HP OpenVMS

Still exceeding expectations.

hp

Today's business success formula is based on innovation: you can't wait to react to change, you have to anticipate it. That takes an infrastructure that lets you shift from meeting IT needs to meeting business needs.

HP's adaptive enterprise philosophy gives you a lean, responsive IT infrastructure, synchronizing information with your core business processes to capitalize on change. Agility, flexibility, return on IT investment, and performance are the key features, and those have always been the drivers for the development of HP OpenVMS. OpenVMS enables you to reduce costs, better utilize your assets and increase operational efficiency — now and for the long-term. It's an operating system that actually supports your ability to offer more value to your customers.

HP OpenVMS… still exceeding expectations.
Your expectations are the starting point for the
information technologies from HP. That's why we've
always made HP OpenVMS equal to the toughest
challenges of constantly-changing business realities.

For more than twenty-five years, HP OpenVMS has met or exceeded the world's most challenging IT demands. Amazing? Not when you consider what it was designed to do, namely to handle enormous amounts of information in the support of the world's most demanding industries. OpenVMS is employed by more than 10 million users in a world that never stands still. As new needs require you to consider new options, you will want to grow not just at the speed of technology, but at the speed of business.

OpenVMS continues to exceed expectations, to improve, to provide an exceptionally robust, secure, scalable and flexible information management capability in an environment that is driven by relentless, unpredictable and accelerating change.

The power to meet the most demanding pressures for business-critical markets such as financial services, manufacturing, healthcare, telecommunications, and government makes it indispensable. The ability to maintain a seamless connection between business demands and IT performance make it uniquely OpenVMS.

Its reputation is legendary… but the best never rest.

HP OpenVMS has always seen change as nothing more than business as usual. It has always been incredibly robust and resilient. It is amazingly secure… and resistant to hackers when properly configured. It fully supports an increasingly open, multi-system strategy. Flexible and inclusive, it is a key element in HP's multi-operating system strategy. OpenVMS is a prime example of HP's commitment to being the best right now, and the best way to move into the future.

Today's OpenVMS lets you continue to rely on the power of your AlphaServer systems, while beginning the process of integrating HP Integrity servers into your enterprise at your own pace. HP has always met its OpenVMS roadmaps, ensuring that every IT investment you make will continue to make business – as well as financial – sense. With OpenVMS, all of your IT assets retain their value, running as part of one cohesive IT environment.

OpenVMS continues to exceed expectations.

OpenVMS is everything you expect and more.

If you run mission-critical systems with HP OpenVMS now, you know it as the fail-safe, highly available and secure backbone of your top-priority operations.

The best way to achieve manageable, sensible growth is to create an adaptive infrastructure; to assemble technologies that support multiple operating environments. To maintain reasonable returns on your IT investment, you have to layer and dovetail multiple hardware platforms, integrate mixed architectures, and include scattered assets into one coherent enterprise. The goal is uninterrupted functionality for every IT investment you make.

HP OpenVMS continues to address these needs while proving itself the leader in availability, security, scalability, reliability and disaster tolerance, allowing you to devote more energy to strengthening your value chain.

The best information technologies are, ultimately, held accountable in a business context. Instead of being forced into sudden, costly changes, you take bottom-line concerns into account. As an OpenVMS user, you know you can make changes when they're right for you, without sacrificing performance, or making compromises between what you have and what you expect. With the industry-standard Integrity servers on the horizon, seamless continuity is critical to your business success: OpenVMS is the common element that allows AlphaServer systems and Integrity servers to coexist in the same operating environment and doing this can be as easy as adding additional nodes to the cluster.

Even with distributed IT assets, the ability to manage information across your enterprise, instantaneously, reliably and seamlessly, continues to set HP OpenVMS apart. Not many businesses have the luxury to create and maintain a single-vendor IT ecosystem. Few businesses go through mergers, acquisitions and the natural evolution of rapid, reactive growth, and wind up with a perfectly monolithic IT infrastructure. Multi-generational assets still have to function cohesively. OpenVMS has always supported that critical priority. It has consistently delivered on the promise of availability, flexibility and scalability… all of them key elements in business responsiveness. It continues to lead the industry as information systems are expected to support accelerating patterns of change and uncertainty, with growth as the ultimate objective.

