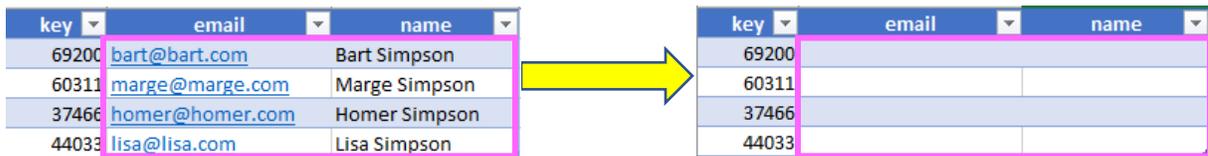


Working with Confidential Data in Power BI

Power BI reports often rely on source data that should not be accessible by those who consume the report. Several options exist to ensure confidential data isn't inadvertently leaked. **Each report that uses confidential information should be fully tested before it is shared.**

1. Delete identifiers in the source file

If you have access to edit the source file and you will not use the identifiers in a query or report, then one solution is to delete identifiers from the source file. For example, in an Excel file, simply select the cells with identifying info and delete them.

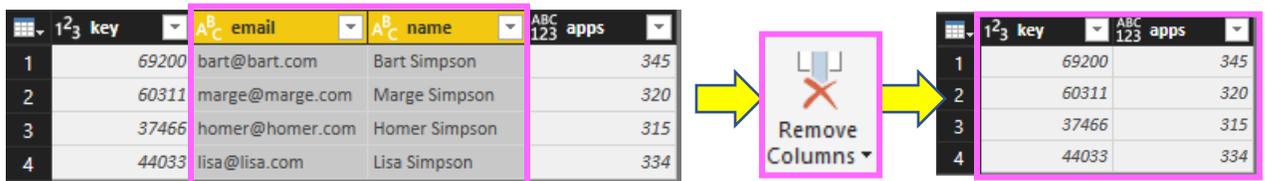


key	email	name
69200	bart@bart.com	Bart Simpson
60311	marge@marge.com	Marge Simpson
37466	homer@homer.com	Homer Simpson
44033	lisa@lisa.com	Lisa Simpson

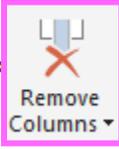
key	email	name
69200		
60311		
37466		
44033		

2. Remove identifying columns in the query editor

If the identifiers are needed in the query editor (ex. merge with other sources, remove duplicates), they can be removed from the table after they are used to sort, merge, or otherwise transform the data. **Select the columns** and click **Remove Columns** to remove the columns.



key	email	name	apps	
1	69200	bart@bart.com	Bart Simpson	345
2	60311	marge@marge.com	Marge Simpson	320
3	37466	homer@homer.com	Homer Simpson	315
4	44033	lisa@lisa.com	Lisa Simpson	334

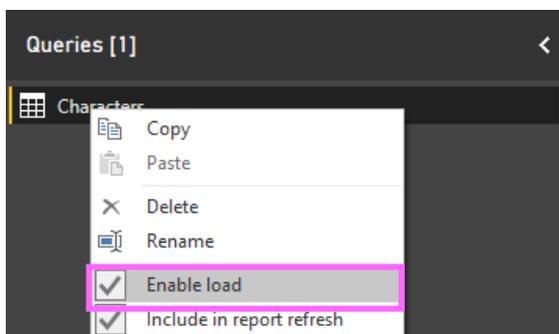


Remove Columns

key	apps	
1	69200	345
2	60311	320
3	37466	315
4	44033	334

3. Disable loading of tables with identifying information

If the entire table that contains identifiers won't be used to visualize data in the report, use the **disable load** feature in the query editor to prevent access to the table in report view. To disable load, **right-click on the query in the query editor** and **uncheck Enable load**.

