

OpenVMS V8.4 & NEW INTEGRITY SERVERS

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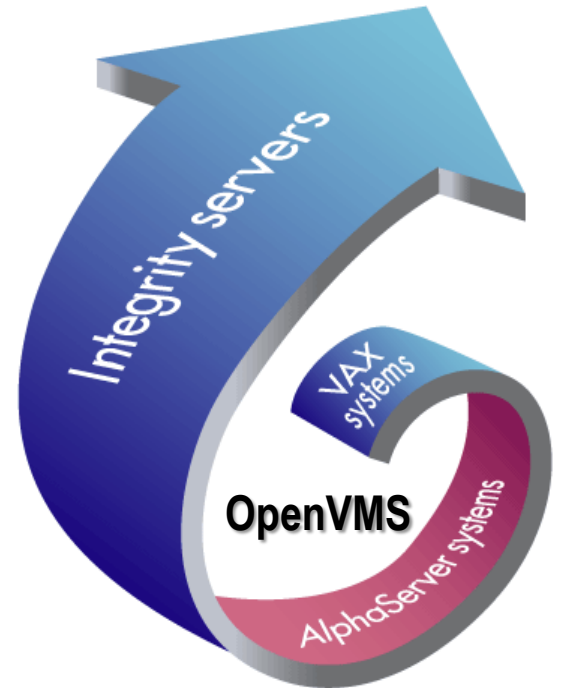


