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A/UX 2.0: Macintosh Applications Can Use 32-Bit Addressing

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Article Change History

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- For technical accuracy.

TOPIC -----

Does A/UX 2.0's 32-bit addressing extend to the "MultiFinder" process? That is, if I am running "normal" Macintosh applications under A/UX 2.0, do I have access to more than 8MB of memory space?

DISCUSSION -----

Yes, A/UX 2.0's 32-bit addressing capability can be extended to the Macintosh applications which run under A/UX 2.0 MultiFinder Environment. However, the Macintosh application can access up to 16MB, because this is the maximum memory size allowed in Macintosh OS.

The size of the Macintosh application's memory address space can be changed via either ResEdit or Get Info. Note that there is a limitation on using the "Get Info" method; it lets you key no more than four digits. Therefore, use ResEdit if you require a change of more than 9999K.

To have your Macintosh applications run in the A/UX 2.0 32-bit environment, make sure you have sufficient virtual memory allocated before the session is started. There are two ways of controlling the size of the virtual memory allocation:

- 1) By assigning a value to an environment variable TBMEMORY. For example, "TBMEMORY=16m; export TBMEMORY" (or put them in the .profile file or .login file), logout then login again. This will create a 16MB virtual memory for MultiFinder.
- 2) By passing a flag when starting the "startmac" process. For example, edit the /mac/bin/mac32 file to have the "startmac" command line to read "/mac/bin/startmac -m16m &". This will create a 16MB virtual memory for MultiFinder.

The maximum feasible size for virtual memory is dependent on the environment (24-bit or 32-bit), and of course the size of the Swap space on the disk. For the 24-bit environment, the maximum virtual memory is 8MB; for the 32-bit environment the maximum virtual memory is 256MB.

System performance, however, will degrade if the virtual memory is much larger than the physical memory present in the system because a lot of paging and swapping activities will take place. A good rule of thumb is to keep virtual memory no larger than twice the size of physical memory present in the system. Copyright 1990, Apple Computer, Inc.

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