



# Improvements to Debian CI

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## Introduction

[Debian Continuous Integration](#) is a system that runs tests on Debian packages to assist with the process of quality assurance of the Debian distribution. I will be working on improving the Debian CI user interface, both web and otherwise to make the interaction of Debian maintainers with the service more productive.

## Proposal

By the end of the project, I aim to deliver the following-

- Add a self-service section.
- Export anonymized list of test runs requested by users.
- Make improvements to the overview section of all pages.
- Add filters to remove results from the index page.
- Write a command line client to facilitate interaction with the Debci server.
- Improve documentation, particularly for non-debian users.

I would broadly divide my proposal into three phases -

### Phase 1

I will be working on the command line client. In the end, we would have a working client, including tests, documentation and detailed tutorials.

### Phase 2

I will spend the first two weeks of the second phase getting the command line client published in the Debian repository. This would save a lot of time for package maintainers, and I would get experience of being a maintainer as well.

Then I will work on different improvements to the web interface. I plan on finishing the following improvements - Exporting lists, adding enhancements to overview.

### Phase 3

I will spend the first two weeks on implementing the self-service section. I expect a lot of discussion with Tercerio.

I will work on incorporating suggestions from maintainers and end users. I will document my work for future reference.

I hope to become a valued member of the Debci community and contribute in the future as well to one of the most influential open source projects, by the end of my term as a GSoC student.

## Specifications

### Command Line Client

It is by far the most exciting and challenging deliverable. I am aiming for feature parity with the website, with console-centric improvements. I would need to go over the workflow of package maintainers to identify the upgrades sorely need.

Currently, authentication and test-related information are accessible by the command line. I would extend the JSON API endpoints to incorporate other features like overviews, registration. I also planned to store commonly queried data in a cache, similar to what apt has.

I plan to publish the package, making it easy for maintainers to incorporate the client with their workflow.

The command line client would be written in ruby. I am going through different HTTP clients, and HTTParty seems most promising.

### Improvements to Overview Section

I have worked over this while getting to understand the codebase. I will be closing issues [#21](#), [#25](#), [#26](#), [#31](#), [#33](#) along with the additional improvements we would come up.

### Self Service Section

I wanted to work over this as my application task, but Terecio had quite a few ideas about how we are going to implement this. Going through the code base, I realize significant changes (such as handling POST requests) are required and would be glad to discuss this with him.

## Timeline

**Community bonding period (May 6 - 27, 2019)** - Interaction with mentor and community, going over implementation details and changes. Create a wiki page to document my work.

### Phase 1

**Week 1 (May 27 - June 3, 2019)** - Design the command line tool according to best practices, begin.

**Week 2 (June 3 - June 10, 2019)** - Implement features present in the web interface.

**Week 3 (June 10 - June 17, 2019)** - Add registration, tests and caching.

**Week 4 (June 17 - June 24, 2019)** - Refactor code, add detailed tutorials and prepare for the first review.

### Phase 2

**Week 5 (June 24 - July 1, 2019)** - Work on making the command line tool compatible with Debian Policy.

**Week 6 (July 1 - July 8, 2019)** - Publish package, discuss interface and features with package maintainers.

**Week 7 (July 8 - July 15, 2019)** - Implement exporting test results in web interface, various improvements to overview


**Week 8 (July 15 - July 22, 2019)** - Refactor code, improve documentation and prepare for the second review.

### Phase 3

**Week 9 (July 22 - July 29, 2019)** - Begin implementing self-service section.

**Week 10 (July 29 - August 5, 2019)** - Finish implementing self-service section.

**Week 11 (August 27 - August 12, 2019)** - Add new features to the web interface, suggestions for command line client



**Week 12 (August 27 - August 19, 2019)** - Refactor code, improve documentation and prepare for the third review.

Create a detailed overview of my work including the following -

- Features implemented
- Features not implemented
- Bugs found
- Future improvements
- Overall experience with community

## Previous Work

### IRIS

I am a **backend developer** at ***Integrated Resource And Information Sharing (IRIS)***. IRIS is a team of students from NITK under faculty guidance, developing and expanding a digital portal that ensures that all administrative, academic and alumni-related procedures take place methodically. It's a homegrown ERP solution created, maintained and managed entirely by students. It has been developed using **Ruby on Rails** framework. [More About IRIS](#)

I am working currently on two modules - **Academic Certificates**, which integrates and simplifies the process of applying for academic certificates and **Academic Ph.D.**, which manages the lifecycle of a Ph.D. scholar.

