24 *Usenet News*

24.1 INTRODUCTION

Usenet is a software system that distributes messages ("articles") to many sites around the world. It is not really a type of network, but rather a set of protocols, file formats, and affiliations among sites. The actual transport of messages usually occurs via the Internet or UUCP.

Usenet is similar to electronic mail, except that all articles are publicly readable. It's also similar in many respects to the "message boards" of on-line services such as CompuServe and America Online. However, it operates on a much larger scale. Usenet has more than 3,000,000 readers at 80,000 sites, and many subject areas ("newsgroups") receive hundreds of articles a day.

24.2 THE DISTRIBUTION OF NEWS

Most news is transmitted using the Network News Transfer Protocol (NNTP), which runs on top of TCP/IP. Originally, UUCP was used as the transport layer, but that is becoming increasingly rare.

Each news site has one or more *feeds* from which news is obtained and zero or more *clients* to which news is sent. The distribution of news is not centralized; articles ("postings") may originate at any site, and are simply propagated both "upstream" and "downstream" by the Usenet software. Each site that receives news is responsible for correctly preparing it to be resent to all the sites that it feeds.

Over 75 megabytes of news are posted each day. This is a staggering figure, and the amount of incoming data creates some formidable management problems. It has become very expensive (in terms of disk space) to create a stockpile of news articles. News sites typically allow articles to remain on the system for only a few days before they are deleted ("expired").

In order to run news at your site, you need a Usenet software package (usually C-News/NNTP or INN) and one or more interactive news-reading packages. The Usenet software manages the flow of news articles to and from your site, while the readers provide user-level access to the database of articles.

24.3 NEWSGROUPS

Usenet articles are categorized into newsgroups. Each newsgroup is dedicated to the discussion of one particular topic, which may be as broad as the UNIX operating system (comp.unix) or as narrow as Celtic culture (soc.culture.celtic).

It is not necessary or even possible for users to read everything posted to the Usenet. There are over 5,000 newsgroups, and some of them receive upwards of a thousand messages a day. News-reading programs allow users to "subscribe" to the groups they are interested in, and some even provide ways of hiding particular threads of discussion inside groups. Even with all this help, it can take an hour or more to read 20 active newsgroups.

A lot of the articles posted to Usenet are computer-related: operating systems, software, human interfaces, programming languages, hardware, etc. This is perhaps a natural consequence of the fact that many Usenet readers are computer professionals. But there are also are newsgroups for skydivers, scuba divers, glider pilots, cooks, Buddhists, woodworkers, nudists, and almost any other category you can think of.

Most newsgroups are "unmoderated," which means that anyone can post an article. Some unmoderated groups feature high doses of irrelevant material and personal animosity. Groups with a technical bent usually maintain a high signal-to-noise ratio, but more socially-oriented newsgroups frequently degenerate into free-for-alls in which little useful information is exchanged.

Perhaps five percent of newsgroups are moderated. Instead of posting articles directly to a moderated newsgroup, users must send them to a moderator for review. Every article that appears in a moderated group has been personally approved by the moderator. Some moderators forward individual articles, while others condense them into digests that are posted as a single article. Most news readers provide the same

interface for posting to an unmoderated group and submitting an article to a moderator. It is rare for a moderator to actually reject an article, since the mere threat of review tends to weed out spurious messages.

Like directories in the filesystem, newsgroups are organized into a hierarchy. The name of a newsgroup is analogous to the full pathname of a file, except that the separator character is a dot instead of a slash. The similarity between these two is intentional and convenient; news is stored in a tree of directories whose names are formed by translating dots to slashes.

At the top level of the news hierarchy are the core news classes listed in Table 24.1. Some top-level classes (for example, gnu and bionet) are distributed on a by-request basis and may not be available everywhere.

