

Quick-Installation (Zuul)

Zuul is not like other CI or CD systems. It is a project gating system designed to assist developers in taking a change from proposal through deployment. Zuul can support any number of workflow processes and systems, but to help you get started with Zuul, this tutorial will walk through setting up a basic gating configuration which protects projects from merging broken code.

Start Zuul Containers

Before you start, ensure that some needed packages are installed.

```
# Red Hat / CentOS:

sudo yum install epel-release
sudo yum update
sudo yum install docker docker-compose git python-pip
sudo pip install git-review

# Fedora:

sudo dnf install docker docker-compose git git-review

# OpenSuse:

sudo zypper install docker docker-compose git
sudo python3 -m pip install git-review

# Ubuntu / Debian:

sudo apt-get update
sudo apt-get install docker-compose docker.io git python3-pip
sudo python3 -m pip install git-review

# Start and Enable the docker service on Fedora / CentOS
# Red Hat / OpenSuse / Ubuntu / Debian:

sudo systemctl enable docker.service
sudo systemctl start docker.service
```

Clone the Zuul repository:

```
git clone https://opendev.org/zuul/zuul
```

Then cd into the directory containing this document, and run docker-compose in order to start Zuul, Nodepool and Gerrit.

```
cd zuul/doc/source/examples
sudo -E docker-compose -p zuul-tutorial up
```

For reference, the files in that directory are also [browsable on the web](#).

All of the services will be started with debug-level logging sent to the standard output of the terminal where docker-compose is running. You will see a considerable amount of information scroll by, including some errors. Zuul will immediately attempt to connect to Gerrit and begin processing, even before Gerrit has fully initialized. The docker composition includes scripts to configure Gerrit and create an account for Zuul. Once this has all completed, the system should automatically connect, stabilize and become idle. When this is complete, you will have the following services running:

- Zookeeper
- Gerrit
- Nodepool Launcher
- Zuul Scheduler
- Zuul Web Server
- Zuul Executor
- Apache HTTPD

And a long-running static test node used by Nodepool and Zuul upon which to run tests.

The Zuul scheduler is configured to connect to Gerrit via a connection named `gerrit`. Zuul can interact with as many systems as necessary, each such connection is assigned a name for use in the Zuul configuration.

Zuul is a multi-tenant application, so that differing needs of independent work-groups can be supported from one system. This example configures a single tenant named `example-tenant`. Assigned to this tenant are three projects: `zuul-config`, `test1` and `test2`. These have already been created in Gerrit and are ready for us to begin using.

Add Your Gerrit Account³

Before you can interact with Gerrit, you will need to create an account. The initialization script has already created an account for Zuul, but has left the task of creating your own account to you so that you can provide your own SSH key. You may safely use any existing SSH key on your workstation, or you may create a new one by running `ssh-keygen`.

Gerrit is configured in a development mode where passwords are not required in the web interface and you may become any user in the system at any time.

To create your Gerrit account, visit <http://localhost:8080> in your browser and click *Sign in* in the top right corner.

<input type="text"/>	Sign in
Updated	Size

Then click *New Account* under *Register*.

Sign In

Username:

Email Address:

Account ID:

Choose: [admin](#)
[zuul](#)

Register

Don't bother to enter anything into the confirmation dialog that pops up, instead, click the *settings* link at the bottom.

Please confirm your contact information

The following contact information was automatically obtained when you signed in to the site. This information is used to display who you are to others, and to send updates to code reviews you have either started or subscribed to.

