

# A template L<sup>A</sup>T<sub>E</sub>X report

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## **Abstract**

This document demonstrates usage of L<sup>A</sup>T<sub>E</sub>X.

**Contents**

<b>1</b>	<b>Introduction</b>	<b>1</b>
<b>2</b>	<b>Examples</b>	<b>1</b>
2.1	Code . . . . .	1
2.2	Images . . . . .	1
<b>3</b>	<b>Conclusion</b>	<b>2</b>
<b>A</b>	<b>Beaker inside Vagrant example</b>	<b>4</b>

# 1 Introduction

This is a  $\text{\LaTeX}$  report template. It demonstrates cross-references, citations, images, and code examples with minted.

## 2 Examples

### 2.1 Code

The following is a demonstration of how cross-references can be used to refer to appendix code. Citations are also used.

Beaker can work with different hypervisors by using plugins. If a plugin for a particular hypervisor does not exist, an alternative is to use Vagrant to manage the SUT's, and instead install and run Beaker as part of Vagrant's provisioning process. [2][1] An example of this is included in appendix A. This example would be used by running `vagrant up --verbose && vagrant destroy --force --verbose`.

### 2.2 Images

Figure 1 shows a picture of Sunnmørsalpane. You're welcome.

Figure 1: Sunnmørsalpane



### **3 Conclusion**

This has been a demonstration of L<sup>A</sup>T<sub>E</sub>X in use.

## References

- [1] [OpenStack documentation: Puppet Module Functional Testing](#). [Online; accessed 4-November-2018]. 1
- [2] [Puppet Module Functional Testing with Vagrant, OpenStack and Beaker](#). [Online; accessed 4-November-2018]. 1

## A Beaker inside Vagrant example

```
1  # -*- mode: ruby -*-
2  # vi: set ft=ruby :
3
4  require 'vagrant-openstack-provider'
5
6  #
7  # This is quite the minimal configuration necessary
8  # to start an OpenStack instance using Vagrant on
9  # an OpenStack with Keystone v3 API
10 #
11 # NOTE: this example is heavily
12 # inspired by http://myl.fr/blog/puppet-module-functional-testing-with-vagrant-openstack-and-beaker/
13 #
14 Vagrant.configure('2') do |config|
15
16   config.ssh.username = 'ubuntu'
17
18   config.vm.provider :openstack do |os, ov|
19     os.server_name = 'vagrant_machine_in_openstack'
20     os.security_groups = [ 'default', 'linux' ]
21     os.identity_api_version = '3'
22     os.openstack_auth_url = 'https://api.skyhigh.iik.ntnu.no:5000/v3'
23     os.project_name = '<PROJECTNAME>'
24     os.user_domain_name = 'NTNU'
25     os.project_domain_name = 'NTNU'
26     os.username = '<USERNAME>'
27     os.password = '<PASSWORD>'
28     os.region = 'SkyHigh'
29     os.floating_ip_pool = 'ntnu-internal'
30     os.floating_ip_pool_always_allocate = true
31     os.flavor = 'm1.small'
32     os.image = 'Ubuntu Server 16.04 LTS (Xenial Xerus) amd64'
33     os.networks = [ '<INTERNALNETID>' ]
34
35     ov.nfs.functional = false
36   end
37
38   # you could provision this machine using the same provisioning scripts used by
39   # Heat, to create an exact duplicate
40   config.vm.provision "shell", path: "bootscriptFromHeat.sh"
41
42
43   # shell to install beaker, setup ssh, and run beaker tests.
44   # written inline for sake of example
45   config.vm.provision "shell", inline: <<-SHELL
46   #!/bin/bash
47
48   # install deps
49   sudo apt-get update
50   sudo apt-get install -y libxml2-dev libxslt-dev zlib1g-dev git ruby ruby-dev build-essential
51
52   # prepare ssh
53   echo "" | sudo tee -a /etc/ssh/sshd_config
54   echo "Match address 127.0.0.1" | sudo tee -a /etc/ssh/sshd_config
55   echo "    PermitRootLogin without-password" | sudo tee -a /etc/ssh/sshd_config
56   echo "" | sudo tee -a /etc/ssh/sshd_config
57   echo "Match address ::1" | sudo tee -a /etc/ssh/sshd_config
58   echo "    PermitRootLogin without-password" | sudo tee -a /etc/ssh/sshd_config
59   mkdir -p .ssh
60   ssh-keygen -f ~/.ssh/id_rsa -b 2048 -C "beaker key" -P ""
61   sudo mkdir -p /root/.ssh
62   sudo rm /root/.ssh/authorized_keys
63   cat ~/.ssh/id_rsa.pub | sudo tee -a /root/.ssh/authorized_keys
64   sudo service ssh restart
65
66   # prepare gems
67   # this uses my gossinbackup module as an example, but it would be
68   # possible to have the module as a parameter to this process
69   git clone https://github.com/tholok97/gossinbackup
70   cd gossinbackup
71   sudo gem install bundler --no-rdoc --no-ri --verbose
72   bundle install
73
74   # run tests
75   # this relies on SUT yaml definitions with hypervisor set to "none",
76   # like here: https://github.com/openstack/puppet-keystone/blob/master/spec/acceptance/nodesets/nodepool-xenial.yml
77   export BEAKER_debug=yes
78   bundle exec rspec spec/acceptance
79 SHELL
80
81 end
```