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set val(stop) 120
set ns [new Simulator]
set tracefile [open pg.tr w]
$ns trace-all $tracefile
set namfile [open pg.nam w]
$ns namtrace-all $namfile
set winFile0 [open winFileReno w]
set winFile1 [open winFileNewReno w]
set n0 [$ns node]
set n1 [$ns node]
set n2 [$ns node]
set n3 [$ns node]
set n4 [$ns node]
set n5 [$ns node]
$ns color 1 Red
$ns color 2 Yellow
$ns duplex-link $n0 $n2 100.0Mb 10ms
DropTail
$ns queue-limit $n0 $n2 50
$ns duplex-link $n2 $n1 100.0Mb 10ms
DropTail
$ns queue-limit $n2 $n1 50
$ns duplex-link $n2 $n3 100.0Mb 10ms
DropTail
$ns queue-limit $n2 $n3 50
$ns duplex-link-op $n0 $n2 orient right-
down
$ns duplex-link-op $n2 $n1 orient left-
down
$ns duplex-link-op $n2 $n3 orient right
set lan [$ns newLan "$n3 $n4 $n5" 0.5Mb
40ms LL Queue/DropTail
MAC/802_3 Channel]
set loss_module [new ErrorModel]
$loss_module ranvar [new
RandomVariable/Uniform]
$loss_module drop-target [new
Agent/Null]
$ns lossmodel $loss_module $n2 $n3
proc PlotWindow {tcpsource file} {
global ns
set time 0.1
set now [$ns now]
set cwnd [$tcpsource set cwnd_]
puts $file "$now $cwnd"
$ns at [expr $now+$time] "PlotWindow
$tcpsource $file"

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}
set tcp0 [new Agent/TCP/Newreno]
$ns attach-agent $n0 $tcp0
set sink1 [new Agent/TCPSink]
$ns attach-agent $n4 $sink1
$ns connect $tcp0 $sink1
$tcp0 set window_ 8000
$tcp0 set packetSize_ 1500
$tcp0 set fid_ 1
#Setup a TCP/Reno connection
set tcp3 [new Agent/TCP/Reno]
$ns attach-agent $n1 $tcp3
set sink2 [new Agent/TCPSink]
$ns attach-agent $n5 $sink2
$ns connect $tcp3 $sink2
$tcp3 set window_ 8000
$tcp3 set packetSize_ 1500
$tcp3 set fid_ 2
set ftp0 [new Application/FTP]
$ftp0 attach-agent $tcp0
$ns at 1.0 "$ftp0 start"
$ns at 0.1 "PlotWindow $tcp0 $winFile0"
$ns at 100.0 "$ftp0 stop"
set ftp1 [new Application/FTP]
$ftp1
attach-agent $tcp3
$ns at 1.0 "$ftp1 start"
$ns at 0.1 "PlotWindow $tcp3 $winFile1"
$ns at 100.0 "$ftp1 stop"
proc finish {} {
global ns tracefile namfile
$ns flush-trace
close $tracefile
close $namfile
exec nam pg.nam &
exec xgraph winFileReno winFileNewReno
&
exit 0
}
$ns at $val(stop) "$ns nam-end-wireless
$val(stop)"
$ns at $val(stop) "finish"
$ns at $val(stop) "puts \"done\" ; $ns
halt"
$ns run

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