Installing Usenet News on the NeXT®

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Introduction

This is a guide to installing Usenet news, or simply news, on the NeXT. This installation assumes that you will be polling a news feed-site using UUCP. Therefore it assumes that you are familiar with, or have already installed a UUCP connection. I recommend that you obtain and read *"Managing UUCP and Usenet", O'Reilly and Associates (Nutshell handbook series)*. I will be making the assumption that you have this book as a companion to this installation guide. I am assuming that you have already successfully installed a UUCP connection with a site that offers Usenet news, and that you are polling this site periodically using **cron**.

In this guide, I will step you through the process of installing **C News**, the news management program, and **NewsGrazer** (by Jayson Adams), the NextStep® news reading program (very nice). You can, if you wish, install a command line news reader, such as the popular and highly recommended **rn**, but that is not covered in this guide simply because **NewsGrazer** is a wonderful NeXT-specific news reader that takes advantage of the user interface of the NeXT.

Background

C News is the software package that drives Usenet, the distributed bulletin-board service in which over 20 megabytes of articles in the form of code, prose, data and pictures pass daily. C News takes the articles from another computer connected via UUCP (or via nntp) and organizes them into the proper directories for reading.
C News was written in 1987 at University of Toronto to replace the short comings of its predecessor, B News.
In the May 27, 1991 issue of UNIX Today, it was announced that Software Tool & Die company will be revamping the C News program. The revamped version of the C News program is to be completed by Spring 1992. It hopes to solve the problems of C News related to reliability, performance and ease of installation.

What you will need

- **c-news.tar.Z** - the archive copy of C News that is available via "anonymous" **ftp** from uunet.uu.net.
- **NewsGrazer** – Jayson Adams' awesome NextStep news reader application.
- Extended release of 2.0 – i.e. the gnu-C compiler , libraries and manpages.
- An installed UUCP connection.
- A Usenet News feed available from your UUCP connection.
- Minimum of about 20 megabytes free disk space.
- About 2 to 4 hours of your time to install it.

I suggest that you read these Nutshell series handbooks prior to commencing the installation:

- *"Managing UUCP and Usenet", by Tim O'Reilly and Grace Todino, O'Reilly & Associates, 1990, ISBN 0-937175-48-X.*

- *"Using UUCP and Usenet", by Dale Dougherty and Grace Todino, O'Reilly & Associates, 1990, ISBN0-937175-10-2.*

Installing Usenet News on the NeXT

1. Obtain the news program **C News** from an archive site.

```
> ftp uunet.uu.net
(login as user: anonymous)
> cd news
> bin
> get c-news.tar.Z
```

If you don't have Internet access using **ftp**, you may obtain **c-news.tar.Z** from someone on optical, or floppy disk.

2. Become superuser by logging in as **root** (or **su root**) and **uncompress** and un-**tar c-news.tar.Z** and place into a directory. (I suggest somewhere like **/LocalLibrary/C-News**):

```
# mkdir /LocalLibrary/C-News
# mv ~c-news.tar.Z /LocalLibrary/C-News/.
# uncompress c-news.tar.Z
# tar -xvf c-news.tar
```

3. Make sure that *all* the source files and directories of C News are owned by **bin**! This is important because the C News **build** script expects the news source code to be owned by **bin**. There may be some source files or directories that may be inadvertently owned by an unknown uid such as **425**. To be sure that all the news source files are owned by **bin**, do the following:

```
# cd /LocalLibray/C-News
# ls -lg
# chown -R bin.bin *
```

Also change the owner of **/LocalLibrary/C-News** *to* **bin***:*

```
# cd /LocalLibray
# chown bin.bin C-News
```

This will change the owner of all the C News source to **bin**.