Agenda

OpenVMS V8.4

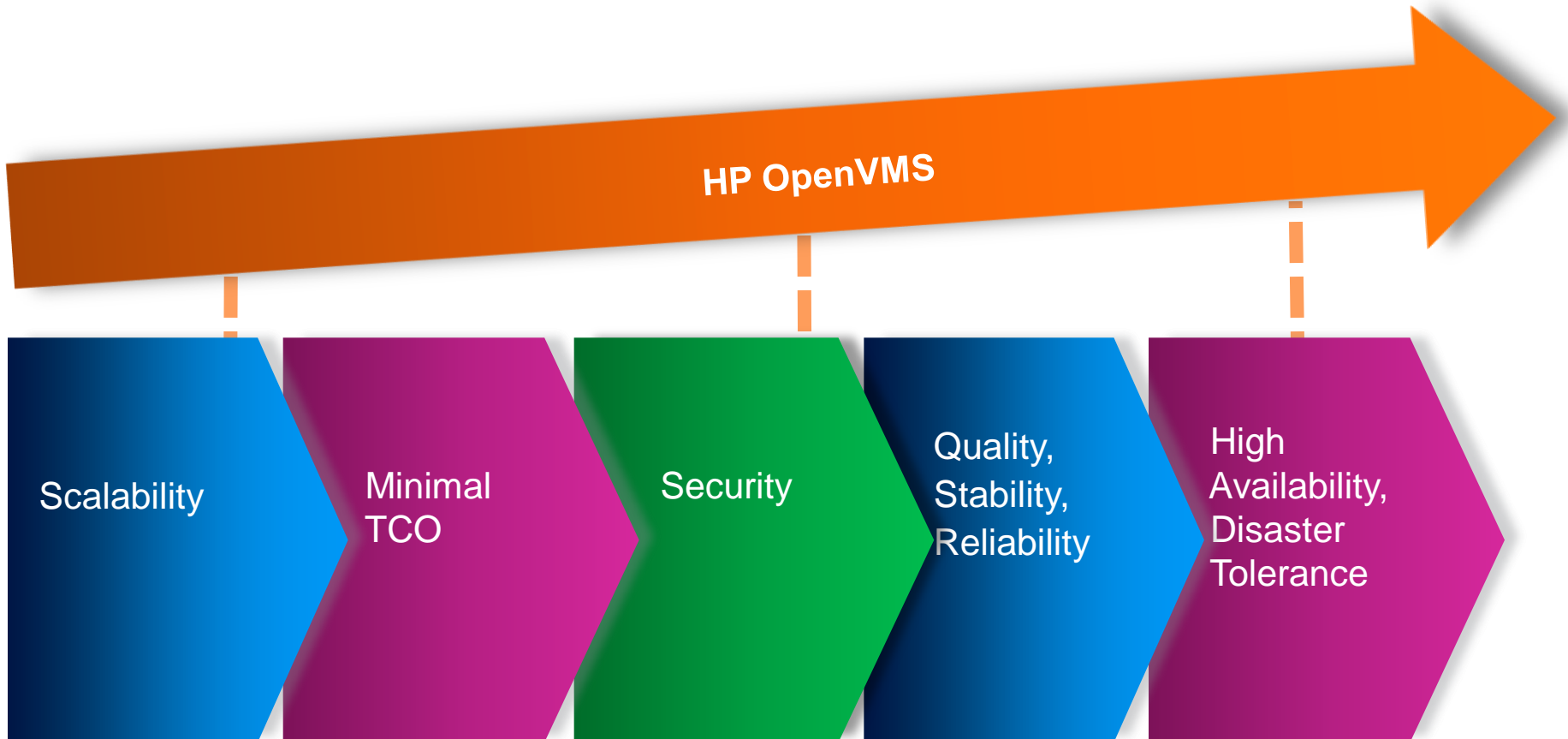
The New Integrity Servers

Business Case: Upgrade to
OpenVMS V8.4 & BL8x0c i2 Server
Blades



Foundation of OpenVMS

For 30+ years, these blocks have stood as the foundation of OpenVMS



OpenVMS V8.4

Virtualization | Always On | Simplified Management

- 65+ New Features & Enhancements
- Extensively Field Tested by 250+ customers, partners, ISVs world wide.
- Up to 2x per socket performance improvement with BL8x0c i2 Server Blades
- Simplified OEs
- Per Socket Licensing : Simple Yet Affordable.
- ROI < 11 months

Virtualization

Clustering Over TCP/IP

Hardware and Storage

Improved Performance

Strengthened Security

Availability

System and Server Management

Application Development, Migration,
and ISV Support

Open Source



OpenVMS V8.4 FT FEEDBACK

Field Test (FT) Sites

Largest Field Test Ever : 250+ beta customers, partners, ISVs

~70% on entry-level systems, ~20% on high-end systems

Upgrade Plans

90% of FT sites plan to upgrade to v8.4

~40% of FT sites plan to upgrade to newest Integrity server

Top Features Tested

- Cluster Connect over TCP/IP
- Data compression with backup
- Shadowing with 6-member shadowsets
- HP Integrity Virtual Machine

27% of field test sites plan to deploy OpenVMS as HP Integrity Virtual Machine guest in development or production environment

- *Fairly painless upgrade*
- *It was the same but better*
- *Cluster over IP (yeah! finally ! You made my network guys happy!!!)*
- *I have been testing OpenVMS and HPVM since release XBW8... Everything works like expected. No difference when running on physical or virtual servers. OpenVMS just keeps on running with Oracle Rdb and DECforms, no changes required at all. Our goal this autumn is to replace 95% of all physical test and development systems with blade servers running HPVM to create a dynamic environment that can adapt to our needs.*

- a large European global furniture retail company

KEY FEATURES IN OpenVMS V8.4

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Virtualization

OpenVMS V8.4 is now available as a guest on HP Integrity Virtual Machine v4.2

Enables :

- Better resource utilization by combining multiple guests or workloads for better resource utilization
- Conserve real estate, Reduce power and cooling costs by consolidating servers
- Flexibility



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Clustering Over TCP/IP

- No more specialized equipment for multi-site clusters
- Decreased cost of deployment for multi-site cluster
- Leverage technology advances in TCP/IP seamlessly

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HARDWARE

- New Integrity Servers support: Reduced TCO productivity with newer faster hardware
- vKVM, vMedia support
- Sound card support (limited) on Integrity
- USB enhancements
- Support for new storage array, controllers, network
- 2TB volume support
- Backup enhancements – compression, 2TB support

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Improved Performance

- OpenVMS V8.4 has improved application performance:
 - Up to 2x per socket moving from dual-core Integrity systems to the new Integrity servers
 - Up to 12x per socket moving from Alpha servers to the new Integrity servers
- Integrity RAD support
- Packet Processing Engine support in TCP/IP
- General performance improvements



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→ Strengthened Security

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SECURITY

- Improved Authentication: using Lightweight Directory Access Protocol (LDAP) by adding mapping of login name to VMS username in an active directory managed environment
- Security Strengthened with an SSL refresh: Security strengthened with an SSL refresh based on new openssl.org base level, 0.9.8E, which includes new cryptographic algorithms
- New Signing Infrastructure
- FTP over SSL
- DECnet over IP over SSH



