Enterprise Strategy Group™

ECONOMIC VALIDATION

The Economic Benefits of HPE Private Cloud Business Edition, Now Built With HPE Morpheus VM Essentials Software

Reduce Complexity and Lower Cost of Virtualization Licenses by 50% to 97% and Reduce Expected Overall TCO by 1.8x to 2.9x

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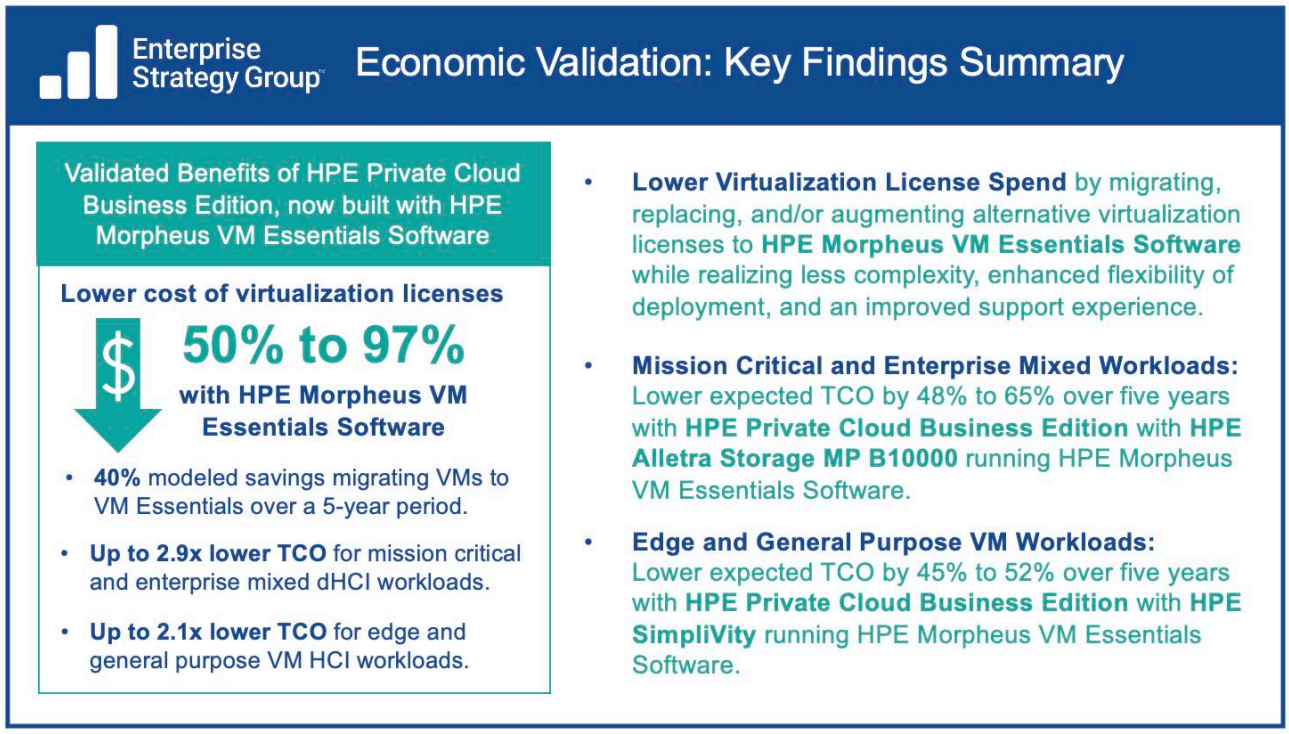

Introduction

This Economic Validation from Enterprise Strategy Group focuses on the quantitative and qualitative benefits organizations can expect by optimizing their virtualization strategy with HPE Private Cloud Business Edition, now built with HPE Morpheus VM Essentials Software. The solution provides a private cloud experience and a unified approach to virtualization with its KVM-based hypervisor (HVM) that allows businesses to provision and manage KVM-based and VMware VMs from a single intuitive interface.

Challenges

Virtualization hypervisors and management tools are critical in driving organizations' hybrid cloud and multi-cloud strategies to support VMs, containerized applications, and services that can be deployed at the data center, at the edge, or in the cloud. Today, a single technology has become the overwhelming technology leader and hypervisor of choice for most non-public cloud deployments, but recent uncertainty around licensing changes, cost increases, the possibility of vendor lock-in, and indirect support services have piqued the interest of some organizations to reevaluate at least some of their strategies and look for alternatives going forward.

As shown in Figure 1, Enterprise Strategy Group research revealed that 56% of organizations are currently investigating hypervisor alternatives, with the leading reasons being security capabilities, scalability, performance for price, and cost.[1]

Paradoxically, while virtualization has greatly reduced complexity and improved operational efficiency for organizations, it has also enabled the same IT resources to run more workloads and applications, support AI initiatives, and support more formats, people, and locations than ever. Today's organizations are under pressure to lower costs but need to support legacy and new emerging workloads and quickly provide VMs for developers with cloud-like agility across silos of diverse virtualized technology accumulated over time. This has resulted in VM sprawl across on-premises and public cloud instances, added management complexity, and constant reactive firefighting that limits IT agility and stifles innovation.

As businesses look to reduce the costs and complexity of virtualized deployments, there is an opportunity to consider alternative strategies and technologies to augment, optimize, and reduce risk in their current virtualization environment and, at the same time, modernize their IT estate. Organizations should look at vendors that offer flexibility and choice of hypervisor and who can help assess current needs and future requirements to better identify which workloads can be served more cost-effectively on alternative hypervisors or future platforms such as Kubernetes. They should consider how they can best reduce complexity by unifying management tools, automating processes, and orchestrating across all hypervisors, both on premises and public cloud.

[1] Source: Enterprise Strategy Group Research Report, *Private AI, Virtualization, and Cloud: Transforming the Future of Infrastructure Modernization*, July 2025.

