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# Tempest-stress Documentation

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OpenStack Foundation

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## TEMPEST FIELD GUIDE TO STRESS TESTS

OpenStack is a distributed, asynchronous system that is prone to race condition bugs. These bugs will not be easily found during functional testing but will be encountered by users in large deployments in a way that is hard to debug. The stress test tries to cause these bugs to happen in a more controlled environment.

Stress tests are designed to stress an OpenStack environment by running a high workload against it and seeing what breaks. The stress test framework runs several test jobs in parallel and can run any existing test in Tempest as a stress job.

### 1.1 Environment

This particular framework assumes your working Nova cluster understands Nova API 2.0. The stress tests can read the logs from the cluster. To enable this you have to provide the hostname to call nova-manage and the private key and user name for ssh to the cluster in the [stress] section of tempest.conf. You also need to provide the location of the log files:

- target\_logfiles = regexp to all log files to be checked for errors
- target\_private\_key\_path = private ssh key for controller and log file nodes
- target\_ssh\_user = username for controller and log file nodes
- target\_controller = hostname or ip of controller node (for nova-manage)
- log\_check\_interval = time between checking logs for errors (default 60s)

To activate logging on your console please make sure that you activate *use\_stderr* in tempest.conf or use the default *logging.conf.sample* file.

### 1.2 Running default stress test set

### 1.3 Installation

1. You first need to clone this repo.:

```
$ git clone https://github.com/openstack/tempest-stress
$ cd tempest_stress
```

2. Install:

```
$ python setup.py install
```

3. Install *Tempest*

### 1.3.1 Configuration

To Run stress tests, two configuration files are needed:

1. `tempest.conf` - As per Tempest configuration guidelines here: [configuration](#)
2. `stress_tests.conf` - same location as `tempest.conf`

later one is being used to define all config options specific to stress tests.

### 1.3.2 Run

Run all tests:

```
$ run-tempest-stress -a -d 30
```

Run specific test:

```
$ run-tempest-stress -t ./tempest_stress/etc/server-create-destroy-test.json -  
↪d 30
```

This sample test tries to create a few VMs and kill a few VMs.

For more information please refer `run-tempest-stress` CLI help:

```
$ run-tempest-stress -h
```

## 1.4 Additional Tools

Sometimes the tests dont finish, or there are failures. In these cases, you may want to clean out the nova cluster. We have provided some scripts to do this in the `tools` subdirectory. You can use the following script to destroy any keypairs, floating ips, and servers:

```
tempest_stress/tools/cleanup.py
```

## INSTALLATION

At the command line:

```
$ pip install tempest_stress
```

Or, if you have virtualenvwrapper installed:

```
$ mkvirtualenv tempest_stress  
$ pip install tempest_stress
```

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## CHAPTER THREE

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### USAGE

To use `tempest_stress` in a project:

```
import tempest\_stress
```

## SO YOU WANT TO CONTRIBUTE

For general information on contributing to OpenStack, please check out the [contributor guide](#) to get started. It covers all the basics that are common to all OpenStack projects: the accounts you need, the basics of interacting with our Gerrit review system, how we communicate as a community, etc.

Below will cover the more project specific information you need to get started with tempest-stress.

### 4.1 Communication

- IRC channel `#openstack-qa` at OFTC
- Mailing list (prefix subjects with `[qa]` for faster responses) <http://lists.openstack.org/cgi-bin/mailman/listinfo/openstack-discuss>

### 4.2 Contacting the Core Team

Please refer to the [tempest-stress Core Team](#) contacts.

### 4.3 New Feature Planning

If you want to propose a new feature please read [Feature Proposal Process](#)

### 4.4 Task Tracking

There is no separate task tracking tool for tempest-stress, we track our tasks in [Launchpad](#).

### 4.5 Reporting a Bug

You found an issue and want to make sure we are aware of it? You can do so on [Launchpad](#). There is no separate Launchpad for tempest-stress. More info about Launchpad usage can be found on [OpenStack docs page](#)

### 4.6 Getting Your Patch Merged

All changes proposed to the tempest-stress requires single `Code-Review +2` votes as minimum from tempest-stress core reviewers who can approve patch by giving `Workflow +1` vote.

## 4.7 Project Team Lead Duties

All common PTL duties are enumerated in the [PTL guide](#).

The Release Process for QA is documented in [QA Release Process](#).

## INDICES AND TABLES

- genindex
- modindex
- search