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SYSTEM & SERVER MANAGEMENT

- HP Management Suite enhancements to manage physical, logical, and virtual resources
- Provisioning full installation using HP Systems Insight Manager (SIM)
- Common management tools eases management and enables non-OpenVMS administrators to manage systems
- InfoServer on EFI Drivers
- Two Operating Environments
- Automate installation of OpenVMS configuration of TCP/IP on up to 8 Integrity servers simultaneously



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APPLICATION DEVELOPMENT

- Unix portability enhancements – Symlinks, Semaphores, UTF8
- Ease porting from Open Source
- Make it easier for UNIX® developers to program on OpenVMS
- Utilities enhancements



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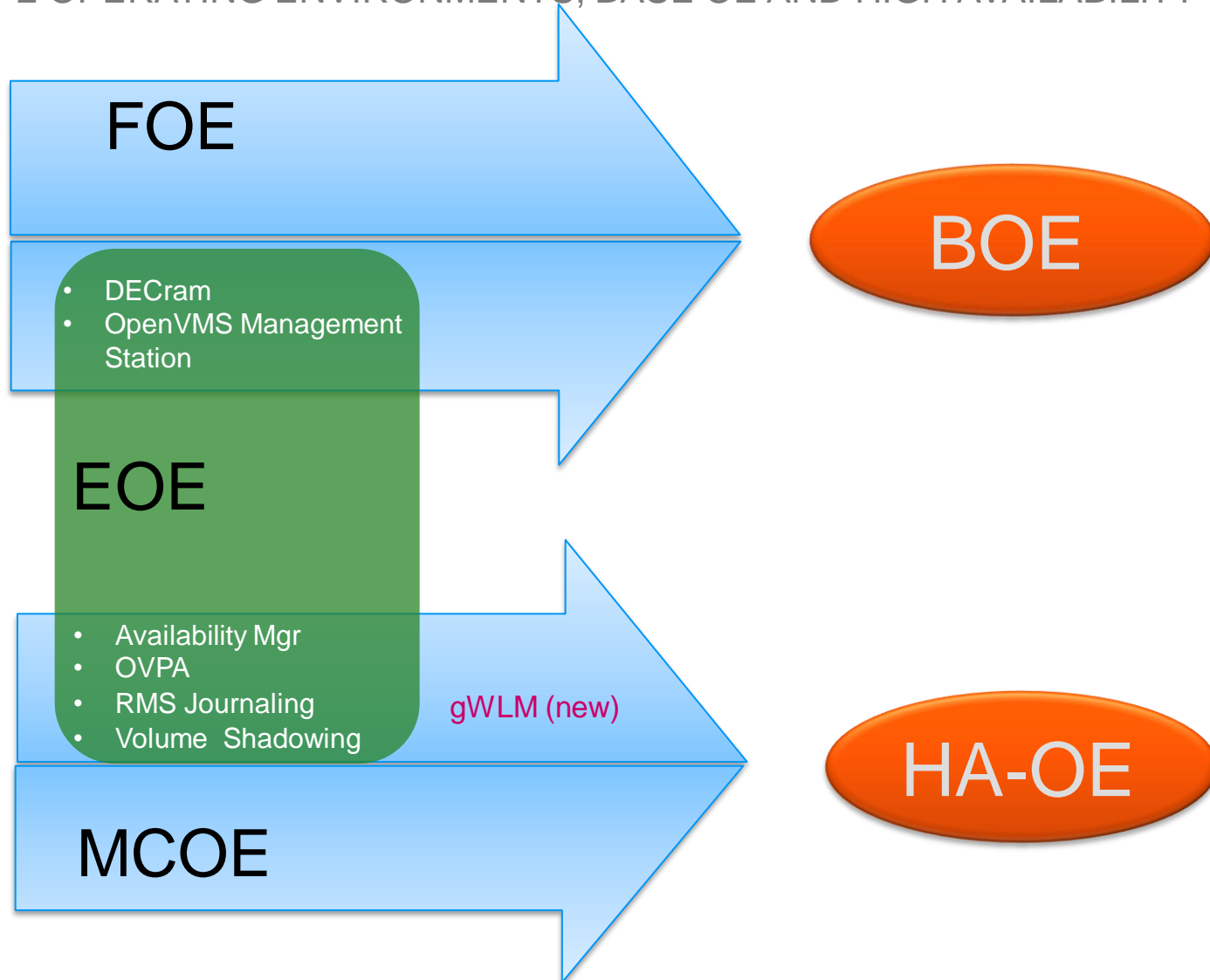
OPEN SOURCE

