



Project Speedway

C/C++ Application development in the OpenSolaris™ Operating System on SPARC® processor-based systems in the cloud



Project Speedway is an Internet-based collection of services that makes it easy to compile and build C/C++ applications for OpenSolaris on Sun's SPARC processor-based systems in the Sun Cloud. If you have a web browser and an Internet connection, you can use Project Speedway from anywhere in the US, with no setup required.

Highlights

- Platform-independent access to SPARC® processor-based virtual machines through your web browser
- OpenSolaris™ developer environment on SPARC processor-based virtual machines
- A private workspace in the Sun Cloud for your projects
- Developer services to make it easy to build, test, and tune your code in the cloud
- Desktop services including a full GNOME desktop or xterm
- Remote development platform for NetBeans™ IDE running locally on your client system

Project Speedway developer environment

Project Speedway's OpenSolaris containers provide a secure developer-centered environment for you to use in the privacy of your own workspace. Project Speedway provides a virtual machine, fully configured with the following:

- A fully configured OpenSolaris software stack featuring the OpenSolaris operating system, the AMP stack (Apache web server, MySQL™ database, PHP and Perl scripting languages) for web application development
- Multiple developer tools pre-installed and ready to use, including the NetBeans IDE, the Sun™ Studio compilers and tools, and the GNU compiler collection (GCC)
- DTrace-enabled performance-tuned applications

What you can do with Project Speedway

Project Speedway is currently in Preview release, and is still under development. The features, user interface, and data storage implementation are subject to change, so the service should only be used for evaluation purposes.

Project Speedway's web interface is launched from <http://developers.sun.com/speedway>.

Configure your virtual platform

Log in to the Project Speedway website with your Sun Developer Network ID. From here, you configure a platform, which is used to create one or more OpenSolaris virtual machines called containers. The OpenSolaris containers are private: only you can access a container

that has been created for you. The containers run on a collection of multicore chip-multi-threaded Sun systems. You can select from the following machines:

- Sun Blade™ T6320 Server Module, based on the UltraSPARC® T2 Plus processor, which offers 128 hardware threads in every socket
- Sun SPARC Enterprise® M3000 server, a quad-core machine based on the SPARC64® VII processor

Upload your source code

You can upload source code to a Project Speedway workspace in the Sun Cloud and access the workspace from your OpenSolaris container. You can create multiple projects in your workspace. The first project is created automatically when you log in. You can alter privacy settings to allow other Project Speedway users to access any or all of your projects. Each project is currently limited to 1GB of disk space, which should be considered temporary storage, as Project Speedway is still under development.

Check out source from Web-based repositories

You can check out source code directly to your Project Speedway workspace from any code base that is accessible on the Internet through a URI and managed through SVN, Hg, GIT, or CVS. In particular, you can check out code from <http://kenai.com>, Sun's connected developer destination. At Kenai.com, developers can host open source projects, and connect, communicate, and collaborate with developers of like mind.

Once the source code is in your Project Speedway workspace, you can work on the code using the IDEs or command line interfaces to developer tools in the OpenSolaris container.

Build, test, and tune with one click

One of Project Speedway's most convenient features is the ability to build, test, and tune your code with a single click on the Project Speedway web interface. There is no need to access your OpenSolaris container or start an IDE. Project Speedway services are set up to automatically optimize your binaries for running on the platform you select.

Build your application on Project Speedway from locally running NetBeans IDE 6.7

With NetBeans IDE 6.7 and a plugin from the NetBeans update center, you can work with your code on your local system or a web-based repository like Kenai.com, and then use Project Speedway to build NetBeans projects in the cloud. You can access the Project Speedway services without leaving the NetBeans IDE. You can also run, debug, and profile NetBeans projects using Project Speedway from the Netbeans IDE.

Interacting with your OpenSolaris container

Project Speedway provides a number of ways to access and interact with your OpenSolaris container. You should consider not just personal preference (GUI vs CLI) but also the speed and capacity of the Internet connection you are using to access the site.

GNOME desktop

Click the Desktop button to start a fully functioning graphical user desktop based on the open source GNOME desktop. This desktop is the same as that featured in OpenSolaris 2009.06, and has all the available developer packages installed and accessible.

The desktop opens to fill your screen, and is already logged in as root in your OpenSolaris container. You can use whatever application you can see in the Applications menu. The experience is that of an OpenSolaris desktop delivered to your own client directly. The desktop requires a high bandwidth connection.

Terminal

Click the Terminal button on the Project Speedway website to start an xterm terminal session for command line access to your OpenSolaris container. The xterm session opens in a separate window on your local machine, and is already logged in as root in your OpenSolaris container. The terminal requires less bandwidth than the desktop.

Web Terminal

Click the Web Terminal button on the Project Speedway website to start a terminal session in a browser window for command line access to your OpenSolaris container. The terminal session starts in a new browser window on your local machine, and is already logged in as root in your OpenSolaris container. The web terminal requires the least bandwidth and is a good choice for accessing your container when you have low bandwidth.

Project Speedway's one-click services

Project Speedway offers several services that provide you with the ability to perform a task on a project with a single click of a button, without the need for an IDE or even an active container to be running.

These services are designed to make it easier for you to build, test, and deploy on multiple platforms.

Build service

Configured to make it easy to create highly optimized Solaris™ binaries. Compilers are pre-configured with the right defaults and custom optimized for major open source applications. You can select the tool chain you want to use, either GNU or Sun Studio tools. Distributed builds are performed automatically utilizing multiple cores and hardware threads for parallelism, for very fast results. You can build your binaries for particular objectives: throughput vs. scalar performance, working set vs. image size, or generic vs. platform-specific.

Test service

Features black-box and stress tests, continuous integration test automation, formal validation and verification site testing.

Tune service

Features automatic tuning services for the best performance options. The tuning service is profile guided and optimized for execution feedback.

Contact us

For more information about Project Speedway and Sun's cloud offerings, please visit: <http://developers.sun.com/speedway/>