

SUCCESS STORY

# NetApp Engineering cuts AWS costs by up to 60% with Spot by NetApp



**Ridiculously fast speed at less than half the cost? Sounds like a no-brainer.**

#### **Problem solved**

Inside NetApp's Common Test Lab—the proving grounds for NetApp® Cloud Volumes ONTAP®—cloud compute costs were rising.

#### **Client outcomes**

NetApp Engineering deployed Spot by NetApp to enable cloud agility for Cloud Volumes ONTAP testing while slashing compute costs in AWS by up to 60% per instance.

## SUCCESS STORY

**Projected  
cost savings:  
\$35K  
per month**

“Seeing all that on one screen, it just screams at you, ‘Use me!’”

Mekka Williams,  
Principal Engineer, NetApp Hybrid Cloud Engineering team

### **More cloud. Less cost.**

NetApp’s Common Test Lab (CTL) provides environments for QA engineers, product developers, and any engineer who needs a test bed configuration for NetApp products. A combination of microservices, a rich user interface, and a proven set of libraries make CTL the testing environment for ONTAP, NetApp’s legendary storage OS.

Inside CTL’s cloud test ecosystem, where NetApp engineers test updates to Cloud Volumes ONTAP for AWS, cloud compute costs were rising. EC2 usage for Cloud Volumes ONTAP for AWS testing averaged about 85 instances per day. Monthly spending was projected to top \$110,000 for Cloud Volumes ONTAP for AWS alone. Eyebrows were raised.

“When you’re testing in the cloud, at some point, someone is going to come knocking at your door to talk to you about your bill,” says Mekka Williams, the principal engineer on NetApp’s Hybrid Cloud Engineering team and the cloud test architect for Google Cloud, AWS, and Azure. “We needed to figure out how we could curb our spending without reducing efficiency.”

The team began looking at using AWS EC2 spot instances, which let you use excess compute capacity in AWS for up to 90% less than the On-Demand price. The catch—and it’s a big one—is that AWS can terminate a spot instance with just a 2-minute warning if it needs that capacity back.

“We tried to use a native cloud service to help us utilize spot instances, but our QA teams weren’t too excited about the idea that an ONTAP node might be yanked from underneath them during their test execution,” explains Williams. “They just didn’t need the extra burden of having to battle with that uncertainty.”

Enter Spot (now Spot by NetApp), a novel and ingenious way to take advantage of hyperscale spot instances at discounted prices without the risk. Elastigroup by Spot uses machine learning models to monitor compute usage and predict interruptions of spot instances in advance, migrating at-risk instances to new instances to avoid disruption.

## SUCCESS STORY

Williams started doing some testing of her own to see if Spot could be made to work in a complex enterprise environment such as NetApp's CTL. As with those of many large enterprises, NetApp's library suite is a bit of a juggernaut, featuring older languages that have been used to test ONTAP for years, such as Perl, and newer languages, such as Python and cloud-native COI.

Spot handled it like a champ. Preliminary results showed that by integrating Spot APIs, NetApp's CTL could save around 60% in compute costs per instance. In addition to the projected cost savings, no disruption to service was experienced, giving Williams the confidence that Spot would keep CTL up and running.

Williams and her team excitedly presented their findings to NetApp's cloud leadership. Days later, Spot became Spot by NetApp.

"I had people calling me asking if we knew anything about the acquisition," says Williams. "We had no idea, but the solution was so good that we were going to use it regardless."

Today, Williams and her team are busy identifying every workflow they can possibly move to Spot. Using Cloud Analyzer, Spot's intelligent management tool, Williams can see all her spot instances at a glance and identify workflows that have the highest likelihood of success. "Seeing all that on one screen, it just screams at you, 'Use me!'" says Williams.

When all is said and done, the team expects to save 60% to 65% in compute costs across the workflows it can migrate to Spot. Back-of-the-envelope calculations show that could mean \$35K per month or more in savings for Cloud Volumes ONTAP for AWS testing environments. Perhaps even more significantly, Spot is driving a cultural change in the way NetApp Engineering thinks about its on-premises resources.

"One interesting thing that has come out of this is that it's making us look at how we can use our bare metal and on-premises resources more efficiently," says Williams. "We're used to that model of just using equipment and not thinking about what it costs because we paid for it up front. The integration of Spot is forcing us to be more mindful about what it costs us to test, period."



+1 877 263 8277

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)



© 2020 NetApp, Inc. All Rights Reserved. NETAPP, the NETAPP logo, and the marks listed at [netapp.com/TM](http://netapp.com/TM) are trademarks of NetApp, Inc. Other company and product names may be trademarks of their respective owners. CSS-7146-0920