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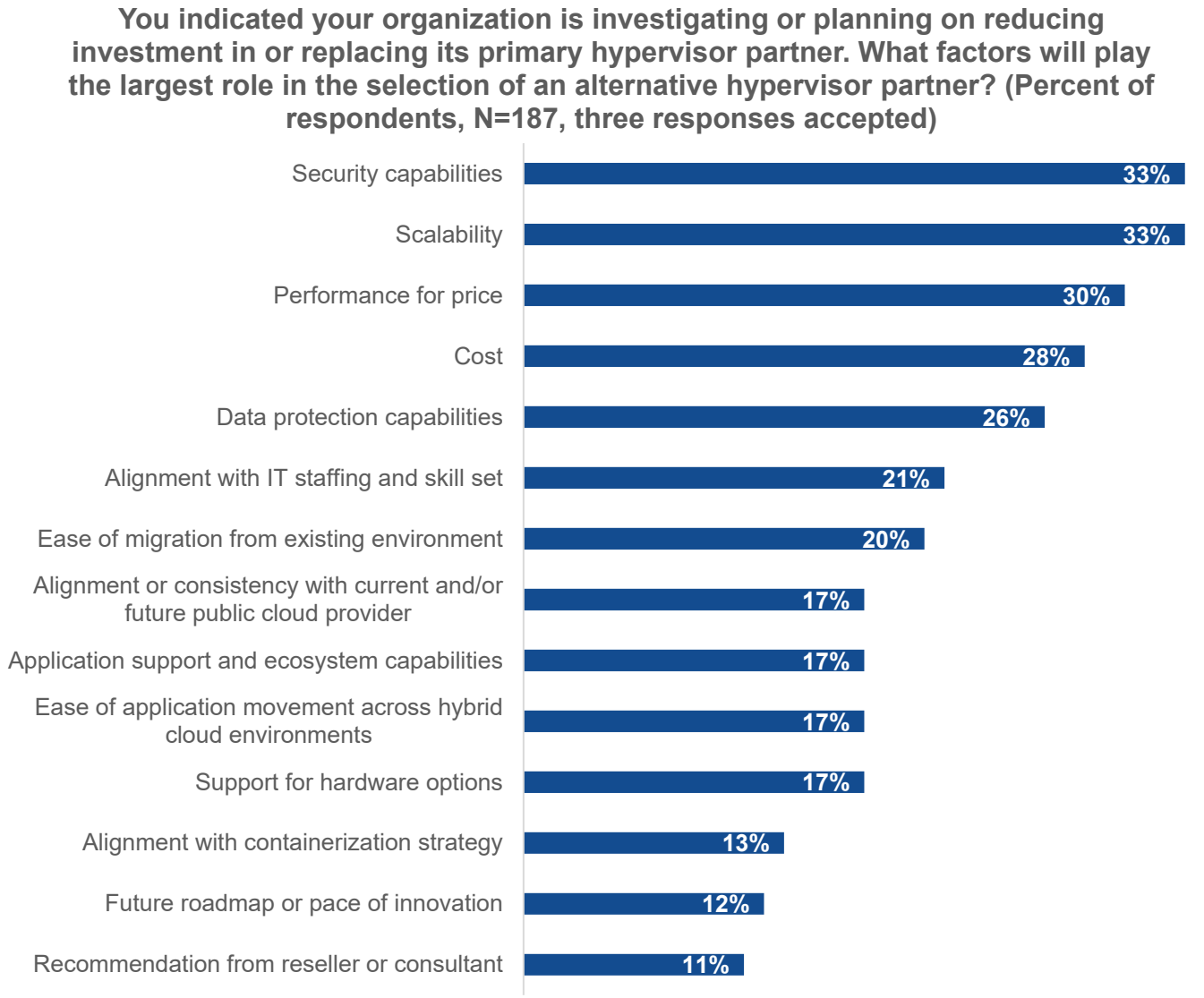
Figure 1. Factors Playing the Largest Role in the Selection of an Alternative Hypervisor Partner



Source: Enterprise Strategy Group, now part of Omdia

The Solution: HPE Private Cloud Business Edition, Now Built With HPE Morpheus VM Essentials Software

HPE Morpheus VM Essentials Software

HPE Morpheus VM Essentials Software (VM Essentials) is a cost-effective virtualization solution that is fully integrated into HPE Private Cloud Business Edition or can be deployed as standalone software to virtualize and manage HPE and/or third-party hardware. VM Essentials Software consists of:

- **HVM hypervisor.** HPE's KVM-based hypervisor that can run virtualized workloads. The solution supports multiple types of storage (local, NFS, iSCSI, or FC), distributed workload placement, VM HA and live migration, data protection via snapshots and backups, and DR through HPE Zerto.
- **VM Essentials manager.** A unified management suite that can simultaneously manage both HVM and VMware clusters from one interface. Virtualization administrators can simplify the provisioning and

management of VMs, clusters, and high availability (HA) and perform live migrations. HPE VM Essentials supports IP address management and Domain Name System integration, automation execution, secrets management, and conversion between VMware and HPE VM Essentials images.

- **HPE enterprise support.** HPE VM Essentials is supported by HPE's enterprise-class global support and ecosystem of independent software vendors (ISVs) that can provide HPE VM Essentials certification and support for data protection, VDI, ERP, etc.
- **Future-ready upgrade path.** If needed, customers can easily upgrade to full **HPE Morpheus Enterprise Software** for multi-cloud management, Kubernetes support, governance, and FinOps capabilities.

HPE Morpheus VM Essentials allows organizations to transition existing workloads and licenses at their own pace, with full support for VMware and the flexibility to move to the HVM hypervisor when the time is right.

