IBM **Turbonomic**

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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 [1]

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.

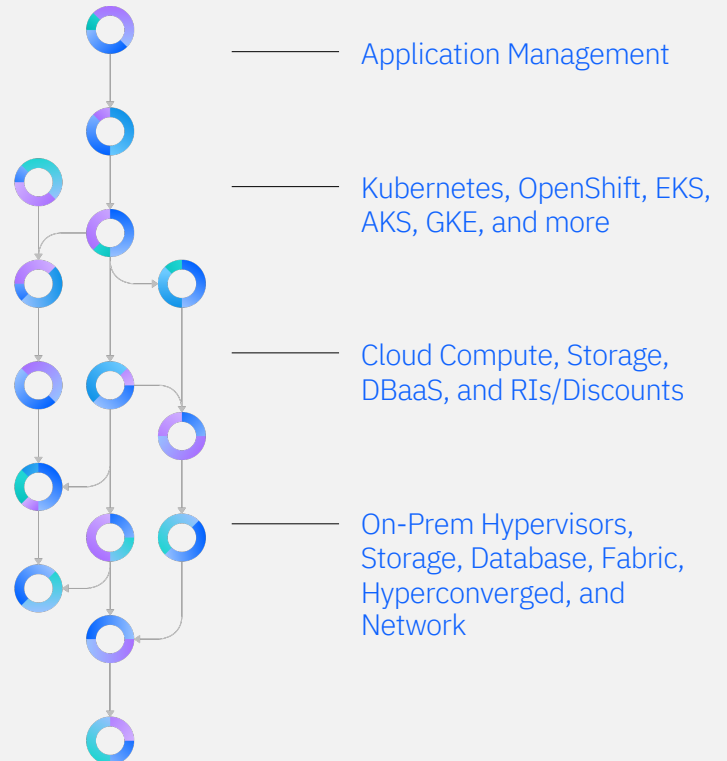**Connect cloud optimization to the end-user experience**
App Owners and the LOB can see exactly how dynamic resourcing ensures great end-user experience.

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Explore live sandbox environment at
Ibm.com/products/turbonomic

Unlock application, cloud native, and cloud elasticity anywhere

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

Application Management

Kubernetes, OpenShift, EKS, AKS, GKE, and more

Cloud Compute, Storage, DBaaS, and RIs/Discounts

On-Prem Hypervisors, Storage, Database, Fabric, Hyperconverged, and Network

[1]Forrester Total Economic Impact of IBM Turbonomic Application Resource Management

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

Trustworthy actions $\longrightarrow$ Operationalized $\longrightarrow$ 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).

Correlate app response-time, transaction throughput, or other SLOS to dynamic resourcing!

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)

RIs & 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.

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