

New Technical Notes

Macintosh

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Developer Support

NW 29 - File Sharing Extension 7.6.1 Networking

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This Technical Note documents the enhanced features of Macintosh File Sharing version 7.6.1. **Changes since February 1995:** PBUnmount returns different errors to distinguish between the volume being busy because a file is open by a local user vs. a remote user.

Topics

- Identifying Enhanced Macintosh File Sharing
- Server Control Calls Supported
- What Volumes Are Shared?
- | • New error code for PBUnmount

Introduction

Macintosh File Sharing 7.6.1 supports a subset of the AppleShare File Server 4.0.2 server features. This Technical Note tells how to identify Macintosh File Sharing 7.6.1, lists the server control calls supported by Macintosh File Sharing 7.6.1, documents behavior differences in the supported server control calls, documents the new rule File Sharing uses to determine what volumes to share, and documents how to determine why a busy volume cannot be unmounted. All other documentation for the AppleShare and File Sharing API can be found in the AppleShare API SDK (AppleShare 3.0 Developer's Kit) on the Mac OS Software Developer's Kit CD-ROM. Macintosh File Sharing 7.6.1 is installed as part of System 7.5 Update.

Identifying Enhanced Macintosh File Sharing

Macintosh File Sharing 7.6.1 has the server type of MFSType (\$0000) and has the server version \$003E. It can be identified using the server control call SCServerVersion as shown here.

```
enum
{
    kNewFileSharingVersion = 0x3e /* File Sharing 7.6.1's version number */
};

Boolean HasEnhancedFileSharing(void)
{
    SCParamBlockRec scPB;
    Boolean result;
```

```
result = false;
/* Make sure the ServerDispatch trap (A094) is available */
if ( TrapAvailable(ServerDispatch) )
{
    scPB.versionPB.scCode = SCServerVersion;
    scPB.versionPB.scExtNamePtr = NULL;

    if ( SyncServerDispatch(&scPB) == noErr )
    {
        /* See if server is file sharing with */
        /* a server version => kNewFileSharingVersion */
        result = ( (scPB.versionPB.scServerType == MFSType) &&
                   (scPB.versionPB.scServerVersion >= kNewFileSharingVersion) )
    }
}
return ( result );
}
```

Server Control Calls Supported

Macintosh File Sharing 7.6.1 supports the following server control calls:

- SCCancelShutDown
- SCDisconnect
- SCGetExpFldr
- SCGetSetupInfo
- SCPollServer
- SCServerVersion
- SCSetSetupInfo
- SCShutDown
- SCStartServer
- SCSendMessage
- SCGetServerStatus
- SCDisconnectVolUsers
- SCGetUserNameRec
- SCGetUserMountInfo
- SCSetCopyProtect
- SCClrCopyProtect
- SCWakeServer
- SCSleepServer

Macintosh File Sharing 7.6.1 does not support the following server control calls which are supported by AppleShare 3.0 and does not support any of the internal server control calls used by AppleShare Pro or AppleShare 4.0:

- SCInstallServerEventProc
- SCRemoveServerEventProc
- SCGetServerEventProc

Of the server control calls that are supported, some behave differently with Macintosh File Sharing 7.6.1 than they do on an AppleShare File Server. The sections that follow explain those differences.

SCDisconnect

The SCDisconnect call does not send disconnect attention messages under Macintosh File Sharing. SCDisconnect was supported by older versions of File Sharing, but the scFlags and scMessagePtr fields in the parameter block were ignored. Some program failed to initialize those fields, so Macintosh File Sharing 7.6.1 must ignore them to prevent address and bus errors.

SCGetSetupInfo

The SCGetSetupInfo call now supports the scMaxVolumes, scMaxExpFolders, and scCurMaxSession fields in the parameter block, and in the setup information record (SetupInfoRec), SILoginMsg is supported. However, the SCGetSetupInfo call still does not use the following fields of the setup information record:

- SIVolInfoLocation
- SIVolInfoVisible
- SIUserInfoLocation
- SIUserInfoVisible
- SIShutdownMins
- SISpare

SCSetSetupInfo

The SCSetSetupInfo call now supports the SILoginMsg in the setup information record (SetupInfoRec). However, the SCSetSetupInfo call still does not use the following fields of the setup information record:

- SIVolInfoLocation
- SIVolInfoVisible
- SIUserInfoLocation
- SIUserInfoVisible
- SIShutdownMins
- SISpare

SCShutDown

The SCShutDown call does not send shutdown attention messages under Macintosh File Sharing. SCShutDown was supported by older versions of File Sharing, but the scFlags and scMessagePtr fields in the parameter block were ignored. Some program failed to initialize those fields, so Macintosh File Sharing 7.6.1 must ignore them to prevent address and bus errors.

What Volumes Are Shared?

Audio CDs are Never Shared

Because a shared Audio CD has never made sense, Macintosh File Sharing 7.6.1 never shares Audio CDs. Audio CDs are identified by File Sharing by the file system ID of the Audio CD Access file system, \$4A48.

bDontShareIt Volume Attribute Bit

Foreign file systems can now tell Macintosh File Sharing to never share their volumes by setting the `bDontShareIt` volume attribute bit (bit 21 in the `vMAttrib` field of `GetVolParmsInfoBuffer`) returned in response to a `PBHGetVolParms` request (`HFSDispatch`, selector \$30). Network foreign file systems should always set the `bDontShareIt` bit.

New error code for `PBUnmount`

When you try to unmount a volume that has one or more files open, `PBUnmount` will fail because the volume is busy. In the past, the error result returned by `PBUnmount` when this happened was always `fBsyErr` (-47). To distinguish between the volume being busy because files are open by the local user vs. remote users, Macintosh File Sharing 7.6.1 now returns two error codes: `fBsyErr` if all files are open only by a local user; `afpFileBusy` (-5010) if any files are open by remote users.

Further Reference:

- *Inside Macintosh: Files*, Chapter 2, `PBHGetVolParms`
- Mac OS SDK CD-ROM, AppleShare API SDK (AppleShare 3.0 Developer's Kit), Server Control Calls and Server Event Handling
- FL 35 - Determining Which File System Is Active