

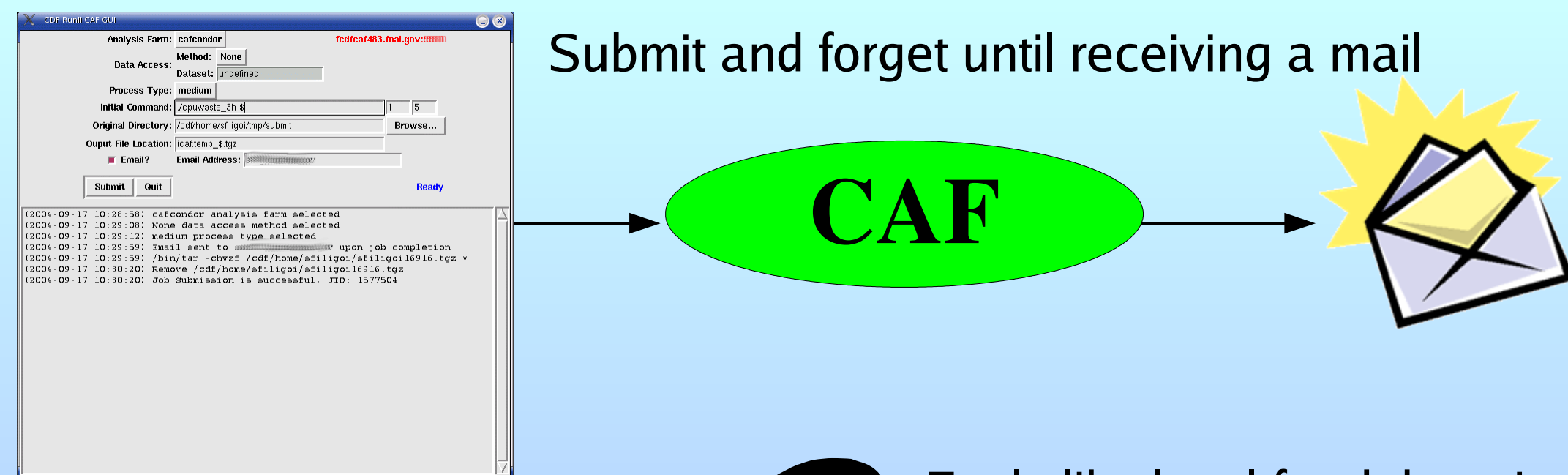
THE CDF ANALYSIS FARM

CAF Philosophy

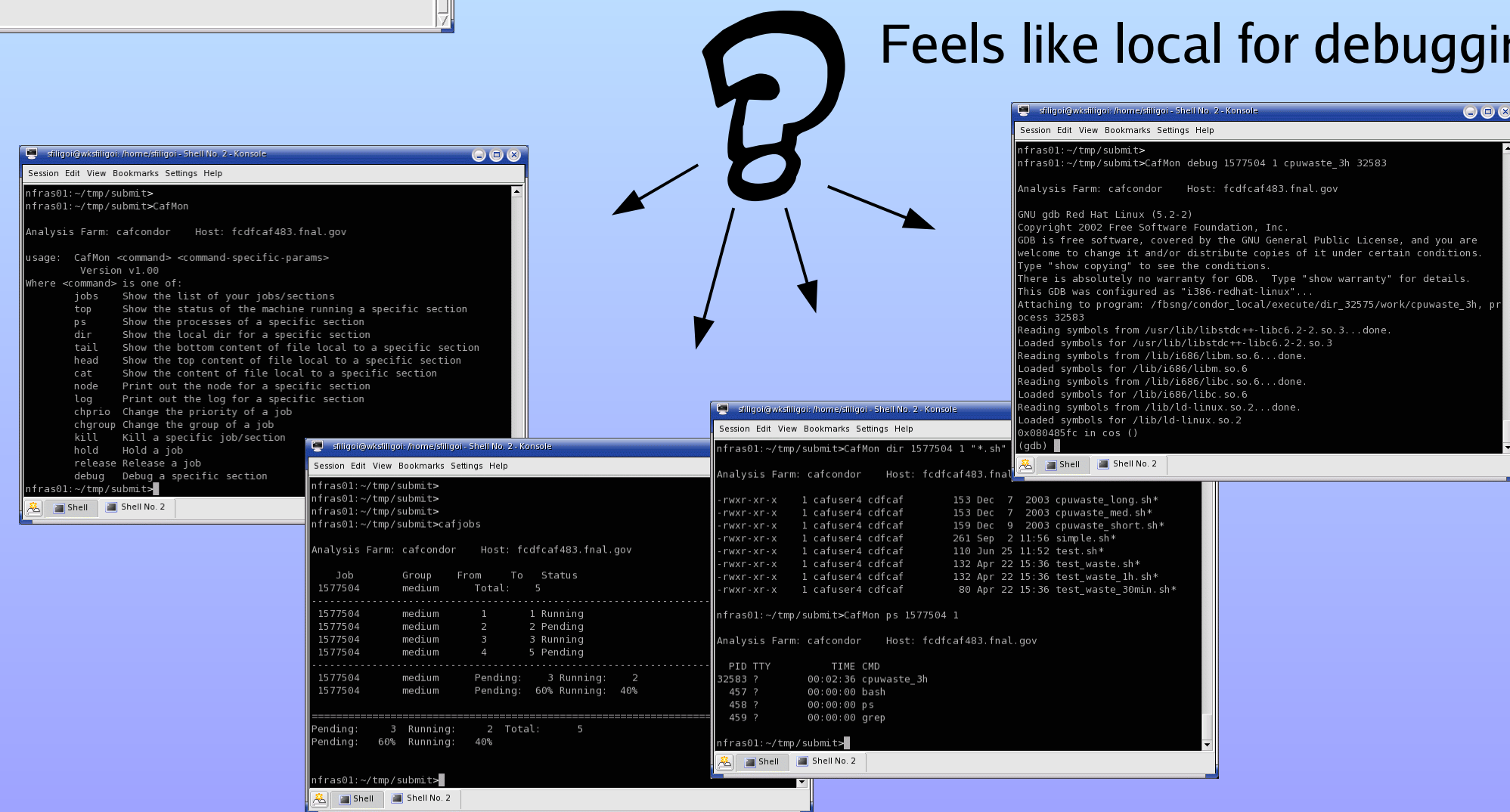
Develop, debug AND submit from personal PC