- GNV Update
- Stunnel v4.2
- GnuPG
- SNORT®



OpenVMS V8.4 OPERATING ENVIRONMENTS

NOW 2 OPERATING ENVIRONMENTS, BASE OE AND HIGH AVAILABILITY OE



Licensing and Pricing

Simple, Predictable, Investment Protection

Licensing



It's now Per-Socket

- OpenVMS is licensed per-socket on HP Integrity Servers based on Intel 9300 processors
- OpenVMS on earlier servers stays per core

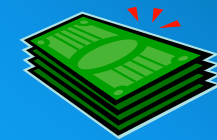
Pricing



Up to 50% less per-core

- Per-socket prices “on par” with Montvale – equates to up to a 50% reduction in per-core prices on BL8x0c i2 Server Blades
- Price per-core actually decreases over time

Trade-Ins



Up to 100% credit

- Customers can “trade-in” existing OE software licenses for new licenses when upgrading.
- “A socket for a socket” – 1 or 2 pci's = 1 socket license (depending on processor type)
- Retains value of prior investment

* Software support contract required

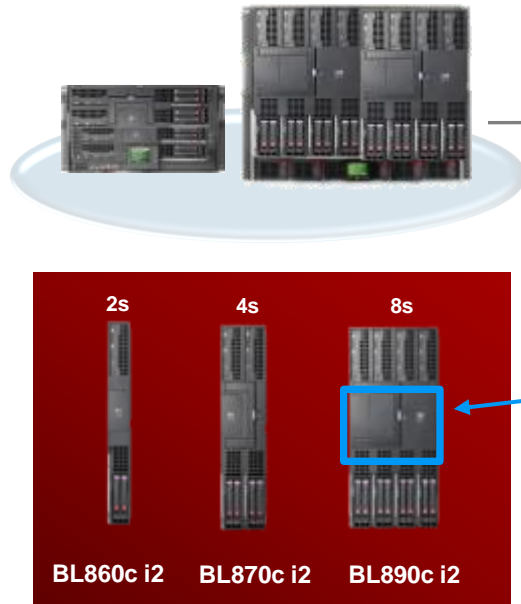


NEW INTEGRITY SERVERS



BL8X0C i2 SERVER BLADES – SUPPORTED NOW

World's first scale-up blades built on the industry's #1 blade infrastructure



- Up to 8 socket/32 cores Intel® Itanium® processor 9300 series
- Up to 384GB DIMMs
- Up to 16 x 10 GbE (Flex-10) NICs

Common architecture

- Mix and match new and existing Integrity, ProLiant and StorageWorks storage blades within the same enclosure
- 2.5x compute density compared to traditional rack mount servers

Blade link

- Scale up, out and within; scale more and scale linear
- Combine multiple blades to create 2-, 4- and 8-socket systems

HP Virtual Connect Flex-10- Coming Soon

- Network scalability and configuration flexibility
- Up to 20x increase in networking bandwidth
- Virtually connect LAN, SAN, facilities, etc.

Flexible mission-critical server blades combined with the efficiency of HP BladeSystem to accelerate IT effectiveness

rx2800 i2 – COMING SOON



- Up to 2 socket/8 cores Intel® Itanium® processor 9300 series
- Up to 192GB DIMMs
- 6 I/O slots, 4 integrated 1GbE LAN and 8 internal HDDs

Do more for less

- Expanded memory, I/O, and disk capacity in 2U footprint
- Compared to rx2600, double the capacity in the same footprint

Leverage existing infrastructure

- Easily deploys into racked environments with familiarity in design and skills

Ideal for smaller or more remote deployments

- Branch office applications
- State and local governments
- Educational institutions

8-core scalability in 3x more compute density without sacrificing RAS

BUSINESS CASE : UPGRADE TO OpenVMS V8.4 & BL8X0C i2 SERVER BLADES



THE TechWise REPORT

“Total Cost of Upgrading HP OpenVMS Environments to HP Integrity i2 Server Blades.”