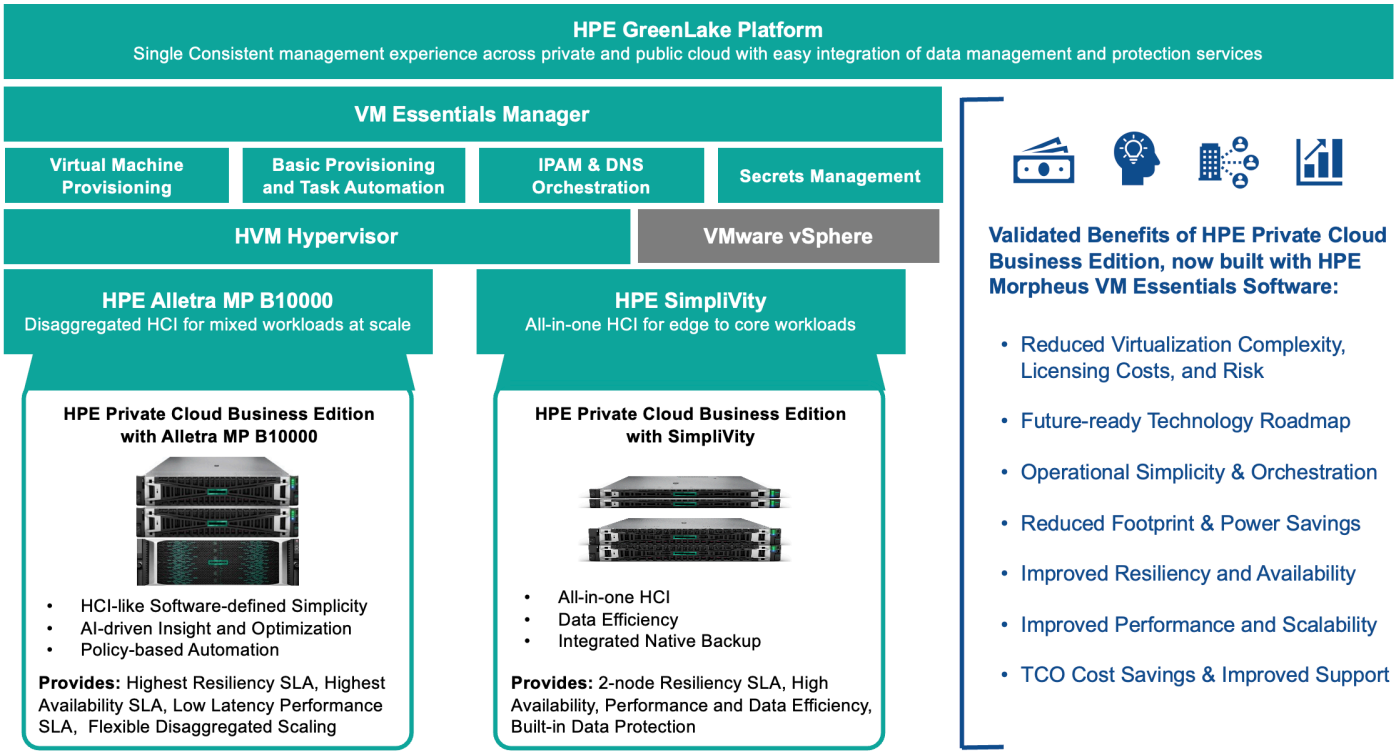
HPE Private Cloud Business Edition

HPE Private Cloud Business Edition delivers a fully integrated, self-managed private cloud experience with unified VM management, multi-hypervisor support, and the simplicity of HPE's modern distributed HCI technology. With automated set-up and lifecycle management, organizations can easily manage VM's and infrastructure across virtualized environments.

- **For mission-critical and mixed workloads at scale**, **HPE Alletra** provides a disaggregated HCI architecture made up of HPE Alletra Storage MP B10000 and HPE ProLiant compute for independent scaling. Each serve HCI use cases and deliver a foundation for hybrid cloud environments. Please see the "Mission-critical and Mixed Workloads at Scale With HPE Alletra Storage MP B10000" section for more detailed information on HPE's dHCI solutions and HPE Alletra Storage MP B10000.
- **For edge and general-purpose workloads**, **HPE SimpliVity** delivers an efficient, all-in-one hyperconverged solution with built-in backup and recovery and collapses silos in a simple scale-out architecture. Please see the "Edge and General-purpose VM Workloads With HPE SimpliVity" section for more detailed information on HPE SimpliVity.

With HPE VM Essentials and HPE Private Cloud Business Edition, organizations gain a complete IT infrastructure for private cloud built with proven technology that delivers the simplicity, resiliency, and speed they demand for virtualized workloads, with the flexibility of choice and simplified management.

Figure 2. HPE Private Cloud Business Edition, Now Built With HPE Morpheus VM Essentials Software



Source: Enterprise Strategy Group, now part of Omdia

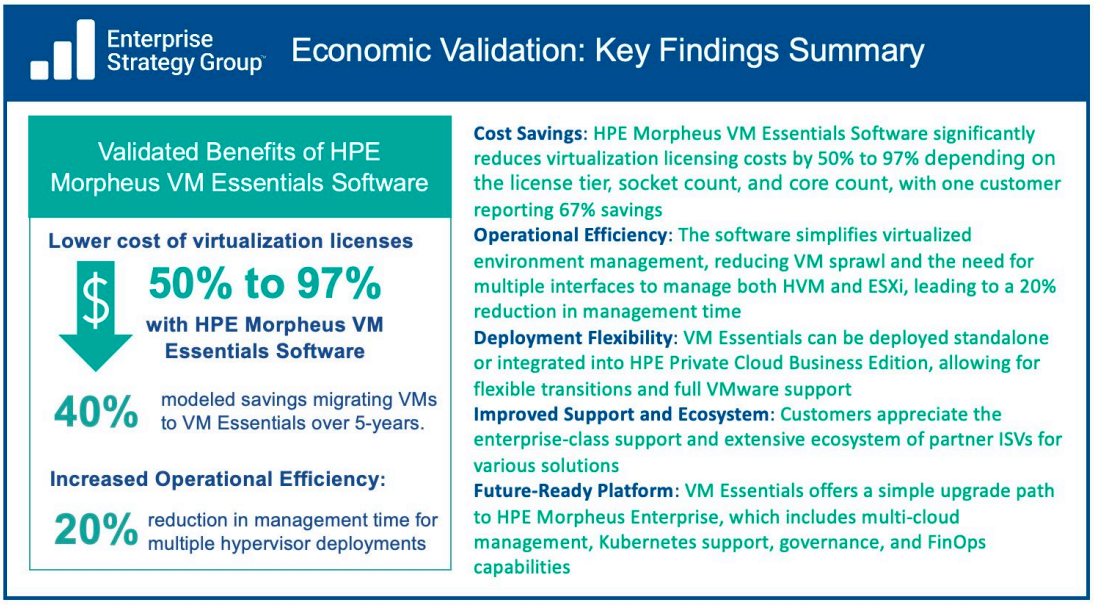
Enterprise Strategy Group Economic Validation

Enterprise Strategy Group completed a quantitative economic analysis of HPE Private Cloud Business Edition, now embedded with HPE Morpheus VM Essentials Software. Enterprise Strategy Group's Economic Validation process is a proven method for understanding, validating, quantifying, and modeling the economic value propositions of a product or solution. The process leverages Enterprise Strategy Group's core competencies in market and industry analysis, forward-looking research, and technical/economic validation. Enterprise Strategy Group conducted in-depth interviews with end users to better understand and quantify how HPE VM Essentials and the HPE Private Cloud Business Edition virtualization platform have impacted their organizations. The qualitative and quantitative findings were used as the basis for economic models comparing the cost and benefits of using HPE technologies across three use scenarios:

- **HPE Morpheus VM Essentials Software:** We validated the benefits customers have seen since replacing and/or augmenting their existing virtualized environments with HPE VM Essentials and modeled the expected licensing cost savings organizations can expect by adding HPE VM Essentials to their virtualized environments.
- **Mission-critical and mixed workloads at scale with HPE Alletra Storage MP B10000:** We validated the benefits HPE Private Cloud Business Edition customers have seen since deploying HPE Morpheus VM Essentials Software in their disaggregated HCI environments and modeled the expected total cost of ownership (TCO) savings versus running their virtualized environment with alternative VSAN software-based HCI solutions.

- **Edge and general-purpose workloads with HPE SimpliVity HCI:** We validated the benefits HPE SimpliVity customers have seen since deploying HPE Morpheus VM Essentials Software in HCI environments and modeled the expected TCO savings versus running their virtualized environment with alternative virtualization solutions.

