29 Time Series Table Display

Since 2020.01 it is possible to configure a display to show values of time series in a customizable table.

Time series can be defined via the <variable> elements and multiple <tableTabs> can be configured to use multiple tables spread over multiple tabs.

Variables can be used in multiple tabs.

A forecast filter can be configured to view values from different forecasts.

```
<?xml version="1.0" encoding="UTF-8"?>
<timeSeriesTableDisplay xmlns="http://www.wldelft.nl/fews" xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance" xsi:schemaLocation="http://www.wldelft.nl/fews http://fews.wldelft.nl/schemas/version1.0
/timeSeriesTableDisplay.xsd">
        <general>
                <displayName>Rainfall Forecast Summary</displayName>
                <forecastFilter>
                        <workflowId>Create_NWP_MediumRange_BE</workflowId>
                        <workflowId>Create_NWP_MediumRange_RWC</workflowId>
                </forecastFilter>
                <variable>
                        <variableId>Mean_6hr_BE</variableId>
                        <timeSeriesSet>
                                <moduleInstanceId>Process_Fluvial_BE</moduleInstanceId>
                                <valueType>scalar</valueType>
                                <parameterId>P.nwp.forecast</parameterId>
                                <qualifierId>Mean</qualifierId>
                                <locationSetId>UK_RFS_Polygons</locationSetId>
                                <timeSeriesType>simulated forecasting</timeSeriesType>
                                <timeStep unit="hour" multiplier="6"/>
                                <readWriteMode>read complete forecast</readWriteMode>
                                <ensembleId>FMRBE</ensembleId>
                                <ensembleMemberId>BE</ensembleMemberId>
                        </timeSeriesSet>
                </variable>
                <variable>
                        <variableId>Max_6hr_BE</variableId>
                        <timeSeriesSet>
                                <moduleInstanceId>Process_Fluvial_BE</moduleInstanceId>
                                <valueType>scalar</valueType>
                                <parameterId>P.nwp.forecast</parameterId>
                                <qualifierId>Max</qualifierId>
                                <locationSetId>UK_RFS_Polygons</locationSetId>
                                <timeSeriesType>simulated forecasting</timeSeriesType>
                                <timeStep unit="hour" multiplier="6"/>
                                <readWriteMode>read complete forecast</readWriteMode>
                                <ensembleId>FMRBE</ensembleId>
                                <ensembleMemberId>BE</ensembleMemberId>
                        </timeSeriesSet>
                </variable>
                <variable>
                        <variableId>Mean_12hr_BE</variableId>
                        <timeSeriesSet>
                                <moduleInstanceId>Process_Fluvial_BE</moduleInstanceId>
                                <valueType>scalar</valueType>
                                <parameterId>P.nwp.forecast</parameterId>
                                <qualifierId>Mean</qualifierId>
                                <locationSetId>UK_RFS_Polygons</locationSetId>
                                <timeSeriesType>simulated forecasting</timeSeriesType>
                                <timeStep unit="hour" multiplier="12"/>
                                <readWriteMode>read complete forecast</readWriteMode>
                                <ensembleId>FMRBE</ensembleId>
                                <ensembleMemberId>BE</ensembleMemberId>
                        </timeSeriesSet>
                </variable>
                <variable>
                        <variableId>Max_12hr_BE</variableId>
                        <timeSeriesSet>
                                <moduleInstanceId>Process_Fluvial_BE</moduleInstanceId>
```

```
                                <valueType>scalar</valueType>
                                <parameterId>P.nwp.forecast</parameterId>
                                <qualifierId>Max</qualifierId>
                                <locationSetId>UK_RFS_Polygons</locationSetId>
                                <timeSeriesType>simulated forecasting</timeSeriesType>
                                <timeStep unit="hour" multiplier="12"/>
                                <readWriteMode>read complete forecast</readWriteMode>
                                <ensembleId>FMRBE</ensembleId>
                                <ensembleMemberId>BE</ensembleMemberId>
                        </timeSeriesSet>
                </variable>
        </general>
        <tableTab>
                <title>Rainfall Forecast Summary 6 hr (BE)</title>
                <showValues>true</showValues>
                <showThresholdColors>true</showThresholdColors>
                <locationOrderingAttributeId>RFS_Order</locationOrderingAttributeId>
                <column variableId="Mean_6hr_BE" name="Mean"/>
                <column variableId="Max_6hr_BE" name="Max"/>
        </tableTab>
        <tableTab>
                <title>Rainfall Forecast Summary 12 hr (BE)</title>
                <showValues>true</showValues>
                <showThresholdColors>true</showThresholdColors>
                <locationOrderingAttributeId>RFS_Order</locationOrderingAttributeId>
                <column variableId="Mean_12hr_BE" name="Mean"/>
                <column variableId="Max_12hr_BE"/>
        </tableTab>
</timeSeriesTableDisplay>
```

