DOTS Server(s) Discovery

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Context & Motivation: Reminder

• A DOTS client needs to learn the IP reachability information to contact its DOTS server(s)
  – Idem for a DOTS gateway

• The DOTS architecture and Data/Signal channel drafts do not specify how such information is provided to DOTS clients

• *This document is filling this void*
What Happened Since Prague?

• Solicited more feedback from the list
  – Seek for more inputs whether we need to shorten the list of options in the draft
  – The discussion confirmed the approach of the draft
    • One single discovery mechanism is unlikely
    • The solution should cover a variety of devices, with heterogeneous capabilities
    • ..including devices with no name resolution capabilities
What Happened Since Prague?

• Integrated comments from Russ White:
  – A DOTS client may be configured with a name, an address and a reference identifier, or an IP address only
  – When only a name is provided, the name is used to retrieve the list of DOTS server IP addresses, but also for authentication
  – If both an IP address and a name are supplied, the name is only used for authentication; it is not passed to an underlying resolution library
  – If only an IP address is provided, this means that the IP address is also used as a reference identifier for authentication purposes
    • Using an IP address for PKIX-based authentication is not widely used
      – “few certification authorities issue server certificates based on IP addresses” (RFC6125)
    • But, Russ’s argument is that operators who want to avoid DNS dependency can build such certificates
Updated Behavior

• All DOTS clients MUST support at least one of the four mechanisms
  1. Explicit configuration
     I. Local/Manual configuration
     II. Automatic configuration
  2. Service Resolution
  3. DNS-SD
  4. Anycast

• All DOTS clients SHOULD implement all four

• DOTS Clients MUST prefer information received from the discovery methods in the listed order
What is Next?

• Consider adoption of the draft
• Comments & questions are welcome