Handle up to 69 Percent More ASP.NET Work on Microsoft® Azure® Dsv5 Virtual Machines Featuring 3rd Gen Intel® Xeon® Scalable Processors

ASP.NET

Up to 60% more Requests/ Second on Standard D2s_v5 VMs Featuring 3rd Gen Intel Xeon Scalable Processors

vs. D2_v2 VMs

Up to 47% more Requests/ Second on Standard D4s_v5 VMs Featuring 3rd Gen Intel Xeon Scalable Processors

vs. D3_v2 VMs

Up to 69% more Requests/ Second on Standard D8s_v5 VMs Featuring 3rd Gen Intel Xeon Scalable Processors

vs. D4_v2 VMs

With Docker Containers, Dsv5 Virtual Machines Outperformed Dv2 VMs with Older Processors

Selecting a cloud platform that can handle more requests per second on your ASP.NET development framework can improve response times for users and make them more likely to use your applications. To show how the processors powering these virtual machines (VMs) can affect performance, we tested two generations of Azure VMs with ASP.NET Core 6.0 on Docker containers: Standard Dsv5 VMs featuring 3rd Gen Intel Xeon Scalable processors, and Standard Dv2 VMs running on older processors. On a variety of scenarios including tests related to Plaintext, Json, Fortunes, and more, the Dsv5 VMs handled significantly more requests per second than their Dv2 counterparts. At multiple VM sizes (2vCPU, 4vCPU, and 8vCPU), Dsv5 VMs delivered consistently stronger ASP.NET performance, which means your organization could deliver a better app experience for end users no matter the size of your workloads.

Performance on 2vCPU Virtual Machines

Figure 1 shows the relative ASP.NET performance of VMs with 2 vCPUs, where the Dsv5 VMs consistently yielded higher performance than Dv2 VMs—achieving up to 60% more requests per second.

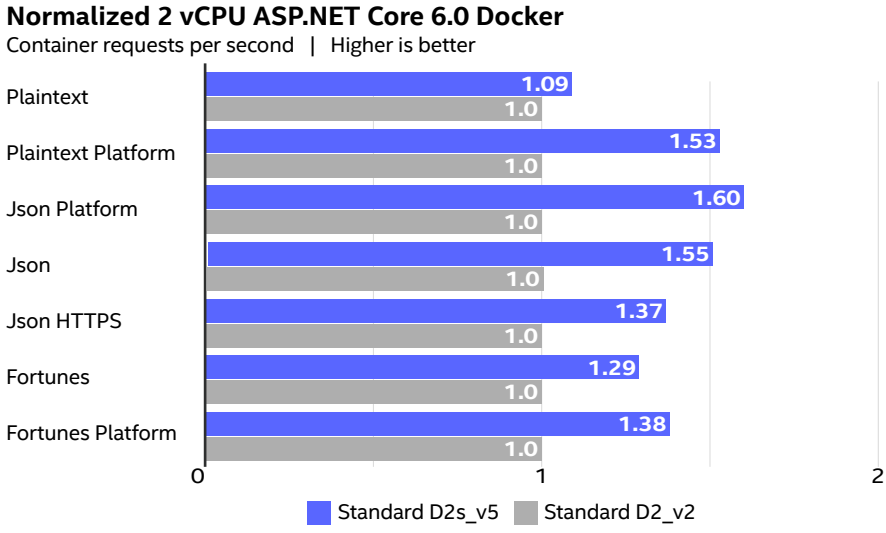


Figure 1. Relative test results comparing the requests-per-second rate of D2s_v5 VMs enabled by 3rd Gen Intel Xeon Scalable processors vs. D2_v2 VMs enabled by older processors.

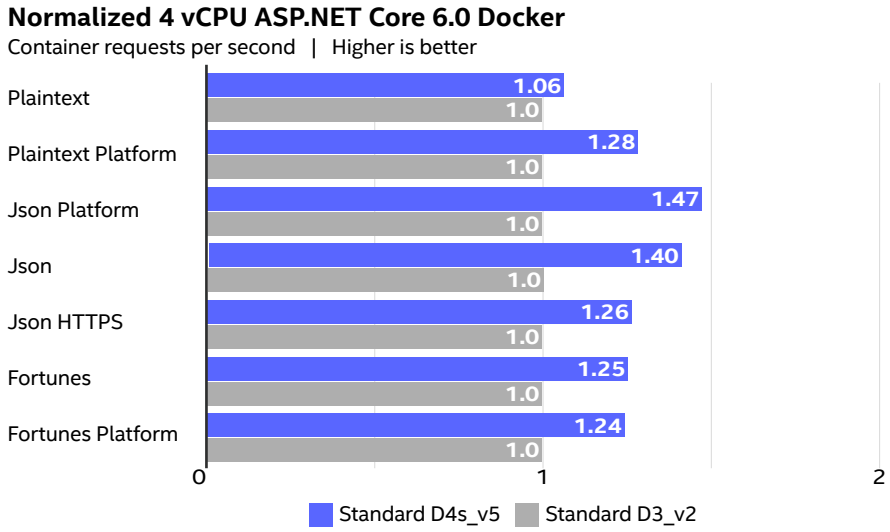
Intel Workload Proof Series: ASP.NET on Azure Dsv5 VMs vs. Dv2 VMs

