

# AlphaServer Customer Transition Guide

Alpha RetainTrust Program



In a controversial article titled "IT Doesn't Matter"<sup>1</sup> in the May 2003 *Harvard Business Review*, the author states that "As IT's core functions become cheaper, more standardized and more easily replicable, their ability to serve as the basis for competitive advantage has steadily eroded. Given this continuing inexorable trend, companies would be wise to manage IT as a commodity input, seeking to achieve competitively necessary levels of IT capability at the lowest possible cost and risk."

Thanks to the provocative title, these observations stirred enormous controversy. However, it highlighted the need to create standardized IT infrastructures that closely align IT investment and business objectives to create competitive advantage.

The Adaptive Enterprise (AE) is the HP vision to combine industry-leading solutions, services and products from HP and its partners to construct a flexible IT environment that delivers simplicity, agility and value. It synchronizes IT and business needs, and reduces operational cost by simplifying management tasks and optimizing resource use.

AE employs three guiding principles to deliver this capability — standardization, virtualization, and management:

- Standardization – leverages solutions based on industry-standard software and architectures, reusable components, and a consistent implementation to reduce cost and simplify change.

- Virtualization – an approach to IT that pools and shares resources to optimize use and automatically match supply to demand
- Management – automates the dynamic link between business processes and IT resources

To provide the increased power and flexibility required to deliver the Adaptive Enterprise, HP made several strategic decisions:

- To create standard, flexible systems by converging, over time, three proprietary RISC-based architecture systems (AlphaServer, HP 9000, NonStop Himalaya) to industry-standard Itanium<sup>®</sup>-based systems
- To standardize on HP-UX 11i as the HP enterprise UNIX operating system to deliver superior virtualization and resource management capabilities
- To port the OpenVMS operating system to the HP Integrity server platform
- To provide comprehensive affinity between Linux and HP-UX environments
- To provide a hardware platform capable of running multiple operating systems (HP-UX 11i, Linux, Windows<sup>®</sup> 2003 Server, and OpenVMS)

<sup>1</sup> Nicholas Carr, "IT Doesn't Matter," *Harvard Business Review*, (May 2003)



“We easily implemented the HP Integrity platform and had no production disruptions or failures. We involved all of our business partners early and we got the right people on the team. Software support for the Itanium platform is the key. Oracle software already ran on the Itanium platform and HP helped Quest Software port and test its SharePlex software. The HP Alpha RetainTrust program is for real and it works in a very proactive manner: Within a week, Quest had a remote link to an HP lab and HP helped Quest complete the port on time.”  
 Scott Wolfe, IT Enterprise Architect, Boeing Employee Credit Union

## Industry standard components

Prior to the companies' merger, HP and Compaq both recognized that the price/performance of the industry-standard Itanium® microprocessors would soon supersede that of proprietary RISC microprocessors. HP chose to deliver value on top of industry-standard 64-bit Itanium® microprocessors to deliver a flexible, high-performance server product portfolio – HP Integrity servers. HP Integrity servers are highly scalable and provide rock-solid reliability with ECC memory error checking and machine-check architecture to ensure data integrity. HP is investing heavily in operating system and management software to create a server environment that offers a range of virtualization, resource management and security features (partitioning continuum) and management tools (Systems Insight Manager and HP OpenView) to address the most demanding requirements. Through this platform standardization, four different operating systems are supported on the HP Integrity server – HP-UX 11i, Linux, Windows 2003 Server, and OpenVMS.

## Alpha RetainTrust Program

As an AlphaServer customer, you have many options open to you. HP provides a comprehensive set of resources and tools to support your technology transition when the business timing is right for you. The HP Alpha RetainTrust (ART) program is designed to ensure a smooth transition from AlphaServer to HP Integrity servers. Its key components are:

**Excellent products** – robust, flexible products that meet present requirements and grow to meet your future requirements

**Comprehensive customer engagement programs** – programs for executive, business and technical staffs to ensure that you are aware of HP plans and the transition tools available to help you plan and implement your transition

**Strong ISV support** – continued support for ISV applications on AlphaServer, help ISVs port their applications portfolio over to HP Integrity servers, and work together to ensure a smooth transition to HP Integrity servers

**Extensive tools, services, and resources** – transition planning, design and implementation tools and services to help minimize disruption and cost while adding business value

**Compelling business practices** – a suite of investment protection options including generous trade-in, leasing and upgrade programs

## HP platform strategy overview

### AlphaServer hardware

AlphaServer systems deliver high performance to meet the most demanding workloads. EV7-based AlphaServer systems are excellent choices for customers requiring outstanding performance, reliability and expansion for customers who plan to continue using AlphaServer. All systems (HP AlphaServer ES47, ES80 and GS1280) have the same core capabilities – hard partitions, clustering, dynamic multi-path I/O, RAID memory, and integrated server management tools.

