

Delft-FEWS 2019.02 Solved Features								
Component/s	Key	Customer name	Summary	Release Note Text	Release Note Text Description	Link to Documentation	Config Example	Images
App - Admin Web User Interface	<a href="#">FEWS-15860</a>	RWS (NL)	Admin Interface: Upload Multiple New Action Configuration	Admin Interface: It is now possible to upload multiple new action configuration at the same time	You can upload any number of action configurations in one file if you click on "Upload multiple configurations" button. This feature is available since 2019.02. If you click the checkbox "Default", all uploaded configurations will be set as default. If there are no configurations in the database that share an action ID with the new uploaded configuration, it will be set to default automatically. If the set default checkbox is not checked, the new configurations will appear in the lists of versions under the same action id. The upload has a strict XML schema.	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/04+Setting+Up+Event-Action+Configuration#id-04SettingUpEvent-ActionConfiguration-Uploadingmultipleactionconfigurations">https://publicwiki.deltares.nl/display/FEWSDOC/04+Setting+Up+Event-Action+Configuration#id-04SettingUpEvent-ActionConfiguration-Uploadingmultipleactionconfigurations</a>		
App - Admin Web User Interface	<a href="#">FEWS-20683</a>	Deltares	Admin Interface Editing FailOver tasks will change the ownerMcid of the Task	edit button is disabled for remote mc tasks	edit button is disabled for remote mc tasks	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/Scheduled+Tasks">https://publicwiki.deltares.nl/display/FEWSDOC/Scheduled+Tasks</a>		
App - Admin Web User Interface	<a href="#">FEWS-20506</a>	EA	FEWS-18050 FFFS-Al: Show runtime of last task in Scheduled Forecast page	Latest Run Time visible in scheduled tasks list	Latest Run Time visible in scheduled tasks list	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/Scheduled+Tasks">https://publicwiki.deltares.nl/display/FEWSDOC/Scheduled+Tasks</a>		
App - Admin Web User Interface	<a href="#">FEWS-20507</a>	EA	FEWS-18050 FFFS-Al: Show additional information in Task Details page	The task runs page allows showing all log files of one taskrun or of (max 50) recent task runs.	The task runs page allows showing all log files of one taskrun or of (max 50) recent task runs.	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/Scheduled+Tasks+-+Task+Runs">https://publicwiki.deltares.nl/display/FEWSDOC/Scheduled+Tasks+-+Task+Runs</a>		
App - Admin Web User Interface	<a href="#">FEWS-20485</a>	EA	FEWS-18050 FFFS-Al: Option to delete Importstatus records from database and use correct colours	import status colors visible in admin interface	Configured Import Status Colors in the SystemMonitor configuration file are now also used by the Admin Interface	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/Admin+Interface+Files+-+Import+Status">https://publicwiki.deltares.nl/display/FEWSDOC/Admin+Interface+Files+-+Import+Status</a>		
App - Admin Web User Interface	<a href="#">FEWS-14310</a>	EA	FEWS-18050 Add more info to database and Admin Interface	Improvements on running tasks page of Admin Interface	Improvements on running tasks page of Admin Interface	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/Running+Tasks">https://publicwiki.deltares.nl/display/FEWSDOC/Running+Tasks</a>		
App - Admin Web User Interface	<a href="#">FEWS-20513</a>	EA	FEWS-18050 FFFS-Al: Add audit functionality in the Admin Interface	audit trail event logs	Both the Admin Interface and the OC now generate audit trail event logs.	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/31.+Audit+Trail+Event+Log">https://publicwiki.deltares.nl/display/FEWSDOC/31.+Audit+Trail+Event+Log</a>		
App - Admin Web User Interface	<a href="#">FEWS-21384</a>	Deltares	Add filter option to workflow mapping matrix to show unmapped workflows	Unmapped workflows are marked with red background color	Unmapped workflows are marked with red background color	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/Workflow+FSS+Groups+Mapping">https://publicwiki.deltares.nl/display/FEWSDOC/Workflow+FSS+Groups+Mapping</a>		
App - Admin Web User Interface	<a href="#">FEWS-21369</a>	Deltares	Al FSS Groups werkt niet lekker, erg foutgevoelig	FSS Groups and workflow mapping improvements	Fss Groups page show per FSS group if allow unmapped is enabled. When mapping all workflows to a group, a confirmation is required now. <i>Unmapped flows will have a red background color.</i>	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/Workflow+FSS+Groups+Mapping">https://publicwiki.deltares.nl/display/FEWSDOC/Workflow+FSS+Groups+Mapping</a>		
App - Admin Web User Interface	<a href="#">FEWS-20818</a>	Deltares	Case insensitive login Al	Username is now case insensitive when logging in with the admin interface	Username is now case insensitive when logging in with the admin interface	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/Delft-FEWS+Admin+Interface+-+Introduction#Delft-FEWSAdminInterface-Introduction-Introduction-Logonscreen">https://publicwiki.deltares.nl/display/FEWSDOC/Delft-FEWS+Admin+Interface+-+Introduction#Delft-FEWSAdminInterface-Introduction-Introduction-Logonscreen</a>		
App - Admin Web User Interface	<a href="#">FEWS-20486</a>	Deltares	AI: Improve wording/explanation for Scheduled Task - Run Options	Improved tooltip text of runOptions	Improved tooltip text of runOptions	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/Scheduled+Tasks+-+New+Task">https://publicwiki.deltares.nl/display/FEWSDOC/Scheduled+Tasks+-+New+Task</a>		
App - Admin Web User Interface	<a href="#">FEWS-20679</a>		FEWS-19650 NGINX proxy and 413 Request Entity Too Large for uploading basebuild to admin interface	OIDC authentication requires large http headers	OIDC authentication requires large http headers. (code) AD authentication can use large http headers that sometimes are larger than the maximum allowed 8K that is set by default for Apache 2. The /etc/apache2/apache2.conf configurations should be updated with the following settings:  LimitRequestFieldSize 80000  LimitRequestBody 0  (code)	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/Authentication+and+Authorization+using+the+Apache2+OpenID+Connect+module+-+mod_auth_openidc">https://publicwiki.deltares.nl/display/FEWSDOC/Authentication+and+Authorization+using+the+Apache2+OpenID+Connect+module+-+mod_auth_openidc</a>		
App - Archive	<a href="#">FEWS-20979</a>	Deltares	FEWS-18050 FFFS-Archive: get rid of config.zip file and use original files					
App - Configuration Manager Gui	<a href="#">FEWS-21366</a>		FEWS-18050 Config manager. Checksum instead of download for config file equals check.	A calculated hash is used to determine if imported config files are different from the current active one.	A database column "hash" has been added for each config file type. This stores a calculated string for each inserted config file based on its contents. Whenever new config files are imported the hash of new file is compared with that of the current active file. Only if the hash is different the current active version is read from the database in order to show the differences. This saves a lot data that has to be transferred over the network. If the hash is not filled yet (file is imported in older version), it will	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/20.2+Configuration+Manager+-+from+2017.02">https://publicwiki.deltares.nl/display/FEWSDOC/20.2+Configuration+Manager+-+from+2017.02</a>		
App - Configuration Manager Gui, App - Operator Client Gui (Explorer)	<a href="#">FEWS-20336</a>	Deltares	FEWS-18245 Opening an OC when you have the CM open (or vice versa) gives an unnecessary warning/ <i>openup</i>	Difference between OC and CM session is taken into account for duplicate session warning	Difference between OC and CM session is taken into account for duplicate session warning	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/01+FEWS+Explorer#id-01FEWSExplorer">https://publicwiki.deltares.nl/display/FEWSDOC/01+FEWS+Explorer#id-01FEWSExplorer</a>		
App - Delft-FEWS	<a href="#">FEWS-20951</a>	Deltares	VERSION file in bin directory	_build_manifest.txt in bin dir	The Delft FEWS version and build number of a bin dir is now readable as plain text in bin/_build_manifest.txt			
App - Forecasting Shell Server	<a href="#">FEWS-20345</a>	Deltares	FEWS-19650 Number of FSSs in ready state don't match the number in the FSS group	Fix readyState for FSS Group	Fix readyState for FSS Group	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/FSS+Groups">https://publicwiki.deltares.nl/display/FEWSDOC/FSS+Groups</a>		
App - Forecasting Shell Server	<a href="#">FEWS-19956</a>	EA	FEWS-18050 FFFS: Improve deployment of FEWS in Azure	Admin Interface improvements for cloud integration	Admin Interface improvements for cloud integration	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/Dashboard">https://publicwiki.deltares.nl/display/FEWSDOC/Dashboard</a>		

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App - Master Controller Server	<a href="#">FEWS-17386</a>	TVA	FEWS-17996 TVA: Request to not automatically run tasks on primary system when a failover is triggered	New task option to not run failover tasks on ownerMc when the ownerMc is in failover	Where before a task was either a failover task or not, a task now has three different options 1. Run Duty - Run this Task only on the Master Controller that owns it (default). 2. Run Duty and Failover - When the Duty Master Controller is in Failover mode, run this task on the top priority Failover Master Controller, but also run this task on the Duty Master Controller that owns it. 3. Suspend Duty in Failover - When the Duty Master Controller is in Failover mode, run this task on the top priority Failover Master Controller and do not run this task on the Duty Master Controller that owns it.	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/Scheduled+Tasks+-+New+Task">https://publicwiki.deltares.nl/display/FEWSDOC/Scheduled+Tasks+-+New+Task</a>		
