

## An advanced Storage Monitoring tool

Friday 11 May 2007 14:00 (20 minutes)

**Describe the scientific/technical community and the scientific/technical activity using (planning to use) the EGEE infrastructure. A high-level description is needed (neither a detailed specialist report nor a list of references).**

All the Storage Elements on the grid are lacking in monitoring and accounting features. This implies that could become difficult to take trace, in an easy way, of what files are stored into the system, which user is storing files, how many bytes were written by each user and so on. This problem is much more evident nowadays as a storage system is composed by a large amount of pools, such as new SRM software.

**Report on the experience (or the proposed activity). It would be very important to mention key services which are essential for the success of your activity on the EGEE infrastructure.**

This monitoring tool is now installed on the INFN-BARI farm that uses dCache as Storage Element, at INFN-T1 (CNAF) where CASTOR is installed, and was tested on INFN-LNL on DPM SRM.

The result of the last several month of run show that the tool meets the need of both site admin and user that wants to know the much more information from their storage system.

The reliability of the system, especially with dCache, seems really good and it is also simple to build graph and detailed query in order to have all information needed.

The tool is used successfully from some farms in every day work to cross check information coming from other monitoring system in order to better understand the storage system behaviour.

It is also very useful in order to have a quick look on resource usage both per User and VO base.

**With a forward look to future evolution, discuss the issues you have encountered (or that you expect) in using the EGEE infrastructure. Wherever possible, point out the experience limitations (both in terms of existing services or missing functionality)**

In the existing infrastructure it is missing some advanced monitoring system that provides detailed information about transfers and other operation on Storage Elements. With the tool presented all farms can provide some advanced functionality both in monitoring and in accounting their storage system.

**Describe the added value of the Grid for the scientific/technical activity you (plan to) do on the Grid. This should include the scale of the activity and of the potential user community and the relevance for other scientific or business applications**

We have developed a monitoring system that is capable to provide much more information on the behaviour of the Grid Storage Elements. Thanks to this monitoring tool it is possible to see which user is using the system, what he is doing, if there are some errors etc.

With this tool it is also possible to measure how much a dataset is accessed by the user; the storage occupancy for each VO or user supported.

For the user point of view this kind of tool is really useful in order to see how his application performs (how many bytes are read or written by the application).

The tool supports all the most important SRM flavours installed on EGEE infrastructure: such as CASTOR, dCache, DPM.

Also the ClassicSE can be supported as well.

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