DESY Site Report
Update on Unix and NT

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Outline

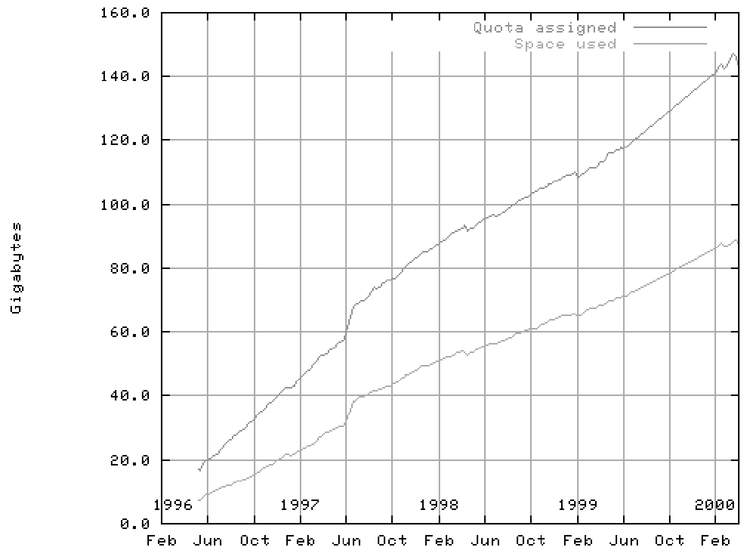
- Installed Systems Overview
- AFS Update
- Revised Linux Support Policy
- Mass Storage News
- Network Migration Status
- Mail Migration Status
- Windows NT
- Access to DESY
- Trends

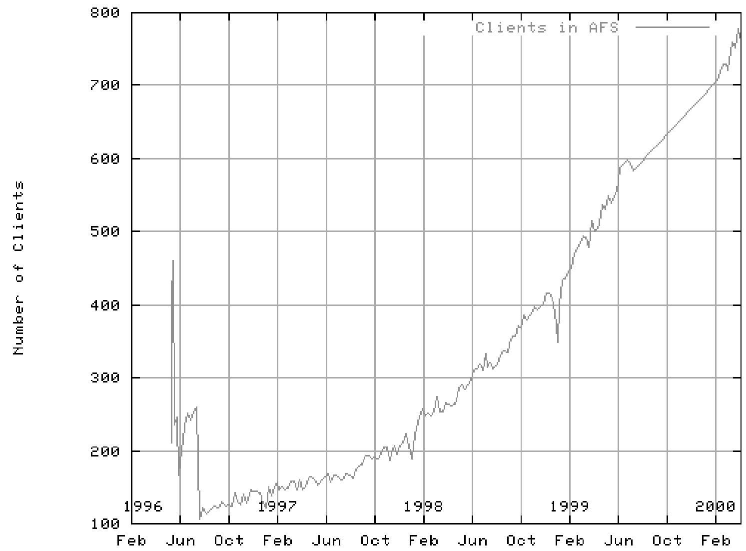
Installed Systems Overview

	Hamburg (approx.)	Zeuthen	Sum	Trend
Linux	148 WGS, 156 DT	50 WGS, 16 DT	370	↗
Solaris	127	27	152	↗
HP-UX	53	17	70	→
IRIX	36	1	37	→
AIX	30	0	30	↘
NT	1450	160	1610	↗
XTerm	600	150	750	↘

The table includes those machines which are registered, installed, and supported by -IT-.

AFS





AFS Disk Space

Number of clients

- User migration still incomplete
- Number of AFS clients still rising steeply (Linux machines)
- Significant increase in AFS file space planned

Revised Linux Support Policy

- Strong user request for . . .
  - . . . workstation power on the desktop
  - . . . access (NFS) to physics data for his workstation
  - . . . more control over his workstation
  - . . . support for various hardware configurations
- Faster network allows for mode freedom
- Linux support policy revised in late 1999, issued Jan 2000
- Roadmap for 2000
- Seeking professional help

→ K. Woller / S. Müller on Tuesday

Linux Support Status

Hamburg	Zeuthen
S.u.S.E. 6.3 (glibc2.1) / Kernel 2.2.14	
Customised package selections on installation server	
First boot with installation floppy	
Boot configuration via bootp/DHCP	
Fully automated NFS based installation with YaST 1	
Postinstall wboom/SALAD	Postinstall SUE/cfengine
Applications and user homedirs in AFS	
Maintenance wboom/SALAD	Maintenance SUE/cfengine
300+ installed units	60+ installed units
< 1 FTE manpower	< 1 FTE manpower

New Computing Model in HERA Experiments

- Multiprocessor SGI Challenges being phased out
- CPU power in inexpensive PC farms, data kept on SGI servers
- Integration of desktop CPU power strongly requested
- We watch physicists xterms being replaced by Linux PCs
- We are facing a major AFS space upgrade
- We are facing large increase of NFS/rfio network load
- Need tools to install/maintain/monitor desktop PCs with authority delegation to group admins and users
- Need better and transparent mechanisms to distribute data ("Disk Cache", DESY-FNAL collaboration)

Network News

- Continuing to build the DESY Gigabit network
  - Structured cabling, gigabit ready
  - Routers and switches from Cisco
  - 10/100 Ethernet to end device, gigabit backbone
  - Redundant routers
- Zeuthen has 100% structured cabling for some time already
- Hamburg project will have $>$ 5000 switched fast ethernet ports
- 2240 ports done so far (1500 in active use)
- 1500 ports being set up these days (Hasylab)
- About 2000 ports to follow in various buildings next 2–3 years