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Across the board: HP OpenVMS makes it possible to synchronize business and the information technologies that drive it.

HP OpenVMS is a technology designed to perform under the most extreme conditions. Its capacity for transaction support, its bulletproof reliability, and its security are among the proven benefits that let you rely on it any time, anywhere. That means you can shift the focus of your time and talent to other operations connected to the success of your business.

Highly available: data and applications when you need them… all the time.

OpenVMS has been a success from day one because it delivers system-wide availability of data and applications, with access from anywhere across the enterprise. For more than twenty-five years, it has been at the heart of IT infrastructures that provides no-compromise, uninterruptible access to data and applications. IT availability is business continuity. System failure means business interruption, an issue with severe bottom-line implications. Delivering system-wide availability of your data and applications, anytime, all the time, is what OpenVMS is all about.

The cluster: core concept of continuous computing.

The concept of clustering technology was developed by OpenVMS, and OpenVMS continues to set the pace today. No other cluster technology can support as many nodes, or span as much distance. When integrated into the right hardware, software, operations and services continuum, OpenVMS delivers the ideal of continuous computing. OpenVMS clusters enable multiple, disparate computers to function as a cohesive system, providing rapid, automatic recovery from hardware, software and operational errors. Mixed interconnect and multi-site cluster configurations eliminate single points of failure, while spanning up to 800 kilometers (500 miles) and accommodating up to 96 nodes (more than 3,000 processors).

Today, HP supports mixed architecture clusters that include VAX and AlphaServers. Tomorrow, with OpenVMS Version 8.2, HP will support AlphaServer systems and Integrity servers in mixed architecture clusters.

Multiple components in the cluster can be managed as a single computer environment from any point in the cluster, or remotely from anywhere. System software, management utilities and commands are implemented once, taking effect across the entire system. Major cost savings can be realized from this elegant system management strategy, and HP and its partners offer a variety of management tools to ensure complete, efficient oversight and control.

Secure by design: OpenVMS is closed to hackers.

Business pressures force you to open the channels of communication across multiple locations and infrastructures, especially as you attempt to work more closely with suppliers, partners and customers. You access multiple mixed hardware and software environments. You connect to web-based or distributed applications. But you can't risk exposure to hackers or unauthorized users. When you connect OpenVMS to other elements in a global IT environment, you connect securely. You can integrate Windows, Linux, and UNIX™, but as soon as you make OpenVMS part of the mix, it connects you to any element in the enterprise with airtight security. Security isn't an added feature of OpenVMS, it's built in.

OpenVMS meets the U.S. Department of Defense "C2" certification requirements. In fact, it was one of the first commercial operating system to achieve this designation. C2 ratings were also awarded on the AlphaServer platform; not just to one node, but the entire OpenVMS cluster. This security level is not compromised even though OpenVMS widens the scope of interoperability in increasingly heterogeneous environments.

OpenVMS is often chosen because of its security features alone. The Health Insurance Portability and Accountability Act of 1996 (HIPAA) has set strict national standards for security and confidentiality in personal information. OpenVMS already meets all of the technical security parameters proposed by HIPAA.

The OpenVMS operating system is compliant with Defense Information Infrastructure-Common Operating Environment (DII-COE) standards established by the United States Government, where OpenVMS systems are already well entrenched.

Expand and extend: OpenVMS grows when you do.

HP OpenVMS is scalable in two dimensions: it scales "out" to accommodate additional processing and storage in a clustered environment without interruption to the rest of the cluster. It also scales "up" with the addition of larger processing capacity. High-end, symmetric multiprocessing systems can be quickly integrated into an OpenVMS cluster to meet sudden increases in demand.

Disaster Tolerance and Business Continuity: here today, here tomorrow.

OpenVMS delivers continuous computing. Information support and actual business transactions are moving ever closer together. Imagine a securities transaction without immediate IT support, for example. The closer they are, the more the performance of the information system defines business performance itself. With proper configuration and support services, OpenVMS on AlphaServer systems, and soon HP Integrity servers based on the Intel® Itanium® 2 processor are engineered to deliver 99.999% availability.

