

**LAPORAN PRAKTIKUM**  
**TEKNOLOGI CLOUD**  
**PERTEMUAN KE-4**



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<b>PROGRAM STUDI</b>	<b>: Sistem Informasi</b>
<b>JENJANG</b>	<b>: S1</b>

**UNIVERSITAS TEKNOLOGI DIGITAL INDONESIA**  
**YOGYAKARTA**  
**2022**

#### A. Tujuan

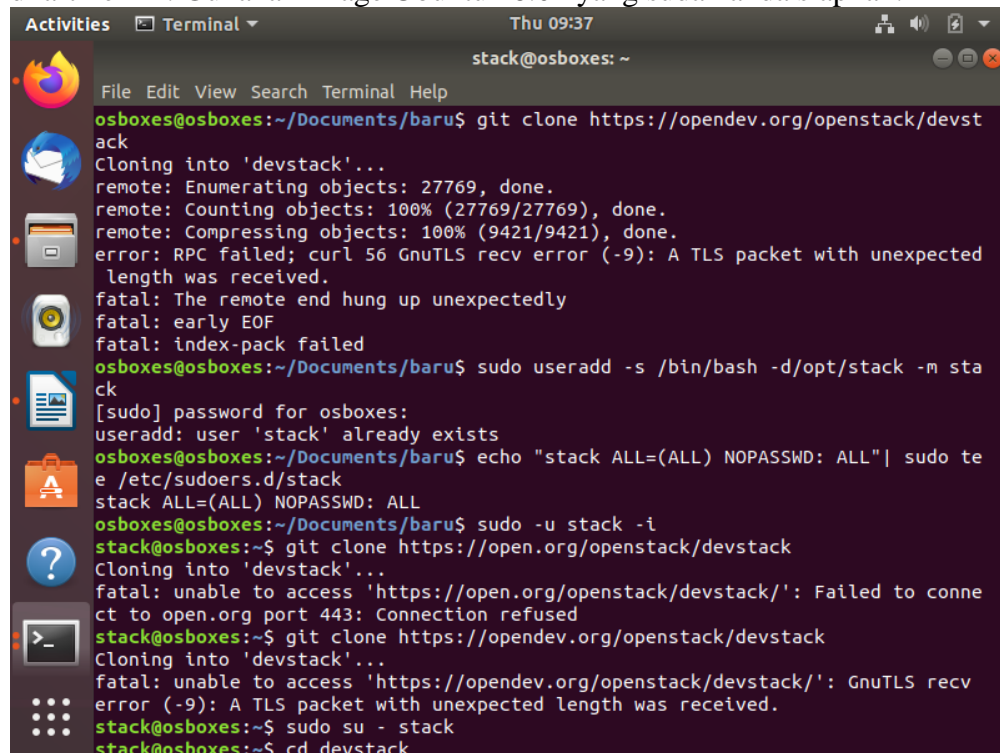
1. Mahasiswa memahami pengertian serta komponen-komponen dari IaaS.
2. Mahasiswa memahami dan mampu melakukan instalasi DevStack sebagai software yang menyediakan IaaS serta memahami arah dari pembelajaran IaaS menggunakan OpenStack / DevStack.
3. Mahasiswa memahami pengertian serta komponen-komponen dari SDN (Software-Defined Networking).
4. Mahasiswa memahami dasar-dasar cara kerja dari SDN menggunakan simulator Mininet.
5. Mahasiswa memahami keterkaitan antara IaaS dengan SDN.

#### B. Pembahasan

1. Pengertian IaaS dan komponen-komponen IaaS
2. Memulai DevStack
3. Software-Defined Networking - OpenDaylight
4. Mininet utk emulasi SDN
5. Keterkaitan IaaS dengan SDN

