

Contributors Welcome

from the community to the community



-pancake



Introduction

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One of the best ways for R2 to improve is by having more contributors, reducing techdebt is key, but all projects need more eyes and hands to spot bugs, implement features or improve code quality.

There's a fear of contributing

Why contribute?

We all have our own excuses

- Learn more about reversing or programming in C
- Extend the tool to support whatever we need
- Contribute to opensource projects
- Get recognition and profit for personal or professional
- Understand better how to work with large projects
- Porting to new OS or support more architectures

How to contribute?

Code

- Fix GH issues, improve code quality, pending refactors..
- Improve GUIs: iaio, webui, visual mode ..
- Maintainers for main plugins r2yara, r2frida, r2ghidra, ..
- Scripting APIs, improve r2pipe/r2papi/..

Documentation

- Improve the book, manpages, advent, present
- Enhance r2ai model dataset

Poll

Where would you like to contribute? Raise your hand!

- laito
- radare2
- r2frida
- r2ghidra
- r2yara
- r2papi

Hands on!

Minimum Requirements

- Pick your favourite editor (VSCode, VIM, ..)
- Git basics (how to fork a repo, create a pullreq, diff, rebase)
- Knowledge in C
- Linux/BSD/macOS/WSL box

GIT BASICS

- **git clone <https://github.com/radareorg/radare2>**
 - Fork in GH
- **sys/install.sh**
 - Installation with symlinks
 - You can later run make in any directory
 - No need to rebuild everything or even install

CODE STRUCTURE

- `libr/` -> libraries
 - `p/` -> plugins
 - `d/` -> data
- `shlr/`
 - Shared libraries like capstone, ..
- `binr/`
 - Programs
- `man|doc`

DEV TRICKS

Git grep is your friend

- R_API - public apis
- R2_600 / R2_590 - abi stable, api redesigns
- R_TH_LOCAL - remove globals
- // "command" - where the command is implemented
- sys/lint.sh
- eprintf for debugging, R_LOG for committing
- Check github issues tags like "Good First Issues"

Ongoing Todos And Status

R2GHIDRA

- Looking for a maintainer
 - Right now it works, but it's far from being updated
 - Most claimed
- Ghidra-native sync with latest ghidra code
 - Fix lots of segfaults and massage the patches back
- Improve decompiler output, better integration with r2
- Maybe makes more sense to use r2 and GHIDRA in parallel

Projects

New redesigned implementation of projects

- `libr/core/p/core_prj.c`

Binary file format, right now supports flags only

- Extend to support comments, analysis points, func names..

laito

Test, fix bugs

- Add missing functionalities to match with r2
- Better color themes and look&feel / usability
- Improve/fix debugger support, as well as frida support.
- Implement r2ui commands in QT
- Code Editor for RLang/Typescript/R2JS scripts

r2frida

- Native Breakpoint and Watchpoint commands
- Refactor Typescript for reusability
- Improve testsuite on more platforms

R2Pipe2 and R2Papi

- R2Pipe2 requires testing and fixing error handling of all commands in radare2. Use the { command.
- R2Papi is the high level API on top of r2pipe
 - Python r2papi needs a maintainer
 - Typescript one is recommended

Redesigning APIs

- RArch - still leftovers from RAsm
- RParse - needs a proper api cleanup
- RCrypto - move everything into a plugin
- RBin - Using rvector instead of RList/RVec/..
- Dwarf -> better codeline storage
- ..

WebUI

Do you like HTML/CSS/JS?

- Improve usability and get better user experience

R2YARA

- Load and execute YARA rules directly within Radare2 for streamlined malware analysis.
- Manage YARA rules with commands to add, list, or unload them on demand.
- Use yrs to scan files against loaded YARA rules, with options like quiet mode for focused output.
- Generate dynamic YARA rules in Radare2, adding custom strings, hex patterns, and function signatures.

The Book

- Review wording, structure, missing topics
- Test / update procedures
- Add more chapters

Other

The roadmap is defined by the contributors, so you don't need to stick to any of the already development plans, do what you like and need.

Have fun and happy hacking!

Testimonials

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Call to contributors to come here!

- Share your experiences in r2land
- What can we do to improve

Your Turn