Table 24.1   Top-level newsgroup classifications

Name	Contents
alt	Alternative groups (alt.drugs, alt.sex, etc. – by request only)
bionet	Biotechnology groups
biz	Business groups
clari	International news wire in Usenet format
comp	Computer-related and source code distribution newsgroups
gnu	The Free Software Foundation
k12	Lower education (kindergarten through high school)
misc	Miscellaneous (items for sale, jobs offered or wanted)
news	Groups that discuss Usenet itself, its content and transport
pubnet	Public bulletin boards
rec	Discussions of recreational activities (skiing, hiking)
sci	Scientific and mathematical topics, new research, etc.
soc	Not-so-serious discussions (singles, college)
talk	Generally serious discussions (abortion, religion, philosophy)

Underneath each class is an arbitrary number of subdivisions. A subdivision may be a newsgroup in its own right, may have other subdivisions inside it, or both. For example, misc.consumers covers material of interest to consumers in general. Typical fare ranges from product reviews to consumer horror stories. This group also has a subgroup misc.consumers.house which addresses issues specific to real estate. The more subtopics in the name of a group, the more focused it is.

24.4 ALT: THE FORBIDDEN HIERARCHY

More than any other part of Usenet, the alt hierarchy has developed a widespread reputation in the network community. This is due to its liberal group creation policy: if you want to create a new group, you will

generally be permitted to do so.[1] As a result, alt tends to be a catch-all for groups that didn't fit in elsewhere, either categorically or socially.

Alt is home to some fascinating groups, such as alt.dessert.toppings, alt.culture.austrian, alt.beer, alt.tv.brady-bunch, and the ever-popular alt.fan.dan-quayle. In the true spirit of free speech, however, alt contains many groups that might be deemed inappropriate for children, such as alt.sex.bestiality.barney,[2] alt.sex.watersports, and even the steamy alt.binaries.pictures.erotica.furry. You get the idea.

Clearly, it might be wise to partition some of this material from the under-18 crowd. Unfortunately, this separation is not well supported by Usenet and the Internet. Although it is possible to accept individual groups or subtrees of alt, it is safest to accept no part of the alt hierarchy if you provide computing resources to minors.

While alt is the largest moral majority offender, it is certainly not the only one. Newsgroups such as rec.arts.erotica are hidden in many dark corners throughout the Usenet tree. In addition, there is nothing to stop Joe Random Sicko from posting an inappropriate message to the otherwise "safe" k12 hierarchy.

Common sense might suggest that material like that found on the Internet is already available on playgrounds and soccer fields around the world, but it also suggests requiring parents to sign consent forms when any minor is given access to the Internet—even access that has been deemed "safe." There's always `ftp`.

Even if your site is a company with no underage users, you may still end up with an alt argument on your hands. Most of the enlightened world considers newsgroup suppression to be a form of censorship. But others contend that carrying alt is a waste of corporate resources or that certain groups are offensive to a specific gender, race, religion, or sexual preference. Now that's an argument you'll never win.

24.5 USENET: ASSET OR LIABILITY?

The classic Internet debate often centers around Usenet and its various offerings. Many members of upper management are convinced that engineers or secretaries who read news for an hour every day are "wasting time." In our view, this claim is unjustified.

Usenet often provides the irresistible bait that encourages Interphobes (those who are terrified of the Internet) to learn about the Internet and

---

1. See the group alt.config for information about creating a newsgroup in alt. Other hierarchies have more restrictive policies that usually involve a formal voting mechanism. Check news.groups to determine the current practice for your favorite hierarchy.

2. It's the thought that counts.

its various offerings, both for work and for pleasure. Once a secretary impressively produces a crucial tax form at the last minute by pulling it off the net, managers may think twice about their reservations.

Engineers and other technical staff often use Usenet as a sounding board for ideas and research. Perhaps management would rather build a fancy printed-matter library with outrageously expensive video conferencing hardware?

