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A/UX 2.0: Disk Space Value Depends on Login (6/93)

Article Created: 19 June 1990

Article Reviewed/Updated: 23 June 1993

TOPIC -----

We set up a 160MB disk with a 57MB Root&Usr and a 70MB Usr partition. The 70MB partition is automatically mounted by an entry in fstab. Everything works, except there seems to be a major discrepancy in available space reported by the Finder.

When logging in as root, the Finder reports 3MB free on the Root&Usr and 16MB on the Usr partition (after double clicking the directory specified as the mount point in fstab). When logging in as any other user, the Finder reports less than 1MB on the Root&Usr partition and 7MB on the Usr partition. Why the discrepancy?

DISCUSSION -----

The values you see for available free disk space (from either Finder or the "df" command), depend on whether you login as "root" or with a normal user (non-root) accounts. This is because A/UX 2.0 adopts UFS (Berkeley Fast File System) as the default root file system with minimum free-space threshold. UFS provides a mechanism that lets you specify the percentage of disk space RESERVED FROM USE by normal (non-root) users to reduce disk overhead and increase disk performance.

The percentage of space reserved for the Root file system shipped with A/UX 2.0 is about 5 percent, and the default percentage of space reserved for the non-root file system is 10 percent on the UFS file system. This is done via the -m option of the "newfs" command.

The point is that the root superuser has the privilege to see and use all free disk space, including the reserved space, but other users see only the AVAILABLE disk space.

If you really need some or all of the reserved disk space for normal use and don't care about disk performance, use the tuneufs(1M) command with the -m minfree option to change the percentage of the reserved space on an unmounted UFS file system. For example, the command,

```
tuneufs -m 0
```

sets a UFS file system without free-space threshold. However, the disk performance (throughput) is significantly lower than performance at the default 10 percent threshold.

For more information on Berkeley UFS, refer to newfs(1M) and tuneufs(1M) manual pages.

Article Change History:

23 Jun 1993 - Cleaned up.

31 Aug 1992 - Reviewed for technical accuracy.

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Keywords: <None>

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19960215 11:05:19.00

Tech Info Library Article Number: 6015