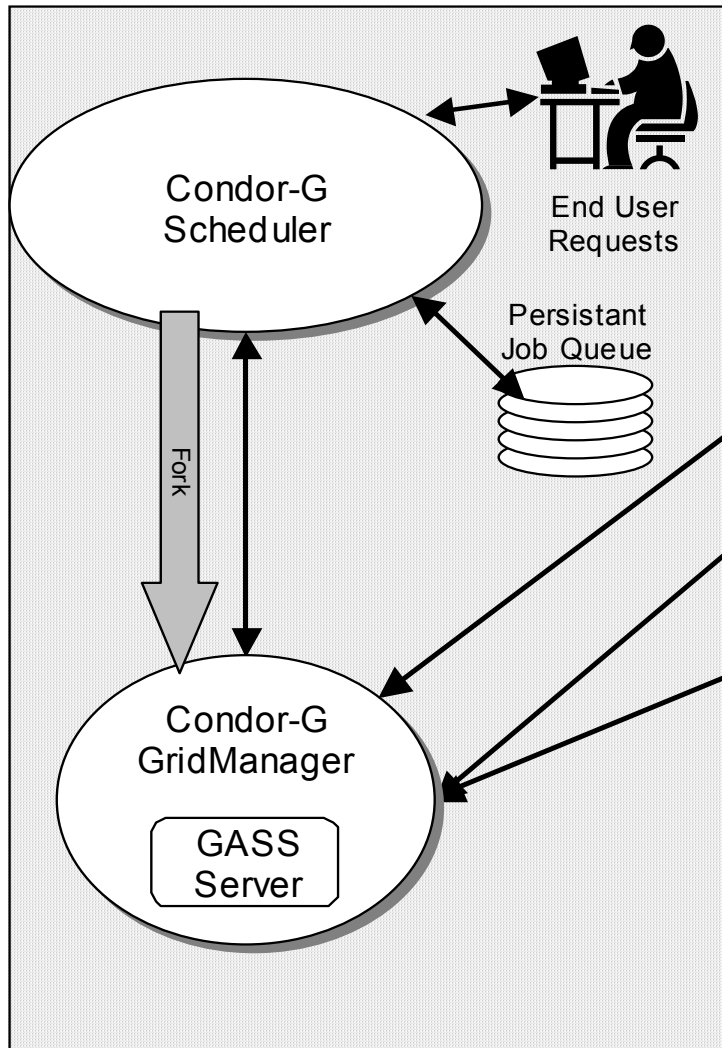
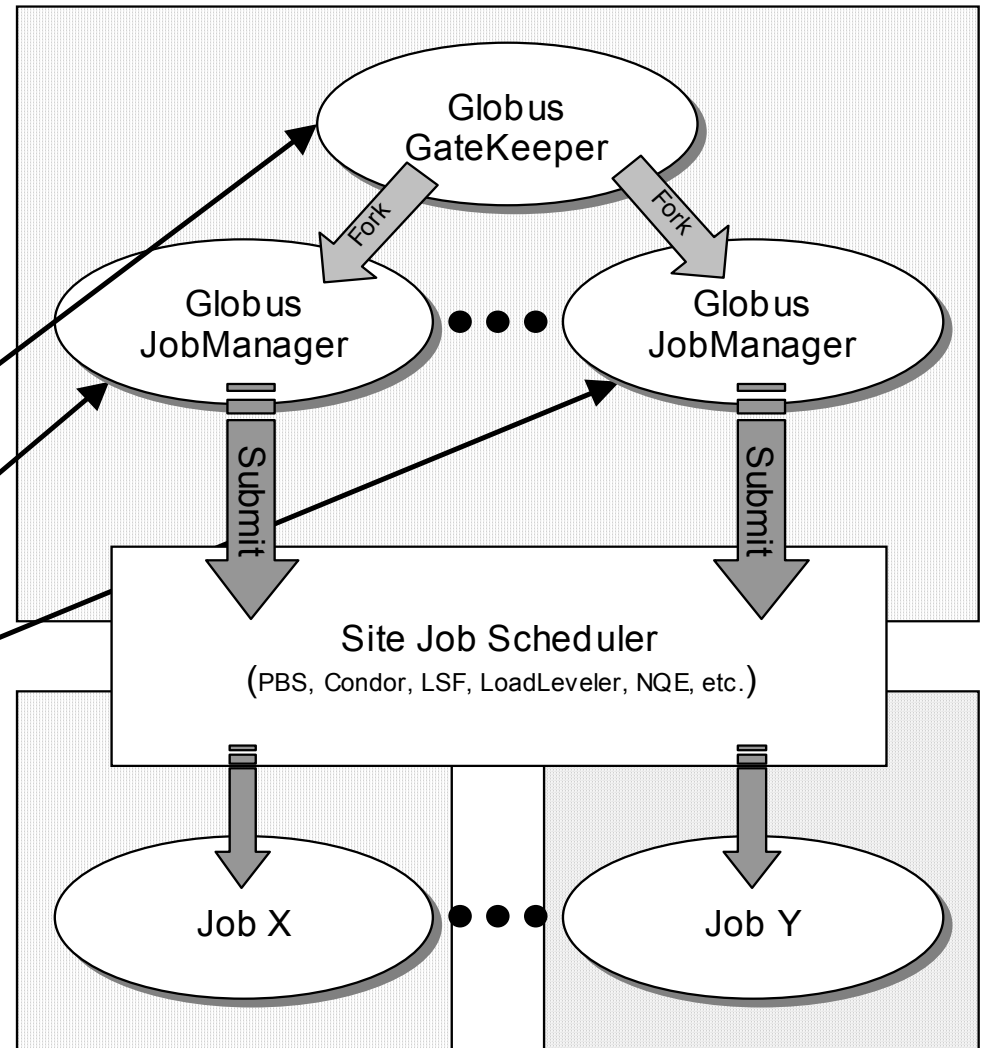


Condor Globus Universe

Job Submission Machine



Job Execution Site



Globus Universe Concerns

- What about Fault Tolerance?
 - Local Crashes
 - What if the submit machine goes down?
 - Network Outages
 - What if the connection to the remote Globus jobmanager is lost?
 - Remote Crashes
 - What if the remote Globus jobmanager crashes?
 - What if the remote machine goes down?

