draft-ietf-v6ops-nd-cache-init-00

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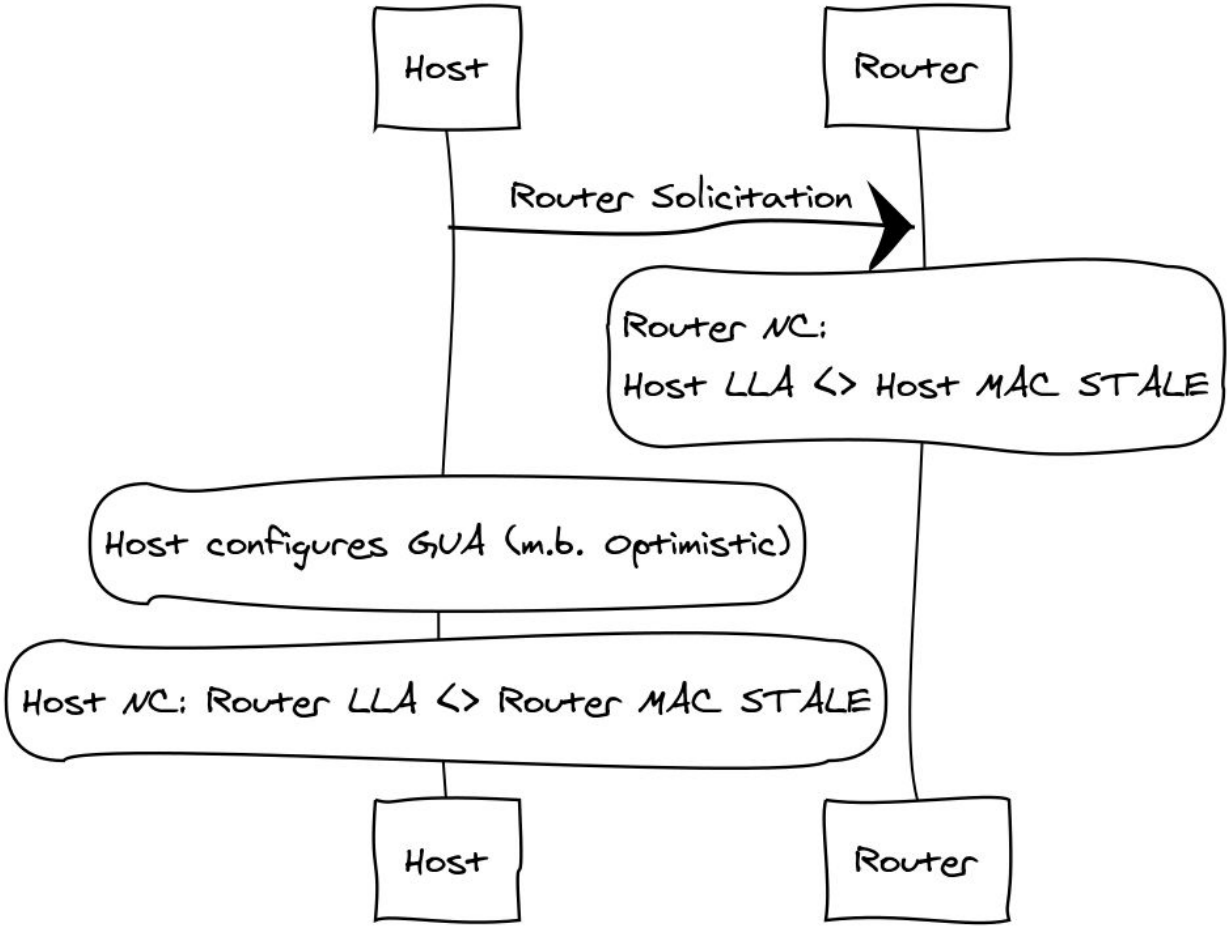
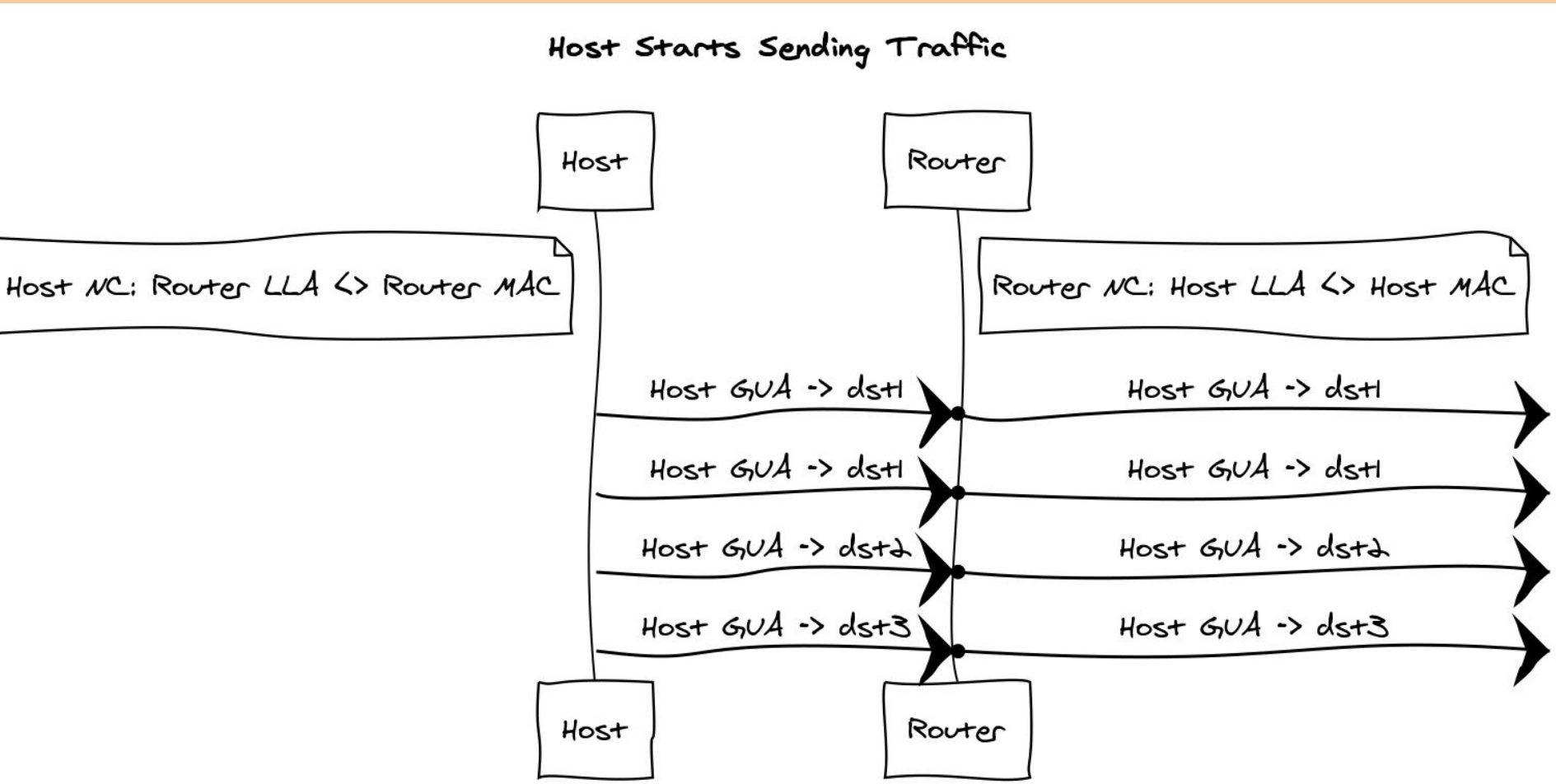