There are three key themes of EV7-based AlphaServers:

- **SMP-on-a-chip** – memory controller, L2 cache controllers, and interprocessor communications and coordination are integrated onto a single microprocessor to reduce component count and increase reliability. All system capabilities – memory, interprocessor communications, and I/O bandwidth – scale linearly with processor clock speed increases
- **Switch-less mesh architecture** – directly connects processors to reduce system complexity and yield incredibly large memory bandwidth, speedy interprocessor communications and very low latency
- **Building block modules** – let you build linearly scalable systems, starting with the ES47 through the GS1280. Preserves investments in core products, module and building blocks as the system expands

In August 2004, HP announced the final generation of AlphaServer systems:

- GS1280 systems based on 1.3 GHz EV7z microprocessors (14% overall performance increase relative to EV7), along with faster memory (at 1.066 GHz, available for up to 40% memory price reduction)

- ES47 and ES80 systems based on 1.15 GHz EV7 microprocessors will yield 16% overall performance increases as compared with 1 GHz EV7 microprocessor at the same price as the 1 GHz EV7
- New HP storage drives, adapters, storage devices and backup devices

An AlphaServer upgrade may provide you with the most appropriate upgrade before transitioning to an Integrity server. HP will continue to sell AlphaServers running Tru64 UNIX® and OpenVMS until 2006 with support extending at least through 2011. In addition, the ART Program's business practices protect your AlphaServer investment by providing a smooth growth path to an Integrity server as your needs require.

## HP Integrity servers

HP Integrity servers, based on the Itanium®2 processor, deliver industry-leading performance across multiple workloads and operating environments, including HP-UX 11i, Linux, Microsoft® Windows Server 2003, and OpenVMS. This unique flexibility allows you to run any of these operating systems standalone or in hard partitions on the same system. Integrity servers also provide the flexibility to change operating systems should you elect to do so.

HP extends the capabilities of the industry-standard Itanium®2 microprocessor through the HP Scalable Processor Chipset zx1 for entry-level servers, and the HP Super-Scalable Processor Chipset sx1000 for midrange and high-end servers that increase memory and I/O subsystem scalability. In early 2004, the HP Integrity server family was enhanced by the introduction of the HP mx2 dual-processor module, which doubles the number of Itanium®2 processors that can be deployed in the same chassis for the Integrity Superdome, Integrity rx8620-32, Integrity rx7620-16, and Integrity rx4640-8 server models. Mx2-based Integrity servers offer nearly twice the workload capacity and nearly twice the performance density compared to current, single Itanium®2-based Integrity servers. For more information on HP Integrity servers, see <http://www.hp.com/products1/servers/integrity/index.html>

## HP 9000 servers

A transition from AlphaServer to the HP 9000 server can be the first step toward implementing a more flexible computing environment. For example, you may consolidate the application workloads currently on both AlphaServer and HP 9000 systems onto fewer, more powerful HP 9000 servers, improving operational efficiency and performance. The HP PA-8800 processor, announced in 2004, delivers 20-40% better performance than the PA-8700 processor. In addition, PA-8800 dual processor module technology doubles the density, delivering sizable performance benefits in the same form factor. Moreover, these HP 9000 servers use the same chipsets as the Integrity server family – the zx1 chipset (for entry-level

servers) and the sx1000 chipset (for midrange and high-end servers) making it simple to start with PA-8800 processors and replace them with future Itanium® processors (in-box upgrade).

## HP operating system strategy overview

### OpenVMS

OpenVMS provides a robust, secure, scalable and flexible operating system to meet the demanding requirements in markets such as financial services, manufacturing, health-care, telecommunications and government. Fundamental OpenVMS attributes — robust security, high availability and disaster tolerance through OpenVMS clustering, as well as adaptability and agility through soft partitioning (OpenVMS Galaxy), continue to deliver value. With OpenVMS supporting portable, standardized languages and environments such as JVM, J2EE and XML, OpenVMS is extended to deliver application services to users.

OpenVMS v7.3-2 is the currently shipping release as of November 2004. It supports EV7-based AlphaServer systems, with support for EV7z-based AlphaServer systems added via an upgrade kit. For OpenVMS customers, the path forward to Integrity servers is simple. HP is porting OpenVMS, OpenVMS layered applications, and all development tools to HP Integrity servers. OpenVMS for HP Integrity servers is called OpenVMS Industry Standard 64 (OpenVMS I64). OpenVMS v8.2, based on a common source code stream for AlphaServer and Integrity server, is planned for January 2005 shipment. You can smoothly integrate Integrity servers into an existing AlphaServer cluster. OpenVMS on AlphaServer will be sold until 2006, and supported at least through 2011.

ISVs have strongly endorsed the HP transition to Itanium®-based systems. HP created the OpenVMS FastTrack program to help key ISVs port their software to OpenVMS I64, validate functionality of the base operating systems, layered products and compilers, and demonstrate how easy it is to move their applications and custom code from AlphaServer to Integrity server – in most cases, simply re-compile and re-link your applications. These porting experiences provided valuable insights that are included in the OpenVMS Porting Guide. To date, approximately 350 ISV partners have committed to port more than 750 applications to OpenVMS I64, with 200+ applications available for OpenVMS v8.2, and more applications declared ready each week.

The primary drivers for you to move your OpenVMS applications to Integrity server are the availability of ported ISV or custom code applications software, and when the workload requires more performance than the existing AlphaServer can deliver.



