

# Distributed Data Handling Infrastructures in Climatology and the Grid

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Modern coupled climate models are mostly running on dedicated, tightly coupled HPC computers. They produce exponentially growing amounts of data. This model data is becoming important for a large, diverse group of people. A powerful data handling and processing infrastructure for climate scientists is needed to support them in finding, accessing, comparing data as well as generating new derived data products e.g. for climate impact studies. Also policy makers as well as the private sector have an increasing demand on infrastructural facilities to make model data products easily accessible.

Grid technology is one key component to build up such an infrastructure. In this talk we present developments done in several national and international projects towards a distributed data handling and processing infrastructure. Experiences from the German C3Grid project and the prototype C3Grid/EGEE integration are summarized. Additionally recent developments towards a world wide climate model data infrastructure in the context of the international climate model intercomparison project (CMIP5) and the data handling effort for the next intergovernmental panel of climate change (IPCC) assessment report are presented.

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