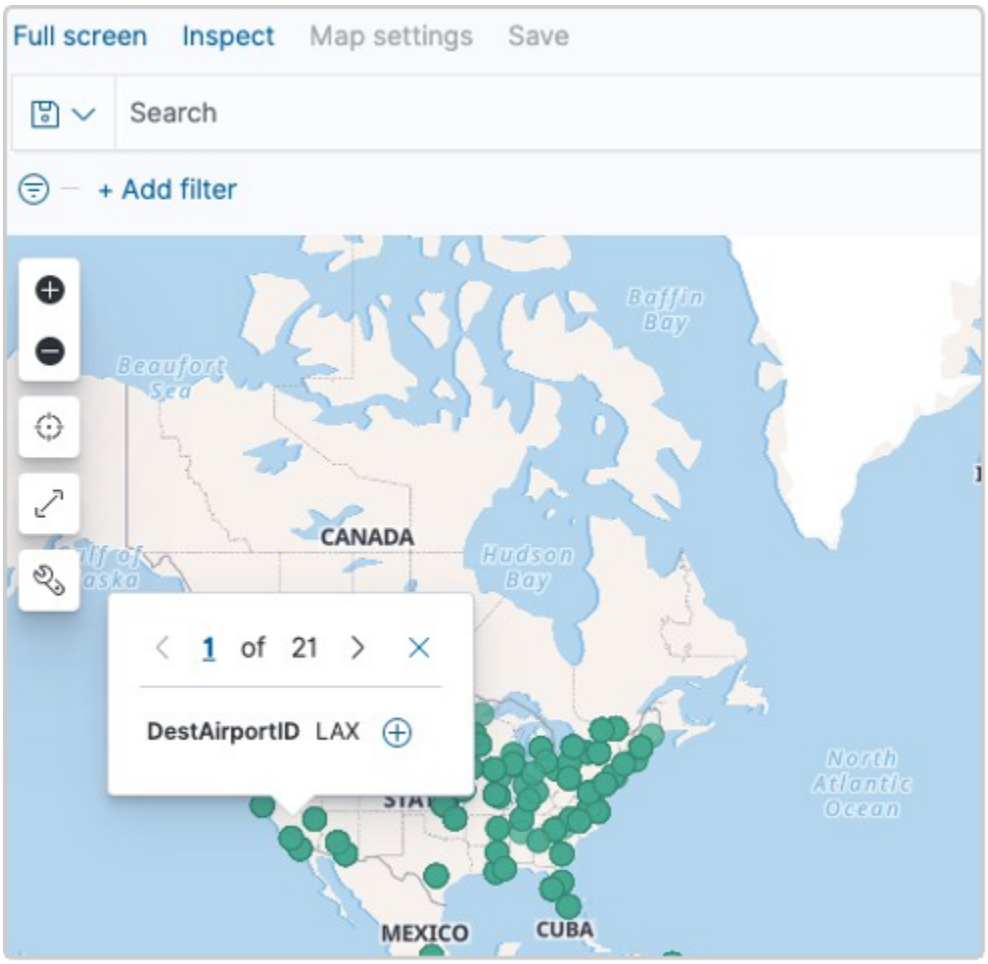
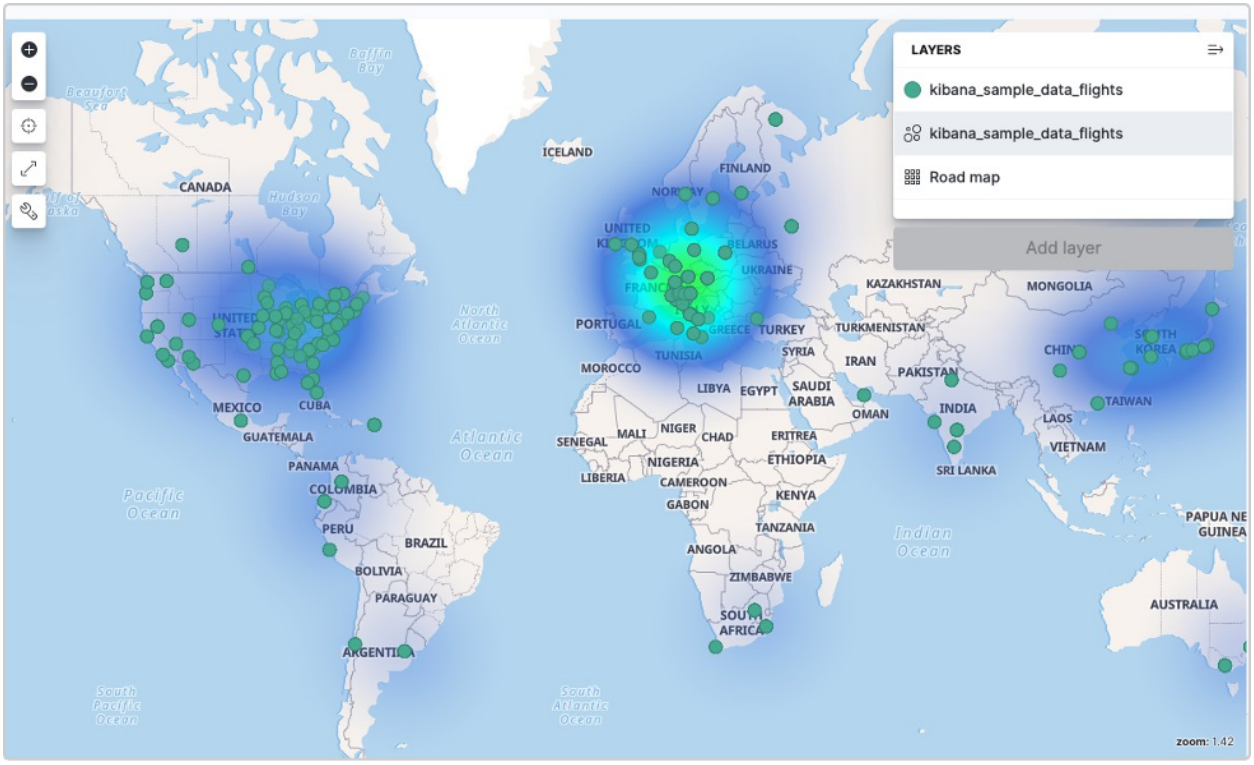
7. If you click on one of the dots on your map, you will see the destination airport code in the tooltip:



8. Click "Save & close"
9. Click "Add layer" to add another layer
10. Select "Heat map"
11. Set the index pattern to `kibana_sample_data_flights`
12. Keep `DestLocation` selected under "Geospatial field" and click "Add layer". You should now have two layers displayed on your map.
13. If you hover with your mouse over each of the layer names in the "LAYERS" panel, you should see a symbol appear that looks like two horizontal lines.

You can use this to change the order of the layers. Swap the order of the layers so that the documents layer is at the top and the heat map layer is at the bottom:

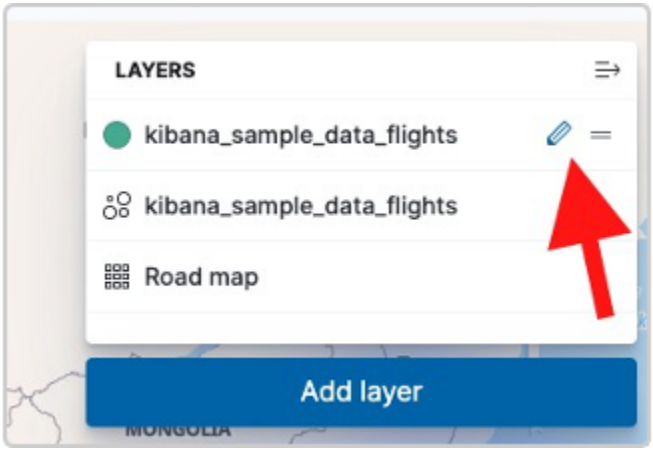


14. Click "Save & close"
15. Finally, click on "Save", add a title, and save the visualization.

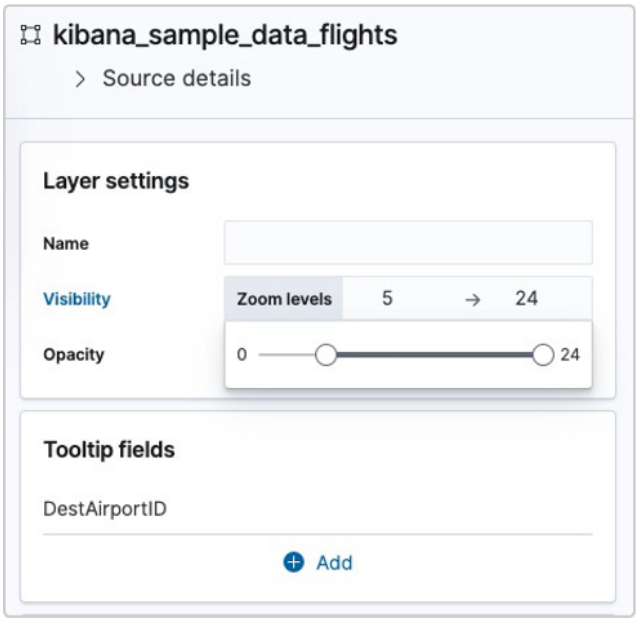
Zoom levels and layer visibility

In the previous exercise, you created a map with two layers. The visualization shows both layers by default. You can change the visibility of the layers depending on their zoom level. For instance, you may only want to make the documents visible on the map at a specific zoom level. That's what you will do in this exercise.

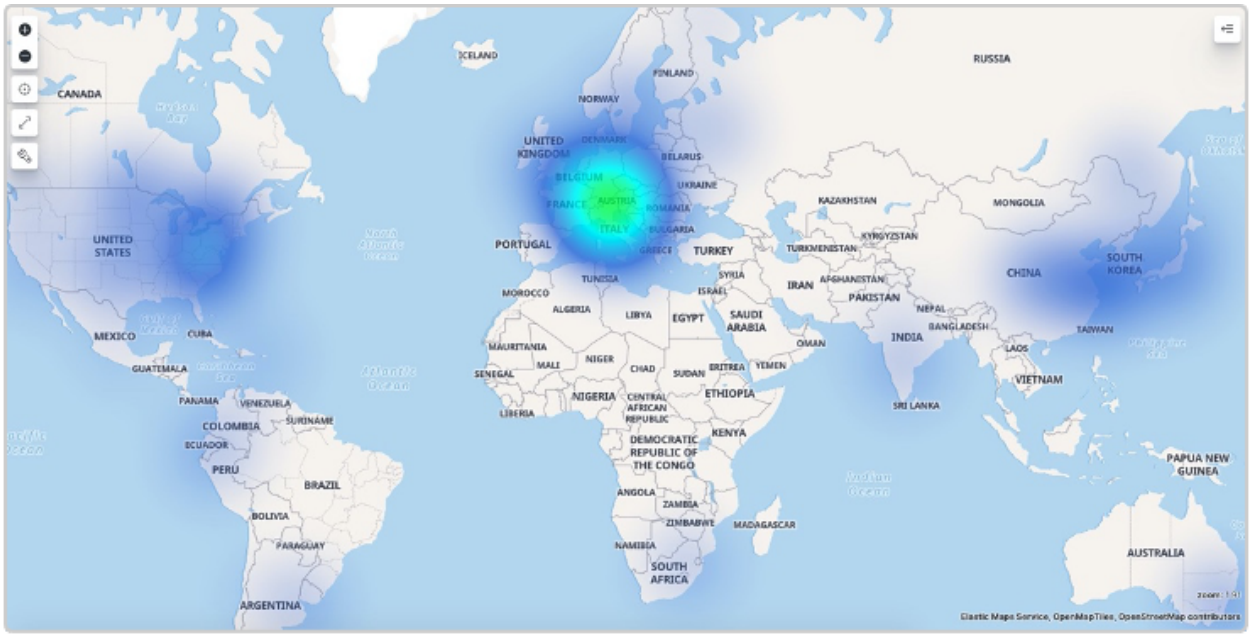
1. Open the previous map with the two layers. You can do that from the dashboard by clicking the gear icon at the top right of the panel, and clicking "Edit map".
2. To customize the first layer, click on the edit button for that layer. It looks like a pencil, and appears when you hover over the layer name with your mouse:



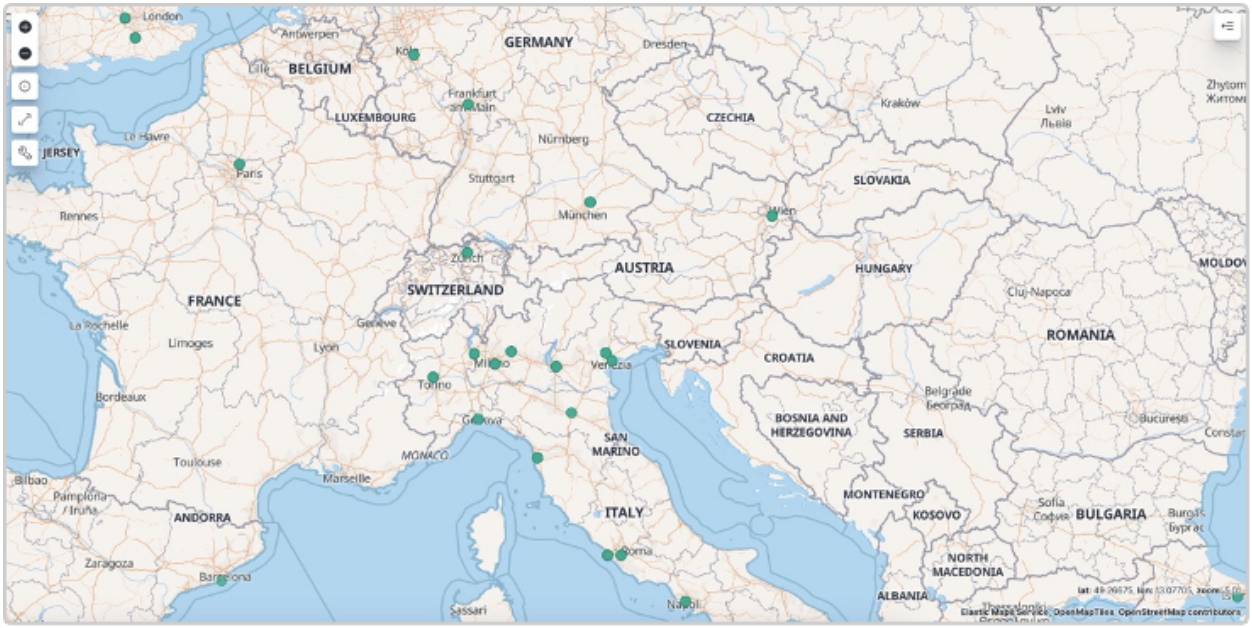
3. Set zoom levels 5 to 24. This indicates that the layer information is only visible in that range of zoom levels



4. Click on "Save & close"
5. Click to edit the second layer (i.e., heat map layer)
6. Set zoom levels `0` to `5`. This indicates that after zoom level of 5 the heat map will not be visible.
7. Click on "Save & close"
8. When the map visualization is zoomed out it should look like the picture below. Notice that only the heap map layer is visible due to the current zoom level being set to `~1`.



