

Over 3,000 world-class companies rely on Turbonomic

Banking	Financial Services	Technology	Insurance	Healthcare	Telco	Service Providers	Consulting	Retail	Government



Assuring Performance for:

- 10,000+ VSI
- 7,000+ Azure Cloud Instances

37,000 hours

saved based on automated resourcing actions.

Challenges

- Experiencing application performance issues due to resource congestion.
- Migration to hyperconverged & Azure was “best-guess” on resource requirements, leading to overprovisioning.
- Manual processes of monitoring thresholds to identify any application performance issues.

Results

- 95% reduction in application performance issues due to placement automation. 433,000 automated actions taken since deployment.
- Reduced manual effort and labor due to automated actions – 37,000 hours saved based on automated actions.
- On track to realize \$600K in savings for CY2020.
- Future savings of \$120K per month on PaaS based SQL as workloads are migrated to Azure.
- Decreased on-premises data center costs by reclaiming 200TB of wasted storage, over 230 vCPUs and 650 GB of vMem.

Improving App Performance for Top 4 US Money Center Bank

ARM Manages:

- 210,000+ VDI
- 85,000+ VSI
- 75+ OpenShift Clusters
- 15,000+ Containers

With ARM automation and end-to-end visibility for App Owners, Operations Teams, and Execs this multinational bank can confidently advance its digital transformation.

Challenges

- Resource overprovisioning due to the rapid growth of their container environment.
- Manual and siloed operations to optimize performance and resource utilization were not effective.
- Siloed teams struggled with lack of single-source of truth across VDI, VSI and Container environments.

Results

- Over 1300 container performance risks found. With ARM the customer improved OpenShift node utilization by 50%, reclaimed 45%+ vCPU cluster reservations, and 55%+ vMem cluster reservation.
- Customer maintains HA by mitigating IaaS performance risk – VM dynamic placement to avoid resource congestions.
- Over 4,000 performance risks were identified for VSI environment. With ARM the customer saw a 50% VM:host density improvement.
- ARM lowered CPU contention by 40%, improving VDI performance, while also improving density by over 15%.

1300

Container performance risks identified

40%

Reduction in CPU contention

Integrations



Red Hat

OpenShift Container Platform

vmware

Top 4 Money Center Bank Assures Performance for 3,000+ Business Apps

Assure Performance for:

- 3,000+ Business Applications
- 70,000+ Applications
- 60,000+ VMs
- 4000 Hosts

“As we accelerate our digital transformation and transition to the next generation architecture, Turbonomic provides a way to ensure and gain direct insight into the performance of our business applications.”

- Managing Director

Challenge

- Multiple tools used to across the application and infrastructure stack to gain visibility into performance risks; lacked common data set for managing application resources
- Manual oversight to allocate and provision resources to applications
- Inefficient use of shared infrastructure resources
- Lack of oversight in managing software licensing costs

Results

- Integrated AppDynamics and Turbonomic to use application metrics to make the best resourcing decisions and improve end user experience
- Reduced MTTR; reduce performance risks by using Turbonomic decisions and automating actions
- Over 100% improvement in VM:Host density with placement and sizing automation while considering HA compliance policies
- Additional headroom for over 1,200 VMs with existing hardware with placement automation enabled while considering all HA compliance policies

This city government plays a crucial role in the day to day lives of its citizens. For this customer, mission-critical applications could be a matter of life and death.

Challenge

The city's infrastructure team's mission is to protect their critical applications. They were concerned about latency in their production cluster for the city-wide Emergency Response applications.

Results

Turbonomic quickly understood the relationships between application performance and the underlying infrastructure. It identified that ready-queue build up in SQL databases was putting their critical applications at risk. The software generated right-size actions to improve performance and enabled the team to safely consolidate multiple smaller clusters that had previously been implemented as silos. With AI-powered software managing the resources for them, segmenting infrastructure to try and make resource management easier was no longer necessary. Turbonomic was able to help them safely increase densities.

Additionally, with ARM automation turned on, the teams were ecstatic about the fact that they didn't have to worry about initial placement or ongoing management because the software was taking care of all that in the background. Their small team could run lean while assuring the performance of their mission-critical applications.

Integrations



A Provider of Healthcare Information Technology Solutions

As a leader in healthcare information technology solutions that advance clinical, financial and operational results, this customer enables organizations worldwide to change what's possible in healthcare.

