

Working with Dimension Hierarchies

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Creating new dimension hierarchies

About this task

You may find it useful to define a hierarchy of dimensions, to enable visuals with variable levels of granularity over the same range of data.



Note:

This feature is available only to users with administrative privileges.

The following steps demonstrate how to define such a hierarchy on the dataset World Life Expectancy [data source samples.world_life_expectancy]. We will use the dimensions un_region, un_subregion, and country to define a dimensional hierarchy called Region.

Procedure

1. On the main navigation bar, click Data.

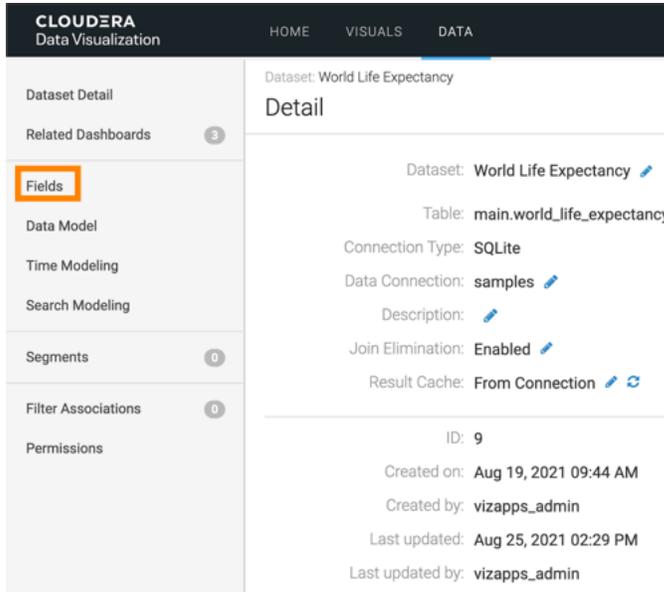
The Data view appears.

2. Open on the Datasets tab.
3. In the left navigation menu, click Samples.
4. In the Datasets area, select World Life Expectancy (samples.world_life_expectancy).

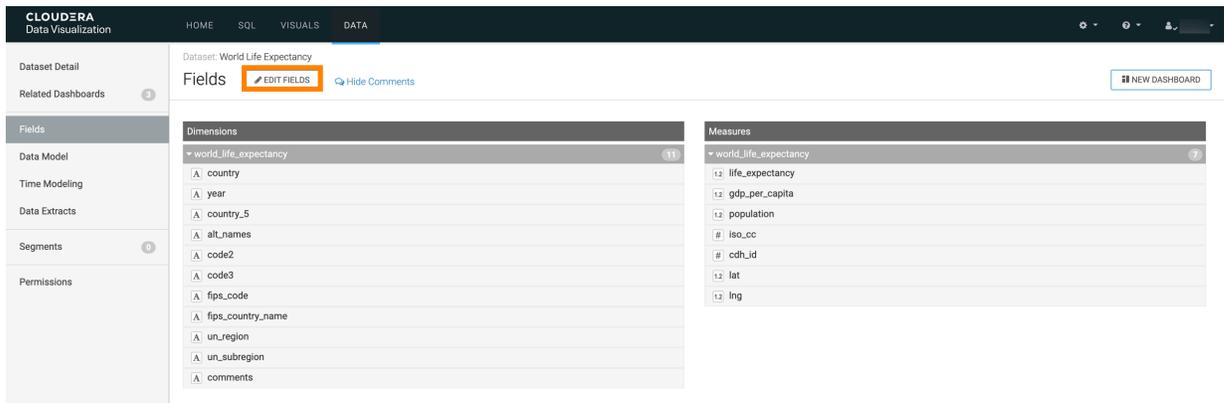
The screenshot shows the Cloudera Data Visualization interface. The top navigation bar includes 'HOME', 'VISUALS', and 'DATA'. A search bar contains 'World Life Expectancy'. The left sidebar shows 'All Connections' with 'Postgres' and 'samples' listed. The main area displays 'NEW DATASET', 'ADD DATA', and 'Datasets 15'. A table lists datasets with columns 'Title/Table' and 'Created'. The 'World Life Expectancy' dataset (main.world_life_expectancy) is highlighted with an orange box, and its creation date is 'Aug 19, 2021'.

