HP-UX 11i compatibility for HP Integrity and HP 9000 servers

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Introduction

Hewlett-Packard (HP) understands your need for investment protection. By providing multiple levels of compatibility between operating system versions, between hardware platforms, on virtual machines, and even between chip architectures, we believe the HP-UX operating system provides the most comprehensive investment protection in the industry. (See Appendix A for a definition of levels of compatibility)

Compatibility across operating system releases and hardware platforms

For "Well-behaved" user space applications Hewlett-Packard (See Appendix A for a definition of "Well-behaved" and other terms):

Maintains forward data, source, build environment, and binary compatibility across all hardware platforms of the same architecture family (e.g. Integrity or HP 9000) which are supported by the same version of HP-UX;

Provides forward data, source, build environment, and binary compatibility across HP-UX versions on HP 9000 servers and Integrity servers on their respective architectures. This is true for 32bit or 64bit applications on either architecture family;

Delivers new features and improved performance with each new HP-UX release. Binary compatibility across Operating System versions applies to legacy features (features that were present in the earlier release) and often still holds true for new features. There are some instances, however, where applications may be required to recompile in order to use or leverage a new feature.
See the release notes for each version of HP-UX for information on new features that may require changes to applications.

Compatibility within HP-UX 11i Virtualization Solutions

"Well-behaved" applications built on HP-UX 11i are binary compatible to run within HP-UX Virtual Partitions (vPars) on the same architecture family. No changes, recompilation or re-certification is necessary.

"Well-behaved" applications built on HP-UX 11i Integrity are binary compatible to run within an HP Integrity Virtual Machine. This binary compatibility applies to applications with no specific device dependencies and to applications that depend only on devices currently virtualized by Integrity VM. Most applications do not have specific device dependencies. However, if your application has specific device dependencies, please refer to the "HP Integrity Virtual Machines QuickSpecs" or "Software Solutions in HP Integrity Virtual Machines (Integrity VM)" for details.

Compatibility between architecture families

In addition to the compatibility provided within an architecture family, HP-UX 11i on HP 9000 servers is data, source, and build environment compatible with HPUX 11i on Integrity servers. Build environments and source files can be moved from HP 9000 servers to Integrity servers and be rebuilt without modification.

Application binaries that were built on HP-UX on HP 9000 servers are binary compatible, with some limitations, with HP-UX on HP Integrity servers when running through the Aries Dynamic Code Translator. The use of Aries can be completely transparent. For more information about Aries, see http://www.hp.com/go/aries.

Support

HP is committed to providing investment protection via compatibility as outlined above. Any owner of application code that meets the criteria for compatibility, who has encountered a compatibility failure as defined by this document, should contact HP through a special support line (for North America) at 1-800-249-3294 and use option 2. Help is also available alternatively by sending an e-mail to dspp.dev@hp.com. Please identify the problem as a "compatibility failure".

Appendix A:

Definition of Terms and Levels of Compatibility

There are multiple types of compatibility that need to be defined.

1. Forward Compatibility means that there is compatibility between a version and a later version. It does not mean or include compatibility going from the later version to the previous version. All references to compatibility in this document are for forward compatibility only.

2. Build environment compatibility means that application build environments (makefiles, script files, etc.) can be moved and used unchanged from the original system to the target system.

3. Source compatibility refers to the ability to compile the same application code source file on an original system and a compatible system with different versions of the HP compiler.

4. Binary compatibility refers to the ability to compile an application on a specific solution (architecture, hardware platform, Operating system version) to produce a binary file. That binary file, without modification, can be run on the solution where it was created and it can be on a target solution which is binary compatible.

5. Data compatibility means that the data format on the different targets is the same.

6. "Well-behaved" User Space Applications:
   HP-UX provides compatibility for applications that are user space (as opposed to kernel intrusive) applications that are "well behaved". A "well behaved" user space application is an application that adheres to the following characteristics:

   1. Uses only documented public application programming interfaces (APIs) (Documented interfaces are those found in the system manual (man) pages or at http://docs.hp.com)
   2. Is not a kernel intrusive application
   3. Adheres to standard development practices (for example: a shared library cannot be dependent on an archive library, etc.)
   4. Does not use features that are specifically documented as having platform architecture or configuration limitations
   5. Has no software dependencies on specific types of hardware (e.g. specific mass storage devices or specific I/O or networking adapters.)
   6. Does not decompose an HP-UX product and then reuse the results of the decomposition. (For example: extracting and using a module from a system library, or copying a system library or command from one release to another, et

For more information

http://www.hp.com/go/hpux11i
http://www.hp.com/go/integrity

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