Compaq OpenVMS Times

Volume 1/Number 4 July–September 2000

Watch for Special Edition!

There's big news brewing for *OpenVMS*—enhancements, e-business advances, and more. Read all about it in a Special Edition of the *OpenVMS Times* coming in October.

Stay tuned!

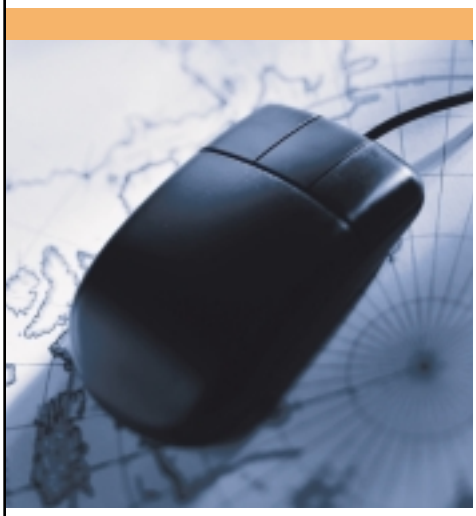
In This Issue...

COMPAQ

International Securities Exchange (ISE) trades one-millionth contract

ISE establishes successful marketplace

The International Securities Exchange (ISE) announced recently that it traded its one-millionth contract on 8 August, just ten weeks since the launch of trading on the first fully electronic options exchange in the U.S.



ISE's trading software (developed by OM Technology) operates on Compaq *OpenVMS*™-based *AlphaServer*™ systems using Oracle Rdb as a data server. The *OpenVMS* operating system, *OpenVMS* clusters, Reliable Transaction Router (RTR) software, and Alpha architecture from Compaq Computer Corporation provide configuration flexibility, technologies proven in many international markets, and unparalleled growth capacity to handle the high volumes of quotes associated with options trading. Further, this trading system has multiple levels of redundancy.

On 26 May, the ISE listed three issues as a first step in its rollout to trade the top 600 equity options on the world's only exchange to combine electronic trading with auction market principles. As of 8 August, ISE traded 70 issues and continues to increase the roster in its rollout toward the full contingent of 600 listings.

Since trading began, ISE's market has performed precisely as designed: the technical infrastructure processes orders rapidly and accurately, market makers provide extremely competitive markets, and customer satisfaction is high. Updated summary statistics pertaining to ISE's listed equity options can be found on its website, www.iseoptions.com ❖

Terry Shannon on OpenVMS...

BCSG Bill quashes fear and loathing

Labor Day has come and gone, but *OpenVMS* clearly is not in the autumn of its life. Compaq Business Critical Server Group VP and General Manager Bill Heil recently traveled to Compaq's Technology Symposium in Munich, Germany to allay reseller fears about the longevity of *OpenVMS* and the Alpha architecture. Heil claimed that there is a $2.5 trillion opportunity for business-to-business e-commerce over the next three years. The good news for Compaq and its flagship products is that more than 90% of the B2B infrastructure is yet to be deployed. Noting that Compaq's *OpenVMS* customer base has returned to growth mode, Heil said the OS is one of the most important customer sectors the company has. Mr. Heil also confirmed that Compaq would not attempt to migrate *OpenVMS* customers to Windows NT/2000 in the near future, which represents a departure from the strategy of erstwhile Compaq Grand Fromage Eckhard Pfeiffer.

Heil also confirmed support from Oracle for *OpenVMS* by stating that *OpenVMS* is now a *Tier One Plus 90 days* Oracle platform. On the Alpha front, Heil said Compaq is investing ~$750M per year on the architecture, including ~$150M annually in chip research and development. Suggesting that Compaq products will help to make the Internet fault-tolerant, Heil said the combination of Alpha, *Himalaya*™, and *ProLiant*™ servers will enable the firm to retain and grow its market share in the high-availability enterprise market. Since there are proper roles for these disparate platforms and OSes, not to mention well-articulated interoperability strategies (Compaq's Zero Latency Architecture demonstration comes to mind), Mr. Heil's remarks seem credible indeed.

Java: definitely *OpenVMS*' "cup of tea"

The *OpenVMS* Renaissance initiative gained more impetus in August when e-business and B2B integration software purveyor Attunity Ltd. announced an agreement with Compaq that will enable users to connect their existing Alpha-based *OpenVMS* systems with new business-to-business and business-to-customer systems. Under the long-term agreement, Compaq will embed Attunity Connect JDBC access into its enterprise class *OpenVMS AlphaServer* systems, thus rendering *OpenVMS* an appropriate and reliable element of the e-business/B2B equation. As a result of the initiative, so-called "legacy" *OpenVMS*-based systems can serve as the backbone of leading-edge e-business solutions.

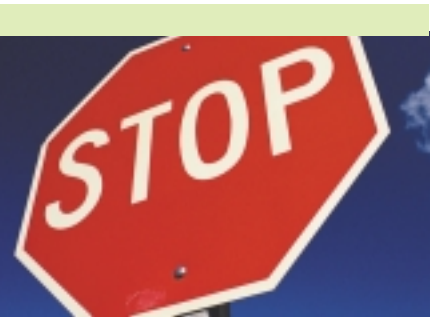
While the marketplace frequently equates e-business with UNIX systems, *OpenVMS* Engineering is no slouch in this regard. In fact, during the late 1980s and early 1990s, *OpenVMS* was at the heart of Digital's Electronic Data Interchange (EDI) strategy. EDI fell short of marketplace expectations, but modern B2B applications embody the same underlying architecture. Equipped with Internet-centric clients and protocols—HTML, HTTPS, and Java—yesterday's EDI became today's B2B. Given increased globalization, faster networks, and the near-ubiquity of computer access, B2B can be characterized as "EDI Done Right."