Title/Table	Created
World Life Expectancy main.world_life_expectancy	Aug 19, 2021

5. In the Dataset Detail menu, select Fields.

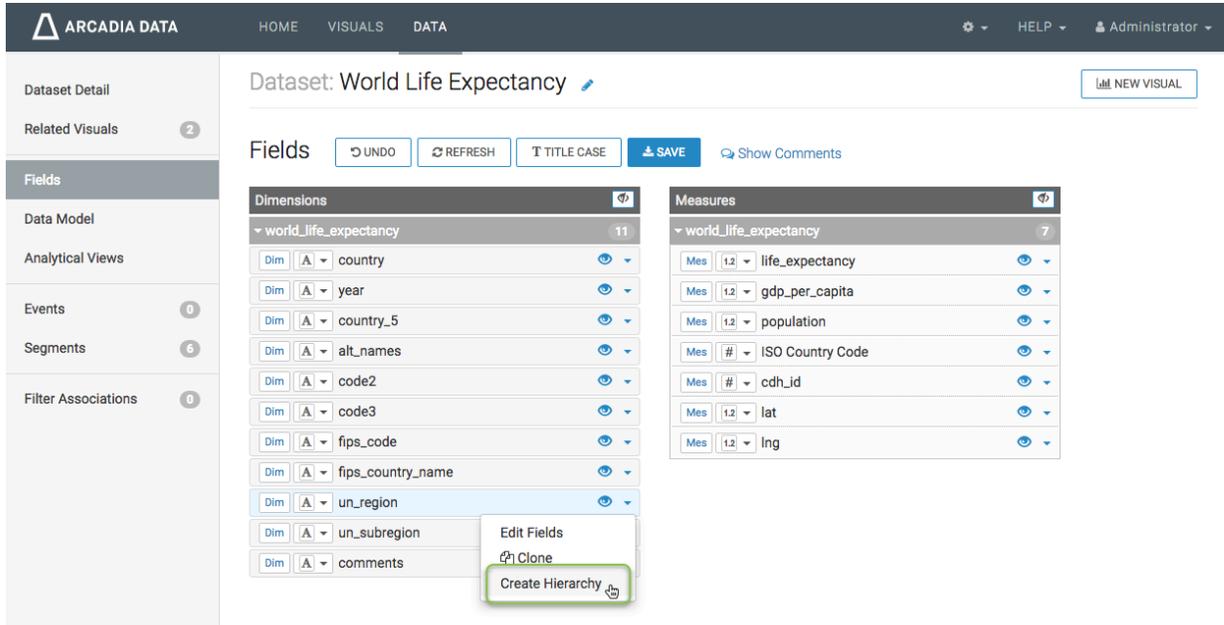


6. In the Fields interface, select Edit fields.



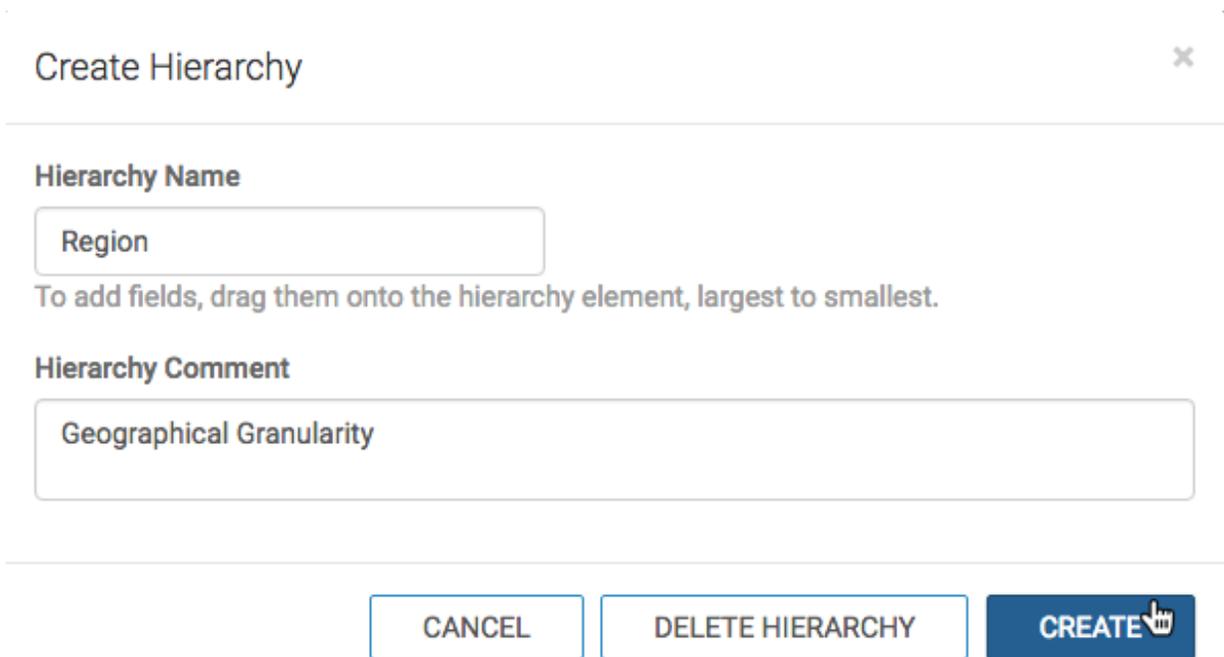
7. In the editable Fields interface, under Dimensions, find the field un_region.

