Abstract:

Within the framework of the European Union project EUROGRID (Application Testbed for European GRID computing, IST-1999-20247; funding period: Nov. 2000 until Oct. 2003), the Deutscher Wetterdienst (DWD) will develop a local weather prediction model for worldwide application (Meteo-GRID). This ASP (Application Service Provider) solution will allow virtually anyone to run a high-resolution numerical weather prediction model on demand for his/her domain of interest. The execution of such a model is computationally very demanding: A 48 hour forecast requires up to $60 \times 10^{12}$ floating point operations (flop) and creates about 5 GByte of forecast data. Moreover, short-range weather prediction is a time critical task, which has to be completed in less than two hours. Thus Meteo-GRID will make use of the European high-performance computing HPC-GRID developed in EUROGRID and based on UNICORE technology.