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Receiving Parameters in Dashboards

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Contents

Creating visuals with optional dimensions.....4

Creating filters to control optional dimensions.....6

Creating visuals with optional measures.....13

Creating filters to control optional measures.....15

Creating visuals with variable dimensions.....22

Creating filters to control variable dimensions.....24

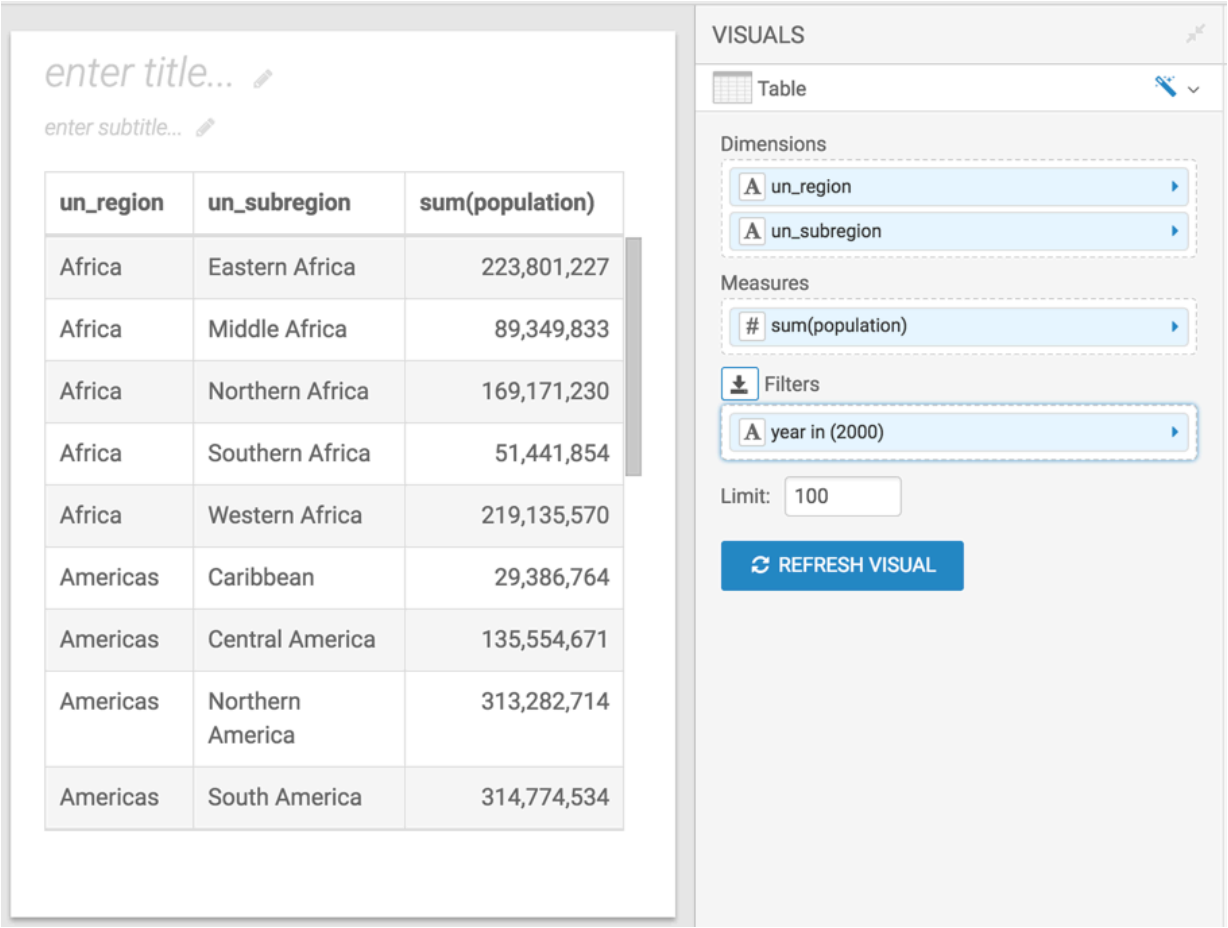
Creating visuals with variable measures.....30

Creating filters to control variable measures.....33

Creating visuals with optional dimensions

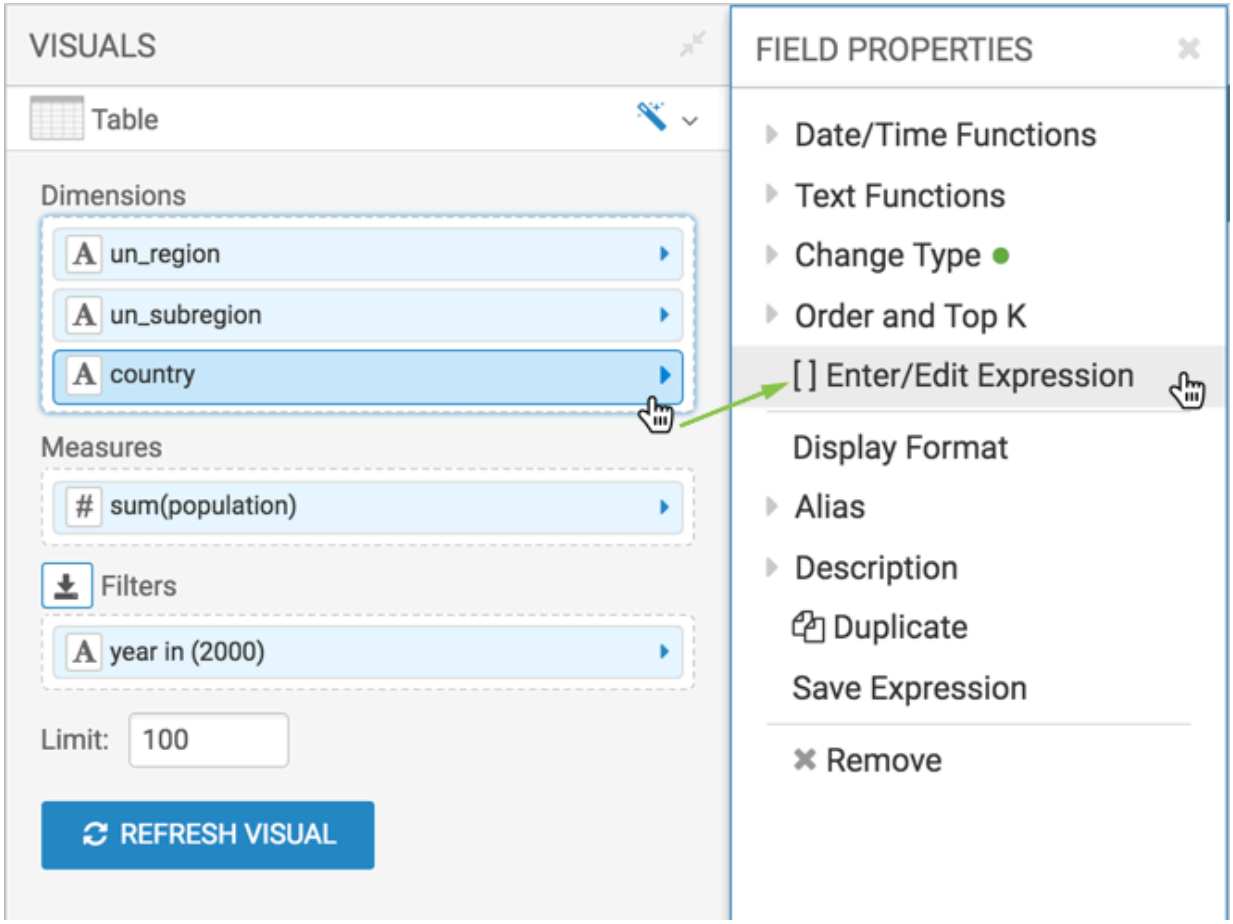
Procedure

1. Open a new dashboard.
2. Click New Visual.
3. Under the =Data menu, select the World Life Expectancy dataset.
4. Under the Visuals menu, choose the Table visual type.
5. Populate the shelves of the visual:
   - From Dimension, select and move un_region and un_subregion fields onto the Dimension shelf.
   - From Measures, select and move population field onto the Measures shelf.
   - From Dimensions, select and move year field onto the Filters shelf.
   - On the Filters shelf, select year field, choose Pick values from a list, select 2000, and click Save.



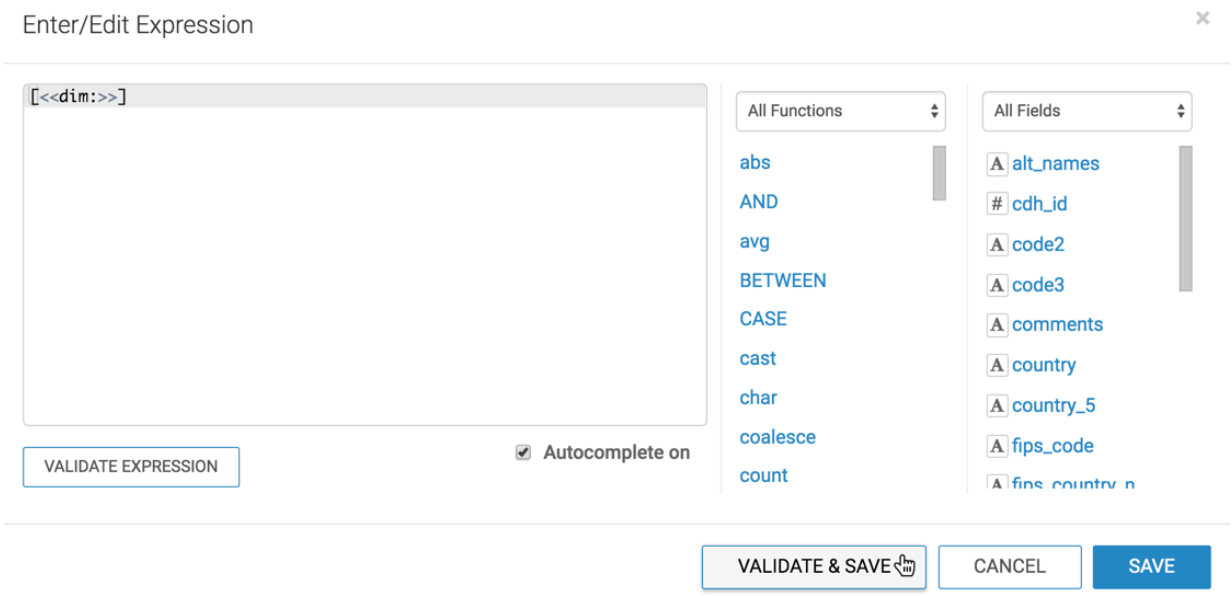
6. From Dimensions, select and move the country field onto the Dimension shelf.
7. On the Dimensions shelf, click country field.

8. In the Field Properties menu, select [ ] Enter/Edit Expression.



9. In the Enter/Edit Expression modal window, change the text to the following expression:

- [<<dim:>>].
- Click Validate & Save.



10. Click Refresh Visual.

11. Change the name of the visual to Regional Populations.

12. Click Save.

Creating filters to control optional dimensions

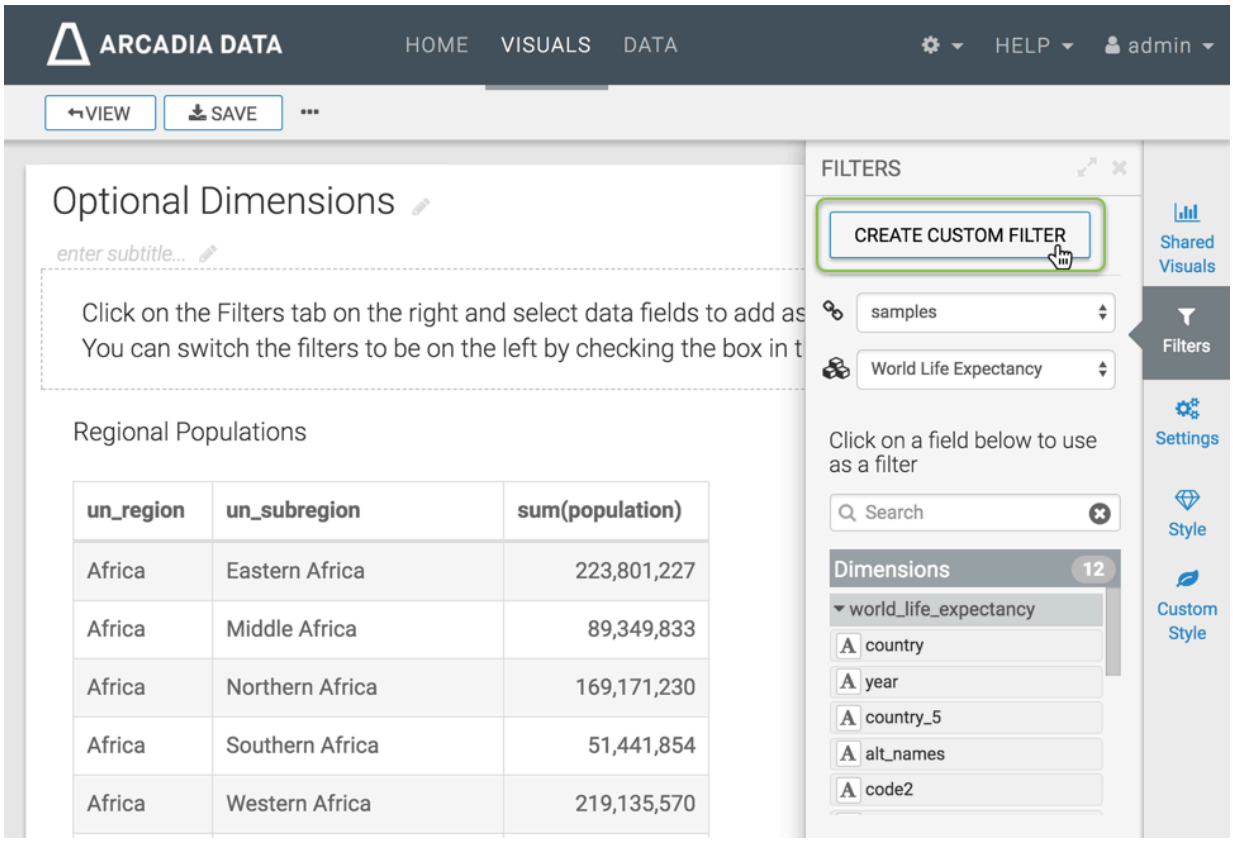
About this task

Before starting on this work flow, complete the steps in Creating visuals with optional dimensions on page 4.

