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Managing Filter Shelves

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Selecting discrete values on filter shelves

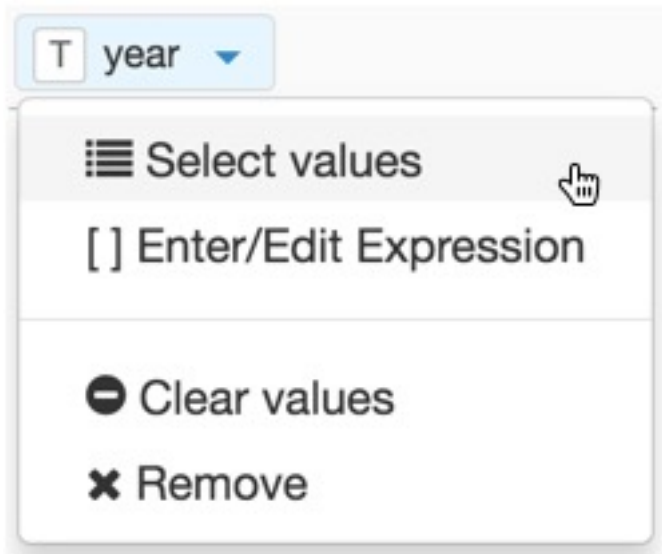
About this task

It is very simple to select discrete values on the filter shelf for all data types: numerical, string, date, and so on.

For selecting discrete numbers in a filter, let's use the example from building *Cross tabulation*, where we specify several discrete years of the dataset World Life Expectancy.

Procedure

1. On the Filters shelf, click Down Arrow on the year field placed there earlier, then click Select values.



2. In the Filter for year modal window, under the Values tab, select 1900, 1910, 1920, 1930, 1940, 1950, 1960, 1970, 1970, 1980, 1990, 2000, and 2010.

3. Click Apply.

Filter for year ×

Values Range

Exclude these values

1900
 1901
 1902
 1903
 1904
 1905
 1906
 1907
 1908
 1909
 1910
 1911
 1912
 1913

4. After clicking Refresh Visual, the cross tabulation visual appears. Note the years we specified in the previous step.

| | country | | | | | | |
|------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-----------------------|
| | Angola | Cameroon | Chad | Congo | Equatorial Guinea | Gabon | Sao Tome and Principe |
| year | avg(life_expectancy) | avg(life_expectancy) | avg(life_expectancy) | avg(life_expectancy) | avg(life_expectancy) | avg(life_expectancy) | avg(life_expectancy) |
| 1900 | 27.00 | 28.80 | 30.90 | 31.60 | 29.80 | 30.60 | 31.00 |
| 1910 | 27.00 | 28.80 | 30.90 | 31.60 | 29.80 | 30.60 | 31.00 |
| 1920 | 27.00 | 28.80 | 30.90 | 31.60 | 29.80 | 30.60 | 31.00 |
| 1930 | 27.00 | 28.80 | 30.90 | 31.60 | 29.80 | 30.60 | 31.00 |
| 1940 | 27.00 | 28.80 | 30.90 | 31.60 | 29.80 | 30.60 | 35.80 |
| 1950 | 29.20 | 37.90 | 35.60 | 38.30 | 33.90 | 36.00 | 45.50 |
| 1960 | 33.00 | 41.50 | 38.00 | 41.10 | 36.70 | 39.60 | 50.40 |
| 1970 | 37.00 | 46.10 | 41.30 | 43.90 | 39.80 | 46.70 | 55.90 |
| 1980 | 40.20 | 51.20 | 44.70 | 46.10 | 43.00 | 54.90 | 60.60 |
| 1990 | 41.20 | 53.60 | 46.40 | 47.50 | 46.50 | 61.40 | 61.80 |
| 2000 | 45.20 | 52.00 | 46.70 | 46.40 | 47.70 | 59.70 | 63.30 |
| 2010 | 50.70 | 53.70 | 49.80 | 49.00 | 51.50 | 62.30 | 65.90 |

Alternatively, with a numerical data, we can specify a [Selecting a range of number values on filter shelves](#) on page 6. We can also choose the desired combination of filters by specifying an [Selecting values by using an expression on filter shelves](#) on page 16.

Related Information

[Cross tabulation](#)

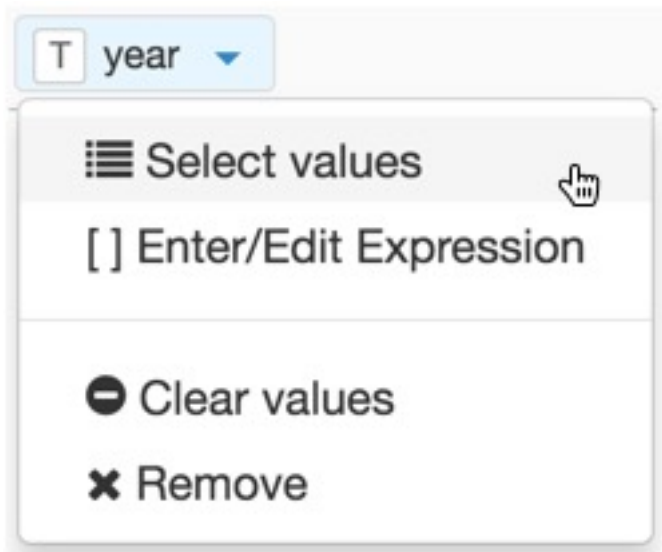
Selecting a range of number values on filter shelves

About this task

For selecting a range of numerical values in a filter shelf, let's use the example from building *Cross tabulation*, where we specify several discrete years of the dataset World Life Expectancy.

Procedure

1. On the Filters shelf, click Down Arrow on the year field placed there earlier, then click Select values.



2. In the Filter for year modal window, click the Range tab, and then slide the range upper and lower values to select the range of values used by the visual.

By default, the lowest value of the range is at the extreme left of the slide control (set to \geq), and the highest value is on the extreme right (set to \leq). You can change the end-point specifications of the range.