Disaster tolerance is a key area in which your information systems can demonstrate genuine business value. IT outages are, more than ever, business shutdowns. When employees are idle, the revenue stream dries up, customers go elsewhere, and creditors lose confidence in your viability. In some sectors it gets even worse: public safety emergency call centers whose operations are interrupted, might measure down time in lives lost. There are no "acceptable" levels of downtime in emergency rooms, nuclear facilities, air traffic control centers, defense installations, and the financial operations that affect global currencies and the balance of trade.

Disaster-tolerant OpenVMS cluster configurations can survive catastrophic events that affect entire data centers. With OpenVMS at the heart of your IT infrastructure, you can count on the no-excuses availability of your data and applications… a business continuity strategy in its simplest terms.

Flexibility: OpenVMS plays well with others.

The OpenVMS UNIX Portability (UP) Initiative simplifies porting of applications from UNIX systems to OpenVMS systems.

Since many ISVs develop applications for both OpenVMS and UNIX, this initiative helps them deploy software faster and at reduced costs. Making the port easier also ensures a wider set of solutions for the OpenVMS platform.

UNIX tools and utilities are also supported by OpenVMS, facilitating the porting of many other types of applications, including Linux and Java applications. The UNIX Portability Initiative provides a set of UNIX (POSIX) interfaces and tools native and fully integrated into OpenVMS. This eliminates performance issues associated with a layered UNIX emulator solution and enhances interoperability. For OpenVMS users, this translates into practical "adaptive" environment, including the expansion of the available applications portfolio, and Open Source applications.

Integration: a truly adaptive infrastructure is one of compatibility.

Growth, acquisitions, mergers, and the resulting mixed environments require a high degree of accommodation for multiple platforms and software, including an array of applications. OpenVMS provides the infrastructure for integrating heterogeneous systems so that you do not need to worry about mixed vendor environments. OpenVMS has the tools and technologies to support these environments.

Together with its partners, HP has taken initiatives to develop a complete suite of standard e-business and integration technologies and tools for the OpenVMS environment. This suite provides the opportunity for the HP OpenVMS operating system to be an integral part of the solution for a multiplicity of platforms and applications, often creating a more consolidated, cohesive enterprise with greater security, functionality and ROI.

Industry-standard middleware products such as the Software Development Kit (SDK) for the Java™ Platform (J2SE), SWS (Secure Web Server – based on Apache), RTR (Reliable Transaction Router), ACMS, COM (Common Object Model), DCE (Distributing Computing Environment) and CORBA (Common Object Request Broker Architecture), are compatible with OpenVMS, making it possible to integrate them into the growing, expanding enterprise. By using Microsoft .NET or BEA WebLogic Server, OpenVMS lets you take advantage of even the most ambitious Internet or e-business opportunities.

Open for e-business.
The Internet represents a dramatic new business paradigm; how well the enterprise handles the realities it brings to the table is a measure of its true value. Not surprisingly, OpenVMS users find themselves able to meet many of these radically new ways of doing business very quickly. These include the need to integrate current business operations across the global enterprise, the need to support the service level requirements of your supply chain and, establish a truly collaborative environment upstream with suppliers and downstream with customers. There is also the need to serve data and applications to a wider user community, both internal and external. Most importantly, e-business has established a need to complete transactions across the globe through a front office that never closes, and a back room that never fails. E-business demands a 24/7 capability, with even the smallest failure representing major opportunities for your competition. OpenVMS proved itself in adapting immediately to the e-business revolution, an indication of its uncanny responsiveness to sudden, new developments.

System management: using OpenView to run the IT business.
OpenView provides unparalleled insight into the structure, availability, and performance of the infrastructure, data, and applications. Systems managers can easily manage OpenVMS servers in a heterogeneous enterprise environment from an OpenView management console.

This structure supports real-time monitoring of the entire OpenVMS environment, and allows the correlation of events from OpenVMS with other systems. A full range of functionality is enabled, including control, messaging, log file, action, monitor, distribution, and message interceptor.

In keeping with the adaptive enterprise model, the management of an OpenVMS enterprise is imperative from more than just an IT point of view, extending to oversight of all IT activity from a business perspective. Accurate and detailed process descriptions that are standardized and automated are central to this business-focused system management approach. Being able to monitor the system in a more global way can reduce errors, failure rates and their associated costs. Business-centered system management further allocates valuable IT resources to help improve bottom-line objectives.