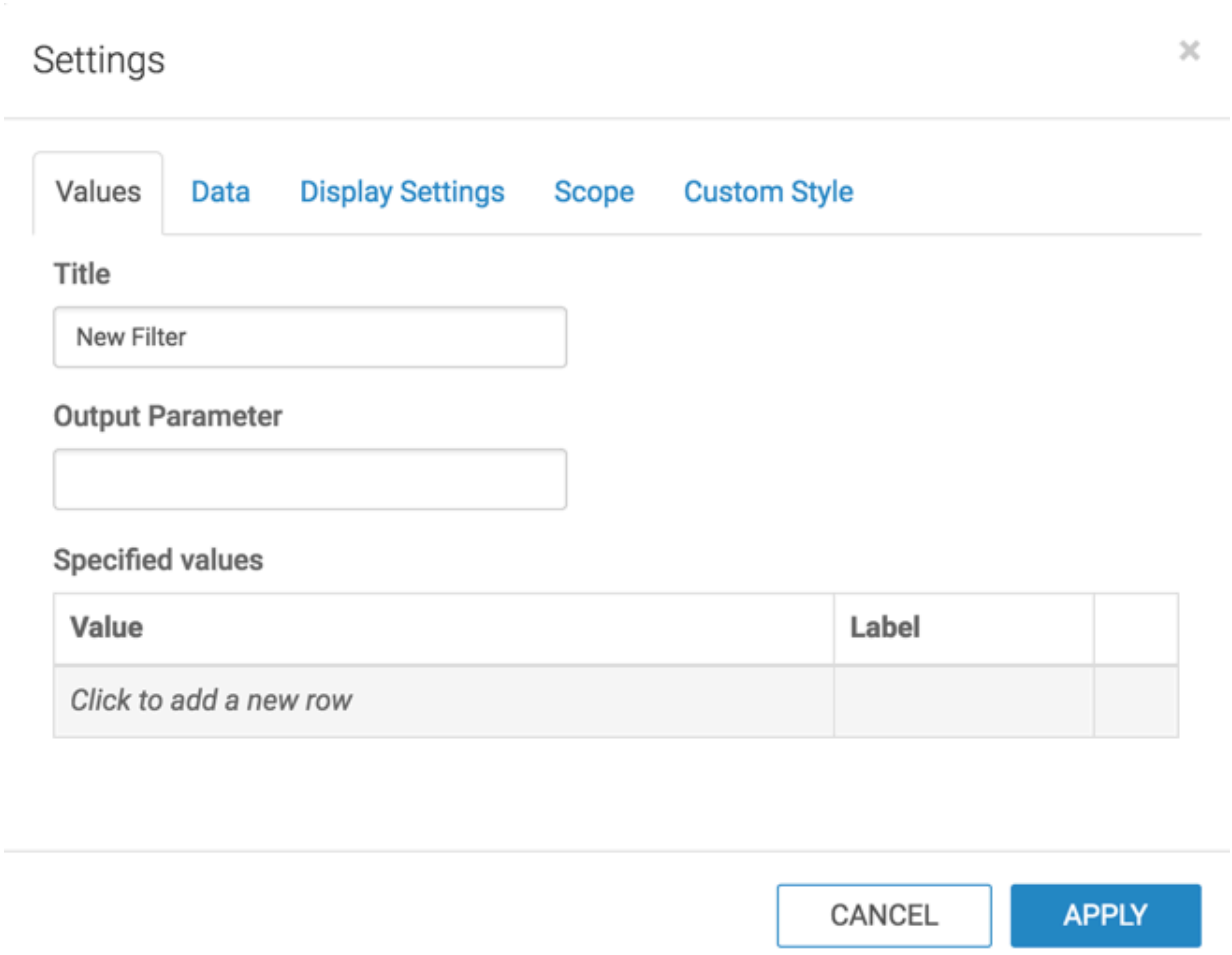
Procedure

1. In the dashboard, click the Filters tab.

2. Click Create Custom Filter.

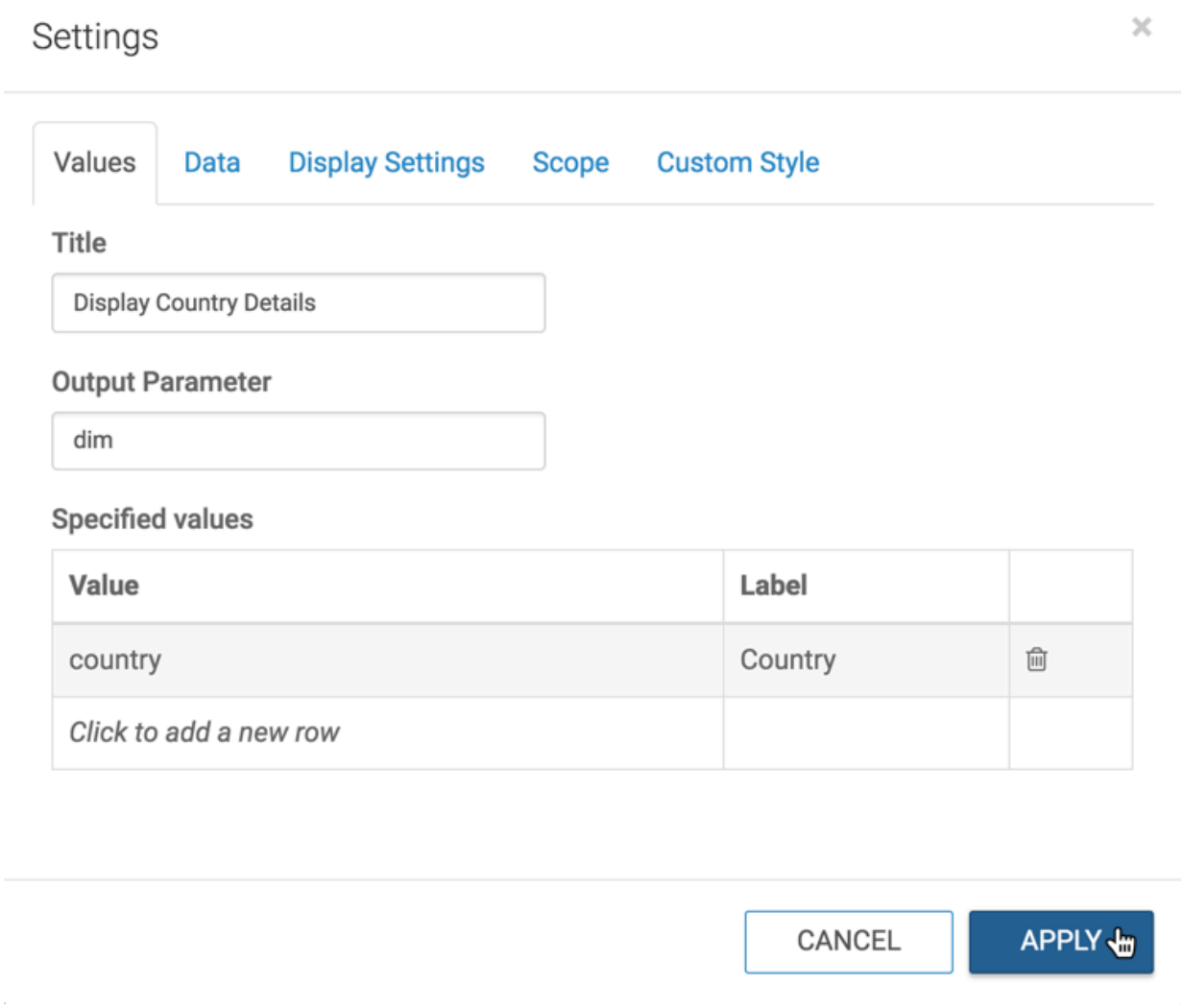


This creates a New Filter in the filter area of the application, and opens the Settings window modal for that filter.


Settings
Values
Data
Display Settings
Scope
Custom Style
Title
New Filter
Output Parameter
Specified values
Value
Label
Click to add a new row
CANCEL
APPLY

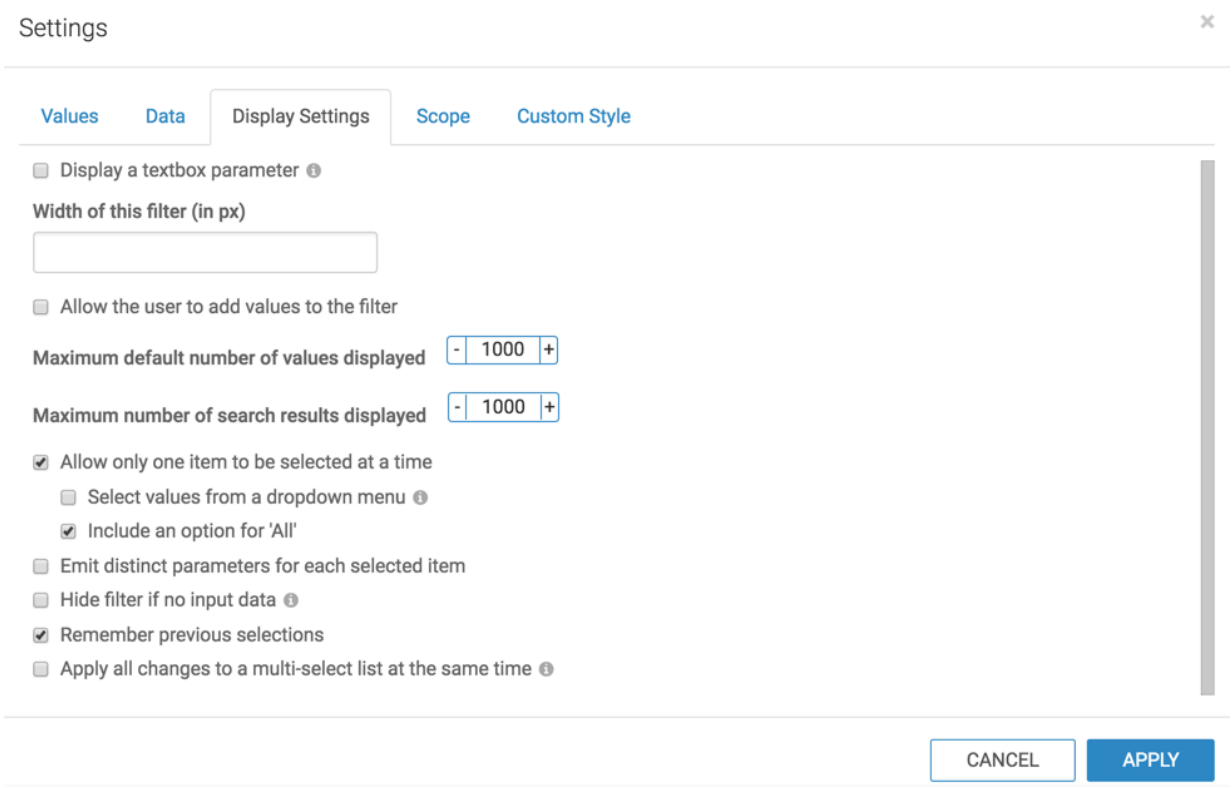
3. In the Settings modal window, under the Values tab, enter the following:
   - Under Title, enter Display Country Details.
   - Under Output Parameter, enter dim.

     Note that this is the parameter from Creating visuals with optional dimensions on page 4.
   - Under Specified values, enter Value: country, and Label: Country.



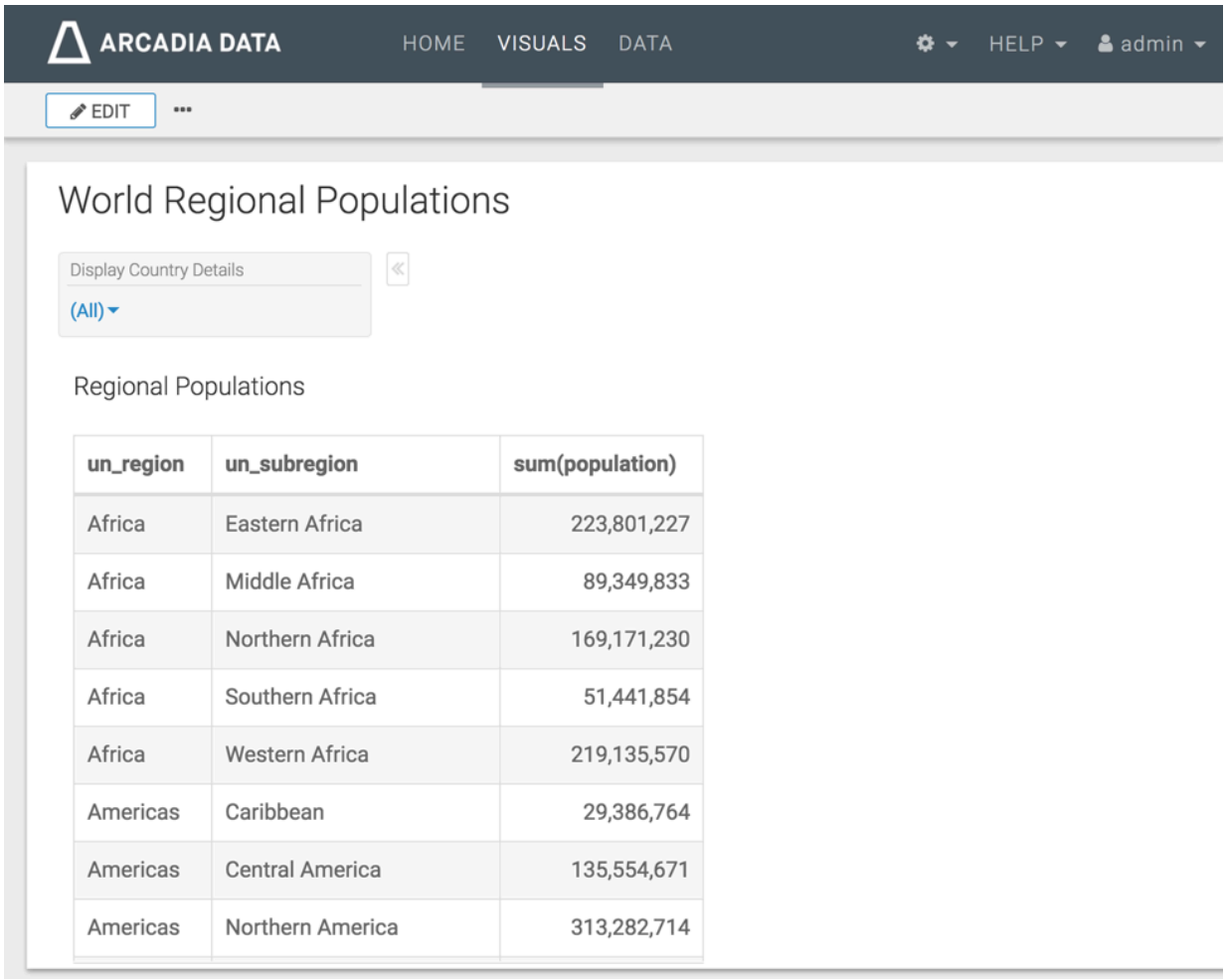
4. Switch to Display Settings tab, and select Allow only one item to be selected at a time and then select Include an option for 'All'.

5. Click Apply.

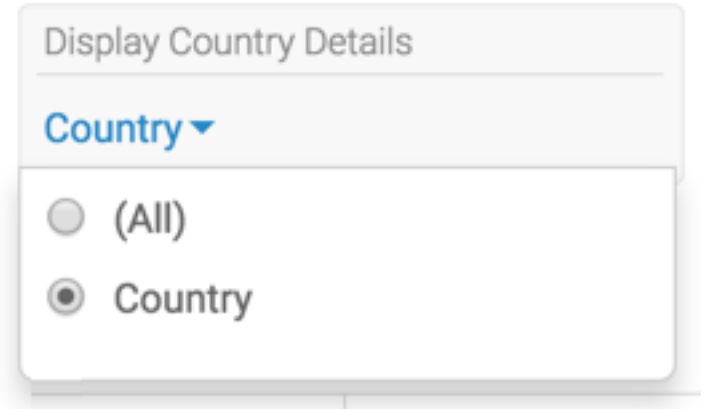


6. Name and save the dashboard.

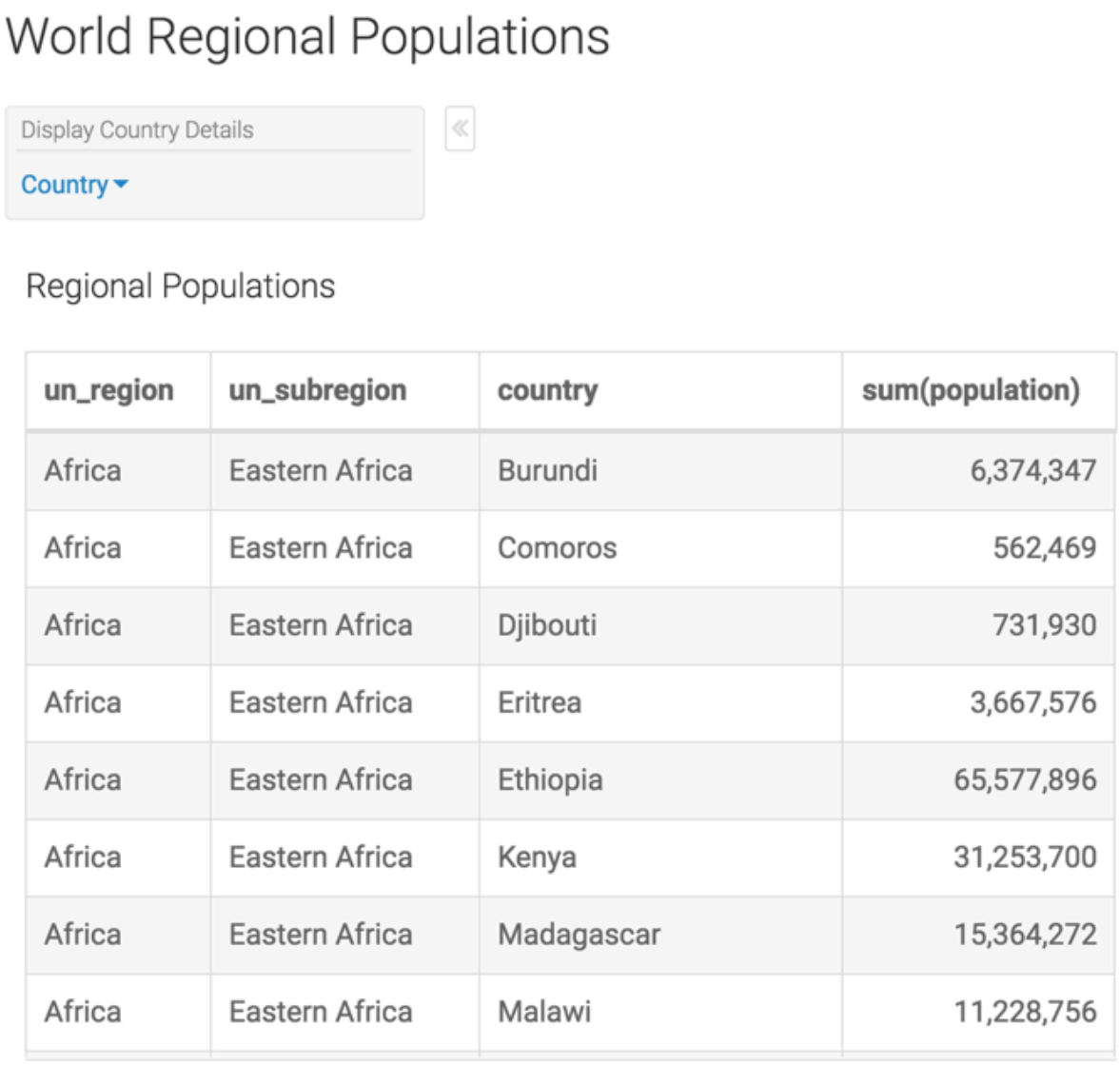
7. Switch to dashboard View mode, and select World Regional Populations.