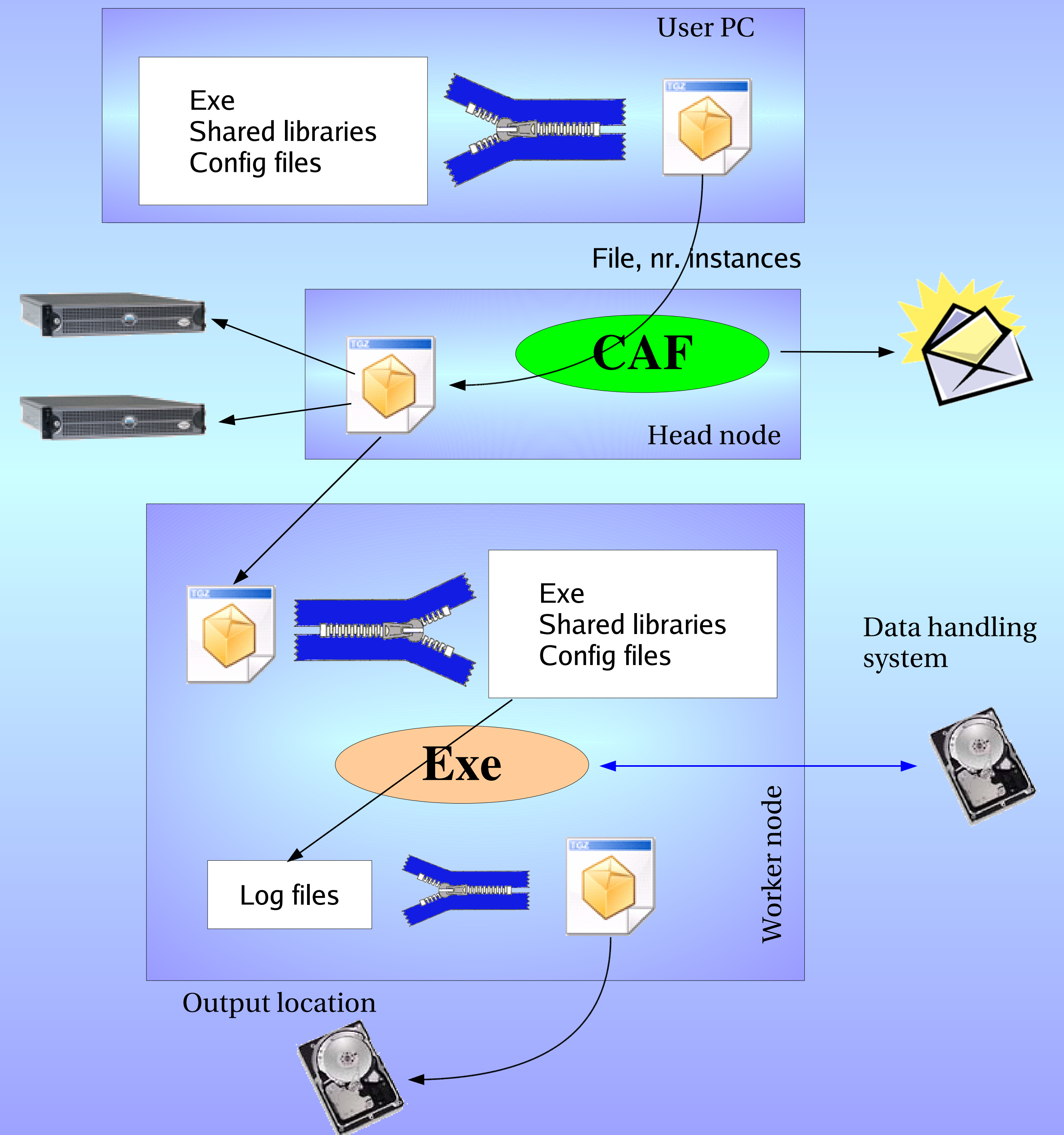
Submit and forget until receiving a mail



