

# AODV Implementation using NS2.

By

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# ABSTRACT

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- Ad Hoc On Demand Distance Vector(AODV) is one of the commonly used reactive on demand routing protocols in Mobile Adhoc Network(MANET).
- The Route discovery process involves ROUTE REQUEST(RREQ) and ROUTE REPLY(RREP) packets.
- AODV minimizes the no of packets involved in route discovery by establishing routes on demand.
- With the help of NS2 simulator, AODV algorithm is implemented.

# NS 2 Simulator

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- NS (Network Simulator ) -1,2,3 are discrete-event computer network,simulators, primarily used in research and teaching.
- NS 2 Simulator is open Source.
- It is written using C++ and Python.
- The Executable code is of .tcl extension

# NAM -Network Animator

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- Nam is a Tcl/Tk based animation tool for viewing network simulation traces and real world packet traces.
- It supports topology layout, packet level animation, and various data inspection tools.
- The nam program reads an input file (containing the packet transmission events) and draw the network events graphically.
- The nam programs are of .nam extension.

# System Configuration

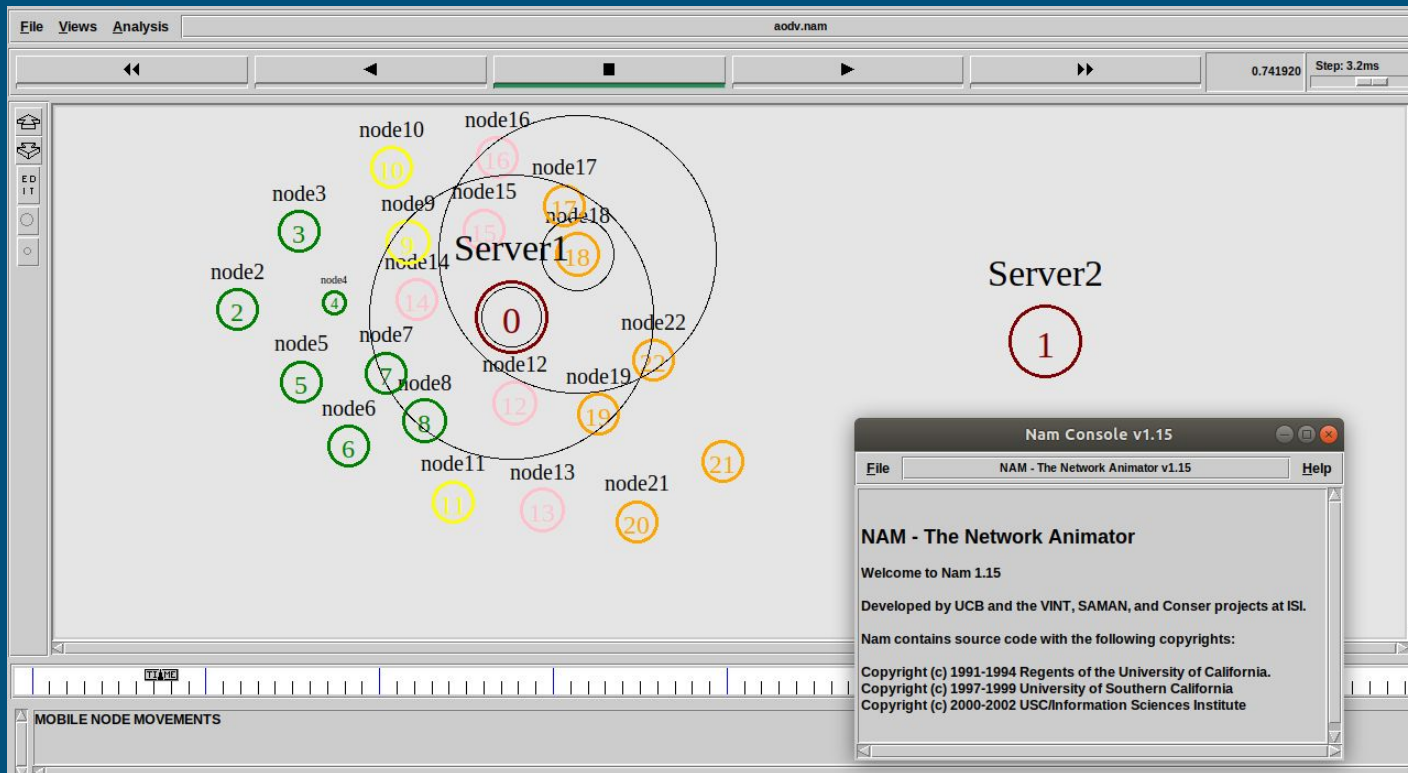
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- 2.5 GHZ Intel i5-3210m x64 Processor
- 6 GB ,1600MHZ RAM
- 512 GB SSD
- Ubuntu 18.04 64 Bit OS
- Intel HD 4000 Graphics