Consolidation: doing more with less.
Businesses that are prepared to close the distance between critical processes and the information technologies that support them are also making IT decisions with an eye to consolidation.

Streamlined, focused information systems cost less to own and to run, while being much quicker to adapt to the rapid changes that characterize today's business realities. Consolidation is good business: from immediate operational cost savings, you can look ahead to long-term Total Cost of Ownership (TCO) savings, better business flexibility, and numerous competitive advantages designed to improve service levels and boost the bottom line.

OpenVMS on AlphaServer systems and soon on HP Integrity servers are a key component in an IT consolidation strategy. With hardware and software partitioning, fewer assets are required to perform multiple operations. Being able to run multiple operating systems on the same server reduces the need for isolated, dedicated systems. This in turn can reduce system management demands, help increase security, and lower overall costs, while increasing performance in many cases.

New OpenVMS enhancements and AlphaServer systems take technology to new levels of performance.

OpenVMS and AlphaServer system enhancements continue to take technology to new levels of performance, providing maximum value for AlphaServer system customers who have made a decision to stay with the AlphaServer technology until the end of its development cycle.

Delivering on a promise, HP OpenVMS Alpha Version 7.3-2

As a key part of HP's multi-operating system strategy, the commitment to OpenVMS continues to evolve with this latest version release. With an impressive array of enhancements, OpenVMS Alpha Version 7.3-2 expands the key properties of security, availability, performance, and interoperability with UNIX. This iteration of OpenVMS is highly scalable, running on every AlphaServer from the entry-level DS series to the largest AlphaServer GS1280 system. The ability to deploy various generations of AlphaServer technology in one functional cluster (which will shortly accommodate HP Integrity servers based on the Intel® Itanium® 2 processor as well,) boosts RoIT and protects investments. The financial implications are considerable, as businesses use OpenVMS to unify scattered information systems instead of making costly and disruptive across-the-board equipment replacements. These enhancements are proof positive of HP's dedication to developing standards-based technologies that allow your company to build an adaptive enterprise to respond quickly and efficiently to changing demands.

The following are available across the latest AlphaServer systems with OpenVMS.

• Enhanced security features, with available vulnerability assessment services, configuration and management services, and the expansion of the security model to encompass today's heterogeneous computing environments.

• Increased interoperability capabilities with UNIX including more UNIX portability features, to support the running of more Open Source and third party applications.

• Increased system and I/O performance enhancements.

• Better system management tools, including Agent Support for OpenView integration and BMC software enhancements.

• For e-business and integration capabilities, more tools are available from HP and select partners for integration into OpenVMS Alpha Version 7.3-2.

• Better storage solutions, including lower-cost Fibre Channel solutions, and ENSA support for capacity, speed and reliability.

• Better availability features across the cluster.

• Availability improvements for TCP/IP services.

Today's AlphaServer systems: the best they've ever been.

The new generation AlphaServer systems are based on the latest EV7 processor – the best AlphaServer technology yet. The last version of Alpha technology, the EV7z will be announced in mid-year 2004. This last iteration of the famed Alpha architecture, will provide performance enhancements for your business-critical AlphaServer systems. It establishes new system performance levels with the highest memory bandwidth available in any server processor, and its short access latency simply leaves the rest of the pack behind. The AlphaServer systems continue to combine performance, scalability and availability features that re-define mission-critical enterprise and high-performance computing.

AlphaServer systems take maximum advantage of the availability and security features of the OpenVMS operating system. Continued support and performance upgrades for the AlphaServer technology widen an important window of opportunity: they give customers all the flexibility they need when planning future IT commitments. Continuing Alpha server innovations prove our commitment to promised roadmaps: we will continue to ship AlphaServer systems through 2006, with support available until at least through 2011.

The next wave: OpenVMS and the HP Integrity servers.

When the standard-setting AlphaServer systems technology was first released, we were committed to develop it until a better alternative came over the horizon. The Itanium®2 -based HP Integrity servers are the next evolutionary step.