Rather than devoting *OpenVMS* Engineering resources to the data access, infrastructure, and integration aspects of modern-day B2B solutions, Compaq is taking a more pragmatic approach by aligning itself with an established technology provider. As *OpenVMS* Group VP Richard Marcello said, the extended relationship with Attunity allows Compaq to "concentrate on what we do best and still ensure that we give our users a superior solution for integrating enterprise systems with any Internet application server that is certified with Compaq's Java Technology for *OpenVMS*-based Alpha systems."

The "Attunity Connection" represents a continuation of Compaq's enterprise system integration strategy. Several months ago, Compaq fortified the *Himalaya* NSK NonStop Enterprise Application Server product with Java II Enterprise Edition support. The extension of J2EE support to NSK allows *Himalaya* users to more easily share apps built for UNIX and other systems. The improved Java support renders *Himalaya*/NSK solutions more attractive to e-business customers, and Compaq's *OpenVMS* Group expects JDBC access to similarly increase the competitive edge of *OpenVMS*-based Alpha systems in a very attractive and rapidly growing market segment. ❖

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

Compaq and Oracle announce E-business Platform agreement



On 28 June 2000, Compaq and Oracle announced a three-year agreement to deliver an Integrated E-Business Platform, along with Comprehensive Professional Services. Compaq and Oracle will jointly develop, sell, and support an integrated e-business platform combining Oracle's new Internet Platform software, Compaq's server lines, and joint service offerings. The Compaq and Oracle E-Business Platform software environment will be optimized and made available for *AlphaServer* systems running *OpenVMS* or *Tru64*™ UNIX and *ProLiant* systems running Windows NT/Windows 2000 in the Q4 2000 timeframe.

With this agreement, the Compaq and Oracle E-Business Platform becomes Compaq's reference cross-platform, Java application server, and e-business development platform for Oracle database and applications—and Compaq becomes Oracle's leading e-business development platform partner.

For *OpenVMS*, the agreement re-affirms the Compaq and Oracle commitment to *OpenVMS* as an Internet/B2B platform by porting and actively marketing the Compaq and Oracle E-Business Platform and Oracle Internet Application Server (iAS).

To learn more about this strategic initiative, please go to: **www.compaq.com/partners/oracle/index.html**

For more information from Oracle's perspective, please visit the Oracle website at: **www.oracle.com/** ❖

OpenVMS Galaxy team shines for Compaq Board of Directors

When the Compaq Board of Directors recently came to Boston to meet with Michael Capellas, the *OpenVMS* Galaxy team was there with a demo in the *AlphaServer* GS160 Dream Machine truck. Bill Hanley, *OpenVMS* Galaxy product manager, kicked off the presentation by telling the Board everything they needed to know about Galaxy.

"It's *OpenVMS*, it's 'really cool stuff' (to quote Mr. Capellas), and customers LOVE it on the new *AlphaServer* GS Series systems. Any questions?"

With that great lead-in, Larry Bonnette, *OpenVMS* Engineering Support, then delivered the Music Store demo that shows how Galaxy can be used to handle all aspects of an e-business operation including online ordering, inventory control, shipping, billing, and product support.

After the demo, the Board clearly understood how *OpenVMS* and the new *AlphaServer* GS Series deliver the availability, scalability, and flexibility required for successful e-business implementations. The Board was impressed with Galaxy's ability to run multiple instances of *OpenVMS* within a single *AlphaServer* system (or hard partition), and to dynamically reallocate CPUs between instances without rebooting. To strengthen the flexibility message, the *AlphaServer* GS160 system in the Dream Machine truck is configured into two hard partitions: the first running a ZLE demo on *Tru64* UNIX, and the second running two instances of *OpenVMS* and the Galaxy demo.

The *OpenVMS* Galaxy presentation and demo to the Compaq Board of Directors underscores the fact that *OpenVMS* Galaxy is on the technological cutting edge for e-business solutions, and that the *OpenVMS* Renaissance continues to gain momentum.

For more information on the *AlphaServer* GS Series and *OpenVMS* Galaxy, go to:
www.openvms.compaq.com/gsseries/index.html ❖

OpenVMS wins lowest Total Cost of Ownership (TCO) for enterprise-class Clusters

TechWise Research, Inc. just published a research report entitled "Total Cost of Ownership for Enterprise Class Clusters." The study included RISC-based clusters from IBM, Sun, Hewlett Packard, and Compaq.

OpenVMS running on *AlphaServer* GS160 and GS320 clusters took top honors versus Sun, HP, and IBM UNIX RISC servers. These *OpenVMS* clusters delivered the lowest TCO by a significant margin for most variable downtime cost factors. The white paper illustrates how *OpenVMS can save our customers millions of dollars in total cost of ownership over a five-year period* versus competitive alternatives.

The white paper presents some compelling new data that will make it simple for customers to select and justify an *OpenVMS*-based *AlphaServer* GS160 or GS320 cluster for their next mission-critical application—including the added benefit of great cost savings over the life of the product.

The study utilized two classes of cluster configurations—Class 1 and Class 2. Both configurations had two servers in the cluster; the difference was the size of the servers. Class 1 included servers such as *AlphaServer* GS160, IBM S80, and Sun UE 6500 systems, while Class 2 included servers such as *AlphaServer* GS320, Sun UE 10000, and HP 9000 (V2600) systems.