4. Once you have done steps 2 and 3, change directory into **/LocalLibrary/C-News** (if you are not still there) and now execute the **build** script by doing the following:

```
# cd conf
# ./build
```

Answer the questions that the **build** script presents to you. The answers you should make, if the default is not correct, are indicated here in **bold** type. The standard defaults are inside brackets – such as [news].

note: *See the "Managing UUCP and Usenet" book, pp. 178-187.*

```
This interactive command will build shell files named
doit.root,doit.bin, doit.news, and again.root to do all
the work.  It will not actually do anything itself, so
feel free to abort and start again.

You probably need your system manuals handy.

When a question is asked in the form 'How are you
[okay]? ', the answer in brackets is what you will get
if you just hit RETURN.
(If you want give an empty string as the answer, type a
single '-' instead.)

C News wants to keep most of its files under a uid
which preferably should be all its own.  Its programs,
however, can and probably should be owned by another
user, typically the same one who owns most of the
rest of the system.
What user id should be used for news files [news]?
What group id should be used for news files [news]?
What user id should be used for news programs [bin]?
What group id should be used for news programs [bin]?
Do the C News sources belong to bin [yes]?

C News lives primarily under three directories:  one
for articles (and incoming and outgoing spooling), one
for control files, and one for programs.
Where should articles live [/usr/spool/news]?
Where should control files live [/usr/lib/news]?
Where should programs live [/usr/lib/newsbin]?
```

tip: *You may want to change the path* **/usr/spool/news** *to somewhere else if you have limited space on the current physical volume. For example, you may have reserved another hard disk for mail spooling.*

```
C News by default assumes that all normal Unix programs
can be found in /bin or /usr/bin.  This is naive,
especially on Berkeley-derived systems where some
standard programs inexplicably moved to /usr/ucb.
It appears that some standard programs live in /usr/ucb
on your system.  Is that right [yes]?
Should /usr/ucb be searched after /bin and /usr/bin
(as opposed to before) [yes]?
Is there any other directory which should be searched
to find standard programs on your system [no]?

   C News normally uses a umask of 002, turning off
only the others-write bit in the permissions of files
used.  (The correspondence between bits and number is:
rwx = 421, so turning off group-write bits and all
others-access bits would be a mask of 027, for
example.)  Usually a umask of 002 or 022 is
appropriate.
What umask should C News use [002]?

   C News wants to mail some forms of trouble reports
to an administrator. You probably want to make this a
```

```
system mailbox, rather than that of a specific user, so
you won't have to change the software when you get a
new administrator.
Where should C News mail trouble reports [usenet]?
```

tip: *You should be sure to alias this mailbox to a real person, as described later (step 10). The person to alias it to will be the news administrator on your system (for my system - I have aliased* **usenet** *to* **root** *using* **NetInfoManager***).*

```
The shell files that are everywhere in C News want to
pick up their configuration parameters (mostly, the
last few questions you have answered) from a file at a
known location; this is very hard to avoid unless you
play tricks with environment variables (see
documentation).
Where should the shell configuration file be located
[/usr/lib/news/bin/config]?

What is the full pathname of the chown command
[/etc/chown]?
Can I say '/etc/chown news.news file' to change both
the user id and group id of a file [yes]?

building doit.root...
done

C News has libraries for several kinds of Unix:
        bsd42   4.2BSD and successors
        usg     AT&T System V
        v7      Version 7 (4.1BSD is pretty close,ditto
                Xenix)
        v8      Version 8, aka Eighth Edition
Which best describes your system [v7]? bsd42

C News has libraries for small address spaces (16 bits)
and big ones (preferably 32 bits, but anything rather
bigger than 16).
Which best describes your system [big]?

Systems vary in whether certain library functions and
system calls are present.  C News contains reasonably-
portable versions of the possibly-missing library
functions, and fake versions of the possibly-missing
system calls, but it needs to know which are missing.
Does your system have  fsync() [yes]?
Does your system have  getopt() [yes]?
Does your system have  memcpy() [yes]?
Does your system have  memcmp() [yes]?
Does your system have  memchr() [yes]?
Does your system have  memset() [yes]?
Does your system have  mkdir() [yes]?
Does your system have  putenv() [yes]? no
Does your system have  strchr() [yes]?
Does your system have  strrchr() [yes]?
Does your system have  strpbrk() [yes]?
Does your system have  strspn() [yes]?
Does your system have  strcspn() [yes]?
Does your system have  strtok() [yes]?
Does your system have  symlink() [yes]?
Does your system have  strerror() [yes]?
```