App - Master Controller Server, System - Synchronisation	<a href="#">FEWS-20559</a>		FEWS-17996 Allow status MC-MC synchronization while in false failover	Config option for Mc-Mc synchronization status only	New config option for Mc-Mc synchronization only on status tables, e.g. SystemActivities, ComponentLogFileSnapshots, MasterControllers, FSSGroups, ForecastingShells, FssStatus, LiveMcAvailabilities	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/Delft-FEWS+Installation+-+Configure+MasterController+application+-+2017.02+and+later">https://publicwiki.deltares.nl/display/FEWSDOC/Delft-FEWS+Installation+-+Configure+MasterController+application+-+2017.02+and+later</a>		
App - Master Controller Server	<a href="#">FEWS-20834</a>	EA	FEWS-18050 FFFS: Add function to send event codes to Azure Service Bus	Azure Service Bus Alerter	The Azure Service Bus Alerter can be used to configure MC_SystemAlerter tasks that can send messages to the Azure Service Bus.	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/Azure+Service+Bus+Alerts">https://publicwiki.deltares.nl/display/FEWSDOC/Azure+Service+Bus+Alerts</a>		
App - Operator Client Gui (Explorer), System	<a href="#">FEWS-21017</a>	Deltares	FEWS-18245 Use the same look and feel across all platforms and settings	Use the same GUI look and feel across all platforms and color schemes	FEWS now uses the exact same GUI look and feel across all platforms and regardless of whether a color scheme is active or not (although color schemes of course do still change the colors of the GUI elements)	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/08+Color+schemes+and+custom+colors#08Colorschemesandcustomcolors-Changessince2019_02">https://publicwiki.deltares.nl/display/FEWSDOC/08+Color+schemes+and+custom+colors#08Colorschemesandcustomcolors-Changessince2019_02</a>		
App - Operator Client Gui (Explorer)	<a href="#">FEWS-20124</a>	Deltares	FEWS-19650 FFFS: When uploading a new Patch.jar the OC has an incomplete message	Clearly show who updated the root config and with which comment	Clearly show who updated the root config and with which comment	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/01+FEWS+Explorer#01FEWSExplorer">https://publicwiki.deltares.nl/display/FEWSDOC/01+FEWS+Explorer#01FEWSExplorer</a>		
App - Operator Client Gui (Explorer)	<a href="#">FEWS-19950</a>	EA	FEWS-18050 FFFS: Improve KFlows functionality	KFFS KFlows improvements	KFFS KFlows improvements	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/16+KFlows+Display">https://publicwiki.deltares.nl/display/FEWSDOC/16+KFlows+Display</a>		
App - Operator Client Gui (Explorer)	<a href="#">FEWS-20849</a>	EA	FEWS-18050 FFFS: Implement UK BST – British Summer Time Zone	UK British time zone GMT/BST	Shows GMT in the winter and BST in the summer	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/B+Enumerations">https://publicwiki.deltares.nl/display/FEWSDOC/B+Enumerations</a>		
App - Operator Client Gui (Explorer), Configuration	<a href="#">FEWS-21101</a>		FEWS-18050 Recognize "none" as qualifier id in time series filter (modifiers, products, etc)					
App - Operator Client Gui (Explorer)	<a href="#">FEWS-19961</a>	EA	FEWS-18050 FFFS: Improvements to Permissions	In the log browser users will no longer see log messages from workflows they have no permission to see	In the log browser users will no longer see log messages from workflows they have no permission to see.	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/07+Permissions">https://publicwiki.deltares.nl/display/FEWSDOC/07+Permissions</a>		
App - Operator Client Gui (Explorer)	<a href="#">FEWS-20515</a>	EA	FEWS-18050 FFFS-OC: Add audit functionality to the OC	Audit trail for Operator Client. Generate event codes that are stored as log messages	Audit trail for Operator Client. Generate event codes that are stored as log messages	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/31+Audit+Trail+Event+Log#id-31.AuditTrailEventLog-OperatorClientaudittraileventlogmessages">https://publicwiki.deltares.nl/display/FEWSDOC/31+Audit+Trail+Event+Log#id-31.AuditTrailEventLog-OperatorClientaudittraileventlogmessages</a>		
Configuration	<a href="#">FEWS-18660</a>	Deltares	Option to apply idMapping case insensitive	A new option for ID mapping has been implemented to make ID mapping case insensitive.	IdMaps are defined to map internal location and parameter ID's to external location and parameter ID's. A new option element <enableCaseInsensitivity/> has been implemented to make the ID mapping process case-insensitive. This option can be applied to both 'full' and 'compact' ID maps as well as one-to-one ID maps.	<a href="https://publicwiki.deltares.nl/x/eqGe">https://publicwiki.deltares.nl/x/eqGe</a>		
Configuration	<a href="#">FEWS-20440</a>		Remove ConfigUpdateScript	Config Editor has been removed	Config Editor has been removed	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/30+Config+Update+Module">https://publicwiki.deltares.nl/display/FEWSDOC/30+Config+Update+Module</a>		
Configuration	<a href="#">FEWS-20901</a>	EA	FEWS-18050 FFFS: Add one to many relations in locationSet	One to many location relations for building location sets	building dynamic locations sets. E.g. all locations in a catchment			
Configuration	<a href="#">FEWS-21120</a>		FEWS-18050 Allow shapeIdFunction besides shapeId in the polygons.xml					
Configuration	<a href="#">FEWS-20637</a>		FEWS-18050 Attribute exits constraint. Recognize multi value attributes with only null values as unavailable					
Database	<a href="#">FEWS-20978</a>	EA	FEWS-18050 make create scripts available to the EA branch	Added table UserSettings and ProductInfo				
Database	<a href="#">FEWS-19974</a>	EA	FEWS-18050 FFFS: Automatically generate locationSets with template and attributes	Automatically group a location set into sub location sets that share the same attribute	subLocationSetIdFunction is used to generate the location set id	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/02+LocationSets">https://publicwiki.deltares.nl/display/FEWSDOC/02+LocationSets</a>		
Database	<a href="#">FEWS-20655</a>		FEWS-18050 changes in latest database update script need to be applied to FFFS Azure Database	database changes for FFFS applied to 201902	database changes for FFFS applied to 201902	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/Delft-FEWS+Installation+-+Central+Database">https://publicwiki.deltares.nl/display/FEWSDOC/Delft-FEWS+Installation+-+Central+Database</a>		
Debug Tool - Workflow Navigator	<a href="#">FEWS-20621</a>	MDBA	FEWS-14730 Show description of transformation modules and transformation elements in OC GUI (R_323)	Show description of transformation modules and transformation elements in OC GUI as mouse label text	Added <description> to individual transformations, they will appear as labels. However, the name of the transformation module is built not from the configuration file of the module, but from the workflow file. Therefore I added a new field workflow activity to add a <description> This description should work as a label also for import, export, sub-workflow, performance too.	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/20+Transformation+Module+-+Improved+schema#id-20TransformationModule-Improvedschema-Description">https://publicwiki.deltares.nl/display/FEWSDOC/20+Transformation+Module+-+Improved+schema#id-20TransformationModule-Improvedschema-Description</a>		



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Plugin - Gui - Archive Display	<a href="#">FEWS-21206</a>	TVA / BPA / NWS / BC Hydro	Retrieve + import States in database - GUI Work	ArchiveDisplay - importing states	States are archived in the forecast archiving process, together with time series, reports and modifiers. Up to now the states were only ingested while importing a simulated data set From now on, it is also possible to ingest the states only. For this purpose an (optional) element "statesWorkflowId" has been added to the ArchiveModuleDisplay config file. An example from _ArchiveModuleDisplay.xml : (code:xml) <archiveImportWorkflowId>ImportArchivedData</archiveImportWorkflowId>  <dataTypeImportWorkflows> <statesWorkflowId>ImportArchivedStates</statesWorkflowId> </dataTypeImportWorkflows> (code) The import states workflow (ImportArchivedStates in this example) should have "moduleStatesImportActivity" , to ensure that only states are ingested from simulated folder, and not the whole forecast An example from _importArchiveModule.xml : (code:xml) <importSimulated> <activities> <moduleStatesImportActivity/> </activities> <importFolder>\$ARCHIVE_DOWNLOAD_FOLDERS\$simulated</importFolder> </importSimulated> (code)	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/21+Archive+display">https://publicwiki.deltares.nl/display/FEWSDOC/21+Archive+display</a>		
Plugin - Gui - Archive Display	<a href="#">FEWS-20746</a>	TVA	FEWS-20739 TVA: Auto filter sources in the archive catalogue tool based on data set type	Archive Catalog Display shows per data set type only the relevant sources	Every time the harvester is scanning and updating the archive database, it creates also DataTypeInfo.xml. DataTypeInfo.xml contains per data type the source Id's that are available in the archive database for that data type. Information from DataTypeInfo.xml is used by Archive Catalog Display to show the relevant source per data type.  If the DataTypeInfo.xml is not available, or not created for some reason, the Archive Catalog Display shows all known sources , for each data type.	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/21+Archive+display">https://publicwiki.deltares.nl/display/FEWSDOC/21+Archive+display</a>		