“The app owners initially pushed back about not wanting to scale down their workloads, but after we did the scaling exercise we didn't hear a peep from anyone about performance issues, and we reduced our cost with Turbonomic.”

- Director of IS

Challenges

- Unpredictable performance of business-critical applications and end user experiences
- Rapid adoption of Azure services was causing uncontrolled cloud spend
- Multiple tools sets managing on-premises and cloud infrastructure could not holistically manage the stack
- IT staff burdened with manually trying to predict resource requirements for applications migrating to cloud

Results

- Turbonomic initially identified and alleviated over 1,400 performance risks and today continues to assure performance for 200+ Azure subscriptions, 5,500 Azure workloads, and 800 VDI instances.
- The customer realized over \$62,000/month in Azure savings by leveraging new compute configurations, discounting mechanisms and RIs. An additional \$37,000+ monthly savings was realized through automated scaling actions. As applications are migrated to the cloud, Turbonomic consumption-based migration plans will help the company save nearly \$80,000 per month in Azure spend.

Integrations



As part of the initiative to create an 'automation engine' to enable IT to drive, deliver, and differentiate the business, this global pharmaceutical company knew that performance was paramount throughout this transformation.

Key Highlights

- Continuous, predictable performance
- Unified hybrid cloud optimization
- Over \$500,000 in annual cloud savings

Challenges

By 2021 transform from operating 70% of their workloads on-premises and 30% in cloud, to 30% on-premises and 70%, while continuously ensuring the performance of their Azure and AWS workloads.

Results

- With Turbonomic as a core component in their IT 'automation engine,' this custom now benefits from consistent and predictable application performance across their on-premises and multicloud estate, enabled by the automatic scaling of cloud workloads
- Leveraging Turbonomic's application-aware cloud migration planning they can aggressively move additional workloads to the cloud, while realizing over \$500,000 in annual savings across their AWS and Azure estates.

Integrations



A Global Leader in Legal Education

At this organization, the Senior Director of IT, understood that for public cloud, performance-first cloud cost optimization was critical to delivering a world class customer experience, while controlling Azure costs.

“Turbonomic is able to take all of the data from Dynatrace, relate it back to the infrastructure & Azure resource stack, actually driving actions ensuring that applications have the resources they need to perform. This has been incredibly valuable for us.”

- Senior Director of IT

Challenge

This organization. has prep courses to fit all types of law students and legal professionals. Their challenge was to deliver world class application performance for their customers, while controlling Azure cost.

Results

This organization is realizing the many benefits of application-aware optimization, by leveraging Turbonomic’s integration with Dynatrace. With Turbonomic, they get complete visibility into how their applications consume resources from every layer of the underlying infrastructure stack. They can confidently automate resourcing actions to provide their users with world class service, while their IT team focuses on strategic initiatives, like expanding cloud adoption with containers and more advanced services.

Integrations



MetroStar Systems creates award-winning enterprise, digital, and cybersecurity solutions that help public and private sector clients achieve their mission. They put Turbonomic's AI-powered automation to work, allowing their people to focus on strategic initiatives.

"Turbonomic is absolutely one of our mission critical solutions, and I would definitely recommend this product to anyone. Whether for on-premises estates, public cloud deployments or across your hybrid environment Turbonomic Application Resource Management enables our team to optimize performance and IT resources"

- Principal Infrastructure Engineer

Challenge

MetroStar Systems, a longstanding Turbonomic customer on-premises, was under executive direction to up-level their management approach in AWS. One of the core tenants of MetroStar's new approach was to leverage automation to augment their IT staff. They had to assure application performance in AWS while easing the burden of operations on IT.

Result

With Turbonomic, MetroStar drove more consistent performance, while saving 25% across their AWS estate by automating Turbonomic compute and storage resourcing actions. With the software working 24/7, their team was free to drive more strategic initiatives, even as they took on the management of 12 additional AWS accounts and a rapidly growing cloud estate.

Integrations



Increasing Productivity by 25%, While Delivering Elastic Hybrid Cloud

A global consulting organization that provides strategic planning, data analytics, cyber security, technology, and other services for customers mainly focused in the public sector.

“Going forward, we expect Turbonomic to play a critical role in our dynamic developer infrastructure - we would not be able to deliver a genuinely elastic environment without it.”