8. In the Display Country Details filter, select Country.



Note that the table now has a new column, country.



un_region	un_subregion	country	sum(population)
Africa	Eastern Africa	Burundi	6,374,347
Africa	Eastern Africa	Comoros	562,469
Africa	Eastern Africa	Djibouti	731,930
Africa	Eastern Africa	Eritrea	3,667,576
Africa	Eastern Africa	Ethiopia	65,577,896
Africa	Eastern Africa	Kenya	31,253,700
Africa	Eastern Africa	Madagascar	15,364,272
Africa	Eastern Africa	Malawi	11,228,756

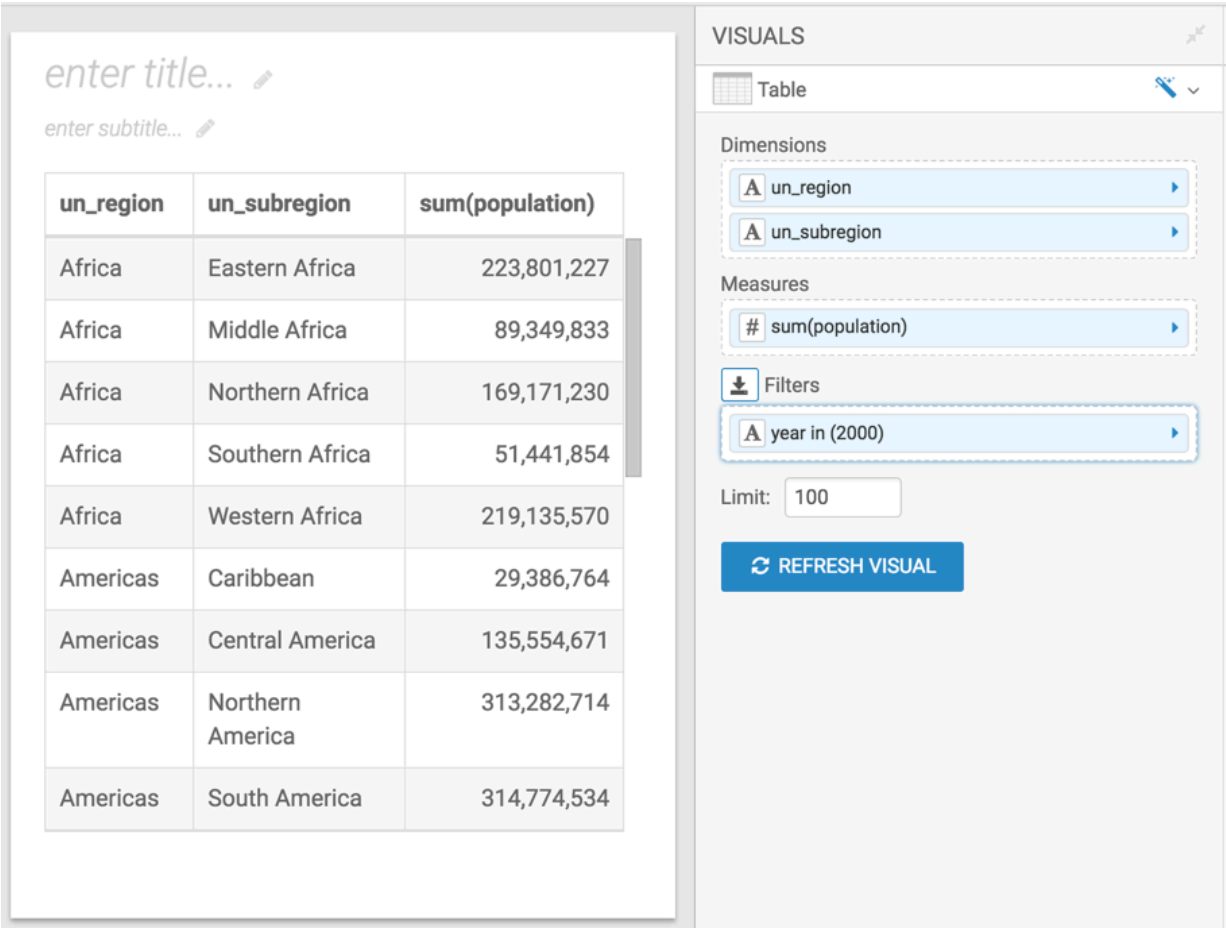
Creating visuals with optional measures

About this task

You may choose to duplicate the dashboard that you created earlier according to the instructions in Creating visuals with optional dimensions on page 4. In this case, open the visual, and skip to Step 6 in the following workflow.

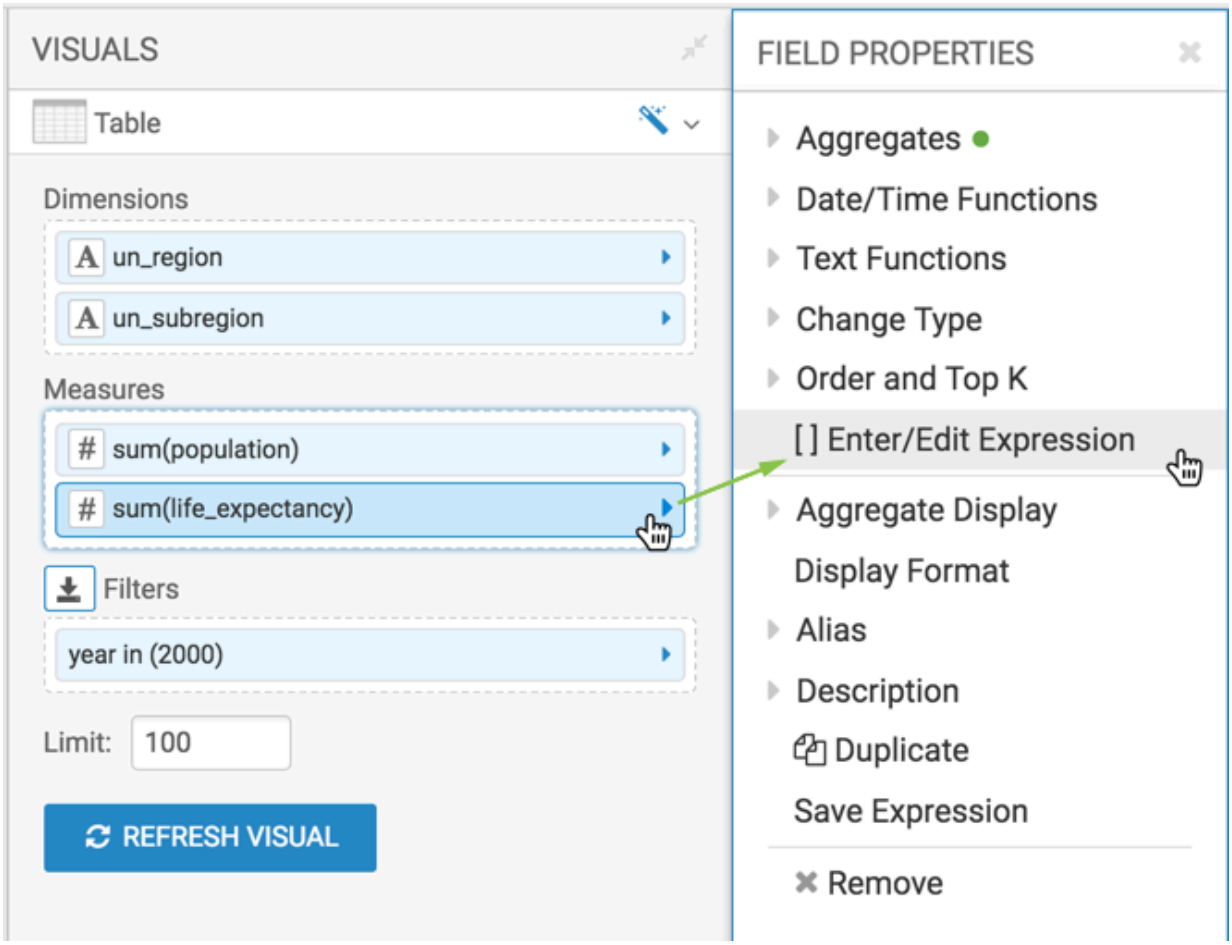
Procedure

1. Open a new dashboard.
2. In the dashboard, click New Visual.
3. Under the Data menu, select the World Life Expectancy dataset.
4. Under the Visuals menu, choose the Table visual type.
5. Populate the shelves of the visual:
   - From Dimension, select and move un_region and un_subregion fields onto the Dimension shelf.
   - From Measures, select and move population field onto the Measures shelf.
   - From Dimensions, select and move year field onto the Filters shelf.
   - On the Filters shelf, select year field, choose Pick values from a list, select 2000, and click Save.

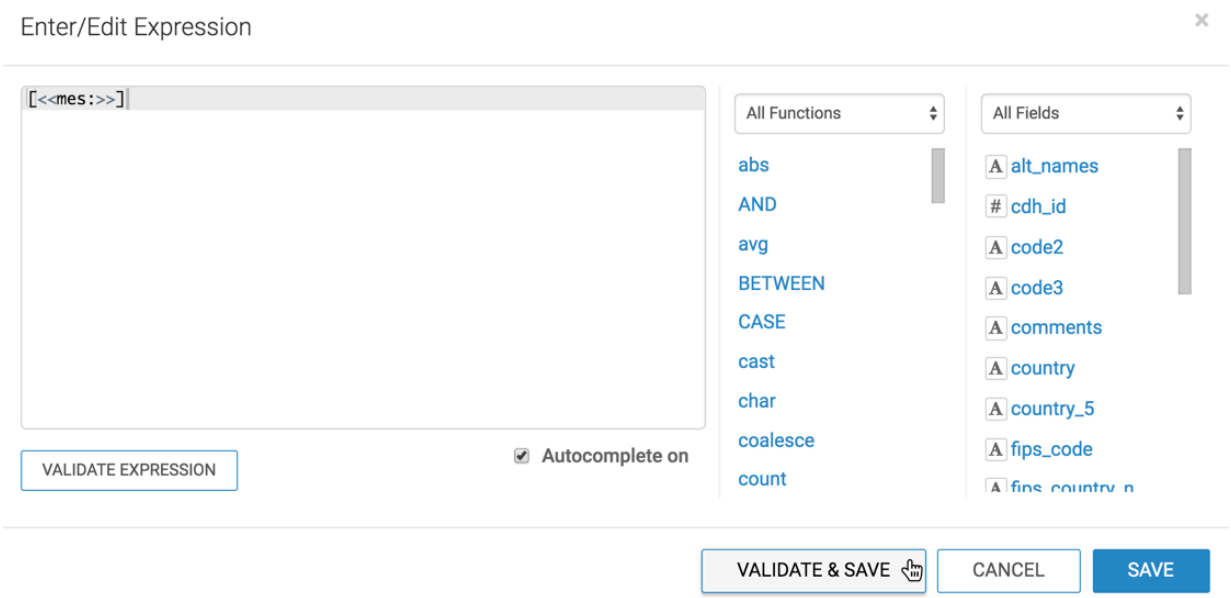


6. From Measures, select and move the life_expectancy field onto the Measures shelf.
7. On the Measures shelf, click the life_expectancy field.

8. In the Field Properties menu, select [ ] Enter/Edit Expression.



9. In the Enter/Edit Expression modal window, change the text to the following expression: [<<mes:>>].
10. Click Validate & Save.



11. Click Refresh Visual.
12. Change the name of the visual to Regional Populations.

13. Click Save.

Creating filters to control optional measures

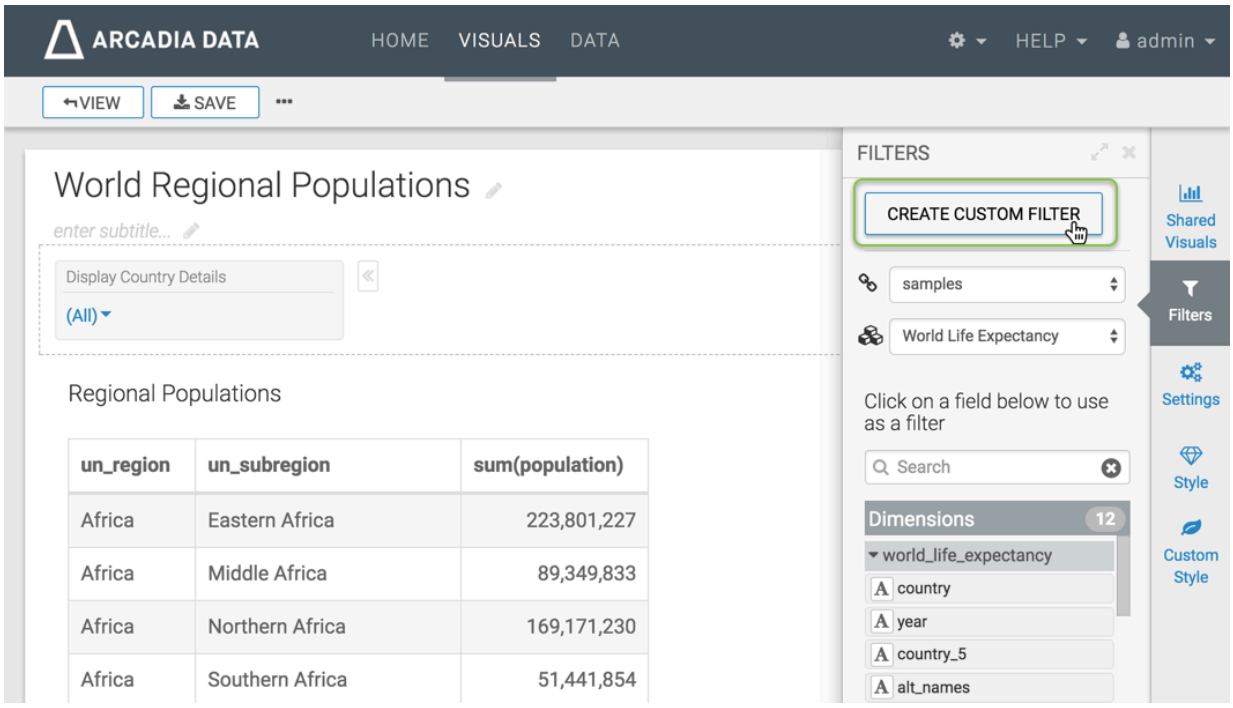
About this task

Before starting on this work flow, complete the steps in Creating visuals with optional measures on page 13.