HPE Morpheus VM Essentials Software Economic Overview



Enterprise Strategy Group validated that VM Essentials has provided organizations with an alternative to the leading virtualization software solution that is simpler, more cost effective, and seamlessly integrates into their current environment. VM Essentials provides dual hypervisor support, allowing organizations to transition existing workloads and licenses at their own pace. Customers that have already deployed or are planning to migrate to HPE VM Essentials reported the following savings and benefits:

- **Reduced licensing costs.** VM Essentials provides a hypervisor that is economically priced per socket (rather than per core count), helping organizations significantly reduce virtualization licensing costs by **50% to 97% (2x to 37x)**, depending on license tier, socket count, and core count. License savings is maximized for denser servers with higher core counts per socket. VM Essentials licensing is also easier to plan for with a single all-inclusive license that avoids tiered licensing to accommodate advanced functionality or more powerful infrastructure. The low licensing cost and ease of implementation made it simple and economical for organizations to perform proof of concept (PoC) testing on VM Essentials. After running successful PoCs some organizations we spoke with took initiatives to immediately migrate some workloads and shared their plans to fully migrate all virtualized servers and build future applications around VM Essentials. Table 1 summarizes the potential virtualization license savings provided by VM Essentials.

> **"VM Essentials does everything we need it to do for 1/3 of the cost we were spending on [alternative virtualization] licenses [67% savings], and we have more confidence in the roadmap going forward."**

Table 1. Potential VM Essentials Software License Cost Savings

Per-core Virtualization License	12 Cores/Socket	24 Cores/Socket	36 Cores/Socket	48 Cores/Socket	64 Cores/Socket
Standard	-	50%	67%	75%	81%
Enterprise Plus	58%	79%	86%	90%	92%
Foundation	67%	83%	89%	92%	94%
Cloud Foundation	86%	93%	95%	96%	97%

(Modeled Savings based on 2-socket server)

Source: Enterprise Strategy Group, now part of Omdia

- **Faster time to optimized virtualization.** The HPE CloudPhysics Assessment and services team helped organizations quickly assess their virtualized environment by providing insights and an actionable plan to manage and reduce costs. By streamlining the migration of virtual servers and data to VM Essentials, organizations reported that the time and licensing cost savings resulted in more time and available resources to modernize their IT estate (rehosting, refactoring, re-platforming).
- **Reduced complexity and improved operational efficiencies.** VM Essentials manager provides a single, unified management layer to deploy and manage VMware and HVM virtual machines, helping to reduce VM sprawl and eliminating the need to context switch and use multiple windows and interfaces. One customer estimated that HPE VM Essentials provided them with a **20% reduction in time spent managing their virtualized environments**. Customers also reported that simplified wizards, integrations, unified automation and orchestration (through REST API, Bash, and PowerShell) made provisioning, deploying, and migrating VMs across hybrid cloud environments simpler and reduced the number of manual or repetitive tasks they had to perform. This helped free the team to work on profit-generating projects and enabled them to operate much larger environments without first having to grow the team.
- **Deployment flexibility.** Customers spoke about the added flexibility that they now have with VM Essentials, which is embedded in HPE Private Cloud Business Edition and can also be deployed as a standalone software. This gave the flexibility to deploy VM Essentials on third-party infrastructure, helping to extend the value of the hardware through optimized host utilization while avoiding high licensing costs and extending the operational benefits of VM Essentials. For most organizations, VM Essentials did not fully replace their existing virtualization vendor but helped to augment and better assess the environment, giving freedom of choice to find the right virtualization technology for each workload. And VM Essentials provides a very simple and seamless upgrade path to the HPE Morpheus Enterprise hybrid cloud management platform when needed.
- **Improved support experience.** HPE customers highlighted the enterprise-class support experience as a major reason for choosing HPE VM Essentials Software on HPE infrastructure. They noted that their previous hardware vendor's support was not responsive and that the incumbent virtualization product's support had been contracted out, leading to a decline in service quality.
- **Extended virtualization ecosystem.** HPE's ecosystem includes a wide range of partner ISVs that support various solutions, such as data protection, virtual desktop infrastructure, and enterprise resource planning. This extensive ecosystem helps customers manage and optimize their virtualized environments more effectively.

> **"We see great value in having one vendor for everything from VM Essentials to our dHCI infrastructure and Aruba networking with single unified support. We can talk to one person to focus on everything, and HPE can bring in experts if needed."**

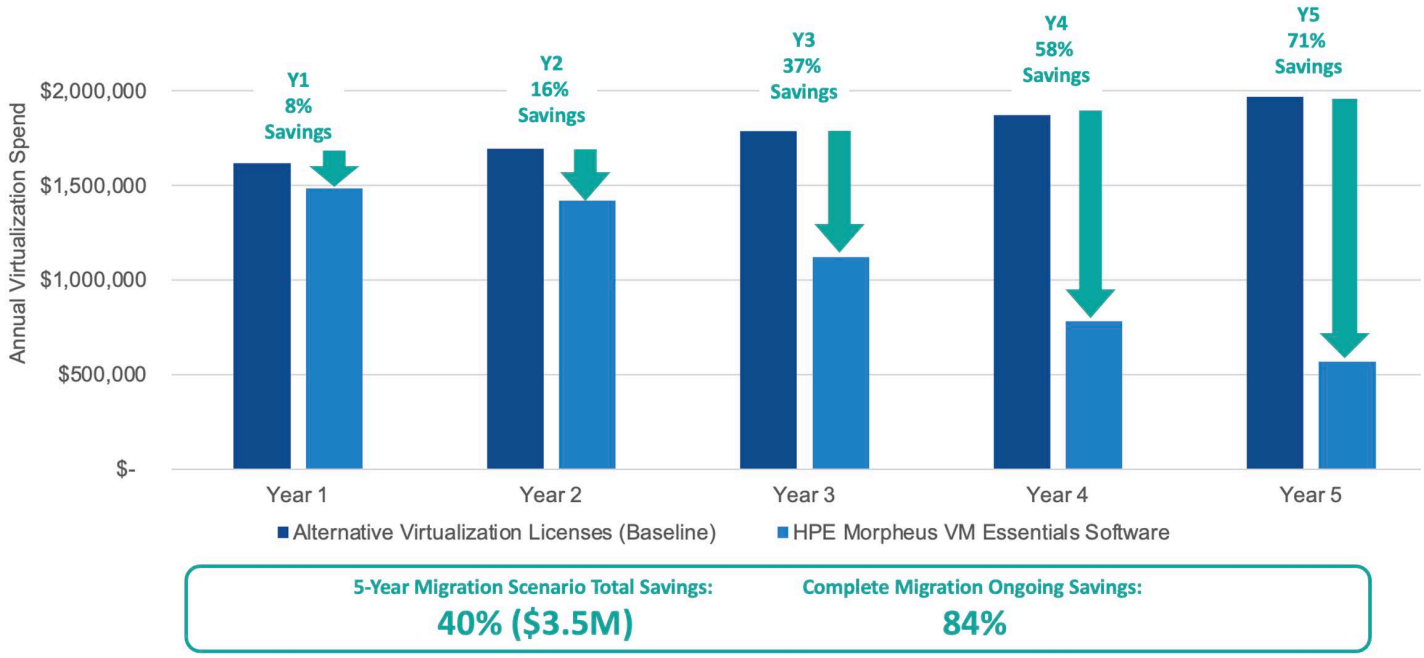
- **Future-ready platform.** Partnering with HPE across the entire technology stack, including services, support, and an alternative virtualization solution, resulted in streamlined planning for the future. Customers appreciated the future-ready IT roadmap provided by HPE, which includes flexible consumption models and simple upgrade paths to HPE Morpheus Enterprise to enable multi-cloud management and rapid application deployment. This approach helped organizations avoid potential risks associated with vendor or tool lock-in, complexity, license cost variability, and technology roadmap limitations.
- **Microsegmentation license cost savings.** Customers with requirements for highly secure networks such as regulated industries (energy and utilities) or public sector (FED/SLED) or those running workloads that benefit from the performance and security provided by network microsegmentation (such as mission-critical workloads, VDI, AI, etc.) can reduce TCO even further with HPE Aruba Networking CX10000. Built-in microsegmentation provided by AMD Pensando helps to reduce NGFW and NSX license costs, reducing spending by up to 57% over five years.