- Click Down icon on the un_region line, and select Create Hierarchy.



- In the Create Hierarchy modal window, enter the values for Hierarchy Name and Hierarchy Comment, and click Create.

We named our hierarchy Region, and described it as Geographical Granularity.



10. Note that Measures now contain a hierarchy Region, denoted by the Hierarchy icon. The hierarchy contains a single element, un_region.

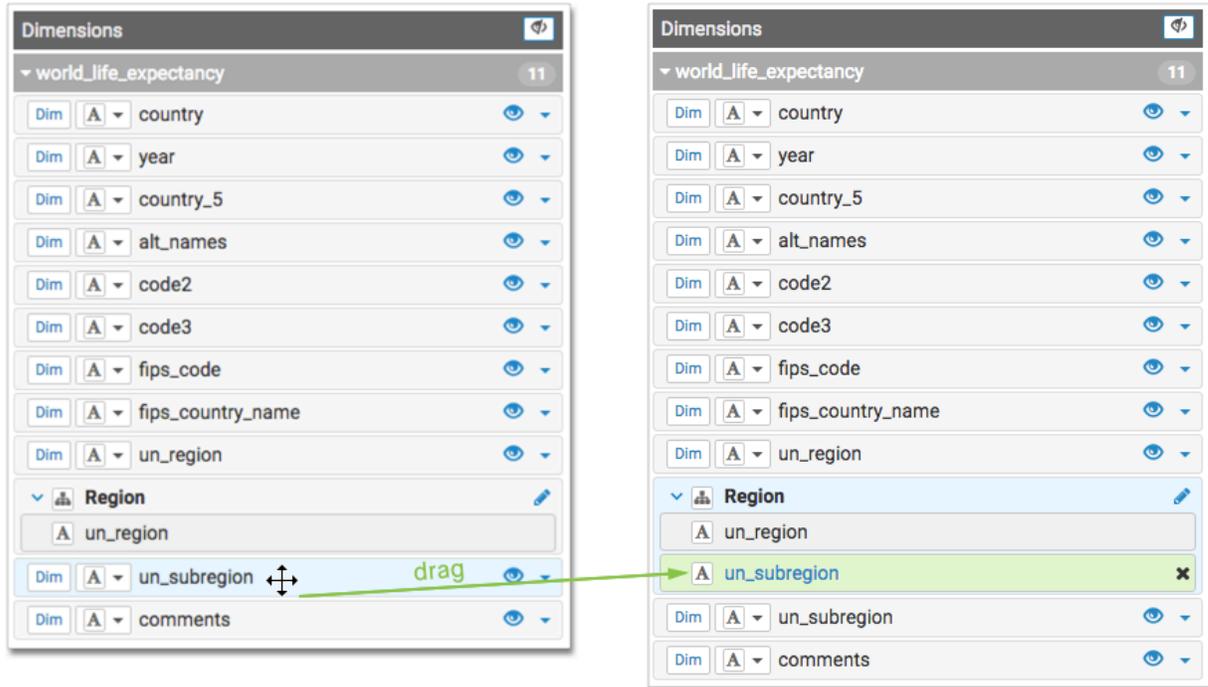
The screenshot shows the Arcadia Data interface for the 'World Life Expectancy' dataset. The left sidebar contains navigation options: Dataset Detail, Related Visuals (2), Fields, Data Model, Analytical Views, Events (0), Segments (6), and Filter Associations (0). The main area is titled 'Dataset: World Life Expectancy' and includes buttons for UNDO, REFRESH, TITLE CASE, SAVE, and Show Comments. It is divided into two panels: Dimensions and Measures.