The valid operators for the bottom of the range are:

- Greater than or equal to (\geq)
- Greater than ($>$)
- Equal to ($=$)
- Not equal to (\neq)
- Do not use minimum range

The valid operators for the top of the range are:

- Less than or equal to (\leq)
- Less than ($<$)
- Do not use maximum range

Filter for year ×

Values Range

Pick a range of values below

1995 2010

Greater than or equal to (\geq)
✓ Greater than ($>$)
Equal to ($=$)
Not equal to (\neq)
Do not use minimum range

Less than or equal to (\leq) ↕

Cancel Apply

3. After clicking Refresh Visual, the cross tabulation visual appears. Note the years we specified in the previous step.

| | country | | | | | | |
|------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-----------------------|
| | Angola | Cameroon | Chad | Congo | Equatorial Guinea | Gabon | Sao Tome and Principe |
| year | avg(life_expectancy) | avg(life_expectancy) | avg(life_expectancy) | avg(life_expectancy) | avg(life_expectancy) | avg(life_expectancy) | avg(life_expectancy) |
| 1996 | 42.50 | 53.00 | 46.50 | 46.20 | 47.70 | 60.90 | 62.80 |
| 1997 | 43.10 | 52.80 | 46.50 | 46.10 | 47.70 | 60.70 | 62.90 |
| 1998 | 43.70 | 52.50 | 46.60 | 46.00 | 47.70 | 60.30 | 63.00 |
| 1999 | 44.50 | 52.20 | 46.60 | 46.10 | 47.70 | 60.00 | 63.20 |
| 2000 | 45.20 | 52.00 | 46.70 | 46.40 | 47.70 | 59.70 | 63.30 |
| 2001 | 46.00 | 51.80 | 46.80 | 46.70 | 47.80 | 59.60 | 63.50 |
| 2002 | 46.70 | 51.70 | 47.00 | 47.10 | 47.90 | 59.50 | 63.80 |
| 2003 | 47.40 | 51.70 | 47.10 | 47.40 | 48.10 | 59.50 | 64.00 |
| 2004 | 48.00 | 51.70 | 47.40 | 47.60 | 48.40 | 59.70 | 64.30 |
| 2005 | 48.60 | 51.90 | 47.70 | 47.90 | 48.80 | 60.10 | 64.60 |
| 2006 | 49.00 | 52.20 | 48.10 | 48.00 | 49.30 | 60.50 | 65.00 |
| 2007 | 49.50 | 52.50 | 48.50 | 48.20 | 49.80 | 60.90 | 65.30 |
| 2008 | 49.90 | 52.90 | 48.90 | 48.50 | 50.30 | 61.40 | 65.50 |
| 2009 | 50.30 | 53.30 | 49.30 | 48.70 | 50.90 | 61.90 | 65.70 |
| 2010 | 50.70 | 53.70 | 49.80 | 49.00 | 51.50 | 62.30 | 65.90 |

Related Information

[Cross tabulation](#)

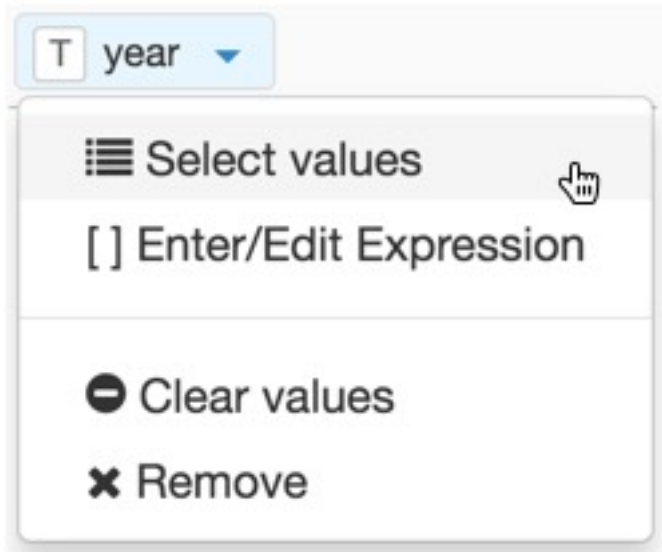
Selecting a string pattern for values on filter shelves

About this task

For selecting a range of numerical values in a filter shelf, let's use the example from building *Cross tabulation*, where we specify several discrete years of the dataset World Life Expectancy.

Procedure

1. On the Filters shelf, click Down Arrow on the year field placed there earlier, then click Select values.

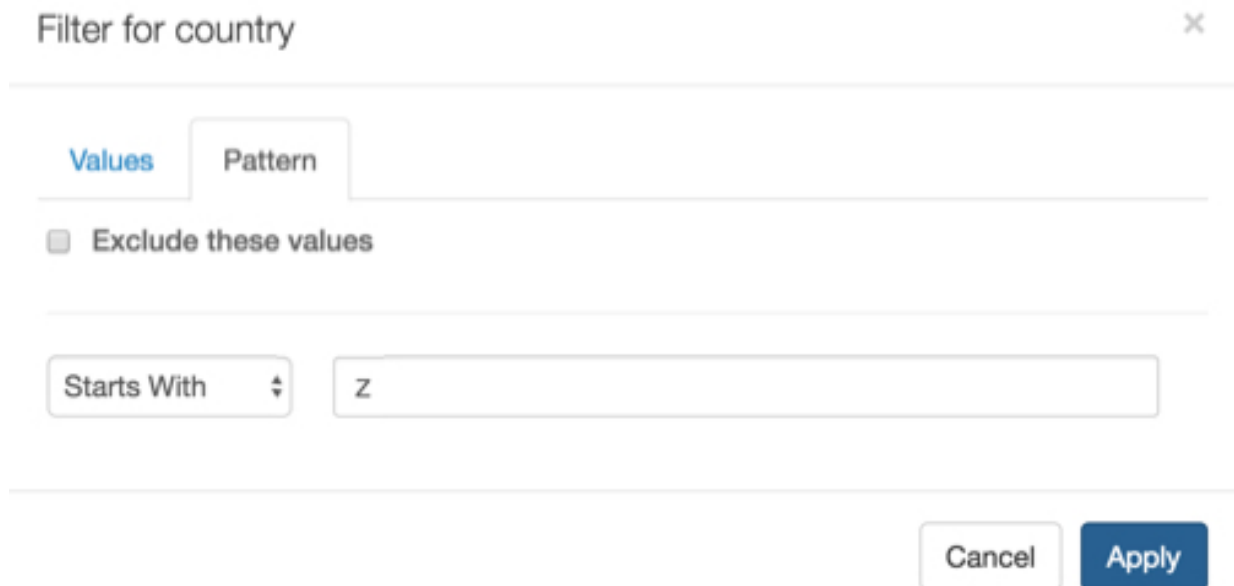


2. In the Filter for country modal window, click the Pattern tab, and then enter the necessary information.

The patterns can be matched in the following manner:

- Starts With
- Ends With
- Contains

3. To select all countries that start with Z, select Starts With, enter Z in the text box, and click Apply.

A screenshot of a modal window titled 'Filter for country' with a close button (x) in the top right corner. The window has two tabs: 'Values' (selected) and 'Pattern'. Below the tabs, there is a checkbox labeled 'Exclude these values' which is currently unchecked. Underneath, there is a dropdown menu set to 'Starts With' and a text input field containing the letter 'Z'. At the bottom right of the modal, there are two buttons: 'Cancel' and 'Apply'.

