Azure Cache for Redis®[2]

Distributed, in-memory, scalable solution providing super-fast data access
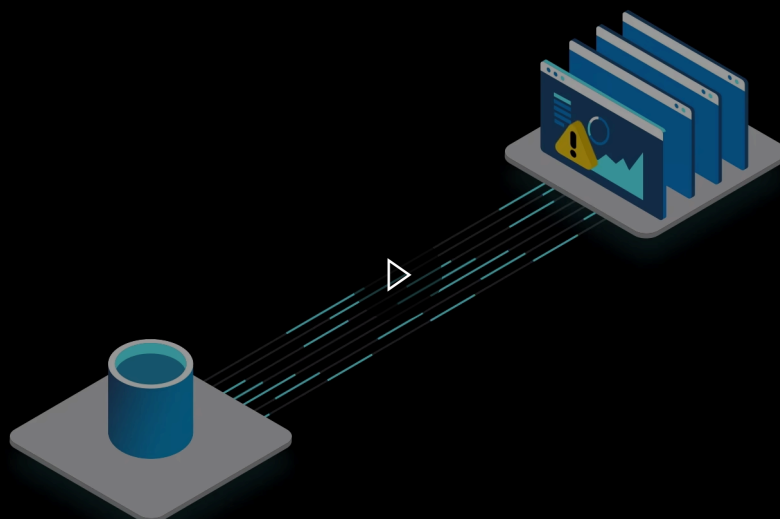
Try Azure for free   Create a pay-as-you-go account

Overview ⌄

Your app. Faster.

As traffic and demands on your app increase, scale performance simply and cost-effectively. Add a quick caching layer to the application architecture to handle thousands of simultaneous users with near-instant speed—all with the benefits of a fully managed service.

Superior throughput and performance to handle millions of requests per second with down to sub-millisecond latency

Fully managed service with automatic patching, updates, scaling, and provisioning so you can focus on development

