

Brochure

Exceed business expectations

VSI OpenVMS V8.4-2L1



Hewlett Packard
Enterprise

Capitalize on performance improvements, binary compatibility, robust security mechanisms, high uptime, attractive licensing policies, and best-in-class total cost of ownership benefits with the latest generation of HPE Integrity servers running VSI OpenVMS V8.4-2L1.

OpenVMS continues to be an exceptionally robust, flexible, and secure operating system. We're delivering on our promise of excellence.

Your success depends on application availability and uptime

Your organization requires a superior **IT infrastructure**, one that serves your crucial business processes while providing scalability, security, and reliability for the applications that support those mission-critical workloads. You also need systems that deliver a strong return on investment (ROI) and have the ability to integrate with your existing IT environment. It is also important to capitalize on virtualization, security, systems management, and business continuity.

VSI OpenVMS V8.4-2L1 can deliver on those requirements. While most enterprise-class IT environments measure uptime in days, weeks, or months, customers using OpenVMS environments regularly characterize uptime in terms of years. OpenVMS has been one of the leading operating systems that deliver superior application availability—with an appropriately configured cluster—and manage large volumes of information reliably.

What is new with VSI OpenVMS V8.4-2L1?

With the latest release of **OpenVMS**, VMS Software Inc. (VSI) demonstrates its commitment to developing technologies that accelerate your business growth, lower your costs, and mitigate your risks.

VSI OpenVMS V8.4-2L1 provides:

Support for HPE Integrity i4 servers

VSI is continuing the development prowess and customer-first approach that are so closely associated with the OpenVMS operating system. VSI's team of veteran OpenVMS developers, many from the core DEC/Compaq/Hewlett Packard Enterprise teams responsible for the technical excellence that has been the hallmark of OpenVMS, brings you VSI OpenVMS V8.4-2L1. This release enhances support for **HPE Integrity i4** servers based on the Intel® Itanium® Processor 9500 Series.

With an increase in the number of cores per socket, you can expect enhanced performance. On the HPE Integrity rx2800 i4 Server, you can expect up to 3.5x performance, 21 percent less energy consumption, and 33 percent lower total cost of ownership (TCO).¹ Additionally, with the per-socket-based licensing, you can reduce your license costs significantly.

64-core support per OpenVMS instance

VSI OpenVMS V8.4-2L1 supports BL890c i4 configurations with 64 processor cores and 1.5 TB of memory. With 64-core support, a BL890c i4 can be configured as a single 4 Blade nPar.

Tunable backup compression

The ability to compress file data within a save set for a save operation was added to Backup in HPE OpenVMS V8.3. In VSI OpenVMS V8.4-2L1, the compression mechanism maybe tuned to provide a greater or lesser amount of compression.

ACMELOGIN and LOGINPLUS

Earlier versions of OpenVMS shipped each variant in different kits called the ACMELOGIN and LOGIN patch kit; later the LOGINPLUS kit was used to switch between them. VSI OpenVMS features a simplified means for installing ACME (external authentication) LOGIN. There is no longer the LOGINPLUS kit to switch between traditional login and ACME-enabled login.

Improved performance

In VSI OpenVMS V8.4-2, a number of alignment faults were fixed. Through analysis of system operation, we discovered that one source of recurring alignment faults on a running system was in the Extended File Cache (XFC). Compile and link tests performed on HPE Integrity i4 servers running OpenVMS V8.4-2 execute 31 percent faster than the same tests performed on HPE Integrity i2 servers running OpenVMS V8.4-2.²

Enhanced security

With VSI SSL1 V1.0, VSI introduces an updated SSL product based on the OpenSSL code base V1.0.2. VSI SSL1 V1.0 provides new keys and ciphers that meet current secure communications requirements. All OpenVMS components that are dependent on OpenSSL have been modified to make use of the new 1.0.2 code base.

Two operating environments

A streamlined operating environment (OE) portfolio offers two OEs—base OE and high availability OE—to better match your business requirements.

