Apple Business Systems
Technical Notes

Product Technical Support

AWS19: Adding a UFS Drive

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Some customers using the AWS 95 have experienced difficulty adding additional UFS drives to a server. This problem occurs when they set up their drives on a Macintosh other than the server they will be used on. The "Apple HD SC Setup" program that is supplied with the AWS 95 system software protects administrators from the details of creating UNIX mount points, which are necessary to make the drive available. If the drive is formatted on another machine, these mount points are not created on the server, so the disk will not be accessible, which confuses some users. This Technical Note will endeavor to provide step-by-step instructions for adding a UFS drive to the AWS 95.

The following steps need to be taken to install a disk onto a server. It assumes you are using `Apple HD SC Setup` or some third party formatting tool that supports Unix paritioning. The drive that will be used in this example is a Micronet CPK-200, set to SCSI ID #5.

Use the formatting tool to create a "Free UNIX slice 3" on the disk, which creates the partition we will be using. Attach the disk to the server, and then execute this command from CommandShell:

```
newfs /dev/rdsk/c5d0s3 Generic
```

The parameter "Generic" (which is case sensitive) in the command line specifies that there is no specific drive entry in the */etc/disktab* file. Entries are provided for some disks. If your disk is not one of them, you can either specify "Generic" for the drive type or provide the drive information from the manufactures documentation. This information allows newfs to tune the disk performance somewhat, but isn't critical, so if you don't have it handy, the Generic entry is usually close enough.

The AWS 95 supports 4 logical SCSI busses number 1-4 so that when you connect the drive to the PDS card's external connector, the command that you will need to enter changes to the following:

```
newfs /dev/rdsk/c405d0s3 Generic
```

Since you have not used "Apple HD SC Setup" program you will also need to create an entry in the /etc/fstab file so that this drive can be automatically mounted when the system is restarted. For this example we will assume that the drive will be mounted on a directory within the "/Shared Data" folder. Open the /etc/fstab file by traversing in the Mac environment and double-clicking on the file. The file should look something like the following:

```
/dev/dsk/c300d0s0   /    ignore  rw  1 0
```

Now append a new line to the file specify an existing directory in the */ Shared Data* folder.

```
/dev/dsk/c205d0s3   /\ Shared\ Data/NewVolume    4.2  RW  1 2
```

In this instance the NewFolder that is used for the mount point is NewFolder. The back slashes are necessary as the string */ Shared Data* has a space in it. You can create the directory for NewVolume from the CommandShell or from the Mac environment. Now you can close and save the */etc/fstab* file.

To make this volume accessible to users you can enter the following command from the CommandShell:

```
mount -a
```

If there is a problem you will see some error text after this command is executed. To verify that the drive is now accessible you can type *mount* and receive output similar to the following:

```
/dev/dsk/c300d0s0   on /  type 4.2 (rw,noquota)
/dev/dsk/c205d0s3   on / Shared Data/NewVolume    type 4.2 (rw)
```

When adding new drives to the AWS95 it is also important to add them to the PDS card as this will give you maximum performance. The DMA and Cache provided by the card will help increase I/O as compared to the motherboard internal and external busses.