

A photograph of two men in a meeting. One man is pointing at a document held by the other. They are both looking at the document intently. The background is a blurred office setting.

REAL

IZE

the benefits of running your OpenVMS environment on HP Integrity systems.

HP OpenVMS V8.4 on the HP Integrity rx2800 i2 Server

Solution brief

HP OpenVMS—the future-ready operating system

Day after day for over 30 years, the world's most demanding enterprises continue to rely on HP OpenVMS as their operating environment because it delivers:

- Nearly 100 percent application availability
- Robust security
- Steadfast disaster tolerance
- Scalability to millions of users
- No-compromise reliability
- Ease of management
- Exceptional price/performance

OpenVMS remains the operating environment of choice for enterprises that require business continuity, scalability to millions of users, and high levels of security. With the latest release of OpenVMS, HP continues to demonstrate its commitment to developing technologies that help you accelerate business growth, lower costs, and mitigate risks. In addition to its world-recognized security features, renowned clustering capabilities, virtualization, and volume shadowing functions that further increase performance levels in disaster-tolerant environments—OpenVMS V8.4 delivers higher levels of performance and price/performance than ever.



However, to maintain the rock-solid availability, disaster tolerance, security, and scalability of your OpenVMS V8.4 environment you need an equally high-performing, reliable, and scalable server infrastructure. The combination of OpenVMS and HP Integrity systems provides an ideal infrastructure that can dynamically respond to your business needs. OpenVMS V8.4 is now supported and available on the HP Integrity rx2800 i2 Server. Now you can take advantage of a fail-safe, highly available, and secure backbone for your top-priority operations.

HP OpenVMS V8.4—constantly exceeding expectations

High availability, outstanding reliability, robust security, and room for scalability are the reasons OpenVMS keeps a tremendous number of enterprises up and running. It is packed with countless features and benefits that simply keep them going without interruption. OpenVMS V8.4 comes with:

- **HP Integrity Virtual Machine guest support:** OpenVMS V8.4 is supported as a guest operating system on Integrity VM v4.2. This enables OpenVMS to be part of a Converged Infrastructure—reducing “IT sprawl”—and offering increased server utilization, reduced floor space and power costs, and faster deployment of new environments.
- **Clusters over TCP/IP:** Use of industry-standard TCP/IP networking brings efficiencies to cluster interconnect technology, reducing the need to route dedicated systems communications services (SCS) traffic over costly LAN bridging or Layer 2 services.

¹ Formerly known as HP Insight Dynamics—VSE

- **Volume shadowing with an increase of up to six member disks:** With an increase to six members, a balanced multi-site cluster can be designed with either:
 - Two sites with three disks per site
 - Three sites with two disks per site
- **Improved performance:** Enhance application performance per socket up to double by migrating from dual-core Integrity systems to new Integrity servers. And improve application performance 10 to 15 percent on average by upgrading to OpenVMS V8.4.
- **Storage enhancements:**
 - Reduce the data flowing through your network and the storage required for savesets with a new compression feature in the BACKUP utility to create and restore compressed savesets on disks and magnetic tapes. Additionally, the maximum volume supported in SCSI disk volumes is increased from 1 TB to 2 TB.
 - Get faster storage connectivity with OpenVMS V8.4 support of new 6 Gb SAS HBA on the rx2800 i2.
- **Simplified system management:** Key components of the Matrix Operating Environment¹ support OpenVMS V8.4, enabling OpenVMS nodes to be managed through the Matrix Operating Environment central management server. With OpenVMS V8.4 as a guest on Integrity Virtual Machine, the Matrix Operating Environment enables management of physical and virtual resources through a single, easy-to-use graphical interface.



- **Robust security:** Strengthen the use of the Secure Sockets Layer (SSL) protocol with a refresh based on the new openssl.org base level, 0.98h. In addition, improve authentication using the Lightweight Directory Access Protocol (LDAP) protocol by adding the mapping of the login name to the VMS username in an active directory managed environment.
- **Two new operating environments:** Streamlined operating environment (OE) portfolio is reduced to only two OEs—Base OE and High Availability OE—for improved alignment with your business needs.

HP Integrity systems—adding value to your OpenVMS environment

HP Integrity systems give you flexible capacity to adjust in real time for all workloads, secured availability to support and protect your continuous business operations, and simplified management to increase productivity and resource utilization. These capabilities serve as a perfect complement to the broad range of features that OpenVMS provides: high availability, robust security, scalability, and rich virtualization attributes.

