This technical note documents a caveat in configuring the Apple Workgroup Server 95 both as a NFS and AppleShare Server and its implications on your server. It also documents the limitations in configuring the AWS95 as an NFS client and sharing of an NFS mounted file system via AppleShare Pro.

Configuring AWS95 as an NFS Server

AppleShare Pro and NFS while running on the Apple Workgroup Server 95 do not share User/Group accounts and their access privileges. This makes it extremely difficult to share the same volumes via both applications on the Apple Workgroup Server 95.

The Apple Workgroup Server 95 configured both as an NFS and AppleShare Server, will still let you access an NFS shared file system through AppleShare. It becomes cumbersome only if you want to create and modify the same files shared by NFS and AppleShare, on the same volume.

Since AppleShare runs as root, all files created by regular UNIX users can be seen and modified via AppleShare. Thus, sharing the same file system by NFS and AppleShare will leave the NFS user's files unprotected from the AppleShare users.

Apple does not recommend sharing the same items via NFS and AppleShare. It's perfectly normal to configure the Apple Workgroup Server 95 both as a NFS and AppleShare server for sharing separate items.

Running NFS on the Apple Workgroup Server 95 utilizes the number of buffers (kernel parameter, called NMBUFS) allocated for networking. If NFS is being heavily used in your configuration, NMBUFS may need to be increased. If the message

Apple Business Systems
Technical Notes

Product Technical Support

AWS13 : AWS95 in Mixed NFS & AppleShare Environment

Written by : Sandhya Vora November, 1993

'*m_expand returning 0'* is seen often, or if the system halts with the message '*panic: out of mbufs*', NMBUFS should be increased by using the *kconfig* command. For more information, refer to the on-line man page for *kconfig*.

Implementing NFS services on the Apple Workgroup Server 95 will have an impact on your server's memory resources, by starting more UNIX processes. Also, increasing NMBUFS reduces the amount of free memory in the system, which increases the probability that the system will run out of physical memory and begin paging or swapping, thereby degrading the performance of your server. You must ensure your Apple Workgroup Server 95 has adequate cache settings to be configured for your specific needs. For more information on cache settings, refer to the technical note *AWS03:AWS95 Configuration & Sizing Guide.*

Configuring AWS95 as an NFS Client

When configuring the AWS95 as an NFS client, sharing of an NFS mounted file system is not recommended. AppleShare Pro was designed to share local volumes. No provisions were made in AppleShare Pro to share network volumes. There is no mechanism in place to deal with an NFS mounted file system being shared by AppleShare Pro in case the NFS server goes down.

AWS95 configured as an NFS client cannot handle the NFS request time-outs gracefully. As an NFS request is being made by an NFS client to the server, a time-out is started. At the end of

Apple Business Systems
Technical Notes

Product Technical Support

AWS13 : AWS95 in Mixed NFS & AppleShare Environment

Written by : Sandhya Vora November, 1993

the time-out if the request returns an error, a normal UNIX process may continue to retry the request by doing system calls such as read/write/stat etc., and may cause itself and the Macintosh Virtual Environment to hang while accessing the non-responsive server. In such a case AppleShare does not know what to do with the NFS time-out errors.

Since AppleShare Pro is implemented as a single UNIX process handling multiple client sessions, even if only one of the many clients tries to access the non-responsive server, it may cause the AppleShare services to hang for all the other connected clients. However, all the other UNIX processes on the AWS 95 configured as a client should continue to work properly.

Apple Business Systems
Technical Notes

Product Technical Support

AWS13 : AWS95 in Mixed NFS & AppleShare Environment

Written by : Sandhya Vora November, 1993