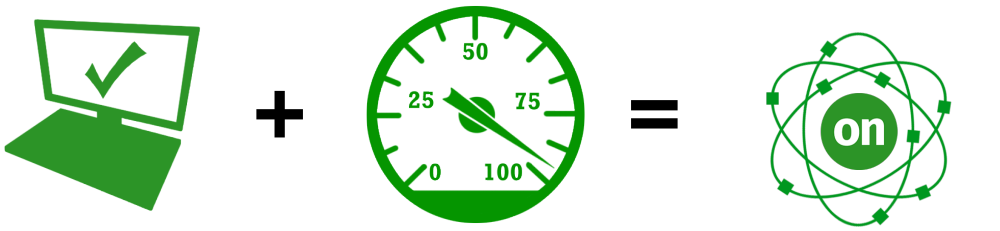
LIBERTY UNIVERSITY IMPROVES PERFORMANCE AND UTILIZATION WITH TURBONOMIC



Assured Performance of Virtual Workloads + *Maximized Resource Utilization* = *Control Over Complex Virtual Environment*

LIBERTY UNIVERSITY™

SITUATION

Founded in 1971, Liberty University is the largest private, nonprofit university in the country, the largest university in Virginia and the largest Christian university in the world. With over 2,500 full and part-time faculty, Liberty University's total enrollment, including online and residential programs, is more than 110,000 doctoral, masters, graduate and undergraduate students.

Johnny Diaz, Systems Administrator, has been with Liberty University since 2012 and has more than two decades of IT experience. Johnny's team manages the virtual environment for the university, ensuring the seamless delivery of services to students, faculty and administrators. The team leverages VMware vSphere® ESXi™ across their approximately 70-80% virtualized environment and has been undergoing a migration from legacy Dell servers to Cisco® UCS blades.

Diaz and his team had a feeling they could improve the performance of their more than 650 VMs and began to reconsider traditional management practices. "I was reluctant to look at Turbonomic at first, I figured it was another monitoring tool doing things that I could do myself," said Diaz. "I began to understand just how different the platform was, allowing us to be not just proactive in managing our environment, but ultimately preventative. I never thought a product could do that for me."

> "We went from 'we don't need it' to 'love it, can't live without it.'"
> – Johnny Diaz, Systems Administrator

Diaz implemented Turbonomic initially in his development environment, setting the platform to automate placement decisions. "We saw a difference immediately and quickly grew to trust the platform," said Diaz. "Looking at our current state versus our desired state, it just clicked."

COMPANY

Liberty University
www.liberty.edu

CHALLENGES

- *Inability to guarantee per- formance of mis- sion-crit- ical applications in rap- idly expanding virtual environment with existing tools*
- *Disruption of virtual- ized workloads due to resource contention and systems congestion*
- *Inefficient use of virtual and human resources*

TURBONOMIC SOLUTION

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

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After two weeks, the team had it deployed fully in their production environment. "We're definitely dependent on Turbonomic's ability to manage and control our system, and know we don't need to check in on it too often," said Diaz. "It's pretty much set it and forget it. It's given me the confidence to make the changes we need to maximize performance while achieving the highest utilization."

"We are running a stretch cluster, with some systems on one side of the campus and some of the other side," said Diaz. "Turbonomic helped us reduce redundancy across the cluster and clean up our system. It's helping us managing everything better and we know exactly where workloads should be, when and why."

STORAGE CONTROL

Diaz and his team have deployed Turbonomic's storage integration to tie in with their NetApp® arrays. This ability has given the team control over the latency their workloads experience, positively impacting performance across the board.

SOFTWARE-DEFINED DATA CENTER

"SDDC is something we are moving towards," said Diaz. "As we continue to grow, having self-service VMs and systems will be crucial. We want to allow our users to build their own VMs but want to maintain control over utilization and performance. With that type of density and growth, I envision Turbonomic as being the automated manager of this project. It will be a major player."

RESULTS

- *Autonomic platform drives real time*
- *Performance across a diverse environment*
- *Increased VM to Host densities to maximize infrastructure efficiency*
- *Reduced time spent monitoring and manually resolving issues*
- *Improved team productivity*

"For us, no news is good news. Adding Turbonomic has made us not only proactive but preventative, reducing alerts and end-user tickets dramatically. Before, 15-20% of my day was spent on monitoring and management. Turbonomic took all that away."

Johnny Diaz
Systems Administrator
Liberty University

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