

Urgent Computing Workshop 2007



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Organizing Committee:

Pete Beckman, Kelvin Droegemeier, Dennis Gannon, Jan Mandel, Nancy Wilkins–Diehr

Goals For This Meeting

- Bring together four groups to discuss urgent computing and start a roadmap
 - ◆ Applications, Middleware, Resource providers, Allocation and policy
- Understand several example applications and their requirements
- Explore the middleware available now, and what could be available in the future
- Plan future community activities
- Write a white paper with a summary of discussions



Urgent Computing Space

- Session Activation
 - ◆ Clear (audit trail) beginning and end
- Elevated priority / QoS
- Flexible policies, variety of resources
- Ad-hoc coordination of participants
- Practice drills
- Simple usage policies and responsibilities



Applications

- What is your urgent computing workflow?
- How much and where is the data that must flow through the system?
- How is data analyzed for decision making?
- How much computation is needed?
- How often do you need urgent computing?
- What are your deadlines and lead times?
- What is your roadmap?



Middleware

- Tell us about:
 - ◆ Scheduling & queuing and resource mgmt
 - ◆ Virtualization and clusters on demand
 - ◆ Checkpoint / Restart
 - ◆ Urgent computing environments
- What can these technologies do for us?
- How can data transfers be managed?
- What could we do to improve feature sets specifically for urgent computing applications?



Resource Providers

- Do you have urgent computing apps now?
- What are your plans for supporting them?
- Describe your other users that must co-exist with the urgent system?
- What other users need urgent computing?
 - ◆ online microscopes, interactive viz, etc.
- How can allocations work for urgent computing?
- What policy nightmares scare you most...



Panel

- Allocation and policy discussion
- Technical roadmap discussion
- Community activities
- Urgent computing as basic cyberinfrastructure?



Topics for Future Discussions

(If only we had a week :-)

- Collaborative (distributed) analysis and decision making
- Network bandwidth / QoS reservation technologies
- The urgent computing needs of instruments (microscopes, telescopes, beam lines)
- Triage and arbitration of urgency
 - ♦ Plagues >> tornadoes >> oil slick
- Reliability of simulations and models in the real decision-making world
- Deployment into real world

