

# Reporting of Happy Eyeballs Failures

**draft-palet-v6ops-he-reporting-00**

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# HE: "the bad"

- Happy Eyeballs provides a way for improving user-visible IPv6 vs IPv4 delay
- SO ... hides the possible IPv6 connectivity issues to the operator
  - Users don't "see" troubles, so don't complain
- GOAL: HE extension to provide reporting
  - Using existing and common protocols

# Simplicity

- Syslog (RFC5424) over UDP (RFC5426)
  - Default port (514)
  - IPv6-only
- Syslog collector:
  - Network-Specific-Prefix (NSP)
  - 192.88.99.1 (“older” 6to4 anycast)
    - NSP::192.88.99.1
      - Other collectors (if needed) can use NSP+192.88.99.0/24

# Syslog collector discovery

- 96 bits, same “trick” as RFC7050 for the NSP
  - Discovery of the IPv6 Prefix Used for IPv6 Address Synthesis (DNS/NAT64)
- Remaining 32 bits, 192.88.99.0 (RFC7526)
  - NO conflict with 6to4, not in use
  - NO conflict with anything else
  - NO conflict even if anyone is using 6to4, because is using only a unique GUA from the operator prefix
  - Can be restricted to a specific network

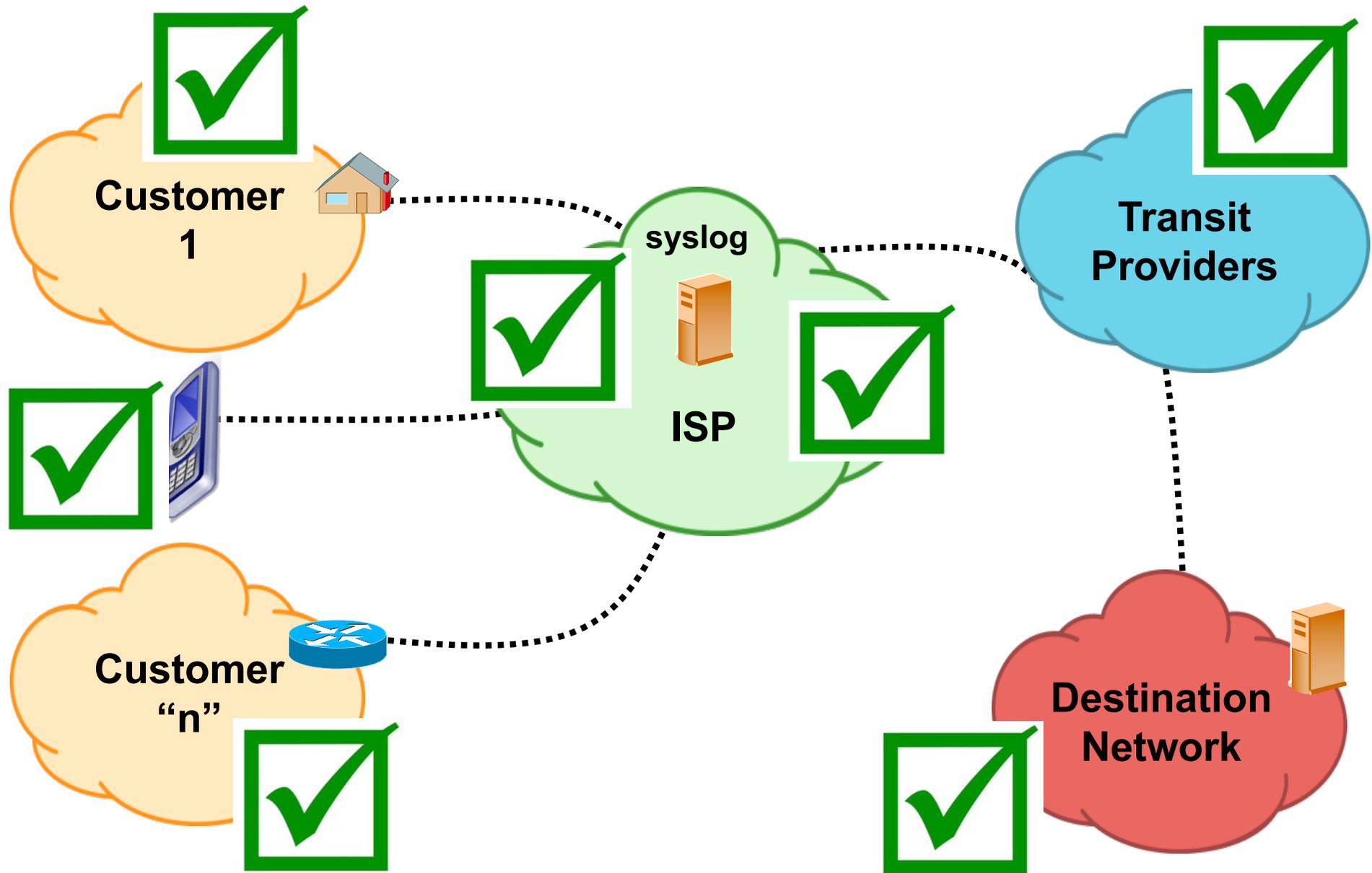
# HE behaviour

- On failure detection HE MUST:
  - Use syslog to report:
    - Timeout parameters
    - Failed destination address
    - Source prefix
- Details TBD, possibly working with OS vendors

