

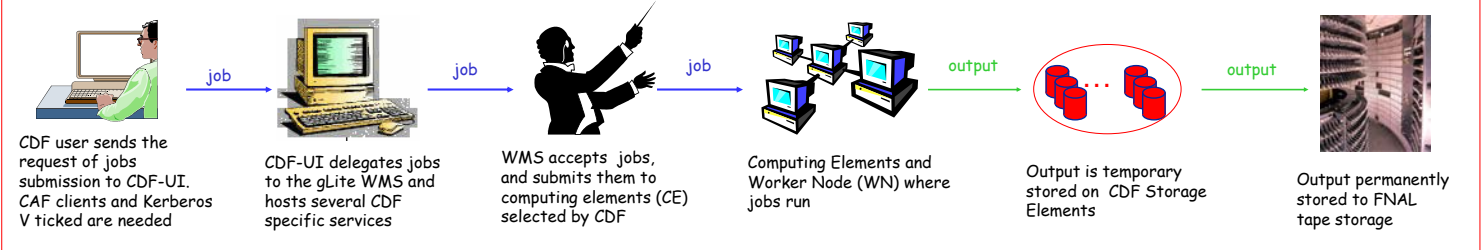
LcgCAF: CDF submission portal to LCG resources

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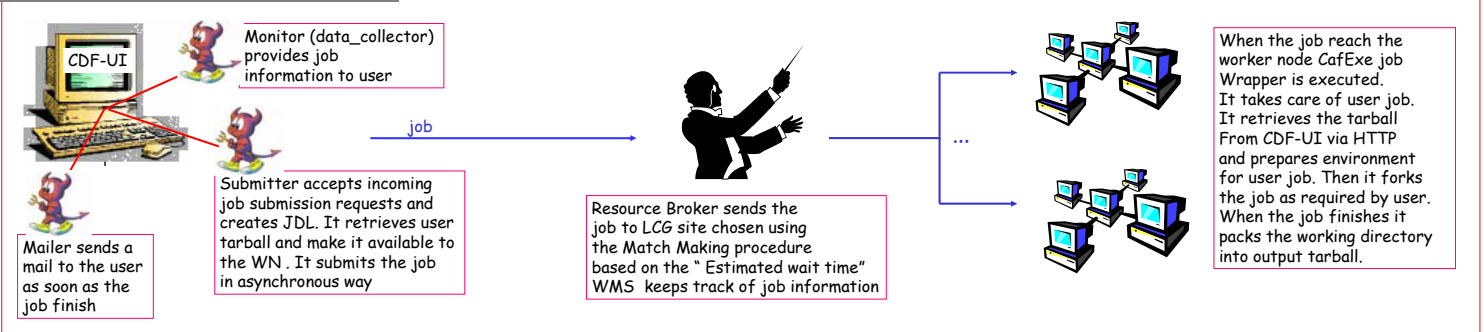
Introduction

LcgCAF is a complete rewrite of the CDF Analysis Farm (CAF) software developed by H. Shih-Chieh, E. Lipeles, M. Neubauer and F. Wuerthwein. It is constituted by several services running on CDF-UI which is like the farm head node for CDF. Based on the LCG/gLite middleware it allows the direct submission to the gLite Workload Management System (WMS).

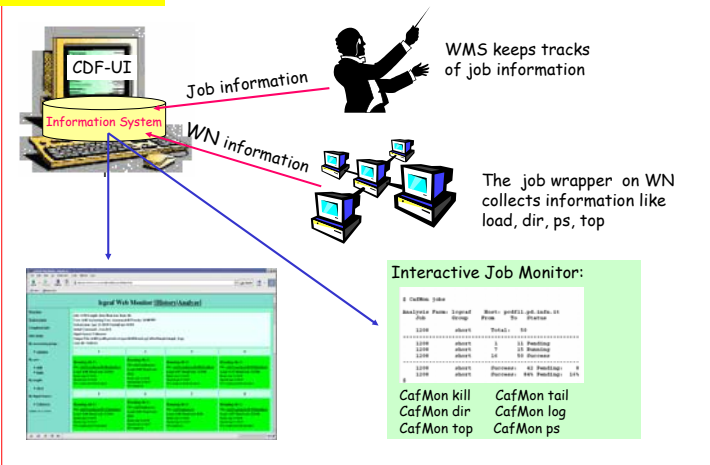
General architecture



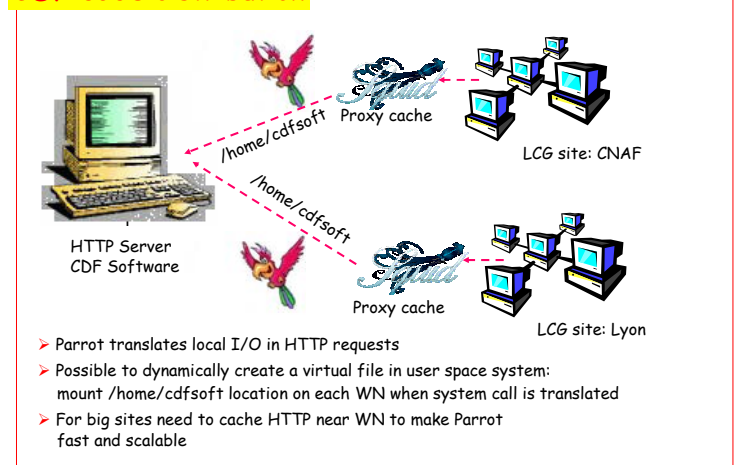
Job Submission and Execution



Job Monitor



CDF code distribution



Performances

CDF B Monte Carlo production

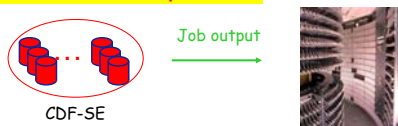
Samples	Events on tape	ϵ	ϵ with 1 Recovery
$B_s \rightarrow D_s \pi D_s \rightarrow \phi \pi$	1969964	~92%	~100%
$B_s \rightarrow D_s \pi D_s \rightarrow K^* K$	2471751	~98%	~100%
$B_s \rightarrow D_s \pi D_s \rightarrow K_s K$	1774336	~92%	~100%

ϵ = # segments succeeded / # segments submitted

GRID failures: site miss-configuration, temporary authentication problems, WMS overload
LcgCAF failures: Parrot and Squid cache stacked

Retry mechanism: necessary to achieve ~100% efficiency. It exploits the WMS retry for GRID failures and the LcgCAF "home-made" retry based on logs parsing

Future Developments



Currently the output of the job, i.e. simulated data, is copied to FNAL tapes using a CDF procedure.

Future:
 An interface between SRM and SAM (CDF catalogue) is under development. This will allow:

- File declaration into the catalogue directly from LcgCAF
- Automatic transfer of files from LCG sites to FNAL tape
- Possibility of data processing on LCG sites

Useful Links

- LcgCAF Home Page - <http://www.pi.infn.it/cdf-italia/public/offline/lcgcaf.html>
- CAF Home page - <http://cdfcaf.fnal.gov/>
- SAM Home page - <http://projects.fnal.gov/samgrid/shift.html>
- INFN-GRID Home page - <http://grid.infn.it>
- GRID-IT CNAF Home Page - <http://grid-it.cnaf.infn.it>
- Squid Web Proxy Cache - <http://www.squid-cache.org/>
- Parrot Home page - <http://www.cse.nd.edu/~ccl/software/parrot/>