24.6 FAQs and Archives

Well-focused groups usually maintain a Frequently Asked Questions (FAQ) file that collects answers to various common questions. In addition, FAQs often provide an overview of the topic that the group is devoted to and a list of locations (if any) where the group is archived.[3] Before posting to *any* group, try to find its FAQ and read it thoroughly. This will help you avoid irritating other readers by asking questions that have been asked thousands of times before. It will also keep you from looking stupid.

FAQs are usually posted to their respective groups once a month or so, and they are also posted to the group news.answers. If you're impatient, the host rtfm.mit.edu keeps an archive of all known FAQs which you can access via anonymous `ftp`.

24.7 Clarinet

Clarinet is a company that offers an "electronic newspaper" in Usenet format called ClariNews. ClariNews contains a wide variety of materials, from the AP and Reuters news wires to special features on science, technology, stock quotes, and the computer industry, just to name a few.

Clarinet charges a fee to provide this service to your desktop. They have a variety of pricing structures, with special pricing for educational institutions, overseas customers and public access systems or BBSs. Site licenses range from less than $4 per user per month for fifteen users to $1 per user per month for larger sites.

To obtain a feed, call Clarinet at 1-800-USE-NETS for more information, or email info@clarinet.com.

24.8 Usenet Software

News software is not a standard package, but it is "freely available." The software is not in the public domain, but distribution is unlimited. Two implementations can be found on the CD-ROM.

---

3. That is, where the articles are kept permanently on-line for reference.

C-News and NNTP

The most common and versatile news software actually consists of two separate packages joined together: the C-News system written mostly by Geoffrey Collyer and Henry Spencer, and the NNTP transport package written at Berkeley. Both are included on the CD-ROM, along with instructions on how to fit them together. C-News is responsible for storing incoming articles and deciding to what other sites they should be forwarded; NNTP is used to transmit them to remote neighbors.

INN

The InterNetNews (INN) package was written by Rich $alz as a complete replacement for the C-News/NNTP package combination in use at most sites. It uses the standard NNTP protocol to communicate with other sites and can talk to sites running either C-News or INN. INN is more efficient at managing a large news feed because it keeps a lot of information in memory.

INN is the best choice for a news package today if you have a fairly large feed and have a machine with lots of real memory (> 64MB) that you can dedicate as a news server. In a smaller environment, C-News is probably the best choice.

Setting Up News at your Site

Initial setup is by far the hardest part of news administration. Once the news software is installed and news has begun to flow, only occasional checkups are necessary. In general, setting up a news server involves the following steps.

First, you must allocate disk space to store the Usenet article tree. This should be at least a separate partition (**/var/spool/news**), and more than one partition if you intend to get a full feed (for example, one partition for alt, one for comp, and one for all the rest). Partitions should be placed on separate physical drives to optimize throughput.

To figure out how much space to allocate, you must first decide how many days of articles you want to keep on-line. To keep four days of articles, you would need 75MB/day * 4 days = 300MB, plus about 50% "slop." Ergo, a 450MB partition would provide adequate space.[4]

Second, obtain and install one of the news software packages (either INN or C-News/NNTP). These packages are responsible for accepting incoming news from your feed sites and storing it in the article tree. The basic news packages also serve individual articles to local clients, expire

---

4. Keep in mind that traffic is growing about 50% per year, so these numbers may or may not be appropriate by the time you read this.

old articles, and feed articles to downstream sites. Instructions for installing INN are given below.

Next, you need a news feed. Contact your Internet service provider or other system administrator "friends" to request one. It is common for sites to charge you a reasonable fee ($20-$100 per month) for the hassle and resources required to provide the feed.

Once you've found a feed, you must tell the upstream site the name of your news server and the groups or subtrees you want to receive. You will also need to know the name of the feed server so that you can propagate postings and other upstream traffic back to it. Enter all this information into your configuration files.

At this point, you can start the news daemon (or daemons) and wait for news to begin arriving. Watch log files carefully for the first hour or so until you are certain that you are correctly receiving and storing news.