Feels like local for debugging

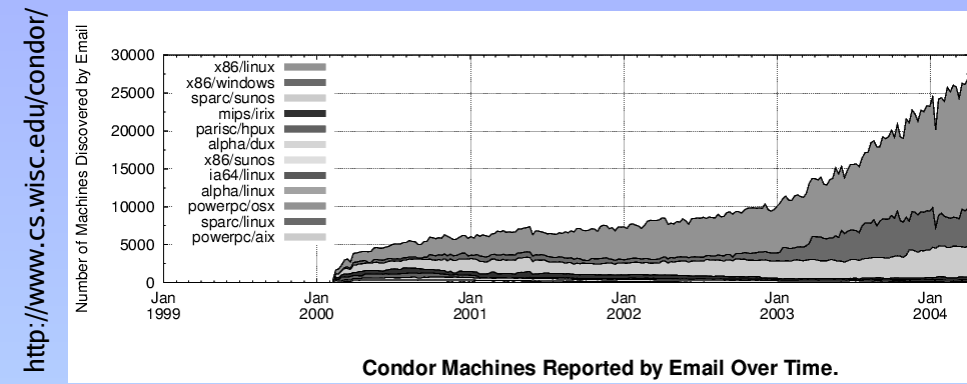


Life of a CAF job

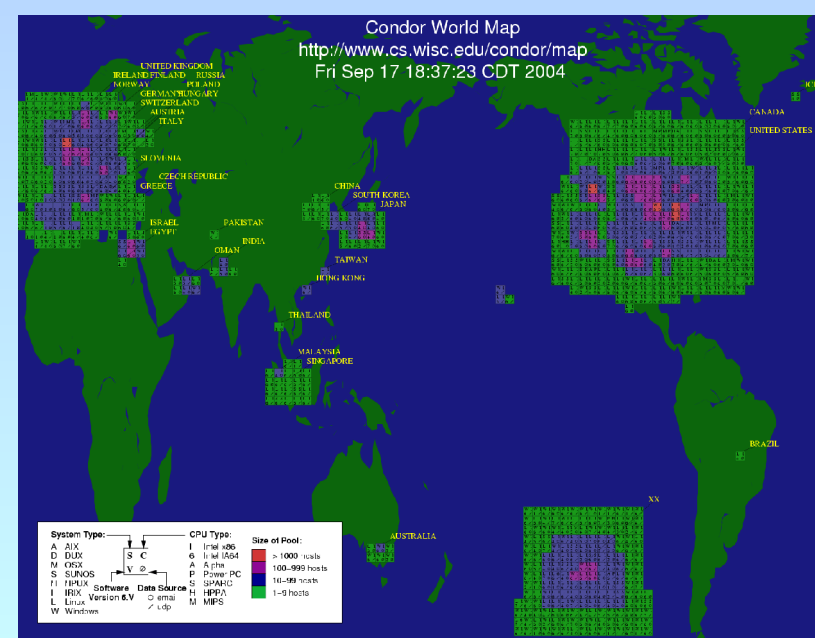


CONDOR BATCH SYSTEM

Alive, widely deployed batch system



Known to scale well to thousands of nodes



Well supported

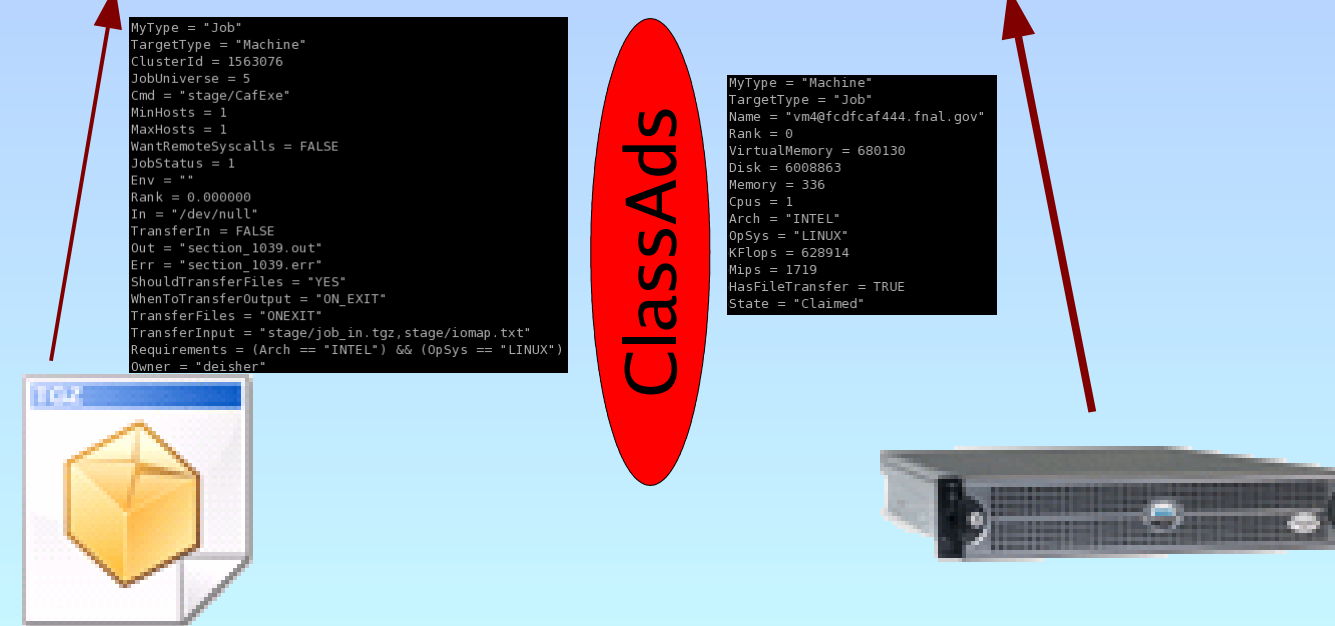
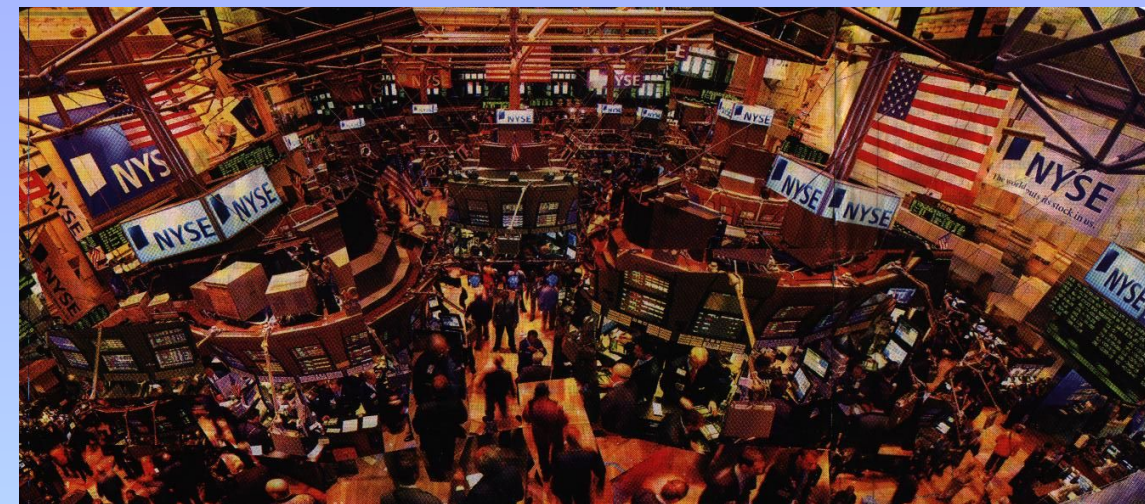
At Fermilab

