

WRF model application experiments at C-DAC

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C-DAC is an R&D society of Government of India, engaged in high performance research and services. Computational Atmospheric science group of C-DAC has performed mountain meteorological simulation by ingesting India data, local weather prediction for missile launch and high resolution (1km-10km) meteorological parameter simulations required for air quality modeling using MM5 model. These simulations were carried out on PARAM series of supercomputers based on Sun Ultrasparc and IBM power4 processors.

C-DAC in collaboration with MMM division of NCAR have initiated WRF model job facility and test bed centre for Indian researchers. This involves development of scientist oriented user interfaces, contribution to multi-component infrastructure by coupling with air quality models, regional climate, etc. It is proposed to have Indian test bed centre for WRF using C-DAC's PARAM PADMA and to develop WRF application and data grid environment through grid computing and portal technology. In this presentation, we share the preliminary benchmarking results of WRF model on PARAM PADMA. In addition, one of the major applications is air quality prediction for Pune city using WRF-Chem. We present porting and simulation experience of WRF-Chem on PARAM PADAM and discuss future contribution of C-DAC in the development.