HPE SMALL BUSINESS SOLUTIONS FOR HYPERCONVERGED INFRASTRUCTURE

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HPE SMALL BUSINESS SOLUTIONS FOR HYPERCONVERGED INFRASTRUCTURE

HPE Small Business Solutions are based on HPE ProLiant Gen10 servers and preconfigured for foundational use cases. They are tested, optimized, and validated with Windows Server, Windows Storage Spaces Direct, and Windows Hyper-V as well as VMware vSphere® and VMware vSAN™. They are designed to be a one-stop shop for packaged solutions including hardware, software, services, and top-selling HPE ProLiant options, ready-to-go for on-premises and Hybrid Cloud use cases.

HPE Small Business Solutions for Hyperconverged Infrastructure (HCI) with Windows Server 2019 Storage Spaces Direct or VMware vSAN give you software-defined storage that mitigates storage sprawl, enables redundant compute and storage, and frees you from the cost and complexity of traditional storage.

You can easily make Hybrid Cloud a reality through and Microsoft Azure Cloud Services or co-located partner cloud services. Combining on-premises HPE infrastructure with cloud services gives you the flexibility to protect mission-critical workloads and sensitive data on-premises, while using the cloud for backup and business continuity.

If you're facing end of support for Windows Server 2008, now is the perfect time to upgrade to HPE Small Business Solutions with Windows Server. Modernizing a legacy Windows Server 2008 environment on HPE ProLiant Gen10 servers with a current version of Windows Server gives you added security against cybercrime, the efficiency of cost-saving technologies, and the benefits of a cloud-ready platform.

Use the iQuote solutions tile

iQuote is an online sales enablement program that simplifies the process of configuring, quoting, and purchasing HPE products and solutions from a single location. The iQuote Solution tile makes it easy to find and select the recommended options because they are bundled kits with all the options necessary to fully deploy your solution—just click and add. You can access the universal version via iquote.hpe.com or contact your preferred HPE Authorized Partner or Distributor for live pricing.
BUILD YOUR SOLUTION

Step 1: Size your solution
HPE Small Business Solutions for HCI are sized by the number of VCPUs. The following table shows the available configurations, with guidance on which base configuration to select based on the number of VCPUs you need.

<table>
<thead>
<tr>
<th>Server uses for base configuration</th>
<th>VCPUs supported</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPE ProLiant ML350 Gen10</td>
<td>12 per node*</td>
</tr>
<tr>
<td>HPE ProLiant DL180 Gen10**</td>
<td>9 per node*</td>
</tr>
<tr>
<td>HPE ProLiant DL325 Gen10</td>
<td>21 per node</td>
</tr>
<tr>
<td>HPE ProLiant DL360 Gen10</td>
<td>15 per node*</td>
</tr>
<tr>
<td>HPE ProLiant DL380 Gen10 (small config)</td>
<td>9 per node*</td>
</tr>
<tr>
<td>HPE ProLiant DL380 Gen10 (large config)</td>
<td>45 per node</td>
</tr>
<tr>
<td>HPE ProLiant DL385 Gen10</td>
<td>21 per node*</td>
</tr>
</tbody>
</table>

* It is possible to double the VCPUs per node by adding a second CPU and related memory and disk space
** ProLiant DL180 Gen10 configuration is Microsoft Azure Stack HCI certified

Step 2: Choose the right configuration and recommended options
Select the solution offer and elements for your business outcome and sizing needs

HPE Small Business Solutions consist of a base system plus offer elements. These combinations are the foundation for special pricing and are the starting point for building your solution configuration. After selecting the appropriate Small Business Solution configuration for your business outcome and sizing requirements, you may also wish to expand its capabilities by adding recommended options.

The configurations for HPE Small Business Solutions were designed for cost-effectiveness and structured as building blocks for easy expandability. All HCI solutions are equipped with redundant power supplies for additional availability protection. SSDs are combined with SAS HDDs on each node to create a storage pool that is shared among the nodes in the solution for high availability. When a node fails, the other node(s) will take over the load from the failed node. This can be performed manually; but can be automated with additional software.

All HCI solutions require a minimum of a 2-node cluster. Some nodes can scale up by adding a second CPU and more drives and memory. All HCI solutions can scale out by adding more nodes to support more demanding workloads or to increase the number of VCPUs supported. The maximum number of nodes vary depending on the software defined storage solution—64 nodes max for vSAN and 16 nodes max for Storage Spaces Direct (except for DL180 Azure Stack—HCI, which is certified for up to 4 nodes). Also note that a 2-node cluster requires a witness. For Microsoft Storage Spaces Direct this can be a USB-based witness or a host-based witness (see the Microsoft website for details). VMware vSAN must be configured with a separate witness host.

HPE Small Business Solutions for Hyperconverged Infrastructure
HPE Small Business Solutions for Hyperconverged Infrastructure are equipped with sufficient CPU, memory, and storage to provide SDS resources up to the stated solution capacity. Memory and drives can be expanded as needed for increased workloads.

Operating system and storage considerations
Windows: The boot volume for Windows Server is intended to be installed on the dual M.2 SSDs, which should be configured as a RAID 1 array from the S100i controller or within the operating system to protect against the failure of one disk. Each of the remaining HDDs and SSDs are to be configured as pass-through on the P408i-a Smart Array Controller. The storage controller must be dedicated to the storage pool. More storage can be added to expand capacity as your needs grow.

VMware*: VMware ESXi™ and VMware vSAN does not support software RAID on the M.2 SSD/S100i controller combination. Therefore, only one M.2 SSD is needed to host the OS volume. Each of the remaining HDDs and SSDs are to be configured as pass-through on the P408i-a Smart Array Controller. The storage controller must be dedicated to the storage pool. More storage can be added to expand capacity as your needs grow.
### TABLE 2. Base system plus offer elements

<table>
<thead>
<tr>
<th>Model</th>
<th>2 x DL350 Gen10</th>
<th>2 x DL180 Gen10*</th>
<th>2 x DL325 Gen10</th>
<th>2 x DL360 Gen10</th>
<th>2 x DL380 Gen10 (small config)**</th>
<th>2 x DL380 Gen10 (large config)**</th>
<th>2 x DL385 Gen10</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Solution capacity</strong></td>
<td>22 vCPUs per node***</td>
<td>9 vCPUs per node***</td>
<td>21 vCPUs per node***</td>
<td>15 vCPUs per node***</td>
<td>9 vCPUs per node***</td>
<td>45 vCPUs per node***</td>
<td>21 vCPUs per node***</td>
</tr>
<tr>
<td><strong>System</strong></td>
<td>4U tower</td>
<td>2U rack</td>
<td>1U Rack</td>
<td>1U Rack</td>
<td>2U Rack</td>
<td>2U Rack</td>
<td>2U Rack</td>
</tr>
<tr>
<td><strong>Processor</strong></td>
<td>1 x Intel® Xeon® 4210 (10 core)</td>
<td>3 x Intel® Xeon® 4208 (8 core)</td>
<td>1 x AMD EPYC™ 7302 (12 core)</td>
<td>1 x Intel® Xeon® 4214 (12 core)</td>
<td>1 x Intel® Xeon® 4208 (12 core)</td>
<td>2 x Intel® Xeon® 5218 (16 core)</td>
<td>1 x AMD EPYC™ 7302 (16 core)</td>
</tr>
<tr>
<td><strong>Memory</strong></td>
<td>4 x 16 GB PC4-2933</td>
<td>6 x 16 GB PC4-2933</td>
<td>6 x 16 GB PC4-2933</td>
<td>6 x 16 GB PC4-2933</td>
<td>12 x 32 GB PC4-2933</td>
<td>12 x 32 GB PC4-2933</td>
<td></td>
</tr>
<tr>
<td><strong>Storage pool HDDs</strong></td>
<td>4 x 1.2 TB 12G 10K SAS</td>
<td>4 x 1.2 TB 12G 10K SAS</td>
<td>4 x 1.2 TB 12G 10K SAS</td>
<td>4 x 1.2 TB 12G 10K SAS</td>
<td>4 x 1.2 TB 12G 10K SAS</td>
<td>4 x 24 TB 12G 10K SAS</td>
<td>2 x 960 GB 6G Mixed Use SATA</td>
</tr>
<tr>
<td><strong>OS volume (VMware)</strong></td>
<td>3 x 240 GB 6G Mixed Use M2 SATA SSDs</td>
<td>1 x 240 GB 6G Mixed Use M2 SATA SSDs</td>
<td>1 x 240 GB 6G Mixed Use M2 SATA SSDs</td>
<td>1 x 240 GB 6G Mixed Use M2 SATA SSDs</td>
<td>1 x 240 GB 6G Mixed Use M2 SATA SSDs</td>
<td>1 x 240 GB 6G Mixed Use M2 SATA SSDs</td>
<td>1 x 240 GB 6G Mixed Use M2 SATA SSDs</td>
</tr>
<tr>
<td><strong>Controller</strong></td>
<td>HPE Smart Array P408i-a Gen10</td>
<td>HPE Smart Array P408i-a Gen10</td>
<td>HPE Smart Array P408i-a Gen10</td>
<td>HPE Smart Array P408i-a Gen10</td>
<td>HPE Smart Array P408i-a Gen10</td>
<td>HPE Smart Array P408i-a Gen10</td>
<td>HPE Smart Array P408i-a Gen10</td>
</tr>
<tr>
<td><strong>Network</strong></td>
<td>2 x 10/25GbE SFP+ PCIe; 4 x 1GbE (embedded)</td>
<td>2 x 10/25GbE SFP+ PCIe; 2 x 1GbE (embedded)</td>
<td>2 x 10/25GbE SFP+ PCIe; 4 x 1GbE FlexLOM</td>
<td>2 x 10/25GbE SFP+ PCIe; 4 x 1GbE FlexLOM</td>
<td>2 x 10/25GbE SFP+ PCIe; 4 x 1GbE FlexLOM</td>
<td>2 x 10/25GbE SFP+ PCIe; 4 x 1GbE FlexLOM</td>
<td></td>
</tr>
<tr>
<td><strong>Power supply</strong></td>
<td>2 x 800W RPSU</td>
<td>2 x 800W RPSU</td>
<td>2 x 800W RPSU</td>
<td>2 x 800W RPSU</td>
<td>2 x 800W RPSU</td>
<td>2 x 800W RPSU</td>
<td></td>
</tr>
</tbody>
</table>

### NOTES
- These configurations represent the solution offers and recommended options.
- The 10GbE NIC is dedicated to internode storage networking; the 1GbE integrated or FlexLOM ports are for normal network traffic between the HA storage solution and the rest of the network.

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**ProLiant DL380 Gen10 configuration is Microsoft Azure Stack HCI certified**

**A minimum of two nodes is required. A two-node HA cluster consists of one active server, one passive server, and a witness which decides which server will be the active server in case of a node failure or communication disruption. The witness can be run on any physical machine that is not part of the cluster and that supports the witness host, avoiding the costs of deploying a third server. Alternatively, the solution witness can be configured on a USB or file share if using Windows Server 2019. A cluster of 3 or more nodes does not require a witness host. See Windows Server 2019 and VMware vSphere documentation for details**

***It is possible to double the VCPUs per node by adding a second CPU and related memory and disk space***
**Step 3: Don’t forget services**

**HPE Pointnext Services**

A services partner built for your business today and tomorrow, HPE Pointnext Services enable you to meet availability commitments with a variety of coverage levels and response times, and easily connect to HPE for faster problem resolution. HPE Pointnext Services offers comprehensive hardware and software services to help increase the availability of IT infrastructure and extend in-house IT staff with HPE expertise. You can do more with less by leveraging service tools with built-in simplification and remote management tools.

Service offerings include:
- HPE Foundation Care
- HPE Proactive Care
- HPE Proactive Care Advanced
- HPE Installation and Deployment Services

**NOTE**

HPE recommends Foundation Care 24x7 as the minimum recommended service level for HPE Small Business Solutions.

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**Step 4: Consider a quote for a flexible monthly payment plan**

**HPE Financial Services**

Purchasing new IT and keeping it current can be financially daunting. HPE is offering a better way for you to acquire and pay for the IT infrastructure you need.

**HPE Subscription Services** allow you to select a complete solution from defined options that include best-in-class compute, storage, and networking hardware, software, accessories, and worry-free support services for a predictable monthly subscription fee. No large, up-front purchase to make—just subscribe, use, return, and renew. No worries about what to do with old equipment. Need to expand? Simply add more hardware or services. HPE Channel Partners can offer hardware, software, and support services in a single solution and deliver it in one simplified subscription contract.

**HPE Technology Refresh program** replaces ownership with predictable monthly or quarterly payments and provides for a shorter, routine refresh cycle every 24 to 48 months. You don’t have to be locked in to holding onto aging IT equipment and delaying upgrades. With HPE Technology Refresh, you can have the IT you need to meet business goals and pay over time to conserve cash, saving 10% to 15% over three or four years.

**SIMPLE, SECURE, AND AFFORDABLE**

HPE Small Business Solutions lower the cost of accessing easy-to-use on-premises and hybrid cloud solutions without sacrificing security. To learn more about HPE Small Business Solutions, visit the resources included in this document, or contact your HPE or authorized Partner representative.
RESOURCES

- Solution brief: HPE Small Business Solutions for Hyperconverged Infrastructure
- ProLiant DL180 Microsoft Azure Stack HCI certified solution
- ProLiant Server QuickSpecs
- HPE Server Options
- IT Support Services
- Get connected
- iQuote

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