

```

1 set ns [new Simulator]
2 set nf [open prog3.nam w]
3 $ns namtrace-all $nf
4 set nd [open prog3.tr w]
5 $ns trace-all $nd
6
7 proc finish {} {
8     global ns nf nd
9     $ns flush-trace
10    close $nf
11    exec nam prog3.nam &
12    exit 0
13 }
14
15 set n0 [$ns node]
16 set n1 [$ns node]
17 set n2 [$ns node]
18 set n3 [$ns node]
19 #set color to the nodes
20 $n1 color blue
21 $n0 color red
22 $n2 color purple
23 $n3 color orange
24
25 $ns color 1 blue
26
27 $n0 label TCP
28 $n1 label UDP
29 $n3 label NULL-TCP-SINK
30
31 $ns duplex-link $n0 $n2 1Mb 10ms DropTail
32 $ns duplex-link $n1 $n2 1Mb 10ms DropTail
33 $ns duplex-link $n2 $n3 1Mb 10ms DropTail
34
35 set tcp0 [new Agent/TCP]
36 $ns attach-agent $n0 $tcp0
37
38 set sink0 [new Agent/TCP-Sink]
39 $ns attach-agent $n3 $sink0
40 $ns connect $tcp0 $sink0
41 $tcp0 set fid_ 1
42
43 set ftp0 [new Application/FTP]
44 $ftp0 attach-agent $tcp0
45
46 set udp0 [new Agent/UDP]
47 $ns attach-agent $n1 $udp0
48 set null0 [new Agent/Null]
49 $ns attach-agent $n3 $null0
50 $ns connect $udp0 $null0
51
52 set cbr0 [new Application/Traffic/CBR]
53 $cbr0 set packetSize_ 500
54 $cbr0 set interval_ 0.005
55 $cbr0 attach-agent $udp0
56
57 $ns at 0.2 "$cbr0 start"
58 $ns at 0.1 "$ftp0 start"
59 $ns at 4.5 "$cbr0 stop"
60 $ns at 4.4 "$ftp0 stop"
61
62 $ns at 5.0 "finish"
63 $ns run
64

```