The study concludes:
Class 1 results
Compaq has the lowest TCO at all downtime costs tested with the exception of the $25,000 per hour level. Applying the average cost per hour of downtime of $71,000, Compaq *OpenVMS*-based *AlphaServer* clusters have the lowest TCO followed by IBM, HP, and Sun. *At the average $71,000 per hour downtime cost, Compaq's TCO advantage over these vendors is $1.8 million, $4.4 million, and $5.4 million respectively over five years.*

Class 2 results
IBM has the lowest TCO when the downtime cost is$25,000 per hour. In contrast, Compaq has the lowest TCO in situations where the downtime cost is $50,000 or more. Applying the average cost per hour of downtime of $71,000, Compaq clusters have the lowest TCO followed by IBM, HP, and Sun. At the average $71,000 per hour downtime cost, *Compaq's TCO advantage over these vendors is $1.3 million, $4.1 million, and $6.1 million respectively over five years.*

TechWise Research, Inc. is an independent primary market research firm that specializes in the computer industry. If you have any questions regarding this research, please contact: **TCO2000@TechWise-Research.com**

Find this white paper at:
www.openvms.compaq.com/openvms/WHITEPAPERS/INDEX.HTML ❖

Did You Know?

If you're taking the water shuttle between Sweden and Finland, you're cruising thanks to *OpenVMS*!

OpenVMS clusters take top honors in availability study

Hot off the press is a research report completed by TechWise Research, Inc. entitled "Quantifying the Value of Availability of Enterprise Class RISC-Based Cluster Solutions." The study included RISC-based clusters from IBM, Sun, Hewlett Packard, and Compaq.

***OpenVMS* enterprise clusters took most of the honors:**

- Lowest annual downtime due to hardware failures
- Lowest annual downtime due to operating system or cluster software failures
- Lowest annual downtime due to database failures
- Second lowest annual downtime due to other application failure
- Second lowest annual downtime due to human error
- Lowest total overall annual downtime due to any causes

The white paper shows how *OpenVMS*-based *AlphaServer* GS Series servers can save companies millions of dollars in downtime costs versus other alternatives. It also presents compelling new data that will make it simple for a company to select and justify *OpenVMS* for its next mission-critical application.

The study concludes:
"System reliability and availability are very important attributes and key factors in the purchase decision process for high-end clusters. The study found that a wide range of costs associated with server downtime exists. Companies lose between a few thousand dollars to over one million dollars per hour when their primary applications are off-line. The study found the average cost per hour of downtime is $71,000."

TechWise Research has identified an "Availability Advantage" that exists between different cluster brands. This gap represents the difference in downtime costs at various hourly rates. In situations when one hour of downtime has little to no impact on an organization, the Availability Advantage is negligible. However, the gap grows dramatically at higher hourly downtime rates. For example, if the cost per hour of downtime were $50,000, *OpenVMS*-based *AlphaServer* systems have the potential to save the average company between $1.9 million and $4.4 million in downtime costs over a five-year period, compared with either IBM, HP, or Sun. Depending on the cluster's configuration, these savings could pay for the servers themselves. Companies can estimate their total downtime costs by multiplying their firm's hourly downtime rate by each cluster brand's average number of annual downtime hours.

IT managers would be wise to factor in downtime costs into their cluster purchase decisions. Other factors such as system performance, software features, application availability, and quality of service and support offered also contribute to the overall value of a cluster and should be evaluated as well.

This information is available at
www.openvms.compaq.com/openvms/whitepapers/techwise-availability.html

TechWise Research, Inc. is a primary market research firm that specializes in the computer industry. If you have any questions regarding this research, please contact:
Availability@TechWise-Research.com ❖

Study shows upgrade to *OpenVMS*-based *AlphaServer* pays for itself in less than six months!

A new study entitled "Quantifying the Total Cost of Upgrading *VAX*™ Systems to *AlphaServer OpenVMS*" was just released by TechWise Research, Inc. The study focuses on customers who have upgraded their *VAX* systems to new *AlphaServer* systems. This study is an analysis of the benefits realized and satisfaction achieved by upgrading *VAX* environments to *AlphaServer* systems running *OpenVMS*.

Significant benefits cited
One major finding is that companies that have upgraded their *VAX* to *AlphaServer* systems are extremely satisfied with their decision. Respondents reported many benefits as

a result of their upgrade—including increased performance, reduced service costs, greater growth capabilities, and increased customer satisfaction. Another key finding is that most companies saw a dramatic 61% decrease in downtime as a result of their upgrade. Based on the data collected, companies have the potential to save between $329,000 and $800,000 per year in downtime costs alone from a *VAX* to *AlphaServer* system *OpenVMS* upgrade.

Results of the study also show that the costs associated with upgrading software and installing the new system sometimes equals the price of the hardware itself. However, even despite this initial cost, the *VAX* to *AlphaServer* upgrade process pays for itself in a very short time. This is because *AlphaServer* systems offer significant savings in management, downtime, and service contract costs. When all these factors are considered in the analysis, the upgrade to an *OpenVMS*-based *AlphaServer* system pays for itself in six months or less for all four configurations tested. Furthermore, companies have the potential to save millions of dollars over a three-year period in lower service, management, and downtime costs.

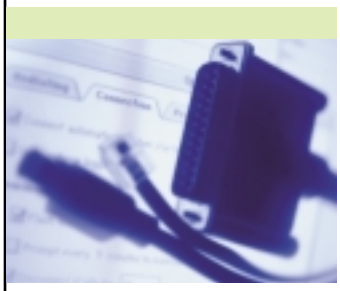
The white paper published by TechWise Research, Inc. explores all of the aspects of making the upgrade from a *VAX* to an *AlphaServer* system, and details some very important insights with respect to moving applications to the new platform.

For more details, please visit: **www.openvms.compaq.com/openvms/whitepapers/index.html** ❖

Did You Know?

If you drive, walk, or are driven by cab through the streets of New York City, you're a user of *OpenVMS*. It's running the traffic control system!