- After clicking Refresh Visual, the cross tabulation visual appears. Note that only two countries, Zambia and Zimbabwe, match the filter conditions.

| | country | |
|------|----------------------|----------------------|
| | Zambia | Zimbabwe |
| year | avg(life_expectancy) | avg(life_expectancy) |
| 2001 | 42.50 | 43.30 |
| 2002 | 43.50 | 43.00 |
| 2003 | 44.50 | 42.90 |
| 2004 | 45.80 | 43.20 |
| 2005 | 47.20 | 44.00 |
| 2006 | 48.60 | 45.20 |
| 2007 | 50.10 | 46.80 |
| 2008 | 51.60 | 48.90 |
| 2009 | 53.10 | 51.20 |
| 2010 | 54.50 | 53.70 |

- To select all countries that end with 'stan', select Ends With, enter stan in the text box, and click Apply.

| | country | | | | | | |
|------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| | Afghanistan | Kazakhstan | Kyrgyzstan | Pakistan | Tajikistan | Turkmenistan | Uzbekistan |
| year | avg(life_expectancy) | avg(life_expectancy) | avg(life_expectancy) | avg(life_expectancy) | avg(life_expectancy) | avg(life_expectancy) | avg(life_expectancy) |
| 2001 | 55.30 | 63.80 | 66.30 | 64.10 | 63.90 | 64.00 | 67.10 |
| 2002 | 55.70 | 64.20 | 66.50 | 64.40 | 64.30 | 64.20 | 67.20 |
| 2003 | 56.10 | 64.60 | 66.50 | 64.70 | 64.70 | 64.30 | 67.20 |
| 2004 | 56.60 | 64.90 | 66.60 | 64.90 | 65.10 | 64.30 | 67.30 |
| 2005 | 57.10 | 65.20 | 66.60 | 65.20 | 65.40 | 64.40 | 67.40 |
| 2006 | 57.60 | 65.40 | 66.70 | 65.40 | 65.80 | 64.50 | 67.50 |
| 2007 | 58.10 | 65.60 | 66.70 | 65.60 | 66.10 | 64.60 | 67.50 |
| 2008 | 58.60 | 65.80 | 66.80 | 65.80 | 66.40 | 64.70 | 67.60 |
| 2009 | 59.10 | 66.00 | 66.90 | 65.90 | 66.60 | 64.90 | 67.80 |
| 2010 | 59.60 | 66.10 | 67.10 | 66.10 | 66.80 | 65.00 | 67.90 |

Related Information

[Cross tabulation](#)

Selecting a range of dates on filter shelves

About this task

For selecting a range of dates in a filter shelf, let's use a visual built in *Creating joins*.

Procedure

1. Create a new field `crs_dep_timestamp` directly on the dataset.

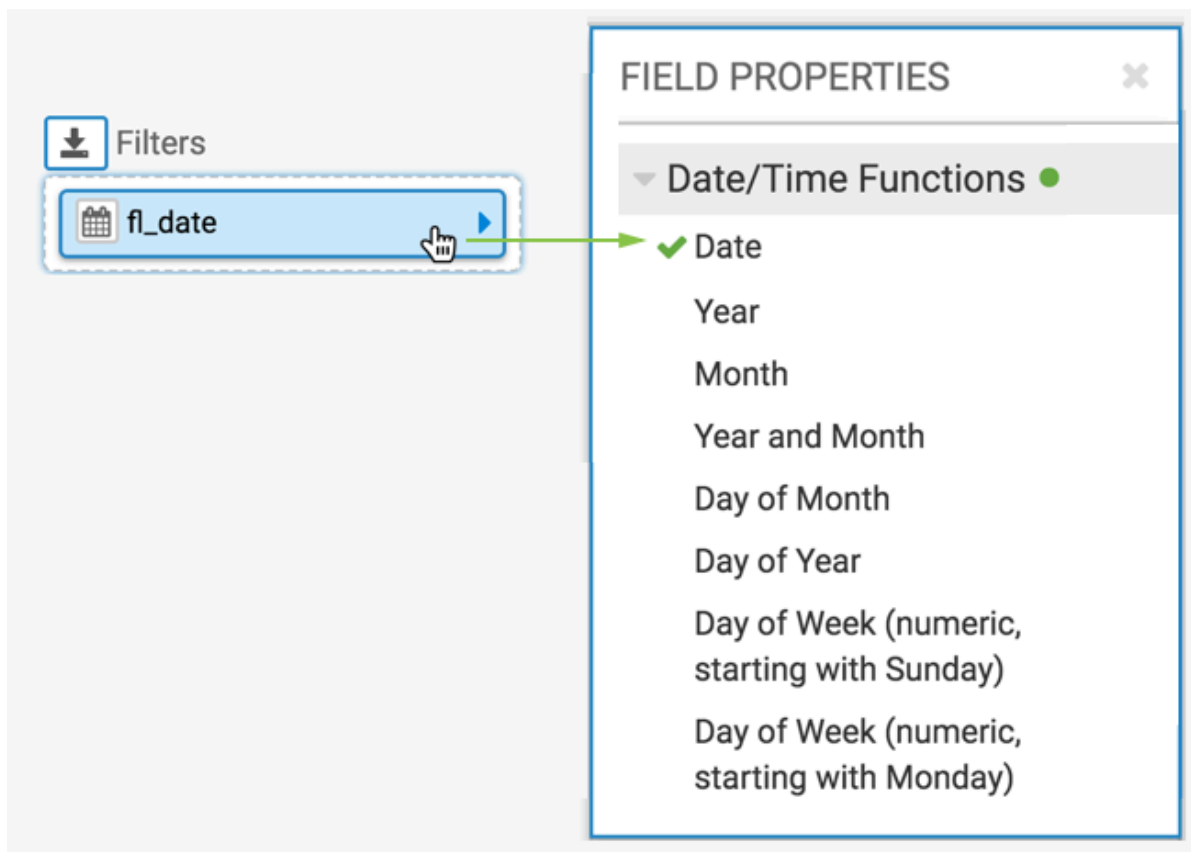
It combines the `fl_date` and `crs_dep_time` data into a new timestamp field that has the following definition:

```
concat(substr(cast([fl_date] as string),1,11),
if(length(cast([crs_dep_time] as string))=3,
concat('0',substr(cast([crs_dep_time] as string),1
,1),' : ',
substr(cast([crs_dep_time] as string),2,2),' :00'),
concat(' ',substr(cast([crs_dep_time] as string)
,1,2),' : ',
substr(cast([crs_dep_time] as string),3,2),' :00')
))
```

2. Create a new cross tabulation visual on the dataset Flight Delays with the following configuration:

- On the X shelf, add the dimension `unique_carrier`. Alias the field as `Airline`.
- On the Y shelf, add the dimension `fl_date`.

Click the field name, and under the Field Properties, change the Date/Time Functions to `Date`.

