VHPC 2011: 6th Workshop on Virtualization in High-Performance Cloud Computing

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Virtualization has become a common abstraction layer in modern data centers, enabling resource owners to manage complex infrastructure independently of their applications. Conjointly virtualization is becoming a driving technology for a manifold of industry grade IT services. The cloud concept includes the notion of a separation between resource owners and users, adding services such as hosted application frameworks and queuing. Utilizing the same infrastructure, clouds carry significant potential for use in high-performance scientific computing. The ability of clouds to provide for requests and releases of vast computing resource dynamically and close to the marginal cost of providing the services is unprecedented in the history of scientific and commercial computing. Distributed computing concepts that leverage federated resource access are popular within the grid community, but have not seen previously desired deployed levels so far. Also, many of the scientific datacenters have not adopted virtualization or cloud concepts yet. This workshop aims to bring together industrial providers with the scientific community in order to foster discussion, collaboration and mutual exchange of knowledge and experience. This year's workshop featured 9 papers on diverse topics in HPC virtualization. Papers of note include Kim et al. proposing group-based cloud memory deduplication along with Nanos et al. presenting results from a high-performance cluster interconnect prototype for VMs with a user-level RDMA protocol over standard 10Gbps Ethernet. The chairs would like to thank the Euro-Par organizers and the members of the program committee along with the speakers and attendees, whose interaction contributed to a stimulating environment. VHPC is planning to continue the successful co-location with Euro-Par in 2012.