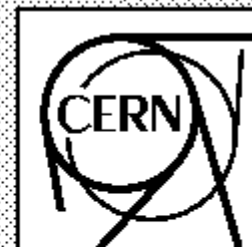


CERN COMPUTER NEWSLETTER



CERN - IT Division
CH-1211 Geneva 23
SWITZERLAND

January – March 2002

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Editorial Information

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The opinions expressed in this newsletter are those of the contributors and are not necessarily those of the CERN Management. The Editors reserve the right to edit or omit articles, or hold over copy due to lack of space.

General Information

The CNL Web home page is at URL: <http://cern.ch/ref/cnl>

The policy is to have approximately four CNL editions per year (Spring, before and after the Summer, and before Christmas shutdown).

Issue number	Deadline
CERN-CNL-2002-002	Friday 7th June 2002

Information for contributors

The CNL is processed using XML technology and templates. Articles marked up in HTML are preferred, but plain text is also acceptable. A Web form to be used for article submission (contributions) is provided at the CNL "Home" page (<http://cern.ch/ref/cnl>), link "Article Submission form" (<http://cern.ch/ref/cnl/submit>).

Help in using this form is provided via the "Help" link (<http://cern.ch/ref/cnl/help/submit>) at the top bar.

Distribution

- An electronic mail is sent to the "CNL Announcement Distribution List" as soon as a new issue of the CNL is available on the Web (<http://cern.ch/ref/cnl/help/announcement>).
- A paper version is sent to the users who have subscribed to the "CNL Paper Version Registration" list: (<http://cern.ch/ref/cnl/help/register>).

All ~~subscriptions to our distribution lists~~ can be made through the CNL "Help&Info" page at the URL <http://cern.ch/ref/cnl/help>.

You can also cancel your subscription in either case by filling in the appropriate form.

The compressed ~~PostScript file~~ containing the complete printable version of this CNL is available via the Web at the URL <http://cern.ch/ref/cnl-2002-001/main.ps.gz>. It is possible that, in order to optimize typesetting, the PostScript printable version differs slightly from the master HTML version. In any case the HTML version on the Web must be considered as the reference.

If you need Help

FRONT LINE Services

	Phone	Location	E-mail Address
Computing Help Desk	78888	513/R-052	Helpdesk@cern.ch
Opening hours: 8:30–17:30 (Monday–Friday)			
Satellite Help Desk	78888	52/1-004	Helpdesk@cern.ch
Opening hours: 8:00–12:00 (Monday–Friday)			
Administrative Applications (EDH, BHT, etc.)	79933	5/R-021	Ais.Support@cern.ch
Opening hours: 8:30–12:30 and 13:30–17:30			
Central Computer Operators (24/24 hours on call)	75011	513/R-049	Computer.Operations@cern.ch
General Network Operational Problems	74927		Network.Support@cern.ch

Contacts at CERN

The “Computing Help Desk” is the recommended call center for help on all computer-related issues. Following is a non-exhaustive list of individual people responsible or assigned to a given service. If you do not find a pointer to the service you need, then contact the “Computing Help Desk” for submitting your request. For all the services listed below please use the generic electronic mail address whenever possible. These mailboxes will be read even when the usual specialist is absent. It is helpful to use relevant keywords in the subject field of your message. Contact specialists directly only for very urgent cases or for very general consultations. Please note:

- In the *Web version* of this page the “Service Definition” can be a *link* to the Welcome page of this service: we invite you to read carefully all the information given in this page before submitting a question/problem.
- In addition you might find useful to search in the “Questions&Answers” database for possible answers to your query (<http://consult.cern.ch/qas>).
- Many generic e-mail addresses for support lines are just an automatic re-direction to the Computing Helpdesk (this is the case, for instance, for [Mail.Support](mailto:Mail.Support@cern.ch) or [Www.Support](mailto:Www.Support@cern.ch)). Those addresses have been kept mainly for backward compatibility, and also to help the Helpdesk to escalate the query towards the right specialist whenever this is needed.

USER SERVICES

Service Definition	Name	E-mail Address
User Relations and Service Manager	L. Pregemig	Ludwig.Pregemig@cern.ch
Help Desk Managers	R. Woolnough	user.relations@cern.ch
	N. Crémel	user.relations@cern.ch
User Registration		user.registration@cern.ch
Computing BookShop	J. Megies	bookshop@cern.ch

CENTRAL SERVICES

Public Services (PLUS batch & interactive services and CSF/PCSF Simulation farms)

See the complete and up-to-date list of contacts at URL:

<http://cern.ch/it/pdp/is/main/experiments.html#PUBSERV>

Service Definition	Name	E-mail Address
SHIFT (Reconstruction & Analysis Clusters)	T. Smith	tim.smith@cern.ch
CORE Operations	M. Vergari	mario.vergari@cern.ch
Work Group Servers	T. Smith	tim.smith@cern.ch
Distributed File Services (incl. AFS)		afs.support@cern.ch
NAP and Parallel Applications	E. McIntosh	eric.mcintosh@cern.ch
Stager, tapes and TMS support		tape.support@cern.ch
Central Data Recording (CDR)		cdr.support@cern.ch
CASTOR HSM software		castor.support@cern.ch
HPSS Services		Hpss.Support@cern.ch
CERN-wide Print Service	J.L. Vosdey	printer.support@cern.ch

Support for Experiments

See the complete and up-to-date list of contacts at URL :

<http://cern.ch/it/pdp/is/main/experiments.html>

DESKTOP COMPUTING

Service Definition	Name	E-mail Address
NICE (Networked PCs)	F. Hemmer	nice.support@cern.ch
PC Desktop (Repairs and sales)	C. Ball	pc.admin@cern.ch
MACintosh Support	F. Ovet	mac.support@cern.ch
MACintosh Sales	W. Hug	waltrand.hug@cern.ch
X Terminals Support		xterminal.support@cern.ch
ASIS Support		asis.support@cern.ch

Operating System Support

Service Definition	E-mail Address
HP 700 s/w:	hp.support@cern.ch
SUN s/w:	sun.support@cern.ch
Solaris s/w:	solaris.support@cern.ch
RS/6000 s/w:	aix.support@cern.ch
Digital Unix s/w:	dnunix.support@cern.ch
Linux:	linux.support@cern.ch

SCIENTIFIC APPLICATIONS & SOFTWARE ENGINEERING

Service Definition	Name	E-mail Address
CERN Program Library	L. Besson	heplib.support@cern.ch
PAW Support	O. Couet	paw.support@cern.ch
Anaphe and GEANT		heplib.support@cern.ch
Oracle Databases	N. Segura	oracle.support@cern.ch
Objectivity DB Service		objectivity.support@cern.ch
Software Development Tools		sdt.support@cern.ch
Adobe FrameMaker		docsys.support@cern.ch

PaRC Service (Engineering Cluster):

for each application see the “mailto’s” E-mail address as given by the URL:

http://cern.ch/it/ce/support_index.html

COMPUTING FOR ENGINEERING (*)

(*) Activities are now in PS group, and the web site will migrate.

All comments, problem reports, and suggestions can be reported via the “Feedback” Web form accessible from the “IT-CE Home page” (<http://cern.ch/it/ce>, link “Feedback” on the left).

