HUGHES
NETWORK SYSTEMS

HUGHES NETWORK SYSTEMS | PROBLEM SOLVED

Hughes Network Systems is fueling rapid growth into global markets with DevOps automation enabled by NetApp® modules for Ansible.

Hughes Network Systems Drives Automation, Innovation with NetApp and Ansible

Hughes Network Systems is the global leader in broadband satellite technology and services. Its flagship high-speed satellite internet service, HughesNet, is the world's largest satellite network. By adopting a DevOps approach, the company is fueling rapid growth into new global markets and bringing new enterprise services to market faster. NetApp modules for Ansible automate the provisioning of test environments, giving developers the speed they need to innovate faster than ever before.

Accelerate provisioning from weeks to hours

Cut weeks off development cycles

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>
> Jesus Pinto
> Systems Engineer, Hughes Network Systems

Forty years ago, Hughes invented satellite internet. Since then, it has continued to lead the way in satellite broadband for home and office. Oil and gas rigs in the most remote locations depend on the company's highly reliable, secure network. Disaster response agencies turn to Hughes for critical communication networks that need to stay online during emergencies. Every time you buy a lottery ticket, swipe your credit card, or check out a digital sign, it's likely that Hughes is delivering that service.

Hughes is rapidly expanding its service offerings into new global markets, from South America to Russia, India, and the Middle East. Anywhere there's a need for fast, reliable satellite internet, there's Hughes.

"We now have more consumers signing up for more services," says Nick Ferrant, systems engineer in Core Operations Systems Support at Hughes. "So the way that we deploy code can't be as monolithic as it used to be. As we expand into global markets, we need to be able to do smaller, more frequent releases."

MODERNIZING FOR GROWTH

Solving the challenges of globalization is no small feat. If a customer in India buys an ordering system, that customer might have regionally specific requirements for payment methods. They might require customizations due to physical satellite limitations or unique feature integrations. And they might have to comply with local regulations.

"In the past, that one customized project would have taken multiple months," says Jesus Pinto, systems engineer. "That's just not sustainable. Automation is the only way that we are going to be able to expand our resources to support that growth."

Over the last 10 years, the company's development environment has more than tripled in size. With a need for more frequent software releases, the operations team scrambled to build test environments to meet developer demand.

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ONE-CLICK SPEED WITH NETAPP AND ANSIBLE

Hughes began the shift to DevOps by adopting Red Hat Ansible for IT orchestration and automation. They chose NetApp modules for Ansible to automate the deployment of storage, giving developers access to full-featured test environments. NetApp's preconfigured, pretested Ansible modules free the ops team from time-consuming coding and QA.

"We started out by writing custom storage modules, but we ditched them after NetApp released their own Ansible modules," explains Ferrant. "They save a bunch of time that I would have spent writing code, and they're much better than the modules that I wrote myself."

What used to take weeks can now be completed in hours, getting developers up and running quickly and shortening time to deployment. With the click of a button, developers can deploy their own "mini clouds" for testing. With another click, they can push their changes to production.

"The time savings is just insane," says Pinto. "Before, deploying a single testbed environment would take about 2 to 3 weeks.

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It was a full-time job. Now it takes me 4 to 6 hours to deploy it, and I can let it run and just check it every now and then. I don't have to touch it."

NetApp AFF all-flash arrays provide nonstop availability, even in the event of an outage. NetApp storage efficiency and replication capabilities enable dev teams to work with full production datasets so they can confidently deploy changes to production.

Developers can also roll out more releases, faster. They no longer have to wait on ops for the resources they need to bring a new customer on board, push out a security update, or add a new feature. And the improved agility is causing a ripple effect throughout the company.

"We have really transformed our IT organization," says Ferrant. "Other teams that have seen how easy it is for us to deploy a test environment are now asking for help. By automating low-level tasks, we have enabled our high-value people to focus their intellects on delivering the most value to the business."

CONTINUING THE DEVOPS JOURNEY WITH CONTAINERS AND TRIDENT

Freed from manual provisioning tasks, the company is now looking to the next phase of its DevOps journey. Hughes is in the early stages of deploying containers to further accelerate development and deployment. Using the NetApp Trident storage orchestrator for containers, the company will leverage its existing NetApp hardware while automating storage persistence for containers.

"Containers are very different from traditional infrastructure. They require their own specific solutions," says Ferrant. "That's not the case when it comes to NetApp. With Trident, our developers can self-provision storage for their applications, and we can do it all using our existing storage systems."

SOLUTION COMPONENTS

NETAPP PRODUCTS

NetApp modules for Ansible

NetApp Trident

NetApp AFF all-flash storage systems

THIRD-PARTY PRODUCTS

Red Hat Ansible

Red Hat OpenShift

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