note*: As far as I could determine, the NeXT does not have* **putenv()** *in its library.*

```
The news system uses a database package, typically the
old "dbm"library from Version 7 or a lookalike, as an
indexing system.  We supply a version of the "dbz"
library, which is faster than "dbm",uses much less disk
space, and is program-compatible (although it is *not*
file-compatible, so anything else using the database
[notably NNTP, if applicable] has to be relinked with
it).  Dbz is usually preferable to dbm, barring major
backward-compatibility problems.
Do you want to use our "dbz" library [yes]?

Many systems, notably older ones, have implementations
of the Standard I/O library ("stdio") in which fgets,
fputs, fread, and fwrite are quite slow.  We supply
versions of these functions which are faster than those
in any stdio we know; they are compatible with most old
AT&T-derived stdios.  (They tend not to work on modern
System V,but the modern System V stdio is respectably
fast.)  They can be a major performance win for C News.
There is a fairly thorough compatibility check run
after the library is built; as far as we know, if the
test works, the functions do (even on SunOS 4.0).
Do you want to use our fast stdio library [yes]? no

The strchr() function is usually slower than in-line C
code when small strings are involved, unless your
compiler is very clever and can generate in-line code
for strchr().
Is your compiler that good (okay to guess) [no]?

Modern Unixes can generally use the setuid() system
call to set the real and effective user ids to the
current effective user id.  In old Unixes, only "root"
can change the real user id.  This causes various
problems for C News.  C News provides a small program
named "setnewsids" to run setuserid-root; all it does
is change user and group ids and then execute C News
"relaynews".  It is needed only on uncooperative
systems.  Relaynews invokes it automatically if needed
(and it then invokes relaynews in return).  Can this
system do setuid(geteuid()) to change the real uid/gid
[yes]?

Some systems have header files that others lack, and C
News is prepared to fake missing ones.
Does your system have an ANSI-C-conforming <string.h>
[yes]?

Does your system have <sys/timeb.h> [yes]?

Very old Unix systems needed the order of object
modules in a library chosen very carefully.  V7
introduced "ranlib" which removes the need for this.
Recent System Vs have had the same facility built into
"ar" (look for the "symdef" feature in the "ar" manual
page) so "ranlib"is not needed.  Does your system use
ranlib [no]? yes

Historically the C compiler is named "cc", but this is
not true on some systems, and on others there are
several different C compilers.
What is the name of the C compiler to be used [cc]?

Historically the only normal compilation option needed
for most programs is -O, but again compilers,
especially newer ones, differ.
What options should be given to the compiler [-O]?

The final linking ("ld") step of compiling might need
an option,such as -n or -i, to produce the preferred
form of executable file. On most modern systems the
default is right.  What options, if any, should be
given for linking []?
```

```
On unusual systems it may be necessary to link C News
programs with libraries other than the usual C library.
These can be specified as either full pathnames or -
l... options.  What libraries, in addition to the
one(s) picked up automatically by the compiler, should
be used when linking C News []?

Does your system have a "hostname" command [yes]?

C News tries to limit the backlog of news batches