Below an example can be seen where both values and threshold colors are used. They can be turned on and off separately with the elements <showValues> and <showThresholdColors>

Forecast selection

Create Reasonable Worst Case Medium Range Forecast	T0 = Wed Dec 11 06:00:00 GMT 2019	dispatchTime = Wed Dec 11 12:00:48 GMT 2019
Create Best Estimate Medium Range Forecast	T0 = Wed Dec 11 06:00:00 GMT 2019	dispatchTime = Wed Dec 11 12:00:00 GMT 2019
Create Reasonable Worst Case Medium Range Forecast	T0 = Tue Dec 10 15:00:00 GMT 2019	dispatchTime = Wed Dec 11 06:12:20 GMT 2019
Create Best Estimate Medium Range Forecast	T0 = Tue Dec 10 15:00:00 GMT 2019	dispatchTime = Wed Dec 11 06:04:45 GMT 2019

Rainfall Forecast Summary 6 hr (BE) | Rainfall Forecast Summary 12 hr (BE) | Rainfall Forecast Summary 6 hr (RWC) | Rainfall Forecast Summary 12 hr (RWC

Location	11/12 06:00		11/12 12:00		11/12 18:00		12/12 00:00		12/12 06:00		12/12 12:00		12/12 18:00		13/12 00:00		13/12 06:00	
	Mean	Max	Mean	Max	Mean	Max	Mean	Max	Mean	Max	Mean	Max	Mean	Max	Mean	Max	Mean	Max
Cornwall & Lower Ground	0.01	0.44	1.03	6.01	1.71	4.65	0.66	4.35	0.68	2.3	9.04	19.5	3.53	9.84	2.95	6.63	0.98	5.56
Sussex	0.0	0.0	0.49	3.4	2.83	5.91	0.0	0.0	0.0	0.0	1.6	3.75	8.63	24.62	3.74	8.16	0.01	0.34
Kent & South London	0.0	0.0	0.01	0.47	2.53	7.39	0.0	0.0	0.0	0.0	0.91	3.91	4.66	16.06	5.49	9.17	0.32	3.77
South London	0.0	0.0	0.0	0.0	0.85	1.75	0.0	0.0	0.0	0.0	0.3	1.13	6.55	12.88	6.73	8.53	1.23	3.77
North London	0.0	0.0	0.0	0.0	0.6	1.22	0.0	0.0	0.0	0.0	0.38	0.91	7.9	13.27	7.12	9.49	1.32	3.75
North East Thames	0.0	0.0	0.0	0.0	0.23	1.1	0.0	0.06	0.0	0.0	0.45	1.94	7.77	13.06	6.84	13.75	0.41	2.26
West Thames (South)	0.0	0.0	0.03	0.78	0.71	2.88	0.0	0.0	0.0	0.0	0.83	3.24	10.33	23.78	3.5	8.41	0.08	1.06
West Thames (North)	0.0	0.0	0.06	0.66	0.26	1.37	0.01	0.44	0.0	0.0	1.05	2.92	6.51	10.43	1.92	5.22	0.78	3.2
Cotswolds	0.0	0.0	0.46	1.04	0.77	2.03	0.0	0.0	0.0	0.0	1.12	2.28	4.74	7.76	2.06	3.73	0.89	3.2
Essex	0.0	0.0	0.0	0.0	0.33	1.32	0.01	0.62	0.0	0.0	0.19	0.6	2.22	5.78	7.78	15.94	2.0	4.69
Norfolk & Suffok	0.0	0.0	0.0	0.0	0.01	0.63	0.06	1.22	0.0	0.0	0.01	0.32	0.58	2.7	12.95	19.25	1.19	4.51
Bodmin Moor	0.0	0.0	1.77	3.54	1.64	3.44	0.92	2.32	0.67	2.15	4.94	7.48	4.59	8.66	3.39	5.53	0.82	2.98
