OpenRemote Testing Framework

Team Schfifty-Five

Andrew Rodman, Chad Hobbs, Jason Daniel, Jake Wisse, Brett Ostwalt

The Open Remote Project

- OpenRemote is a software integration platform for residential and commercial building automation "- openremote.org
- Develops and deploys on build custom patch and configuration on device.
- Provides detailed diagnostic test case management
- Available as a web, desktop iOS or Android application.
- Written in the Java programming language

OpenRemote

Raspi

Hue Bulbs

The Testing Script

- Written in Python and executed from the command line
- How it works (for each test case template):
  1. Parse the test case metadata
  2. Compile the test case driver
  3. Run the test
  4. Record the result in a temporary file
- Generates a full HTML report containing the results and template data for every test

Sample Run & Walkthrough

The HTML Report

- Dynamically generated per test run
- Timestamped to allow for regression testing
- Contains all values specified per template specified format for each test case
- Demo

Fault Injection

- OpenRemote Controller Project code is deliberately modified to cause tests to fail
- Ensures that test cases are working properly
- We injected five faults that caused numerous tests to fail

Finally, the Report

- Full writeup of our project experience with instructions for usage and writing tests
- Explanation of the project as a whole: summary, testing framework, test cases and fault injection, instruction manual, and a review
- Most parts explained in previous slides with the exception of the instructions and the team review

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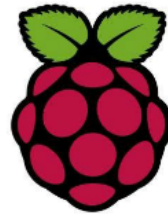
The Open Remote Project

- "OpenRemote is a software integration platform for residential and commercial building automation. " - openremote.org

- Developers and designers can build custom panels and configurations for devices

- Provides cloud design tools for remote management

- Available as a web, desktop, iOS, or Android application

- Written in the Java programming language

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