

Czech Computing Center for HEP

Site Report for Prague HEP Institutes

Global View

Institute of Physics

Faculty of Mathematics and Physics

Nuclear Physics Institute

Faculty of Nuclear Physics and Physical Engineering

J.Hrivnac, 1/9/95

Site Report for Prague HEP Institutes

Institute of Physics

- Hardware Configuration
- Physical Projects
- Startup Scripts

NEW!

- AFS
- Batch System
- X-Windows
- Information Services
- TeleConferencing
- Desktop Publishing
- Backup
- Access from Home
- Zephyr
- Servers
- PC
- Future Plans

1. The first Site Report presented in HEPiX Saclay Meeting, October 1994, in PowerPoint and PostScript.
2. The second Site Report has been presented in HEPiX Prague Meeting, May 1995.

There is also local page describing computing in the Institute of Physics.



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Hardware Configuration

- 1x HP735, 2x HP715, 1x HP710
- 3x SUN
- 9x PC
- 2x Mac
- 7x Terminal
- 2x PostScript Printer
- 1x Laser Printer
- 1x Color Jet Printer NEW
- 2x Exabyte
- 1x DAT
- 2x Modem
- 1x Streamer (on PC) NEW
- 2x CD (one on HP, one on PC) NEW
- 13 GB Disk Space

Future:

- +16 GB of disk space soon
- +64 MB of memory soon
- Scanner
- Batch server (HP Kitty Hawk)
- MBONE server (SGI)

- Backup (tape robot, optical disks) ?
- More modems



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Physics Projects

- Alice:
 - Detector studies.
- Atlas:
 - Physics studies.
 - Detector construction and tests.
 - Reconstruction software development.
 - Trigger software development.
- Moose (RD41):
 - Object-Oriented reconstruction software development.
 - Modern programming techniques evaluation.
- Delphi:
 - Physics analysis.
 - Detector upgrade.
- H1:
 - Physics analysis.
- Omega:
 - Physics simulation and analysis.
- Theory:
 - Numerical methods (Minuit).
 - Symbolic methods (Mathematica).

Future:

- AFS-mounting and local mirroring of all software packages used by mentioned Collaborations. Creation of the central repository of the software for the Czech Republic (Czech Computing Center for HEP) based on AFS.
- Instalation of larger disk space for simulation and analysis of the experimental data. Instalation of some kind of a tape robot for analysis of larger amount of experimental data.



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Startup Scripts

HEPIX Scripts (from ASIS) with minor local customisation have been installed. new

Future:



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AFS

We've started a common project with *Transarc* for setting up integrated WWW-AFS system - WWW based on AFS (Czech Computing Center for HEP).

Future:

- Setting up AFS clients. **done**
- Setting up AFS server.



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Batch system

Batch system is based on the `nqs,nqs++`. All our workstations run as a distributed farm, but jobs are mostly sent to HP-735. Jobs can be sent also from or to CERN and other laboratories running `nqs++`. On HP, *NQShunter* has been started to enable CPU limits.

Queues:

- `cpqX` (20 s)
- `cpqS` (200 s)
- `cpqM` (10000 s)
- `cpqL` (1000000 s)

Future:

- Instalation in other HEP institutes in Prague.



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X-Windows

- HP runs HP-VUE with local customisation.
 - SUN runs X11R5 with local customisation
 - xdm and chooser is running, but has problem with HP !
 - PC runs X-Appeal and Exceed.
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Future:

- X11R6 will be installed (following CERN instalation).
 - HEPiX X11 Environment will be installed as soon as available (merging with current customisation !).
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Information Services

- WWW Server <http://www-hep.fzu.cz/Welcome.html> was the first WWW Server in East Europe. Many applications run under it, for example:
 1. Distribution of the Local News with an interface, which enables submitting of articles via WWW, Usenet News and E-mail.
 2. Interactive database of Czechs and Slovaks working in the Elementary Particle Physics.
 3. Interactive database of the travelling to and from CERN.
 4. Interactive database of the seminars.
 5. Interactive database of the magnetic tapes.
 6. Information on the status of the computers.
 7. Prague Home-Pages for experiments Atlas, Delphi and H1 and for the Theory.
 8. Computing information.
 9. And much more....
 - NNTP Server nntp-hep.fzu.cz gets general groups from the national NNTP Server and HEP groups from CERN. It is the central NNTP Server for HEP groups in the Czech Republic. It has also many local newsgroups.
 - News system is well interconnected - one may send news from WWW, Usenet or mail to any of these services. In case of crash of any Server, several others may immediately do the job.
 - Listserver *bmr* has been installed. HEP
 - VRML has been introduced (browsers installed, http server reconfigured). HEP
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Future:

- Majordomo will be installed. ?
 - System will become part of the Czech Computing Center for HEP.
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TeleConferencing

Our workstations are connected to MBONE.

