



Open Science Grid

How do you join the OSG? A software perspective

Alain Roy



Open Science Grid

Joining OSG

- Assumption: You have a campus grid
- Question: What changes do you need to make to join OSG?



Your Campus Grid

- I'm assuming that you have a cluster with a batch system.
 - Condor
 - Sun Grid Engine
 - PBS/Torque
 - LSF



Administrative Work

- You need a security contact
 - Who will respond to security concerns?
 - You need to take this seriously
- You need to register your site
- You should have a web page about your site.
 - This will be published
 - People can learn about your site.



Big Picture

- Compute Element (CE)
 - OSG jobs submitted to CE, which gives them to batch system
 - Also has information services and lots of support software
- Shared file system
 - OSG requires a couple of directories to be mounted on all worker nodes
- Storage Element (SE)
 - How do you manage your storage at your site
 - Can be big topic by itself, just touched on here.



Installing Software

- The OSG Software Stack
 - Based on the VDT
 - The majority of the software you'll install
 - Doesn't care which grid you're part of
 - OSG Software Stack:
 - VDT + OSG-specific configuration
- Installed via Pacman
 - No RPMs right now

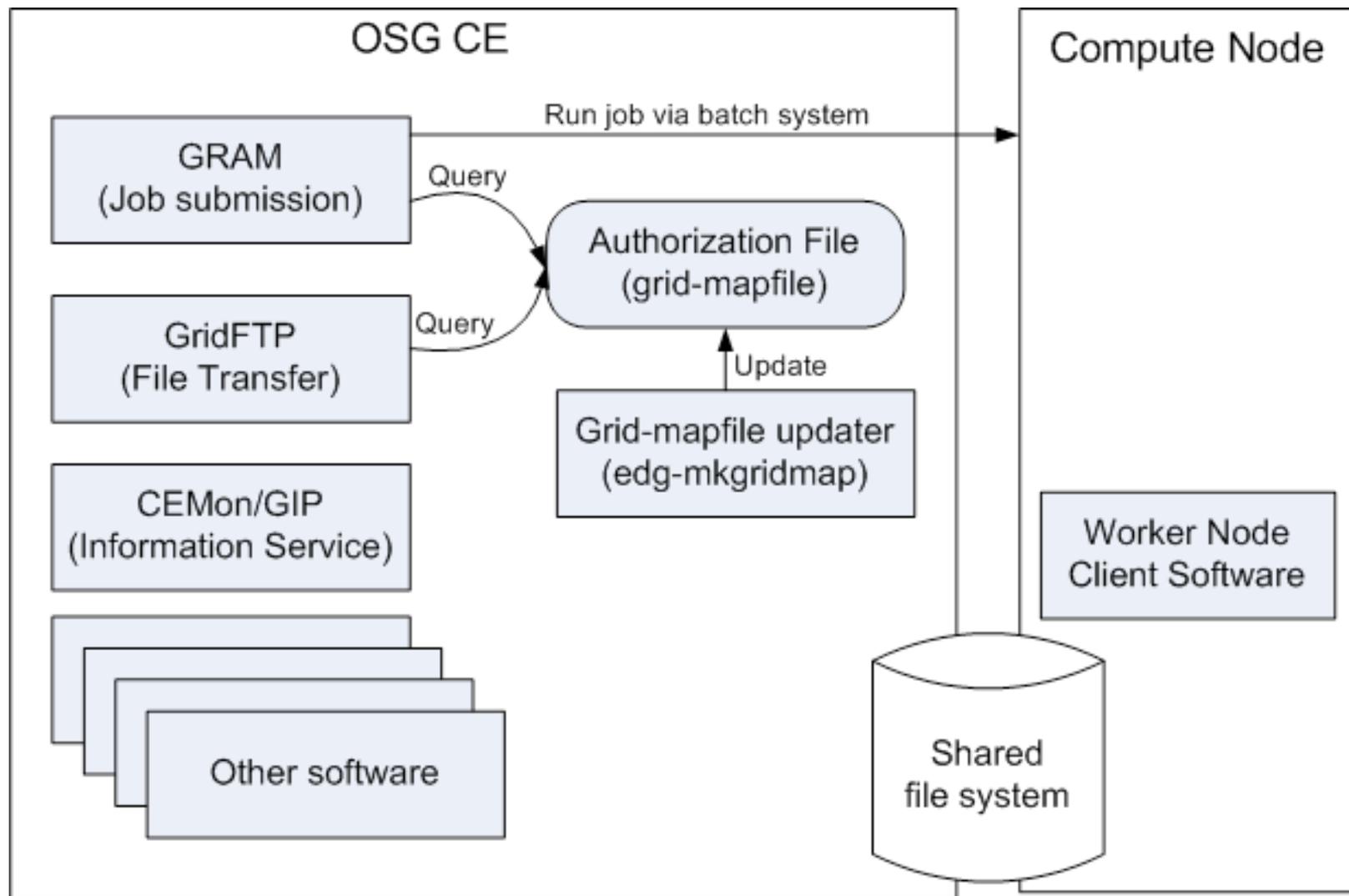


What is installed?

- GRAM: Allow job submissions
- GridFTP: Allow file transfers
- CEMon/GIP: Publish site information
- Some authorization mechanism
 - grid-mapfile: file that lists authorized users
 - GUMS: service that maps users
- And a few other things...



Picture of a basic site





Shared file system

- OSG_APP
 - For users to store applications
- OSG_DATA
 - A place to store data
 - Highly recommended, not required
- OSG_GRID
 - Software needed on worker nodes
 - Not required
 - May not exist on non-Linux clusters
- Home directories for users
 - Not required, but often very convenient



Storage Element

- Some folks require more sophisticated storage management
 - How do worker nodes access data?
 - How do you handle terabytes (petabytes?) of data
- Storage Elements are more complicated
 - More planning needed
 - Some are complex to install and configure
- Two OSG supported options:
 - dCache
 - Bestman



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More information

- Site planning
 - <https://twiki.grid.iu.edu/twiki/bin/view/ReleaseDocumentation/SitePlanning>
- Installing OSG Software Stack
 - <https://twiki.grid.iu.edu/twiki/bin/view/ReleaseDocumentation/>



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Questions?

