

## General Syntax:

```
./setdest [-n num_of_nodes] [-p pausetime] [-s maxspeed] [-t simtime] \  
[-x maxx] [-y maxy] > [outdir/movement-file]
```

## Example:

```
./setdest -n 20 -p 2.0 -s 10.0 -t 200 -x 500 -y 500 > scen-20-test
```

## TRACE FILE FORMAT :

The format of a trace string is shown below:

| event | time | from node | to node | pkt type | pkt size | flags | fid | src addr | dst addr | seq num | pkt id |
|-------|------|-----------|---------|----------|----------|-------|-----|----------|----------|---------|--------|
|-------|------|-----------|---------|----------|----------|-------|-----|----------|----------|---------|--------|

```
r : receive (at to_node)  
+ : enqueue (at queue)          src_addr : node.port (3.0)  
- : dequeue (at queue)         dst_addr : node.port (0.0)  
d : drop (at queue)
```

```
r 1.3556 3 2 ack 40 ----- 1 3.0 0.0 15 201  
+ 1.3556 2 0 ack 40 ----- 1 3.0 0.0 15 201  
- 1.3556 2 0 ack 40 ----- 1 3.0 0.0 15 201  
r 1.35576 0 2 tcp 1000 ----- 1 0.0 3.0 29 199  
+ 1.35576 2 3 tcp 1000 ----- 1 0.0 3.0 29 199  
d 1.35576 2 3 tcp 1000 ----- 1 0.0 3.0 29 199  
+ 1.356 1 2 cbr 1000 ----- 2 1.0 3.1 157 207  
- 1.356 1 2 cbr 1000 ----- 2 1.0 3.1 157 207
```

where 12 fields of the trace string are as follows.

### 1. Type Identifier:

- “+”: a packet enqueue event
- “-”: a packet deque event
- “r”: a packet reception event
- “d”: a packet drop (e.g., sent to dropHead\_) event
- “c”: a packet collision at the MAC level

2. Time: at which the packet tracing string is created.

3-4. Source Node and Destination Node: denote the IDs of the source and the destination nodes of the tracing object.

5. Packet Name: Name of the packet type

6. Packet Size: Size of the packet in bytes.

7. Flags: A 7-digit flag string

- “-”: disable
- 1st = “E”: ECN (Explicit Congestion Notification) echo is enabled.
- 2nd = “P”: the priority in the IP header is enabled.
- 3rd : Not in use
- 4th = “A”: Congestion action
- 5th = “E”: Congestion has occurred.
- 6th = “F”: The TCP fast start is used.
- 7th = “N”: Explicit Congestion Notification (ECN) is on.

8. Flow ID

9-10. Source Address and Destination Address: the format of these two fields is “*a.b*”, where “*a*” is the address and “*b*” is the port.

11. Sequence Number

12. Packet Unique ID