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A/UX: How To Mount a Remote Toolbox Over NFS (9/94)

Revised: 9/2/94
Security: Everyone

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Article Created: 20 July 1988
Article Reviewed/Updated: 1 September 1994

TOPIC -----

Some users have reported an NFS/ToolBox Problem.

In one instance, the systems have 40MB hard drives with only 20MB used by A/UX. To achieve this, users divided the total space required by A/UX between local disk storage and remotely mounted NFS disk storage across NFS on a VAX and a Sequent.

With this kind of mounting, however, Toolbox applications would no longer run. Most just crashed; however, "rez" produced the following error message while making %sample in "/usr/lib/mac/examples":

```
SysError(23)
pc = 0x1002653a (ROM = 0x10000000 -> 0x10040000)
Fatal error in Toolbox
```

DISCUSSION -----

Error 23 is an international utilities package load error documented as "package 6 not present". The A/UX System file, "/usr/lib/mac/System", may have been the problem. It was remote-mounted, and once it was copied back to the local machine, the problem disappeared.

You can get around the problem by keeping a local copy of the System file on each machine and using a symbolic link on the NFS-mounted file system to refer to the local copy.

A testing group reproduced the problem. After remote-mounting "/usr/lib/mac", they always got "Memory fault". However, removing "/usr/lib/mac" gave the same message with the text "core dumped" tagged on.

Note: Making "/dev/console" readable for all was not enough to run

"/etc/toolboxdaemon" as normal user.

The solution to this begins with the realization that "/usr/lib/mac/System" is a system-dependent file that must be found by the local "/etc/toolboxdaemon." To run Toolbox applications over the NFS:

1. Assume "/usr/toolboxbin" and "/usr/lib/mac" are not available in the local A/UX system but do exist in the remote NFS machine.
2. Launch "/etc/toolboxdaemon" from the local A/UX. (You don't need to be "root" to launch "toolboxdaemon". Any normal user can run "toolboxdaemon" if "/dev/systty", "/dev/console", and "/dev/syscon" are set mode to 0666.)
3. Mount a remote NFS machine; for example:

```
mount remote-machine-name:/ /mnt
```

4. Symbolically link a remote Toolbox Library to local machine; for example:

```
ln -s /mnt/usr/lib/mac /usr/lib/mac
```

5. Try to launch any Toolbox Application program; for example:

```
term
```

Article Change History:

1 Sept 1994 - Reviewed

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Tech Info Library Article Number:3148