8th Workshop on Virtualization in High-Performance Cloud Computing

Open Challenges

Topics of interest include, but are not limited to:

- Management, deployment and monitoring of VM-based environments
- VM-cloud performance monitoring
- VM cloud topology management and optimization
- Operating systems virtualization supportpptimization
- VM-based cloud performance modelling
- Network virtualization for VM-environments
- Data virtualization
- Cloudbursting
- Evolved grid architectures including such based on network virtualization
- Workload characterization for VM-based environments
- Optimized communication libraries/protocols in the cloud
- System and process/bytecode VM convergence
- Cloud frameworks and APIs
- GPU Virtualization architectures and APIs
- Checkpointing/migration of large compute jobs
- Instrumentation interfaces and languages
- VMM performance (auto-)tuning on various load types
- Cloud reliability, fault-tolerance, and security
- Heterogeneous virtualized environments
- Paravirtualized I/O
- Services in cloud HPC
- Research and education use cases
- Virtualization in cloud, cluster and grid environments
- Cross-layer VM optimizations
- Cloud HPC use cases including optimizations
- Energy-aware virtualization
- Performance and cost modelling
- QoS and and service levels
- Languages for describing highly-distributed compute jobs
- VM cloud and cluster distribution algorithms, load balancing
- Instrumentation interfaces and languages
- Hypervisor extensions and tools for cluster and grid computing
- Virtual machine monitor platforms
- Cluster provisioning in the cloud