THE NEW CPTEC/INPE FTP SERVER FOR DISTRIBUTION OF FULL MODEL OUTPUTS

Waldenio Gambi de Almeida, Marcelo Barbio Rosa, Raphael Pousa dos Santos,
José Roberto Rozante, Alex de Almeida Fernandes, Christopher C. Castro e Valner da Silva Nogueira

gambi@cptec.inpe.br, marcelo@cptec.inpe.br, raphael@cptec.inpe.br, rozante@cptec.inpe.br,
alexalm@cptec.inpe.br, castro@cptec.inpe.br, nvalner@cptec.inpe.br

National Institute for Space Research-INPE, Centre for Weather Forecast and Climatic Analysis-CPTEC
Rod. Presidente Dutra km 39- 12630-000- Cachoeira Paulista –SP

ABSTRACT:

With the improvement of the CPTEC/INPE's processing power the number and resolution of operational numerical models have increased. The demand for these model outputs have increased also, and many users demand the full outputs at near-real time. This situation brings the necessity to improve the centre´s infrastructure for data distribution.

Here we describe the features of the new FTP server, a system for distribution of the full outputs from CPTEC´s operational models.

THE "OLD" DATA DISTRIBUTION SCHEME:

The data from CPTEC/INPE are freely distributed for the users at no cost. The main way for data distribution is the institutional FTP server, that has a link in the institutional webpage. This server has a heavy utilization by the users, but the full output of models data are not available there, only choppings for some areas and specific variables. Moreover, most of the data available in this "old" system are derived products like images and plots. The full outputs of CPTEC´s data in digital format are distributed through manual processing and delivery, under direct requests to the personal assigned to the task.

	Models			
	GLOBAL T213	**ETA 20 km**	**CATT-BRAMS**	**W-WATCH**
Run Times	00/12 Z	00/12 Z	00 Z	00/12 Z
Volume	2650 Gb	1100 Gb	978 Gb	9,2 Gb

Copyright ©INPE/CPTEC
Comentários e/ou sugestões:
webmaster@cptec.inpe.br

NEW SCHEME AND FTP SERVER

New systems are being implemented to meet the present demands. For automatic data delivery we are using tools like the Unidata's *LDM* (Local Data Manager), and under the PROTIM project other distribution services are being implemented to provide direct access through the internet to the CPTEC's databases. For the FTP service a new machine have been installed where the complete outputs of the new models are available. These outputs have a bigger data volume that cant' be inserted in the older FTP server. We are working to implement new data delivery systems. One option is to install an *OPENDAP (aka DODs) server in the same machine, a tool that could be used for extract only the needed data or to produce a chopping of the model data output*. In the figure we have the *webpage* developed for the new FTP server, and in the table above it we have the data volume and running times from the numerical models. Other informations still need be added to the webpage, like informations about each model, resolution or available variables.

NEW DATA DISTRIBUTION TECHNOLOGIES:

Each data producer meteorological center uses the more convenient way for data distribution. The more popular ways are the FTP and access through internet HTTP. However, new specific technologies like OPENDAP and LDM servers have been used by a growing number of institutions. A good example for OPENDAP distribution service is the NCEP's (National Center for Environmental Prediction) NOMADS project (NOAA Operational Model Archive and Distribution Systems). A good example of access via *webpage* and *FTP* server is the ECMWF system (European Center for Medium-Range Weather Forecast). The Unidata's LDM is being used by hundreds of institutions in several countries, and it is the tool used to create the IDD system (Internet Data Distribution). Recently this tool was chosen for the massive data transfer of the WMO TIGGE project (Thorphex Interactive Grand Global Ensemble). As a conclusion, the recents developments in numerical weather modeling and telecommunication creates a necessity to improve the data-delivery services of meteorological centers. To meet these objectives the data delivery infrastructure have been improved, but new specific tools and technologies also available too. The FTP and HTTP services still are the most popular ones, but tools and servers like the LDM and OPENDAP among others have a growing number of users.