



# Go Code Colorado

## PowerBI for GoCode Colorado

**Last Updated:** April 20, 2018

[Power BI](#) is a business intelligence app from Microsoft that allows for complex visualization of data. Utilizing a couple built in features on the Colorado Information Marketplace, it's simple to harness the power of Power BI. This brief walkthrough will give you a starting point for creating visualizations. For more tutorials, navigate to Microsoft's [Power BI Guided Learning](#).

For this walkthrough we are going to create a table and graph visualization to display the “highest average annual wage by occupation in Colorado by Metropolitan Statistical Areas and selected regions” using the [Employment Wages in Colorado](#) dataset.

# Employment Wages in Colorado

Labor & Employment

View Data

Visualize ▾

Export

API

...

Employment wages by industry, year, and area, from Colorado Department of Labor and Employment (CDLE), since 2009

Updated  
April 10, 2018



Data Provided by  
CDLE - Colorado Department of Labor & Employment

## Featured Content Using this Data

Choose to promote up to 3 Socrata assets that use this data, or choose to feature any relevant external resources. If left blank this section will be invisible.

Manage Featured Content

## About this Dataset

Edit Dataset Metadata

Watch this Dataset



Updated  
**April 10, 2018**

Data Last Updated  
March 16, 2018

Metadata Last Updated  
April 10, 2018

Date Created  
May 15, 2014

Views  
**1,267**

Downloads  
**362**

### Contributing Agency Information

Agency Data Series Page [https://www.bls.gov/oes/current/oes\\_co.htm](https://www.bls.gov/oes/current/oes_co.htm)

Citation CDLE - Colorado Department of Labor & Employment

Agency Program Page <https://www.colorado.gov/cdle>

### Dataset Coverage

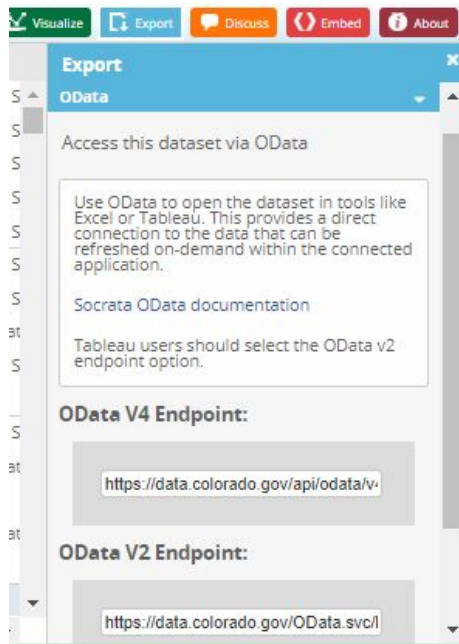
Geographic Coverage State

Unit of Analysis Tabular

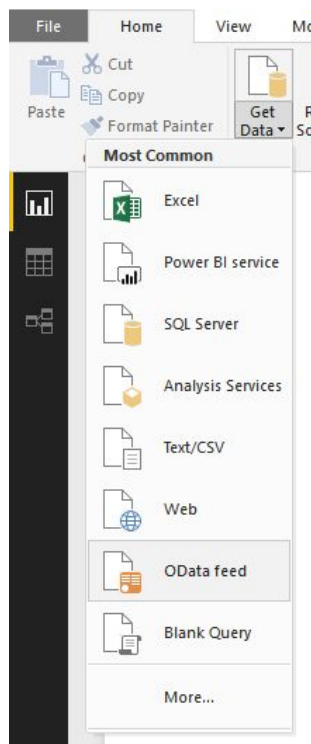
## Walkthrough on Creating Query for Highest Average Annual Wage by Occupation

1. Open dataset and View Data on CIM

## 2. Export OData Feed



## 3. Get Data > OData Feed



## 4. Enter OData v2 URL in the Basic URL field

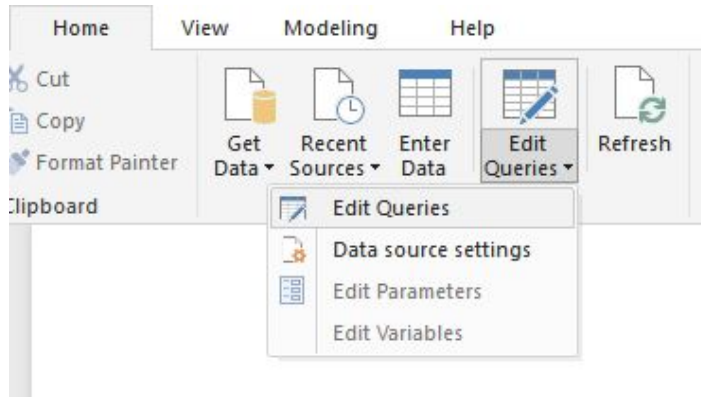
## 5. Once OData feed is established, click Load to load the data