Once news is up and running, you'll need to run maintenance and cleanup scripts (such as **news.daily**, see page 574) out of **cron**.

To read news, you'll need some client software. See page 574 for a survey of the most popular clients. The last step is to announce the availability of news to your users. Be sure to including a lecture about proper behavior (basically, "Don't be a jerk"). Then take cover.

24.9 INSTALLING INN

INN (pronounced "eye en en") can easily handle a very large news flow, provided that you have adequate computing resources (a > 20-30 MIPS machine with at least 64MB of physical memory). Given the growth of Usenet traffic, this will soon be a requirement at all sites that want to receive a reasonable number of newsgroups.

Obtaining INN

The first step in installing INN is to obtain the source code. It can be found on the CD-ROM and is also available from ftp.uu.net. The following sections assume that you've successfully uncompressed and un-**tar**red the file (if necessary) and that the result has been placed in a directory we'll call $inn.

Printing the INN Installation Documentation

Once you've unpacked the INN distribution, the first thing to do is to print out the official tutorial, *Installing InterNetNews*. We've summarized its contents in the sections that follow, but when in doubt, the distributed document should be considered authoritative.

The installation document is in **roff** format and uses the **-ms** macros. The distributed file comes in two parts that you'll have to concatenate before you can print. Assuming you have the **psroff** command to translate **roff** into PostScript and a PostScript printer named spud-lw, the following commands could be used to print the instructions:

```
% cd $inn
% make Install.ms
% psroff -Pspud-lw -ms Install.ms
```

Configuring INN

INN learns about its environment (where commands live, what library routines to use, etc.) via a master config file called **config.data**. Editing this file is the hardest but most essential step in the installation procedure. A template called **config.dist** is included in the INN distribution; copy it to **config.data** before you start editing.

config.data is processed by a command called **subst** which is distributed with INN. Much like **cpp** or **m4**, **subst** does token textual substitution. Here are some typical entries from the **config.data** file:

```
_PATH_NEWSLIB          /usr/local/news
_PATH_LOGFILE          /var/log/news/news
_PATH_ERRLOG           /var/log/news/errlog
_PATH_MOST_LOGS        /var/log/news
_PATH_SERVERPID        /usr/local/news/innd/innd.pid
_PATH_NEWSFEEDS        /usr/local/news/newsfeeds
_PATH_HISTORY          /usr/local/news/history
_PATH_INNDHOSTS        /usr/local/news/hosts.nntp
_PATH_ACTIVE           /usr/local/news/active
```

These lines define the paths to many of the files used by INN. You should skim through the entries in the distributed template and change the ones that you know are different on your system, such as the locations of log files, commands, or libraries.

Installing InterNetNews has a section near the back which details suggested changes for operating systems such as Solaris, HP-UX, IRIX, and BSDI. Since many of these changes are obscure (for example, changes in certain type declarations), you should refer to the distribution document if you're running a common system.

Compiling INN

Once you've finished tinkering with **config.data**, you'll need to run **make** to compile and install the INN programs and control files.

This can be done with the following commands.

```
% cd $inn
% make world
% make install
```

With luck, after a few minutes of compiling and file copying, the INN package will be properly installed in your destination directory (usually **/usr/local/news**).

The INN Cast of Characters

INN consists of a number of programs that perform specific tasks and a set of files that control them. The most important INN programs are:

innd The "ringmaster" of INN. It runs as a daemon, listens on the NNTP port (TCP port 119), and accepts connections from feed sites as well as from local news-reading clients. Local connections are handed off to **nnrpd**.

nnrpd This is a specialized daemon that services local clients; it is invoked by **innd**.

expire Using **expire.ctl** as a guide, **expire** removes old articles from the article tree. Eventually, they are also removed from the article database.

nntpsend **nntpsend** and its helper **innxmit** work together to transmit articles to neighbors, both up- and downstream. **nntpsend** is the front end, and the actual work is done by **innxmit**.

ctlinnd **ctlinnd** sends "hints" to **innd**. For example, "I just changed file X, so you should go reread it now."