spooled up for transmission to a site, to control use
of disk space.  To do this, it needs to be able to
determine the length of the queue of news batches for a
particular site.  This is UUCP-version-dependent.
There is a good chance that you will have to customize
the "queuelen"program.  C News knows about several
versions:
        hdb     Honey DanBer, aka Basic Networking
                Utilities
        sub     old uucp with subdirectories (e.g.
                /usr/spool/uucp/C.)
        old     very old uucp, no subdirectories
        pre     prehistoric uucp, no subdirectories, no
                -g option on uux
        null    don't run uucp or don't care about
                queue lengths
Which one is most appropriate [hdb]? sub
Beware -- test "queuelen" to make sure it works.

C News often wants to ask how much disk space is
available.  The format of output from the "df" command
unfortunately varies a lot.
C News knows about several different versions:
        bsd     4.2BSD and later
        sysv    many System Vs
        xenix   some (all?) Xenixes; some System Vs,
                e.g. Microport, HP?
        sgi     Silicon Graphics Iris systems
        ultrix  DEC Ultrix 3.0 (and later) (and
                earlier??)
        v7      plain old style:  no headers or fluff,
                just name and number
        null    don't know or don't care how much space
                is available
Which one is most appropriate [bsd]?

Some "df" commands, especially on old systems, must be
given the name of a device.  Modern ones can be given
any directory name and the system handles the details
of figuring out what device is meant. A few will take a
directory only if it is the "top" of a filesystem.
Will "df" accept any directory name as an argument
[yes]?

Are you planning to use expire to archive news on disk
[no]?

Are you particularly short of disk space [no]?
You may want to inspect "spacefor" to make sure its
defaults for things like desired free space are
appropriate for your system, although the defaults are
fairly conservative.

It is very difficult to do anything useful with
incoming news when there is no space for it.  Normally,
C News simply discards it and mails a trouble report.
On a single-user system, it may be better to just have
the news reception stall until more space becomes
available.  Warning:  this may stall processing of
other incoming traffic, e.g. mail, as well, and the
queue of unprocessed traffic may well grow until your
disk fills up.  Should news reception
stall if space gets short [no]?

News processing is much more efficient when done in
bulk, so C News normally just saves incoming news and
processes it once an hour. If you have ample resources
and are wildly impatient to make news available the
instant it arrives, that is expensive but possible.
Do you want immediate processing [no]?

Are you running C News on a group of machines hooked
together with NFS,with articles filed on one "server"
machine [no]?

Several programs need to know an overall name for the
system news is being run on, where "system" may include
multiple machines if they share a common set of control
files and articles; this is used in article headers and
related places.  For uucp sites, this usually should be
the uucp name.  It is VITAL that you and your
neighboring sites agree on this name -- if their news
systems know you by a different name, or even a
slightly-different variation of the same overall name,
there will be trouble.  What is the name of the overall
system for news purposes [nowhere]? hfs
```

