HVM IO Performance

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Unmodified Disk IO Performance

- HVM IDE
- KVM IDE
- KVM SCSI
- PV
- Native IDE

Performance measured in MB/sec.
Unmodified Network IO Performance

- HVM
- DOM0
- PV
- Native

Mbit/sec
Unmodified Network IO CPU Usage

- **HVM**
  - DOM0 % CPU
  - DOMU % CPU
  - QEMU-DM % CPU

- **DOM0**
  - DOM0 % CPU
  - DOMU % CPU
  - QEMU-DM % CPU

- **PV**
  - DOM0 % CPU
  - DOMU % CPU
  - QEMU-DM % CPU

- **Native**
  - DOM0 % CPU
  - DOMU % CPU
  - QEMU-DM % CPU
HVM SCSI Disk

- Add LSI SCSI device to QEMU-DM
- Option ROM for boot support
- DMA batching through LSI “Scripts”
QEMU + Linux AIO + Zero Copy

• QEMU 0.9.0 introduces async IO
  – Linux AIO
  – Important for RAID workloads

• Zero Copy
  – Proper O DIRECT
  – Avoid page cache

• Sample patch for IDE done for 0.8.2
Questions?