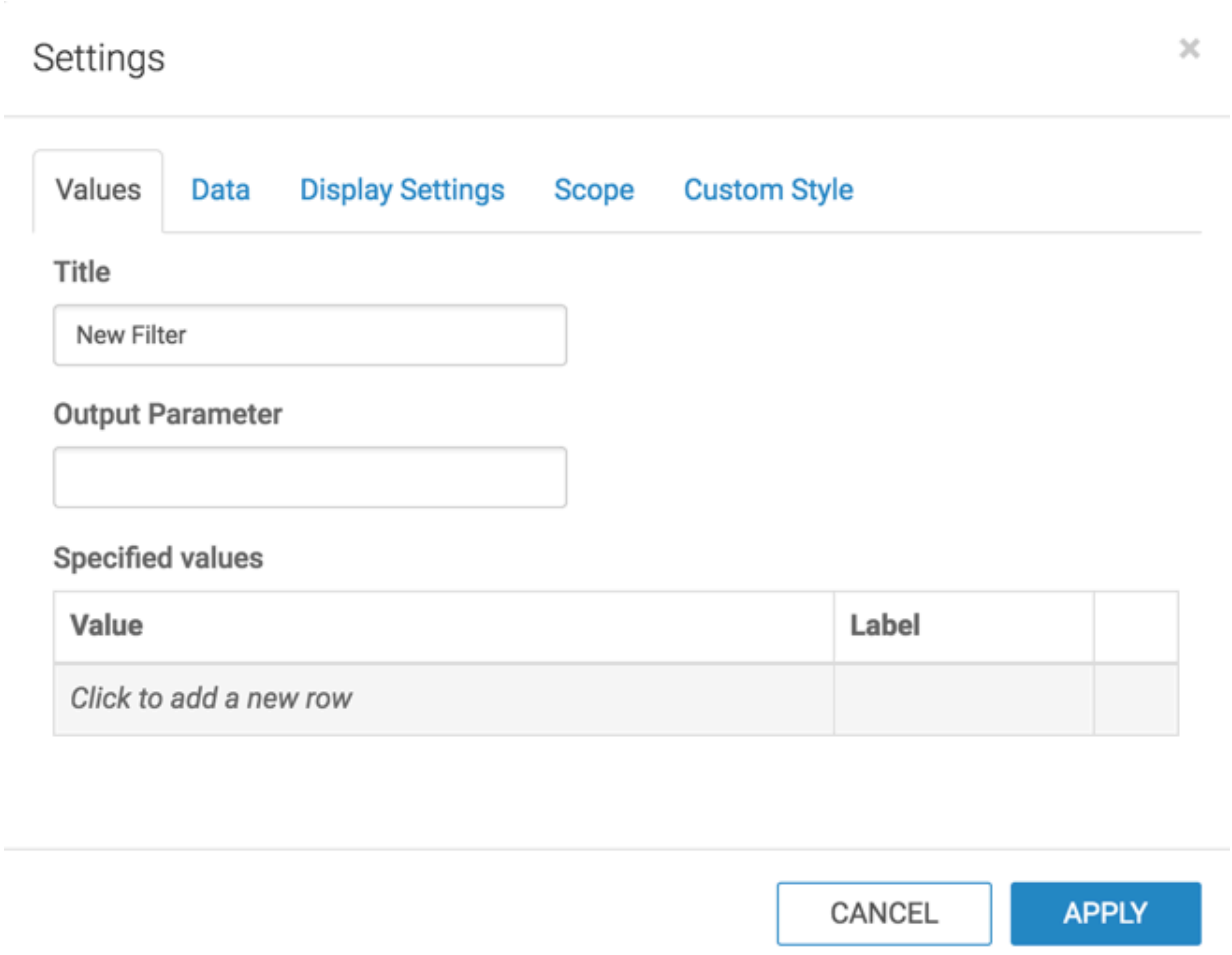
Procedure

1. In the dashboard, click the Filters tab.

2. Click Create Custom Filter to create a second dashboard filter.

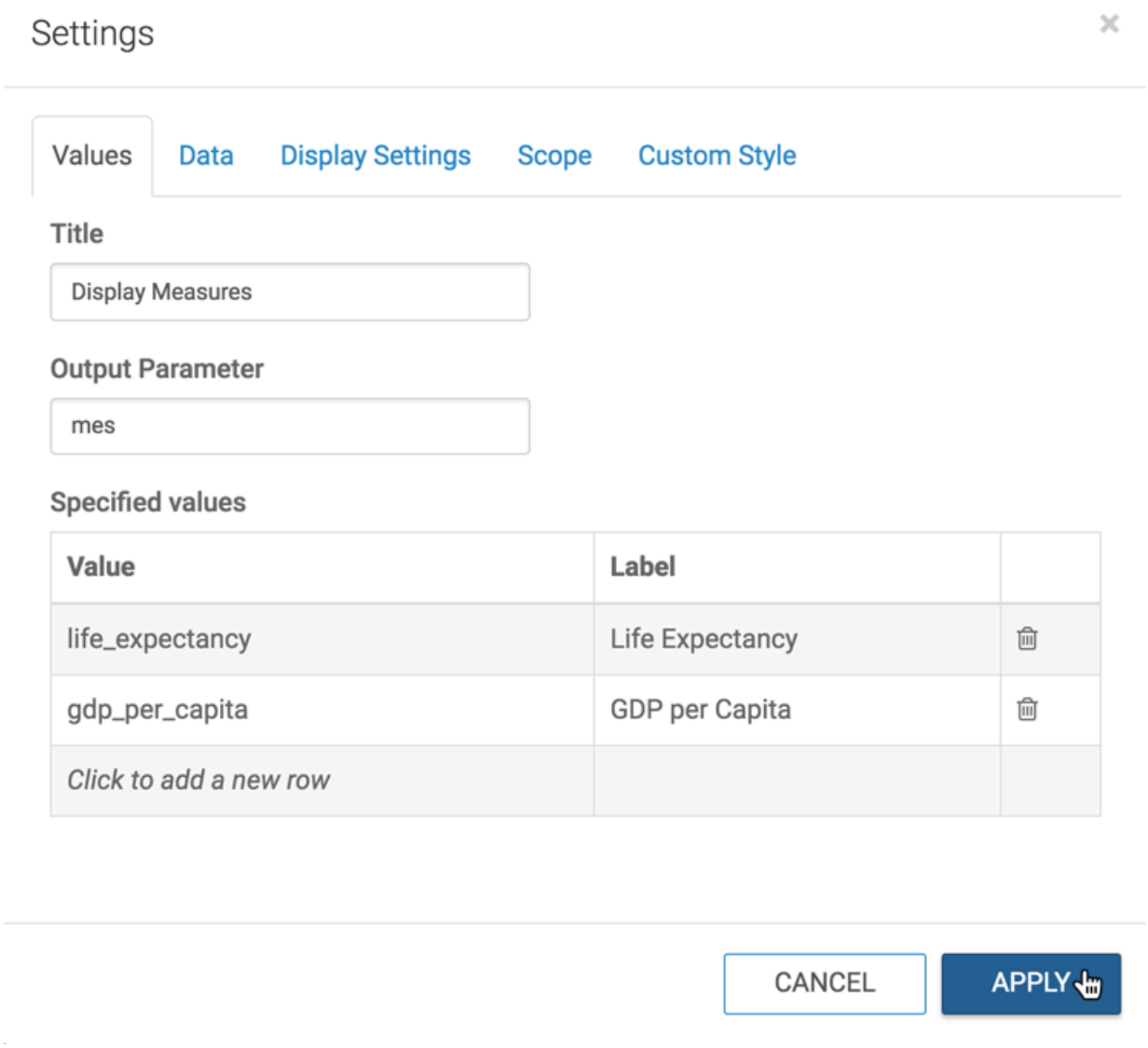


This creates a New Filter in the filter area of the application, and opens the Settings window modal for that filter.



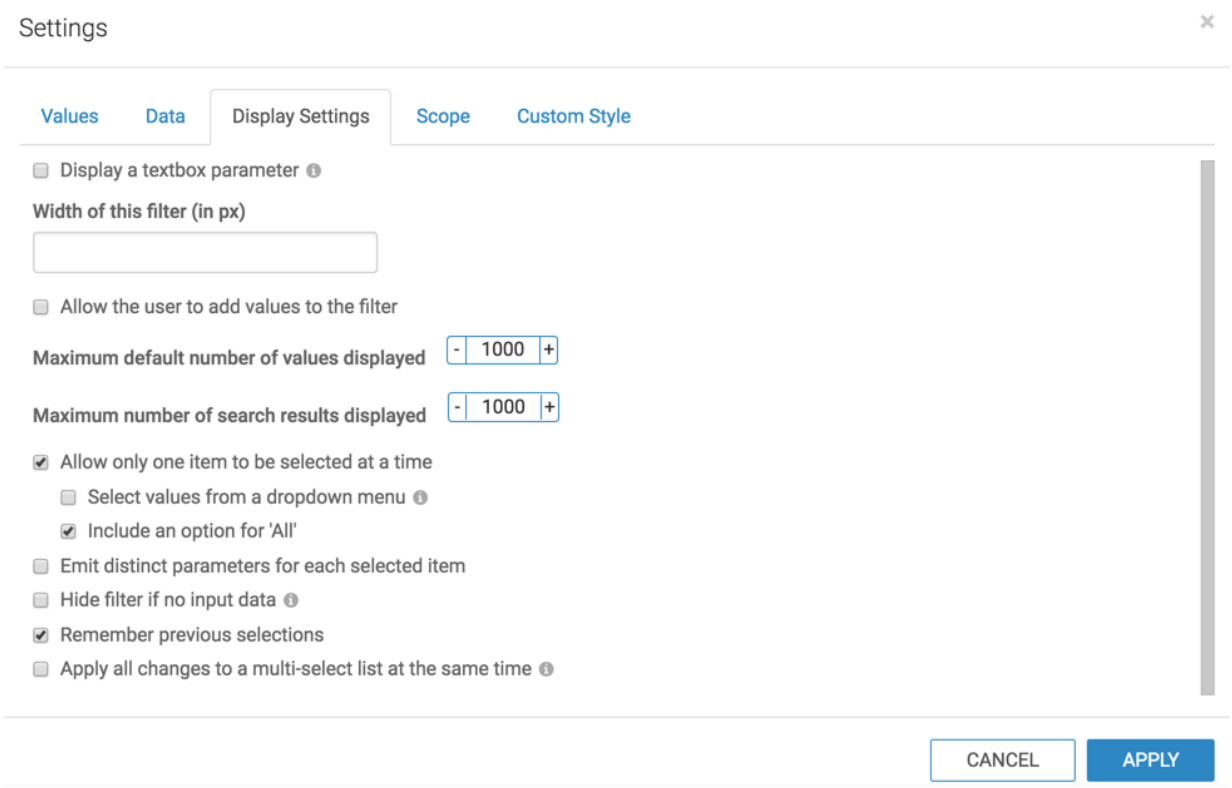
3. In the Settings modal window, under the Values tab, enter the following:
   - Under Title, enter Display Measures.
   - Under Output Parameter, enter mes.

     Note that this is the parameter from Creating visuals with optional measures on page 13.
   - Under Specified values, enter the following two rows:
     - Value: life_expectancy, Label: Life Expectancy
     - Value: gdp_per_capita, Label: GDP per Capita



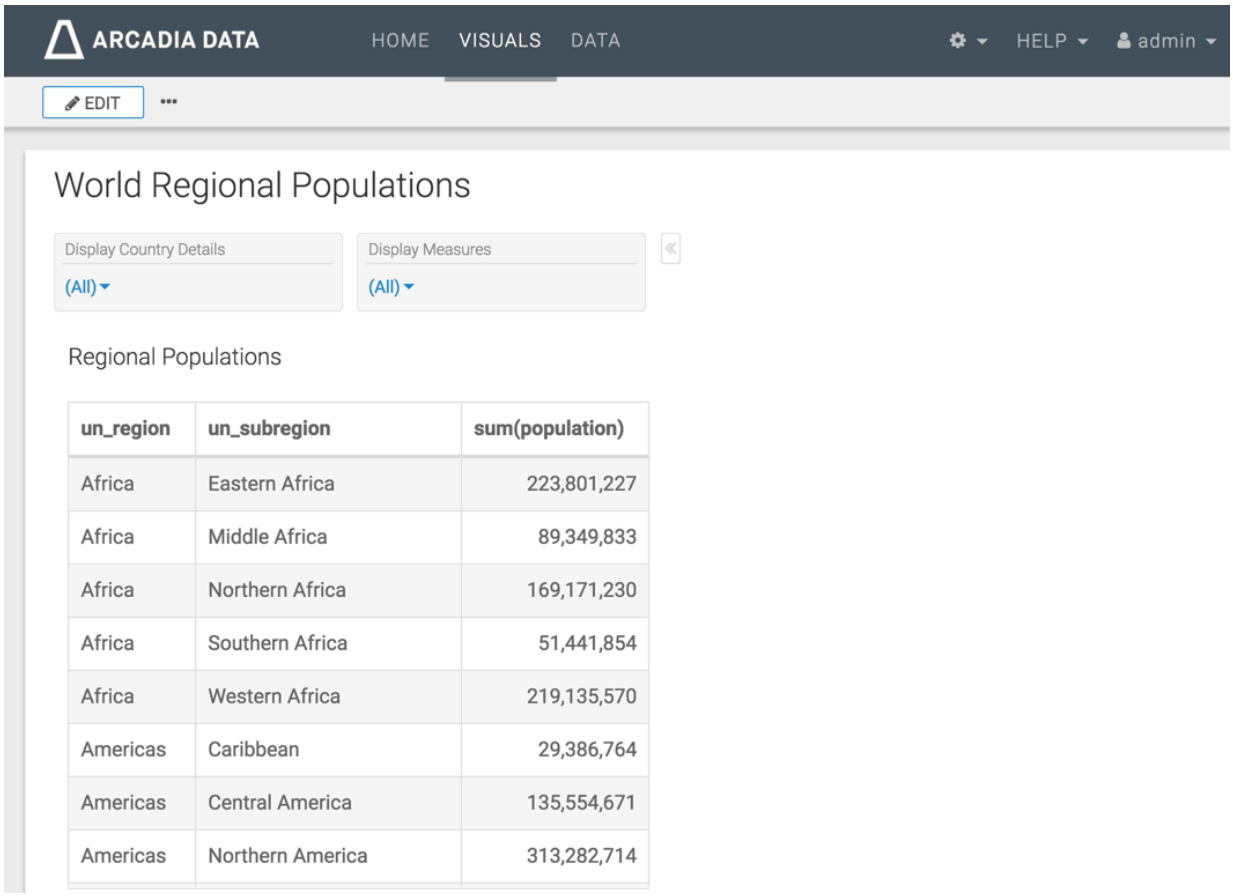
4. In the Settings modal window, switch to Display Settings.
5. Select Allow only one item to be selected at a time
6. Select Include an option for 'All'.

7. Click Apply.



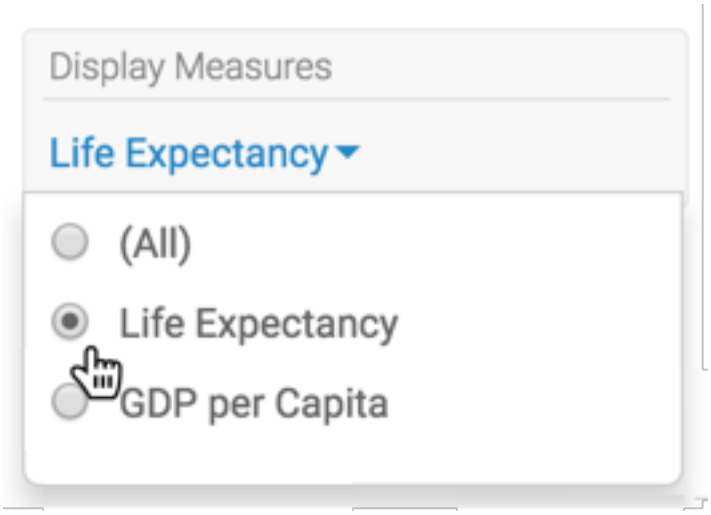
8. Name and save the dashboard.

9. Switch to application View mode, and select World Regional Populations.

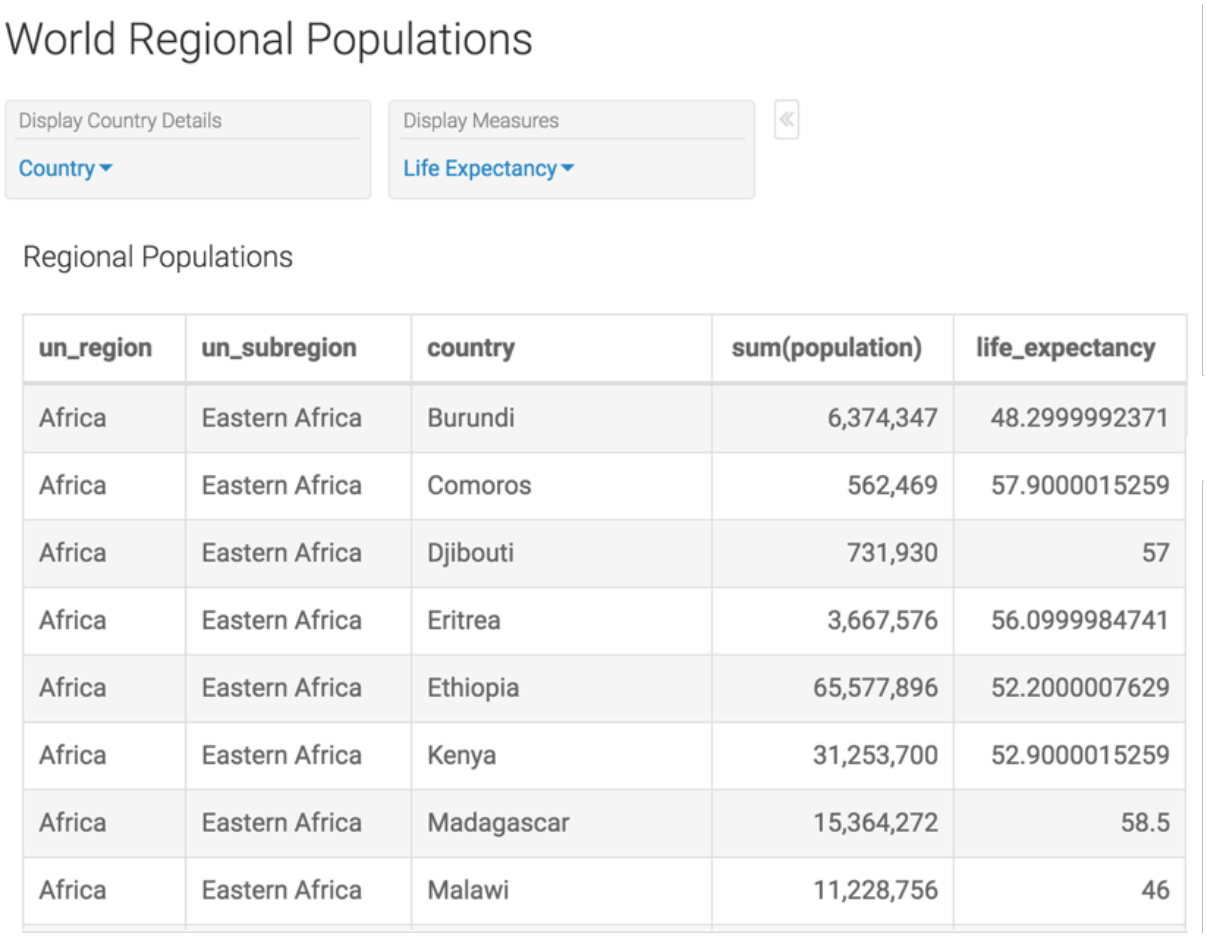


10. [Optional] In the Display Country Details filter, select Country.

11. In the Display Measures filter, select Life Expectancy.

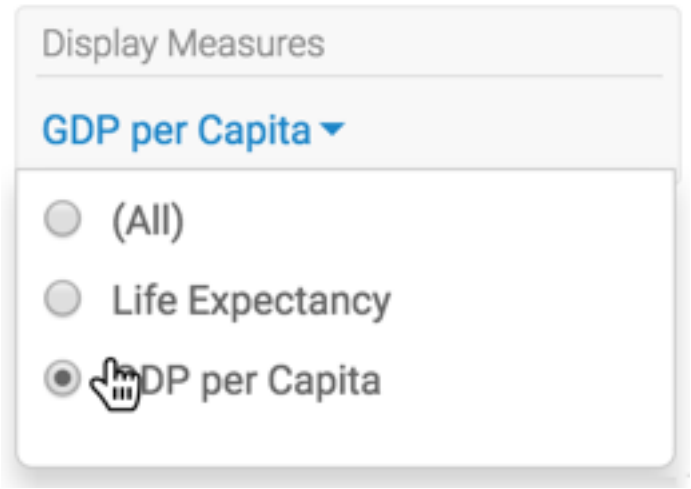


Note that the table now has a new column, life_expectancy.



un_region	un_subregion	country	sum(population)	life_expectancy
Africa	Eastern Africa	Burundi	6,374,347	48.2999992371
Africa	Eastern Africa	Comoros	562,469	57.9000015259
Africa	Eastern Africa	Djibouti	731,930	57
Africa	Eastern Africa	Eritrea	3,667,576	56.0999984741
Africa	Eastern Africa	Ethiopia	65,577,896	52.2000007629
Africa	Eastern Africa	Kenya	31,253,700	52.9000015259
Africa	Eastern Africa	Madagascar	15,364,272	58.5
Africa	Eastern Africa	Malawi	11,228,756	46

12. To change the measure that appears in the visual, in the Display Measures filter, select GDP per Capita.



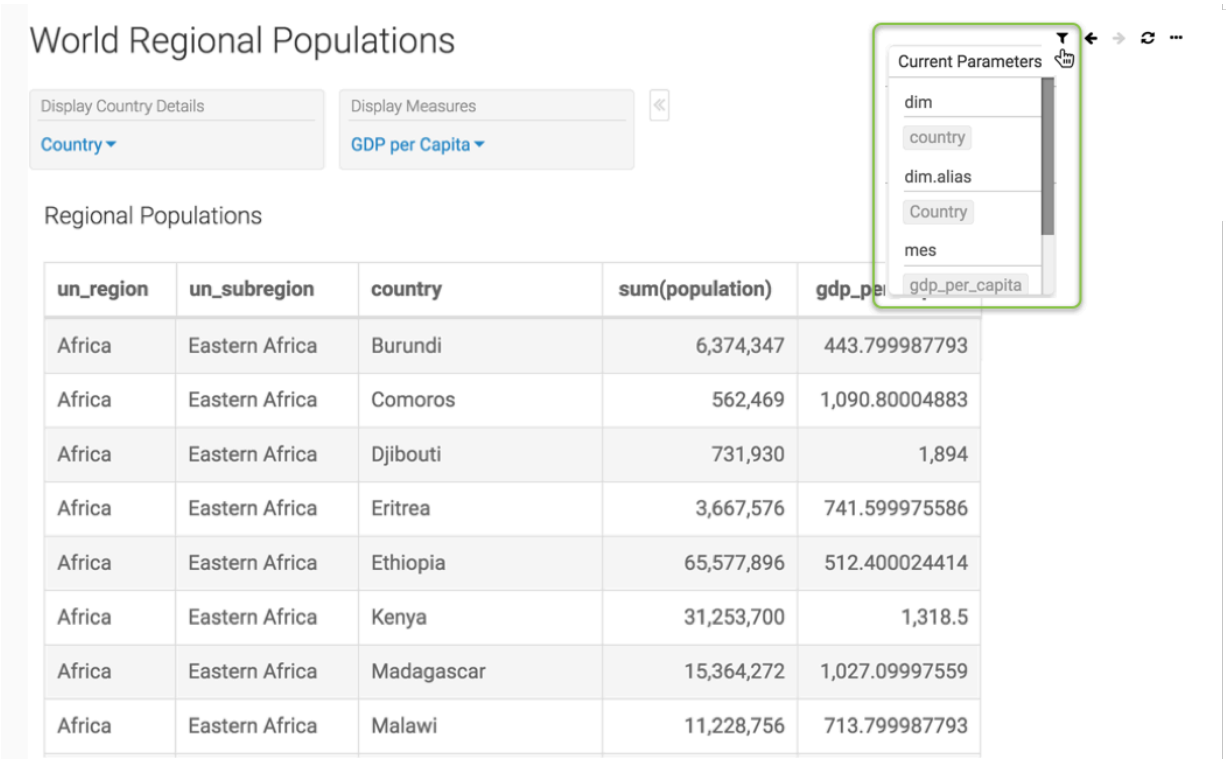
Note that the additional column is now titled gdp_per_capita, not life_expectancy.