340 nodes, 2k virtual machines



250 registered users

Based on the principles of the marketplace



Jobs ask for resources

Machines offer resources

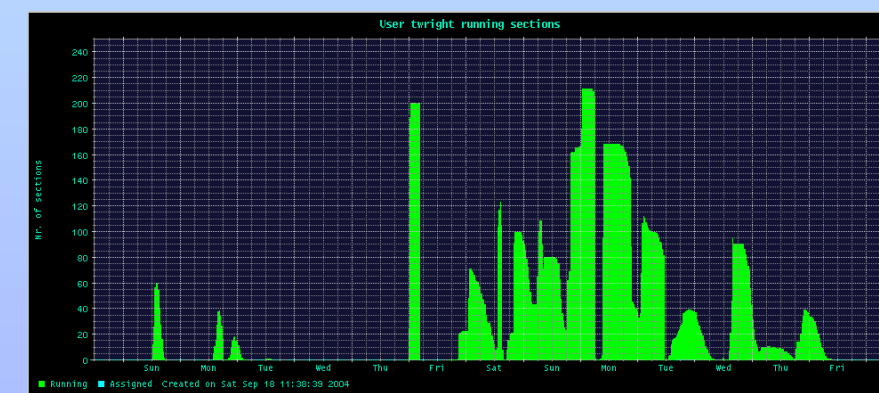
Simple numbers or arbitrary complex expressions

```

classad = {
  type = "Machine";
  name = "condor";
  url = "http://condor.cern.ch";
  ...
}
    
```

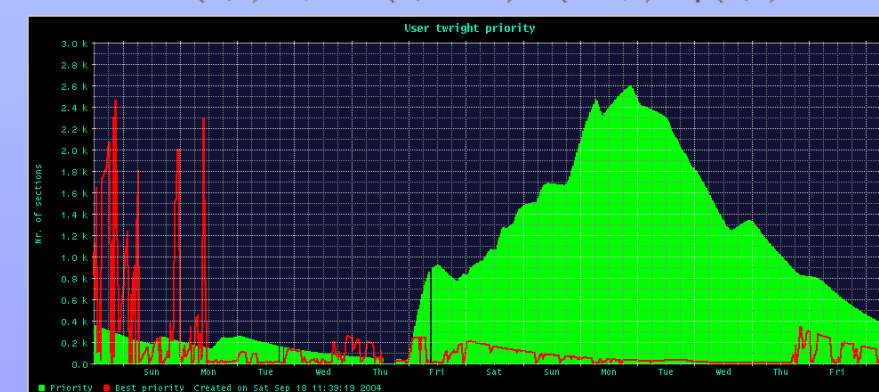
Very powerful

User priority is a function of resources used



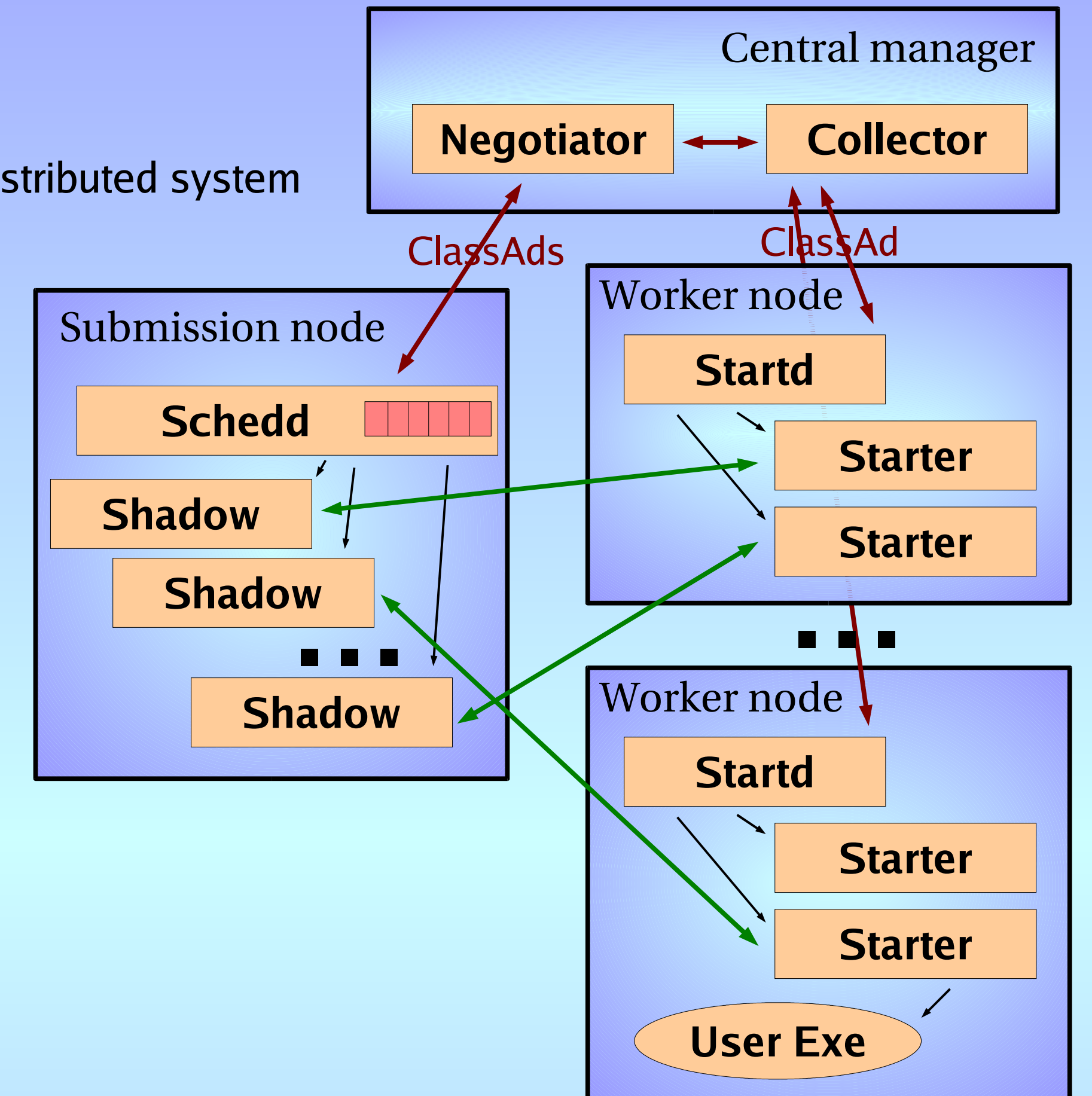
When using resources, priority worsens linearly

