Guide: How to Telnet into the CAND Linux command line shell
NOTE: This guide assumes you are an advanced user familiar with Linux use through command line shells. Also, your router should have assigned an IP address to your CAND box so you can telnet to it. If you wish to telnet using the host name, then it is assumed you are on a network with DNS service as well.

Enabling Telnet service (port 23) on the CAND

Log on to the web browser GUI configuration program, then type on the address bar:
http://<your CAND address>/cgi/telnet/telnet.cgi

(So for example, if your CAND hostname is named "giganas", you can type
http://giganas/cgi/telnet/telnet.cgi

Make sure "Telnet Server: Enabled" checkbox is checked.
Port 23 is the standard telnet service port number.
Click "Save".
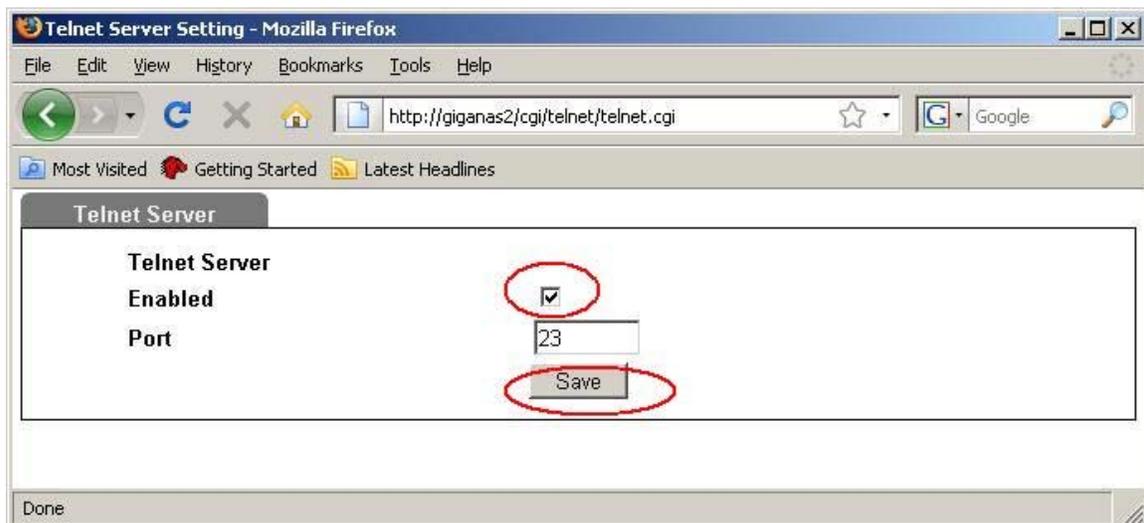
You can close your browser and attempt to telnet using windows xp:

Just type on command console: telnet <hostname or IP>
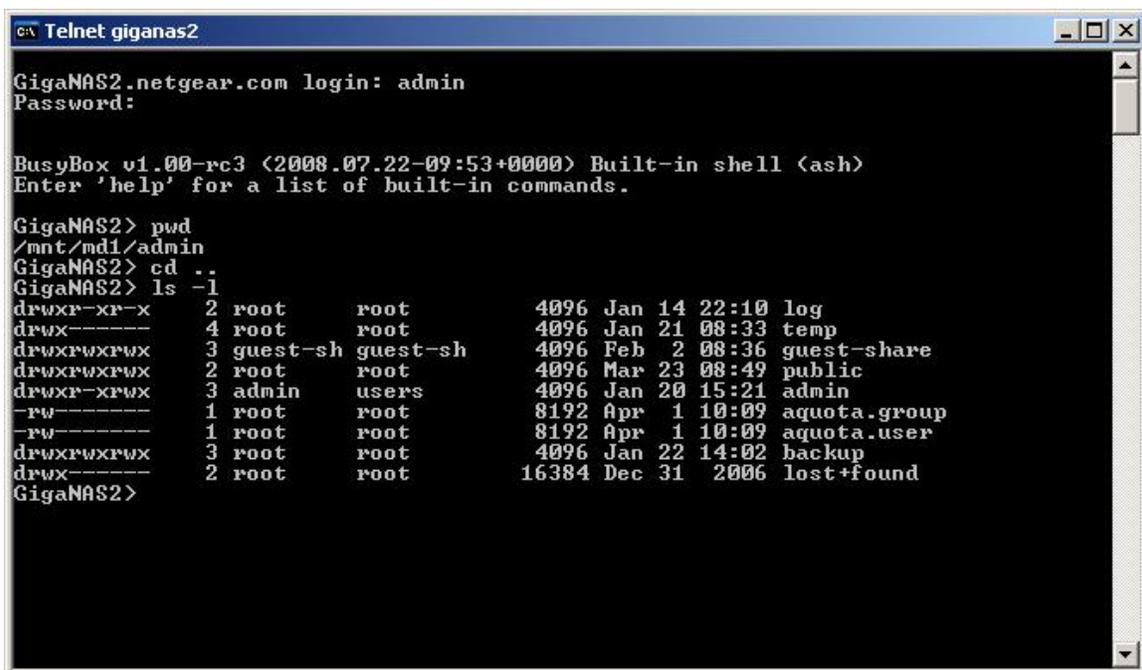**(example: telnet giganas2)**
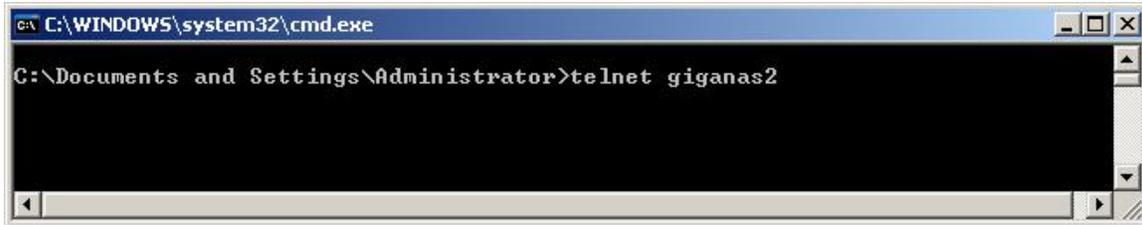
```
C:\WINDOWS\system32\cmd.exe                                    _ □ ×

C:\Documents and Settings\Administrator>telnet giganas2
```

