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Introducing!
Mark Gorham,
Vice President of the
OpenVMS Group

It's with great pleasure that I rejoin the *OpenVMS*™ Group to take over the helm of the very successful *OpenVMS* business from Rich Marcello. I bring eleven years of *OpenVMS* experience to the organization, having led the Product Management and Partner Management groups during my previous tenure. Most recently, I was Chief of Staff and Worldwide Operations Manager in Compaq Customer Services. On 11 May I celebrated 20 years with Compaq/Digital. My scholastic training includes a Bachelor of Science degree in Theoretical Mathematics from Bates College and a Master of Business Administration from the Harvard Business School.

During my earlier years with the *OpenVMS* organization, I had the opportunity to meet with thousands of customers and developed personal relationships with many. I'm very impressed by the positive changes that have taken place within the *OpenVMS* business over the last few years and believe it's due to the focused execution of a solid customer and partner engagement strategy that's been in place for nearly four years. The *OpenVMS* Group has done a great job of strengthening customer and partner relationships, while continuing to deliver leadership, mission-critical hardware and software on which you, our customers, bet your business. In addition to winning more business with existing customers, we continue to attract new customers to *OpenVMS*!
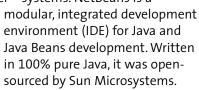
In corporate surveys, *OpenVMS* customers are consistently rated the most satisfied with products and services, which is a credit to the product excellence, the services excellence, our employees including the *OpenVMS* Ambassadors, and the focused customer engagement efforts such as Diamond Forums.

I am excited about the opportunity to drive the continued success of *OpenVMS* and I encourage you to send me your suggestions for continuing to drive this business. We have a great *OpenVMS* organization to keep the *OpenVMS* Renaissance going.

Feel free to contact me at Mark.gorham@compaq.com

Announcing NetBeans for *OpenVMS*

Compaq is pleased to provide NetBeans version 3.2 for *OpenVMS* on *AlphaServer*™ systems. NetBeans is a modular, integrated development environment (IDE) for Java and Java Beans development. Written in 100% pure Java, it was open-sourced by Sun Microsystems.

NetBean's popularity is a result of its versatility, extensible architecture, and relative ease of use. Although NetBeans is exclusively a Java development environment at present, it is possible to create modules for developing with other languages.

NetBeans for *OpenVMS* is distributed according to the terms of the Sun Microsystems, Inc. Binary Code License Agreement (viewable upon installation or from NetBeans.org). NetBeans source code is distributed according to the terms of use set forth in the Sun Public License (SPL).

For more information about NetBeans, visit
www.openvms.compaq.com/openvms/
products/ips/netbeans/

IBM MQSeries v5.1 now available on *OpenVMS*

IBM has announced the availability of MQSeries v5.1 on *OpenVMS* v7.2-1 or v7.3 for *AlphaServer* systems. MQSeries messaging products are widely used in banking, finance and other communities as a way to integrate business applications. Until now, IBM only supported MQSeries v2.2.1.1 on *OpenVMS*.

This marks a *significant re-investment in OpenVMS support by IBM*.

The evolution of MQSeries from v2.2.1.1 to v5.1 is considerable. It provides extensive enhancements to MQSeries operation on *OpenVMS*, including many design changes that provide greatly improved MQSeries functionality and maximize the capabilities of the *OpenVMS* operating system. It brings MQSeries functionality on *OpenVMS* in line with that on other leading platforms used in the finance community.

For complete details of the announcement, visit
www-4.ibm.com/software/ts/mqseries/messaging/
openvmsv51/factsheet.html

OpenVMS Tech Tip

OpenVMS v7.3 new feature to spinlock: NoSpin Locking, which allows a lock to be acquired if available. If the lock is not available, an error message is returned. This feature allows a potential spinlock to be acquired out of rank order.

Discover Attunity Connect and unlock your RMS data

Have you ever wanted to access the data on your Compaq *OpenVMS* system transparently — using tools on your desktop or other, perhaps non-*OpenVMS*, system — without having to learn the intricacies of the record management system (RMS) file or write special programs? You can with Attunity Connect, whether you're using Active Server Pages (ASP), Visual Basic for Applications from Excel, XML from any platform, or ANSI '92 Standard SQL. Attunity Connect provides a robust, scalable and reliable solution that lets you unlock your RMS data, control the number of users accessing the data, control the security of that data and much more.

Designed to run on all Compaq platforms, Attunity Connect ships with *OpenVMS* v7.3 as part of the On Platform Package, and is also packaged by Oracle with Oracle8i as a "Transparent Gateway." Attunity Connect can access all major databases, including network databases such as Oracle DBMS, hierarchical databases such as IBM IMS, and a large number of non-relational data sources such as RMS files, sequential (DISAM) files on UNIX, and even Excel spreadsheets.

Attunity Connect can also be used to activate program modules by exposing them as stored procedures to the client program. So if you have a special data source you would like to expose as a stored procedure — such as a home-grown file system, shop floor device, or network interface — you can use the Attunity Connect Software Development Kit to write your own driver and have client programs query your data source using SQL or XML.

