DOTS Architecture Update

draft-ietf-dots-architecture-01

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Changes Overview

- Anycast considerations
- Establishing signal channel clarification

Establishing the Signal Channel

- Session configuration now in signal channel
- DOTS agents must agree session configuration
  - Heartbeat interval
  - Acceptable signal loss
  - Maximum mitigation lifetime
- New: Signal channel is not active until DOTS agents agree on the above

DOTS and Anycast

- WG suggestion during IETF 96
- Resolve potential issues arising from redirected signaling?

Anycast Signaling

- Draft highlights three use cases:

    1. Service discovery

    2. Regional/per-customer deployments

    3. Operational resiliency

Anycast Service Discovery

- "Instance discovery" as described in RFC 7094
- DOTS client connects to DOTS Service Address
- DOTS server responding as Service Address redirects to a unicast DOTS server

Anycast Signaling

- Draft highlights three use cases:

  1. Service discovery

  2. Regional/per-customer deployments

  3. Operational resiliency

- But…

Anycast Operational Challenges

- Signaling sessions are long-lived
- Network instability may kill signaling sessions
  - Security state would need to be shared among anycast DOTS servers sharing a Service Address
- Signal session flapping

Remaining Work

- Service discovery section
  - DNS SRV, DNS-SD, Anycast "instance discovery"
- Redirected signaling considerations
- Provisioning discussion needed?
  - DANE, EST
- ECMP discussion required?
- Other issues?

Questions?

https://github.com/dotswg/dots-architecture