To check the parameters of the dashboard, hover the pointer over the Filter icon at the top right corner. They are:

- dim: country
- dim.alias: Country
- mes: gdp_per_capita

You can scroll down to see

- mes.alias: GDP per Capita parameter



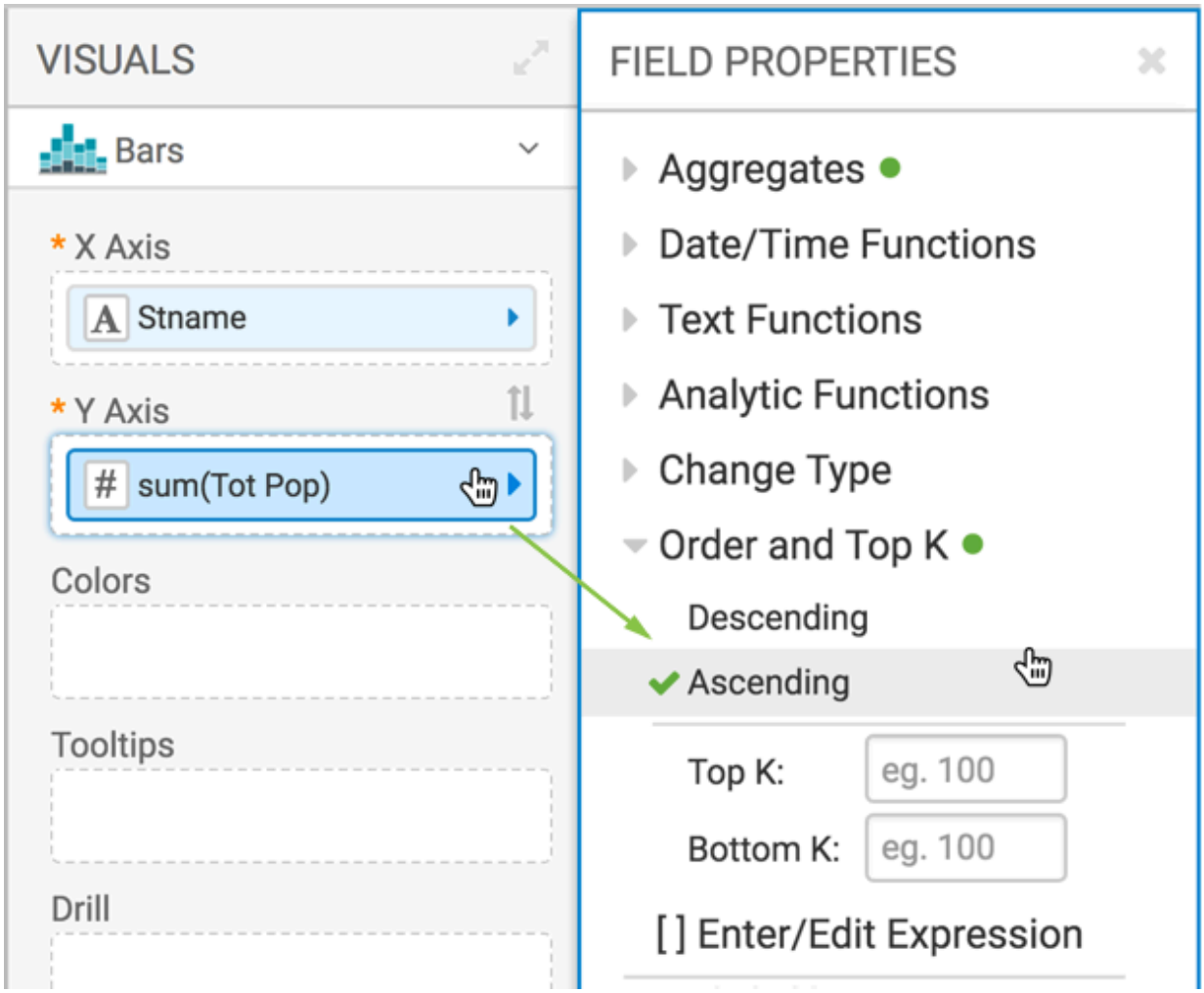
un_region	un_subregion	country	sum(population)	gdp_pe
Africa	Eastern Africa	Burundi	6,374,347	443.799987793
Africa	Eastern Africa	Comoros	562,469	1,090.80004883
Africa	Eastern Africa	Djibouti	731,930	1,894
Africa	Eastern Africa	Eritrea	3,667,576	741.599975586
Africa	Eastern Africa	Ethiopia	65,577,896	512.400024414
Africa	Eastern Africa	Kenya	31,253,700	1,318.5
Africa	Eastern Africa	Madagascar	15,364,272	1,027.09997559
Africa	Eastern Africa	Malawi	11,228,756	713.799987793

13. [Optional] You can easily navigate between the permutations of filter outputs you create by using filter navigation controls at the top right corner.

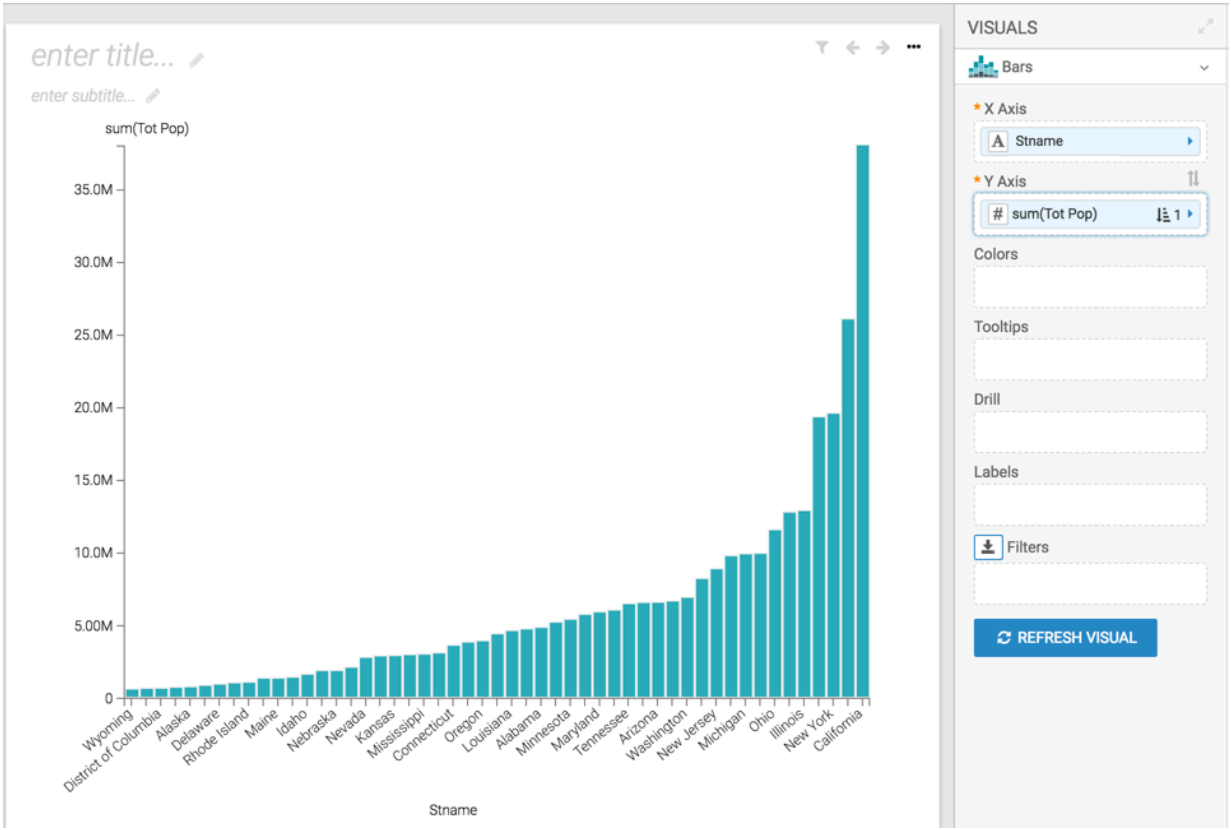
Creating visuals with variable dimensions

Procedure

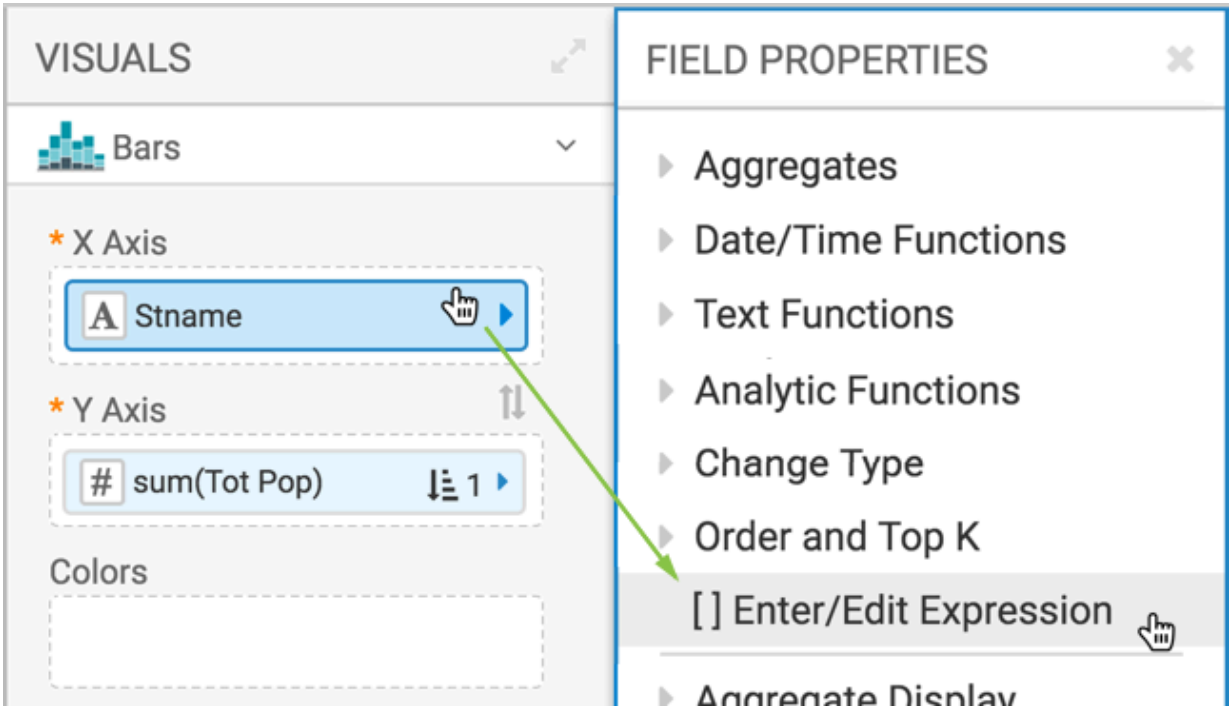
1. Open a new dashboard.
2. In the dashboard, click New Visual.
3. Under the Data menu, select the US County Population dataset.
4. Under the Visuals menu choose the Bar Chart visual type.
5. Populate the shelves of the visual:
   - From Dimension, select and move Stname field onto the X Axis shelf.
   - From Measures, select and move Tot Pop field onto the Y Axis shelf.
   - On the Y Axis shelf, change the aggregation of the Tot Pop field from sum(Tot Pop) to avg(Tot Pop): select Tot Pop field, chose the Aggregates menu, and change the aggregate from Sum to Average.
   - On the Y Axis shelf, click Tot Pop, and under the Field Properties menu select Order, and choose Ascending.



6. Click Refresh Visual to see the basic set up of the bar chart.

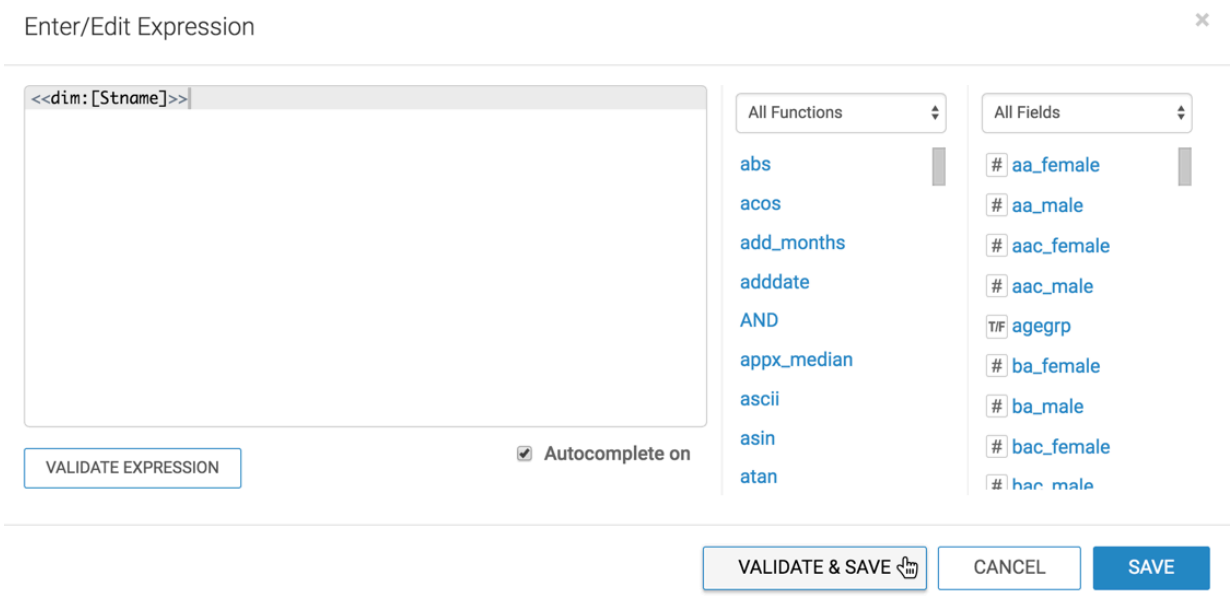


7. On the X Axis shelf, click Stname field.
8. In the Field Properties menu, select [ ] Enter/Edit Expression.



9. In the Enter/Edit Expression modal window, change the text to the following expression: <<dim:[Stname]>>.

10. Click Validate & Save.



11. Change the name of the visual to Population by <<dim>>.

To have an informative title for the visual, you may add the parameter placeholders to it. The filter configured in Creating filters to control variable dimensions on page 24 supplies the required value.

12. Click Save.

Creating filters to control variable dimensions

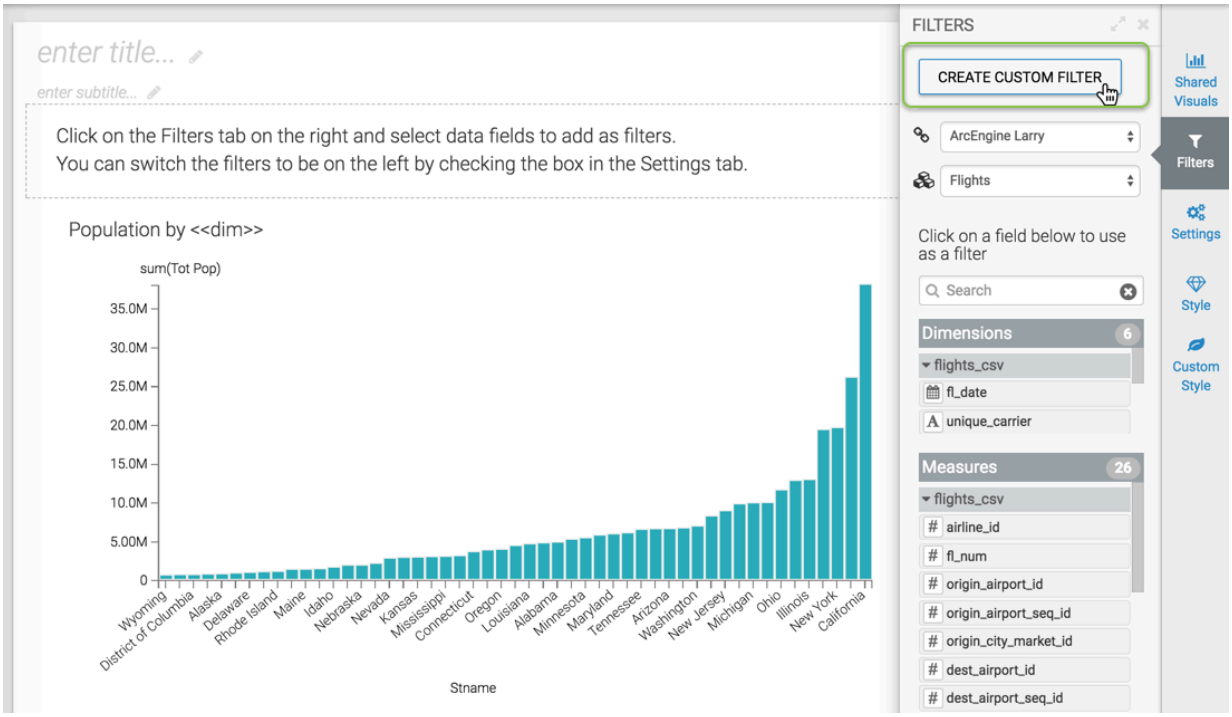
About this task

Before starting on this work flow, complete the steps in Creating visuals with variable dimensions on page 22.

