

# Plugin PivotTable

Introduced in [Tiki 16.2](#)

Use this [wiki plugin](#) to create dashboards with summaries of data in Tiki objects through the [unified search index](#) to produce a pivot table report of your choice. Initially this plugin works with [tracker data](#), but other Tiki objects can be connected later with this plugin. Results for the variables of interest (tracker fields, as well as creation\_date, modification\_date and tracker\_status of the items) are aggregated by criteria selected by the user.

It produces the [JavaScript Pivot Table \(aka Pivot Grid, Pivot Chart, Cross-Tab\) implementation from Nicolas Kruchten](#) with drag'n'drop (see [the list of changes in each version](#)).

## Parameters

Create and display data in pivot table for reporting

Introduced in [Tiki 16.1](#). Required parameters are in **bold**.

[Go to the source code](#)

Preferences required: `wikiplugin_pivottable`

Parameters	Accepted Values	Description	Default	Since
(body of plugin)		Leave one space in the box below to allow easier editing of current values with the plugin popup helper later on		
<b>data</b>	text <i>separator: :</i>	For example 'tracker:1' or 'activitystream'	0	
dataCallback	text	Pass a custom javascript function to tweak the final layout and data traces before rendering them.		24.7
chartTitle	text	Override title when using Chart renderers.		16.3
menuLimit	digits	Pivottable menuLimit option override - number of entries to consider the menu list too big when filtering on a particular column or row.		16.2
inclusions	text	Filter values for fields in rows or columns. Contains JSON encoded object of arrays of strings.		
xAxisLabel	text	Override label of horizontal axis when using Chart renderers.		16.3
yAxisLabel	text	Override label of vertical axis when using Chart renderers.		16.3

aggregateDetailsFormat	text	Uses the translate function to replace %0 etc with the aggregate field values. E.g. "%0 any text %1"		22.1
aggregateDetailsCallback	text	Use custom javascript function to build the aggregate details popup window.		24.1
colOrder	text	The order in which column data is provided to the renderer, must be one of "key_a_to_z", "value_a_to_z", "value_z_to_a", ordering by value orders by column total.	key_a_to_z	
height	word	Height of charts. You have to only put the value (Unit: px). For instance, use 500 for 500 pixels.	400px	
lang	text	This helps to avoid pivotUI missing the chosen aggregator next time you change the site language. Default value: "site" if you want to keep using the site language	site	26
rowOrder	text	The order in which row data is provided to the renderer, must be one of "key_a_to_z", "value_a_to_z", "value_z_to_a", ordering by value orders by row total.	key_a_to_z	
highlightChartType	text			24.7
width	word	Width of charts. You have to only put the value (Unit: px). For instance, use 500 for 500 pixels.	100%	
aggregatorName	Count  Count Unique Values  List Unique Values  Sum  Integer Sum  Average  Minimum  Maximum  Sum over Sum  80% Upper Bound  80% Lower Bound  Sum as Fraction of Total  Sum as Fraction of Rows  Sum as Fraction of Columns  Count as Fraction of Total  Count as Fraction of Rows  Count as Fraction of Columns	Function to apply on the numeric values from the variables selected.	Count	
allowStickyHeaders	(blank) n y	Sticky Headers for the Pivot Table when scrolling top or left Default value: No	n	26

chartHoverBar	y n	Display the Chart hover bar or not.	y	16.3
heatmapColors	text separator: :			17
highlightGroupColors	text separator: :			18.1
highlightRequest	text separator: :	Highlight items' values matching those coming from request like a search form POST. List pairs of tracker field names and incoming request variable names separated by a dash.		24.7
highlightGroup	(blank) y n	Highlight items' values belonging to one of my groups in Charts.	n	16.3
highlightMine	(blank) y n	Highlight owned items' values in Charts.	n	16.3
displayBeforeFilter	(blank) n y	Load PivotTable results on initial page load even before applying "editable" filters. Turn this off if you have a large data set and plan to use "editable" filters to dynamically filter it. Default value: Yes	y	21.1
overridePermissions	(blank) y n	Return all tracker items ignoring permissions to view the corresponding items.	n	18.1

