

Test Farm @ SLAC

S. Luitz

SuperB General Meeting

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BaBar Electronics Hut Refitted as Low-Density Computing Facility

- Network
 - 6509-720 Cisco Switch / Router
 - 3 x 48 x 1GigE + 1 x 4 x 10GigE
 - Routed networks available as needed (with Internet access)
 - Dell 24-port 10GigE Switch
 - Current outside connectivity: 2 x 1 Gbit/s to SLAC CC
 - Upgrade to 2 x 10 Gbit/s possible later
- Servers
 - 40 x AMD 2 CPU x 2 cores @ 2.2GHz, 4 Gbyte RAM, 3 x 72Gbyte disk
 - 63 x AMD 2 CPU x 2 cores @ 2.0 GHz, 16 Gbyte RAM, 2 x 72GByte disk
 - 4 x Dell R715, AMD 2 CPU x 12 cores @ 2.1 GHz, 128 Gbyte RAM, 2 x 146GByte (+ SSD + 3 x 1 Tbyte 5.4k RPM)
- Will have a few more TB of “slow” storage
- ~40 Tbyte of SuperB storage at SLAC CC

Research / Test Ideas / Plans

- SuperB event building & Online
- Networking (e.g. 10GigE switch performance)
 - Data center bridging?
 - I/O Virtualization (e.g. SR-IOV)
- SuperB simulation production (not a test)
 - ~400 cores available for next SP
- PetaCache
 - SLAC-developed 5TByte Flash NAS
 - Internally non-blocking
 - Proprietary block-access protocol (non-FS)
 - Scalable
- Other data services
 - E.g. Tiered storage / caches with SSDs
- Private Clouds
 - Focus on provisioning & APIs
 - h/w too old for advanced VM support
- Deployment
- ... and more ...
- **Because of the way this was funded, PetaCache and SuperB have priority access**