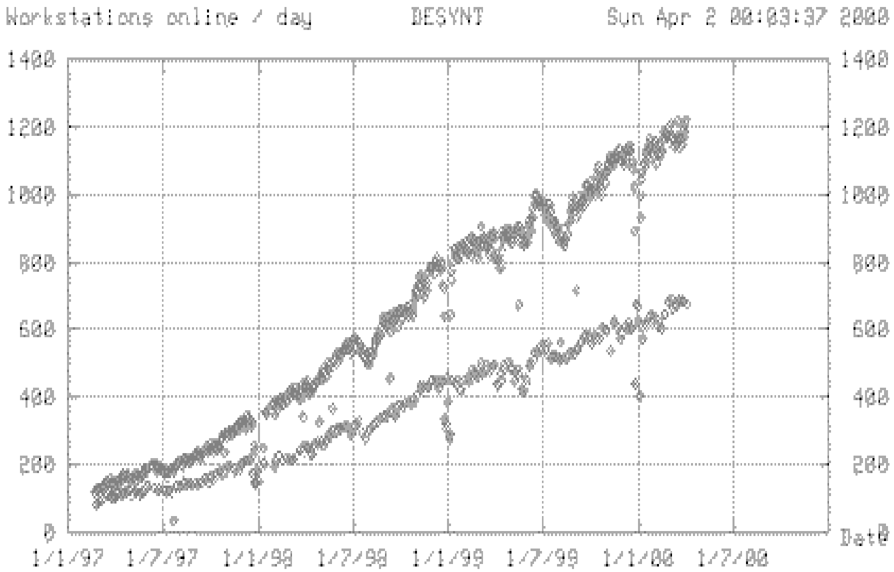
Mass Storage News

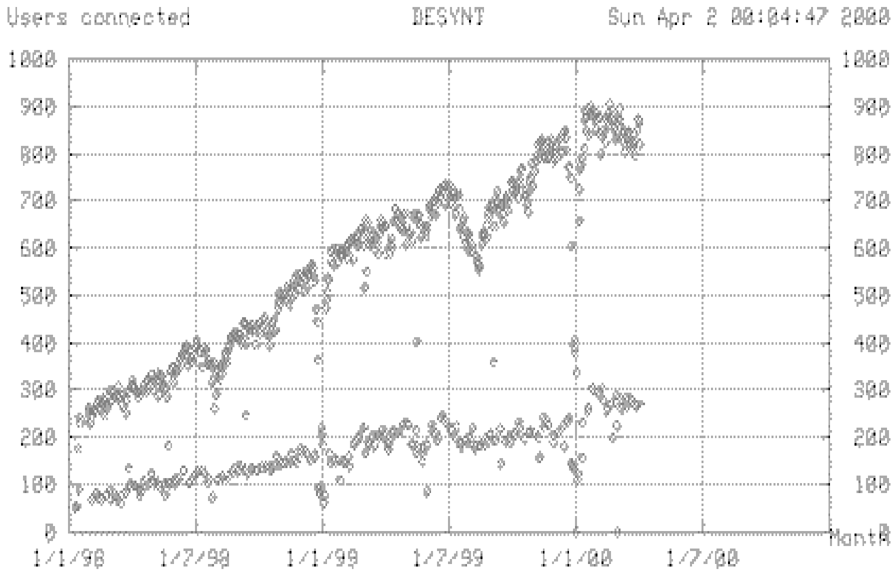
- GRAU robot is full (140 TB / 10 AMPEX / 260 exch./h)
- Last STK 3490 (still 3 silos) will be gone in Summer
- One STK Powderhorn (120 TB / 10 drives) in operation for 13 months now, filling up fast
  - 14 two reel cassette drives type 9840 ('Eagle')
  - up to 450 exchanges per hour
  - SGI Origin 2000 as server allows futher scaling, but network throughput is problematic; Gigabit is not equivalent to HIPPI.
- HERA is running better than ever, new robot needed this year.
- Eurostore I ends this summer, Eurostore II in preparation

Mail Migration Status (Hamburg)

- NT mail has been migrated to MS Exchange server (→ C. Trachimow on Monday)
- DESY will phase out VMS this summer (as scheduled)
  - Need to migrate VMS mail users and PMDF services
  - VMS mail users being migrated to Exchange or Unix mail now
  - PMDF will be migrated to Solaris
- Planned structure:
  - PMDF on Solaris as gateway to the outside
  - Exchange as IMAP server for NT users
  - Solaris based IMAP server for Unix users
- Common IMAP server for both Unix and NT possible, but requires common user registry.

The DESY NT Domain





- Single domain spanning Hamburg and Zeuthen
- 1200 workstations online per day, about 1600 registered nodes, still growing
- Will need new domain for Win2K (→ C. Trachimow on Monday)

Access to DESY Computers

- Computer Security Council defines policies
- D. Mönkemeyer is DESY's computer security officer
- Policy change ahead in a few weeks:
  - Strict port filter implementation in WAN router
  - Access restricted to encrypted protocols and selected, registered services (http, AFS, well founded exceptions)
- Mindterm's ssh java applet for remote access (e.g. from here) for DESY AFS users

Trends

- Linux for mainstream and commodity computing
- Solaris for central services (mail, WWW, Oracle, SAP, printing, console management, time, news, DNS, ...)
- SGI for high performance I/O and file service
- NT 4 domain stable and growing slowly
- Network performance and stability much improved
- Change in computing model is challenging (and expensive)
- Shrinking manpower for growing number of hosts
- Attempting to outsource and focus on core competence