

Timezones

All date time vectors in R have two components:

- a vector of times described in a particular **reference** timezone (UTC)
- a single **local** time zone that indicates what zone should be used for all computations

The default timezone will always be UTC. If an input includes an explicit timezone offset ("2019-05-02T10:30-05:00"), this will be applied but converted into UTC ("2019-05-02T15:30Z").

The function **with_tz()** takes a datetime and sets a new local timezone. It does not change the underlying times in the reference timezone.

Modifying Timezone

Sometimes you may be given a data set that contains information about a date time in a particular timezone, but that time zone is not explicitly set. For example, something like "2019-05-02T10:30", where this refers to 10:30am in Chicago rather than UTC.

To fix these, we can use **force_tz()** to modify the date time. This appear to do very little, but actually do a lot. The local timezone is changed to the desired timezone; the reference time is changed so that the time in the new local time matches the time in the original local time.

Finally, we can use **force_tzs()** in a similar way but each of the original data points was given in a different timezone. The output needs a single local time, so we set both a vector of original timezones and a single output timezone.