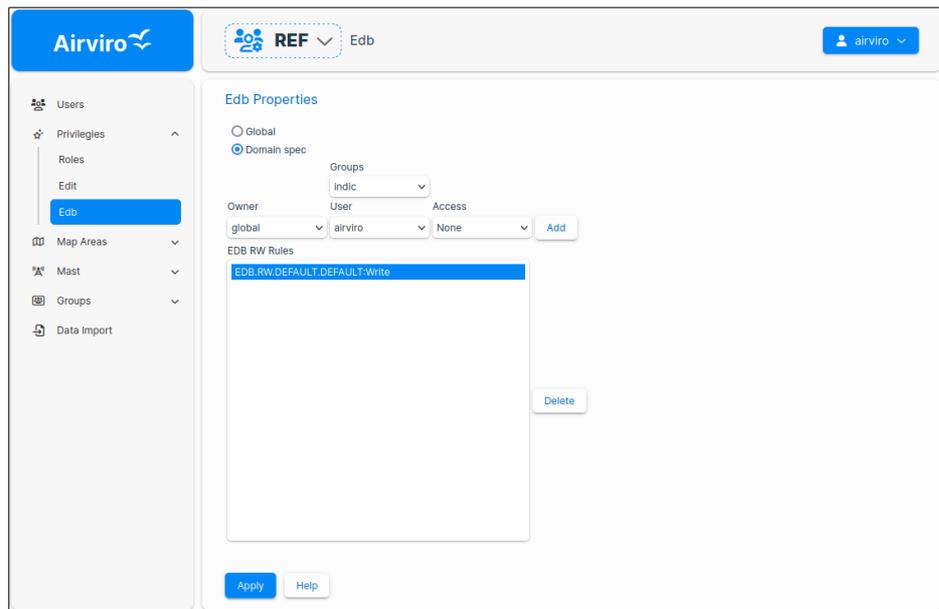# Apertum

Airviro User's Reference

Working with IADM

How to perform administrative tasks in Airviro

How to perform administrative tasks in Airviro

Amendments

Version	Date changed	Cause of change	Signature
3.11	Nov 2006	Manual for new Airviro module	GS
3.11	Nov 2007	Upgrade	GS
3.12	Feb 2009	Upgrade	GS
3.13	Feb 2009	Upgrade	GS
3.20	Dec 2010	Upgrade	GS
3.21	Dec 2010	Upgrade	GS
3.21	June 2012	Review	GS
3.22	March 2013	Upgrade	GS
3.23	May 2013	Upgrade	GS
3.23	Nov 2014	Review	GS
4.00	June 2015	Upgrade	GS
4.00	Aug 2018	Review	GS
5.00	Dec 2020	Review	GS
5.00	March 2021	Review	DC
5.01	March 2023	Review	GS
5.10	March 2023	Review	GS
6.00	March 2024	Upgrade	GS
6.00	Oct 2024	Review	GS
6.0	Jan2025	Review	GS
6.0	Feb 2025	Review	DC
6.0	March 2025	Review	LEO

Contents

7.1 Introduction

IADM Module is used to perform some administrative and configuration tasks in Airviro.

Only the user named **airviro** has access to this module since changes made here may affect the entire installation.

In this manual you will learn:

- How to add users to your system.

- How to add roles and privileges to users.

- How to work with maps in Airviro.

- How to add scenarios for later use in dispersion calculations.

Some of the examples shown here are based on real sources from the Airviro (Göteborg) Reference System, included in all Airviro installations.

> **Note:** As already said, only the **airviro** user can use this module since changes made here may affect the entire system. If you need to perform some administrative tasks such as adding a new layer to a map or setting up a new user or role, contact your system administrator.

> **Note:** Different users can have different privilege levels for different modules and menus. It is the task of the system administrator to ensure that the correct functionality is only available to those responsible and that other users cannot make changes in the Airviro configuration files. If you have problems to access modules that you think you should be able to access, ask your system administrator about your privilege levels.

