



case study: N+1 server availability

Benefits of Server Failover with Scalent

Reliability

Scalent ensures that when a server failure occurs, HedgeFundCo can fail over that server, along with the appropriate network topology and storage connectivity - and without human intervention.

Speed

Scalent enables a HedgeFundCo recovery machine to go from dead, bare metal to a live, networked server in five minutes or less.

Cost

Scalent saves HedgeFundCo from having to maintain an N -to- N mapping of production servers to recovery servers. With Scalent, HedgeFundCo has an $N+1$ failover architecture.

Scalent and HedgeFundCo: \$5 Billion in Transactions

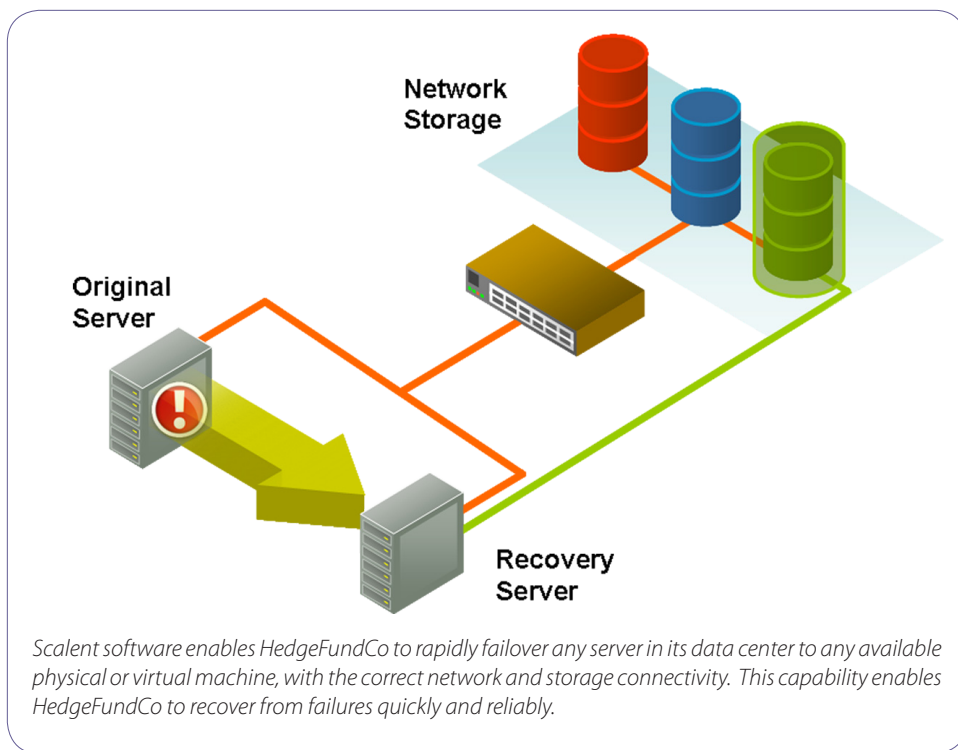
In financial institutions, server downtime is not measured in employee coffee breaks, but rather in profitability and lost opportunities per second. To mitigate IT failures, financial firms employ load-balancing, redundant hardware, shared file systems, and third-party high availability and clustering solutions. Frequently, though, finance-specific and in-house custom applications do not work with standard high availability solutions. The following study describes how a leading hedge fund is leveraging Scalent software to fail-over production their trading services.

Failing Over 1000 Servers Running Customized Applications

HedgeFundCo* has active trading desks in the US and international locations. In order to support the trading desks' activities, HedgeFundCo dedicates individual servers to teams of traders, and groups of servers to cross-organizational trading activities. Due to the transactional nature of HedgeFundCo's custom applications, the loss of a single server can terminate operations for all of the traders who were working on the hosted applications. Therefore, HedgeFundCo's success depends on the ability of these servers to recover quickly from failure.

Unfortunately, in HedgeFundCo's environment, manual failover processes and physical server reprovisioning do not suffice. The physical recabling required to reprovision a machine can take hours, or even days, and once a new server comes online, it is still not useful without the correct network and storage connectivity, which can take even longer to reproduce. Moreover, failing over server software can induce problems if the underlying hardware does not match the original machine's hardware.

Due to the custom nature of HedgeFundCo's trading applications, HedgeFundCo's attempts to leverage industry-standard high availability solutions had failed. Existing high availability solutions did not support HedgeFundCo's many in-house applications, nor its multi-vendor data center infrastructure. HedgeFundCo needed a solution which would provide high availability for its custom applications and disparate hardware.



“Using Scalent, we were able to deploy and execute DR, Dev’t, and QA/Test on 75% fewer servers, saving us millions of dollars per year, with no loss in performance.”

—Vice President,
HedgeFundCo

HedgeFundCo found that Scalent Systems was the only company whose software met their server failover needs. Scalent software allows any non-production machine to act as the recovery server for any production server, and Scalent chooses the best available machine for each server at the time of failover. By automatically failing over server software, as well as the correct network topology and storage connectivity, Scalent enables five-minute recovery of every server in HedgeFundCo's data center.

