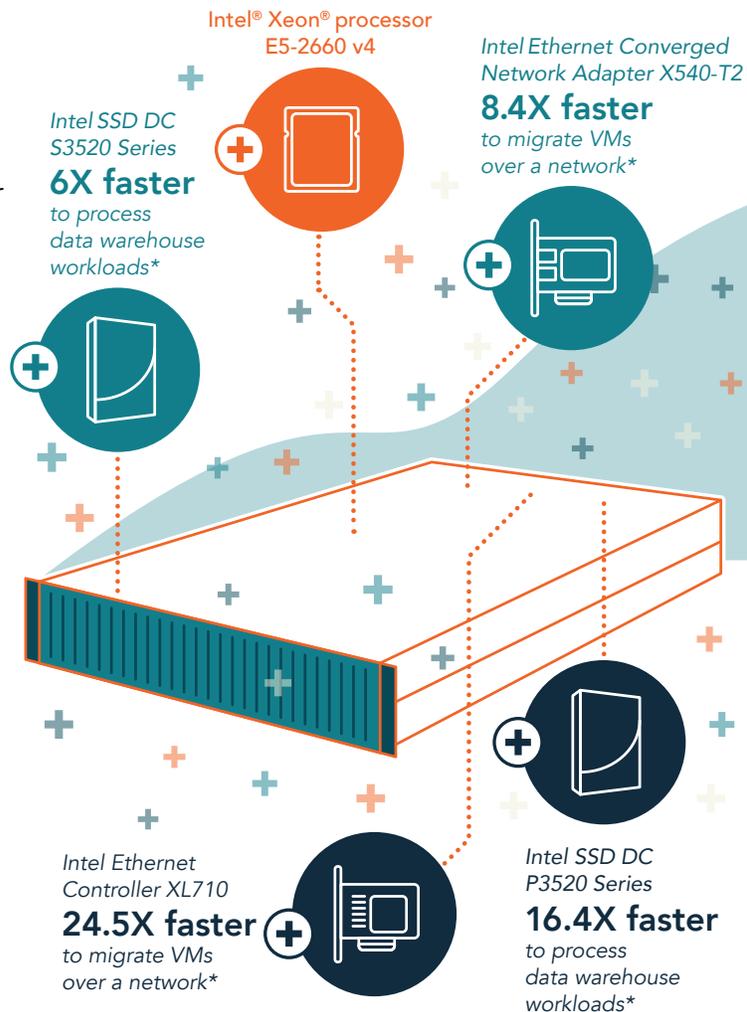**Executive summary**

Boost your work with hardware from Intel

The right configuration of Intel processors, SSDs, and networking can give your business a competitive advantage

The strength of your business depends in part on the strength of your server hardware. When you have a strong hardware foundation, it opens up possibilities for the types and complexity of work your business can do. Servers with hardware from Intel can empower your business to analyze risk and reward more quickly and increase agility and competitiveness.

At Principled Technologies, we measured the performance of several server components: the Intel® Xeon® processor E5-2660 v4 (compute); the Intel® Solid State Drive Data Center S3520 Series, and the Intel Solid State Drive Data Center P3520 Series with PCIe®-performance speed (storage); and the Intel Ethernet Converged Network Adapter X540-T2 and Intel Ethernet Controller XL710 (networking).

With each server upgrade came increased capabilities in data throughput, which can help your business stay ahead of the competition. We saw the biggest benefit by far with the server equipped with the Intel Xeon processor E5-2660 v4, Intel SSD DC P3520 Series, and the 40GbE Ethernet Controller XL710.

Intel® Xeon® processor E5-2660 v4

Intel Ethernet Converged Network Adapter X540-T2
8.4X faster to migrate VMs over a network*

Intel SSD DC S3520 Series
6X faster to process data warehouse workloads*

Intel Ethernet Controller XL710
24.5X faster to migrate VMs over a network*

Intel SSD DC P3520 Series
16.4X faster to process data warehouse workloads*

*Compared to the legacy solution.

Intel processors bring greater work capabilities

A Principled Technologies study from March 2017 found that the Intel Xeon processor E5-2660 v4 could enable a dual-socket server to support up to 48 virtual machines. Read that full report at www.principledtechnologies.com/Intel/Xeon_E5-v4_processor_upgrades_0317.pdf.

Faster storage means faster data analysis

Better storage can bring better analytics capabilities to your business. The Intel SSD DC S3520 Series enabled a server to process a data warehouse workload six times faster than a server using hard drives. The Intel SSD DC P3520 Series was even faster, taking less than 35 minutes to process a workload that took the hard drive-based server nearly 10 hours 10 minutes to process—16.4 times faster.

High-bandwidth networking for fast data migration

Fast networking can enable your company to migrate lots of data between servers with ease. The 10GbE Intel Ethernet Converged Network Adapter X520-T2 enabled our servers to move six VMs across a network in just over four minutes. The 40GbE Intel Ethernet Controller XL710 did the work in just 1.5 minutes, 24.5 times faster than the 1GbE network adapter, which took over 40 minutes to do the exact same work.

Conclusion

Good business requires a solid foundation of server hardware. Upgrades from Intel for compute, storage, and networking components can help your business support new users and expand your customer base.

Read the full report at http://facts.pt/Sz9PSB. ▶

Principled Technologies®

Facts matter.®