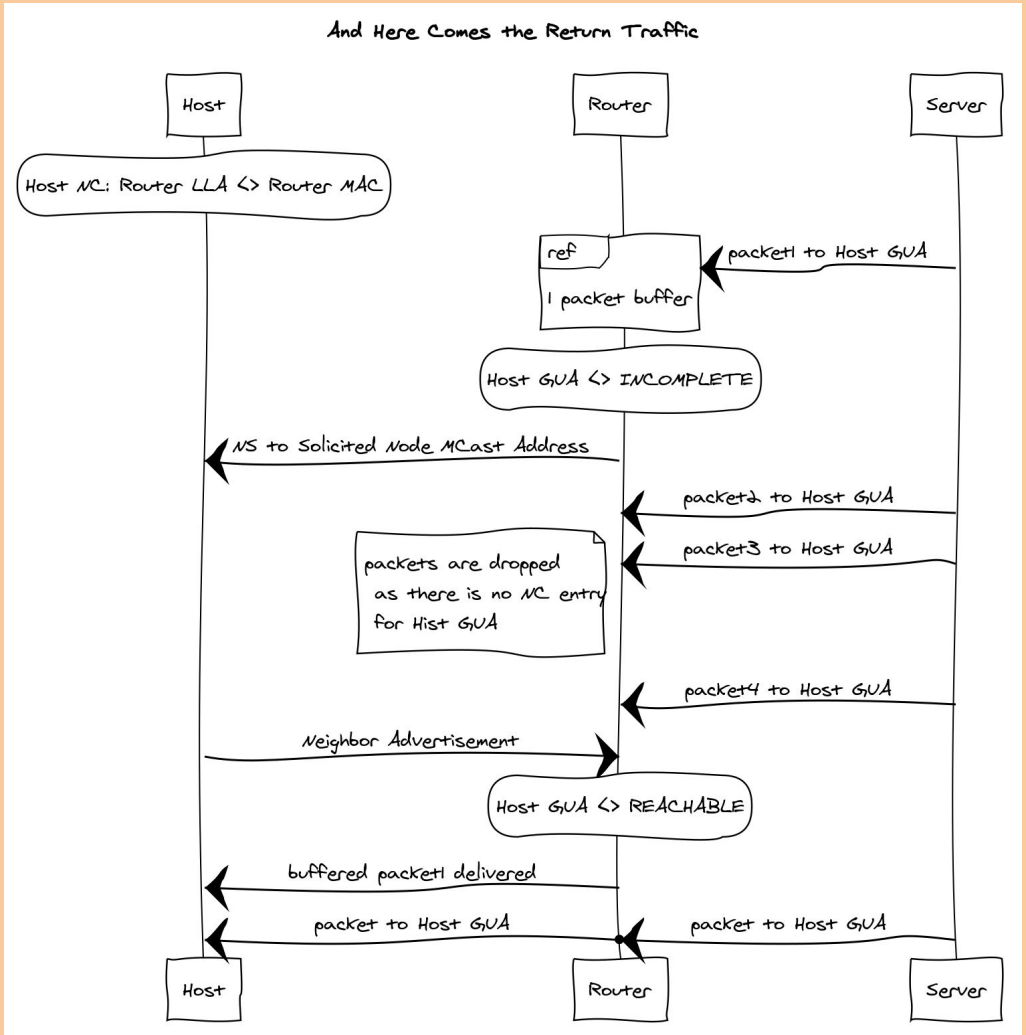
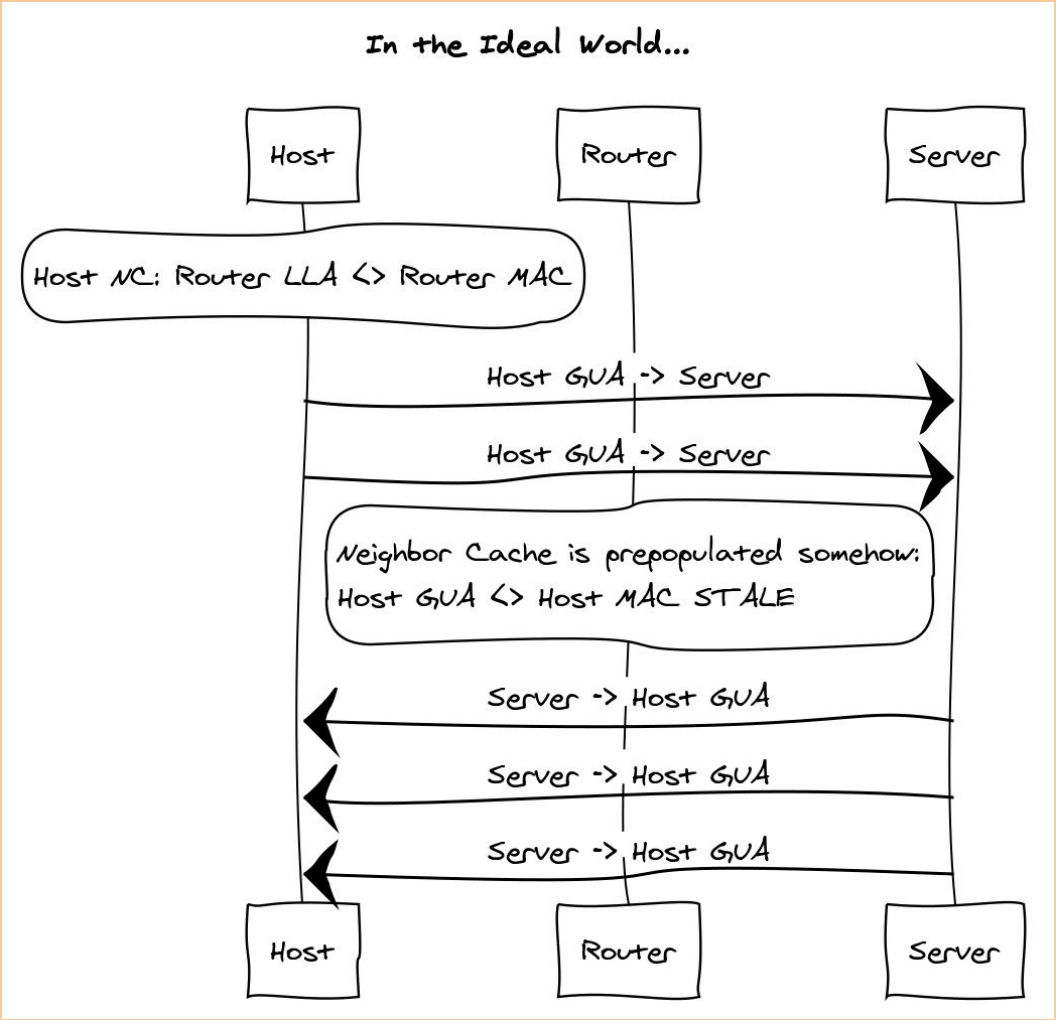
Recap sequence