#### C. Latihan

Install DevStack dengan menggunakan petunjuk yang ada di quickstart maupun di artikel ini. Gunakan image Ubuntu 18.04 yang sudah anda siapkan.



```
Activities Terminal Thu 09:37
stack@osboxes: ~
File Edit View Search Terminal Help
osboxes@osboxes:~/Documents/baru$ git clone https://opendev.org/openstack/devstack
Cloning into 'devstack'...
remote: Enumerating objects: 27769, done.
remote: Counting objects: 100% (27769/27769), done.
remote: Compressing objects: 100% (9421/9421), done.
error: RPC failed; curl 56 GnuTLS recv error (-9): A TLS packet with unexpected
length was received.
fatal: The remote end hung up unexpectedly
fatal: early EOF
fatal: index-pack failed
osboxes@osboxes:~/Documents/baru$ sudo useradd -s /bin/bash -d/opt/stack -m sta
ck
[sudo] password for osboxes:
useradd: user 'stack' already exists
osboxes@osboxes:~/Documents/baru$ echo "stack ALL=(ALL) NOPASSWD: ALL"| sudo te
e /etc/sudoers.d/stack
stack ALL=(ALL) NOPASSWD: ALL
osboxes@osboxes:~/Documents/baru$ sudo -u stack -i
stack@osboxes:~$ git clone https://open.org/openstack/devstack
Cloning into 'devstack'...
fatal: unable to access 'https://open.org/openstack/devstack/': Failed to conne
ct to open.org port 443: Connection refused
stack@osboxes:~$ git clone https://opendev.org/openstack/devstack
Cloning into 'devstack'...
fatal: unable to access 'https://opendev.org/openstack/devstack/': GnuTLS recv
error (-9): A TLS packet with unexpected length was received.
stack@osboxes:~$ sudo su - stack
stack@osboxes:~$ cd devstack
```

percobaan [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Activities Terminal Thu 09:22

stack@osboxes: ~

```
File Edit View Search Terminal Help
remote: Enumerating objects: 27769, done.
remote: Counting objects: 100% (27769/27769), done.
remote: Compressing objects: 100% (9421/9421), done.
error: RPC failed; curl 56 GnuTLS recv error (-9): A TLS packet with unexpected
length was received.
fatal: The remote end hung up unexpectedly
fatal: early EOF
fatal: index-pack failed
osboxes@osboxes:~/Documents/baru$ sudo useradd -s /bin/bash -d/opt/stack -m sta
ck
[sudo] password for osboxes:
useradd: user 'stack' already exists
osboxes@osboxes:~/Documents/baru$ echo "stack ALL=(ALL) NOPASSWD: ALL" | sudo te
e /etc/sudoers.d/stack
stack ALL=(ALL) NOPASSWD: ALL
osboxes@osboxes:~/Documents/baru$ sudo -u stack -i
stack@osboxes:~$ git clone https://open.org/openstack/devstack
Cloning into 'devstack'...
fatal: unable to access 'https://open.org/openstack/devstack/': Failed to conne
ct to open.org port 443: Connection refused
stack@osboxes:~$ git clone https://opendev.org/openstack/devstack
Cloning into 'devstack'...
fatal: unable to access 'https://opendev.org/openstack/devstack/': GnuTLS recv
error (-9): A TLS packet with unexpected length was received.
stack@osboxes:~$ sudo su - stack
stack@osboxes:~$ cd devstack
-su: cd: devstack: No such file or directory
stack@osboxes:~$
```

