

How does the ToNumber function work?

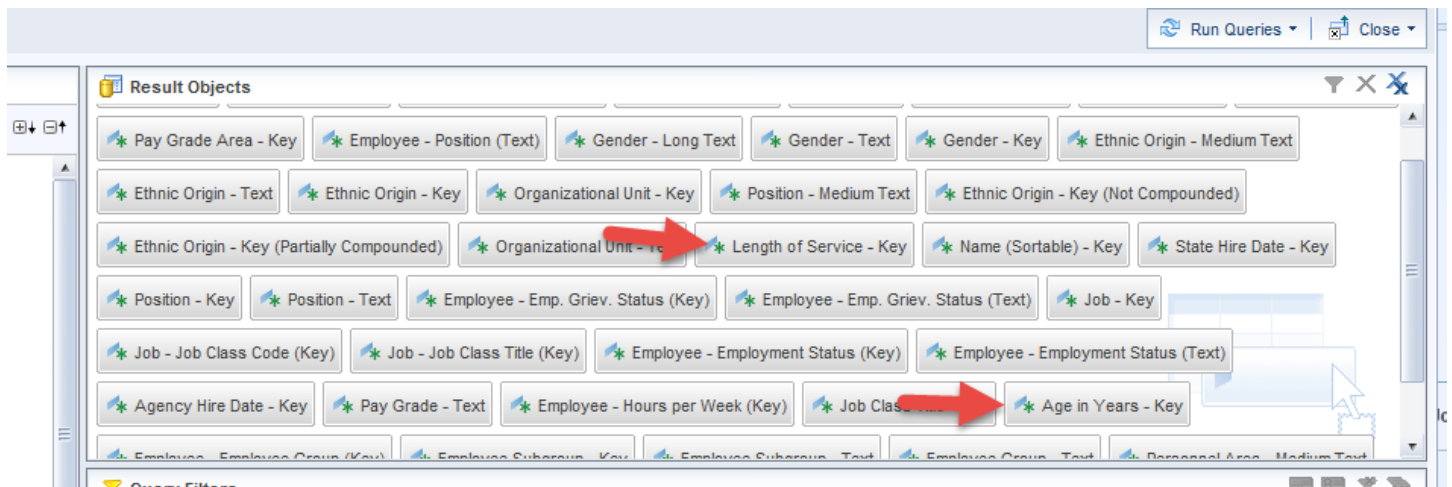
Sometimes data available in the Business Warehouse may be formatted as a detail (text) where you need to use it as a measure (number). You may need to use it for calculations or sorting and this is not possible with the current format. ToNumber function allows you to take the field and reformat it as a number.

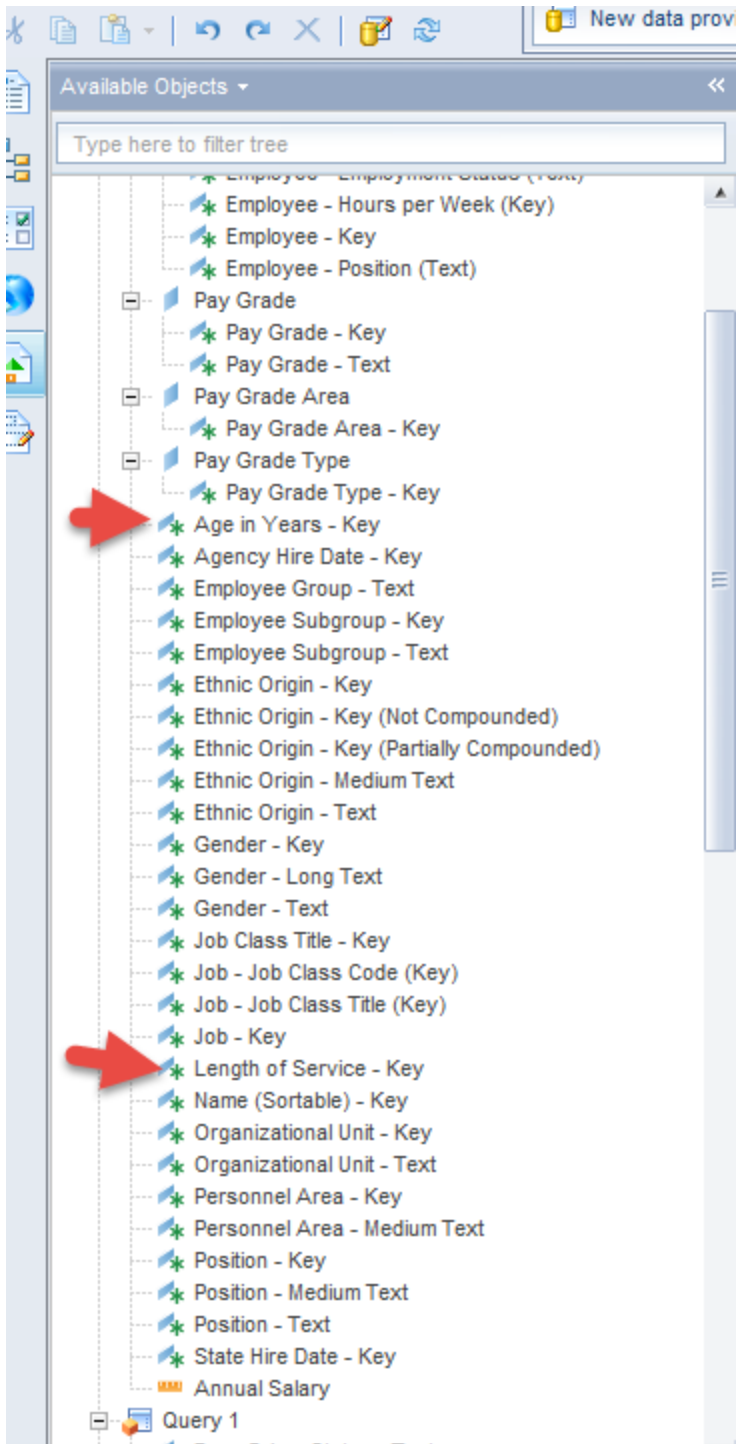
By utilizing the ToNumber function and crafting variables in your report which take advantage of the function, you can use this field as if it were a number, summing, averaging and sorting it numerically.