7.2 Getting started

This Airviro module runs on any PC or device running later versions of Microsoft Edge, Firefox, Chrome or Safari.

Once Airviro has been properly installed on the *server*, you can start using it by typing the correct URL in your web browser over the Intranet/Internet.

After logging into Airviro typing your user-ID and password, a domain must first be selected from the icon showing the map or enabling the List Mode, and pressing on the Domain name that is displayed. In this case **IADM** should be chosen from the available modules.

Any user with the required privileges can access the module. Privileges must be previously defined to avoid unauthorized access.

By clicking on the button ^ [down arrow], besides the user button text, **airviro ∨** the **[Logout]** button, is shown. By clicking on the Logout button, the current module is closed and the Airviro login page is displayed instead. (*Figure 7.2.1.*).
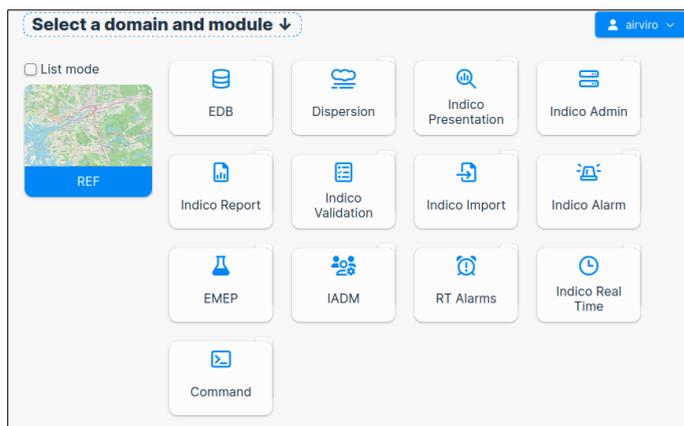

Figure 7.2.1 Logging in Airviro.
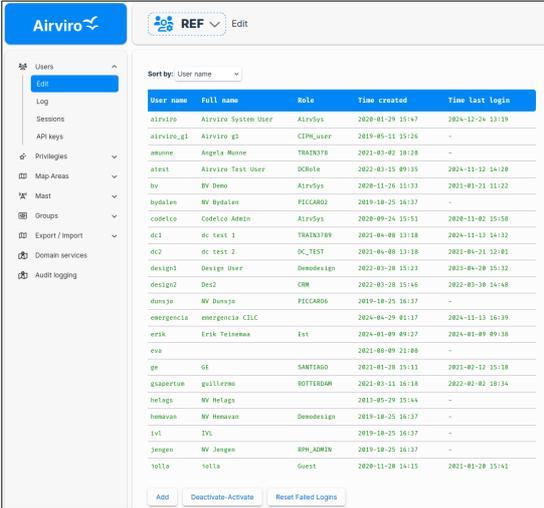
7.3. Users

7.3.1 Edit

Click on the **Users** menu option, then click on **Edit** to open this window. *Figure 7.3.1.*

Use **sort by** to rearrange the users list by: username, role, time created and time for last login.

Select a user from the list, to specify a **Full Name** for this user or change his / her **Password**.

Press **[Add]** to add new *users.* Press **[Deactivate - Activate]** to activate/deactivate existing Airviro users.   Users displayed in red are deactivated and those in green are activated. Press **[Reset failed logins]** to reset the counter of failed login attempts. (*Figure 7.3.1.)*

Figure 7.3.1. Select Users.

7.3.2 Log

Click on **Log** to display this window, see *Figure 7.3.2,*This list shows the date, user, status and IP address (from where the user logged in) of every session accessing the system.

Use **sort by** to rearrange the log list by: date, user, status and IP address.   By setting a start or end date or both, the information displayed is restricted to those dates when pressing the **[Filter]** button.

