

10 Known Problems

The current version of SimpleWave doesn't implement a couple of things which may limit the working a bit. Below is an overview of these problems.

Real problems which need to be fixed

None!

Minor problems and special considerations

- Invisible files, even when not owned by the system, are not checked or deleted.
- When you have updated a whole group of related files (new system software version?) you may run into problems when the user restarts or performs a shutdown before all files are properly copied. You may end up with a Finder and System file of different versions! If you expect such a situation then you should either install the files manually or deny access to the computers while SimpleWave updates the disks (weekend, overnight?).
- When the user adds or deletes a file or folder, while SimpleWave is checking the parent folder at the same time, a file or folder may get skipped.
- The Owner name is set to whatever is stored with the "User & Groups Data file" (usually located in the Preferences folder) and reset when this file is updated from the server.
- When the client computer is a powerbook the connection with the server is lost when the portable computer goes into the sleep state. There is no solution because SimpleWave will probably already abort checking when the server connection is re-established if you use the AutoRemounter control panel.
- Several testers reported their network froze for some time and then came back to life. Symptoms were the solid Appletalk arrows in the upper-left corner of the screen, and the watch cursor.

Jim Luther works at Apple Computer, Inc. and is involved with the File Manager (part of the System software) and the ASP protocol used to communicate over the network with file-servers.

Privately he told me the following (not representing Apple):

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> Date: Fri, 28 Apr 1995 00:10:35 -0400
> From: JumpLong@aol.com (Jim Luther)
>
>
> Sounds like you have a GetRequest starved server. Here's what I mean...
>
> AppleShare uses ASP as it's transport protocol. ASP requests are send
> with an infinite retry count - the client keeps sending it's requests
> until they are filled, or until the session is torn down.
>
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> AppleShare uses a set number of active ATP GetRequests (if I remember
> correctly, AppleShare 3.0 has three, but that was increased with
> AppleShare Pro and 4.0). Whenever a request comes in from a client, the
> number of pending GetRequests is decremented by one. When the request is
> satisfied, the server call GetRequest again.
>
> When all GetRequests have been used, there's nothing to catch requests
> from clients so they go into the bit bucket (they're lost). However,
> since ASP uses infinite retries, the client will eventually get through.
>
> OK, with that as our background, what happens when you beat on a server
> really hard with *lots* of clients? Some of the clients get through and
> the rest keep trying. In some cases (especially on slow networks with
> little bandwidth like LocalTalk), that can end up clogging the network
> with the retries to the point that the replies to the requests that did
> get through to the server have a hard time getting out. Until they get
> out, another GetRequest won't be posted...
>
> I think you can see what happens. You get a traffic jam on your network.
>
> Is this your problem? I don't know. If you have a network sniffer that
> shows the level of network traffic, it would be easy to look and see.
>
> Oh yeah, a network that loses lots of packets makes this problem show up
> even faster.
>
> If you do have this problem, then the only ways to solve it are to:
>
> 1) increase the bandwidth of the network (if your network bandwidth is
> the problem)
> 2) get a faster server (if you have a fast network, but the server cannot
> handle requests fast enough)
> 3) use a different protocol and a client/server model that lets the
> *server* tell clients to back off when the load gets heavy.
>
> Hope this helps.
>
> - Jim Luther

Since SimpleWave currently heavily depends on the AppleShare file-servers it is not possible right now to use the third suggested solution. There is no way to bypass the problem and detect if a lock-up is going to occur. For the moment we have to live with it.

The best and cheapest solution is to lower the maximum number of connections for the file-server. Every computer trying to connect would be denied access if the limit is reached. If it was SimpleWave trying to get connected, it will try again at the next startup.

For the AppleShare FileServer (3.0) you can do this in the AppleShare Admin application. Select the "File Server Preferences..." item from the "Server" menu and the window which appears allows you to change the maximum number of connections.