

EXAMPLE - NOW and TODAY Functions

This example illustrates how the `NOW` and `TODAY` functions operate. Both functions generate outputs of Datetime data type.

- `NOW` - Generates valid Datetime values for the current timestamp in the specified time zone. See *NOW Function*.
- `TODAY` - Generates valid Datetime for the current date in the specified time zone. See *TODAY Function*.
- `DATEDIF` - Calculates the difference between two Datetime values based on a specific unit of measure. See *DATEDIF Function*.

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	'currentTime'

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

Parameter: New column name	'currentDate'
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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	<code>DATEDIF(currentDate, Arrival, day)</code>
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	<code>today <> 0</code>
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	<code>DATEDIF(currentTime, Arrival, minute)</code>
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: Formula	<code>if(status < -20, 'arrived', if(status > 20, 'scheduled', if(status <= 0, 'landed', 'arriving')))</code>

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.