

# Assignment 04

MAKSUD ALAM  
ID-16201033

CSE491

I have tested the following installation guide on Ubuntu 16.

```
maksud@alam-16201033:~$  
maksud@alam-16201033:~$ sudo su -  
[sudo] password for maksud:  
Sorry, try again.  
[sudo] password for maksud:
```

```
root@alam-16201033:~# blkid  
/dev/vda1: UUID="c9308e36-fb99-429e-8117-531d1e678f44" TYPE="ext2" PARTUUID="0c84a697-01"  
/dev/vda5: UUID="F95uoX-YOVT-Kc4r-tceF-s1Pk-TBnb-xj1T6l" TYPE="LVM2_member" PARTUUID="0c84a697-05"  
/dev/mapper/alam--16201033--vg-root: UUID="3dde2e00-f4fc-427d-9d87-f3433c793548" TYPE="ext4"  
/dev/mapper/alam--16201033--vg-swap_1: UUID="7d74cba0-a332-4389-bcbe-d4daebf6de1d" TYPE="swap"  
/dev/mapper/alam--16201033--vg-home: UUID="66b2173d-8d6e-4559-8fa9-2c1901c1fc09" TYPE="ext4"
```

by bikid I saw the disks.

```
maksud@alam-16201033:~$ sudo apt-get install git curl gcc memcached rsync sqlite3 xfsprogs git-core libffi-dev python-setuptools  
libssl-dev  
Reading package lists... Done  
Building dependency tree  
Reading state information... Done  
gcc is already the newest version (4:5.3.1-1ubuntu1).  
libffi-dev is already the newest version (3.2.1-4).  
python-setuptools is already the newest version (20.7.0-1).  
curl is already the newest version (7.47.0-1ubuntu2.16).  
git is already the newest version (1:2.7.4-0ubuntu1.9).  
git-core is already the newest version (1:2.7.4-0ubuntu1.9).  
libssl-dev is already the newest version (1.0.2g-1ubuntu4.17).  
memcached is already the newest version (1.4.25-2ubuntu1.5).  
rsync is already the newest version (3.1.1-3ubuntu1.3).  
sqlite3 is already the newest version (3.11.0-1ubuntu1.5).  
xfsprogs is already the newest version (4.3.0+nmu1ubuntu1.1).  
0 upgraded, 0 newly installed, 0 to remove and 244 not upgraded.
```

```
maksud@alam-16201033:~$ sudo apt-get install python-coverage python-dev python-nose \python-xattr python-eventlet \python-greenl
et python-pastedeploy \python-netifaces python-pip python-dnspython \python-mock
Reading package lists... Done
Building dependency tree
Reading state information... Done
python-dnspython is already the newest version (1.12.0-1).
python-eventlet is already the newest version (0.18.4-1ubuntu1).
python-greenlet is already the newest version (0.4.9-2fakesync1).
python-mock is already the newest version (1.3.0-2.1ubuntu1).
python-netifaces is already the newest version (0.10.4-0.1build2).
python-pastedeploy is already the newest version (1.5.2-1).
python-xattr is already the newest version (0.7.8-3).
python-coverage is already the newest version (3.7.1+dfsg.1-1ubuntu7?).
python-nose is already the newest version (1.3.7-1).
python-dev is already the newest version (2.7.12-1~16.04).
python-pip is already the newest version (8.1.1-2ubuntu0.4).
0 upgraded, 0 newly installed, 0 to remove and 8 not upgraded.
```

I installed many python dependencies and python packages for further work.

```
maksud@alam-16201033:~$ git clone http://github.com/openstack/swift.git
Cloning into 'swift'...
remote: Enumerating objects: 230, done.
remote: Counting objects: 100% (230/230), done.
remote: Compressing objects: 100% (164/164), done.
remote: Total 86358 (delta 130), reused 126 (delta 66), pack-reused 86128
Receiving objects: 100% (86358/86358), 59.12 MiB | 761.00 KiB/s, done.
Resolving deltas: 100% (66375/66375), done.
Checking connectivity... done.
```