Here, in the transition between the AlphaServer and Integrity server technologies, is where the adaptability of OpenVMS proves itself as being uniquely attuned to real-world needs. Since a complete "scrap everything and start over" upgrade is neither practical nor cost-effective, all of the technologies involved — AlphaServer, HP Integrity, and OpenVMS will work together, and accommodate a wide range of transition timetables.

Schedule a test drive.
2004 marks the beginning of an opportunity to integrate HP Integrity servers running OpenVMS into the enterprise on a phase-in basis. Trial versions of OpenVMS for Integrity servers are available to Developer and Solution Partner Program (DSPP) members. As well as all who want to begin working with it and porting their environments. ISV's and our Partners are committed to port applications to this new server line. Most find all that is necessary is to recompile, relink, test and go.

The playing field gets bigger: HP OpenVMS Version 8.2 will add the HP Integrity line of Itanium2®- based servers to the OpenVMS environment.
We talk about roadmaps: here is the actual road, smoothly paved and heading straight to the Itanium®-based enterprise. An overview of this latest version's key features shows why anybody who is serious about getting up to speed will choose the Alpha server/Integrity path for OpenVMS into more productive IT territory.

In the second half of 2004 HP will release OpenVMS Version 8.2, the first production-quality release for HP Integrity servers. It will headline with unprecedented integration capabilities. AlphaServers and Integrity servers will work as one in Version 8.2. In addition Version 8.2 will be released on VAX at the same time, (although current plans do not call for support of VAX and Integrity server mixed cluster configurations.) The OpenVMS integration capabilities make any transition timing to the HP Integrity platform less intimidating, and make system consolidation easier. Strong support from ISVs and collaboration with Intel for Partner recruitment programs are in place. The enhancements included in OpenVMS Version 8.2 come with attractive pricing for Integrity servers, and simplified licensing management.

A common source code stream.
By employing a common source code stream, OpenVMS Version 8.2 will run on both AlphaServer systems and Integrity servers. This allows you to continue to invest in AlphaServer technology now for your production work while you begin to adopt Integrity servers. This focus on investment protection further supports a no-pressure, no-surprises evolution. You will be running Integrity servers eventually, but you don't sacrifice an iota of investment as you evolve and upgrade your IT environment to meet your changing and growing business needs.

HP Integrity servers: ready when you are.

Integrating HP Integrity servers, based on Intel® Itanium®2 processors, into your OpenVMS environment can be as straightforward as adding a new node to your OpenVMS cluster.

"We expected it (the Itanium® port) to be a compile and go, and that's exactly what we got. Words of advice to other partners. Don't be afraid to port, its not hard, and it's not a big project."
— John Vottero
Partner and Founder
MVP Systems, Inc.

2004 brings the production-quality release of OpenVMS on the Itanium®2- based HP Integrity platform. As with generations of VAX and AlphaServer systems, the combination of AlphaServer systems and Integrity servers is poised to re-define enterprise-level computing environments. HP Integrity servers capitalize on the economies of an industry-standard architecture, but add value with HP innovation and functionality.

With the continued commitment to AlphaServer systems you're free to make the transition when it's right for you. Your investments are considerable in your current enterprise, in terms of dollars and in terms of operations that need to be included in your move to Itanium® servers.

The extraordinary flexibility of OpenVMS ensures that your information technology always meets the needs of your business. It will allow you to continue on AlphaServer systems as well as run both AlphaServer systems and Integrity servers in the same cluster.

OpenVMS Galaxy partitioning functionality is also planned for OpenVMS in the Integrity server environment adding still more capacity and flexibility by allowing partitioning, as well as precise control of the degree of "cooperation" between instances of OpenVMS in a single computer. You can dynamically re-allocate CPUs within these environments to address constantly changing business requirements.

When the port to Integrity servers is complete and the configurations are qualified, OpenVMS will support both AlphaServer systems and Integrity servers in a mixed-architecture cluster.

With OpenVMS, AlphaServer systems and Integrity servers as the core of an IT strategy, you have the option of running the industry-standard platform along with the proven AlphaServer technology. You run multiple operating systems (or multiple instances of the same system) on multiple hardware platforms. Not only is this type of heterogeneous architecture more practical and cost efficient, its inherent diversity makes it more fault averse and disaster tolerant.

