Decision Framework, DF-18-0559
G. Weiss

**Research Note**
15 October 2002

# The Case for OpenVMS: Should You Migrate?

**OpenVMS users must consider the options and planning criteria for staying with, or leaving, OpenVMS.**

**Core Topic**
Hardware Platforms: Server Platforms

**Key Issue**
How will centralized and distributed servers evolve during the next five years?

**Strategic Planning Assumptions**
Fewer than 10 percent of OpenVMS users will migrate from Alpha to Itanium by 2006 (0.7 probability).

Fifty-five percent of users will migrate from Alpha OpenVMS to a competitive vendor platform (Unix or Windows Server) by 2006 (0.7 probability); 20 percent will migrate to an HP merged Unix or Windows Server environment by 2006 (0.7 probability); 25 percent of OpenVMS users will remain with OpenVMS beyond 2006 (0.7 probability).

We apply our framework for evaluating the planning process of a server migration (see "How to Plan a Server Migration Strategy") to the issues of how and when users should consider a migration from OpenVMS.

## Is the application support by third parties shrinking?

OpenVMS is definitely a shrinking market opportunity for independent software vendors (ISVs). Many of the original third-party ISVs are out of the OpenVMS market or have proclaimed their last releases supported on OpenVMS, and we expect continued attrition. Thus, users with strong third-party dependency must monitor their ISVs and be prepared with an alternative platform strategy in advance of ISV departures. With Hewlett-Packard's (HP's) stated intention to move the OpenVMS environment to Itanium, users should request clear indications that ISVs will also move and support their applications on Itanium. If the preponderance of ISVs fail to support Itanium, the intended move of OpenVMS will encounter the chief obstacle to its viability in application support.

## How much custom code has been developed?

For the 50 percent or so remaining OpenVMS users running custom code, these IS organizations have the flexibility to await the outcome of HP's migration to Itanium. However, the IS organization should also be ready to assess the costs of migrating the existing code under OpenVMS or selecting another platform and operating system (OS) with third-party applications or conversion of code. If the code remains under OpenVMS and is portable enough to recompile and link, the IS organization should ensure that the code is well-documented in case the original developers depart before Itanium production systems are deployed. Even with such flexibility, the IS organization should restrain further development. Loss of the people who developed the code and poor documentation may mean starting from

scratch or switching to third-party packages that may not be available for OpenVMS. At worst, HP intends to provide a binary translation tool at a likely trade-off in performance.

**What is the level of in-house administration and technical skills?**

If OpenVMS skills become increasingly difficult to find or keep, then it's very likely that the IS organization will pay increasingly higher costs for the maintenance of OpenVMS over time. We believe that users will inevitably face this difficulty and that HP will not be able to assure the OpenVMS community of the size and distribution of technical and administrative skills. Most of the "new IT skills" emerging in the market will be focused on Linux, Microsoft .NET, deployment and provisioning, and advanced database administration, while proprietary environments will continue to suffer skill attrition. Users can help soften the impact if OpenVMS programs move to Java and C++ as the common development and program environment.

**What is the degree of interoperability and systems integration with other enterprise systems?**

The remaining loyalists have mostly used OpenVMS clustering and high-availability solutions as a testament to its high reliability and scaling. These IS organizations' reluctance to move from OpenVMS is partly from the fear that an alternative OS, such as Windows or Unix, will not provide comparable reliability and ease of use. These OpenVMS systems are operationally viable, but organically (growth in applications) static. Therefore, they should be positioned as high value to operations, low value to application expansion. Despite some of the protocols offered for interoperability (TCP/IP, COM for OpenVMS, Pathworks), we remain skeptical of OpenVMS playing roles as peer nodes in Windows and Unix networks.

**What is the vendor's road map for the platform?**

HP has decided to continue an OpenVMS road map entailing the movement of a good deal of the system code to Itanium. According to HP, the reason is that the Itanium migration is considerably simpler and easier to manage than the VAX-to-Alpha migration, its estimated internal costs will be reasonable (estimated in the $40 million range), and the current OpenVMS/Alpha revenue stream is profitable. However, the real issue is whether the program will translate into user benefits. HP must prove that the costs of migration to users will provide longer-term returns than a migration to an alternative platform. IS organizations therefore must assess the following:

1. How much of the code can move intact with compatibility maintained on Itanium 2?
2. What parts of the system code and layered software will continue to be supported vs. that designated "end of life"?
3. How well will the code perform on the designated new Itanium platforms?

These questions will remain indecisive until completion of the OpenVMS port and the delivery of production platforms on which users can run test profiles. Users will probably not have definitive answers before 2005, but HP intends to report on milestones of its posted road maps on its Web site.

**What are the vendor's technical support resources?**

Although HP may have the OpenVMS installed base's interest at heart, it will be exceedingly difficult to maintain a core of well-trained specialists worldwide that can service all of the OpenVMS accounts with mission-critical responsiveness. Simply put, IT careers are made on growth platforms as opposed to legacies considered remnants of a bygone era, regardless of the technology's superiority.