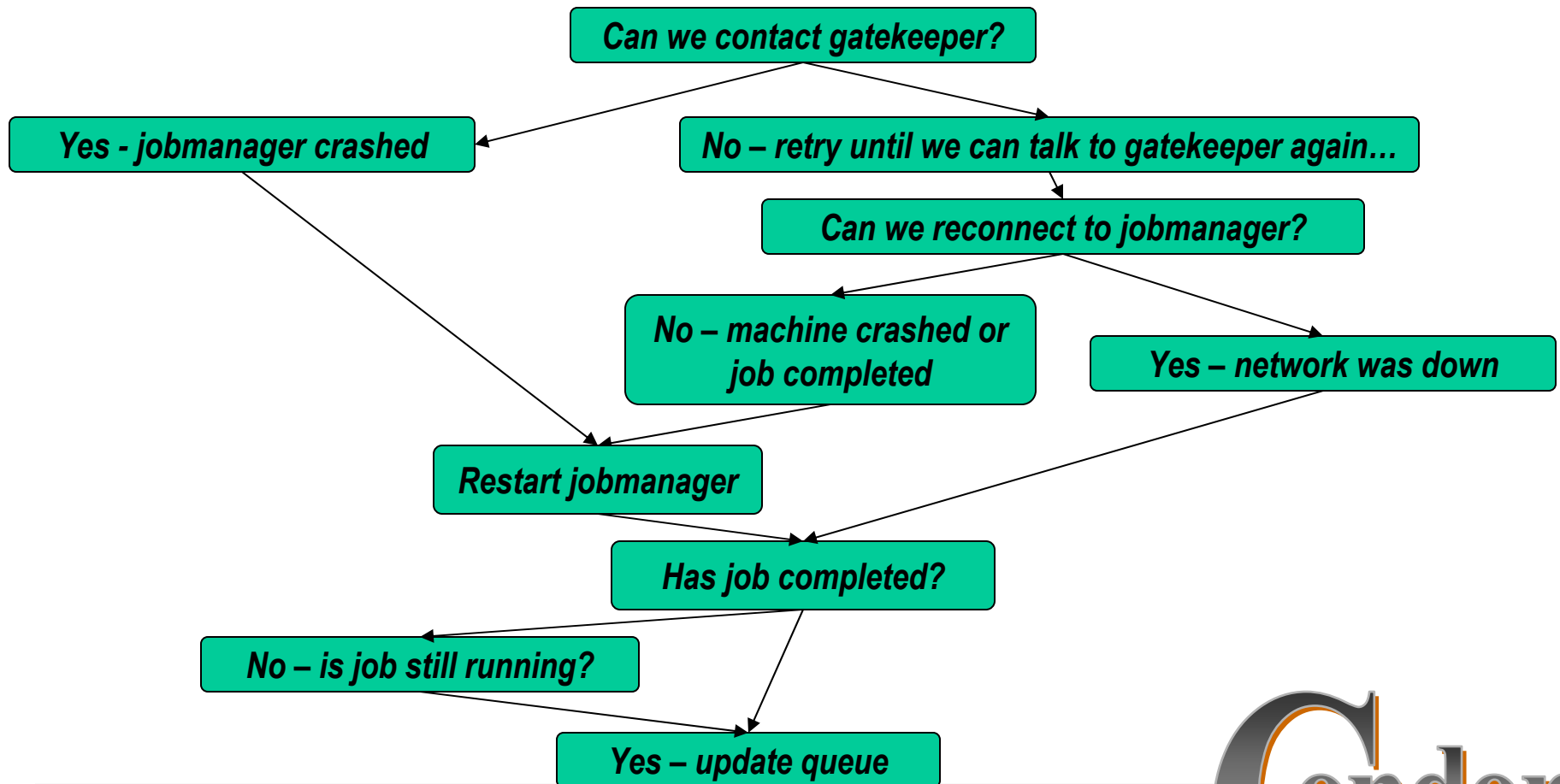
Changes to the Globus JobManager for Fault Tolerance

- > Ability to restart a JobManager
- > Enhanced two-phase commit submit protocol

Globus Universe Fault-Tolerance: Submit-side Failures

- > All relevant state for each submitted job is stored persistently in the Condor job queue.
- > This persistent information allows the Condor GridManager upon restart to read the state information and reconnect to JobManagers that were running at the time of the crash.
- > If a JobManager fails to respond...

Globus Universe Fault-Tolerance: Lost Contact with Remote Jobmanager



Globus Universe Fault-Tolerance: Credential Management

- > Authentication in Globus is done with limited-lifetime X509 proxies
- > Proxy may expire before jobs finish executing
- > Condor can put jobs on hold and email user to refresh proxy
- > Todo: Interface with MyProxy...