



Training Outreach and Education

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Monitoring

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PPARC

<http://www.pparc.ac.uk/>

eGEE

<http://www.eu-egee.org/>



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- This presentation can be re-used for academic purposes.
 - However if you do so then please let training-support@nesc.ac.uk know. We need to gather statistics of re-use: no. of events, number of people trained.
- Thank you!!



Acknowledgements

The slides in this presentation are taken from presentations by:

- S. Pickering at the e-Science All Hands Meeting 2005.
 - <http://www.ngs.ac.uk/guide/NGS-Partners-AHM05-Pickering.ppt>
- J. Schopf
 - http://www-unix.mcs.anl.gov/~schopf/Talks/mds4Inca_lcg_nov2004.ppt
- S. Smallen and K. Ericson at Super Computing 05.
 - http://inca.sdsc.edu/downloads/inca_sc05.pdf



NGS Grid Monitoring

- Service Reliability
- Performance Monitoring
- Benchmarking
- Site Interoperability Certification
- Software Stack Validation

- Customisations
- Archiving
- Integration – PBS, GITS, Ganglia, INCA



Collecting Information

- System Administration
 - Operating System
 - Disk
 - Network
 - Problem detection
- User Information
 - Software/Modules
 - Queues
 - Resources



What is monitoring?

- Discovery and expression of data
- Discovery:
 - Registry service
 - Contains descriptions of data that is available
 - Sometimes also where last value of data is kept (caching)
- Expression of data
 - Access to sensors, archives, etc.
 - Producer (in consumer producer model)



What is Grid monitoring?

- Grid level monitoring concerns data that is:
 - Shared between administrative domains
 - For use by multiple people
 - Often summarized
 - (think scalability)
- Different levels of monitoring needed:
 - Application specific
 - Node level
 - Cluster/site Level
 - Grid level
- Grid monitoring may contain summaries of lower level monitoring



Grid Monitoring Does Not Include...

- All the data about every node of every site
- Years of utilization logs to use for planning next hardware purchase
- Low-level application progress details for a single user
- Application debugging data
- Point-to-point sharing of all data over all sites



INCA

- Inca is a framework for the automated testing, benchmarking and monitoring of Grid resources
- Inca provides:
 - Scheduled execution of information gathering
 - scripts (reporters)
 - Data management
 - Collection
 - Archiving
 - Publishing
- <http://inca.sdsc.edu/>



Ganglia

- Each node broadcasts information (UDP Multicast)
- One node listens
- Good for current CPU/Memory usage



Links

- <http://inca.grid-support.ac.uk/index.html>
- <http://ganglia.ngs.rl.ac.uk/>
 - Only the front page is available to users. You will get "Page not found" or equivalent errors if you try and drill down into ganglia.