Figure 7.3.2. Example:Log

7.3.3 Sessions

Click on the **Users** menu option, then click on **Sessions** to open this window. *Figure 7.3.3..*

Use **sort by** to rearrange the list by: user, class, expire, login time and ID address. The table displayed provides the following information about each session:

- token: authentication key

- user: username

- class: user class (a: API key that never expires, it is used f.e. for data distribution, u: API keys that expires, normally assigned to Airviro users

- expire: session expiration date and time

- idle time: number of days , hours , minutes and seconds of inactivity

- login time: session login date and time

- max idle: The time that the user can remain authenticated without interacting with the Airviro

- IP address: the IP from which the user got connected.

Press the red cross to end a user session.

Figure 7.3.3.. Sessions

7.3.4 API keys

Enter a username and password to create a session and get a token. The token is shown below the controls.

Figure 7.3.3.. Sessions

7.4. Privileges

This section manages user's privileges to access the Airviro system and the Airviro functions that will be available for a specific domain or module.

This menu has three sub-menus: **Roles**, **Edit** and **Edb**.

7.4.1 Roles

Roles are useful for configuring groups of users who need to have the same privileges to access certain modules or to perform certain operations.

All users belonging to the same Role, will share the same privileges.

Before defining roles it is important to know how different users will use the system.

Figure 7.4.1. Privileges: Roles
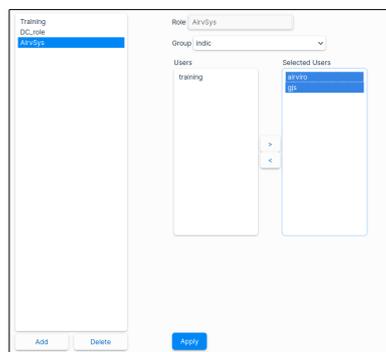
Also it is important to know that:

- A role can contain one or several users.

- A user cannot belong to more than one role.

- Users can be added to an existing role.

To add a Role, press **[Add]** and enter a name for the new Role in the **Role** text box, then select the users to whom this new Role will be assigned and finally press **[Apply]**. Press **[Delete]** to delete roles

7.4.2 Edit

There are two levels of Privileges: A global level and a domain specific level. If a role doesn't have any privileges defined for a certain domain, the global definition for that role will be used instead. If the global definition for the role doesn't exist, the definition for the global role DEFAULT will be used instead. The global role DEFAULT always exists and should not give access to anything. In this way one must define privileges for a role, otherwise that role won't have access to anything.

That is, privileges are matched according to the following hierarchy (until privileges are found):

1. Domain specific privileges for the role
2. Global privileges for the role

After having defined different roles, the administrator can configure them:

- Setting access to a specific domain.

- Setting access to the different Airviro modules.

- Assigning READ/WRITE privileges to modules and time series keys.

- Defining which maps will be available for each specific Domain.

- Setting which dispersion models will be available for each Domain.

- Ticking off if Role/User are allowed to run Dispersion Calculations.

- Setting which servers are allowed to execute simulations.

  - Allowing to select custom mast configurations.

  - And so on.

Under **Other Settings**, the Airviro administrator can configure the following settings:

Access to domains allowed:

– *Indico databases Write:*

– *Waved Write:*

– *Create Delete Edb:*

– *Writeable Time Series Keys:*

– *Readable Time Series Keys:*

– *Start-Kill dispersion simulation:*

– *Simulation Max Cores:*

– *Control of data collection daemon:*

– *Allowed to select custom mast configuration:*
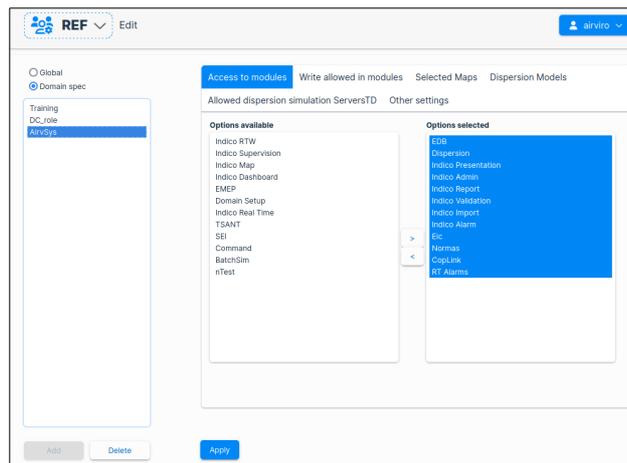
– *Data collection control:*

Figure 7.4.2. Privileges .Edit

In addition, the administrator can configure the following priviligies:

- Configure access to a specified Domain.

