



Tech Info Library

A/UX: Optimizing for Current Memory (8/93)

Revised: 8/18/93
Security: Everyone

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Article Created: 17 October 1990
Article Reviewed/Updated: 18 August 1993

TOPIC -----

I have an 8MB Macintosh IIcx running A/UX that I want to optimize for performance at that memory configuration. I have read the Tech Info Library article "A/UX: How to Improve File Access Speed", and I have some questions.

If you run a "newconfig" command while under A/UX, will it automatically build a new kernel that is optimized for the current memory in the system? Will "autoconfiguration" at startup time notice that I have more physical memory than the kernel is optimized for and carry out this kconfig command for me?

DISCUSSION -----

Prior to A/UX 3.0 when a "newconfig" command is used to build a new kernel, the file "/newunix" is used as the base for the new kernel. Therefore, the new kernel (/unix) parameter values, like NBUF, NINODE, NFILE, and so on, will be reset to the default from /newunix. To keep the current kernel parameter values when the new kernel is built, use this:

```
# cp /newunix /newunix.orig    #! Save the original newunix
# kconfig -n /unix             #! Modify kernel parameters
# cp /unix /newunix           #! Copy the current kernel to newunix
# newconfig                    #! reconfig the new kernel
```

The new kernel will be built with the current kernel parameters.

If you want to build a new kernel based on the original, the /newunix.orig can be copied back any time. For example, cp /newunix.orig /newunix.

With A/UX 3.0 and higher, the above process is not necessary because the parameter values, like NBUF, NINODE, NFILE, and so on, are kept and become

part of the new kernel.

If there is new hardware (like an EtherTalk NB Card) to be added to the system, A/UX will automatically configure it when A/UX is started up. The file "/newunix" is also used as the base for the new kernel.

Here is a description of booting/launching decision:

When A/UX Startup is launched, by default, it performs:

- AutoRecovery, which checks the root file system with the command:

```
/dev/default
```

If the file system check is successful, do:

- AutoLaunch with the command: launch

The launch command first checks the default kernel against the hardware. Because no kernel is specified on the command line, the contents of file /nextunix, which is /unix, is used by launch. If the kernel matches the hardware, the /unix kernel is used to start up A/UX. If the kernel doesn't match the hardware, the launch command uses the /newunix kernel instead to build the new kernel, and the new kernel is placed on /unix.

Article Change History:

18 Aug 1993 - Updated to include A/UX 3.x, and reviewed for technical accuracy.

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Tech Info Library Article Number:6217