EXCHANGE SERVER 2019
ON THE HPE APOLLO 4200

- High Density Storage for the Largest Exchange Environments
- Mike Harding, Product Manager, Microsoft Storage Solutions, HPE
- Greg Taylor, Director of Product Marketing, Exchange Server & Exchange Online, Microsoft
- #HPEMSFT
WHAT’S NEW WITH APOLLO 4200 GEN10 SYSTEMS
High-density storage with flash SSD supports Exchange Preferred Architecture

- Scale-up for enterprise-class Exchange
  - High capacity scales to 392 TB/server or ~7.5 PB/rack
  - Supports thousands of users, large mailboxes (greater than 10s of GB)
  - Apollo design heritage includes Big Data and HPC workloads
- High-density Exchange server storage
  - Accommodates 28 LFF or 54 SFF in just a 2U system
  - Footprint minimizes sys admin, space, and energy costs
- Gen10 enhanced with latest chips and storage media
  - New Intel processors with new memory increase cores and transfers/second for faster performance and improved user experience
  - Supports NVMe storage for additional high-performance capacity and future applications
MS EXCHANGE ON APOLLO 4200 – SOLUTION COMPONENTS

• Apollo 4200 system
  • Based on latest Cascade Lake generation systems – 2 proc, up to 48 cores
  • High capacity – 392TB within just 2U design
  • Future proofed with NVMe support, roadmap with memory enhancements

• Exchange Server 2019
  • New architecture leverages Flash storage performance for new Metacache Database
  • Works with Windows Server 2019 for increased security

• Technical Whitepapers & Training
  • Publishing Configuration Guides
  • Reseller training & enablement

• HPE PointNext services
  • Email mobility practice with proven execution & tools

• Sales tools, Collateral, Promotion
  • Customer deck, Solution brief
  • Webinars, events
EXCHANGE ON HPE APOLLO SOLUTION – BENEFITS TO YOU

High-density storage supports the largest of environments

- Minimize email hardware and space costs with a high-density Exchange on Apollo Gen10 storage system solutions
- Easier capacity planning with this ample data design
- Accommodate hundreds of TBs capacity in just 2U
- Get cloud economics with affordable, large capacity platform
- Reduce project risk with Reference architectures, testing/certifications, technical guidance, and sizing tools
- Gain confidence from established, G500 track record
### GET CLOUD SCALE ECONOMICS WITH EXCHANGE ON APOLLO

<table>
<thead>
<tr>
<th>4,000 user Exchange TCO</th>
<th>Cloud</th>
<th>On-Premises</th>
</tr>
</thead>
<tbody>
<tr>
<td>Software – Windows, Exchange</td>
<td></td>
<td>$199k</td>
</tr>
<tr>
<td>Hardware (4 Apollo 4200s, list price)</td>
<td></td>
<td>177k</td>
</tr>
<tr>
<td>System administration</td>
<td></td>
<td>76k</td>
</tr>
<tr>
<td>Power/cooling/space</td>
<td></td>
<td>75k</td>
</tr>
<tr>
<td><strong>Total Cost – 3 years</strong></td>
<td></td>
<td>$527k</td>
</tr>
<tr>
<td><strong>Total Cost/User/Month</strong></td>
<td>$4.00</td>
<td>$3.66</td>
</tr>
<tr>
<td><strong>% Savings</strong></td>
<td></td>
<td>9%</td>
</tr>
</tbody>
</table>

Based on a 4,000 user solution, 3 Year timeframe for variable items. On-premises data sources include Gartner and other IT publications. Hosted cost is Exchange Online Plan 1 (most basic service). [https://products.office.com/en-us/exchange/compare-microsoft-exchange-online-plans](https://products.office.com/en-us/exchange/compare-microsoft-exchange-online-plans)
MICROSOFT EXCHANGE SERVER 2019

Greg Taylor
Director of Product Marketing, Exchange Server and Exchange Online
Microsoft
WHAT DOES END OF SUPPORT MEAN FOR EXCHANGE SERVER 2010?

- On January 14, 2020, Microsoft will no longer provide:
  - Technical support for problems that might occur
  - Bug fixes for issues that are discovered and that might impact the stability and usability of the server
  - Security fixes for vulnerabilities that are discovered and that might make the server vulnerable to security breaches
  - Time zone updates
- Your installation of Exchange 2010 will continue to run
- HPE suggests migrating as soon as possible
- HPE will not offer premier support extensions
EXCHANGE SERVER 2019

Secure, proven architecture
- Windows Server core
- Scale improvements
- New and improved search technology

Performance and manageability
- Faster and more reliable failovers
- Improved calendar management
- Simplifying connectivity

Delighting users
- Do Not Forward meetings
- Smarter calendar management
- Support for EAI/IDN mail routing
CLOUD-SCALE CODE IN YOUR DATA CENTER