- Configure access to different Modules.

- Assign privileges to read-write Modules.

- Define maps which maps that are available for a Domain.

- Dispersion models available for a Domain.

- Define which roles / users can run dispersion calculations.

7.4.3 EDB

Roles are not used for setting privileges for EDB. The privileges are set per user. There are two levels of Privileges: A global level and a domain specific level. You can specify which users that can access EDB:s owned by another user. The user DEFAULT can be used if no privilege was set for any combination Edb owner / user access . The table

below shows the precedence of rules that will be followed to determine the level of access. In this example, the user pär is granted access to an EDB owned by user guillermo:

Domain EDB.RW.guillermo.pär

Global RW.guillermo.pär.

Domain RW.guillermo.DEFAULT.

Global RW.guillermo.DEFAULT.

Domain RW.DEFAULT.pär

Global RW.DEFAULT.pär

Domain RW.DEFAULT.DEFAULT

Global RW.DEFAULT.DEFAULT

Here, the administrator can specify:

Access level (read / write / write sources only) that each user will have to other user´s Edbs

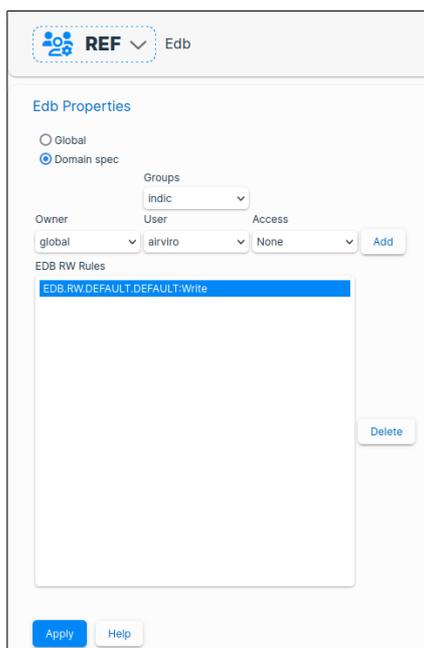In the example shown here, any users has access to all other users EDBs.

Figure 7.4.3. Privileges: EDB.

7.5 Map Areas

This section has four sub menus: **Import, Local Map, Maps and Viewport.**

These menus will allow you to import maps and configure how they will be displayed. Maps have a high-quality digital format and are usually created using GIS or CAD systems.

All Airviro modules obtain information related to map files from a resource file named **modell.par.**

There is only one **modell.par** file per domain, containing all map references for that domain .

7.5.1 Import

This menu allows the user to import map files into the Airviro server, specifying the folder where the file should be saved.
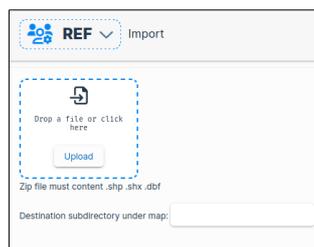

Figure 7.5.1. Map import.

The maps files should be inside a zip archive. The archive should contain files with the extension shp, shx and dbf. Click on, the icon to browse for the zip file to be imported, and press **[Upload]**,. The file will be saved in   the default folder /usr/Airviro/data/ {DOMAIN}/map/ if no destination is specified, otherwise a sub folder with the specified destination will be created under the default folder to save the files.

7.5.2 Local Maps

Here you can configure different options for the maps used in each specific domain.

Press **[Add]** or [**Delete]** to add, or delete maps.

Under Map Definitions, give the new map a name in **Map Name** text box. The **layers** list box show all the available map files (layers) that are included in a map.

