5 REASONS WHY CHOOSING HPE PROLIANT FOR MICROSOFT AZURE STACK WON’T STEER YOU WRONG!

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AGENDA

1. HPE ProLiant for Microsoft Azure Stack Solution Overview
2. Top 5 reasons to choose HPE ProLiant for Microsoft Azure Stack
3. Summary and next steps
MICROSOFT’S HYBRID CLOUD PLATFORM

Azure Stack is Azure in the data center

Microsoft Azure Stack
Hybrid | on-premises

Portal | PowerShell | DevOps tools

Azure Resource Manager

Azure IaaS | Azure PaaS
Compute | Network | Storage | App Service | Service Fabric

Cloud-inspired infrastructure

Developers

One Azure ecosystem
Unified app development

Azure services in your data center

IT

Microsoft Azure
Public | cloud

Portal | PowerShell | DevOps tools

Azure Resource Manager

Azure IaaS | Azure PaaS

Cloud infrastructure

Azure Stack updates are available on a monthly basis to ensure consistent environment with Azure.
AZURE-CONSISTENT SERVICES FROM YOUR DATA CENTER
With HPE ProLiant for Microsoft Azure Stack

Common developer experience

Multiple configuration options

Consistent API

Multiple packaging options

Integrated system management

Multiple financing options

Multiple sourcing options

Most configurable solution available
ENTERPRISE USE CASES FOR AZURE HYBRID CLOUD

Data sovereignty, security and compliance
- Geo-distributed applications

Performance
- Support high-performance analytics, big data and low-latency apps
- Tiered data and analytics

Edge and disconnected applications
- AI at the Edge
- Multi-site locations

Hybrid DevOps
- Deploy apps to private or public cloud
TOP 5 REASONS TO CHOOSE HPE PROLIANT FOR MICROSOFT AZURE STACK
#1: THE MOST CONFIGURABLE SOLUTION AVAILABLE
## HPE PROLIANT FOR MICROSOFT AZURE STACK: THE MOST CONFIGURABLE SOLUTION AVAILABLE

### Component | Default | Options
---|---|---
**Environments** | Rack, cables, PDU, factory build |  
**Server** | HPE ProLiant DL380 Gen10 | 4-16 nodes Hybrid or All-Flash
**Processor** | Intel Cascade Lake Processors | 10 – 28 cores
|  |  | 2.1 – 3.1 GHz
**Memory** | 24 DIMM Slots 256 GB minimum | 256GB², 384GB, 576GB, 768GB, 768GB (expandable)³,
|  |  | 1152GB, 1.5TB
**Storage** | 12 HDD per server 6-SSD per server | 4TB, 6TB, 8TB, or 10TB
|  | | 800GB, 1.6TB, or 3.2TB
|  | | All flash: 800GB, 1.6 TB, 3.2TB, or 6.4TB
|  | | (total capacity up to 102TB)
**Network** | 25 GbE SFP28 1 GbE RJ45 (OOB Management) | FlexFabric 5945 48SFP28
|  | | FlexFabric 5900 AF-48G-4XG-2QSFP+
|  | | Cisco C93180YC / C9348GC (customer acquisition)
**Power** | 110V and 220V HPE Power Advisor |  
**OOB server** | HPE ProLiant DL360 Gen10 8SFF CTO Server | Standard solution management server (aka HLH)
**Factory Build** | Rack, Stack, Cable, Load FW and SW, System Test and Validation, Connect to customer network, install Microsoft Azure Stack, Integrate with Azure AD | HPE Foundation Care for Azure Services running on Azure Stack
**Onsite Installation** |  | HPE Datacenter Care
|  | | DC care specialist advice / services
|  | | HPE GreenLake Flexible Capacity

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1. Processors must be identical pairs
2. 256 GB memory option results in 33% less memory bandwidth as compared with other options
3. 768 GB (expandable) memory option uses 12x 64GB DIMMs to enable future expansion to 1.5 TB

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### Hybrid Nodes

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max 16</td>
<td>Max 16</td>
</tr>
<tr>
<td>120TB RAW / Node</td>
<td>102TB RAW / Node</td>
</tr>
<tr>
<td>~40TB Usable / Node</td>
<td>~34 TB Usable / Node</td>
</tr>
<tr>
<td>Max Cap 16 nodes</td>
<td>Max Cap 16 nodes</td>
</tr>
<tr>
<td>1.99TB RAW</td>
<td>1.99TB RAW</td>
</tr>
<tr>
<td>640TB Usable</td>
<td>544TB Usable</td>
</tr>
</tbody>
</table>

### All Flash Node

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max 16</td>
<td>Max 16</td>
</tr>
<tr>
<td>120TB RAW / Node</td>
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<tr>
<td>~40TB Usable / Node</td>
<td>~34 TB Usable / Node</td>
</tr>
<tr>
<td>Max Cap 16 nodes</td>
<td>Max Cap 16 nodes</td>
</tr>
<tr>
<td>2.3TB RAW</td>
<td>2.3TB RAW</td>
</tr>
<tr>
<td>1.6PB Usable</td>
<td>1.3PB Usable</td>
</tr>
<tr>
<td>920TB Usable</td>
<td>768TB Usable</td>
</tr>
<tr>
<td>Max Cap 16 nodes</td>
<td>Max Cap 16 nodes</td>
</tr>
<tr>
<td>160TB RAW</td>
<td>160TB RAW</td>
</tr>
<tr>
<td>1.6PB Usable</td>
<td>1.3PB Usable</td>
</tr>
<tr>
<td>920TB Usable</td>
<td>768TB Usable</td>
</tr>
</tbody>
</table>

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**Note:** DL380 physical nodes are “hyper-converged”. All nodes within an Azure Scale Unit must be homogeneous so hybrid and all-flash nodes can’t be mixed.

