

# IBM Turbonomic

Application Resource Management  
for [Microsoft Azure](#)

**Cloud optimization you can continuously automate to prevent performance risk and cost overruns.**

Software (not people) continuously makes complex resourcing decisions to ensure all applications get exactly what they need to perform.



**Improve application performance**



**Increase IT productivity**

**33%**

**Reduction in cloud spend**  
due to dynamic scaling and rightsizing <sup>1</sup>

## Accelerate safe cloud migrations

Optimize on-prem workloads first, then assess appropriate cloud configurations.

## Unlock cloud elasticity with continuous optimization

Automate application resourcing across compute, storage, DBaaS, and Kubernetes.

## Maximize ROI of next-gen Kubernetes platforms

Continuous optimization from apps to platform to infrastructure unlocks elasticity at every layer.

## Connect cloud optimization to the end-user experience

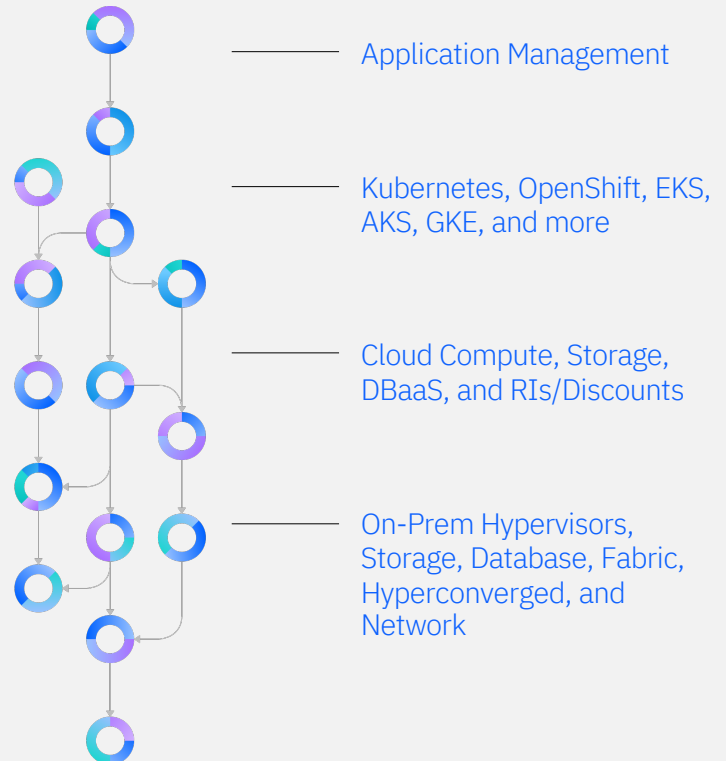
App Owners and the LOB can see exactly how dynamic resourcing ensures great end-user experience.



Explore live sandbox environment at [turbonomic.com/try](https://turbonomic.com/try)

Unlock application, cloud native, and cloud elasticity anywhere

Our app-first, full-stack solution integrates with a wide range of platforms to unlock elasticity.



<sup>1</sup>[Forrester Total Economic Impact of IBM Turbonomic Application Resource Management](#)

# Achieving real business outcomes requires continuous optimization to be automated at scale

## Trustworthy actions —> Operationalized —> Business impact

App-first, demand-based analysis ensures actions can be safely automated across Kubernetes, Azure compute, storage, DBaaS, and more. Turbonomic delivers...

- Azure Virtual Machines
- Azure Storage
- Azure SQL Database
- Azure Kubernetes Service (AKS)

Integrate with any pipeline, IaC, ITSM, or communication tool in your organization!

- Ansible
- Azure DevOps
- GitHub
- GitLab
- Jenkins
- Puppet
- Slack
- Terraform

...and more!

Build trust with AppDev by showing exactly how automating application resourcing impacts on the customer experience (response-time or other business SLOs).



### Azure Virtual Machines

Automatically determines the correct instance type for cloud application workloads, accounting for the following with every compute scaling decision:

- VCPU
- VMem
- Network & Storage IO
- Throughput
- Reserved Instance Inventory
- Pricing/Discounts
- Disk count, quota, available region capacity, and more

The only solution that simultaneously considers IOPs, and discounts.

### Azure Storage

Considers IOPS and throughput, to determine when you need to...

- **Scale between cloud tiers** for performance (IOPS, throughput) and cost
- **Size up volumes for performance** (IOPS, throughput)
- **Modify capacity of IOPS & throughput limit** for IOPS limits

Increase volume sizes to improve performance. Identify & delete unattached volumes. Always, use exactly what you need.

### Azure SQL Database

**Scale between Azure database tiers:** Move between Azure SQL DB Tiers based on utilization (DTU\*) with near-zero downtime.

**Size Up/Down Database Volumes:** Non-disruptively increase or decrease disk size (for used space)

### RI's & Discounts

**RI-aware compute scaling actions** increase existing RI inventory utilization.

**Demand-based RI purchasing actions** maximize reservation-to-VM coverage.

### Azure Kubernetes Service (AKS)

Optimizes the Kubernetes platform for performance and cost with the following actions:

- **Container rightsizing:** Scale container limits/requests up or down based on application demand
- **Continuous pod moves:** Move pods to avoid resource congestion and defragment the cluster
- **Cluster scaling:** Provision/suspend nodes based on real-time application demand
- **Container planning:** Simulate how to optimize the existing environment, onboard more applications faster.