COMMUNICATIONS AND NETWORKS

A complete and up-to-date list of contacts is at the “Communications Systems Group” Help page at the URL: <http://cern.ch/it-div-cs/public/help/>

INTERNET SERVICES

Service Definition	E-mail Address
Web support	www.support@cern.ch
Mail support	mail.support@cern.ch

In addition to this generic address, the normal support lines are listed

at the URL: <http://cern.ch/mailservices/Support/>

COMPUTER SECURITY

Service Definition	E-mail Address
Computer Security Information	computer.security@cern.ch
Security Alert Reports	cert@cern.ch

Other Newsletters

Administrative Information Services (<http://ais.cern.ch/newsletter>)

Editor/Distribution: AIS.newsletter@cern.ch

Some Useful Web Pages

TvScreen (Systems Status)	http://tvscreen.cern.ch
Network Connection Request Form	http://network.cern.ch/register
Remote/Mobile Computing	http://cern.ch/it-div-cs/public/services/mobile/welcome.html
User-Oriented Catalogue	http://cern.ch/consult
User-Oriented Service Directory (*)	http://cern.ch/services
FrameMaker Support	http://cern.ch/docsys/framemaker
Text Processing related documentation	http://cern.ch/it/asdoc/textproc.html
IT Home Page	http://cern.ch/it
User Services Home Page	http://cern.ch/it/support
NICE Home Page	http://nicewww.cern.ch/
PC Support Service Page	http://pcwww.cern.ch/
PC Farms Homepage	http://cern.ch/it/pdp/pc/
CASTOR Query Report	http://wwwinfo.cern.ch/htbin/pdp/castor/castor_report.pl
Software Development Tools	http://cern.ch/sdt
Computing Support for Engineering	http://cern.ch/it/ce
Joint Controls Project (LHC Experiments)	http://itcowww.cern.ch/ITC0/jcop/
Web Services	http://cern.ch/WebServices
Mail Services	http://cern.ch/mailservices/

(*) Useful service entry points at this page include the *Computing Helpdesk*, *User Registration*, *Computing Bookshop*, *Mail*, *Netscape*, *Listbox*, etc.

Seminars and Presentations

Designation	Usual Location	Organizer(s)	Tel.	E-mail Address
Computing Colloquia	Auditorium / bldg 500	J. Shiers, IT	74928	Jamie.Shiers@cern.ch
	see http://cern.ch/computing-colloquia			
Computing Seminars	IT Auditorium 31/3-005	J. Blake, IT	74893	computing.seminar@cern.ch
	see http://cern.ch/it/seminars			
Technical Presentations	IT Auditorium 31/3-005	S. Cannon, IT	75036	stanley.cannon@cern.ch

Computer Resources Allocation and Divisional Contacts

Computer Resources Allocation Committee (COCOTIME):

Chairman: H. Hoffmann/DG 60/S-006 75458 Hans.Falk.Hoffmann@cern.ch

Secretary: A. Morsch/EP 160/R-018 78617 Andreas.Morsch@cern.ch

Divisional Representatives for Computing

For questions about new registration and resource allocation please ask the contact person for your division.

Div. Repres.	Div. Repres.	Div. Repres.	Div. Repres.	Div. Repres.
AS	AT P. Heymans	IT	ETT M. Draper	FI C. Saitta
EST Ch. Delamaire	HR M. Buttner	EP A. Björkebo	PS A. Riche	SL M. Bormand
ST E. Sanchez-Corral	TH E. Gianolio	TIS G. R. Stevenson		

NICE Divisional Representatives

See the URL <http://cern.ch/w2ktmf/Membership.htm>

Divisional Representatives for Networking

For questions about new installations, testing, local coordination, etc., please ask the contact person for your division (or, if you are an experimental physicist, the networking contact person within your experimental group).

The complete and up-to-date list of contacts is given in the "Communications Systems Group" Help page, at the URL: <http://cern.ch/it-div-cs/public/help/>.

Editorial

This new spring edition of the Computers Newsletter is a small one, but I am sure you will find it interesting. Let me emphasize two articles, one on the DataGrid project, about the first live demonstration with the DataGrid tested, and another one trying to clarify how to start remote X Applications at CERN on Unix systems (this is a question frequently asked by physicists).

Let me remind all of us that, until now, the CNL has been useful (especially outside CERN) to inform all users about current projects and technical computing developments. Moreover, as proven by the “35th Year Anniversary” issue, it also provides a very good picture of computing evolution at CERN. The Web has been a marvellous improvement in communication, especially to share information all across the World, but it will not provide this “historical picture” of Computing at CERN.

However, in order to keep the CNL alive, we probably need more contributors!

If you think the CNL in its present form is not anymore useful, or you have suggestions, please tell us, sending a mail to CNL.Editor@cern.ch.

Best regards,

Nicole Crémel,
CNL Editor, IT/User Services

Following is a message sent by one of our readers, reporting a problem with a URL in the last CNL (CERN-CNL-2001-003), and our reply.

Date: Mon, 04 Feb 2002 17:35:58 +0100
From: David Chamont
Subject: A Quick Tour of Compiling, Linking, Loading, and Handling Libraries on Unix

Hi,

I try without success to access the original paper from ojps.aip.org.
The address given in the CNL article is not any more relevant.
Do you have a copy of it ?

David.

Hello,

Thanks for reporting this to us. Indeed the URL for this article (*Computing in Science & Engineering-September 2001*) has changed, and I have now updated the CNL web version to point to the new URLs, (see <http://ref.cern.ch/CERN/CNL/2001/003/shared-lib/Pr>).

The new URI is <http://ojps.aip.org/journal/cgi/dbt?KEY=CSENF&Volume=3&Issue=6#MINOR5>

The PDF version can be found at the URL:

<http://ojps.aip.org/getpdf/servlet/GetPDFServlet?filetype=pdf&id=CSENF000003000005000090000001&idtype=cvips>

Regards,

Nicole Crémel, CNL Editor

1. Announcements

This chapter contains announcements concrete in time and/or of informative nature from the division to the User Community.

1.1 2002 CERN School of Computing

Jackie Franco-Turner, IT / DI

The 2002 CERN School of Computing, organised by CERN in collaboration with the Institute of Composite and Biomedical Materials, National Research Council, Naples, Italy, will be held on 15-28 September in Vico Equense, Italy.

It is aimed at postgraduate students and research workers with a few years' experience in particle physics, computing

or related fields.

Special themes this year are: From Detectors to Physics Papers, Grid Computing, Security and Networks, Tools and Methods.

More information is available at the URL:

<http://www.cern.ch/CSC/>

2. Physics Computing

Functional description of all the Central Public Services, specifically oriented to use by the Research sector, either for interactive (central and CPU intensive) or batch processing. The main physics computing services consist of providing computer farms, central data recording facilities and central data storage facilities.

2.1 European DataGrid Project Demonstrated Successfully

Fabrizio Gagliardi and the DataGrid Project Office.

Jeff Templon - NIKHEF, Amsterdam;

Roberto Puccinelli - CNR, Rome;

Alexia Augier-Bochon, Robert Jones, Fabrizio Gagliardi - CERN

On Friday 1 March, the EU-funded DataGrid project successfully passed the first year review performed by external experts appointed by the European Union.

In late 1990, a CERN computer scientist invented the World Wide Web to facilitate exchange of information between scientists working on different computers, perhaps at different sites. At the EU review, CERN, along with DataGrid project partners INFN/CNAF (Bologna, Italy), CNRS/IN2P3 (Lyon, France), PPARC/RAL (UK), and FOM/NIKHEF (Amsterdam/NL), demonstrated the first DataGrid testbed. The WWW is mainly aimed at the exchange of information while the Grid is concerned with the exchange of computer power, data-storage, and accessing large databases, without forcing users to search for these resources. Once "connected" to the Grid, the end user will see it essentially as one large computer system. For these reasons, many believe the Grid to be the most practical solution to the so-called data intensive science problem that must be overcome if the computing needs of scientific communities such as processing of physics data from LHC experiments are to be satisfied.