Plug-and-play *OpenVMS* cluster



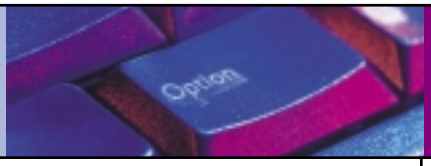
Based on the world's first and fastest 64-bit architecture, the *AlphaServer* ES40 cluster-based system benefits from the robust and proven Compaq *OpenVMS* operating system with highly developed clustering capabilities for applications and database solutions in a wide variety of industries. Shipped in a cabinet and ready to plug in and run, this system:

- Comes configured and fully tested with two processors, the *OpenVMS* operating system, cluster software, and RAID storage—creating an application-ready cluster system
- Provides simplified ordering and deployment of a high-powered, easy-to-manage clustered system
- Is orderable (base system) with a single part number
- Is hardware and software factory integrated and tested by Compaq CustomSystems
- Offers flexibility to meet unique customer specifications with additional processors, memory, storage, and services
- Includes the standard Compaq three-year hardware warranty

OpenVMS clusters set the standard for the industry. They deliver ultra-high availability, resource sharing, scalability, load balancing, and world class performance. For investment protection, *OpenVMS* clusters support both *VAX* and *AlphaServer* systems.

OpenVMS clusters ensure 24 x 365 access to data and applications. They support up to 96 nodes and can span up to 500 miles (800 kilometers) for disaster tolerant requirements. All applications running on *OpenVMS* benefit from cluster-wide synchronized access to data from all nodes in the cluster. Also the *OpenVMS* operating system supports interoperability with Windows NT and *Tru64* UNIX.

For more information, please visit: **www.compaq.com/solutions/customsystems/ha/co-es40ovms.html** ❖



Customer/Partner Profiles:

L–Soft

"It is in the e-commerce space that I see* OpenVMS *making a comeback."

— Eric Thomas
Founder and CEO
L-Soft

L-Soft, the world's leading provider of electronic mailing list and e-mail delivery solutions, relies on Compaq *AlphaServer* systems running the Compaq *OpenVMS* operating system to deliver some 10 million messages each day for an international roster of clients from the commercial, academic, and governmental sectors. L-Soft's hosting operation runs on a cluster of Compaq *AlphaServer* systems primarily running *OpenVMS*, which also interoperates with *Tru64* UNIX and Windows NT. L-Soft chose this platform because it considers it to be "a safe bet." For the complete story, visit **www.openvms.compaq.com/openvms/brochures/l-soft/**

InterSystems Corporation

"Our success is driven by how successful our customers are at building and deploying applications.* OpenVMS *on* AlphaServer *systems has provided a very stable, very productive environment both for building and deploying applications."

— Paul Grabscheid
Vice President of Strategic Planning
InterSystems Corporation

InterSystems is the world's leading provider of high performance database systems. Used by more than 3.5 million global developers, InterSystem's flagship product, CACHE´, is the only development environment that offers easy and rapid creation of sophisticated Web applications — plus a massively scalable and superfast e-DBMS. CACHE´ is a powerhouse of a database, and it requires a powerhouse of a platform. With Compaq *AlphaServer* GS Series systems running the *OpenVMS* operating system, CACHE´ has met its match. For information, visit **www.openvms.compaq.com/brochures/intersystems/**

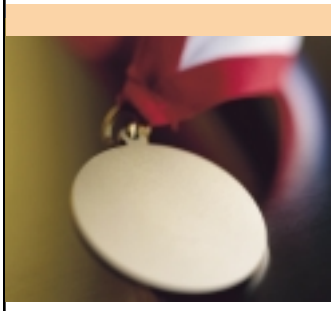
London Health Sciences Centre

"*OpenVMS *for us was an absolute requirement because of the way that it lends itself to stability, availability, and growth — all the important things for keeping an IT shop running. It is the platform that we have the most confidence in."

— Peter Gilbert
Coordinator, Technology Support
London Health Sciences Centre

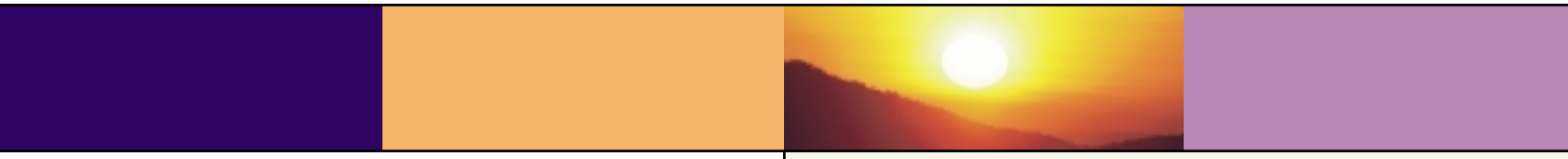
Technology can be good medicine — both for a healthcare organization and the patients it looks after. London Health Sciences Centre (LHSC) is one of Canada's largest university teaching hospitals. Situated on three campuses in London, Ontario, it serves a referral area of one and a half million adults and children. Forward-thinking LHSC uses information technology proactively to ensure that it provides the finest health services possible. Its platform of choice is Compaq *AlphaServer* systems running the *OpenVMS* operating system. For more information, visit **www.openvms.compaq.com/brochures/londonhealth/**

Heroix RoboMon...still winning with *OpenVMS*!



Based in Boston, Massachusetts, Heroix is a leading developer of e-business infrastructure management software that helps organizations guarantee the availability and performance of their applications, systems and networks.

Andrew Crisp, Partner Relations Manager for Heroix, traces the company's history: "From its inception in 1975, Heroix has been closely involved with Digital, and now Compaq, operating



systems and hardware. The very first products from Heroix were developed for the *VMS*™ platform, so in 1989 when Heroix developed RoboMon, its flagship automated fault and event management solution, it was natural that the first versions were for *VMS*."