Plugin - Gui - Dashboard	<a href="#">FEWS-21311</a>	EA	FEWS-18050 Add options to automatically arrange dashboard frames	Add options to new dashboard panel to neatly arrange frames	The dashboard panel has three menu options to arrange the frames currently in the panel: arrange horizontally, arrange vertically and arrange automatically. The arrange horizontally and vertically options perform as would be expected. The arrange automatically options attempts to determine the desired arrangement based on the current positions, removing as much overlap in frames and empty space as possible, preferring to assign extra space to the top frame if possible.	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/33+Dashboard+Display">https://publicwiki.deltares.nl/display/FEWSDOC/33+Dashboard+Display</a>		
Plugin - Gui - Grid Display, Plugin - Module - Spatial Modifiers	<a href="#">FEWS-21129</a>	EA	FEWS-18050 Add option to set the application order of time series modifiers	Add option to set the application order of spatial modifiers	For the new spatial modifiers, the application order is important if the areas to which two modifiers apply overlap. To allow the user to control the application order, a priority was added. The priority of spatial modifiers can be edited (and viewed) in the modifiers panel. Modifiers are applied from the one with the highest value for priority to the one with the lowest value (so a modifier with priority 1 will be applied after a modifier with priority 2). This causes the modifier with the lowest value to be "on top".	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/05+Spatial+Display#id-05SpatialDisplay-Priority">https://publicwiki.deltares.nl/display/FEWSDOC/05+Spatial+Display#id-05SpatialDisplay-Priority</a>		
Plugin - Gui - Grid Display	<a href="#">FEWS-20893</a>	EA	FEWS-18050 Add sketch buttons section to GridDisplay toolbar	Move sketch functionality in spatial display to new sketch button section	There was already a lot of functionality present in the spatial display to draw points, profiles and areas and use these to extract time series data and show it in a graph (time series dialog). This functionality was all "hidden" in the right-click menu. The functionality has been moved to two new buttons (with drop-down menus) in the spatial display toolbar to make it more accessible: one button for all "drawing" options and one for all options to then extract chart data.	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/05+Spatial+Display">https://publicwiki.deltares.nl/display/FEWSDOC/05+Spatial+Display</a>		
Plugin - Gui - Grid Display	<a href="#">FEWS-20709</a>		FEWS-18050 Add forecast selection button to Grid Display	Add a forecast selection button to the Grid Display	A forecast selection button was added to the grid display to allow the user to select a different (previous) forecast without opening the spatial thumbnails. The button can be pressed to cycle through the available forecasts or a specific forecast time can be selected from its drop-down menu. This also allows selecting a previous forecast when viewing an ensemble time series (where the regular spatial thumbnails are disabled and only the newly developed ensemble thumbnails are available).	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/05+Spatial+Display#id-05SpatialDisplay-Selectingdifferentforecasttimes">https://publicwiki.deltares.nl/display/FEWSDOC/05+Spatial+Display#id-05SpatialDisplay-Selectingdifferentforecasttimes</a>		
Plugin - Gui - Grid Display	<a href="#">FEWS-21210</a>	EA	FEWS-18050 Store selected aggregation in user settings	Store selected aggregation in user settings	The aggregation selected in the grid display is now stored in the user settings. When starting FEWS the same aggregation will be selected as was selected when closing.	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/05+Spatial+Display#id-05SpatialDisplay-MovingAverageorAccumulationSlider">https://publicwiki.deltares.nl/display/FEWSDOC/05+Spatial+Display#id-05SpatialDisplay-MovingAverageorAccumulationSlider</a>		

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Plugin - Gui - Grid Display, Plugin - Module - Spatial Modifiers	<a href="#">FEWS-21131</a>	EA	FEWS-18050 Add a tooltip to the time slider and map where a spatial modifier has been applied	Add a tooltip to the time slider and map where a spatial modifier has been applied	A tooltip with information about the applied spatial modifiers was added to the time slider and the applied modifier polygons (dashed polygons). The tooltip shows the name of the modifier as well as any user defined descriptions added to it.	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/05+Spatial+Display#id-05SpatialDisplay-ViewingExistingSpatialModifiers">https://publicwiki.deltares.nl/display/FEWSDOC/05+Spatial+Display#id-05SpatialDisplay-ViewingExistingSpatialModifiers</a>		
Plugin - Gui - Grid Display	<a href="#">FEWS-20868</a>	FOEN	FEWS-9563 FOEN: Option in Spatial display to show less decimals in values on map	Add option in spatial display to decrease number of decimals in labels	Adds two menu items to the label drop down menu in the spatial display. One to increase and one to decrease the number of decimals shown in the labels and tooltip. If a user has used these buttons to decrease the number of decimals, this will be stored in the user settings. This setting is stored separately for each parameter group. The number of decimals can never be increased to more than the resolution with which the values are stored (the configured value resolution of the parameter group).	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/05+Spatial+Display#id-05SpatialDisplay-ControlToolbar">https://publicwiki.deltares.nl/display/FEWSDOC/05+Spatial+Display#id-05SpatialDisplay-ControlToolbar</a>		
Plugin - Gui - Grid Display	<a href="#">FEWS-19690</a>	EA	FEWS-18050 FFFS: Simplify configuration of ensemble member filter	Now whole ensembles can be used in a gridplot and shown/picked by SpatialEnsembleThumbnailPanel	Now whole ensembles can be used in a gridplot and shown/picked by SpatialEnsembleThumbnailPanel	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/01+Grid+Display#id-01GridDisplay">https://publicwiki.deltares.nl/display/FEWSDOC/01+Grid+Display#id-01GridDisplay</a>		
Plugin - Gui - Grid Display	<a href="#">FEWS-21352</a>	EA	FEWS-18050 FFFS: Spatial Display link to displaygroups through PlotId					
Plugin - Gui - Grid Display	<a href="#">FEWS-20687</a>	EA	FEWS-18050 Spatial display. Allow setting the speed of the animation when pressing the play button	Speed of animation can be set in grid display	An configuration option in the grid display has been added to set the speed of the animation	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/01+Grid+Display#id-01GridDisplay-movieFrameDurationMillis">https://publicwiki.deltares.nl/display/FEWSDOC/01+Grid+Display#id-01GridDisplay-movieFrameDurationMillis</a>		
Plugin - Gui - Grid Display	<a href="#">FEWS-20108</a>	EA	FEWS-18050 FFFS: Import Shape file on the fly and compute catchment average			<a href="https://publicwiki.deltares.nl/display/FEWSDOC/05+Spatial+Display#id-05SpatialDisplay-Extractingminmaxandmeanoftimeseriesforanarea">https://publicwiki.deltares.nl/display/FEWSDOC/05+Spatial+Display#id-05SpatialDisplay-Extractingminmaxandmeanoftimeseriesforanarea</a>		
Plugin - Gui - Grid Display	<a href="#">FEWS-17861</a>	EA	FEWS-18050 FFFS: Extend the Spatial Display thumbnails with sub-plots per ensemble member	When an ensemble with multiple members is configured in a grid plot a button for opening the spatial ensemble thumbnails becomes enabled so all members can be shown at once and a selection for the grid display can be made by selecting the desired thumbnail.	When an ensemble with multiple members is configured in a grid plot a button for opening the spatial ensemble thumbnails becomes enabled so all members can be shown at once and a selection for the grid display can be made by selecting the desired thumbnail.	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/05+Spatial+Display#id-05SpatialDisplay-Selectingdifferentensemblemembers">https://publicwiki.deltares.nl/display/FEWSDOC/05+Spatial+Display#id-05SpatialDisplay-Selectingdifferentensemblemembers</a>		
Plugin - Gui - Grid Display	<a href="#">FEWS-21075</a>	EA	FEWS-18050 FFFS-OC: Button in the Spatial Display time slider to move to last available time					
Plugin - Gui - Grid Display	<a href="#">FEWS-20106</a>	EA	FEWS-18050 FFFS: Search functionality in Spatial Display					
Plugin - Gui - Grid Display	<a href="#">FEWS-17182</a>	UAE Navy	FEWS-17145 Spatial Display - show plot (cross section-z) based on user defined cross section (x,y)		Create a 2D longitudinal profile on the fly for 3D data in the spatial display. Start drawing a longitudinal profile with a CTRL-click in the spatial display and click to add points as required. Finish the profile with a double-click for the last point. Open up the longitudinal profile in the timeseriesdisplay with CTRL-F11, or via the context menu. Note, this feature only works for * data within 1 grid partition. In some cases 3D data model runs are run on multiple domain partitions. This data can be shown as a 2D longitudinal profile, but only if the profile remains within a single domain. * scalar data (e.g. Water temperature or salinity), and not yet for vector data like currents.			
