



Tech Info Library

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

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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
```

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