Enter username and password. Default is "admin" and "admin".

For ROOT access ,"root" for user, and "admin" for password.
(NOTE: use "root" for user to attempt permanent permission changes to the shared folders)

Then type "pwd" to list the directory. You can go to the parent directory by typing "cd .."
Then type "ls –l" to list all files and directory with permissions shown in the current subdirectory.

```
Telnet giganas2                                                _ □ ×

GigaNAS2.netgear.com login: admin
Password:


BusyBox v1.00-rc3 (2008.07.22-09:53+0000) Built-in shell (ash)
Enter 'help' for a list of built-in commands.

GigaNAS2> pwd
/mnt/md1/admin
GigaNAS2> cd ..
GigaNAS2> ls -l
drwxr-xr-x    2 root      root          4096 Jan 14 22:10 log
drwx------    4 root      root          4096 Jan 21 08:33 temp
drwxrwxrwx    3 guest-sh  guest-sh      4096 Feb  2 08:36 guest-share
drwxrwxrwx    2 root      root          4096 Mar 23 08:49 public
drwxr-xrwx    3 admin     users         4096 Jan 20 15:21 admin
-rw-------    1 root      root          8192 Apr  1 10:09 aquota.group
-rw-------    1 root      root          8192 Apr  1 10:09 aquota.user
drwxrwxrwx    3 root      root          4096 Jan 22 14:02 backup
drwx------    2 root      root         16384 Dec 31  2006 lost+found
GigaNAS2>
```

As you can see "public" folder has permissions set as "drwxrwxrwx".
"d" = directory

rwx rwx rwx = read/write/execute permissions enabled for "world level"
"network level" and "local level". See abundant information on Linux file
systems on the internet for more information on directories and
permissions for ext3.

chmod   (changes permissions)

 (type chmod 777 <folder or file name> to grant access to all. , chmod –R
777 <folder or file name> will recursively change   permissions for
all subfolders and files as well)

(NOTE: do NOT use chmod on the root ("/") folder or any important system
folders on the CAND. It will mess up the system and you can't boot
anymore. Please restrict the use of chmod to only the /mnt/md1 folders.)

\usr\webroot   is the location of the web gui html files

\mnt\md1   is the mount point of the volume (md1 = multidrive 1,
                       our RAID volume mounted here; you can see the folders
                       here, and typing ls-l will list their current permissions).

See example below:

For eample, you can check the ext3 file permissions on the public
folder(and other folders) by using telnet.

```
Telnet quad-nas                                                    _ □ X

QUAD-NAS.netgear.com login: root
Password:


BusyBox v1.00-rc3 (2009.04.16-09:49+0000) Built-in shell (ash)
Enter 'help' for a list of built-in commands.

QUAD-NAS> ls
QUAD-NAS> pwd
/root
QUAD-NAS> cd /mnt
QUAD-NAS> ls
md1
QUAD-NAS> pwd
/mnt
QUAD-NAS> cd md1
QUAD-NAS> ls
guest-share    public         aquota.user    lost+found
backup         aquota.group   admin
QUAD-NAS> ls -l
drwxr-s--x   3 guest-sh guest-sh     4096 Sep  3 07:40 guest-share
drwxrwxrwx   2 root     root         4096 Sep  3 07:40 backup
drwxrwxrwx   3 root     root         4096 Sep 15 07:56 public
-rw-------   1 root     root         7168 Sep  3 07:40 aquota.group
-rw-------   1 root     root         7168 Sep  3 07:40 aquota.user
drwxr-s--x   3 admin    users        4096 Nov 26 02:21 admin
drwx------   2 root     root        16384 Sep  3 07:33 lost+found
QUAD-NAS> chmod -R 777 public
QUAD-NAS> ls -l
drwxr-s--x   3 guest-sh guest-sh     4096 Sep  3 07:40 guest-share
drwxrwxrwx   2 root     root         4096 Sep  3 07:40 backup
drwxrwxrwx   3 root     root         4096 Sep 15 07:56 public
-rw-------   1 root     root         7168 Sep  3 07:40 aquota.group
-rw-------   1 root     root         7168 Sep  3 07:40 aquota.user
drwxr-s--x   3 admin    users        4096 Nov 26 02:21 admin
drwx------   2 root     root        16384 Sep  3 07:33 lost+found
QUAD-NAS>
```

