

NEX-TECH SOLVES IOPS PROBLEM AND PLANS FOR SMART NAS REQUISITIONS WITH TURBONOMIC



Reduced Latency and Improved Performance



Eliminated Resource Contention



Re-Designed Infrastructure to Maximize Efficiency



SITUATION

Rural Telephone and subsidiary Nex-Tech have served northeastern Kansas with state-of-the-art business and residential telecommunications services for more than 60 years.

Nex-Tech's 2 datacenters consist of 20 hosts – 80% virtualized – and 180 virtual machines delivering a huge variety of applications to the company and its customers. Many of Nex-Tech's hosted apps are corporate: billing, phone systems and administrative. However, Nex-Tech's Business services also include public cloud-based servers – which reside in this datacenter.

Their storage environment consists of IBM N Series/NetApp arrays, configured as both NAS and SAN pools.

Server Support Technician Andy Miller manages this environment leveraging the native statistics of vCenter. However, hosting Nex-Tech's workloads has grown increasingly difficult per vCenter's limitations. Miller knows there are "bully VMs" in Nex-Tech's environment – driving high IOPS and latency across the board – but has no insight into the IOPS number, or the associated workloads clogging access to the storage controller. Even if Miller manually identifies the noisy neighbors, the remediating placement, sizing, and configuration actions required to assure performance for all are difficult to specify.

Miller is acutely aware of the symbiosis that exists between virtual workloads, but cannot continually optimize these relationships with vCenter alone.

Nex-Tech set out in search of "monitoring software that could do a deeper dive". Their evaluation honed in on VMware vCenter Operations Manager and newcomer Turbonomic.

*"It solved our initial problem and has many more capabilities."
– Andy Miller, Server Support Technician*

COMPANY

Nex-Tech

www.nex-tech.com

CHALLENGES

- *Inability to guarantee performance of mission-critical applications in virtual environment with existing tools*
- *Inconsistent Quality of Service (QoS) and disruption of virtualized workloads*
- *Difficulty gaining value from native hypervisor monitoring tools*
- *Storage congestion beneath virtualized workloads*

TURBONOMIC SOLUTION

- *Turbonomic intelligently and automatically senses changes to application demand and adjusts infrastructure supply in real-time to improve utili-*

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Nex-Tech opted for Turbonomic to solve its bully VM problem. Not only did Nex-Tech obtain its magic IOPS number, but also the specific actions to take on bully VMs and their neighbors to reduce latency and enhance performance: where to place them, how to size them, and on which datastore they should reside.

WHAT-IF: CAPACITY PLANNING FOR NAS REQUISITION

A perfect example of the automation flexibility offered by Turbonomic, Nex-Tech automates vMotion recommendations during maintenance hours, and accepts its sizing recommendations manually. Where Nex-Tech has reaped immense value from Turbonomic is its planner function, which uses live production data to run offline What-If capacity planning scenarios.

With Nex-Tech's NAS leases soon expiring, it is looking for way to re-architect its storage infrastructure that will economically enhance storage performance. Nex-Tech has stress-tested a variety of NAS candidates by running IOmeters on VM templates. Leveraging Turbonomic's real-time planning capabilities, Nex-Tech identified the number of templates it could place on each NAS candidates to actually see the IOPS number they would push. By placing heavy bully-like VMs on each NAS, Turbonomic told Nex-Tech what power it had produced.

Using this creative planning technique, Nex-Tech has run numerous permutations of storage architectures and tenancy scenarios – including a theoretical VDI deployment –evaluating the projected performance benefits against their acquisition costs, all before making the purchase.

RESULTS

- *Autonomic platform drives real time performance across a diverse environment*
- *Eliminated contention-based outages and degradation though accepting recommendations for optimal allocation of resources*
- *Optimized storage array purchases through real time What-If capacity planning*

"Turbonomic helped us identify performance issues related to our NAS infrastructure and gave us peace of mind while testing replacement NAS systems."

Justin Dempsey
IT Manager
NexTech

ABOUT TURBONOMIC

Turbonomic delivers an autonomic platform where virtual and cloud environments self-manage in real-time to assure application performance. Turbonomic's patented decision engine dynamically analyzes application demand and allocates shared resources to maintain a continuous state of application health.

Launched in 2010, Turbonomic is one of the fastest growing technology companies in the virtualization and cloud space. Turbonomic's autonomic platform is trusted by thousands of enterprises to accelerate their adoption of virtual, cloud, and container deployments for all mission critical applications.