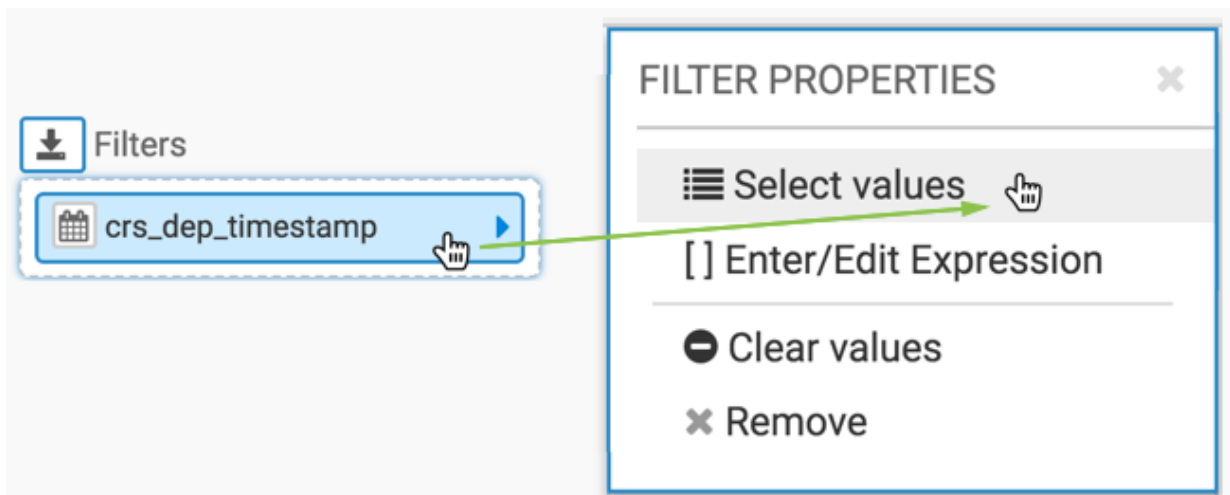


- On the Measures shelf, add the measure `dep_delay`, and ensure that it uses the `avg(dep_delay)` aggregate. Alias the field as `Delay`.
- On the Filters shelf, add `crs_dep_timestamp`.

- Click Refresh Visual. Note that all the date values in the dataset, starting with 2015-01-01 and ending with 2015-02-28.

| | Airline | | | | | | | | | | | | | |
|------------|---------|--------|-------|-------|-------|-------|--------|-------|-------|-------|-------|-------|--------|-------|
| | AA | AS | B6 | DL | EV | F9 | HA | MQ | NK | OO | UA | US | VX | WN |
| Date | Delay | Delay | Delay | Delay | Delay | Delay | Delay | Delay | Delay | Delay | Delay | Delay | Delay | Delay |
| 2015-01-01 | 18.0 | 1.21 | 5.62 | 3.42 | 5.48 | 14.7 | 4.22 | 13.9 | 9.95 | 13.0 | 14.9 | 3.60 | 1.56 | 10.5 |
| 2015-01-02 | 21.4 | 8.04 | 2.08 | 6.30 | 6.99 | 16.6 | 22.1 | 18.5 | 15.5 | 14.3 | 18.2 | 3.10 | 5.38 | 16.5 |
| 2015-01-03 | 29.9 | 9.12 | 20.6 | 14.3 | 32.1 | 52.4 | 22.3 | 34.3 | 30.9 | 25.4 | 29.1 | 15.3 | 6.31 | 27.6 |
| 2015-01-04 | 36.1 | 10.9 | 34.4 | 21.3 | 37.6 | 65.3 | 1.58 | 56.3 | 36.7 | 31.2 | 38.4 | 17.0 | 16.8 | 31.6 |
| 2015-01-05 | 25.6 | 6.35 | 21.1 | 6.99 | 29.5 | 31.9 | 6.02 | 49.1 | 47.0 | 26.4 | 23.6 | 7.13 | 7.40 | 18.7 |
| 2015-01-06 | 16.0 | 8 | 33.4 | 13.6 | 21.8 | 26.1 | -1.59 | 35.3 | 30.7 | 15.8 | 25.5 | 26.1 | 11.4 | 29.0 |
| 2015-01-07 | 14.3 | 5.76 | 15.7 | 6.01 | 14.5 | 35.2 | -1.81 | 32.0 | 23.7 | 16.3 | 25.7 | 6.42 | 8.62 | 12.9 |
| 2015-01-08 | 17.9 | 5.10 | 6.73 | 11.5 | 19.8 | 18.1 | 1.55 | 33.1 | 17.5 | 20.7 | 29.9 | 8.71 | 1.89 | 13.9 |
| 2015-01-09 | 14.1 | 0.289 | 27.8 | 11.8 | 17.1 | 33.4 | 2.63 | 28.2 | 20.2 | 22.8 | 28.6 | 5.79 | 7.38 | 7.60 |
| 2015-01-10 | 12.8 | -1.79 | 7.32 | 4.49 | 5.98 | 19.9 | -0.592 | 12.3 | 12.7 | 11.1 | 16.4 | 3.84 | 0.642 | 6.97 |
| 2015-01-11 | 15.3 | 8.38 | 7.89 | 4.63 | 11.4 | 20.1 | 2.37 | 21.8 | 10.9 | 17.7 | 18.1 | 6.99 | 23.0 | 18.8 |
| 2015-01-12 | 11.1 | 3.20 | 13.2 | 27.8 | 25.4 | 21.7 | -2.71 | 31.0 | 33.2 | 22.5 | 19.7 | 9.73 | 18.6 | 16.8 |
| 2015-01-13 | 5.83 | -0.420 | 0.405 | 3.93 | 4.55 | 3.34 | 1.12 | 22.3 | 7.18 | 16.4 | 6.78 | 2.57 | -0.669 | 4.91 |
| 2015-02-18 | 7.02 | -0.651 | 15.4 | 11.7 | 14.1 | 2.12 | 1.79 | 17.1 | 14.0 | 10.2 | 9.11 | 8.54 | 5.31 | 9.02 |
| 2015-02-19 | 4.98 | 3.02 | 19.7 | 11.2 | 9.85 | 26.1 | 2.34 | 19.3 | 12.8 | 12.2 | 15.5 | 9.62 | 11.7 | 11.1 |
| 2015-02-20 | 7.48 | 5.41 | 15.8 | 15.5 | 11.2 | 23.2 | 1.52 | 31.7 | 13.0 | 8.58 | 15.7 | 13.9 | 8.91 | 9.28 |
| 2015-02-21 | 12.1 | 4.08 | 22.9 | 17.6 | 8.31 | 35.8 | 2.21 | 17.8 | 19.3 | 9.07 | 21.7 | 14.2 | -1.16 | 11.3 |
| 2015-02-22 | 21.4 | 2.29 | 50.1 | 18.6 | 18.5 | 72.5 | 5.93 | 20.1 | 28.8 | 12.8 | 21.2 | 28.3 | 9.94 | 11.8 |
| 2015-02-23 | 14.0 | 3.53 | 13.5 | 10.3 | 17.7 | 30.1 | -1.80 | 25.8 | 48.7 | 15.7 | 13.7 | 8.96 | 6.98 | 12.2 |
| 2015-02-24 | 10.4 | -3.49 | 3.68 | 35.3 | 23.8 | 16.1 | -4.00 | 34.1 | 23.3 | 6.10 | 8.99 | 10.2 | -1.05 | 11.2 |
| 2015-02-25 | 11.9 | -1.57 | 14.7 | 16.6 | 11.9 | 31.8 | -1.15 | 17.9 | 14.3 | 8.63 | 13.4 | 3.09 | -2.35 | 9.58 |
| 2015-02-26 | 22.9 | 1.28 | 12.4 | 12.4 | 26.8 | 28.3 | 0.721 | 39.9 | 23.2 | 21.4 | 24.9 | 14.2 | 4.98 | 25.3 |
| 2015-02-27 | 34.1 | 3.66 | 10.8 | 8.20 | 8.01 | 12.2 | 3.88 | 30.9 | 15.9 | 16.8 | 16.8 | 7.91 | 22.5 | 12.4 |
| 2015-02-28 | 37.3 | 1.01 | 15.8 | 6.20 | 5.27 | 54.8 | 2.31 | 21.7 | 31.4 | 10.8 | 17.0 | 9.51 | 5.53 | 9.57 |

