Solaris™ Containers for Linux Applications

Virtualization Platform for Your Solaris and Linux Applications

Solaris™ Containers for Linux Applications allow Linux applications to run unmodified on the Solaris 10 Operating System (OS). By leveraging all the benefits of Solaris Containers, this feature combines the best of virtualization, resource management, and OS flexibility.

Highlights

- Maximizes consolidation of IT environments by allowing Linux and Solaris applications to coexist on the same Solaris 10 system.
- Increases flexibility by lowering the barrier to migrate from Linux to the Solaris OS.
- Removes dependencies on unpredictable schedules and source code availability for both in-house and third-party applications.
- Boosts cross-platform development by extending the observability features of Solaris 10 to the Linux platform.

Linux interoperability

Sun has been enabling Linux compatibility and interoperability for many years. Apart from their common history, Linux and the Solaris OS today share many standards and protocols that can be employed to integrate the two platforms. Throughout previous releases, the Solaris OS has maintained source compatibility with Linux applications. It also featured lxrun, an open source utility that allows Linux applications to be executed under Solaris without requiring source code recompilation. Now, with the Solaris 10 OS, Sun is taking interoperability with Linux to a new level. Solaris Containers for Linux Applications allow Linux binaries to run unmodified inside the secure environment of a Solaris Container with unprecedented ease of use and performance. By extending the benefits of Solaris Containers to non-native applications (those that do not run on the Solaris platform), Solaris 10 effectively becomes the premier platform for developing, testing, and deploying Linux applications.

Consolidation of IT environments

Sun provides a unique combination of hardware and software to enable customers to consolidate their data centers. Instead of managing and operating dozens or even hundreds of disparate systems, customers can benefit from Sun's leadership in chip multithreading capabilities, as well as a full portfolio of virtualization technologies to consolidate their environments, lowering cost and complexity.

In particular, the Solaris Containers feature is proving to be a revolutionary tool for consolidation. By enabling Linux applications to run in a Solaris Container — without requiring source code modifications or recompilation — the Solaris 10 OS becomes an even more powerful consolidation platform. Customers can reduce the number of servers and operating systems that need to be managed, without affecting their applications.

Linux to Solaris migration

As businesses become increasingly disillusioned due to the lack of cost savings promised by Linux vendors, many customers are now seeking an alternative path to a truly scalable, enterprise-class, secure but affordable operating system, such as the Solaris 10 OS. However, previous investments in Linux applications — from in-house or third-party providers — have created a significant "barrier to exit" for companies that want to move away from Linux. Furthermore, unpredictable application schedules and roadmaps, as well as limited or missing access to application source code, can make a transition appear difficult.

With Solaris Containers for Linux Applications, Sun's customers are empowered to migrate in incremental phases — rather than all at once — and at their own pace. Linux applications that may be too time-consuming or risky for an initial migration can remain operational throughout a Solaris 10 deployment, then tackled at a later stage without disruption to the customers' environment.

Cross-platform and Linux development

Solaris offers a unique set of developer tools and observability capabilities. By allowing Solaris and Linux binaries to coexist on the same system, cross-platform application testing and deployment is simplified. In addition, it is now possible to use the award-winning Solaris 10 dynamic tracing (DTrace) capabilities to monitor and help debug Linux applications, significantly increasing their performance and stability. It even becomes possible to simulate and troubleshoot multitiered, multiplatform applications and services.

Across the board, Sun is seeing extraordinary developer enthusiasm around the Solaris 10 platform. ISVs are porting to Solaris and certifying their applications for Sun's flagship operating system faster than ever before. This increase in mindshare, combined with the fact that no other operating system can offer anything close to its capabilities, means that the Solaris 10 OS is rapidly becoming the most powerful developer platform for Linux applications.

Integrated security and administration

Solaris Containers have seen phenomenal popularity and uptake since the release of Solaris 10. Rather than introducing a new administrative framework for Linux binaries, the Solaris Container for Linux Applications leverages all aspects of the Container functionality and elegantly integrate into the existing model — there is no need for system administrators to be retrained. To be clear: This is not another Linux distribution, and there is no need for any kind of special Linux software. Solaris 10 simply extends observability, security, and all other benefits of the Solaris Container feature to apply to Linux applications.

Support for non-native environments

The underlying technology supporting non-native application environments and their corresponding binaries, allowing them to run in Solaris Containers, was also designed with flexibility in mind. While Sun will initially support applications certified to run under Red Hat Advanced Server 3 (and the corresponding CentOS distribution), it will be possible to extend this feature to cover other environments, as well.

Interested third-party vendors can create and support a Solaris Container running, for instance, SuSE, Debian, or BSD applications by participating in the OpenSolaris™ project. Access to the underlying technology is provided, and Sun encourages the community to leverage it as desired.

Learn More

To learn more about Solaris Containers for Linux Applications, please visit sun.com/solaris/scla.jsp.

For additional information about Solaris 10, please see sun.com/solaris/features.

Conclusion

With the Solaris 10 OS, Sun is enabling unprecedented Linux interoperability. The bottom line is a rock-solid platform that can be used to test, deploy, and consolidate Linux applications, while delivering all the unique features offered by Solaris Containers.

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