¹ hpe.com/us/en/product-catalog/servers/integrity-servers.html

² Internal test, VMS Software, Inc., February 2016

Performance from new HPE Integrity i4 servers

OpenVMS V8.4-2L1 is available on the new HPE Integrity BL8x0c i4 **Server Blades**, as well as rackmount HPE Integrity rx2800 i4 systems—all equipped with the Intel Itanium Processor 9500 Series. With VSI OpenVMS V8.4-2L1 on the HPE Integrity i4 servers, you can expect to see a considerable performance improvement over the previous generation HPE Integrity i2 servers.

Tests conducted on OpenVMS V8.4-2L1 with HPE Integrity i4 servers reported lower memory latency (ranging from 18 percent to 56 percent) and greater memory bandwidth (ranging from 62 percent to 143 percent).³ Servers featuring Intel Itanium Processor 9500 Series contain double the core count of the Intel Itanium Processor 9300 Series. As a result, smaller systems can process the same workload, helping you realize greater capital and operating expenditure benefits.

VSI OpenVMS V8.4-2L1—a solid foundation for your business

OpenVMS remains the operating system of choice for businesses—financial service firms and stock exchanges, manufacturing plants, telecommunications providers, government agencies, and health care offices—that require high uptime, scalability to millions of users, and ease of manageability. VSI OpenVMS V8.4-2L1 support for Integrity i4 servers is the proof of our dedication to developing technologies that allow your organization to build a stable, rock-solid infrastructure—giving you the confidence to respond quickly and efficiently to the demands of a dynamic environment.

OpenVMS V8.4-2L1 draws on over 30 years of nearly continuous evolution and improvement to build upon the same inherent qualities since the inception of OpenVMS, including:

Stay competitive with high application availability

OpenVMS delivers comprehensive, system-wide application, and data availability. This type of seamless business continuity enhances productivity, enriches customer loyalty, and supports your revenue streams. OpenVMS has a pioneering and industry-leading clustering, enabling continuous sharing and balancing of an application and its workload among all nodes in a cluster, resulting in superior application uptime. OpenVMS clustering technology provides support for up to 96 nodes that can span a distance of 500 miles or 800 kilometers.

These cluster nodes act as “one system,” so an application can operate across multiple nodes simultaneously. If one node fails, another node can seamlessly take over the workload.

OpenVMS provides availability in multiple ways, including clustering, host-based volume shadowing, and transaction- and message-based shadowing.

Expand and extend instantly as your business grows

Due to its flexible operating system design, OpenVMS can scale out or scale up depending on workload demands. If the workload increases, you can scale out by adding another node to the cluster—with no interruption to the rest of the cluster—or scale up to support Integrity eight-socket server blades with 64 cores and 64 hyperthreads.

Simplify your system management and maintenance

Due to the unique design of OpenVMS, an **entire cluster** can be managed as one node—from any point in the cluster or even remotely—so fewer resources are required to maintain OpenVMS systems. When the nodes use shared disks, system software, management utilities, patches, and commands are implemented only once at a node and take effect across the entire system.

This implies reduced TCO and maintenance of nodes—especially important if there are a large number of nodes.

Security that is reassuring

OpenVMS is secure by design and has earned a reputation as being one of the most secure operating systems commercially available.⁴ As an example, OpenVMS has recorded one of the lowest number of Computer Emergency Response Team (CERT) advisories over a 10-year period compared to other operating systems. Offering multi-level security, OpenVMS provides different layers of security with each layer requiring its own credentials to gain certain privileges. A breach in one layer does not compromise another layer. OpenVMS security is highly configurable to enable the end user to achieve the required level of security.

