ASSIGNMENT NO: 3

Problem Statement

Write a program to simulate routing in mobile Ad-Hoc network with multiple nodes. You may use NetSim or NS2 or QualNet for this experiment.

Objectives:

1. Understand about the basics of Mobile Ad-hoc Networks (MANETs) and different routing protocols

2. Setup a network with wireless nodes using ns2

3. Get familiar with the different characteristics of MANET through simulations

Theory:

Explain following concepts with their example

- Overview of Mobile Ad-Hoc Network (MANET)
- MANET Applications
- Challenges and issues in MANET
- Routing in MANET and Routing Protocols
- Type of ADHOC Routing Protocols

Algorithm:

Student can write the stepwise procedure/ algorithm to implement the assignment solution.

Platform:
Platform required in order to run network simulator
- ✓ UNIX and Unix like systems
- ✓ Linux (Use Fedora or Ubuntu versions)
- ✓ Windows OS platform
- ✓ Free BSD
- ✓ SunOS/Solaris

Input:

Output:

Conclusion:

Thus, implemented a TCL script to simulate routing in mobile Ad-Hoc network with multiple nodes using NS2.

FAQs:

1) What are the main features of routing protocols?
2) Why routing in ad hoc network is so difficult and this network is more vulnerable as compared to conventional networks?
3) Can adhoc networks be used by multiple devices, why?
4) What are common Attacks on Routing Protocols? Explain in details.
5) How Route maintenance is carried out in AODV protocol? Give advantages and disadvantages of AODV
6) What is the main vulnerability of routing protocols?

*Attach copy of Implemented Code with snap of output