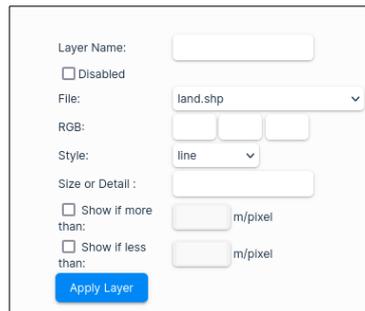To disable a layer tick off the **Disabled** check box.

Figure 7.5.2. Local Maps

[Up] and **[Down]** buttons allow you to change the order in which the layers will be displayed on the map.

The *Layers* section has the following options available:

**[Add Shape]:** Allows you to add new layers to the map.

Figure 7.5.3. Add shape.

Enter the name of the Layer in the **Layer Name** text box. Then a **File** must be selected from the list showing all the available shape files that can be used to create the layer.

Use the **RGB** text boxes, to enter an RGB color code for the active layer.

Use the **Style** drop down list to select a style (linear or filled) to be applied to the layer that is being added to the map

Additional features can be added to the layer by assigning features such as **Size or Detail,** and a display restriction (**Show if more than X m/pixel & Show if less than Y m/pixel)** to specify when to display a layer (after or before a zoom in/out) based on its definition in m/pixel.
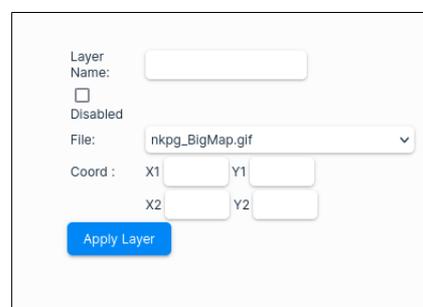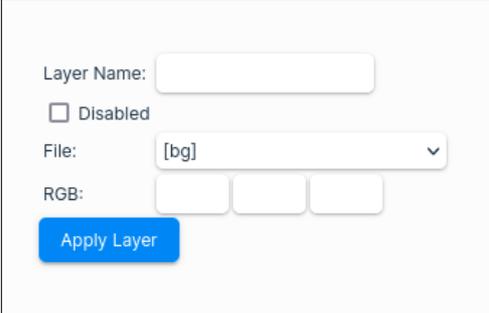

Figure 7.5.4. Add Gif.

[Add Gif]: With this option a Gif file can be added to the map, for example, a satellite image.

[Add BackG]: it adds a background color.

Figure 7.5.5 Add background.

[Delete]: Use this button to eliminate layers from the map. See *Figure 7.5.2. Maps*

Use the **Projections** drop down list to select a Projection and type Attribution.

7.5.3 Maps

Here you can configure main information for the maps used in each specific domain.

Press **[Add]** or **[Delete]** to add maps or delete them.

Use the **Type** drop down list to select the source of the map. Different settings are required for different types:

- Open street map (from their servers): when selecting open street map, the information that must be specified is the name and key.

- Open street map (from alternative server): when selecting open street map, the information that must be typed in is the name, key and url.

- From layer files (defined under local maps): when selecting from layer file, the information that must be specified is the name, key and attribute. Also, select the projection and layer file.

- WMS service providing tiles: when selecting WMS service, the information that must be entered is the name, url, extent, tile size, resolution, auto resolution and parameters. Also, select the projection.

- WMTS service for tiles: when selecting WMS service for tiles, the information that must be entered is the name, key, url, extent, tile size, resolution, auto resolution and parameters. Also, select the projection.

Limit: Shows the X1, X2, Y1, Y2 of the map.

Press the **[Apply]** button to save.

7.5.4 Viewport

This interface allows you to define different areas for viewing from the same map and to configure a the viewport for dispersion calculations. This information is saved in the **modell.par** file.

The **[Preview Map]** button is available in the tabs detailed below. Click on this button to display the map.

The tabs in this window are map definitions, simulation grid and physiography and topography.