For more information, please visit www.attunity.com

> *"Compaq* OpenVMS *continues to meet customers' insatiable requirements for high availability and scalability demanded by today's e-business model. In particular, its proven, standard-setting clustering and innovative* Galaxy *partitioning for* AlphaServer *systems provide the solid underpinning for this new model"*
>
> — Harvey Hindin, Vice President High Availability,
>   D.H. Brown Associates, Inc.
>
> Read the whole story at
> www.openvms.compaq.com/openvms/brochures

OpenVMS in the news

Heroix Corporation recently issued a press release entitled, "Heroix Announces New *OpenVMS* Release with Its Leading Automation Software, RoboMon", which includes a quote from Rich Marcello. In this release, Heroix states that they are seeing growth in the *OpenVMS* market, and in 2000 their *OpenVMS* business grew by 33%.

To find out more about the latest version of RoboMon and learn about the business benefits London Clearing House has experienced from RoboMon for *OpenVMS*, please visit www.heroix.com/news/news_press88.htm

New Compaq certification programs aimed at enterprise customers

As part of worldwide efforts to enhance customer satisfaction and respond to a shortage of IT skills in the marketplace, Compaq has developed and announced several new system engineer certifications for our enterprise-computing customers.

New system engineer certifications for Compaq's enterprise platforms include *AlphaServer/OpenVMS* v7, *AlphaServer/Tru64* UNIX v5, *NonStop™ Himalaya™* systems, additional designations for Compaq *ProLiant™* platforms, and a Master Accredited Systems Engineer Storage Area Network (ASE-SAN) Architect.

New operating system certifications include *OpenVMS* v7 Systems Engineer, *NonStop* Kernel Systems Engineer and *Tru64* UNIX v5 Systems Engineer. New platform-specific warranty service certifications complete the new program, which is now known as the Compaq Accredited Professional program.

Compaq has certified more than 50,000 professionals to plan, deploy, troubleshoot and maintain its systems and solutions. They include Compaq customers, authorized resellers, service providers and integration specialists, plus information-management personnel responsible for Compaq solutions and systems.

For more details on the Compaq Accredited Professional program, visit www.compaq.com/certification

Terry Shannon on *OpenVMS*

Another good reason to rely on *OpenVMS*

"Give it Away" may be the theme song of the Red Hot Chili Peppers rock band and the Open Source community, but *OpenVMS* customers and industry observers will be the first to tell you that there's no such thing as a free lunch in the Compaq enterprise OS arena. However, the *OpenVMS* eBusiness initiative Compaq announced concurrently with *OpenVMS* version 7.3 can save customers up to $33K.

During the v7.3 launch, Compaq folded a number of Open Source apps and formerly extra-cost components into the standard *OpenVMS* license. Included among these was Compaq Reliable Transaction Router v4.0. In use since 1990, Compaq Reliable Transaction Router (RTR) is software fault tolerant transactional messaging middleware used to implement large, distributed applications using client/server technology. RTR is designed to support applications that require the ability to execute real-time transactions reliably and without any interruption of service across widely distributed multivendor systems.

Typical RTR applications include stock exchanges, Internet banking and brokerage systems, reservation systems, and telecommunications systems. The Australian Stock Exchange, the International Securities Exchange, the Swiss Stock Exchange, and others all rely on RTR's three-tier client/server architecture to absolutely, positively guarantee the end-to-end completion of their transactions.

RTR v4.0 delivers continuous applications availability in *OpenVMS*, *Tru64*™ UNIX, Windows 95/98/NT/2000, and Solaris environments. *OpenVMS* and *Tru64* UNIX RTR licenses range from $10,134 for a workgroup license to $33,134 for an enterprise license. Accordingly, Compaq's decision to bundle RTR v4.0 middleware into *OpenVMS* results in a net savings of as much $33K. Granted, there's no such thing as a free lunch with *OpenVMS*, but you can't beat the price of the RTR appetizer!

RTR v4.0 also introduces an object oriented interface that simplifies the development of fault-tolerant applications, a Web-based system management environment compatible with Internet Explorer, and shadowing enhancements that reduce transaction recovery time and improve data availability. You can get all the technical details about RTR v4.0, as well as customer case studies, white papers and documentation, by visiting http://www.compaq.com/rtr. Like RTR v4.0 for *OpenVMS*, the Web visit is free.

Terry C. Shannon, consultant and publisher of Shannon Knows Compaq (SKC), *has more than 25 years experience in the IT industry as an* OpenVMS *system manager, programmer, analyst, journalist, and consultant. Mr. Shannon's opinions are his own and do not necessarily reflect the opinion of Compaq Computer Corporation.*
— Editor

Did You Know?

OpenVMS-based *AlphaServer* systems run the first new exchange in the U.S. in 26 years – the International Securities Exchange.