9. After zooming in a few levels >5, the heat map layer is no longer visible. Now, the documents layer becomes visible.

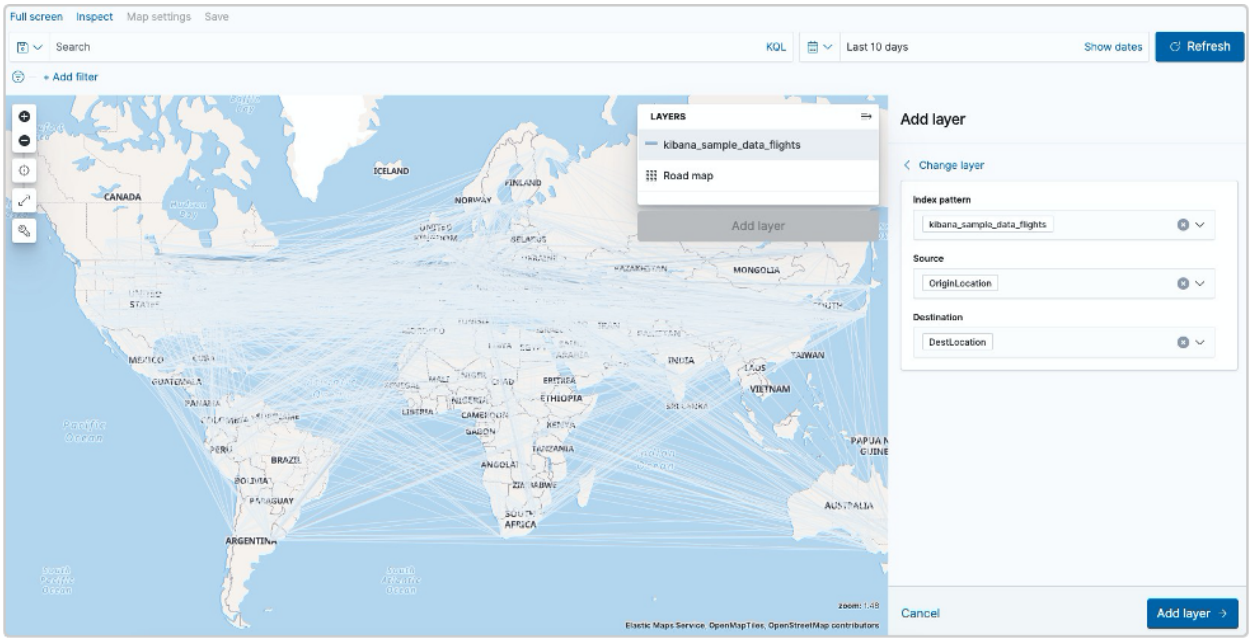


10. Finally, click on "Save and return" to save the visualization.

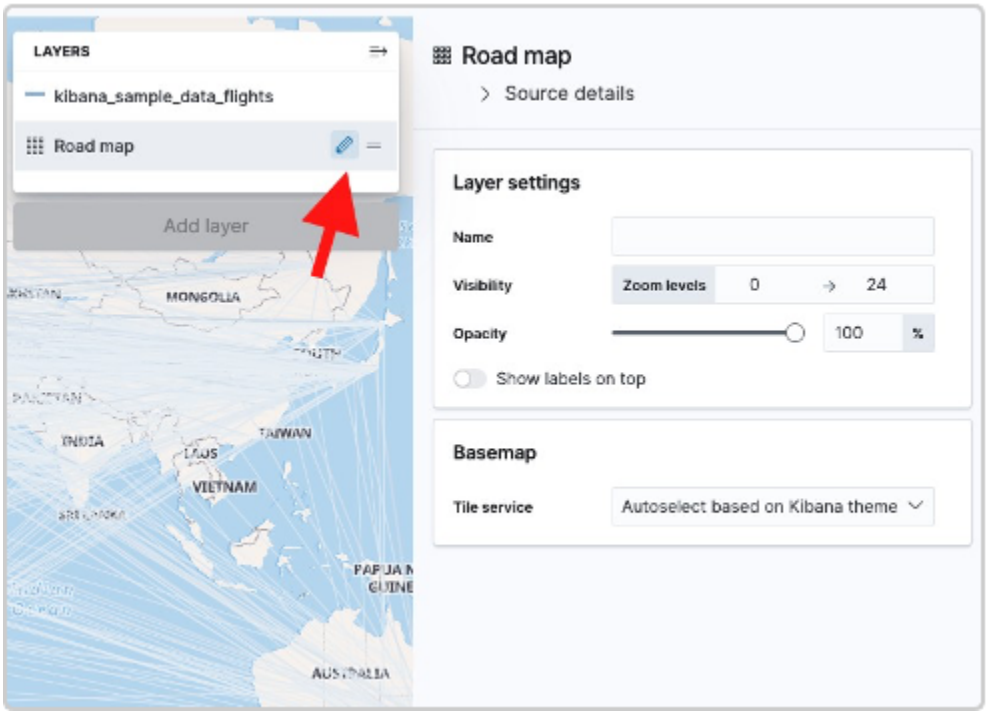
Point to Point Map

Another way you can plot data on a map is by using a point to point visualization. This visualization plots aggregated data paths between source