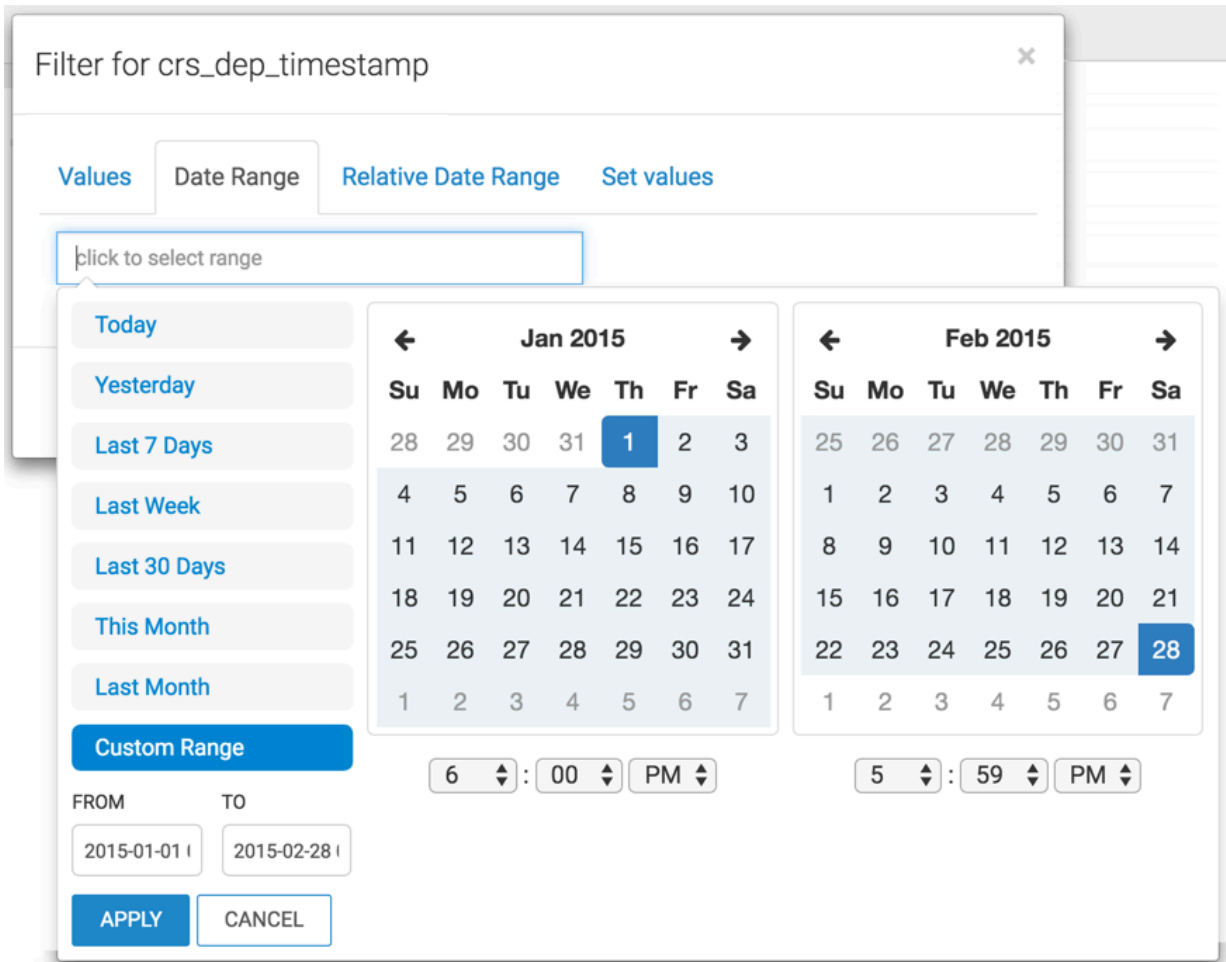
- On the Filters shelf, click the crs_dep_timestamp field.
- Click Select values.



6. In the Filter for crs_dep_timestamp modal window, click the Date Range tab.
7. Click inside the textbox that contains the text.
8. Click to select range.

Note the selection options in date range/calendar interface:

- Pre-set ranges, such as Today, Yesterday, Last 7 Days, Last Week, Last 30 Days, This Month, and Last Month.
- Custom Range, that can be configured either through the FROM and TO entry boxes, or by manipulating the calendar widgets
- Time of Day control for beginning and end of the time period.



9. In the calendar widget, select the date range of 24th of January 2015 (10:00 AM) through 17th of February 2015 (9:30 PM).

10. Click Apply.

Today

Yesterday

Last 7 Days

Last Week

Last 30 Days

This Month

Last Month

Custom Range

FROM TO

2015-01-24 2015-02-17

APPLY

CANCEL

← Jan 2015 →

| Su | Mo | Tu | We | Th | Fr | Sa |
|----|----|----|----|----|----|----|
| 28 | 29 | 30 | 31 | 1 | 2 | 3 |
| 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 | 29 | 30 | 31 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

10 : 00 AM

← Feb 2015 →

| Su | Mo | Tu | We | Th | Fr | Sa |
|----|----|----|----|----|----|----|
| 25 | 26 | 27 | 28 | 29 | 30 | 31 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

9 : 30 PM

11. After clicking Refresh Visual, the updated visual appears. Note the range of dates we specified in the previous step.

