ExpNews

NeXT System Administration!

Calendar of Events:

I did it!
found on a wall at work.

They said "you'll never make it", and they thought that they were right, but I kept on plodding onward, because I hoped I might.

And they shook their heads in wonder, that I lacked the sense to quit, but I held my chin up higher, and I didn't mind a bit.

They said "you'll never make it", as the problems multiplied, but I had to make an effort, and to know at least I tried.

So I dug my heels in deeper, though sometimes my spirits lagged, and I shouldered what was lightest, and the rest I sort of dragged.

And I found to my amazement, at the ending of the day, that what they said I couldn't, I had managed anyway.

I only took three littles words, "Lord help me", and I rid myself o doubt, and all they said I'd never do...I did.

The Beeper
James D. Corder

I had a Scout come up to me exuding the greatest of excitement. He could hardly wait to show off his new pager.

When I ask the young Lad why he need a pager at 15 years of age, he began to explain how important it was for his friends to be able to get ahold of him. They could beep him for lunch. If his friends where going to get together for a flick they could simply page him. He stated that far to often he was away from his home/phone and now they can simply page him. The strange thing about a pager is what this chap longed for, I for a long time have attempted to get rid of. I classified the pocket pager as a ball and chain.

Many of my professional friends, when asked why their employer wants them to carry a pager and/or a cellular telephone stated: I am so important to the operation of the company that they can not get along without me, so I carry a pager.

It is my opinion that you are asked to carry a pager because the employee is so cheep that they do not want to fund a 2nd or 3rd shift. Face it they can call you in for free or pay someone else. In short they value your free time less than their bottom line.

The Explorer Code
As an Explorer-

I believe that American's Strength lies in her trust in God and in the courage and strength of her people

I will, therefore, be faithful in my religious duties and will maintain a personal sense of honor in my own life.

I will treasure my American heritage and will do all I can to preserve and enrich it.

I will recognize the dignity and worth of my fellowmen and will use fair play and goodwill in dealing with them.

I will acquire the exploring attitude that seeks the truth in all things and adventure on the frontiers of our changing world.

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NeXTisms for the sysadmin
by Karl N. Matthias

In light of the recent anonymous donation of 7 NeXTstations and one NeXTcube to Post 369, I thought that I would write a short article about NeXTisms, in order to help the new NeXT system administrator, since NeXTstep does not follow all 4.3BSD conventions.

Other than Display Postscript, the one NeXTstep feature least understood by any non-NeXT sysadmin is the NetInfo Database. NetInfo is essentially a replacement for NIS or local map files, which centralizes all map information into one remote database. It is extremely useful for smaller networks, where one machine can handle the load of all the queries, and requires far less setup and administration than NIS. The largest drawback is that it is not supported natively by any other operating system. Xedoc, the Australian company from which NeXT licenses NetInfo, however, has versions available for Irix, Solaris, HP/UX, Auspex, AIX, and others, allowing you to integrate many different platforms in a NetInfo domain.

It should be noted here that the above discussion does not mean that NIS is not supported by NeXT. You can, in fact, run both NetInfo and NIS at the same time, if you wish. NetInfo is important to the sysadmin of even a non-networked

NeXT machine, because all the maps are still stored in NetInfo databases. For instance, the /etc/passwd file is just a dummy, the real one is stored in NetInfo. You should keep the two synced as much as possible, however, so that programs which are ignorant of NetInfo can still get your account information if they need it. The hosts table, services file, and others are all stored in NetInfo. Thus when you attempt to make a connection to another machine, it is actually looked up in the NetInfo hosts database, and the actual hosts file is ignored, except by programs that directly call lookups in the hosts file.

So how do you get things into the Net-Info database? There are several ways. If you want to use the GUI, there are all kinds of tools in /NextAdmin, like Host-Manager and UserManager. These tools really are very good, but in the spirit of UNIX, of course, you can also use the command line to do all this administration. If you want to edit the passwd table, you need to first get it from Net-Info. To do this you do something like the following:

nidump passwd . > tempfile

This command dumps the password table to a file in the format of /etc/passwd. A good idea is to do the nidump to /etc/passwd, and then do the updates there. That way the /etc/passwd file is automatically kept in sync with the Net-

Info database. Once you have edited the passwd table, you need to get NetInfo to reload it. To do this, you do something like the following:

niload passwd . < tempfile

Just as it looks, this overwrites the current NetInfo table. All the NetInfo maps work this way, from the services table to the hosts table.

For editing the passwd table, though, there is also another way. You can use a utility from the command line called nu. Nu accepts several switches which tell it what type of session you are going to need. The -a switch tells it to add a user, -m tells it to modify an existing user, and 0d tells it to remove an existing user. Thus you can avoid the passwd file and all the nidumping and niloading if you wish, because nu is tied directly to Net-Info.

Another important file to take note of is the /etc/hostconfig file. It contains information needed by the host at bootup, although you can also have most of it configure automatically if you are using NetInfo. This file includes the local hostname, the inetaddrs, the NIS domain (if used), the time host, the network configuration server (NetInfo), and some other fields. If you are running a NetInfo domain, most of this does not need to be configured, because the machine's ethernet address will be stored in the NetInfo database and the host will be configured automatically at boot by the configuration server.

That is most of the background on NetInfo. It is really a nice tool, and certainly more powerful and efficient than NIS, but if you aren't familiar with it, it can make life extremely difficult. The information presented here should help a lot.