³ Internal test, VMS Software, Inc., February 2016

⁴ A search of common vulnerabilities and exposures (CVE) at NIST's CVE and Common Configuration Enumeration (CCE) Vulnerability Database with keyword "OpenVMS" indicates this. Visit: web.nvd.nist.gov/view/vuln/search-advanced?cid=4

The core of your next-generation data center

HPE Converged Infrastructure strategy helps organizations synchronize business and IT to capitalize on change, bringing together the storage, networking, virtualization, and management software needed to create the next-generation data center that operates efficiently and effectively.

OpenVMS plays an important role in the converged infrastructure portfolio, providing organizations the highly available, stable foundation required for important enterprises. Key focus areas for OpenVMS in a converged infrastructure environment include:

- **Unified blade architecture**
OpenVMS V8.4-2L1 supports the HPE Integrity i4 servers. The blade scale architecture includes a common, modular platform for a uniform way to connect to networks and to manage all blade parameters, including energy utilization.
- **Mission-critical HPE FlexFabric**
OpenVMS V8.4-2L1 supports scalable blade links, which combine multiple blades into a single scalable system. HPE Virtual Connect support is available for OpenVMS V8.4-2L1.

Rely on VSI OpenVMS V8.4-2L1

VSI OpenVMS V8.4-2L1 is designed to perform under the extreme conditions. Its capacity for transaction support, reliability, and security are among the proven benefits that you can rely on anytime, anywhere. That means you can shift the focus of your time and talent to other operations necessary for the success of your business.

The high uptime of OpenVMS, rock-solid reliability, virtually bulletproof security, and almost limitless scalability keep numerous enterprises up and running. Our continued enhancements to HPE OpenVMS, such as those in OpenVMS V8.4-2L1, underscore our commitment to the technology and, therefore, our clients who rely on us. We want to evolve with their businesses.



Sign up for updates

OpenVMS offers industry-leading clustering, industry-leading uptimes (measured in years), and world-class security (significantly lowers TCO) unparalleled in the industry. It was designed from day one as a multi-user system with the aim of making it crash proof by using four access modes (user, supervisor, exec, and kernel), which acts like an internal firewall to isolate trusted system code from untrusted user code that limits the impact of bugs and malicious intent.

HPE Technology Services

Our services deliver confidence, reduce risk, and help customers realize agility and stability. With expertise in different operating systems and every major technology, we are uniquely positioned to provide consistent, global, end-to-end support.

With **HPE Foundation Care Services**, you enjoy the support that is simple, affordable, scalable, and personal. As easy to buy as HPE Care Pack Services, it encompasses a streamlined selection of standardized service levels to help you resolve your problems faster and keep your business running. Foundation Care Services supports all HPE enterprise technologies—including servers, storage, and networking products—as well as industry-leading software from Microsoft®, Red Hat®, SUSE, OpenVMS, Ubuntu, VMware®, and others. hpe.com/services/foundationcare

HPE Proactive 24 Service provides proactive and reactive support, delivered under the direction of an account support manager. The support includes an assigned account team, remote monitoring, an account support plan, 24x7 hardware support with a 4-hour onsite response, 24x7 software support with a 2-hour response, and flexible call submittal. Customer incidents are addressed 24x7, 365 days a year. hpe.com/services/proactivecare

HPE Critical Service (CS) is for environments where downtime cannot be tolerated. It offers an integrated set of proactive and reactive services and utilizes an IT Infrastructure Library (ITIL®)-based framework of proven, integrated processes to help improve availability and performance of your IT infrastructure. CS provides an assigned account team composed of highly trained IT professionals that address issues, mitigate risks, and reduce incidents.

HPE Datacenter Care helps improve IT stability and security, increase the value of IT, and enable agility and innovation. It is a structured framework of repeatable, tested, and globally available services “building blocks.” You can deploy, operate, and evolve your data center wherever you are on your IT journey. With HPE Datacenter Care, you benefit from a personalized relationship with Hewlett Packard Enterprise via a single point of accountability for HPE and other products. For more information, visit hpe.com/services/datacentercare

HPE Storage Services portfolio helps you manage, enhance, reduce costs, and streamline your storage environments. hpe.com/services/storage

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