**PROGRAM9B:**

set ns [new Simulator] set nr [open thro.tr w]

$ns trace-all $nr

set nf [open thro.nam w]

$ns namtrace-all $nf proc finish { } { global ns nr nf

$ns flush-trace close $nf close $nr

exec nam thro.nam & exit 0

}

for { set i 0 } { $i < 12} { incr i 1 } { set n($i) [$ns node]}

for {set i 0} {$i < 8} {incr i} {

$ns duplex-link $n($i) $n([expr $i+1]) 1Mb 10ms DropTail }

$ns duplex-link $n(0) $n(8) 1Mb 10ms DropTail

$ns duplex-link $n(1) $n(10) 1Mb 10ms DropTail

$ns duplex-link $n(0) $n(9) 1Mb 10ms DropTail

$ns duplex-link $n(9) $n(11) 1Mb 10ms DropTail

$ns duplex-link $n(10) $n(11) 1Mb 10ms DropTail

$ns duplex-link $n(11) $n(5) 1Mb 10ms DropTail

set udp0 [new Agent/UDP]

$ns attach-agent $n(0) $udp0

set cbr0 [new Application/Traffic/CBR]

$cbr0 set packetSize\_ 500

$cbr0 set interval\_ 0.005

$cbr0 attach-agent $udp0 set null0 [new Agent/Null]

$ns attach-agent $n(5) $null0

$ns connect $udp0 $null0

set udp1 [new Agent/UDP]

$ns attach-agent $n(1) $udp1

set cbr1 [new Application/Traffic/CBR]

$cbr1 set packetSize\_ 500

$cbr1 set interval\_ 0.005

$cbr1 attach-agent $udp1 set null0 [new Agent/Null]

$ns attach-agent $n(5) $null0

$ns connect $udp1 $null0

$ns rtproto LS

$ns rtmodel-at 10.0 down $n(11) $n(5)

$ns rtmodel-at 15.0 down $n(7) $n(6)

$ns rtmodel-at 30.0 up $n(11) $n(5)

$ns rtmodel-at 20.0 up $n(7) $n(6)

$udp0 set fid\_ 1

$udp1 set fid\_ 2

$ns color 1 Red

$ns color 2 Green

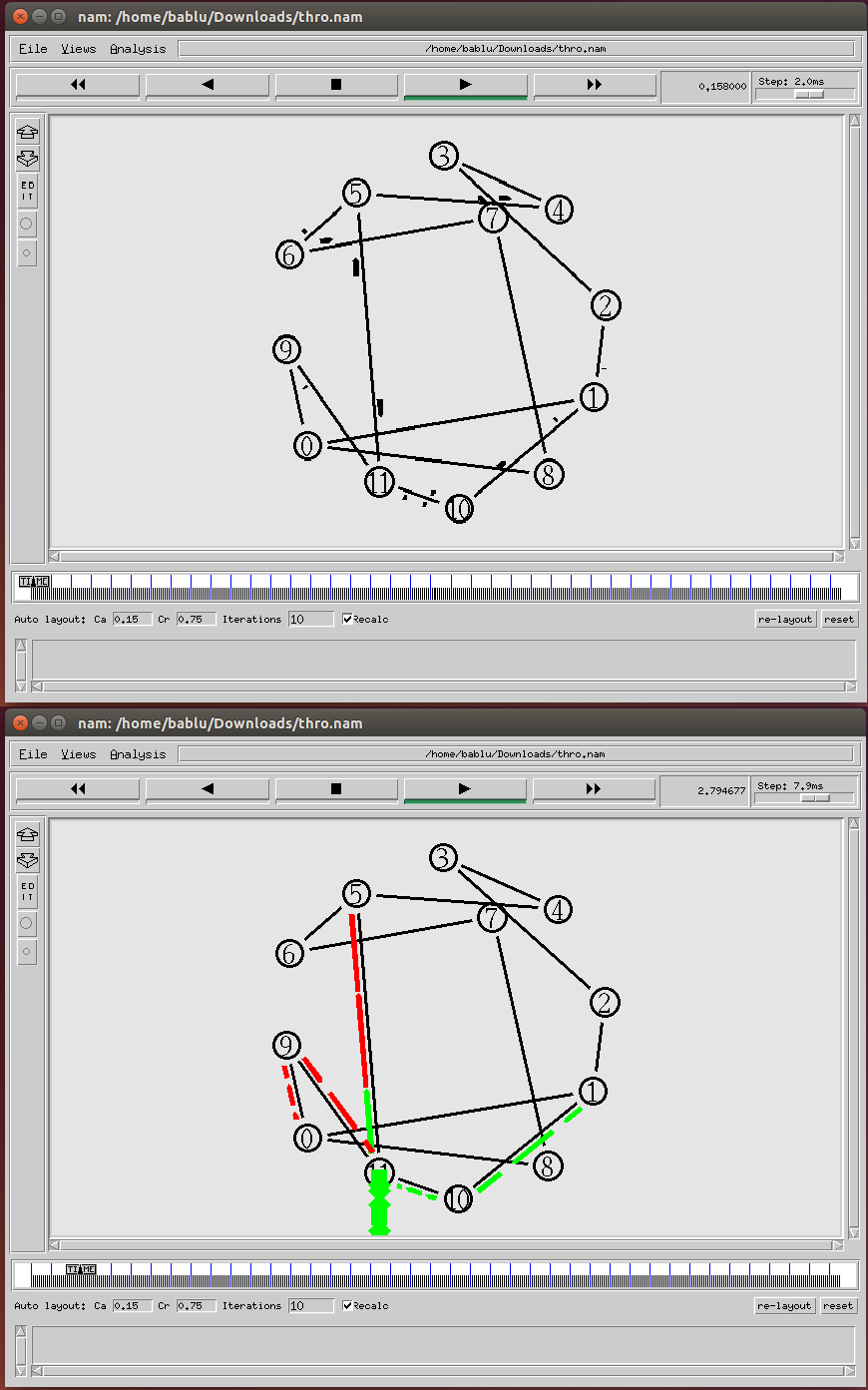
$ns at 1.0 "$cbr0 start"

$ns at 2.0 "$cbr1 start"

$ns at 45 "finish"

$ns run

# OUTPUT:

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