In about five years, LHC will start to produce an enormous stream of data that must be stored and processed. The "data current" is estimated to be a few petabytes per year, and in excess of 50,000 high-ward workstations will be needed to keep all the physicists' analysis tasks going. Because no single HEP computer centre is able to provide for both the storage and computing facilities for the entire LHC operation, distribution of computation and data is required. The DataGrid project has begun to solve this problem by developing methods and software that will efficiently and smoothly distribute requests to use computing and storage resources offered by all computer centres connected to the Grid.

The EU review was a day-long affair at CERN. The 16 other member institutions of the DataGrid project were represented by on the order of 60 scientists in attendance. These project partners, together with the six main partners, are responsible for most of the technical developments including innovative middleware software, testbed deployment, and specification of application test cases. The review culminated in a live demonstration in which jobs were submitted to the DataGrid testbed. A total of about fifteen jobs were submitted, mostly by representatives of physics experiments, but also by representatives of the Earth Observation and Computational Biology communities, who are also participating in the DataGrid project. The jobs were successfully distributed across the five computer centres that participated.

The EU reviewers congratulated the project for the excellent work done at both technical and managerial level, exceeding the expectations for the first year in some areas. They even complemented the few "disturbances" in some of the Grid services that occurred during the demonstration, noting that they would have been very suspicious if everything had worked flawlessly at such an early stage in the project.

The jobs submitted during the demo consumed in total less than one CPU-hour. The demonstration showed the capability of the Grid to distribute computational tasks, but came nowhere close to demonstrating how much computer power it can provide. Now that the demonstration is over, more users have been admitted to the Grid and experiments are beginning to conduct more demanding tests. This power will increase rapidly as the existing centres expand and new sites join the Grid.

For more information on the project you can visit

<http://eu-datagrid.web.cern.ch/eu-datagrid/>.

2.2 Changes to the CERN Batch System (LSF)

Tim Smith and Ulrich Fuchs, IT/FIO

The manner in which CPU allocations are managed on LXBATCH has been changed in order to optimise the overall resource usage. We made this change to introduce "LSF

FairShare" on Monday March 18th at 08.00 hrs, and the details are described in this article.

Global Allocations

CPU resources were allocated in a rather static manner by partitioning the majority of LXBATCH, with experiments having an allocation of fixed machines with dedicated queues to submit to these machines. In addition there was the general usage public partition. There was no dynamic sharing of resources between experiment partitions, nor any automatic way to use the spare cycles from under-utilised partitions. Therefore we removed the static partitions, putting all CPUs back into a common pool, and let LSF share these resources using the LSF FairShare algorithm. The initial configuration for this algorithm allocates shares to each experiment in direct proportion to the previous statically available resources they had. If the experiment partition had a special configuration, like extra memory, then this is specified as an extra resource on these nodes which can be selected in the job specifications, to ensure that the jobs go to nodes with the necessary configuration.

Allocations within an experiment

CPU resources within an experiment were typically allocated to different groups using different queues of varying priorities. This is handled in the new scheme using the Multi-Level FairShare capabilities of LSF. This means that within the experiment share, further sharing can be defined between the various experiment groups, without the need for dedicated queues.

Instant Response

It is often argued that the reason experiment dedicated resources are idle is to ensure an instant response when necessary. We wish to not leave nodes completely idle, but also give instant response. We try to do this by reserving a fraction of the nodes to run only certain queues, with restrictions on the number of jobs per user. The size of this fraction will be tuned, but one could imagine for example that in this way we guarantee that 20 independent users will get instant access to the 80m queue. Tuning the number of nodes according to the load on the queues should ensure instant access for the majority.

Transition measures

Initially the dedicated experiment queue names (e.g., `zz_1nw`) were not destroyed, but are channelled into the common queues, in order to give continuity during the transition phase. Subsequently we will removed all these dedicated queue names to simplify the cluster from both the user and administrators point of view.

Assessment of fairness of sharing

The LSF FairShare algorithms rely on historical information about the resource usage. The reference period of this history can (and will) be tuned, but obviously it takes several days for the system to stabilise into giving correct allocations. We therefore asked for the patience of the users to not flood the lists in the initial days after introduction with questions about not getting the right response, or not being treated fairly. This could only be truly assessed after the system has stabilised and been tuned a little.

Exceptions

We wish to keep the exceptions to a minimum, but acknowledge that some resources may have to be treated specially. All COCOTIME controlled resources went straight into the common pool, but some LXBATCH nodes were bought from private experiment funds. Ideally these would simply be contributed to the common pool also, and the share for that experiment boosted by the appropriate fraction. In cases where this is unacceptable, special partitions have to be maintained, but no attempt is made to balance between the experiments share of the common pool and the private resource. It is the responsibility of the users to submit their jobs to the public or private resource in order to keep them busy, which is obviously less convenient than letting the system do this scheduling.

Future Developments

The next major development stage will be to install a new version of LSF (v4.x) in mid May. This has increased stability, functionality and bug fixes to problems we currently encounter.

Training

A series of LSF training courses will be organized during the summer. Please watch the Bulletin for announcements.

Considering the sub-optimal overall-CPU usage of our clusters and the constant cry for more, moving towards the policy of sharing all available resources across experiment boundaries is not only a necessary step for successful resource management, but also a must in times of financial restrictions. In the long term, the increased efficiency and available capacity of the installation will repay for any difficulties during the transition from the present setup to a fair-shared common cluster.

3. Desktop Computing

Description and news concerning the CERN desktop environment centrally provided on UNIX and NT/PCs (Windows-95, -NT or -2000), and providing the "general-purpose computing" environment. It consists of the hardware, software strategy, and services for the basic applications, which one expects to be generally available on desktops. This environment presents the basic computing infrastructure of the laboratory.

3.1 Starting Remote X Applications at CERN

Lionel Cons, IT/ADC

Introduction

Most desktop computers do or can run an X server. This is true for X terminals, UNIX workstations and Windows PCs with an X emulator such as Exceed.

When your desktop computer runs an X server you often need to start remote X applications, i.e., applications not running on your desktop but with the windows displayed on your screen. In some cases this is transparent for you because XDM (the X Display Manager) takes care of the details. In other cases some manual intervention is needed.

This article explains how to start remote X applications (also called X clients) easily and securely. This is the recommended way to run remote X applications which need to be displayed at CERN.

Note: the following recipes assume that your desktop is a standard UNIX workstation (for instance, running CERN Red Hat Linux). If you have a Windows PC or an X terminal you should first login to a UNIX server (such as LXPLUS), using XDM, and then follow the recipe.

Using ssh

The recommended way to start a remote X client is to use **ssh** with its X11 forwarding feature enabled (this is the default at CERN).

You can either start an interactive session with **ssh** and start an X client (by simply typing the command name) or directly start the remote command with:

```
ssh [-l <remote-user-name>] <remote-machine>
    <command> [<arguments>]
```

For instance:

```
ssh lxplus001 xload
ssh -l root myserver xterm -ls
```

For more information see the **ssh** man page or the URL <http://cern.ch/security/ssh>.

Using mxconns

If you cannot use **ssh** command, the other recommended way is to use **mxconns**, which is available on all standard UNIX machines (through ASIS). Like **ssh**, it will relay the X traffic to your X server.

The easiest solution is to start **mxconns** through the HEPX X11 scripts (by setting **HX_START_MXCONNS=yes** in your `~/hepix/xprofile`). This will take effect the next time you login and will set the environment variable **XDISPLAY**.

If you start it by hand, you should use:

```
setenv XDISPLAY 'mxconns -fork -hnt -verbose'
```

Once connected to the remote machine (via **ssh**, **telnet**, **rlogin**, etc), you should set the **DISPLAY** variable on the remote machine to the value of **XDISPLAY** on the machine where **mxconns** runs. For instance:

```
setenv DISPLAY lxplus002.cern.ch:9
```

You can then start your remote X client.