note: *Set this to the name of your system as determined by your UUCP connection. For my setup,* **hfs** *is the login id that UUCP uses to poll the system* **questor.wimsey.bc.ca**

```
The "From:" lines of news postings, on the other hand,
should carry a mailing address, which in particular
should be a domain address for sites that have one.
What is the mailing-address name of this system,
preferably a domain address [hfs.uucp]?
hfs.questor.wimsey.bc.ca
```

note*: This is your complete domain address. This is what you have set in the* **hostname** *field of the* **NetManager** *program under Local setup. For example, with the mail setup. My mail address on my system is* bhead@hfs.questor.wimsey.bc.ca.

```
What is the name of the organization, for insertion
into articles posted from here [Godcorp]?
Headfirst Software, Vancouver, BC, Canada
```

note: *Replace this with your organization name. This is appended to postings you make as part of the header of your post. Don't use a bogus name here. If you don't have your own organization per se, use the organization name that you poll for news - i.e. for my setup, I would otherwise set my organization name to "The Questor Project" - the name of the organization that feeds me news.*

```
Manual pages are normally stored in a tree structure
under /usr/man. Local practices vary a great deal,
however, and System V has also introduced some bizarre
distortions into this once-simple structure.
What is the top-level manual-page directory [/usr/man]?

C News adds manual pages to chapters 1 (programs), 5
(files), and 8 (administrative programs).  These
chapter numbers have changed in some variants of Unix.
```

```
Also, originally pages from chapter 5 (for example)
were stored in /usr/man/man5.  This has also changed in
some variants.  Has your system made such changes [no]?

The "rnews" and "cunbatch" commands (which are
identical, the latter being purely for backward
compatibility with seriously-old systems) have to be
installed somewhere where uucp can find them to execute
them.  It is not normally necessary for users to be
able to run them, so they need not go in the
directories searched for normal commands... although
uucp often searches only those directories.
What directory should "rnews" and "cunbatch" go in
[/bin]?

Our "postnews", "readnews", and "checknews" are
included mostly for completeness.  They are very simple
and crude compared to the user interface many users are
accustomed to.  As far as we know, B News (or other)
versions should run fine with C News.  If you are
already running such user-interface software, you may
not want to change. Do you want to install our user-
interface programs [yes]? no
```

note: *Even if you didn't have* ***NewsGrazer*** *for reading news, you'd still say no here and install* **rn** *instead.*

```
The "inews" command(s) should go in one of the
directories searched for normal commands, so users can
run them without special arrangements.  What directory
should these commands go in [/bin]?

For replies to control messages, C News invokes "mail"
(typically /bin/mail unless you make special
arrangements) with either an Internet-style "@" address
or a uucp-style "!" address.  Internet style is
probably better... if your mailer supports it at all.
Will "mail" handle "@" addresses [no]? yes

The ihave/sendme protocol, although marginally useful
in some cases, is a security hole -- it lets another
site ask for any article by Message-ID, and if your
Message-IDs are predictable enough (which C News's
generally are not, mind you), that site can get any
article currently on your system.  Do you have any
newsgroups containing confidential or proprietary
material [no]?

building doit.bin...
done

building doit.news...
done

building again.root...
done

saving defaults...
done

You should now run doit.root as root, doit.bin as bin,
doit.news as news, and again.root as root, in that
order.  (This assumes that the source directories are
owned by bin.  If you need to do installation work by
hand, run 'doit.bin -i' as the owner; this will create
the programs but won't install them.)  (It is not
necessary to log in as these users; use of 'su'
suffices.)  Finally, you will want to add the contents
of 'cron', or something similar, to your cron's work-
to-be-done file(s), and the contents of 'rc', or
something similar, to /etc/rc or whatever your system
executes when booting.

"make gclean" will clean up everything afterwards.
"make lclean" does a less drastic cleanup affecting
only the library directories. "make spotless" does
"make gclean" and also removes the doit files.

Good luck and happy news reading.
```

5. Once you have done this, the next step is to follow the instructions given at the end of the build script output:

As **root** type the following in the **/LocalLibrary/C-News/conf** directory:

warning: *You may indeed have to install some of what* **doit.bin** *does by hand, as suggested above. Or, you can do what I did and temporarily set the file permissions of* **/bin** *and* **/usr/man/man?** *to 777 so that* **doit.bin** *won't barf when it tries to install the files for you (see* man(1) **chmod** *for details). Be sure to set the permissions back when you're done!*

```
# ./doit.root
# su bin
$ ./doit.bin
$ exit
```

6. Next, following the directions as shown above:

```
# su news
% ./doit.news
% exit
```

7. Now run **again.root** as **root**

```
# ./again.root
```

8. Now you will want to clean the filesystem of files generated and used in the installation process:

tip: *I suggest doing a* **make spotless.** *Assuming you are still in the directory* **/LocalLibrary/C-News/conf** *type the following:*

```
# make spotless
```

9. Install the news manpages

The script **doit.bin** should have installed the man pages relevant to news in the **/usr/man/man?** directories. Now you'll want to prepare them for use in **Digital Librarian**™. If you don't update the index for **Digital Librarian**, the man pages will appear as raw **nroff** format (format needed for **man**).
You can do this two ways:

