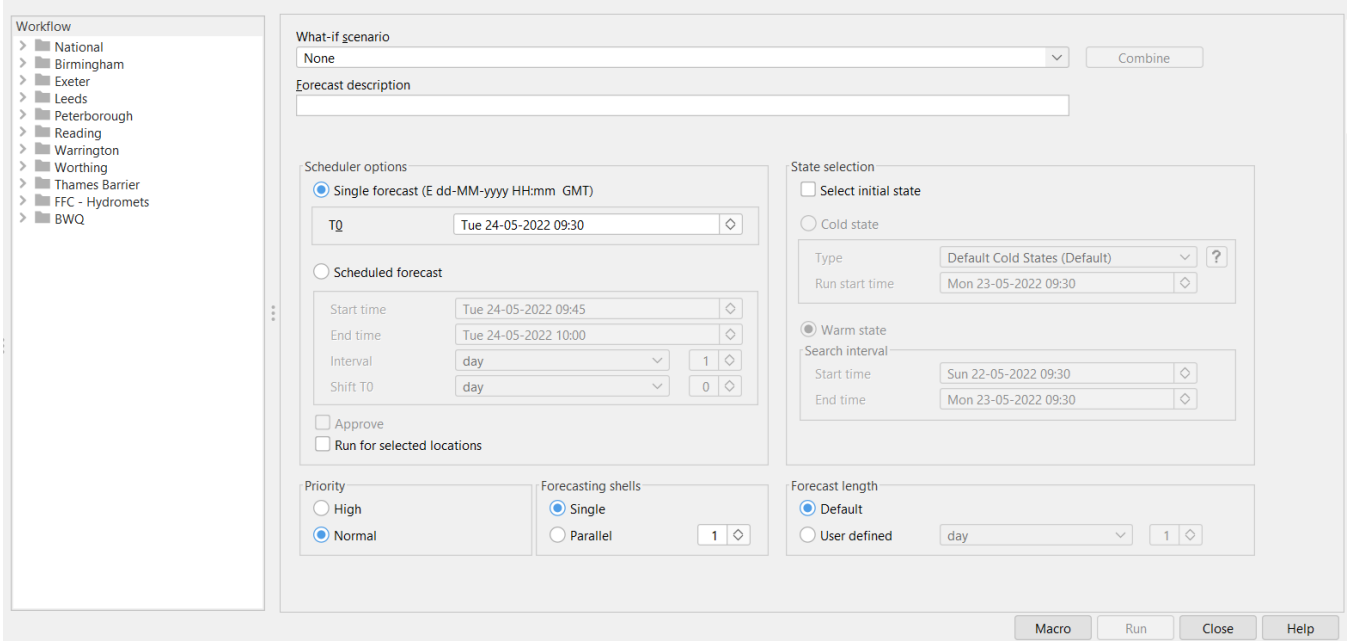
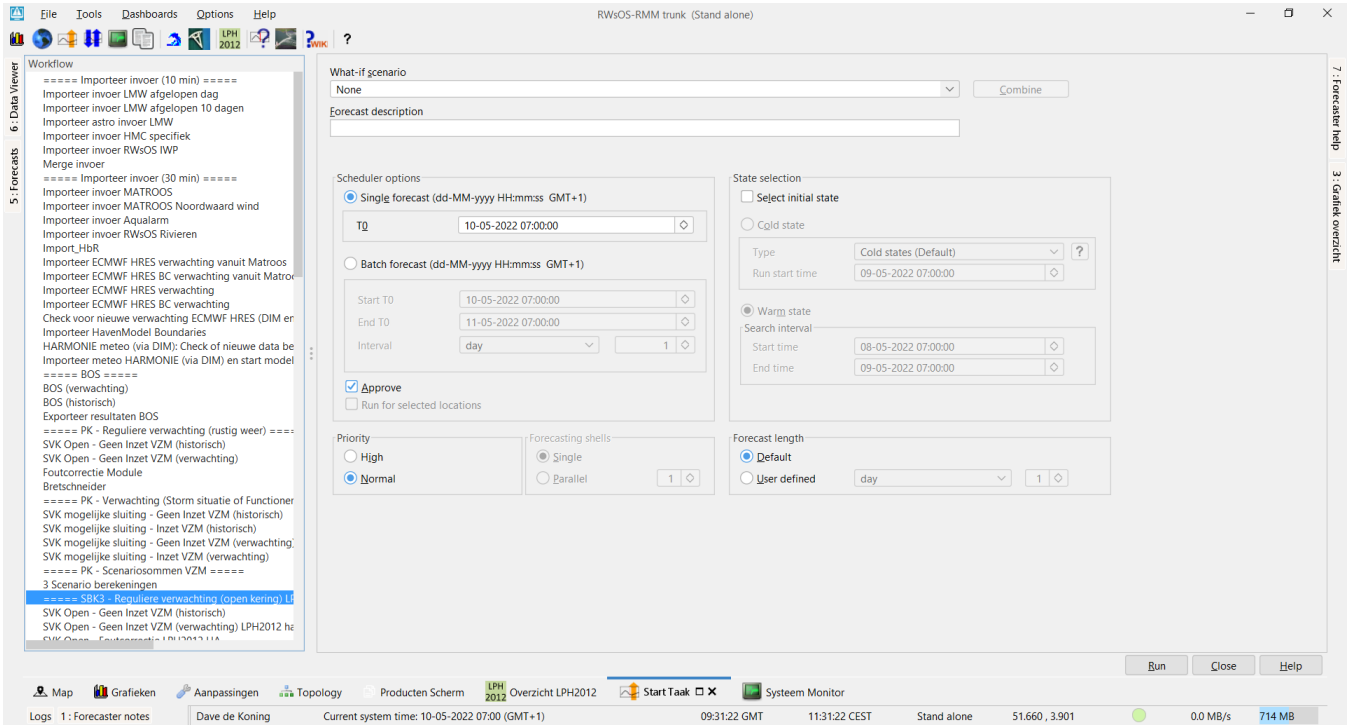
06 Manual Forecast Display