Manager of Technical Services

Challenge

- The Manager of Technical Services realized that he was spending far too much time and effort manually balancing, optimizing, and resizing Hyper-V VMs across their two data centers and their Azure environment, just to try to keep applications performing.
- In order to keep pace with the demands of the business, he knew he needed to deliver a truly elastic hybrid infrastructure, in the data center and Microsoft Azure, automating as much as possible to continuously assure performance.

Results

The team now automatically deliver the application performance and policy compliance the business needs while simultaneously regaining over 25% of their time, which they now devote to strategic and tactical projects.

Integrations



Improving Performance During Business-Critical Demand Spikes



Carhartt has been one of the hardest-working companies in America. Originally designed for rail workers, it has become the choice for workers in automobile production, construction and many other industries.

“Our integration of Turbonomic and AppDynamics creates a closed-loop performance-feedback system that can automate away avoidable issues so we can focus on the unavoidable. We are excited about the ServiceNow-Turbonomic integration which, already in a very short amount of time, is already driving greater agility for Carhartt IT – and an even better experience for our customers.”

Tim Masey
VP of IT Infrastructure & Security at Carhartt

Challenge

- Support rapid growth as Carhartt expanded its brand to include younger consumers, which had increased revenues from under \$100MM in the 90’s to nearly \$1BN today.
- The Carhartt IT team was looking for a way to better manage rapid spikes in demand, particularly on Black Friday, where a spike in 2018 demand created issues between their front-end site and multiple back end systems including inventory and loyalty systems.
- Insight from Cisco AppDynamics demonstrated the code was fine but couldn’t pinpoint the root cause of the performance issue.

Results

Carhartt was able to identify many opportunities for improvement:

- Adjusting Java Heap sizes (a recommendation Turbonomic was able to make due to its integration into AppDynamics)
- Powering off low use systems, adjusting VM Hardware for best performance, and optimizing VM placement.

The actions prescribed by Turbonomic have enabled Carhartt to grow and drive record sales through subsequent holiday periods and the shift to online shopping.

Integrations



International producer of progressive and prominent hearing aids

An international designer, developer and producer of progressive and prominent hearing aids and accessories, this organization employs 4,075 people and has divisions in more than 20 countries and partners in 60 more.

“Turbonomic took us to a different level. We don’t just sit and monitor our system all day. Turbonomic controls everything, preventing problems and takes an entirely different approach.”

- Manager, Infrastructure Development

Challenge

- Running VMware vSphere® ESXi™, the team’s environment is approximately 70-75% virtualized and runs nearly 700 virtual machines servicing 4,000 end-users across the globe.
- As the company expanded its services, they began experiencing inconsistent performance of their virtual workloads, for which they could not seem to pinpoint a cause. The degradation led to issues across multiple systems, from the VMware environment to their SAN, causing a total standstill.

Results

- Turbonomic stood apart from other tools because it provided automatable actions to bring the organization’s environment into a state of perpetual health. The team automated those actions to keep it there.
- Since deploying and automating Turbonomic, the team has seen noticeable improvements in the performance of their organization’s supply chain management system, the company’s most critical application. **“We no longer hear complaints from end-users at the end of every month,” said their Manager of Infrastructure Development. “We aren’t spending time we would have needed to fix the issues.”**

Assuring Performance Through Rapid Growth & Acquisitions

A global communications, hosting, cloud and IT services company enabling millions of customers to transform their businesses and their lives through innovative technology solutions.

"With Turbonomic, you know the platform is in control of your workloads, preventing issues in the environment. That means less time spent looking for issues and more time researching new ways to improve."

Principal IT Engineer

Challenge

- Through a successful, multi-year acquisition strategy this organization has become a significant player, providing managed services to customers throughout North America, Europe, and Asia, and now operating 55 data centers across the globe.
- Their Principal IT Engineer was on board for the whirlwind. **"Our environment was growing rapidly. We started with one data center and, within 12 months, we had four other locations," he said.** In four years, the number of VMs managed by his team grew ten-fold.
- As the business continued to grow, the team knew they would need a better way to plan and on-board new workloads and manage performance in rapidly-growing, diverse environment.

