

Working with Dimension Hierarchies

Date published: 2020-10-30

Date modified: 2025-01-31



Legal Notice

© Cloudera Inc. 2025. All rights reserved.

The documentation is and contains Cloudera proprietary information protected by copyright and other intellectual property rights. No license under copyright or any other intellectual property right is granted herein.

Unless otherwise noted, scripts and sample code are licensed under the Apache License, Version 2.0.

Copyright information for Cloudera software may be found within the documentation accompanying each component in a particular release.

Cloudera software includes software from various open source or other third party projects, and may be released under the Apache Software License 2.0 (“ASLv2”), the Affero General Public License version 3 (AGPLv3), or other license terms. Other software included may be released under the terms of alternative open source licenses. Please review the license and notice files accompanying the software for additional licensing information.

Please visit the Cloudera software product page for more information on Cloudera software. For more information on Cloudera support services, please visit either the Support or Sales page. Feel free to contact us directly to discuss your specific needs.

Cloudera reserves the right to change any products at any time, and without notice. Cloudera assumes no responsibility nor liability arising from the use of products, except as expressly agreed to in writing by Cloudera.

Cloudera, Cloudera Altus, HUE, Impala, Cloudera Impala, and other Cloudera marks are registered or unregistered trademarks in the United States and other countries. All other trademarks are the property of their respective owners.

Disclaimer: EXCEPT AS EXPRESSLY PROVIDED IN A WRITTEN AGREEMENT WITH CLOUDERA, CLOUDERA DOES NOT MAKE NOR GIVE ANY REPRESENTATION, WARRANTY, NOR COVENANT OF ANY KIND, WHETHER EXPRESS OR IMPLIED, IN CONNECTION WITH CLOUDERA TECHNOLOGY OR RELATED SUPPORT PROVIDED IN CONNECTION THEREWITH. CLOUDERA DOES NOT WARRANT THAT CLOUDERA PRODUCTS NOR SOFTWARE WILL OPERATE UNINTERRUPTED NOR THAT IT WILL BE FREE FROM DEFECTS NOR ERRORS, THAT IT WILL PROTECT YOUR DATA FROM LOSS, CORRUPTION NOR UNAVAILABILITY, NOR THAT IT WILL MEET ALL OF CUSTOMER’S BUSINESS REQUIREMENTS. WITHOUT LIMITING THE FOREGOING, AND TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, CLOUDERA EXPRESSLY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY, QUALITY, NON-INFRINGEMENT, TITLE, AND FITNESS FOR A PARTICULAR PURPOSE AND ANY REPRESENTATION, WARRANTY, OR COVENANT BASED ON COURSE OF DEALING OR USAGE IN TRADE.

Contents

Creating new dimension hierarchies.....	4
Changing the name of the hierarchy.....	8
Changing the order of components in the hierarchy.....	8
Adding levels to the hierarchy.....	9
Removing levels from the hierarchy.....	9
Deleting dimension hierarchies.....	9
Hierarchy drill into support on the color shelf.....	10

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]. In this example the dimensions un_region, un_subregion, and country are used to define a dimensional hierarchy called Region.

