Fueling new approaches to IT

Data is rightly characterized as the fuel that drives modern business. Market intelligence firm, IDC, projects that the global datasphere will grow to 175 zettabytes (1 ZB = 1 trillion GB) by 2025.¹ That's a lot of “fuel,” and it begs for a simplified, scalable, and secure storage solution to contain it.

Projections such as IDC’s are drawing many in IT to reconsider traditional storage architectures and to adopt software-defined storage (SDS). SDS essentially pools direct-attached storage resources under a virtual data plane making storage provisioning and management independent of the underlying hardware, which contributes to a TCO as much as 50% lower than traditional storage approaches.²

It all starts with the server

Undoubtedly, SDS use is growing rapidly, but it has introduced a troubling misconception in the industry that hardware no longer matters when the environment is software-defined. Banish the thought.

The performance of the software—and the storage it defines—is vitally dependent on the performance, reliability, and security of the hardware upon which it runs. So much so, in fact, that SDS-pioneer VMware*-defined SDS-specific server configurations and partnered with Hewlett Packard Enterprise to certify them. The result is the HPE vSAN Ready Node.

Just right for the task at hand

For a just right balance of CPU, memory, network, I/O controller, and storage, HPE has preconfigured the new HPE vSAN Ready Node. This easy-to-order SDS building block, certified under the VMware vSAN™ all-flash 6 specification, is built on the HPE ProLiant DL380 Gen10 with two 12-core Intel® Xeon® Scalable processors.

Ideal for structured data management and data analytics using popular platforms like Microsoft® SQL Server and Oracle Database configurations begin with a 3-node cluster, each delivering 8 TB of storage and up to 50,000 IOPS. From there, scaling in one-node increments, the HPE vSAN Ready Node scales out to 64 nodes delivering 512 TB of storage and up to 3.2 million IOPS.³

Securing the value

Data is an immense store of value for modern businesses, so it seems reasonable that something of such value should be secured. The HPE vSAN Ready Node is built on HPE ProLiant, the world’s most secure industry-standard server.⁴ At server power on and prior to boot, the HPE Integrated Lights Out 5 (iLO 5) server management system checks the BIOS and every line of firmware against an immutable digital fingerprint stored inside the HPE iLO 5 ASIC to verify that the code is valid and uncompromised. This silicon root of trust is exclusive to HPE.

¹ The Digitization of the World—From Edge to Core, IDC, sponsored by Seagate
Doc #US44413318, November 2018

² VMware vSAN data sheet 2018

³ A measure of capable IOPS in accordance with VMware vSAN Ready Node all-flash 6 specifications

⁴ Based on new silicon root of trust technology and other comprehensive security features, verified by InfusionPoints

³ A measure of capable IOPS in accordance with VMware vSAN Ready Node all-flash 6 specifications
Each HPE vSAN Ready Node running VMware vSAN virtualizes the local physical storage of the HPE ProLiant servers, turning them into pools of storage that can be divided and assigned to virtual machines and applications according to performance, capacity, or quality of service (QoS) requirements.

Each server in the cluster must provide at least one cache device for temporary storage plus one or more capacity devices for persistent storage.

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**Table 1. HPE vSAN Ready Node—the right balance of resources for data-intensive workloads**

<table>
<thead>
<tr>
<th>HPE vSAN Ready Node built on HPE ProLiant DL380 Gen10</th>
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<tbody>
<tr>
<td><strong>Part number</strong> P13271-B21</td>
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<tr>
<td><strong>CPU</strong> 2 x Intel Xeon Gold 6126 processor (12c, 2.6 GHz)</td>
</tr>
<tr>
<td><strong>Memory</strong> 256 GB, 2666 MHz DDR4 RAM</td>
</tr>
</tbody>
</table>
| **Storage** Caching tier: Two disk groups each with 400 GB 12G SAS SSD  
  Capacity tier: Two disk groups each with 4.8 TB 12G SAS SSD |
| **Controller** HPE Smart Array P408i-a SR Gen10 controller  
  (8 lanes, 2 GB cache) |
| **NIC** Dual-port 10/25GbE 6640FLR-SFP28             |
| **Software** VMware vSAN Advanced, 1 year license and support |

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**Easy to choose, easy to buy**

For almost two decades, HPE and VMware have collaborated on defining, designing, and delivering the broadest portfolio of tightly integrated virtualization and software-defined solutions. In fact, more VMware software run on HPE servers than any other server brand, and the reasons are clear. HPE vSAN Ready Node provides the performance, reliability, scalability and, now, industry-leading security—all the characteristics of a software-defined infrastructure entrusted with protecting your data—and the future of your business.

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Learn more at hpe.com/servers/dl380