Activities Terminal Thu 09:43

stack@osboxes: ~

```
File Edit View Search Terminal Help
stack@osboxes:~$ # apt-get install git
stack@osboxes:~$ sudo apt update
Hit:1 http://us.archive.ubuntu.com/ubuntu bionic InRelease
Get:2 http://security.ubuntu.com/ubuntu bionic-security InRelease [88.7 kB]
Get:3 http://us.archive.ubuntu.com/ubuntu bionic-updates InRelease [88.7 kB]
Get:4 http://us.archive.ubuntu.com/ubuntu bionic-backports InRelease [74.6 kB]
Get:5 http://security.ubuntu.com/ubuntu bionic-security/main i386 Packages [1,1
29 kB]
Get:6 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 Packages [2
,464 kB]
Get:7 http://security.ubuntu.com/ubuntu bionic-security/main amd64 Packages [2,
117 kB]
Get:8 http://security.ubuntu.com/ubuntu bionic-security/main amd64 DEP-11 Metad
ata [55.3 kB]
Get:9 http://security.ubuntu.com/ubuntu bionic-security/universe amd64 DEP-11 M
etadadata [59.3 kB]
Get:10 http://security.ubuntu.com/ubuntu bionic-security/multiverse amd64 DEP-1
1 Metadata [2,464 B]
Get:11 http://us.archive.ubuntu.com/ubuntu bionic-updates/main i386 Packages [1
,435 kB]
87% [11 Packages 782 kB/1,435 kB 54%] 88% [11 Packages 905
Get:12 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 DEP-11 Met
adata [297 kB]
Get:13 http://us.archive.ubuntu.com/ubuntu bionic-updates/universe amd64 DEP-11
Metadata [300 kB]
Get:14 http://us.archive.ubuntu.com/ubuntu bionic-updates/multiverse amd64 DEP-
11 Metadata [2,468 B]
Get:15 http://us.archive.ubuntu.com/ubuntu bionic-backports/universe amd64 DEP-
11 Metadata [9,264 B]
```

```
Activities Terminal Thu 09:43 stack@osboxes: ~
File Edit View Search Terminal Help
36 packages can be upgraded. Run 'apt list --upgradable' to see them.
stack@osboxes:~$ sudo apt install git
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  git-man liberror-perl
Suggested packages:
  git-daemon-run | git-daemon-sysvinit git-doc git-el git-email git-gui gitk
  gitweb git-cvs git-mediawiki git-svn
The following NEW packages will be installed:
  git git-man liberror-perl
0 upgraded, 3 newly installed, 0 to remove and 36 not upgraded.
Need to get 4,750 kB of archives.
After this operation, 34.0 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://us.archive.ubuntu.com/ubuntu bionic/main amd64 liberror-perl all 0
.17025-1 [22.8 kB]
Get:2 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 git-man all
1:2.17.1-1ubuntu0.9 [803 kB]
Get:3 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 git amd64 1
:2.17.1-1ubuntu0.9 [3,923 kB]
Fetched 4,750 kB in 1min 35s (49.9 kB/s)
Selecting previously unselected package liberror-perl.
(Reading database ... 164051 files and directories currently installed.)
Preparing to unpack .../liberror-perl_0.17025-1_all.deb ...
Unpacking liberror-perl (0.17025-1) ...
Selecting previously unselected package git-man.
Preparing to unpack .../git-man_1%3a2.17.1-1ubuntu0.9_all.deb ...
Unpacking git-man (1:2.17.1-1ubuntu0.9) ...
Activities Terminal Thu 09:43 stack@osboxes: ~
File Edit View Search Terminal Help
Get:1 http://us.archive.ubuntu.com/ubuntu bionic/main amd64 liberror-perl all 0
.17025-1 [22.8 kB]
Get:2 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 git-man all
1:2.17.1-1ubuntu0.9 [803 kB]
Get:3 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 git amd64 1
:2.17.1-1ubuntu0.9 [3,923 kB]
Fetched 4,750 kB in 1min 35s (49.9 kB/s)
Selecting previously unselected package liberror-perl.
(Reading database ... 164051 files and directories currently installed.)
Preparing to unpack .../liberror-perl_0.17025-1_all.deb ...
Unpacking liberror-perl (0.17025-1) ...
Selecting previously unselected package git-man.
Preparing to unpack .../git-man_1%3a2.17.1-1ubuntu0.9_all.deb ...
Unpacking git-man (1:2.17.1-1ubuntu0.9) ...
Selecting previously unselected package git.
Preparing to unpack .../git_1%3a2.17.1-1ubuntu0.9_amd64.deb ...
Unpacking git (1:2.17.1-1ubuntu0.9) ...
Setting up git-man (1:2.17.1-1ubuntu0.9) ...
Setting up liberror-perl (0.17025-1) ...
Setting up git (1:2.17.1-1ubuntu0.9) ...
Processing triggers for man-db (2.8.3-2ubuntu0.1) ...
stack@osboxes:~$ git --version
git version 2.17.1
stack@osboxes:~$ git clone https://opendev.org/openstack/devstack
Cloning into 'devstack'...
fatal: unable to access 'https://opendev.org/openstack/devstack/': GnuTLS recv
error (-9): A TLS packet with unexpected length was received.
stack@osboxes:~$
```