Host Joins the Network




Host Starts Sending Traffic
Host
Router
Host NC: Router LLA <> Router MAC
Router NC: Host LLA <> Host MAC
Host GUA -> dst1
Host GUA -> dst1
Host GUA -> dst1
Host GUA -> dst1
Host GUA -> dst2
Host GUA -> dst2
Host GUA -> dst3
Host GUA -> dst3
Host
Router


And Here Comes the Return Traffic
Host
Router
Server
Host NC: Router LLA <> Router MAC
ref
1 packet buffer
packet1 to Host GUA
Host GUA <> INCOMPLETE
NS to Solicited Node MCast Address
packet2 to Host GUA
packet3 to Host GUA
packets are dropped
as there is no NC entry
for Hist GUA
packet4 to Host GUA
Neighbor Advertisement
Host GUA <> REACHABLE
buffered packet1 delivered
packet to Host GUA
packet to Host GUA
Host
Router
Server


In the Ideal World...
Host
Router
Server
Host NC: Router LLA <> Router MAC
Host GUA -> Server
Host GUA -> Server
Neighbor Cache is prepopulated somehow:
Host GUA <> Host MAC STALE
Server -> Host GUA
Server -> Host GUA
Server -> Host GUA
Host
Router
Server

Dual-Stack Network

- Hosts sends Gratuitous ARP
- Routers get their cache updated
- Happy Eyeballs

Changes Since Adoption (IETF105)

Split one draft in two

- draft-ietf-v6ops-nd-cache-init-00
  - Operational problem
  - Various solution approaches
- draft-linkova-6man-grand-00
  - Proposed changes to RFC4861
  - Security considerations

Another solution approach added

- Routers glean from DAD , start resolution proactively
  - Pros: no host changes
  - Cons:
    - Routers have to receive/process all DAD traffic
    - Race condition (hosts would ignore NS for tentative address)

draft-linkova-6man-grand-00

- Proposed changes to ND
  - Hosts SHOULD send Gratuitous NAs when a new address is configured on the interface
  - Routers MAY entries upon receiving unsolicited NAs

SHOULD MAY be SHOULD?

Editorial Changes

- Sections moved to draft-linkova-6man-grand
  - Avoiding disruption
  - Security considerations

QUESTIONS?

COMMENTS?