Dimensions Panel: Lists 11 dimensions for 'world_life_expectancy'. A hierarchy named 'Region' is expanded, showing a single member 'un_region' highlighted with a green box. Other dimensions include country, year, country_5, alt_names, code2, code3, fips_code, fips_country_name, and un_region.

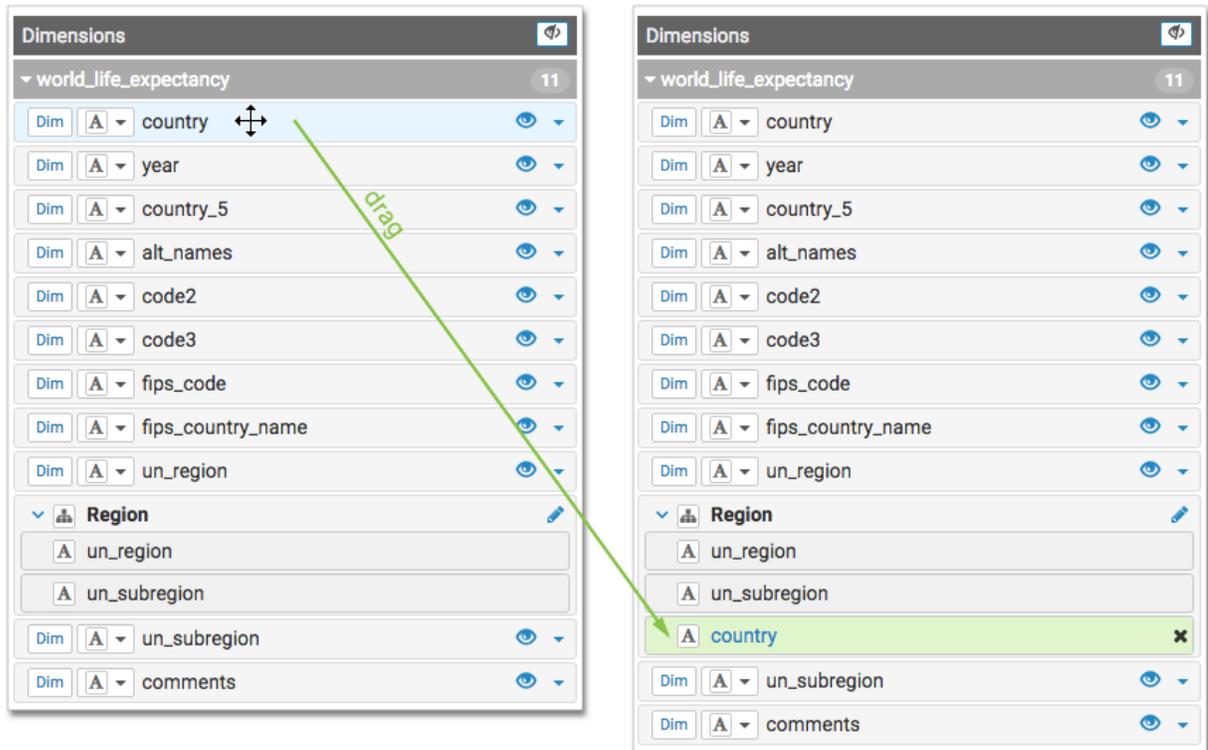
Measures Panel: Lists 7 measures for 'world_life_expectancy'. The measures are life_expectancy, gdp_per_capita, population, ISO Country Code, cdh_id, lat, and lng.

- To add more levels to the hierarchy, simply click and drag the relevant dimensions or measures to the newly created hierarchy. Be sure to arrange them in order of scale, from largest to smallest.

Below un_region, we added un_subregion.



Below un_subregion, we added country.



12. Click Save.

Note that the hierarchy Region appears alongside the dimensions obtained directly from the data table.