RedisBloom, RediSearch, RedisJSON, and RedisTimeSeries module integration, supporting data analysis, search, and streaming
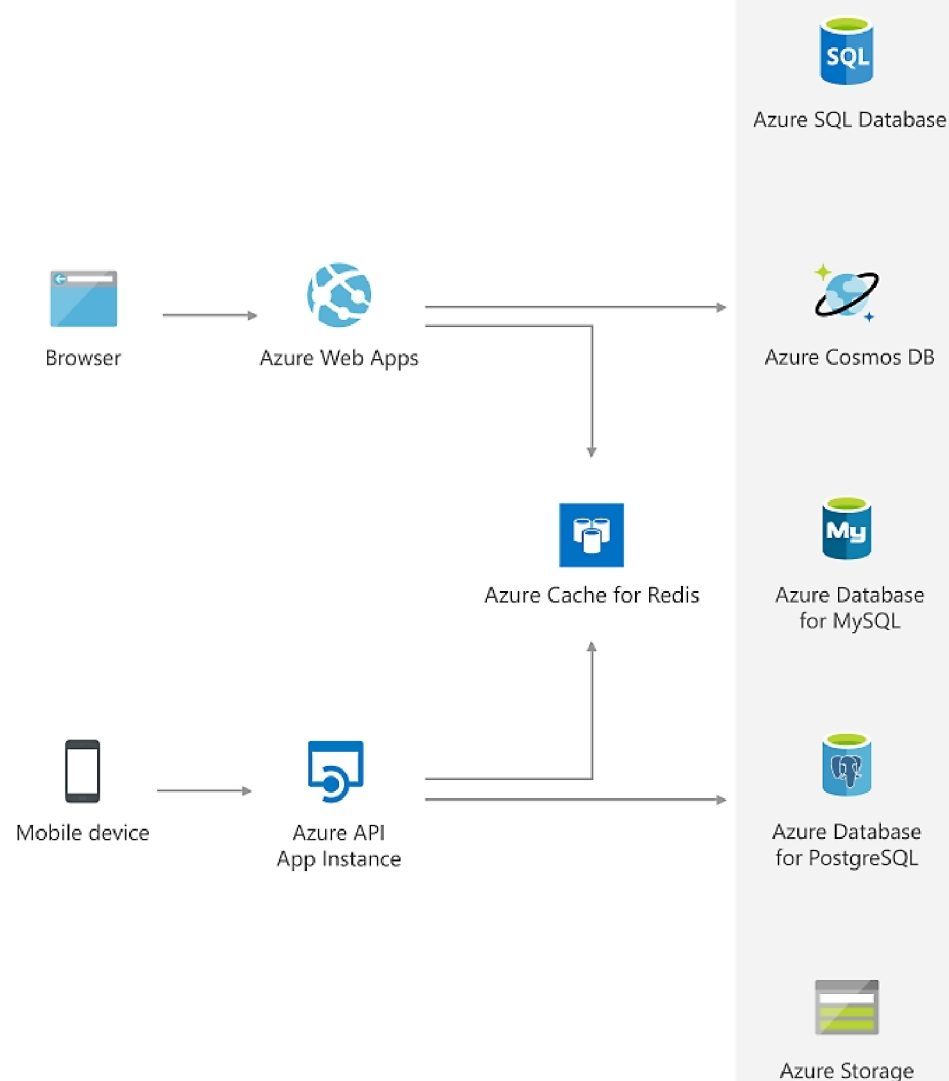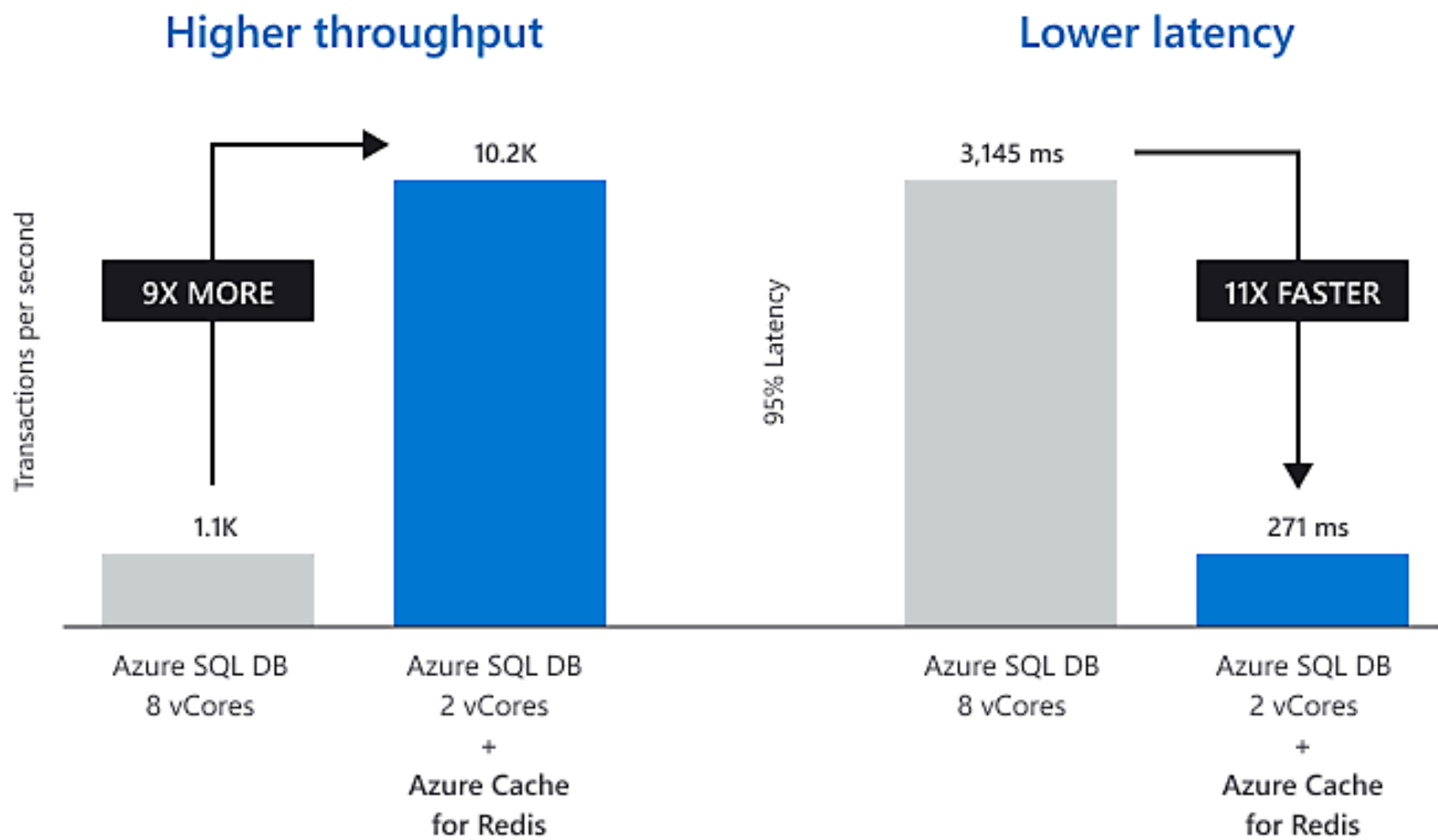
Powerful capabilities including clustering, active geo-replication, Redis on Flash, and availability of up to 99.999 percent

⊙ Chat with sales

What you can build using Azure Cache for Redis

Improve application throughput and latency

Use Azure Cache for Redis to accelerate your data layer through caching. Adding Azure Cache for Redis can increase data throughput by over 800 percent while increasing latency performance by over 1,000 percent[1] at a cost-effective price. It's a great way to efficiently scale applications and improve user experience without the expense of rearchitecting your underlying database.

Read the blog post ›

Higher throughput

Transactions per second

9X MORE

10.2K

1.1K

Azure SQL DB
8 vCores

Azure SQL DB
2 vCores
+
Azure Cache
for Redis

Lower latency

95% Latency

3,145 ms

11X FASTER

271 ms

Azure SQL DB
8 vCores

Azure SQL DB
2 vCores
+
Azure Cache
for Redis

Browser → Azure Web Apps

Mobile device → Azure API App Instance

Azure Cache for Redis

Azure SQL Database

Azure Cosmos DB

Azure Database for MySQL
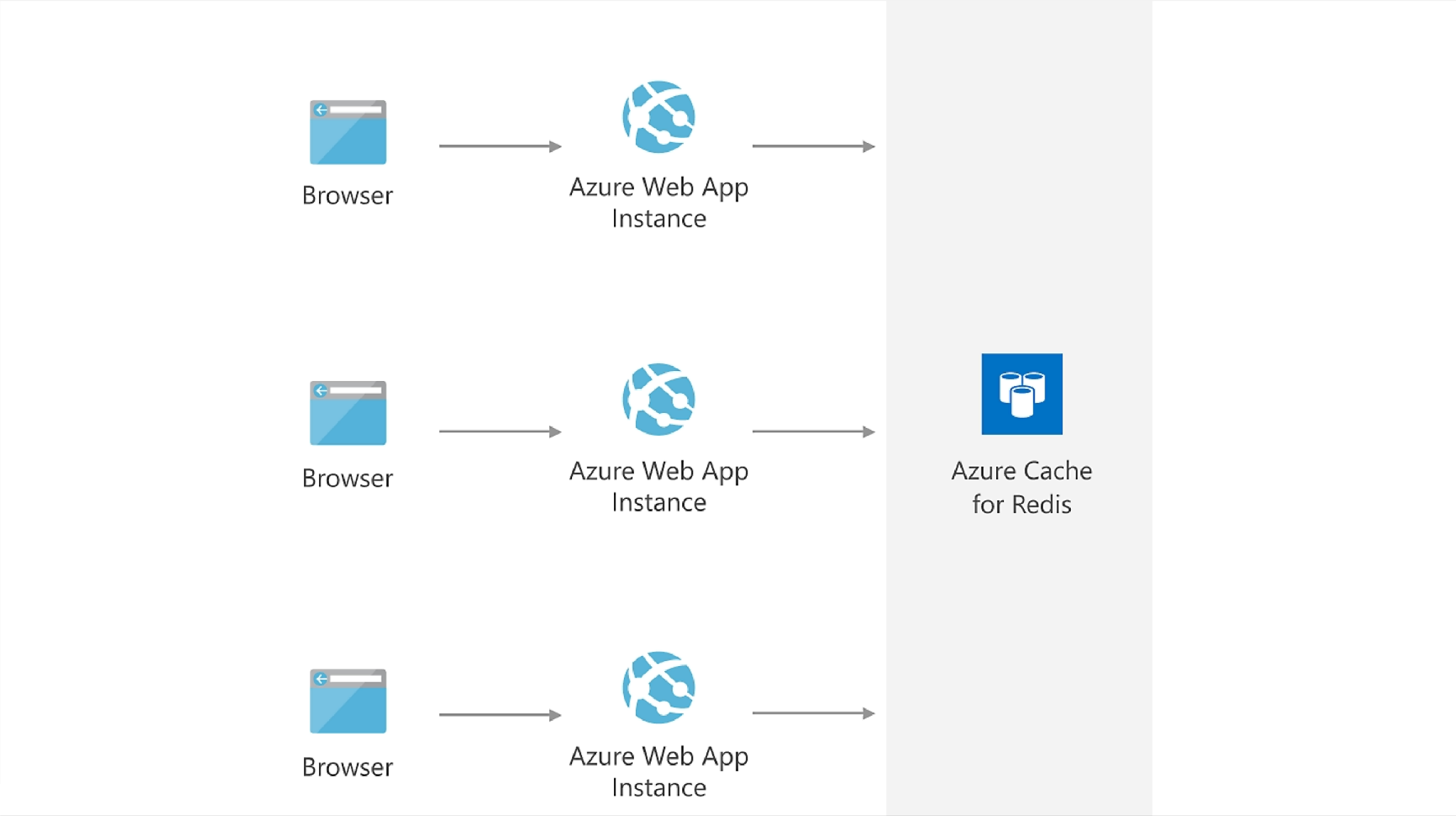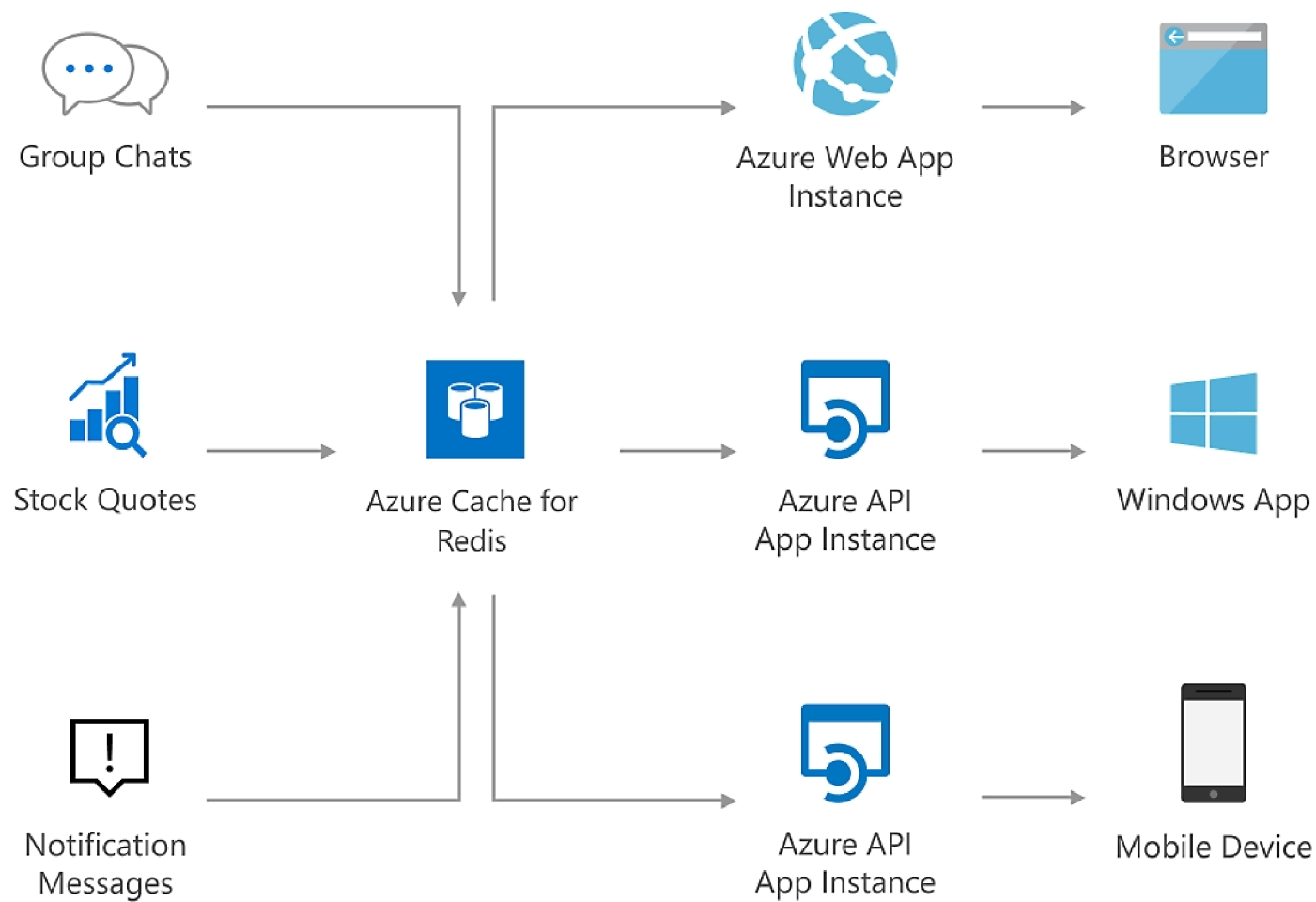
Azure Database for PostgreSQL

