Contribution ID: **246** Type: **poster**

HEP Specific Benchmarks of Virtual Machines on multi-core CPU Architectures

Tuesday, March 24, 2009 8:00 AM (20 minutes)

Virtualization technologies such as Xen can be used in order to satisfy the disparate and often incompatible system requirements of different user groups in shared-use computing facilities. This capability is particularly important for HEP applications, which often have restrictive requirements. The use of virtualization adds flexibility, however, it is essential that the virtualization technology place little overhead on the HEP application. We present an evaluation of the practicality of running HEP applications in multiple Virtual Machines (VMs) on a single multi-core Linux system. We use the benchmark suite used by the HEPiX CPU Benchmarking Working Group to give a quantitative evaluation relevant to the HEP community. Benchmarks are packaged inside VMs, and then the VMs are booted onto a single multi-core system. Benchmarks are then simultaneously executed on each VM to simulate highly loaded VMs running HEP applications. These techniques are applied to a variety of multi-core CPU architectures and VM configurations.

Primary authors: GABLE, Ian (University of Victoria); ALEF, Manfred (FZK Karlsruhe)

Presenter: GABLE, Ian (University of Victoria)

Session Classification: Poster session

Track Classification: Hardware and Computing Fabrics