Now you can develop *OpenVMS* applications in a PC environment

Announcing Compaq Enterprise Toolkit Version 2.0, *OpenVMS* Edition

The Compaq Enterprise Toolkit (ETK) provides an interactive development environment on Windows 95/98/NT/2000, and allows software developers to develop Compaq *OpenVMS* applications using an interactive PC environment. (ETK is layered on the Microsoft Developer Studio that's part of Microsoft Visual C++ V6.0 or Visual Fortran V6.1.)

Working on this PC-based Interactive Development Environment (IDE) that's networked with your *OpenVMS* environment, you can use C, C++, Fortran, COBOL, BASIC, Pascal and Ada to write, compile, debug and tune applications — with *OpenVMS* as the target platform.

The ETK extends the reach and depth of the Developer Studio to provide additional software development functions such as:

> Remote source file editing

> Remote compilation and linking

> Direct support for complex build procedures

> Remote debugging

> Access to *OpenVMS* source control libraries

> Source browsing (source views by routine/procedure)

> Terminal emulation

> Context-sensitive help with access to *OpenVMS* documentation

The Microsoft Developer Studio is the most widely used PC-based IDE for anyone from college students to experienced developers. There's no easier way to develop powerful *OpenVMS* applications using 64-bit *OpenVMS Alpha*™ technology and Compaq *VAX*™ technology.

ETK benefits

> Simplifies software development with one environment for developing on multiple platforms

> Provides maximum business flexibility in the deployment of client/server solutions across your enterprise

> Provides a choice of tools and extends the industry-leading Windows NT development environment to *OpenVMS*

> Access to easy-to-use tools to obtain maximum performance from your *OpenVMS* applications — right from your PC desktop!

Try ETK today

Download a 60-day evaluation kit from www.openvms.compaq.com/commercial/et/et_index.html

For more information, please send mail to OpenVMSToolkit@compaq.com

Significant improvements to DECprint Supervisor (DCPS) v2.0 for *OpenVMS*

In Q2 CY 2001, version 2.0 of DECprint Supervisor (DCPS) for *OpenVMS* was released. With this version, all *OpenVMS* users who use DCPS will realize significant improvements.

Supports 26 new printers

DCPS is the *OpenVMS* software for PostScript printing. Over the past several years, new third-party printers have become available and competitive licensing issues have surfaced. With DCPS v2.0, 26 new printers from HP, Lexmark, Tektronix and Xerox have been added so customers can now use more current printers.

DCPS licensing no longer required

Another significant improvement is in the area of product licensing. DCPS-Base, -Open, and -Plus have been combined into one product with v2.0. The "right to use" DCPS v2.0 is obtained with an *OpenVMS* operating system license, so DCPS licensing is no longer required.

Product Media is available on either the product specific CD (P/N QA-09NAB-H8) or layered products CD and separate service contracts will be offered.

For more information, visit
www.openvms.compaq.com/openvms/print/
print_sw_prods.html

New beta kits available for Apache-based Compaq Secure Web Server T1.1 for *OpenVMS* on *Alpha* systems

The new Compaq Secure Web Server T1.1 beta kit, based on Apache 1.3.14, is now available for downloading. (Previous versions were based on Apache 1.3.12.) The T1.1 beta kit includes performance enhancements and support for multiple Web servers running on the same system.

Compaq Secure Web Server is a powerful, flexible, HTTP/1.1 compliant Web server that includes Secure Sockets Layer (SSL) through mod_ssl and OpenSSL/RSA Crypto-C™ (BSAFE). Compaq Secure Web Server features an easy-to-use certificate tool that greatly simplifies creating and managing certificates through a simple user interface.

A new beta kit of CSWS_JAVA is also available. It includes the following Apache Tomcat technologies: JavaServer Pages 1.1, Java Servlet 2.2, and MOD_JK.

The Compaq Secure Web Server technology, which is available for *OpenVMS* on *Alpha* systems, is licensed with the *OpenVMS* operating system license agreement. It is fully supported by Compaq Global Services via the *OpenVMS* on *Alpha* Support Contract.

To download the new beta kits, go to
www.openvms.compaq.com/openvms/products/
ips/apache/csws.html

OpenVMS Enterprise Directory for eBusiness — now even more secure

Following the bundling of Enterprise Directory for eBusiness into *OpenVMS* v7.3, the directory has been certified with the Baltimore Technologies Unicert Public Key Infrastructure (PKI) product. A PKI environment ensures that all users — whether partners, suppliers or customers — are authenticated at sign-on by the use of their own Private Key and the Public Key stored in the directory. In addition, PKI enables encryption of any document utilizing a second Private Key.

Unicert and Entrust/PKI are the two leading PKI solutions in the market worldwide, and Enterprise Directory is now certified with both products.

