Wikiprint Book

Title: WRF4G

Subject: TracMeteo - WRF4G

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Introduction

WRF for GRID (WRF4G) is a framework for the execution and monitoring of the WRF Modelling System in distributed computer resources (see this presentation). It provides a flexible and easy way of designing complex experiments involving many simulations (multiple start/end dates, multi-parametric simulations, long climate runs, ...). The monitor allows a precise control of the experiment's state, where broken simulations are automatically detected and relaunched at the next submission.

Given a list of computer resources the user can access, WRF4G submits the experiment to them according to the experiment needs. Users can configure different kind of resources (Their local PCs, stand-alone servers, PBS or SGE Clusters,...) and use them at the same time to run different simulations of a WRF experiment. Output files are centrally stored regardless the computing resources used to run the simulations.

WRF4G separates the experiment design from the execution environment. To prepare a experiment, users are required to fill in two files: experiment.wrf4g which defines the WRF experiment, and resources.wrf4g, where running environment and storage resources are configured. WRF4G provides a command line interface that allow the users to prepare, run and monitor their experiments.

The following picture shows the main WRF4G components and the interaction among them.
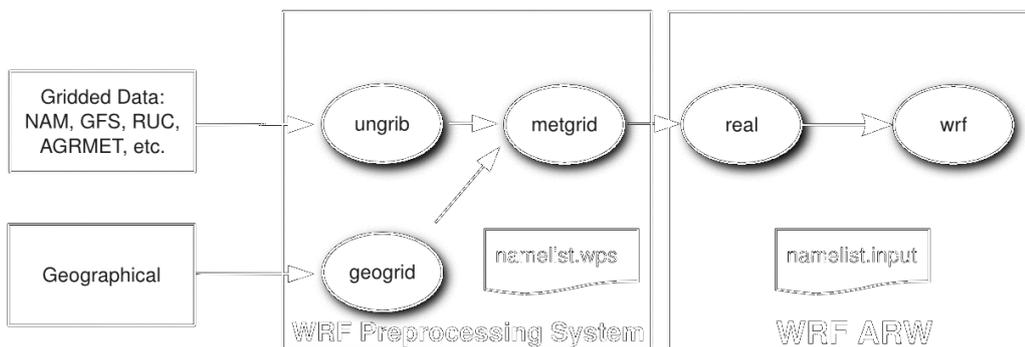
Documentation

- WRF4G Framework
- Installation Guide
- Tutorials:
  - How to run a simple experiment
  - How to run a reforecast experiment using WRF4G
    Advanced tutorial
    - How to manage WRF4G errors
    - How to add new computing resources to WRF4G
    - How to add a new WRF geographical domain
    - How to reconfigure the features of an experiment

- How to resubmit an experiment
  - How to rerun a specific chunk of a realization
  - How to use wrf4g_kill command
- WRF4G Command Line Interface
- WRF Distributions
- WRF4G configuration files:
  - Resources setup
    - framework4g.conf
    - gwd.conf
  - Experiment setup
    - experiment.wrf4g
    - resources.wrf4g
    - prolog.wrf4g
- FAQ

Problems

If you happen to have any problems, please ?send us a ticket!!