In this example, I will run the RH039F Employee Demographics and Position Information Query. I will use the Length of Service-Key and the Age in Years-Key as fields for the ToNumber function.

Creating Variables and using ToNumber function:

As you can see from the red arrows below, this document includes the Length of Service-Key and the Age in Years-Key in the Results Objects. You can also see these both are Detail objects not measures





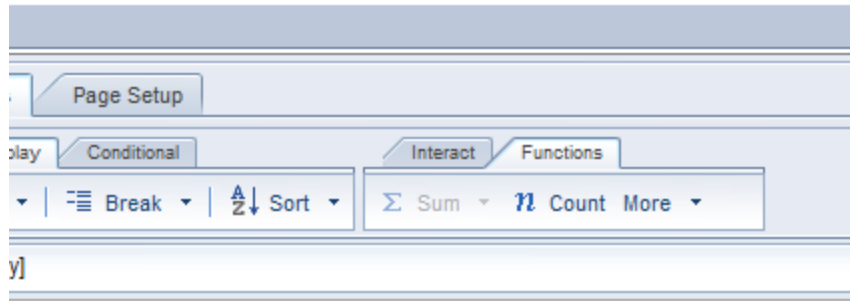
Notice that if I add these fields to a report, they are not sorted numerically. This is evident with the Length of Service field. Notice all the 1X years are before 2, all the 2X before 3, etc. Also, notice that any employee with no years of services is recorded as #, which is not a numerical value.