Important INN control files are listed in Table 24.2. These files usually live in **/usr/local/news**.

Table 24.2 Important INN control files

File	Purpose
active	Lists all active newsgroups, the oldest and newest article number for each, and each group's posting status
inn.conf	Defines the names of your news server and organization, and specifies where to mail moderated postings
expire.ctl	Controls expiration, on a per-group basis if desired
newsfeeds	Specifies which articles to feed to downstream sites
nnrp.access	Lists machines permitted to read news from this server
hosts.nntp	Lists upstream and downstream sites allowed to connect via NNTP to transfer batches of articles

You must edit all five of the files listed in Table 24.2 before starting the news system for the first time.

The active file

The **active** file lists the groups that the news system knows about. It also contains a record of the article numbers that are on-line for each group, the acceptance and posting status of each group, and any group aliases that exist. There must be one line in this file for every valid newsgroup at your site. A typical entry might look like this:

```
alt.abortion.inequity 0000013258 0000013208 y
```

This line describes the newsgroup alt.abortion.inequity. Article number 13,208 is the oldest article on-line, and article number 13,258 is the newest. Thus, the next incoming article for this group would be assigned the number 13,259. The trailing y indicates that this group is accepted from feeds and that posting is allowed from this site. Valid options for this field are listed in Table 24.3.

Table 24.3 Newsgroup status option codes

Option	Meaning
y	Group is accepted and postable
n	Group exists but not at this site (not accepted/no postings)
m	Group is moderated (accepted but postings go somewhere else)
x	Group is accepted, but posting is not allowed
j	Articles in this group are not kept, only passed on
=*alias*	Group has been renamed to *alias*

When you initially set up your news server, you should request a copy of the upstream **active** file and replace the two middle fields with 0s. This can be done with **awk** as follows:

```
cat upstream.active | awk '{ printf("%s 000000000
   000000000 %s\n", $1, $4) }' > active
```

The expire.ctl file

expire.ctl is used by the **expire** program, which removes old articles when their time has come. Once an article has been removed, a record of its message ID is kept for a while longer so that the article can be rejected if a feed site offers it again. This helps to avoid duplicate postings. An initial **expire.ctl** file might look like this:

```
/remember/:14
*:A:3:4:5
```

The remember line is special and indicates that we should hold on to message IDs of old articles for 14 days. Subsequent lines specify when the bodies of articles in particular groups should be removed from the system. The fields have the meanings listed in Table 24.4.

Table 24.4   Decoding guide for example expire.ctl file

Field	Meaning
*	All newsgroups
A	All newsgroup types (moderated and normal)
3	Minimum number of days to keep articles
4	Default number of days to keep articles
5	Maximum number of days to keep articles

In this example, all newsgroups are treated alike. But there can be many configuration lines, each of which applies to a different set of newsgroups. When an article falls between the minimum and maximum retention times, its Expires header line is used to determine its life. If an articles has no Expires header, the default time is used.

The newsfeeds file

The **newsfeeds** file indicates how articles should be redistributed to upstream and downstream sites. There must be one line in this file for every site you exchange news with. The **newsfeeds** file has a powerful syntax that can be used for many situations, from UUCP feeds to article-at-a-time feeds via mail. Refer to the man page for **newsfeeds** for detailed information.