The screenshot shows the Arcadia Data interface for the 'World Life Expectancy' dataset. The 'Fields' section is expanded to show a custom hierarchy named 'Region' which includes 'un_region', 'un_subregion', and 'country'. The 'Dimensions' section lists various fields like 'country', 'year', 'country_5', etc. The 'Measures' section lists 'life_expectancy', 'gdp_per_capita', 'population', etc.

Dimensions	Measures
world_life_expectancy (12)	world_life_expectancy (7)
country	life_expectancy
year	gdp_per_capita
country_5	population
alt_names	ISO Country Code
code2	cdh_id
code3	lat
fips_code	lng
fips_country_name	
un_region	
Region	
un_region	
un_subregion	
country	
un_subregion	
comments	

Results

Defined dimension hierarchies, such as Region that we created here, can be used just as any other dimension field of the dataset.

Changing the name of the hierarchy

Procedure

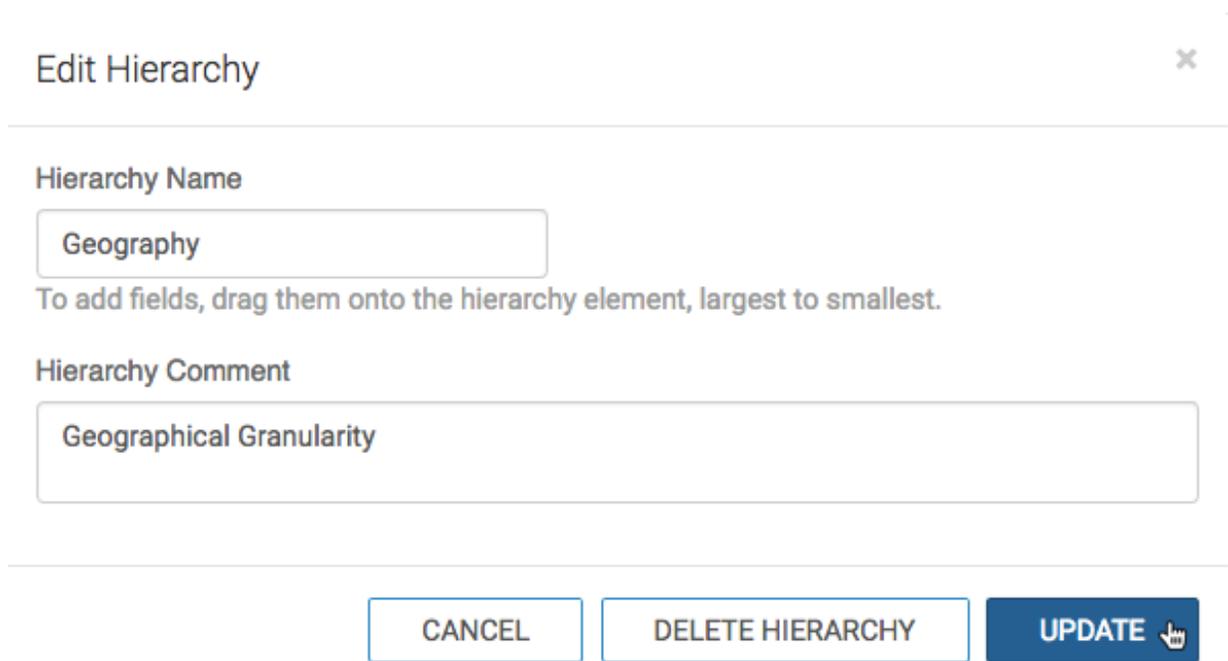
1. Click Edit Fields.