The world's first 64-bit directory, *OpenVMS* Enterprise Directory for eBusiness, is a proven X.500-based product that delivers robust and scaleable directory services across intranets, extranets and the Internet to customers, suppliers and partners. It combines the best of both the industry standard LDAPv3 and X.500 capabilities. Add to that the directory's built-in robustness, highly extensible schema, group access controls and automatic replication capabilities, and the result is a combination that is ideal for large-scale corporate deployments across the globe and very large scale ISP/ASP deployments.

For further information, visit
www.openvms.compaq.com/commercial/newsletter/
newsletter_home.html

VAX-emulator now available for OpenVMS on Alpha systems

By Dr. Robert Boers, CEO, Software Resources International

Software Resources International has completed the porting of the CHARON-*VAX* Micro*VAX* emulator to *OpenVMS* for *Alpha* systems and is shipping the product. CHARON-*VAX* is an application that emulates a complete Micro*VAX* system, including peripherals. It acts as a hardware abstraction layer — creating a virtual *VAX* system that directly boots and executes binary *VAX* instructions. It runs *VAX*/VMS, *VAX*Elan, NetBSD, etc. loaded from the original installation kits.

This implementation of CHARON-*VAX* allows customers to execute unmodified *VAX* applications on *OpenVMS* for *Alpha* systems. *VAX* hardware can be redeployed, and there is no need for any software conversion. With the introduction of CHARON-*VAX* for the *Alpha* platforms, the emulator functionality is extended at the same time with a *VAX*server 3500/600 model. The emulated *VAX* disks and tapes can now be represented as files on the *OpenVMS*-based *Alpha* host or directly connect to physical disks and tape drives.

About Software Resources International

Software Resources International of Geneva, Switzerland, which has its roots in Digital Equipment Corporation, provides a wide range of services for *OpenVMS* and *Tru64* UNIX, including source code porting, programming language translation (e.g. ADA to C++) and database migration. The company, which works closely with Compaq in Europe, has representative offices in many European countries and the United States. For more information about Software Resources International, visit www.softresint.com

CHARON-*VAX* on *OpenVMS* for *Alpha* systems is available for shipment, with evaluation and installation support. For more information, visit www.vaxemulator.com where you can download CHARON-*VAX* documentation and manuals.

Content is king at upcoming Compaq Enterprise Technical Symposium 2001

9-14 September, Anaheim, California

By Linda Musthaler, Vice President, Currid & Company

If you're looking for in-depth technical information about *OpenVMS* and other Compaq-related topics, the second annual Compaq Enterprise Technical Symposium is the place to be this fall.

The planning committee for the symposium has one guiding principle: content is king. We know that you are trying to stretch your training dollars, and we aim to give you the biggest bang for your buck.

Compaq Chairman and CEO Michael Capellas will lead the program with a keynote session on the first morning. Top executives of the Compaq global business units will also address the expected 5,000 attendees. Howard Elias, Senior Vice President and General Manager of the Business Critical Solutions Group, will talk about the strategies and futures of *OpenVMS*, *Tru64* UNIX, *Alpha* and more. And you'll find plenty of "drill-down" sessions on your favorite topics to help you plan your enterprise applications roadmap.

Choose from among 30 full-day pre-conference seminars, 200 interactive hands-on workshops, 250+ technical breakout sessions, eight general sessions, numerous birds-of-a-feather meetings, special non-disclosure sessions, and meetings with Compaq developers and engineers in the Tech Center. Be sure to save some time to visit with the 100+ solution partners in the Exhibition Center.

But the conference content isn't just about numbers of sessions. We are very focused on providing the *right* technical information you want. You'll learn how to integrate enterprise systems, how to troubleshoot problems and what to do when problems do occur, and how to maximize the life of the systems you have now — while planning your future IT investments. You'll also get the roadmaps and strategic directions for *OpenVMS*, *Tru64* UNIX, *AlphaServer* and other essential solutions from Compaq.

The Compaq Enterprise Technical Symposium is also your best place to network with people who can become your "virtual resources" after the conference. Meet people who work on the same platforms you do, who have faced the same technical challenges you face everyday. Exchange ideas, trade war stories, and make new friends you can call for advice long after the conference has ended.

To learn more about Compaq Enterprise Technical Symposium 2001, visit www.cets2001.com. Registration for this premier technical event begins 8 June.

Heroix RoboMon develops alongside *OpenVMS*

By Debra Wilkins, Strategic Alliances Exec EMEA, Heroix

Heroix, a leader in managing today's diverse enterprise, started out managing and monitoring *OpenVMS* over 12 years ago with its flagship product, RoboMon — automated monitoring and problem solving software. As *OpenVMS* has evolved, Heroix has developed RoboMon alongside this remarkable operating system.

RoboMon for *OpenVMS* works by using comprehensive solution rules, which detect a wide variety of common *OpenVMS* operational and performance problems. The rules are specifically designed to be self-configuring, so that RoboMon is fully functional out-of-the-box. Once installed, the product can be tailored and extended so that site-specific requirements can easily be accommodated. This results in a comprehensive ability to perform lights-out operations — which is particularly crucial to global business.