Note: the preceding commands assume that you are using the tcsh shell; if you are using the Bourne shell then the command is:

```
DISPLAY=<whatever>; export DISPLAY
```

For more information see the **mxconns** man page or the URL <http://cern.ch/mxconns>.

About the author(s): *Lionel Cons* is a member of the CERN security team (Computer.Security@cern.ch).

4. Internet Services and Network

Everything related to Internet in a large sense: i.e., network issues and performances, all technical Web issues, electronic mail, Internet news, home access to CERN facilities, video conferencing and multi-media, network security, etc.

4.1 Registration of Portable Computers

Mike Gerard, IT / CS

All portable computers which are used on the CERN site and connect to the CERN network on network outlets dedicated to portable computers must be registered in the network data base. These outlets are normally indicated by an information sheet placed close by, giving some details on how to use them. Amongst other information the registration must include the MAC (Media Access Control) address of the interface card.

This requirement applies both to CERN staff using portables and to visitors bringing their own portables. It is particularly necessary in order that for any observed problems related to use of the portable the person responsible for the computer can be contacted immediately.

Portable computers which connect to the network via Wireless adapters, for which some particular rooms of CERN are equipped, should be registered in the same way. For these computers the MAC address will be that of the adapter itself. If, however, a portable has both a normal cable interface and a wireless interface then it is the normal interface MAC address which should be registered first. Once this registra-

tion has been made the wireless card MAC address should be communicated by mail to Network.Operations@cern.ch.

Portables should **not** be connected onto an outlet dedicated to a particular computer or set of computers: the outlets concerned will not accept to offer a dynamic IP address and it is **NOT ACCEPTABLE** to impersonate a different system by "borrowing" its IP address, even temporarily.

For further details please consult the IT/CS Web page, which was created specifically for visitors but is also relevant to CERN staff, at the URL

<http://cern.ch/it-div-cs/public/services/notebooks.html>

Finally, be reminded that all requests related to connections of equipment to the CERN network should be made via the Web form <http://network.cern.ch/register>

In case of problems the Network Operations Office (74927) will be happy to provide assistance.

About the author(s): *Mike Gerard is the "Network Troubleshooter" in the Communications Systems Group.*

4.2 Security Risks of Peer-to-Peer Software across the Internet

Mike Gerard, IT / CS

Over the past year or so there have been developed a number of programs for peer-to-peer communications across the Internet. The first, perhaps best known, of these was *Napster*, which was used across the world to exchange MP3 (music) files. Other programs developed since then have offered file sharing for more general types of files. A non-exhaustive list of these programs would be: *Napster*, *Aimster*, *Gnutella*, *Morpheus*, *KaZaA*, *Edonkey2000*, *Napigator*, *Limewire*, *Bearshare*, *WinMX*, etc.

These programs can be used for professional purposes. However, their usage in the general world tends to be for retrieving and sharing audio (MP3) and video files and pirate versions of commercial software. Such use raises issues of legality, and in particular copyright.

As for any software downloaded from the Internet, these programs can introduce security risks such as viruses, Trojan

horses and back-doors. In addition, these programs may contain "spyware" which can violate confidentiality. *Spyware programs* collect information about the user and usage of the computer (email addresses, types of Web sites visited and so on). They may also cause extra network traffic by regularly popping up browser windows to particular network sites.

Private use of peer-to-peer programs creates an unacceptable security risk for the CERN site. If they are required for professional use then please contact computer.security@cern.ch in advance so we can collaborate to secure them.

Users of any computers sited at CERN are reminded that their usage is always subject to the rules given in the document at the URL <http://cern.ch/ComputingRules>.

About the author(s): *Mike Gerard is the "Network Troubleshooter" in the Communications Systems Group.*

5. Scientific Applications and Software Engineering

This includes descriptions of: scientific applications and libraries from CERNLIB and Anuphe, mainly used by the Physicists; engineering applications like the ones on PaRC or those associated to online controls; software development environment.

5.1 Rational Unify Process (RUP), a Software Process Knowledge Base.

Eric Poinsignon, IT/PS

Introduction

Are you involved in software development, project management, quality insurance, software architect, testing, configuration management or software design? Then you should learn the RUP. Three major methodologies, the *three amigos* (G. Booch, I. Jacobson and J. Rumbaugh) were hired by the Rational company. They created in parallel the Unify Modelling Language (UML) and the tool Rational Unify Process (RUP). RUP gives pieces of advice around *software process*.

What is RUP?

The Rational Unified Process or RUP product is a *software engineering process*. It provides a disciplined approach to assigning tasks and responsibilities within a development organization. Its goal is to ensure the production of high quality software that meets the needs of its end users within a

predictable schedule and budget. RUP is a *process "framework"* for software development which covers the life cycle of a project and guides the development team in the activities of project management as well as the technical activities. The RUP has a solid structure, its description is coherent and uses in itself an object oriented approach. Its structure transcends the traditional model of the development in cascade to offer a powerful software development framework based on a controlled and optimized iterative cycle. The RUP proposes a framework making it possible an organization of software development of all sizes to work, extend and improve its process according to its objectives. The RUP is a rich base of knowledge of the best practices harvested by Rational over the years. The RUP is a process product. It evolves integrating into multiple experiments and new technologies concepts. RUP will make it possible through the best practices to traverse its key concepts and to define its dynamic and static structure.

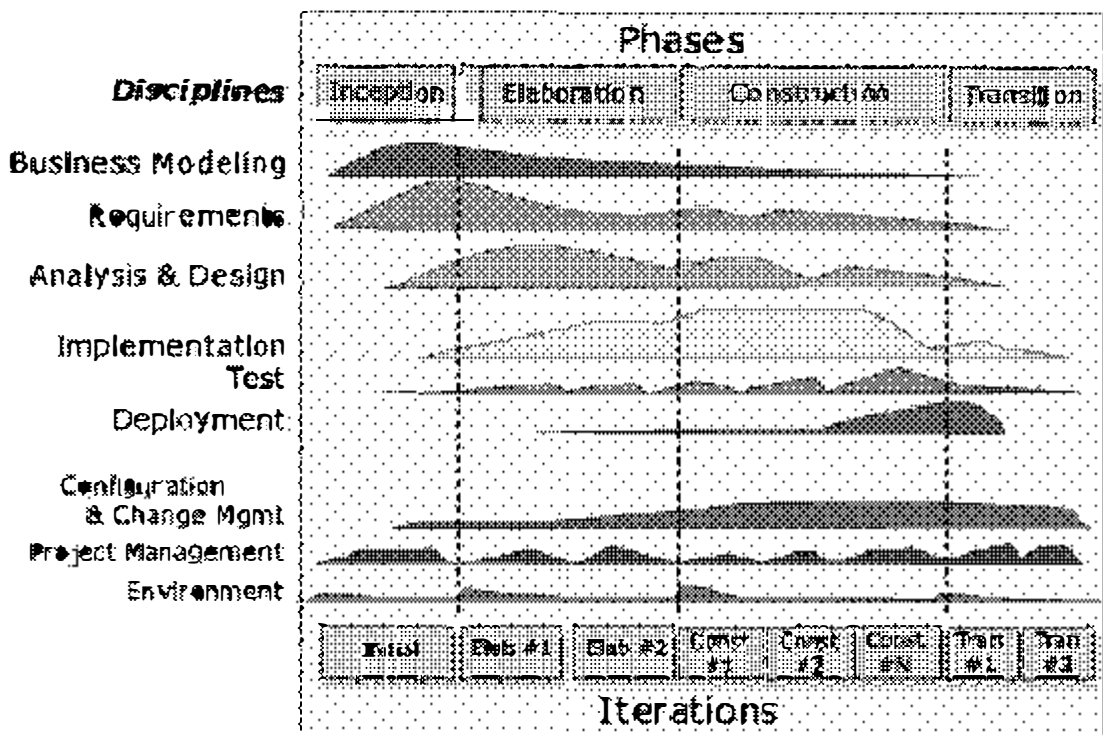


Figure 1: Starting point of the RUP

Web access

RUP includes 35000 pages of information, templates, white papers containing a lot of advice that is easy to consult with a web browser. In fact, it is a “Web-enabled software engineering process for software best practices”. In Figure 1, you can see the starting point of RUP, the overview. It appears in the first page when starting the tool.

