

## Managing Filter Shelves

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## Selecting discrete values on filter shelves

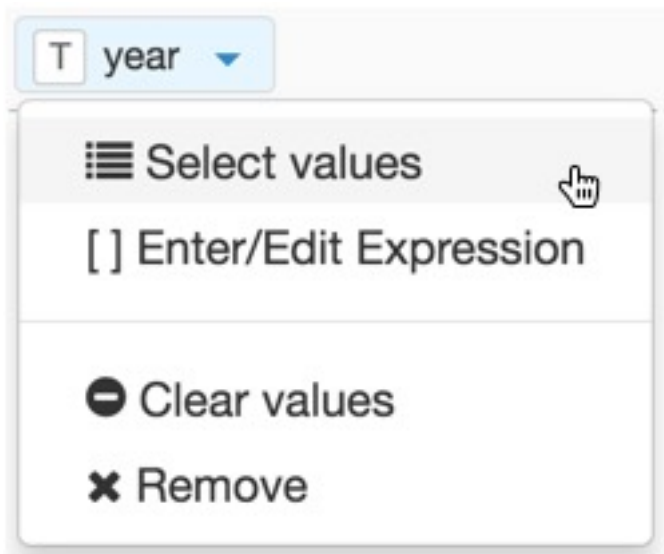
### About this task

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, the example from building *Cross tabulation* is used, where several discrete years of the dataset World Life Expectancy are specified.

### Procedure

1. On the Filters shelf, click the 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

Cancel

Apply

#### 4. Click REFRESH VISUAL.

The cross tabulation visual appears with the years 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 numerical data, you can specify a range of numerical values. For more information, see [Selecting a range of number values on filter shelves](#) on page 6. You can also choose the desired combination of filters by specifying an expression. For more information, see [Selecting values by using an expression on filter shelves](#) on page 16.

#### Related Information

[Cross tabulation](#)

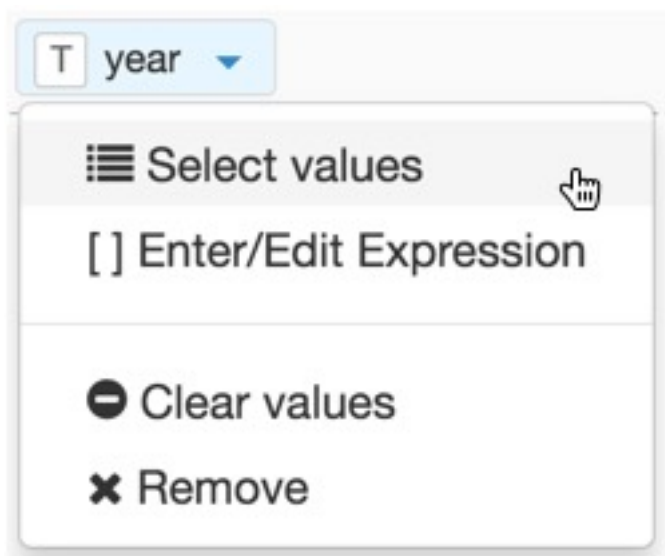
## Selecting a range of number values on filter shelves

#### 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](#)

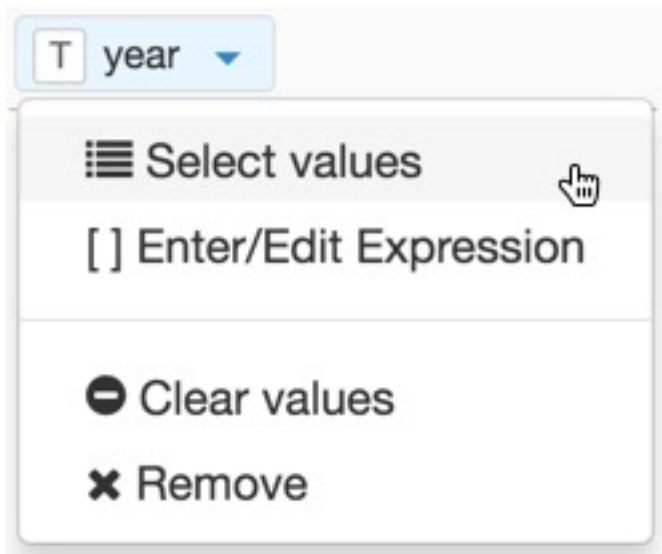
## Selecting a string pattern for values on filter shelves