(i) Remove the index to the manpages which is found in the directory **/NextLibrary/Documentation/Unix/ManPages/.index/index.ixif** and then execute the following in **/NextLibrary/Documentation/Unix/ManPages**:

```
# ixBuild –fman –Nwhatis –Ncat\* –V
```

(ii) You may want to try **installman** (see man(1) **installman** for details) to add the manpages to the index and format them for use in **Digital Librarian**:

```
# /usr/lib/indexing/installman manpage_files
```

I suggest that you carefully read all the news manpages before you continue with the news configuration:

- man(1) **inews**
- man(5) **active.times**
- man(5) **news**
- man(8) **expire**
- man(8) **newsaux**
- man(8) **newsbatch**
- man(8) **newsmail**
- man(8) **newsmaint**
- man(8) **relaynews**
- man(8) **rnews**

10. Alias the user **usenet** to whomever will administer news.

Here, you'll most likely want to alias **usenet** to **root**. To do this you need to add an alias to **root**. This can be done using **NetInfoManager** (see *Network and System Administration, Chapter 7, pp. 109-113* for details). The user **usenet** will receive all maintenance messages that **news** will report – this includes such things as reporting errors like invalid newsgroup fields in your **active** file.

Configuring Usenet News

All right! Now you are ready for the fun stuff! Next you're going to want to modify the following files (Here, I highly recommend referring to *Managing UUCP and Usenet*, *Chapter 8*):

- /usr/lib/news/sys
- /usr/lib/news/active
- /etc/uucp/L.cmds
- /etc/crontab (/etc/crontab.local is preferred)
- /etc/rc.local

You may also wish to modify:

- /usr/lib/news/explist
- /usr/lib/news/batchparms

IMPORTANT: *Make a note of the owner and group membership using the* **Workspace Manager**™ Tools Inspector Panel *(or in the shell type* **ls -lg***) so that if you are modifying the files as user* **root** *you can then change them back to the proper owner (see* man(8) **chown***). When executing any of the maintenance scripts manually, it is suggested that you* **su news** *first, in order to maintain consistent ownership of news related files.*

11. /usr/lib/news/sys

If you are simply polling a site for news (as opposed to polling a site and allowing others to poll you), then your **sys** file will be quite simple. For a more detailed discussion refer to *Managing UUCP and Usenet*, and look over the news related manpages.

Here is my **sys** file:

```
# Only the ME line is mandatory; the others are just
# samples of how to do
```

```
# things.  Virtually everything will need modifying for
# your local feeds
# and newsgroups.

# line indicating what we are willing to receive
ME:alt,comp,news,sci,rec,misc,soc,talk,can,to.

# local-postings-only feed direct to major site (gets
#  them out fast)
questor.wimsey.bc.ca:alt,comp,news,sci,rec,misc,soc,talk,can,to
.questor/all:Lf:
```

note: *The system name that you will be receiving and posting news to should be the same as shown in* **/etc/uucp/L.sys.**

12. /usr/lib/active

This file holds the active list of net-wide newsgroups. It is used by **inews** to check for valid newsgroup names and to keep track of local article numbers received at your site.

You can use the script **addgroups** to add groups to the **active** list. To do this:

```
# cd /usr/lib/newsbin/maint
# su news
% ./addgroup the.group.name y
```

You can repeatedly add groups this way, keeping in mind that it is best to add them in alphabetical order.

tip: *You can add them more quickly by editing the* **active** *file directly and adding a list of the newsgroups already sorted alphabetically (or even better, obtain a list from another news administrator).*

An initial addition to the **active** list might look something like this:

```
can.jobs 0000000000 0000000001 y
comp.fonts 0000000000 0000000001 y
comp.lang.postscript 0000000000 0000000001 y
comp.sys.next 0000000000 0000000001 y
control 0000000000 0000000001 y
general 0000000000 0000000001 y
junk 0000000000 0000000001 y
news.announce.newusers 0000000000 0000000001 x
rec.arts.startrek.info 0000000000 0000000001 m
```

tip: *Don't tabulate the 4 fields in the* **active** *file. These four fields should be separated by one space only.*

Here, the "x" at the end of each line means that the group has been locally disabled. The "m" means that the group is moderated. See *Managing UUCP and Usenet* for more details.

