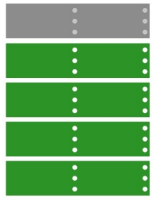
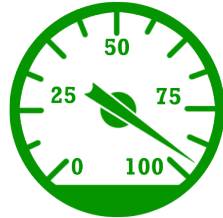


# GARLAND, TEXAS SAVES MORE THAN \$200,000 WITH TURBONOMIC



Maximized Resource Utilization



Autonomic Application Performance



Savings of Over \$200,000



**GARLAND**  
TEXAS MADE HERE

## SITUATION

The City of Garland, Texas is the 12th largest city in Texas, and 88th largest city in the United States. Each of Garland's 40 municipal departments – from Police, Fire and Public Safety to Parks, Courts and Animal Control – are served from a single datacenter.

Senior System Engineer Dammions Darden joined The City of Garland in 2011, inheriting a fragmented infrastructure, and equally fragmented requisition process. Each municipal department was treated as a separate business unit with its own hardware, applications and purchase cycle. The environment was 95% virtualized, home to some 300+ virtual machines on VMware®, 6 flavors of Linux® and Windows Server® 2003 to 2012 R2.

Garland was leveraging VMware® vCenter Operations Manager and WhatsUp Gold to monitor its virtual and physical infrastructures, respectively. It was common for municipal department representatives to demand additional compute, storage and network resources from Mr. Darden – citing that their applications were starved. Ironically, Dammions was confident that the infrastructure was wastefully over provisioned; he simply needed the data to prove it.

Mr. Darden found Turbonomic via a web search. He downloaded and deployed a 30-Day Trial of Turbonomic, and let it run for 3 hours.

"I've been saying this, now Turbonomic is proving it."  
– Dammions Darden, Sr. System Engineer

In 3 hours' time, Turbonomic indicated to Dammions that 90% of Garland's hosts were over provisioned, and could reclaim CPU and memory immediately. "A lot of the application issues weren't from starvation. It was ready queues! Turbonomic cleaned those right up," said Darden.

## COMPANY

City of Garland, Texas

[www.garlandtx.gov](http://www.garlandtx.gov)

## CHALLENGES

- *Inconsistent Quality of Service (QoS) and disruption of virtualized workloads*
- *Difficulty efficiently provisioning resources*
- *Difficulty accelerating ROI of virtualization initiatives*

## TURBONOMIC SOLUTION

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

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Turbonomic also started recommending that he power down 2 entire hosts. When he did so, Turbonomic migrated the workloads to other hosts in the environment, where their performance actually increased.

Dammions used Turbonomic to automate vMotions and memory allocation, and accepts CPU resizing manually

### HARDWARE REFRESH, VDI ROLLOUT AND A DEV LAB

At the time of Turbonomic deployment, Garland's environment was primarily comprised of Dell R810s. In 2012, Darden managed a refresh to three M820s, on which Turbonomic drove a production density of 25:1.

"Our M820s handled all of our administrative apps, but I still had eight R810s that were good for something, so I turned three of them into our 200+ seat VDI cluster on Pure Storage, and the rest became our Dev Lab."

### "WE EASILY SAVED \$300K-\$400K IF YOU CONSIDER DEV"

Darden thinks about the numbers often, and in this particular instance, he is convinced Turbonomic saved The City of Garland \$200,000 at a minimum. Leveraging Turbonomic's planning capabilities, Darden played-out numerous What-If capacity scenarios. "That's how I knew we needed three M820s, and it's also how I knew I could fit all our VDI seats on the R810s."

All told, between deferred hardware savings, saving on VMware® licensing and Garland's 5 host Dev Lab, Mr. Darden estimates savings of between \$300,000 and \$400,000, and claims that City of Garland's Application, Network and Storage teams all agree that Turbonomic is an invaluable tool. "Over time, Turbonomic became the first thing that the App team would open in the morning."

### 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.

### RESULTS

- *Autonomic platform drives real time performance across a diverse environment*
- *Avoided more than \$200,000 spend through deferred hardware and software licensing savings*
- *Eliminated contention-based outages and degradation through accepting recommendations for optimal allocation of resources*
- *Saved additional \$100K-\$200K by repurposing hardware for VDI and Dev Lab clusters*

"It was a minimum savings of \$200,000, but we easily saved \$300K-\$400K if you consider Dev."

**Dammions Darden**  
**Sr. System Engineer**  
**City of Garland, Texas**