Crisp continues, "That was in 1989, and since then Heroix' platforms have expanded to include *Tru64* UNIX and Windows NT and 2000 on Compaq hardware. Naturally, *OpenVMS* is still an important part of the product line, on both *VAX* and *AlphaServer* systems. In 1999, *OpenVMS* represented 40% of Heroix' revenues—a 28% growth from 1998."

The Heroix customer list includes many organizations known worldwide. Communications companies such as Reuters, AT&T, and Vodafone; computer companies such as Compaq, Motorola, and Microsoft; manufacturing companies such as 3M Corporation, Pepsi Cola, and Xerox, plus major names from the worlds of finance, automotive, chemicals, education, government, insurance and utilities. For many of these companies, *OpenVMS* on Compaq *AlphaServer* systems form a significant part of their IT infrastructure.

Heroix has customers who have been using RoboMon for *OpenVMS* for ten years–customers such as Jacobs Bakery in the U.K. where the Senior Operations Analyst Nick Clews and a team of four look after the systems. "Having RoboMon is like adding a fifth member to my team", says Clews, "but with a difference. RoboMon runs 24 hours a day and over holidays and Christmas. It doesn't go to the pub. It doesn't have office breaks. It doesn't keep asking for pay raises and it's very accurate."

For more information on Heroix and RoboMon for *OpenVMS*, visit: **www.heroix.com/product_detail_vms.htm** ❖

Did You Know?

All the publicly owned forests in the United Kingdom are managed by the Forestry Commission, which uses *OpenVMS* for most of its systems.

OpenVMS in the news!

"COMPAQ JOCKEYS FOR DOTCOMS WITH NEW SERVER LINE"

cnetnews.com, 15 May 2000
http://news.cnet.com/news/0-1003-2001878946.html?tag=st

"COMPAQ SAYS NEW SERVERS WILL BOOST NET PERFORMANCE"

InformationWeek, 16 May 2000
http://www.informationweek.com/story/IWK20000516S0004

"COMPAQ LEAPFROGS IN SERVER MARKET"

VARBusiness, 18 May 2000
http://www.varbusiness.com/news/breakingnews.asp?ArticleID=16757

"COMPAQ UNLEASHES 'WILDFIRE' IN UNIX MARKET"

Asia Intelligence Wire, 26 May 2000

"COMPAQ MOVES TO QUELL VMS AND ALPHA FEARS"

Computer Reseller News, 8 June 2000
http://www.vnunet.com/Analysis/1102826

"COMPAQ LEADS HIGH-END UNIX SERVER CHARGE"

Network World, 29 May 2000
http://www.nwfusion.com/archive/2000/97130_05-22-2000.html

"SANCHEZ EXPECTS NEW, HIGH-END, COMPAQ GS-SERIES ALPHASERVERS WILL PROVIDE PROCESSING PERFORMANCE PUNCH TO PROFILE"

13 July 2000 Press Release
http://www.sanchez.com/news/pr000713.htm

"COMPAQ'S ALPHA IS 'A SAFE BET' "

Australian IT
http://australianit.com.au/common/storyPage/0,3811,950135%255E1282,00.html

"THE TIMES ARE A CHANGIN' "
ent online, 28 June 2000
http://www.entmag.com/displayarticle.asp?ID=6270072727PM

"FISHER-TITUS MEDICAL CENTER – WRQ REFLECTION HELPS A MAJOR MEDICAL CENTER INTEGRATE REMOTE FACILITIES"
http://www.wrq.com/news/success/fisher_titus/fisher_titus.html

"ORACLE FILLS OUT WEB LINEUP"
InfoWorld, 30 June 2000
http://www.infoworld.com/articles/hn/xml/00/07/03/000703hnoracport.xml

"ATTUNITY DELIVERS JAVA APPLICATION INTEGRATION FOR COMPAQ OPENVMS—ATTUNITY AND COMPAQ JOIN FORCES TO EXTEND THE REACH OF MORE THAN 450,000 OPENVMS SYSTEMS FOR E-BUSINESS AND B2B"
9 August 2000 press release
http://www.attunity.com/content/newsevents/detail.asp?catid=6&scatid=20&o=107&y=8/9/2000&h=1

"VMS, IT WILL NEVER GROW OLD"
CIO Magazine– New Zealand, August 2000
Hardcopy

"A VISION WITH A VAX"
CIO Magazine– New Zealand, August 2000
Hardcopy

"COMPAQ TO INVEST IN OPENVMS"
NST – Computimes Malaysia, 3 August 2000
Hardcopy ❖

Large demand for *OpenVMS and Windows NT Integration For Dummies*

During the last worldwide *OpenVMS* Ambassadors meeting, Dick Hustvedt and Compaq CEO Michael Capellas received copies of *OpenVMS and Windows NT Integration For Dummies* directly from the authors. Dick Hustvedt was one of the original architects of the *OpenVMS* operating system.

Michael Capellas, Compaq CEO

Available since the end of March, *OpenVMS and Windows NT Integration For Dummies* is a great way to introduce (or revisit) Compaq *OpenVMS* and Windows NT integration solutions. Written in the lighthearted and somewhat irreverent style of the IDG "Dummies" series, the book covers a set of products and services designed to add Windows to the reliable, scalable, secure, and available environment that *OpenVMS* systems provide. Thousands of copies of the book have already been ordered!

Dick Hustvedt, an original OpenVMS architect

If you'd like a copy, please contact your Compaq representative.

Did You Know?

If you explore the mysteries of the universe from pictures generated by the Hubble Space Telescope, you are a user of *OpenVMS*.