## Tru64 UNIX operating system support

With the planned transition, over time, to HP-UX 11i, the HP Tru64 UNIX development strategy focuses on two areas:

- Preserve binary compatibility to ensure ISV stability
- Improve operating system stability, resiliency and performance tuning

HP preserves the value of your Tru64 UNIX solution ecosystem by isolating future minor enhancements from application interfaces to ensure application binary compatibility on all future Tru64 UNIX releases. This eliminates the need for ISVs to re-qualify applications to support Tru64 UNIX, or for you to re-certify your custom code. HP also plans to continue to improve the quality and resiliency of Tru64 UNIX.

Tru64 UNIX and TruCluster Server v5.1B-2, a binary compatible enhancement to v5.1B, shipped in August 2004. Key features include:

- EV7z platform support
- v5.1B PK4 patch kit
- Updated Tru64 UNIX applications and bundled products
- Refreshed Associated Products CD (APCD) products
- New Unified Buffer Cache Scaling for improved large SMP and NUMA system performance
- Enhanced cluster efficiency for bad disk detection and handling for improved cluster performance
- Improved Memory Channel subsystem performance with support for parallel Memory Channel input processing
- Up to 60% faster boot time with clustered Logical Storage Manager via code optimization
- Common management framework using OpenView and System Insight Manager

For more information on v5.1B-2, see <http://h30097.www3.hp.com/unix/v51b.html>

Tru64 UNIX v5.1B with its enhancements will be supported at least through 2011. For customers planning to continue using AlphaServer, v5.1B is the recommended, long-term release for continued Tru64 UNIX "standard" support. HP also provides more time for customers who cannot upgrade to v5.1B to plan and implement their transition to HP Integrity servers by extending Prior Version Support – Sustaining Engineering (PVS-SE) status for several older Tru64 UNIX versions (v4.0F, v4.0G, and v5.1A) through June 2007. For more information on Tru64 UNIX transition, see [www.hp.com/go/tru64transition](http://www.hp.com/go/tru64transition)

## HP-UX 11i

HP-UX 11i embodies the principles of the Adaptive Enterprise. It delivers mature and stable UNIX capabilities, combining an extraordinarily robust UNIX kernel with proven reliability, high availability, outstanding performance, extensive scalability, and tough security. It's an open operating environment designed to support mission-critical applications and take advantage of advances in technologies, applications and servers such as virtualization, intelligent management and Intel processors, as well as interoperability with Linux or Windows.

HP-UX 11i is a powerful and proven UNIX environment that delivers:

### Integrated virtualization and workload management

- Optimizes use through shared and pooled resources
- Automatically meets service levels based on business priorities
- Provides continuous application availability within and across data centers

### Intelligent management

- Visualizes and adapts configurations to facilitate a dynamic link between business demand and IT resources
- Integrates with state-of-the-art multi-operating-system management solutions to increase productivity, minimize errors and reduce costs

### Breakthrough innovation on standards

- Meets or exceeds all UNIX standards for robustness, security and quality
- Includes designed-in resilience and redundancy which delivers outstanding performance and extensive scalability
- Provides strong Linux affinity, with Linux API compatibility allowing you development of applications on Linux, and then deployment on HP-UX 11i operating environment
- Strong Java™ development tools to develop applications
- Uses HP-UX 11i Java Virtual Machine (JVM) to deliver strong performance

The power behind HP-UX 11i lies in its integration with virtualization, high availability capabilities, and management. Spanning many levels across the partitioning continuum, systems running HP-UX 11i can implement virtualization techniques from the smallest element to a complete IT utility implementation. Intelligent management, using products such as HP OpenView and System Insight Manager, improves administrator productivity, reduces cost and minimizes complexity. The HP Serviceguard product portfolio provides the greatest levels of availability and disaster tolerance, while integrating with Virtual Server environments to ensure continued optimization of investments and maintenance of service level objectives.

HP-UX 11i offers you a choice of operating environments, all built on a common core, each providing increasing levels of robust capabilities to address business requirements.

Simple to order and support, these easy-to-install packages facilitate rapid and cost-effective deployment:

- HP-UX 11i Mission Critical — a powerful platform with the highest levels of availability, workload management, and security built in
- HP-UX 11i Enterprise — enterprise-class performance and stability, with the added value of resource management, monitoring, scalability, and online data management
- HP-UX 11i Foundation — delivers the stability, manageability and interoperability needed to quickly build your UNIX foundation

HP-UX 11i v2, the newest version of HP-UX 11i for HP Integrity and HP 9000 servers, is a robust enterprise release, complete with the full range of HP manageability, availability, security and ISV software products. It began shipping in September 2004 and delivers exceptional performance on both HP Integrity and HP 9000 servers on a wide variety of benchmarks, due to improvements such as MxN threading, more kernel tunables and cell local memory. It delivers 1-128-way scaling, enhanced security features, and provides a common code release for both HP 9000 and Integrity servers.

To accelerate the availability of a leadership virtualization solution for HP-UX 11i customers, HP has expanded its long relationship with VERITAS Software Corporation. The HP-UX 11i cluster file system technology will be based on VERITAS Cluster File System (CFS) instead of TruCluster Server and Advanced File System (AdvFS), as previously planned. HP Serviceguard products will be integrated with the VERITAS Storage Foundation products that contain a cluster file system (CFS) and cluster volume manager. HP Serviceguard with the cluster file system option is targeted to be available in Q3 CY05, approximately one year earlier than previously planned.

