DOTS Architecture Update

draft-ietf-dots-architecture-01

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IETF 97 - Seoul
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