"Schlumberger Messaging Solutions Group (MSG) has more than ten years' experience of supplying applications for the Mobile Telecoms industry, with OpenVMS and AlphaServers at the heart of each installation. This partnership has provided 'bet your business' availability and scalability for our best in class SMSC, USC, USSD and EIR products. In recognition of the importance to our customers of the revenue streams that depend on the integrity of OpenVMS, we are selecting the OpenVMS and Itanium®2 combination as the basis for the next generation of our Messaging platforms. This combination represents a tremendous opportunity for increasing the price performance of our solutions while minimizing risk to our Telco customers, thanks to the continuation of a long-standing and successful partnership of MSG Applications and HP OpenVMS."
— Graham Beare
MSG Senior Platform Architect
Schlumberger

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Storage: data where and when you need it.
Integrated with the OpenVMS environment, HP Storage-Works is architecturally compatible with both AlphaServer and HP Integrity platforms.

The OpenVMS operating system, OpenVMS cluster software, AlphaServer systems and StorageWorks all work together by design, letting you build an enterprise that functions as a cohesive information management engine to drive the most critical demands for data and applications.

HP is the leading provider of enterprise-level storage solutions. They are reliable, efficient, fast, and expandable. They are meant for the businesses that cannot make compromises on data integrity and accessibility. Being able to rely on superior storage systems can help IT managers meet requests for shorter time-to-market, consistently high quality, lower production costs, improved productivity, lessened complexity, simplified management, and web-enabling of every aspect of the business.

The need for efficiency could be the trigger to an IT consolidation and the integration of more productive storage technologies. This, in turn, is a natural evolutionary step that suggests introducing HP Integrity servers into the system. HP storage consolidation is a comprehensive, end-to-end approach that can maximize profitability, improve productivity, and increase the flexibility of your data storage environment. Further, HP network storage fits into the adaptive enterprise concept, supporting multiple operating system environments.

HP Services: support at every step.
To make an information systems network highly available, secure and disaster-tolerant takes more than just good hardware and software, tools, and the physical environment. Together with proper operating practices, they have to be supported by a disciplined methodology for bringing everything together into a streamlined, business- focused enterprise.

Our support for the creation of an adaptive enterprise is grounded in our commitment to being a responsive and accountable partner in the process. By taking advantage of HP Services, you can take a wide-angle, long-range view of IT availability and return on your IT investment. We can collaborate with you, working on your agenda and timetable. HP customers have always been able to count on HP's commitment to stated roadmaps, and our understanding of the link between business and technology. From the planning stage to on-going performance monitoring and productivity enhancements, HP Services enables you to respond more quickly to change, and positions you to capitalize on unexpected opportunities.

Through HP Services, OpenVMS users can take advantage of comprehensive programs that ensure investment protection and a well-thought-out transition program. HP services are rated number one in mission-critical infrastructure services, services for open IT environments, and enterprise-ready Microsoft integration. Operating within a network of 105 Operations Centers in 160 countries, our Services organization connects customers with 65,000 highly qualified professionals.

Partners.
Our ISVs are committed to the ongoing support of OpenVMS on AlphaServer systems, until 2011, and availability of applications for OpenVMS on HP Integrity servers well into the future. HP is evolving its award-winning HP OpenView Solution Alliance Partner Program, which currently supports more than 140 software partners, into a new Adaptive Management Partner Program that will address the needs of the existing members as well as a new breed of partners who want to integrate with HP's adaptive management technologies. New features and benefits will include adaptive management integration toolkits, integration guides and marketing opportunities to support partners looking to deliver adaptive management solutions.

ISV partners on fast forward.
In advance of the planned ship date of the first release of OpenVMS on the Itanium hardware platform, a FastTrack program was initiated for key ISVs. The objective was to have them ready to port their software on day one of the release of version 8.0. The goal was met, and results included early validation of the OpenVMS base operating systems, compilers, and layered products, ensuring a tight quality feedback loop to engineering and increased quality of the early releases. The porting experiences were invaluable in preparing others for the port, and provided valuable input into the OpenVMS Porting Guide. These early references and success stories were used to build momentum, encouraging other partners to port early, ensuring availability of key horizontal applications to other partners for use in their application development processes.