rendererName	Table  Table Barchart  Heatmap  Row Heatmap  Col Heatmap  Line Chart  Bar Chart  Overlay Bar Chart  Stacked Bar Chart  Relative Bar Chart  Boxplot Chart  Horizontal Boxplot Chart  Area Chart  Histogram  Density Histogram  Percent Histogram  Probability Histogram  Density Histogram Horizontal  Percent Histogram Horizontal  Probability Histogram Horizontal  Horizontal Histogram  Histogram2D  Density Histogram2D  Percent Histogram2D  Probability Histogram2D  Density Histogram2D Horizontal  Percent Histogram2D Horizontal  Probability Histogram2D Horizontal  Horizontal Histogram2D  Scatter Chart  Treemap	Display format of data	Table	
translate	(blank) n y	Use translated data values for calculations and display. Default value: No	n	18.3
heatmapDomain	text separator: :			17
aggregateDetails	text separator: :	When enabled, clicking a table cell will popup all items that were aggregated into that cell. Specify the name of the field or fields to use to display the details separated by colon. Enabled by default. To disable, set contents to an empty string.		16.2
vals	text separator: :	Variable with numeric values or tracker field permNames, on which the formula from the aggregator is applied. It can be left empty if aggregator is related to Counts. Use permanentNames in case of tracker fields, separated by : in case of multiple fields function.		

cols	text separator: :	Which field or fields to use as table columns. Leaving blank will use the first available field. Use permanentNames in case of tracker fields. Separated by colon (:) if more than one.
rows	text separator: :	Which field or fields to use as table rows. Leaving blank will remove grouping by table rows. Use permanentNames in case of tracker fields. Separated by colon (:) if more than one.

#### Notes on **aggregateDetails**:

- The aggregateDetails accepts multiple field names or permNames separated by colon.
- The aggregateDetails parameter is also enabled by default and can be disabled setting aggregateDetails to an empty string.
- Each item has the associated object\_link available by default and clickable in the popup where the aggregateDetails field data is shown.
  - It will work with other unified search index content entries (not only tracker items) but might be slow for large result sets.
  - It is only activated if aggregateDetails is not disabled. Therefore, there is a workaround to disable this feature for large sets of data (e.g. containing several or hundreds of thousands of items).

## Basic Usage

Basic usage requires just to provide the data source (e.g. a tracker with id 1: "**tracker:1**" since [Tiki16](#), or **activitystream** also since [Tiki19](#) ), and the rest will be taken as default values by the pivot table plugin, and you will be able to edit it through the PivotTable UI itself. That will allow you to display all field names of the tracker, and will let you drag and drop them in rows or columns of the pivot table editor.

That will cover most use cases. However, if your dataset is huge, or the tracker has many fields, and some of them carrying heavy data (long text fields, or big files/images attached to the tracker items in files tracker fields), you can use an advanced syntax to filter the number of items or reduce the amount of tracker fields exposed to the pivot table to work with, so that performance of the pivot table plugin is fast again. See below for "[Advanced Usage](#)"

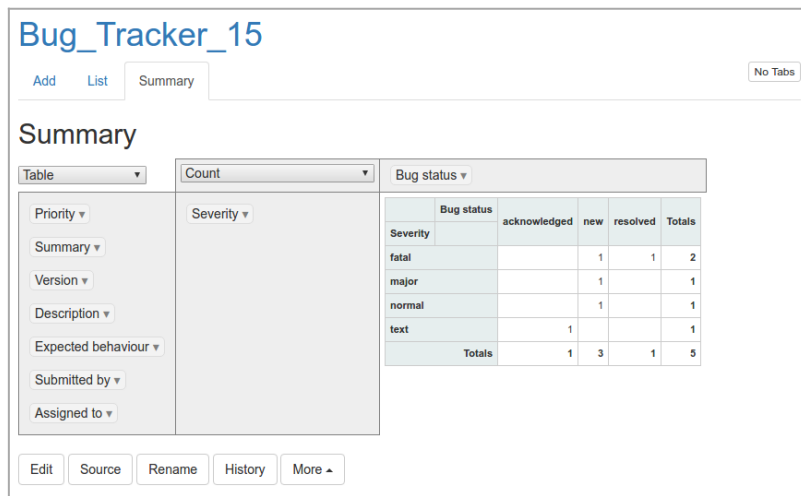
# Example 1

After installing the [Bug\\_Tracker\\_16 profile](#) on a brand new Tiki 16, you will get a new tracker with id 1 to hold the data of the bug reports/issue tickets. When you add a few dozen items, you can use some syntax like the one indicated below to produce some demo pivot tables table with default values as a starting point, to let you start reviewing the data as wiki-wiki (quick) as possible.