When using few or none, priority exponentially decays

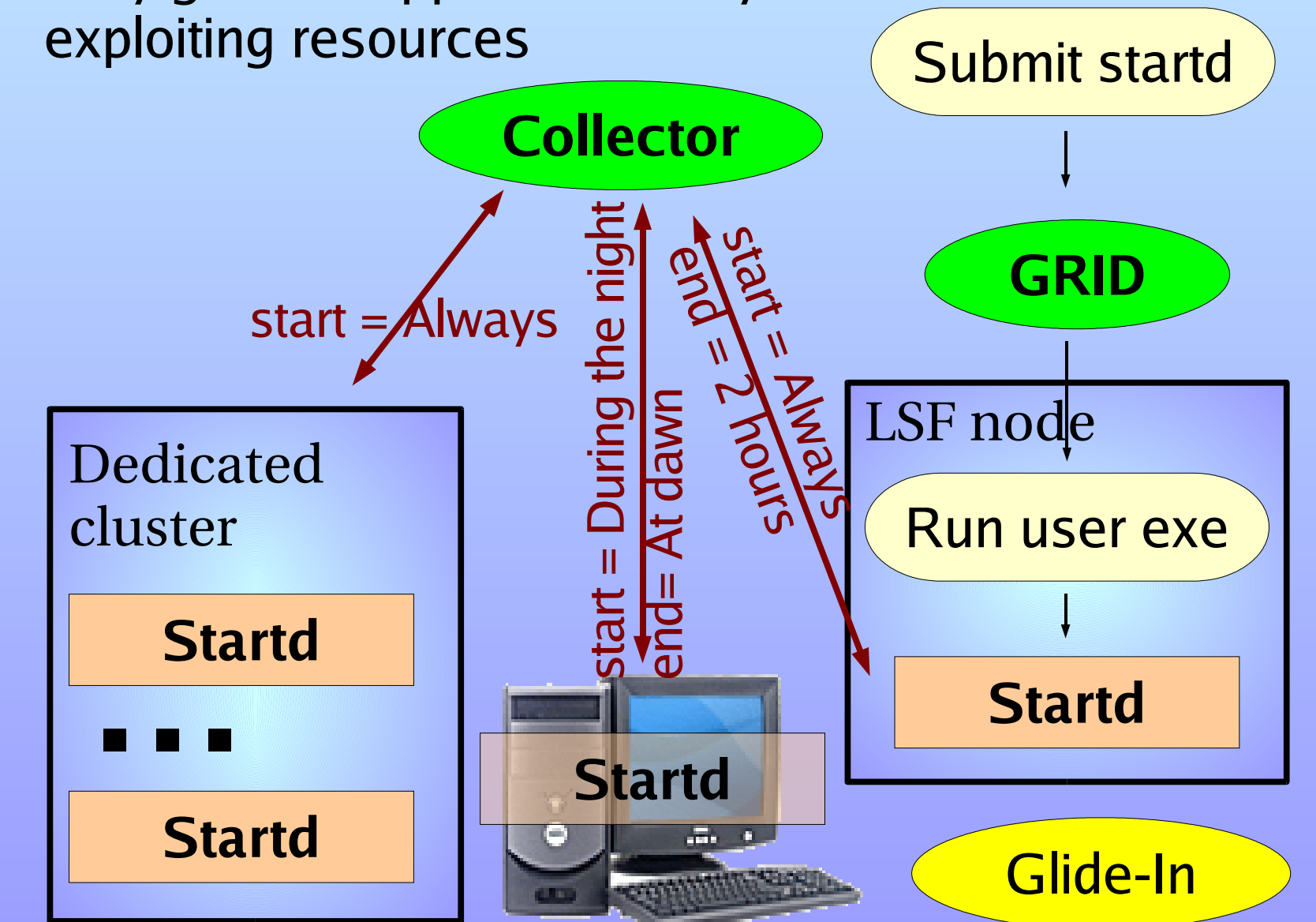


Heavy users cannot cheat
New users start immediately

Distributed system



