

EXAMPLE - Time Zone Conversion Functions

This example shows how you can use functions to convert Datetime values to different time zones.

Functions:

Item	Description
CONVERTFROM UTC Function	Converts Datetime value to corresponding value of the specified time zone. Input can be a column of Datetime values, a literal Datetime value, or a function returning Datetime values.
CONVERTTOUT C Function	Converts Datetime value in specified time zone to corresponding value in UTC time zone. Input can be a column of Datetime values, a literal Datetime value, or a function returning Datetime values.
CONVERTTIMEZ ONE Function	Converts Datetime value in specified time zone to corresponding value second specified time zone. Input can be a column of Datetime values, a literal Datetime value, or a function returning Datetime values.
ISMISMATCHED Function	Tests whether a set of values is not valid for a specified data type.

Source:

row	datetime
1	2020-03-15
2	2020-03-15 0:00:00
3	2020-03-15 +08:00
4	2020-03-15 1:02:03
5	2020-03-15 4:02:03
6	2020-03-15 8:02:03
7	2020-03-15 12:02:03
8	2020-03-15 16:02:03
9	2020-03-15 20:02:03
10	2020-03-15 23:02:03

Transformation:

When you import the above dates, Trifacta may not recognize the column as a set of dates. You can use the column menus to format the date values to the following standardized format:

```
yyyy*mm*dd*HH:MM:SS
```

Transformation Name	Change column data type
Parameter: Columns	datetime
Parameter: New type	Date/Time
Parameter: Date/Time type	yyyy*mm*dd*HH:MM:SS

When the type has been changed, row 1 and row 3 have been identified as invalid. You can use the following transformation to remove these rows:

Transformation Name	Filter rows
Parameter: Condition	Custom formula
Parameter: Type of formula	Custom single
Parameter: Condition	ISMISMATCHED(datetime, ['Datetime', 'yy-mm-dd hh:mm:ss', 'yyyy*mm*dd*HH:MM:SS'])
Parameter: Action	Delete matching rows

When the Datetime values are consistently formatted, you can use the following transformations to perform conversions. The following transformation converts the values from UTC to US/Eastern time zone:

Transformation Name	New formula
Parameter: Formula type	Single row formula
Parameter: Formula	CONVERTFROMUTC(datetime, 'US\Eastern')
Parameter: New column name	'datetimeUTC2Eastern'

This transformation now assumes that the date values are in US/Pacific time zone and converts them to UTC:

Transformation Name	New formula
Parameter: Formula type	Single row formula
Parameter: Formula	CONVERTTOUTC(datetime, 'US\Pacific')
Parameter: New column name	'datetimePacific2UTC'

The final transformation converts the date time values between arbitrary time zones. In this case, the values are assumed to be in US/Alaska time zone and are converted to US/Hawaii time zone:

Transformation Name	New formula
Parameter: Formula type	Single row formula
Parameter: Formula	CONVERTTIMEZONE(datetime, 'US\Alaska', 'US\Hawaii')
Parameter: New column name	'datetimeAlaska2Hawaii'

Results:

row	datetime	datetimeAlaska2Hawaii	datetimePacific2UTC	datetimeUTC2Eastern
2	2020-03-15 00:00:00	2020-03-14 22:00:00	2020-03-15 07:00:00	2020-03-14 20:00:00
4	2020-03-15 01:02:03	2020-03-14 23:02:03	2020-03-15 08:02:03	2020-03-14 21:02:03
5	2020-03-15 04:02:03	2020-03-15 02:02:03	2020-03-15 11:02:03	2020-03-15 00:02:03
6	2020-03-15 08:02:03	2020-03-15 06:02:03	2020-03-15 15:02:03	2020-03-15 04:02:03
7	2020-03-15 12:02:03	2020-03-15 10:02:03	2020-03-15 19:02:03	2020-03-15 08:02:03
8	2020-03-15 16:02:03	2020-03-15 14:02:03	2020-03-15 23:02:03	2020-03-15 12:02:03

9	2020-03-15 20:02:03	2020-03-15 18:02:03	2020-03-16 03:02:03	2020-03-15 16:02:03
10	2020-03-15 23:02:03	2020-03-15 21:02:03	2020-03-16 06:02:03	2020-03-15 19:02:03