New! Adobe Acrobat Viewer (for Java) on *OpenVMS* Alpha Systems

Now you can view Adobe Portable Document Format (PDF) files on Compaq Alpha systems running the *OpenVMS* operating system. Adobe PDF is a universal file format that preserves all the fonts, formatting, colors, and graphics of any source document—regardless of the application and platform used to create it. Adobe Acrobat Viewer allows you to view PDF files on *OpenVMS*-based Alpha systems that have the Java Virtual Machine (JVM) installed. Adobe provides the Viewer free of charge from its website.

A new document, "Installing and Using the Adobe Acrobat Viewer (for Java) on *OpenVMS* Alpha Systems" is now available on the Web. It contains the following topics:

- Prerequisites
- *OpenVMS* Tasks
- Downloading the Viewer
- Installing the Viewer
- Using the Viewer
- Tuning
- Troubleshooting

Java Acrobat performance on *OpenVMS*

When you compare the performance of a native version of the Adobe Acrobat Viewer on a specific platform to the Java version of the viewer on the same platform, you will notice that the Java version runs more slowly. This is because the Java Viewer has an extra layer of software (the Java Virtual Machine) between the viewer and the operating system.

For best Acrobat Viewer performance, use a native version of the Acrobat Viewer. For platforms on which Adobe does not provide a native viewer, the Java version of the Acrobat Viewer provides a way for users to view and print PDF files.

The performance of the Java version of the Acrobat Viewer on *OpenVMS* is about the same as the Java version of the Acrobat Viewer on Windows or Macintosh systems. You can improve the performance of the Java version of the Acrobat Reader on *OpenVMS* by changing the system settings as described in the document referenced above. Compaq will continue to look for ways to improve the performance of the Acrobat Viewer on *OpenVMS* and make these improvements available to customers.

You may download a copy of the document, "Installing and Using the Adobe Acrobat Viewer (for Java) on *OpenVMS* Alpha Systems" as follows:
www.openvms.compaq.com/new ❖

New! Fast Virtual Machine for Java 2 platform on *OpenVMS* Alpha!

The Java Development team just released the beta version of Compaq Fast Virtual Machine (Fast VM) 1.2.2 for Java 2 on *OpenVMS* running on Alpha systems. This beta kit is available for *OpenVMS* Alpha V7.2 and higher. The final kit will be available for versions 7.1 and higher. The Fast VM 1.2.2-beta 1 is intended for use with the Java 2 SDK (J2SDK) v 1.2.2-beta 1 for *OpenVMS* Alpha.

To download a copy of the Fast VM 1.2.2-beta 1, visit
www.compaq.com/java/alpha/index.html
and select "Java for Compaq Alpha Systems." ❖

Apache Web Server for *OpenVMS*—beta now available for download!

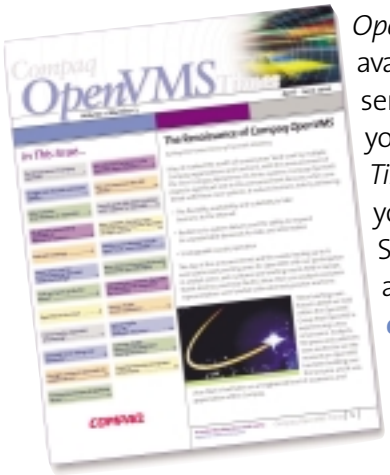
Apache—the world's most widely deployed Web (HTTP) server that powers more than nine million Internet servers—is now available for immediate download. The current beta kit for *OpenVMS* Alpha, which is based on Apache V1.3.12 code from the Apache Software Foundation (**www.apache.org**), is available for download at: **www.openvms.compaq.com/openvms/products/ips/apache/apache.html**

Downloadable beta kits are available frequently as new functionality is added, so please visit the above URL regularly.

Current beta enhancements include:

- Perl T5.5-3A1 and mod_perl T1.21-1A1
- Jserv/JSSI Version T1.1-1A1
- *OpenVMS* cluster awareness
- Secure Sockets Layer (SSL): mod_ssl
- OpenSSL/RSA\Crypto-C"_(BSAFE) is coming soon ❖

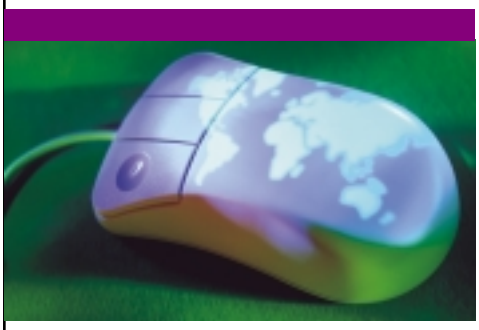
New! *OpenVMS Times* subscription service



OpenVMS Times is now available via a Web subscription service. This service allows you to subscribe to *OpenVMS Times*, and have it sent directly to your e-mail account. Subscription forms are available at: **www.openvms.compaq.com/openvmstimes/** ❖

New! EnterpriseSCHEDULE from International Structural Engineers, Inc. (ISE)

Please note that this company is not to be confused with International Securities Exchange (ISE) —Editor.



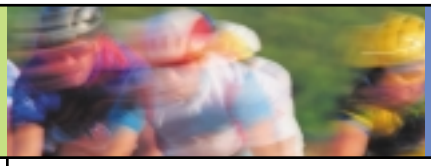
International Structural Engineers, Inc. (ISE), a leader in data center management solutions, offers an enterprise-wide software system for initiating, monitoring, and tracking all the batch jobs run for *OpenVMS*. EnterpriseSCHEDULE is the foundation tool for automating IT functions on a daily, weekly, monthly, yearly, or pre-determined basis—regardless of industry or type of network. Using EnterpriseSCHEDULE, complete job status is always just a click away, with "live" displays showing job progress and alerts when abnormalities occur. Users can watch as jobs are executed through their scheduled runs and as the system automatically performs crucial tasks, the Schedule database can also be distributed over the entire network, eliminating any single point of failure.

