AODVv2

ns-3 model of AODVv2

MANET
IETF 122, Bangkok

Draft status

- The AODVv2 draft is currently an individual draft: https://datatracker.ietf.org/doc/draft-perkins-manet-aodvv2/

- The personal draft was produced in response to comments received in the [manet] working group for an earlier AODVv2 specification, draft-ietf-manet-aodvv2-16

- The manet WG originally chartered AODVv2 to be a Proposed Standard with the design goal of merging DSR and AODV, both informational RFCs.

- The AODVv2 draft was revived last year due to inquiries about whether or not AODVv2 should resume progress towards standardization in the [manet] working group

- AODV was instrumental in the design of AODV-RPL, which is now in the RFC editor's queue

About ns-3

- Discrete event network simulator
- Simulation and emulation (connection with real devices)
- IPv4, IPv6, OLSR, AODV, etc.
- C++ / Python, License GPL-2.0-only
- https://www.nsnam.org

Implementation team

Università di Firenze, Italy

- Tommaso Pecorella - Project lead
- Francesco Todino - Lead developer

NITK Surathkal, India

- Mohit P. Tahiliani - Project lead for testing the model
- Aniket Singh - Student lead
- Satyam Shukla - Team member
- Anirudh Gubbi- Team member

Implementation status

Most of the code is developed; the following parts are missing:

- Support for external networks
- Interaction with other protocols (e.g., NHDP)
- IPv6 (ongoing development)
- Repository: https://gitlab.com/tod97/ns-3-dev (active until merged in the mainline of ns-3)

Results examples

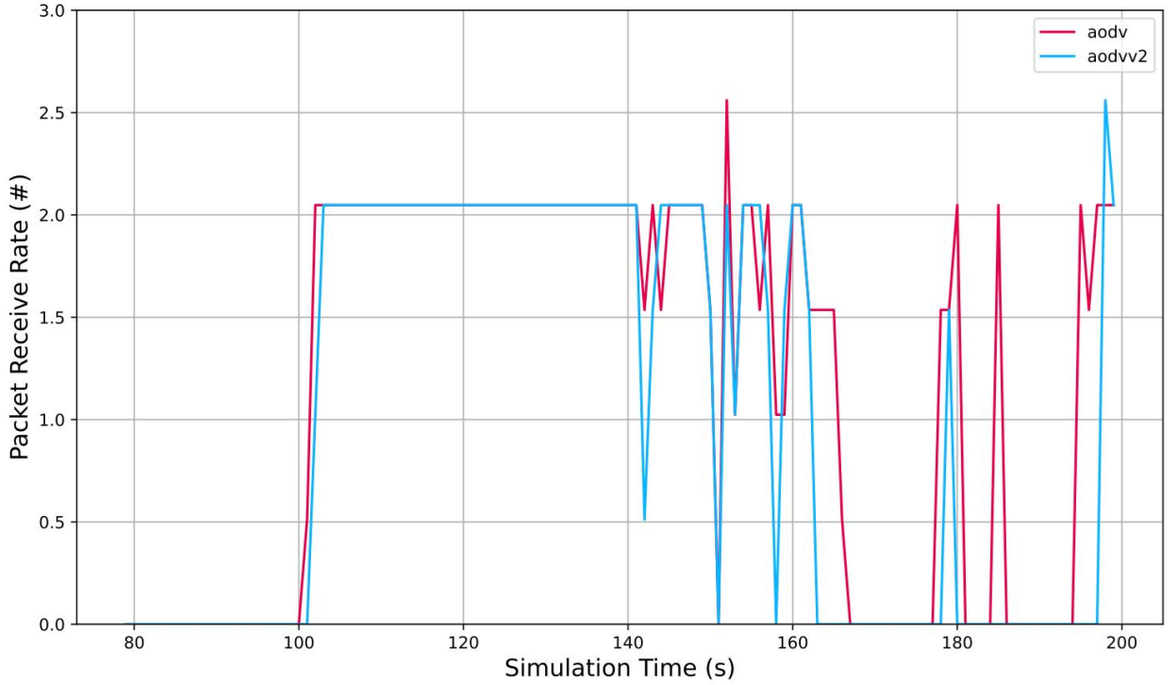
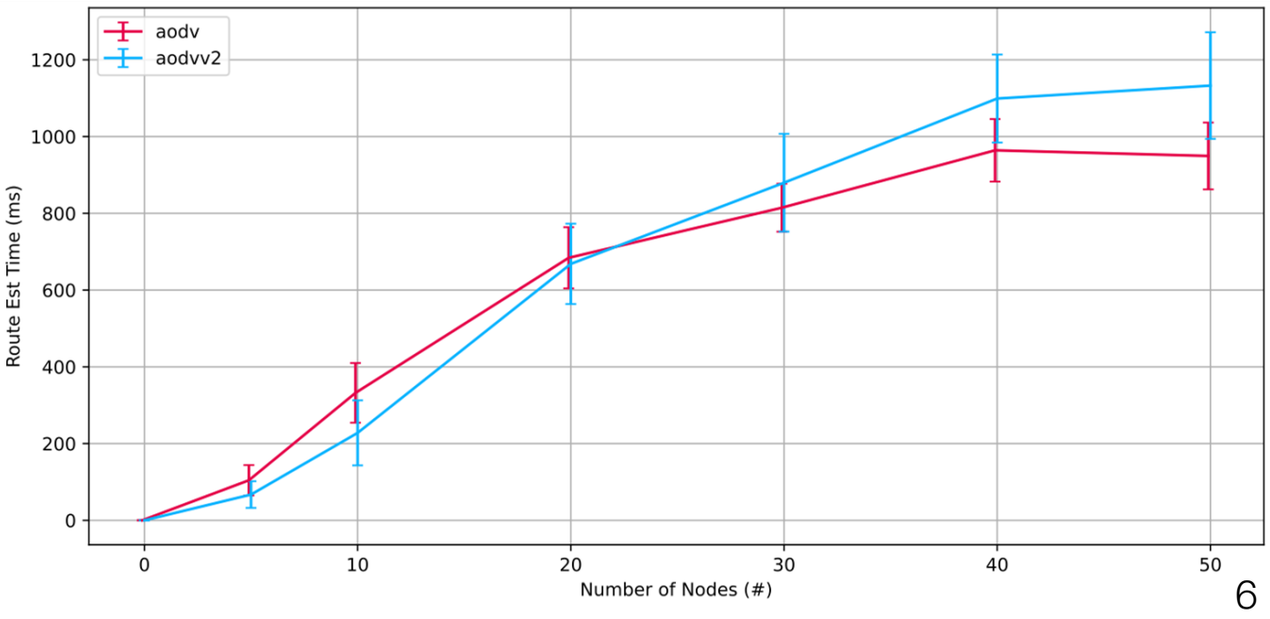


Table 1: AODV overhead.

Type	Avg Count (#)	Average (B)	Min (B)	Max (B)
RREQ	110.78	24.0	24.0	24.0
RREP	194.63	20.0	20.0	20.0
RERR	2.0	12.0	12.0	12.0
RREP_ACK	1.74	2.0	2.0	2.0

Table 2: AODVv2 overhead.

Type	Avg Count (#)	Average (B)	Min (B)	Max (B)
RREQ	58.98	49.43	46.0	51.0
RREP	306.83	53.93	46.0	54.0
RERR	3.94	60.69	40.0	120.0
RREP_ACK	306.3	11.0	11.0	11.0



AODVv2 Vs AODV
- Less RREQ
- More RREP/RREP_ACK
- Larger packets

Thank you!