

# OpenSolaris™

OpenSolaris is a thriving, innovative community. Open for collaboration. Open for download. Open for browsing. Open for business. Based around the source code for the Solaris™ Operating System, the OpenSolaris community has quickly transformed into an active community. The OpenSolaris project is unique because it gives open source developers access to technologies only available in the Solaris Operating System, including Dynamic Tracing (DTrace), Solaris Containers (or Zones), Predictive Self Healing and the ZettaByte File System (ZFS). Most importantly, OpenSolaris brings the most advanced operating system on the planet, Solaris, into the open.

## OpenSolaris Project History

- June 2004: Jonathan Schwartz, then Sun COO, now Sun CEO, announces that the Solaris Operating System will be open sourced
- September 2004: OpenSolaris Pilot program begins. It grows to include 145 external participants.
- January 2005: Sun unveils CDDL, an OSI-approved open source license.
- June 14<sup>th</sup> 2005: OpenSolaris Opening Day – Sun open sources Solaris under the CDDL.
- November 2005: ZFS, a breakthrough 128-bit file system, is released in build 27 of OpenSolaris.
- December 2005: BrandZ is announced in build 29 of OpenSolaris, allowing non-native operating environments to boot within a Solaris Zone.
- February 2006: The OpenSolaris Charter is approved.
- June 2006: OpenSolaris has 12,000 external participants, 4 community distributions and 32,000 recorded downloads of the source code.

## OpenSolaris

On June 14, 2005, Sun open sourced the Solaris Operating System (OS) and launched OpenSolaris.org, a development community site that offers cutting-edge operating system code, development tools, and expertise that will drive operating systems innovation.

The OpenSolaris project is aimed at developers worldwide. The membership at opensolaris.org encompasses a wide range of participants, from corporate and enterprise developers to students and academics who want to contribute to the future of operating system innovations.

While Solaris continues to be the fully tested, certified and supported operating system from Sun, future versions of Solaris will be based on the OpenSolaris project source code.

## Features of OpenSolaris

OpenSolaris has all the powerful new features in Solaris that optimize system utilization, deliver extreme performance and deliver unparalleled security – all with relentless availability and support for SPARC, x86 and x64 platforms.

## DTrace

DTrace is a comprehensive dynamic tracing framework for troubleshooting systemic problems in real time. With DTrace, administrators and developers can tune applications for performance and troubleshoot systems giving operational insights not available on any other operating system -all with little or no performance impact.

## Solaris Containers

Solaris Containers isolate software applications and

services using flexible, software-defined boundaries. Each application can be given a private environment, virtually eliminating error propagation, unauthorized access, and unintentional intrusions.

## Solaris ZFS

ZFS greatly reduces the administrative burden of file systems, eliminating many complicated administration concepts entirely. All data is protected by 64-bit checksums with 99.9999999999999999% error detection and correction, and ZFS will then automatically repair corrupted data - part of Sun's quest to build truly self-healing systems. As a 128-bit file system, it provides 16 billion billion times the capacity of 32 or 64-bit file systems, exceeding the quantum limits of earth-based storage.

## Security

Solaris incorporates advanced security features designed giving protection at multiple levels. The security system protects against both malicious external attacks and data access violations from the inside. The Process Rights Management component provides fine-grained control over which users -and what processes- have what rights when.

## OpenSolaris =Community Innovation

The OpenSolaris project will drive Solaris technology adoption in key markets, especially

Financial Services, Government, Telecommunication, Education and Research.

The main difference between the OpenSolaris project and the Solaris Operating System is that OpenSolaris is a project sponsored by Sun – not a product. It features an open source code base, with tools necessary for developing and building the code, and a community infrastructure that allows participants to collaborate on specific projects related to OpenSolaris. Support for OpenSolaris technology is provided by the community; Sun offers no formal support for OpenSolaris based code in either source or binary form.

#### Getting Involved

Sun believes that an open source community development model creates more opportunities for collaboration. Additionally, many Solaris customers require open source. OpenSolaris will allow Sun and its partners to participate in projects that require open source software.

Several OpenSolaris community projects are underway that address advanced operating system functionality, including fault tolerance, observability, performance, security and zones.

Open source developers, marketeers, and users are invited to register at [www.opensolaris.org](http://www.opensolaris.org) and participate in discussion groups and forums. Here they can download source, contribute ideas and code, participate in documentation and marketing forums, and join regional user groups worldwide.

#### Features of the OpenSolaris Project

- Website for collaboration with project lists, discussion forums and project information.
- 10 million lines of source code including core operating system, networking, system libraries and commands, plus support for both x64 and x86 systems.
- Variety of development tools, including Sun Studio Software, GNU Compiler Collection (CGC) compilers, and OpenGrok, a “wicked fast source browser”.
- Open Source Initiative (OSI) approved

Common Development and Distribution License (CDDL), that promotes sharing of modifications, allows CDDL source files to be mixed with proprietary source files, and protects against patent litigation.

- Community Advisory Board (CAB) guidance and governance model for community is in place.

#### OpenSolaris Development Process

The OpenSolaris code base is the result of years of development work by hundreds of engineers. As part of that work, a comprehensive and reliable development process evolved that allows parallel development, maintaining a high level of quality and stability in the resulting code. These processes provide a proven framework for large scale software development at Sun and are now evolving based on the experiences and input of the OpenSolaris community.

#### Contributing to OpenSolaris

Developers have many opportunities to participate in the OpenSolaris community. To begin, simply visit [opensolaris.org](http://opensolaris.org), register as a member of the community, and subscribe to community project discussion groups.

Code Contributions, discussions, and proposals for community projects on [opensolaris.org](http://opensolaris.org) are encouraged. Be a part of the future of operating system innovation. Join today at [www.opensolaris.org](http://www.opensolaris.org).

[Learn More](#)

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