



# Tech Info Library

## A/UX 1.0: The m\_expand returning to 0 Kernel Message (8/93)

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Security: Everyone

A/UX 1.0: The "m\_expand returning to 0" Kernel Message (8/93)

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TOPIC -----

This article describes a solution to the "m\_expand returning to 0" Kernel message.

DISCUSSION -----

When you encounter the "m\_expand returning to 0" kernel message, perform the following command:

```
netstat -m
```

An example of output from this command:

```
56/500 mbufs in use:
    21 mbufs allocated to socket structures
    29 mbufs allocated to protocol control blocks
    4 mbufs allocated to routing table entries
    2 mbufs allocated to interface addresses
0/32 mapped pages in use
157 Kbytes allocated to network (8% in use)
0 requests for memory denied
```

This lets you see how many "mbufs" (memory space) are allocated in your networked system versus the total mbufs allocated. In the example, 500 mbufs are allocated in the system, 56 mbufs are currently used, and 157 Kbytes (256 bytes/mbuf x 500) are allocated to the network. Note the last line: "n requests for memory denied".

If the currently used mbufs are almost equal to or greater than the total allocated mbufs, and/or there are any memory requests denied, you should adjust your kernel parameter on NMBUFS (number of buffers for networking).

Use "kconfig -av" to display the current kernel parameters before modifying them.

Depending on the amount of RAM in your system and network activities, the NMBUFS can be adjusted with the "kconfig" command. For example:

```
# kconfig -n /unix
NMBUFS=1024
<Control-d>
# sync
# sync
# sync
# reboot
```

You also should check these kernel parameters (which may or may not affect your network):

- NBUF (number of system block I/O buffers),
- NINODE (size of system inode table), and
- NFILE (size of system file table pool)

The distributed A/UX 1.0 is configured for a system with 2MB of memory. If you have 5MB RAM installed, you should change the values of NBUF, NINODE, and NFILE to 1000, 200, and 200, respectively. This is mentioned in the A/UX Release Notes 1.0.

Article Change History:

- 20 Aug 1993 - Cleaned up to format.
- 31 Aug 1992 - Reviewed for technical accuracy.

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