7.5.4.1 Map Definitions

Id is a unique identifier. **Active** is a check box that indicates if the selected map will be available or not for the selected Domain. **Name** is a text shown for the specified view port. **X1, X2, Y1, Y2** are the coordinates that specifies the lower left and upper right corners of the viewport. **Width** and **Height** shows the width and height of the view port.

The **Map Source** list shows all available maps. Selecting anSelecting a item from the **Map Source** and pressing **Add,** adds the map source to the **Maps selected** list.

Selecting a map source from the **Map Source** list and pressing **[Show Coords]** shows the coordinates X1, X2, Y1 and Y2 for the selected map source.

Press **[Combine]** to combine two maps from the map source list, previously you must highlight two map sources from the **Map source** list and then press combine, a new item will be added to the Map Selected list showing both maps id, separated by a colon (i.e: LT:CA)

Press **[Switch]** to alter the order the Combined maps will be displayed

With UP and Down button the user can alter the order in the Map Selected list box
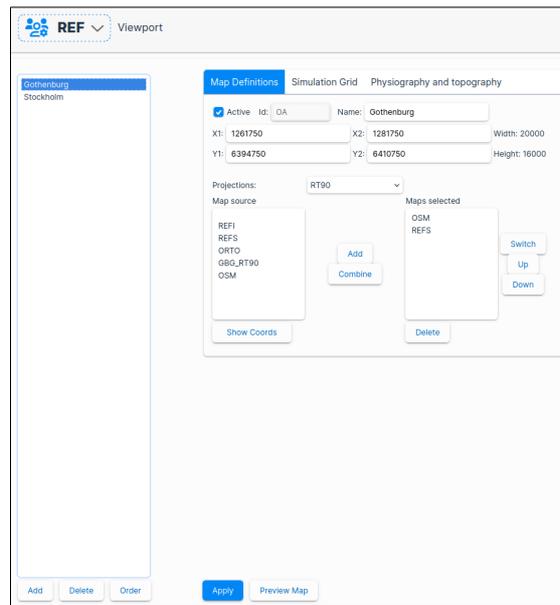
Figure 7.5.6 Viewport, map definitions.

7.5.4.2 Simulation Grid

Tick the **Simulation Grid** check box to use the viewport for dispersion calculations. Specify the **Lat**itude and **Long**itude as well as the default **Grid** size for the map used for dispersion calculations.
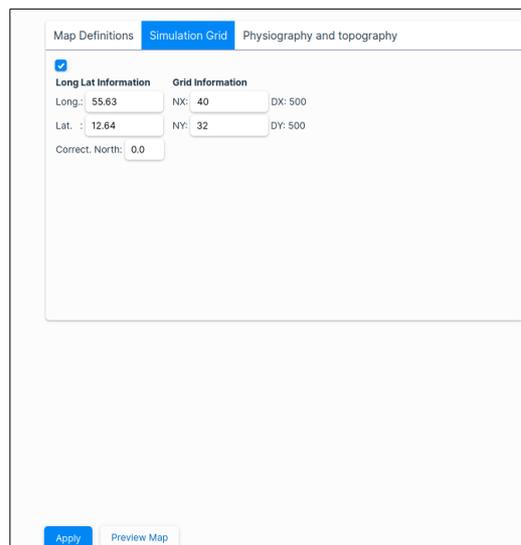

Figure 7.5.7 Viewport, Simulation Grid.

7.5.4.3 Physiography and topography

Under the **Physiography** and **Topography** section, files containing this information are listed in the corresponding list boxes. The selected topography and physiography are used in dispersion calculations.