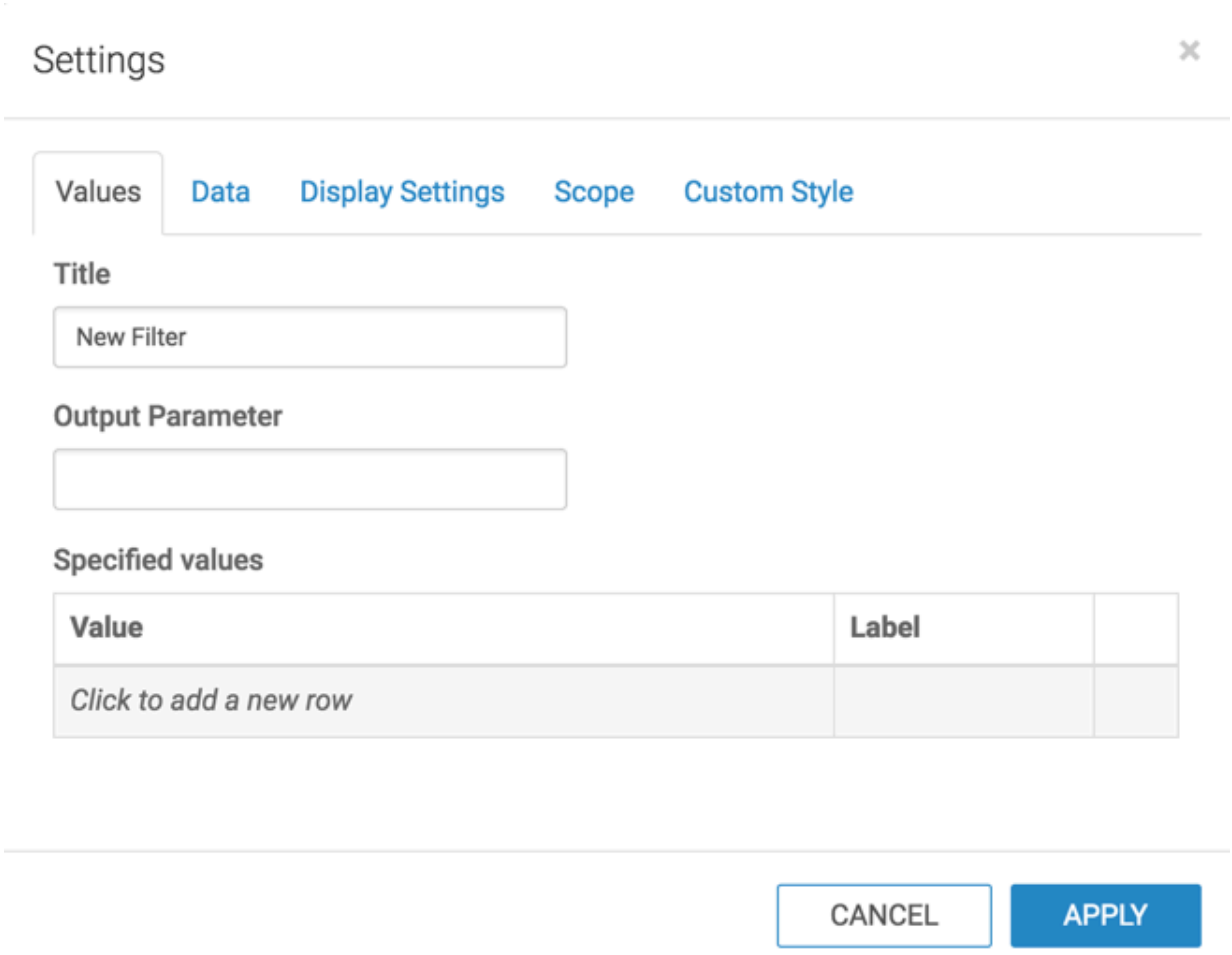
Procedure

1. In the dashboard, click the Filters tab.

2. Click Create Custom Filter.

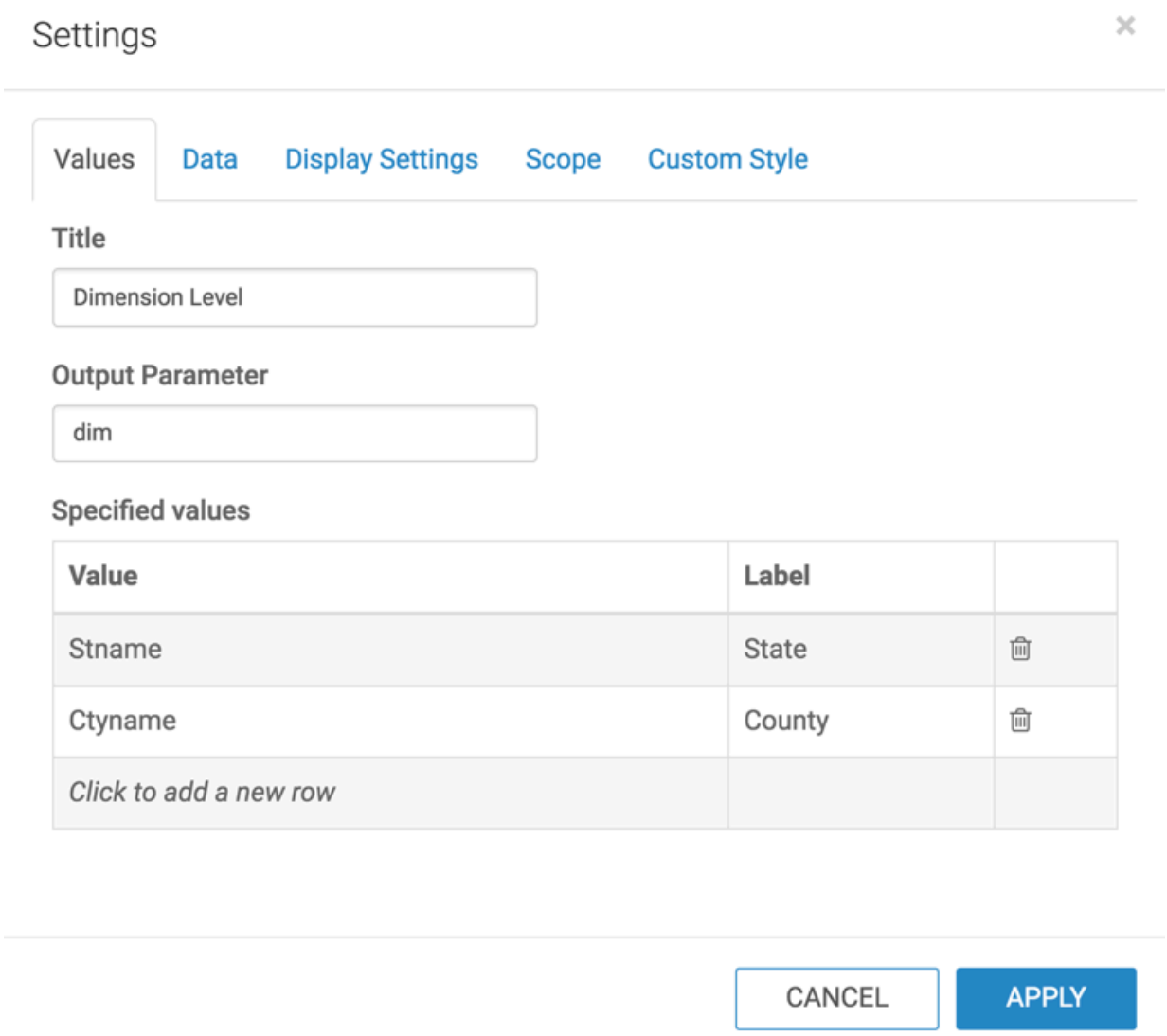


This creates a New Filter in the filter area of the application, and opens the Settings window modal for that filter.

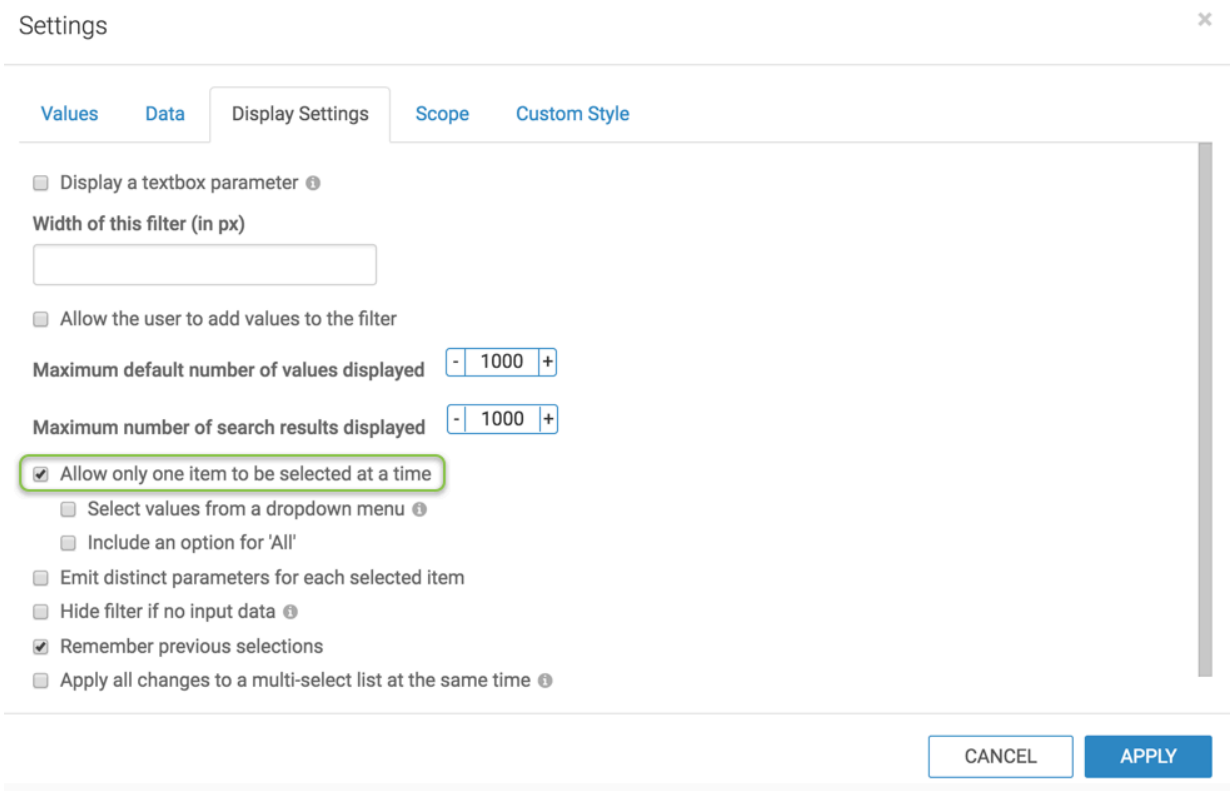

Settings
Values
Data
Display Settings
Scope
Custom Style
Title
New Filter
Output Parameter
Specified values
Value
Label
Click to add a new row
CANCEL
APPLY

3. In the Settings modal window, switch to Values tab, and enter the following:
   - Under Title, enter Dimension Level.
   - Under Output Parameter, enter dim.

     Note that this is the parameter from Creating visuals with variable dimensions on page 22.
   - Under Specified values, enter the following two rows:
     - Value: stname, Label: State
     - Value: ctyname, Label: County



4. Switch to Display Settings tab, and select the options Permit only one item to be selected.

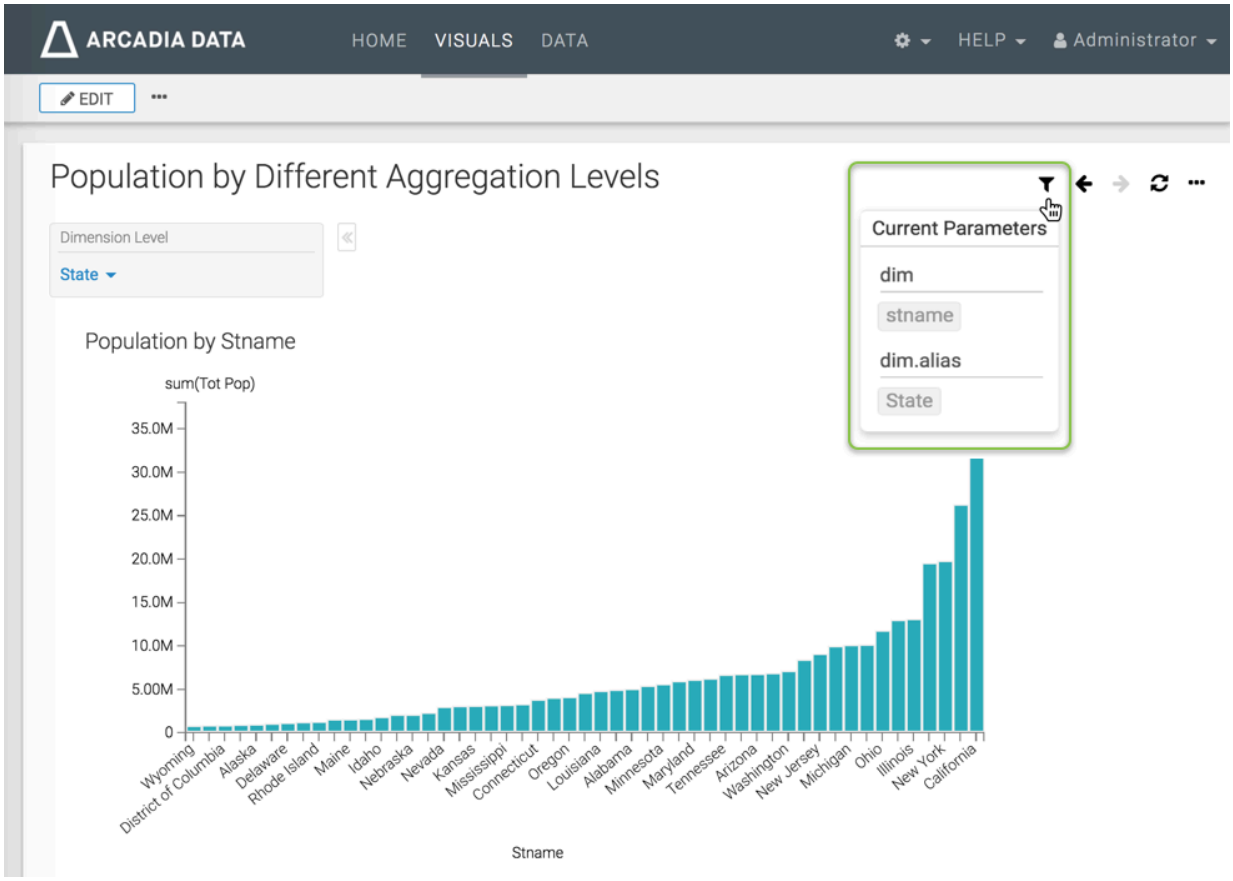


5. Click Apply.
6. Name and save the dashboard. We used the name Population by Different Aggregation Levels.

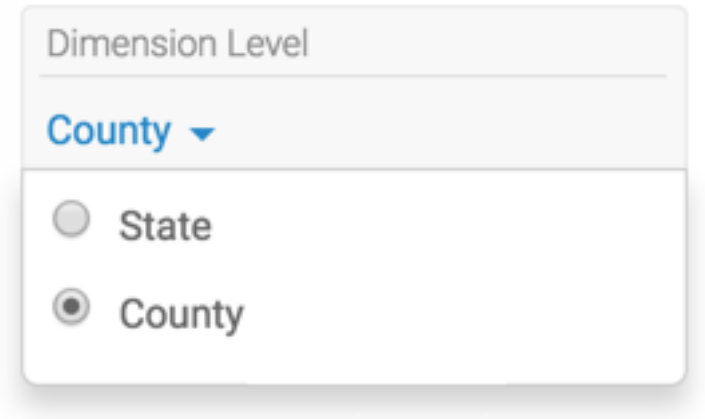
7. Switch to application View mode.

   Note that the default choice, Stname, displays both on the horizontal axis, and in the title of the visual.

   To check the parameters of the dashboard, hover the pointer over the Filter icon at the top right corner. They are dim: Stname and dim.alias: State.



