



Cluster Performance Focus Group

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for
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Cluster Performance Group Agenda

- **Membership**
- **Charter for group <> directions**
 - **Scalability vs Performance**
- **Activities inside and outside of Gelato**
 - **PNNL**
 - **Group**
- **Open Discussion**
- **Develop wish list**



Cluster Performance Group Membership

- **BII**
- **KTH**
- **HP**
- **INRIA**
- **OSC**
- **PSC**
- **RAS**
- **CERN**
- **Tsinghua**
- **NCAR**
- **NCSA**
- **PUCRS**

PFG Charter

Establish objectives for future performance metrics and measurement techniques to characterize system value and productivity to users and institutions.

Identify strategies for evaluation including benchmarking of existing and proposed systems in support of user applications. Determine parameters for specification of system attributes and properties.



PFG Charter

Stolen from SIAB

Mission: Explore ways to use clusters with the highest efficiency; Identify, study and resolve bottlenecks to large cluster scalability.

Objectives: Share information and resources in Linux cluster scalability.

Areas of interest: Linux cluster and applications performance scaling



Cluster Performance (Scalability?) at the High End



Dimensions of Performance

- **Reliability**
 - High-Availability
 - MTBI (at high processor count!)
- **Capacity**
 - Pleasantly Parallel / Low (no?) State - Web serving
 - Workload characterization (NERSC)
- **Capability**
 - Applications Performance
 - Efficiency: % of Peak?
 - Time to Solution
- **Cost!!**



Discussion / Next Steps

- **For Clusters: Is Performance an element of Scalability? (One Focus Group?)**
- **Enlist HP Participation**



End