ATLAS on SL(C)5

- SLC4 is currently the primary supported platform
- We understood that existing SLC4/gcc 3.4 binaries should run on SLC5
  - Reports from some remote sites and users using SL5
- We're trying to confirm this now that we have access to lx64slc5.cern.ch machines
- However, we found problems with SELinux and SLC5/64-bit kernel
  - One of the ROOT libraries used by all ATLAS applications (libCintex.so) violates the additional protection imposed and causes all jobs to fail
    - New ROOT patch exists and will fix future releases but does not solve the problem with existing code
    - ROOT version cannot be replaced transparently because of ROOT treatment of LD_LIBRARY_PATH
  - We believe we have identified the set of compatibility rpms that are necessary in order to run SLC4/gcc3.4 applications, but we experience a massive memory leak that kills the job during the processing of the first event when it exceeds 3 GB of virtual memory (the limit in 32-bit mode)
- We had not planned on a native SLC5/gcc 3.4 port in addition to the existing SLC4/gcc 3.4 port but will now undertake this
  - In the meantime we need to have existing production releases built with SLC4/gcc3.4 working on SLC5
  - In addition we need to be able to build and validate future SLC4/gcc3.4 builds until full transition to SLC5 achieved across all ATLAS sites, not just CERN
- Discussion at LCG-AF based on experiment feedback on transition steps:
  - First SLC5/gcc3.4 (same compiler as now)
  - Later-on SLC5/gcc4.3 (20-30% improved cpu performance)
- Target for full transition is Winter 2009-2010
  - After that we'll need to be able to run on SLC4 releases built on SLC5 at external sites