

draft-ietf-netconf-zerotouch-00

Zero Touch Provisioning for NETCONF Call Home

Introduction

Zero Touch is a technique for establishing a secure NETCONF connection between a newly deployed IP-based device, configured with just its factory default settings, and the new owner's Network Management System (NMS).

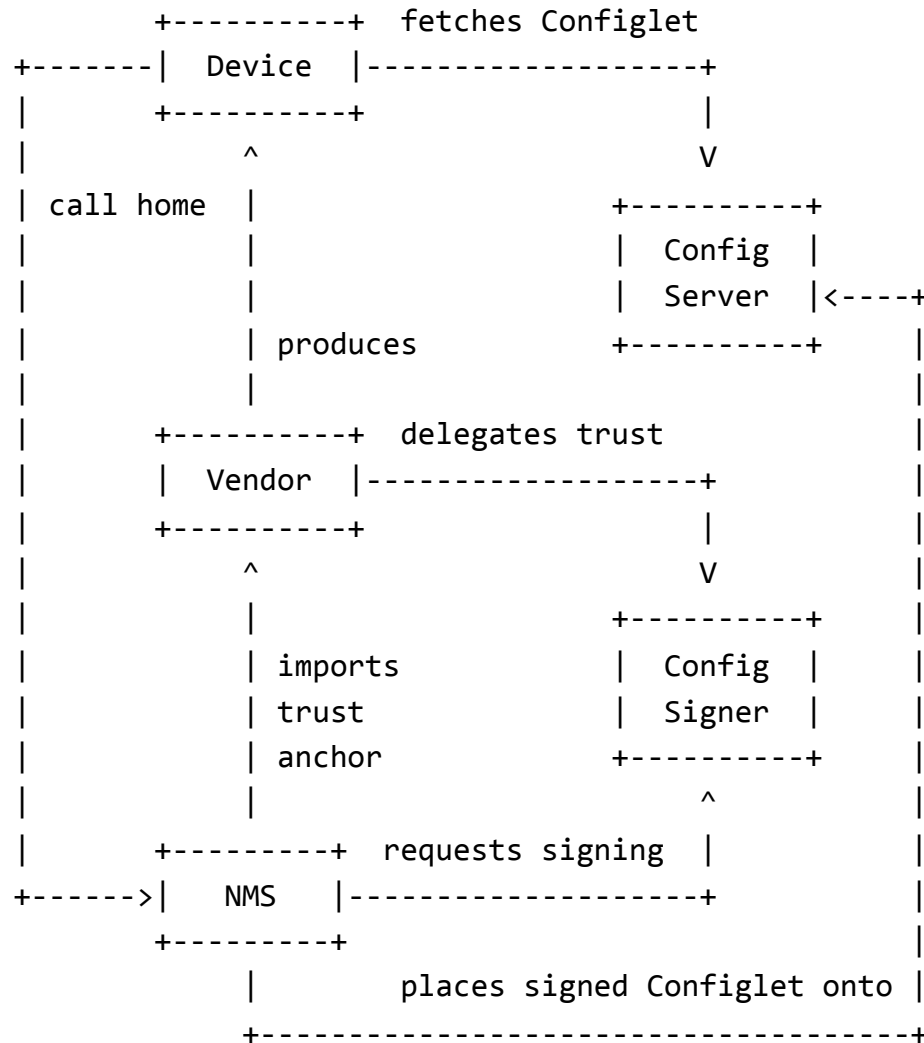
Updates since IETF 89

- From I-D to -00
 - Major structural update; the essence is the same, but most every section was rewritten to some degree.
 - Added a Use Cases section clearly articulating the local vs 3rd-party network cases
 - Added diagrams for "Actors and Roles" and "NMS Precondition" sections, and greatly improved the "Device Boot Sequence" diagram
 - Removed support for physical presence or any ability for Configlets to not be signed.
 - Now Configlet is a header (target-requirements) + body (anyxml)
 - Defined the ZeroTouch Information DHCP option
 - Added an ability for devices to also download images from Configuration Servers
 - Added an ability for Configlets to be encrypted
 - Now Configuration Servers can only support HTTP/S - no other schemes possible
 - Device now MUST access URL via UID, before trying raw URL
 - Now uses IEEE 802.1AR-2009 IDevID (Initial Device Identifier)

