

## **REportal: A Web Based Reverse Engineering Portal**

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Reportal is a web-based reverse-engineering portal that allows authorized users to upload source code and perform software analysis.

Reportal relieves users of the need to obtain, learn, and maintain specific tools and operating systems to perform complex queries on software systems. Instead of forcing users to maintain different operating systems or a heterogeneous suite of utilities, Reportal requires only a Java-enabled web browser. Reportal users are spared the need to constantly train with new reverse-engineering tools, as they do not even need to be aware of the complex group of utilities used to drive the Reportal engine. By condensing all of these elements into a consistent and user-friendly interface, Reportal simplifies the otherwise difficult process of performing, abstracting and visualizing complex queries of software systems.

Currently, REportal supports reverse engineering of Java code (C/C++ support is currently under development). Consequently, a user might upload a jar file, which REportal automatically unpacks into one of many project folders that a user may have. These projects can be easily navigated via a hierarchy similar to Windows Explorer. Upon opening the project, users can perform queries to answer questions such as: "In which class is the main() function contained?", "What is the inheritance tree or call graph for this program?" or "If I make changes to this piece of code, which subsystems would be affected?" REportal can give these results as a table list, as a DOT graph, or as a Bunch clustered graph. Using the clustered view, users can navigate through the graph at various levels of abstraction by hiding and showing subsystems in the view using our customized version of the Grappa system.

REportal is a joint effort between researchers at the Software Engineering Research Group (SERG). Many background tools such as CIAO and DOT are provided by the AT&T Research Labs.

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