Swampzone specify the number of grid squares outside the simulation area that should be included in a dispersion calculation. A normal number is 3.
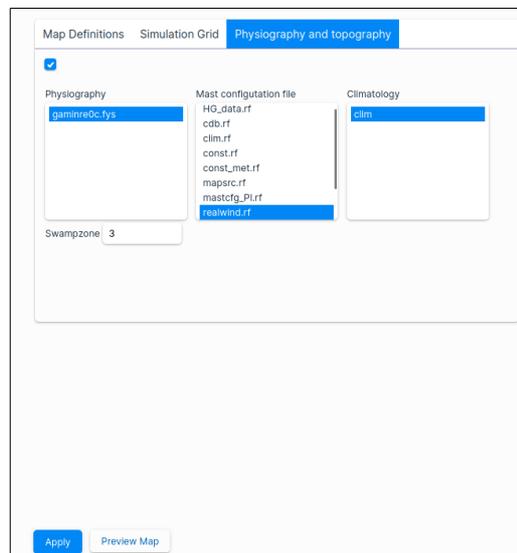
Figure 7.5.8 Viewport, Physiography and topography.

7.6 Masts

This interface provides access to configuration files used in the Dispersion Module. The Dispersion module installation process creates two configuration files: realwind.rf and climSH.rf. These contain the default configurations for the meteorological mast(s) and the

default setup for climatologies. Additional mast configurations and climatologies can be created using realwind.rf, or one of the additional mast configurations, as a template.

7.6.1 Configuration

Additional mast configuration files can be created using this interface. Select a realwind(XX).rf file as a template and then press **[Add]** to create a new additional mast configuration file. When starting a dispersion calculation, the mast configuration used for the calculation can be selected if the user has privileges to do so.

The new config file has a unique two letter identifier and is named mastcfg_XX.rf where XX is the two letter identifier.

The meteorological parameters used can be changed, including, temperature, differential temperature, wind direction, wind speed, precipitation, global radiation, humidity, standard deviation wind direction, standard deviation for vertical wind and pressure.

The roughness length and influence zones can be changed as well.
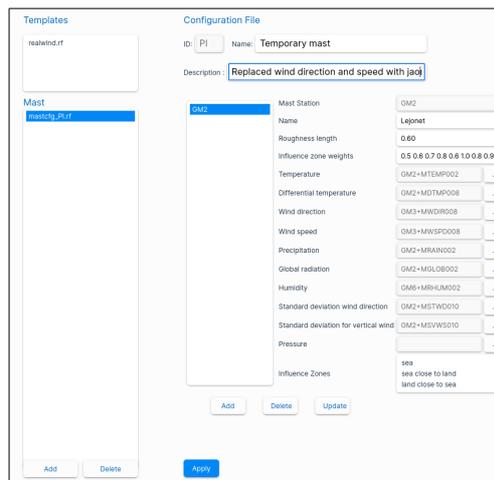
Figure 7.6.1 Mast. Configuration.

7.6.2 Climatologies

This interface allows you to configure climatologies. These are used by the Dispersion module when selecting Scenario in **Model Settings.**

Climatologies can be reconfigured and recalculated for existing mast configuration files.

The available mast configuration files are listed on the right side listbox. By selecting one, it is possible to change the scenario and recalculate it. A scenario consists of a number of Season Specifications. New ones can be added, and old ones deleted. A Season Specification consists of -a name and a time period less than one year, that- shows which meteorological data will be used for that scenario.

7.6.2. Climatologies

Below the Season Specification list is the number of wind directions- used for the scenario and the time period for the meteorological data that will be used for the scenario calculation.

Press the **[Apply]** button to save and recalculate the climatology.

7.7 Groups

This interface allows you to configure groups used for email and text messages. To specify more than one email recipient use space as a separator.

The email and sms groups defined in this module are used by the Indico Alarms and Indico Report.

7.8 Export / Import

The data transaction is initiated by the central server (push) or by the client (pull).

7.8.1 Pull

With this option, time series data export is enabled for different services . For example with Waved (Excel interface, Indico   Presentation).