A simple entry for an NNTP feed to a remote site might look like this:

```
news.acme.com:comp.*,rec.*:Tf,Wnm:news.acme.com
```

The line starts with the name of the remote site, here, news.acme.com. The second field lists the groups that should be fed. In this case, the comp and rec hierarchies are sent. The third field specifies how article information should be "handed off" to **nntpsend** or an equivalent transport program. Tf,Wnm indicates that a list of articles should be written to a file in **/var/spool/news/out.going**, which is correct for feeds that use **nntpsend**. Finally, news.acme.com is specified as the host that **nntpsend** should contact to transmit the articles.

nntplink is included on the CD-ROM.

nntplink, an alternative to **nntpsend**, can be used as a more efficient bulk transfer method for large sites. The **newsfeeds** man page illustrates the use of **nntplink** as a transfer program.

The nnrp.access file

nnrp.access controls server access by local news-reading clients. The only hosts listed in this file should be those that belong to your organization. An entry that would allow reading and posting from all hosts in the xinet.com domain might look like this:

```
*.xinet.com:Read Post:::*
```

The last three fields allow per-user posting and group access restrictions (not used here). See the man page for **nnrp.access** for details.

The hosts.nntp file

hosts.nntp specifies which remote hosts are allowed to transfer articles to the local site. Both upstream and downstream sites should be listed in this file. Some examples:

```
xor.com:
cronkite.cs.umd.edu:
news.colorado.edu:
```

Starting Up INN

A special script, **inndstart**, is used to start **innd**. It's usually located in **/usr/local/etc**. Once **innd** has started, you can use **telnet** to verify that it's alive:

```
% telnet localhost nntp
Trying 127.0.0.1 ...
Connected to localhost.xor.com.
Escape character is '^]'.
200 news.xor.com InterNetNews server INN 1.4 Dec-93 ready
```

Monitoring Article Flow

After **innd** has been running for a while (and the feed to you has been turned on at the remote site), you can use **tail -f** to examine the log, which is usually **/var/log/news/news.log**. Entries look like this:

```
Jun 14 00:16:34.536 + cs.umd.edu
   <2tikil$4e0@news1.svc.portal.com> news.colorado.edu
```

This entry indicates that an article with message ID

```
<2tikil$4e0@news1.svc.portal.com>
```

was received from cs.umd.edu and fed to news.colorado.edu.

If the news system encounters trouble, it will write details of the problem to the file **/var/log/news/errlog**.

Daily Chores

The **news.daily** script should run out of **cron** once a day to clean up log files, run **expire**, etc. Add an entry like this to news' crontab:

```
6 4 * * * /usr/local/news/bin/news.daily >/dev/null 2>&1 &
```

24.10 NNTP-BASED NEWS READERS

The NNTP protocol (RFC977) functions both as a way for news servers to talk among themselves and as a way for end-users to access the local

news database (one article at a time). In the past, news was often read directly out of files in the spool directory. These days, most news readers understand NNTP.

See page 375 for more information about the performance of NFS.

Some sites use NFS to cross-mount the article tree from the news server. Since NFS is based on UDP and thus does no congestion control, this is a horrible idea. Accessing articles via an NNTP daemon is much kinder to your network.

The sections below describe some of the more popular news readers.

rn: Read News

rn is the traditional UNIX-based news reader. It provides basic news and posting (via **Pnews**) capabilities. Its command structure is somewhat cryptic, and it lacks creature comforts offered by other clients.

When you start up **rn**, it first prints a list of newsgroups that you have subscribed to, along with the number of unread articles in each. This information is based on your **~/.newsrc** file, which **rn** updates as you read articles. Next, **rn** asks if you want to subscribe to any new groups that have been created since you last read news.[5] Finally, it prompts you for the newsgroup you want to read first.

rn generally has a sour, UNIX-like flavor. It lacks the point-and-click feel of more modern news readers.

trn: A Threaded Version of rn

trn is a close cousin of **rn**. In fact, it looks exactly like **rn** except for one major enhancement: **trn** maintains a database (called a thread database) of all the subjects currently being discussed in each group. When reading news, a user can elect to follow a thread, reading all articles about a specific topic at once. This is much nicer than reading the articles in the essentially random order in which they arrived.

nn: No News is Good News

nn is included on the CD-ROM.

