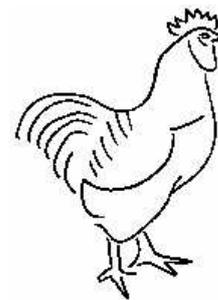


## CLTC Documentation Sheet 3:

# Installing the Internet Chat and News Servers



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*"Distrust all those who talk much of their justice! Verily, in their souls not only honey is lacking. And when they call themselves "the good and just," forget not, that for them to be Pharisees, nothing is lacking but - power!"*

Friedrich Nietzsche, chapter 29, *Thus Spake Zarathustra*

This sheet looks at the configuration of the InterNet News (INN) and Internet Relay Chat (IRC) servers. These are probably the most complex of the servers on the CLTC system to set up for those with little experience of working with Linux. However, they both provide valuable services on the CLTC server to support training in the use of networks and communications systems.

## ...where angels fear to tread

Why install the chat and news servers just after setting up the networking system? Because they're a pain to do so. And if you are going to mess up the server by doing so, you might as well do it now before you put any more effort into configuring it.

Internet news is a hassle to install. It takes a little messing around with directories and permissions. Internet chat is equally annoying to install, mainly because it's not supported with documentation on how to install it. You will also have to find an RPM package of the chat server program online because it's not provided with the *Red Hat* distribution.

We use the chat server on the CLTC so that people have the experience of using a chat server in private, in order to develop the skill of real-time communication. Likewise, news servers have not been as popular since the advent of the web, but they still have a role to play. Therefore we include one so that people can have the experience of using them on a local network, before using them online for real.

Our installations of Chat and News are not

perfect, but they work well enough for the task we require of them.

## Installing the Internet news server

The Internet news server works using the `innd` daemon. Internet news servers are rather like an email server. They want to be connected to other news servers in order to function. The fact that we're keeping the news server caged within a closed network makes it a little more difficult to configure.

As Internet news is installed as part of the Red Hat installation process, there should already be a user and group ID called 'news'. Find out where the 'news' user has its home directory using a user management program. It should be something like `/var/spool/news`. You should also have an `/etc/news` directory with a lot of configuration files in it.

To learn more on how the `innd` daemon works in detail you should read the `README` and `INSTALL` files in the `/usr/share/doc/inn-2.3.2/` directory. Much of this relates to the configuration of 'newsfeeds'. As a closed

network, our server does not need complex newfeeds to be configured. You should also read the `innd` manual page by entering the command `man innd`.

First we need to edit the configuration files in the `/etc/news` directory.

Open the file `incoming.conf`. Scroll to the very end and find the line -

```
hostname: "localhost, 127.0.0.1"
```

and change it to -

```
hostname "news.cltc.lan,
          192.168.66.1"
```

Open the file `readers.conf`. Scroll down and find the section `auth "localhost"`. Then edit the line -

```
hosts: "localhost,
        127.0.0.1, stdin"
```

and change it to -

```
hosts: "cltc.lan,
        192.168.66.0/24, stdin"
```

Open the file `inn.conf`. Scroll down to just beyond the `###` lines and find the line -

```
#pathost: localhost
```

and change it to -

```
pathhosts: mail.cltc.lan
```

Move down a few lines to the 'general settings' section and add the domain of the mail server as follows:

```
domain: news.cltc.lan
server: cltc.lan
```

Now move down a few lines to the 'feed configuration' section and find the 'bind' line and change it to:

```
bindaddress: 192.168.66.1
```

Finally, open `storage.conf`. Uncomment the following lines:

```
method timehash {
    newsgroups: *
    class: 0
}
```

Now we can check the `innd` daemon. If you now enter the command:

```
/etc/init.d/innd status
```

...you should get a message asking you to run `makehistory` and `makedbz` before stating. This is because the news databases in the

`/var/lib/news` directory have not been initialised.

We're going to have to log in as the 'news' user to configure the news databases. Therefore you need to edit the news ID's user password (so that you can log in with the right password) and set a login shell (`/bin/bash`) - the quickest and easiest way to do this is with one of the graphical user management programs like `kuser`. Then you can press `Ctrl-Alt-F2` to jump another virtual console so that you can login as 'news'. After logging-in you need to enter the following commands:

```
cd /var/lib/news
rm history*
touch history
makedbz -i
rename history.n. history. history*
```

The `/var/lib/news` directory has history files, but they're not initialised. Therefore we removes them with the `'rm'` command. Then we create a new history file with the `'touch'` command and then create the new files with `'makedbz'`. These have `'.n.'` ('new') in the middle of their name, which needs to be removed. We do this with the `'rename'` command.

Now press `Ctrl-Alt-F7` to jump back to your graphical console (or `Ctrl-Alt-F1` to jump back to the text console) you started off in. While logged in as `root`, the next task is to reassign the permissions on the news files in the news `/var` directory. We do this with four commands:

```
chown -R news.news /var/spool/news
chown -R news.news /var/lib/news
```

Now we can repeat the test of the `innd` daemon with the command:

```
/etc/init.d/innd status
```

This time you should get a message that the `innd` daemon is stopped. To start the daemon enter the command:

```
/etc/init.d/innd start
```

If all's well, the news server should now be usable. You can test it by logging in from the server itself to read the list of newsgroups. Finally, to start the server at boot time, you need to enable `innd` using the `ntsysv` utility.