In addition, EnterpriseSCHEDULE:

- Needs no additional software to run
- Can selectively deliver exception messages to help desk, pager, or e-mail system; and allows the job network to be viewed, printed, saved, and monitored as a fully annotated diagram
- Integrates all *OpenVMS*, UNIX, and Windows NT nodes into a single job stream—making centralized cross-platform scheduling a reality

The ISE solution enhances the *AlphaServer* GS Series dynamic allocation feature by allowing the automatic scheduling of processors to meet the job load.

The system includes a conversion program that can assist companies migrating from other software packages or in-house based procedures. For more information, contact ISE at 310 643-7310, **sales@I-s-e.com** or **www.i-s-e.com** ❖



New! DCE V3.0 for *OpenVMS*

Heterogeneous Distributed Computing Capability for the Enterprise

The *OpenVMS* Engineering Group is releasing the latest code base of The Open Group, which is the new name for the Open Software Foundation. Distributed Computing Environment (DCE R1.2.2) on *OpenVMS VAX* and Alpha platforms. DCE V3.0 for *OpenVMS* replaces DCE V1.5 for *OpenVMS* and puts Compaq's *OpenVMS* hardware platforms on equal functional par with the latest DCE offerings from HP, IBM, SUN, and Gradient.

DCE V3.0 for *OpenVMS* serves as the basis for a client/server computing environment where networks of multivendor systems appear as a single system to the user. Users can locate and share information safely and easily across the entire enterprise. With DCE V3.0 for *OpenVMS*, application developers can easily build portable, interoperable client/server applications with the standard set of services and interfaces that are a part of DCE. System managers will be able to manage DCE for *OpenVMS* because it comes with a set of tools to manage the entire distributed computing environment.

The Open Group and its constituent companies overhauled the DCE code base on which DCE V1.5 for *OpenVMS* was based. The overhaul included not only a massive code base cleanup and maintenance effort, but also added a NEW distributed runtime daemon and tool that makes running, managing, and configuring a DCE cell less complex and more reliable. Compaq, IBM, HP, and SUN worked together to produce a DCE product that will ensure that companies can create stable heterogeneous computing environments well into the millennium.

The important but mundane maintenance effort of cleaning the DCE code base of obsolete code and bringing the source code up to professional software engineering coding standards was just a start. These companies added functionality that allows DCE client/server developers to instrument their private clients and servers with generic informational and debugging support. DCE developers can now use one standard DCE serviceability interface to report transactional events, error or warning conditions, or just simply trace and debug information from their running code. All of this can be controlled and administered even while the clients and servers are running.

The DCE product team has been working hard to make sure that this major product upgrade will continue to provide Compaq customers with up-to-date, leading edge distributed computing capability that is ready for prime-time deployment. The Open Group's release of DCE R1.2.2 represents an impressive maintenance and functional development effort for DCE, and *OpenVMS* now delivers the result of this work and specific *OpenVMS* enhancements in DCE V3.0 for *OpenVMS*.

The DCE Runtime Services for *OpenVMS* are included in the *OpenVMS* operating system at no additional cost. The DCE Application Developer Kit, the DCE Cell Directory Server for *OpenVMS* Alpha, and the DCE Security Server for *OpenVMS* are licensed separately.

For more information please visit:
www.openvms.compaq.com/commercial/dce/dce_index.html ❖

Now shipping—Compaq Office Server MAPI Driver V7.0

For almost five years, Compaq has offered *OpenVMS* customers the ability to support the Microsoft Outlook mail client from Office Server and *ALL-IN-1* V3.2 through the Messaging Application Programming Interface (MAPI) Driver. This has enabled customers to deploy a common messaging client across the enterprise of *OpenVMS* systems and Exchange servers on Windows NT. Such commonality reduces training and transition costs, and entitles corporations to volume discounts for the client.

The MAPI Driver lets companies take full advantage of both Office Server and Exchange Server through joint access to

both message stores, both message delivery mediums, and all directories. Thus end-users can send, reply, forward (and read, re-file, copy and delete) messages to any other user in the Exchange Global Directory and any directory utilized by Office Server. Historic documents and mails from the Office Server File Cabinet can all be accessed and sent to any recipient—thereby ensuring instant access to the corporate memory built up over decades on *OpenVMS* systems.

Version 7 of the MAPI Driver adds the ability to view the Office Server File Cabinet hierarchically with up to ten levels of Nested Folders behind each Drawer. This enhancement is also being added to the Web Interface V7.0, TeamLinks Mail Client V5.0, and the IMAP4 Server within Office Server V6.0—ensuring that virtually all clients can exploit this new capability. VT users will still be able to view and access all mail and documents stored within Nested Folders, but they will not be displayed hierarchically.

Other features of Outlook now accessible to Office Server users include Auto-Reply, Sticky Note, Tasks, and Contacts. V7.0 is supported on Windows 2000, NT V4.0 and Windows 98/95 with Outlook 2000/98/97. No modifications are required to Office Server or ALL-IN-1 V3.2.

For additional information on MAPI, please visit:
www.openvms.compaq.com/commercial/a1mapi.html ❖

Windows 2000 integration with PATHWORKS and Advanced Server for *OpenVMS*

Since the initial beta release of the Microsoft Windows 2000 operating system, the *OpenVMS* Advanced Server Engineering team has received numerous inquiries into future plans for integrating Windows 2000 file and print services with the robust enterprise file and print services offered by *OpenVMS* and the PATHWORKS and Advanced Server products.