2. In the list of Dimensions, find the Region hierarchy, and click the Pencil icon next to it.

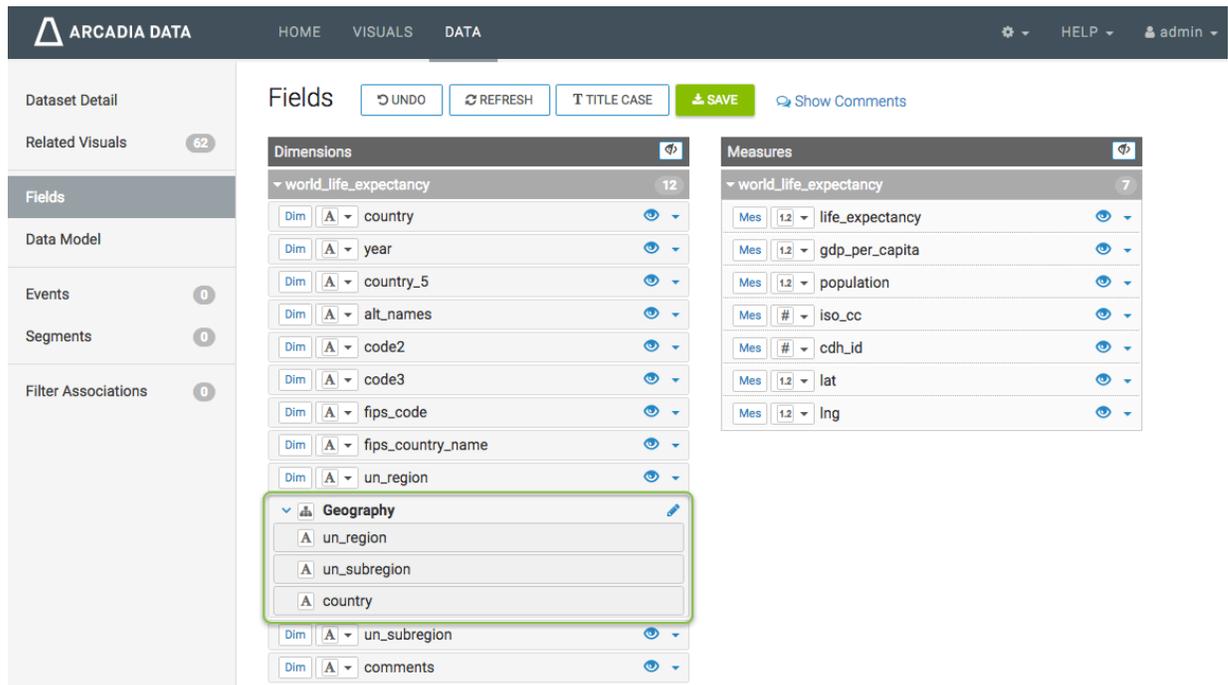
The screenshot shows the Arcadia Data interface for the 'World Life Expectancy' dataset. The left sidebar contains navigation options: Dataset Detail, Related Visuals (62), Fields, Data Model, Events (0), Segments (0), and Filter Associations (0). The main area displays the dataset name and a 'NEW VISUAL' button. Below this are 'Fields' controls: UNDO, REFRESH, TITLE CASE, SAVE, and Show Comments. The 'Dimensions' panel shows a list of dimensions for 'world_life_expectancy', including country, year, country_5, alt_names, code2, code3, fips_code, fips_country_name, un_region, and a highlighted 'Region' hierarchy. The 'Region' hierarchy is expanded to show 'un_region', 'un_subregion', and 'country'. A pencil icon is next to the 'Region' label. The 'Measures' panel shows a list of measures for 'world_life_expectancy', including life_expectancy, gdp_per_capita, population, iso_cc, cdh_id, lat, and lng.

- In the Edit Hierarchy modal window, change Hierarchy Name, and click Update.

We changed the name of the hierarchy to Geography.



The hierarchy title Geography now appears in the list of dimensions, instead of Region.



- Click SAVE.

Changing the order of components in the hierarchy

Procedure

1. Click Edit Fields.
2. Click one of the components of the hierarchy, and move it up or down the list.

In this case, we moved country from third level to second level in a three-tier dimensional hierarchy Region.

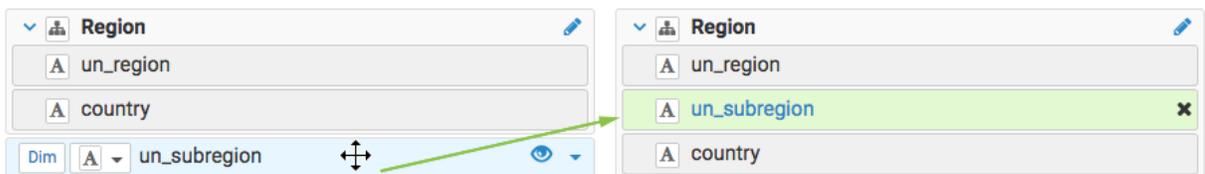


3. Click Save.

Adding levels to the hierarchy

Procedure

1. Click Edit Fields.
2. Pick a component to add to the hierarchy, such as un_subregion, click it, and drag into the desired position inside the hierarchy area.