For The Willis Group, it is absolutely crucial that the complex infrastructure supporting their brokers' business does not go down. RoboMon plays a strategic role to help ensure this does not happen. More than 900 RoboMon rules are active on some of the larger systems, many proactively looking for problems.

Despite the large number of rules running across more than 40 separate systems, RoboMon is easy to manage because it fits easily into The Willis Group's existing software distribution tool. When a new rule is written, it is simply added to a central location and automatically distributed overnight, after which it is compiled and starts execution on all systems.

James Allchurch of The Willis Group says, "Not only do we collect *OpenVMS* performance data, we are also capable of collecting data from any operating system that RoboMon runs on, including Windows NT/2000, and UNIX. We have all the resource information we need, which enables us to make adjustments and therefore provide a reliable service. We are confident that RoboMon will support this growth and continue to do so at a favorable price."

Heroix sees 33% growth in *OpenVMS* market in 2000

The Compaq *OpenVMS* operating system remains very important to major corporations and Heroix fully supports it as part of its product portfolio.

According to Paul Roxan, Managing Director of Heroix EMEA, "Heroix has seen growth in the *OpenVMS* market in recent months and in 2000 our *OpenVMS* business grew by 33%. There was a period when *OpenVMS* was seen as old and redundant, but we are now seeing an increased investment by our customers in the latest *OpenVMS* technologies. With Compaq's continued commitment we expect this trend to continue. *OpenVMS* is seen as a mature, stable platform with many good system management tools available, so it's used in mission critical environments by many of our key customers."

For more information, visit www.heroix.com

Did You Know?

Four new fully electronic financial exchanges based on OpenVMS opened in 2000.

New Java application server technology for *OpenVMS* from Xoology

By Will Sheward, Marketing Manager, Xoology

Xoology Software Ltd. announces the availability of its recently released Concerto Java/JavaScript/XML application server on the *OpenVMS* platform.

The product includes an integrated toolset for development and a Java Application Server for deploying e-business solutions. The key characteristics of the toolset offer a more effective path for realizing the power of *OpenVMS* in an e-business setting.

The front-end development tools provide innovative features and full integration with the application server. Unique capabilities such as full-syntax parsing mean that development-time errors are trapped early, resulting in higher efficiency for "right-first-time" development.

The Java Application Server provides the latest technologies in a neat and simple management framework. All config-uration and monitoring is done via a Web browser, allowing multiple installations to be managed from a single location.

Core capabilities include access to multiple database technologies (via third-party JDBC interfaces to a range of products including: RMS, Flatfiles, Rdb, Oracle, Sybase, Informix), integrated facilities for accessing and creating XML data, and full integration with Sun's Java2 environment.

However, what really puts this product ahead of the pack is its ease-of-use: developers can be up and running in minutes. And they can use a combination of Java and server-side JavaScript languages.

It is these features that make Concerto an ideal product for those deploying e-business solutions both externally and internally. Cross-training times are minimized and your existing IT resources will have no trouble in delivering business value quickly.

For more information on Concerto, please contact Bob Andrews at bob.andrews@xoology.com or visit www.xoology.com

Run e-business on your customer's time with DateSim

By Phil Jamieson, President, Software Partners, Inc.

DateSim/*VMS* v2.1 is the *OpenVMS* Date Management Utility from Software Partners, Inc. DateSim enables the maintenance of multiple dates and times within the context of one *AlphaServer* system running *OpenVMS*. DateSim gives users who are on the same server — but operating in different time zones — the advantage of seeing the true local time in their documents, time-stamps and other interfaces. It does this by allowing the system administrator to easily set dates and times in the context of individual *OpenVMS* processes in order to bypass the system level date and time.

One customer currently using DateSim is EDS of Australia. According to John Lees, EDS SD Mid Range Infrastructure, "We are about to undertake a consolidation project which will make us critically dependent on DateSim to support users in different time zones." DateSim allows EDS to have an application running in a different state, while at the same time showing local time to users. DateSim will also allow EDS to change the time stamp on this one par-ticular application and not the other applications running on this *Alpha*-based *OpenVMS* v7.1 platform, since it is the only application requiring non-local time.

What was once just another Y2K conversion tool has emerged as a creative way for enterprises to manage elaborate *OpenVMS* environments. DateSim/*VMS* is a strong complement to global e-commerce. As Internet and extranet bandwidth increases and Compaq continues to produce more powerful e-business solutions such as *OpenVMS* Galaxy and the *AlphaServer* GS Series systems, data center and server consolidations are becoming more and more attractive. This means fewer platforms serving larger geographic areas. DateSim allows a single server to simultaneously synchronize thousands of processes to local time for users — logging in from each of the 24 time zones around the world.

DateSim v2.1 is available immediately from Software Partners, Inc. For more information, call 1-800-828-5830 or visit www.SoftwarePartners.com

Announcing v2.2 of Compaq Management Agents for *OpenVMS*

Web-Based Enterprise Management (WBEM) is an architecture that allows you to use a Web browser to monitor many devices connected to a network. Compaq Management Agents for *OpenVMS* includes a Web server for system management, as well as management agents that let you look at devices on your *OpenVMS* systems.