Services can be specified in two levels: Domain specific or Global. Services coloured in green indicate that they have at least one role assigned, while those coloured in red have no role assigned, Select a service and then select which roles will have that service enabled or disabled (use the arrow buttons). Press the **[Apply]** button to save.
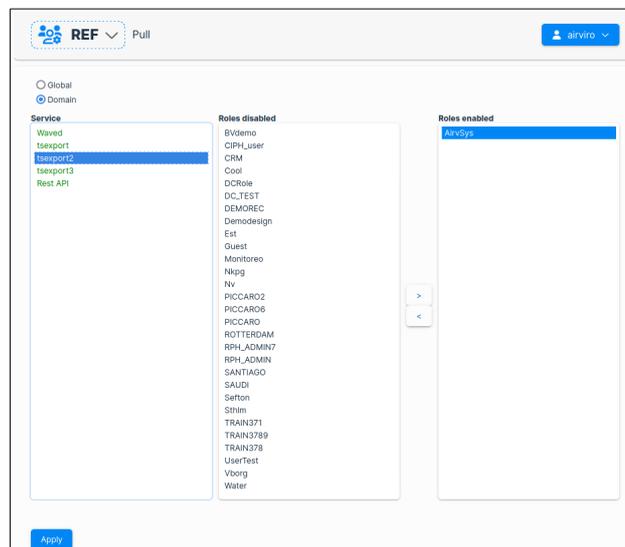
Figure 7.8.1. Pull.

7.8.2 Push

A REST API that is compatible with OpenAPI 3.1 is included in Airviro. The REST API allows access to data and meta-data.

The table allows the user to have an overview of the pull services and also to be able to enable and disable them per role. All the pull services in Airviro are controllable from the control center.

The window displays the following information: user, instance name, report type, scheduling, transfer method and transfer details. (*Figure 7.8.2)*

Figure 7.8.2. Push.

Tick the checkbox to enable an instance and then press the **[Apply]** button to save the new settings.

7.9 Domain services

The available domain services are shown in a table:

- Domain : all domains available.

- Write to time series database: tick to enable writing to the time series database.

- Data collection: tick to allow data collection.

- Post processing: tick to allow post processing.

- Alarm daemon: tick to allow the alarm daemon being executed.

Press the **[Apply]** button to save.

Figure 7.9.1. Domain services.

7.10 Audit logging

This interface allows you to enable or disable tracking of modifications to different databases, resources and configuration files, which are saved in a text log file. In figure (*Figure 7.9.1*), The options in green are recording modifications (mode Full), while the red ones are not (mode Off).

Figure 7.10.1. Audit logging.

Appendix 7A: Privileges

7A.1 User Privileges

A privilege database is used to control access to functions within Airviro. This access is controlled based on the user's login identity. Global privilege settings can be made, as well as settings per domain.

Access to domains can be granted per user.

7A.1.1 EDB

Access to EDB can be granted per user.

The possibility to save macros can also be granted per user.

For the use of the global EDB or personal EDBs owned by specific users, four levels of privileges are available:

1 - No access is allowed to any EDBs.

2 - EDBs can be viewed but no changes can be made.

3 - EDBs can be viewed and modified.

4 - EDBs can be viewed and sources modified.

Additionally, there is another set of privileges available related to the creation and deletion of EDBs that also has three levels:

1 - No EDBs can be created

2 - Personal EDBs can be created and deleted

3 - Personal EDBs can be created, all EDBs may be deleted including those belonging to other users.

7A.1.2. Indico Presentation

Access to the module can be granted per user.

The possibility to save macros can also be granted per user.

7A.2 Indico Administration

Access to the module can be granted per user.

The possibility to save macros can also be granted per user.

For editing functions in Indico Administration (excluding editing of time series data), there are two levels of privilege**s**:

1- Other users can view the station content and parameter databases, but can not edit them.

2- A user can edit the station and parameter databases.

7A.3 Indico Report

Access to the module can be granted per user. The possibility to save reports can also be granted per user.

7A.4 Indico Validation

Access to the module can be granted per user. The possibility to edit or delete data can be granted per user.

7A.5 Dispersion

Access to the module can be granted per user. The possibility to save macros can also be granted per user.

7A.6 Time series data

The possibility to add or modify time series data can be granted per user and station.

7A.7 Map areas

The possibility to see and use a particular map area can be granted per user.

7A.8 Waved

The possibility to write data to the airviro time series database using waved.