Modeled Scenario: HPE Morpheus VM Essentials Software Migration Savings

Most customers will transition existing workloads and licenses at their own pace. The customers we spoke with started with a PoC, followed by migrating their non-production workloads, and finally their production workloads. Enterprise Strategy Group modeled the expected costs for an organization in the process of migrating their 2,000 virtualized machines to HPE VM Essentials over a five-year period. We assumed a 5% annual growth in VMs. We assumed that 25% of all VMs were running production workloads hosted on physical servers with an average of 2.5 sockets (mix of 2 and 4 socket servers) and 44 cores per CPU (mix of 32 and 56 cores) and an average of 16 physical cores required per production VM. The remaining 75% of all VMs were running non-production workloads hosted on physical servers with an average of 1.5 sockets (mix of 1 and 2 socket servers) and 28 cores per CPU (mix of 24 and 32 cores) and an average of 4 physical cores required per production VM. For virtualization, we assumed the organization had a mix of foundation (20%), enterprise plus (50%), and standard (30%) licenses, resulting in a blended average cost of $105/core/year.

Our model assumed that the organization would start by conservatively migrating non-production workloads first according to the following schedule: 25% of VMs by the end of year 1, 50% by year 2, 75% by year 3, and 100% by year 4. Production VMs would follow a similar schedule starting after the first two years, with 25% migrated by year 3, 50% by year 4, and 75% by year 5. It bears mentioning, and is technically possible, that many organizations might choose to migrate on a more aggressive schedule. Our model predicted that, by the end of the fifth year, the organization would have **lowered annual virtualization license costs by 71%** (starting with savings of 8% in the first year and growing each subsequent year). The migration scenario resulted in a **total five-year reduction in licensing costs of 40%, saving the organization over $3.5 million.** Once the entire migration was complete and VMs were running on VM Essentials, our models predicted an ongoing **84% lower annual cost of virtualization licenses**. Figure 3 summarizes the results of our modeled analysis.

Figure 3. 5-year Migration Savings Provided by HPE Morpheus VM Essentials Software



Source: Enterprise Strategy Group, now part of Omdia

HPE Private Cloud Business Edition, Now Built With HPE Morpheus VM Essentials Software

Mission-critical and Mixed Workloads at Scale With HPE Alletra Storage MP B10000

Mission-critical and enterprise-mixed workloads are essential to everyday operations and the success of the business and, thus, require the highest levels of performance, security, availability, and reliability. For mission-critical and mixed workloads at scale, HPE provides a disaggregated HCI architecture made up of HPE Alletra Storage MP B10000 and HPE ProLiant compute for independent scaling.

Mission-critical Workloads:

Production financial and healthcare applications; ERP; supply chain; manufacturing systems, e-commerce, and core business databases; etc.

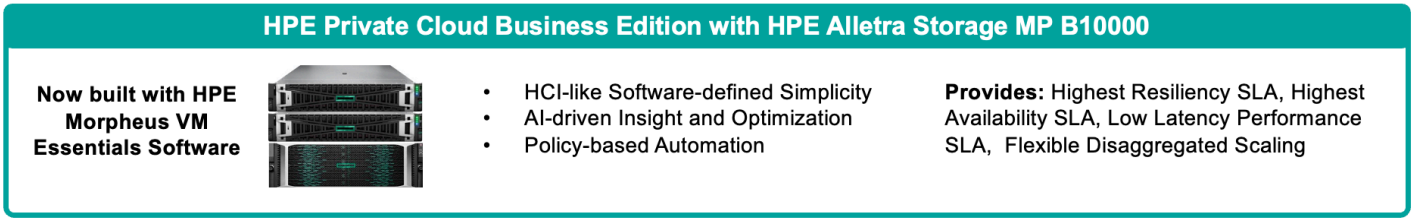
Enterprise-mixed Workloads:

BI, analytics, AI, CRM and HR systems, productivity and collaboration tools, dev/test, websites, general VMs and containers, etc.

HPE Private Cloud Business Edition with HPE Alletra Storage MP B10000

HPE delivers the HCI experience to workloads with unpredictable growth by combining the simplified and unified management architecture of HCI with the capabilities of enterprise-class disaggregated storage. Built on a secure foundation of HPE ProLiant servers with silicon root of trust and self-managing flash storage of HPE Alletra Storage MP B10000, the platform gives enterprises the operational simplicity of HCI, along with the flexibility to independently scale compute and storage resources. The HPE solution has built-in automation software that simplifies cluster deployment and scaling, and all data services can be managed with a single pane from HPE GreenLake. The system is architected to provide AI-driven intelligence and automated administration to predict and prevent disruptions and to self-optimize the entire virtualization stack. It is designed with no single point of failure, can withstand three simultaneous drive failures, and is resilient, with a minimum of 99.9999% guaranteed availability.

