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Using Parrot to access the CDF software on LCG Grid sites

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When the CDF experiment was developing its software infrastructure,
most computing was done on dedicated clusters. As a result,
libraries, configuration files, and large executable were
deployed over a shared file system.

As CDF started to move into the Grid world, the assumption of having a
shared file system showed its limits. In a widely distributed computing model,
such as the Grid, the CDF software will be not available natively on each worker node.

In order to overcome this problems CDF investigated several solutions and
finally Parrot was adopted by LcgCAF, the CDF portal to the LCG Grid resources.

Parrot is a virtual filesystem for performing POSIX-like I/O on remote data services.
It supports several protocols, including HTTP, FTP, RFIO, and other protocols common
in Grid computing.
CDF has chosen to use the HTTP protocol, since it can be easily cached by Squid caches,
already deployed at, or close to big Grid sites.

The current configuration used by CDF in production on LCG sites will be presented
together with the
different performance benchmarks, both with and without a local Squid. The experience
and problems
found by using Parrot in a system with several hundred of concurrent users will be
discussed.
Finally, the problem of cache coherence due to daily code updates will be analyzed and
the possible solutions discussed

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