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Handle up to 1.64x the MySQL™ Database Transactions Per Minute with Amazon™ EC2 R5 Instances Featuring 2nd Gen Intel® Xeon® Scalable Processors

Amazon Web Services R5 Instances Feature Intel Cascade Lake Processors

Help More Customers on Ecommerce Workloads with Amazon EC2 R5 Instances Featuring 2nd Gen Intel Xeon Scalable Processors

If your organization seeks memory-optimized Amazon EC2 instances to drive ecommerce database workloads, selecting instances that run on newer technology can allow your database to handle more transactions per instance to support more customers.

In MySQL transactional database tests comparing Amazon EC2 instances of various sizes, newer R5 instances enabled by 2nd Gen Intel Xeon Scalable 8259CL processors outperformed older R4 series instances with Intel Xeon E5 v4 processors, processing as much as 1.64x the transactions per minute of similarly configured older instances.

Whether your databases require, small, medium, or large instances sizes, selecting R5 instances featuring 2nd Gen Intel Xeon Scalable processors over older R4 instances can improve your organization's ability to keep up with customer demand, both now and as business continues to grow.

Support More Customers on Small Instances

Once you've decided to run workloads in the cloud, it's time to select the instance type to run your mission-critical databases. By selecting upgraded instances that run on new technology rather than outdated hardware, you can ensure you can meet peak ecommerce demands.

Tests comparing small instances with eight vCPUs show choosing Amazon EC2 R5 instances featuring 2nd Gen Intel Xeon Scalable processors can achieve up to 1.45x the MySQL transactions per minute of R4 series instances with Intel Xeon E5 v4 processors.

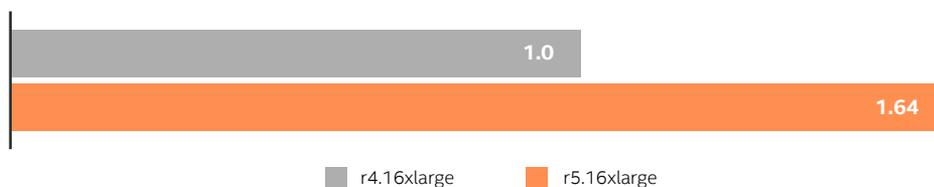Large instance comparison: normalized transactions per minute

■ r4.16xlarge	■ r5.16xlarge

Figure 1. HammerDB test results comparing performance of the R5 instance type to R4 instance type with 8 vCPUs and 52GB database size.
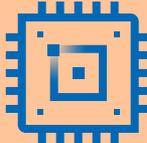
MySQL

Handle 1.45x the **customer transactions**
on small instances

Handle 1.47x the **customer transactions**
on medium instances

Handle 1.64x the **customer transactions**
on large instances

Support More Customers on Medium Instances

As with small instances, tests comparing medium instances with 16 vCPUs showed that Amazon EC2 R5 instances featuring 2nd Gen Intel® Xeon® Scalable processors improved MySQL database performance, delivering up to 1.47x the transactions per minute of older R4 instances.
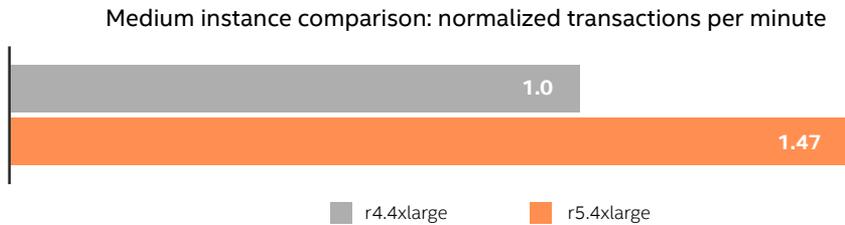
Medium instance comparison: normalized transactions per minute

r4.4xlarge	1.0
r5.4xlarge	1.47

Figure 2. HammerDB test results comparing performance of the R5 instance type to R4 instance type with 16 vCPUs and 105GB database size.

Support More Customers on Large Instances

Large instances showed the largest performance improvements from choosing Amazon EC2 R5 instances enabled by 2nd Gen Intel Xeon Scalable processors, offering up to 1.64x the MySQL transactions per minute of R4 series instances. This means that organizations can support more customer transactions per instance by selecting memory-optimized Amazon EC2 R5 instances enabled by 2nd Gen Intel Xeon Scalable processors and set themselves up for continued success.
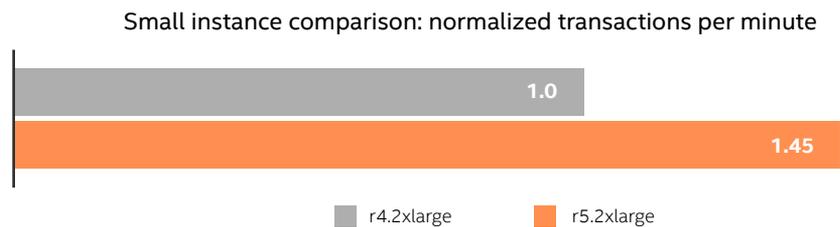
Small instance comparison: normalized transactions per minute

r4.2xlarge	1.0
r5.2xlarge	1.45

Figure 3. HammerDB test results comparing performance of the R5 instance type to R4 instance type with 64 vCPUs and 424GB database size.

Learn More

To begin your MySQL database deployments on Amazon EC2 R5 instances featuring 2nd Gen Intel Xeon Scalable processors, visit http://intel.com/AWS.

For more test details, visit http://facts.pt/L5S3md0.

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