



GALGOTIAS  
UNIVERSITY

**School of Computing  
Science and Engineering**

Program: B.Tech.

Course Code: CSCN 4024

Course Name: Wireless and Mobile  
Security

## Ad-Hoc On-demand Distance Vector Routing Protocol (AODV)

- AODV is an improvement of the Destination-Sequenced Distance Vector(DSDV).
- Unlike DSDV, AODV minimizes the number of *required broadcasts as it creates and maintains routes only when they are needed.*

## Ad-Hoc On-demand Distance Vector Routing Protocol (AODV)

- In contrast to DSR, AODV uses a different mechanism to create routes, when a source node desires to send a message to another node whereas it does not already have a valid route to that destination, it applies a path discovery operation to find out fresh valid path to that destination.
- Accordingly, it broadcasts a route *request packet to its neighbors, all nodes presented (between source and destination) are occupied as intermediate nodes.*

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- The path freshness is determined by the destination sequence number, which is compared with available information in an intermediate node for a requested path.

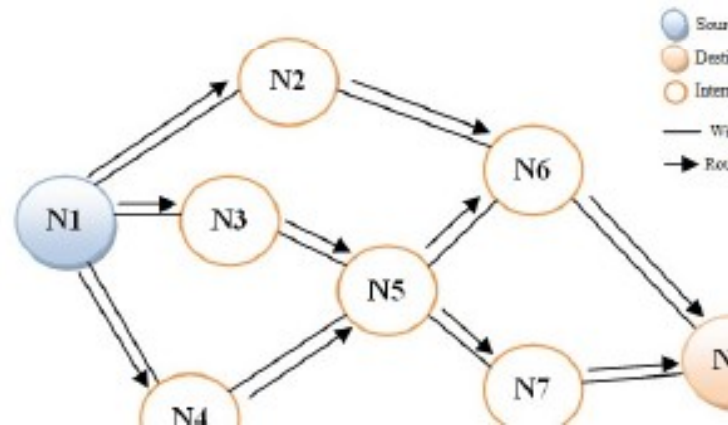
# Ad-Hoc On-demand Distance Vector Routing Protocol (AODV)

- Route Discovery can be finalized only by destination or intermediate node if its recorded entry sequence number is greater than the one in Route Request.
- Consequently, it establishes unicast Route Reply Packet backward along the reversed path from which it first receives the Route Request.
- Accordingly, every node belongs to this path sets up its forwarding route entries in their routing tables which refer to the node from which Route Reply came as shown in figure 7 and figure 8 respectively.
- Thus, valid path will be achieved for forwarding process.

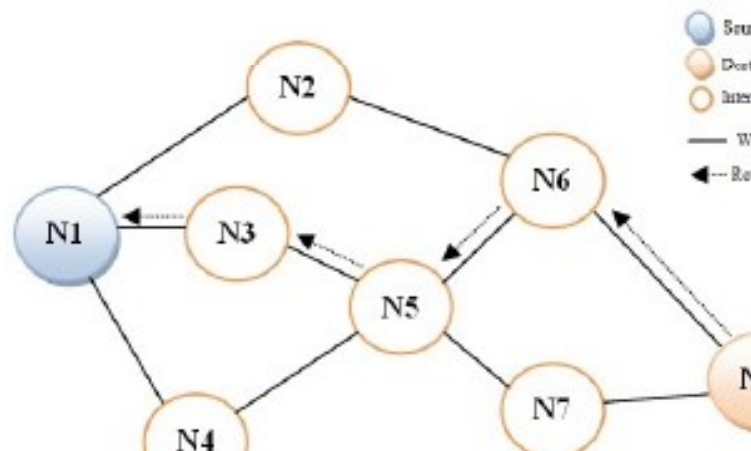
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- Routing Maintenance Operation, it provides route recovery in case of path breaks due to link failure or node movements as shown in figure 9. This failure cannot be handled locally.

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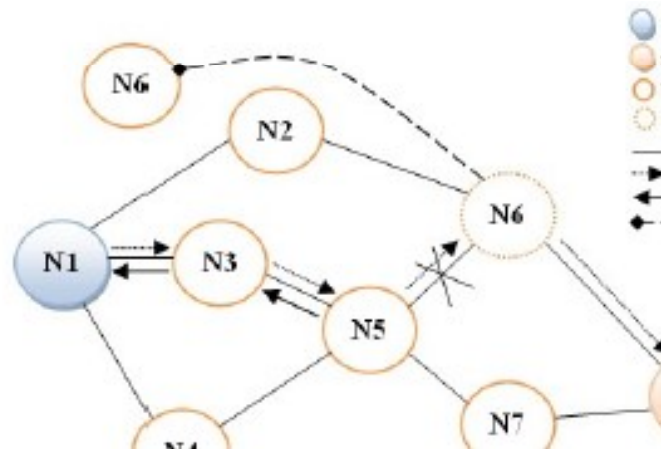


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Thank You