Manual Forecast Display

The Manual Forecast display (see below) in the *Operator Client* allows for the running of single or a manually scheduled forecast.



The Manual Forecast display (see below) in a *Standalone* system is slightly different from the one in the Operator Client and allows for running of a single forecast or a batch of forecasts.

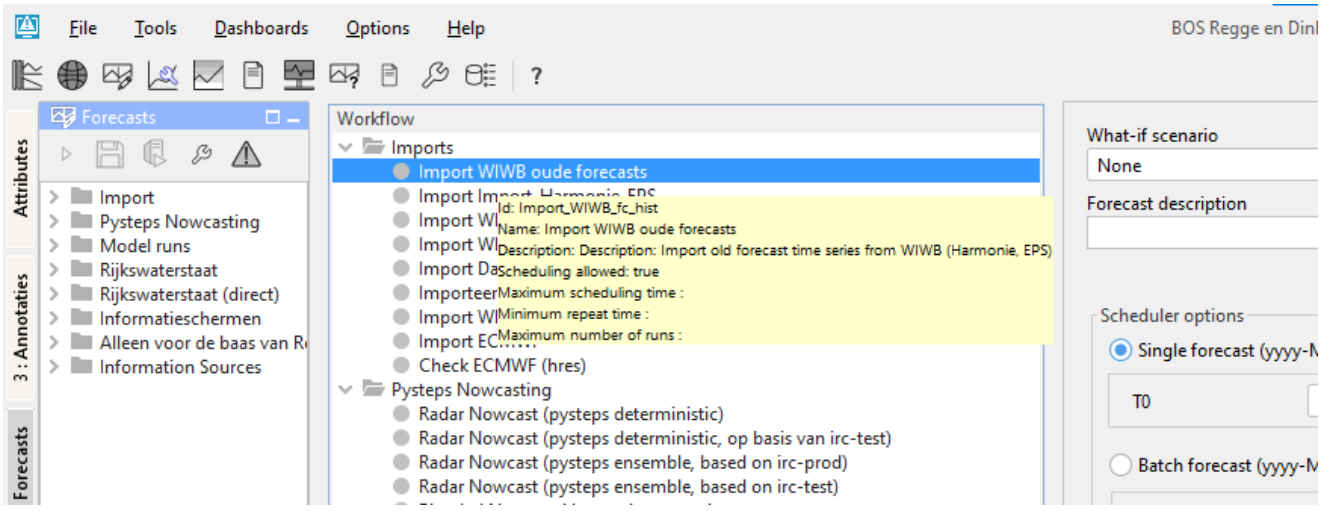


A single or a series of forecasts can be submitted to the system by pressing [Run]. With [Close], a user can leave the Manual Forecast display.

The various items in the Manual Forecast display are described below.

Workflow

A workflow can be selected from a list with pre-configured workflows. By hovering over a workflow from this list, a tooltip appears containing the description of the selected workflow.



Notification after completion workflow

An automatic notification pops up after the completion of the workflow.

What-if Scenario

A What-if Scenario can be selected from a drop-down list with predefined What-if Scenarios. By hovering over a What-if Scenario, a tooltip appears containing the description of the selected What-if Scenario. What-if Scenarios are defined via the What-if Scenario display.

Forecast description

A forecast description can be entered in this field. Entering of a description is not obligatory.

Please note that the *forecast name* is generated automatically by the system and consists of the start time of a forecast, (ii) the selected workflow and (iii) the selected What-if Scenario.

Scheduler options (only in Operator Client)

Two types of manual forecasts can be defined:

- single forecast
- scheduled forecast

A single forecast will only run once. For single forecast only the *T0* of the forecast has to be entered in the date & time field (yyyy-MM-dd HH:mm).