Where to start at CERN?

RUP is supported by the Software Development Tools Service (SDT). The starting page of RUP at CERN is <http://sdt.cern.ch/RUP/>.

The best way to start using this huge knowledge base is to follow the *Getting started* tutorial appearing with the first page. Alternatively, you can read the SDT presentation slides that you can find at the URL

<http://sdt.cern.ch/RUP/Doc.html>.

Under the heading “Getting started”, there are two PowerPoint presentations “*RUP Quick Tour*” and “*Mini RUP for small projects*”.

Advantages

Main advantages are many pieces of advice concerning life cycle, approaches to project management, definitions of each

“role” in a project team, his corresponding “actions”, “artifacts” or documentation to produce. Each artifact has its template like “Software development Plan”, “Vision”, “Software Architecture plan”, “Configuration Management Plan” and many others. One will also find examples of projects.

Advanced users

The best way to use RUP is to consult it as a whole. But for specific approaches and for advance users, it is possible to customize and focus RUP on a subject like “business modelling” or “J2EE” or “real-time” or others. This customization is using the “builder” tool running on MSWindows. This tool installs those plug ins essentially provided by Rational but may be provided by any other RUP customer.

Contact at CERN

RUP is supported by the Software development Tools Service (SDT, sdt.support@cern.ch), where Eric Poinsignon is managing this service. The RUP Web page is at the URL

<http://sdt.cern.ch/RUP/>

About the author(s): *Eric Poinsignon is looking after the SDT Service run by IT/PS.*

6. Desktop Publishing

Everything related to "Text Processing": HTML issues, $\text{\LaTeX}$, Word, Framemaker, etc.

6.1 XML Applications at CERN

Michel Goossens, IT/API

Useful XML tools

In the AFS directory `/afs/cern.ch/sw/XML/cdrom` you can find an up-to-date set of publicly available XML tools for Linux. A lot of documentation and tutorials is available at the URL <http://xml.cern.ch/docs.html>.

To execute these XML tools you must set the relevant environment variables.

```
# for Bourne-like shells
XMLCDROM=/afs/cern.ch/sw/XML/cdrom
PATH=$XMLCDROM/bin/i386:$PATH
export PATH XMLCDROM

# for C-like shells
setenv XMLCDROM /afs/cern.ch/sw/XML/cdrom
setenv PATH $XMLCDROM/bin/i386:$PATH
```

The most important tools that are regularly updated are:

<u>batik.sh</u>	Apache's SVG browser
<u>fop.sh</u>	Apache's XSL-FO to PDF converter
<u>rxp</u>	Fas: XML parser
<u>saxon.sh</u>	Mike Kay's XSL parser
<u>xalan.sh</u>	Apache's XSL parser
<u>xerces.sh</u>	Apache's XML parser
<u>xsltproc.sh</u>	Fas: XSLT parser

Writing documentation in DocBook XML

I get often asked the question which is today's supported way to generate computer documentation. Of course, the basic answer is to use the tool one is already familiar with (LaTeX, Microsoft Word, FrameMaker) or that is most suited for the job at hand. However, many software companies are turning to XML for developing and maintaining their manuals.

In particular, they use the DocBook XML markup schema, with which I have recently experimented here at CERN for producing a few manuals.

The DocBook system is very flexible and complete and comes with a lot of tools. DocBook forms the basis of the documentation setup of an ever increasing number of developers. For instance, the GNOME, KDE, Linux, and GNU projects, as well as companies such as Redhat, Suse, Sun, HP, Rational, etc. are all testing or already heavily using DocBook.

At CERN I have installed a DocBook system, using XML tools, and I have written a draft manual. Information on DocBook is at the URL <http://xml.cern.ch/docbook.html>, where the CERN manual, the complete DocBook reference manual, and a few background articles are available. Feedback and questions can be sent to michel.goossens@cern.ch.

Math and graphics come to the Web

Starting with version 0.9.9 (released in March 2002) the Mozilla browser features basic support for MathML (the XML language for mathematics) and SVG (an XML vocabulary for 2-dim graphics). Recent versions of Mozilla can be installed with ease on your machine. Similarly, the W3C browser Amaya has quite substantial MathML and some SVG support, while Microsoft's Internet Explorer can be made to handle these XML languages with the help of freely available plugins. I hope to be able to write about my experience with these tools in one of the upcoming issues of the CNL.

About the author(s): *Michel Goossens is a CERN authority on $\text{\LaTeX}$, XML and Electronic Document Publishing techniques in general. He has written several articles and books on the subject.*

7. The Learning Zone

All kinds of "educational" computing issues, not necessarily directly CERN-related, such as computing news from the Press and tutorials on various subjects.

7.1 Unix Lesson - Displaying more with "less"

Wolfgang Friebe, IT/DS

To browse files under UNIX you can use the excellent viewer **less** (<http://www.greenwoodsoftware.com/less/>), the better alternative to **more**. By making use of the environment variable **LESSOPEN**, **less** can be enhanced by external filters to become even more powerful. I will describe a filter **lesspipe.sh** (<http://www.ifh.de/~friebe/unix/lesspipe.html>).

It can be used at CERN by setting the environment variable **LESSOPEN** as described below.

For the ksh, bash, and zsh shells, define

```
LESSOPEN='|/usr/local/bin/lesspipe.sh %s'; export LESSOPEN
```

For the csh and tcsh shells define

```
setenv LESSOPEN '|/usr/local/bin/lesspipe.sh %s'
```

Most Linux distributions come already preconfigured with a filter **lesspipe.sh** or **lessopen.sh** that covers the most common situations. The input filter **lesspipe.sh** for **less** that I am going to describe understands many of the more common file formats. It is easily extendable for new formats. The preprocessor for **less** is written in a ksh compatible language (ksh, bash, zsh) as one of these is nearly always installed on UNIX systems and uses relatively few resources. The design of the input filter is based on two main ideas. The recognition of the file format is not based on the file suffix. This method from the DOS world is error prone and keeping the suffix list up to date is a tedious job. UNIX comes with the **file** command that recognizes lots of formats. Up to date file descriptions are included in the **tablib**, so maintaining a list of file formats is therefore only a matter of obtaining a current version of the **file** package.

The second idea is to be able to call **lesspipe.sh** with a hierarchy of file names and to pull out finally the file at the bottom of the hierarchy. This would allow you to look at individual files contained in an archive which itself could be part of a still bigger archive.

As **lesspipe.sh** accepts only a single argument, a hierarchical list of file names has to be separated by a nonblank character. As the colon is rarely found in file names, it has been chosen as the separator character. At each stage in extracting files from such a hierarchy the file type is determined. This guarantees correct processing and display at each stage of the filtering.