By strengthening the existing relationship between HP and VERITAS, this change offers what customers and ISVs have requested: tighter alignment of virtualization, clustering, partitioning, symmetric multi-processing, and support of

multi-platform, multi-vendor environments. VERITAS will continue to provide the strategic HP-UX 11i file system (known as Online JFS) and volume management (based on VxVM) components. VERITAS will deliver their entire product suite on HP Integrity server sooner (1H CY 2005), helping Tru64 UNIX customers who use AdvFS and TruCluster to transition to HP Integrity server running HP-UX 11i v2 sooner. This change provides equivalent functionality to that provided by TruCluster Server and AdvFS sooner, plus enhanced features not available in those products.

HP will provide a smooth evolution to these new technologies via training, conversion tools and white papers, as well as product trade-in business practices.

For more information on HP-UX 11i, see [www.hp.com/hpux](http://www.hp.com/hpux)

## Linux

Linux complements HP-UX 11i, bringing you cost savings, performance and the benefits of open source. Linux is robust and economical for running “network edge” workloads. It is widely accepted in technical computing markets because of its flexibility and lower cost. The strong floating point performance and large memory addressability of HP Integrity server, plus the ability to customize Linux, make it very appealing for many technical computing applications.

Today, these same capabilities make Linux attractive to an expanding range of commercial workloads in the telecommunications and financial services industries, as well as infrastructure workloads such as directory services, secure web transaction servers, ERP, SCM, CRM, and on-line trading. The HP strategy is to add value to the Linux environment via robust system-level management and service-level management, enterprise enhancements for Linux (such as HP Serviceguard for Linux), and simplified Linux server deployment.

HP offers an extensive Linux professional services portfolio spanning software engineering, consulting and support to enable successful enterprise implementation of Linux-based solutions. Specialized HP sales and services personnel help you determine where Linux can be deployed to provide strong results. The Linux Affinity features provide runtime, migration and development environments on HP-UX 11i. HP also provides Linux migration, deployment and support services to optimize your overall enterprise environment to realize the benefits of Linux. For more information, see [www.hp.com/hps/linux](http://www.hp.com/hps/linux)

## Windows Server 2003

Many AlphaServer customers employ a multi-operating system IT infrastructure, with HP ProLiant servers running network edge, infrastructure and application workloads, and AlphaServer systems providing the back-end server (typically a database). You may be planning to move workloads previously run on your AlphaServer systems to ProLiant servers to reduce cost, simplify system management and leverage your staff's technical skills. You might also be considering moving more resource-intensive workloads

# Triggers for Tru64 UNIX customers to transition to HP Integrity servers — general guidelines

## Stay on AlphaServer “as is” when some or all of these criteria are applicable

- Workload requirements met by present AlphaServer
- AlphaServer provides cost-effective solution
- ISV application not available on HP-UX 11i
- ISV application not qualified on Tru64 UNIX v5.1B
- New ISV functionality (ISV upgrade) or custom code software not required
- No cost savings through IT consolidation on new AlphaServer

## Upgrade to EV7-based AlphaServer when some or all of these criteria are applicable

- Workload requirements exceed present AlphaServer environment and you want to stabilize functionality
- No need for enhanced ISV functionality in future to maximize solution longevity
- ISV(s) providing the solution are qualified on Tru64 UNIX v5.1B
- Required new ISV functionality (ISV upgrade) is available on Tru64 UNIX v5.1B
- Cost savings possible through IT consolidation

## Transition to HP Integrity server running HP-UX 11i v2 may be advisable when

- System and storage fully depreciated, lease nearing expiration
- Expensive “non-standard” support cost on AlphaServer, storage, and Tru64 UNIX or older ISV software revisions
- Need to enhance or re-engineer solution stack or custom code
- Already use HP-UX in IT infrastructure and can reduce TCO through IT consolidation on Integrity server
- Want to use HP-UX 11i virtualization and workload management capabilities to increase utilization and business agility
- Upgrade solution stack to handle increased workload or required new functionality
- Re-host existing solution stack on Integrity server to improve price/performance
- Upgrade current application to get new functionality or as prerequisite for another application
- Consolidate multiple databases onto Integrity server using Serviceguard for clustering
- Run multiple OS in electrically isolated hardware partitions
- Reduce license and support fees as a result of strong price/performance of Integrity servers
- Tru64 UNIX version 4 customer requiring clustering can move to HP-UX 11iv2 using JFS (VxFS version 3.5) and LVM today
- Tru64 UNIX version 5 customers using AdvFS, but not TruCluster Server, can transition in Q2 CY05 when the equivalent functionality (VERITAS VxFS version 4) is available for HP-UX 11i v2
- Tru64 UNIX version 5 customers who use AdvFS & TruCluster Server may delay transition until the VERITAS Cluster File System and Cluster Volume Manager are integrated into HP-UX 11i and Serviceguard (targeted for 2H CY05 as an update to HP-UX 11i v2)