and destination locations. That's what you will do in this exercise.

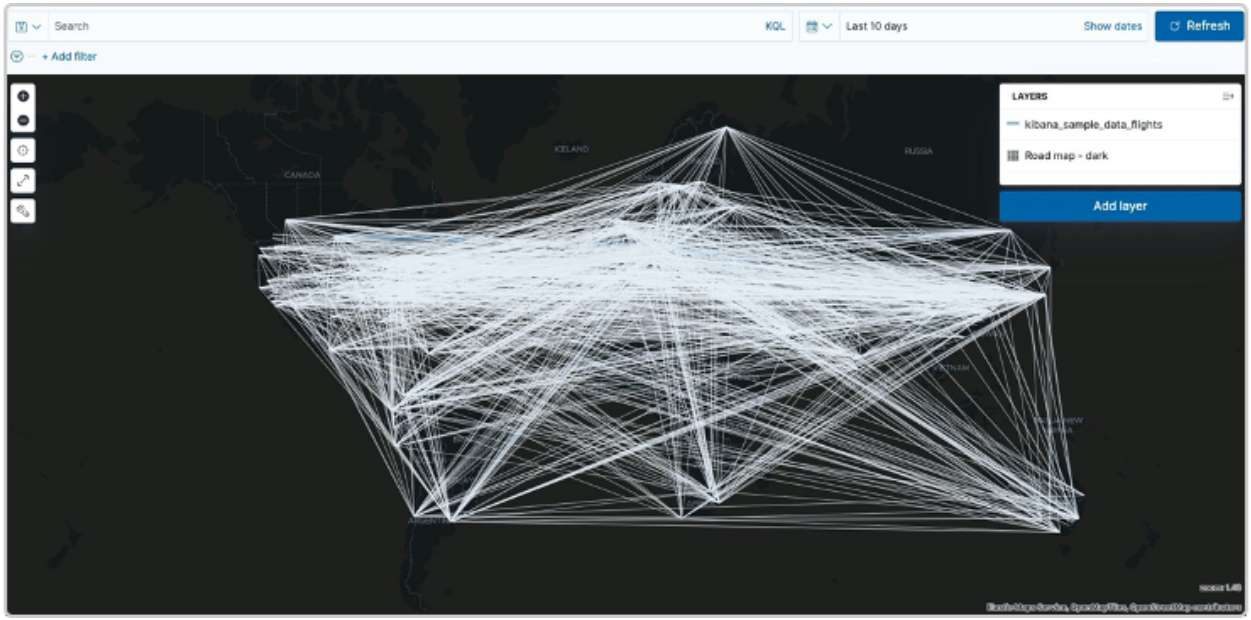
1. From your dashboard, click on "Select Type" and select "Maps". This will bring you to an empty map, to which you will be adding a layer. Click "Add layer".
2. Select "Point to point".
3. Set the index pattern to `kibana_sample_data_flights`.
4. Set Source to "OriginLocation".
5. Set Destination to "DestLocation".



