HPE ProLiant for Microsoft Azure Stack and ZeroDown software provide application HA for important company data

Mark Evans, Senior Technical Marketing Engineer
Keith Fukuhara, CTO ZeroDown

July 2019
Expertise and try before you buy
Joint HPE-Microsoft Azure Stack Innovation Centers (ASIC)  

Experience: State-of-the-art technical engagement facility
- Customers immersed in Azure Stack technology with comprehensive programs from discovering, planning, designing, and producing proof-of-concept implementations
- Workshops tuned to your customer’s needs
- Goal of customers being 100% committed to further Azure Stack collaboration

Access: HPE ProLiant for Microsoft Azure Stack
- Azure Stack ASDK and Multi-nodes
- Azure Stack subject-matter experts from Microsoft and HPE

Locations: Multiple options
- Workshop in-person at the ASIC: innovationcenters@hpe.com
  - Microsoft Technology Center in Bellevue, WA, USA
  - HPE Customer Innovation Centers in Geneva and Singapore
- Customer site and remote options available
ASIC integrations and demos

- Corent: Cloud Migration
- VeeAM: BC/DR
- CommVault: BC/DR, Migration
- f5: Load balancing across stamps
- Micro Focus: Multi-cloud management
- Hewlett Packard Enterprise: Monitoring with OneView Global Dashboard and Azure Log Analytics
- Zero Down Software: BC/DR, Migration

More information at azurestackinnovationcenters.com/solutions
### New Hardware Options

<table>
<thead>
<tr>
<th>Component</th>
<th>Default</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Environmentals</strong></td>
<td>Rack, cables, PDU, factory build</td>
<td></td>
</tr>
<tr>
<td><strong>Server</strong></td>
<td>HPE ProLiant DL380 Gen10</td>
<td>4-16 nodes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4-8 DL380 Gen10 All-Flash</td>
</tr>
<tr>
<td><strong>Processor</strong>¹</td>
<td>Intel Skylake CPUs</td>
<td>10 – 28 cores</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.0 – 3.0 GHz</td>
</tr>
<tr>
<td><strong>Memory</strong></td>
<td>24 DIMM Slots 256 GB minimum</td>
<td>256GB², 384GB, 576GB, 768GB, 1.5TB</td>
</tr>
<tr>
<td><strong>Storage</strong></td>
<td>12 HDD per server</td>
<td>4TB, 6TB, 8TB, or 10TB</td>
</tr>
<tr>
<td></td>
<td>6-SSD per server</td>
<td>800GB, 1.6 TB, or 3.2TB</td>
</tr>
<tr>
<td></td>
<td></td>
<td>All flash: 800GB, 1.6 TB, 3.2TB, or 6.4TB (total capacity up to 102TB)</td>
</tr>
<tr>
<td><strong>Network</strong></td>
<td>25 GbE SFP28</td>
<td>FlexFabric 5950 48SFP28</td>
</tr>
<tr>
<td></td>
<td>1 GbE RJ45 (OOB Management)</td>
<td>FlexFabric 5900 AF-48G-4XG-2QSFP+</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Arista 7160 / 7020RA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cisco C93180YC / C9348GC</td>
</tr>
<tr>
<td><strong>Power</strong></td>
<td>110V and 220V HPE Power Advisor</td>
<td></td>
</tr>
<tr>
<td><strong>OOB server</strong></td>
<td>HPE ProLiant DL360 Gen10 8SFF CTO Server</td>
<td>Higher performance HLH</td>
</tr>
<tr>
<td><strong>Factory Build</strong></td>
<td>Rack, Stack, Cable, Load FW and SW, System Test and Validation, Connect to customer network, install Microsoft Azure Stack, Integrate with Azure AD</td>
<td>HPE Foundation Care for Azure Services running on Azure Stack</td>
</tr>
<tr>
<td><strong>Onsite Installation</strong></td>
<td></td>
<td>HPE Datacenter Care</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DC care specialist advice / services</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HPE GreenLake Flexible Capacity</td>
</tr>
</tbody>
</table>

¹Processors must be identical pairs.

56 GB memory option results in 33% less memory bandwidth as compared with other options.
Company Profile

- Founded 19 years ago in Denver, Colorado USA
- Original name, ZeroNines®, came from Gartner
- Executives with deep IT industry experience in Data Storage, Security, Enterprise Software, Audit and Consulting
- Unique High Availability Solution backed by Issued Patents
- Cloud Partnerships with AWS, Microsoft and Oracle
- Microsoft ISV PAC Member; Azure Stack Syndication Technology Partner; P2P IP Co-Sell Ready
- HPE Cloud 28+ Alliance Partner
- Intel Portfolio Company
What We Do: Minimize Cloud Migration Business Risks While Providing Maximum Uptime

Provides patented software tools for delivering true Active–Active application availability with no business interruptions.

Acts as a safety net for migration and enables High Availability for hybrid and multi-cloud.

Move to the Cloud Today with ZERO Downtime: RPO=0; RTO<90s
What We Provide

- Our patented technology delivers true active-active application availability at the transactional level
- Our non-intrusive, agentless, and hardware-agnostic software sits between application server and network
- All transactions, data exchanges, and network activities can occur simultaneously across multiple sites or zones
- All servers are hot and all are active
- Our BCaaS™ solution provides HA services in a Hybrid environment (MS Azure and Azure Stack)
- Default configuration targeting RPO of 0 and RTO < 90sec.
Microsoft Azure Stack Development Kit

- Provides a platform for developing software for Azure Stack
- Self contained 1 node Azure Stack Cloud
- Closed environment
  - VMs and Services are not exposed externally (as of 19.04)
- Multi-cloud/Multi-stamp/Hybrid software limitations
  - Applications requiring exposed endpoints outside
  - IoT applications
- New releases reimage the entire deployment
HPE Azure Stack Innovation Center

Setup and Configuration of ZeroDown Software in HPE ASIC

- Jump Server
- Two (2) Production Stamps
- Access to Portals on each Stamp
- Marketplace Images
  - ZeroDown Software
  - Ubuntu Linux
  - Kubernetes Cluster (preview)
HPE ASIC Benefits

- Provided proof points
  - Provides external endpoints for multi-platform software demonstrations
    - Azure Stack to Azure Stack, Azure or Windows Server
  - Production software testing/vetting environment
    - Platform to deploy and evaluate Azure Stack
    - Benchmarking
- Create new solutions for HPE Partners and Clients
  - Access to new/preview Azure Stack services and images
- Utilized by other regional HPE offices and partners
Summary

– ASIC provides an environment to demonstrate HA between Azure Stack Stamps
– Stable platform providing Azure Stack updates
– ASIC is a resource platform for HPE associates
  – Exposes Azure Stack solutions to new clients and partners
Next steps

Learn
http://www.hpe.com/cloud/azure-stack

Visit online or in Person
Visit the HPE and Microsoft Azure Stack Innovation Center
https://www.hpe-microsoftazurestack.com/

Try It Out
Single Node PoC
Thank you

Marcus.evans@hpe.com
Kfukuhara@zerodownsoftware.com