## Transition to HP 9000 server running HP-UX 11i advisable when

- ISV application not yet available on HP Integrity server running HP-UX 11i
- Need immediate solution stack that cannot at this time be deployed on HP Integrity server
- Already using HP 9000 in your IT infrastructure, can reduce TCO through IT consolidation on HP 9000

to HP Integrity servers running Windows Server 2003, where they can take advantage of the additional reliability of HP Integrity servers combined with the 64-bit addressability enhancements to Windows Server 2003 for memory-intensive applications. These capabilities are demonstrated by the leadership TPC-C results on an HP Integrity Superdome running Microsoft Windows Server 2003 Datacenter Edition and Microsoft SQL Server 2000 Enterprise Edition (64-bit). To help customers move workloads to either ProLiant or HP Integrity servers, HP provides a breadth of financing, leasing, planning and deployment services. For more information on these services, refer to [www.hp.com/products1/itanium/services/index.html](http://www.hp.com/products1/itanium/services/index.html)

## Your business needs determine when to transition

HP supports the transition from AlphaServer to any of the four operating systems supported on HP Integrity servers – HP-UX 11i, Linux, Windows 2003 Server and OpenVMS I64.

The OpenVMS transition is straightforward as HP is porting the same source code pool, layered products and software development ecosystem to Integrity server.

Because the Tru64 UNIX-to-HP-UX 11i transition is more complex, the remainder of this guide provides advice on when transition to HP-UX 11i is appropriate. It identifies HP tools to help you plan, design and implement your transition.

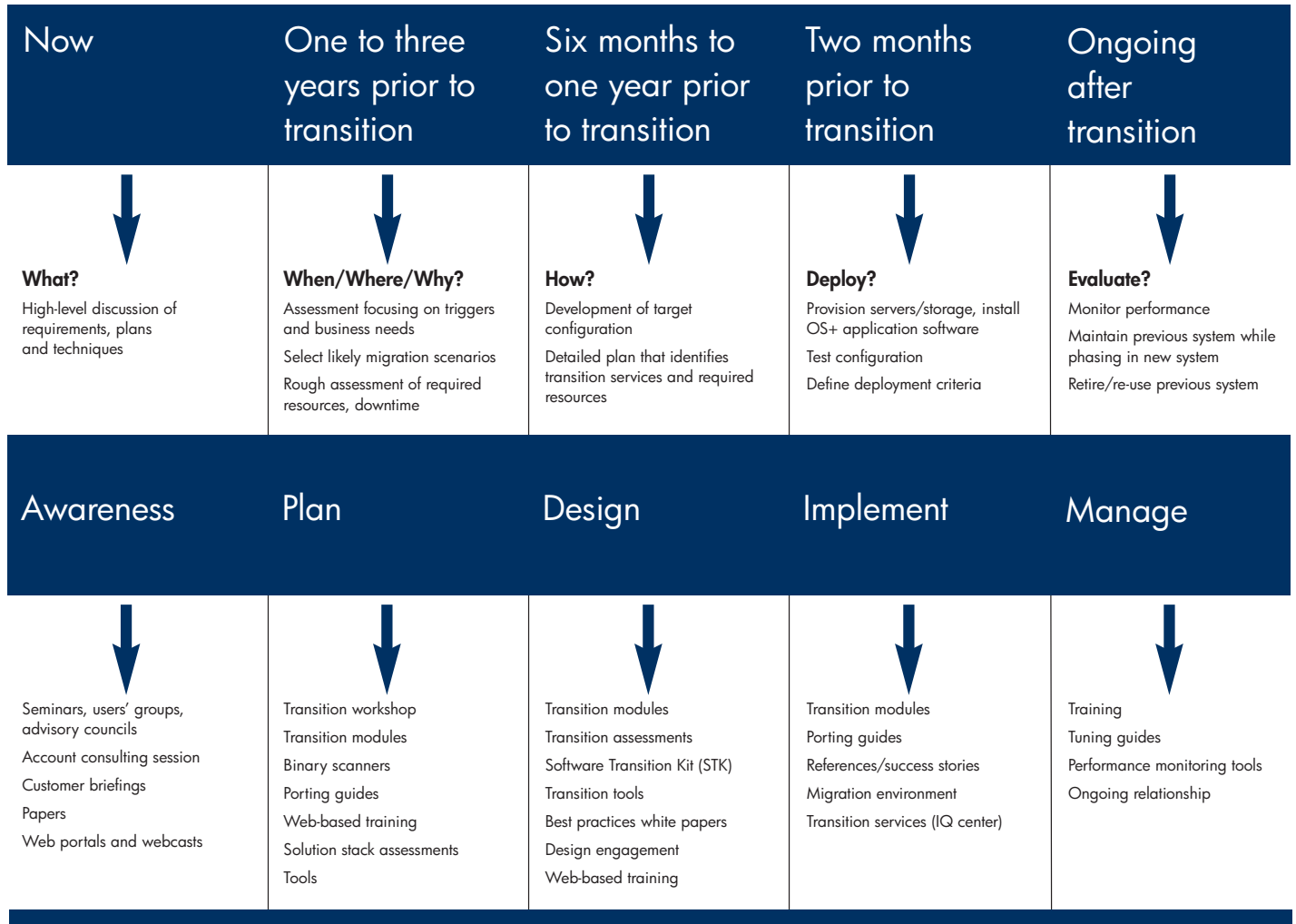
## Tru64 UNIX to HP-UX 11i transition – factors to consider

The first step in planning any transition is to identify overall IT objectives, inventory the present solution stack, and assess how well your present IT infrastructure addresses those requirements.