The two-socket HP Integrity rx2800 i2 Server is an economical and easy way to boost performance and take advantage of your existing rack-mount investments. With the latest Intel® Itanium® 9300 series quad-core and dual-core processors, up to 192 GB DDR3 memory, up to 4.8 TB internal storage, and six I/O expansion slots, the rx2800 i2 Server can scale to run a range of mission-critical applications.² Its built-in resiliency, advanced server management features, ENERGY STAR® certification, and 2U compute density make it an ideal choice for OpenVMS environments. The rx2800 i2 Server helps:

^{2,3} Initial release will support only up to 96 GB DDR memory and up to 2.4 TB internal storage.

- **Run a range of mission-critical applications in a 2U footprint with compact scaling:** The rx2800 i2 Server offers the flexibility to scale—thanks to two quad-core Intel Itanium 9300 series processors providing eight cores of compute power, 24 DIMM slots with up to 192 GB of DDR3 memory, up to 4.8 TB storage, six PCI-e I/O slots, and four integrated 1 GbE LANs.³
- **Earn a compelling return on your IT investment with out-of-the-box savings:**
 - **Lower power usage and advance energy efficiency:** The rx2800 i2 Server saves data center costs by reducing floor space since it allows 20 servers per 42U rack. You can reduce power consumption with an ENERGY STAR compliant server.
 - **Reduce total cost of ownership (TCO):** Decrease your solution acquisition costs and operating system (OS) licensing fees so that you can earn greater return on your IT investment compared to previous generation servers.
- **Achieve operational excellence by simplifying data center administration:** The rx2800 i2 Server's management tools enable remote management, ease serviceability, and improve overall IT staff productivity. Adopting the Converged Infrastructure approach, the rx2800 i2 is delivered through a common architectural framework, based on a standard set of components and management tools. They include HP Integrated Lights-Out 3 (perform everyday maintenance and deployment remotely), HP Insight Control server management software (deploy servers quickly, proactively manage their health, and streamline power consumption), and System Insight Display (a slide-out system diagnostics display that makes it easy to find troubleshooting information at the front of the server).





Continue your journey toward Converged Infrastructure

HP Converged Infrastructure delivers the data center of the future to overcome IT sprawl with innovations that deliver new levels of simplicity, integration, and automation to enable you to focus on meeting your businesses' demands. HP can offer a full portfolio of standards-based, integrated solutions and services developed specifically to meet these demands. The HP Integrity rx2800 i2 Server is a part of the HP Converged Infrastructure portfolio, designed to increase efficiency, simplify operations, and deliver automated intelligence. This approach is delivered through a common architectural framework, based on a standard set of components and management tools. It enables data centers to respond quickly in an agile business environment.

Running OpenVMS on the rx2800 i2 Server delivers simplicity, agility, and value, and is ideally suited for mission-critical data centers and branch offices such as yours that require greater capacity, improved productivity, and a higher return on server investments for entry-level workloads.

Take technology to newer levels of performance

Many of the world's most successful businesses in the most competitive industries trust and depend on OpenVMS and HP Integrity systems every day—and so can you. For OpenVMS environments, the rx2800 i2 Server provides a unique combination of scalability and availability enabling you to improve your business outcomes while decreasing costs and reducing risk. An ideal combination of price/performance leadership, low TCO, scalability, high availability, and rock-solid security—OpenVMS V8.4—running on the Integrity rx2800 i2 Server provides your enterprise with a secure, stable business platform today and in the future.

Related reading

To understand the costs and benefits associated with upgrading OpenVMS environments to the new HP Integrity i2 server blades running OpenVMS V8.4, read the "Total cost of upgrading OpenVMS environments to Open VMS V8.4 on HP Integrity Blades" white paper published by TechWise Research.

Visit HP OpenVMS Blogs at <http://h30507.www3.hp.com/t5/Mission-Critical-Computing-Blog/bg-p/199> for some interesting insights on HP OpenVMS environments.

To discover how OpenVMS V8.4 running on the HP Integrity rx2800 i2 Server helps reduce costs, better utilize your assets, and increase operational efficiency, visit www.hp.com/go/openvms

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4AA3-2027ENW, Created January 2011