The message has always been clear: leverage the strengths developed over the past years to allow seamless integration with Windows 2000 as with Windows NT. To that end, Compaq has been testing and integrating with Windows 2000 since the initial beta releases, making necessary code changes, and documenting expected behavior. From the earliest beta releases, we provided patches to our customers that would also allow them to assist with our integration testing.

There are two types of integration support. The first is for Windows 2000 client support, which refers to the capability of a Windows 2000 desktop (usually Windows 2000 Professional) to access file and print resources shared from an *OpenVMS* system. The second is server or domain support, which refers to the ability of an *OpenVMS* server to operate as some form of domain controller in a Windows 2000 domain.

Windows 2000 client support

Compaq will support Windows 2000 clients with PATHWORKS V6.0C for *OpenVMS* and Advanced Server V7.2A for *OpenVMS*. To enable this support, you need to obtain the latest patches for the PATHWORKS V6.0C or Advanced Server V7.2A products. As for PATHWORKS V5.0F, Compaq will support Windows 2000 clients on a best-effort basis. Patches are available to

address known issues with V5. In the future, PATHWORKS V6.1 and Advanced Server V7.3 will offer full Windows 2000 client support.

Windows 2000 domain support
Compaq will provide the same level of support for *OpenVMS* servers (PATHWORKS V6.0C and Advanced Server V7.2A) in a Windows 2000 domain as is currently available with a Windows NT server. Just as any Windows NT 4.0 server can be a backup domain controller in a Windows 2000 mixed-mode domain, so can the PATHWORKS and Advanced Server for *OpenVMS* servers. With the upcoming release of PATHWORKS V6.1 and Advanced Server V7.3, the servers will support the member server role. Just as any Windows NT 4.0 server can be a member server in a pure Windows 2000 domain, so will the Advanced Server V7.3 and V6.1.

Future plans for Windows 2000 integration include functional enhancements that allow *OpenVMS* resources to appear in the Active Directory of the Windows 2000 domain. That functionality will be delivered in a future release of the Advanced Server product.

Compaq's long-term strategy is to provide full support for *OpenVMS* servers in a Windows 2000 environment. In the interim, we will aggressively provide best-effort support for our servers in this environment.

For specific details of future releases, please refer to the *OpenVMS* roadmaps at **www.openvms.compaq.com/openvms/roadmap** ❖

Integrated Terminal Office—a full back-office solution

Integrated Terminal Office (ITO) from Commercial Computer Services provides the full back-office solution needed by terminal operators in today's competitive marketplace. It allows for seamless integration with automated rack systems used for dispensing product—while providing all of the back-office functions that are required, including tank and product inventory control, invoicing, A/R, A/P, G/L, and financial reporting.

ITO is written to run on an *OpenVMS* server connected to PC networks that are found in most terminal operations. Most of the automated racks run under Windows NT and ITO provides for the transfer of data from the automated dispensing system down to the *OpenVMS* platform.

Terminal operators looking to implement a system that will provide efficient and effective handling of the daily back-office operation should investigate the benefits Integrated Terminal Office system offers.

For more information, contact Commercial Computer Services at +1 847-325-2960 or **sales@ccs4vms.com** ❖

Capacity Planning and System Performance

Part 4: *OpenVMS* Performance Expertise Center

When faced with a system slowdown, a system tuning problem or a capacity planning evaluation on *OpenVMS*, the best place to start is by answering all the relevant questions that bear on your particular issue. When working with our customers on a wide variety of performance-related questions, the *OpenVMS* Performance Expertise Center uses an approach we call the *OpenVMS* Performance Audit Litany (OPAL).

OPAL gets you started on the right track, builds a broad foundation of essential facts, and sets the stage for tackling the most difficult of these performance situations. The answers to a full set of OPAL questions create a characteristic signature that represents the current state of performance on your system—a baseline for gauging your progress as you apply specific interventions to increase throughput and/or reduce response time.

Below is a basic starter kit of OPAL questions for trouble-shooting a performance slowdown on one of your business-critical systems. You can use these questions as a base to give your systems a quick performance checkup. The questions are drawn from a recent session delivered at the Computer Technology 2000 conference in Munich, Germany.

OPAL first steps

- What's slow? How slow is it? How fast must it be?
- How does the slowdown affect business results?
- How much can you spend to fix the problem?

Digging deeper

- When is it slow? Is it ever fast? If so, how fast? Was it ever fast?
- How fast is it best case? What resources does it consume?
- When did it first slow down? What else happened around the same time? Was the slowdown sudden or gradual?
- Is everything slow now? Are some functions OK or even fast?
- What relationships can you see?
- What is the response time to throughput?
- Are heavily used resources active during slowdown?
- What system resources are consumed by the slow function?
- What tools do you use?
- What are your performance objectives?
- How do you measure response, throughput, variability?
- How do you maintain historical timelines of performance?
- What historical data is available?

The people side of the equation

- Who are the stakeholders?
- What are they measuring?
- How will they gauge success? Watch for different standards—this is often the most difficult aspect!

Timelines and trends

- History of recent tuning or configuration changes?
- New applications put into service?
- Timeline trend of increase in number of users?
- Timeline trend in growth in online storage?
- Recent movement of data files?

It's good to note that the most valuable questions will often turn out to be the ones that you have the most difficulty in answering in the first go-around. Going after the answers to these unanswered or partially answered questions will provide a strong focus for your ongoing performance investigations. As you fill in these missing links, you will improve your ability to solve the specific problem at hand and to prepare yourself for successfully managing performance on your *OpenVMS* systems in the future. ❖

OpenVMS Times is published quarterly by the *OpenVMS* Marketing Group, Compaq Computer Corporation, to keep you informed about the latest in *OpenVMS* strategy, solutions, products, and activities.

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