

# Increase MySQL Database Transactions by 1.65x with AWS EC2 M5 Instances vs. AWS EC2 M6g Instances

## Reap 1.32x the Performance per Dollar with AWS M5 Instances Featuring 2<sup>nd</sup> Gen Intel Xeon Scalable Processors

Companies rely on MySQL databases for ecommerce, data warehousing, and other applications. In all cases, strong performance is vital to providing customers and other users with a good experience. Another top priority when running your MySQL workloads in AWS instances is cost-effectiveness. The processor you choose can make a dramatic difference in performance and value. For extra-large OLTP databases, AWS M5 Instances enabled by 2<sup>nd</sup> Gen Intel<sup>®</sup> Xeon<sup>®</sup> Scalable processors can offer greater performance than M6g instances with Amazon Graviton2 processors.

In HammerDB benchmark tests using an OLTP workload to compare MySQL database performance on two different 64-vCPU AWS instances, M5 instances featuring 2<sup>nd</sup> Gen Intel Xeon Scalable processors delivered 1.65x more transactions per minute than M6g instances.

The 64-vCPU AWS M5 instances also offered better value than the same size M6g instances, providing 1.32x more performance per dollar. By selecting M5 instances, not only do you get more from each instance, but you can achieve a given amount of database work with fewer cloud instances, a great boon to your bottom line.

### Boost Database Performance with M5 Instances

As Figure 1 shows, 64-vCPU M5 instances enabled by 2<sup>nd</sup> Gen Intel Xeon Scalable processors outperformed 64-vCPU M6g instances, processing 1.65x more MySQL database transactions per minute.

#### Relative MySQL Database Performance

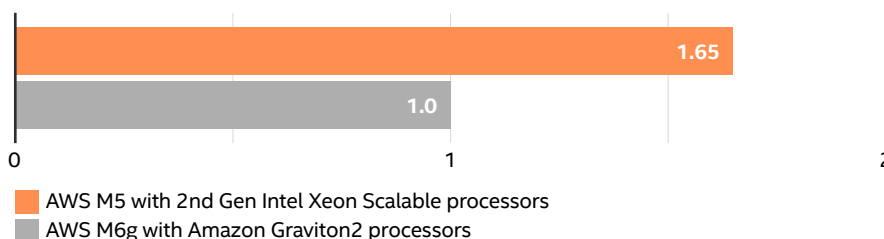


Figure 1. Relative results comparing the MySQL database transactions per minute of 64-vCPU M5 instances vs. 64-vCPU M6g instances.

MySQL

**Complete 1.65x more MySQL database transactions per minute on M5 instances with 2<sup>nd</sup> Gen Intel Xeon Scalable processors vs. M6g instances**

**Get 1.32x more MySQL database performance per dollar on M5 instances with 2<sup>nd</sup> Gen Intel Xeon Scalable processors vs. M6g instances**



## Get Better Value By Selecting M5 Instances with 2<sup>nd</sup> Gen Intel® Xeon® Scalable processors

Better performance is always desirable, but companies must weigh performance with cost to determine the best course forward. Looking at pricing for the two 64-vCPU M series AWS instances we tested, we see that the hourly rate for M6g instances with AWS Graviton2 processors is lower than M5 instances with 2<sup>nd</sup> Gen Intel Xeon Scalable processors, which could make them seem like a good bet. However, the performance of the M5 instances is so much stronger that when we calculate the performance per dollar, these instances come out way ahead.

As Figure 2 shows, M5 instances with 2<sup>nd</sup> Gen Intel Xeon Scalable processors provided 1.32x better database performance per dollar than M6g instances.

**Relative MySQL Database Performance Per Dollar**

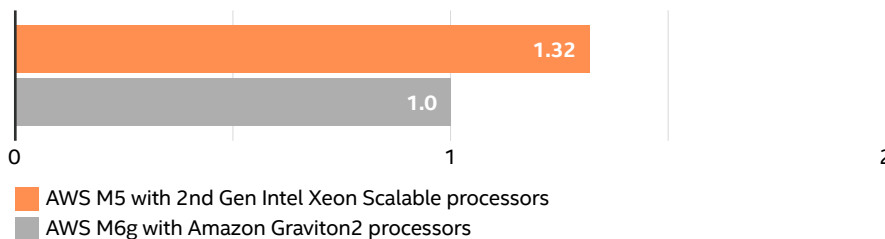


Figure 2. Relative results comparing the MySQL database transactions per minute per dollar of 64-vCPU M5 instances vs. 64-vCPU M6g instances.

If your organization hosts MySQL databases in the cloud, these performance and value comparisons have important implications. By selecting AWS M5 instances enabled by 2<sup>nd</sup> Gen Intel Xeon Scalable processors rather than AWS M6g instances with Amazon Graviton2 processors, you could deliver better performance to your users and get a greater return on your cloud investment.

### Learn More

To begin running your MySQL workloads on AWS M5 Instances with 2<sup>nd</sup> Gen Intel Xeon Scalable processors, visit <http://intel.com/aws>.



Performance varies by use, configuration and other factors. Learn more at <https://intel.com/benchmarks>.

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