Procedure

1. On the main navigation bar, click DATA.

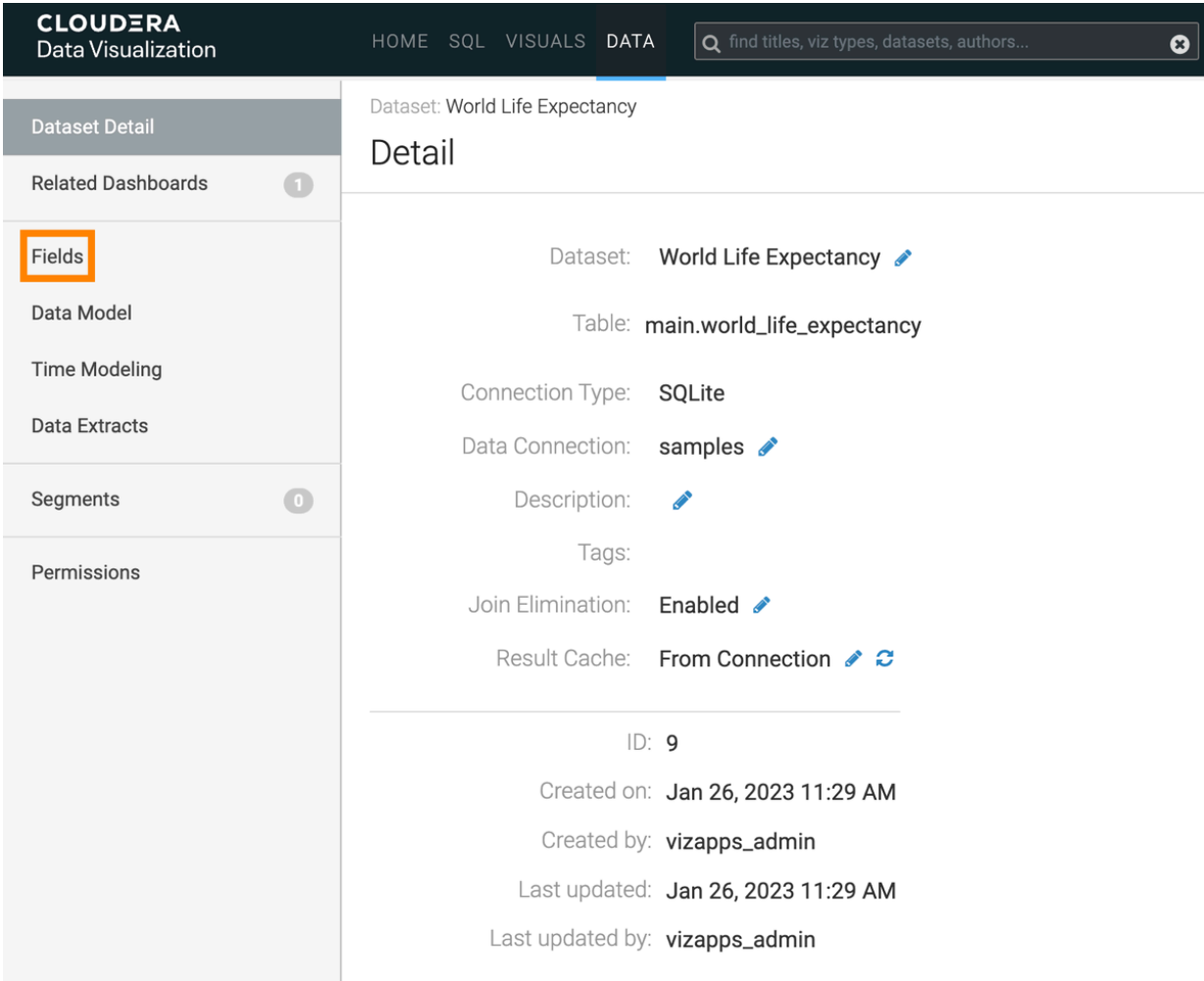
The Data view appears open on the Datasets tab.