**What is the rate of advancement and functional improvements for the platform?**

As a leading indicator, users must trust HP and its partners to provide a continual stream of enhancements. If it cannot, or is not willing to provide the investment and marketing effort, OpenVMS will lack traction and strategic value. Although HP claims 400,000 systems and a continuing profitable revenue stream of $2 billion as justification for continued support, HP must nevertheless prove that the OS fits well into the evolving commodity nature of the hardware market. Systems supporting OpenVMS must be modular, be flexible and support a variety of software solutions to compete effectively. OpenVMS users should not expect priority responsiveness with the other merger details, road maps and costs vying for attention, with the exception perhaps of Galaxy, a partitioning scheme for AlphaServers that must be moved to Itanium.

**What are the suggested targets for an upgrade?**

Currently, HP's strategy consists of upgrades of HP-UX platforms such as Superdome to Itanium and the introduction of two-way and four-way Itanium 2 systems (announced 8 July 2002). Users must be apprised of the complete system road map encompassing the replacement of the Alpha GS series, including performance data and test suites. AlphaServer systems are an alternate choice, with a chip upgrade due in 2004, but with a high

probability of no further shipments after 2006 and cessation of support by 2011.

**What other vendor systems directly or indirectly compete for market attention?**

HP intends to continue to support NonStop systems, ship AlphaServers to about 2006 (with continued support of Tru64 but without further enhancements), ship PA-RISC systems with HP-UX, oversee user migrations from PA-RISC to Itanium and continue server marketing programs for Windows (ProLiant family), blades and Linux. Thus, OpenVMS must be evaluated in the context of a broad product portfolio and its effectiveness to contribute to HP's bottom line. So far, HP is suggesting that OpenVMS is a strategic installed base. However, we believe that the true test will be speed of execution in moving users to Itanium. Inordinate delays would have an atrophying effect and could divert resources and marketing attention to the winning platforms.

**How profitable, under scrutiny, is the revenue stream for the platform?**

HP maintains that OpenVMS business is profitable and maintenance revenue is good enough to sustain a business of continuing support for OpenVMS. Users should evaluate their own support expenses. If the platform is operationally self-sustaining at minimum cost, there should be no urgency to migrate to other platforms or operating environments. HP has indicated that it intends to create a Unix-like OpenVMS environment and attract Unix developers and applications to the platform. We would advise users not to be lulled by this. Such programs have had minimal success in the past (for example, IBM's attempt on the mainframe with Unix Systems Services) and represent a contrarian view of building more Unix variants than the market seeks in this era of consolidation.

**Has vendor management made a firm commitment to the platform's viability?**

We have been pleasantly surprised by HP and Compaq's serious endeavor to enhance the viability of OpenVMS with a detailed road map. Had there been a muted response after the merger, we would have declared an earlier end of life. Such an effort is worth recognition but not a passport to sustained long-term viability. OpenVMS users may feel more breathing room, but they must still remain alert to the road map's progress.

**What will be the maximum period the user/organization can remain on the platform before organizational ineffectiveness sets in?**

Eventually, because of limited development, infrequent refreshment of the technology, and a lack of human resources or application choices, an organizational IT program on OpenVMS will atrophy on the platform. As an outside target, OpenVMS could continue to survive through 2010, but the relevant issue is IT effectiveness: will it meld with the strategic directions and applications of the enterprise, or will it remain an island of computing, doing its limited jobs well but outside the organic growth of IT. HP is hoping that enabling Java development, Web services and selected ISVs such as BEA Systems and Oracle will make OpenVMS as vital as other operating environments. However, such endorsements and tools are only as effective as the speed with which enhancements are delivered to the platform. In an era of consolidation, Oracle and SAP are bent on a course of consolidating to a few Unix variants with hopes that Linux becomes the standard environment. Then, fewer ports will need to be maintained, reducing the ISV's internal resources and costs.

**How much will a migration cost?**

Third-party systems integrators and specialists in converting code and system software should help users assess the costs in migrating to HP's Itanium on OpenVMS vs. targeting another OS and platform. Costs could range from a low end of $100,000 (three-month project) to a high end of $3 million (eight months), based on the type and amount of code (for example, assembly code, 3GL, 4GL), retraining and redeployment. Among third parties in this market are Sector7 and TKM Digital (formerly Digital India). HP offers free assessments and workshops to minimize upfront costs, but the actual migration costs must still be borne by the user.

**Bottom Line:** The issue for most users is not whether to migrate, but when. We believe OpenVMS is not a sustainable strategy other than for specific and short-term tactical needs or budget constraints. If users intend to see the OpenVMS transition through to Itanium, then we recommend that they negotiate for service credits and loaners to minimize cost burdens during the transition. Such credits can come in the form of preliminary migration assessments, performance analysis, compatibility certification and loaners for pilots. If HP cannot provide specific timetables and products for the transition by mid-2003, users should have, and resort to, a contingency plan to an alternative platform. For the small, but statistically significant, number of governmental and defense users of OpenVMS with much longer

**Acronym Key**

| | |
|---|---|
| **HP** | Hewlett-Packard |
| **ISV** | Independent software vendor |
| **OS** | Operating system |

support expectations and less dependence on ISVs, these users should remain with OpenVMS and demand support from HP even beyond HP's stated end of support around 2011.