Voxbone Dials in OpenStack on a Tintri All Flash Array

Telecom provider runs OpenStack private cloud on Tintri storage

www.voxbone.com

Industry
- Telecommunications

Geography
- Headquartered in Brussels with offices in London, Austin and San Francisco

Primary use case
- Staging environment

Virtualization environment
- OpenStack Ubuntu
- KVM
- Juju
- MAAS

Tintri solution
- Tintri VMstore™ T5040 All Flash Array

Business benefits
- Performance far superior to legacy direct-attached storage
- Streamlined installation and configuration
- Ease of use
- Management requires no additional resources
- Scalability supports rapid business growth
- Exceptional support includes continuous monitoring of array

Company Information

Voxbone is the global market leader in Voice-over-IP telecom services. Voxbone customers include leading global telecom providers such as Deutsche Telekom, T-Mobile, NTT, and Telefonica, as well as contact centers such as Swisscom and Serenova (LiveOps). Voxbone delivers high-quality inbound communications (also known as direct inward dialing, or DID, numbers) from more than 9,000 cities in 60 countries, making it possible for customers to receive local phone calls from around the world, with outbound emergency and toll-free dialing capabilities.

Data is crucial to the Voxbone business model. A year ago, the company's five data centers exclusively housed physical servers. To improve efficiency, Voxbone launched a private cloud proof of concept.

All-Flash Arrays for Enterprise Cloud

Dutch consulting firm Fairbanks helped Voxbone plan a staging environment that would run in a private cloud based on an Ubuntu OpenStack. They decided to deploy Juju for application management, and Metal as a Service (MAAS) for device inventory management. Voxbone needed its staging environment to house about 200 persistent virtual machines, with the capability to accommodate a few hundred more whenever it has builds and tests in progress.

For data storage, Fairbanks encouraged Voxbone to consider Tintri All-Flash storage arrays. "Tintri was highly recommended by Fairbanks," says Xavier Devlamynck, IT infrastructure architect at Voxbone. "We were convinced by the easy setup, the performance, and the option of scaling up without major configuration issues."

Also important was the ability to set the quality of service (QoS) per volume, virtual machine, or class of virtual machines. Voxbone anticipated the possibility that it might sell certain services internally, so it needed the ability to prioritize certain groups' needs.

"Last, but not least, the proactive and continuous monitoring of our devices was a key decision point," Devlamynck says. Voxbone purchased the Tintri Gold support plan, through which Tintri provides a field engineer and replacement parts the next business day.

"We've currently deployed four times more nodes than we planned to for this pilot, and the system is still behaving as expected. We are planning to move everything that can be virtualized into a virtual environment on Tintri All Flash Arrays."

Xavier Devlamynck, IT Infrastructure Architect, Voxbone

Staging Environment on a Private Cloud

Voxbone deployed a Tintri VMstore™ T5040 All Flash Array under a conditional PO (CPO), in which success would lead to implementation of additional arrays in the future.

The deployment went smoothly, and Voxbone found the storage is easy to use. "Time to install and time to configure are two main benefits of the Tintri storage," Devlamynck says. "We didn't have to add any additional resources to manage the array.

"Currently, we're running all our staging environment on our private cloud," Devlamynck continues. "This includes Jenkins build nodes, Web proxies, Apache Tomcat, RabbitMQ messaging, and GitLab (with the GitLab CI feature). We also plan to test the deployment of a virtual big data environment, which we're currently running only on physical server nodes."

Performance, Scalability, and Support

Performance is far exceeding Voxbone's expectations. "We're coming from almost no virtualization, and the Tintri All Flash Array is performing very, very well," Devlamynck says. "Our physical servers are HDD-based, and the virtual machines are much faster, even with the virtualization and network overlays. Faster storage facilitates faster deployments and faster testing, giving us more flexibility on new releases."

Devlamynck is also pleased with the scalability of the new storage. "We've currently deployed four times more nodes than we planned to for this proof of concept, and the system is still behaving as expected," he says. "We've already transformed the CPO into a PO, and we will soon begin moving part of our production environment to virtual machines. For technical reasons, part of our backbone requires physical servers, but we are planning to move everything that can be virtualized into a virtual environment on Tintri All Flash Arrays."

Voxbone is now developing a disaster recovery plan that will use more small VMstore arrays to limit the size of a fault domain. And at Voxbone's request, Tintri has expanded the product roadmap for its ReplicateVM software to include development of OpenStack support.

"Tintri continues to work with us to make sure the solution meets our needs," Devlamynck says. "Their support is one of the best features of their All Flash Arrays."