Hill Air Force Base

HiveIO

Case Study

Hill Air Force Base Keeps Its Data Center Flying High

Thanks to the HiveIO Software Defined Storage solution, Hill AFB achieved a 90% reduction in storage consumption and a 10X performance improvement.

Cost-Effective Hyper-Converged Storage

Located approximately 50 km north of Salt Lake City, Utah, Hill Air Force Base is the sixth-largest employer in the state.

With roughly 18,000 on-site employees, and upwards of 860,000 users running a single application, Douglas Babb, Chief IT Systems Architect at the Hill Enterprise Datacenter, had a lot on his mind—so he called up Atlantis Computing.

Hill AFB is big—and getting bigger.

A while ago the IT team noticed that file and block storage was nearly doubling every year, and they wondered how to keep up *and* keep costs flat. Not only that, but the base's applications were requiring higher and higher performance levels, and its various storage siloes were getting harder and harder to manage.

So the Hill IT team surveyed the market with three goals in mind:

- Virtualize all storage
- Accelerate all storage
- Implement inline deduplication and performance tiers within their infrastructure

“We needed an 80% dedupe rate, compression, encryption, performance, and lower latency," says Babb. "We found that Atlantis has the ability to deliver low latencies. We wanted to run out of non-volatile RAM, and are excited about some of the new technologies coming to market.”

CHALLENGES

- Meet an increasing demand for storage capacity and greater application performance
- Achieve increased agility and cost-efficiency

HIVEIO PRODUCTS

- Hive USX

“We used USX for the data reduction and were able put USX in front of our legacy storage and in our preexisting HCI environment.”

Douglas Babb
Chief IT Systems Architect
Hill Enterprise Datacenter

Hill Air Force Base

USX is a software-defined storage solution that can instantly and efficiently deliver storage resources for any application through an existing data center infrastructure and hyper-converged building blocks

BENEFITS

- 90% overall reduction in storage consumed
- 10X performance improvement
- Greater agility through USX Rest APIs

ADVANTAGES

- Spreading out workloads
- Flexibility
- Advantages of VMware and other hypervisors
- Raw, bare-metal performance

"At Hill we're constantly under pressure to do more with less, reduce time to value, increase agility—and we know USX will allow us to continue to reduce our costs, reduce time to value, and increase capabilities."

Douglas Babb
Chief IT Systems Architect
Hill Enterprise Datacenter

CLOSE TO A 90% REDUCTION IN STORAGE CONSUMPTION

With just USX, the Hill team managed to build hyper-converged, converged, and simple volumes solutions. In addition, this allowed them to gain advanced data services such as VVOLs, as well as advanced clones and snapshots.

"We went through multiple iterations of tests and started deploying larger and larger RAM footprints to give USX the ability to run a lot of our environment completely out of RAM, and that's when we were really blown away," says Babb.

By the numbers, the team observed a 10X performance improvement over other hyper-converged and cached solutions.

"We had some high-performance flash array hardware, but, when tested, we found that the performance wasn't in line with the cost. Seventy percent of our applications are Oracle based, with the majority of them running on physical servers with flash memory cards added to improve performance," says Babb.

So Hill took some of those applications, virtualized them, ran them out of RAM, and found that they got better performance than with their physical environment.

VDI

The team found VDI to be another great USX use case. A small VDI deployment went really well, so they are now looking to extend it into other environments.

They also implemented remote devices attached to the datacenter to accelerate performance into the datacenter and conduct asset discovery at that location. They use these small WAN POP appliances to test performance of their applications at specific sites. They'll use USX to power the storage on these hyper-converged appliances.

Alternatively they can serve up storage using USX-based acceleration and data services for legacy fibre-channel-based environments with minimal changes to the environment.

BEYOND COSTS

"We're constantly getting new surprise projects, and we have to react quickly, because time to value is a huge issue for us," says Babb. "Sometimes we have to react within a minute, because, for high-value apps, if we're down for an hour, we've lost $1 million in labor alone, plus we've lost a lot of prestige for the data center.

www.hiveio.com | info@hiveio.com | @HiveIOInc
T (415) 340 2089 | F (415) 715 9028