After that, I cloned swift folder to my machine from github. It clones that whole repository to my hard drive using git clone command. Later I also cloned from python-swift folder from my machine but I forgot to take screenshot.

```

maksud@Alam-16201033:~$ cd python-swiftclient
maksud@Alam-16201033:~/python-swiftclient$ pip install -r requirements.txt
Collecting futures>=3.0.0 (from -r requirements.txt (line 1))
  Downloading https://files.pythonhosted.org/packages/d8/a6/f46ae3f1da0cd4361c344888f59ec2
-3.3.0-py2-none-any.whl
Collecting requests>=1.1.0 (from -r requirements.txt (line 2))
  Downloading https://files.pythonhosted.org/packages/45/1e/0c169c6a5381e241ba7404532c16a2
s-2.24.0-py2.py3-none-any.whl (61kB)
    100% |#####| 71kB 1.2MB/s
Collecting six>=1.9.0 (from -r requirements.txt (line 3))
  Downloading https://files.pythonhosted.org/packages/ee/ff/48bde5c0f013094d729fe4b0316ba2
5.0-py2.py3-none-any.whl
Collecting chardet<4,>=3.0.2 (from requests>=1.1.0->-r requirements.txt (line 2))
  Downloading https://files.pythonhosted.org/packages/bc/a9/01ffebfb562e4274b6487b4bb1ddc
-3.0.4-py2.py3-none-any.whl (133kB)
    100% |#####| 143kB 1.5MB/s
Collecting urllib3!=1.25.0,!1.25.1,<1.26,>=1.21.1 (from requests>=1.1.0->-r requirements.
-1.25.10-py2.py3-none-any.whl (127kB)
    100% |#####| 133kB 1.9MB/s
Collecting idna<3,>=2.5 (from requests>=1.1.0->-r requirements.txt (line 2))
  Downloading https://files.pythonhosted.org/packages/a2/38/928ddce2273eaa564f6f50de919327
10-py2.py3-none-any.whl (58kB)
    100% |#####| 61kB 6.5MB/s
Collecting certifi>=2017.4.17 (from requests>=1.1.0->-r requirements.txt (line 2))
  Downloading https://files.pythonhosted.org/packages/5e/c4/6c4fe722df5343c33226f0b4e0bb04
-2020.6.20-py2.py3-none-any.whl (156kB)
    100% |#####| 163kB 205kB/s
Installing collected packages: futures, chardet, urllib3, idna, certifi, requests, six
Successfully installed certifi chardet futures idna-2.0 requests six-1.10.0 urllib3
You are using pip version 8.1.1, however version 20.2.3 is available.
You should consider upgrading via the 'pip install --upgrade pip' command.

```

Then, I went to the python-swiftclient destination with cd command and installed the requirements.txt which consist of some libraries and package installation commands to generate the download and installation process.

```

maksud@Alam-16201033:~/swift$ python setup.py install
running install
running build
running build_py
running egg_info
writing pbr to swift.egg-info/pbr.json
writing requirements to swift.egg-info/requirements.txt
writing swift.egg-info/PKG-INFO
writing top-level names to swift.egg-info/top_level.txt
writing dependency_links to swift.egg-info/dependency_links.txt
writing entry points to swift.egg-info/entry_points.txt
[pbr] Processing SOURCES.txt
[pbr] In git context, generating filelist from git
warning: no files found matching 'ChangeLog'
warning: no previously-included files matching '*.pyc' found anywhere in distribut
reading manifest template 'MANIFEST.in'
writing manifest file 'swift.egg-info/SOURCES.txt'
running build_scripts
running install_lib
creating /usr/local/lib/python2.7/dist-packages/swift

```

then, I installed python setup.py install

```

maksud@Alam-16201033:~$ mkdir -p /etc/swift
maksud@Alam-16201033:~$ cd swift/etc
maksud@Alam-16201033:~/swift/etc$ _

```

Then, I make a directory as /etc/swift in which I will copy all the configuration files.

```

maksud@Alam-16201033:~/swift/etc$ sudo cp account-server.conf-sample /etc/swift/account-server.conf
maksud@Alam-16201033:~/swift/etc$ sudo cp container-server.conf-sample /etc/swift/container-server.conf
maksud@Alam-16201033:~/swift/etc$ sudo cp object-server.conf-sample /etc/object-server.conf
maksud@Alam-16201033:~/swift/etc$ sudo cp proxy-server.conf-sample /etc/proxy-server.conf
maksud@Alam-16201033:~/swift/etc$ sudo cp drive-aduit.conf-sample /etc/swift/drive-audit.conf
cp: cannot stat 'drive-aduit.conf-sample': No such file or directory
maksud@Alam-16201033:~/swift/etc$ sudo cp swift.conf-sample /etc/swift/swift.conf
maksud@Alam-16201033:~/swift/etc$ _

```

Then, I would go to the swift/etc directory and then copy all the necessary configuration samples files provided by swift and copy them as .conf files to /etc/swift directory.

```
maksud@Alam-16201033:~/swift/etc$ ls /sys/block
dm-0 dm-1 dm-2 loop0 loop1 loop2 loop3 loop4 loop5 loop6 loop7 sr0 vda
maksud@Alam-16201033:~/swift/etc$
```

