

Increase PostgreSQL® Database Performance by up to 1.41x with Amazon™ EC2 M5n Instances Featuring 2nd Gen Intel® Xeon® Scalable Processors

Amazon EC2 M5n Instances Feature Intel Cascade Lake Processors

PostgreSQL

Handle 1.27x the customer transactions
on small instances

Handle 1.20x the customer transactions
on medium instances

Handle 1.41x the customer transactions
on large instances

Handle More PostgreSQL Database Transactions Per Minute in Amazon EC2 M5n Instances, Featuring 2nd Gen Intel Xeon Scalable Processors

Running databases in the cloud may simplify day-to-day operations for admin staff, but once you select a cloud provider a critical choice remains: What kind of instance offers the PostgreSQL database performance you require? Amazon EC2 M5n instances with 2nd Gen Intel Xeon Scalable processors give organizations all the benefits of the latest technology, including significantly stronger database performance.

In PostgreSQL transactional database tests comparing Amazon EC2 instances, new M5n instances enabled by 2nd Gen Intel Xeon Scalable processors outperformed older M4 instances. A small instance (with 8 vCPUs) handled 1.27x the transactions per minute, a medium instance (with 16 vCPUs) processed 1.20x the transactions per minute, and a large instance (with 64 vCPUs) achieved 1.41x the transactions per minute of similarly configured older M4 instances with Intel Xeon E5 v4 processors.

While workload requirements and instance sizes differ, new M5n instances featuring 2nd Gen Intel Xeon Scalable processors take advantage of new technology to handle more transactions per minute and thus support more customers per instance compared to older M4 instances.

Support More Customers on Small Instances

Tests comparing the performance of small instances with 8 vCPUs show that Amazon EC2 M5n instances featuring 2nd Gen Intel Xeon Scalable processors deliver up to 1.27x the PostgreSQL transactions per minute of a M4 instance running on older processors.

This means that selecting Amazon EC2 M5n instances with updated 2nd Gen Intel® Xeon® Scalable processors can increase the number of database transactions per instance you can sustain.

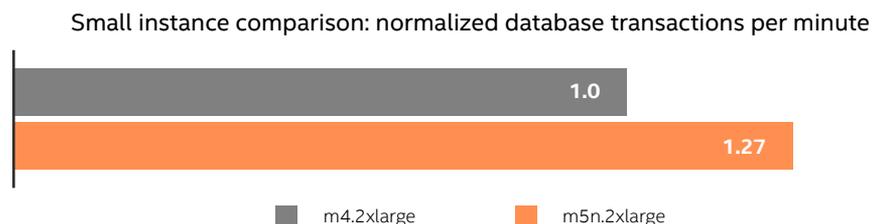


Figure 1. HammerDB test results comparing performance of the M5n instance type to M4 instance type with 8 vCPUs and 20GB database size.

Support More Customers on Medium Instances

In HammerDB tests, medium instances supporting mid-sized databases had similar performance gains when choosing instances with upgraded technology. With 16 vCPUs, Amazon EC2 M5n instances featuring 2nd Gen Intel® Xeon® Scalable processors delivered 1.20x the PostgreSQL transactions per minute of the older M4 instances.

Whether your organization runs small or medium-sized databases, using updated instances with 2nd Gen Intel Xeon Scalable processors can offer significant performance boosts to help you handle more customer transactions.

Medium instance comparison: normalized database transactions per minute

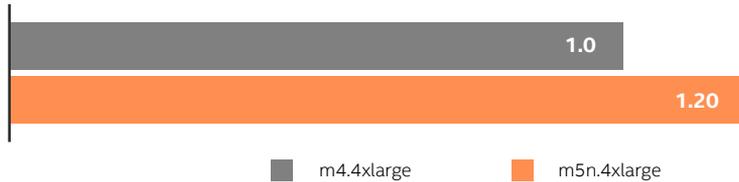


Figure 2. HammerDB test results comparing performance of the M5n instance type to M4 instance type with 16 vCPUs and 50GB database size.



Support More Customers on Large Instances

HammerDB testing with large instances saw strong performance gains for Amazon EC2 M5n instances featuring 2nd Gen Intel Xeon Scalable processors compared to older M4 instances—handling up to 1.41x the transactions per minute.

The big performance increases that M5n instances provide for PostgreSQL database workloads mean that organizations can handle more customers with fewer instances and reduce the number of instances they must manage and support.

Large instance comparison: normalized database transactions per minute

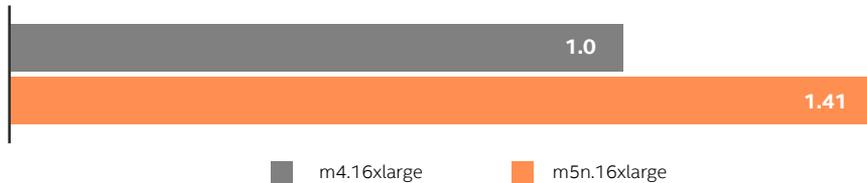


Figure 3. HammerDB test results comparing performance of the M5n instance type to M4 instance type with 64 vCPUs and 100GB database size.

Learn More

To begin your PostgreSQL database deployments on Amazon EC2 M5n instances featuring 2nd Gen Intel Xeon Scalable processors, visit <https://intel.com/aws>.

For more test details, visit <http://facts.pt/xHrpYj1>.



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

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