– TechWise Research

http://h71000.www7.hp.com/techwise_openvms_itanium_i2_tcu_sep10.pdf



CASE STUDY: UPGRADING ALPHA ES80

Payback in 6 months – Findings from Techwise white paper

Original Server	<ul style="list-style-type: none"> • AlphaServer ES80 1150MHz • 8 chips (8 cores) • 16 GB RAM
New Server	<ul style="list-style-type: none"> • Integrity BL860c i2 • 2 chips (8 cores) • 16 GB RAM
Result	<ul style="list-style-type: none"> • Overall savings of \$162,000 over 3 years • Payback in 6 months • Savings of 87% in energy

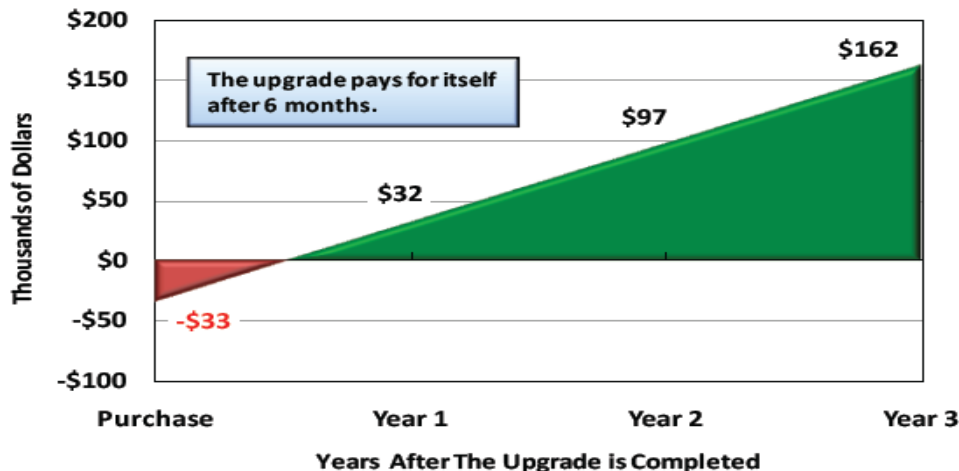


TECHWISE
RESEARCH, INC.

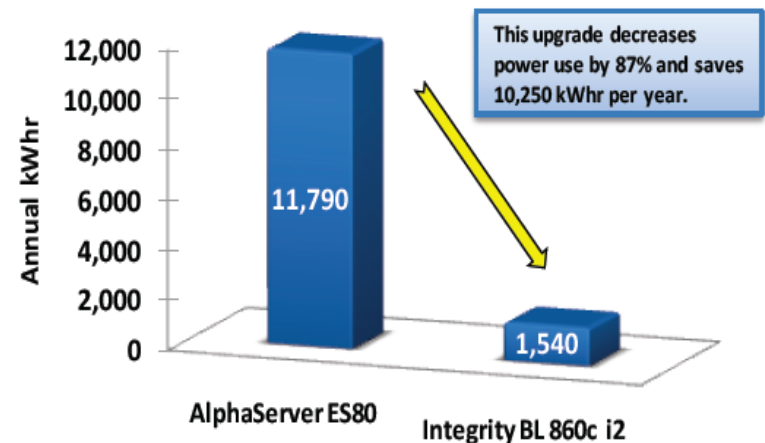
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<http://techwise-research.com>

First Midrange Upgrade Cash Flow Analysis
AlphaServer ES80 to Integrity BL 860c i2



AlphaServer ES80 to Integrity BL860c i2



CASE STUDY: UPGRADING ALPHA ES47

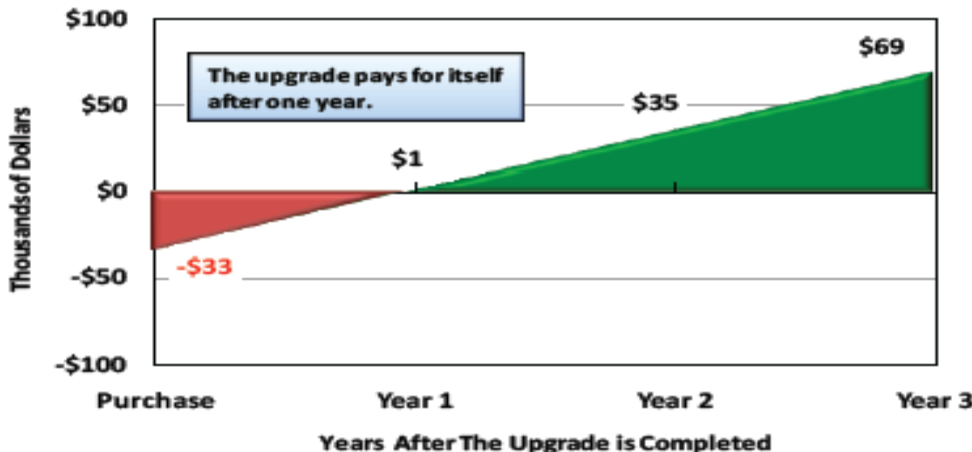
Payback in 12 months

Original Server	<ul style="list-style-type: none">• AlphaServer ES47 1150MHz• 4 chips (4 cores)• 16 GB RAM
New Server	<ul style="list-style-type: none">• Integrity BL860c i2• 2 chips (8 cores)• 16 GB RAM
Result	<ul style="list-style-type: none">• Overall savings of \$69,000 over 3 years• Payback in 12 months• Savings of 54% in energy

