## SSN College of Engineering, Kalavakkam

## Department of Computer Science and Engineering

## UCS1511 NETWORKS LAB

# Exercise 10: PERFORMANCE EVALUATION OF ROUTING PROTOCOLS

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**LEARNING OBJECTIVES:**

To write tcl script to evaluate the performance of routing protocols in wired networks and write awk script to calculate the throughput of the network.

**CODE:**

```
BEGIN {
    recvdSize = 0
    txsize=0
    drpSize=0
    startTime = 0
    stopTime = 0
    thru=0
}


{
    event = $1
    time = $2
    node_id = $3
    pkt_size = $6
    level = $5
    # Store start time
```

```
    if (level == "cbr" && (event == "+" || event == "s") )
    {
        if (time < startTime)
        {
            startTime = time
        }
        txsize++;
    }
    # Update total received packetsâ€™ size and store packets
    arrival time
    if (level == "cbr" && event == "r" )
    {
        if (time > stopTime)
        {
            stopTime = time
        }
        recvdSize++
    }
    if (level == "cbr" && event == "d" )
    {
        drpSize++
    }
}
END {
    printf("Average Throughput[kbps] =
%.2f\t\ts=%.2f\td=%.2f\tr=%.2f\nStartTime=%.2f\tStopTime=%.2f\n"
,(recvdSize/(stopTime-
startTime)),txsize,drpSize,recvdSize,startTime,stopTime)
}
```

**Screenshot:**


rahul@rahul-Ubuntu:~/Sem_05/NWLAB/Ex_10$ gawk -f ex10.awk outa.tr
Average Throughput[kbps] = 1471.91 s=7386.00 d=7.00 r=7359.00
StartTime=0.00 StopTime=5.00
rahul@rahul-Ubuntu:~/Sem_05/NWLAB/Ex_10$ gawk -f ex10.awk outb.tr
Average Throughput[kbps] = 1122.69 s=5640.00 d=7.00 r=5613.00
StartTime=0.00 StopTime=5.00
rahul@rahul-Ubuntu:~/Sem_05/NWLAB/Ex_10$