Azure Storage

Speed up applications with a distributed cache

Complement database services like Azure SQL Database and Azure Cosmos DB by enabling your data tier to scale throughput at a lower cost than through expanded database instances. Store and share database query results, session states, and static content by using a common cache-aside pattern, and make your application more nimble and scalable.
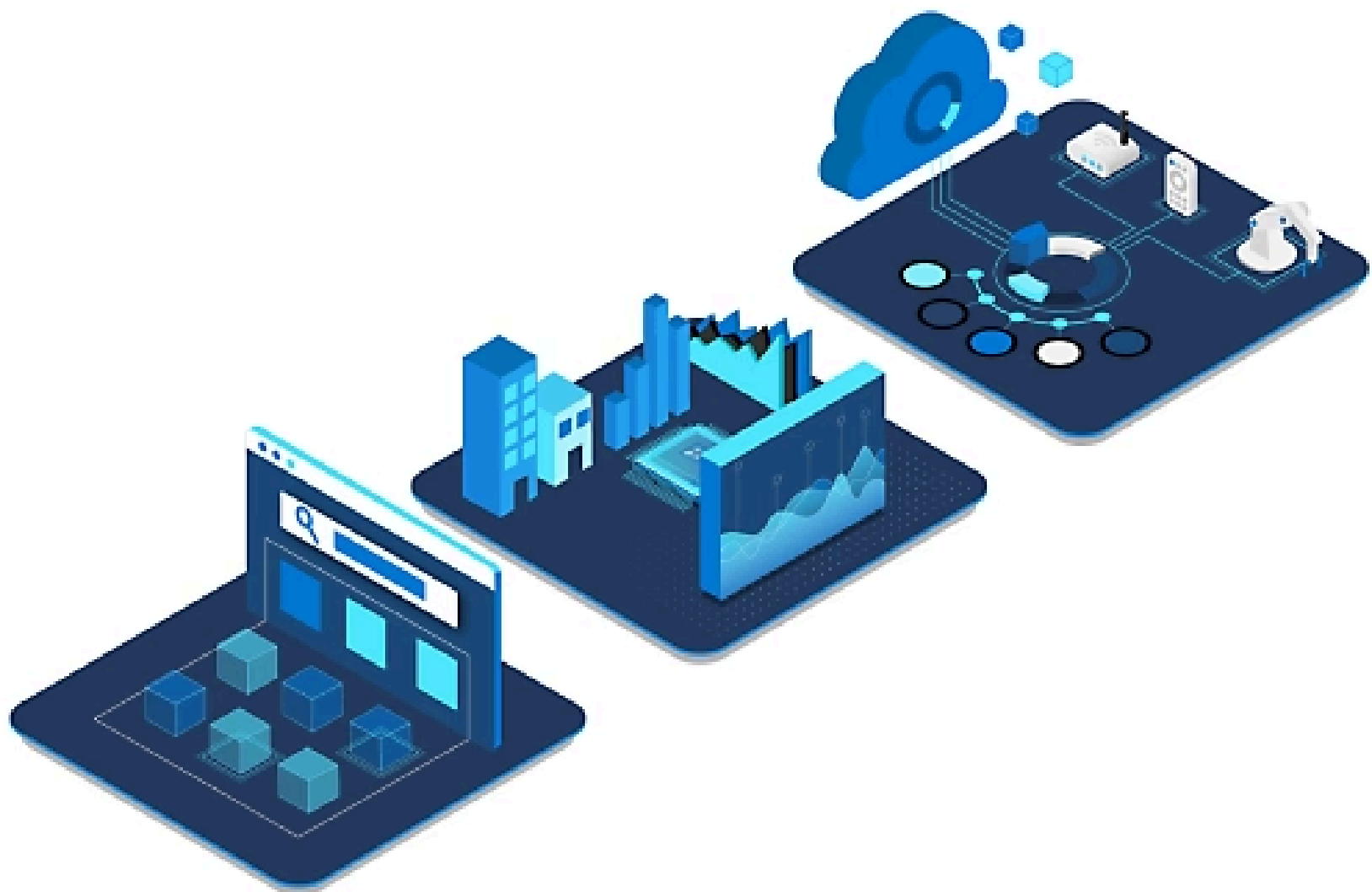
Efficiently store session data

Quickly save, retrieve, and update web session data, such as user cookies and output pages. Improve the performance of your application by increasing its responsiveness and enabling it to handle increasing loads with fewer web-compute resources. Take advantage of data persistence, and automatic data duplication for maximum user data reliability. Scale out to terabyte size using clustering to meet the needs of even the largest enterprises and synchronize session data globally with active geo-distribution.