A typical solution stack includes:

- Server, storage, network hardware
- Operating system version
- Storage software and revision
- Database management software
- ISV software (and “completer” applications frequently used with those applications)
- Custom code software
- System infrastructure and management tools

## Transition lifecycle — a systematic approach



You determine when it's appropriate for your business to transition to Integrity server. Competitors would portray that you have limited options with HP. On the contrary, you have a number of options to consider. The right time to move to Integrity server is when it delivers the business value that you require. To help you identify the appropriate time for you to transition from Tru64 UNIX to HP Integrity server running HP-UX 11i, HP has identified guidelines and recommendations, shown in the chart on page 6.

### How can HP help?

HP has developed a five-stage Transition Life Cycle model shown in the figure above – that identifies the stages that occur when planning an IT transition, along with rough timelines and questions to be addressed for each stage.

### ISV support

ISV application availability on Integrity server and ongoing support for their applications on AlphaServer are critical factors in determining transition timing. HP works continually with its ISV partners to ensure a smooth transition. Integrity server's strong performance and the rich feature set of HP-UX 11i has made it very attractive for ISVs to port their applications to Integrity server, which is a minor port for applications already available on HP-UX 11i on HP 9000 servers.

HP implemented a two-level Itanium® recruitment strategy with its ISV partners. First, HP secured commitment to port to Integrity server from the most heavily used ISVs, with many applications available now or soon. Second, HP addressed the broader ISV community through developer events in both North America and Europe. This strategy has yielded strong results, with more than 2,500 ISV applications available on Integrity server today on HP-UX 11i, Linux, and Windows 2003 Server, with more coming each day.



## Complimentary transition tools, services and resources

HP provides a combination of transition tools and services to assess your transition requirements, as well as complimentary training, white papers, and analyst papers and transition tools to help you plan, design, and, in many cases, implement your transition.

### Transition modules

Making the transition as seamless to your business operations as possible requires a good blueprint. HP has invested extensively in the development of transition modules (TMs), a consolidation of HP-developed tools, documentation, best practices, white papers, porting guides and software tools. TMs are mapped to the transition phases to help you identify requirements, timing and required resources. They are modular, with cross-references to other modules to avoid repetition. These “living tools” incorporate periodic improvements to help you gain from the experiences of others who have successfully transitioned. Four Tru64 UNIX-to-HP-UX 11i TMs are available.

**Platform Infrastructure Planning Transition Module** includes a systematic information-gathering model, planning information and transition recommendations for servers, operating systems, networking, storage devices and tape devices. It discusses key platform change topics

such as data endian differences, storage transition, clustering considerations, archived data transfer, system management, security and server sizing information.

**Custom Code Planning and Design Transition Module** provides planning and design information and recommendations to estimate the work required to move custom code applications and to port your custom code to HP-UX 11i on Integrity servers. This module includes a set of complimentary application transition tools (detailed in a later section), plus detailed information, including project scoping tools, application development tools, development environment differences, API differences, and a description of the online application transition tools.

**Packaged Application Planning and Design Transition Module** provides two elements to help you plan an ISV transition to HP Integrity server. First, it includes ISV white papers that provide application-specific transition planning and design advice for moving to HP-UX 11i on Integrity servers. White papers are available on leading ISVs such as Baan, BEA, Iona, Informatica, Informix, Oracle®, Peoplesoft, SAP, SAS, Sybase and Tibco, with many others planned. The second area is ISV applications availability. The ISV Roadmap Advisory tool helps HP account teams identify ISV application status and availability on all HP hardware platforms (AlphaServer, HP 9000, HP Integrity server) and operating systems (Tru64 UNIX, HP-UX 11i, Linux, OpenVMS and Microsoft Windows Server) to help you plan your upgrade or transition plans.

**Database Planning Module for Oracle** focuses on planning the pre-migration, data migration and post-migration operational and technical tasks to ensure a completely safe transition for your Oracle database. The HP Database Migration Planning Assistant (DBMPA) tool helps plan your database migration effort by estimating the time it should take to transition your Oracle database from Tru64 UNIX to HP-UX 11i on Integrity server. This module then provides suggestions on the methods to use to reduce that average transition time to meet your business requirements.

These complimentary transition modules are available for download at [www.hp.com/go/tru64transition](http://www.hp.com/go/tru64transition).

