LAMPIRAN

Lampiran 1. File Konfigurasi Limitasi Interface pada Router-1

```
#!/bin/bash
# THIS FILE IS ADDED FOR COMPATIBILITY PURPOSES
#
# It is highly advisable to create own systemd services or udev
rules
# to run scripts during boot instead of using this file.
#
# In contrast to previous versions due to parallel execution
during boot
# this script will NOT be run after all other services.
#
# Please note that you must run 'chmod +x /etc/rc.d/rc.local' to
ensure
# that this script will be executed during boot.

touch /var/lock/subsys/local

tc qdisc add dev eth1 root handle 1:0 htb
tc class add dev eth1 parent 1:0 classid 1:1 htb rate 10Mbit
tc filter add dev eth1 protokol ip parent 1:0 prio 0 u32 match
ip dst 192.168.3.0/24 flowid 1:1

tc qdisc add dev eth2 root handle 1:0 htb
tc class add dev eth2 parent 1:0 classid 1:1 htb rate 10Mbit
tc filter add dev eth2 protokol ip parent 1:0 prio 0 u32 match
ip dst 192.168.3.0/24 flowid 1:1
```

Lampiran 2. File Konfigurasi zebra.conf pada OSPF Multi-Path (Router-1)

```
!
! Zebra configuration saved from vty
!   2018/01/08 19:37:56
!
hostname router-1
!
interface eth0
 description to-LAN
 ip address 192.168.1.1/24
 ipv6 nd suppress-ra
!
interface eth1
 description to-R2
 ip address 192.168.100.1/24
 ipv6 nd suppress-ra
!
interface eth2
 description to-R3
 ip address 192.168.101.1/24
 ipv6 nd suppress-ra
!
interface eth3
 ipv6 nd suppress-ra
!
interface lo
!
ip forwarding
!
!
line vty
```

Lampiran 3. File Konfigurasi ospfd.conf pada OSPF Multi-Path (Router-1)

```
!
! Zebra configuration saved from vty
!   2018/01/08 19:37:56
!
hostname ospfd@router-1
password zebra
log stdout
!
!
!
interface eth0
 description to-LAN
!
interface eth1
 description to-R2
 ip ospf cost 5
!
interface eth2
 description to-R3
!
interface eth3
!
interface lo
!
router ospf
 ospf router-id 192.168.1.1
 network 192.168.1.0/24 area 0.0.0.0
 network 192.168.100.0/24 area 0.0.0.0
 network 192.168.101.0/24 area 0.0.0.0
!
line vty
```

Lampiran 4. Hasil Konfigurasi Quagga pada OSPF Multi-Path (Router-1)

```
Building configuration...

Current configuration:
!
hostname router-1
hostname ospfd@router-1
log stdout
!
password zebra
!
interface eth0
 description to-LAN
 ip address 192.168.1.1/24
 ipv6 nd suppress-ra
!
interface eth1
 description to-R2
 ip address 192.168.100.1/24
 ip ospf cost 5
 ipv6 nd suppress-ra
!
interface eth2
 description to-R3
 ip address 192.168.101.1/24
 ipv6 nd suppress-ra
!
interface eth3
 ipv6 nd suppress-ra
!
interface lo
!
router ospf
 ospf router-id 192.168.1.1
 network 192.168.1.0/24 area 0.0.0.0
 network 192.168.100.0/24 area 0.0.0.0
 network 192.168.101.0/24 area 0.0.0.0
!
ip forwarding
!
line vty
!
end
```

Lampiran 5. File Konfigurasi Limitasi Interface pada Router-2

```
#!/bin/bash
# THIS FILE IS ADDED FOR COMPATIBILITY PURPOSES
#
# It is highly advisable to create own systemd services or udev
rules
# to run scripts during boot instead of using this file.
#
# In contrast to previous versions due to parallel execution during
boot
# this script will NOT be run after all other services.
#
# Please note that you must run 'chmod +x /etc/rc.d/rc.local' to
ensure
# that this script will be executed during boot.

touch /var/lock/subsys/local

tc qdisc add dev eth1 root handle 1:0 htb
tc class add dev eth1 parent 1:0 classid 1:1 htb rate 10Mbit
tc filter add dev eth1 protokol ip parent 1:0 prio 0 u32 match ip
dst 192.168.1.10 flowid 1:1

tc qdisc add dev eth2 root handle 1:0 htb
tc class add dev eth1 parent 1:0 classid 1:1 htb rate 10Mbit
tc filter add dev eth1 protokol ip parent 1:0 prio 0 u32 match ip
dst 192.168.3.30 flowid 1:1
```

Lampiran 6. File Konfigurasi zebra.conf pada OSPF Multi-Path (Router-2)

```
!
! Zebra configuration saved from vty
!   2018/01/05 09:34:15
!
hostname router-1
!
interface eth0
 description to-LAN
 ip address 192.168.2.1/24
 ipv6 nd suppress-ra
!
interface eth1
 description to-R1
 ip address 192.168.100.2/24
 ipv6 nd suppress-ra
!
interface eth2
 description to-R3
 ip address 192.168.102.2/24
 ipv6 nd suppress-ra
!
interface eth3
 ipv6 nd suppress-ra
!
interface lo
!
ip forwarding
!
!
line vty
```