Communicate between services as a message broker

Use Azure Cache for Redis as a solution for implementing publish/subscribe or queue architectures. Route real-time messages and scale up web communication frameworks such as SignalR. Use industry-standard TLS encryption for data in transit, and configure proper network isolation with Azure Private Link.

Upgrade app performance with Redis Enterprise on Azure

Get game-changing support for popular Redis Enterprise features via Enterprise and Enterprise Flash tiers of Azure Cache for Redis, developed in partnership with Redis Inc. Take advantage of active geo-replication to create globally distributed caches with up to 99.999% availability. Add new data structures that enhance analytics and machine learning with the included RediSearch, RedisBloom, and RedisTimeSeries modules. And gain massive

cache sizes at a lower price point by using the Enterprise Flash tier to run Redis on speedy flash storage.
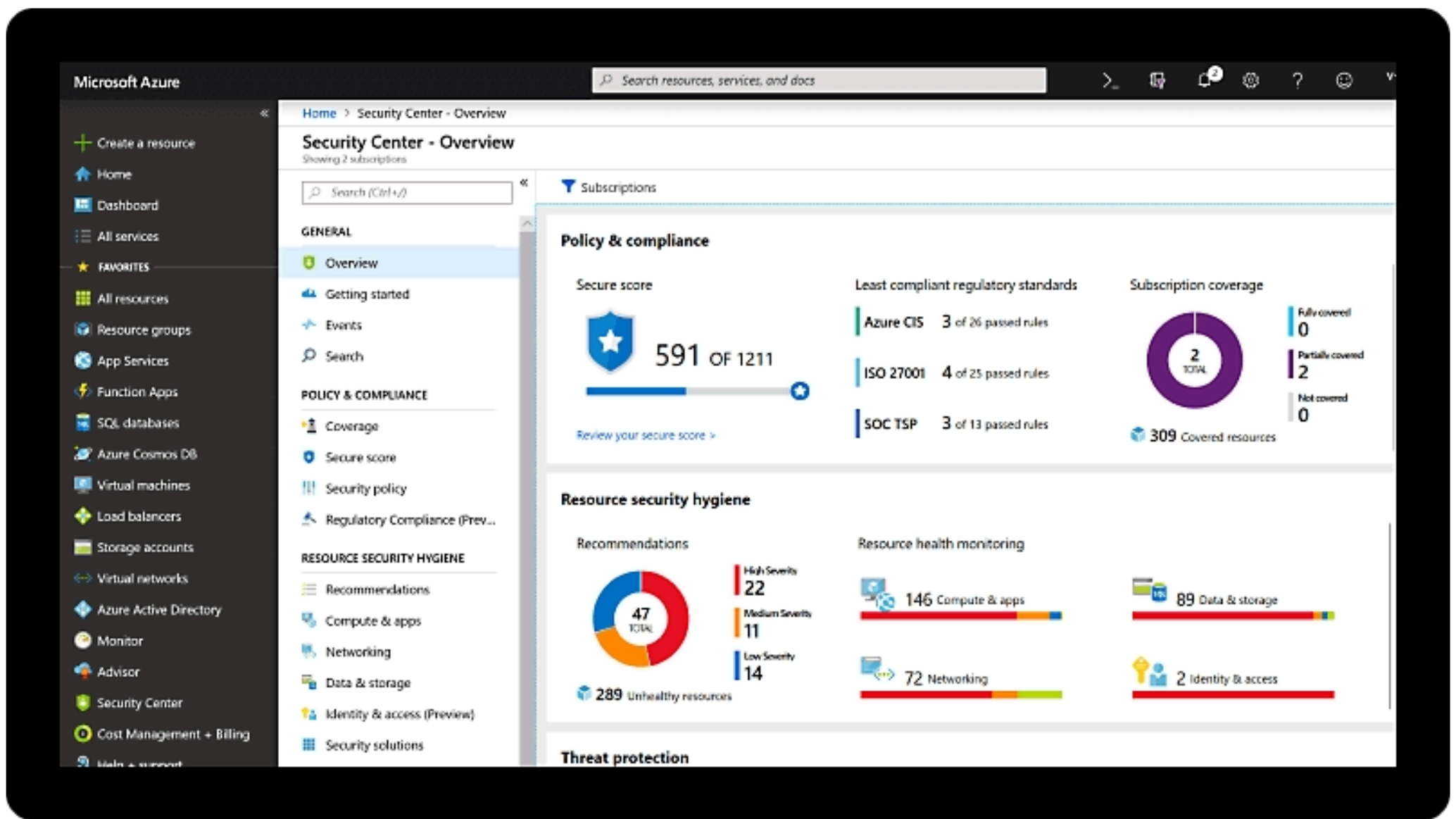
[Learn more ›](#)

