



CERA - the technical basis for WDCC

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The World Data Centre for Climate (WDCC) is hosted by the German Climate Computing Centre (DKRZ). It collects, stores and disseminates data for climate research in order to serve the scientific community. Emphasis hereby is spent on climate modelling and related data products. CERA (Climate and environmental retrieval and archive) is the infrastructure hosting data and metadata from WDCC. Data originates from projects like IPCC (and IPCC-DDC), ENSEMBLES, COPS and several others.

Currently more than 400 terabytes of data are managed within CERA. Even more data is addressed through metadata. Data stored inline in CERA is currently archived in an Oracle Database which itself is transparently linked to a sophisticated HSM system. Within this HSM system a wide range of storage systems like different RAID and tape devices are used. HSM for CERA is configured in such a way, that a unique media failure may not cause any data loss.

Correct and complete metadata are an important ingredient for relevant archiving procedures. Within CERA special care is taken to assure these goals. As a high end service DOIs can be assigned to data entities as they make the management of intellectual property easier and more convenient.

Any data format can be served from within CERA although most of the data stored in CERA is in either GRIB or netCDF format. Out of the box CERA provides several data reduction mechanisms like time-slicing or regional selection. More elaborate functions like format conversion or diverse processing is attached either in- our outline. Fine-grained access control allows data to be distributed under diverse data policies.

Currently up to 800 users are registered within CERA. More than 600.000 downloads (255 terabytes) have been served from CERA within 2009.

At present CERA is restructured, more specific details of the current implementation and the future development will be given in the presentation.