AODVv2

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Outline of Presentation

• History
• Differences from RFC 3561
• Recent Changes
• Issues to be resolved
• Please hold long questions until the end
History

• AODVv2 (was, DYMO) combines:
  – AODV (RFC 3561) and DSR (RFC 4728)
  – Metrics
  – RFC 5444 Generalised MANET packet/message ...

• Feb 2005: DYMO introduced
  – datatracker.ietf.org/doc/draft-ietf-manet-dymo/

• December 2013: Renamed AODVv2

• November 2016: AODVv2 removed from charter

• March 2017: AD-sponsored AODVv2

• 2020-2023: COVID, nobody working on AODVv2
  – But, publication has been requested for aodv-rpl

• 2024: draft-perkins-manet-aodvv2-04
Comparison to RFC 3561

- Route discovery is basically the same
- No intermediate RREP or expanding ring
- RFC 5444 conformant (Packet/Message/Address Block TLVs)
- RFC 5498 conformant (port #, etc)
- RFC 7182 security (TIMESTAMP and ICV TLVs)
- Better verification of link bidirectionality
- Alternate metrics may be used
- Better support for multiple interfaces
- Support for multi-interface IP addresses
- End to end integrity checks enabled
- Multihoming (SeqNoRtr)
- No Hello messages or local repair
- RREP_Ack and route maintenance prioritized
- Careful handling for rebooting routers (losing SeqNum)
“Recent” Changes

- Handling for rebooting routers (lost SeqNum)
- Clarified safety issues, new crypto algorithms
- Many editorial changes (e.g., terminology)
- New ICMP Destination Unreachable code
- Optional precursor lists for better RERR performance
- MAC-layer hints about bidirectionality
Issues to be resolved

• Implementability
• IANA response needed
  – MetricType and Address Type TLV Registries?
  – New Type 1 - Destination Unreachable needed
• I-D.ietf-manet-ibs → RFC 7859
• Asymmetric routing?
• Has been extensively reviewed
  – Need to make sure all comments resolved
• More review expected/appreciated
Questions

It’s probably about 1:00am here where I am. In order to avoid silly, mistakes I would like to defer answers to difficult questions for discussion on the mailing list.

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