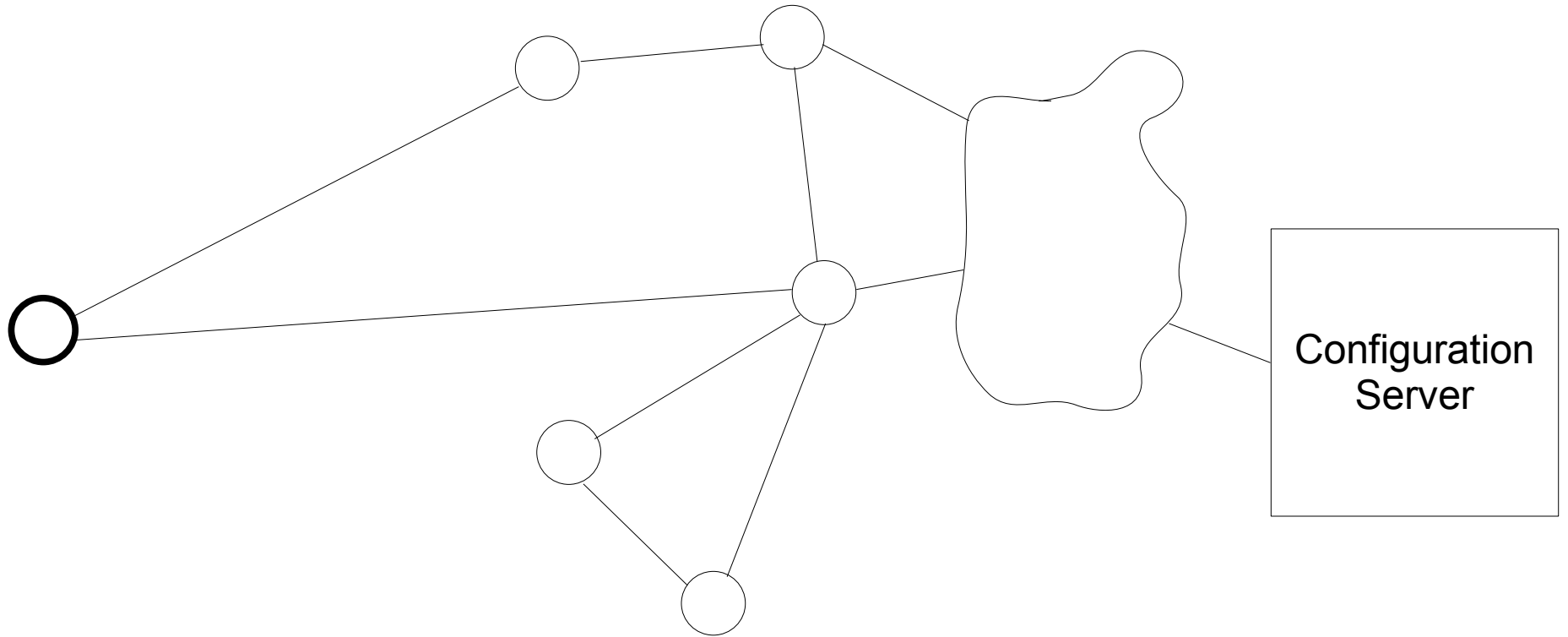# Network Bootstrapping Problem

draft-tsou-opsawg-network-configuration-00.txt

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IETF 78

Network Context

Joining device

Partially-built
network

Configuration
Server

Bootstrapping Stages For a Network Device

- Establishment of L2 connectivity with neighbours

- IP address acquisition

- Discovery of Configuration Server address

- Establishment of a secure channel to the Configuration Server

Our Choices

- Acquisition of IP Addresses
    - Stateful DHCPv6 vs. stateless DHCPv6 + SLAAC
    - RFC 3118 for authentication?
    - Missing specification for persistent node identifier (DUID)
- Discovery of the Configuration Server
    - Manual configuration vs. DHCPv6 vs. Service Location Protocol (RFC 2608) vs. DNS SRV (RFC 2782)
    - Latter two choices require further specification

Our Choices (cont'd)

- Establishing and Using a Secure Channel
  - Choices for mutual authentication (need that persistent identifier again)
    - security protocol
    - initial keying methodology
  - Choices for transport protocol
  - Choice between push and pull mode for configuration files

What Is To Be Done?

- Can we narrow down the choices in a BCP?

- Is this a potential OPSAWG work item?

  - Will need follow-up work to complete protocol specifications in other WGs