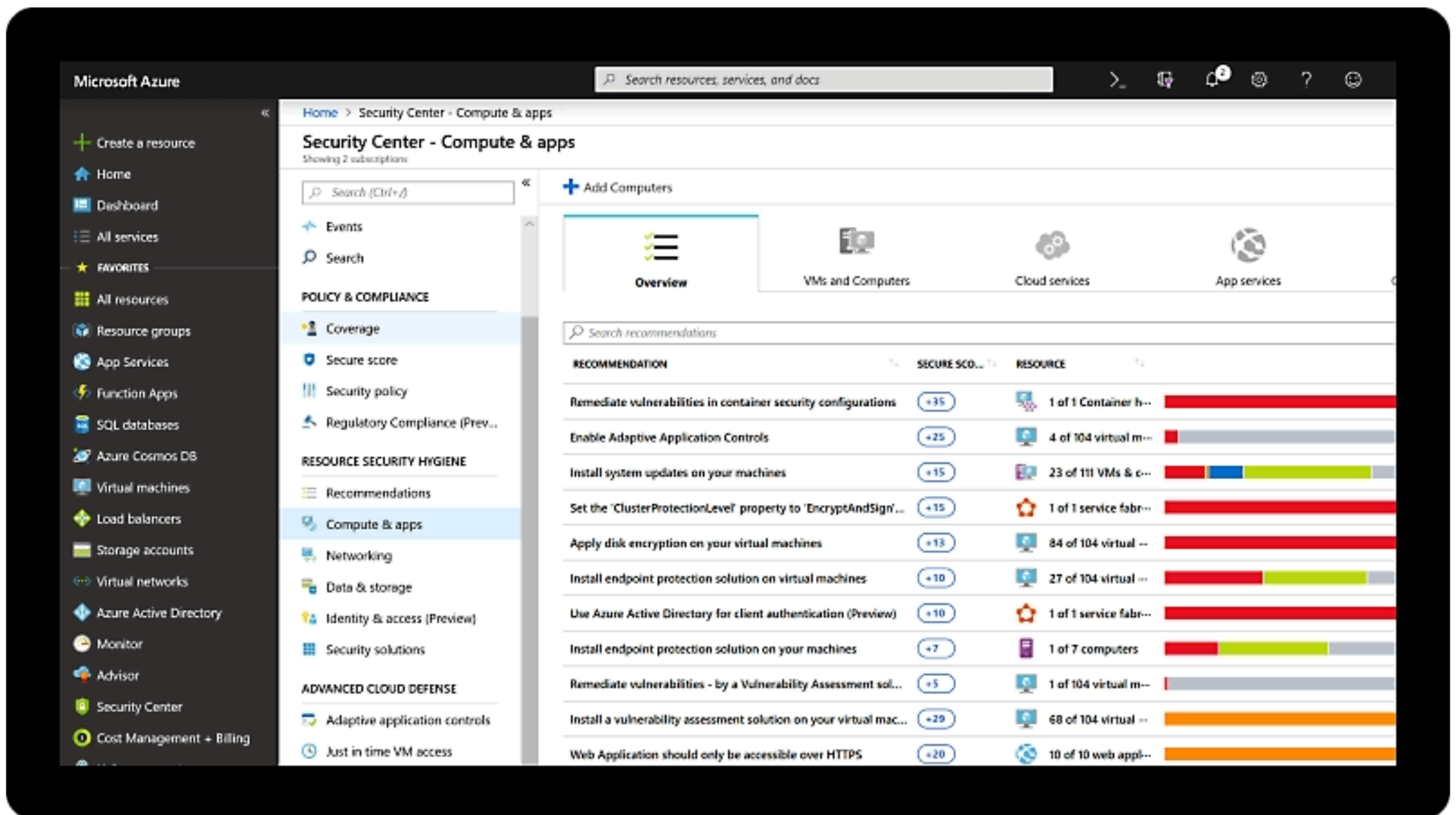## Enjoy Redis as a fully managed service

Deploy faster by using a fully managed service on Azure. Azure Cache for Redis is backed by open-source Redis and natively supports Redis data structures including [hashes](#), [lists](#), and [sorted sets](#). If your application uses Redis, it will work with Azure Cache for Redis. [Streamline migration](#) by [importing and exporting](#) Azure Cache for Redis database files.

