

**hp's** Linux compatibility  
solutions for hp-ux

develop on Linux



deploy on hp-ux



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## hp's Linux compatibility solutions for hp-ux

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### now developers can

- run Linux applications on Linux and HP-UX seamlessly
- develop applications on Linux, and then deploy on HP-UX by recompiling



**business challenges** Linux has emerged as the low-cost, platform-neutral development environment of choice within the application development community. According to IDC, the market share for Linux had surged 212% in 1998, outpacing the growth of Windows® NT, NetWare, UNIX® and all others in the server market. However, Linux still has challenges ahead, including being a more stable and reliable environment for mission-critical and enterprise customers.

**hp's solutions** To ensure the best investment protection for our customers, HP offers the Linux Compatibility Solutions on HP-UX for both PA-RISC and the Itanium™ Processor Family (IPF) so customers can still leverage the low-cost development environment of Linux and be able to deploy on HP-UX with its application availability, unmatched scalability and reliability, robustness, and trust. To achieve this ground-breaking innovation, HP offers two toolkits for developers to be successful:

- **Linux Runtime Environment with binary compatibility**—which enables Linux IPF applications to run seamlessly on HP-UX IPF without recompilation, by using Linux ABIs (application binary interfaces).
- **Linux Porting Kit with source compatibility**—which allows the transfer of Linux PA-RISC/IPF applications to the HP-UX PA-RISC/IPF environment, respectively, by using Linux source compatibility tools and APIs (application program interfaces), which work concurrently with the existing HP-UX libraries, making *96% of Linux core APIs available* to the developers.

With these Linux compatibility solutions for HP-UX, application developers and e-services developers will have the most competitive cost and total developer experience with Linux development and HP-UX deployment on PA-RISC and the Itanium Processor Family systems.

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leverage the low-cost development environment of Linux and deploy on **hp-ux**

**binary compatibility** With binary compatibility, the developer can develop applications on Linux IPF and then move the applications seamlessly to HP-UX IPF unaltered. Hence, these “Linux” applications can now run better with all the mission-critical features of enterprise HP-UX on the IPF environment.

To achieve this, HP plans to introduce the HP Linux Runtime Environment Toolkit (with Linux ABIs) for HP-UX IPF. With this toolkit, application developers can achieve binary compatibility, which enables 64-bit little-endian IPF Linux applications to run on big-endian IPF HP-UX without recompilation. This way, developers only need to build once on Linux IPF and be able to run their applications on both Linux and HP-UX IPF seamlessly with no code changes. This toolkit will also help reduce build and support costs for developers interested in multi-OS opportunities.

**Linux runtime environment** HP’s Linux Runtime Environment Toolkit for HP-UX IPF will include the following three main components:

- **LE Itanium runtime environment**—will include many libraries, commands, utilities, packages, and Linux ABIs.
- **Linux software transition kit**—will improve productivity with tools that scan binaries and suggest recommended changes.
- **Linux runtime environment white paper**—will document the binary compatibility process and issues between Linux and HP-UX.

**source compatibility** With source compatibility, the developer can port applications from Linux PA-RISC/IPF to the HP-UX PA-RISC/IPF environment by using the Linux Porting Kit for HP-UX.

With this porting kit, the application developers can use Linux source compatibility tools and APIs to easily convert the Linux applications to run on HP-UX. The Linux Porting Kit for HP-UX enables developers to build and compile on HP-UX, using familiar Linux application development tools. It also provides a library of Linux-compatible APIs for HP-UX and a code scanner to identify changes needed. These tools make it simple to deploy “Linux” applications into the HP-UX environment.

**Linux porting kit** The Linux Porting Kit for HP-UX includes the following four key components:

- **Open Source developer’s toolkit for HP-UX**—contains a collection of over 50 popular, easy-to-install Open Source application development tools.
- **Linux-compatible API library**—contains almost 200 Linux-compatible APIs in libhplx, the related header files, and the library sources. Derived from the GNU libc 2.1.3, the Linux-compatible APIs work concurrently with the existing HP-UX libraries, which will make available 96% of Linux core APIs to the developers.
- **Linux software transition kit (STK)**—with scanner tools to identify and recommend changes needed in the Linux applications when porting to HP-UX.
- **Linux application porting guide**—with extensive, easy-to-use documentation such as the porting process, white papers, and numerous online resources.

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