

Status of Grid-enabled UTA McFarm software

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As a reminder ...

- **In UTA we operate two Linux farms HEP and CSE for MC production**
- **We use McFarm a home-grown batch processing system for D0 MC production**
- **We are currently switching from Linux 6.* to Linux 7.***
- **In parallel we use the CSE farms to test the scripts for McFarm software installation**

**A couple of experimental groups in D0
have expressed interest in our software and
plan to install it on their farms**

- *LTU, Boston, Tata, Dubna, Brazil,
Manchester, Oklahoma, LTU*
- *Of these Tata, Oklahoma and LTU will
become first ones to install McView*
- *We hope that others will follow.*

We start to distribute McFarm software.

How are we going to distribute the McFarm software?

- **WWW page** <http://www-hep.uta.edu/~d0race/McFarm/McFarm.html>
- **You will find there a collection of notes and scripts for installation of farm server, file server, worker nodes, gather servers etc.**
- **Also you will find there additional information: how to install Linux, Globus, Sam, etc.**
- **Software is available for download, but read documentation first!**

Useful sites with UTA software documentation:

- <http://heppc12.uta.edu/~d0race/> : **how to install D0 software**
- http://www-hep.uta.edu/hep_notes/computing.html **All UTA related computing documents**
- <http://www-hep.uta.edu/%7Emcfarm/mcfarm/main.html>
McFarm
- <http://www-hep.uta.edu/~d0race/McFarm/McFarm.html>
How to install McFarm

Future of job submission and bookkeeping



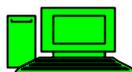
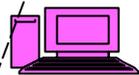
user

MC production server

Only one machine takes care of the job submission and monitoring for all farms!

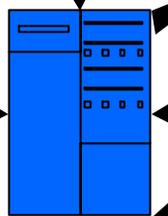
**www server
(production status)**

Job submission and control via Globus-tools

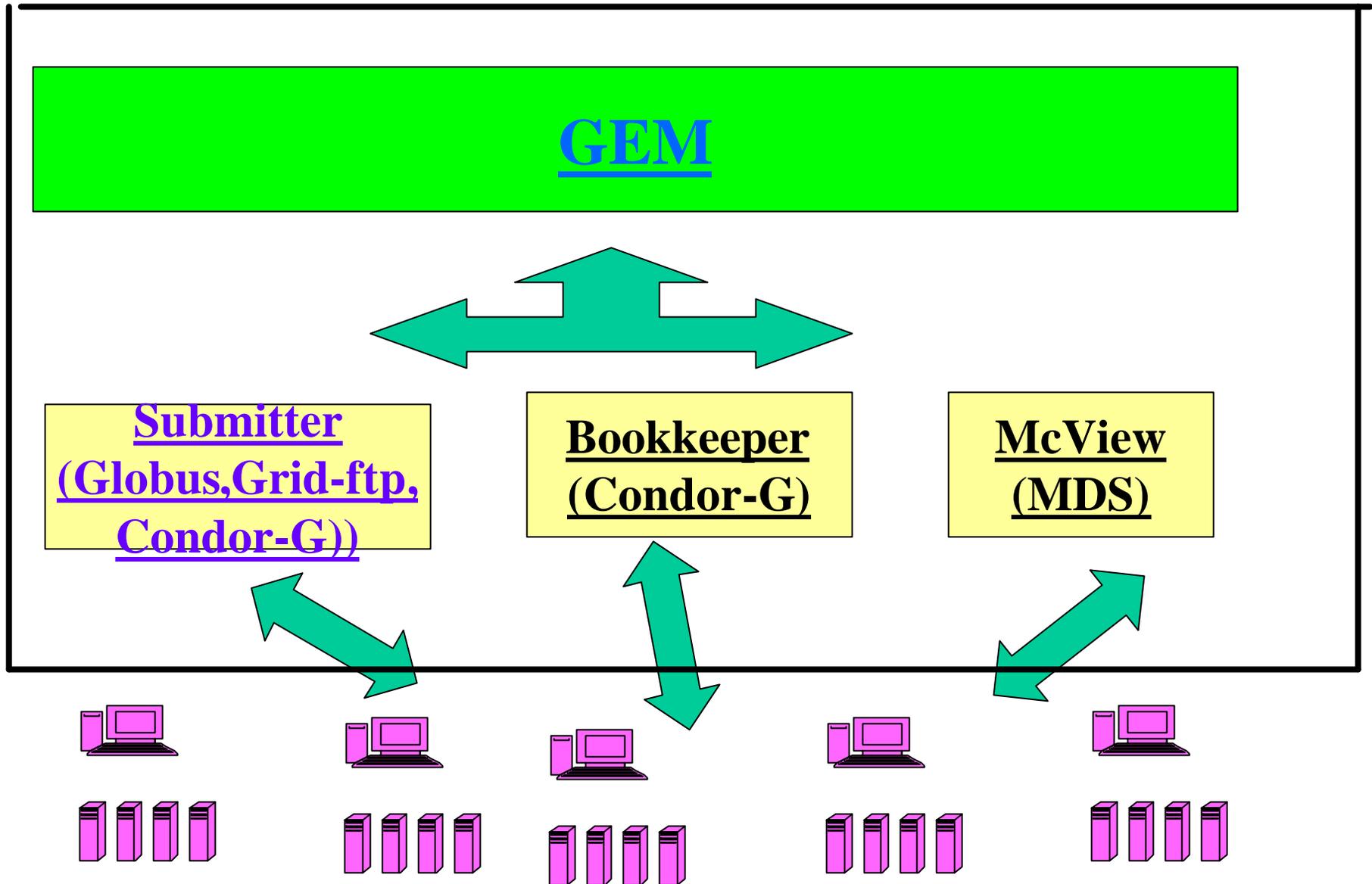


Participating production farms – can be anywhere in the world!

SAM



The plan



Status of the components:

- **Bookkeeper exists, can be seen**
<http://heppc1.uta.edu/atlas/grid-status/mcfarm/mcp10.15.01/runs.html>
- **The job submission scripts exist, Anand our student converts them to DAGMAN**
- **McView, the information provider (formerly known as CIA) has been released. It can be seen on page <http://heppc1.uta.edu/atlas/grid-status/mcfarm/mcview.html>**

Status of McView

- **It is inspired by GridView, a software tool by Kaushik De from UTA developed for Atlas Grid test bed (<http://heppc1.uta.edu/atlas/grid-status/>)**
- **But McView takes the concept of Grid monitoring one step further: It reads not only information that is in MDS by default, but fills MDS with job status information as well.**
- **This means: We have added new information providers for MDS.**

Status of McView – continued.

- **For the time being McView shows the number of undistributed jobs, errored jobs, running jobs and jobs ready to gather at each farm. It shows status of individual jobs as well**
- **McView checks if the relevant daemons (monitor, gather, sam station) are alive at the farms**
- **It detects stalled and inconsistent jobs and warns the operator.**

Conclusion

- We would like to build a centrally operated, Globus based distributed system for MC production
- It slowly starts to take shape.
- It will be the first practical large scale implementation of Globus toolkit technology for HEP computing!
- It will be a poor man's Grid prototype, but nevertheless a first Grid-like computing network and a first step towards a real Grid!