- Built on the newest operating system
  - Exchange Server 2019 runs on Windows Server 2019
- Focus on security
  - New Exchange Server 2019 installs using TLS 1.2
- Leverage more memory
  - Minimum memory recommendation is now 128 GB, maximum is 256 GB
- Re-engineered search
  - Uses Bing™ technology
  - No more search index files to manage
- Exchange uses tiered storage
  - SSD and HDD together reduces latency and controls TCO
EXCHANGE 2019 REQUIRES BOTH SSDS AND HDDS
CLOUD-SCALE CODE IN YOUR DATA CENTER
With MCDB and dynamic cache technology

- The addition of MCDB and dynamic cache technology increases performance and scale
- Increases the number of users you can put on a server by 20%
- Features the option to use much larger disks
- Cuts client latency for many operations in half
MICROSOFT EXCHANGE 2019 ON APOLLO 4200 – SUMMARY

• HPE Apollo 4200 Gen 10 available today
• High capacity/density 2U platform
• Exchange Server 2019 – improved performance, manageability
• New MCDB leverages performance benefits of Flash SSD
• Secure, proven architecture with Windows Server 2019
• Apollo-based solution provides cloud economics with on-premises control
• Established big data heritage, Global 500 track record
LEARN MORE ABOUT HPE STORAGE SOLUTIONS FOR MICROSOFT EXCHANGE

• On the web
  • Microsoft Exchange Server product page
  • HPE Storage Solutions for Microsoft

• Tools and collateral
  • Microsoft Exchange on HPE Apollo Gen10 solution brief
  • Protecting Microsoft Exchange with RMC solution Brief
  • Microsoft Exchange 2019 preferred architecture

• Exchange Solution reviewed program and white papers
  • Microsoft Exchange 2019 on HPE Apollo 4200 Gen10 server tech whitepaper
  • HPE 3PAR StoreServ 9450 AFA with 920 GB SSD drives for 8,000 Mailbox Resiliency storage solution - ESRP 4.0
  • HPE StoreVirtual 3200 Storage 1000 Mailbox Resiliency Exchange 2016 Storage Solution

• Recent blogs on Exchange
  • “Deeper dive inside Exchange on Apollo”
  • “Expand your Microsoft Exchange universe with HPE Apollo Gen10”
  • “How HPE brings out the best in Microsoft Exchange 2019”
QUESTIONS?

Thank you!
BACKUP SLIDES
START PLANNING YOUR EXCHANGE UPGRADE ON INTELLIGENT, CLOUD-CONNECTED INFRASTRUCTURE

| Increase IT agility | Hardware that improves application performance  
Integrations that improve admin efficiency  
Automation that eliminates repetitive manual tasks |
|---------------------|--------------------------------------------------------------------------------------------------|
| Accelerate IT innovation | Product line breadth that provides choice  
Future-proofed components to extend infrastructure longevity  
Cloud connected to increase application and data mobility |
| Reduce IT spending | Increased TB / $ to reduce cost of capacity  
Increased IOPS / $ to increased return on budget  
Increased resource density to control admin/space/power costs |
EXCHANGE 2019 UPGRADE CONSIDERATIONS

Version refresh without business disruption

• The version refresh to Exchange Server 2019 has specific complexities
• Double-hop upgrade process using Exchange 2016 as the temporary transition version
  • Or direct migration using a third-party migration tool
• Third-party tool use for the messaging data migration from Exchange Server 2010 to 2019 involves migration tool deployment and specific testing
• HPE Pointnext has its own migration toolset developed to support large and complex transformations to help ensure minimal impact on the user community and business continuity
• Migration approach should emphasize management of change to make the user community informed, engaged, and skilled for the move to the new messaging platform
## HPE POINTNEXT CONSULTING SERVICES FOR EXCHANGE MIGRATIONS

Established transformation framework

### Project acquisition phases

<table>
<thead>
<tr>
<th>Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial contact</td>
</tr>
<tr>
<td>Awareness</td>
</tr>
<tr>
<td>Envisioning workshop</td>
</tr>
<tr>
<td>Light assessment</td>
</tr>
<tr>
<td>Rationalization</td>
</tr>
<tr>
<td>Project proposal</td>
</tr>
</tbody>
</table>

### Project delivery phases

<table>
<thead>
<tr>
<th>Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project management</td>
</tr>
<tr>
<td>Detailed assessment</td>
</tr>
<tr>
<td>Design</td>
</tr>
<tr>
<td>Implementation</td>
</tr>
<tr>
<td>Handover</td>
</tr>
<tr>
<td>Management of change</td>
</tr>
</tbody>
</table>
BURKHALTER LIGHTS UP EXCHANGE WITH HPE STORAGE INFRASTRUCTURE
Speeds provisioning, reduces IT cost with HPE 3PAR storage

Needs and challenges
- Leading electrical contractor in Switzerland and holding company comprising 47 subsidiaries
- Growing through acquisition
- Needed to deploy new apps
- Automate to address growing scale and scope
- Decision between cloud vs. on-premises

Solution
- HPE 3PAR StoreServ Array
- HPE Synergy composable compute
- Windows operating system
- Exchange and other enterprise workloads

Results
- HPE on-premises solution preferred vs. transitioning to a cloud service
- Fast provisioning of new applications and services
- 20% lower admin cost due to the high degree of automation