



Making Teuthology Friendly

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Agenda



1. Introduction
2. Problem
3. Solution
4. Implementation
5. Benefits of the solution
6. Future improvements

1. Introduction



Teuthology is the automation framework for Ceph, written in Python. It remotely orchestrates operations on remote hosts over SSH. A typical job consists of multiple nested tasks, each of which perform operations on a remote host over the network.

The test results are stored in Paddles and are available on Pulpito, a dashboard for test runs and results.

1.1 What Is Pulpito?



- Pulpito is a web dashboard which is used for monitoring the teuthology test infrastructure which includes the tests, the queue and all the test nodes available.
- It provides real-time information about the health and performance of the infrastructure, making it easier for administrators to keep an eye on the system. They can quickly identify any issues or bottlenecks and take appropriate actions to address them.

2. Problems with CLI



Teuthology commands, in general, require a bit of a learning curve and usually requires someone who's a veteran with teuthology to help out, this can interrupt the productivity of the engineering team.

The complexity of teuthology can lead to new users scheduling bad runs that can hold up the queue and block other jobs.

2.1 What are these problems?



- Teuthology commands often require users to understand and input complex command-line syntax, including various flags, options, and arguments, which can be overwhelming for new users.
- Users might struggle to discover available commands, options, and their meanings, leading to frustration and difficulty in effectively utilizing Teuthology's capabilities.
- Users often need to manually configure a wide range of parameters, such as repository URLs, branch names, and suite options, which can lead to errors due to typos or misconfigurations.

3. Solution - Pulpito NextGen!



- It aims to provide an improved user experience compared to the current Pulpito. It offers a more intuitive user interface, making it easier for administrators and developers to navigate, configure, and monitor Teuthology tests.
- It will also allow users to schedule and kill jobs using the dashboard which will enhance productivity and make working with Teuthology a joy for both novices and seasoned professionals.

4. Implementation



By creating an API for Teuthology and integrating it with Pulpito-ng developers can directly schedule or kill jobs without SSH-ing into teuthology through the website UI.

We have been working on the following features in the new Pulpito:

- GitHub Authentication
- Scheduling Jobs
- Killing Jobs

5. Benefits of the solution



Through a UI for scheduling and killing jobs, the developers won't have to SSH into Teuthology and write the whole command for the same every time. It will make it both easier and productive for teams in the long run.

6. Future Aspects



- A Paddles rewrite using FastAPI
 - Currently uses Pecan, which is an unmaintained framework
 - FastAPI has a big community and a lot of in-built features
- Work on the user experience of pulpito-ng
 - Making it visually easier to schedule a job
- More user centered features on pulpito-ng
 - Add options for users such as current/past scheduled jobs