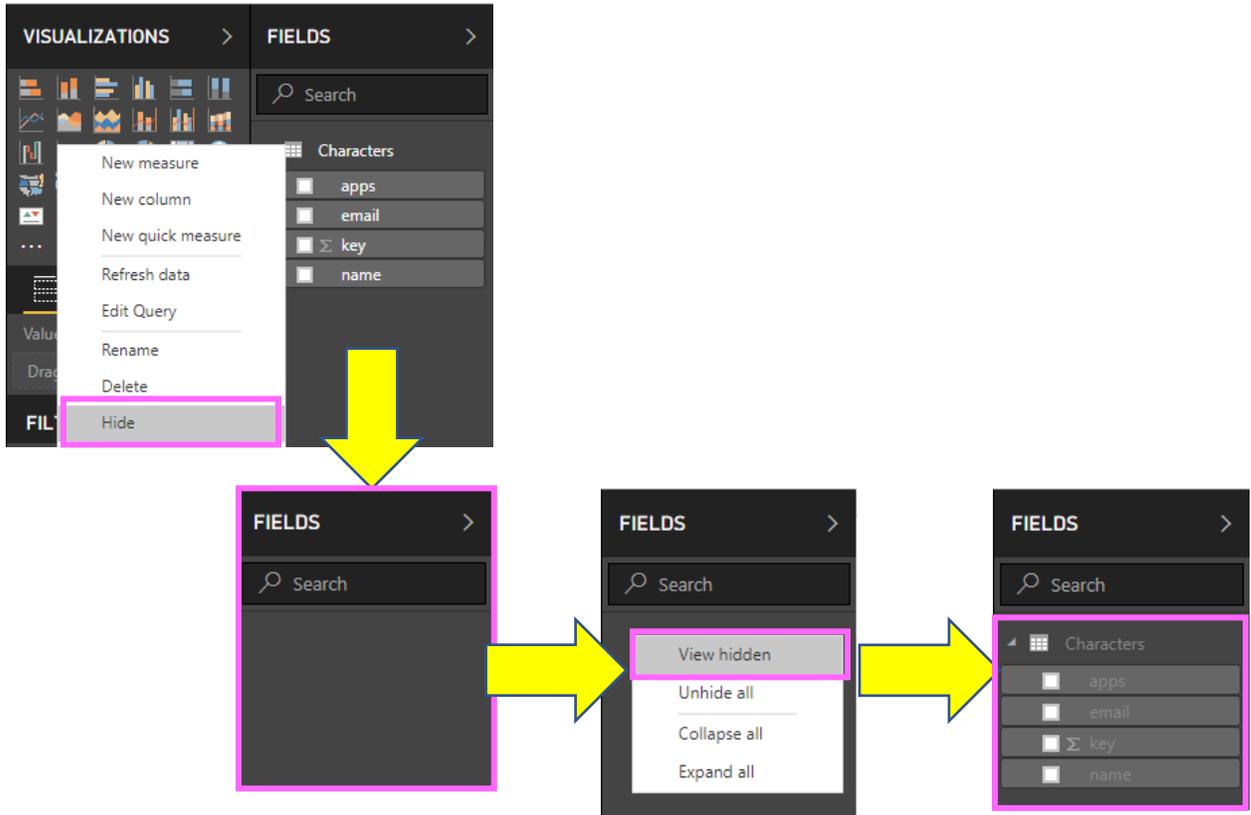


Working with Confidential Data in Power BI

4. Hide tables and fields in the report editor

Underlying data fields that should not be accessible to viewers should be hidden in report view. Typically, viewers should not be allowed to access any of the underlying data tables.