To give an example, I show how one could display the man page **file.man** found in the RPM source archive

file-xxx.rpm. The **less** command enhanced with the **lesspipe.sh** filter

```
less file-3.27-43.i386.rpm
...
SuSE series: a
-rw-r--r-- 1 root root 12963 Feb 3 11:46 file-3.27.dif
-rw-r--r-- 1 root root 123641 Jul 6 1999 file-3.27.tar.gz
-rw-r--r-- 1 root root 3396 Mar 26 07:31 file.spec
...
```

Another example is the following:

```
less file-3.27-43.i386.rpm:file-3.27.tar.gz
...
-rw-rw-r-- christon/christon 8740 1999-02-14 18:16 file-3.27/file.c
-rw-rw-r-- christon/christon 4888 1999-02-14 18:16 file-3.27/file.h
-rw-rw-r-- christon/christon 13428 1999-02-14 18:16 file-3.27/file.man
...
```

The desired man page can finally be viewed with the command

```
less file-3.27-43.i386.rpm:file-3.27.tar.gz:file-3.27/file.man
```

The subcomponents of the argument to **less** were easily obtained by cut and paste using information contained in the previous lines of output. If you wanted to display the **nroff** sources instead, appending another colon at the end of the argument would have done the job:

```
less file-3.27-43.i386.rpm:file-3.27.tar.gz:file-3.27/file.man:
```

If the man page was even compressed (e.g., as **file.man.gz**) it would have been uncompressed anyway. To also disallow uncompressing the source **file.man.gz** a second colon would have to be appended to the argument.

Even extracting single files from an archive is possible, like with

```
less file-3.27-43.i386.rpm:file-3.27.tar.gz:file-3.27/file.c>file.c
```

The script is able to extract files up to a depth of 6 where applying a decompression algorithm counts as a separate level. In a few rare cases the **file** command does not recognize the correct format (especially with **nroff**). In such cases the filtering can be suppressed by a trailing colon on the file name.

The most recent additions to **lesspipe.sh** allow you to browse MSWord files (using the very fast **antiword** command) and look at contents of DOS formatted disks by accessing the proper device file.

To activate lesspipe.sh you have only to define the environment variable **LESSOPEN** as described above.

The current **lesspipe** package is available from the original distribution site or from sourceforge (<http://sourceforge.net/projects/lesspipe/>). The supported formats are listed below.

Compressed files

File format	Decoding method
gzip, pack and compress	uncompressed with <u>gzip -c -d</u>
bzip2	uncompressed with <u>bzip2 -c -d</u>
zip	uncompressed with <u>unzip -lv</u> (extracting with <u>unzip -avp</u>)

Other file formats

File format	Displaying method
dvi	using <u>dvi2tty</u>
ps	using <u>ps2ascii</u> and <u>gs</u>

File format	Displaying method
ar library	using <u>ar vt</u> (extracting with <u>ar p</u>)
htm shared lib	using <u>nm</u>
executable directory	using <u>strings</u>
rpm	using <u>ls -lAl</u> <u>rpm -qiv -pand</u> <u>rpm2cpio cpio -i -tv</u> (extracting with <u>rpm2cpio</u> and GNU <u>cpio</u>)
tar	using <u>GNU tar tvf</u> (extracting files with <u>tar Oxf</u>)
Word	using <u>antiword</u>
rtf	using <u>unrtf</u>
pdf	using <u>pdftotext</u>
groff	using <u>groff -s -p -t -e -Tascii -mandoc</u>
Debian	using <u>dpkg -I, dpkg -c</u> (extracting with <u>dpkg -fsys-terfile</u>)
html	using <u>lynx -dump</u>
unmounted media	using <u>ter omdir</u> (extracting with <u>ntype</u>)

7.2 Questions and Answers from the Computing Helpdesk

Collected by the IT/User Services Team

Nicole Crémel(Editor), IT/User Services

Abstract

This is a collection of Questions & Answers that have been treated by the Computing Helpdesk managed by the User Services group.

N.B. The number in parentheses refers to its relative numbering in the User Services "Question-Answer" database, at the URL: <http://cern.ch/consult/qa/NNN>, where NNN is the problem identifier (number).

Windows Support

(Hannes Schwarzbauer, IT/User Services)

Question [691]– Public folder inaccessible

*I want to access my colleague's public folder where I *know* there is some data that is important for my work. However, the folder does not seem to have the necessary "read for everyone" permission anymore, and my colleague is absent now.*

Who can change the access rights?

Answer

CERN official statement:

The case of access to data under the account of someone who is absent is specifically addressed in MCS section IV, 18 vi). Requests are usually sent to the CSO and should come from a Division Leader or Head of Experiment with a justification of the serious impact on operations.

Conclusion:

The fact that a folder is called "public", does not mean it has to be available on read-only for everyone, although this is the default CERN setup for filesystems like AFS or NICE.

This means that in any case the user's decision whether or not to make/leave his public folder readable for everyone has priority. The above procedure should therefore be applied in case of the owner's absence, after which a system responsible will set the necessary access rights.

Question [734]– Scratch disk space on NICE

How can I obtain temporary scratch disk space on NICE?

Answer

Use the web mechanism, reachable from the URL

<http://winservices.cern.ch>.

In the "Services" area, select "Scratch Space", under "Storage Service". You will be prompted for your login/password on NICE, and then you should obtain a page where you can request some scratch space.

This mechanism allows the users to specify if they want a public or read protected directory.

This scratch space is located on `\\CERNSCRATCH02\SCRATCH` which is mounted on `\\cern.ch\dfs\scratch`.

Please note: files kept in the scratch areas are **not** backed up and will be **deleted** after a few days.

Question [795]– Windows XP support from NICE

Is there NICE support for the OS Windows XP and/or its components, like Office XP?

Answer

Unfortunately, and until further notice, Windows XP and all that comes with it, is not supported by the NICE team at the moment.

Please note: Windows XP is an enhanced version of Windows 2000. Or even more precisely, with Windows 2000 being Windows NT 5, Windows XP is really Windows NT 5.1.

Question [800]– Error codes on Windows - Explanation

Windows NT or Windows 2000 brings up an error message, like e.g.:

*An internal error has occurred,
reference 00000000,
logon User Code=1234*

Where can I get help or documentation on these code numbers?

Answer

- Start a DOS session (on NICE/NT start - applications - DOS prompt) or Start - Run... and type cmd.exe
- type net helpmsg NNNN (where NNNN is the code number).

The error description is mostly short and does not offer a problem solution, but it can give a good clue of what is going on with your PC.

Question [810]– Extend sound recorder time

I would like to have the Sound Recorder available for a duration of far more than the 60 seconds that seem to be the default.

Trying out to decrease the speed gives unsatisfying and inconsistent sound quality, and I did not find anything obvious in the registries either (but there might be something hidden in hexadecimal/binary/whatever code).

Answer

By default, the Microsoft sound recorder offers a duration of 60 seconds.

It seems we could not find an equivalent registry entry, but this is a workaround:

- Invent an empty wav file by recording nothing for 60 seconds. Save it as say **XXX.WAV**.
- Now edit - insert **XXX.WAV** as many times back into the sound recorder as desired and resave it each time. To get 5 minutes, one obviously has to insert **XXX.WAV** 4 times.
- Before recording a new file, insert this grown **XXX.WAV** file and you can record for 5 minutes at consistent speed.

Question [837]– Find large files on Windows

How can I quickly find out/display the biggest files I have on my P.C. be they on my hard drive(s) or on the home server?

Answer

Windows 95/NT 4.0:

1. Press Start / Find / Files or Folders.
2. On the Name & Location tab, enter *.* in the Named box.
3. Select all your hard drives in the Look in: box or select the J: drive. Check "Include subfolders" (NT).
4. On the Advanced tab, select At least in the Size is: drop down and type the number of kilobytes in the KB box (and select "All files and folders" for W95).
5. Press Find Now.

Windows 2000:

1. Press Start / Search / For Files or Folders
2. Enter *.* into the Search for files or folders named box.
3. Look in: should already have selected all your hard drives. If you want your home directory, select "My Documents".
4. Check the Size box and At least should be selected
5. Type the number of kilobytes in the KB box.
6. If you click Advanced, you will notice that Search subfolders is checked.
7. Press Search Now.

UNIX Support**Question [1631]– Log in problem on Unix (Lxplus)**

I cannot log in to LXPLUS, although my password has been reset by the Helpdesk.