| | Airline | | | | | | | | | | | | | |
|------------|---------|-------|-------|--------|--------|-------|--------|-------|--------|-------|-------|--------|-------|-------|
| | AA | AS | B6 | DL | EV | F9 | HA | MQ | NK | OO | UA | US | VX | WN |
| Date | Delay | Delay | Delay | Delay | Delay | Delay | Delay | Delay | Delay | Delay | Delay | Delay | Delay | Delay |
| 2015-01-25 | 5.20 | -2.05 | 0.618 | 0.373 | 1.59 | 18.9 | -3.57 | 16.0 | 11.5 | 8.32 | 7.52 | 1.09 | 7.03 | 3.47 |
| 2015-01-26 | 6.30 | 4.57 | 21.4 | 2.86 | 5.23 | 5.04 | -5.21 | 12.7 | 5.94 | 4.26 | 7.98 | 3.51 | 4.49 | 4.47 |
| 2015-01-27 | 0.697 | -2.34 | 4.56 | -0.569 | -0.959 | -4.06 | -5.09 | 5.13 | -1.27 | 0.307 | 1.80 | 0.304 | -3.47 | -1.42 |
| 2015-01-28 | 2.38 | 1.09 | 7.77 | 1.23 | -0.037 | 3.16 | -1.50 | 2.02 | 0.929 | 0.132 | 2.63 | 2.61 | 5.08 | 1.73 |
| 2015-01-29 | 2.61 | 5.02 | 6.43 | 2.65 | 2.40 | 7.72 | 4.87 | 5.48 | 1.11 | 2.97 | 7.34 | -0.920 | -1.12 | 5.54 |
| 2015-01-30 | 4.56 | 15.4 | 11.4 | 7.15 | 5.53 | 14.5 | -0.258 | 10.1 | 8.30 | 12.7 | 13.5 | 14.3 | 12.6 | 12.2 |
| 2015-01-31 | 4.70 | 10.0 | 5.80 | 1.92 | -0.804 | 8.26 | 3.89 | 0.617 | 3.77 | 6.75 | 6.54 | 2.85 | -1.11 | 2.38 |
| 2015-02-01 | 9.74 | 3.93 | 7.25 | 10.7 | 8.67 | 51.7 | -2.32 | 9.66 | 29.2 | 19.3 | 12.7 | 31.9 | -1.27 | 13.6 |
| 2015-02-02 | 13.7 | 10.2 | 54.0 | 30.2 | 22.7 | 43.1 | -1.56 | 24.6 | 28.4 | 16.6 | 21.0 | 14.8 | 11.9 | 10.7 |
| 2015-02-03 | 4.83 | -1.49 | 44.0 | 10.4 | 11.7 | 32.0 | -3.90 | 21.2 | 16.2 | 12.0 | 15.6 | 7.04 | 8.10 | 6.92 |
| 2015-02-04 | 3.67 | -1.29 | 9.20 | 5.37 | 13.2 | 47.0 | -0.764 | 25.4 | 18.4 | 20.5 | 13.2 | 0.112 | 20.1 | 6.83 |
| 2015-02-05 | 13.2 | 7.25 | 32.7 | 8.43 | 9.06 | 15.8 | 0.188 | 33.7 | 22.4 | 23.1 | 15.5 | 5.96 | 24.7 | 12.8 |
| 2015-02-06 | 3.52 | 6.36 | 1.74 | 3.53 | 1.53 | 7.58 | 5.50 | 5.86 | 2.85 | 6.90 | 20.9 | 1.31 | 87.0 | 7.06 |
| 2015-02-07 | 1.41 | 2.62 | 4.77 | 1.83 | -1.36 | 0.132 | 5.10 | 0.698 | -1.78 | 4.57 | 6.65 | -0.890 | 9.45 | 1.48 |
| 2015-02-08 | 8.31 | 6.98 | 23.7 | 5.18 | 3.31 | 4.55 | 4.96 | 9.90 | 4.08 | 11.9 | 12.1 | 2.90 | 57.5 | 8.01 |
| 2015-02-09 | 7.41 | 2.57 | 18.2 | 12.9 | 7.59 | 11.1 | 12.0 | 25.4 | 9.20 | 9.13 | 9.32 | 2.81 | 7.72 | 5.09 |
| 2015-02-10 | 2.58 | 2.60 | 18.1 | 2.62 | 2.51 | 7.06 | -1.12 | 1.39 | 8.81 | 1.43 | 2.43 | 2.93 | -1.92 | 3.05 |
| 2015-02-11 | 0.371 | -1.17 | 7.60 | 2.83 | 0.999 | 8.68 | 4.80 | 3.56 | -0.486 | 2.85 | 5.45 | 1.10 | -1.62 | 2.19 |
| 2015-02-12 | 3.95 | 6.40 | 10.1 | 5.54 | 6.18 | 7.44 | -1.40 | 3.82 | 3.95 | 5.04 | 19.7 | 3.59 | 2.67 | 7.57 |
| 2015-02-13 | 6.21 | 4.29 | 7.56 | 10.5 | 5.94 | 7.19 | 1.86 | 9.96 | 12.7 | 5.67 | 13.2 | 7.18 | 11.6 | 8.42 |
| 2015-02-14 | 5.45 | 3.50 | 16.4 | 9.99 | 4.64 | 41.4 | 33.4 | 10.9 | 21.5 | 3.19 | 13.0 | 3.33 | 6.64 | 10.4 |
| 2015-02-15 | 6.45 | 0.529 | 21.8 | 7.06 | 12.7 | 22.8 | 0.510 | 22.7 | 18.4 | 9.11 | 18.5 | 9.89 | 9.69 | 8.74 |
| 2015-02-16 | 18.3 | -1.14 | 56.2 | 21.4 | 21.0 | 41.2 | 3.66 | 24.7 | 21.9 | 13.2 | 20.6 | 11.5 | 5.64 | 18.1 |
| 2015-02-17 | 10.8 | 4.02 | 38.6 | 26.1 | 23.4 | 33.4 | -2.19 | 23.1 | 21.4 | 8.67 | 17.2 | 32.5 | 16.4 | 13.0 |

Related Information

[Creating joins](#)

Selecting values by using an expression on filter shelves

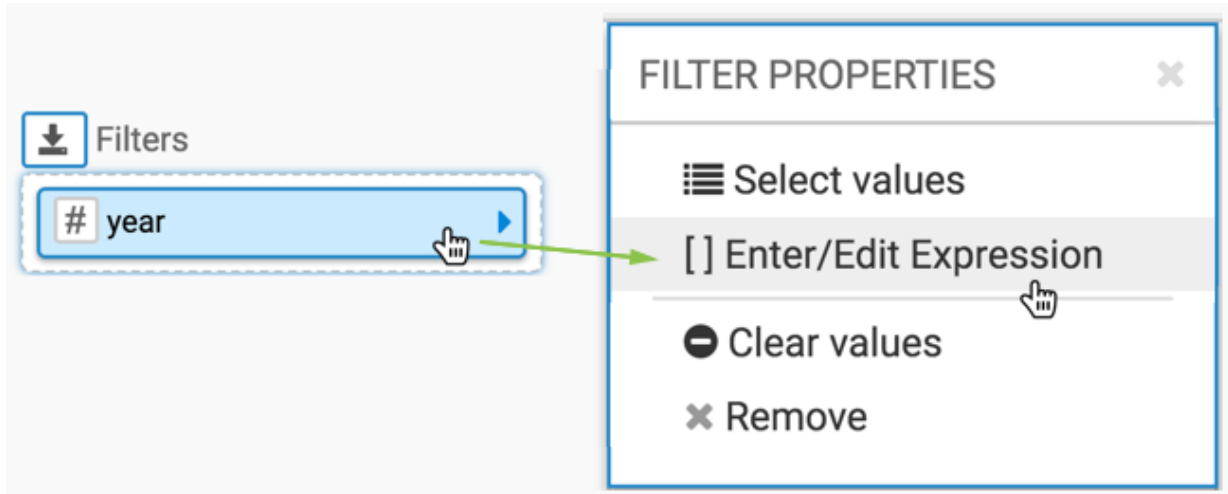
About this task

The Enter/Edit Expression interfaced may be used on a filter shelf to fine-tune value filtering, and to incorporate information about values from multiple rows of the dataset. To demonstrate this approach, let's use the example from building *Cross tabulation*, where we specify several discrete years of the dataset World Life Expectancy.