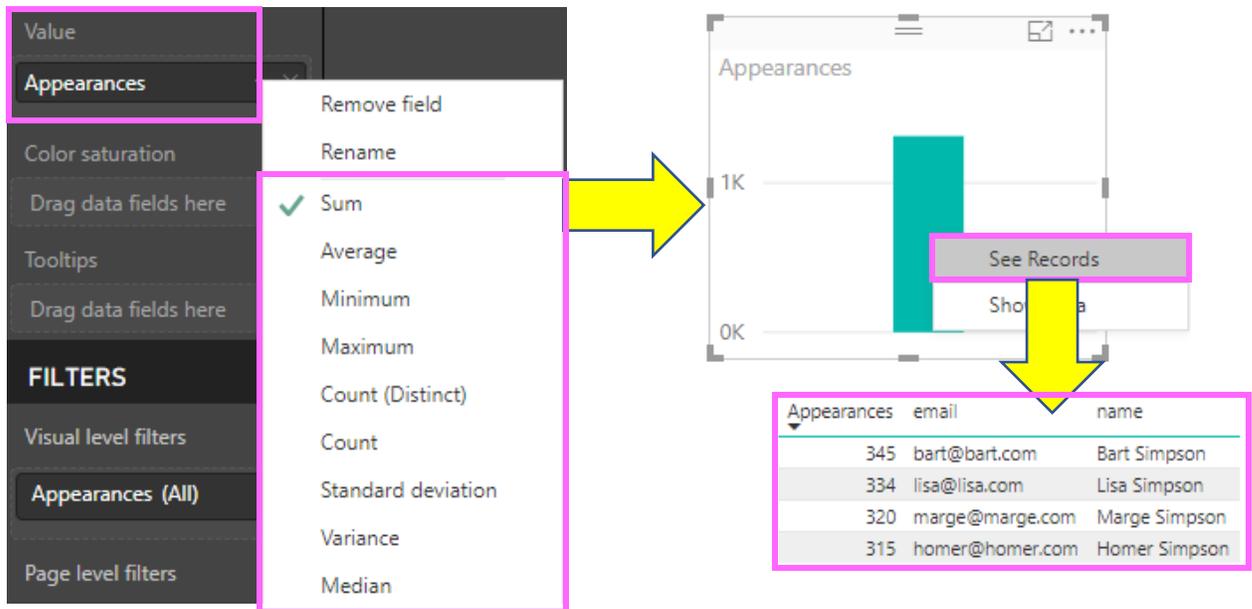
To hide, **right-click the table or field**, then **click hide**. To continue using hidden fields in Power BI desktop, **right-click in the fields area**, then click **view hidden**.



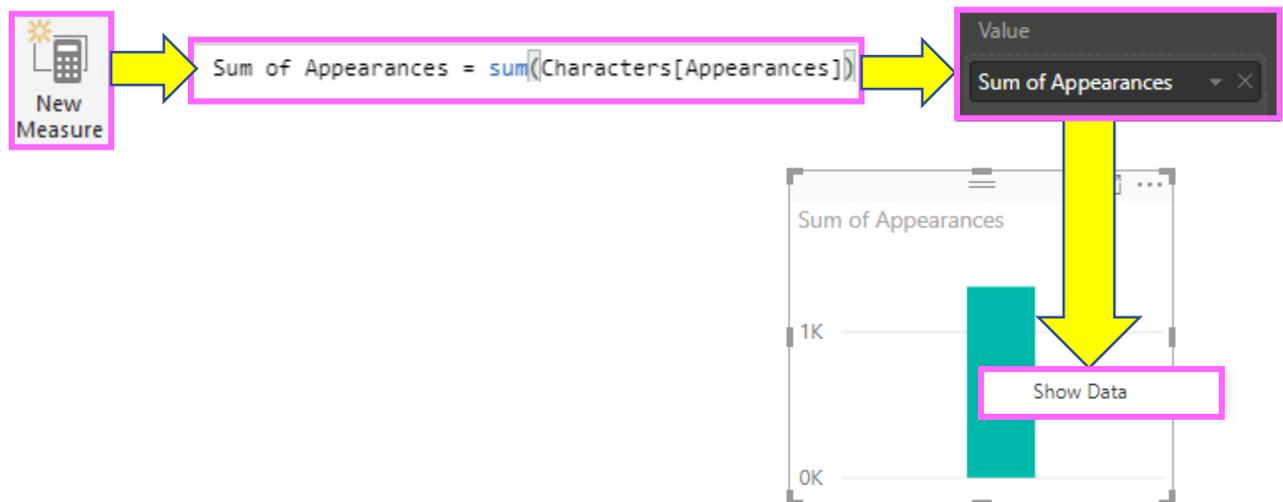
Working with Confidential Data in Power BI

5. Write explicit measures to aggregate data

Adding a field from a table to the “Values” area of a visual often results in the creation of an **implicit measure**. Implicit measures automatically summarize data by counting, averaging, summing, etc. While implicit measures can be useful, they also allow end users to see the underlying data records used to calculate them by right-clicking on a visual.