* Real name withheld.

How Scalent Reduces Cost & Complexity

Lower Infrastructure Overhead

reducing redundant, underutilized infrastructure.

Simplifies management

by enabling an install-once environment from which servers can be automatically repurposed in 5 minutes.

Increases performance

by enabling on-the-fly movement of servers, idle machines can be automatically redeployed to where they are needed when they are needed.

High Availability and Disaster Recovery Site Consolidation

In addition to supporting HedgeFundCo's custom applications, Scalent manages the disparate operating systems in HedgeFundCo's production environment - Linux, Windows, Solaris, and AIX. At the hardware level, Scalent software deploys servers onto HedgeFundCo's x86, SPARC, and AIX processor systems. And Scalent manages HedgeFundCo's virtualization infrastructure, deploying both VMware ESX server and Xen hypervisor, as well as repurposing servers into these platforms.

As an additional benefit, Scalent software operates outside of the data path of HedgeFundCo's servers, so it does not degrade data center performance. Because Scalent software manages servers through out-of-band communication, if the Scalent management software were to fail, there would be no impact on HedgeFundCo's servers.

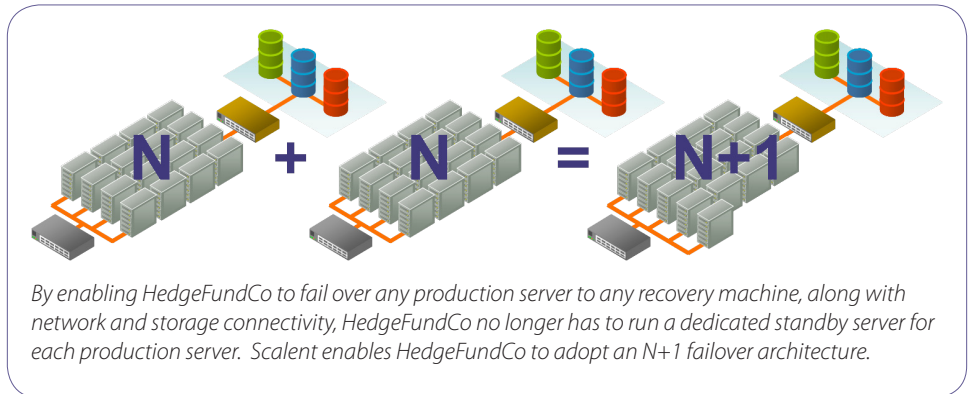
With Scalent managing its servers, HedgeFundCo no longer needs a one-to-one mapping of production to recovery machines. Scalent software understands the resource requirements of every HedgeFundCo server, and, when a server fails, Scalent automatically allocates an appropriate recovery machine, adjusts the network topology and storage connectivity, and boots the machine as the recovery server. Scalent enables HedgeFundCo to repurpose its machines from dead, bare metal to live, connected recovery servers in five minutes or less.

Scalent's ability to rapidly repurpose individual servers also gives HedgeFundCo the flexibility to consolidate its disaster recovery data centers. Instead of supporting four separate sites, each tied to a different production data center, HedgeFundCo now maintains one disaster recovery data center. In the event of a failure at a production data center, Scalent quickly and automatically repurposes the appropriate disaster recovery machines as failover servers, along with the appropriate network topology and storage connectivity.

From N+N Architecture to N+1

Before installing Scalent, HedgeFundCo had to maintain a standby server for every production server. This N+N failover architecture ultimately doubled HedgeFundCo's costs for hardware, software, power, cooling, and maintenance.

With Scalent, however, HedgeFundCo's servers reside on network storage, and, in the event of a failover, Scalent software deploys the servers to appropriate physical or virtual machines. Because Scalent can quickly repurpose any machine to run any production server, HedgeFundCo does not need to maintain one-to-one mappings of production servers to failover machines. HedgeFundCo can simply maintain a small pool of recovery machines and repurpose any of those machines as any recovery server when necessary. This cuts HedgeFundCo's costs in half.



This new architecture gives HedgeFundCo N + 1 failover capability. Instead of maintaining 1000 hot standby servers to support the recovery of its 1000 production servers, HedgeFundCo can maintain a small number of recovery machines, or even just one recovery machine. Since Scalent can quickly repurpose a recovery machine as any of the N production servers, HedgeFundCo now has an N + 1 failover architecture.

About Scalent Systems

Scalent Systems is the leading provider of server repurposing software to large data centers worldwide. Scalent's software enables data centers to react in real-time to changing business needs by dynamically changing what servers are running and how those servers are connected to network and storage. The result is an adaptive infrastructure, where data centers can transition between different configurations – or from bare metal to live, connected servers – in five minutes or less, without physical intervention. Using Scalent software, companies have been able to implement cost-effective solutions while reducing server counts, simplifying manageability, and increasing reliability. Many of the Fortune 1000 companies rely on Scalent to support their success, having adopted the software as an integral part of their IT operations.

To learn more about how Scalent can help you, please visit www.scalent.com or call 1-866-4-Scalent.

