# ADVANCED COMPUTER NETWORK

PRACTICAL NO 6

027\_Abhishek\_Ojha

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Aim: Create network cloud and hosts.

Source Code:

### CloudAndHosts.ned

```
package inet.examples.internetcloud.cloudandhosts;
import inet.networklayer.autorouting.ipv4.IPv4NetworkConfigurator;
import inet.nodes.inet.StandardHost;
import inet.nodes.internetcloud.InternetCloud;
import ned.DatarateChannel;
network Cloud And Hosts
  parameters:
    int numSenders;
  types:
    channel C extends DatarateChannel
       delay = 10ms;
       datarate = 5Mbps;
  submodules:
    configurator: IPv4NetworkConfigurator {
       parameters:
          @display("p=61,163");
    }
    sender[numSenders]: StandardHost {
       @display("p=516,250");
    recip: StandardHost {
       @display("p=320,102");
    internet: InternetCloud {
       @display("p=516,102");
    }
  connections
    recip.pppg++ <--> C <--> internet.pppg++;
    for i=0..numSenders-1 {
       sender[i].pppg++ <--> C <--> internet.pppg++;
```

### omnetpp.ini

```
[General]
network = CloudAndHosts
tkenv-plugin-path = ../../etc/plugins
*.sender[*].numPingApps = 1
*.sender[*].pingApp[0].destAddr = "recip"
*.sender[*].pingApp[0].stopTime = 10000s
**.pingApp[*].sendInterval = 1000ms
**.internet.networkLayer.delayer.config = xmldoc("internetCloud.xml")
[Config simple]
description = "one host pings another"
**.numSenders = 1
[Config two senders]
description = "two senders with 100ms sendInterval"
**.numSenders = 2
**.pingApp[*].sendInterval = 100ms
[Config ten_senders]
description = "ten senders"
**.numSenders = 10
```

## internetCloud.xml

```
<internetCloud symmetric="true">
 <parameters name="good">
  <traffic src="sender[0]" dest="recip" delay="20ms+truncnormal(200ms,60ms)"</pre>
datarate="uniform(100kbps,1Mbps)" drop="uniform(0,1) < 0.01" />
  <traffic src="sender[1]" dest="recip" delay="30ms+truncnormal(200ms,60ms)"</pre>
datarate="uniform(100kbps,1Mbps)" drop="uniform(0,1) < 0.02" />
  <traffic src="sender[2]" dest="recip" delay="40ms+truncnormal(200ms,60ms)"</pre>
datarate="uniform(100kbps,1Mbps)" drop="uniform(0,1) < 0.03" />
  <traffic src="sender[3]" dest="recip" delay="50ms+truncnormal(200ms,60ms)"</pre>
datarate="uniform(100kbps,1Mbps)" drop="uniform(0,1) < 0.04" />
  <traffic src="sender[4]" dest="recip" delay="60ms+truncnormal(200ms,60ms)"</pre>
datarate="uniform(100kbps,1Mbps)" drop="uniform(0,1) < 0.05" />
  <traffic src="sender[5]" dest="recip" delay="70ms+truncnormal(200ms,60ms)"</pre>
datarate="uniform(100kbps,1Mbps)" drop="uniform(0,1) < 0.06" />
  <traffic src="sender[6]" dest="recip" delay="80ms+truncnormal(200ms.60ms)"</pre>
datarate="uniform(100kbps,1Mbps)" drop="uniform(0,1) < 0.07" />
```

# Output:

