

# Firehose: a Unified Message Bus for Infra Services

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<https://github.com/mtreinish/firehose>

# OpenStack Infrastructure

**Imagine a big, complicated diagram here.**

# Firehose

- ▶ An MQTT broker for the OpenStack community infrastructure
- ▶ Has anonymous, read-only access via MQTT on 1883/tcp
- ▶ SSL/TLS MQTT also available on 8883/tcp
- ▶ Websockets supported (but temporarily disabled)

# MQTT

- ▶ Pub/sub messaging protocol
- ▶ Formerly MQ Telemetry Transport
- ▶ ISO/IEC PRF 20922
- ▶ Protocol dates back to 1999
- ▶ Lightweight design, low bandwidth

Example mosquitto client subscriber command line (provided in a mosquitto-clients package on many distros):

```
mosquitto_sub -h firehose.openstack.org --topic '#'
```

## Services Using the Firehose

Topics start with the name of the service publishing the messages while subsequent levels are specified by the publisher, like:

```
gerrit/openstack-infra/germqtt/comment-added
```

In this case "gerrit" is the service, while the remainder is set by the germqtt publisher daemon. Services currently published:

Service	Base Topic	Source of Messages
Gerrit	gerrit	germqtt
Launchpad	launchpad	lpmqtt
Logstash	logstash	logstash-output-mqtt

# Future Plans

- ▶ Add germqtt subscription support to:
  - ▶ Gerritbot (already PoC)
  - ▶ Zuul v3+
- ▶ Add more publishers:
  - ▶ The Infra Ansible/Puppet wheel
  - ▶ Nodepool daemons
  - ▶ (your favorite service here)

## Where to get more information

- ▶ openstack-infra ML [openstack-infra@lists.openstack.org](mailto:openstack-infra@lists.openstack.org)
- ▶ #openstack-infra on Freenode
- ▶ <http://docs.openstack.org/infra/system-config/firehose.html>
- ▶ <http://specs.openstack.org/openstack-infra/infra-specs/specs/firehose.html>
- ▶ <http://mqtt.org/>
- ▶ <https://mosquitto.org/>