Geophysical Research Abstracts
Vol. 13, EGU2011-9811, 2011
EGU General Assembly 2011

e-Science Application on EUAsiaGrid: gLite based WRF simulation

Yun-Pin Sun (1), Hsin-Yen Chen (1), and Chuan-Yao Lin (2)

(1) Academia Sinica Grid Computing Center, Academia Sinica, Taiwan, (2) Research Center for Environmental Changes, Academia Sinica, Taiwan

Climate change has become an important topic in the world today, no matter in the daily numerical weather prediction (NWP) or disaster preventions. Since 2009, ASGC ported the Weather Research and Forecasting Model (WRF) using gLite middleware on the EUAsiaGrid. WRF is defined as the next generation model and provide widely physical extensions and even chemical plugins. It is also a popular program used by weather bureaus in many countries. Through the calculation power of Grid, it's possible to achieve an efficient weather simulation mechanism. WRF is also a productive program in general clusters, our main work is to design a package of scripts and making WRF can be run on gLite-based Grid infrastructure and executing with MPI parallel environment. On the other hand, for a primary scientific work, some of the simulations around Southeast Asia will be done and comparing with the real data to get an optimized physical model. This work will be also a benchmark of our Grid-Enabled WRF, package update and bug fixing will process through this work. With optimized physical parameters for Southeast Asia, we can study the prevention of climate hazards, this may save more lives and reduce the huge economical damage. To get such an optimized model parameter, it's necessary to comparing historical data to our massive simulations.