



Networking Strategies (For The Future)

SIMS 2005 User Conference
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NetWare 4.2 Alive and Kicking

- SIMS has purchased master licenses for NetWare 4.2 and can supply new as well as upgrade licenses to our customers when NetWare 6.x licenses of equivalent users/type is purchased from us also.
- Cost: Free – You just have to purchase the NetWare 6.x licenses through us.
 - Buy a 5 user additive 6.5 license through us and you get it as well as a 4.2 – 5 user license from us.

Why still NetWare 4.2 ?

- Clustering “at this moment” might meet the specification according to UL, but it does not meet the SIMS “would I trust this with my alarm account” test.
- Clustering works fine for application server environments but in true file server configurations it can – and will – lose alarm signals during a server switchover.
- Clustering also requires the use of external “Network Attached Storage” which presents a single point of failure.

Dual Channel Clustering

- A new technology is in development whereby each server is connected to two entirely separate network attached storage devices. This removes the single point of failure issue with regular clustering.
- Dual Channel Clustering is evolving to also support “Client State Refresh” which will allow the client workstation to notify the new server “where it left off” during a switchover, hopefully eliminating the possibility of lost alarm signals.

When will it be available ?

- Dual Channel Clustering is available today. However the clients still do not support “Client State Refresh” so it’s unusable in our environment. In April, we are scheduled to receive test hardware from Dell and are working with a company that is in pre-Alpha development on their client. Hopefully by mid-summer we’ll have more information available on this.

Don't hold your breath....

If this isn't your first SIMS Users Conference you will realize this isn't the first time I've mentioned similar developments to you. I'd like to give you a guarantee that it will happen on a certain date but since companies change their marketing strategies hourly it seems, I won't be holding my breath.

The Technical Aspect

- Why SFTIII works and Clustering Doesn't.
 - If you click on “Network Neighborhood” on your Windows workstation when connected to a pair of SFTIII servers, you probably noticed that you only see one server and not two. This is because the physical servers mirror a “virtual server” in memory and that is what the workstations connect to. As long as one of the physical boxes still has the virtual server running, the workstations are fine.

More Technical Detail....

- To the workstations, a pair of SFTIII servers appears to be one server that has two network cards in it. Since the IPX protocol allows multi-homing, when one of the servers die, the workstation just continues communicating to the other one.

Mis-Information

- People believe that the “primary” SFTIII server is the only one talking to the workstations. This is incorrect. Since they are fully mirrored, typically about half your workstations will be talking to one server and the rest to the other server. Network topology issues can prevent this from working properly, but when installed with compliant devices on the network, that’s how it works.

Why clustering fails....

Clustering uses a shared hard drive with two servers talking on the network. It does not “mirror” anything really. Any mirroring that takes place is done in the Network Attached Storage devices. When a server “dies” the backup server takes over what the other server was doing, however any workstations that had files open, locks on records and so forth, have been lost.

Client State Refresh

If/When Client State Refresh is available, the clustered servers still won't be smart enough to handle the switchover like SFTIII does.... But the client will be smart enough to immediately request the new server allocate the same resources it had open/locked on the other server. In order to accomplish this, there will most likely be a 60 second "synchronization" window during which time everything on the network remains "locked".

But other vendors.....

- The old motherly adage “If your friends jumped off a cliff would you ?” applies.
- Either they don’t have the technical knowledge to know why clustering is dangerous or they are looking the other way to succumb to pressure in using a Windows platform.
- Would you drive your car if you thought the brakes wouldn’t work ?

The SIMS “Family”

- You can be sure that we stay current on new developments in the server technologies very closely and the very second that we feel an alternative platform meets our concerns, we’ll tell you about it.
- You aren’t just our customers, you are part of the SIMS family of central stations. And we won’t recommend things to our SIMS family we wouldn’t want protecting our family at home.