

# 南昌大学实验报告

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Fill-in the following sections with either English or Chinese.

In your submission email, you may deliver (1) your source code (packed in one file or shared in a netdisk link) (2) PDF version of this report

**Remove** these comments when writing your report

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专业班级：计算机科学与技术154班\_\_

实验日期：\_\_2018.4.7\_\_

课程名称：\_\_Linux程序设计\_\_

## 实验项目名称：Linux Programming

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### 实验目的

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安装部署OpenStack

### 实验基础

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Ubuntu14

### 实验步骤

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1 , build an OS

2 , Initialize a Service

3 , openstack training-labs

### 实验数据或结果

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#### 1.首先更新ubuntu源

```
$sudo apt-get update $sudo apt-get upgrade
```

```
命中 http://cn.archive.ubuntu.com trusty/restricted Translation-zh_CN
命中 http://cn.archive.ubuntu.com trusty/restricted Translation-en
命中 http://cn.archive.ubuntu.com trusty/universe Translation-zh_CN
命中 http://cn.archive.ubuntu.com trusty/universe Translation-en
忽略 http://cn.archive.ubuntu.com trusty/main Translation-zh
忽略 http://cn.archive.ubuntu.com trusty/multiverse Translation-zh
获取 : 21 http://security.ubuntu.com trusty-security/restricted i386 Packages [13,9 kB]
忽略 http://cn.archive.ubuntu.com trusty/restricted Translation-zh
获取 : 22 http://security.ubuntu.com trusty-security/universe i386 Packages [217 kB]
忽略 http://cn.archive.ubuntu.com trusty/universe Translation-zh
获取 : 23 http://security.ubuntu.com trusty-security/multiverse i386 Packages [4,951 B]
获取 : 24 http://security.ubuntu.com trusty-security/main Translation-en [393 kB]
获取 : 25 http://security.ubuntu.com trusty-security/multiverse Translation-en [2,564 B]
获取 : 26 http://security.ubuntu.com trusty-security/restricted Translation-en [3,546 B]
获取 : 27 http://security.ubuntu.com trusty-security/universe Translation-en [123 kB]
下载 4,705 kB, 耗时 37秒 (124 kB/s)
正在读取软件包列表... 完成
CZM@CZM-53:~$
```

## 2.安装git

`$sudo apt-get install git`

```
解压缩后会消耗掉 22.0 MB 的额外空间。
您希望继续执行吗？ [Y/n] Y
获取 : 1 http://cn.archive.ubuntu.com/ubuntu/ trusty/main liberror-perl all 0.17-1.1 [21.1 kB]
获取 : 2 http://cn.archive.ubuntu.com/ubuntu/ trusty-updates/main git-man all 1:1.9.1-1ubuntu0.7 [699 kB]
获取 : 3 http://cn.archive.ubuntu.com/ubuntu/ trusty-updates/main git i386 1:1.9.1-1ubuntu0.7 [2,215 kB]
下载 2,936 kB, 耗时 16秒 (178 kB/s)
Selecting previously unselected package liberror-perl.
(正在读取数据库 ... 系统当前共安装有 145277 个文件和目录。)
Preparing to unpack .../liberror-perl_0.17-1.1_all.deb ...
Unpacking liberror-perl (0.17-1.1) ...
Selecting previously unselected package git-man.
Preparing to unpack .../git-man_1%3a1.9.1-1ubuntu0.7_all.deb ...
Unpacking git-man (1:1.9.1-1ubuntu0.7) ...
Selecting previously unselected package git.
Preparing to unpack .../git_1%3a1.9.1-1ubuntu0.7_i386.deb ...
Unpacking git (1:1.9.1-1ubuntu0.7) ...
Processing triggers for man-db (2.6.7.1-1) ...
正在设置 liberror-perl (0.17-1.1) ...
正在设置 git-man (1:1.9.1-1ubuntu0.7) ...
正在设置 git (1:1.9.1-1ubuntu0.7) ...
```

## 3.获取openshit

`$cd /home`

`$git clone https://github.com/windworst/openshit.git`

## 4.编辑配置文件setting.conf

```
$cd openshit $sudo chmod 777 setting.conf $sudo gedit setting.conf
```

```
czm@czm-53:/home$ sudo git clone https://github.com/windworst/openshit.git
正克隆到 'openshit'...
remote: Counting objects: 381, done.
remote: Total 381 (delta 0), reused 0 (delta 0), pack-reused 381
接收对象中: 100% (381/381), 61.68 KiB | 114.00 KiB/s, done.
处理 delta 中: 100% (247/247), done.
检查连接... 完成。
czm@czm-53:/home$ cd openshit
czm@czm-53:/home/openshit$ sudo chmod 777 setting.conf
czm@czm-53:/home/openshit$ sudo gedit setting.conf
```