After that, I check whether the partition I made, by adding virtual hard drive, exists or not.

```
maksud@Alam-16201033:~$ sudo mkfs.xfs -f -L d1 /dev/vda2
size 0 of data subvolume is too small, minimum 100 blocks
Usage: mkfs.xfs
/* blocksize */          [-b log=n|size=num]
/* metadata */           [-m crc=0|1,finobt=0|1,uuid=xxx]
/* data subvol */        [-d agcount=n,agsize=n,file,name=xxx,size=num,
                          (sunit=value,swidth=value|su=num,sw=num|noalign),
                          sectlog=n|sectsize=num]

/* force overwrite */    [-f]
/* inode size */         [-i log=n|perblock=n|size=num,maxpct=n,attr=0|1|2,
                          projid32bit=0|1,sparse=0|1]
/* no discard */         [-K]
/* log subvol */         [-l agnum=n,internal,size=num,logdev=xxx,version=n
                          sunit=value|su=num,sectlog=n|sectsize=num,
                          lazy-count=0|1]

/* label */              [-L label (maximum 12 characters)]
/* naming */             [-n log=n|size=num,version=2|ci,ftype=0|1]
/* no-op info only */    [-N]
/* prototype file */     [-p fname]
/* quiet */              [-q]
/* realtime subvol */    [-r extsize=num,size=num,rtdev=xxx]
/* sectorsize */         [-s log=n|size=num]
/* version */            [-V]
                          devicename
<devicename> is required unless -d name=xxx is given.
<num> is xxx (bytes), xxxs (sectors), xxxb (fs blocks), xxxk (xxx KiB),
      xxxm (xxx MiB), xxxg (xxx GiB), xxxt (xxx TiB) or xxxp (xxx PiB).
<value> is xxx (512 byte blocks).
```

next , I formatted.

```
maksud@Alam-16201033:~$ sudo mkdir -p /srv/node/d1
maksud@Alam-16201033:~$ sudo mkdir -p /srv/node/d2
maksud@Alam-16201033:~$ sudo mkdir -p /srv/node/d3
```

I created a directory in /srv/node/ for each device as a place to mount the filesystem. We suggest a simple approach to naming the directories, such as using each device's label (d1, d2,d3)

```
maksud@Alam-16201033:~$ useradd swift
useradd: user 'swift' already exists
maksud@Alam-16201033:~$ chown -R swift:swift /srv/node
chown: changing ownership of '/srv/node/d3': Operation not permitted
chown: changing ownership of '/srv/node/d1': Operation not permitted
chown: changing ownership of '/srv/node/d2': Operation not permitted
chown: changing ownership of '/srv/node': Operation not permitted
maksud@Alam-16201033:~$ sudo chown -R swift:swift /srv/node
```

I gave the swift user ownership to the directories.

```
maksud@Alam-16201033:~/swift/bin$ swift-ring-builder account.builder create 3 3 1
maksud@Alam-16201033:~/swift/bin$ swift-ring-builder container.builder create 3 3 1
maksud@Alam-16201033:~/swift/bin$ swift-ring-builder object.builder create 3 3 1
maksud@Alam-16201033:~/swift/bin$ ls
account                swift-config           swift-drive-audit      swift-obje
account.builder        swift-container-auditor swift-form-signature    swift-oldi
backups                swift-container-info   swift-get-nodes         swift-orph
container.builder      swift-container-reconciler swift-init              swift-prox
object.builder         swift-container-replicator swift-object-auditor    swift-reco
swift-account-audit    swift-container-server  swift-object-expirer    swift-reco
swift-account-auditor  swift-container-sharder swift-object-info       swift-reco
swift-account-info     swift-container-sync    swift-object-reconstructor swift-ring
swift-account-reaper   swift-container-updater  swift-object-relinker   swift-ring
swift-account-replicator swift-dispersion-populate swift-object-replicator swift-ring
swift-account-server   swift-dispersion-report swift-object-server
```

