

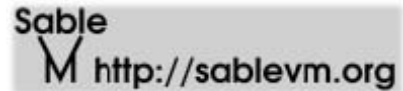
Debugging free Java with SableVM and Eclipse

The goal of SableVM Project is to develop a robust, liberally-licensed free virtual machine for Java. SableVM Project has just made available a preview release of SableVM development branch that supports the JVMDI (Java Virtual Machine Debugging Interface) and JDWP (Java Debug Wire Protocol). These standard protocols are commonly used by tools like Eclipse to provide a rich and user-friendly system with visual debugging support.

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This release is an important breakthrough because SableVM is the first Open Source Java virtual machine to support these protocols. This support is most important for the development of basic class libraries, like those of GNU Classpath.

Regular Open Source applications can usually be debugged with a non-free Java virtual machine. This method does not work with the most basic class libraries because to debug them one needs a Virtual Machine that actually runs on them. In other words – one needs a Java Virtual Machine that runs with free Java libraries, like GNU Classpath, and talks via JVMDI and JDWP. And that is exactly what this release of SableVM provides.



The implementation of the Java Virtual Machine Debug Interface JVMDI has been a considerable effort. It took a year of one person's work to complete that part of SableVM. The code was created in a modular and extensible manner. The high quality of the SableVM source code is rarely encountered even in much smaller projects. Also – SableVM is an interpreter so accessing the many structures and implementing the special mechanisms required by JVMDI was much easier than in a virtual machine featuring a compiler. This might be one of the reasons why no other Open Source Java virtual machine has had this feature implemented.

SableVM's implementation is not yet fully finished, which is why this is a preview release. But the code that is there already allows for all of the standard operations like setting breakpoints, inspecting the stack and values of variables, and more.

The installation of a debug-enabled SableVM snapshot is rather painless, the *Quick Start* instructions are provided along with the *Troubleshooting FAQ*. As always, SableVM developers and users will gladly provide any needed support via the mailing lists.

*) This article has been re-edited by the author for length, spelling and layout.