01 Managing Configurations

Managing configurations

After startup the user can to connect to the Master Controller of the application. The details of which are obtained from the synchronization configuration files or the DDA (direct database access details) for that application. If a connection has been established successfully, the download and upload buttons will be activated. If a connection cannot be established, the buttons will remain inactive.

The file menu provides a command to create a connection to the master controller, to facilitate the possibility that a user has connected to the network after opening a Master Controller session.



After selecting Login the following window is shown (an example from the wgrfc Configuration. If multiple master controllers are available, these will be shown also)

| ogin to Master (| Controller | × |
|-------------------------------------|-------------------------------|------|
| Select a Master | Controller: TUAMC00 server | |
| -Select a synchro (a) ConfigMana | onisation profile: iger | |
| Set the synchro day | nisation period: | 1 |
| ОК | Cancel | Help |

Download a configuration from a Master Controller

The user must manually initiate a synchronization session with the master controller to download the latest configuration files. Seeing that the configuration manager works independent from FEWS, this is a required action to ensure that the local datastore is up to date. Only configuration files need to be synchronized.

Click on [Download] to download all configuration files. The download button is only available if a connection has been established with a master controller.

| 🙆 Configuration Management - wgrfc_oc | | | | | | | | | | | | |
|--|----------------|-------|-----------------|--------------|----------|--------------|--------|--|----------|-----------------|-------------------|----------------|
| <u>F</u> ile <u>M</u> anagement <u>H</u> elp | | | | | | | | | | | | |
| Management Version Management | | | | | | | | | | | | |
| G | roup By Export | | Im <u>p</u> ort | Set <u>A</u> | ctive | Set Inactive | Delete | | Validate | Do <u>w</u> nlo | ad <u>U</u> pload | System Monitor |
| wyrfc_oc CoefficientSetsFiles CorrelationEventSe TraveTimesFiles DisplayConfigFiles ElaConversionsFile | | • III | Version | | Creation | 1 Time | User | | Filename | | Comment | Synch Level |

In the screen above the download button is not available.

If no download can be performed, this does not mean that the manager cannot be used.

Import configuration files

The import function allows a single or multiple configuration file(s) to be imported from the file system. Files can only be imported into a given group if the Configuration Manager configuration allows this.

On import, each configuration file will be assigned a new, locally unique ID. This ID is prefixed with "CM: " following by the date/time of the import in milliseconds. The exact date/time is arbitrary, as the local ID needs to be unique only on the local machine.

In case the file to be imported is the first file that is imported of a certain configuration schema, this file is directly set as Active.

Three types of configuration files are handled by the configuration manager: XML, HTML and Binary files. The handling of each file type is slightly different, as is shown in the following table.

| FileType | Handling |
|----------|--|
| XML | The file is stored in a readable form in the data store. The content of the xml file is validated before being imported. Invalid files will not be imported. |
| HTML | The file is stored in a readable form in the data store. The content is not validated, as no schema will be available to validate against. |
| Binary | Binary configuration files include all other configuration files. These may be xml configuration files, module data sets or module states. |

When a configuration file is imported, the user that has imported the file is registered.

How are configuration files displayed?

An active configuration is shown having a yellow background. A selected configuration file is shown having a blue background. An active selected configuration file is shown with a blue background, except for the ID which is shown with a yellow background. Below an example is given of two available ManualForcastDisplay configuration files. The active file is selected.