\$ifconfig查看IP

```
czm@czm-53:~$ ifconfig
eth0      Link encap:以太网  硬件地址 00:0c:29:f9:fd:73
          inet 地址:192.168.60.128  广播:192.168.60.255  掩码:255.255.255.0
          inet6 地址: fe80::20c:29ff:fe9:fd73/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  跃点数:1
          接收数据包:2158  错误:0  丢弃:0  过载:0  帧数:0
          发送数据包:1244  错误:0  丢弃:0  过载:0  载波:0
          碰撞:0  发送队列长度:1000
          接收字节:3127823 (3.1 MB)  发送字节:78490 (78.4 KB)
          中断:19  基本地址:0x2000

lo        Link encap:本地环回
          inet 地址:127.0.0.1  掩码:255.0.0.0
          inet6 地址: ::1/128 Scope:Host
          UP LOOPBACK RUNNING  MTU:65536  跃点数:1
          接收数据包:180  错误:0  丢弃:0  过载:0  帧数:0
          发送数据包:180  错误:0  丢弃:0  过载:0  载波:0
          碰撞:0  发送队列长度:0
          接收字节:22321 (22.3 KB)  发送字节:22321 (22.3 KB)
```

在setting.conf文件中，将SET\_CONTROLLER\_IP，SET\_COMPUTE\_IP均设为本主机的Ip地址

```
setting.conf x
# This is OpenShit configure file
# All of settings in this file
# Update to Openstack component configure file

# node ip
SET_CONTROLLER_IP=192.168.60.128
SET_COMPUTE_IP=192.168.60.128
SET_INTERFACE_NAME=eth0

#node
```

## 5.安装openstack

```
$echo y | ./openshit.sh --all install
```

```

正在设置 python-ceilometerclient (1.0.10-0ubuntu1~cloud0) ...
正在设置 python-memcache (1.53-1build1) ...
正在设置 python-saharaclient (0.7.3-1~cloud0) ...
正在设置 python-troveclient (1:1.0.5-0ubuntu2~cloud0) ...
正在设置 python-django-horizon (1:2014.2.4-0ubuntu1~cloud2) ...
正在设置 openstack-dashboard (1:2014.2.4-0ubuntu1~cloud2) ...
正在添加系统用户"horizon" (UID 124)...
正在将新用户"horizon" (UID 124)添加到组"horizon"...
无法创建主目录"/usr/share/openstack-dashboard/"
Collecting and compressing static assets...
apache2_invoke: Enable configuration openstack-dashboard.conf
* Reloading web server apache2
*
正在设置 memcached (1.4.14-0ubuntu9.3) ...
Starting memcached: memcached.
正在设置 openstack-dashboard-ubuntu-theme (1:2014.2.4-0ubuntu1~cloud2) ...
Collecting and compressing static assets...
* Reloading web server apache2
*
Processing triggers for libc-bin (2.19-0ubuntu6) ...
Processing triggers for ureadahead (0.100.0-16) ...
Processing triggers for ufw (0.34~rc-0ubuntu2) ...
czm@czm-53:/home/openshit$

```

## 6.配置

\$./openshit.sh --all config

```

czm@czm-53: /home/openshit
cinder-api start/running, process 31451
restart: cinder-volume
cinder-volume stop/waiting
cinder-volume start/running, process 31469
restart: tgt
tgt stop/waiting
tgt start/running, process 31496
config: nova-network
Configuring /etc/nova/nova.conf ...
cp: 无法创建普通文件"config-backups/2018-04-08_21,51,49/nova.conf-2018-04-08_21,53,00": 没有那个文件或目录
restart: nova-api
nova-api stop/waiting
nova-api start/running, process 31523
restart: nova-scheduler
nova-scheduler stop/waiting
nova-scheduler start/running, process 31541
restart: nova-conductor
nova-conductor stop/waiting
nova-conductor start/running, process 31559
restart: nova-network
nova-network stop/waiting
nova-network start/running, process 31577
czm@czm-53:/home/openshit$

```

## 7.验证

查看结果

\$source admin-env.sh \$nova service-list

```

/openshit$ nova service-list
-----+-----+-----+-----+-----
Host                               | Zone      | Status  | State | Upd
Disabled Reason |
-----+-----+-----+-----+-----
ut2-virtual-machine | internal  | enabled | up    | 201
-                   |           |         |       | 
ut2-virtual-machine | internal  | enabled | up    | 201
-                   |           |         |       | 
ut2-virtual-machine | internal  | enabled | up    | 201
-                   |           |         |       | 
ut2-virtual-machine | nova      | enabled | up    | 201
-                   |           |         |       | 
ut2-virtual-machine | internal  | enabled | up    | 201
-                   |           |         |       | 
-----+-----+-----+-----+-----

```

网页显示

输入<http://192.168.60.128/horizon> 192.168.60.128为本地IP

## 实验思考

原本按照官方指导始终无法成功（其实是看不懂），最后只能通过openshit在Ubuntu上部署OpenStack，这样虽然安装简单，但是只有一个控制节点，估计对后面开发有所影响，不过总的来说，是一个好的开始，对OpenStack有了一定的理解,但还有待加深理解认识。

## 参考资料

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<https://blog.csdn.net/AMDS123/article/details/69488545>

[https://wiki.openstack.org/wiki/Documentation/training-labs#Building the cluster](https://wiki.openstack.org/wiki/Documentation/training-labs#Building_the_cluster)