Very good at opportunistically exploiting resources

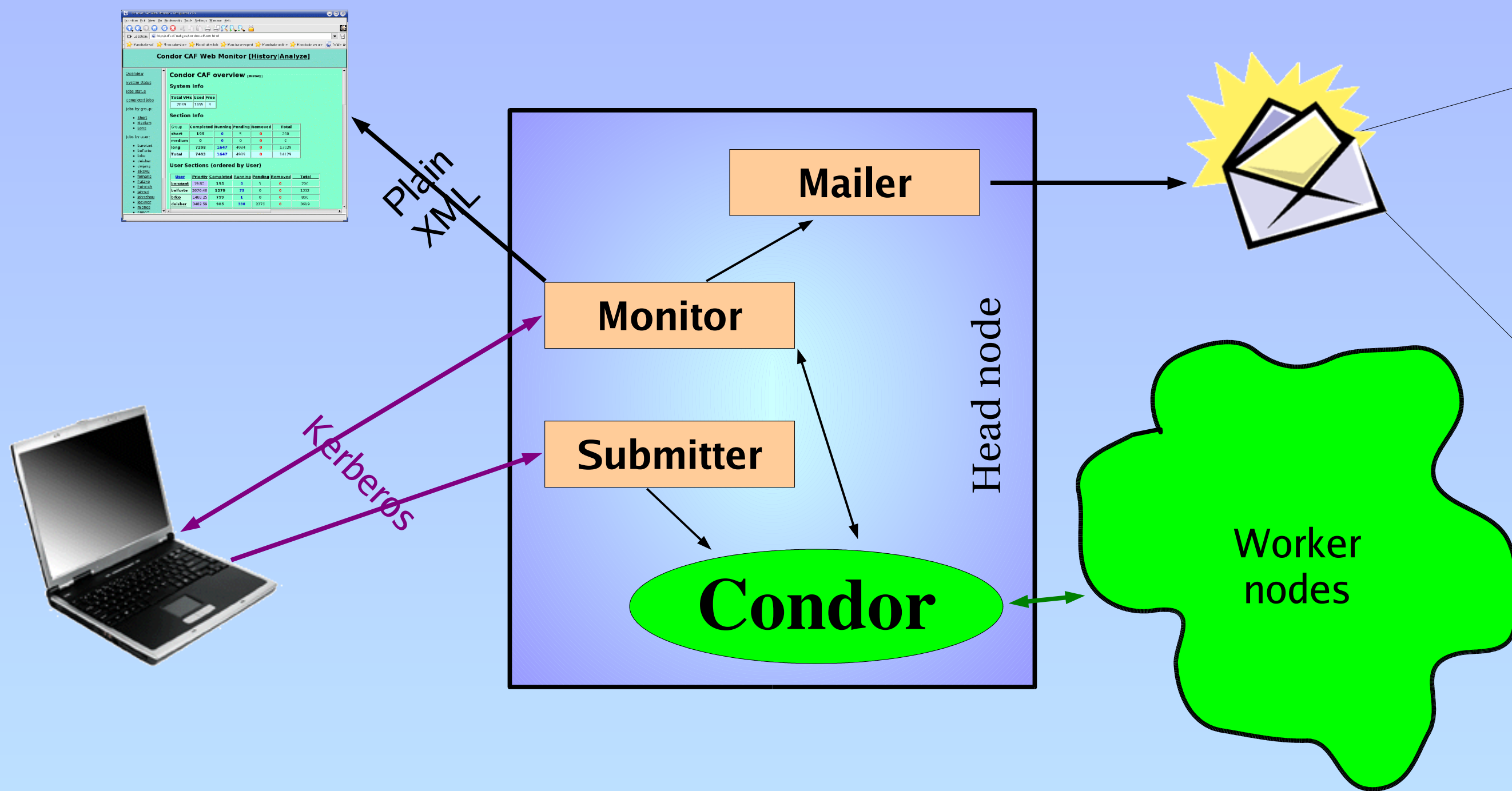


THE CONDOR BASED CAF

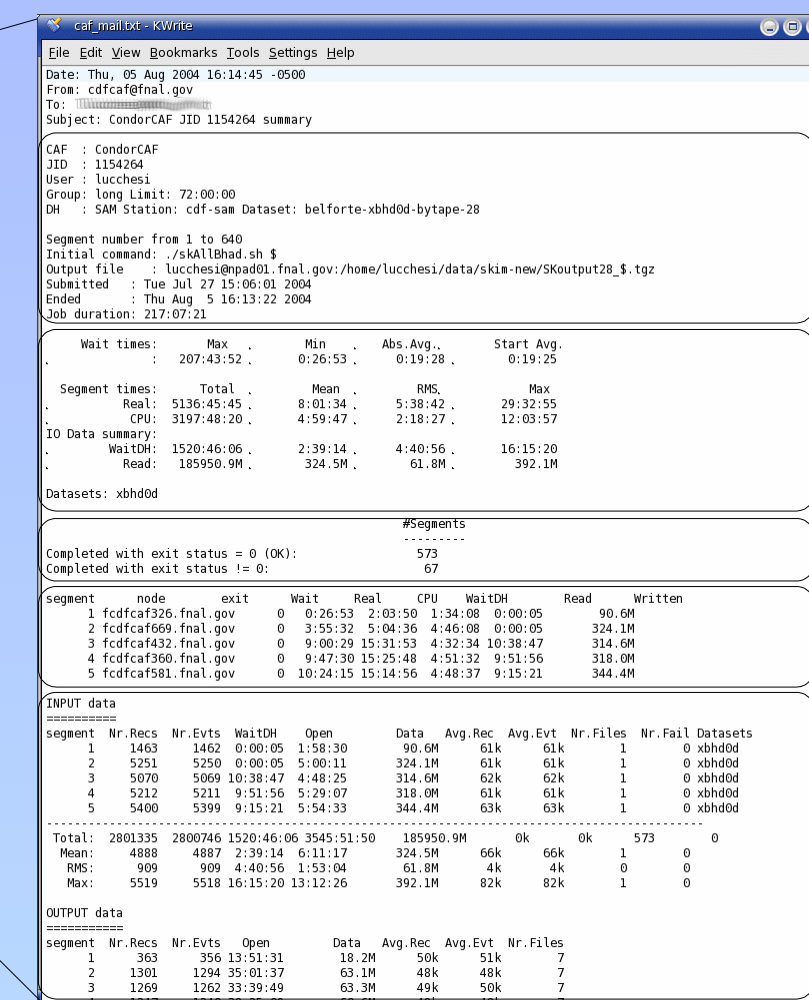
E. Lipeles¹, M. Neubauer¹, I. Sfiligoi², F. Würthwein¹

