



Development and deployment of a Desktop and Mobile application on grid for GPS studie

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GPS networks for scientific studies are developed all over the world and large databases, regularly updated, like IGS are also available. Many GPS have been installed in West and Central Africa during AMMA (African Monsoon Multi-disciplinary Analysis), IHY (International heliophysical Year) and many other projects since 2005. African scientists have been educated to use those data especially for meteorological and ionospheric studies. The annual variations of ionospheric parameters for a given station or map of a given region are very intensive computing. Then grid or cloud computing may be a solution to obtain results in a relatively short time. Real time

At the University of Kinshasa the chosen solution is a grid of several PCs. It has been deployed by using Globus Toolkit on a Condor pool in order to support the processing of GPS data for ionospheric studies. To be user-friendly, graphical user interfaces (GUI) have been developed to help the user to prepare and submit jobs. One is a Java GUI for desktop client, the other is an Android GUI for mobile client.

The interest of a grid is the possibility to send a bunch of jobs with an adequate agent control in order to survey the job execution and result storage. After the feasibility study the grid will be extended to a larger number of PCs. Other solutions will be in parallel explored.