8. In the Dimension Level filter, select County.

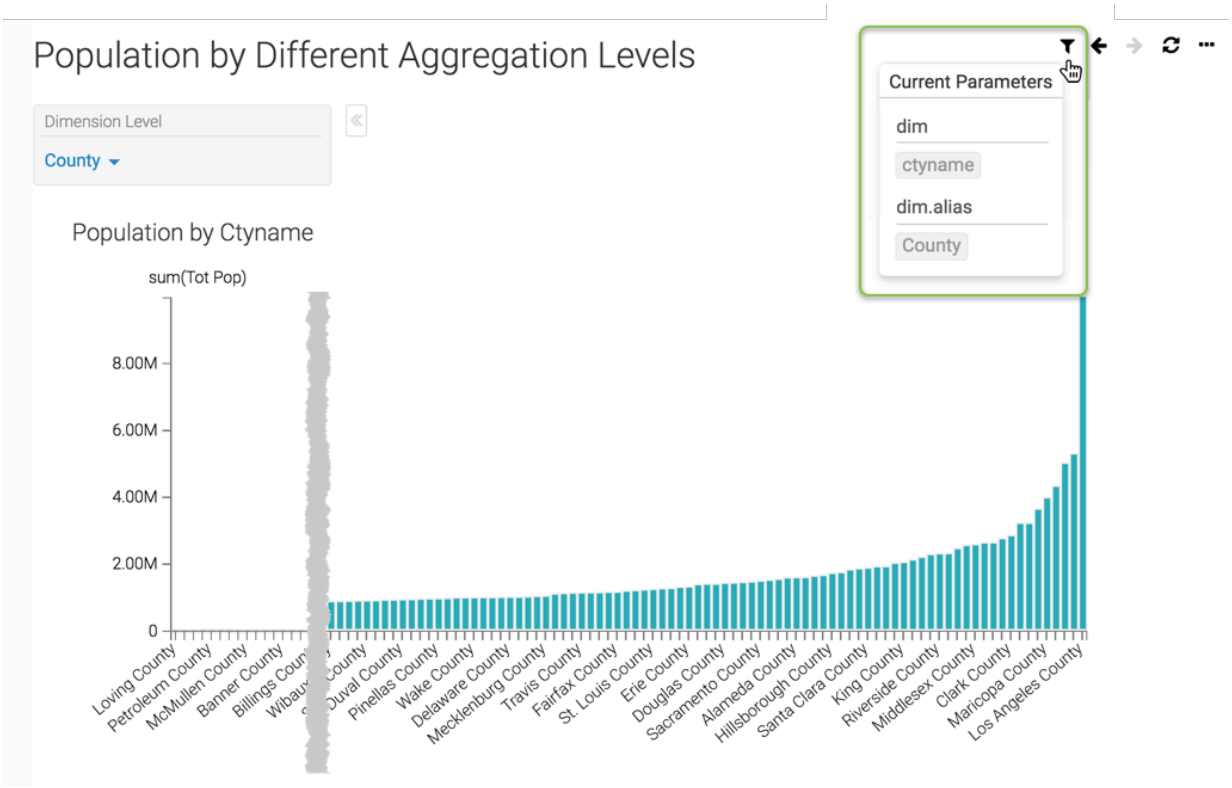


Note that now the title of the graph and the axis changed to use Ctyname.

You may also notice that your graph does not appear to have any bars. In this particular dataset, there are large differences among populations of various counties; a great majority has populations under one million, and a select few represent urban areas with extremely dense population.

In the application, scroll to the extreme right of the visual to see the graph.

If you want to check the status of parameters on this dashboard, hover the pointer over the Filter icon at the top right corner, and notice that they changed to dim: Ctyname and dim.alias: County.



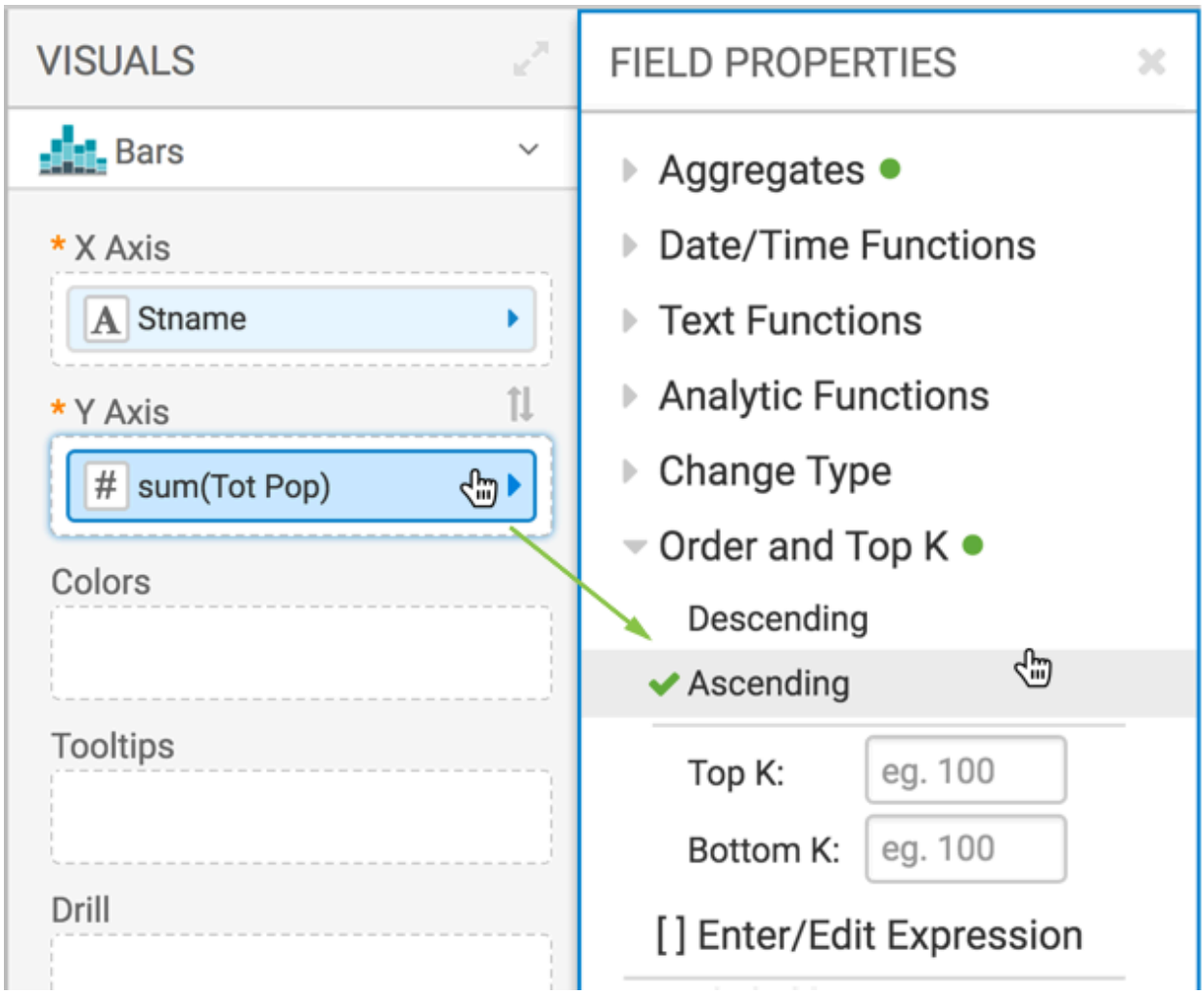
Creating visuals with variable measures

About this task

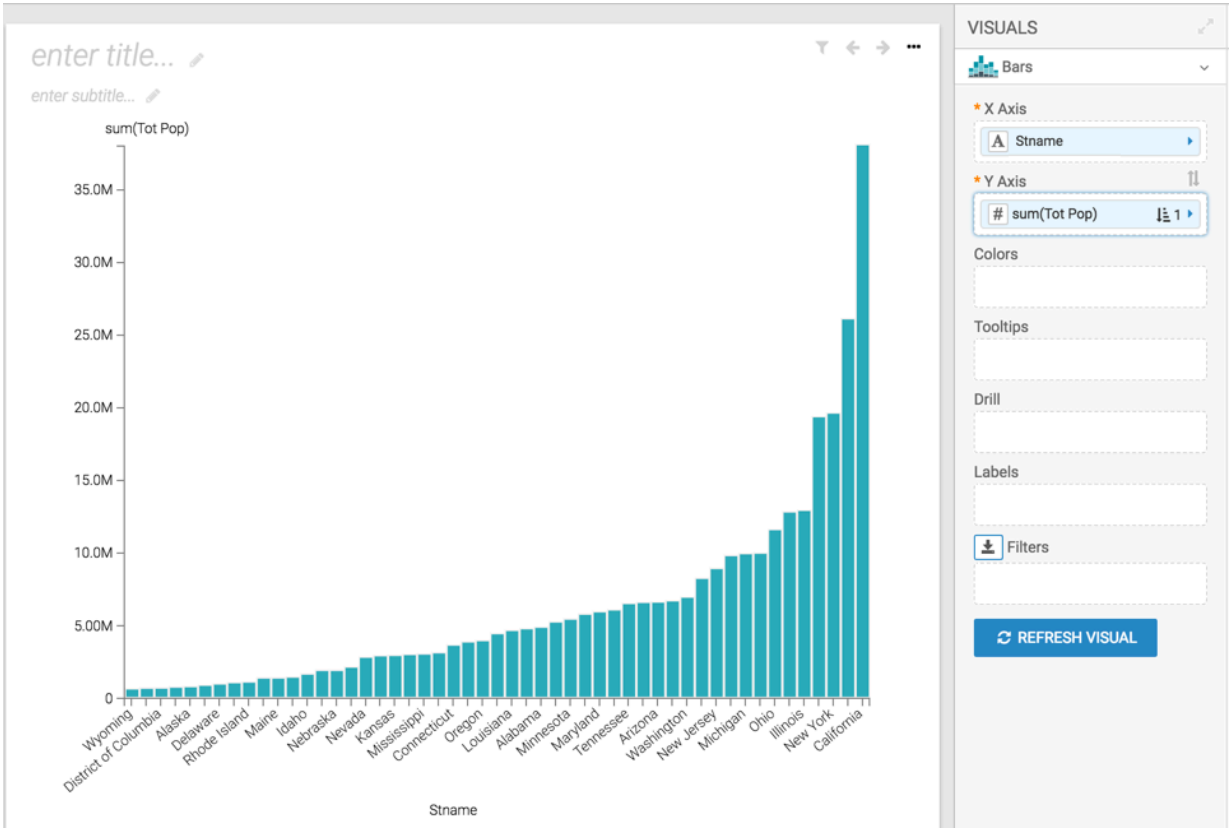
You may choose to duplicate the dashboard that you created earlier according to the instructions in Creating visuals with variable dimensions on page 22. In this case, open the visual, and skip to Step 7 in this workflow.

Procedure

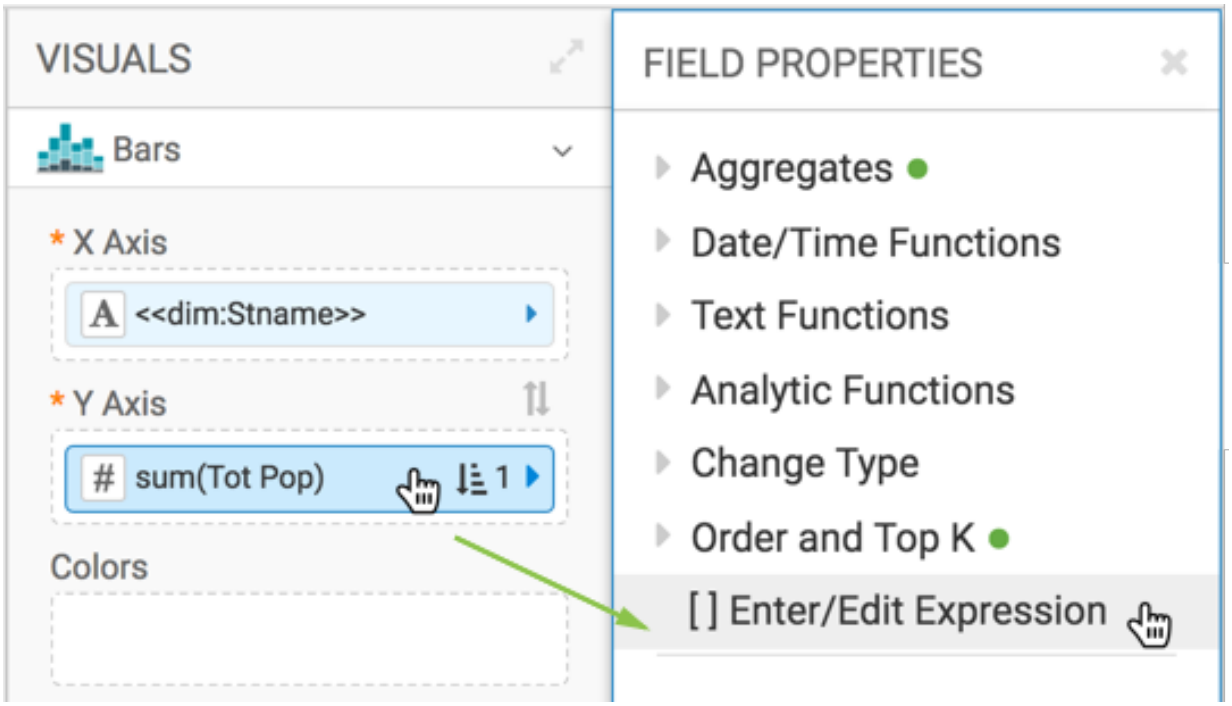
1. In the dashboard, click New Visual.
2. Under the Data menu, select the US County Population dataset.
3. Under the Visuals menu choose the Bar Chart visual type.
4. Populate the shelves of the visual:
   - From Dimension, select and move Stname field onto the X Axis shelf.
   - From Measures, select and move Tot Pop field onto the Y Axis shelf.
   - On the Y Axis shelf, change the aggregation of the Tot Pop field from sum(Tot Pop) to avg(Tot Pop): select Tot Pop field, chose the Aggregates menu, and change the aggregate from Sum to Average.
   - On the Y Axis shelf, click Tot Pop, and under the Field Properties menu select Order, and choose Ascending.



5. Click Refresh Visual to see the basic set up of the bar chart.

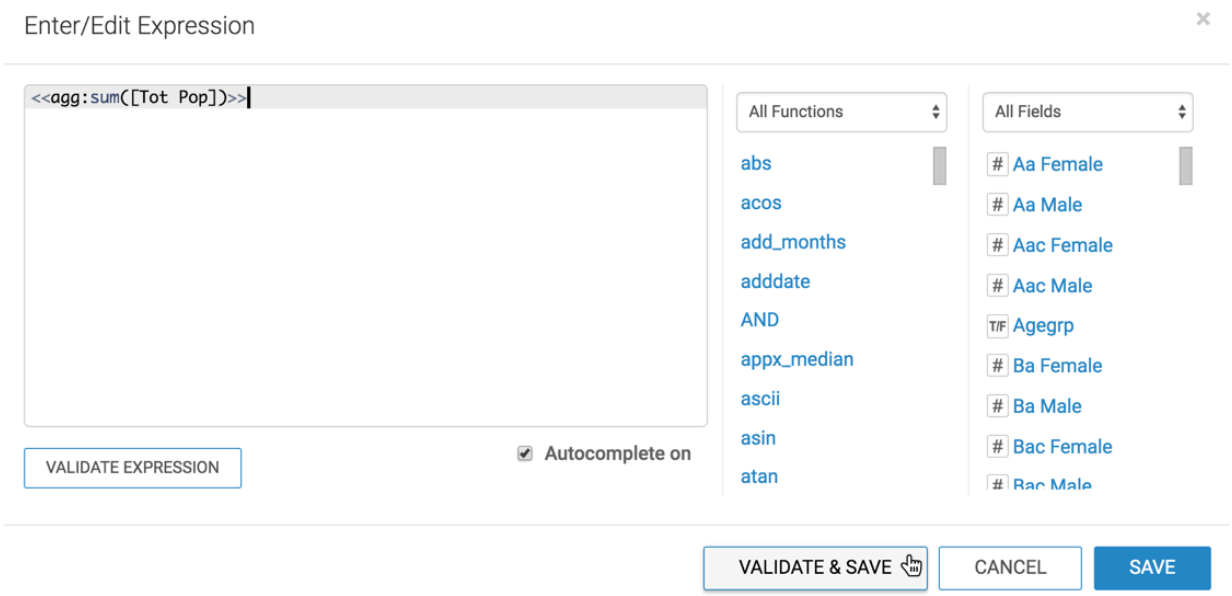


6. On the Y Axis shelf, click the sum(Tot Pop) field.
7. In the Field Properties menu, select [ ] Enter/Edit Expression.



8. In the Enter/Edit Expression modal window,

9. Change the text to the following expression: <<agg:sum([Tot Pop])>>.



10. Click Validate & Save.
11. Change the name of the visual to Population by <<dim>> and <<agg>>. To have an informative title for the visual, you may add the parameter placeholders to it. The filters configured in Creating filters to control variable dimensions on page 24 and Creating filters to control variable measures on page 33 supply the required values for <<dim>> and <<agg>>.
12. Click Save.