Comprehensive security and compliance, built in

✓ Microsoft invests more than **USD 1 billion annually** on cybersecurity research and development.

✓ We employ more than **3,500 security experts** who are dedicated to data security and privacy.

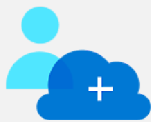Learn more about security on Azure

Cost-effective pricing that gives you control

With five pricing tiers and reserved pricing options, you have the flexibility to tailor performance to your workload. See pricing details.

Get started with an Azure free account

1

Start free. Get USD 200 credit to use within 30 days. While you have your credit, get free amounts of many of our most popular services, plus free amounts of 55+ other services that are always free.

2

After your credit, move to **pay as you go** to keep building with the same free services. Pay only if you use more than your free monthly amounts.

3

After 12 months, you'll keep getting 55+ always-free services—and still pay only for what you use beyond your free monthly amounts.

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Alaska   CARmax   MARS   CHIPOTLE   SITEPRO

Alaska Airlines makes shopping easier

"We wanted to use Azure Cache for Redis and getting that running on-premises wasn't easy. But in Azure, with three clicks, we had it. We didn't have to coordinate with other teams to set up new infrastructure and figure out how to maintain it once we hit production, and that's a beautiful thing."

Ralph Feltis, Senior Software Engineer, Alaska Airlines

Read the story >

Azure Cache for Redis resources and documentation

Learning resources

Quickstarts:

.NET | .NET Core | ASP.NET | Java

Node.js | Python

Tutorial:

Cache-aside leaderboard

Microsoft Learn:

Cache read-only data with Redis

Use the cache-aside pattern

Improve session scalability in a ASP.NET web application

Accelerate and scale a Spring Boot application with Azure Cache for Redis

Popular developer resources

Code samples

SDKs:

.NET | Java | REST API | Redis client | Redis commands

Azure PowerShell | Azure CLI

Solution architectures:

[Caching best practices](#) | [Cache-aside](#)

[Highly available app services deployment](#)

[Enterprise app deployment](#)

[E-commerce front end](#) | [E-commerce output caching](#)

[E-Improve web scalability](#) | [Simple website](#)

[Web and mobile app](#)

Frequently asked questions about Azure Cache for Redis

›   **What is Azure Cache for Redis?**

›   **What makes Azure Cache for Redis so fast?**

›   **Is Azure Cache for Redis a database or a cache?**

›   **Is an in-memory cache reliable enough for my data?**

Ready when you are—let's set up your Azure free account

Try Azure for free

[1] Performance claims are based on data from a study commissioned by Microsoft and conducted by GigaOm in October 2020. The study compared the performance of a test application using an Azure database with and without implementing Azure Cache for Redis as a caching solution. Azure SQL Database and Azure Database for PostgreSQL were used as the database element in the study. A 2 vCore Gen 5 General Purpose instance of Azure SQL Database and a 2 vCore General Purpose instance of Azure Database for PostgreSQL were used with a 6 GB P1 Premium instance of Azure for Redis. These results were compared with 8, 16, 24, and 32 vCore Gen 5 General Purpose instances of Azure SQL DB and 8, 16, 24, and 32 vCore General Purpose instances of Azure Database for PostgreSQL without Azure Cache for Redis. The benchmark data is taken from the GigaOm Web Application Database Load Test which simulates a common web application and backend database barraged by increasing HTTP requests. Actual results may vary based on configuration and region.

[2] Redis is a registered trademark of Redis Ltd. Any rights therein are reserved to Redis Ltd. Any use by Microsoft is for referential purposes only and does not indicate any sponsorship, endorsement or affiliation between Redis and Microsoft.

Explore Azure

Explore Azure

What is Azure?

Get started

Global infrastructure

Datacentre regions

Trust your cloud

Products and pricing

Products and pricing

Products

Pricing

Free Azure services

Flexible purchase options

Cloud economics

Optimise your costs

Solutions and support

Solutions and support

Solutions

Resources for accelerating growth

Solution architectures

Support

Azure demo and live Q&A

Partners

Partners

Azure Marketplace

Find a partner

Join ISV Success

Resources

Resources

Training and certifications

Documentation

Blog

Developer resources

Students

Events and webinars

Analyst reports, white papers and e-books

Videos

Cloud computing

Cloud computing

What is cloud computing?

What is cloud migration?

What is a hybrid cloud?

What is AI?

What is IaaS?

What is SaaS?

What is PaaS?

What is DevOps?

Change language

English (India)

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