3. Click Save.

Removing levels from the hierarchy

Procedure

1. Click Edit Fields.
2. Pick a component of the hierarchy to remove, and click its Remove icon.

In this case, we removed un_subregion from the dimensional hierarchy Region.



3. Click Save.

Deleting dimension hierarchies

About this task

To delete the hierarchy, you must make changes in the dataset Fields interface.

Procedure

1. Click Edit Fields.
2. In the list of Dimensions, find the hierarchy to delete, and click the Pencil icon next to it.

We are deleting the Region hierarchy.

The screenshot shows the Arcadia Data interface for the 'World Life Expectancy' dataset. The 'Fields' section is active, displaying two panels: 'Dimensions' and 'Measures'.

Dimensions Panel: Lists 12 dimensions under the 'world_life_expectancy' dataset. The 'Region' hierarchy is expanded and highlighted with a green box. It includes 'un_region', 'un_subregion', and 'country'. A pencil icon is visible next to the 'Region' header, indicating it is selected for editing.

Measures Panel: Lists 7 measures under the 'world_life_expectancy' dataset. The measures are: 'life_expectancy', 'gdp_per_capita', 'population', 'iso_cc', 'cdh_id', 'lat', and 'lng'.

The interface also includes a navigation bar at the top with 'HOME', 'VISUALS', and 'DATA' tabs, and a sidebar on the left with options like 'Dataset Detail', 'Related Visuals', 'Fields', 'Data Model', 'Events', 'Segments', and 'Filter Associations'.

- In the Edit Hierarchy modal window, click Delete Hierarchy.

Edit Hierarchy ✕

Hierarchy Name

Geography

To add fields, drag them onto the hierarchy element, largest to smallest.

Hierarchy Comment

Geographical Granularity

CANCEL

DELETE HIERARCHY

UPDATE

- Click Save.

The hierarchy no longer appears in the list of dimensions.

ARCADIA DATA
HOME VISUALS DATA
HELP admin

Dataset: World Life Expectancy NEW VISUAL

Fields UNDO REFRESH TITLE CASE SAVE Show Comments

Dimensions	Measures
<div style="border-bottom: 1px solid #ccc; padding: 2px;"> world_life_expectancy 11 </div> <div style="border-bottom: 1px solid #ccc; padding: 2px;"> Dim country </div> <div style="border-bottom: 1px solid #ccc; padding: 2px;"> Dim year </div> <div style="border-bottom: 1px solid #ccc; padding: 2px;"> Dim country_5 </div> <div style="border-bottom: 1px solid #ccc; padding: 2px;"> Dim alt_names </div> <div style="border-bottom: 1px solid #ccc; padding: 2px;"> Dim code2 </div> <div style="border-bottom: 1px solid #ccc; padding: 2px;"> Dim code3 </div> <div style="border-bottom: 1px solid #ccc; padding: 2px;"> Dim fips_code </div> <div style="border-bottom: 1px solid #ccc; padding: 2px;"> Dim fips_country_name </div> <div style="border-bottom: 1px solid #ccc; padding: 2px;"> Dim un_region </div> <div style="border-bottom: 1px solid #ccc; padding: 2px;"> Dim un_subregion </div> <div style="padding: 2px;"> Dim comments </div>	<div style="border-bottom: 1px solid #ccc; padding: 2px;"> world_life_expectancy 7 </div> <div style="border-bottom: 1px solid #ccc; padding: 2px;"> Mes life_expectancy </div> <div style="border-bottom: 1px solid #ccc; padding: 2px;"> Mes gdp_per_capita </div> <div style="border-bottom: 1px solid #ccc; padding: 2px;"> Mes population </div> <div style="border-bottom: 1px solid #ccc; padding: 2px;"> Mes iso_cc </div> <div style="border-bottom: 1px solid #ccc; padding: 2px;"> Mes cdh_id </div> <div style="border-bottom: 1px solid #ccc; padding: 2px;"> Mes lat </div> <div style="padding: 2px;"> Mes lng </div>

Hierarchy drill into support on the color shelf

About this task

You can use the hierarchy drill-down data discovery on the Colors shelf of the Lines, Bars, Areas, Grouped Bars and Scatter visuals. To use the drill-down, click the legend colors.



Note: You must create the hierarchy in advance, on the Dataset Field interface.