

## **Wikiprint Book**

**Title: framework4g.conf file**

**Subject: TracMeteo - WRF4Gframework4g\_conf**

**Version: 49**

**Date: 07/07/2022 03:26:30 AM**

## Table of Contents

<b>framework4g.conf file</b>	<b>3</b>
Database	3
Computing Resources	3

## framework4g.conf file

The **framework4g.conf** file is read by [wrf4g\\_framework](#) to manage the WRF4G framework. It is located under `$WRF4G_LOCATION/etc` and has two sections, Database and Computing Resources.

### Database

WRF4G uses a MySQL database in order to keep track of the experiments. For that reason, WRF4G provides a 5.5-x86\_64 distribution of MySQL under `$WRF4G_LOCATION/opt/` directory. Also, you can use another MySQL changing **WRF4G\_DB\_LOCAL** variable.

You should modify the database password and `WRF4G_DB_PASSWD` variable after starting `wrf4g_framework`. To do that, you can execute:

```
echo "SET PASSWORD FOR 'wrf4guser'@'%' = PASSWORD('newpassword');" | mysql -P 13306 -u wrf4guser -h 127.0.0.1 -p
```

```
[Database]
WRF4G_DB_LOCAL=1
WRF4G_DB_HOST=mycomputer
WRF4G_DB_PORT=13306
WRF4G_DB_USER="wrf4guser"
WRF4G_DB_PASSWD="Meteo2011"
WRF4G_DB_DATABASE="WRF4GDB"
```

### WRF4G\_DB\_LOCAL

0 indicates that you will use an external DB and the local database included in WRF4G distribution. If you want to use an external database, you will have to import [WRF4GDB?](#) table in your MySQL.

### WRF4G\_DB\_HOST

Computer where the DB is running. If `WRF4G_DB_LOCAL=1`, `WRF4G_DB_HOST` has to be the name of the computer where WRF4G is running.

### WRF4G\_DB\_PORT

Port where mysql DB is listening.

### WRF4G\_DB\_USER and WRF4G\_DB\_PASSWD

Credentials to access DB

### WRF4G\_DB\_DATABASE

Name of the WRF4G DB

## Computing Resources

WRF4G uses [DRM4G](#) in order to configure computing resources. Using that tool, users are able to access to different Distributed Resource Managements (DRM) such as:

- PBS/Torque
- SGE
- FORK
- LoadLeveler
- SLURM

```
[ComputingResources]
# Syntax
# '#' Comments
#
# This section contains one resource per line, with format:
#
# resource = attributes
# ... ..
# resource = attributes
#
# where:
#
```

```

# * resource : It is the name of the computing resource.
# * attributes: They are the static attributes of the computing resource. The syntax is:
#
# <scheme>://<username>@<host:port>?<query>
#
# -scheme: URL schemes available are "ssh" and "local".
# * ssh: In order to connect to remote resource via SSH
# * local: In order to use a local resource
# -username: user name on the resource
# -host: host name
# -port: host port to connect to. By DEFAULT it is 22
# -query: contains additional information of computing resources. The query string syntax is:
# * key1=value1;key2=value2;key3=value3
# Variable options:
# LRMS_TYPE (mandatory) : Type of LRMS system [pbs | sge | fork | slurm ]
# NODECOUNT (mandatory) : Maximum number of job slots for a resource
# QUEUE_NAME (mandatory) : Queue name to configure. It is mandatory except for "LRMS_TYPE=fork"
# SSH_KEY_FILE (optional) : Defines the key file for "ssh" connection.
# By DEFAULT it is ~/.ssh/id_rsa
# PROJECT (optional) : Specifies the project which the jobs are assigned.
# It is only optional for SGE and PBS
# PARALLEL_TAG (optional) : Defines the parallel environments available for SGE
# TEMP_DIR (optional) : Temporary directory used by DRM4G on the resource to temporarily store data
# By DEFAULT it is $HOME. TEMP_DIR path must be absolute
# RUN_DIR (optional) : Temporary directory used to run WRF Model on the resource
# By DEFAULT it is $HOME. RUN_DIR path must be absolute
#
#*****
#
# Examples
#
# resource = <scheme>://<username>@<host>?<query>
# FORK_resource = local://localhost?LRMS_TYPE=fork;NODECOUNT=1
# PBS_cluster = local://localhost?LRMS_TYPE=pbs;QUEUE_NAME=estadistica;NODECOUNT=8
# SGE_cluster = local://localhost?LRMS_TYPE=sge;QUEUE_NAME=meteo;PROJECT=1.project;NODECOUNT=16;PARALLEL_TAG=mpi
# remote_PBS_cluster = ssh://user@hostname_submitting_machine?LRMS_TYPE=pbs;SSH_KEY_FILE=~/.ssh/id_rsa;QUEUE_NAME=short;N
# remote_SGE_cluster = ssh://user@hostname_submitting_machine?LRMS_TYPE=sge;QUEUE_NAME=meteo;SSH_KEY_FILE=~/.ssh/id_dsa;N
# remote_FORK_cluster = ssh://user@hostname_submitting_machine?LRMS_TYPE=fork;NODECOUNT=1

# By default, WRF4G is going to use the local machine as FORK system
mycomputer = local://localhost?LRMS_TYPE=fork;NODECOUNT=1

```

More information regarding how to add resources on [DRM4G](#).

If you want to configure Grid Resources, you have to see [WRF4G Grid Configuration](#).