21 Use of Time in Delft-FEWS

Various time concepts in FEWS

Various concepts of time are available in Delft-FEWS. In this section an overview is given of the various time concepts and their role in the system.

Internal timestamps

All timestamps are stored as GMT without Daylight saving. The internal time is always Greenwich Mean Time (GMT). All time related information is stored in the FEWS database in GMT. Since 2017.02 the resolution is in millis. Before 2017.02 seconds was the resolution.

Current time

The current time is taken from the computer clock. For internal use GMT is derived from the computer clock and the time zone. The current time is by default displayed in GMT, but can also be displayed in local time.

Current system time

The current system time is the time in which the system 'lives'. The current system time moves forward in the so-called "Cardinal Time Step". In the live system the current system time will generally be the same as the current time. For analysis purposes, the system time can be set back to simulate a particular situation in the past. When the system time is set back, only information - e.g. observed data and external forecasts- will be available to the system with a timestamp before the set system time. In case an hindcast for a particular flood is made with the system time set back to for example 13:00 on 21 January 2004, only data, that were imported into the database before this time will be used by the system. The system behaves as if the current time was 13:00 on 21 January 2004. When part of the required import data streams were missing at that moment but have been received later, they are not used in the analysis. In case however, the same analysis is done without setting back the system , all data until the current time will be available for the analysis. This means that in this case also the above mentioned missing import data will be used in the analysis.

Display time

The display time is used in the time series display and allows the operator to define view windows on the selected time series. Note that the DisplayTime works like a TimeZero for the data displayed! So changing the displayTime to a different date does not only change the view period, but in case of simulated and forecast timeseries, might lead to the selection of timeseries with a different forecast time.

Setting the display time has no effect on data stored in the database.