



# Networking Developments

SIMS 2006 User Conference  
( Steve Ryckman )

## 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.

## A New Alternative

- Stratus Technologies manufactures a redundant server solution which runs Microsoft Windows Server 2003 or Linux. This is proprietary hardware, they have basically done the same thing as SFTIII but at the hardware level instead of Network Operating System.
- More information on this available on Monday at 9 am.

## How does it compare

- Both solutions mirror memory between two physical servers. The difference is SFTIII uses MSL cards to move data between standard server machines and the Stratus machines have a high speed backplane that interconnects the two servers as one.
- Switchover is actually more efficient on the stratus Servers as the hardware knows something has gone wrong immediately, whereas software has to wait to detect it.

## Comparison Continues

- SFTIII is a more economical solution, especially now that we include the SFTIII license for free since we have a master license for Netware 4.2
- SFTIII by it's nature is limited to roughly 150mb/s of bandwidth due to the FDDI technology used for MSL cards.



## Why Clustering Doesn't Work

- Why clustering Doesn't Work as Well.
  - If you click on “Network Neighborhood” on your Windows workstation when connected to a pair of SFTIII servers or Stratus 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 or Stratus Servers appears to be one server that has two network cards in it. When one of the server die, the workstation just communicating to what it believes is a second network card in the same server. The workstation has no idea. It is actually a separate server.



## Misinformation

- 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.

## The Stratus Perspective...

- The stratus servers do have an “active” and “standby” role, but since the switchover is so fast the workstations aren’t aware that anything happened.
- Since the stratus servers can run windows 2003 server, they can run other applications that previously wouldn’t run on the Netware server. For instance, Terminal services can be fully redundant.

## But the 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 other platforms for economical reasons.
- 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.