Future:

- Installing MBONE in other institutes.
 - Adding MBONE to PCs (Windows 95 ?).
 - Purchasing SGI for sending video.
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Desktop Publishing

- LaTeX is installed and heavily used on each platform. The standard CERN setup (incl. LaTeX2e) has been customised to the czech language.
 - HTML format is used. WYSIWIG editors are used.
 - Word for Windows is used on PCs.
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Future:

- FrameMaker will be installed (price .
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Backup

- HP,SUN: Manual backup.
 - PC: Personal copy to mounted Unix disks.
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Future:

- Some centralised system (Omniback) will be used. PC directories will be backedup via *PC/TCP*.
 - Some kind of tape robot will be used for automated backup.
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Access from Home

There are two modems connected to HP. One may choose between UUCP and SLIP new connection. Connection is still very slow and noisy .

Future:

- More modems will be put in place.
 - Callback system will be installed.
 - FAX software will be installed.
 - PPP will be installed.
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Zephyr

Zephyr is called by default for each login. CERN Servers are used. There are problems with non-X access !.

Future:

- *Prague-HEP* groups will be set up.
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Servers

- ASIS is mirrored nightly from CERN and NFS-mounted from central Server. The installation is done in the same way as suggested by CERN.
 - Local Software has similar structure as ASIS and is also distributed via NFS.
 - Software for experiments is NFS-mounted:
 - Atlas (mirror from CERN)
 - Moose (mirror from CERN)
 - Delphi
 - Omega
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Future:

- Software will be AFS mounted and locally mirrored.
 - The central repository of the HEP software used in the Czech Republic will be based on the AFS.
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PC

Authorisation is centralised and is based on the Unix passwd files. After login, one may choose one of the following configurations:

- PC/TCP: It is standard for MS-DOS and MS-Windows with NFS-mounted filesystems from the Unix to PCs. Home directories and central Server of PC software is currently mounted.
- X-Apple or Exceed: They are standard X-Server which can call X-Windows on any workstation.

Future:

- Windows 95, Linux ?



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Future Plans

- Near future **soon**
 - Setting up of an AFS client to access CERN cell.
 - Adding 16 GB of disk space (to the 13 GB already in place).
 - Adding 64 MB of memory.
 - Improving the networking in Prague and making it more reliable (fiber optics).
 - Further future
 - Setting up of an AFS servers as a part of Czech Computing Center for HEP.
 - Adding a tape robot.
 - Adding optical disks for backup.
 - Adding more memory to workstations.
 - Adding more X-terminals.
 - Adding scanner.
 - Installing batch server (HP Kitty Hawk).
 - Installing MBONE server (SGI).
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Site Report - HEP Computing at MFF UK

Jiri Chudoba, *NC MFF UK*



This report covers the computer resources at 2 departements:
the Nuclear Centre and the Departement of Nuclear Physics.

Hardware

- CPU: 2x HP715/75, 1x SGI, PC's (386 and 486)
- OS: HP-UX, IRIX 4., MS-DOS + MS Windows, Linux
- Disk Space: each HP 1GB disk inside, SGI 0.5GB
3x2GB connected to HP
1GB connected to SGI
- Printers: HP LaserJet 4M+, 2xHP LaserJet 3; matrix printers
- Other devices: 1xDAT with hardware compression
1xExabyte (often broken down)
- LAN: Thin Ethernet

Software

- **HEP software: ASIS, parts of DELPHI and H1 code for simulations and analysis**
- **WWW:**
 - **server: CERN httpd on HP (www.troja.mff.cuni.cz)**
 - **browser: mosaic and netscape on HP and PC's**

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- **About this document ...**
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Jiri Chudoba

Sat May 27 17:52:42 METDST 1995

Heavy Ions Physics Group
Nuclear Physics Institute, Rez near Prague

Site Report
I. Hřivnáčová

Hardware:

- CPU: HP715/75, 2xHP712/60, PC's (486)
- OS: HP-UX 9.0, MS-DOS + MS-Windows for WorkGroups, Linux
- DiskSpace:
 - inside: 1GB, 2x2GB (HP's), 2x0.85Gb (PC's)
 - outside: 2GB, 4GB connected to HP
- CD-ROM (HP)
- Printers: HPLaserJet 4M+, matrix printers
- Tape devices: 2xEXAbytes, 1xDAT
- LAN: Ethernet

Software:

- **HEP software:**

- software for data analysis: experiments
WA98, ALICE (CERN), TAPS (GSI)
- HEPiX login scripts
- ASIS/cern software

- **WWW:**

- NPI Rez Home Page:
http://lorien.site.cas.cz/NPI_Rez/NPI_1.html
- browser: Netscape on PC's