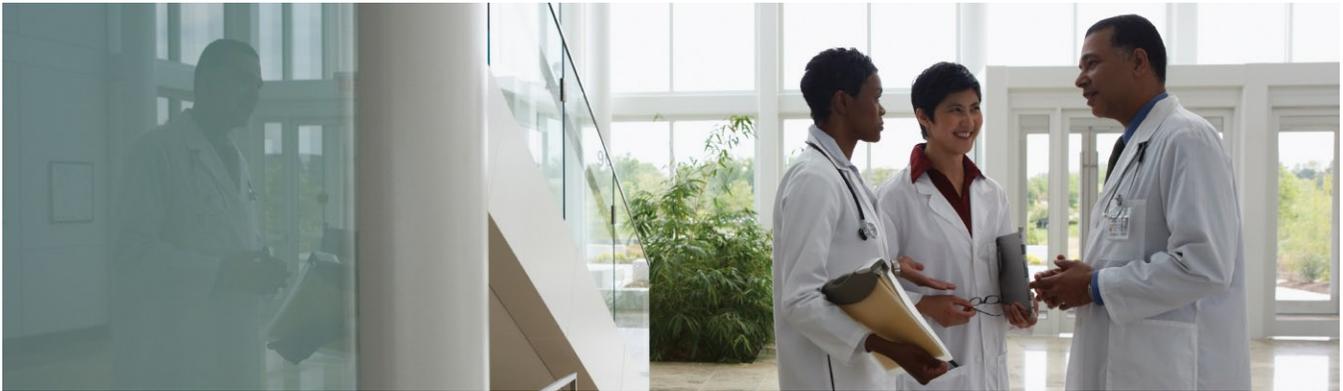




NetApp™
Go further, faster

Success Stories

Favrille Gains Flexibility, Scalability to Grow Rapidly With NetApp and VMware



KEY HIGHLIGHTS

Industry
Healthcare

The challenge
Maintain continuous access to data.
Minimize maintenance, power, and cooling costs.

The solution
NetApp iSCSI SAN with VMware

- Benefits**
- 80% lower maintenance time and costs
 - 97% less time to purpose and provision virtual servers (20 minutes versus one day)
 - Can expand storage capacity in just 30 minutes
 - Can quickly move virtual servers from one physical server to another without downtime
 - Can restore a Snapshot™ copy of an entire server in just seconds

CUSTOMER PROFILE

Favrille (www.favrille.com) is a biopharmaceutical company focused on the development and commercialization of patient-specific immunotherapies for the treatment of cancer and other diseases of the immune system. Favrille owns a proprietary technology that enables efficient development and manufacturing of active immunotherapy products, designed to stimulate a patient's own immune system to mount a specific and sustained response to disease. The company, based in San Diego, California, was launched six years ago and is in a start-up phase until the FDA approves its drug, Specifid. However, even with zero sales, start-up companies frequently have to plan and build their IT infrastructures to accommodate rapid growth. Favrille is awaiting FDA approval soon, and once momentum picks up there will be no time for systems to crash because of capacity constraints. Following FDA approval, the company will immediately swing into full production, and it will need all the processing and storage capacity it has been building for over three years.

THE CHALLENGE

Prepare for rapid growth while maintaining flexibility

Originally equipped with direct-attached storage (DAS), the company experienced a spike in its volume of data from two mass

spectrometer machines it was using for research. Even though FDA approval was still far off, Favrille had to begin scaling up.

Favrille chose the NetApp FAS3020 storage system for its flexibility and ability to handle rapid growth. With the Data ONTAP® operating system, the NetApp FAS3020 storage system can support both FC SAN and iSCSI SAN network protocols and both Fibre Channel and SATA disk. This enabled the young company to choose less expensive options for its storage with an iSCSI network and SATA disks.

“We started out at the low end with a lot of SATA disk and iSCSI,” says Tina Frazer, network engineer, Favrille. “With NetApp, we knew we would be able to trade up to the higher performance and more expensive FC SAN and Fibre Channel disks when the need arose.”

“We didn’t know where we would be today or two or three years from now,” says Tom Pearce, senior network manager, Favrille. “All we knew was that we would be implementing big systems and that we would have large data requirements. So really, what we were looking for was a vendor that would be able to address those issues as the company grew. NetApp was the right choice for us.”

“NetApp equipment works the way NetApp says it works. We’re just a small company, and the fact that we can enjoy this level of engineering, technology, and support is amazing to me.”

Tina Frazer
Network Engineer, Favrille

Integrated Archive Systems (IAS), a NetApp partner, helped with the implementation. “They have been an incredible resource for us,” says Pearce. “They represent all different types of solutions, so they are able to come to the table knowing a whole lot more than some other vendors who represent only one or two solutions. They can give us exactly what we need without the big sales slant. We trust their opinions. They have incredible engineers on staff, and their sales people are very responsive.”

THE SOLUTION

Leverage the synergy between NetApp and VMware

As the production phase drew nearer, the need for a complex, compute-intensive server and storage environment became clear—and NetApp’s storage was a key part of the solution.

Specificid is unique in that the drug composition is specific to each patient. Each patient lot is an entire manufacturing run. In the regulated pharmaceutical environment, Favrille must keep records for each batch it produces, and that translated into a stack of paper 12 to 18 inches tall for every batch. To turn the paper-based process into an

electronic one, Favrille chose a well-known software suite designed to provide electronic record keeping for each manufacturing batch, manage the resulting documents, and store and manage data. The software included Camstar InSite, a manufacturing enterprise system, and IBM SCORE, a document management system that meets pharmaceutical regulatory compliance requirements. These industrial-scale management software packages had to be integrated with Favrille’s SAP® enterprise resource planning system, and all the data generated had to be stored and protected.

