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A/UX: X Window System, MacX Performance Help (4/95)

Article Created: 17 October 1990

Article Reviewed/Updated: 03 April 1995

TOPIC -----

I am running some performance benchmarks on the A/UX implementation of the native X Window System and MacX. I cannot reproduce some favorable benchmarks that I read about in "Digital Review." I need some specific, concrete steps that I can take to optimize A/UX for running native X Window System applications as a client and server.

I'm running A/UX on a Macintosh IIfx with 8MB RAM on a Hammer 330MB drive (formatted with LaCie's Silverlining).

Also, is there anything I can do other than increase the memory or select "faster bitmap graphics" for the MacX performance benchmarks?

DISCUSSION -----

First, make sure that you are running the current release of "X Window System for A/UX". It includes "MacX for A/UX" and "Native X11 Window System for A/UX".

This software comes standard with A/UX 3.0. Here are some notes about these two products:

For "MacX for A/UX", the display server and the included "xcalc" client application are based on X11R3.

For "Native X11 Window System for A/UX", the display server and the "xstdcmap" client application are based on X11R4. The Xlib, the Xtoolkit, and other client applications are based on X11R3.

Because the Native X11 server for A/UX is based on X11R4, the performance behavior on the display server should be much improved over the X11R3 server.

To run X Window System with A/UX efficiently, some kernel parameters need to be adjusted, because of the number of processes and amount of memory space required by both the display server and client applications in a network environment.

Use the command "kconfig -av" to display the current kernel parameters, and adjust these parameters, if necessary:

NBUF

NFILE
NINODE
NPROC
MAXUP
NMBUFS

For an A/UX with 8MB RAM, the suggested values for these parameters are:

```
NBUF=1000  
NINODE=600  
NFILE=400  
NPROC=100  
MAXUP=100  
NMBUFS=1000
```

NMBUFS is allocated buffers for the network. You can adjust them, if necessary. The above can be done via the "kconfig -n /unix" command. Then use "sync;sync;sync;reboot" to effect the change.

For MacX, other than increasing the memory size of the MacX application (default is 1500K), we are not aware any other way to improve the performance. The suggested memory size of MacX is 2500K. Use "Get Info" to change the size under A/UX Finder.

If physical memory is your concern, you can use the "TBMEMORY" environment variable to increase your virtual memory under A/UX. For instance, to make a 16MB virtual memory, put these two lines in your .profile file, then logout and login to effect the change:

```
TBMEMORY=16m  
export TBMEMORY
```

Article Change History:

03 Apr 1995 - Corrected wording of Silverlining.
19 Sep 1994 - Reviewed for technical accuracy.
31 Aug 1992 - Reviewed.

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Keywords: <None>

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19960215 11:05:19.00

Tech Info Library Article Number: 6504