New features in version 2.2 include:

> Web-enabled DCL SHOW commands — Display information about the current status of the system as well as its users, memory, clusters, CPUs, devices, and virtual I/O cached memory

> CPQ storage MIB — Includes the new Fibre Channel subagent, which provides information about its controller and devices attached to it, and the new IDE subagent, which gives information about devices such as CD-ROMs that are installed on your system

> CPU utilization — Shows CPU usage on bar graphs for 1 minute, 5 minutes, 30 minutes, 1 hour, and total usage for the system

> Kit for *OpenVMS* v7.3 — Includes support for Virtual I/O Cache (XFC), TPC/IP v5.1, and *OpenVMS* internal data structures

You can download the latest version now from www.openvms.compaq.com/openvms/products/mgmt_agents/

OpenVMS Early Access Program inspires *OpenVMS* Enterprise Solutions Center

The *OpenVMS* Early Access Program — which allows many *OpenVMS* partners and customers to test applications on the latest technologies available from Compaq on the *AlphaServer* GS Series platform — has been in operation for over a year. Participant feedback shows that this program has generated improved partner and customer relationships, as well as achieved a positive market acceptance of the new *AlphaServer* GS Series systems and *OpenVMS*.

The *OpenVMS* Group would like to thank *OpenVMS* employees, partners, and customers for their support of this program. Without your efforts, many of the successes would not have been achieved. This truly was a team effort, and demonstrated that with this type of support, achievements can be made in many important areas — such as higher release quality, better partner/customer relationships, and market acceptance.

The *OpenVMS* Early Access Lab has been renamed The *OpenVMS* Enterprise Solutions Center. We would like to extend an invitation to *OpenVMS* customers and partners to visit our new location and conduct application testing on our *OpenVMS AlphaServer* GS Series systems.

For more information about the *OpenVMS* Enterprise Solutions Center, please contact Craig Showers at 603-884-1246 or craig.showers@compaq.com

OpenVMS Tech Tip

OpenVMS *v7.3 introduces a new enhancements to the MONITOR utility, including the RLOCK class of the MONITOR utility. This feature, available in both* VAX *and* Alpha *versions of the operating system, will allow you to track lock mastering.*

SCT and Compaq strengthen relationship

The SCT global education solutions market unit and the Compaq *OpenVMS* Group are pleased to announce a renewal and strengthening of their relationship. These two groups have worked closely for almost two decades, providing quality products to our joint customers. As a result, SCT global education solutions will continue to support its current and planned future products on Compaq *AlphaServer* systems running *OpenVMS*. This commitment is based on the *OpenVMS* Renaissance and Compaq's new business initiatives.

Recent *OpenVMS* and *AlphaServer* enhancements enable SCT global education solutions to leverage Compaq's technology in delivering breakthrough solutions to education. SCT and Compaq are committed to continuing and strengthening this relationship with our joint customers.

About SCT

As a technology leader in application solutions for higher education, SCT's solutions are focused on connecting students, faculty, alumni and employees. These applications include general administration support, enrollment and resource planning, all designed to emphasize interactions versus transactions.

Headquartered in Malvern, Pennsylvania, SCT is the education market technology leader. SCT provides Web-enabled software and services to more than 1,100 active clients worldwide, representing more than eight million learners. SCT collaborates with clients to provide solutions using its competencies, industry expertise and vision. SCT helps institutions strengthen relationships with students, faculty, staff and alumni to achieve significant, measurable results. SCT also provides specific solutions for three industry markets: energy, utilities and communications; process manufacturing and distribution; and courts, state and local government. For more information, visit www.sctcorp.com

"Houston, we have LIFTOFF!"

CCSS Interactive Learning now provides online *OpenVMS* instruction

By Bill Pedersen, President, CCSS Corporation

This is something anyone with a new Web site might yell. But given that CCSS Interactive Learning is dedicated to *OpenVMS* with emphasis on remote instruction, we really want Houston (Compaq) to be aware that we are now online. CCSS is a computer consulting and system sevices company with an *OpenVMS*-centric emphasis.

To support those in the *OpenVMS* Renaissance — both the foot soldier and the storm trooper — new learning technologies and techniques need to be launched. CCSS Interactive Learning is one such technology. This fully self-contained teaching environment supports the efforts of CIOs and others searching for educational resources to get staff up to speed on *OpenVMS*.

From the comfort of your browser, you have access to:

> Courses
> Computers
> Student accounts
> Online documentation
> Tutors
> Sample course
> Feedback
> Testing
> Completion certificates

Developed from the ground up, these courses leverage years of experience with *OpenVMS* from a new palette, the Web page. To allow for quick understanding and economy, each course is approximately a day's effort.

Connectivity to the teaching environment is via a Java-based terminal emulator, and connects students to the teaching environment without the need of a terminal emulator loaded on their PC.