A scheduled manual forecast will run for a period of time and with a time interval both defined by the user. In case a manual forecast is scheduled, the following information should be entered by the user:

- Period of time for which a scheduled manual forecast should run is defined by entering the *Start time* and *End time* (yyyy-MM-dd HH:mm). The first forecast run is done at the Start time.
- Via menu item *Interval* , the time interval at which the scheduled manual should run can be defined.
- Entering *Shift T0* allows the user to define a period of time over which the T0 of the forecast itself should be set back in relation to the Start time of the forecast run.

For example: In case a scheduled manual forecasts should always be made at 8:00 AM and the T0 of the forecast itself should be midnight (00:00 AM), the *Shift T0* should be set at -8 hours while the *Start time* is set at 08:00 AM.

Batch Forecast options (only in standalone)

Two types of manual forecasts can be defined:

- single forecast
- batch forecast

A single forecast will only run once. For single forecast only the *T0* of the forecast has to be entered in the date & time field (yyyy-MM-dd HH:mm).

In batch mode, a scheduled manual forecast will run for a period of time and with a time interval both defined by the user. In case a manual forecast is run in batch mode, the following information should be entered by the user:

- Period of time for which a scheduled manual forecast should run is defined by entering the *Start T0* and *End T0* (yyyy-MM-dd HH:mm). The first forecast run will be made with the Start T0.
- Via menu item *Interval* , the time interval at with which the T0 of consecutive forecasts should be increased when submitted.

All runs will be submitted at the same time but will be run with different T0's as defined by the user.

Automatically approving forecasts

Ticking the [Approve] checkbox will set the status of the forecast automatically to *current* after it has been completed. In case you want to cancel this action or suspend it, please use the Scheduled Forecast tab in the System Monitor. When using the default synchprofiles.xml, non-approved runs will not be automatically downloaded by the synchronising OC and need to be downloaded manually before they can be opened.

Run for selected locations

The [Run for selected locations] checkbox is enabled when the selected workflow has an option <allowSelection=true> in *WorkflowDescriptors.xml*. The workflow will be then run only for locations selected in the Explorer Filters. It is not allowed to configure a forecast workflow with the allowSelection option set to true.

Run for selected ensemble member indices

Specify for which ensemble member indices the workflow should run. Separated by comma use - for ranges. For example 1,5-7,11

The ensemble member selection will apply to ANY ensemble that is present in the workflow.

Not setting a selection results in the full ensemble to be ran.
The user will need to know if the selection given is plausible: FEWS will not check if the specified ensemble members indeed exist.

State Selection

Leaving *Select initial state* unchecked, the default state- as has been configured by the system manager- will be used to start the historic run preceding a forecast simulation (see also *Running Modules*). For statefull simulation models- like hydrodynamic models- this means that the state selection for a model will follow the state selection rules as configured in the General Adapter Module Instances.

Checking *Select initial state* allows the user to select a particular state to start the historic run. A selection can be made between a cold and a warm state. A *Cold state* is a fixed module state defined in the system configuration. Normally various cold states will be available representing characteristic catchment conditions (e.g. dry, normal and wet). When a cold state should be used at the start of the historic run, the following information is required:

- *Type:*
  Via a drop-down list a typical cold state type can be selected.

- *Relative start time:*
  The relative start time defines the length of the historic run.

A *Warm state* is a module state that has been generated in a previous forecasting run and stored in the Central Database. In order to find a suitable warm state to start the historic run, a time interval needs to be defined within which the system will look for a warm state. The time interval is defined relative to the T0 of the forecast by the using the following entry fields:

- *Time unit:*
  The time unit that will be applied to defined the *Search interval* .

- *Start & end time:*
  The start and end time of the search interval are defined by multiplying the above mentioned *Time interval* with the values respectively entered in the first and second field. The system will look for the warm state with the date/time stamp closest to T0, which means that the multiplier for the Start time should always be set at a lower value than for the End time.

Please note that in case a *Warm state* is selected as the initial state, the date/time stamp of the warm state found within the defined *Search interval* will determine the actual start and therefore length of the historic run.

In case no *Warm state* can be found within the defined *Search interval* , the system will automatically run as if *Select initial state* was unchecked. This means that in that case the default state will be used for starting the historic run.

Priority

The user can give a forecast run either a *High* or a *Normal* priority. The Master Controller will give precedence to high priority tasks above normal priority tasks.

Please note that setting the priority to 'high' does not mean that the task will be directly carried out. In case other high priority tasks are waiting for execution, the new task will be added to the queue. When another task with normal priority is already being executed, it will not be cancelled when a new high priority task is submitted, but will be completed first.

Forecast length

A default forecast length is configured when setting up the forecasting system. Please note that within an area different forecasts lengths may have been configured depending on for example the hydrological (sub-) system and/or the forecasting models used.

F12 popup menu options

"Select modules to include in next run Ctrl+R" : since 2020.01 a workflow can be run for the selected modules also on FSS.