

# Unpivot Transform

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Reshapes the data by merging one or more columns into key and value columns. Keys are the names of input columns, and value columns are the cell values from the source. Rows of data are duplicated, once for each input column.

The `unpivot` column can be applied to multiple columns in the same transform. All columns are un-pivoted into the same `key` and `value` columns. When this transform is applied to two columns, the number of rows in the dataset is doubled.

This transform is the opposite of the `pivot` transform, which converts a set of column values into distinct columns. See *Pivot Transform*.

## Basic Usage

### Single- or multi-column example:

You can specify single columns or comma-separated sets of columns.

```
unpivot col: FirstName, MiddleInitial
```

**Output:** Converts the values in the columns `FirstName` and `MiddleInitial` into separate `key` and `value` columns.

### Column range example:

You can also specify ranges of columns using the tilde (~) operator:

```
unpivot col:Column1~Column20
```

**Output:** Converts all of the values in columns between `Column1` and `Column20` into `key` and `value` columns.

## Syntax and Parameters

```
unpivot col: column_ref [groupEvery: int_num]
```

Token	Required?	Data Type	Description
<code>unpivot</code>	Y	transform	Name of the transform
<code>col</code>	Y	string	Name of source column or columns

groupEvery	N	string	If specified, this parameter defines the number of individual key-value pairs to store in each generated column. Default is 1.
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For more information on syntax standards, see *Language Documentation Syntax Notes*.

## col

Identifies the column or columns to which to apply the transform. You can specify one or more columns.

To specify multiple columns:

- Discrete column names are comma-separated.
- Values for column names are case-sensitive.

### Usage Notes:

Required?	Data Type
Yes	String (column name)

## groupEvery

Specifies the number of output key-value pair columns to produce after unpivoting.

This optional parameter is used to create multiple sets of key-value pair columns in the output. The columns listed in the `col` parameter are placed into each pair of output key-value columns sequentially. After all key-value pair columns are filled in a record, the next column is placed into the first key-value pair column of the next record.

By default, this value is 1, meaning that each column specified in the transform is rendered into a new record in a single pair of key-value columns.

### Usage Notes:

Required?	Data Type
No	Integer (positive)

## Examples

**Tip:** For additional examples, see *Common Tasks*.

### Example - Basic Unpivot

#### Source:

productName	productColor	productSize
Whizbang	red	M
Whizbang	red, blue	L
Whizbang	green	M
Bangwhiz	red	S

Bangwhiz	blue	M
Bangwhiz	red	S

**Transform:**

After you have created a header, if necessary, add the following transform:

```
unpivot col:productColor
```

**Results:**

productName	productSize	key	value
Whizbang	M	productColor	red
Whizbang	L	productColor	red, blue
Whizbang	M	productColor	green
Bangwhiz	S	productColor	red
Bangwhiz	M	productColor	blue
Bangwhiz	S	productColor	red

**Extended:**

Note how each instance of a value results in a separate row; duplicate values are included. For a single-column unpivot, this transform results in the same number of rows as the source.

- Since the value is treated as a string, the value red, blue is treated as one value.

Now, edit the transform you just added. Replace it with the following, which includes the productSize key as part of the transform:

```
unpivot col:productColor,productSize
```

**Results:**

productName	key	value
Whizbang	productColor	red
Whizbang	productSize	M
Whizbang	productColor	red, blue
Whizbang	productSize	L
Whizbang	productColor	green
Whizbang	productSize	M
Bangwhiz	productColor	red
Bangwhiz	productSize	S
Bangwhiz	productColor	blue
Bangwhiz	productSize	M
Bangwhiz	productColor	red
Bangwhiz	productSize	S

Row keys alternate based on the order in which the source columns are specified in the transform. Since the transform specifies two columns, the number of key-value pairs is doubled, which results in a dataset that has twice as many rows as the source.

**Example - Basic Pivot with groupEvery**

From the previous example, modify the unpivot transform to be the following:

```
unpivot col:productColor,productSize groupEvery:2
```

**Results:**

productName	key1	value1	key2	value2
Whizbang	productColor	red	productSize	M
Whizbang	productColor	red, blue	productSize	L
Whizbang	productColor	green	productSize	M
Bangwhiz	productColor	red	productSize	S
Bangwhiz	productColor	blue	productSize	M
Bangwhiz	productColor	red	productSize	S