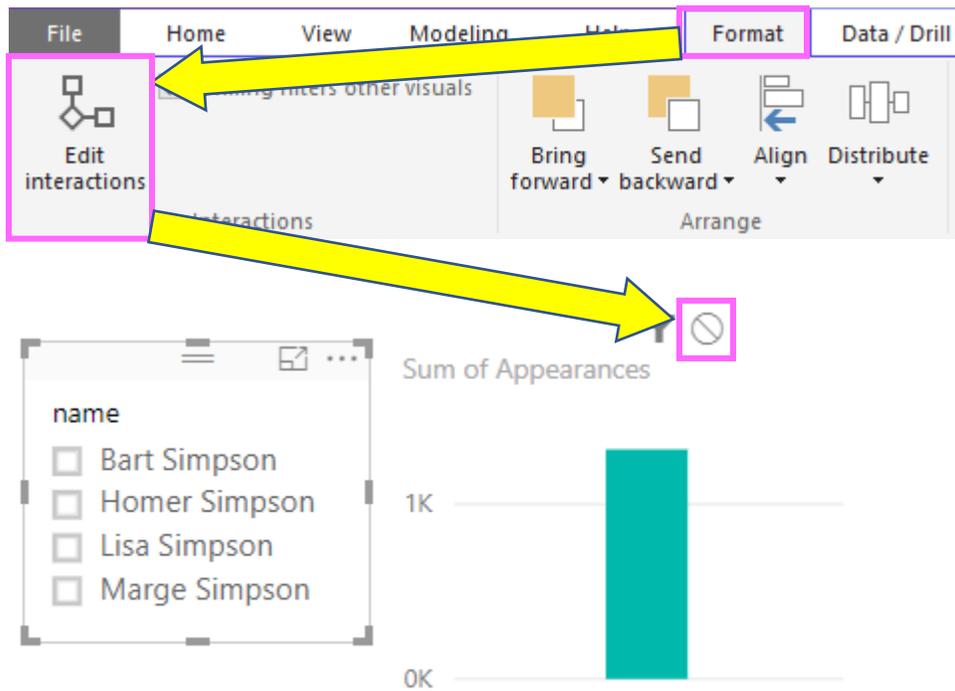
Explicit measures are written by the report creator using DAX. Using an explicit DAX measure instead of an implicit measure disables the ability for end users to see the underlying data records. To create a measure, click **New Measure**, enter your measure in the editor, then **drag the measure** from the **Fields** pane to the **Value** area of the visual.



Working with Confidential Data in Power BI

6. Disable Visual Interactions

Visual interactions can inadvertently identify individuals if they are not handled carefully. For example, if a report viewer may filter to females and see results for 10 students. If the viewer then clicks to see out-of-state students, the viewer may see results for 1 or 2 students that are identifiable. **Select a visual**, then **click the format tab in the ribbon**, then **edit interactions** to view interactions for that visual. Click the **disable icon** on the visual to disable the interaction.



Working with Confidential Data in Power BI

7. Use bounding measures

Another way to ensure viewers cannot breakdown data to identifiable levels is to create a bounding measure in DAX. Bounding measures can be used in other measures to disable viewing of data if counts get below a certain threshold. For example, here is a bounding measure that returns “Y” if there are more than two characters and “N” if there are two or fewer:

```
Character Bound = IF(CALCULATE(COUNTA(Characters[name]),ALLSELECTED(Characters)) > 2, "Y", "N")
```

That measure can then be referenced in another measure to show a result if there are more than two characters. **Bounding measures should not be used in the “Filters” area of the report, as viewers can edit filters and turn bounding measures off.**

```
Sum of Appearances = if(Characters[Character Bound]="Y",sum(Characters[Appearances]),BLANK())
```

Now if a user selects one character, Sum of Appearances does not show (it is BLANK):



If three or more characters are selected, Sum of Appearances displays as normal:

