

# Interoperability and the Solaris™ 10 Operating System

Interoperability from the Desktop to the Data Center  
Across a Range of Systems, Software, and Technologies



## Highlights

An ideal platform for heterogeneous computing, the Solaris™ 10 OS:

- Supports open standards such as UDDI, SOAP, WSDL, and XML
- Provides source and binary compatibility for Linux applications and interoperability with Microsoft Windows
- Includes Perl, PHP, and other popular scripting languages
- Includes Apache, Samba, Sendmail, IP Filter, BIND, and other open source software
- Supports Java™ technology-based application development and deployment with Java 2 Platform, Enterprise Edition (J2EE™) and Standard Edition (J2SE™) technologies
- Provides source-level compatibility, allowing Solaris and Linux applications to compile and run on both platforms

## Investment protection in heterogeneous environments

Today, businesses rely on complex, geographically dispersed computing infrastructures that often consist of hundreds of heterogeneous hardware and software platforms from a wide variety of vendors. If these environments are to remain manageable, organizations must be able to rely on interoperable products that work well together. At the same time, as organizations evolve their computing environments with an eye toward improving cost-effectiveness and total cost of ownership (TCO), heavy investments in servers, operating systems, and applications must be protected, and dependence on specific hardware or software vendors must be avoided. The Solaris™ 10 Operating System meets these challenges through a number of different ways, from interoperability with both Linux and Microsoft Windows-based systems through support for a wide range of open standards and open source applications.

### Interoperability with Java™ technology

The Java™ technology revolution has changed how people think about interoperability by no longer tying application design to a specific platform. Running on every major hardware platform and supported by virtually every software vendor, Java technology enables business applications to be developed and operated independent of operating systems. The Solaris 10 OS provides a rich set of features for Java technology-based development and deployment, including two Java 2 Platform, Enterprise Edition (J2EE™ platform)-compliant application servers — the Sun Java™ System Application Server and the open source Tomcat server.

### Interoperability with Microsoft Windows

The Solaris OS offers a variety of different features for interoperability with Microsoft Windows. Samba, which is integrated into the Solaris OS, allows Sun clients and servers to access file and print services in a Microsoft Windows network. The StarOffice™ office suite provides interoperability with Microsoft Office file formats. Users can even run Microsoft

Windows on a Solaris system by installing a SunPCI™ card. The Solaris OS also supports open standards and interfaces that make it easier to interoperate with Microsoft Windows systems. Authentication interoperability can be achieved through the Kerberos protocol using the Sun Enterprise Authentication Mechanism™ software built right into the Solaris 10 OS. Separately, LDAP authentication can also be used to access a Microsoft Active Directory server from a Solaris client.

### Interoperability with Linux

Sun's commitment to open systems stretches back over two decades. Since the Linux operating system comes from the same roots, the Solaris OS and Linux are complementary and a natural fit to work together in most any environment. As Linux interfaces continue to evolve, the Solaris OS maintains source-level compatibility, helping to ensure that applications developed for Solaris or Linux software will compile and run on both platforms. This includes the addition in the Solaris OS of libraries such as Glib, zlib, and Tcl/Tk; scripting

and shell utilities such as Perl, Python, zsh, tcsh, and bash; and common user and administrative interfaces such as GNOME, KDE, and Webmin. In addition, in an update to the Solaris 10 OS, the Solaris Linux Application Environment will allow users on x86 systems to take existing, unmodified Linux binaries and run them on the Solaris platform. This new level of interoperability will give users access to the applications they prefer while at the same time enabling them to reap the benefits of Solaris 10 functionality.

### Common desktop and infrastructure software

In addition to interoperability for Java technology-based development, Sun provides integrated applications and environments that run across multiple operating systems. These include the Sun Java Desktop System and the Sun Java Enterprise System, both of which are available on Solaris and Linux platforms. The Solaris 10 OS now includes the Java Desktop System — an integrated, full-featured client environment that includes the Mozilla™ Web browser and the StarOffice office suite — providing a unified desktop interface across Solaris and Linux platforms. Components of the Java Enterprise System are also included with the Solaris 10 OS, introducing an end-to-end software system that can support all of your infrastructure service needs on both Solaris and Linux platforms.

### Common free and open source software and tools

In addition to contributing software to the open source community, Sun also helps you leverage the power of free and open source software (F/OSS) by providing it to you up front with the Solaris 10 OS. You don't have to download, compile, test, and integrate the tools you need. The Solaris 10 OS includes 187 software products from the F/OSS community, also popular on Linux platforms, including:

- Apache, Tomcat, and multiple Zebra routing protocols for network and Web services
- Bison, GCC, Perl, and Python tools for software development
- IP Filter, TCP Wrappers, and Secure Shell utilities for security
- GNOME, Mozilla, and Evolution software for desktop usability

These free software components are either integrated directly into the Solaris 10 distribution or are included on the Solaris Software Companion CD.

Additionally, F/OSS tools integrated into the Solaris 10 OS include the standard GNU development utilities. Library support includes UNIX® standard functions as well as the most popular F/OSS libraries such as Glib, GTK, JPEG, PNG, Tcl/Tk, TIFF, XML, and zlib, which can be used across Solaris and Linux platforms.

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### Conclusion

For businesses that rely on heterogeneous environments, the Solaris 10 OS empowers users with new technologies and tools that let them take advantage of the innovation, security, and performance of Solaris 10 software while protecting existing investments in applications, hardware, and training.