This code:

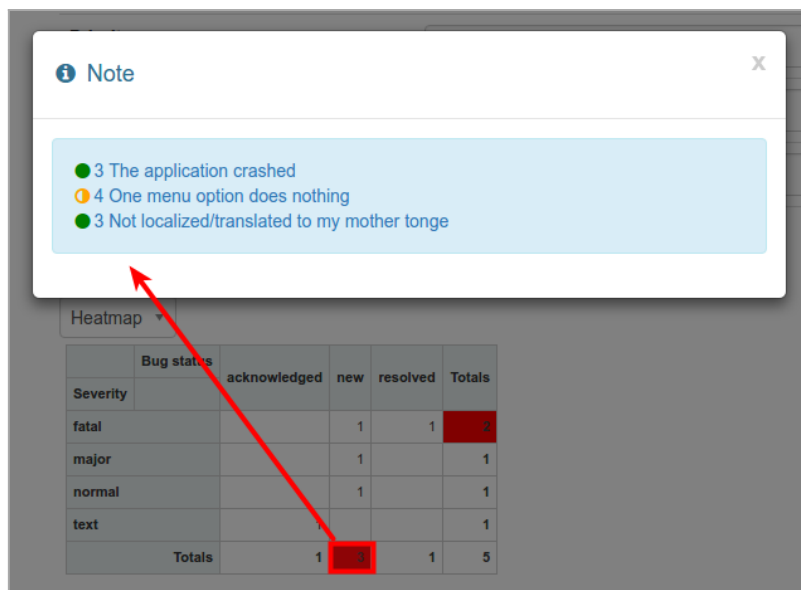
```
{pivottable data="tracker:1"}
```

Would produce with the data from that profile (at the time of this writing):



Click to expand

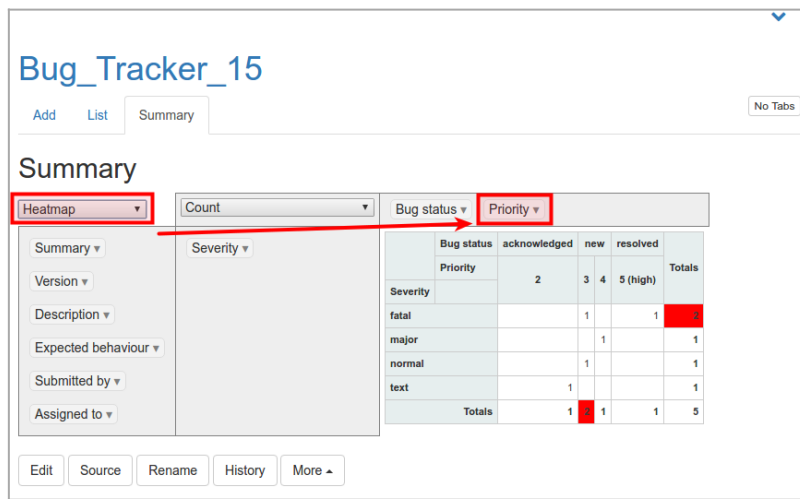
Once saved, you can click on any cell of the pivottable report, and you will be shown a popup with the information tracker items that produced the count for that cell, with a link to view the full record of each of the tracker items.



Click to expand

From there we can edit the Pivottable again through the PivotTable UI itself, and modify the variables to be used as row or column data, or add new variables in columns, change the type of table or chart produced, etc.

A table can even consider more than one value in a single dimension. The following example therefore uses both Status and Priority on the horizontal axis (meaning a column can have subcolumns):