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

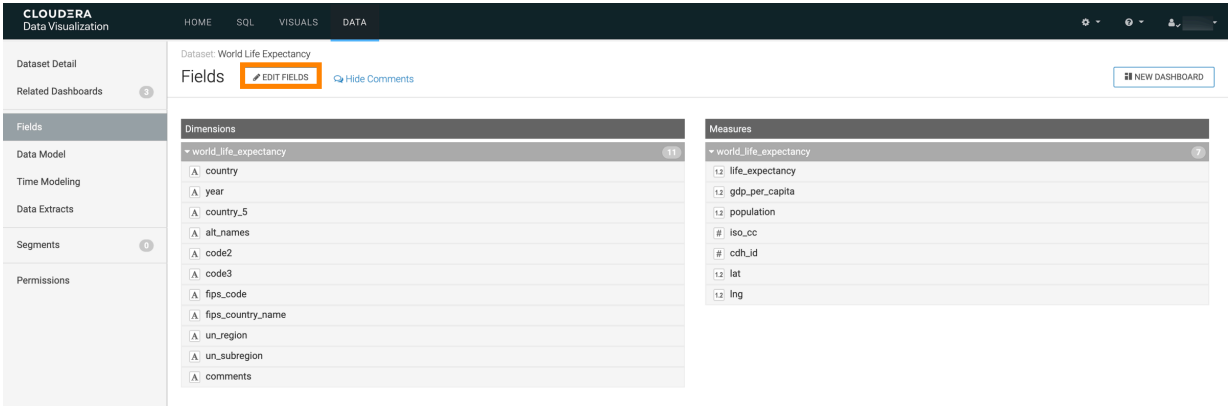
The screenshot shows the Cloudera Data Visualization interface. The top navigation bar includes 'HOME', 'VISUALS', and 'DATA'. A search bar on the right contains 'World Life Expectancy'. The left sidebar shows 'All Connections' with 'Postgres' and 'samples' listed. The main area displays 'NEW DATASET', 'ADD DATA', and a 'Datasets' list with 15 items. The 'World Life Expectancy' dataset is highlighted with an orange box. Below it, the table structure is visible with columns 'Title/Table' and 'Created'.

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

4. In the Dataset Detail menu, select Fields.

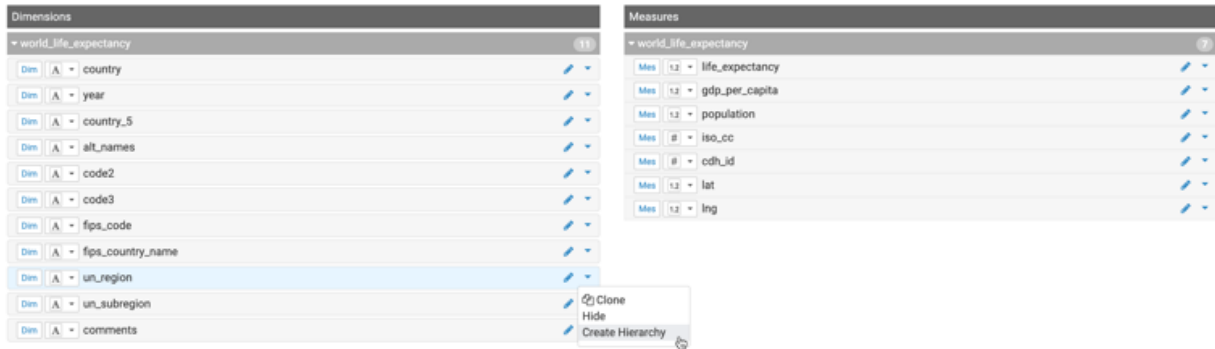


5. In the Fields interface, select Edit fields.



6. 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.

The example shows a hierarchy named Region, described as Geographical Granularity.