Display PostScript (DPS) is another very NeXT-specific interface. Other operating systems, such as Solaris, include DPS features, but no other OS is built from the ground up to run on top of DPS. This is certainly not slow, as some people claim, although it is slightly

slower than regular display would be, but it has extreme advantages when dealing with images, documents, and publishing. The NeXTLaser printer takes advantage of the NeXT's DPS technology by having the machine do all the processing and formatting. The printer itself is just an engine. This is much quicker, since the documents are already in PostScript, and they just need to be pixel translated. DPS makes graphics programming easier, as well, because programmers can call directly on the display engine for graphical routines.

Most sysadmins who do not understand DPS will claim that because it is not X11 that it cannot do remote display. This is not so. NeXTstep's remote display technology works beautifully, but it is not quite as secure as X11's. The reason for this is that there is nothing like xauth to control who can display on your screen. NeXTstep defaults to not allowing anyone else to display to your terminal. If, however, you want any other machine to be able to do this, you have to allow ALL machines the same ability, by turning on the Public Window Server. So, you must be very careful with this. Once you have configured your machine to allow this, you can remote display back any NeXTstep application by giving it the -NXHost option followed by your hostname.

All of this discussion of DPS does not mean you are locked out of using X11 with NeXTstep. There are two commercial products and one free, which allow you to do this. CoXist and Cub'X Window allow you to run X11 apps on your NeXTstep desktop seamlessly. This allows local X apps or remote X apps to integrate perfectly with your local or remote NeXTstep apps. If you don't have the money for a commercial product, you can get XNeXT, a full-blown X11 implementation for NeXTstep. It does not allow you to run X11 apps on the NeXTstep desktop, but with Xfe.app, you can switch between X11 and NeXTstep with a keystroke. For a free product it works nicely.

See NeXT month's newsletter for more about NeXT and NeXTstep
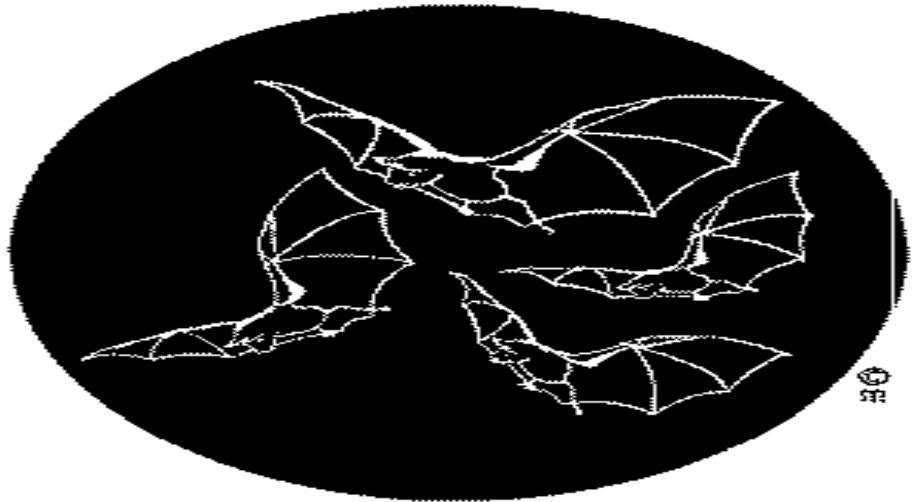
The Future
Told by a stranger

Yesterday is History.

Tomorrow is a Mystery.

Today is a Gift.

That is why it is called a present.

Court of Honor
James D. Corder

Our September Court of Honor will be held at the shelter house in the While hall park off of Hamilton Road. This pitch in picnic is the start of the new year.

Both the Boy Scouts and The Explorers will be in attendance.

Congratulations to Mr. Steve Weller, a member of our committee: he has been appointed to the roll of Scoutmaster of Troop 369.
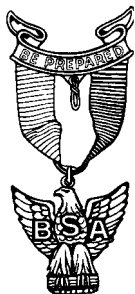
Terror in the Trees
The Scouter

Saturday October 26, 1996 8:00 am - 9:00pm at the Adventure Education Center Camp Lazarus in Delaware County off State Rt. 23, 9 miles north of Columbus: Terror in the Trees!

We dare you to try the ropes course high in the trees.

Are you brave enough for the intensity of these team building challenges with your friends?

Will you make it through the Haunted Hike in the dark of night?

The bonfire will scare away the bats, but not the Buerger's.

Only the Strongest Explorers will survive Terror in the Trees.

Id you think your tough enough, call the Exploring Division at (614) 436-7200 to register.

A special Thank you!
James D. Corder

I would like to give a warm thank you to Mrs. Gregor for her kind and charitable contribution to Explorer Post 369.

Post Finances
Explorer Post 369 has   -$505.00.
Donation $30.00.
Explorer Post 369 has   -$480.00.

Quote of the Month
John Henry Newman

A few highly endowed men will rescue the world for centuries to come.

Our Principals:
1)   Honor before all else.
2)   The difference between a winner and a looser is that the winner tried one more time.
3)   K.I.S.M.I.F.

Our Creed:
Exploring: Enthusiasm, Energy, & Excellence.

Up-an-Coming Post Expenses
12/01/96 Post Charter $30.00
12/01/96 Post Insurance $85.00

Up-an-Coming Member Expenses
Registration 11/01/96 $15.00

Explorer Post 369:

Explorer Post 369 was chartered on December 31, 1994 to the Reformation Luthern Church.

Explorer Post 369 specializes in UNIX for Programmers while emphasizing a deep theme of Engineering Computer Information & Science

Membership in Explorer Post 369 is open to young men and women between the ages of 14 [and in high school] and not yet 20. Annual Membership fees are $15.00.

Our E-Mail Addresses

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Matt Groce   Toady
Allan Hamilton   Toady

Remember to add [.columbus.oh.us] to the end of the freenet accounts!!!

BOY SCOUTS OF AMERICA

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