AWS 95: A/UX User Terminal Session Limit From 16 To 32 (6/94)

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TOPIC ---

I'm interested in allowing more than 16 logins to an Apple Workgroup Server
(AWS) 95 running A/UX 3.0.1. I'm using A/UX for a class and want to allow all
students the ability to login and on the 17th login attempt, a message to the
terminal says there are no more logins allowed (I'm are using NCSA Telnet to
login).

I understand that there is a product called, A/UX 32 User License Product. From
what I can tell, this is only a license agreement from Apple giving the customer
permission to allow 32 logins to one A/UX computer.

Exactly how do I go about increasing that 16-user limit to 32? Is there a disk
or CD that alters the A/UX process that keeps track of the active terminal
sessions? It is unclear how this change is accomplished within A/UX.

DISCUSSION ---

The 16 user limit applies only to users directly attached to the system. It
does not apply to users connected via network services.

As of A/UX 3.1 and later, the system is capable of supporting more than 16 users
after performing a change in the kernel and adding the additional devices
needed.

Memory requirements of the system will be very different from the one the system
has when being used as an AppleShare Pro file server. If you are planning on
using the AWS 95 for both purposes, the system memory requirements might be big
and memory usage parameters would need to be adjusted carefully. If this is not
done, server performance will suffer greatly.

Also this only affects remote users accessing TCP/IP services such as telnet and
rlogin. It does not limit the number of users accessing file systems remotely
via NFS or AppleShare.

The kernel variable NPTY should be set to the number of users you want to let
login. The default is 32.

You can increase this number based on specific needs. This can be used using the
following kconfig command

```
kconfig -n /unix
NPTY=40
<Control-D>
```

For this change to take effect, the system needs to be restarted.

The devices to be added are the two parts of the pseudo terminal to be used. The master and slave part of this pair are necessary for the connection to work.

A/UX 3.1 includes 16 pairs of devices

```
/dev/ptyp[0-9a-f]
/dev/ttyp[0-9a-f]
```

For the next set of 16 devices to be available for connection, the devices need to be created. There are two ways of creating these devices. The long way is to use the command mknod(1) to create each of the devices in the range

```
/dev/ptyq[0-9a-f]
/dev/ttyq[0-9a-f]
```

The major device number for pty's is 20, the major device number for typ's is 21. The minor device numbers would go from 32 to 47. Based on this, the commands would look like

```
mknod /dev/ptyq0 c 20 32
mknod /dev/ttyq0 c 21 32
....
mknod /dev/ptyqf c 20 47
mknod /dev/ttyqf c 21 47
```

The easy way to do this is to modify and use the script

/etc/init.d/bnet

Edit the file /etc/init.d/bnet with vi or TextEditor.

Look for the line reading

```
        for ptyname in C p        # q r s
```

Change it to look like

```
        for ptyname in C p q      # q r s
```

Save the file.

Make sure there are no users connected to the system via telnet or rlogin.

Execute the modified shell script with the command:

sh /etc/init.d/bnet

This will create the devices:

```
/dev/ptyq[0-9a-f]
/dev/ttyq[0-9a-f]
```

Keywords: supt

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