Full Name

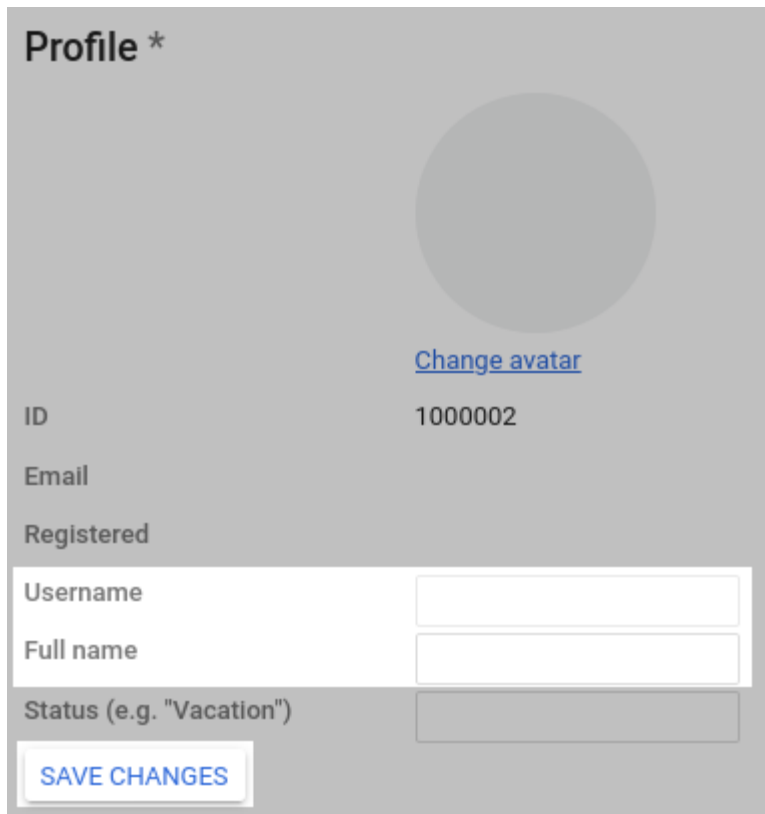
Username

Preferred Email

More configuration options for Gerrit may be found in the [settings](#).

[CLOSE](#) [SAVE](#)

In the *Profile* section at the top, enter the username you use to log into your workstation in the *Username* field and your full name in the *Full name* field, then click *Save Changes*.



The image shows the 'Profile' page in Gerrit. At the top, it says 'Profile *'. Below this is a large circular placeholder for an avatar, with a blue link 'Change avatar' underneath. The profile information is listed: 'ID' is 1000002, 'Email' is empty, and 'Registered' is checked. Below this is a form with three input fields: 'Username', 'Full name', and 'Status (e.g. "Vacation")'. At the bottom of the form is a blue button labeled 'SAVE CHANGES'.

Scroll down to the *Email Addresses* section and enter your email address into the *New email address* field, then click *Send Verification*. Since Gerrit is in developer mode, it will not actually send any email, and the address will be automatically confirmed. This step is useful since several parts of the Gerrit user interface expect to be able to display email addresses.



The image shows the 'Email Addresses' page in Gerrit. At the top, it says 'Email Addresses'. Below this is a form with a 'New email address' field containing 'user@example.com'. To the right of the field is a 'Preferred' checkbox. Below the field is a blue button labeled 'SEND VERIFICATION'. At the bottom of the form is a blue button labeled 'SAVE CHANGES'.

Scroll down to the *SSH keys* section and copy and paste the contents of `~/.ssh/id_rsa.pub` into the *New SSH key* field and click *Add New SSH Key*.

SSH keys

Comment

StatusPublic key

SAVE CHANGES

New SSH key

ssh-rsa

AAAAB3NzaC1yc2EAAAADAQABAAQDOLSh853Avwnyy9lBDEANVzc0XNf+1kgp99bZNQqDbOs8m4nj9w4GkGpEj7dRhVrA08uW7tnuj60fyST2ZHHcypACpC8xqyTiddCoZDHSPePsG//XgSpuwCQNT/b/wonG1TEZmXdwPfASKimPTmgZFL72C0atzYWXlbBibncL+DCIbDdds/Dtqhh88R1GR5IUUYUMEYHwT2jlvPo7bRU/GRBzOQul9yzvlpNxETIMRylsxvAz0JuZTSi1tJCqWv2fNA50+D2HVbn26OptCsVihv9eJT5zChtT7CUZcs+g5HlAmNEkvyuGh4a5IRUdEAyxfeDOKSMBJt7m3vwn03/d

ADD NEW SSH KEY

Click the *Reload* button in your browser to reload the page with the new settings in effect. At this point you have created and logged into your personal account in Gerrit and are ready to begin configuring Zuul.