

Aim : - Create a basic MANET implementation simulation for Packet animation and Packet Trace.

Steps for practical:

1. Then open inet/examples/
2. Right click on manetrouting -create new folder as MobileNet.
3. Right click on your newly created folder and select NED file. Give name as Net1.
select new adhoc mobility wireless network wizard.

```
//  
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//
```

```
package inet.examples.manetrouting.mymanet;
```

```
// numofHosts: 10  
// parametric: true  
// static:      false
```

```
import inet.networklayer.autorouting.ipv4.IPv4NetworkConfigurator;  
import inet.nodes.inet.AdhocHost;  
import inet.world.radio.ChannelControl;
```

```
network Net1  
{  
    parameters:  
        int numHosts;  
    submodules:  
        host[numHosts]: AdhocHost  
        {  
            parameters:  
                @display("r=, ,#707070");  
        }  
  
        channelControl: ChannelControl  
        {  
            parameters:  
                @display("p=60,50");  
        }  
}
```

```

    }

    configurator: IPv4NetworkConfigurator
    {
        @display("p=140,50");
    }
}

```

a file omnetpp.ini will be created with the following code

```

[General]
network = Net1
#record-eventlog = true
#eventlog-message-detail-pattern = *:(not declaredOn(cMessage) and not
declaredOn(cNamedObject) and not declaredOn(cObject))

*.numHosts = 10

num-rngs = 3
**.mobility.rng-0 = 1
**.wlan[*].mac.rng-0 = 2
#debug-on-errors = true

tkenv-plugin-path = ../../../../etc/plugins

**.channelNumber = 0

# channel physical parameters
*.channelControl.carrierFrequency = 2.4GHz
*.channelControl.pMax = 2.0mW
*.channelControl.sat = -110dBm
*.channelControl.alpha = 2
*.channelControl.numChannels = 1

# mobility
**.host[*].mobilityType = "MassMobility"
**.mobility.constraintAreaMinZ = 0m
**.mobility.constraintAreaMaxZ = 0m
**.mobility.constraintAreaMinX = 0m
**.mobility.constraintAreaMinY = 0m
**.mobility.constraintAreaMaxX = 600m
**.mobility.constraintAreaMaxY = 400m
**.mobility.changeInterval = truncnormal(2s, 0.5s)
**.mobility.changeAngleBy = normal(0deg, 30deg)
**.mobility.speed = truncnormal(20mps, 8mps)
**.mobility.updateInterval = 100ms

# ping app (host[0] pinged by others)
*.host[0].pingApp[0].destAddr = ""
*.host[*].numPingApps = 1
*.host[*].pingApp[0].destAddr = "host[0]"
*.host[*].pingApp[0].startTime = uniform(1s,5s)
*.host[*].pingApp[0].printPing = true

# nic settings

```

```

**.wlan[*].bitrate = 2Mbps

**.wlan[*].mgmt.frameCapacity = 10
**.wlan[*].mac.address = "auto"
**.wlan[*].mac.maxQueueSize = 14
**.wlan[*].mac.rtsThresholdBytes = 3000B
**.wlan[*].mac.retryLimit = 7
**.wlan[*].mac.cwMinData = 7
**.wlan[*].mac.cwMinMulticast = 31

**.wlan[*].radio.transmitterPower = 2mW
**.wlan[*].radio.thermalNoise = -110dBm
**.wlan[*].radio.sensitivity = -85dBm
**.wlan[*].radio.pathLossAlpha = 2
**.wlan[*].radio.snirThreshold = 4dB

```

right click on ned file and run it as omnetpp simulation

