MySQL on Azure Optimized via Intel® Optimized Cloud Stack Solution Snapshot

intel.

The Challenge

Companies continue to go through capacity and system constraints; increasing demand amplifies these challenges enterprises face.

MySQL Server Overview + Benefits

The mass proliferation of data means that businesses have the information they need to make smarter business decisions—that is, if they can analyze that data quickly and turn those insights into action. Whether databases are small, large, or somewhere in the middle, the latest general purpose (Dds) instances and memory-optimized (Eds) instances are well suited for memory-intensive enterprise applications, large relational database servers, and in-memory analytics workloads. Microsoft Azure, powered with 3rd Gen Intel® Xeon® processors, can improve MySQL database performance over older 2nd Gen Intel® Xeon® processors.

MySQL Server Value Props

MySQL is an open-source relational database engines for running internet-scale web and mobile applications.

Airbnb, Uber Technologies, and Netflix are some of the popular companies that use MySQL.

Why Intel for MySQL Server

Memory-optimized virtual machine sizes for the best performance of MySQL workloads and higher memory-to-vCore ratio for mission-critical and data warehouse workloads.

Access to the latest Intel® Xeon® processor technologies Intel® Turbo Boost Technology 2.0, Intel® AVX-512, and Intel® Deep Learning Boost for data analysis.

Fast Operations

MySQL on Azure provides fast insights across the application development cycle and allows you to add new use cases quickly by deploying data warehousing solutions in minutes. Harness more data with less hassle by using 3rd Gen Intel® Xeon® Scalable processors for MySQL deployments.

Shrink Infrastructure Footprint
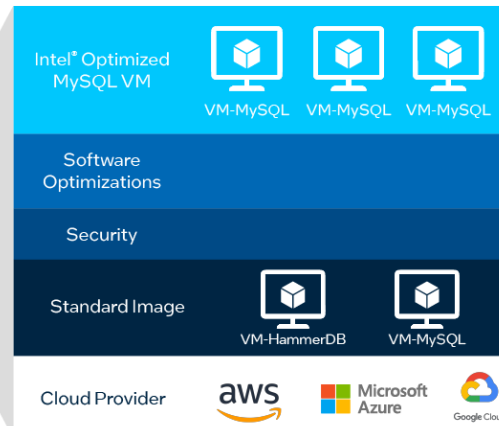
Shrink your infrastructure footprint and maintain costs with Intel® architecture on Azure Cloud with Intel® Xeon® Scalable processors.

Flexible Storage Options

Leverage Intel® technology to run MySQL on your infrastructure platform choice, on-premises, or Azure Cloud.

Turn-Key Solution

Intel® Optimized Cloud Stack uses ready-to-use Azure images to save workload runtime and cloud costs, helping end customers reduce customization complexity and accelerate time to deployment.
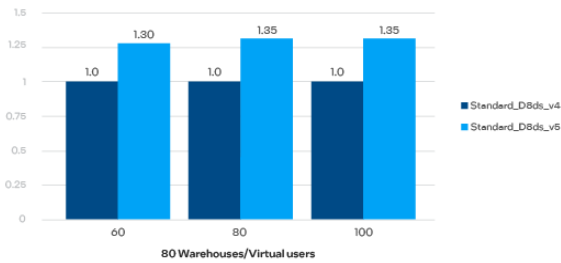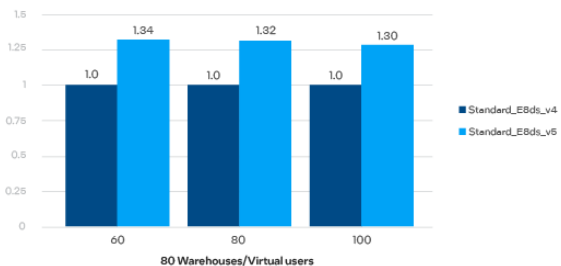
Proof Points

Intel® Optimized Cloud Stacks (Intel® OCS) for MySQL

Intel® Optimized MySQL VM	VM-MySQL	VM-MySQL	VM-MySQL
Software Optimizations			
Security			
Standard Image	VM-HammerDB	VM-MySQL	
Cloud Provider	aws	Microsoft Azure	Google Cloud

HammerDB TPROC-C[1,2]

80 Warehouses/Virtual users

Standard_D8ds_v4 / Standard_D8ds_v5

- Standard_D8ds_v5 outperforms Standard_D8ds_v4 by 30% with the same number of vCPUs
- Dds v5 series virtual machines feature the 3rd Gen Intel® Xeon® Platinum 8370C processor in a hyper-threaded configuration. They can scale up to 96 vCPUs with configurations similar to the Dds v4 series VM
- Dds v4 virtual machines are based on a custom 2nd Gen Intel® Xeon® Platinum 8272CL processor, which runs at a base speed of 2.5 GHz and can achieve up to 3.4 GHz all core turbo frequency

HammerDB TPROC-C[5,6]

80 Warehouses/Virtual users

Standard_E8ds_v4 / Standard_E8ds_v5

Standard_E8ds_v5 with 3rd Gen Intel® Xeon® Platinum processors outperform Standard_E8ds_v4 with 2nd Gen Intel® Xeon® Platinum processors by 30% with the same number of vCPUs

HammerDB TPROC-C[3,4]

160 Warehouses/Virtual users

Standard_D16ds_v4 / Standard_D16ds_v5

Standard_D16ds_v5 with 3rd Gen Intel® Xeon® Platinum processors outperform Standard_D16ds_v4 with 2nd Gen Intel® Xeon® Platinum processors by 33% with the same number of vCPUs

HammerDB TPROC-C[7,8]

160 Warehouses/Virtual users

Standard_E16ds_v4 / Standard_E16ds_v5
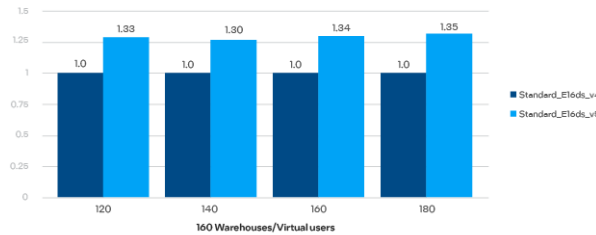
Standard_E16ds_v5 with 3rd Gen Intel® Xeon® Platinum processors outperform Standard_E16ds_v4 with 2nd Gen Intel® Xeon® Platinum processors by 30% with the same number of vCPUs

Want More Information?

Contact your MySQL or Intel account executive to learn how we can help to optimize your MySQL workloads.