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**Optional KVM**

**Same HLH Management server for both solutions**

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**Virtualization:**

- HPE and Cisco switch options
- Optional KVM
- DL380 physical nodes are “hyper-converged”
- All nodes within an Azure Scale Unit must be homogeneous so hybrid and all-flash nodes can’t be mixed

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**Important:**

- Hybrid Nodes and All Flash Nodes must be configured identically.
- Grouping may be necessary to meet performance targets.

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**Additional Resources:**

- [HPE ProLiant DL380 Gen10](https://www.hpe.com)
- [Microsoft Azure Stack](https://www.microsoft.com/azurestack)
- [HPE Foundation Care for Azure Services](https://www.hpe.com/services/management-and-optimization/hpe-foundation-care.html)
- [HPE Datacenter Care](https://www.hpe.com/services/management-and-optimization/hpe-datacenter-care.html)
#2: UNMATCHED SECURITY
UNMATCHED SECURITY
HPE Silicon Root of Trust

Protect, detect and recover from attacks with industry-leading encryption and firmware protection

- Ultimate firmware protection
- Run-time attack detection
- Secure data within the server
- Leading regulatory compliance
#3: PAY-AS-YOU-CONSUME PRICING
A TRUE PAY-PER-USE PRIVATE CLOUD

Choose the configuration you need
Customize your integrated, factory-installed HPE ProLiant for Microsoft Azure Stack solution to meet your workload needs

Align services with your business needs
We support, monitor, and manage your installed hardware and offer centralized support and billing for Azure/Azure Stack

Pay only for what you consume
We meter your usage and you pay monthly for what you use¹

Always have capacity ahead of demand
We install a buffer of capacity and actively monitor, manage, and deploy capacity ahead of business demand

¹ Minimum commitment may apply
AN AS-A-SERVICE MODEL WITH QUANTIFIABLE RESULTS

- Save on costs due to overprovisioning
  - Enterprises overprovision on average by new capacity: 59% for compute and 48% for storage

- Capacity ahead of demand
  - Maintain a safe buffer of capacity
    - 50% experienced downtime due to capacity planning
    - 57% received complaints of slow performance

1 451 Research November 2016
EXPERIENCE THE BENEFITS OF HPE GREENLAKE

**Faster value**
Accelerate app and services deployment

**Simplified IT**
Free up your people to do their best work

**Cloud economics**
No capital, no overprovisioning, variable cost

**Proper control**
Manage performance, latency, risk, & cost

- **65%** shorter time to deploy global IT projects
- **44%** less time spent "keeping the lights on"
- **30%** CAPEX savings due to eliminated need for overprovisioning
- **40%** increased IT team productivity by reducing the support load on IT

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1 A commissioned study conducted by Forrester Consulting, The Total Economic Impact™ of HPE GreenLake Flex Capacity, May 2018
2 IDC White Paper, sponsored by HPE, Business Value Enabled by HPE Datacenter Care Service, September 2017

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Microsoft
#4: EXPERTISE AND TRY BEFORE YOUR BUY
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
- Offerings 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 hardware and software solutions
- Azure Stack subject-matter experts from Microsoft and HPE

Locations: Multiple options

- Best experience: in-person at the ASIC:
  - Microsoft Technology Center in Bellevue, WA, USA
  - HPE Customer Engagement Centers in Geneva and Singapore
- Customer site and remote options available
START YOUR HYBRID JOURNEY WITH AN HPE WORKSHOP / POC FOR AZURE HYBRID CLOUD

Multi-day working session delivery
Modular workshop for defining your Microsoft Azure initiative

Facilitated advisory sessions
Providing insight, guidance, and recommendations for next steps

Accelerating stakeholder effort
Addressing many of the common challenges associated with moving to Microsoft Azure

POC with Azure Stack
Plan, build, and configure a test use case - including: DBaaS, SQL IaaS, Multi-tier PaaS, or Dev/Test. PoC funding is available for qualifying deals.

Microsoft
#5: HPE PARTNERS TO DELIVER SOLUTIONS FOR OUR CUSTOMERS
**HPE PARTNERS TO DELIVER SOLUTIONS FOR CUSTOMERS**

Broad ecosystem of validated solutions

Partnering with ISVs to deliver customer solutions in 4 key areas:
- Data protection/high availability
- Deployment
- Monitoring/optimization
- Security
SUMMARY AND NEXT STEPS
WHY CHOOSE HPE FOR YOUR MICROSOFT AZURE STACK SOLUTION?

- 30 Year Partnership
- Management
- Innovation Center
- Superior Flexibility
- Cloud Pricing Model
- High Availability
- Industry Leading Security
NEXT STEPS

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

Schedule
Workshop to develop an Azure hybrid cloud strategic plan

Plan
Visit the HPE and Microsoft Azure Stack Innovation Center
https://www.hpe-microsoftazurestack.com/

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THANK YOU