



WRF4G project: Advances in running climate simulations on the EGI Infrastructure

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The Weather Research and Forecasting For Grid (WRF4G) project is a two-year Spanish National R&D project, which has started in 2011. It is now a well established project, involving scientists and technical staff from several institutions, which contribute results to international initiatives such as CORDEX and European FP7 projects such as SPECS and EUPORIAS. The aim of the WRF4G project is to homogenize access hybrid Distributed Computer Infrastructures (DCIs), such as HPC and Grid infrastructures, for climate researchers. Additionally, it provides a productive interface to accomplish ambitious climate experiments such as regional hind-cast/forecast and sensitivity studies.

Although Grid infrastructures are very powerful, they have some drawbacks for executing climate applications such as the WRF model. This makes necessary to encapsulate the applications in a middleware in order to provide the appropriate services for monitoring and management. Therefore, the challenge of the WRF4G project is to develop a generic adaptation framework (WRF4G framework) to disseminate it to the scientific community. The framework aims at simplifying the model access by releasing climate scientists from technical and computational aspects.

In this contribution, we present some new advances of the WRF4G framework, including new components for designing experiments, simulation monitoring and data management. Additionally, we will show how WRF4G makes possible to run complex experiments on EGI infrastructures concurrently over several VOs such as esr and earth.vo.ibergrid.

<http://www.meteo.unican.es/software/wrf4g>

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