Figure 4. HPE GreenLake for Private Cloud Business Edition With HPE Alletra Storage MP B10000



Source: Enterprise Strategy Group, now part of Omdia

Validated Savings and Benefits Provided by HPE Alletra Storage MP B10000

In addition to the savings and benefits provided by HPE Morpheus VM Essentials (described earlier) customers running on HPE Private Cloud Business Edition with HPE Alletra Storage MP B10000 reported savings and benefits in the following categories:

- **Reduced hardware footprint.** Enterprise Strategy Group interviewed customers who confirmed that the HPE solution provides more usable compute power, storage capacity, and resiliency in a smaller footprint, helping reduce infrastructure costs. Their HCI deployments had to be overprovisioned to achieve similar levels of performance and availability, resulting in higher costs to operate and wasted resources. We also found that scaling storage separately from compute helped to avoid unnecessarily paying higher license and networking costs for expensive core or socket-based virtualization and database licenses.
- **Enterprise resiliency.** Customers were reassured knowing that HPE's solution was built on the most reliable and secure enterprise servers, storage, and networking instead of the commodity components used to build many HCI nodes. HPE Alletra MP B10000 storage arrays are designed with no single point of failure, redundant hardware, or hardened RAID protection with triple parity and checksums, and it can tolerate three simultaneous drive failures. Enterprise Strategy Group validated calculations that show that HPE is up to 35x more resilient than most HCI and 4x more resilient than the most robust HCI protection configurations that can require significant overprovisioning of nodes and storage capacity for redundancy. Mission-critical applications running on the HPE solution with Alletra MP B10000 with HPE InfoSight predictive analytics can achieve 100% data availability and help detect and avoid potential issues before they happen.
- **Cost-effective performance and scalability.** Enterprise Strategy Group validated that the HPE solution provided noticeable performance improvements for customers migrating from HCI, getting the most out of the compute, network, and storage resources and providing up to 10x lower latency and up to 500% improvements in workload performance, especially for write operations that are critical for transactional workloads. Customers told Enterprise Strategy Group that the disaggregated HPE solution enabled the simple, independent addition of compute and/or storage and eliminated the need to overprovision, rebalance data across nodes, or tune and optimize any layer. When using HCI, these customers often had to purchase more compute than necessary to meet storage requirements or more storage than was required due to the need for additional compute cores. In contrast to HCI, which requires compute and memory resources from every node to handle storage and data services, HPE Alletra MP B10000 storage controllers handled all storage functions. Additionally, the solution leverages leveraged AI to help understand and optimally place workloads for ideal performance.

> **"With HPE, if we have a sudden need for a large amount of storage, we just bring in another disk shelf and cable it in instead of having to add 10 HCI nodes, knowing that the memory and CPU on those nodes will go unused."**

- **Simplified management, efficiency, and agility.** Customers told Enterprise Strategy Group that their HPE solution was simple to manage. Admins were already familiar with VM-centric management, and they could manage all HPE and non-HPE VMs through HPE VM Essentials Manager. They didn't need server or storage expertise, additional appliances, element managers, or training. If needed, advanced storage functions and insight were made simple through the AI-assisted single-pane-of-glass management software portal on the HPE Alletra Storage platform. They also reported that the solution saved additional time and reduced complexity because it's automatically optimized with built-in best practices and data services. One customer reported that his team was easily able to grow from managing under 100 VMs to over 4,500 VMs without the need to add resources. Many customers noted that the HPE solution was as easy to scale and upgrade with a single click as their HCI systems but with less disruption to applications. All resources were software-defined and easily auto-discovered. Customers experienced the added benefit of being able to grow without the need to rebalance data (helping to keep latency low and predictable) or run in a temporary degraded state when updating or restarting components (which would have reduced availability and introduced unacceptable risk).
- **Improved support experience and reduced risk.** Customers reported that the HPE InfoSight predictive analytics system and support automation simplified infrastructure support by enabling full-stack monitoring and recommendations with global intelligence. HPE InfoSight leveraged AI to proactively resolve, warn, and protect from many issues, resulting in fewer glitches, improved visibility, and faster troubleshooting and resolution. Customers were thrilled with how easy it was to directly access Level 3 support.

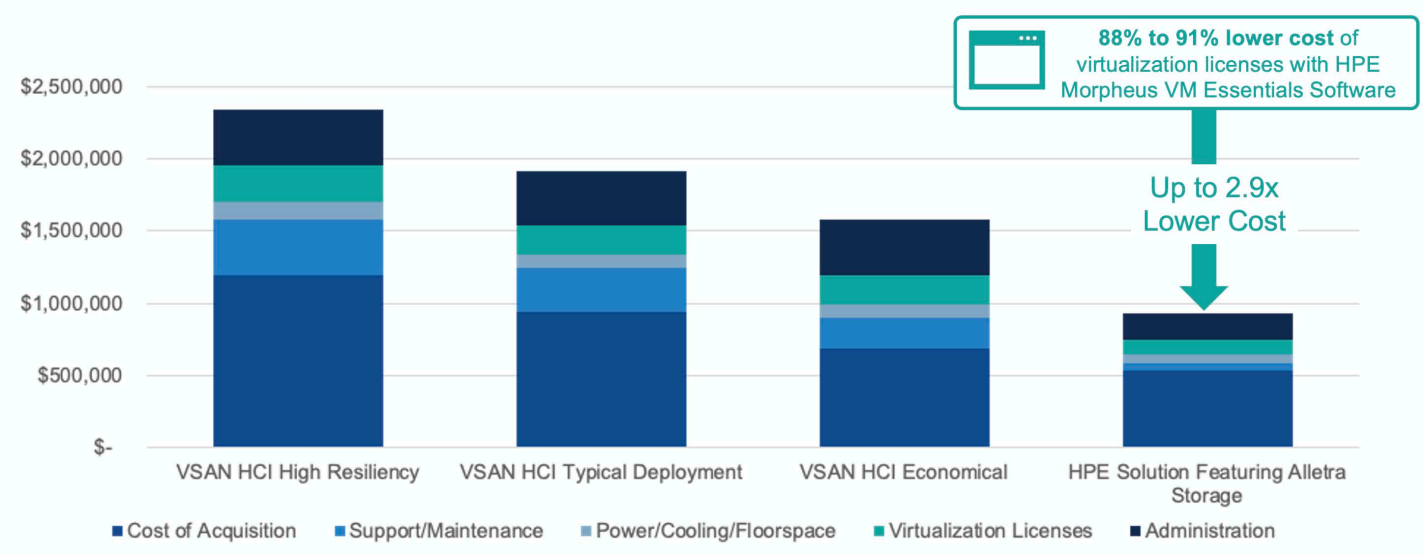
To learn more about the validated savings and benefits provided by HPE Alletra, please refer to the full Enterprise Strategy Group Economic Validation Reports entitled "Analyzing the Economic Benefits of Hewlett Packard Enterprise GreenLake for Private Cloud Business Edition," published in May 2024, and "Analyzing the Economic Impact of HPE Alletra Storage MP B10000," published in February 2025.