Because in my particular example, I am only receiving a limited news feed from the feedsite, I only have a "y" or "m" (which is for moderated newsgroups, such as rec.arts.startrek.info) in the fourth field of the groups that I am getting from the feedsite; the rest are "x". Make sure, that there is a line for each news group that you wish to get from your feedsite. A complete listing of all available news groups in the **active** list is optional.

13. /etc/uucp/L.cmds

Make sure you add **rnews** to your **L.cmds** file, so that **L.cmds** looks something like this:

```
rmail
# Only return the status of a rnews if it is
# non-zero
rnews,Error
```

14. /etc/crontab (I recommend /etc/crontab.local)

You'll need to add entries to either your **/etc/crontab** file or your **/etc/crontab.local** file. I recommend adding your entries to **crontab.local**, simply because it enables you to logically separate your custom configuration from the standard configuration. The entries for **news** allow news gathering, posting, and maintenance. See *Managing UUCP and Usenet* for more details. If you are not at all familiar with **cron** and its **crontab** format then see man(8) **cron**.

As an example, here is my **/etc/crontab.local** file:

```
12 * * * * uucp    /usr/lib/uucp/uucico -r1 \
-squestor.wimsey.bc.ca
30 * * * * su news -c '/usr/lib/newsbin/input/newsrun'
00 01 * * * su news -c '/usr/lib/newsbin/input/newsrunning on'
0,30 * * * * su news -c '/usr/lib/newsbin/batch/sendbatches'
59 0 * * * su news -c '/usr/lib/newsbin/expire/doexpire'
10 8 * * * su news -c '/usr/lib/newsbin/maint/newsdaily'
00 5,13,21 * * su news -c '/usr/lib/newsbin/maint/newswatch'
```

You may have to alter this **crontab** entry somewhat. To get mine to work, I had to explicitly add the 'owner' field for the **news** related entries. This way, my entries look something like this:

```
30 * * * * root su news -c '/usr/lib/newsbin/input/newsrun'
```

where **root** is the owner and it su's to **news** to execute **newsrun**. The *su news* is important to maintain proper ownership of news related files. See man(8) **cron** for more details on the **crontab** format.

15. /etc/rc.local

You'll want to add the following line to your **rc.local** file so that **newsboot** can clean up the news files that might be lying around after a system crash.

```
su news -c '/usr/lib/newsbin/newsboot'
```

16. /usr/lib/news/explist

You may want to modify the **explist** which is read when the news maintenance script **doexpire** executes to determine how long newsgroups articles stay around. For very noisy newsgroups you may want to expire them more quickly.
For example, I receive comp.sys.next articles, among others. As we all know, comp.sys.next is very busy so I have added a line in **explist** to expire comp.sys.next articles after 3 days:

```
# until comp.sys.next gets split up into separate
# groups lets throw it away quickly (every three days)
comp.sys.next    x    3   -
```

reminder: *when modifying these, or any other files related to* **news***, be sure to note the file ownership and group membership, and restore them if they have changed after you edit them - this is easy to do when using* **Edit***)*

Installing NewsGrazer (the news reader)

Here, all that is important is that you configure it correctly the first time you run **NewsGrazer**.

The default configuration is for **nntp** (network news transfer protocol) for the news feed. For UUCP, change this to "Use flat files", and the flat file defaults should be correct.

The rest of the installation of **NewsGrazer** can easily be explored within the program.

You are now ready to read news!

caution: *When reading Usenet news watch for SPARCs and open FLAMES!*

About the author

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