RJava User and Developer Manual

Yi Lin
yi.lin@anu.edu.au

November 3, 2013

Abstract

RJava is a restricted subset of the Java language with low-level extensions that allow access to hardware and operating system. RJava utilizes the same syntax as Java, and consequently inherits benefits from Java such as type safety, various software engineering tools and productivity. Futhermore, by restrictions, RJava is a fully static language with closed world assumption. Thus it requires a much more succinct runtime, and is well suitable for aggressive static compilation and optimizations. RJava is designed to be an implementation language for virtual machine construction (and more broadly for system programming).

This manual describes the language and its current implementation– the RJava Compiler (RJC). It is intended for RJava users and developers who are willing to contribute. This manual will be maintained to keep pace with the RJC code base.

Contents