Worker Node Requirements

- TCO – biggest bang for the buck
  - Efficiency per $ important (ie cost per unit of work)
  - Processor speed (faster is not necessarily better)
  - HT enabled (or not)
  - Memory per job slot
  - Local disk I/O per job slot
  - Networking

- Dell R410 is the workhorse
  - X5660 cpu with HT (10-15% more work), 24 job slots
  - 48GB memory (but now should be 72G or more)
  - Multiple local drives (H200, three 1TB SATA 7200RPM)
  - 1Gb NICS

- CC WN node would use IB for private interface
  - Good connection to local SE
  - Must have NAT access to public network (IB or 1Gb ?)

- BNL tests show Dell CP6100 is bad for Atlas jobs

- **SE Pool Nodes**
  - dCache 1.9.12 with locality cache (like AGLT2)
  - Use GPFS for backing store
  - IB used to get to DDN
  - 10Ge to public network
  - Fast, non-firewalled access to UC and IU sites
  - WNs connect to SE via IB (dcap, direct access)

- **Dell R710 type node with 10Ge and IB**
  - AGLT2 use 48GB
  - Small amount of local disk
  - How many pool nodes is not known and will grow

- **Integration and Operation**
  - Personnel on the CC who will help

- **Condor**
  - Condor with Flocking from UC
  - Need local Condor master on public and IB networks
  - Non-firewall to UC
  - Could be on a VM or separate node (like an R410)

- **Squid**
  - Local cache for CVMFS and Frontier
  - Public and IB
  - Can also serve UC and IU
  - Not a fast CPU, but needs memory and disk
  - Some CERN access for monitoring

- Networking Requirements
  - WAN improvements between UC, IU and UIUC in works
  - 10Ge public connection for SE pools
  - IB from pool nodes to DDN and WN to pool nodes
  - Condor master and Squid also need public (1Gb)
  - WNs can be private but need fast NAT access
  - Firewalling between UC, IU and UIUC need to be open

- Other Items of Interest
  - UC monitoring of UIUC nodes
  - Very fluid environment
  - Who has root
  - How can we make changes (work in progress)
  - One bad WN can spoil the whole lot