For a small company of fewer than 200 employees, the software and hardware required were a big challenge. IBM consultants sized the hardware needs and concluded that Favrille would require 28 servers to run the software. The small data center would not be able to accommodate 28 physical servers with their power and cooling needs. The IT team had one storage administrator, and for cost reasons it was important to keep the headcount down.

“Since we didn’t have the space and we didn’t want to be burdened with the power and cooling costs, there was only one

solution,” says Frazer. “That was going virtual.” Virtual servers would not only solve the operational challenges, they would also enable IT to respond immediately to needs for more server power as the company grew. And by using VMware, Favrille would be able to take advantage of the ability of the NetApp FAS3020 to scale seamlessly and virtualize both servers and storage loads. In addition, the company leveraged NetApp Snapshot software to make copies of the servers and their data without consuming large amounts of disk space or using server cycles to make these copies.

“The combination of NetApp and VMware was a slam-dunk decision for us,” says Frazer. “We actually underestimated the storage needs, but NetApp let us grow on the fly. We added two extra shelves of disks in a matter of minutes.”

“We evaluated blade servers and rack-mounted servers, but VMware and NetApp seemed to be the right combination,” says Pearce. “The VMware® ESX 3 and NetApp FAS3020 took less power, produced less heat, gave us a better backup solution, and had the advantage of using the storage we already owned.”



BUSINESS BENEFITS

New servers in minutes

Now consultants and employees turn to the IT department for new servers to implement and test applications. The IT group can respond with a new server in 20 minutes, compared to previously taking a day to deploy an individual server, plus the time it took to order and receive the hardware.

It happens in the course of research and development that some new ideas don't work out. "NetApp Snapshot copies have saved us in so many instances," says Bill Fisher, network engineer, Faville. "With Snapshot copies, we can recover to the previous version within minutes. NetApp gives us the reassurance that any step that we take in the implementation process is reversible very rapidly and reliably. With tape backup solutions or other disaster recovery products, there are always multiple steps that can involve a lot of time and, honestly, the trust isn't all there—as opposed to NetApp Snapshot copies, which give us complete comfort."

80% less maintenance time with virtual environment

Three IBM System x 445 servers now host the equivalent of 28 physical servers, including test and development, qualification, and production environments. The NetApp FAS3020 storage system has two controllers in active-active configuration, so that data is always available. If one controller fails, it fails over flawlessly to the other controller, which takes over ownership of both controllers. The network supports both iSCSI-SAN and CIFS for flexibility.

With NetApp's storage hosting all the data, along with the operating systems of the virtual servers, workloads can be reassigned among the three physical servers without interrupting users' activities. In fact, the IT team can shut down the servers and take Snapshot images while the machines are off and then bring them back up again rapidly. This virtual environment offers flexibility in maintaining the servers, and it also requires significantly less maintenance time. In fact, ongoing maintenance, including updates

and patches, takes approximately 80% less time than it would have taken with 28 physical servers plus storage. In addition, pooling the processors of the IBM machines enables maximum utilization of the physical resources, resulting in highly available and reliable processing capacity for the 28 virtual servers.

The three IBM boxes are configured in a cluster. "Any one of those three boxes can service the virtual machines," says Fisher. "We are able to move the actual processing of one machine from one IBM box to another because our NetApp storage is sitting out there hosting all the data on those servers. The IBM machines are clustered with VMware, and they talk to each other to exchange workloads seamlessly."

Recently the IT team upgraded the VMware ESX version on the three IBM servers. The team was able to upgrade all three ESX host servers during business hours by using VMotion™ without bringing down the production servers. Previously the team had to do upgrades over the weekend to avoid causing interruptions to production systems.

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Tom Pearce
Senior Network Manager, Favrilie

No surprises make for happy customers

Favrilie has also been impressed with the promptness and efficiency of NetApp SupportEdge Premium support service with four-hour parts replacement and software updates. “We have been really pleased with the level of support we get on the phone with NetApp,” says Frazer. “We get knowledgeable people right away. I have never had to escalate a call. NetApp’s reliability has been really great, and we trust it.”

To sum up, Favrilie has found that NetApp’s equipment performs without surprises. “NetApp equipment works the way NetApp says it works,” says Frazer. “That’s really the highest praise I can give a vendor. We’re just a small company, and the fact that we can enjoy this level of engineering, technology, and support is amazing to me.”

SOLUTION COMPONENTS

NetApp Products

NetApp FAS3020

Data ONTAP 7 operating system

NetApp Snapshot

Protocols

CIFS, IP-SAN

NetApp Services

NetApp SupportEdge Premium support service

NetApp Partner

Integrated Archive Systems (IAS)
www.iarchive.com

Partner Products

VMware ESX 3

Environment

Applications: IBM SCORE, Camstar InSite, SAP ECC 5.0

Databases: Oracle® 9i™ Database

Server platform: IBM System x 445

Users: 200 employees and consultants

NetApp creates innovative storage and data management solutions that accelerate business breakthroughs and deliver outstanding cost efficiency. Discover our passion for helping companies around the world go further, faster at www.netapp.com.

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