



**Company:** Object Refinery Limited

**Location:** Hertfordshire, UK

**Url:** <http://jfree.org>

**Industry:** Java charting and reporting components

**Oracle Products & Services:**

- Java
- NetBeans IDE
- Java VisualVM

**Related Software:**

- SourceForge
- GitHub
- Ant
- FindBugs
- CheckStyle

## JFREE

*“NetBeans IDE meets our requirements out-of-the-box. That's important to us, because we don't like spending time finding, installing, and configuring plugins for essential features. We are impressed with the quality and attention to detail that pervades the NetBeans IDE product, with steady improvements release after release.”*

### Executive Summary

Object Refinery Limited is the company behind JFree.org, which is home to a number of free software projects targeting the Java platform. JFree.org started in 2000 with the beginnings of the JFreeChart and JFreeReport open source projects, providing free Java charting and reporting components. The team has worked on a few other projects, but JFreeChart and JFreeReport are its big success stories.

JFreeChart is a free 100% Java chart library that makes it easy for developers to display professional quality charts in their applications. In 13 years, JFreeChart has been downloaded more than 2 million times from SourceForge.

For funding, the team has received generous support from users who have purchased the developer documentation, along with sponsorship from Object Refinery Limited.

### The Business Issue

The team has a straightforward development set-up with few dependencies, no databases or application servers to interact with, while all its code is 100% pure Java.

### Key Challenges

The team needed an IDE that:

- Is fast and efficient for core Java coding.
- Has great support for debugging, source control (SVN, Git, and CVS are used), unit testing (JUnit), builds (Ant and Maven), patch reviews (diff tools), and static analysis (FindBugs).
- Provides excellent navigation around mid-sized code bases because JFreeChart comprises around 600 classes.

### Solution

- NetBeans IDE meets the team's requirements out-of-the-box. That's important, because the team does not like spending time finding, installing, and configuring plugins for essential features (for example, Subversion). The IDE just works, and lets developers focus on their work.

- JFreeChart has more than 2,200 JUnit tests and the team needs to run them often. The IDE has this well covered, and the NetBeans development team has been very responsive to requests for enhancements to the JUnit runner.
- For source control, Subversion is used primarily, though the team is moving projects over to Git, while the IDE has excellent support for both.
- When reviewing patches submitted by other developers (or sometimes just reviewing changes between different versions of the team's own code), the Diff tools in the IDE have been found to be really nice.
- The team runs static analysis tools (particularly FindBugs) across their code on a regular basis, and the team likes the way this is done in the IDE as a separate inspection step. It's out of the way while developers are coding, but available when they decide to stop and review.
- Though they've not been big Maven users in the past, the team likes the built-in support for loading Maven-based projects. It's saved them work on a number of occasions.
- The team uses a range of operating systems for development (Mac, Linux and Windows) so it is great to be able to use the same IDE across all of them.

### Business Value

- NetBeans IDE increases coding productivity, helping the team complete development tasks in less time.
- New features in the IDE, such as the Git integration, have lowered the barriers for adopting new technologies.
- Costs are minimized since the IDE is free, and there is a wealth of free knowledge available on the web for support.

### Credits:

David Gilbert