6. Click "Add layer".
7. Click on the pencil icon that appears when you hover with your mouse over "Road map".



8. Under Basemap select "Road map - dark" as the tile service.
9. Click "Save & close"
10. The resulting map should look as follows:



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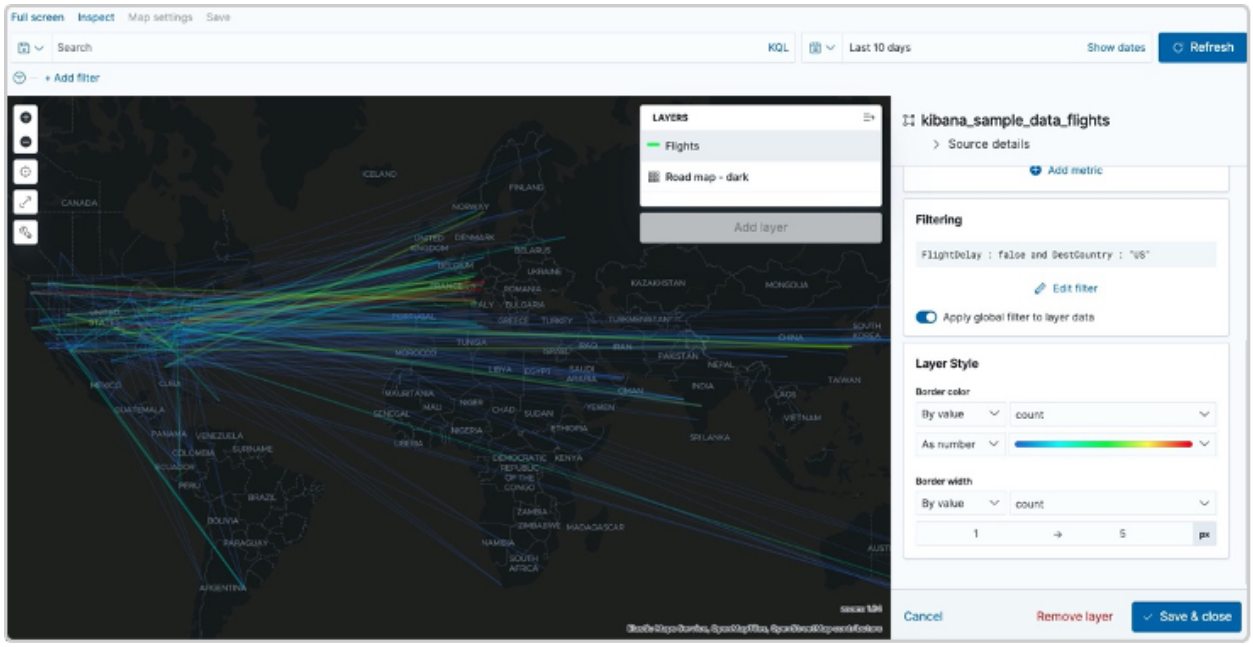
11. Click to edit the first layer (i.e., `kibana_sample_data_flights`) and perform the following edits:
    a. Under Layer Settings set "Name" to `Flights`
    b. Under Layer Settings set "Opacity" to `25%`
    c. Under Filtering create a filter using the following query: `FlightDelay : false and DestCountry : "US"`
    d. Under Layer Style set border color to rainbow
    e. Under Layer Style set border width to `1-5` pixels
12. The final result should look similar to the following:



13. Click on "Save & close".
14. Finally, click on "Save", add a title, and save the visualization.
15. Finally, save your dashboard by clicking "Save" in the top right. Give your dashboard a title, and click the "Save" button.