Click to expand

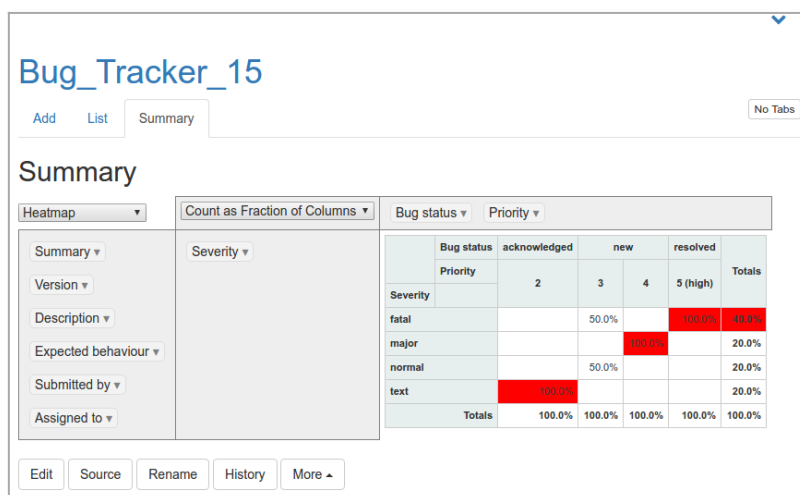
## Example 2

A default configuration for each parameter of the plugin can also be specified. For instance, the values considered in both dimensions can be specified, using the *rows* and *cols* parameters, as in the following example (which considers 2 values on the horizontal axis, as in the previous screenshot).

This code:

```
{PIVOTTABLE(data="tracker:1" width="100%" height="500px" rows="bug_tracker_severity"
cols="bug_tracker_bug_status:bug_tracker_priority" rendererName="Heatmap" aggregatorName="Count as Fraction of
Columns" vals="bug_tracker_priority")} {PIVOTTABLE}
```

Would produce with the data from that profile (at the time of this writing):



Click to expand

## Example 3

You can also make some charts:

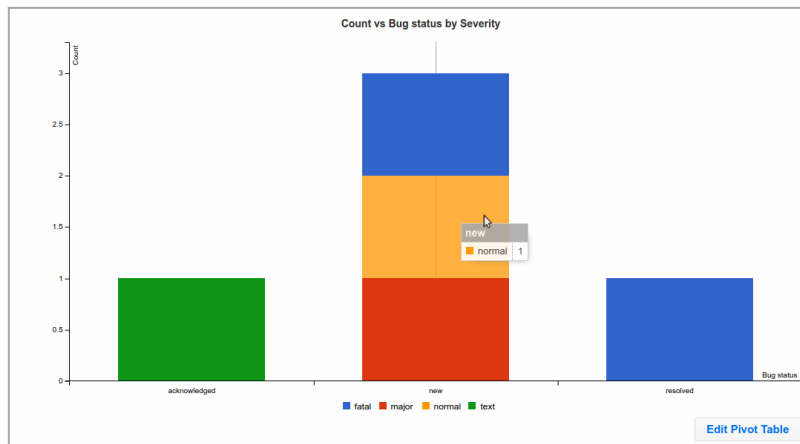
- Line Chart
- Bar Chart
- Stacked Bar Chart
- Area Chart
- Scatter Chart

For instance...

*This code:*

```
{PIVOTTABLE(data="tracker:1" width="400px" height="300px" rows="bug_tracker_severity" cols="bug_tracker_bug_status" rendererName="Stacked Bar Chart" aggregatorName="Count")} {PIVOTTABLE}
```

*Would produce:*



Click to expand

## Example 4 (subtotals since Tiki 18)

Since [Tiki18](#) new renderers were added to allow displaying subtotal sums for rows in the table, through the [addition of subtotal.js](#) to the plugin:

- Table With Subtotal
- Table With Subtotal Bar Chart
- Table With Subtotal Heatmap
- Table With Subtotal Row Heatmap
- Table With Subtotal Col Heatmap



**Bug Tracker**

Add List Summary

### Summaries

Table With Subtotal Heatmap Count

Severity Bug status

Severity	Bug status	Totals
		2
fatal	new	1
	resolved	1
major	new	1
normal	new	1
text	acknowledged	1
Totals		5

object\_id object\_type creation\_date

Click to expand

If you click on the triangle at the left of each row name ("Severity" values, in this example), you will get the options of the next column ("Bug Status", in this example) contracted, hiding the different values of this other column, and showing only the subtotals for the field where you first clicked at (a "severity" value, or the whole column "Severity").

Table With Subtotal Heatmap Count

Priority Severity

Summary Bug status

Version Description

Expected behaviour Submitted by

Assigned to

Severity	Bug status	Totals
▶ fatal	2	
▶ major	new	1
▶ normal	1	
▶ text	acknowledged	1
Totals		5

Click to expand

## Example 5 (activity stream since Tiki19)

Since [Tiki19](#), you can display data from the [PluginActivityStream](#) into the Plugin PivotTable.