The goal of **nn** is to help you plow through a large volume of news in a relatively short period of time, quickly sifting the wheat from the chaff. Like **trn**, **nn** is thread-based. It also adds the innovation of presenting subject lines for your selection before moving on to the full articles.

Most news readers assume you want to read every article unless you specify otherwise; **nn** assumes that you don't want to see an article unless you specifically ask for it. **nn** maintains its own database of news information so that all operations are blindingly fast.

---

5. There can be hundreds of new groups. The N key says no to all of them.

tin: Yet Another News Reader

In the same vein as **nn**, **tin** is a heavily **curses**-based news reader that allows users to choose groups or articles from a menu, and also via a highlighted bar that can be moved up and down the screen with the arrow keys. **tin** has more creature comforts than most other newsreaders and supports everything from threads to the ability to "tag" a group of articles, save them to a file, concatenate them, remove their headers, and **uudecode** them all in one step. This is handy when reading a newsgroup such as alt.binaries.pictures.tasteless.

xrn: An X Windows News Reader

A somewhat cumbersome point-and-click news interface, **xrn** is an X11 application that provides pull-down menus, drag-and-drop text editing, and all the other comforts of a windowing system on your desktop. Unfortunately, **xrn** does not support threading.

24.11 MAINTENANCE STRATEGIES

Because of its chronically high disk activity, the news system makes disk backups be much larger than they ought to be. This is especially problematic if your news directory is on the same disk partition as users' home directories, since such partitions must be dumped often.

The solution is to make a separate filesystem on which to keep news. You may find that creating a number of news partitions on physically separate drives will dramatically boost your system's performance, since the kernel can then schedule disk arm movements more efficiently. You may also want to format filesystems for news with more inodes than usual, since the news database consists of numerous small files and directories.

Keep in mind that your news neighbors depend on you to keep your system running correctly. If you take your system down without telling your feeds, they will continue to queue news for transmission to your site. It does not usually take long before the backed-up news traffic starts to cause problems. Likewise, machines that you feed will wonder what is going on. Always notify your news connections of potential downtime and problems. Keep contact information off-line.

24.12 NEWS-READING CHORES FOR SYSTEM ADMINISTRATORS

Some newsgroups are so useful to a system administrator that we consider reading them to be practically mandatory. The following sections introduce a few of them. They are hard to prioritize and are not listed in any particular order. Unless marked, they are unmoderated.

news.announce.important (moderated)

This group carries information of vital importance to all news-reading users. Postings to this newsgroup are required to be really important, so it is rare to see anything here more often than every year or so.

news.admin

This is a forum for administrators of news software. Important information about the news software and Usenet in general usually comes in through this group.

comp.unix.questions

This newsgroup is a forum for questions and answers about UNIX. In theory, the material posted to this group should be hardware-independent, but in real life many of the questions relate to problems with specific versions of UNIX and specific kinds of hardware. Some of the material is obscure, but you will find that much of it pertains, if only indirectly, to you and your system.

If you have a system-independent question that your manuals cannot help you with, this is a good place to try and find an answer. If your question is better suited to a more focused newsgroup, don't post it here. As a general rule, you should learn to recognize the types of questions that are appropriate for a given newsgroup through a week or two of observation before posting anything.

comp.unix.wizards

This newsgroup is kind of an older sibling to comp.unix.questions, but the material discussed is more kernel-oriented. It isn't directly related to system administration, but it can give you a good feel for what is going on inside your machine.

One of the nice things about this newsgroup is that operating system bugs are often reported here as they are found (hopefully, not often). A patch that you can apply to your kernel if you have source code is often supplied along with the bug report, allowing you to increase the reliability of your system in a relatively painless way. But remember to beware of any patch!

comp.sources.unix (moderated)

Source code for use on UNIX systems is posted here. Almost any kind of program can appear, from spelling correctors to text formatters to programming languages to utilities for use with other packages such as UUCP. The code is free and is in the public domain.

