

EXAMPLE - NOW and TODAY Functions

This example illustrates you to generate the date and time values for the current date and timestamp in the specified time zone.

Functions:

Item	Description
NOW Function	Derives the timestamp for the current time in UTC time zone. You can specify a different time zone by optional parameter.
TODAY Function	Derives the value for the current date in UTC time zone. You can specify a different time zone by optional parameter.
DATEDIF Function	Calculates the difference between two valid date values for the specified units of measure.

Source:

The following table includes flight arrival information for Los Angeles International airport.

FlightNumber	Gate	Arrival
1234	1	2/15/17 11:35
212	2	2/15/17 11:58
510	3	2/15/17 11:21
8401	4	2/15/17 12:08
99	5	2/16/17 12:12
116	6	2/16/17 13:32
876	7	2/15/17 16:43
9494	8	2/15/17 21:00
102	9	2/14/17 19:21
77	10	2/16/17 12:31

Transformation:

You are interested in generating a status report on today's flights. To assist, you must generate columns with the current date and time values:

Tip: You should create separate columns containing static values for `NOW` and `TODAY` functions. Avoid creating multiple instances of each function in your dataset, as the values calculated in them can vary at execution time.

Transformation Name	New formula
Parameter: Formula type	Single row formula
Parameter: Formula	<code>NOW('America\Los_Angeles')</code>
Parameter: New column name	<code>'currentTime'</code>

Transformation Name	New formula
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Parameter: Formula type	Single row formula
Parameter: Formula	TODAY('America\Los_Angeles')
Parameter: New column name	'currentDate'

Next, you want to identify the flights that are landing today. In this case, you can use the DATEDIF function to determine if the Arrival value matches the currentTime value within one day:

NOTE: The DATEDIF function computes difference based on the difference from the first date to the second date based on the unit of measure. So, a timestamp that is 23 hours difference from the base timestamp can be within the same unit of day, even though the dates may be different (2/15/2017 vs. 2/14/2017).

Transformation Name	New formula
Parameter: Formula type	Single row formula
Parameter: Formula	DATEDIF(currentDate, Arrival, day)
Parameter: New column name	'today'

Since you are focusing on today only, you can remove all of the rows that do not apply to today:

Transformation Name	Filter rows
Parameter: Condition	Custom formula
Parameter: Type of formula	Custom single
Parameter: Condition	today <> 0
Parameter: Action	Delete matching rows

Now focusing on today's dates, you can calculate the difference between the current time and the arrival time by the minute:

Transformation Name	New formula
Parameter: Formula type	Single row formula
Parameter: Formula	DATEDIF(currentTime, Arrival, minute)
Parameter: New column name	'status'

Using the numeric values in the status column, you can compose the following transform, which identifies status of each flight:

Transformation Name	Edit column with formula
Parameter: Columns	status

Parameter:	if(status < -20, 'arrived', if(status > 20, 'scheduled', if
Formula	(status <= 0, 'landed', 'arriving'))

Results:

You now have a daily flight status report:

currentDate	currentTime	FlightNumber	Gate	Arrival	status	today
2017-02-15	2017-02-15 11:46:12	1234	1	2/15/17 11:35	landed	0
2017-02-15	2017-02-15 11:46:12	212	2	2/15/17 11:58	arriving	0
2017-02-15	2017-02-15 11:46:12	510	3	2/15/17 11:21	arrived	0
2017-02-15	2017-02-15 11:46:12	8401	4	2/15/17 12:08	scheduled	0
2017-02-15	2017-02-15 11:46:12	876	7	2/15/17 16:43	scheduled	0
2017-02-15	2017-02-15 11:46:12	9494	8	2/15/17 21:00	scheduled	0
2017-02-15	2017-02-15 11:46:12	102	9	2/14/17 19:21	arrived	0

The currentDate, currentTime, and today columns can be deleted.