¹UCSD, ²INFN LNF

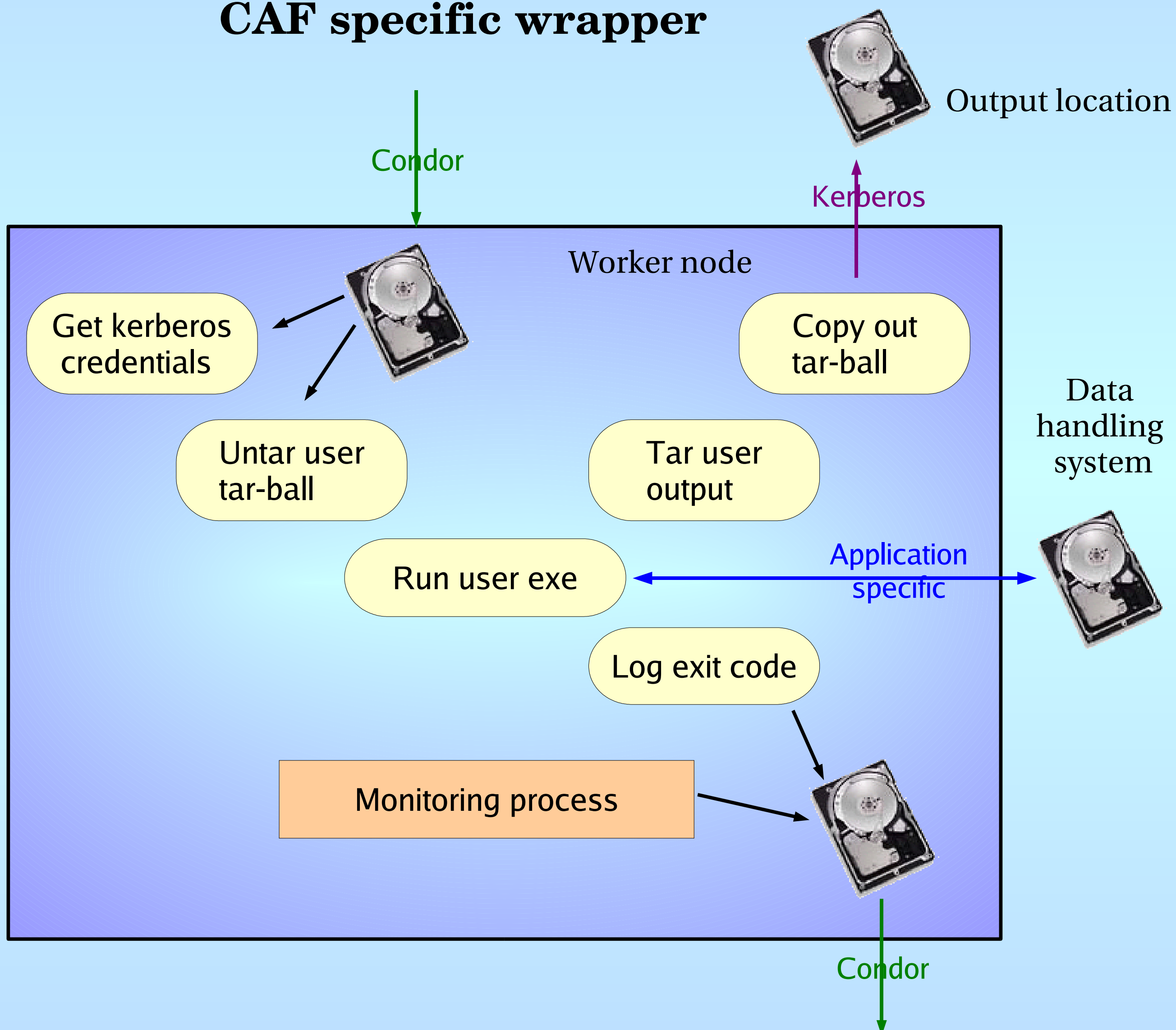
The CAF is just a portal



Detailed summary mail

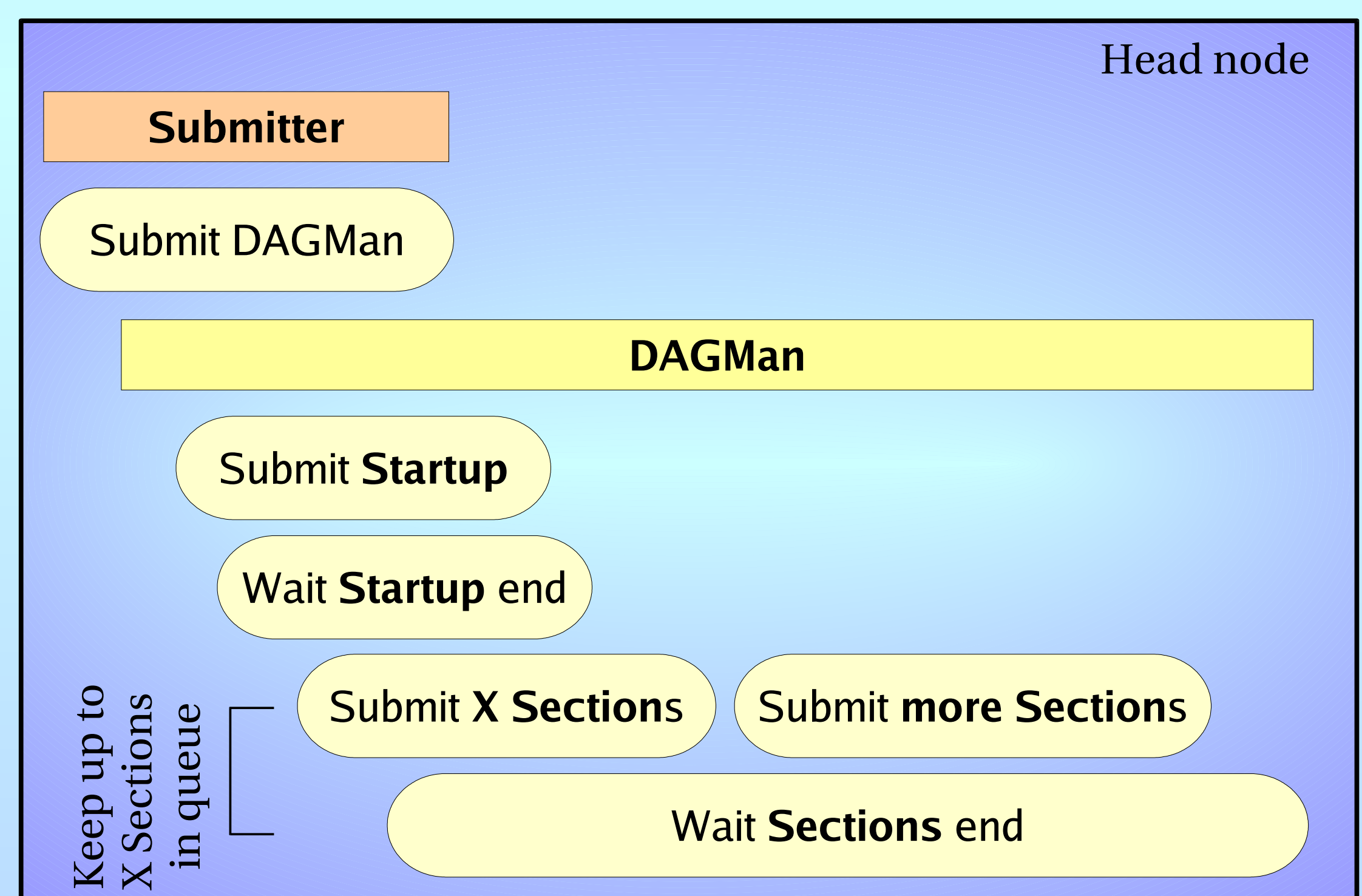
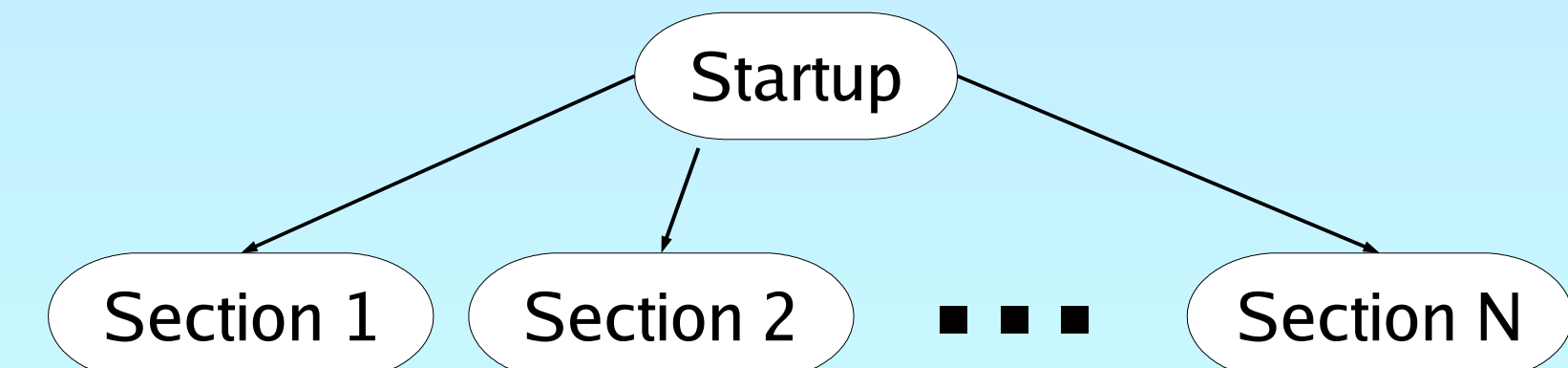