Plugin - Gui - Grid Display	<a href="#">FEWS-19339</a>	TVA	FEWS-20739 TVA: Increase number of grid cells allowed for Spatial Display to avoid illegal argument for 1st check passed					
Plugin - Gui - Grid Display	<a href="#">FEWS-17736</a>	TVA	FEWS-17689 TVA Hydrothermal: Extend vertical slider bar for Delft3D-FLOW or D-Flow FM grids from Sigma layers to Z layers	Vertical slider in spatial display for Z layers	Besides sigma layers it is now also possible to configure a vertical slider for z layers			
Plugin - Gui - Grid Display	<a href="#">FEWS-21376</a>		FEWS-18050 Improve coloring grid display time slider					
Plugin - Gui - Grid Display	<a href="#">FEWS-20859</a>	FOEN	FEWS-9563 FOEN: Add aggregation timestep in time label of spatial display	From now on grid display aggregation slider shows start and end of aggregation period instead of one timestamp.	When you use the aggregation slider in the grid display the time label used to only show a timestep. From now on it will show the aggregation period. For example if the aggregation period is 6 hours and the time is 15-05-2019 00:00, then the label should say "Time 14-05-2019 18:00:00 to 15-05-2019 00:00".	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/05+Spatial+Display">https://publicwiki.deltares.nl/display/FEWSDOC/05+Spatial+Display</a>		
Plugin - Gui - Grid Display	<a href="#">FEWS-20908</a>	NWS	FEWS-20886 NWS: #62738 Show updated (latest import) time in Spatial Display for external historical gridded/scalar time series	Show last import time for external historical data in grid display	This feature allows to show last import time for external historical data in grid display. This option is supported with online version only. The option dataFeedId needs to be configured per gridPlot. The value of the dataFeedId must be the same value that can be seen in System Monitor table, tab Import Status. The id should be the one that corresponds with the module instance id of the time series.	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/01+Grid+Display#id-01GridDisplay&gt;Showlastimporttimeforexternalhistoricaldata">https://publicwiki.deltares.nl/display/FEWSDOC/01+Grid+Display#id-01GridDisplay&gt;Showlastimporttimeforexternalhistoricaldata</a>		
Plugin - GUI - IFD - Dataviewer	<a href="#">FEWS-21035</a>	EA	FEWS-18050 FFFS: Threshold Icons on Forecast Tree					
Plugin - GUI - IFD - Forecasts	<a href="#">FEWS-20267</a>	EA	FEWS-18050 FFFS: Add topology panel to mainPanel					
Plugin - GUI - IFD - Forecasts	<a href="#">FEWS-19958</a>	EA	FEWS-18050 FFFS: Link Display ID to Topology Node					

Delft-FEWS 2019.02 Solved Features								
Component/s	Key	Customer name	Summary	Release Note Text	Release Note Text Description	Link to Documentation	Config Example	Images
Plugin - GUI - IFD - Forecasts	<a href="#">FEWS-21144</a>	EA	FEWS-18050 FFFS: Run forecasts non-approved from the Forecast Tree		It now possible to select in the IFD if a forecast should be approved automatically or not. The details are described at the wiki <a href="https://publicwiki.deltares.nl/display/FEWSDOC/24+Topology#id-24Topology_AutoApproveForecastAutomatically">https://publicwiki.deltares.nl/display/FEWSDOC/24+Topology#id-24Topology_AutoApproveForecastAutomatically</a>			
Plugin - GUI - IFD - Forecasts	<a href="#">FEWS-20201</a>	Deltares	FEWS-18050 FFFS: Forecast Tree Status is not correct when task is killed	Whenever a task is killed it will show as failed in the IFD	Whenever a task is killed it will show as failed in the IFD	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/10+Interactive+forecast+display">https://publicwiki.deltares.nl/display/FEWSDOC/10+Interactive+forecast+display</a>		
Plugin - GUI - IFD - Forecasts, Plugin - Module - Thresholds	<a href="#">FEWS-20361</a>	EA	FEWS-18050 FFFS: Link threshold display to Explorer/IFD selection	System wide Threshold Events display will automatically filter on all locations from the selected IFD node. When there are no explicit locations linked to a node, there will be no filtering.	System wide Threshold Events display will automatically filter on all locations from the selected IFD node. When there are no explicit locations linked to a node, there will be no filtering.	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/29+System+Wide+Threshold+Events+Display#id-29SystemWideThresholdEventsDisplay-IFD">https://publicwiki.deltares.nl/display/FEWSDOC/29+System+Wide+Threshold+Events+Display#id-29SystemWideThresholdEventsDisplay-IFD</a>		
Plugin - GUI - IFD - Forecasts	<a href="#">FEWS-21373</a>	Ea	FEWS-18050 FFFS-OC: Filter log messages for taskrunID in forecast tree node	Forecast Tree (topology tree) - ability to show the log messages for a segment selected in the forecast tree	To show the log-messages , check first if the System Monitor is open. Then select a segment and enter "ctrl L", or choose "Show in Log Browser" from popup menu (right mouse click) Log Brower becomes visible and shows log-messages associated with the task run of the selected segment. The menu item "Show in Log Brower" is disabled if the segment is not run yet.	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/23+Interactive+Forecasting+Display">https://publicwiki.deltares.nl/display/FEWSDOC/23+Interactive+Forecasting+Display</a>		
Plugin - GUI - IFD - Forecasts	<a href="#">FEWS-20890</a>	NWS	FEWS-20886 NWS: #45894 Color coding segments on the Forecasts (Navigation) Panel	Customising the text- and background colours of topology tree nodes	Custom colors You can configure the text and background color(selected and non-selected). These are optional fields, you can configure all, none, or some. These properties can be configured on individual nodes and group nodes	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/24+Topology#id-24Topology-Customcolors">https://publicwiki.deltares.nl/display/FEWSDOC/24+Topology#id-24Topology-Customcolors</a>		
Plugin - GUI - IFD - Forecasts, Plugin - Gui - Tabular Config Files Display	<a href="#">FEWS-20891</a>	NWS	FEWS-20886 NWS: #27156 Extend the Tabular Config Files Display to update depending on selected node in Topology	Tabular Config File Display connected to Forecast Tree	The Tabular Config File Display is now connected to Forecast Tree. Using locationId's in the topology.xml will show the related tabular config files.	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/20+Tabular+Config+Files+Display">https://publicwiki.deltares.nl/display/FEWSDOC/20+Tabular+Config+Files+Display</a>		
Plugin - Gui - Manual Forecast	<a href="#">FEWS-20202</a>	EA	FEWS-18050 FFFS: Manual Forecast workflow list as Tree	Manual Forecast - workflows are displayed in a tree instead of in a combo box	The workflow descriptors can be optionally grouped in WorkflowDescriptors.xml , using the optional configuration element 'workflowNode' . See an example in WorkflowDescriptors1.xml and WorkflowDescriptors2.xml (both files belong to single FEWS config) Manual Forecast dialog shows then the workflows in a tree on the left side of Manual Forecast window If the workflow nodes are not configured, the tree displays the workflows in a simple list.  Once configured in one or more WorkflowDescriptors.xml files, only the workflows referenced in workflowNode's are displayed in ManualForecast dialog. To show all workflows, use F12-> Show all workflows  The workflow info can be viewed in the workflow tool tip (previously it was a info button)	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/06+Manual+Forecast+Display">https://publicwiki.deltares.nl/display/FEWSDOC/06+Manual+Forecast+Display</a>		
Plugin - Gui - Map	<a href="#">FEWS-20807</a>		FEWS-18050 FFFS: Show threshold icon based on last instead of max value for filter in data viewer					
Plugin - Gui - Map	<a href="#">FEWS-20540</a>		FEWS-18050 Disable map zoom and pan animation when using remote desktop or citrix	Quicker response when zooming or panning maps when using remote desktop.		<a href="https://publicwiki.deltares.nl/display/FEWSDOC/02+FEWS+Explorer#id-02FEWSExplorer-MapDisplay">https://publicwiki.deltares.nl/display/FEWSDOC/02+FEWS+Explorer#id-02FEWSExplorer-MapDisplay</a>		
Plugin - Gui - System Monitor	<a href="#">FEWS-20123</a>	Deltares	FEWS-19650 FFFS: User ID should have Operator Client or Configuration Manager Info attached	Live system status monitor table shows the user id of logged in users + session type (OC, CM, FS etc.)	Live system status monitor table shows the user id of logged in users + session type (OC, CM, FS etc.)	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/08+System+Monitor">https://publicwiki.deltares.nl/display/FEWSDOC/08+System+Monitor</a>		
Plugin - Gui - Tabular Config Files Display	<a href="#">FEWS-21117</a>	NWS	FEWS-20886 Add lock button to Tabular Config File Display	Allow locking the Tabular Config File Display	A lock button has been added to the tabular config file display that will allow locking the selection.	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/20+Tabular+Config+Files+Display">https://publicwiki.deltares.nl/display/FEWSDOC/20+Tabular+Config+Files+Display</a>		
Plugin - Gui - Threshold Display	<a href="#">FEWS-20358</a>	EA	FEWS-18050 FFFS: Link Threshold crossings to Target Area Codes	Thresholds levels from thresholdValueSets can be linked to warning areas by <targetLocationIdFunction>	Thresholds levels from thresholdValueSets can be linked to warning areas by <targetLocationIdFunction>	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/10+ThresholdValueSets#id-10ThresholdValueSets-targetLocationIdFunction">https://publicwiki.deltares.nl/display/FEWSDOC/10+ThresholdValueSets#id-10ThresholdValueSets-targetLocationIdFunction</a>		
Plugin - Gui - Time Series	<a href="#">FEWS-18543</a>	SEQWater	FEWS-10487 Seqwater: Scatter Plot with two different parameters for 2 locations in Display Group	Possibility to plot 2 time series with different location and parameter against eachother, and only show a marker for the last time step	Possibility to plot 2 time series with different location and parameter against eachother, and only show a marker for the last time step	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/03+Display+Groups#id-03DisplayGroups-ShowasScatterPlot">https://publicwiki.deltares.nl/display/FEWSDOC/03+Display+Groups#id-03DisplayGroups-ShowasScatterPlot</a>		
Plugin - Gui - Time Series	<a href="#">FEWS-20889</a>	NWS	FEWS-20886 NWS: #60808 Config option to size (enlarge) Plot Thumbnail displays	Thumbnail graph are now cached and only recreated when visible and size or contents changed	Thumbnail graph are now cached and only recreated when visible and size or contents changed	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/01+FEWS+Explorer">https://publicwiki.deltares.nl/display/FEWSDOC/01+FEWS+Explorer</a>		