Additional transition modules for other platform transition pairs (HP-UX 11i on HP 9000 to HP Integrity server) are available at [www.hp.com/go/evolution](http://www.hp.com/go/evolution)

## Application transition tools

**Tru64 UNIX to HP-UX Software Transition Kit (STK)** helps identify and resolve application compatibility issues between HP-UX and Tru64 UNIX. It contains extensive documentation, including white papers, best practices, usage guide and porting guide, and file scanning utilities that identify required changes. It can be downloaded at no charge at [www.hp.com/go/stk](http://www.hp.com/go/stk)

**binaryScan v1.0 for HP-UX, Tru64 UNIX and Solaris** replaces ABIScanner for HP-UX and appscan for Tru64 UNIX. It's an application transition assessment tool that reports the compatibility levels of application programming interfaces (APIs) or application binary interfaces (ABIs) from a source operating system to a destination operating system. In addition, binaryScan provides new features such as a GUI and improved CLI and reporting format. More information is available at [http://devresource.hp.com/drc/resources/binaryScan/binaryscan\\_features.jsp](http://devresource.hp.com/drc/resources/binaryScan/binaryscan_features.jsp)

**Tru64 UNIX Migration Environment for HP-UX** is a runtime environment installed on your HP-UX 11i v2 system that contains Tru64 UNIX APIs, development tools, commands and utilities to help you transition Tru64 UNIX custom applications to the HP-UX 11i on Integrity servers or HP 9000 servers. It can be downloaded at no charge at <http://devresource.hp.com/drc/resources/menv/MEfeatures.jsp>

## Transition planning services

**Account Consulting Sessions (ACS)** are two- to three-hour working sessions between HP or HP partner technical and business personnel and your key team members. These informal sessions address IT concerns and discuss key business and technology requirements and trends to assist with the development of your short- and long-term plans.

**Transition consulting workshops** are customized one- to three-day technical planning and problem-solving workshops designed to address your key requirements. They are technical collaborative exchanges between your technical team, the HP technical team and, where appropriate, third-party partners such as ISVs and systems integrators. Although structured in design, workshops are informal planning sessions that identify your specific requirements and create a transition plan, identify next steps and timing, and specify required resources. Please contact your account representative to schedule transition planning services.

## Complimentary training

HP has developed a comprehensive transition training curriculum specifically for HP Tru64 UNIX customers and partners to learn about HP-UX 11i. This online curriculum includes Web-based self-study training courses and webinars. The webinars are complimentary to HP Tru64 UNIX customers and the web-based courses are available via an e-coupon and registration. The e-coupon is available to all Tru64 UNIX customers. With the e-coupon, the normal fee for these courses is waived. If you have not yet received your e-coupon, send mail to [Tru64.training@hp.com](mailto:Tru64.training@hp.com) or contact your HP or partner sales representative to request an e-coupon. The training is divided into two areas.

**Concepts and Facilities** includes complimentary resources such as white papers, reference tools and "side-by-side Tru64 UNIX and HP-UX" webcasts. Webcasts include: Overview and System Administration, Clustering & Disaster Tolerance, UNIX Storage Configuration, Large System & Resource/Workload Management, Transitioning your applications from Tru64 UNIX to HP-UX11i Application Transition Tools, Planning a Technology Transition, Enterprise Server Evolution, and Tru64 UNIX on AlphaServer to HP-UX on HP Integrity Server: Database Migration for Oracle9i™. These webcasts are available online at [www.hp broadband.com](http://www.hp broadband.com).

**Fundamentals** are a series of web-based courses written from a Tru64 UNIX perspective to help you quickly become familiar with HP-UX 11i.

In addition to the above Web-based courses offered at "no charge" via e-coupon, HP Education Services offers additional courses (such as "more fundamentals", "in-depth", "classroom courses") consisting of instructor-led classroom training specifically recommended for customers who have chosen HP-UX as their target transition platform. There are over 100 HP-UX-oriented courses offered by HP Educational Services. Additional training (for-fee) is available through HP Training at [www.education.hp.com/](http://www.education.hp.com/)

## Fee-based transition tools, services and resources

### HP porting and migration services

Transition to the HP Integrity server environment typically requires porting or re-engineering both packaged applications and custom-developed applications. HP has developed tools to assist customers and help ISVs port their applications to HP Integrity servers. For customers who prefer that HP port their applications to HP Integrity servers, HP has proven project-based porting and migration services that are available with a fixed price, scope and timeframe, backed by rapid deployment capability. Other software services include application consolidation, designing and deploying applications for high availability, enterprise application integration, and using HP "pre-compiled software modules" to speed development, test and deployment. These capabilities leverage HP expertise and development and get customers operational on Integrity servers faster and more safely than competitors, providing a better return on your IT investment. HP not only provides porting assistance to move Tru64 applications to HP-UX 11i, but also can provide Linux, Windows 2003 Server, and OpenVMS porting and migration services to meet your needs. Contact your HP account representative to request more information.

#### **Integrity TestDrive**

The TestDrive program ([www.testdrive.hp.com](http://www.testdrive.hp.com)) provides online access to quickly test applications on HP Integrity servers running HP-UX and Linux. TestDrive is useful to customers who have ported their custom code applications and want to see how these applications will perform on HP Integrity server. For more in-depth porting and testing, HP recommends that you schedule a visit to either the HP/Intel® Solution Centers or the IQ Center.

