HYCOM Data Service

http://hycom.rsmas.miami.edu/dataserver

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HY
COM
HYbrid
Coordinate
Ocean Model

Some HYCOM Data Server Facts:

- Size of the Current data Holdings -> 1.7 TB

- No of Individual files -> ~ 80,000

- No of data server URL accesses in the last two weeks – 4500

- Three machines are currently used for the data server hycom.rsmas.miami.edu is a web/FTP server and a proxy for asterix and obelix, the data servers.

- Served by two dual CPU AMD Opteron 240 machines with 6 GB of memory, aggregate storage 2.5 TB

Data Server FAQ

1) Why is the data server so slow sometimes?

Answer: Classic space-time tradeoff problem

- Compressed files are 50 % smaller but are a big CPU hog

- Multiple concurrent requests further degrades the performance

- Sometimes up to 900 concurrent httpd processes (machine default 150) creates a "DOS" problem

Possible solution: storing some of the fields without compression, but FTP access becomes a problem

Data Server FAQ

- When is the Ocean Prediction System data update on the servers done?

Answer:

The update depends on the data transfer from NRL. Normally the data is received at Miami by early Sunday and the servers are updated late Sunday night.

Data Providers Fun…   10/11/2005 -10/27/2005

Complaint: HYCOM Website too slow - let's move the web and FTP to a separate machine

Moved – and try restarting the machines – Data Server Obelix has network card problem – doesn't start

Cool, XFS is a good choice Problem – latest OPeNDAP build from source doesn't work with Unidata's Aggregation server

OK, while we are at it, lets change the OS to SUSE so that we have a better file system to store > 1 TB of data

OK- let's go back to old OPeNDAP version.

Problem: Previous OPeNDAP version doesn't compile with SUSE

Fix OPeNDAP RedHat Binaries to work with SUSE by linking with 5 fake libraries

ln –s libcrypto.so.6 libcrypto.so.2

Ah ! Finally it works