



# KQL



Common Operators	
<b>print</b> Time=now(), Message="hello"	Outputs single row with one or more scalar expressions
...   <b>count</b>	Counts records in input table (e.g. T)
...   <b>take</b> 10	Get few records - convenient to start get familiar with the data, No actual order ensured
...   <b>where</b> col1 > ago(1) and UserId = 'abcdef'	Filtering on a specific field
...   <b>search</b> "abc"	Will search all columns in the Perf table for the value (not case sensitive by default)
...   <b>project</b> Col1, Col2, ...	Chooses some columns
...   <b>project-away</b> Col1, Col2, ...	Removes some columns
...   <b>extend</b> NewCol1=Col1+Col2	Extend creates a calculated column and adds to the result set
...   <b>top</b> 10 by count_desc/asc	returns the first N rows of the dataset when the dataset is sorted by
...   <b>sort</b> by Col1 desc	Sort the rows of the input table into order by one or more columns
...   <b>summarize</b> count(), dcount(Id) by Col1, Col2	Groups the rows according to the aggregations columns (by)
...   <b>distinct</b> Col1, Col2	Produces a table with the distinct combination of the provided columns of the input table
...   <b>join</b> (...) on Key1, Key2	Merges the rows of two tables to form a new table by matching values of the specified column(s) from each table. Kusto supports a full range of join types: fullouter, inner, innerunique, leftanti, leftantisemi, leftouter, leftsemi, rightanti, rightantisemi, rightouter, rightsemi
FactTable   <b>lookup</b> kind=leftouter DimTable on col1, col2	extends the columns of a fact table with values looked-up in a dimension table
...   <b>union</b> Tab1, Tab2	Takes two or more tables and returns the rows of all of them
...   <b>render</b> timechart	Renders results as a graphical output
...   <b>mv-expand</b> Col1,Col2 ...	Turn dynamic arrays to rows (multi-value expansion)
...   <b>parse</b> Col1 with <pattern>...	Take care of unstructured data
...   extend C1 = <b>range</b> (1, 8, 3)	Generates a dynamic array holding a series of equally-spaced values
...   <b>make-series</b> sum(col1) default=0, avg(col1) default=0 on timestamp from datetime(2016-01-01) to datetime(2016-01-10) step 1d by col2	Create series of specified aggregated values along specified axis
<b>let</b> name = "Free"; ...   <b>where</b> CounterName == name	binds a name to an expression
<b>range</b> x from 1 to 10 step 1   <b>as</b> T1	Binds a name to the operator's input tabular expression
...   <b>invoke</b> foo(param1, param2)	invokes lambda that receives the source of invoke as tabular parameter argument
...   <b>evaluate</b> pluginName (Arg1, arg2)	operator is a tabular operator that provides the ability to invoke query language extensions known as <b>plugins</b>
Common Functions	
...   <b>where</b> Timestamp > <b>ago</b> (1h)	ago returns a time in the past, using the current time as a starting point d – days, h – hours, m – minutes, s – seconds, ms – milliseconds, tick – nanosecond, microsecond – microseconds
...   extend col2 = <b>format_datetime</b> (col1, "y-M-d"),	format_datetime allows you to return specific date formats format_datetime(TimeGenerated, "MM/dd/yyyy HH:mm:ss.ffff") // f/F can also be used for subSs.
...   extend col1 = <b>case</b> ( col1 < 10, "Critical", "You're OK!")	Evaluates a list of predicates, and returns the first result expression whose predicate is satisfied, or the final else expression