

ParAccel Sees Dramatic Improvements in Virtualized Environment with Tintri VMstore™

VMstore

PARACCEL™

ParAccel, a leading analytic application software provider, opens the door for companies to accelerate, innovate, and compete. ParAccel Analytic Platform combines an analytic database with extensibility and integration technology as a foundation for running big data analytics, anytime, anywhere. The company serves Fortune 1000 customers in digital media, retail, financial services, healthcare, and government. ParAccel was acquired by Actian, a hybrid cloud data warehouse, in 2013.

The Challenge: Storage Performance Supports Limited VMs with Low Latency

ParAccel found storage performance issues hindered developer productivity in its fully virtualized database test-and-development environment. Existing storage could not support more than a handful of VMs while delivering low latency for I/O-intensive database applications. ParAccel wanted to deploy a VM storage solution that would not only improve database responsiveness, but allow it to run hundreds of database VMs concurrently while simplifying overall infrastructure management.

ParAccel used traditional storage systems to support its database test-and-development VMs running the ParAccel Analytic Platform. "High latency and performance bottlenecks in our existing storage kept us from running more than a few VMs concurrently, severely affecting developer productivity. We could only safely run fewer than ten VMs given the performance needs of the database VMs," said Mike Torgersen, VP of IT at ParAccel in Campbell. "We wanted a solution that provided low latency and high IOPS to deploy hundreds of high-performance database VMs."

Performance bottlenecks also led to wasted storage capacity and underutilization of host resources, as fewer than ten VMs could run concurrently. "Even at this small scale, we started experiencing latencies exceeding 100ms on our existing storage, even though we added more than 70TB of storage capacity—occupying thirty rack units of data center space—to keep up with performance needs," said Torgersen. "We wanted to reduce our data center footprint while delivering the performance needed for our virtual environment by leveraging flash technology."

ParAccel also wanted to scale the environment to reduce time-to-market by enabling dozens of developers to work concurrently. "We wanted a storage solution that allowed us to run at least seventy VMs initially, and provided ample performance as we scaled our environment to hundreds of VMs," said Torgersen. "We wanted to avoid adding more disks just to accommodate performance needs."

The Solution: Tintri VMstore T540

Tintri VMstore helped ParAccel eliminate storage performance issues and measurably increased developer productivity in its dev/test environment, running fully functional ParAccel database applications. "VMstore's flash-based storage provides the high performance we need to concurrently run hundreds of database instances. We now run seventy database VMs that drive more than 10,000 IOPS aggregate on a single VMstore T540 system. Database latency is consistently less than 2ms even at this scale," said Torgersen. "There is still plenty of room to add more VMs to accommodate our growth needs."

The Result: Improved Developer Productivity, Running 10x the VMs with Smaller Data Footprint

Tintri VMstore also helped ParAccel eliminate storage overprovisioning. Tintri VMstore's flash-based architecture delivers high performance in a small footprint, so there is no wasted capacity. "VMstore provides a compelling, high-performance, small-footprint storage solution for our demanding test-and-development virtual environment," said Torgersen. "Compared to our previous storage, Tintri VMstore can run ten times the VMs in less than a tenth of the data center footprint, and reduce latency by 98% at the same time."

Challenges

- Performance could not keep up with dev/test intensive database applications
- Latencies of over 100ms and reduced productivity
- Overprovisioning storage for performance caused unusable storage capacity
- High operational costs to maintain a large virtual environment with many datastores

Solution

- Tintri VMstore T540

Results

- Reduced latency by 98%
- Improved developer productivity
- Data center space reduced by 90%
- More VMs run concurrently, increasing host resource utilization

**Tintri**
Intelligent Infrastructure

Tintri VMstore helped identify performance constraints elsewhere in ParAccel's environment, given that storage is no longer a bottleneck. "Removing the storage bottleneck allowed us to run dozens of VMs concurrently, and our host resource utilization shot up. We had to add another host to accommodate the CPU and memory needs of the database VMs," said Torgersen. "VMstore helped us realize a fundamental goal of virtualization—consolidate workloads and increase resource utilization, both on hosts and on storage."

Tintri VMstore eliminated storage performance issues, greatly improved developer productivity, and reduced time-to-market. Tintri VMstore also enabled ParAccel to reduce the storage footprint needed for running its test and development virtual environment, reducing operating costs from space, power, and cooling. "We could not be happier with the VMstore solution. VMstore enabled us to realize greater efficiency throughout our test-and- development infrastructure, while reducing the overall cost," said Torgersen.

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Mike Torgersen, VP of IT, ParAccel

Experience Different! For more information on how Tintri VMstore can turbo-charge your business success through a simple, Intelligent Infrastructure, visit tintri.com/vmstore.