Result

- Turbonomic automatically senses changes to the organization's application demand and adjusts infrastructure supply in real time to assure performance and ensure service delivery to their customers.
- Turbonomic facilitates new application deployments, major system reworks or refreshes, and consolidation.

Global Biopharmaceutical Company

This global biopharmaceutical company acquired a specialty biopharmaceutical company. Following the merger, the IT team needed to consolidate IT estates and improve operational efficiency—all while assuring application performance.

Challenge

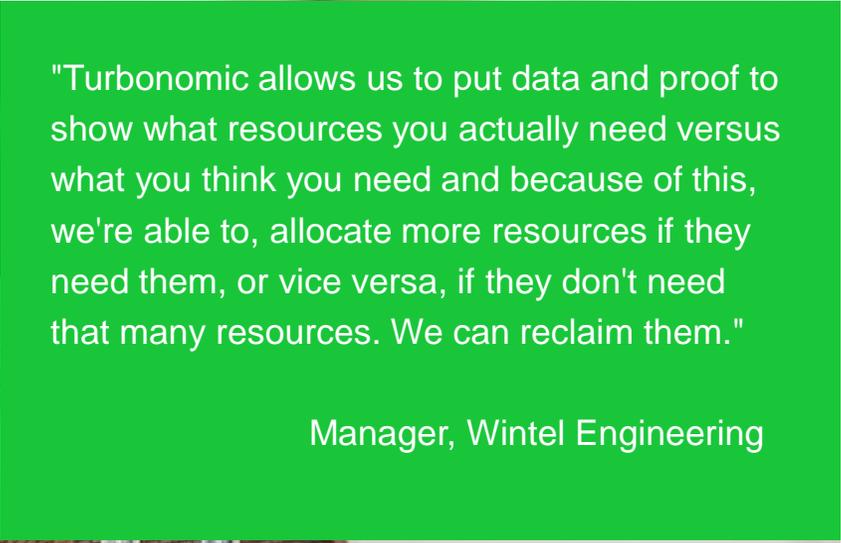
The team was focused on clearing \$10M of IT CapEx and OpEx after the acquisition. As such, they had the following requirements for a solution that would help them through this transition:

- Improve application performance
- Reduce risk and lower Mean-Time-To-Repair (MTTR) if a critical outage occurs
- Improve staff productivity through automation

Results

ARM's ability to automatically assure performance while accounting for their compliance and cost business constraints was the key differentiator. Competitive solutions could not generate actions that could be automated—they still relied on people to make resource decisions. Looking ahead, this customer is further investing in application performance with AppDynamics and having ARM stitch those application metrics to the underlying stack for even smarter, fully automated resource decisions.





"Turbonomic allows us to put data and proof to show what resources you actually need versus what you think you need and because of this, we're able to, allocate more resources if they need them, or vice versa, if they don't need that many resources. We can reclaim them."

Manager, Wintel Engineering

Challenges

Before Turbonomic, this team was managing their environment with DRS. As for right-sizing their environment there was nothing set in place to manage that aspect. Their environment was overprovisioned, they were wasting money on resources they didn't necessarily need. They needed an automated system that was beyond human scale to manage such a large and complex virtual environment.

Results

Turbonomic has helped the team with placement and storage automation for all clusters including Windows and Linux. This is done by automated right-sizing actions done in real-time, helping to save the overall business money, running as efficiently as possible. The team is also using the information Turbonomic provides to them for reclaiming resources back from the application teams and for ensuring reliable application performance.



Available on [Turbonomic.com](https://www.turbonomic.com)

- [Providence Health Drives Continuous Health of Cloud & Hybrid Environment for Better Patient Experiences](#)
- [O.C.Tanner Delivers an Innovation-First PaaS with Kubernetes & Turbonomic](#)
- [Litehouse Foods Augments Their Team Through Automation and Assures Performance Through Uncertain Times](#)
- [Metzler Assures Application Performance and Preserves Client SLAs with Turbonomic](#)
- [Houston Methodist Improves Performance & Maintains Compliance with Turbonomic](#)
- [Fareportal Powers the Digital Travel Experience on Cisco UCS, Assuring Performance with Turbonomic](#)
- [Carhartt Realizes Record Holiday Sales While Delivering a Cloud-First Strategy with Turbonomic](#)
- [Agilysys Assures the Performance of the Guest Journey During an Azure Hybrid Cloud Transformation](#)
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