Most code posted to comp.sources.unix (as well as the other source newsgroups) is packed using a format called a shell archive or "shar" for short. This packing scheme allows multiple files to be placed inside a single file for transmission and then unpacked at the destination by running the file through **sh**. Before invoking **sh** on a file, be sure that all the header information has been trimmed off, as **sh** won't understand it and will gag on the file. And of course, beware of Trojan horses. Some additional comments about the safety of software obtained from Usenet are given on page 556.

comp.sources.misc (moderated)

This is a group for software that doesn't fit into other source code groups. Either it is not of interest to the general public (numerical analysis routines), or it isn't written in C (non-C programs are welcome in most newsgroups, but tend to be scoffed at), or it is for a specific computer that doesn't have its own source code newsgroup.

comp.sources.bugs

Bug reports and fixes for source code distributed through Usenet are posted here.

comp.sources.wanted

In this newsgroup are heard the pleas of people who are trying to find out if code exists to do a particular job, or who are trying to locate a copy of a package that they know exists. Think of this group as a kind of bank: every time you help someone else to get what they need, you are morally entitled to make a request. If the other person's question is not likely to be of interest to the general Usenet community, reply by email rather than posting a response.

Sometimes, it is painfully obvious that the person trying to locate source code is lazy and is trying to get someone else to do the work by posting on Usenet. This is bad because numerous people are liable to reply to easy questions: some to give the answer, and others to complain about how the poster shouldn't have asked the question. Don't get involved in this kind of situation—not as an asker or answerer, and especially not as a whiner.

comp.sys.*machine* and comp.sys.*machine*.digest (moderated)

These are moderated and unmoderated forums for general discussion of a particular machine or architecture. Most commercial systems are represented in the unmoderated groups, but only the more popular ones also have moderated versions. There are a few anomalously-named groups; for example, comp.sys.sun is moderated.

comp.unix.admin

This group is for general discussions of UNIX administration issues. There are often pointers to other, more specific discussion groups.

24.13 FUN NEWSGROUPS YOU MIGHT FIND INTERESTING

Table 24.5 lists some newsgroups that you might find entertaining or instructive in your spare time (or useful for debugging news).

Table 24.5   Some newsgroups

Group	Description
comp.sources.games	Recreational software (moderated)
misc.forsale	Short, tasteful postings about items for sale
misc.invest	Investments and the handling of money
rec.arts.bonsai	Dwarfish trees and shrubbery
rec.arts.movies.reviews	Movie reviews (moderated, surprisingly good)
rec.arts.startrek.info	Trekkish fandom (moderated)
rec.autos.sport	Discussion of organized, legal auto competitions
rec.bicycles.rides	Tours and training or commuting routes
rec.crafts.winemaking	The tasteful art of making wine
rec.food.drink	Wines and spirits
rec.humor.funny	Jokes that are sometimes funny (moderated)
rec.motorcycles	Motorcycles and related products and laws
rec.music.gdead	A group for (Grateful) Dead-heads
rec.photo	Photography and darkroom techniques
rec.sport.boxing	Boxing in all its pugilistic facets and forms
talk.bizarre	The unusual, bizarre, curious, and often stupid

24.14 RECOMMENDED SUPPLEMENTAL READING

O'REILLY, TIM and GRACE TODINO. *Managing UUCP and Usenet*. Sebastopol: O'Reilly & Associates, 1990.

TODINO, GRACE and DALE DOUGHERTY. *Using UUCP and Usenet*. Sebastopol: O'Reilly & Associates, 1990.

KANTOR, B. AND P. LAPSLEY. *Network News Transfer Protocol: A Proposed Standard for the Stream-Based Transmission of News*. RFC977. 1986.

HORTON, M. AND R. ADAMS. *Standard for Interchange of USENET Messages*. RFC1036. 1987.