

```
set ns [new Simulator]

$ns rtproto DV

set nf [open p3.nam w]

$ns namtrace-all $nf

proc finish {} {
    global ns nf
    $ns flush-trace
    close $nf
    exec nam p3.nam &
    exit 0
}

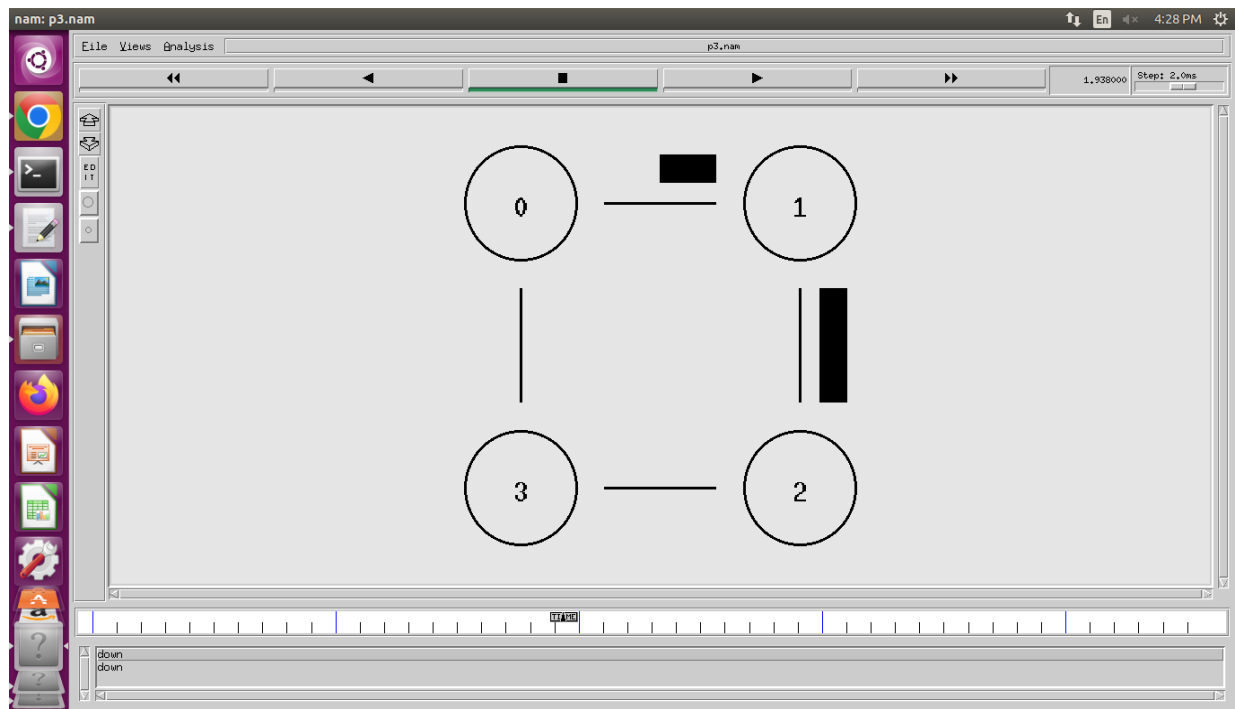
# Create 4 nodes
set n0 [$ns node]
set n1 [$ns node]
set n2 [$ns node]
set n3 [$ns node]

# Specify link characteristics
$ns duplex-link $n0 $n1 10Mb 10ms DropTail
$ns duplex-link $n1 $n2 10Mb 10ms DropTail
$ns duplex-link $n2 $n3 10Mb 10ms DropTail
$ns duplex-link $n3 $n0 10Mb 10ms DropTail

# specify layout as a octagon
$ns duplex-link-op $n0 $n1 orient right
$ns duplex-link-op $n1 $n2 orient down
$ns duplex-link-op $n2 $n3 orient left
$ns duplex-link-op $n3 $n0 orient up

#Create a TCP agent and attach it to node n1
set tcp [new Agent/TCP]
$tcp set class-2
```

```
$ns attach-agent $n0 $tcp
set sink [new Agent/TCPSink]
$ns attach-agent $n2 $sink
$ns connect $tcp $sink
set ftp [new Application/FTP]
$ftp attach-agent $tcp
$ftp set type_ FTP
$ftp set packet_size_ 1000
$ftp set rate_ 1mb
$ns at 1.0 "$ftp start"
$ns rtmodel-at 2.0 down $n1 $n2
$ns rtmodel-at 3.0 up $n1 $n2
$ns at 4.0 "$ftp stop"
$ns at 5.0 "finish"
$ns run
```



```
set ns [new Simulator]
set nf [open out.nam w]
$ns namtrace-all $nf
set tr [open out.tr w]
$ns trace-all $tr
proc finish {} {
    global nf ns tr
    $ns flush-trace
    close $tr
    exec nam out.nam &
    exit 0
}
set n0 [$ns node]
set n1 [$ns node]
set n2 [$ns node]
set n3 [$ns node]
$ns duplex-link $n0 $n1 10Mb 10ms DropTail
$ns duplex-link $n1 $n3 10Mb 10ms DropTail
$ns duplex-link $n2 $n1 10Mb 10ms DropTail
$ns duplex-link-op $n0 $n1 orient right-down
$ns duplex-link-op $n1 $n3 orient right
$ns duplex-link-op $n2 $n1 orient right-up
set tcp [new Agent/TCP]
$ns attach-agent $n0 $tcp
set ftp [new Application/FTP]
$ftp attach-agent $tcp
set sink [new Agent/TCPSink]
$ns attach-agent $n3 $sink
set udp [new Agent/UDP]
```

\$ns attach-agent \$n2 \$udp

set cbr [new Application/Traffic/CBR]

\$cbr attach-agent \$udp

set null [new Agent/Null]

\$ns attach-agent \$n3 \$null

\$ns connect \$tcp \$sink

\$ns connect \$udp \$null

\$ns rtmodel-at 1.0 down \$n1 \$n3

\$ns rtmodel-at 2.0 up \$n1 \$n3

\$ns rtproto LS

\$ns at 0.0 "\$ftp start"

\$ns at 0.0 "\$cbr start"

\$ns at 5.0 "finish"

\$ns run