## 6. Build SOQL query. For this example:

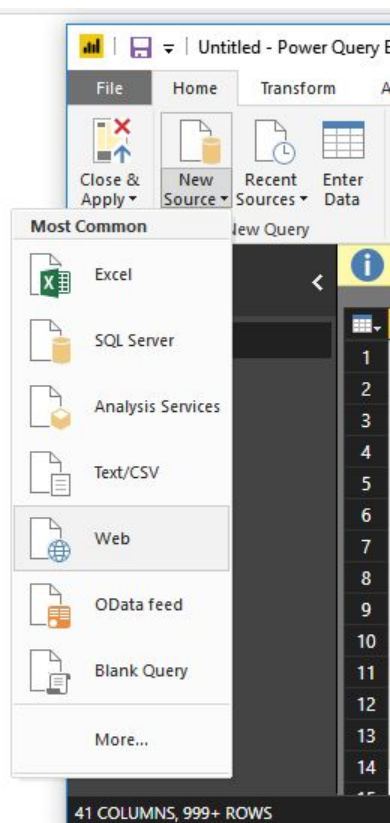
[https://data.colorado.gov/resource/vu7j-izta.json?\\$query=SELECT%20MAX\(mean\),%20](https://data.colorado.gov/resource/vu7j-izta.json?$query=SELECT%20MAX(mean),%20)

[areaname,%20periodyear%20WHERE%20codetitle%20!=%20%27Total%20All%20occupationsANDratetype%20=4%27%20GROUP%20BY%20areaname,%20periodyear](#)

- a. SELECT MAX (mean) areaname, periodyear, codetitle = occupations AND ratetype = 4
  - b. Select the max average salary, the area name, and the period where codetitle does not equal “Total All Occupations” and ratetype = 4 (annual wage or salary).
  - c. Group by area name and period
7. Select Edit Queries from the Ribbon to open the Power Query Editor

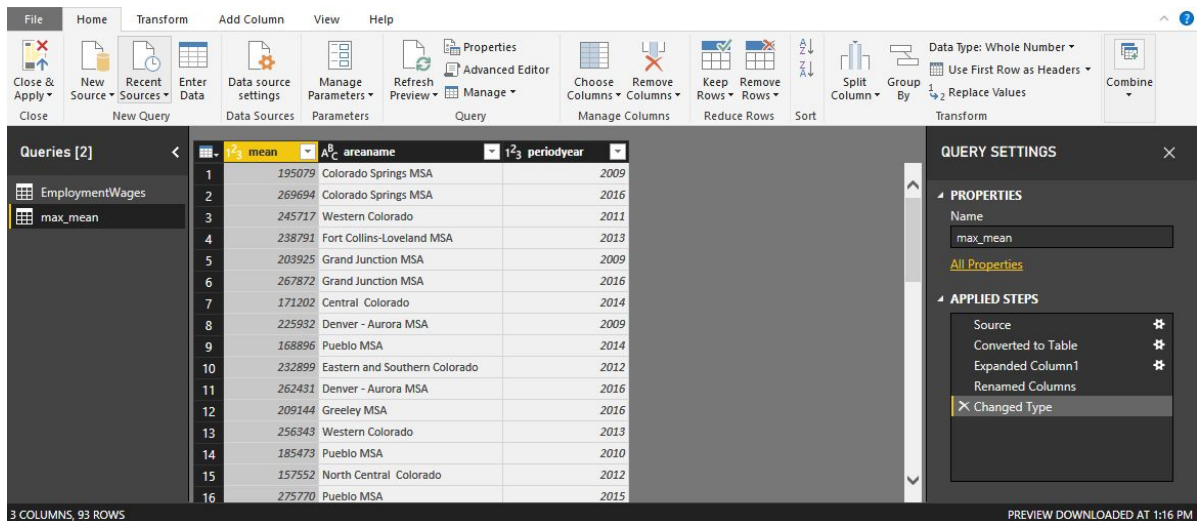


8. In the Power Query Editor window, select New Source, From Web, and enter the SOQL query (above) in the Basic URL field