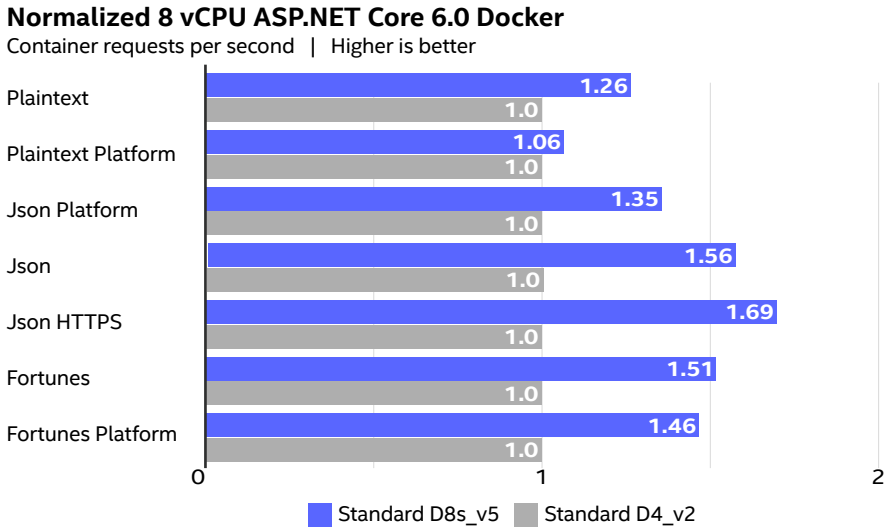
See backup for workloads and configurations. Results may vary.

Performance on 4vCPU Virtual Machines

As Figure 2 shows, on VMs with 4 vCPUs, Dsv5 VMs with 3rd Gen Intel® Xeon® Scalable processors handled up to 47% more requests per second than the Dv2 VMs with older processors did.

Figure 2. Relative test results comparing the requests-per-second rate of D4s_v5 VMs enabled by 3rd Gen Intel Xeon Scalable processors vs. D3_v2 VMs enabled by older processors.





Performance on 8vCPU Virtual Machines

As Figure 3 shows, the newer 8vCPU Dsv5 VMs with 3rd Gen Intel Xeon Scalable processors handled up to 69% more requests per second on an ASP.NET workload as the 8vCPU Dv2 VMs with older processors did.

Figure 3. Relative test results comparing the requests-per-second rate of D8s_v5 VMs enabled by 3rd Gen Intel Xeon Scalable processors vs. D4_v2 VMs enabled by older processors.

Across VM sizes, selecting newer Azure Standard Dsv5 VMs with 3rd Gen Intel Xeon Scalable processors can give your ASP.NET Core 6.0 apps a performance boost that allows you to give your end users a more responsive app experience.

Learn More

To begin running your workloads on Azure Dsv5 VMs with 3rd Gen Intel Xeon Scalable processors, visit https://docs.microsoft.com/en-us/azure/virtual-machines/dv5-dsv5-series.

Tests by Intel completed March 2022. All tests on Azure WestUS 2 Region with Ubuntu 20.04.2 LTS kernel 5.8.0-1036-azure and ASP.Net Core 6.0. Instance details: Standard D2s_v5: Intel Xeon Platinum 8370C CPU @ 2.8GHz, 2 vCPU, 8GB RAM; Standard D4s_v5: Intel Xeon Platinum 8370C CPU @ 2.8GHz, 4 vCPU, 16GB RAM; Standard D8s_v5: Intel Xeon Platinum 8370C CPU @ 2.8GHz, 8 vCPU, 32GB RAM; Standard D2_v2: Intel Xeon Platinum 8370C CPU @ 2.80GHz, Intel Xeon Platinum 8272CL (Cascade Lake), Intel Xeon 8171M 2.1GHz (Skylake), Intel Xeon E5-2673 v4 2.3 GHz (Broadwell), Intel Xeon E5-2673 v3 2.4 GHz (Haswell), 2 vCPU, 7GB RAM; Standard D4_v2: Intel Xeon Platinum 8370C CPU @ 2.80GHz, Intel Xeon Platinum 8272CL (Cascade Lake), Intel Xeon 8171M 2.1GHz (Skylake), Intel Xeon E5-2673 v4 2.3 GHz (Broadwell), Intel Xeon E5-2673 v3 2.4 GHz (Haswell), 4 vCPU, 14GB RAM; Standard D8_v2: Intel Xeon Platinum 8370C CPU @ 2.80GHz, Intel Xeon Platinum 8272CL (Cascade Lake), Intel Xeon 8171M 2.1GHz (Skylake), Intel Xeon E5-2673 v4 2.3 GHz (Broadwell), Intel Xeon E5-2673 v3 2.4 GHz (Haswell), 8 vCPU, 28GB RAM

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