Plugin - Gui - Time Series	<a href="#">FEWS-20373</a>	EA	FEWS-18050 FFFS: Rating curve table and graph must show multiple ratings when these exist	Rating curve display and multiple rating curves for one location	Location might have multiple rating curves with different qualifiers. In this case the rating display shows a list where the specific rating curve can be selected	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/04+Data+Display+and+Data+Editor#id-04DataDisplayandDataEditor-Ratingcurve">https://publicwiki.deltares.nl/display/FEWSDOC/04+Data+Display+and+Data+Editor#id-04DataDisplayandDataEditor-Ratingcurve</a>		
Plugin - Gui - Time Series	<a href="#">FEWS-19431</a>	BC Hydro	FEWS-11235 Making a plot with two Y axes does not work with time series that are similar	TSD plot allows the same parameters on the left and right axis	Attached picture SameParameterOnLeftAndRightAxis.png shows the plot created with the config example	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/03+Display+Groups#id-03DisplayGroups-subplot">https://publicwiki.deltares.nl/display/FEWSDOC/03+Display+Groups#id-03DisplayGroups-subplot</a>		



Component/s	Key	Customer name	Summary	Release Note Text	Release Note Text Description	Link to Documentation	Config Example	Images
Plugin - Gui - Time Series	<a href="#">FEWS-19649</a>	Quebec	FEWS-16663 Québec: ability to have thresholds displayed on both left/right axes	TimeSeriesDisplay – ability to have thresholds displayed on both left and right axes	Thresholds can be displayed on the left axis, or on the right axis, or on both. By default the thresholds are displayed on the left axis. To change it, an option 'thresholdAxis' can be used in DisplayGroups.xml . Configure <thresholdAxis>right</thresholdAxis> if only the right axis should have thresholds, and <thresholdAxis>both</thresholdAxis> if both left and right axes should have thresholds  Picture plot1.png shows a plot created with the config example below. Option <thresholdAxis>both</thresholdAxis> creates plot as shown in picture plot2.png	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/03+Display+Groups#id-03DisplayGroups-thresholdAxis">https://publicwiki.deltares.nl/display/FEWSDOC/03+Display+Groups#id-03DisplayGroups-thresholdAxis</a>		
Plugin - Gui - Time Series	<a href="#">FEWS-20593</a>	EA	FEWS-18050 FFFS-SA: Scaling of rating must only include reliable values.	Rating curve display – option to show all rating curve values or only reliable and doubtful values	Use menu item "Scale to show unreliable data" to switch between showing all rating curve values or reliable and doubtful values only.  This menu item is can be found under the rating curve button, see the attached picture.  By default all rating curve values are shown. If the rating curve has only unreliable values, then all values are shown as well.	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/04+Data+Display+and+Data+Editor#id-04DataDisplayandDataEditor-ScaletoShowUnreliableData">https://publicwiki.deltares.nl/display/FEWSDOC/04+Data+Display+and+Data+Editor#id-04DataDisplayandDataEditor-ScaletoShowUnreliableData</a>		
Plugin - Gui - Time Series	<a href="#">FEWS-20678</a>	MDBA	showing rating curves together with observations of Q-H relation (R_302)	Rating Curve Display – displaying observations along with the rating curve	To show the observations in rating curve display, follow these steps: - open TimeSeriesDialog with the time series you want to see along with the rating curve - open rating curve display for required location - select option "Show selected stage and discharge as scatter plot" from the drop down menu of the button " Rating Curves" (on the TSD toolbar) - select one stage series and one discharge series from the time series table or from the chart legend. The selected series will be shown as scatter plot along the rating curve. All values in the zoom period will be displayed. The number of values shown can be changed by changing of the zoom period. - Note: the selected series must be stage and discharge, it means the series parameter must be from the same parameter group as the rating curve parameters configured in Parameters.xml. Other series selection will be ignored.	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/04+Data+Display+and+Data+Editor#id-04DataDisplayandDataEditor-DisplayingObservationsAlongWithTheRatingCurves">https://publicwiki.deltares.nl/display/FEWSDOC/04+Data+Display+and+Data+Editor#id-04DataDisplayandDataEditor-DisplayingObservationsAlongWithTheRatingCurves</a>		
Plugin - Gui - Time Series	<a href="#">FEWS-19656</a>	EA (UK)	FEWS-18050 FFFS: Make plots in displaygroups depend on permissions					
Plugin - Gui - Time Series	<a href="#">FEWS-21445</a>	EA	FEWS-18050 FFFS: Time series display default datum (mAOD) configurable by location					
Plugin - Gui - Time Series	<a href="#">FEWS-21341</a>	EA	FEWS-18050 FFFS: ModuleInstanceID Mapping with a pattern					
Plugin - Gui - Time Series	<a href="#">FEWS-20438</a>	TransAlta	FEWS-20126 Add option in DisplayGroups.xml to set default visibility	Display groups has a new configuration option to make time series invisible in plots	Display groups has a new optional configuration field to make time series invisible in plots.	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/03+Display+Groups#id-03DisplayGroups-line">https://publicwiki.deltares.nl/display/FEWSDOC/03+Display+Groups#id-03DisplayGroups-line</a>		
Plugin - Gui - Time Series	<a href="#">FEWS-21045</a>	RWS	DisplayGroups: add visibleInLegend, visibleInTable to all subplot elements	Options visibleInLegend, visibleInTable, visibleInPlot are now available in clustered bar display groups too.	Options visibleInLegend, visibleInTable, visibleInPlot are now available in clustered bar display groups too.	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/03+Display+Groups#id-03DisplayGroups-line">https://publicwiki.deltares.nl/display/FEWSDOC/03+Display+Groups#id-03DisplayGroups-line</a>		



Component/s	Key	Customer name	Summary	Release Note Text	Release Note Text Description	Link to Documentation	Config Example	Images
Plugin - Gui - Time Series	<a href="#">FEWS-20749</a>	RWS	Extra option for displaying label in graph legend	Extra option for customising the label in graph legend	<p>legendTextFunction With the use of legendFormat you can customise what information you wish to see on the legend of a graph plot. Currently the supported data types are: location id, location name, location short name, parameter name, parameter id.</p> <p>Use the following tags in the legendformat, they will be automatically replaced with the correct values:</p> <pre>%LOCATION_ID% %LOCATION_NAME% %LOCATION_SHORTNAME% %PARAMETER_ID% %PARAMETER_NAME% %FORECAST_INDEX% %MODULE_INSTANCE% %ENSEMBLE_ID% %ENSEMBLE_MEMBER_ID% %QUALIFIER_NAME% %ADDITIONAL_PREFIX% %HISTORICAL_EVENT_NAME% %MODIFIED% %CUSTOM_LABEL_EXTENSION% %FUNCTION_LABEL% %POSTPROCESSING%</pre> <p>Tags are case sensitive. If a tag configured that does not exist in the given time series, it will be replaced by an empty string. Example: &lt;legendFormat&gt;%PARAMETER_NAME%</p>	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/02+Time+Series+Display+Configuration-legendTextFunction">https://publicwiki.deltares.nl/display/FEWSDOC/02+Time+Series+Display+Configuration-legendTextFunction</a>		
Plugin - Gui - Time Series Modifier	<a href="#">FEWS-20977</a>	Deltares	FEWS-18050 FFFS-SA: Comboboxen in modifiers moeten geen drop-down label hebben.					
Plugin - Gui - Time Series Modifier, Plugin - Module - Modifiers (ModuleParameters), Plugin - Module - Modifiers (TimeSeries)	<a href="#">FEWS-20887</a>		FEWS-20886 NWS: #62489 Request to have extra column for modifier creator (original user name)	ModifiersDisplay – new column 'Creator' in the modifiers table	<p>Column 'Creator' shows the name of the user that has created the modifier. When another user copies or edits this modifier, the original creator will be retained and the user will be updated . Attached ModifiersDisplay.png shows some examples</p> <p>When you open an existing Fews application in 2019.01, new columns added in 2019.01 (Creator, Priority) are not visible . Use modifiers table popup menus "Restore default layout " or "Select columns" to show the new columns.</p>	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/08+Time+Series+Modifiers">https://publicwiki.deltares.nl/display/FEWSDOC/08+Time+Series+Modifiers</a>		
Plugin - Gui - Time Series Modifier	<a href="#">FEWS-20907</a>	NWS	FEWS-20886 NWS: #62737 Provide plot and table for reverseOrderModifiers	MergeSimpleModifiers-reverseOrderModifiers show the time series to switch	<p>MergeSimpleModifiers-reverseOrderModifiers show the time series , that should be switched, in the table and plot . These time series match the input variables configured in the transformation &lt;merge&gt;&lt;simple&gt;. First time series in the table matches the first input variable, second time series matches the second input variable.</p> <p>When the modifier applies only to one location, the display shows two time series, see an example picture SwitchTs_singleLocation.png</p> <p>When the modifier applies to multiple locations, the display shows the time series for multiple locations, see an example picture SwitchTs_multipleLocation.png</p>	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/25+ModifierTypes#id-25ModifierTypes-Reverseordermodifiers">https://publicwiki.deltares.nl/display/FEWSDOC/25+ModifierTypes#id-25ModifierTypes-Reverseordermodifiers</a>		
Plugin - Gui - Time Series Visibility	<a href="#">FEWS-21177</a>		Investigate what would be necessary to make expressions work with comma decimal separator ,.	Use ; in statements of expression series when , is decimal separator	Use ; in statements of expression series when , is decimal separator	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/30+Visibility+Dialog+and+OnTheFly+Expression+Series">https://publicwiki.deltares.nl/display/FEWSDOC/30+Visibility+Dialog+and+OnTheFly+Expression+Series</a>		
Plugin - Gui - Web Browser Display	<a href="#">FEWS-20392</a>	Deltares	FEWS-19373 Implement a whitelist of domains/urls that can be visited using web browser	The Web browser display can now be configured with a "white list" to control which internet domains a user can visit using the embedded Chromium browser.	For the embedded web browser display, a domain whitelist has been implemented to restrict the domains from which content can be displayed in the internal web browser. When the user follows hyperlinks to sites that are not whitelisted the system default browser will be opened instead.	<a href="https://publicwiki.deltares.nl/x/xQtHBw">https://publicwiki.deltares.nl/x/xQtHBw</a>		