- When I execute telnet lxplus and input my usual AFS login password the window is immediately closed (not even asking for another password in case I mistyped it).
- When I try to log in on a CERN Unix central platform I get the error:

**Failed running login shell.
Connection closed by foreign host.**

Answer

The first thing to check is the status of the registration for your PLUS account. You can do it yourself with the command xwho on Unix providing your AFS login, or with http://consult.cern.ch/xwho on the web providing yourname, or the Helpdesk can check your registration in CDB. Most probably, your PLUS login has been blocked, maybe after the last computing review (if no feedback has been provided by your computer administrator). With xwho or http://consult.cern.ch/xwho you can see it if a "*" is preceding the account line.

You need then to send a mail to User.Registration@cern.ch asking them to "de-block" the account. The Computing Helpdesk (78888) can also record the request for you, in "User Support / User registration".

Note: there can be many reasons why the login shell is failing. On all Unix machines you can check the account registration in the system file `/etc/passwd`. E.g., on Lxplus, with a `grep` on the login name, you can see the status of the login shell:

```

Lxplus013] > grep jua /etc/passwd
jua:x:12345:8678:Joe User:/afs/.../jua:/blocked.zsh

```

If the shell is not valid (e.g., `/usr/local/bin/tcsh`) then login will fail (`/blocked.zsh` means that the login has been blocked).

In the case you manage to login but you see strange behaviour, you can use the CERN-made `nc` command to reset your user environment to the default one. Type `nc -h` or `man nc` for more details.

Question [613]– LSF batch system not responding

Trying to use the LSF batch system, I get the message:

```
batch system daemon not responding ... still trying
```

Answer

There are several reasons this happens: the LSF system master can really be in trouble, or it can be temporarily undergoing a reconfiguration.

If the problem persists for more than 15 minutes then contact the Helpdesk who can check with the operators, and submit the problem to the Unix system administrators.

Question [755]– Linux installation on Laptops

Where can I get information for installing Linux on my PC laptop?

Answer

There is a web page dedicated to laptop support for Linux at URL: <http://cern.ch/linux/laptop/>

Please note that if the machine is not one of the CERN standard systems then the installation procedure can fail.

Question [775]– AFS token and Kerberos Ticket

What is the difference between AFS token and Kerberos Ticket?

Answer

In order to edit files etc., you only need an AFS token (see QA 365 for token expiration). Sometimes (e.g., to use a CVS repository with `kserver` access, or to login via `ssh` to a different host without specifying the password, etc.) you also need a “Kerberos Ticket Granting Token” (or “krbtgt”).

Note: a normal login to Lxplus, or the `klog` command, gives you both. Any access via “r” commands (`rsh`, `rlogin`, `rexec`, etc.) only gives the AFS token, but not the “krbtgt”.

In order to check whether you have what you need use the `token` command. If you have a “Kerberos Ticket Granting Token” it should also define an environment variable `KRBTKFILE` in your Unix session. You can check with `Ucomenv | grep KRB` (for `csh` or `tcsh` shell).

Question [1690]– Invalid character in Unix filename

I have a Unix filename which starts with a hyphen (“-”). None of the unix commands like `rm`, `vi`, `more` or `cat` seem

to work, even if I include the filename in a pair of double-quotes.

How can I at least delete this file?

Answer

Assume the name is `-thename`. In this case all Unix commands will take the hyphen as indicating an option, so you must “fool” it by providing an “empty” option. One solution (for removing the file) is to use the command:

```
rm -- -filename
```

Question [1599]– Changing default shell

How can I change my default shell on CERN central machines (e.g., Lxplus)?

Answer

Users can change their own shell on PLUS servers (Lxplus, sunde, etc). The recommended way is to use the CERN command/tool `xnserinfo` which works as follows:

- click “preferred shell” to change the value of the shell; however this will only change the shell assigned to future accounts;
- in order to change the shell for *all* already existing CORE accounts you must click afterwards on the button marked “Reset all shells”.

Then quit the interface by selecting **Save** and **Exit** (see also <http://cern.ch/it/support/nserinfo/>).

N.B. Please note that the validation for `xnserinfo` is not immediate and you may have to wait 15/30 minutes before the change is done on all platforms.

Alternatively, you can use the standard Unix command `chsh` (which stands for “change shell”); this command will reset the shell only for the account where the command has been executed. However, further notice, the `chsh` command does not work on the CERN servers, where users are invited to use `xnserinfo`.

Note that the CCDB tool `nserreg` allows a Group Administrator to change your shell, but *to future accounts only*.

Mail Support

Question [988] – Many questions on mail. CERN Mail service FAQs

Where can I get help (written documentation) on the CERN Mail service?

Answer

A lot of documentation is available on the web, starting from: <http://mailservices.web.cern.ch/MailServices/>

The Mail service team is also maintaining a collection of FAQs at URL:

<http://mailservices.web.cern.ch/MailServices/docs/problems/faq.html>

On March 2002, the list of questions - with detailed answers - was:

Managing your Mail Account

Obtaining a Mail Account

Registering Service Accounts

Checking and changing your Email address

How to handle your password

Managing mail forwards

Setting a vacation message

Filtering your mail

Out of quota?

Reducing your inbox size

Archive your mail

I have accidentally deleted some mails.

Can I get them back?

A PST file takes a lot a space on the hard disk (outlook)

Unsolicited e-mail (Spam) / Viruses

How to report Spam

What do we filter?

Dangerous attachment names that are rejected

Other

Main Netscape issues

Attachments, enclosures, MIME problems

To get answers to all these questions please go to the MailServices FAQ web page as mentioned above.

Question [579] – Outlook and Outlook Express

What is the difference between Outlook and Outlook Express?

Answer

Outlook Express is an e-mail client and newsgreader which comes for free with Internet Explorer. That is just about it.

Outlook (current version 2000) is part of the M/S Office package and is therefore not free.

Not only has it the facilities of Outlook Express, but it is also a good tool for some message networking, and contains modules for group work and a scheduler.

So, Outlook Express is a basic tool for a single PC, whereas Outlook 2000 is more sophisticated and desirable for LANs, networking functions, the like.

Please note: the CERN mail service is only supporting *Outlook*.

Question [123] – Subject in vacation message ("I'm away")

Is there a way to change the traditional "I'm away" used in the subject of a vacation message?

Answer

This text is taken from the "Subject" line you put in the file *.vacation.msg* where you edit your vacation message. However it is necessary to include a blank line just after this "Subject" line (and before the mail body).

The variable **\$SUBJECT** can be used in your vacation message and it will be replaced with the subject of the original message when the reply is sent; thus, a *.vacation.msg* file such as:

Subject: I am on vacation

I am on vacation until July 22.

Your mail regarding "\$SUBJECT" will be read when I return.

If you have something urgent, please contact...

will include the subject of the message in the reply.

Question [761] – Migrate address book from Netscape to Outlook 2000

I would like to migrate my address book from Netscape messenger on W95 (or WNT) to Outlook 2000 on W2000. How to do it?

Answer

This is well explained in the "Using Outlook 2000" documentation provided by the WinServices team, at:

<http://winservices.web.cern.ch/winservices/docs/Outlook>

Web Support

Question [833] – Internet Explorer and link to Office files

Internet Explorer on NICE is configured by default to "host" documents for Office programs that are installed on the computer. Then, when clicking an HTML link to a Microsoft Office file (such as Excel or Word document), Internet Explorer opens the file in Internet Explorer, instead of opening the file in the appropriate Office program.

Is it possible to change this behaviour?

Answer

Yes, you can change this default behaviour. Go to

`\\cern.ch\dfs\Applications\CERN\Nica2000 Useful\OFFICE`

and execute the file *IEandOffice.vbs* and answer "Yes"

If you want to reinstate the default behaviour, run this file again and answer "No".