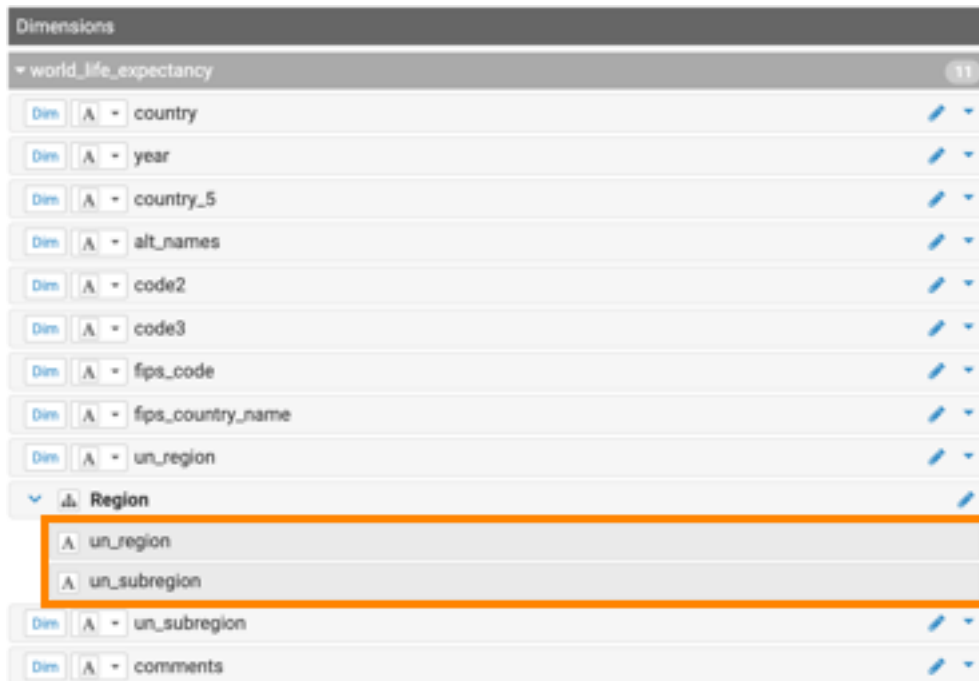
The 'Create Hierarchy' modal window is shown. It has a title bar with a close button. Below the title, there are two input fields: 'Hierarchy Name' with the value 'Region' and 'Hierarchy Comment' with the value 'Geographical Granularity'. Below these fields is a note: 'To add fields, drag them onto the hierarchy element, largest to smallest.' At the bottom, there are three buttons: 'CANCEL', 'DELETE HIERARCHY', and 'CREATE'.

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



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

Below un_region, un_subregion was added.



Below un_subregion, country was added.



11. Click SAVE.

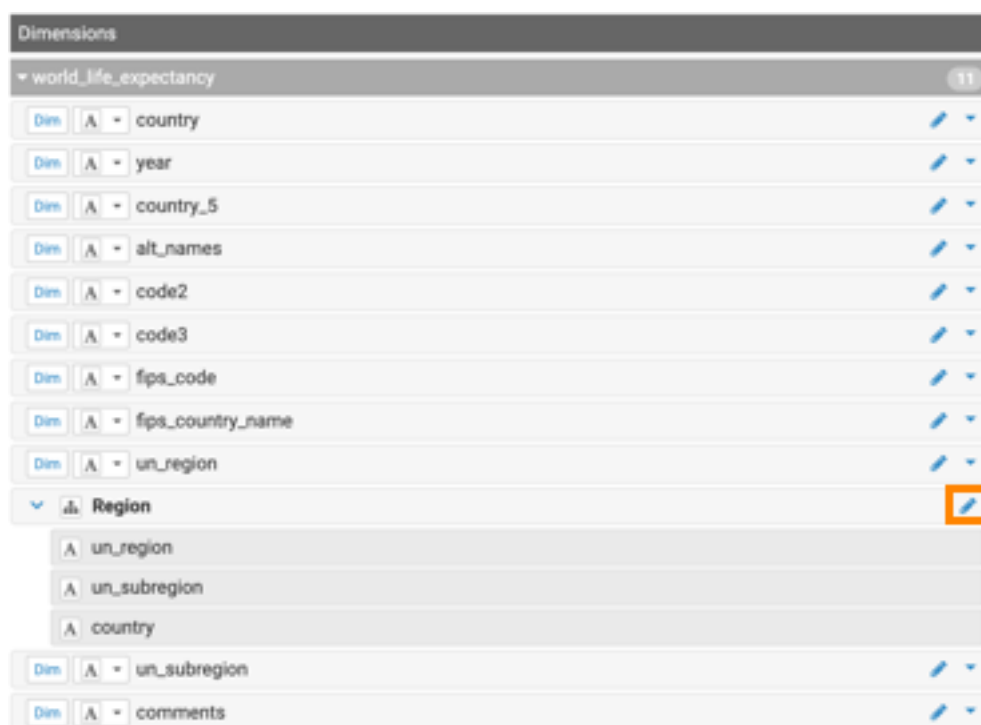
Results

Defined dimension hierarchies, such as Region 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.