Using ToNumber in Reports

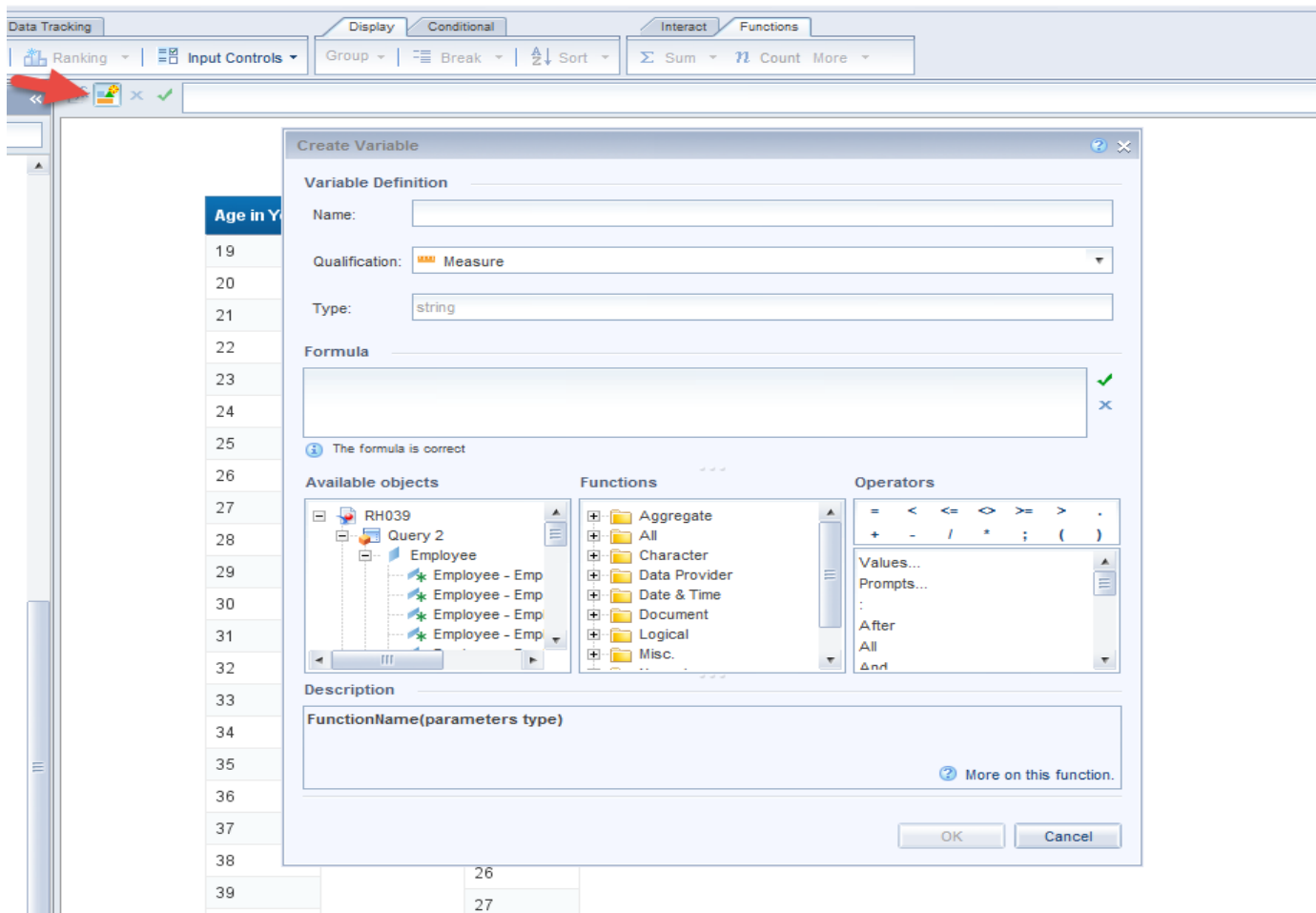
Age in Years	Length of Ser
19	#
20	1
21	10
22	11
23	12
24	13
25	14
26	15
27	16
28	17
29	18
30	19
31	2
32	20
33	21
34	22
35	23
36	24
37	25
38	26
39	27
40	28

Also, notice that the functions are greyed out except for count. Sum, average or any of the numeric functions are not available to me.