Fast Track participants included:
- Brooks Automation
- Cerner Corporation
- TECSys Development, LP (TDI)
- MVP Systems
- Computer Associates
- BEA
- TIBCO
- Attunity
- Acucorp

Exceeding expectations.
Anytime. Anywhere.

More and more, the line between business and technology is being blurred.

Once IT moves from being a support function to an integrated, core competency, the demands on its availability, security, and flexibility grow exponentially. For over a quarter of a century, OpenVMS has anticipated the need for unlimited adaptability to business realities. That's why it holds leadership positions in healthcare, government, telecommunications, financial services, and manufacturing. These markets are characterized by extreme numbers of informational transactions, and a zero tolerance for system failures. These indicator industries test the limits of OpenVMS daily, and offer real-world evidence of its competitive advantages.

In healthcare, IT availability is more than a convenient feature, it's often a life-or-death issue. For a securities exchange, even minimal downtime carries a multi-million dollar penalty. In government, IT demands are constant and far-reaching. In manufacturing, even the shortest delay in the deployment of an application can bring production lines to a standstill. No business can tolerate part-time performance and potential losses. The world's most transaction-intensive operations don't. That's why they choose OpenVMS.

In healthcare, the recognized leadership of OpenVMS systems is coupled with innovations by strategic partners to set performance standards in hospitals and health care facilities world wide. In a setting where the term "mission-critical" takes on an entirely new meaning, OpenVMS systems are relied on day and night to connect point-of-care environments with backroom databases to deliver real-time decision support.

HP OpenVMS is re-defining excellence in healthcare, working with partners like Cerner Corporation to develop technologies for clinical and management information systems, and IDX for billing, scheduling and clinical systems. Performance in this segment speaks to the ability of OpenVMS systems to support critical decision making, while keeping the IT infrastructure scalable and affordable.

"I've been working with OpenVMS for about 15 years, and there's no other operating system that can touch it in my opinion because of the stability that's been evidenced over the years and the security that's built-in. And the clustering is one of the best technologies that's ever existed. Nobody else can hold a candle to what OpenVMS clusters provide as far as scalability and reliability."
— David Harrold
Senior Systems Engineer
Aurora Health Care

Telecommunications requires rapid-response IT support to make billions of connections for millions of customers. In this highly-competitive marketplace, OpenVMS helps customers keep up with quick changes in technology and rapid growth in usage. Most importantly, it allows new user features to be developed and rolled out with shorter lead times. The quest for competitive advantages and revenue generators requires the near-instantaneous scalability, while maintaining service quality and reliability that OpenVMS delivers.

This is fast-moving technology, involving millions of customers, making millions of calls, and getting millions of bills. OpenVMS holds a leadership position in this market, including the delivery of more short messages than any other operating system. OpenVMS is also the leader in wireless prepaid services and GSM HLR subscriber database services. Most of the world's cellular phone billing systems run on OpenVMS.

Government and education, although not generally thought of as businesses, are comprised of institutions that coordinate large-scale projects, managing major amounts of money, and providing indispensable services to massive segments of the population. As these populations grow and change in makeup, the services they require create the need to manage more and more information. This means constantly moving the finish line further ahead. With virtually unlimited headroom, OpenVMS on AlphaServer systems meet the need.

Government agencies in the security and defense sectors use the unstoppable and secure compute power of OpenVMS to control tactical scenarios where there is zero room for error. Only OpenVMS supports the creation and maintenance of fully fail-safe compute capabilities.

In education, OpenVMS is highly recognized for its strength in supporting large-scale research; data collection, storage, and retrieval; record keeping; communications; and billing.

Financial services and electronic gaming operations live and die by the ability handle large volumes of transactions and maintain data integrity… which is why HP OpenVMS is seen so often in the operations centers of these industries. The world's leading stock and derivatives exchanges run OpenVMS, as do most of the lotteries and gaming concerns. In addition to security and fault tolerance, the scalability of OpenVMS meets a need particular to this sector, since both securities trades and lottery ticket sales can "spike" in response to outside influences.

Securities exchanges, brokerage forms, banks and lotteries measure transactions – and transaction amounts – in billions, leaving no room for compromise in the information systems that support them. With OpenVMS, they get the best in the business.