Procedure

1. On the Filters shelf, click Down Arrow on the year field placed there earlier.

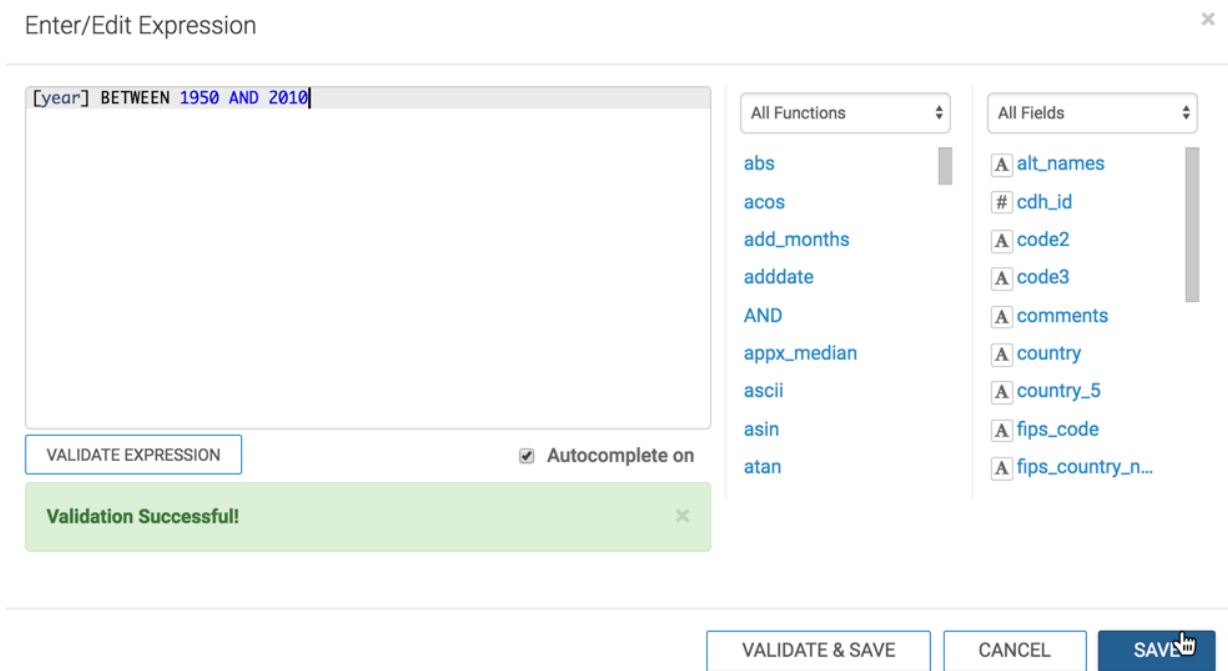
2. Click [] Enter/Edit Expression



3. In the Enter/Edit Expression modal window, build an expression.

We used the following expression to specify a range of year values:

[year]BETWEEN 1950 AND 2010



4. Click Validate Expression.
5. Click Save.

6. After clicking Refresh Visual, the cross tabulation visual appears.



Note the range of years we specified in the previous step, and that the columns stop reporting life expectancy when it reaches the threshold of 50 years for all seven countries in Middle Africa UN sub-region.

