

Delft-FEWS Configuration Guide

Introduction

The Delft-FEWS configuration guide provides the advanced user of Delft-FEWS with the information required to set-up and maintain a configuration of Delft-FEWS. The objective of the guide is to be used both as a reference manual during the development and maintenance of an implementation of Delft-FEWS, as well as to provide some of the background philosophy on how to go about setting up a forecasting system. It is expected that the reader of this guide has a basic understanding of Delft-FEWS and its structure.

To understand how to configure Delft-FEWS, a good understanding of the structure of the configuration is required, see the following table:

section	description	Topics
01 Structure of a Delft-FEWS Configuration	Introduction to different parts of the Delft-FEWS configuration.	Elements of the configuration, naming conventions, XML Schemas and schema validation.
02 Data Handling in Delft-FEWS	Concepts used for handling data in Delft-FEWS.	Types of Time Series, Time Series Sets, Manual data edits
03 System Configuration	Configuration of system components.	E.g. Display settings, FewExplorer, Logging, Permissions, Color schemes
04 Regional Configuration	Various regional configuration components which relate to a specific regional FEWS systems (e.g. monitoring locations).	E.g. Locations, LocationSets, ModuleInstances, WorkflowDescriptors, Branches, Parameters, Grids, Filters, TimeSteps, Qualifiers, Polygons, Topologies, Thresholds, Historical Events.
05 Configuring the available Delft-FEWS modules	Configuration of available Modules, e.g. 'module instances'	E.g. interpolation of data or how to configure an external model such as ISIS (using the General Adapter Module) including how these can be configured to achieve the required functionality.
06 Configuring WorkFlows	Concepts for linking configured modules into logical tasks through configuration of workflows.	
07 Display Configuration	Configuration of user displays.	
08 Mapping Id's flags and units	Mapping information from external data sources.	
09 Module datasets and Module Parameters	Handling of static module data.	
10 Setting up an operational system	Elements for configuring Delft-FEWS as an operational system.	
11 Setting up a forecasting system	A brief introduction is on how to set-up a forecasting system.	Approaches for more advanced setup possibilities.

12 Configuration management Tool	A brief guide in the use of the configuration management module to support configuration.	
13 Additional Modules	Additional functionality available in additional modules available through Delft-FEWS.	
15 Connect external modules with a model adapter	Link third party models.	
17 Launcher Configuration	Optional configurable launch application for accessing Operator Client / ConfigManager / Admin Interface.	
18 FEWS data exchange interfaces	Webservices for data exchange, Fews Jdbc Server	
19 Parallel running of ensemble loops and activities on one forecasting shell instance	Advanced options for running workflows in parallel.	
20 Delft-FEWS as Command Line Runnable : Data Conversion Module - DCM	Generic application for filebased exchange / transformation / conversion of timeseries.	
21 Time Dependent Locations	Support for time dependent locations within Water Information System (WIS).	
Appendices	Colour names, GeoDatum, Time Zones, Units, Data quality flags, Synchronisation Levels	

[Downloadable version \(9-12-2011\)](#)

Contents

- 01 Structure of a Delft-FEWS Configuration
- 02 Data Handling in Delft-FEWS
- 03 System Configuration
 - 01 FEWS Explorer
 - 02 Time Series Display Configuration
 - 03 Display Groups
 - 04 Location Icons
 - 05 Module Descriptors (Obsolete)
 - 06 Display Descriptors (Obsolete)
 - 07 Permissions