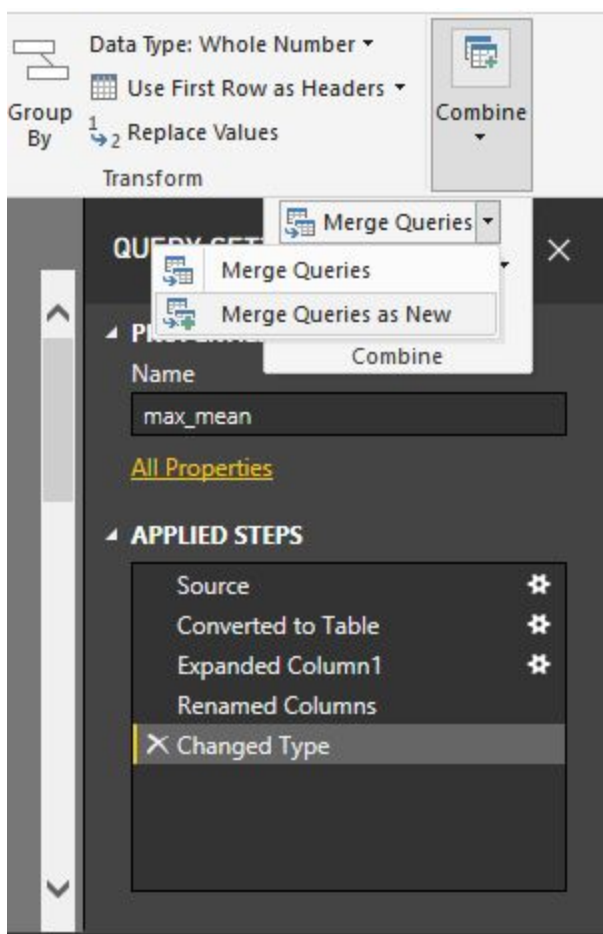


9. In the new query, right click list and select “To Table” and click OK

10. Click the expand icon and press OK to show the data from the query
11. Rename the columns to match the original data and change the column types to the appropriate type by right clicking the header and selecting "Change Type"



12. In the upper right corner of the Power Query Editor, select Combine > Dropdown next to Merge Queries > Select Merge Queries as New



13. Select all three headers by CTRL+clicking the headers for the SOQL query, on the bottom dropdown, select the OData Feed and, in order, click the first header to match the SOQL query, then CTRL+click the remaining headers
14. Check the box in the Privacy levels pop-up to continue

Merge ×

Select tables and matching columns to create a merged table.

max\_mean

mean 1 areaname 2 periodyear 3

Privacy levels

The privacy level is used to ensure data is combined without undesirable data transfer. Incorrect privacy levels may lead to sensitive data being leaked outside of a trusted scope. More information on privacy levels can be found [here](#).

☒ Ignore Privacy Levels checks for this file. Ignoring Privacy Levels could expose sensitive or confidential data to an unauthorized person.

[https://data.colorado.gov/](#)

[https://data.colorado.gov/](#)

Save Cancel

Join Kind

Left Outer (all from first, matching from second)

Estimating matches based on data previews

OK Cancel

15. Select Inner Join to join only matching rows and select OK to complete the Merge

Merge ×

Select tables and matching columns to create a merged table.

max\_mean

mean	1	areaname	2	periodyear	3
195079		Colorado Springs MSA		2009	
269694		Colorado Springs MSA		2016	
245717		Western Colorado		2011	
238791		Fort Collins-Loveland MSA		2013	
203925		Grand Junction MSA		2009	

EmploymentWages

statename	stfips	areaname	2	areatype	areatynome	area	periodyear	3	period
Colorado	8	Denver - Aurora MSA		21	Metropolitan Statistical Area	19740	2013		
Colorado	8	Colorado Springs MSA		21	Metropolitan Statistical Area	17820	2016		
Colorado	8	Boulder-Longmont MSA		21	Metropolitan Statistical Area	14500	2012		
Colorado	8	Denver - Aurora MSA		21	Metropolitan Statistical Area	19740	2013		
Colorado	8	Boulder-Longmont MSA		21	Metropolitan Statistical Area	14500	2014		

Join Kind

Inner (only matching rows)

Estimating matches based on data previews

OK Cancel



16. Click the expand icon for the new merged query and select the desired field (in this case, codetitle)

17. You may then click Close & Apply in the top left and begin creating visualizations based on the final\_answer

18. To create a table and graph visualization, add a Table and add a Clustered Graph

19. For the graph, axis = areaname or code title (depending on how the data should be displayed), legend = periodyear, value = Max of Mean

areaname	periodyear	codetitle	mean
Boulder-Longmont MSA	2012	Chief Executives	211606
Boulder-Longmont MSA	2010	Family and General Practitioners	209414
Boulder-Longmont MSA	2009	Family and General Practitioners	220198
Boulder-Longmont MSA	2011	Obstetricians and Gynecologists	240484
Boulder-Longmont MSA	2013	Physicians and Surgeons, All Other	221530
Boulder-Longmont MSA	2014	Physicians and Surgeons, All Other	261612
Boulder-Longmont MSA	2015	Physicians and Surgeons, All Other	277975
Boulder-Longmont MSA	2016	Psychiatrists	292444
Central Colorado	2010	Family and General Practitioners	150093
Central Colorado	2014	Family and General Practitioners	171202
Central Colorado	2009	Physicians and Surgeons, All Other	178932
Central Colorado	2011	Physicians and Surgeons, All Other	205136
Central Colorado	2013	Physicians and Surgeons, All Other	222890
Central Colorado	2012	Physicians and Surgeons, All Other	225606
Colorado	2011	Anesthesiologists	245008
Colorado	2010	Anesthesiologists	247042
Colorado	2015	Anesthesiologists	266712
Colorado	2016	Anesthesiologists	272764
Colorado	2014	Orthodontists	239286
Colorado	2009	Surgeons	226406
Colorado	2012	Surgeons	226972
Colorado	2013	Surgeons	227383
Colorado Springs MSA	2009	Family and General Practitioners	195079
Colorado Springs MSA	2012	Physicians and Surgeons, All Other	196874
Colorado Springs MSA	2013	Surgeons	224531
Colorado Springs MSA	2014	Surgeons	235531
Colorado Springs MSA	2010	Surgeons	247628
Colorado Springs MSA	2011	Surgeons	254471
Total	187160		