"The treasury business is very dynamic and has to respond quickly to market activities, so performance is vital… The Bank Austria Creditanstalt treasury is trading 24 hours a day to a worldwide market. Therefore, it's critical that the system is always up and running. That's the reason why we choose OpenVMS clusters — because they provide outstanding performance, availability and security."
— Karin Spevak
Manager, IT
WAVE Solutions
Bank Austria Creditanstalt

Manufacturing is looking for IT resources that will support the trend to complete automation, with process control systems expected to keep the production line moving at a steady speed. OpenVMS is at work in these environments, as it is in power plants and distribution facilities, managing the production and delivery of energy to millions of consumers. It is also a mainstay in the Process Manufacturing industries, such as steel, chemicals and semiconductors. In fact, OpenVMS runs the vast majority of the world's microprocessor fabrication operations.

In manufacturing, a company's ability to handle materials and manage processes define its competitive position. OpenVMS can provide an edge, as well as a safeguard from IT-induced disasters: an "always-on" process control technology, for example, can avoid turning a cement plant into an immobile, rock-solid fossil.

No business can afford part-time performance.
Keeping your systems available all the time is, in healthcare a "life and death" issue. Millions of dollars can be lost for a moment of service interruption in the financial industries. In government, the demands are constant and far-reaching. Production facilities that rely on OpenVMS to keep their lines moving and their profits flowing. You can count on OpenVMS to provide your business with the unstoppable performance you have come to expect from HP.

Adopt the adaptive attitude: give yourself an IT capability fit for the realities of business.

In an adaptive enterprise, the cost of change can be proactively managed by standardizing on a foundation of modular building blocks. The adaptive IT environment can help you business react to today's ever changing needs… and better plan for tomorrow's uncertainties. As the business value of your information systems are solidified, you can, in turn, concentrate on business issues, and provide more value to your customers.

An IT infrastructure that delivers more tangible business benefits – while requiring less in the way of maintenance – should be a constant no matter how often the technologies change. HP OpenVMS supports that concept of rapid adaptability. As the world turns toward a universal, industry-standard architecture, the extended functionality of OpenVMS lets you keep the decision making power regarding a move to the next generation. You decide how much to change, when, and at what cost. You have the tools to reduce risk and increase flexibility. There's no discarding current IT investments. No burning bridges. No end of the road.

Because it has always had a virtually infinite capacity for getting heterogeneous systems and mixed assets to work together, OpenVMS remains a leader in supporting real-world computing… that is, providing information support in a world changed daily by change itself.

Alpha RetainTrust program:
The ART of seamless continuity.
Our commitment to helping customers protect their IT investment takes a very tangible form: The Alpha RetainTrust program. It is simply all of the best investment protection programs in the industry. It is a set of customer-focused, clearly spelled-out business practices designed to protect the investments you make today. At its heart, a comprehensive AlphaServer Customer Assurance Program lets you take advantage of the following:

• Money Back Customer Satisfaction Guarantee

• AlphaServer Product Continuity Guarantee

• Technology Refresh Incentives and Guaranteed Trade-In Values

• Transition Lease Program

• HP Software License Trade-ins

• Support for ISV License Transfers

• Transition Tools, Resources and Services

Your expectations will continue to be exceeded.

Extreme availability, rock-solid reliability, virtually impenetrable security, and an almost limitless 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. And these profound advantages regularly attract new customers to the large OpenVMS user community.

Our continued enhancements to OpenVMS underscores our commitment to HP OpenVMS, and to the customers who have come to rely on it. HP OpenVMS provides the enterprise with a secure, stable business platform today… and lets you decide when the time is right to take the next step.

It started more than 25 years ago on VAX systems, moved to AlphaServer systems, and is now coming to HP's new industry standard, Integrity servers based on the Intel® Itanium®2 processor.

To take your next steps in exceeding your expectations contact your HP or HP partner representative. Or visit us at www.hp.com/go/openvms.

"HP plays a very important role in Frankfurt Airport aviation ground services. OpenVMS AlphaServer clusters provide the high availability, stability and disaster tolerance we need to achieve the highest levels of availability. And the support by HP is fantastic."
— Matthias Driesdow
Aviation Ground Services & Logistics
Baggage Services Procedures and Quality Management
Fraport AG