Plugin - Gui - Web Browser Display	<a href="#">FEWS-20362</a>	Deltares	FEWS-19373 Chromium embedded framework (JCEF) update warning	The Chromium embedded web browser package has been updated to Chromium version 73.0.3683	The Chromium embedded web browser display uses the JCEF package (Java Chromium Embedded Framework) which allows Java developers to embed the Chromium web browser in their applications. The JCEF package is not automatically updated so a new build of this package has been made for both Windows and Linux platforms. The current JCEF package (dated 21-3-2019) uses Chromium version Chromium version 73.0.3683. (see also: <a href="https://bitbucket.org/chromiumembedded/java-cef">https://bitbucket.org/chromiumembedded/java-cef</a> )	<a href="https://publicwiki.deltares.nl/x/xQtHBw">https://publicwiki.deltares.nl/x/xQtHBw</a>		
Plugin - Module - Archive	<a href="#">FEWS-20516</a>	EA	FEWS-18050 FFFS: Archive log messages					

Delft-FEWS 2019.02 Solved Features								
Component/s	Key	Customer name	Summary	Release Note Text	Release Note Text Description	Link to Documentation	Config Example	Images
Plugin - Module - Archive	<a href="#">FEWS-20497</a>	EA	FEWS-18050 FFFS: Import External documents and move to Archive folder		It now possible to remove the source files for a products after sending it to the archive. Documentation can be found here: <a href="https://publicwiki.deltares.nl/display/FEWSDOC/22-2+Export+to+Deltares+Open+Archive">https://publicwiki.deltares.nl/display/FEWSDOC/22-2+Export+to+Deltares+Open+Archive</a>			
Plugin - Module - Archive	<a href="#">FEWS-20743</a>	TVA	FEWS-20739 TVA: Ability to map multiple source ids to a single source name					
Plugin - Module - Archive	<a href="#">FEWS-20741</a>	TVA	FEWS-20739 TVA: Fix archive harvester speed (either through caching or a tool to fix metadata)					
Plugin - Module - Archive	<a href="#">FEWS-20609</a>	RWS	FEWS-20605 Archief harvester t.b.v. standaard NetCDF files					
Plugin - Module - Archive	<a href="#">FEWS-21202</a>	TVA / BPA / NWS / BC Hydro	Improve archive export module	ExportArchiveModule improvements – simulation metadata xml is extended with moduleInstanceId and state time	<p>When archiving states, moduleInstanceId and state time are stored in simulation metadata xml, in separate elements. An example from simulationMetaData.xml:</p> <pre>[code:xml] &lt;states&gt; &lt;state&gt; &lt;moduleId&gt;ModelA&lt;/moduleId&gt; &lt;stateTime date="2018-01-18" time="03:00:00"/&gt; &lt;relativeFilePath&gt;modulestates\ModelA20180118030000.zip&lt;/relativeFilePath&gt; &lt;/state&gt; &lt;/states&gt; &lt;code&gt;</pre> <p>When the states are imported from archive, the importer is still able to read the old format, when the moduleInstanceId and state time are available in the zip file name only, for example</p> <pre>[code:xml] &lt;states&gt; &lt;state&gt; &lt;relativeFilePath&gt;modulestates\ModelA20180118020000.zip&lt;/relativeFilePath&gt; &lt;/state&gt; &lt;/states&gt; &lt;code&gt;</pre>	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/22-1+Datasets+of+the+Deltares+Open+Archive#id-22-1DatasetsoftheDeltaresOpenArchive-_Toc386122317SimulationsMetadata">https://publicwiki.deltares.nl/display/FEWSDOC/22-1+Datasets+of+the+Deltares+Open+Archive#id-22-1DatasetsoftheDeltaresOpenArchive-_Toc386122317SimulationsMetadata</a>		
Plugin - Module - Archive	<a href="#">FEWS-20566</a>		FEWS-18050 FFFS: Add option in old Archive import to skip grid data	Old Archive import: new option includeGrids to include or exclude gridded time series while importing	<p>When includeGrids is false, the gridded time series are not imported.</p> <p>When includeGrids is omitted, all gridded time series are imported</p>	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/12+Archive+Module">https://publicwiki.deltares.nl/display/FEWSDOC/12+Archive+Module</a>		
Plugin - Module - Archive	<a href="#">FEWS-21205</a>	TVA / BPA / NWS / BC Hydro	Improve Import Archive Module (wrt states)	ImportArchiveModule – importing of the (most recently archived) states	<p>States are archived in the forecast archiving process, together with time series, reports and modifiers.</p> <p>Up to now the states were only ingested as a part of archived forecast.</p> <p>From now on, it is possible to ingest the states only. For this purpose an (optional) import activity "moduleStatesImportActivity" has been added to the ImportArchiveModule.</p> <p>An example from importArchiveModule.xml :</p> <pre>[code:xml] &lt;importSimulated&gt; &lt;activities&gt; &lt;moduleStatesImportActivity/&gt; &lt;/activities&gt; &lt;importFolder&gt;\$ARCHIVE_DOWNLOAD_FOLDER\$/simulated&lt;/importFolder&gt; &lt;/importSimulated&gt; &lt;code&gt;</pre> <p>When "moduleStatesImportActivity" is configured, only states are imported from the importFolder. These states are then simply added to the WarmStates table.</p> <p>The states to ingest, for example the most recent states , should be selected in the ArchiveDisplay</p>			
Plugin - Module - Archive	<a href="#">FEWS-21473</a>		Increase number of logfiles in Archive Server	Archive Server Log now has a maximum of 20 log files of 1MByte each	Archive Server Log now has a maximum of 20 log files of 1MByte each	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/The+Deltares+OpenArchive+%282017.01+and+newer%29+-+Installation">https://publicwiki.deltares.nl/display/FEWSDOC/The+Deltares+OpenArchive+%282017.01+and+newer%29+-+Installation</a>		
Plugin - Module - Data Export, System - PI Service	<a href="#">FEWS-20062</a>	Singapore	Add a new data export type (NetCDF) to the pi-webservice					
Plugin - Module - Data Import	<a href="#">FEWS-19823</a>	EA	FEWS-18050 FFFS: Import comments from EA XML files	The importer for EA XML has been extended to import comments.	The UK Environmental Agency (EA) uses a custom XML format for transfer of data. This format can include comments that apply to a specific period. The functionality of the EA XML parser has been extended to import these comments to Delft FEWS.	<a href="https://publicwiki.deltares.nl/x/YYT4BQ">https://publicwiki.deltares.nl/x/YYT4BQ</a>		
Plugin - Module - Data Import	<a href="#">FEWS-20169</a>	Deltares	FEWS-18050 FFFS: Improve performance Import (compressed) NetCDF grids	Performance of netcdf cf grid import improved for large datasets by reading more data at once	Performance of netcdf cf grid import improved for large datasets by reading more data at once	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/NETCDF-CF_GRID">https://publicwiki.deltares.nl/display/FEWSDOC/NETCDF-CF_GRID</a>		



Component/s	Key	Customer name	Summary	Release Note Text	Release Note Text Description	Link to Documentation	Config Example	Images
Plugin - Module - Data Import	<a href="#">FEWS-14312</a>	EA	FEWS-18050 Develop Import from CAP Webservice for communication with WARNING system	Import types CapAlerts and CapAlert	<p>These import types import alerts from CAP Webservice of EA Warning system and store the alerts in the time series.</p> <p>*CapAlerts* reads first all links to real CAP files, and then imports the alerts from these CAP files.</p> <pre>&lt;general&gt; &lt;importType&gt;CapAlerts&lt;/importType&gt; &lt;serverUrl&gt;https://environment.data.gov.uk/cap/flood-alerts.atom&lt;/serverUrl&gt; &lt;idMapId&gt;idMapAlert&lt;/idMapId&gt;</pre> <p>(code)</p> <p>Configured serverUrl should be a link to the list of url's</p> <p>*CapAlert* reads the alerts from the single CAP file.</p> <pre>&lt;general&gt; &lt;importType&gt;CapAlert&lt;/importType&gt; &lt;serverUrl&gt;https://cap-xml.prn.defra.cloud/message/0768e13b0ab7aa4526c35a06b6533b37e&lt;/serverUrl&gt; &lt;idMapId&gt;idMapAlert&lt;/idMapId&gt;</pre> <p>(code)</p> <p>Configured serverUrl should be a link to the CAP file.</p> <p>CapAlert is useful when there are no alerts (anymore) on the site with links, and we need to import some old alerts, for example as a test.</p>	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/CAP+Alerts">https://publicwiki.deltares.nl/display/FEWSDOC/CAP+Alerts</a>		
Plugin - Module - Data Import	<a href="#">FEWS-20339</a>	RWS	Matroos import: add an import type for get_ncdf.php	New import type MATROOS_NETCDF-CF_GRID and MATROOS_NETCDF-CF_TIMESERIES	<p>MATROOS_NETCDF-CF_GRID and MATROOS_NETCDF-CF_TIMESERIES first download the nc file from Matroos and then read the downloaded files.</p> <p>To read the downloaded file, MATROOS_NETCDF-CF_GRID uses imported type NETCDF-CF_GRID and MATROOS_NETCDF-CF_TIMESERIES uses import type NETCDF-CF_TIMESERIES</p> <p>Both import types support the following Matroos query: <a href="http://matroos.rws.nl/direct/get_ncdf.php?database=&amp;source=&amp;analysis=&amp;timezone=&amp;hindcast=">http://matroos.rws.nl/direct/get_ncdf.php?database=&amp;source=&amp;analysis=&amp;timezone=&amp;hindcast=</a></p> <p>The query fields 'database' and 'source' are mandatory, 'analysis', 'timezone' and 'hindcast' are optional. The values for the query fields should be configured in the &lt;properties&gt; section of the import module.</p> <p>The downloaded nc file is automatically deleted after import. If you want to keep it, add key 'keep_downloaded_file' to the &lt;properties&gt; section</p>	<a href="https://publicwiki.deltares.nl/pages/resumedraft.action?draftId=141623416&amp;draftsId=67184de8-b42a-43ad-8b0b-a0ea21275027">https://publicwiki.deltares.nl/pages/resumedraft.action?draftId=141623416&amp;draftsId=67184de8-b42a-43ad-8b0b-a0ea21275027</a>		
Plugin - Module - Data Import	<a href="#">FEWS-21165</a>	EA	FEWS-18050 FFFS: Skip Missing values on importing					

Component/s	Key	Customer name	Summary	Release Note Text	Release Note Text Description	Link to Documentation	Config Example	Images
