GETTING MORE FROM SAS® 9.4 WORKLOADS WITH INTEL® XEON® PROCESSOR E7 V3 FAMILY AND INTEL® SSD DATA CENTER FAMILY

SIMPLIFY, SAVE, & DO MORE

Modernize your data center by consolidating the SAS® workloads of your legacy servers onto next-generation Intel® Xeon® processor-powered servers

Is an outdated data center holding back your business and the performance of your SAS® software? It might be time for new systems, which can modernize and simplify through consolidation and upgraded hardware that does many times the work of older servers.

By modernizing your data center, your business can continue to run your current SAS workloads while providing high-performance infrastructure for SAS in-memory visualization and analytics.

One excellent option is to virtualize bare-metal legacy servers onto a newer Intel® Xeon® processor E7 v3 platform, such as the new Dell PowerEdge R930, ideal for SAS in-memory visualization and advanced analytics. This newer technology helps create a modernized data center that delivers more SAS workload performance, uses less space and resources, and offers shorter response times.

Compared to a legacy server, the PowerEdge R930 powered by Intel Xeon processors E7-8890 v3 with Intel SSD DC P3700 Series for PCIe® delivered more relative performance, required less time to complete SAS jobs of and completed more of those jobs per hour on average. In addition, it retained some headroom while running 12 virtual SAS instances simultaneously, potentially leaving room for more workloads.[1]

[1] For detailed information on our testing, environment, and results, see the full Principled Technologies report for SAS at www.principledtechnologies.com/SAS/SAS_Intel_E5_E7v3_0415.pdf.

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A PRINCIPLED TECHNOLOGIES SUMMARY
Commissioned by SAS

SAVING WITH MODERNIZATION

Simply put, virtualizing on the server powered by Intel Xeon processors E7-8890 v3 meant more SAS jobs done simultaneously in less physical space. That means your business could consolidate aging legacy two-socket servers in your data center and run more SAS jobs. Consolidating physical hardware typically provides advantages such as:

- Reduced power and cooling requirements
- Smaller physical footprints from fewer required racks and servers, which reduces space-related costs
- Lower management costs due to fewer physical servers to manage
- Fewer resources wasted as a result of underutilized hardware

One newer four-socket Dell PowerEdge R930 powered by Intel Xeon processors E7 v3 could replace 12 legacy servers (see Figure 1).

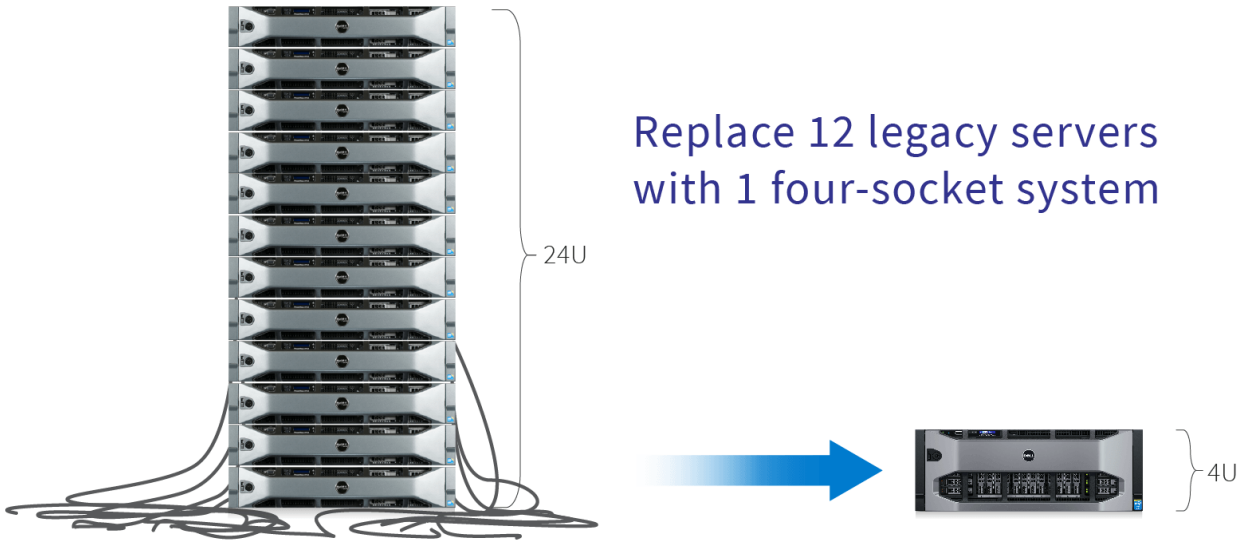

Figure 1: Consolidating legacy servers is a key to modernization.

MORE JOBS IN LESS TIME

In addition to the sheer increase in data through virtualization and consolidation, improved Intel Xeon processor technology created performance and time advantages over the legacy solution. These improvements can help decision makers and database users alike. For example, completing more SAS jobs per hour with the server powered by Intel Xeon processors E7 v3 means your business can analyze crucial SAS data and make necessary decisions more quickly at every level. Figure 2 shows the average jobs per hour for our three solutions.