3. In the Edit Hierarchy modal window, change Hierarchy Name.
4. Click Update.
The hierarchy title Geography now appears in the list of dimensions, instead of Region.
5. 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.
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.
3. Click Save.

Deleting dimension hierarchies

About this task

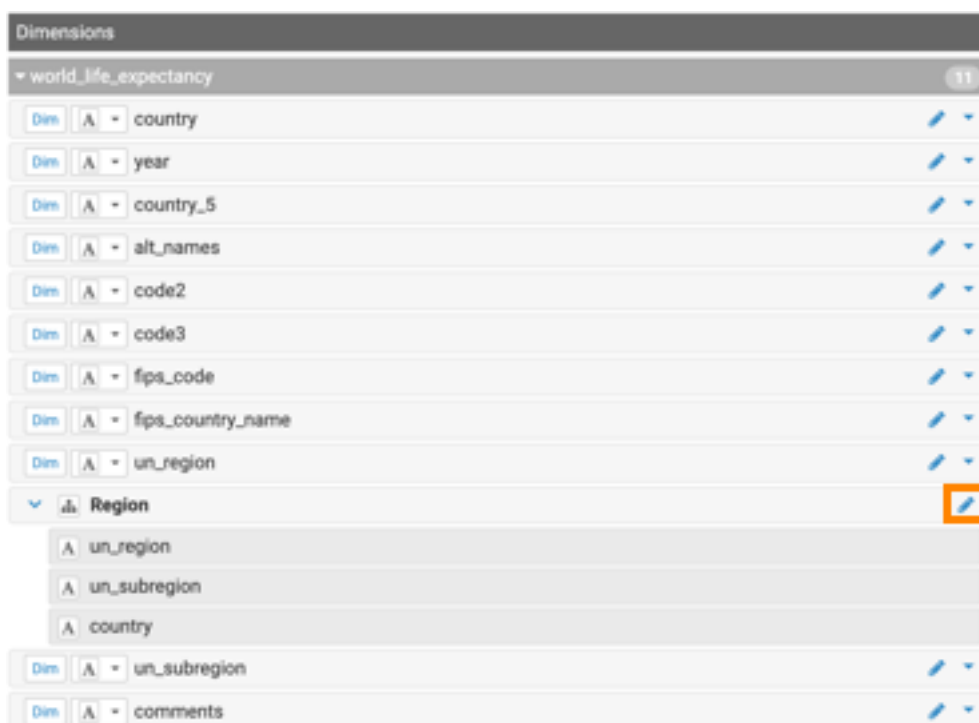
To delete the hierarchy, you must make changes in the dataset Fields interface.

Procedure

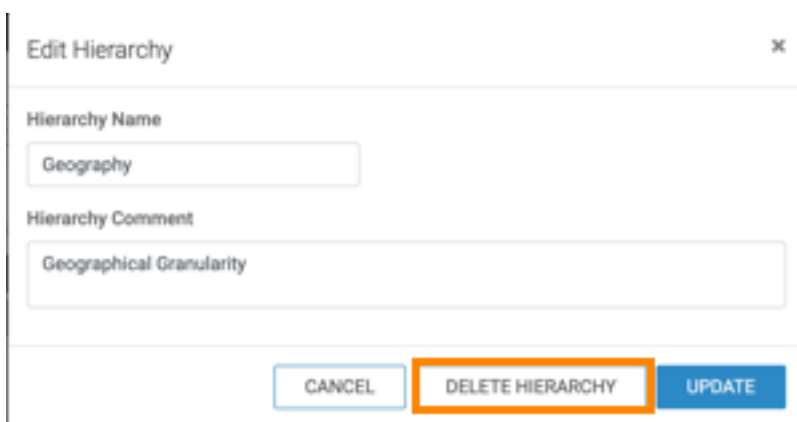
1. Click Edit Fields.

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

We are deleting the Region hierarchy.



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



- Click Save.

The hierarchy no longer appears in the list of dimensions.

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.