Finally, you need to create a *news.daily* file using the command:

```
news.daily
```

This usually takes a minute or so to run. Also, you need to run this as the 'news' user. To become the news user from root, either login from a different virtual console again, or try:

```
su news
```

Finally, if you ever get problems with the news server dying unexpectedly, it's usually because of problems with permissions on the files in the */var/lib/news* directory. To solve this problem just purge the directory of bad permissions with the command:

```
chown -R news.news /var/lib/news
```

## Managing newsgroups on the server

Groups can be created and managed using the *ctlinnd* command. For this to work the *innd* daemon must be running. For example:

To create a group called *cltc.news* you would use the command -

```
ctlinnd newgroup cltc.news
```

To remove the group *cltc.news* you would use the command -

```
ctlinnd rmgroup cltc.news
```

To view all the options available with *ctlinnd* see the *ctlinnd* manual page.

The only problem when running the news server is that the root account will regularly receive email from the news server complaining about the various restrictions on its environment. These are created by 'cron jobs', pre-programmed to take place at certain timed intervals. You can't disable the *cron* jobs because the *cron* calls also undertake essential maintenance of the news server. Just remember to log in as root every now and then and clear them.

## Installing the chat (IRC) server

Internet Relay Chat (IRC) servers are becoming

less well used as other options, such as telephony over the Internet, and especially instant messaging, become more popular. The main problem with running a real IRC server online is that it requires a lot of bandwidth, and a really powerful set of computers to provide the service. This is because every person connecting to the chat server must be maintained as a single, dedicated connection.

On the CLTC this is not a problem. Firstly, because at most there are going to be four to seven users. Secondly, the system is not live online, and so we don't have to worry about the security headaches created by IRC servers.

There are a number of different IRC servers. On the CLTC we use *ircd-2.10.3*. This arrives as an RPM package, which can be obtained from the Internet (do a search for the name, or see *www.irc.org*). We found that *ircd-2.10.3* only worked with Red Hat 7.1's (version 2.4.2) kernel. Later versions of Red Hat produced a 'segmentation error' when you tried to run the program. It would be possible to re-compile the source code for *ircd* (also available online) in order to get around this problem. But we wanted to make installation of the CLTC server as simple as possible. For this reason we stuck with Red Hat 7.1.

Place the RPM file in the */root* directory, and then from the command line issue the command:

```
rpm -ivh /root/ircd-*.rpm
```

This installs the *ircd* package. Under Red Hat 7.1, this packaged installed without any unresolved dependencies or conflicts.

The configuration files for *ircd* appear to be held at */etc/ircd*. In fact this is a symbolic link, and the files are actually held at */home/ircd/etc/ircd* (remember this if you ever back-up the configuration files for your server). We need to edit these files to set the configuration of the server. We also have to create a file called *ircd.conf*.

*ircd.motd* is the 'message of the day' file. This is the message displayed when people log into the server. Edit the single line of this file to something a little more polite than its current contents.

Next open the file `example.conf`. This is the configuration file template. Editing this file is, because of its format, a little complex. Each section in the configuration file has its entries prefixed by a capital letter. Therefore, we suggest that you open a new text file, enter the configuration given in the box above, and then save that file as `/etc/ircd/ircd.conf`.

You can check the configuration of your `ircd.conf` file using the program `chkconf` that is supplied with the `ircd` package. Just enter the command:

```
chkconf
```

If all's well you get a message telling you where your `ircd.conf` file is OK.

To run `ircd` enter:

```
/etc/rc.d/init.d/ircd start
```

You should get a message telling you that the daemon has started 'OK'. If you now issue the command:

```
/etc/rc.d/init.d/ircd status
```

If all's well, you'll get a message telling you

### Example `ircd.conf`

```
M:irc.cltc.lan:192.168.66.1:CLTC IRC Server:6667
A:CLTC IRC Server:epsilon@cltc.lan:Client Server::
P:192.168.66.1:::6667:
Y:10:90::100:512000:10:32
I:192.168.66.*:*:*:10
O:*::epsilon::10
```

that '*ircd is running*'. If you get a message telling you that '*ircd is dead but the subsys is locked*' then it means there could be a compatibility problem between the daemon and the kernel configuration, and the program has been terminated. If you get this message you can either: recompile the program from its source (which requires you manually configure all the settings for the program); or you can search around for another RPM package online that may work with your kernel; or you could try installing a different version of Linux.

If `ircd` runs properly, you should now be able to login to the IRC server over the network from a client machine.

Your final action should be to use the `ntsysv` utility to make `innd` and `ircd` run at boot time. Configuration of News and Chat is then complete.

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