Modeled Scenario: Mission-critical and Enterprise-mixed Workloads

Using the same methodology and assumptions described in detail in the 2024 report (above) we updated our five-year TCO/ROI model that compares the expected costs and benefits of deploying, managing, and maintaining an HPE disaggregated solution with Alletra Storage MP B10000 against those of a leading vSAN-based HCI solution. Our revised model included updating with the latest 2025 configurations and pricing information and adding the expected cost of socket-based VM Essentials licenses. We assumed the vSAN HCI solution used the Enterprise Plus version of an alternative virtualization solution (priced per core). As in the original paper, the configurations were sized to accommodate 121 virtual machines, requiring a total of 162 physical cores, 1,016 GB of memory, and 70 TB of usable solid-state drive (SSD) storage. The mixed workloads included large 10 TB and medium 4 TB transactional databases, as well as smaller general-purpose workloads.

The vSAN solution was configured in a 9-node high-resiliency configuration that could handle up to three drive failures, as well as a 7-node typical deployment configuration capable of handling two drive failures in RAID1 and a 7-node economical configuration capable of handling two drive failures in RAID6. Each node was configured with 2 x 24-core Intel CPUs, 256GB of memory, 6 x 7.68TB NVMe SSDs for capacity, and 2 x 1.6TB read-intensive NVMe SSDs for cache drives. The HPE dHCI solution consisted of four HPE ProLiant DL 360 Gen 11 Servers, two HPE CX 8325H switches, and an HPE Alletra Storage MP B10000 with 16 x 3.84TB NVMe SSDs. Our models considered the cost of hardware/software acquisition, administration, support and maintenance, power/cooling/floorspace, and virtualization licenses. The results showed that the HPE solution could provide up to a **2.9x lower cost over 5-years (48% to 65% savings), including an 88% to 91% lower cost of virtualization licenses** with HPE Morpheus VM Essentials Software.

Figure 5. HPE Private Cloud Business Edition: Expected Savings for Mission-critical and Enterprise-mixed Workloads running Alletra Storage MP B10000



Source: Enterprise Strategy Group, now part of Omdia

Edge and General-purpose VM Workloads With HPE SimpliVity

General-purpose and edge workloads require easy-to-manage infrastructure that delivers agility, flexibility, and scalability. These workloads are ideal for cost-effective virtualization solutions and hyperconverged infrastructure.

For edge or general-purpose VMs, HPE SimpliVity delivers an efficient, all-in-one solution with built-in backup and recovery, and it collapses silos in a simple scale-out architecture.

General purpose workloads: Development and test, web application servers, file and print services, business applications, VDI, database servers, etc.

Edge workloads: Workloads that process data closer to where it is generated, such as at retail, manufacturing, or healthcare sites and workloads supporting streaming video, utilities, telecommunications, IoT/OT, autonomous systems, etc.

HPE Private Cloud Business Edition With HPE SimpliVity

HPE SimpliVity offers an all-in-one, efficient solution with built-in backup and recovery, simplifying operations from edge to core. It reduces complexity and lowers overhead, making it ideal for general-purpose, edge, and VDI workloads. Its scalable infrastructure and advanced data services allow customers to start small and grow as needed.

With simple management, two-node HA, built-in data protection, and hyper data efficiency across all edge sites and data centers, HPE SimpliVity simplifies and collapses the IT stack and reduces the total cost of ownership.

Figure 6. HPE GreenLake for Private Cloud Business Edition With HPE SimpliVity

Source: Enterprise Strategy Group, now part of Omdia

Validated Savings and Benefits Provided by HPE SimpliVity

In addition to the savings and benefits provided by HPE VM Essentials, customers running on HPE Private Cloud Business Edition with HPE SimpliVity reported savings and benefits in the following categories:

- **Simplified management and agility.** HPE SimpliVity greatly simplifies all operations, including deployment, management, scaling, maintenance, and troubleshooting. The software-defined architecture, unified management, policy-based automation, and AI-powered insights and optimizations all contribute to this ease of use. HPE SimpliVity provides extremely simple-to-use VM-centric management for HPE VM Essentials Software and/or other virtualization software environments. Global visibility across all locations makes it easy to provision, scale, move, and protect VMs across all sites. HPE SimpliVity customers have reported time savings of 5 to 10 hours per week for VM administrators.
- **Cost-effective design.** Traditional 3-tier infrastructure often requires overprovisioning to proactively handle data growth, leading directly to higher costs. The HCI building block approach offers easier scalability, but some vendors and implementations require a minimum deployment of three nodes for HA. In contrast, HPE SimpliVity 325 is just two nodes, providing immediate savings. For data efficiency, its software-optimized inline deduplication, compression, and optimization helps minimize I/O and network traffic, improving performance while delivering significant storage and bandwidth efficiency. This can lower acquisition cost by up to 35% compared with other HCI solutions. Additionally, HPE Morpheus VM Essentials Software's socket-based pricing further reduces costs through virtualization licensing savings.

  "[HPE SimpliVity] is extremely easy to use and manage, and the company's customer support is outstanding. Performance, including inline deduplication and compression, is exceptional. And the built-in DR and flexible backup policies are fantastic."
- **Ideal for edge deployments.** The two-node HPE SimpliVity 325 is built on the latest HPE ProLiant DL325 Gen 11 server and leverages up to 128 AMD EPYC cores to provide an extremely compact and cost-effective 2U solution (1U+1U) with global management, all-inclusive software, built-in data protection, high performance, and security built in. HPE provides resiliency service-level agreements and simplified maintenance with remote management, automation, faster and simpler backups, and disaster recovery. All of this makes it an ideal solution for highly distributed locations and/or to deploy at edge locations. HPE SimpliVity customers reported up to a 50% improvement in VM workload performance after moving to HPE SimpliVity, and customers can lower virtualization licenses costs by deploying single-socket SimpliVity 325 nodes combined with HPE VM Essentials Software.
- **Improved support experience and reduced risk.** HPE SimpliVity customers benefit from world-class, enterprise support from HPE. If combined with HPE networking and HPE VM Essentials Software, customers can deal with a single point of support versus having to work with several vendors. HPE InfoSight provides a multisite view of all VMs and backups and uses telemetry data to detect, diagnose, pinpoint, and offer

remediation guidance on potential hardware, software, and capacity issues. SimpliVity's built-in resiliency, data protection, DR, and security helps reduce complexity, speeds backup and recovery times, and reduces risk to the organization. One customer showed their trust in the solution by stating that they run 80% of their business-critical applications on SimpliVity.