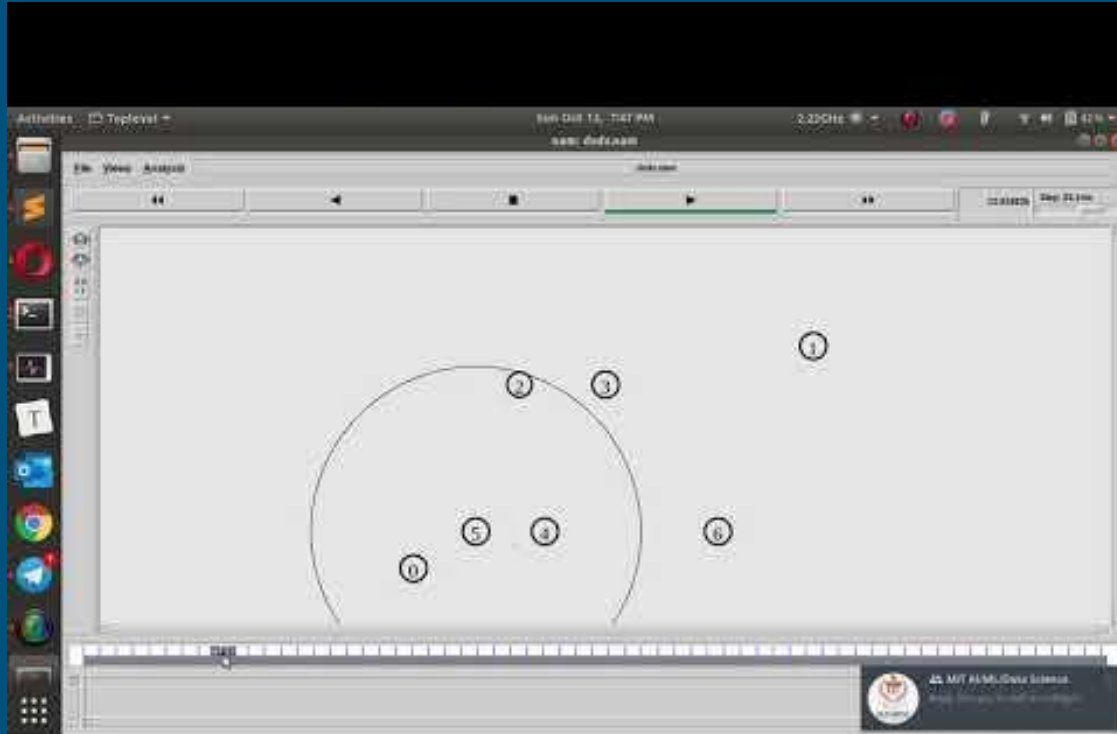
# Executing the Code in NS2

```
harshit95@skynet-thinkpad: ~/Hdrive/gits/MIT-MTechCSE-2019-2021/Advanced-Computer-...  
File Edit View Search Terminal Help  
harshit95@skynet-thinkpad:~/Hdrive/gits/MIT-MTechCSE-2019-2021/Advanced-Computer  
-Networks/lab/ns2$ ns cndemo.tcl  
num_nodes is set 22  
INITIALIZE THE LIST xListHead  
Starting Simulation.....  
channel.cc:sendUp - Calc highestAntennaZ_ and distCST_  
highestAntennaZ_ = 1.5, distCST_ = 1856.3  
SORTING LISTS ...DONE!  
MAC_802_11: accessing MAC cache_ array out of range (src 22, dst 0, size 22)!  
MAC_802_11: accessing MAC cache_ array out of range (src 22, dst 0, size 22)!  
harshit95@skynet-thinkpad:~/Hdrive/gits/MIT-MTechCSE-2019-2021/Advanced-Computer  
-Networks/lab/ns2$ █  
dormant
```

# GUI Execution of NS2 in NAM (Network Animator)



# Execution





# Thank You

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