Benchmarking SQL Server BlackBox Hosting vs AWS

WHY AND HOW WE TESTED

Organisations are more data driven than ever. When it comes to analysing data in the cloud, speed, performance and cost are all major factors when choosing your cloud provider.

We used the publicly available TPROC-C HammerDB benchmark tool to conduct performance analysis for Microsoft SQL workloads on a c5.xlarge AWS EC2 instance against a comparable BlackBox Hosting Standard Single Server.

	SPECIFICATIONS	PRICING
aws c5.xlarge	CPU: 4 vCPU – Intel(R) Xeon(R) Platinum 8124M Memory: 8GB OS: Windows Server 2019 Storage: 128 GB GP3 SSD SQL: SQL Server 2019 Standard	$238.91 (£192.37*) per month (1 year no upfront) Support not included, IOPS (3000), Throughput (125 MBps) 1 year cost: $2866.92 (£2,308.44*) *USD to GBP converted on 18/05/2022
BLACKBOX Standard Single Server	CPU: 4 vCPU – Intel(R) Xeon(R) Gold 6258R Memory: 8GB OS: Windows Server 2019 Storage: 150 GB 3PAR Backed SSD SQL: SQL Server 2019 Standard	£111.86 per month with flexible contract terms – includes support, unlimited bandwidth and storage transaction data 1 year cost: £1,342.32

TEST PARAMETERS AND RESULTS

We created two new virtual machines with only HammerDB and SQL Server 2019 Standard installed. We tested using 4 warehouses and 16 virtual users.

The BlackBox Hosting standard VM achieved a higher transactional throughput than its AWS counterpart. The AWS VM achieved 83,426 NOPM (new orders per minute) and 191,825 TPM (transactions per minute) compared to our BlackBox VM achieving 120,332 NOPM and 277,012 TPM.

By using BlackBox Hosting, you could save 42% in costs as well as benefitting from almost 45% increased performance to support your data needs.

NEW ORDERS PER MINUTE

+ 44.2%

AWS VM	BlackBox VM
83,426	120,332

TRANSACTIONS PER MINUTE

+ 44.4%

AWS VM	BlackBox VM
191,825	277,012

COST ANALYSIS

1-year comparisons show a massive £966.12 difference making AWS 72% more expensive compared to BlackBox

42% cheaper