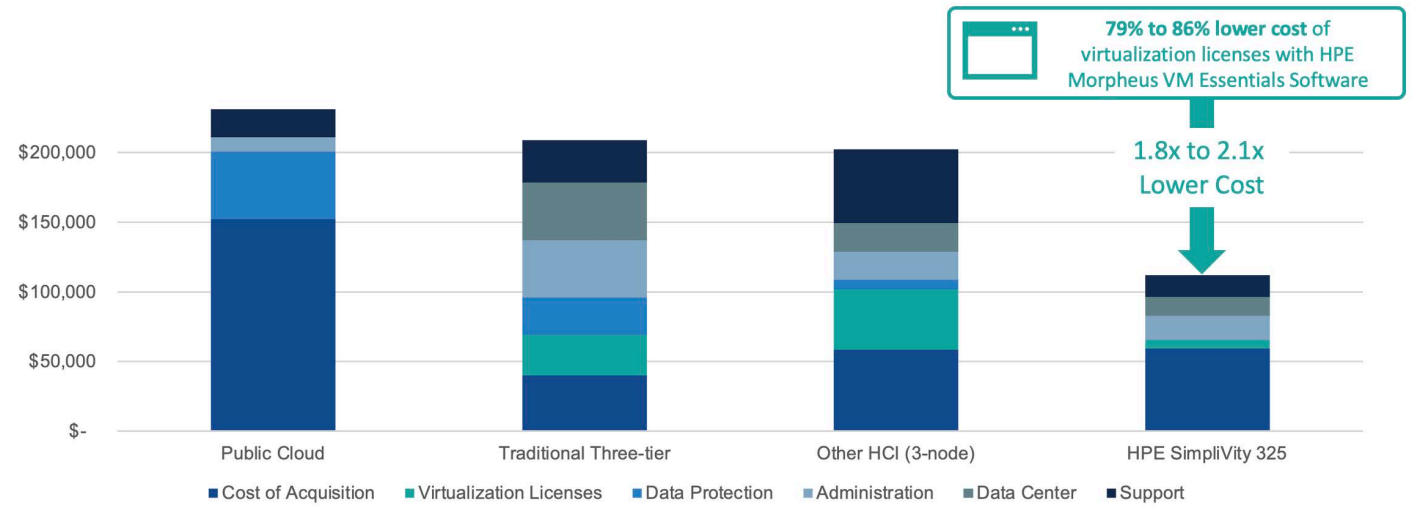
To learn more about the validated savings and benefits provided by HPE SimpliVity, please refer to the full Enterprise Strategy Group Economic Validation Report entitled "Economic Benefits of HPE GreenLake for Private Cloud Business Edition with HPE SimpliVity for Edge," published in July 2024.

Modeled Scenario: Edge and General-purpose VM Workloads with HPE SimpliVity

Enterprise Strategy Group modeled the expected cost for a distributed edge deployment that required 16 VMs, each with four vCPU, 4 GB of RAM, and 700 GB of flash storage capacity. Each distributed edge site was configured with a pair of HPE SimpliVity 325 Gen11 nodes in a fully HA configuration capable of handling a node failure and continuing to operate. Each node was configured with a 24-core 5th Generation AMD EPYC processor, 256 GB of memory, and four 1.92TB SSD drives (4.6 TB usable). A conservative data deduplication rate of 2.5 to 1 was used to determine the effective storage capacity for each HPE SimpliVity distributed edge deployment. We modeled the expected costs to handle this set of requirements by deploying traditional three-tier architecture, an alternative three-node hyperconverged offering, public cloud services, and HPE Private Cloud Business Edition with a pair of SimpliVity 325 nodes.

Our model considered the expected costs for hardware/software acquisition or cloud services; data protection; administration; data center power, cooling, and floorspace; support; and installation services. We also factored in the expected cost of virtualization licenses, assuming that the HPE solution leveraged HPE VM Essentials (priced per socket) and the traditional three-tier and alternative HCI solutions used the Enterprise Plus version of an alternative virtualization solution (priced per core). Because instances are already virtualized, the public cloud IaaS did not require a virtualization license. Our model predicted that the HPE Private Cloud Business Edition with SimpliVity solution **could lower expected cost by 1.8x to 2.1x (45% to 52%)**, including up to an **86% lower cost of virtualization licenses** with HPE Morpheus VM Essentials Software.

Figure 7. Expected Savings for Edge and General-purpose VM Workloads



Source: Enterprise Strategy Group, now part of Omdia

Considerations

The cost analyses shown in this report were built in good faith and based upon the results of well-documented, credible, and validated modeling of solution costs. However, a single scenario does not represent the results of every potential comparison. Each product, workload, set of business requirements, and configuration choice will have a unique set of considerations that will determine how much savings a particular HPE solution will provide against specific alternatives. Enterprise Strategy Group recommends that organizations work with HPE to perform their own PoC testing in their own virtualized environments and with their own workloads to better characterize the potential savings and improvements that might be achievable for their organization.

Conclusion

With uncertainties surrounding the leading virtualization vendor's future technology roadmap, support services, and licensing strategies going forward, it is wise for organizations to consider augmenting their environment with alternative virtualization solutions that can deliver similar enterprise-level capabilities, while lowering cost and complexity. By talking with customers, Enterprise Strategy Group validated that HPE Morpheus VM Essentials Software provides an alternative virtualization technology with enterprise-ready features and the ability to manage HPE and non-HPE VMs through a single unified interface, while greatly reducing virtualization license spending. By combining VM Essentials with other offerings like HPE Private Cloud Business Edition, HPE's world-class support and services, and HPE Aruba microsegmentation, organizations can significantly reduce the cost, complexity, and risk of delivering virtualized IT services.

Our models showed that HPE Morpheus VM Essentials Software offers a low, per-socket license cost that can reduce virtualization license costs by 50% to 97% versus the leading virtualization vendor whose licenses are priced per core. Organizations can see savings all at once by quickly replacing their hypervisors or gradually augmenting their existing virtualization environment and migrating non-production and production workloads to VM Essentials at their own pace, gradually seeing license cost savings grow over time. And VM Essentials provides a simple upgrade path to HPE Morpheus Enterprise that provides a unified control plane for provisioning, governance, and cost management across hypervisors, Kubernetes clusters, and public clouds.

Our models also predicted that VM Essentials can be combined with HPE Private Cloud Business Edition with HPE Alletra Storage MP B10000 to lower TCO by up to 2.9x versus alternative vSAN-based HCI solutions for mission-critical and enterprise workloads or combined with HPE Private Cloud Business Edition with HPE SimpliVity to lower TCO by up to 2.1x versus traditional three-tier architecture, cloud IaaS, and alternative HCI solutions for edge and general-purpose VM workloads.

If your organization is looking to optimize its current virtualization strategy while reducing complexity, minimizing risk, and improving flexibility of deployment options, Enterprise Strategy Group suggests you give HPE Private Cloud Business Edition, now embedded with HPE Morpheus VM Essentials Software, a try.

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