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set ns [new Simulator]
#Define different colors for data flows (for NAM)
$ns color 1 Blue
$ns color 2 Red

#Open the Trace files
set file1 [open out.tr w]
$ns trace-all $file1

#Open the NAM trace file
set file2 [open out.nam w]
$ns namtrace-all $file2

#Define a 'finish' procedure
proc finish {} {
    global ns file1 file2
    $ns flush-trace
    close $file1
    close $file2
    # exec ./nam out.nam &
    exit 0
}

#Create six nodes
set n0 [$ns node]
set n1 [$ns node]
set n2 [$ns node]
set n3 [$ns node]
set n4 [$ns node]
set n5 [$ns node]
$ns at 0.1 "$n1 label \"CBR\""
$ns at 1.0 "$n0 label \"FTP\""

#Create links between the nodes
$ns duplex-link $n0 $n2 2Mb 10ms DropTail
$ns duplex-link $n1 $n2 2Mb 10ms DropTail
$ns duplex-link $n2 $n3 0.3Mb 100ms DropTail
$ns duplex-link $n3 $n4 0.5Mb 40ms DropTail
$ns duplex-link $n3 $n5 0.5Mb 30ms DropTail

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#Give node position
$ns duplex-link-op $n0 $n2 orient right-down
$ns duplex-link-op $n1 $n2 orient right-up
$ns simplex-link-op $n2 $n3 orient right
$ns simplex-link-op $n3 $n2 orient left
$ns duplex-link-op $n3 $n4 orient right-up
$ns duplex-link-op $n3 $n5 orient right-down

#Set Queue Size of link (n2-n3) to 10
$ns queue-limit $n2 $n3 40

#Setup a TCP connection
set tcp [new Agent/TCP]
$ns attach-agent $n0 $tcp
set sink [new Agent/TCPSink]
$ns attach-agent $n4 $sink
$ns connect $tcp $sink
$tcp set fid_ 1
$tcp set window_ 8000
$tcp set packetSize_ 552

#Setup a FTP over TCP connection
set ftp [new Application/FTP]
$ftp attach-agent $tcp
$ftp set type_ FTP

#Setup a UDP connection
set udp [new Agent/UDP]
$ns attach-agent $n1 $udp
set null [new Agent/Null]
$ns attach-agent $n5 $null
$ns connect $udp $null
$udp set fid_ 2

```

```
#Setup a CBR over UDP connection
set cbr [new Application/Traffic/CBR]
$cbr attach-agent $udp
$cbr set type_ CBR
$cbr set packet_size_ 1000
$cbr set rate_ 0.01mb
$cbr set random_ false
```

```
$ns at 0.1 "$cbr start"
$ns at 1.0 "$ftp start"
$ns at 124.0 "$ftp stop"
$ns at 624.5 "$cbr stop"
```

```
$ns at 625.0 "finish"
$ns run
```

The screenshot displays the NAM (Network Animator) environment. On the left, a vertical toolbar contains various icons for file operations, simulation control, and analysis. The main window is divided into several panes:

- Script Editor:** Shows a Tcl script for setting up a CBR application and creating a network topology. The script includes comments and commands like `set cbr [new Application/Traffic/CBR]`, `$cbr attach-agent $udp`, and `$ns duplex-link`.
- Terminal:** Displays the execution of the script, showing the output of the `nam out.nam` command and the start of a new instance.
- Network Topology Diagram:** A visual representation of the network setup. It shows five nodes (labeled 0, 1, 2, 3, 4, 5) connected by links. Node 2 is labeled "CBR" and is connected to node 3. Node 3 is connected to nodes 4 and 5. A red line indicates a link between nodes 2 and 3.
- Simulation Controls:** A panel with buttons for "play forward", "stop", and "reset", along with a progress bar and a time display (0.958000).

The status bar at the bottom indicates the current file is "tcl", the tab width is 8, and the cursor is at line 98, column 17.

EXPERIMENT NO : 11 | NET SIMULATOR 2