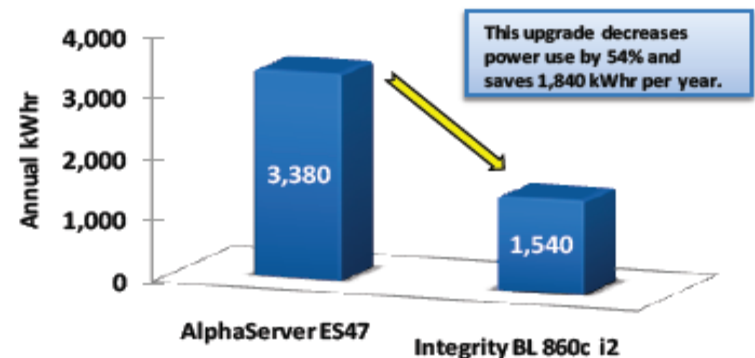


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Second Midrange Upgrade Cash Flow Analysis
AlphaServer ES47 to Integrity BL 860c i2



AlphaServer ES47 to Integrity BL860c i2



CASE STUDY: UPGRADING ALPHA GS1280

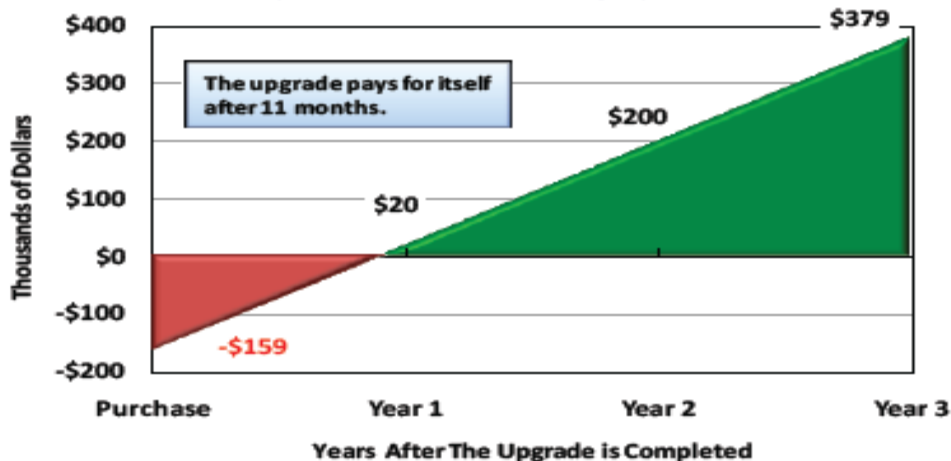
Savings of ~\$380,000 over 3 years

Original Server	<ul style="list-style-type: none"> AlphaServer GS1280 1300MHz 32 chips (32 cores) 128 GB RAM
New Server	<ul style="list-style-type: none"> Integrity BL890c i2 8 chips (32 cores) 128 GB RAM
Result	<ul style="list-style-type: none"> Overall savings of \$379,000 over 3 years Payback in 11 months Savings of 69% in energy

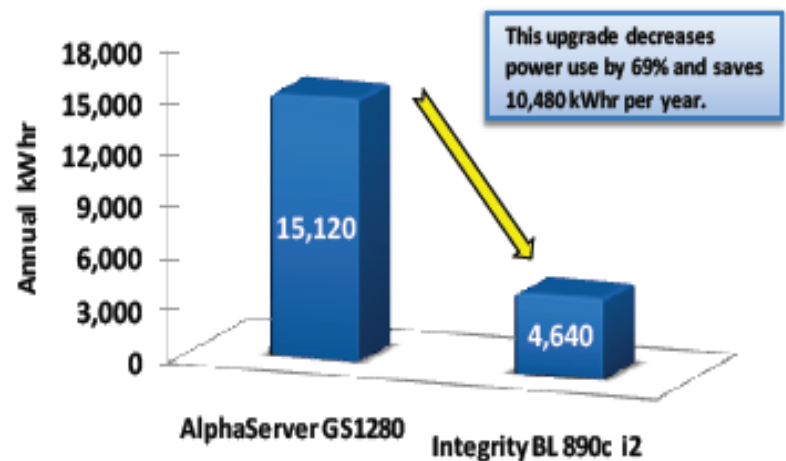


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Enterprise-Class Upgrade Cash Flow Analysis
AlphaServer GS1280 to Integrity BL 890c i2



