http://www.grid-support.ac.uk

http://www.ngs.ac.uk

Monitoring

Guy Warner

NeSC Training Team

http://www.nesc.ac.uk/

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

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

Policy for re-use

- 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

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- 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.