#### 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'. Under the 'Pattern' tab, there is a checkbox labeled 'Exclude these values' which is currently unchecked. Below this, there is a dropdown menu showing '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'.

4. 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

5. 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.

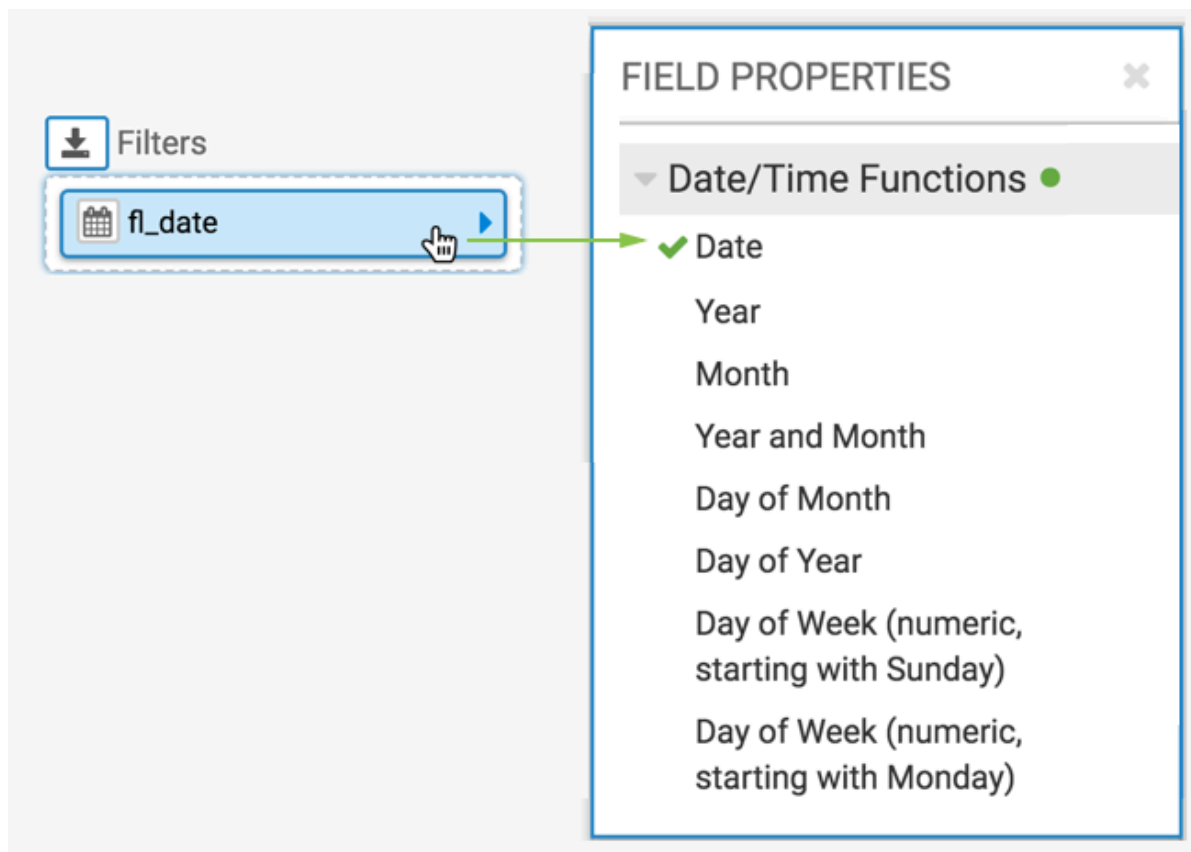
It combines the `fl_date` and `crs_dep_time` data into a new timestamp field that has the following definition:

```
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.

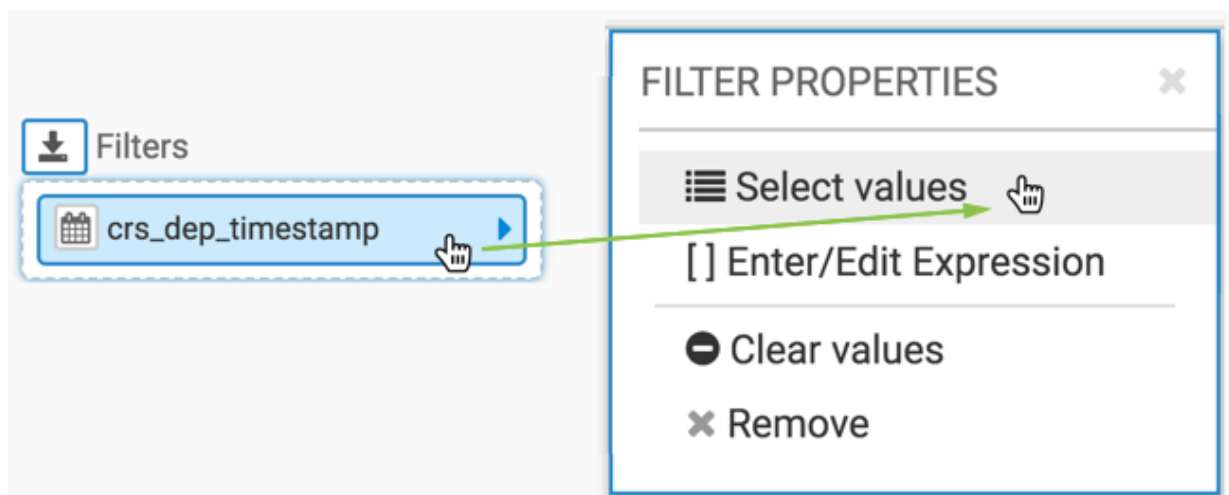