While remote learning environments have no direct student/instructor relationship, CCSS Interactive Learning provides an e-mail interface to tutors on every page for page-specific feedback. Every test is reviewed and personal guidance provided. Additionally, progress reports can be provided to a third party.

For more information, contact www.ccsscorp.com

Compaq *OpenVMS* and Digital Networks form partnership

The following is an open letter from Rich Marcello, Compaq Vice President, and Vic Capozzi, Chairman of Digital Networks

This letter is to inform you of a business initiative and partnership between Compaq *OpenVMS* and Digital Networks. Together we will provide investment protection utilizing the leading industry brands you have trusted for years while bringing new cost effective solutions incorporating the latest technology.

For years Digital Networks products have been system engineered into Compaq *OpenVMS* cluster solutions. Many of these products from Digital Networks were originally developed by the Networks Products division of Digital Equipment Corporation. Due to this common heritage, customers currently have a variety of products from both of our companies installed in their IT environments. Many of our Compaq and Digital Networks system engineers have already worked with your technical consultants on systems solutions across various applications. As an example, there is a large installed base of *OpenVMS* clusters that currently utilize the Digital Networks GIGAswitch/FDDI system, MultiSwitch 900 products and Compaq *AlphaServer* systems. These customers are looking for ways to upgrade and enhance their network without disruption. Together, Compaq and Digital Networks can perform these upgrades and enhance your network – even achieving disaster tolerant capabilities.

In September 2000, Digital Networks became an independent company that exclusively develops, markets, and sells an extensive portfolio of enterprise-class Digital-branded network products. Digital Networks

combines the experience and reliability of a 25-year brand, with the vision and enthusiasm of a startup. Digital Networks has recently added new products to the portfolio with extremely impressive price/performance and functionality, and has additional products in development.

Similar to Digital Networks, *OpenVMS* is experiencing a true Renaissance in the Compaq *OpenVMS* business and recently had the largest *OpenVMS* announcement in five years. Highlights of the announcement included *OpenVMS* v7.3, XML, Java and Apache enhancements. *OpenVMS* also announced new initiatives including the *OpenVMS* portal, the *OpenVMS* Educational Licensing Program, the Defense Information Initiative Common Operating Environment (DII COE) government initiative, Digital Press partnership, and new ISV and SI partner relationships.

Compaq's *OpenVMS* clusters have been the industry's leading clusters for nearly 20 years while Digital Networks' products have been historically recognized as the best I/O subsystem for *OpenVMS* clusters. If you are considering an upgrade or require more network performance, or if you would just like to hear more about the combined power of Compaq *OpenVMS* and Digital Networks and what the strength of our relationship can do for you, please do not hesitate to contact us. For additional information about what this partnership can do for you, please click to www.dnpg.com/partners/openvms/

We thank you for your valued business and look forward to speaking with you.

> "*Using COM for* OpenVMS *we were able to deliver a real-time system to our customer within six weeks that had taken our competitor 18 months to develop.*"
>
> — Kerry Gibbings, project leader, BMS
>
> For the complete story, visit www.openvms.compaq.com/openvms/brochures

Technical training for *OpenVMS* v7.3

The *OpenVMS* technical training curriculum has been updated to include revisions to the following technical courses for *OpenVMS* v7.3.

> *OpenVMS* v7.3 System Performance Management

> *OpenVMS* v7.3 *Alpha* Programming Features I and II

> *OpenVMS* v7.3 Internals for System Managers

> *OpenVMS* v7.3 *Alpha* Internals I, II, and III (available 7/2001)

> *OpenVMS* v7.3 Crash Dump Analysis (available 7/2001)

Additionally, the following new courses have been added to the *OpenVMS* curriculum:

> *OpenVMS* v7.3 Technical Update Seminar

> *OpenVMS* v7.3 System Management: Single Node and *OpenVMS* Clusters

> Managing *OpenVMS* Galaxy v7.3 on the *AlphaServer* GS Series Systems

> *OpenVMS* Galaxy v7.3 and NUMA Programming and Internals

All courses are available for delivery by Compaq's Authorized Independent Training Partners.

To obtain course descriptions and the steps for registration, go to www.compaq.com/training/cd-os.html

OpenVMS Tech Tip

OpenVMS *v7.3 for* AlphaServer *systems introduces a new file cache on XFC (eXtended File Cache). It is much more robust than VIOC. XFC is enabled by default on V7.3 (VCC_FLAGS=2). To force the use of VIOC, set VCC_FLAGS to 1.*

Authorized independent training partners for Compaq and *OpenVMS*

The *OpenVMS* technical curriculum is delivered worldwide by authorized independent training partners of Compaq Computer Corporation. These training partners work in conjunction with Compaq to deliver the Compaq-developed courseware, in addition to offering their own courseware for areas not covered by the Compaq courses. Most training partners have their own training facilities and offer both open enrollment and onsite classes. Authorized independent training partners are region-based.