Plugin - Module - Data Import	<a href="#">FEWS-20352</a>		Improve CMEMS import with properties	Improve CMEMS import with properties	<p>CMEMS import was made easier by adding more property fields.</p> <p>The type of import should be configured using the <code>DATA_TYPE</code> property.  <code>DATA_TYPE</code> should be set to "HOURLY" for hourly data.  <code>DATA_TYPE</code> should be set to "DAILY" for daily data.  <code>DATA_TYPE</code> should be set to "MONTHLY" for monthly data.  Properties "product" and "service" are compulsory fields. Please fill them in exactly the same as it should be in the request url. (See the examples below) The product (i.e. "Product identifier" and service (found in "Services tab" on CMEMS website) can be found in the product explorer on the Copernicus website:  <a href="http://marine.copernicus.eu/services-portfolio/access-to-products/">http://marine.copernicus.eu/services-portfolio/access-to-products/</a>.</p> <p>FEWS will automatically add <code>x_lo</code>, <code>x_hi</code>, <code>y_lo</code>, <code>y_hi</code>, <code>z_lo</code>, <code>z_hi</code> values to the url. The data will be extracted from the grid configuration. Please make sure that the configured grid layer depth (z-layer) matches exactly the <code>z_lo</code> layer values the library provides. If it is not an exact match the data request will be refused. The <code>z_hi</code> values will be calculated by FEWS (<code>z_lo=0.01</code>). Do not use more than two decimals to configure the layers. When shortening the numbers, do not round them: just remove extra digits beyond 2 decimals. Note: Even for 2D imports you need to configure the correct z-value, e.g. 0.493, of the grid layer in Locations.xml.</p> <p>Z layer config example:  LAYER,Z  1,-0.49  8,9.57</p>	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/CMEMS">https://publicwiki.deltares.nl/display/FEWSDOC/CMEMS</a>		
Plugin - Module - Data Import	<a href="#">FEWS-20266</a>	RwsOS Waterbeheer	Waterbeheer: import munisense grondwaterdata	New import: munisense groundwaterdata	<p>Data is imported from <a href="https://opendata.munisense.net">https://opendata.munisense.net</a>. Example query:</p> <pre>https://opendata.munisense.net/api/v2/wareco-water2/groundwaterwells/1082172/water_level_filtered/query/presets/last_month</pre> <p>Example data set:</p> <pre>(code) ("results": [{"timestamp": "2019-03-21T10:15:23.000+00:00", "first_timestamp": "1553164216716", "last_timestamp": "1553164995278", "avg_manual_validation_state": "1", "min_manual_validation_state": "1", "max_manual_validation_state": "1", "count": 16, "avg_value": 8.677, "min_value": 8.389, "max_value": 8.698}, {"timestamp": "2019-03-21T11:15:23.000+00:00", "first_timestamp": "1553168033620", "last_timestamp": "1553168033620", "avg_manual_validation_state": "1", "min_manual_validation_state": "1", "max_manual_validation_state": "1", "count": 1, "avg_value": 8.7, "min_value": 8.7, "max_value": 8.7}, {"timestamp": "2019-03-21T12:15:23.000+00:00", "first_timestamp": "1553171633620", "last_timestamp": "1553171633620", "avg_manual_validation_state": "1", "min_manual_validation_state": "1", "max_manual_validation_state": "1", "count": 1, "avg_value": 8.698, "min_value": 8.698, "max_value": 8.698}, {"timestamp": "2019-03-21T13:15:23.000+00:00", "first_timestamp": "1553175233620", "last_timestamp": "1553175233620", "avg_manual_validation_state": "1", "min_manual_validation_state": "1", "max_manual_validation_state": "1", "count": 1, "avg_value": 8.7, "min_value": 8.7, "max_value": 8.7}], "timestamp": "2019-03-21T13:15:23.000+00:00", "first_timestamp": "1553175233620", "last_timestamp": "1553175233620", "avg_manual_validation_state": "1", "min_manual_validation_state": "1", "max_manual_validation_state": "1", "count": 1, "avg_value": 8.7, "min_value": 8.7, "max_value": 8.7})</pre>	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/Munisense+import">https://publicwiki.deltares.nl/display/FEWSDOC/Munisense+import</a>		
Plugin - Module - General Adapter	<a href="#">FEWS-20149</a>		Possibility to store intermediate restarts from a single run with various TO and distinguish between forecast states and hindcast states	Added <backupWarmStateModuleInstanceId> Different module instance id used for finding warm state, when original warm state can't be found	Added <backupWarmStateModuleInstanceId> Different module instance id used for finding warm state, when original warm state can't be found	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/05+General+Adapter+Module#id-05GeneralAdapterModule-backupWarmStateModuleInstanceId">https://publicwiki.deltares.nl/display/FEWSDOC/05+General+Adapter+Module#id-05GeneralAdapterModule-backupWarmStateModuleInstanceId</a>		
Plugin - Module - General Adapter	<a href="#">FEWS-20619</a>	MDBA	FEWS-14730 Export rating curves with comments and table id (R_303, 304)	GA exportRatingCurveActivity – option onlyLatestAvailable	exportRatingCurveActivity exports by default all rating curves within the run period . If option "onlyLatestAvailable" is used, then only the latest available rating curve in the run period will be exported	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/05+General+Adapter+Module#id-05GeneralAdapterModule-exportRatingCurveActivity">https://publicwiki.deltares.nl/display/FEWSDOC/05+General+Adapter+Module#id-05GeneralAdapterModule-exportRatingCurveActivity</a>		
Plugin - Module - General Adapter	<a href="#">FEWS-20517</a>	EA	FEWS-18050 FFFS: Ignore missing locationSets in General Adapter burninprofile					
Plugin - Module - General Adapter	<a href="#">FEWS-20848</a>		FFFs: Ignore missing locationSets in General Adapter when importing series					
Plugin - Module - General Adapter	<a href="#">FEWS-20444</a>	EA	FEWS-18050 Allow GeneralAdapter to constrain array type here in initial values		Lookup initial value for specific model in case the initial value attribute contains a different value for each model			



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Plugin - Module - Modifiers (TimeSeries)	<a href="#">FEWS-20888</a>	NWS	FEWS-20886 NWS: #53507 SACCO compoundModifier - initial slider position should match the value					
Plugin - Module - Reports	<a href="#">FEWS-19817</a>	SEQWater	FEWS-10487 Add <timeseries> in ReportModule	GeneralCsv export: ability to export ensemble and ensemble member	<p>By default the ensemble member index is exported. To export member id's, use an option &lt;ensembleMemberFormat&gt;name&lt;/ensembleMemberFormat&gt; in the general section of the time series export module.</p> <p>An example :</p> <pre>{code:xml} &lt;general&gt; &lt;exportType&gt;generalCsv&lt;/exportType&gt; &lt;folder&gt;SEXPORT_FOLDERS&lt;/folder&gt; &lt;exportFileName&gt; &lt;name&gt;ExportGeneralCsv.csv&lt;/name&gt; &lt;/exportFileName&gt; &lt;table&gt; &lt;dateTimeColumn name="DateTime" pattern="yyyy-MM-dd HH:mm"/&gt; &lt;locationColumn name="Location"/&gt; &lt;parameterColumn name="Parameter"/&gt; &lt;ensembleMember name="Ensemble"/&gt; &lt;ensembleMemberColumn name="Ensemble Member"/&gt; &lt;valueColumn name="Value"/&gt; &lt;/table&gt; &lt;ensembleMemberFormat&gt;name&lt;/ensembleMemberFormat&gt; &lt;/general&gt; {code}</pre> <p>Please note that ensembleColumn and ensembleMemberColumn are supported only for time series export, and not for time series</p>	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/General+CSV+Export">https://publicwiki.deltares.nl/display/FEWSDOC/General+CSV+Export</a>		
Plugin - Module - Spatial Modifiers	<a href="#">FEWS-21286</a>	EA	FEWS-18050 Allow setting all modifier properties in spatial modifier creation dialog	Use modifier properties panel in spatial modifier creation dialog	The spatial modifier creation dialog contains the same modifier properties panel as is shown when a new modifier is created or a modifier is edited in the modifiers panel. This allows setting all modifier properties (like user defined description fields) for spatial modifiers through the spatial display when creating them, instead of having to navigate to the modifiers panel and edit	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/05+Spatial+Display#id-05SpatialDisplay-ModifierProperties">https://publicwiki.deltares.nl/display/FEWSDOC/05+Spatial+Display#id-05SpatialDisplay-ModifierProperties</a>		
Plugin - Module - Thresholds	<a href="#">FEWS-20356</a>	EA	FEWS-18050 FFFS: Allow usage of multivalued attributes for Thresholds	Multivariate threshold transformation added that can group inputs by locationSet	Multivariate threshold transformation added that can group inputs by locationSet. For each locationSet can be specified which location attribute should be used to determine the threshold value and how many time series should cross their threshold.	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/Multivariate+Alerting+HyFS">https://publicwiki.deltares.nl/display/FEWSDOC/Multivariate+Alerting+HyFS</a>		
Plugin - Module - Transformation	<a href="#">FEWS-20833</a>		FEWS-18050 FFFS: multipleVariateThresholds: additional requirements / some modifications					
Plugin - Module - Transformation	<a href="#">FEWS-19890</a>	EA	FEWS-18050 FFFS: New transformation for Multiple Linear Regression		A new transformation Multiple linear regression is available. This transformation can be used to calculate a value by using a linear regression equation. The input values (time series, factor and constant value) will be defined by using location attributes. More details can be found here: <a href="https://publicwiki.deltares.nl/display/FEWSDOC/Multiple+linear+regression">https://publicwiki.deltares.nl/display/FEWSDOC/Multiple+linear+regression</a>			
Plugin - Module - Transformation	<a href="#">FEWS-18490</a>	EA	FEWS-18050 FFFS: Use qualifiers in rating curve and seasonal rating curves					
Plugin - Module - Transformation	<a href="#">FEWS-21277</a>	EA	FEWS-18050 Allow specifying property for default value in serial interpolation	Allow use of property-tags (\$) in defaultValue element in default interpolationSerial	The <defaultValue> element in the <default> element of <interpolationSerial> now allows the use of property-tags (\$).	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/06+Configuring+Workflows#id-06ConfiguringWorkflows-properties">https://publicwiki.deltares.nl/display/FEWSDOC/06+Configuring+Workflows#id-06ConfiguringWorkflows-properties</a>		
Plugin - Module - Transformation	<a href="#">FEWS-20324</a>	EA	FEWS-18050 FFFS: new transformation for time to (or after) peak	A new transformation for time to (or after) selection has been implemented	In the category Selection transformations, a new "time to selection" transformation has been implemented. This transformation can be used in combination with any of the existing Selection type transformation. For example, the output of the "Selection of peaks" can be used to calculate the nearest high	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/Time+to+selection+transformation">https://publicwiki.deltares.nl/display/FEWSDOC/Time+to+selection+transformation</a>		
Plugin - Module - Transformation	<a href="#">FEWS-21339</a>	EA	FEWS-18050 FFFS: Transformation to select correct ensemble member data	Added selection ensemble member by index transformation which takes the value of the ensemble member that matches its index with the value of a provided time series.	Added selection ensemble member by index transformation which takes the value of the ensemble member that matches its index with the value of a provided time series.	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/Selection+Ensemble+Member+by+Index">https://publicwiki.deltares.nl/display/FEWSDOC/Selection+Ensemble+Member+by+Index</a>		



