The SIMDAT Meteo activity: Distributed data access to operational meteorological data centres

Baudouin Raoult

European Centre for Medium-Range Weather Forecasts (ECMWF)
(baudouin.raoult@ecmwf.int)

The EU funded SIMDAT is developing generic Grid technology for the solution of complex application problems and demonstrating this technology in several representative applications, one of which is the access to distributed meteorological data.

Following the requirements of the World Meteorological Organization Information System (WIS), the partners of the meteorology activity within SIMDAT (ECMWF, Deutscher Wetterdienst , The UK Met office, EUMETSAT and Meteo France), have developed a grid enabled software that provides a generic distributed access to any data repository, through a series of nodes organised in a meshed network. Each node is providing access to data held in one or more data repositories, and is providing cataloguing services base of the WMO core profile of the ISO19115 metadata standard. All catalogues are fully synchronised and all data available throughout the network can be discovered and retrieved from any of the web portals associated with each node. Secured access to datasets is achieved through a fully distributed framework that supports secured messages exchange between nodes that have previously established trust relationships.