Now, I need to create builder files. I need to create minimum of three files, account.builder, container.builder, object.builder. The builder file is a composite of big database. It contains records of all the storage devices in the cluster and the values the ring-builder utility will use to create a ring.

```

maksud@Alam-16201033:~/swift/bin$ swift-ring-builder account.builder add r1z1-127.0.0.1:6002/d1 100
Device d0r1z1-127.0.0.1:6002R127.0.0.1:6002/d1_"" with 100.0 weight got id 0
maksud@Alam-16201033:~/swift/bin$ swift-ring-builder container.builder add r1z1-127.0.0.1:6002/d1 100
Device d0r1z1-127.0.0.1:6002R127.0.0.1:6002/d1_"" with 100.0 weight got id 0
maksud@Alam-16201033:~/swift/bin$ swift-ring-builder object.builder add r1z1-127.0.0.1:6002/d1 100
Device d0r1z1-127.0.0.1:6002R127.0.0.1:6002/d1_"" with 100.0 weight got id 0
maksud@Alam-16201033:~/swift/bin$ swift-ring-builder account.builder add r1z1-127.0.0.1:6002/d1 100
Device 0 already uses 127.0.0.1:6002/d1.
The on-disk ring builder is unchanged.

maksud@Alam-16201033:~/swift/bin$ swift-ring-builder account.builder add r1z1-127.0.0.1:6002/d2 100
Device d1r1z1-127.0.0.1:6002R127.0.0.1:6002/d2_"" with 100.0 weight got id 1
maksud@Alam-16201033:~/swift/bin$ swift-ring-builder container.builder add r1z1-127.0.0.1:6002/d2 100
Device d1r1z1-127.0.0.1:6002R127.0.0.1:6002/d2_"" with 100.0 weight got id 1
maksud@Alam-16201033:~/swift/bin$ swift-ring-builder object.builder add r1z1-127.0.0.1:6002/d2 100
Device d1r1z1-127.0.0.1:6002R127.0.0.1:6002/d2_"" with 100.0 weight got id 1
maksud@Alam-16201033:~/swift/bin$ swift-ring-builder account.builder add r1z1-127.0.0.1:6002/d3 100
Device d2r1z1-127.0.0.1:6002R127.0.0.1:6002/d3_"" with 100.0 weight got id 2
maksud@Alam-16201033:~/swift/bin$ swift-ring-builder container.builder add r1z1-127.0.0.1:6002/d3 100
Device d2r1z1-127.0.0.1:6002R127.0.0.1:6002/d3_"" with 100.0 weight got id 2
maksud@Alam-16201033:~/swift/bin$ swift-ring-builder object.builder add r1z1-127.0.0.1:6002/d3 100
Device d2r1z1-127.0.0.1:6002R127.0.0.1:6002/d3_"" with 100.0 weight got id 2

```

With the builder file created, I have to add drives to them. I have to add region and zone also with the local host IP address and the port number defined for account/container/object and weights to them.

```

maksud@Alam-16201033:~/swift/bin$ swift-ring-builder account.builder rebalance
Reassigned 24 (300.00%) partitions. Balance is now 0.00. Dispersion is now 0.00
maksud@Alam-16201033:~/swift/bin$ swift-ring-builder container.builder rebalance
Reassigned 24 (300.00%) partitions. Balance is now 0.00. Dispersion is now 0.00
maksud@Alam-16201033:~/swift/bin$ swift-ring-builder object.builder rebalance
Reassigned 24 (300.00%) partitions. Balance is now 0.00. Dispersion is now 0.00

```

The re balance command creates an actual ring file used by Swift to determine where data is placed.

```

maksud@Alam-16201033:~/swift/bin$ cd
maksud@Alam-16201033:~$ cd /etc
maksud@Alam-16201033:/etc$ sudo su
[sudo] password for maksud:
root@Alam-16201033:/etc# cd rsyslog.d
root@Alam-16201033:/etc/rsyslog.d# sudo cat 0-swift.conf

```

I created a configuration file named 0-swift.conf in the /etc/rsyslog.d directory.



```
maksud@Alam-16201033:~$ ls
python-swiftclient  swift
maksud@Alam-16201033:~$ cd python-swiftclient
maksud@Alam-16201033:~/python-swiftclient$ swift-init proxy start
Unable to locate config for proxy-server
maksud@Alam-16201033:~/python-swiftclient$ sudo swift-init proxy start
Unable to locate config for proxy-server
maksud@Alam-16201033:~/python-swiftclient$ cd
maksud@Alam-16201033:~$ cd swift
maksud@Alam-16201033:~/swift$ sudo swift-init proxy start
Unable to locate config for proxy-server
maksud@Alam-16201033:~/swift$ sudo swift-init proxy start
Unable to locate config for proxy-server
maksud@Alam-16201033:~/swift$
```

Mam, I tried to fix but I cant.. sorry mam my moms aunt died thats why I had to go village with her.. I gave finals from village...i did back yesterday .. I couldnt do it because I didnt have my pc with me .. Miss sorry , for being late ..