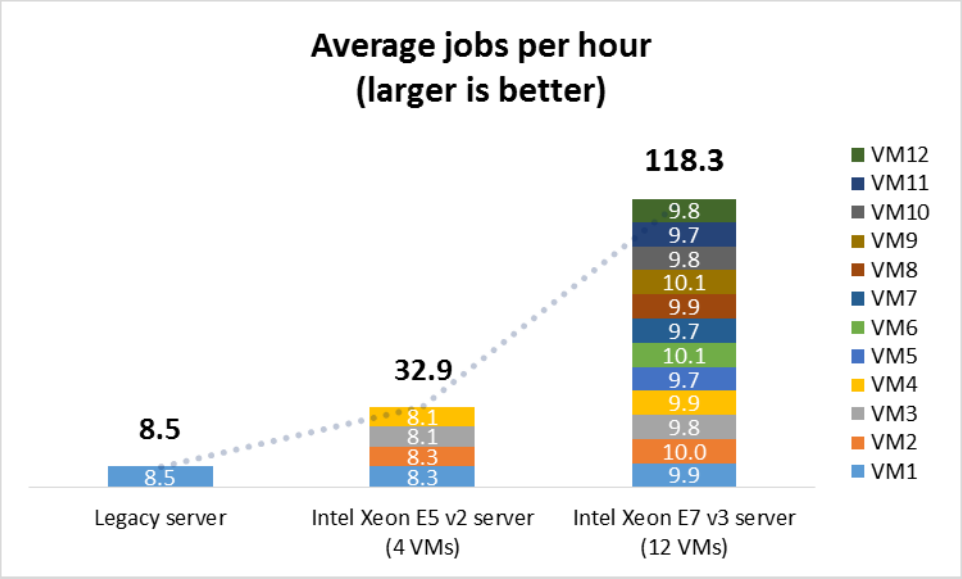

Figure 2: The average number of completed jobs per hour for each solution.

SUPPORTING PROCESSOR PERFORMANCE WITH INTEL SSD STORAGE

The updated Intel disk technology in four-socket servers can make them well suited to support large-volume, complex data analytics software such as those from SAS. The legacy server's hard-disk drives (HDDs) supported only a small fraction of the disk throughput that we achieved with the Intel SSD DC P3700 Series for PCIe solid-state drives (SSDs) featured in the four-socket server powered by Intel Xeon processors E7 v3 (see Figure 3). By upgrading your legacy servers with HDDs to newer servers with SATA and PCIe SSDs, your business could see significant benefits:

- Get SAS data sooner and have more time to analyze the data
- Save on management time by having fewer servers to maintain
- Reduce waste by utilizing processor and memory resources more effectively

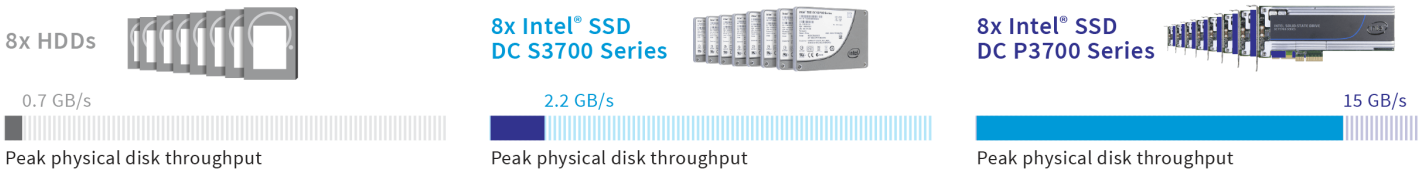

Figure 3: The peak disk throughput in GB per second for each solution. Larger numbers are better.

To read the full report with all of our findings, visit www.principledtechnologies.com/SAS/SAS_Intel_E5_E7v3_0415.pdf.

ABOUT PRINCIPLED TECHNOLOGIES

Principled Technologies, Inc.
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We provide industry-leading technology assessment and fact-based marketing services. We bring to every assignment extensive experience with and expertise in all aspects of technology testing and analysis, from researching new technologies, to developing new methodologies, to testing with existing and new tools.

When the assessment is complete, we know how to present the results to a broad range of target audiences. We provide our clients with the materials they need, from market-focused data to use in their own collateral to custom sales aids, such as test reports, performance assessments, and white papers. Every document reflects the results of our trusted independent analysis.

We provide customized services that focus on our clients' individual requirements. Whether the technology involves hardware, software, Web sites, or services, we offer the experience, expertise, and tools to help our clients assess how it will fare against its competition, its performance, its market readiness, and its quality and reliability.

Our founders, Mark L. Van Name and Bill Catchings, have worked together in technology assessment for over 20 years. As journalists, they published over a thousand articles on a wide array of technology subjects. They created and led the Ziff-Davis Benchmark Operation, which developed such industry-standard benchmarks as Ziff Davis Media's Winstone and WebBench. They founded and led eTesting Labs, and after the acquisition of that company by Lionbridge Technologies were the head and CTO of VeriTest.

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