Minimum syntax to let the user choose options throught the PivotTable UI:

```
{pivottable data="activitystream"}
```

Example:

```
{pivottable data="activitystream" rows="object:type" cols="modification_date" width="100%" height="1000px"
renderName="Bar Chart" aggregatorName="Count" inclusions="{ }" menuLimit="500"
aggregateDetails="object_type"}
```

## Advanced Usage

If your dataset is huge (many thousands), or the tracker has many fields (many hundreds), and some of them carrying heavy data (long text fields, or big files/images attached to the tracker items in files tracker fields), you can use an advanced syntax to filter the number of items or reduce the amount of tracker fields exposed to the pivot table to work with, so that the good performance of the pivot table plugin is preserved.

You can use the **filter** or **display** commands (both from [PluginList](#) ) to indicate which items (filter) or tracker fields (display) you want to use, respectively, in the pivot table plugin.

Example:

```
{display name="tracker_field_JobType"}
```

See:

- [PluginList filter control block](#)
- [PluginList display control block](#)

## Add creation\_date, modification\_date and status

You can also indicate if you want the creation\_date, modification\_date and status if the tracker items to be displayed as optional variables to be used in the report.

```
{display name="creation_date" format="datetime"} {display name="modification_date" format="datetime"} {display name="tracker_status"}
```

## Customize aggregation date values

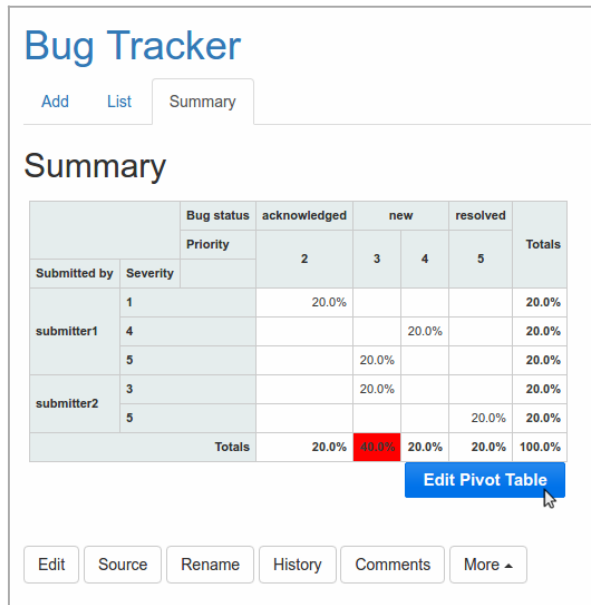
See [Derived Attribute of a date](#)

# Advanced Example 1

This code:

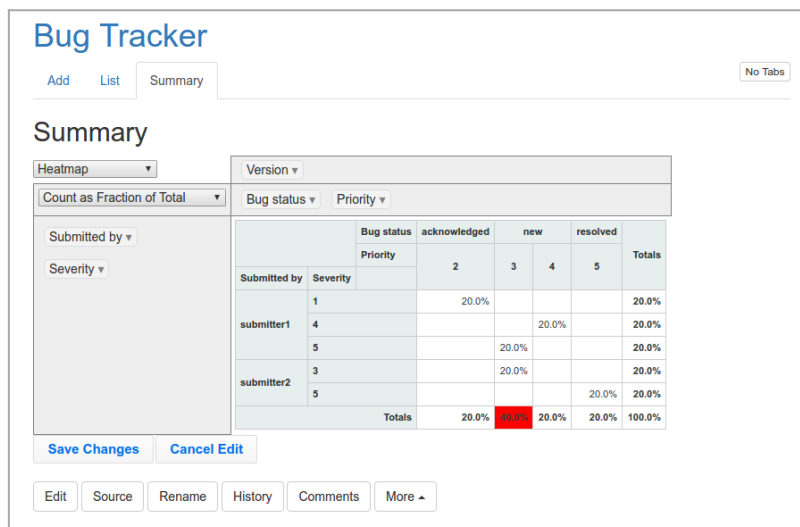
```
{PIVOTTABLE(data="tracker:4" rows="bug_tracker_submitted_by:bug_tracker_severity:" cols="bug_tracker_bug_status:bug_tracker_priority:" rendererName="Heatmap" aggregatorName="Count as Fraction of Total")} {display name="tracker_field_bug_tracker_submitted_by" default=""} {display name="tracker_field_bug_tracker_severity" default=""} {display name="tracker_field_bug_tracker_bug_status" default=""} {display name="tracker_field_bug_tracker_priority" default=""} {display name="tracker_field_bug_tracker_version" default=""} {PIVOTTABLE}
```