Creating filters to control variable measures

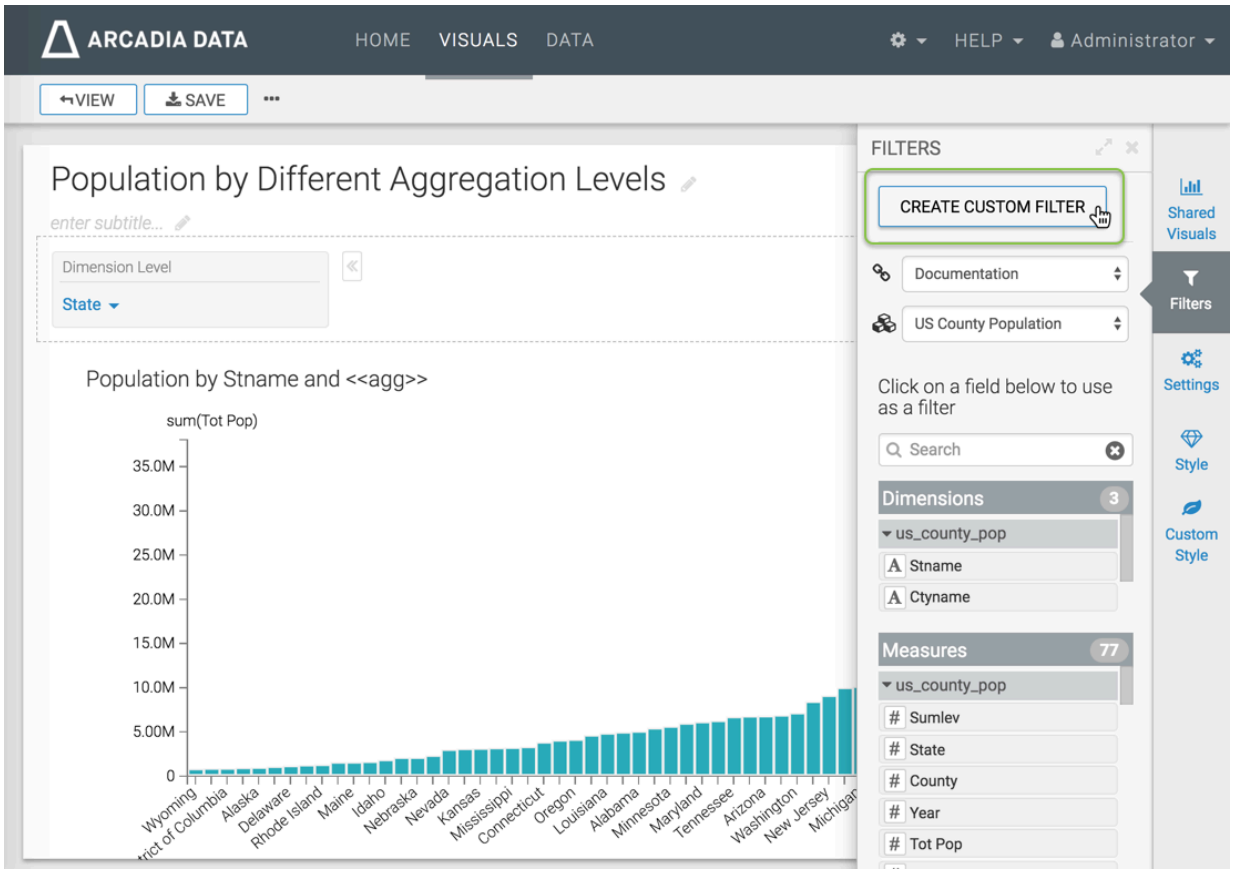
About this task

Before starting on this work flow, complete the steps in Creating visuals with variable measures on page 30.

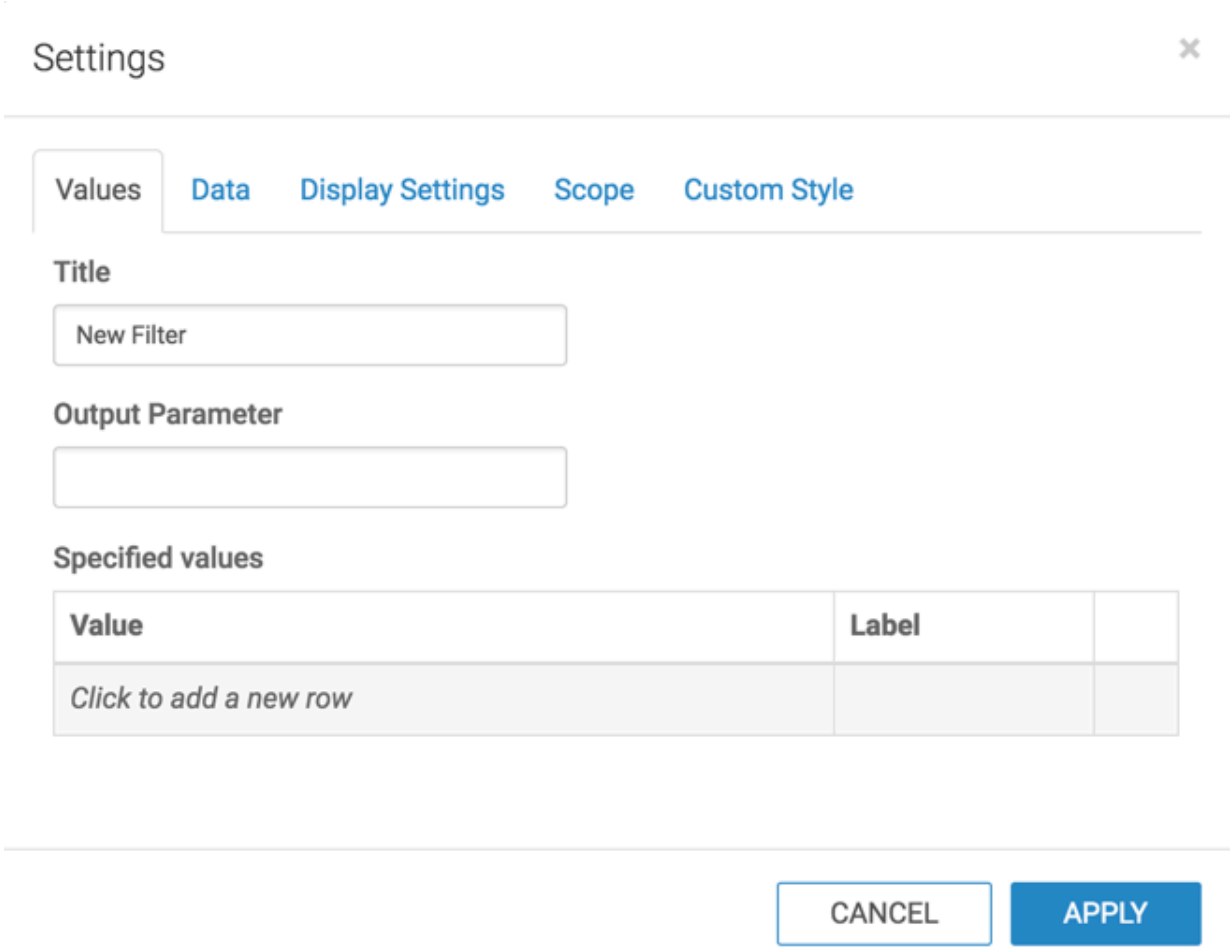
Procedure

1. In the dashboard, click the Filters tab.

2. Click Create Custom Filter.



3. This creates a New Filter in the filter area of the application, and opens the Settings window modal for that filter.



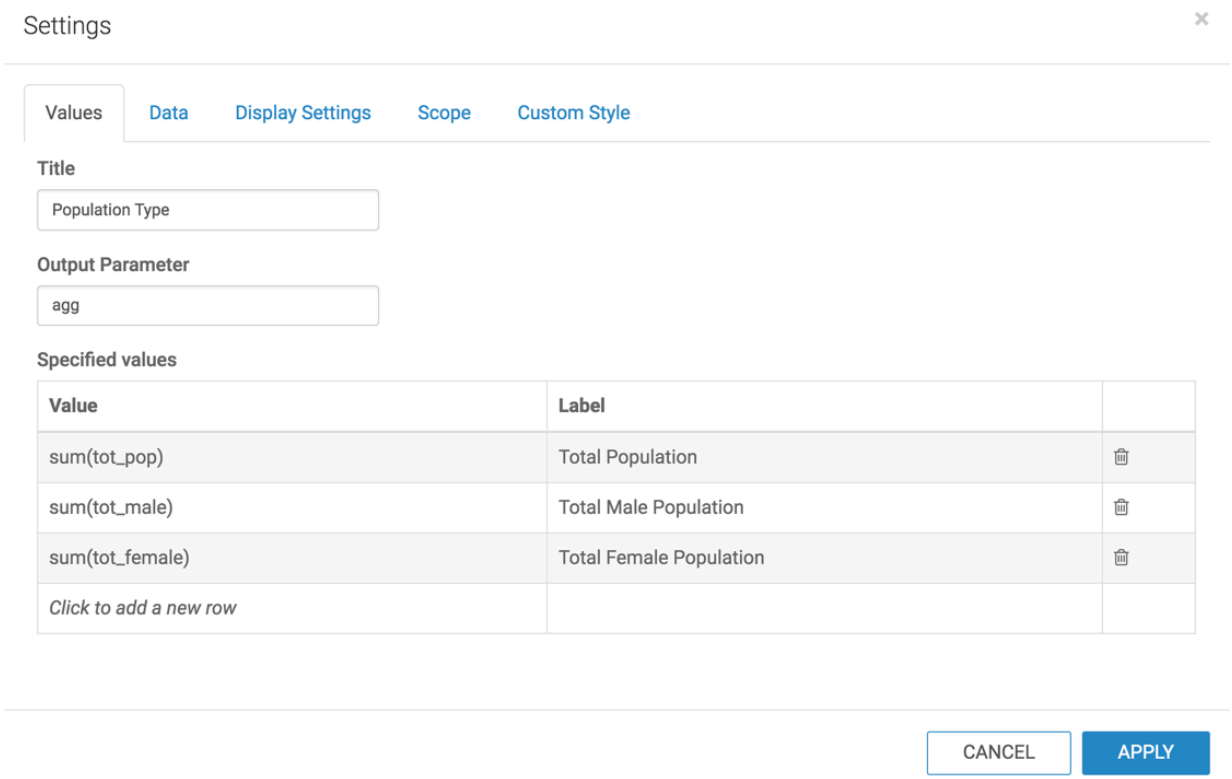
4. In the Settings modal window, switch to Values tab, and enter the following:

   - Under Title, enter Population Type.
   - Under Output Parameter, enter agg.

     Note that this is the parameter from Creating visuals with variable measures on page 30.
   - Under Specified values, enter the following two rows:

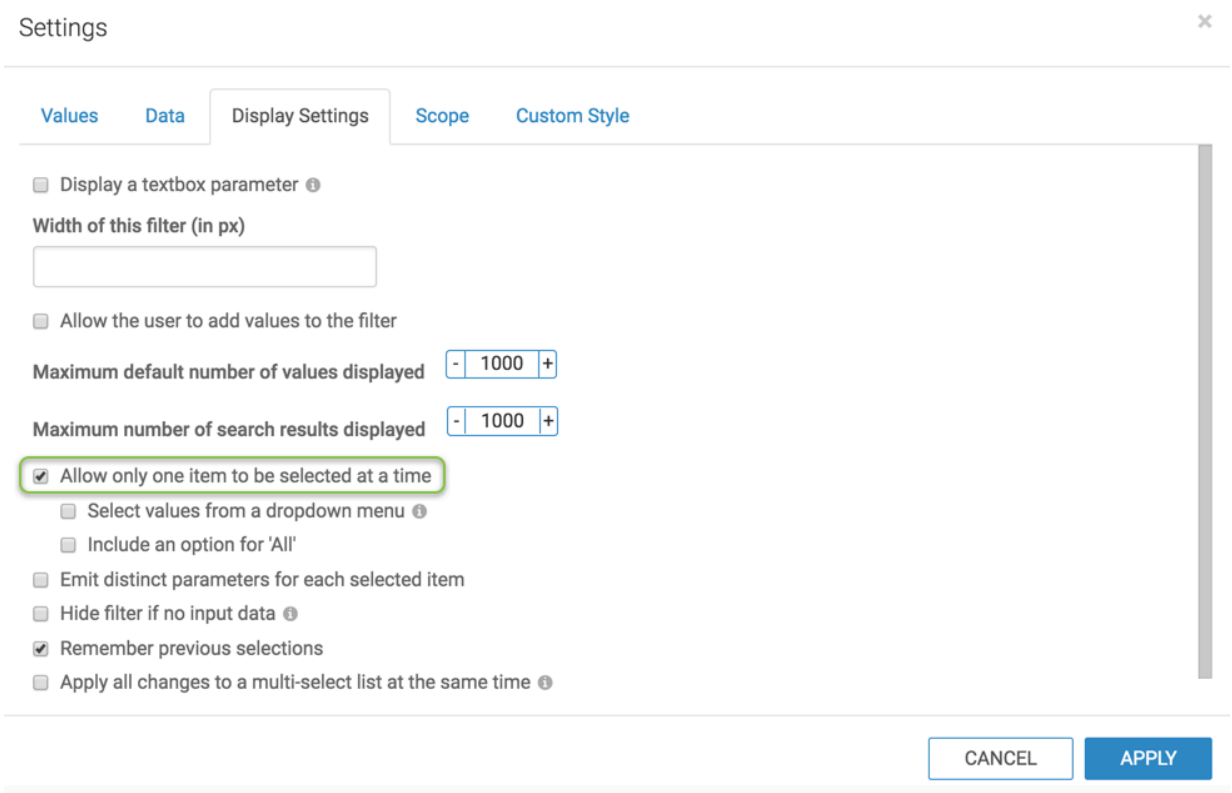
     - Value: sum(tot_pop), Label: Total Population
     - Value: sum(tot_male), Label: Total Male Population
     - Value: sum(tot_female), Label: Total Female Population

     Note that these are the original field names in the source table.

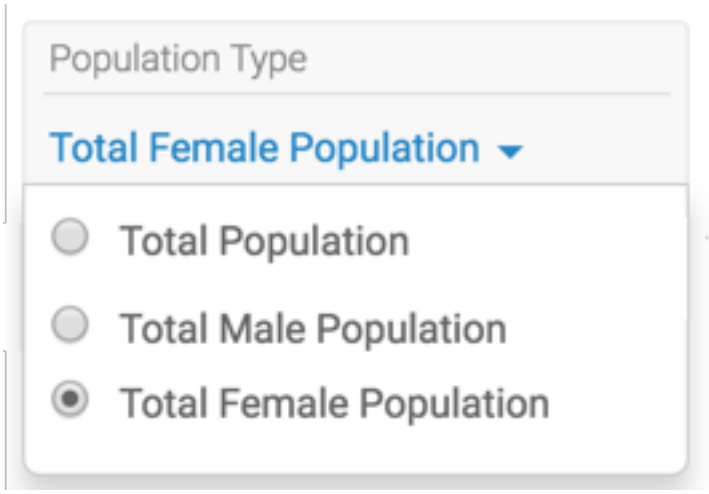


5. Switch to Display Settings tab, and select the options Allow only one item to be selected at a time.

6. Click Apply.

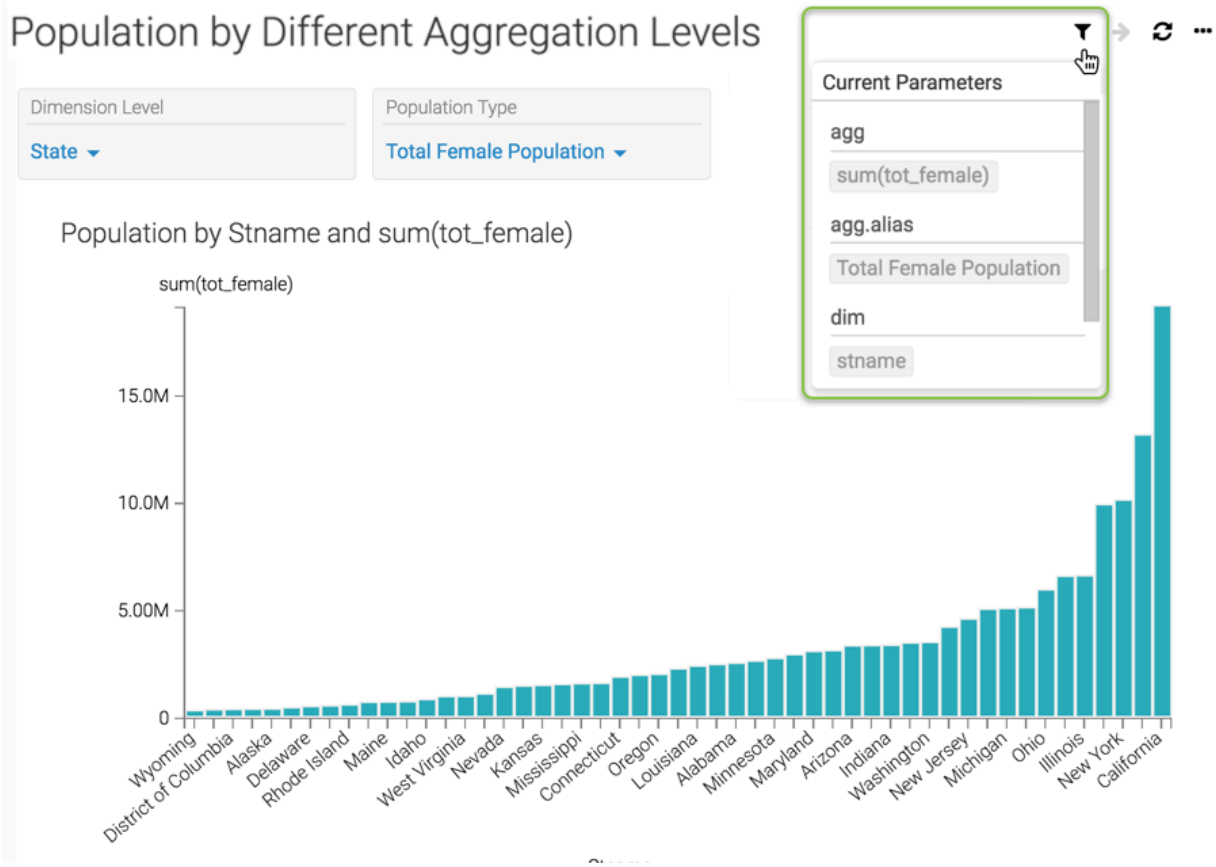


7. Save the dashboard.
8. Switch to dashboard View mode.
9. In the Population Type filter, select Total Female Population.



10. Note that the title of the graph and the vertical axis changed to include sum(tot_female).

To check the parameters of the dashboard, hover the pointer over the Filter icon at the top right corner. They are agg: sum(tot_female), agg.alias: Total Female Population and dim: Stname. You can scroll down to see the di m.alias: State parameter.



Notice that you can operate the two filters, Dimension Level and Population Type, independently.

You can also navigate between the permutations of filter outputs you create by using filter navigation controls at the top right corner.