# PSI Site Report

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# Linux

- **Scientific Linux PSI 4** released (Sept. 2005)
  - 64-bit Support
  - Enhanced Version (KDE 3.5.1, OpenOffice 2.0.2, …)
  - Installation over PXE (no Installation CDs)
  - Configuration with Cfengine
- **Scientific Linux PSI Software Repository**
  - http://linux.web.psi.ch/dist/scientific
  - RPMs built at PSI, kde-redhat.org RPMs and others
  - Own PSI Kernel used for Server Installation

# Linux

- **Diskless Client** based on PSI SL4
  - Hardware auto detection or configuration taken from the server
  - System mounted over NFS
  - Client sees r/w file system (unionfs)
  - Users can have their home directories on AFS
  - Rescue, Hardware Testing, Virus Scanner, try out Linux, …
  - Thin Client: NX Client to Linux, rdesktop to MS Terminal Server
  - For stability reason we may move to an other kernel
- **Live CD/DVD** based on native SL4 and PSI SL4
  - Same build system as Diskless Client
  - Available as Mini-CD, CD and DVD, for 32bit and 64bit
- http://linux.web.psi.ch/livecd

# High Performance Computing

- **Horizon Cluster - Cray XT3**
  - Project together with Swiss National Supercomputing Center (CSCS)
  - PSI share 25%
  - Evaluation with HPCC Benchmarks and real Applications
  - **1100 CPUs** (AMD Opteron 2.6 GHz)
  - 4.5 Tflops
  - Microkernel (minimizes system overhead)
  - High Speed Network 3D-Torus (SeaStar chip)
  - 28 TB Luster Parallel File System
  - Only one moving part per cabinet (big fan)
  - Low Power Consumption / High Reliability

# High Performance Computing

- Merlin3 Cluster
- Compute/Server nodes: **Sun Fire X4100**
  - 2x Dual Core Opteron 280 (2.4GHz), 8GB RAM
  - **Remote Management with IPMI-2**
  - 2 Local SAS Disks, RAID1
  - Network 4x 1Gbit/s + 100 Mbit/s
  - 64-bit PSI Scientific Linux 4
- Disk Storage:
  - 12 TB RAID5 SATA FC
  - Global File System (in Evaluation)
- Production planned for late Spring 2006

# Web CMS

- Finished Evaluation Phase
  - 3 “hot” candidates left:
    - Plone, Typo3 and Imperia
- Decision:
  - Imperia: http://www.imperia.net/
    - Minimal TCO
    - Clear separation between development and live system
    - Easy PHP integration
  - Project started
    - Implementation planned for 2007

# Mail System

- Migration from Exchange 5.5 to Exchange 2003
  - 2000 Mailboxes (default 200MB max. 1GB)
  - Frontend-Backend Server Architecture
  - SMTP Filterserver running Linux (exim)
    - Address and Spam Filter (Spamassassin)
  - NLB clustered Frontend Server
    - Exchange IMF enabled as 2. Spamfilter
  - Microsoft Cluster for Backend Server
  - Sybari (MS) Anti Virus inbound & outbound
  - Next step: Installation of 2 ISA Servers in the DMZ in front of the Mailservers

# Windows

- Windows Terminal Server Migration
  - New Hardware and Windows TS Version 2003
  - NLB Cluster Architecture (2 IBM Servers)
  - Most of the Software locally available on PSI standard PCs are available on the new Terminal Server
    - e.g. AFS Client, MS Office and Open Office
  - Additional Software
    - e.g. Photoshop, Dreamweaver, …
- Useful for Linux Users, “old” PCs, Thin Clients

# Thank you for your attention