The North America training partners for *OpenVMS* are:

Bruden Corporation
www.bruden.com

MindIQ
www.mindiq.com

The Parsec Group
www.parsec.com

The primary EMEA training partners for *OpenVMS* include:

Global Knowledge
www.globalknowledge.net

Onsite Computer GmbH
www.onsite.de

Host Computer Services
www.hostcomputers.co.uk

Compaq European Training (ETEC)
www.ase.emea.compaq.com/etec.html

To arrange *OpenVMS* training in Asia Pacific, visit
http://education.tandem.com/asiapac/ot_schedule/ot_sched.htm

To arrange *OpenVMS* training in Japan, contact Kenichi Horiuchi, Training Center Manager, at
kenichi.horiuchi@compaq.com

To arrange *OpenVMS* training in Greater China, contact Susan Chen at susan.chen@compaq.com

Tips from the *OpenVMS* Performance Expertise Center

Uncovering hidden timeline treasures

In the previous issue, we discussed the importance of the timeline tools T4 and OTLT for customers who are reaching for the best performance with their largest *OpenVMS* systems.

T4 (Tabular Timeline Tracking Tool) captures minute-by-minute timeline information for key *OpenVMS* system internal statistics such as CPU idle time, Mpsynch percentage, and Interrupt percentage. Likewise, OTLT (Oracle TimeLine Tool) keeps minute-by-minute track of key Oracle indicators including Commits, Calls and Consistent Gets.

When these two timelines are brought together and matched up minute by minute, it's possible to bring previously invisible relationships into the open. In some cases, this process can help you uncover hidden treasures — patterns that help you better understand how your systems are used, and how you might take steps for increased performance.

For example, with the data from T4 and OTLT, we can compute new statistics such as milliseconds of CPU consumed per call, or direct I/O per call. CPU consumed or Direct I/O completed represent how much work was accomplished using units of work based on "SYSTEM" resources. Likewise, Oracle Calls tell us how much was accomplished based on Oracle units of work. When we combine these, we get a partial profile or signature, or footprint of the work done.

If the workload mix is stable, these computed values tend to remain stable even as the actual total load increases or decreases. On the other hand, if the characteristics of the workload mix change, these statistics reveal previously invisible processes at work.

As an example of the power of combining timeline data, one large *OpenVMS* customer was able to use such revealed changes in their perceived workload mix to identify, zoom in on, and ultimately eliminate non-essential work activities that were interfering with peak period load. Every time these activities started, the workload signature showed visible shifts. Once the errant load was

removed, the workload signature remained stable through the entire peak period with improved maximum throughput for essential work

Capacity planning for Web loads

It is plausible that an *OpenVMS* capacity planner could be faced with characterizing a Web workload. Characterizing a Web workload can be approached like a client/server performance characterization, if two unique aspects of Web workloads are considered. On the other hand, it is important to realize that the timeline approach demonstrated in previous articles can be successfully applied.

The key concept of a client/server performance characterization is that work is partitioned between a client and a server. A client makes requests of a server, and an example would be a client Web browser making HTTP requests of a Web server. We take the viewpoint that the server only responds to client requests, and that we are interested in the demands placed on the system by the server fulfilling the clients' requests.

Therefore, we concentrate our performance evaluation efforts of an *OpenVMS* Web server in gaining a thorough understanding of the server's workload. Two major aspects that differentiate Web workloads from traditional distributed workloads are extreme variability and bursty traffic.

The extreme variability aspect infers that the capacity planner must consider that there is a non-negligible probability that there will be client requests to the server that will require significantly more than the average amount of system resources to satisfy.

The bursty traffic aspect means that Web workloads have work-demand peaks that can be as much as eight times greater than the workload's average. Once again, if the capacity planner sizes the system for an average load, the system will fail to provide the capacity necessary during a burst of client requests.

The key action to take that will make an *OpenVMS* Web installation effective is to introduce historical timeline measurements of all key variables, both "old" ones such as CPU utilization, and "new" ones such as HTTP requests.

Most Web servers have several logs associated with their operation, and the Compaq Secure Web Server (CSWS) is no exception. The log with the information that is useful

for capacity planning is the access log. This log's default location is: **apache$specific: [logs]access_log**. This log is a text file that contains information on the actions the server took to satisfy user requests.

The format of this file is as follows. Each line within the log contains the following germane information: the client host name (or IP address), the request's date and time, the request, the server's response status, and the number of bytes transferred for a file request. Here is an example of such a line:
VMS.Times.com — [02/May/2001:11:05:35 −0400] "GET/manual/misc/API.html HTTP/1.0" 200 49590.

The first action to take in processing the access log is to utilize the date/time stamps of the server requests to synchronize with the time intervals of an existing time-line. This task is not always straightforward, but once accomplished, then metrics such as number of server requests per interval, or number of bytes transferred per interval, can be placed on the existing timeline.

The point is that the placement of key performance metrics onto a timeline gives the performance analyst a flexible and powerful base from which to begin to characterize system performance.

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