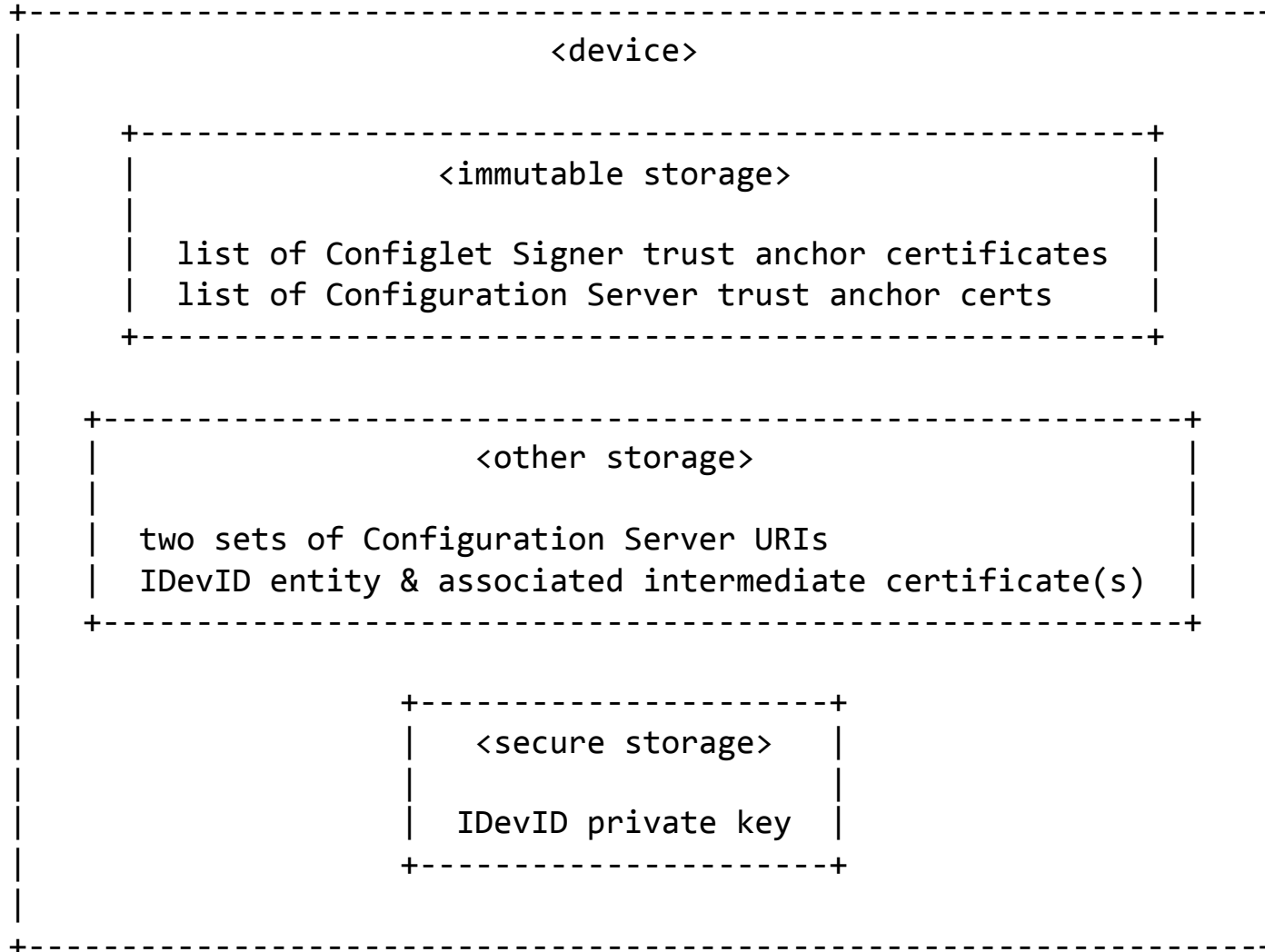
Use Cases

- **Connecting to a remotely administered network**
 - DHCP server administered by 3rd-party
 - Device may not be able to receive site-specific information
 - Device must reach out to network for initial configuration
- **Connecting to a locally administered network**
 - DHCP server can be customized
 - Device may receive some site-specific information
 - Device falls back to network if no local information received