- On the Measures shelf, add the measure `dep_delay`, and ensure that it uses the `avg(dep_delay)` aggregate. Alias the field as Delay.
- On the Filters shelf, add `crs_dep_timestamp`.

- 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	0.54	0.31	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.

Filter for crs\_dep\_timestamp

Values Date Range Relative Date Range Set values

click to select range

Today  
Yesterday  
Last 7 Days  
Last Week  
Last 30 Days  
This Month  
Last Month  
Custom Range

FROM TO

2015-01-01 2015-02-28

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

6 : 00 PM

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

5 : 59 PM

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 a join](#)

# Selecting values by using an expression on filter shelves

## About this task

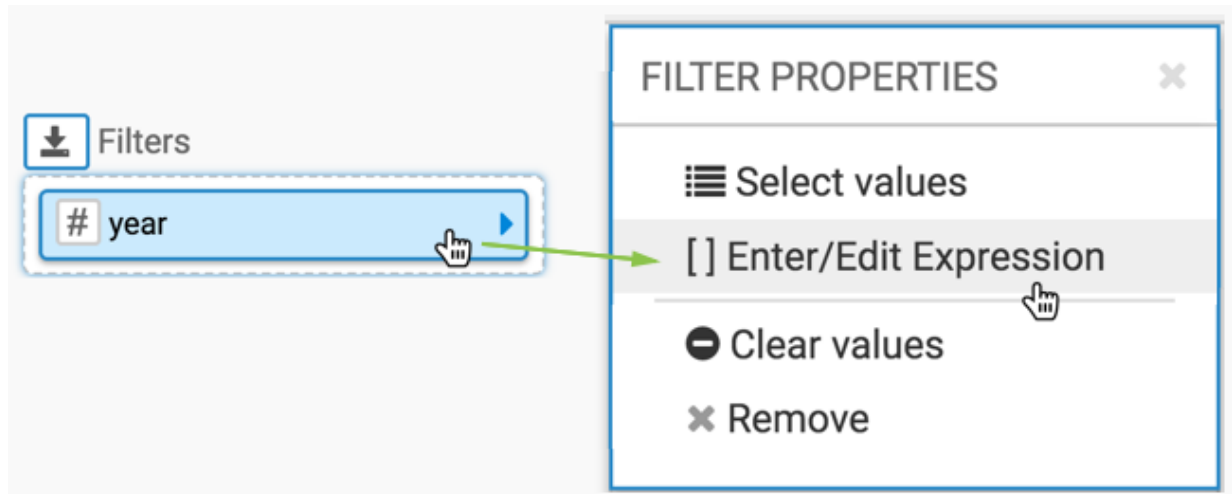
The Enter/Edit Expression interfaced may be used on a filter shelf to fine-tune value filtering, and to incorporate information about values from multiple rows of the dataset. To demonstrate this approach, let's use the example from building *Cross tabulation*, where we specify several discrete years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

## Procedure

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



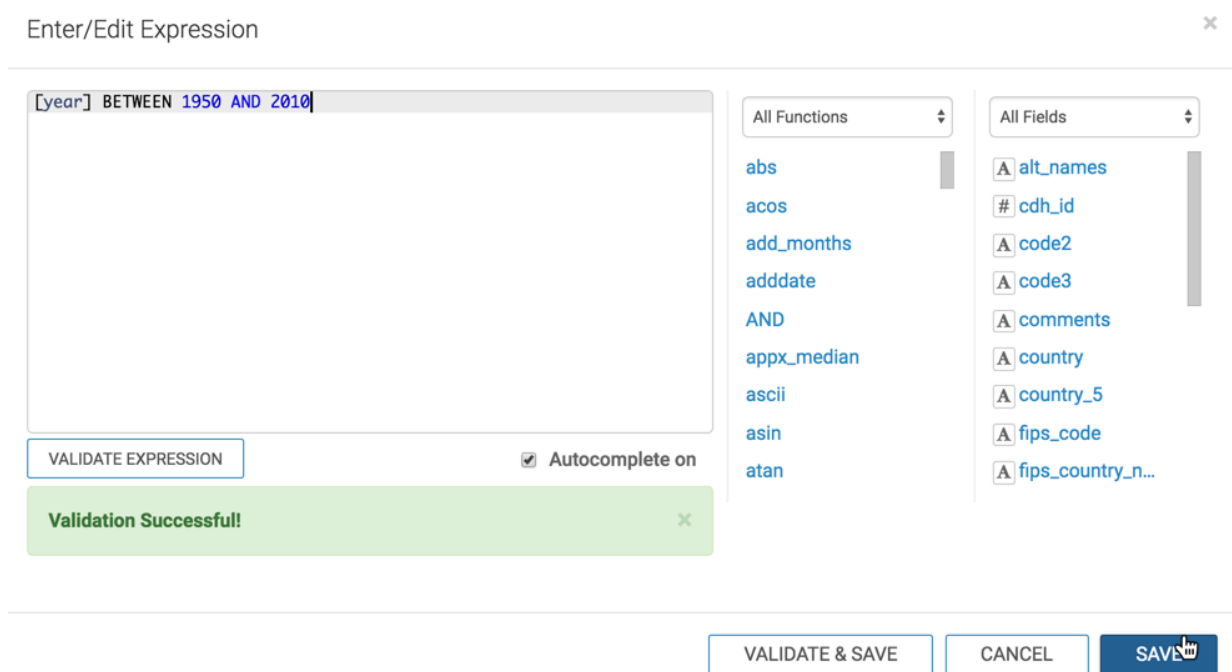
2. Click [ ] Enter/Edit Expression



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](#)