Working at IRIS, as a backend developer taught me the invaluable lesson of working in teams. Collaborating with others taught me proper planning, communication and the importance of documentation.

### Shell Scripting and Linux

I have always tinkered with my desktop, improving the workflow and experience. I look through different people's desktops at [r/unix\\_porn](#) (Completely safe for work subreddit for people to customize their machines). I am particularly proud of the following two configurations -

- [Dotfiles](#) - This is how my desktop currently looks. It uses i3, a tiling manager and Vim. I learned a lot about bash while making helper scripts.
- [Conky conf](#) - It is an older configuration that converts the desktop into a functional day planner.

### Ruby

Apart from my work at IRIS, I have the following projects in ruby -

- [Digital Voting Platform](#) - A blockchain-based digital voting platform, made during an ACM-IE Hackathon. We have attempted to integrate with pre-existing services such as Ganache. I have proposed to rewrite it shortly, as explained in [Issue #1](#).

I have also built [a personal static website](#), using [Jekyll](#), which is a static site generator written in ruby. I need to add a lot more content.

## Debian Continuous Integration

I have three patches with Debci -

- **Status Pending** (Review in progress) - I implemented pagination and filters by suites for pending jobs. The aim was to reduce the time needed to load the page (as having thousands of results slows rendering page) and being able to focus on a particular suite.  
[Merge Request](#), [Issue](#).
- **Status Platform Specific Issue** (Merged) - implemented filtering for packages that have platform-specific issues based on age. Some of the packages had stopped shipping autopkgtests (or were not available in Debian anymore). Right now, Working on storing filters in a configuration file.  
[Merge Request](#), [Issue](#)
- **Status Page for Failing Packages** (WIP) - I have to implement an overview page per suite for failing packages. I began working recently on it, will update as I go.  
[Merge Request](#), [Issue](#)

My (short) experience with the Debci community so far has been great. I realized that it is easy to come up with complicated hacks that are difficult to implement and hard to come up with simple, elegant solutions. I am good developer, since I could implement complicated hacks, but becoming great would require practice! My ruby coding style is improving, thanks to Terecio's reviews and rubocop's nagging.

## About Me

I feel weird about talking about myself, so I asked my friends to describe me. That was an embarrassing experience. As you could guess, my friends are important to me. I have amazed myself as to how far I would go for them. I spent most of my free time hanging out with them, chatting and general college fun.

I love the British Sci-Fi show, "[Doctor Who](#)" and recommend it to everyone. It's about a character called "The Doctor," who is a Time Lord and has a time machine called TARDIS. Time Lords have a unique ability to regenerate when seriously injured or old. This completely changes their physical body and personality and keeps the show alive and exciting. The Doctor and their companion go on life-threatening adventures every episode. I am making it sound way too dull, but it's not. Be sure to check out Series 5, Episode 1!

I adore The Doctor, and particularly the [Twelfth Doctor](#) (played by [Peter Capaldi](#), who is one of my role models) because I started watching the show at a dark time in my own life, where I had problems with morality and meaning. The Doctor filled me with a sense of optimism and kindness. I feel "[Where I Fall](#)" [speech](#) is a beautiful summary of what Doctor stands for.

I have an interest in what I like to call "modern culture," which is an analysis of pop culture and internet culture. Pop culture is what we usually think of - movies, tv shows, and songs. I follow some youtube channels which discuss them, particularly an India Cinema analyst - [Cinema Beyond Entertainment](#). For internet culture, I mostly browse Reddit and 4chan, understanding popular opinions and in a way, how the internet develops and mature. My go-to channel is [Internet Historian](#).

Over the last few months, I have been rekindling my love for reading. I have recently "[12 Rules For Life](#)" (a self-help book) by Jordan Peterson and "[Looking For Alaska](#)" (a coming of age novel) by John Green. As far as reading goes, I have varied interests which include - philosophy, self-help, theology, humor, history, and romance. My favorite books are "[Siddhartha](#)," by Herman Hess and "[Hitchhiker's Guide To Galaxy](#)." Honorable mention to "[Calvin and Hobbes](#)," which is something I keep going back to for good-hearted humor and surprisingly relevant life lessons.



## Contact Info

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