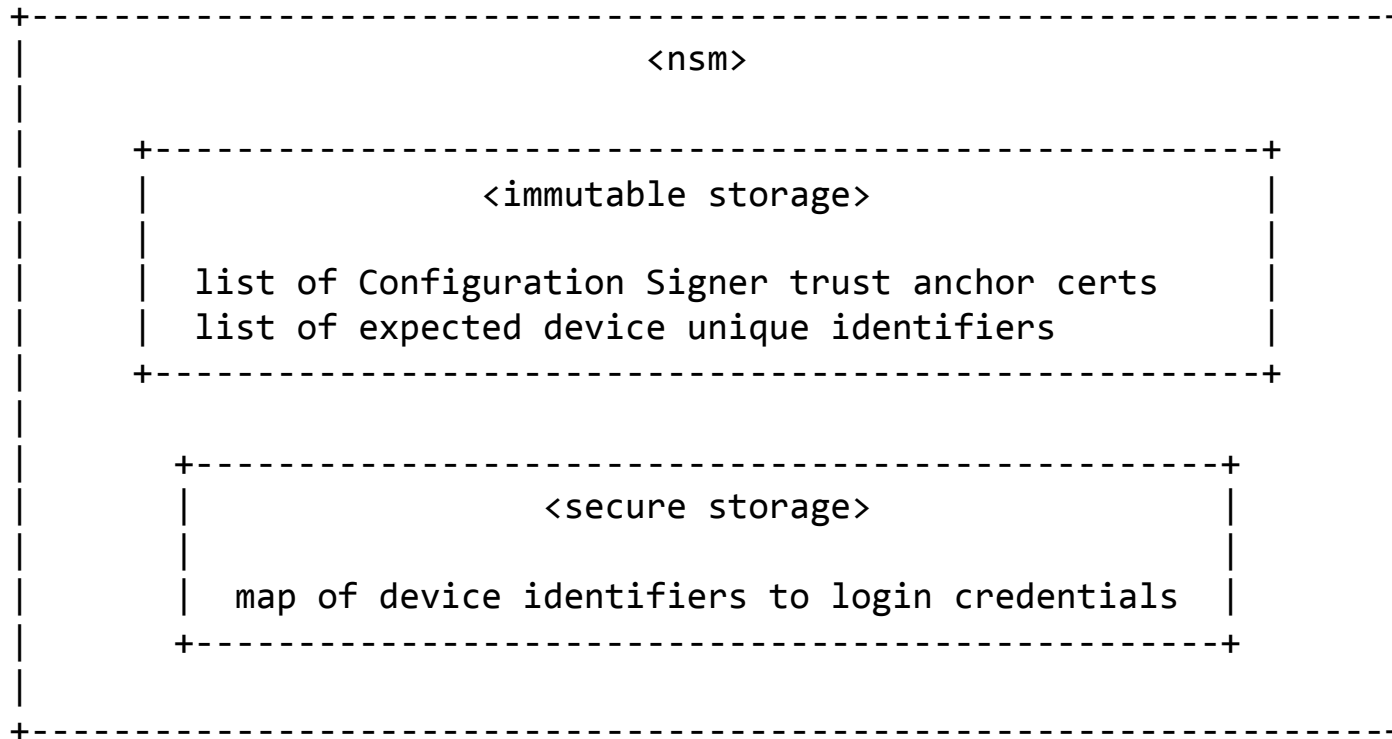
Actors and Roles



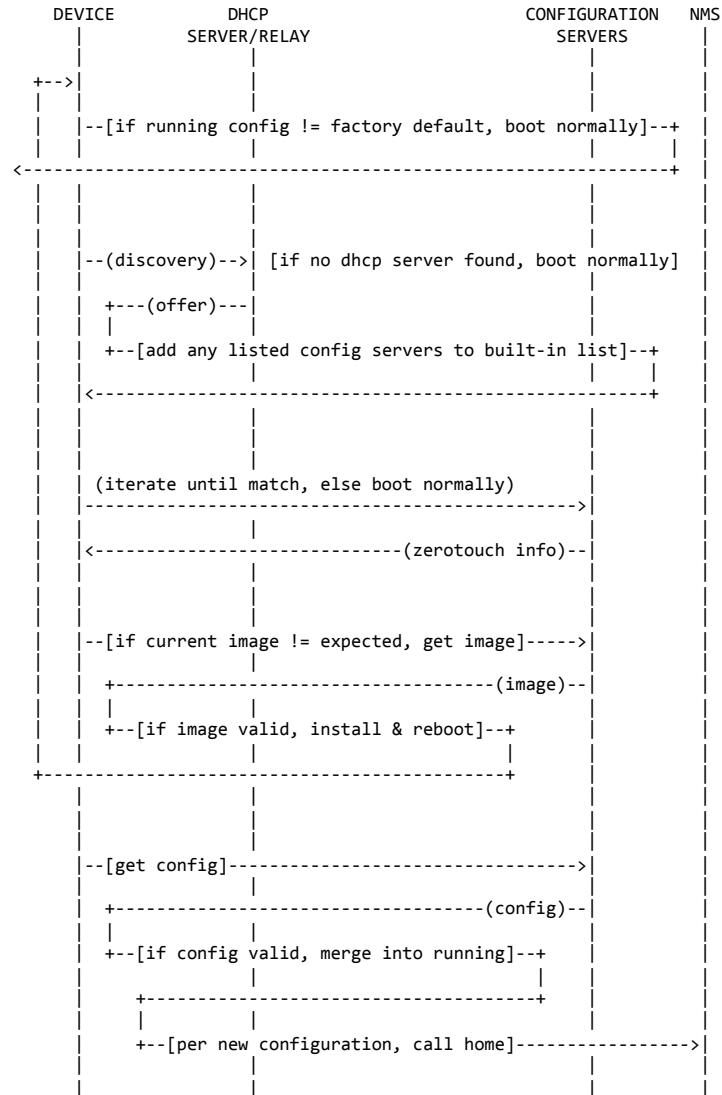
Device's Factory Default State



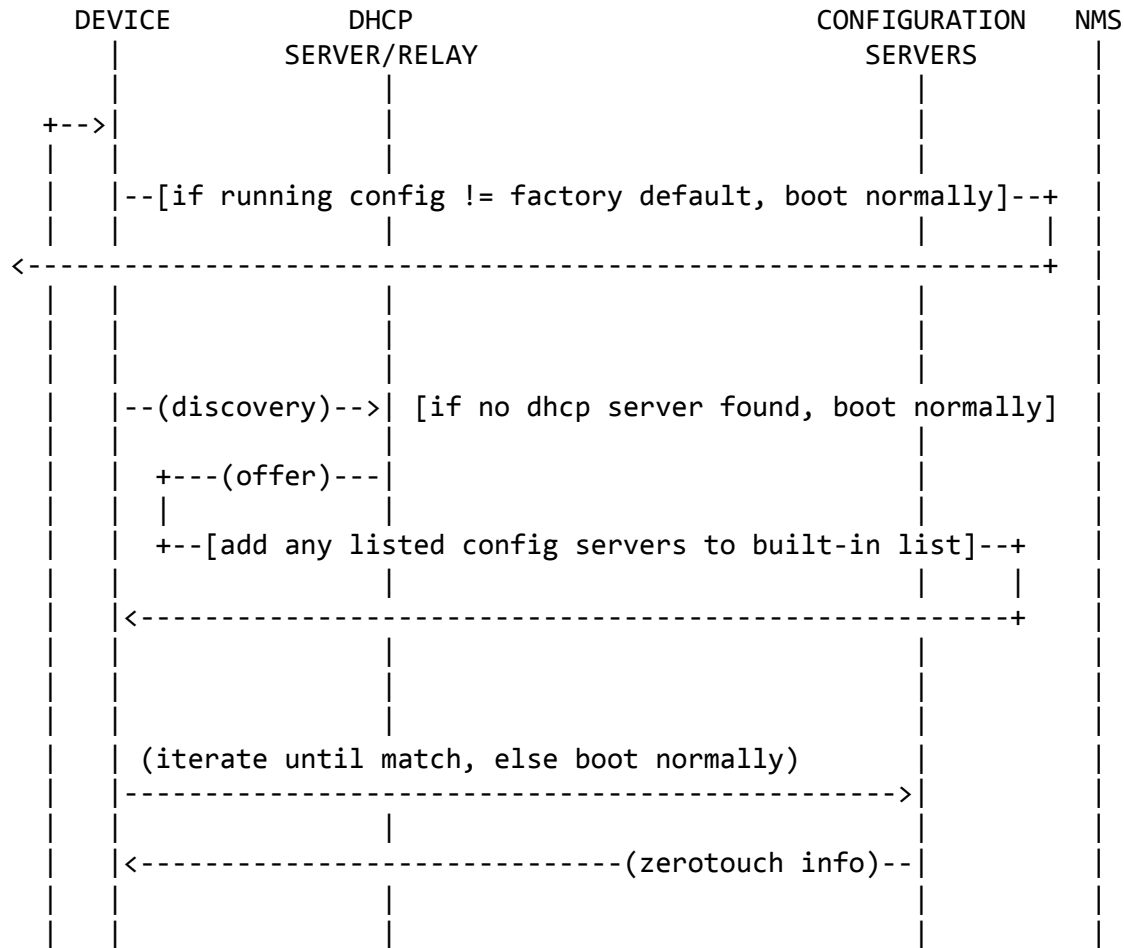
NMS's Precondition



Device Boot Sequence



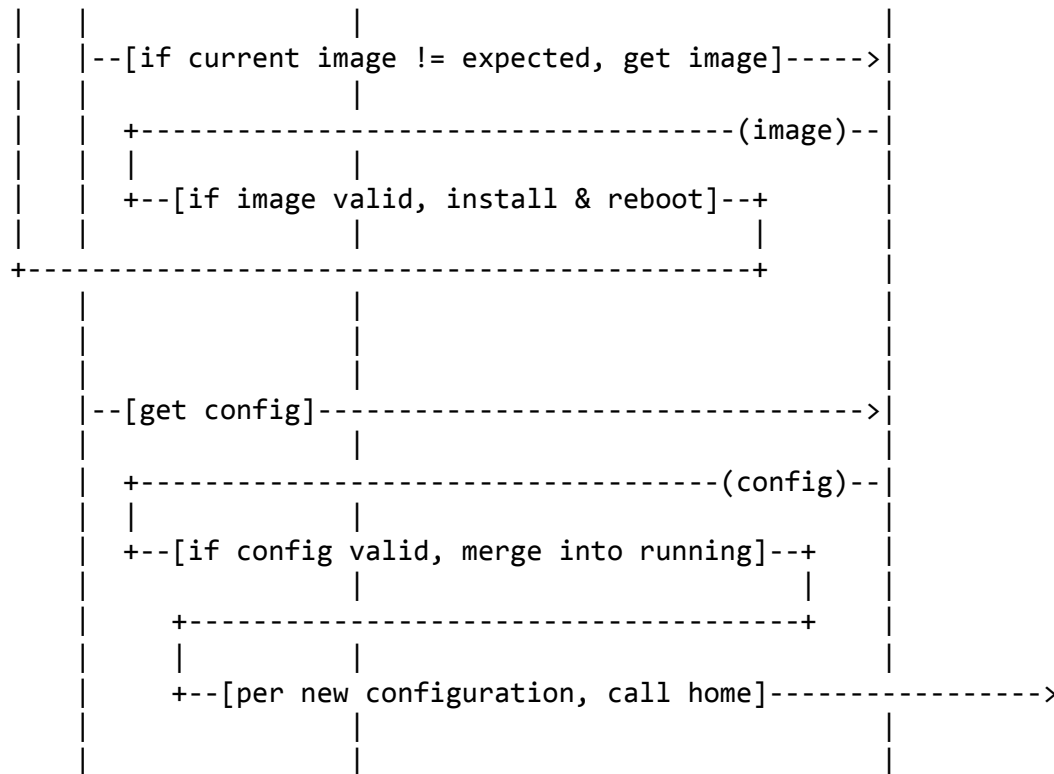
Device Boot Sequence (1/2)



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Device Boot Sequence (2/2)

[Continuation from previous slide]



Configlet Data Model

```
module: ietf-netconf-zero-touch
  +--rw configlet
    +--rw target-requirements
      | +--rw unique-identifier      string
      | +--rw software-version      string
    +--rw configuration              // anyxml
```

IANA Considerations

- “ZeroTouch Information” DHCP Option
 - Returns a list of Configuration Server URIs
- Media Types for Images and Configurations
 - application/zerotouch-configlet
 - application/zerotouch-bootimage

[This is why only HTTP/S is supported now]

Open Issues

- No known issues at this time

Questions / Concerns ?