AlphaServer GS1280 to Integrity BL890c i2



CASE STUDY: CONSOLIDATING 5 ALPHA DS25

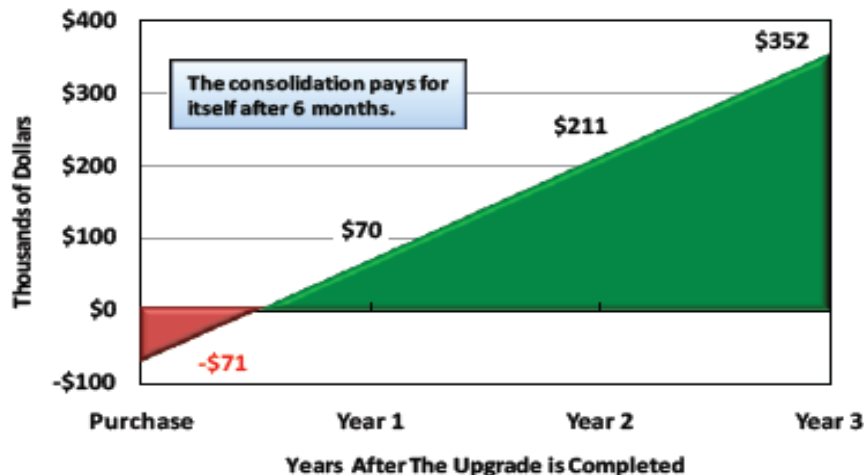
Payback in 6 months

Original Multi-Server Configuration	<ul style="list-style-type: none"> • 5 AlphaServer DS25 servers • 2 chips each (10 total cores) • 2 GB RAM each (10 GB total)
One New Server Blade	<ul style="list-style-type: none"> • Integrity BL870c i2 • 4 chips (16 cores) • OpenVMS as a guest OS using HP Integrity Virtual Machine
Result	<ul style="list-style-type: none"> • Overall savings of \$352,000 over 3 years • Payback in 6 months • Savings of 51% in energy

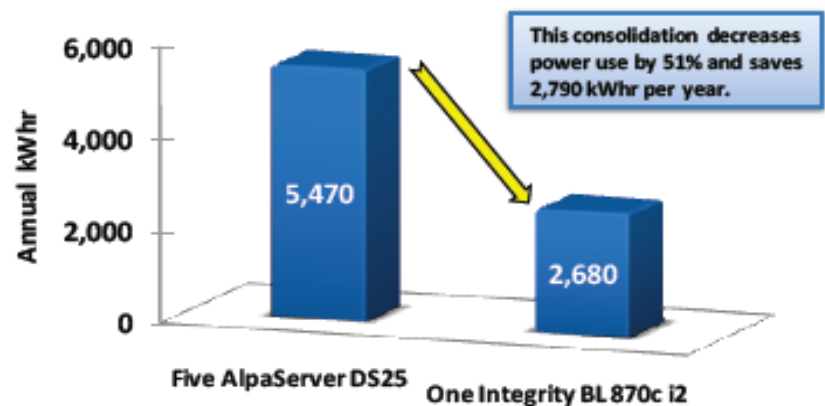


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Entry-Level Consolidation Cash Flow Analysis
 Five AlphaServer DS25 to One Integrity BL 870c i2