Cambridgeshire	0.0	0.0	0.0	0.0	0.07	1.72	0.0	0.13	0.0	0.0	0.2	1.7	3.35	9.99	5.95	18.12	0.74	4.18
Welland & Nene	0.0	0.0	0.0	0.0	0.21	1.37	0.0	0.0	0.0	0.0	0.17	1.25	6.42	9.67	3.45	7.56	0.54	2.94
Lincolnshire	0.0	0.0	0.0	0.0	0.23	0.96	0.0	0.0	0.0	0.0	0.17	0.66	3.97	8.74	4.41	8.73	0.07	1.25
Avon & Soar Headwaters	0.0	0.0	0.01	0.35	0.69	1.92	0.0	0.0	0.0	0.0	0.21	1.54	5.3	8.27	2.18	5.85	0.8	2.79
Upper Trent & Tame	0.0	0.0	0.01	0.16	0.87	2.66	0.0	0.5	0.0	0.0	0.19	0.9	4.23	7.33	1.21	4.48	1.17	6.04
Peak District and Hills	0.0	0.0	0.0	0.35	1.05	4.73	0.69	4.61	0.03	0.87	0.55	1.93	6.31	11.93	2.56	9.05	4.06	11.23
Trent Lowlands	0.0	0.0	0.0	0.0	0.36	1.31	0.0	0.03	0.0	0.0	0.29	1.05	5.44	10.75	1.33	5.3	0.31	6.07
Upper Dee	0.02	0.31	7.34	20.51	0.98	3.69	0.47	2.87	0.17	1.58	1.18	4.78	5.95	11.37	5.4	10.69	5.38	15.55
Dee	0.0	0.13	0.57	3.66	0.76	2.79	0.02	0.88	0.0	0.0	0.06	0.4	3.04	5.33	1.7	5.07	1.63	5.72
Upper Severn	0.07	0.97	3.5	18.96	2.67	6.42	0.47	4.24	0.06	1.18	0.69	4.37	4.49	10.17	4.4	11.48	7.19	20.45
Dartmoor	0.25	1.5	0.91	2.32	2.0	5.5	0.89	2.0	1.12	4.38	8.72	25.9	7.57	11.17	4.44	8.22	1.32	3.72
Wye and Teme	0.03	0.94	2.96	15.49	2.68	10.02	1.08	4.46	0.23	1.87	1.16	5.04	4.54	9.69	6.54	14.84	13.24	24.42
Shropshire	0.04	0.5	0.3	4.1	1.05	2.48	0.0	0.19	0.0	0.0	0.08	0.58	3.19	6.63	1.06	3.97	1.15	4.66
Shropshire Hills	0.03	0.34	0.14	1.97	0.98	2.93	0.05	1.09	0.0	0.0	0.45	2.12	3.44	7.38	3.59	9.1	2.59	8.91
Teme and Wye	0.01	0.41	1.62	5.8	0.51	3.18	0.01	0.47	0.0	0.03	0.91	2.94	3.24	7.38	2.26	7.35	2.37	13.5
Severn Lowlands	0.0	0.0	0.56	2.04	0.95	3.1	0.0	0.0	0.0	0.03	0.59	3.03	3.27	7.31	1.65	5.85	0.82	3.75

A <column> can be defined for a variable, its header titel can be changed by the optional "name" element

There are multiple options to tweak the location list:

<locationOrderingAttributeId> => this attribute orders the locations by the values for this attribute

<locationLabelAttributeId> => the values of this attribute are used for the label of the locations

<locationGroupingAttributeId> => this groups locations with the same attribute value into foldable parts of the table.

Also a <thresholdgroupId> can be specified to select a subset of thresholds that should be used to determine the background color of the cells.