Lampiran 7. File Konfigurasi ospfd.conf pada OSPF Multi-Path (Router-2)

```
!
! Zebra configuration saved from vty
!   2018/01/05 09:34:16
!
hostname ospfd@router-1
password zebra
log stdout
!
!
!
interface eth0
 description to-LAN
!
interface eth1
 description to-R1
 ip ospf cost 5
!
interface eth2
 description to-R3
 ip ospf cost 5
!
interface eth3
!
interface lo
!
router ospf
 ospf router-id 192.168.2.1
 network 192.168.2.0/24 area 0.0.0.0
 network 192.168.100.0/24 area 0.0.0.0
 network 192.168.102.0/24 area 0.0.0.0
!
line vty
```

Lampiran 8. Hasil Konfigurasi Quagga pada OSPF Multi-Path (Router-2)

```
Building configuration...

Current configuration:
!
hostname router-1
hostname ospfd@router-1
log stdout
!
password zebra
!
interface eth0
 description to-LAN
 ip address 192.168.2.1/24
 ipv6 nd suppress-ra
!
interface eth1
 description to-R1
 ip address 192.168.100.2/24
 ip ospf cost 5
 ipv6 nd suppress-ra
!
interface eth2
 description to-R3
 ip address 192.168.102.2/24
 ip ospf cost 5
 ipv6 nd suppress-ra
!
interface eth3
 ipv6 nd suppress-ra
!
interface lo
!
router ospf
 ospf router-id 192.168.2.1
 network 192.168.2.0/24 area 0.0.0.0
 network 192.168.100.0/24 area 0.0.0.0
 network 192.168.102.0/24 area 0.0.0.0
!
ip forwarding
!
line vty
!
end
```

Lampiran 9. File Konfigurasi Limitasi Interface pada Router-3

```
#!/bin/bash
# THIS FILE IS ADDED FOR COMPATIBILITY PURPOSES
#
# It is highly advisable to create own systemd services or udev
rules
# to run scripts during boot instead of using this file.
#
# In contrast to previous versions due to parallel execution
during boot
# this script will NOT be run after all other services.
#
# Please note that you must run 'chmod +x /etc/rc.d/rc.local' to
ensure
# that this script will be executed during boot.

touch /var/lock/subsys/local

tc qdisc add dev eth1 root handle 1:0 htb
tc class add dev eth1 parent 1:0 classid 1:1 htb rate 10Mbit
tc filter add dev eth1 protokol ip parent 1:0 prio 0 u32 match
ip dst 192.168.1.0/24 flowid 1:1

tc qdisc add dev eth2 root handle 1:0 htb
tc class add dev eth2 parent 1:0 classid 1:1 htb rate 10Mbit
tc filter add dev eth2 protokol ip parent 1:0 prio 0 u32 match
ip dst 192.168.1.0/24 flowid 1:1
```

Lampiran 10. File Konfigurasi zebra.conf pada OSPF Multi-Path (Router-3)

```
!
! Zebra configuration saved from vty
!   2018/01/05 09:36:23
!
hostname router-3
!
interface eth0
 description to-LAN
 ip address 192.168.3.1/24
 ipv6 nd suppress-ra
!
interface eth1
 description to-R1
 ip address 192.168.101.3/24
 ipv6 nd suppress-ra
!
interface eth2
 description to-R2
 ip address 192.168.102.3/24
 ipv6 nd suppress-ra
!
interface eth3
 ipv6 nd suppress-ra
!
interface lo
!
interface teql0
 ipv6 nd suppress-ra
!
ip forwarding
!
!
line vty
```

Lampiran 11. File Konfigurasi ospfd.conf pada OSPF Multi-Path (Router-3)

```
!
! Zebra configuration saved from vty
!   2018/01/05 09:36:23
!
hostname ospfd@router-3
password zebra
log stdout
!
!
!
interface eth0
 description to-LAN
!
interface eth1
 description to-R1
!
interface eth2
 description to-R2
 ip ospf cost 5
!
interface eth3
!
interface lo
!
interface teql0
!
router ospf
 ospf router-id 192.168.3.1
 network 192.168.3.0/24 area 0.0.0.0
 network 192.168.101.0/24 area 0.0.0.0
 network 192.168.102.0/24 area 0.0.0.0
!
line vty
```

Lampiran 12. Hasil Konfigurasi Quagga pada OSPF Multi-Path (Router-3)

```
Building configuration...

Current configuration:
!
hostname router-3
hostname ospfd@router-3
log stdout
!
password zebra
!
interface eth0
 description to-LAN
 ip address 192.168.3.1/24
 ipv6 nd suppress-ra
!
interface eth1
 description to-R1
 ip address 192.168.101.3/24
 ipv6 nd suppress-ra
!
interface eth2
 description to-R2
 ip address 192.168.102.3/24
 ip ospf cost 5
 ipv6 nd suppress-ra
!
interface eth3
 ipv6 nd suppress-ra
!
interface lo
!
interface teql0
 ipv6 nd suppress-ra
!
router ospf
 ospf router-id 192.168.3.1
 network 192.168.3.0/24 area 0.0.0.0
 network 192.168.101.0/24 area 0.0.0.0
 network 192.168.102.0/24 area 0.0.0.0
!
ip forwarding
!
line vty
!end
```