Five AlphaServer DS25 to One Integrity BL870c i2



CASE STUDY: CONSOLIDATING 10 INTEGRITY RX3600

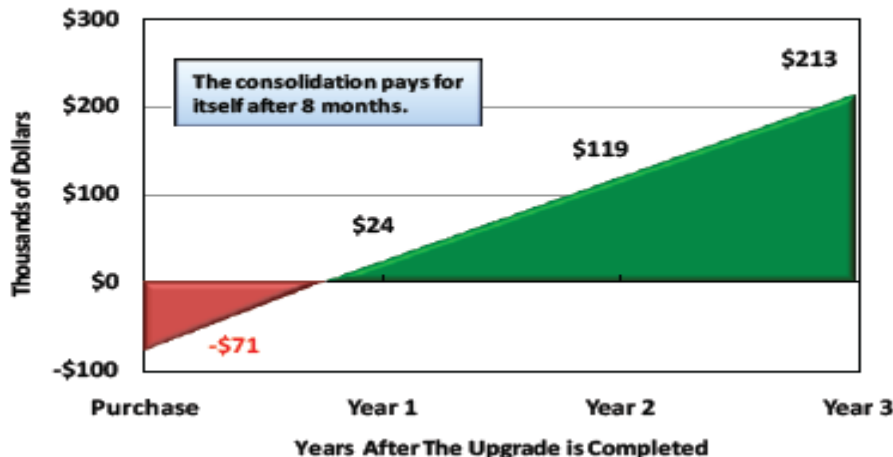
Payback in 8 months

Original Multi-Server Configuration	<ul style="list-style-type: none"> • 10 Integrity rx3600 • 4 chips each (40 total cores) • 160 GB RAM
One New Server Blade	<ul style="list-style-type: none"> • Integrity BL870c i2 • 4 chips (16 cores) • OpenVMS as a guest OS using HP Integrity Virtual Machine
Result	<ul style="list-style-type: none"> • Overall savings of \$213,000 over 3 years • Payback in 8 months • Savings of 81% in energy

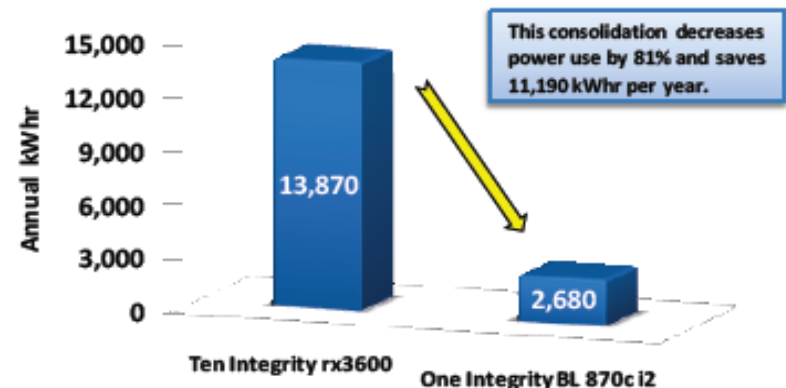


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Midrange Consolidation Cash Flow Analysis
 Ten Integrity rx3600 to One Integrity BL 870c i2



Ten Integrity rx3600 to One Integrity BL870c i2



Gartner Report on OpenVMS

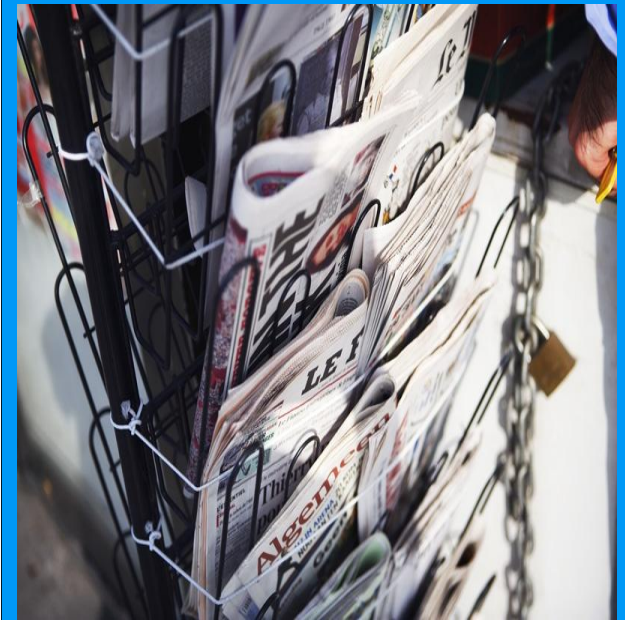
“Best Practices: Migration Planning for Alpha Server Users”

Gartner.

Best Practices: Migration Planning for Alpha Server Users

Gartner ID: G00164706

Close to 1200 downloads



TO CONCLUDE

– With OpenVMS V8.4 / BL8x0c i2 Server Blades

- 2X Performance
- 65+ feature enhancements
- Best in class clustering
- Virtualized & Consolidate
- Lower your costs
- ... Much More

– ROI < 11 months

– Call to Action

- Upgrade to OpenVMS V8.4 / BL8x0c i2 Server Blades



Outcomes that matter.