Would produce with the data from that profile (at the time of this writing):



Click to expand

And once you click at the **Edit Pivot Table** button, you would see the controls to edit variable selection, but notice that you have less amount of variables to choose from than before; only the ones you have selected in the display commands of the plugin body above:



Click to expand

## Advanced example 2

This code:

```
{PIVOTTABLE(data="tracker:4" rows="bug_tracker_submitted_by:bug_tracker_severity:"
cols="bug_tracker_bug_status:bug_tracker_priority:" rendererName="Heatmap" aggregatorName="Count as Fraction of
Total")} {filter field="tracker_field_bug_tracker_bug_status" content="new"} {display
name="tracker_field_bug_tracker_submitted_by" default=""} {display name="tracker_field_bug_tracker_severity"
default=""} {display name="tracker_field_bug_tracker_bug_status" default=""} {display
name="tracker_field_bug_tracker_priority" default=""} {display name="tracker_field_bug_tracker_version" default=""}
{PIVOTTABLE}
```

Would produce the same as before, but restricting the data set to only those items tagged as new bugs (bug status is "new"):

**Bug Tracker**

Add List Summary

### Summary

		Bug status	new		Totals
		Priority	3	4	
Submitted by	Severity				
submitter1	4			33.3%	33.3%
	5		33.3%		33.3%
submitter2	3		33.3%		33.3%
Totals			66.7%	33.3%	100.0%

[Edit Pivot Table](#)

Edit Source Rename History Comments More ▾

Click to expand

Again, if you edit the pivot table, you will see that also have the restricted the number of fields, as well as the data points, that comply with your filtering criteria:

Heatmap

Version object\_id object\_type pivotLink

Count as Fraction of Total

Bug status Priority

Submitted by Severity

		Bug status	new		Totals
		Priority	3	4	
Submitted by	Severity				
submitter1	fatal		33.3%		33.3%
	major			33.3%	33.3%
submitter2	normal		33.3%		33.3%
Totals			66.7%	33.3%	100.0%

Save Changes Cancel Edit

Click to expand

## Advanced example 3

Since Tiki 16.2, any plugin using unified index search formatter and wikibuilder (aka filter, output, display, format, etc. wiki syntax, such as [PluginPivottable](#) ) now accepts `{filter field=... editable=...}` syntax to allow user enter a search value instead of hard-coding it. This means a trackerfilter-like functionality for unified index-based plugins.

You can see this feature in action if you apply profile [Bug\\_Tracker\\_16](#)

Therefore, this code:

```
{PIVOTTABLE(data="tracker:4" rows="bug_tracker_severity" cols="bug_tracker_bug_status" rendererName="Heatmap" aggregatorName="Count")} {filter field="tracker_field_bug_tracker_priority" editable="content"} {filter field="tracker_field_bug_tracker_assignee" editable="content"} {filter field="tracker_field_bug_tracker_summary" editable="content"} {PIVOTTABLE}
```

Would produce the expected pivottable report, with some fields on top to allow the user to filter results before re-drawing the table or chart:

Priority

Assigned to

Summary

Severity	Bug status	acknowledged	new	resolved	Totals
fatal			1	1	2
major			1		1
normal			1		1
text		1			1
	Totals	1	3	1	5

Click to expand

## Related pages

- [Grouped Data](#)
- [Derived Attribute of a date](#)
- [Profiles Wizard](#)
- [Trackers](#)
- <http://nicolas.kruchten.com/pivottable/>
  - <https://github.com/nicolaskruchten/pivottable/wiki>

## Aliases

[Plugin Pivot Table](#) | [Plugin PivotTable](#) | [PluginPivot Table](#) | [Pivot Table](#) | [PivotTable](#) | [Plugin Pivot Tables](#) | [Plugin PivotTables](#) | [PluginPivot Tables](#) | [Pivot Tables](#) | [PivotTables](#) | [Plugin Data Pilot](#) | [Plugin DataPilot](#) | [PluginData Pilot](#) | [Data Pilot](#) | [Data Pilot](#) |