

# EXAMPLE - Flatten and Valuestocols Transforms

This example shows how you can break out a column of nested values into separate rows and columns of data.

## Source:

The following data covers magazine subscriptions for individual customers. Their subscriptions are stored in an array of values. You are interested in who is subscribing to each magazine.

CustId	Subscriptions
Anne Aimes	["Little House and Garden","Sporty Pants","Life on the Range"]
Barry Barnes	["Sporty Pants","Investing Smart"]
Cindy Compton	["Cakes n Pies","Powerlifting Plus","Running Days"]
Darryl Diaz	["Investing Smart","Cakes n Pies"]

## Transformation:

When this data is loaded into the Transformer, you might need to apply a header to it. If it is in CSV format, you might need to apply some `replace` transformations to clean up the `Subscriptions` column so it looks like the above.

When the `Subscriptions` column contains cleanly formatted arrays, the column is re-typed as Array type. You can then apply the following transformation:

<b>Transformation Name</b>	Expand Array into rows
<b>Parameter: Column</b>	Subscriptions

Each `CustId/Subscription` combination is now written to a separate row. You can use this new data structure to break out instances of magazine subscriptions. Using the following transformation, you can add the corresponding `CustId` value to the column:

<b>Transformation Name</b>	Convert values to columns
<b>Parameter: Column</b>	Subscriptions
<b>Parameter: Fill when present</b>	CustId

Delete the two source columns:

<b>Transformation Name</b>	Delete columns
<b>Parameter: Columns</b>	CustId,Subscriptions
<b>Parameter: Action</b>	Delete selected columns

## Results:

Little_House_and_Garden	Sporty_Pants	Life_on_the_Range	Investing_Smart	Cakes_n_Pies	Powerlifting_Plus	R
Anne Aimes						
	Anne Aimes					
		Anne Aimes				

	Barry Barnes					
			Barry Barnes			
				Cindy Compton		
					Cindy Compton	
						Cir
			Darryl Diaz			
				Darry Diaz		