

# SQL Server on Azure Virtual Machines Up to 3.4x faster at 87% lower cost than SQL Server on AWS



## Azure vs. AWS performance study for SQL Server VMs

GigaOm recently wrote a study where they tested throughput performance between SQL Server on Azure VMs and SQL Server on AWS EC2. The study evaluated SQL Server on Azure and on AWS across three benchmarks: **Windows OS, Linux OS, and high-end SSD storage**. Performance is derived from the TPC-E transaction per second (TPS) metric.

### The results

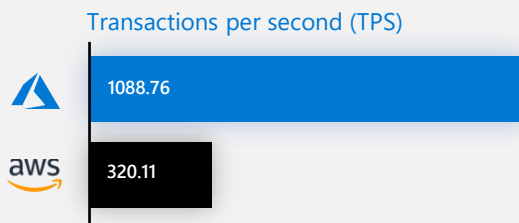
### Performance Higher is better

### Price/performance Lower is better

#### Windows OS



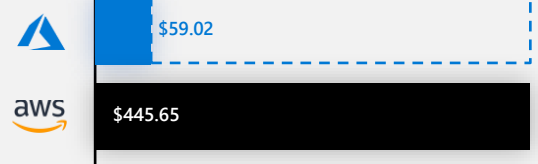
SQL Server Enterprise Edition



**3.4x faster on Azure**

\*Includes Azure Hybrid Benefit and Reserved Instances with three-year commitment.

#### 3 year pricing / TPS\*

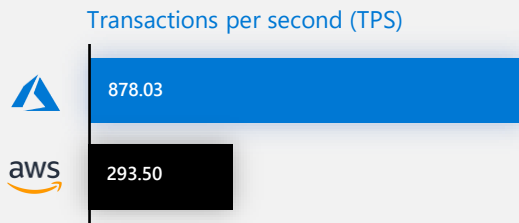


**Costs 87% less than AWS**

#### Linux OS

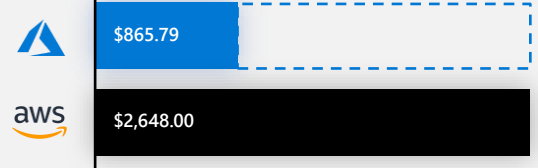


SQL Server Enterprise Edition



**3.0x faster on Azure**

#### 3 year pricing / TPS

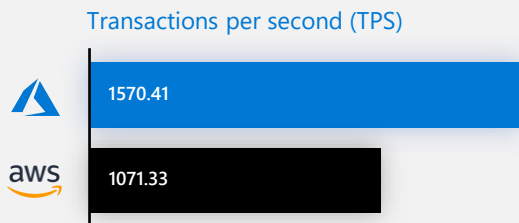


**Costs 67% less than AWS**

#### High-end storage

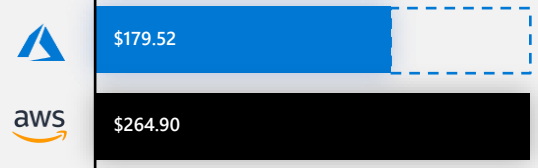


Azure VMs with Ultra Disk and AWS VMs with i01 Volumes



**1.5X faster on Azure**

#### 3 year pricing / TPS



**Costs 32% less than AWS**

**Azure leads AWS across key performance and price/performance benchmarks**

# 5 more reasons to pick Azure over AWS for SQL Server workloads



## Free support for SQL Server 2008/R2

Get free extended security updates for SQL Server 2008/R2 images in Azure IaaS for three years.



## Automatic security updates

Ease of maintenance with automatic application of the latest security patches, only on Azure.



## Pre-configured cloud backup

Restore to a specific point in time with an automatically-generated Azure backup.



## Free Disaster Recovery secondary in Azure

On-premises SQL Server with SA now comes with free SQL license for Azure DR secondary



## Only cloud with Developer edition

Access the fully-featured free SQL Server Developer edition, only pre-configured on Azure.



## Allscripts leveraged existing licensing to seamlessly migrate to the cloud with Azure Virtual Machines

### Challenge

Need to consolidate data after acquisitions

### Solution

Migration of 600 SQL Server VMs to Azure with existing Windows and SQL Licenses

### Outcome

Licensing savings up to 82% with Azure Hybrid Benefit

“By moving our acquired applications to Azure, we were able to get them up, running, and adding value to the business in three weeks versus the three months needed to requisition servers and storage.”

Peter Tomlinson  
Director of IS, Technology Operations



## Choose Azure when migrating SQL Server to the cloud

- ➔ Read the complete performance study [white paper](#)
- ➔ Take advantage of [\\$200 in Azure consumption](#)
- ➔ Leverage your on-premises licenses with [Azure Hybrid Benefit](#)



© 2019 Microsoft Corporation. All rights reserved. Price-performance claims based on data from a study commissioned by Microsoft and conducted by GigaOm in October 2019. The study compared price performance between SQL Server 2017 Enterprise edition on Windows Server 2016 Datacenter edition in Azure E64s\_v3 instance type with 4x P30 1TB Storage Pool data (Read Only Cache) + 1x P20 0.5TB log (No Cache) and the SQL Server 2017 Enterprise edition on Windows Server 2016 Datacenter edition in AWS EC2 r4.16xlarge instance type with 1x 4TB gp2 data + 1x 1TB gp2 log. Benchmark data is taken from a GigaOm Analytic Field Test derived from a recognized industry standard, TPC Benchmark™ E (TPC-E). The Field Test does not implement the full TPC-E benchmark and as such is not comparable to any published TPC-E benchmarks. The Field Test is based on a mixture of read-only and update intensive transactions that simulate activities found in complex OLTP application environments. Price-performance is calculated by GigaOm as the cost of running the cloud platform continuously for three years divided by transactions per second throughput. Prices are based on publicly available US pricing in West US for SQL Server on Azure Virtual Machines and Northern California for AWS EC2 as of October 2019. Pricing incorporates three year reservations for Azure and AWS compute pricing, and Azure Hybrid Benefit for SQL Server and Azure Hybrid Benefit for Windows Server and License Mobility for SQL Server in AWS, excluding Software Assurance costs. Price-performance results are based upon the configurations detailed in the GigaOm Analytic Field Test. Actual results and prices may vary based on configuration and region.