Benchmarking track: Introduction

Helge Meinhard / CERN-IT
HEPiX, GSC St Louis MO USA
06 November 2007
What is benchmarking?

- Quantitative evaluation
  - Processing performance
    - Integer
    - Floating-point
  - Storage performance
    - Throughput
    - Transactions
  - Power consumption
  - Air flow
  - ...
  - ...
Why benchmarking?

- Express requirements
- Help decide what to buy
  - Compare different competing solutions on equal grounds
- Determine how much you have got
  - Compare with contractual constraints (e.g. MOUs)
- Academic interest
- …
How benchmarking?

- “Industry-standard” tools and procedures
- “Industry-standard” tools, adapted procedures
- Home-grown developments
Current Focus

- Processing performance of worker nodes
  - Example: LCG MOUs talk about
    - Petabytes of disk (“easy”)
    - Petabytes of tape (“easy”)
    - Performance of worker nodes (not that easy)
- Long history of performance benchmarks
- More recently (5…10 years), SPEC widely used
Track agenda

1. Michele Michelotto:
   Migrating to SPECint2006

2. Manfred Alef:
   CPU benchmarking at GridKA

3. Helge Meinhard:
   Topics around benchmarking at CERN

4. Don Holmgren:
   Performance of Lattice QCD codes