Using ToNumber in Reports



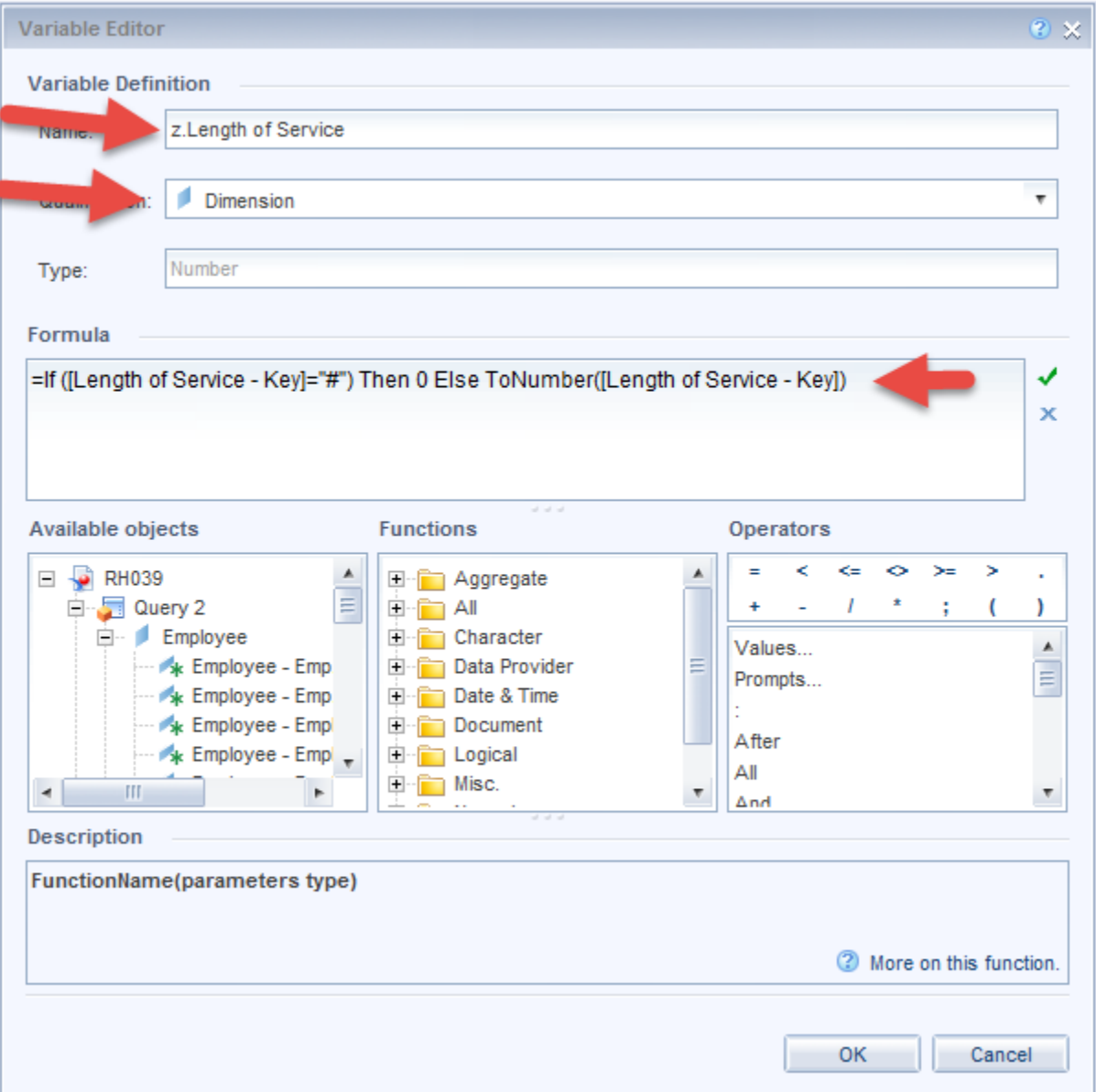
So I need to create a variable to change these fields to numbers. We will do this for the Length in Service field, which we will also change the # to a zero.



We will name this variable z.Length of Service. We will also make this variable a Dimension instead of a detail and make sure the type is a number not a string. (need to explain why not a measure or note we could have made it a measure)

The formula we will use is

```
=If ([Length of Service - Key]="#") Then 0 Else ToNumber([Length of Service - Key])
```



This formula is doing two things.

```
=If ([Length of Service - Key]="#") Then 0 Else ToNumber([Length of Service - Key])
```

First it converts any records that have a # into a zero. The # is not a valid number value and will not allow us to convert the field to numbers. In our reports we can filter out the zeros if that is needed.

Using ToNumber in Reports

=If ([Length of Service - Key]="#") Then 0 Else ToNumber([Length of Service - Key])

The second function of this formula is to convert the data to a number.

Note, if we did not have the # records our formula would just be:

= ToNumber([Length of Service - Key])

Also, note the use of Else. This tells the formula to do both functions. For the records that the field is a #, turn it to zero. Turn everything else to a number.

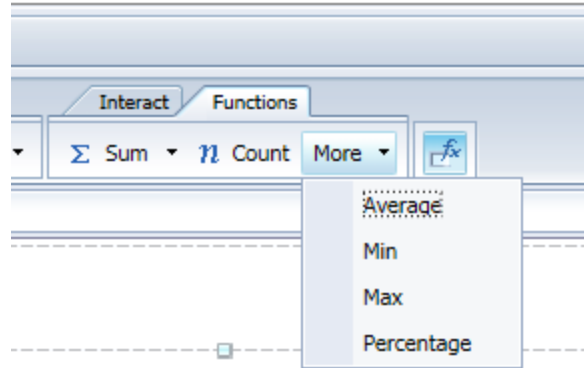
Now if we use the z.Length of Service variable instead of our Length of Service-Key, we get this result:

Length of Se	z.Length of S
#	0
1	1
10	2
11	3
12	4
13	5
14	6
15	7
16	8
17	9
18	10
19	11
2	12
20	13
21	14
22	15
23	16
24	17
25	18
26	19
27	20
28	21

Note the sort difference and the lack of a # record.

The functions available to us now are all of the relevant math ones

Using ToNumber in Reports



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