CAF specific wrapper



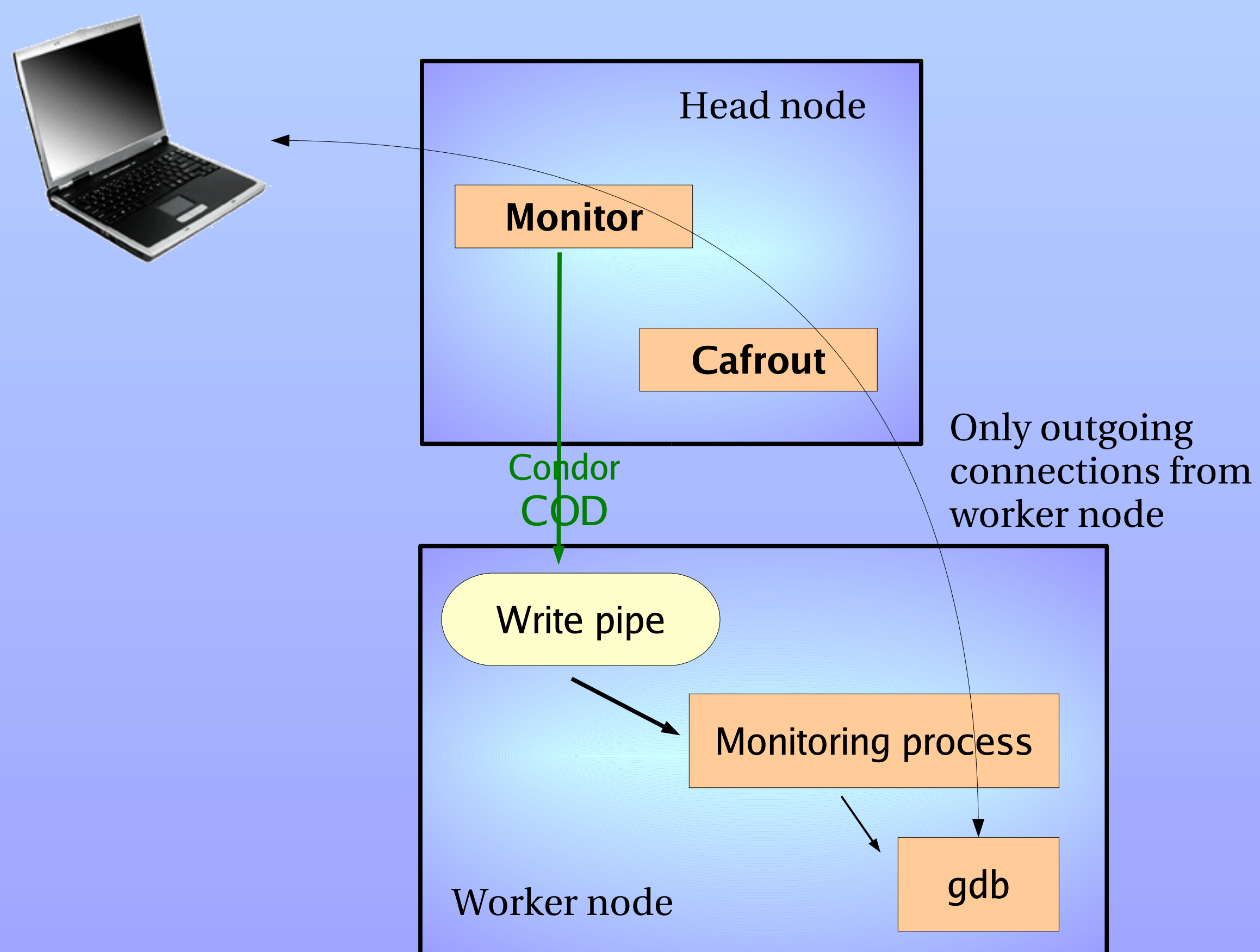
Job multiplicity handled by Condor DAGMan

CAF jobs are highly parallel, but some dependencies remain



Interactive monitoring based on Condor COD

(Computing On Demand – Immediately run a command)



Two monitoring paths