Notice that directory /mnt/md1 is the directory containing the public folder.

To change the permissions of the public folder, first enter the /mnt/md1 directory. Then type ls –l to make sure you can see the public folder.

Then the following command:

chmod –R 777 public

This will recursively change the permissions of the public folder to enable all users local and remote to be able to access it. (as far as the CAND is concerned. you may have to check your host sytem and network infrastructure to be sure)

(NOTE: do NOT use chmod on the root ("/") folder or any important system folders on the CAND. It will mess up the system and you can't boot anymore. Please restrict the use of chmod to only the /mnt/md1 folders.)

Example: To find the MAC address of the CAND, once you are in a telnet session, type:

ip addr
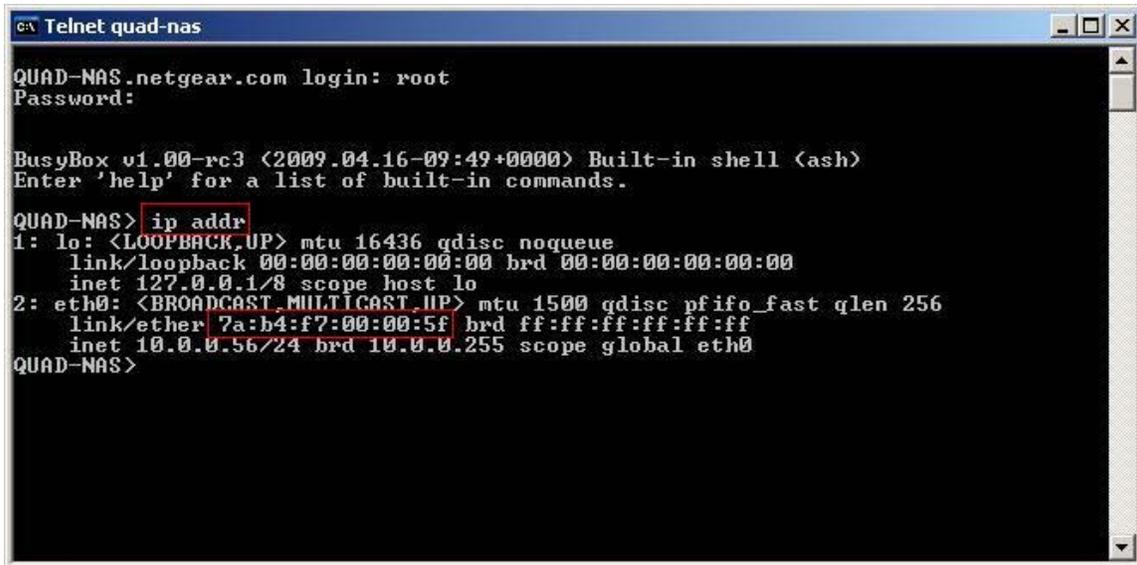
```
Telnet quad-nas                                        _ □ ×

QUAD-NAS.netgear.com login: root
Password:

BusyBox v1.00-rc3 (2009.04.16-09:49+0000) Built-in shell (ash)
Enter 'help' for a list of built-in commands.

QUAD-NAS> ip addr
1: lo: <LOOPBACK,UP> mtu 16436 qdisc noqueue
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
2: eth0: <BROADCAST,MULTICAST,UP> mtu 1500 qdisc pfifo_fast qlen 256
    link/ether 7a:b4:f7:00:00:5f brd ff:ff:ff:ff:ff:ff
    inet 10.0.0.56/24 brd 10.0.0.255 scope global eth0
QUAD-NAS>
```

Address is listed in 6 pairs of HEX digits separated by ":", after the "link/ether"
Here it is "7a:b4:f7:00:00:5f", or 7AB4F700005F

Cavalry storage guide on telnet:
http://www.cavalrystorage.com/products/technicalmanuals/NAStelnet.pdf

Public forum for advanced use of the CAND:
http://memoriedigitali.com/storlinkdevices/viewforum.php?f=12