#### **Worldwide HP/Intel® Solution Centers**

The HP/Intel® Solution Centers (located in Cupertino, California; Grenoble, France; and Shanghai, China) provide customers and ISVs a collaborative environment to port their software to HP-UX 11i, Linux and Windows through provision of tools and porting capabilities, backed by the Solution Center expertise. The centers also help customers verify the performance and scaling of ISV solutions on HP Integrity servers. A complete datacenter infrastructure, including the whole range of HP Integrity servers, enables "proof-of concept" testing in a secure, controlled environment. For more information, see [www.hpintelco.net/techno\\_titanium.htm](http://www.hpintelco.net/techno_titanium.htm)

### HP IQ Center

The HP IQ Center, located in Littleton, Massachusetts (eastern USA) is a lab environment with all HP hardware platforms (HP Integrity, HP 9000, ProLiant, and AlphaServer) running multiple operating systems (HP-UX, Linux, OpenVMS, Tru64 UNIX, or Microsoft Windows) and applications from our key ISV partners. An excellent environment to help customers design their transition to Integrity servers, the center provides architectural analysis and recommendations, prototype solution development, proof-of-concept validation, solution migration services, benchmarking and performance tuning, and many other services. The engineering resources of the IQ Center are also available for Transition Consulting Workshops. For more information, see [www.hp.com/services/iqcenter](http://www.hp.com/services/iqcenter)

### HP consulting and integration services

When you are ready for the implementation phase of your transition, you can use HP fee-based services to help ensure a successful transition. HP provides alternatives that address any method that you want to use:

- Use in-house staff for transition, but need HP guidance
- Lead with your in-house staff for transition, with assistance from HP
- Outsource transition effort to HP or another services organization

HP has a multitude of customer services including:

- IT strategy and architecture
- Infrastructure services and management
- Business application integration
- IT consolidation
- Security
- High availability and business continuity
- Industry services
- Managed services and outsourcing

## HP Network Storage solutions – operating system support

StorageWorks product	Comments	Tru64 UNIX v4.x	Tru64 UNIX v5.x	HP-UX on HP 9000 server	HP-UX on Integrity server
HSG80-based systems (MA8000, EMA12000, EMA 16000)	1 GB Fibre Channel (FC) host/SCSI drivers	Yes	Yes	No	Yes
Modular SAN Array (MSA1000)	2 GB FC host and drives	No	Yes	Yes	HP-UX 11i v2
Enterprise Virtual Array (EVA3000, EVA5000)	2 GB FC host and drives	No	Yes	Yes	HP-UX 11i v2
XP Disk Array	Data Center SAN	No	Yes	Yes	Yes

### HP business practices and investment protection

#### AlphaServer Customer Assurance Program (ACAP)

ACAP offers a comprehensive suite of investment protection initiatives when you purchase new AlphaServer systems today and plan to transition to HP Integrity servers in the future, including:

- Money-back customer satisfaction guarantee on HP Integrity servers, subject to agreed-upon acceptance criteria
- Technology refresh incentives and guaranteed trade-in values for AlphaServer
- Transition lease program that allows you to purchase AlphaServer today and transition to Integrity server with a guarantee of no increase in lease payments when moving to HP Integrity servers.
- HP software license trade-ins
- Support for ISV license transfers
- Storage hardware and software upgrades

### HP software license trade-in and transfer policy

HP offers generous cross-platform software license trade-in and transfer policies for operating systems and HP-layered products to simplify the transition to HP Integrity servers. HP has enhanced these policies to include trade-in of HP Tru64 UNIX layered products to their VERITAS equivalent products. If you have valid support contracts on your HP software licenses, you can transfer or trade in those current licenses for the equivalent destination licenses at no charge. You can also purchase new destination licenses at 40% of the new license purchase price. You can use your software licenses on their present system, consistent with the parallel usage guidelines, as you move to HP Integrity servers.

### StorageWorks investment protection

To help you plan migration of your storage infrastructure (if required), the chart above lists recent HP Network Storage solutions (starting with the HSG80-based storage arrays), and their support on Tru64 UNIX, HP 9000 and HP Integrity servers running HP-UX.

If your storage array is not in this table or you are using direct-attached SCSI storage with your AlphaServer, you must purchase a storage environment supported on HP-UX 11i.

Alternatively, you can trade-in your HSG80-based products for a new HP StorageWorks Enterprise Virtual Array EVA3000 or EVA5000 system, including fibre channel disks, and receive an 8% incremental discount on this purchase. You can also trade in your Data Replication Manager software for a StorageWorks Continuous Access EVA software license at no charge (with a valid support contract) or 60% discount (without a valid support contract). Further information on HP business practices is available at [www.hp.com/products1/evolution/alpha\\_retaintrust/practices.html](http://www.hp.com/products1/evolution/alpha_retaintrust/practices.html)

### Conclusion

Change is often necessary to increase IT and business value. HP has product strategies designed to provide you with powerful, flexible IT environments that deliver substantial value to your business. HP welcomes the opportunity to continue working with you to develop stronger, more flexible solutions. Creating an adaptive enterprise requires careful planning and excellent execution. We invite you to use the breadth of tools, services and resources we have provided to help you successfully plan, design and implement this transition. Contact your local HP representative to obtain further detail or to request assistance in developing your transition plans.

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