| | country | | | | | | |
|------|-----------------|-----------------|-----------------|-----------------|-------------------|-----------------|-----------------------|
| | Angola | Cameroon | Chad | Congo | Equatorial Guinea | Gabon | Sao Tome and Principe |
| year | Life Expectancy | Life Expectancy | Life Expectancy | Life Expectancy | Life Expectancy | Life Expectancy | Life Expectancy |
| 1950 | 29.2 | 37.9 | 35.6 | 38.3 | 33.9 | 36.0 | 45.5 |
| 1951 | 29.4 | 38.0 | 35.7 | 38.5 | 34.0 | 36.2 | 45.7 |
| 1952 | 29.8 | 38.4 | 35.9 | 38.9 | 34.3 | 36.8 | 46.2 |
| 1953 | 30.2 | 38.7 | 36.2 | 39.2 | 34.6 | 37.3 | 46.6 |
| 1954 | 30.6 | 39.1 | 36.4 | 39.6 | 34.9 | 37.7 | 47.1 |
| 1955 | 31.0 | 39.4 | 36.7 | 39.9 | 35.2 | 38.1 | 47.6 |
| 1956 | 31.4 | 39.8 | 37.0 | 40.1 | 35.5 | 38.4 | 48.1 |
| 1957 | 31.8 | 40.3 | 37.2 | 40.4 | 35.8 | 38.7 | 48.6 |
| 1958 | 32.2 | 40.7 | 37.5 | 40.7 | 36.1 | 39.0 | 49.2 |
| 1959 | 32.6 | 41.1 | 37.8 | 40.9 | 36.4 | 39.3 | 49.8 |
| 1960 | 33.0 | 41.5 | 38.0 | 41.1 | 36.7 | 39.6 | 50.4 |
| 1961 | 33.4 | 42.0 | 38.3 | 41.3 | 37.0 | 39.9 | 50.9 |
| 1962 | 33.8 | 42.4 | 38.5 | 41.5 | 37.3 | 40.4 | 51.5 |
| 1963 | 34.2 | 42.9 | 38.8 | 41.8 | 37.6 | 40.9 | 52.1 |
| 1964 | 34.6 | 43.3 | 39.1 | 42.0 | 37.9 | 41.6 | 52.6 |
| 1965 | 35.0 | 43.7 | 39.4 | 42.3 | 38.2 | 42.3 | 53.1 |
| 1966 | 35.4 | 44.2 | 39.7 | 42.5 | 38.5 | 43.2 | 53.6 |
| 1967 | 35.8 | 44.6 | 40.0 | 42.9 | 38.8 | 44.1 | 54.2 |
| 1968 | 36.2 | 45.1 | 40.4 | 43.2 | 39.1 | 44.9 | 54.7 |
| 1969 | 36.6 | 45.5 | 40.7 | 43.6 | 39.5 | 45.8 | 55.3 |
| 1970 | 37.0 | 46.0 | 41.1 | 44.0 | 39.9 | 46.7 | 55.9 |
| 1971 | 37.4 | 46.4 | 41.5 | 44.4 | 40.3 | 47.6 | 56.5 |
| 1972 | 37.8 | 46.8 | 41.9 | 44.8 | 40.7 | 48.5 | 57.1 |
| 1973 | 38.2 | 47.2 | 42.3 | 45.2 | 41.1 | 49.4 | 57.7 |
| 1974 | 38.6 | 47.6 | 42.7 | 45.6 | 41.5 | 50.3 | 58.3 |
| 1975 | 39.0 | 48.0 | 43.1 | 46.0 | 41.9 | 51.2 | 58.9 |
| 1976 | 39.4 | 48.4 | 43.5 | 46.4 | 42.3 | 52.1 | 59.5 |
| 1977 | 39.8 | 48.8 | 43.9 | 46.8 | 42.7 | 53.0 | 60.1 |
| 1978 | 40.2 | 49.2 | 44.3 | 47.2 | 43.1 | 53.9 | 60.7 |
| 1979 | 40.6 | 49.6 | 44.7 | 47.6 | 43.5 | 54.8 | 61.3 |
| 1980 | 41.0 | 50.0 | 45.1 | 48.0 | 43.9 | 55.7 | 61.9 |
| 1981 | 41.4 | 50.4 | 45.5 | 48.4 | 44.3 | 56.6 | 62.5 |
| 1982 | 41.8 | 50.8 | 45.9 | 48.8 | 44.7 | 57.5 | 63.1 |
| 1983 | 42.2 | 51.2 | 46.3 | 49.2 | 45.1 | 58.4 | 63.7 |
| 1984 | 42.6 | 51.6 | 46.7 | 49.6 | 45.5 | 59.3 | 64.3 |
| 1985 | 43.0 | 52.0 | 47.1 | 50.0 | 45.9 | 60.2 | 64.9 |
| 1986 | 43.4 | 52.4 | 47.5 | 50.4 | 46.3 | 61.1 | 65.5 |
| 1987 | 43.8 | 52.8 | 47.9 | 50.8 | 46.7 | 62.0 | 66.1 |
| 1988 | 44.2 | 53.2 | 48.3 | 51.2 | 47.1 | 62.9 | 66.7 |
| 1989 | 44.6 | 53.6 | 48.7 | 51.6 | 47.5 | 63.8 | 67.3 |
| 1990 | 45.0 | 54.0 | 49.1 | 52.0 | 47.9 | 64.7 | 67.9 |
| 1991 | 45.4 | 54.4 | 49.5 | 52.4 | 48.3 | 65.6 | 68.5 |
| 1992 | 45.8 | 54.8 | 49.9 | 52.8 | 48.7 | 66.5 | 69.1 |
| 1993 | 46.2 | 55.2 | 50.3 | 53.2 | 49.1 | 67.4 | 69.7 |
| 1994 | 46.6 | 55.6 | 50.7 | 53.6 | 49.5 | 68.3 | 70.3 |
| 1995 | 47.0 | 56.0 | 51.1 | 54.0 | 49.9 | 69.2 | 70.9 |
| 1996 | 47.4 | 56.4 | 51.5 | 54.4 | 50.3 | 70.1 | 71.5 |
| 1997 | 47.8 | 56.8 | 51.9 | 54.8 | 50.7 | 71.0 | 72.1 |
| 1998 | 48.2 | 57.2 | 52.3 | 55.2 | 51.1 | 71.9 | 72.7 |
| 1999 | 48.6 | 57.6 | 52.7 | 55.6 | 51.5 | 72.8 | 73.3 |
| 2000 | 49.0 | 58.0 | 53.1 | 56.0 | 51.9 | 73.7 | 73.9 |
| 2001 | 49.4 | 58.4 | 53.5 | 56.4 | 52.3 | 74.6 | 74.5 |
| 2002 | 49.8 | 58.8 | 53.9 | 56.8 | 52.7 | 75.5 | 75.1 |
| 2003 | 50.2 | 59.2 | 54.3 | 57.2 | 53.1 | 76.4 | 75.7 |
| 2004 | 50.6 | 59.6 | 54.7 | 57.6 | 53.5 | 77.3 | 76.3 |
| 2005 | 51.0 | 60.0 | 55.1 | 58.0 | 53.9 | 78.2 | 76.9 |
| 2006 | 51.4 | 60.4 | 55.5 | 58.4 | 54.3 | 79.1 | 77.5 |
| 2007 | 51.8 | 60.8 | 55.9 | 58.8 | 54.7 | 80.0 | 78.1 |
| 2008 | 52.2 | 61.2 | 56.3 | 59.2 | 55.1 | 80.9 | 78.7 |
| 2009 | 52.6 | 61.6 | 56.7 | 59.6 | 55.5 | 81.8 | 79.3 |
| 2010 | 53.0 | 62.0 | 57.1 | 60.0 | 55.9 | 82.7 | 79.9 |

7. Let us change the expression to report only when life expectancy is at 50 years or more for the same year range.
([year]BETWEEN 1950 AND 2010) AND ([life_expectancy]>=50)

Note the following results:

- The first row is for year 1960, the first time a country in Middle Africa reported a life expectancy over 50 years.
- Only five out of seven countries are reporting; this means that life expectancy for Chad and Congo never reaches 50 years over the period covered by our dataset, through the year 2010.

| | country  | | | | |
|--|---|-----------------|-------------------|-----------------|-----------------------|
| | Angola | Cameroon | Equatorial Guinea | Gabon | Sao Tome and Principe |
| year  | Life Expectancy | Life Expectancy | Life Expectancy | Life Expectancy | Life Expectancy |
| 1960 | | | | | 50.4 |
| 1961 | | | | | 50.9 |
| 1962 | | | | | 51.5 |
| 1963 | | | | | 52.1 |
| 1964 | | | | | 52.6 |
| 1965 | | | | | 53.1 |
| 1966 | | | | | 53.6 |
| 1967 | | | | | 54.2 |
| 1968 | | | | | 54.7 |
| 1969 | | | | | 55.3 |
| 1970 | | | | | 55.9 |
| 1971 | | | | | 56.5 |
| 1972 | | | | | 57.1 |
| 1973 | | | | | 57.8 |
| 1974 | | | | | 58.4 |
| 1975 | | | | 50.8 | 59.0 |
| 1976 | | | | 51.6 | 59.5 |
| 1977 | | | | 52.4 | 59.9 |
| 1978 | | 50.3 | | 53.2 | 60.2 |
| 1979 | | 50.8 | | 54.1 | 60.4 |
| 1980 | | 51.2 | | 54.9 | 60.6 |
| 1981 | | 51.6 | | 55.8 | 60.6 |
| 1982 | | 52.0 | | 56.6 | 60.7 |
| 1983 | | 52.3 | | 57.5 | 60.8 |
| 1984 | | 52.6 | | 58.3 | 60.8 |
| 1985 | | 52.9 | | 59.1 | 61.0 |
| 1986 | | 53.1 | | 59.8 | 61.1 |
| 1987 | | 53.3 | | 60.3 | 61.3 |
| 1988 | | 53.4 | | 60.8 | 61.5 |
| 1989 | | 53.5 | | 61.1 | 61.6 |

Related Information

[Cross tabulation](#)