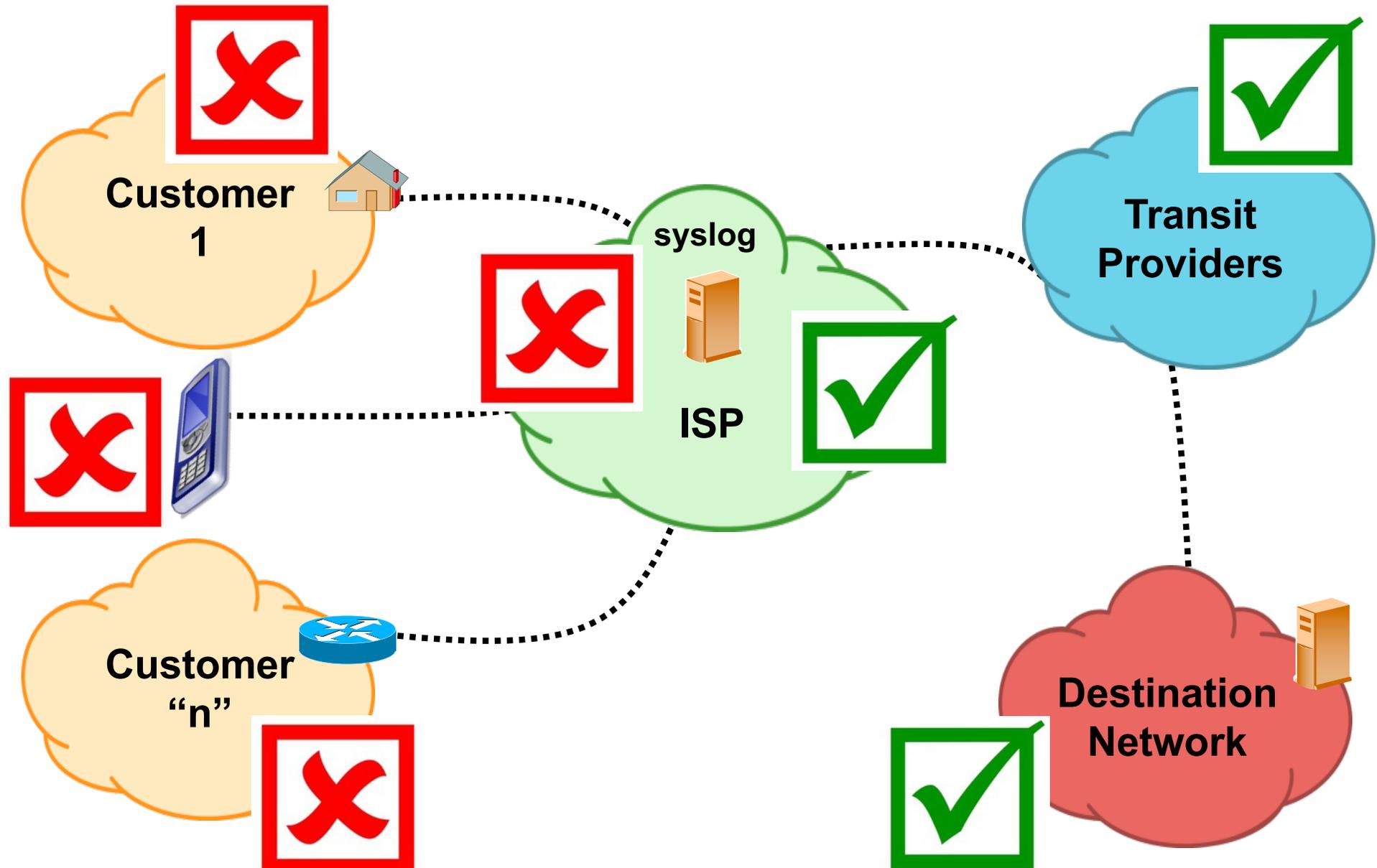
# Privacy Considerations

- Vendors and operators already log/collect telemetry, with different degrees of “privacy”
  - Recent discussion about CGN in v6ops
  - Collecting data is not against privacy if not disclosed
    - Allowed for network O&M
- We can make this “soft” by NOT collecting the user address/prefix, just failed destination

# Reporting with source



# Reporting without source



# Questions from last meeting

- Incentive to deploy/implement this:
  - Improve IPv6 deployment “quality”
- DoS vulnerability:
  - Same as any syslog
- Lots of details to work out
  - That’s why we will like WG adoption for a more serious consideration and inputs

# Open Questions

## 1. Report using only IPv6?

- Simpler
- But reporting will not happen if IPv6 is broken (from the customer LAN to the Operator)
- If we want dual stack-reporting, send two messages (one with IPv6, one with IPv4, which can be correlated, if one is missing that protocol is broken)? Other suggestions?

## 2. IANA request for reserving 192.88.99.0/24

# Main Changes from -00

- Changed document name, so actually is like v01
- New co-author
- Extended privacy considerations section

# Next steps

- Questions ?
- Become a WG item ?
- Inputs ?