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Plugin - Module - Transformation	<a href="#">FEWS-20311</a>	EA	FEWS-18050 FFFS: Add persistencetrend function to new transformation module	Migrating persistencetrend function to new transformation module	This function takes three input time series and produces one output time series.  <inputVariable>: An equidistant scalar time series <outputVariable>: An equidistant scalar time series (longer than the original series) Configuration Define 2 time series as variables to be used as input and output. <availableObservedValues> Required element defining how many non-missing values need to be present in the time window (from which the trend is calculated.) <consecutiveObservedValues>  Required element defining the non-missing values in the time window (from which the trend is calculated) need to be consecutive. If set to false the series of values present are allowed to be broken up by missing values.  <observedValuesGap>  Required element defining how many missing values are allowed between the configured time zero and the last value in observed values.  <>window>  Required element defining the time period in the input time	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/PersistenceTrend">https://publicwiki.deltares.nl/display/FEWSDOC/PersistenceTrend</a>		
Plugin - Module - Transformation	<a href="#">FEWS-20760</a>	Deltares	TS: accumulation-max transformation	New transformation: accumulation max	This transformation takes a time series, and replaces the values to the highest value, that has been observed up to that point. It ignores unreliable values.  Example:  input: 0 1 5 2 3 7 3 3  output: 0 1 5 5 7 7 7  The transformation supports scalar and grid time series. The input and the output types have to be the same. In case of an grid type time series set, the grid geometry must be the same for each time	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/Accumulation+max">https://publicwiki.deltares.nl/display/FEWSDOC/Accumulation+max</a>		
System - Logging	<a href="#">FEWS-18005</a>	RWS	RWsOS: Request to include taskRunId in each line of log.txt					
System - PI Service	<a href="#">FEWS-20766</a>	HDSR	Add locationRelations to getLocations call of PIWebservice	New optional parameter added to getLocations call of PIWebservice: includeLocationRelations	New optional parameter added to getLocations call of PIWebservice: includeLocationRelations Default value is false. If it is set to true, location relations will be included in the response. For XML format response this option is available from v.1.26 or greater. Url example: "http://localhost:8080/FewsWebServices/rest/fewspiservice/v1/locations?showAttributes=true&includeLocationRelations=true&do	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/FEWS+PI+REST+Web+Service#FEWSPIRESTWebService-GETlocations">https://publicwiki.deltares.nl/display/FEWSDOC/FEWS+PI+REST+Web+Service#FEWSPIRESTWebService-GETlocations</a>		



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System - PI Service	<a href="#">FEWS-20765</a>	HDSR	Add info on time dependency to getLocations call of PIwebservice	Added new optional request parameter to PI web service getLocations call: includeTimeDependency. Default value is true. For XML format response this option is available from version 1.26 or greater. If the option is set to true, the response will include: <ul style="list-style-type: none"><li>- start end time of the location, if location is time dependent.</li><li>- if showAttributes is true, and if an attribute is time dependent, for each value it can take it will be listed along with the start and end time and value.</li><li>- if include RelationLocations is true, and the location relation is time dependent, the end and start time of the relation will be listed.</li></ul> Example response: <pre>(code) {   "locationId": "locB",   "shortName": "B",   "lat": "7.0",   "lon": "7.0",   "x": "7.0",   "y": "7.0",   "z": "7.0",   "attributes": [     {       "name": "TEST_ATTRIBUTE",       "type": "text",       "id": "TEST_ATTRIBUTE",       "startDateTime": "1930-01-01T00:00:00+0000",       "endDateTime": "2000-01-01T00:00:00+0000",       "value": "B"     }   ] }</pre>	Added new optional request parameter to PI web service getLocations call: includeTimeDependency. Default value is true. For XML format response this option is available from version 1.26 or greater. If the option is set to true, the response will include: <ul style="list-style-type: none"><li>- start end time of the location, if location is time dependent.</li><li>- if showAttributes is true, and if an attribute is time dependent, for each value it can take it will be listed along with the start and end time and value.</li><li>- if include RelationLocations is true, and the location relation is time dependent, the end and start time of the relation will be listed.</li></ul> Example response: <pre>(code) {   "locationId": "locB",   "shortName": "B",   "lat": "7.0",   "lon": "7.0",   "x": "7.0",   "y": "7.0",   "z": "7.0",   "attributes": [     {       "name": "TEST_ATTRIBUTE",       "type": "text",       "id": "TEST_ATTRIBUTE",       "startDateTime": "1930-01-01T00:00:00+0000",       "endDateTime": "2000-01-01T00:00:00+0000",       "value": "B"     }   ] }</pre>	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/FEWS+PI+REST+Web+Service#FEWSPIRESTWebService-6ETLocations">https://publicwiki.deltares.nl/display/FEWSDOC/FEWS+PI+REST+Web+Service#FEWSPIRESTWebService-6ETLocations</a>		
System - PI Service	<a href="#">FEWS-21074</a>	Deltares	FEWS-19650 FFFS-PI: WMS kijkt maar 2 folders diep in de spatial display config	GetCapabilites was only using 2 levels of layers	The GetCapabilites was only using 2 levels of layers from the GridDisplay.xml. Now all levels are retrieved.	<a href="https://publicwiki.deltares.nl/pages/viewpage.action?pageId=134482048">https://publicwiki.deltares.nl/pages/viewpage.action?pageId=134482048</a>		
System - PI Service	<a href="#">FEWS-20835</a>	EA	FFF-PI: New Request to retrieve all time series of selected plotId of displaygroups	get timeseries using displayGroups plotId	The get timeseries/displaygroups endpoint can retrieve all timeSeries configured using a displayGroups plotId	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/FEWS+PI+REST+Web+Service#FEWSPIRESTWebService-GETTimeseries/displaygroups(2019.02)">https://publicwiki.deltares.nl/display/FEWSDOC/FEWS+PI+REST+Web+Service#FEWSPIRESTWebService-GETTimeseries/displaygroups(2019.02)</a>		
System - PI Service	<a href="#">FEWS-20470</a>	Deltares	FEWS-19650 FEWS Web Services should be readonly by default	READONLY_MODE for FEWS Web Services enabled by default	READONLY_MODE for FEWS Web Services enabled by default since 2018.02	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/FEWS+Web+Services">https://publicwiki.deltares.nl/display/FEWSDOC/FEWS+Web+Services</a>		
System - PI Service	<a href="#">FEWS-19855</a>	Deltares	Read-only support for FEWS webservices	READONLY_MODE for FEWS Web Services	Since 2017.02 it is possible to run the FEWS Web Services in readOnly mode. The FEWSProperties.properties can be configured with the property READONLY_MODE=true to only allow read access. In 2017.02 this property has to be configured. Since 2018.02 read only mode is enabled by default.	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/FEWS+Web+Services">https://publicwiki.deltares.nl/display/FEWSDOC/FEWS+Web+Services</a>		
System - PI Service	<a href="#">FEWS-18927</a>	Deltares	FEWS-19646 Thinning support in REST service	Thinning support for timeseries in pi service	Thinning is used to retrieve the visually interesting time steps of timeSeries. It tries to keep the peaks and gaps and minimizes the number of time steps that have to be retrieved. It is typically used for visualizations. The value to be specified should be equal to the view period in milliseconds of the timeSeries that is visualized divided by the number of pixels that are available for display. For example: visualizing a view period of 5 years (157784760000 milliseconds) on a display of 1024 pixels, the thinning parameter should be set to 157784760000/1024 = 15408668. (Since 2019.02)	<a href="https://publicwiki.deltares.nl/display/FEWSDOC/FEWS+PI+REST+Web+Service#FEWSPIRESTWebService-GETTimeseries">https://publicwiki.deltares.nl/display/FEWSDOC/FEWS+PI+REST+Web+Service#FEWSPIRESTWebService-GETTimeseries</a>		
System - PI Service	<a href="#">FEWS-19945</a>	UAE Navy	FEWS-19924 WMS Service: Support vendor parameter to get specific forecast	WMS service supports requesting older forecasts	WMS service supports requesting older forecasts. With the GetCapabilities method the available external forecast times and times available can be requested. The GetMap method supports passing a forecast time as request parameter for a layer	<a href="https://publicwiki.deltares.nl/pages/viewpage.action?pageId=134482048">https://publicwiki.deltares.nl/pages/viewpage.action?pageId=134482048</a>		
System - Synchronisation	<a href="#">FEWS-18585</a>	Deltares	FEWS-17521 Database download is onduidelijk					
System - Workflow	<a href="#">FEWS-18625</a>		Template functionality for Workflows					



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Water Coach	<a href="#">FEWS-21052</a>	RWS	FEWS-21093 WaterCoach: Master Water Coach instance writes time file for participants from different systems	WaterCoach Multiple Systems - sharing system time	<p>Multiple systems are WaterCoach instances with different configurations, for example FewsMeren, FewsRivieren and so on. These instances are members of the multiple systems. All members share the same water coach system time. The system time is written by the 'master' member to a file on a shared drive and other members read the time from this file to synchronize their exercises.</p> <p>This shared file can be configured with an element 'multipleSystems' in WaterCoachDisplay.xml</p> <pre>{code:xml} &lt;multipleSystems enabled="true"&gt; &lt;systemTimeFile&gt;n:/WaterCoachTemp/systemTimeFile&lt;/systemTimeFile&gt; &lt;/multipleSystems&gt; {code}</pre> <p>When multipleSystems is enabled, a 'Master' check box appears in the WaterCoach display , where the WaterCoach instance can be marked as master member (see attached WaterCoachMaster.png) Only one member of the multiple</p>	<a href="https://publicwiki.deltares.nl/display/EAT/Application+configuration">https://publicwiki.deltares.nl/display/EAT/Application+configuration</a>		