Text Processing and Desktop Publishing

Question [821] – Office 2000 spell checkers

How can I get Office 2000 spell checker in other languages than English or French, for instance German and Italian?

Answer

Select **Tools - language - set language** and specify German, Italian, etc. Click on "spell checker" which should then click in.

For this recipe you must have Microsoft Office 2000 Proofing Tools installed.

Proofing Tools can be installed from:

control panel

- add/remove programs
 - Add New Programs
- and category: Office Tools

Full documentation is available at the URL

[http://cern.ch/WiseServices/docs/Office/Proof/Question\[947\]-MSDownloadCenter\(ViewersforPowerPoint,Word,Excel\)](http://cern.ch/WiseServices/docs/Office/Proof/Question[947]-MSDownloadCenter(ViewersforPowerPoint,Word,Excel))

I have to read and review some presentations at home over the weekend, but I do not have PowerPoint, nor an ACB connection to CERN.

Answer

To get PowerPoint (or any other CERN licensed application, to that matter) one has to mirror or install it on the CERN site.

However, if a user only wants to read a presentation, (s)he can download the **PowerPoint Viewer** for free from the Microsoft "Download Center" web site at URL:

<http://office.microsoft.com/downloads/2000/ppview97.aspx>

This viewer allows to read and print a presentation, but editing is not possible. Its size is fairly small, compared to PowerPoint itself.

Microsoft also offers Viewers for Word and Excel from its site.

Question [565] – L^AT_EX Error: File 'isolatin1.sty' not found

When running L^AT_EX on LXPLUS for a file that was sent to me, I get the error message:

LaTeX Error: File 'isolatin1.sty' not found.

Answer

This file is, in principle, not needed and it should be possible just to make an empty file by, e.g., the command isolatin1.sty

Explanation: the file is a leftover of pre-L^AT_EX2_ε history, where 8-bit input was not easy (or impossible). By default on Linux accented input (e.g., in German or French, with accents) is the default and the latin1 (also known as ISO-8859-1) encoding is assumed.

Question [1434]– L^AT_EX at CERN

Where can I find CERN specific information for L^AT_EX (latest version, access, tools, etc.)?

Who is providing support?

Answer

Information related to L^AT_EX at CERN is available at URL:

<http://wwwinfo.cern.ch/asdoc/textproc.html>

with updates being announced in the CNL.

There is no "official" support for T_EX or L^AT_EX. Questions can be sent to Helpdesk@cern.ch and will be treated on a "best effort" basis.

Miscellaneous

Question [753]– Character case for login (username)

Is the login-id (or login name) case sensitive?

Answer

It depends on the Operating System:

- on Unix both username (login) and password are case sensitive. This means that users must be careful with the "Caps Lock" key (when selected by mistake, it can prevent users from login).
- on Windows: username (login) is not case sensitive, whereas the password is. Please note that in certain cases a username (login) entered in a Windows system can be used for transmission to other tools or systems that might be case sensitive (like Unix). It is then recommended to *always* use lowercase in username/login on all systems to avoid any problem.

It is foreseen that on the coming versions of Windows (for example XP), login (username) will be case sensitive, as on Unix today.

Question [840]– New entry in CERN's phone book

Some new data has been successfully entered into the HR data base, but I cannot see it in my PC's phone book.

Answer

New entries are reflected the very same day in HR, but you should wait 24 hours until this data is propagated into the CERN phone book database and application.

This is true for all Windows operating systems at CERN, and also for the Unix command xwho (or the web version at <http://consult.cern.ch/xwho>).

About the author(s): *Nicole Crémel is working in the User Services group and, with Roger Woolnough, is responsible for the supervision of operations of the Computing Helpdesk. Editing and revising the "Question and Answers" database is a daily task of most members of the group.*

8. User Documentation

Everything related to "computer documentation": updates to computer documentation distributed by IT, offerings of the Computing Bookshop, etc.

8.1 News from the User Services Bookshop

Roger Woolnough and Jutta Megies, IT/User Services

Since the last CNL we have received the following new editions:

- *Python Pocket Reference*
- *Professional Javascript*
- *System Performance Tuning*
- *Unix shells by example*

We have also added the following books to the catalogue, for software development (C++ programming):

- *Numerical Recipes in C++*: this book has sold extremely well and is the follow-up to the *Numerical recipes* series which include both Fortran and C. The companion book of which we have a few copies is *Numerical Recipes Example Book in C++*.
- Other new books for C++ are two titles of the same family *Exceptional C++*, and *More Exceptional C++*.

After a very long wait we have managed to acquire the new *Hachette/Oxford* French/English English/French dictionary, which contains over 900,000 words, phrases and translations.

Other computing books we have received are:

- *Programming ColdFusion*

- *Oracle SQL Tuning Pocket reference*
- *Using Adobe Illustrator 10*

To complete the *Feynman* collection we have the *Feynman Lectures on Computation*.

All these books and the total catalogue are found at the URL <http://consult.cern.ch/books/>. They may be purchased via EDH or cash at our bookshop.

To complete these news from the User Services Bookshop, do not forget we also look after the *Oxford reference trial*, so look at the following web site for a trial:

<http://www.oxfordreference.com/views/GLOBAL.html>

You will be taken straight to the Welcome page for "Oxford Reference Online".

If you experience any problems accessing this site, or if you have any questions, please check out their Frequently Asked Questions section at the URL

<http://www.oxfordreference.com/pub/views/faq.html>

Comments can be sent to our colleague in the Central Library, Jens.Vigen@cern.ch.

8.2 User Services Book Catalogue

Roger Woolnough and Jutta Megies, IT/User Services

Situated in Building 513 1-022 (tel. 74050) is the Computing Bookshop provided by the *IT/User Services* group, where CERN users can find computer books and CDs at discount prices. The service is open weekdays from 8.30 to 12.30 or contactable by e-mail to Bookshop@cern.ch. Books are purchased from some 15 publishing houses and the catalogue offers a selection of documentation aimed at the range

of computing utilities available at CERN. The service welcomes suggestions from the user community for new acquisitions. Purchasing may be done internally via EDH or TID or alternatively cash payments via the CERN Bank.

The list, with all the relevant information, is compiled regularly at URL: <http://cern.ch/consult/books>.

9. Just For Fun ...

Some jokes to end this CNL, and make more fun... for those who did not read them already, somewhere else!

9.1 Grammar Tutorial on Computer: He or She?

Anonymous, (found on the Internet)

An English teacher was explaining to his students the concept of gender association in the English language. He noted how hurricanes at one time were given only female names, and how ships and planes were usually referred to as "she."

One of the students raised her hand and asked, "What gender is a computer?"

The teacher was not certain. So he divided the class into two groups: males in one, females in the other, and asked them to decide if a computer should be masculine or feminine. Both groups were asked to give four reasons for their recommendations.

The group of women concluded that computers should be referred to as masculine because:

1. In order to get their attention, you have to turn them on.
2. They have a lot of data but are still clueless.

3. They are supposed to help you solve your problems, but half the time, they are the problem.
4. As soon as you commit to one, you realise that, if you had waited a little longer, you could have had a better model.

The men, on the other hand, decided that computers should definitely be referred to as feminine because:

1. No one but their creator understands their internal logic.
2. The native language they use to communicate with other computers is incomprehensible to everyone else.
3. Even your smallest mistakes are stored in long-term memory for later retrieval.
4. As soon as you make a commitment to one, you find yourself spending half your pay cheque on accessories for it.

9.2 Programming Today

Citation from Rich Cook (found on the Internet)

"Programming today is a race between software engineers striving to build bigger and better idiot-proof programs, and the Universe trying to produce bigger and better idiots. So far, the Universe is winning."