



# Be The Match saves more lives with better data



## NetApp helps the cause

- 409 NetApp employees on the National Bone Marrow Donor registry
- Contributed \$70,000 to patient assistance fund
- Raised \$27,000 at a NetApp hosted golf tournament

## Investments in NetApp storage infrastructure accelerate donor-patient matches.

For people with life-threatening blood diseases, the most promising treatment is the generosity of another human being.

Be The Match is a nonprofit organization dedicated to helping patients get life-saving bone marrow transplants by matching them with non-relative donors.

With an existing registry of more than 9 million potential donors in the United States and access to 39 million potential donors worldwide, Be The Match is critically dependent on its IT infrastructure and data management.

NetApp® technologies, including an A-Series AFF A700 array and ONTAP® and SnapCenter® software, are central to the organization's data environment and have a direct impact on the number and quality of these matches.



## SQL instances spun up in minutes

“About 10 years ago we chose NetApp as our partner to help rebuild our infrastructure. And we’re now able to cure almost twice as many people per year.”

Mike McCullough  
Chief Information Officer, Be The Match

Over the past 35 years, Be The Match has facilitated 114,000 bone marrow transplants that can cure 55 blood-related diseases. More than 455 medical providers throughout the world and 170 transplant centers in the United States provide these therapies to patients in need.

A bone marrow transplant must be harvested from a living donor with a genetic blood profile that matches that of the patient. Typically, only 30% of donors are related to the patient, requiring a match to come from outside the family.

In 2021, there were 6,649 donor matches made. A U.S. registry contains 9 million potential donors and a global registry contains 39 million.

“We’re constantly looking for ways to use data, to improve our ability to match donors with patients in need,” said Chief Information Officer Mike McCullough. “We’re doing that through enhanced

typing and through improved algorithms that are helping us find better ways to match patients and donors.”

In addition to facilitating matches, the organization also provides transplant research and is currently participating in more than 200 research projects. Be The Match also offers financial support for patients, advocacy, and education to advance their cause and increase participation in the registry.

### Applications that must perform

Headquartered in Minneapolis, Minnesota, Be The Match has about 1,100 employees. The IT infrastructure is built around two data centers, one on premises and a backup center 12 miles away. The storage infrastructure is approximately 1PB divided into thirds between SQL and Oracle databases and file systems. The VMware environment consists of hundreds of hypervisors and several thousand VMs.

The applications developed by Be The Match must integrate with hospital systems in wide use such as Epic, as well as more specific applications such as those used for research. Care facilities use a core application to log into and find potential matches. Diverse organizations around the world use the matching and research applications, which must perform well and be reliable.

For Josh Thorstad, Data Center Services supervisor at Be The Match, partners that can continually improve the infrastructure play an important role in delivering care. As the mission expands and technical challenges arise, NetApp is a constant presence.

“We have been working with NetApp for over 10 years. It’s definitely a partnership,” Thorstad said. “We come with problems, and NetApp comes back to us with solutions.”



## What is the problem?

Each year, Be The Match strives to match more patients with donors - the goal for 2022 is to match 7,000 patients in North America. However, that number represents only about a third of the need. As Be The Match expands its goals, the infrastructure needs to expand as well. In an ongoing effort to modernize the infrastructure, the team is using NetApp technologies to reduce complexity, develop and deliver more services, and improve security.

The VMware environment needed improved performance and flexibility.

At the heart of the infrastructure is a NetApp A-Series A700 array capable of handling the varied workloads. As more virtual machine data stores are needed, they are easily created on the all-flash array, supported by unified storage FAS8700 and FAS2650 systems.

“The A-Series has the performance we were looking for. Those databases need to be available, and we need to be able to refresh them quickly,” Thorstad said.

NetApp SnapCenter software is an important component of the stack that is used for backup and recovery and cloning. Other storage vendors try to emulate the one-button cloning capabilities of SnapCenter through the use of APIs, but SnapCenter performs these tasks natively without requiring tweaks or intervention. Cross-platform support for both Oracle and SQL databases is a major feature.

“SnapCenter is how we protect our data and how we refresh our lower environments,” Thorstad said.

By using SnapCenter to offload VMware CPU utilization to the storage devices, the performance of everything – the VMs, the databases, the applications – is significantly improved and portability is increased.

NetApp ONTAP Select is used in the environment to unify NFS data shares across multiple sites.

## Big performance gains

Moving off of legacy systems and tape has significantly improved the performance of the databases and the applications, and the recovery window from backups has been reduced to under 15 minutes. Database administrators can self-manage and support faster development.

## You may save a life

Joining the National Bone Marrow Registry is easy. Visit [bethematch.org/NetApp](http://bethematch.org/NetApp) to start the online process. Potential donors age 18 to 40 are sent a swab sample kit for testing. Once you're processed and accepted into the registry, doctors have the information they need to match you with a patient. It could take months or years to be matched, or you might never be matched at all. But your generosity could be the chance at life that someone is waiting for.

With ONTAP Select, persistence storage for new databases can be acquired in minutes. An instance of SQL can be spun up in an hour instead of the 3 days previously required.

According to Thorstad, “Before ONTAP Select, there would be a long process of ordering equipment, rack and stacking it, installing it, and provisioning it. Now it's downloading a file and deploying ONTAP, and within a matter of hours, having storage available for development.”

DevOps supported by the data center services team are more efficient, and development teams can produce faster, more productive sprints.

With NetApp at its data fabric core, a more complex environment is actually more nimble and responsive to business demands, and can recover faster from any disruption.

Although the Be The Match infrastructure is primarily on premises today, the organization's investments in NetApp can support a hybrid cloud with very little effort. The same workflows and the same configurations can be moved to public and private clouds.

“We don't have to relearn a technology. It's the same interface, it's the same or even more value-add capabilities in a cloud. So the benefit of sticking with NetApp is clear,” Thorstad said. “In the future we could use the same SnapCenter software to back up our databases, make those Snapshot copies, and with one press of a button, replicate that data out to the cloud, creating an air gap for enhanced security.”

## More lives saved

NetApp data technologies power some of the world's largest companies, but few are quite as important as Be The Match. The benefits of the technology are clear.

“Through NetApp technologies, we’ve had better performance of our databases and applications, faster development for new applications, and increased business agility.” McCullough said.

But the ultimate goal is life changing.

“Transplants happen between complete strangers, and every year we stretch our goal to facilitate more,” McCullough said. “We haven’t reached the limits of kindness and generosity. And thanks to NetApp we aren’t limited by the data infrastructure, either.”

## NetApp Products

NetApp SnapCenter

NetApp A-Series AFF

NetApp FAS

NetApp ONTAP

## Partner Products

VMWare

Oracle

MS SQL

**Learn more about NetApp and Be The Match**



+1 877 263 8277

### About NetApp

In a world full of generalists, NetApp is a specialist. We're focused on one thing, helping your business get the most out of your data. NetApp brings the enterprise-grade data services you rely on into the cloud, and the simple flexibility of cloud into the data center. Our industry-leading solutions work across diverse customer environments and the world's biggest public clouds.

As a cloud-led, data-centric software company, only NetApp can help build your unique data fabric, simplify and connect your cloud, and securely deliver the right data, services and applications to the right people—anytime, anywhere. To learn more, visit [www.netapp.com](http://www.netapp.com)



© 2022 NetApp, Inc. All Rights Reserved. NETAPP, the NETAPP logo, and the marks listed at <http://www.netapp.com/TM> are trademarks of NetApp, Inc. Other company and product names may be trademarks of their respective owners. CSS-7233-0322