netCDF *Fact Sheet*

What is netCDF?

Unidata's Network Common Data Form (netCDF) is a set of software libraries and machine-independent data formats that support the creation, access, and sharing of array-oriented scientific data. It is also a community standard for sharing scientific data. Here are some of netCDF's important characteristics:

- **Self-Describing.** A netCDF file includes information about the data it contains.

- **Portable.** A netCDF file can be accessed by computers with different ways of storing integers, characters, and floating-point numbers.

- **Scalable.** A small subset of a large dataset may be accessed efficiently.

- **Appendable.** Data may be appended to a properly structured netCDF file without copying the dataset or redefining its structure.

- **Sharable.** One writer and multiple readers may simultaneously access the same netCDF file.

- **Archivable.** Access to all earlier forms of netCDF data will be supported by current and future versions of the software.

Languages

The Unidata Program Center supports and maintains netCDF programming interfaces for C, Java, and Fortran. Programming interfaces are also available for C++, IDL, MATLAB, Perl, Python, R, and Ruby.

Active Maintenance

NetCDF is actively developed and maintained. Recent developments include:

- The netCDF-Java library, Java software for writing and reading netCDF data, and for reading data in other forms through a netCDF interface.

- Version 4 of the netCDF C/Fortran library provides a simple netCDF interface to data stored using the Hierarchical Data Format version 5 and brings some advanced HDF5 features to netCDF users.

Platforms

NetCDF has been tested on the following operating systems with various compilers:

Linux, OSX, Windows, and other UNIX versions.

Documentation

Unidata maintains online documentation for netCDF in several forms

- Users Guides for C, Fortran 77 and 90, Java, and C++ interfaces to netCDF data

- Reference documentation for netCDF libraries and utilities

- Tutorial documentation for new users

- Workshop materials for learning netCDF

- Program examples

Who Uses the netCDF Software?

Atmosphere and ocean scientists, climate modelers, software tool developers, data providers, students, educators, and researchers.

Want to Get Started?

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