- 08 Color schemes and custom colors
- 09 Logging
- 10 Archives
- 04 Regional Configuration
 - 01 Locations
 - 01 Related Locations
 - 02 LocationSets
 - 03 Parameters
 - 05 Branches
 - 06 Grids
 - 07 Filters
 - 08 ValidationRulesets
 - 09 Thresholds
 - 10 ThresholdValueSets
 - 11 ColdModuleInstanceStateGroups
 - 12 ModuleInstanceDescriptors
 - 13 WorkflowDescriptors
 - 14 IdMapDescriptors (Obsolete)
 - 15 FlagConversionsDescriptors (Obsolete)
 - 16 UnitConversionsDescriptors (Obsolete)
 - 17 CorrelationEventSetsDescriptors (Obsolete)
 - 18 TravelTimesDescriptors (Obsolete)
 - 19 TimeUnits
 - 20 Historical Events
 - 21 Value Attribute Maps
 - 22 Locations and attributes defined in CSV files, Shape-DBF files or external tables
 - 23 Qualifiers
 - 24 Topology
 - 25 ModifierTypes
 - 26 TimeSteps
 - 27 CustomFlagSources
 - 28 SampleMetadataSchema
 - 29 FlagSourceColumns
 - 30 Persistent Ids
 - 31 Polygons
- 05 Configuring the available Delft-FEWS modules
 - 01 Interpolation Module
 - 02 Transformation Module
 - 03 Import Module
 - 04 Export modules
 - 05 General Adapter Module
 - 06 Lookup Table Module
 - 07 Correlation Module
 - 08 Error Correction Module (ARMA)
 - 09 Report Module
 - 10 Performance Indicator Module
 - 11 Amalgamate Module (Replaced by Import Amalgamate Module)
 - 12 Archive Module
 - 13 Compact index and cache files
 - 14 Support Location Module
 - 15 Scenario Module
 - 16 Pcraster Transformation (pctTransformation)
 - 17 WorkflowLooprunner
 - 18 Mass-balances
 - 19 Rating curves (Obsolete since 2009)
 - 20 Transformation Module - Improved schema
 - 21 Secondary Validation
 - 22 Forecast Length Estimator
 - 23 Decision Module
 - 24 ImportAmalgamate
 - 25 PI-rating curve
 - 26 Content Update Checker
 - 27 SystemMetrics
 - 28 Flood Periods Module
 - 29 Time Series Status Snapshot Update
 - 30 Config Update Module
- 06 Configuring WorkFlows
- 07 Display Configuration
 - 01 Grid Display
 - 02 Longitudinal Display
 - 03 What-If Scenario Display
 - 04 Lookup Table Display
 - 05 Correlation Display
 - 06 System Monitor Display
 - 07 Skill Score Display
 - 08 Time Series Modifiers
 - 09 State editor display

- 10 Interactive forecast display
- 11 Threshold Display
- 12 Task Run Dialog Display
- 13 Manual Forecast Display
- 14 ChartLayer
- 15 Schematic Status Display (formerly Scada Display)
- 16 Modifier display
- 17 TimeSeriesButtonsPanels
- 18 Sample Viewer
- 19 Module Run Table Display
- 20 Tabular Config Files Display
- 21 Archive display
- 22 Forecast Management
- 23 Attribute filter
- 24 Web Browser Display
- 25 WaterCoach
- 26 Verification Analysis Display
- 27 Forecaster Aid Selection Panel
- 28 GeoMap
- 08 Mapping Id's flags and units
 - 01 ID Mapping
 - 02 Unit Conversions
 - 03 Flag Conversions
- 09 Module datasets and Module Parameters
 - 01 Module Datasets
 - 02 Module Parameters
- 10 Setting up an operational system
 - Settings for Delft-FEWS versions before 2018.02
 - Settings for Delft-FEWS versions from 2018.02 and later
- 11 Setting up a forecasting system
 - 01 Requirements
 - 02 Designing the Forecasting System
 - 03a Creating a Delft-FEWS application directory before 2018.02
 - 03b Creating a Delft-FEWS application from version 2018.02 and later
 - 04 Static Configuration
- 12 Configuration management Tool
 - 01 Managing Configurations
 - 02 Validation of a Configuration
 - 03 Analysis of a Configuration
 - 04. Automatic Configuration Update
- 13 Additional Modules
 - 01 Flood Mapping Module
 - 03 Testing workflows with the WorkflowTestRunner in SA mode
 - 04 Bayesian Model Averaging (BMA)
 - 05 Historic Forecast Performance Tool (HFPT) Adapter
- 15 Connect external modules with a model adapter
 - Model adapters not developed by Deltares - manuals
 - Developing a FEWS (Compliant) Adapter
 - Developing a FEWS Adapter based on NetCDF-CF
 - External model specific files
 - Delft3D-FEWS adapter configuration manual
 - Models linked to Delft-Fews
 - Quick-start Guide for Adding an External Module in FEWS
 - Model adapters created by external parties
 - Example code for model adapters
- 17 Launcher Configuration
 - Launcher XML
 - Security XML
- 18 FEWS data exchange interfaces
 - FEWS Web Services
 - FEWS PI REST Web Service
 - FEWS PI SOAP Web Service
 - FEWS Web Mapping Service with time support (WMS-T)
 - WaterML2 Web Service
 - Embedded - Fews PI service
 - Fews Data Access Component
 - Fews JDBC server
 - Fews Workflow Runner service
 - JDBC vs. FewsPiService
- 19 Parallel running of ensemble loops and activities on one forecasting shell instance
- 20 Delft-FEWS as Command Line Runnable : Data Conversion Module - DCM
- 21 Time Dependent Locations
- 22 Exchange with the Deltares Open Archive
 - 22-1 Datasets of the Deltares Open Archive

- [22-2 Export to Deltares Open Archive](#)
- [22-3 Import from Deltares Open Archive](#)
- [Appendices](#)
 - [A Colour names available in Delft-FEWS](#)
 - [B Enumerations](#)