| Configuration Management - wgrfc_o | x | BO B. D. | With same in | - | | | NUMBER OF T | | | |
|---|-----------------|--------------------|----------------------|----------------------|-------------------|-------------------|-------------------|-----------------------|-----|--|
| <u>File Management Help</u> | | | | | | | | | | |
| Management Version Management | | | | | | | | | | |
| Group By Export I | Im <u>p</u> ort | Set <u>A</u> ctive | Set <u>I</u> nactive | <u>D</u> elete | <u>V</u> alidate | Do <u>w</u> nload | Upload | S <u>v</u> stem Monit | or | |
| | * | Version | Creation Time | User | Filena | me | Commen | t | Syn | |
| 😥 📗 CoefficientSetsFiles | E | TUAMC00:00000 | 2016-08-16 08:3 | Min Xu | ManualForecastDi | splay.xml | | | 0 | |
| 🗄 📲 ColdStateFiles | | CM:14793358624 | 2016-11-16 17:3 | Edwin | ManualForecastDi | splay.xml | | | 0 | |
| CorrelationEventSetsFiles | | | | | | | | | | |
| TravelTimesFiles | | | | | | | | | | |
| DisplayConfigFiles | | | | | | | | | | |
| ManualForecastDisplay | | | | | | | | | | |
| ModifierDisplay | | | | | | | | | | |
| Scada_MexRes | | | | | | | | | | |
| SpatialDisplay | | | | | | | | | | |
| SystemMonitorDisplay | | | | | | | | | | |
| | | 16.11.2016 17:37: | 43 INFO - Import.F | inished: Import of | configuration fin | ished. | | | | |
| | * | 16 11 2016 17:37: | 43 INFO - Confia I | nfo: New default fil | e found: Display | Confidurations/ | ManualForecastDis | solav xml | - | |
| Edwin 2016-11-16 17:38:01 EST | r | | | Logged off | | | | | | |

Make a selected configuration file the active file

Of any configuration file instance, only one can be the active file. After selecting a file, click on [Set Active] to make the selected file the active file. Only one configuration file may be active at any moment.

Delete a configuration file

Deleting configuration files is possible only in limited situations. A configuration file could at some stage be used in a forecast and must therefore remain available for at least the length of the rolling barrel.

Configuration files may only be deleted in the following situation: The configuration file ID is a local ID, ie it starts with the prefix "CM: ". The configuration file is not the active configuration file, i.e. it is not referenced in the default table

To delete a configuration file, select the file and click on [Delete]

Export a configuration file

Exporting a configuration file allows the file to be saved to the file system. The filename will be set by the configuration manager. The filename will follow the configuration file naming convention used in the file system:

Name Version Status.xml

Where:

- Name : ID of the configuration file
- Version : Version number of the configuration file
- Status : Default if the configuration file is the active file, a zero length string if the file is not an active configuration file.

After exporting, the configuration manager will start up the application that has been associated with the specific file. This association must be configured in the configuration management configuration file.

Upload to Master Controller

Uploading a configuration (file) involves that all modified and added configuration files are synchronized with the master controller database. An essential aspect of uploading is that the configuration files are provided with a unique Master Controller ID. The local ID that has been set for the configuration file cannot be guaranteed to be unique for the master controller as multiple users may be changing a configuration.

During the period between downloading a configuration and the ensuing uploading of a modified configuration, in theory some one else could have made a change to the same configuration. The configuration manager will not deal with this theoretical possibility. The procedure that is used is that of optimistic locking, where the last changes that are made to a regional configuration are the changes that are stored.

The procedure for uploading a configuration file is:

- Validate the configuration
- Connect to the master controller
- Request a unique ID for each configuration file having a Local ID
- Reset the Local ID's to the obtained Master Controller ID's
- Synchronize the configuration tables
- Log off

The uploading of configuration files is carried out in a transaction, enabling the complete transaction to be rolled back if an error occurs.

Changing an existing configuration file

The procedure to follow when certain configuration file needs to be changed is simple. To do so, carry out the following steps:

Step 1: Select the configuration that needs to be changed

Step 2: Export the file by clicking on [Export]. This will start the 'editor' that has been configured for the selected configuration file. If the editor does not allow editing, close the editor and open the configuration file in an appropriate editor

Step 3: Make the required changes and save the file. Give the configuration file an appropriate name, using the file naming convention given in paragraph 13.2.5

Step 4: Import the modified file. Note that the filename is now shown in the description field.

Step 5: Set the newly imported file Active

Step 6: Use the analysis section to verify that the configuration is still correct. Verify the relevant workflows.

Step 7: Upload the configuration to the master controller. Check that the file has indeed been uploaded by verifying that the ID has been changed from a Local ID to a Master Controller ID