draft-friel-anima-brski-cloud

IETF 108 - ANIMA - 2020-07-30

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TL;DR

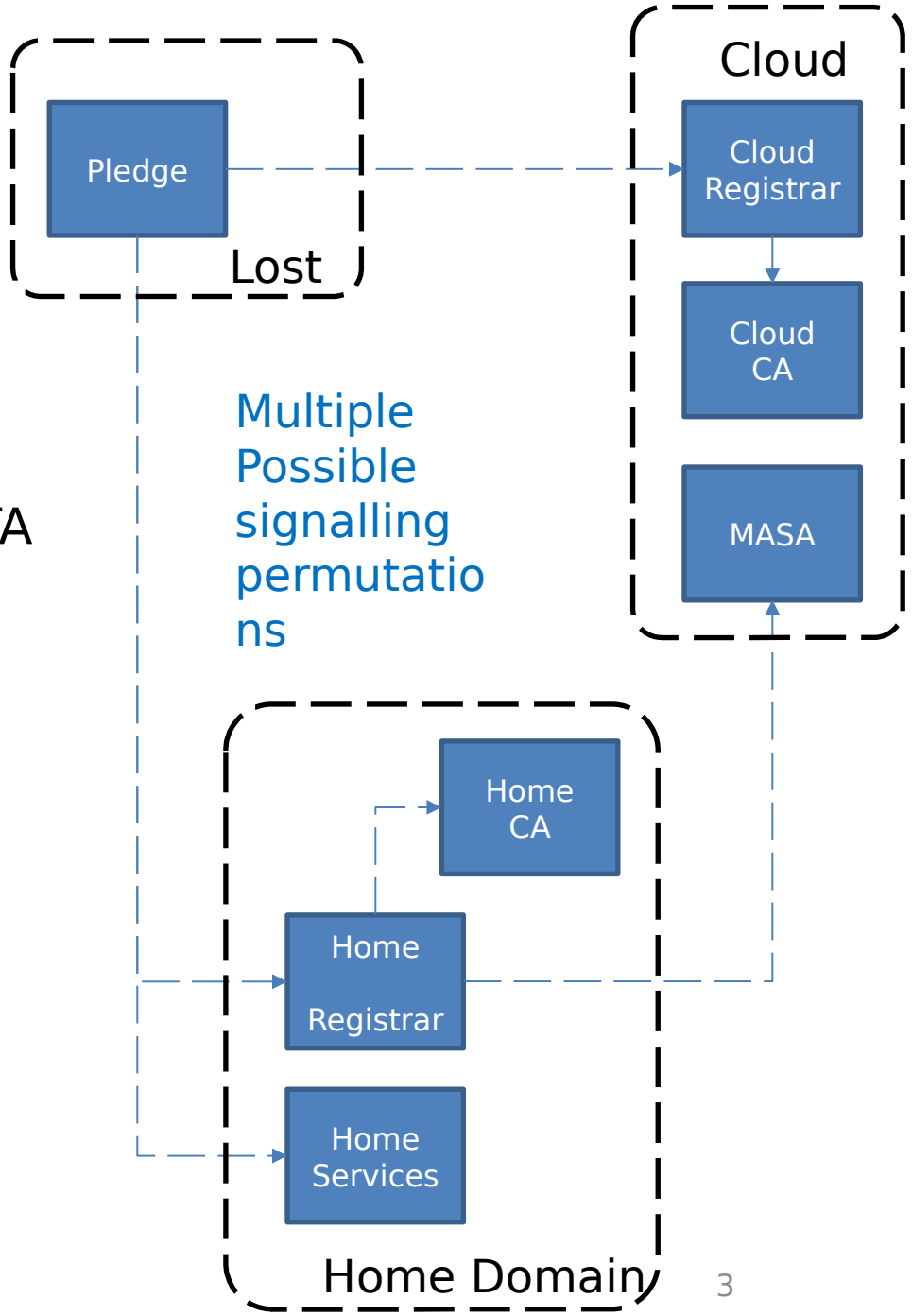
- draft-ietf-anima-bootstrapping-keyinfra does not fully specify default Cloud Registrar operation

- draft-friel-anima-brski-cloud does
  - reduced scenarios in -02 from four down to two unique

- Use cases:
  1. A pledge bootstrapping from a location remote from the domain, and having no Join Proxy needs to discover the location of it's home Registrar.
  2. Use case: A pledge bootstrapping in a location in which there is not (yet?) a BRSKI Registrar may need to use a Manufacturer provided service for onboarding to Enterprise CA

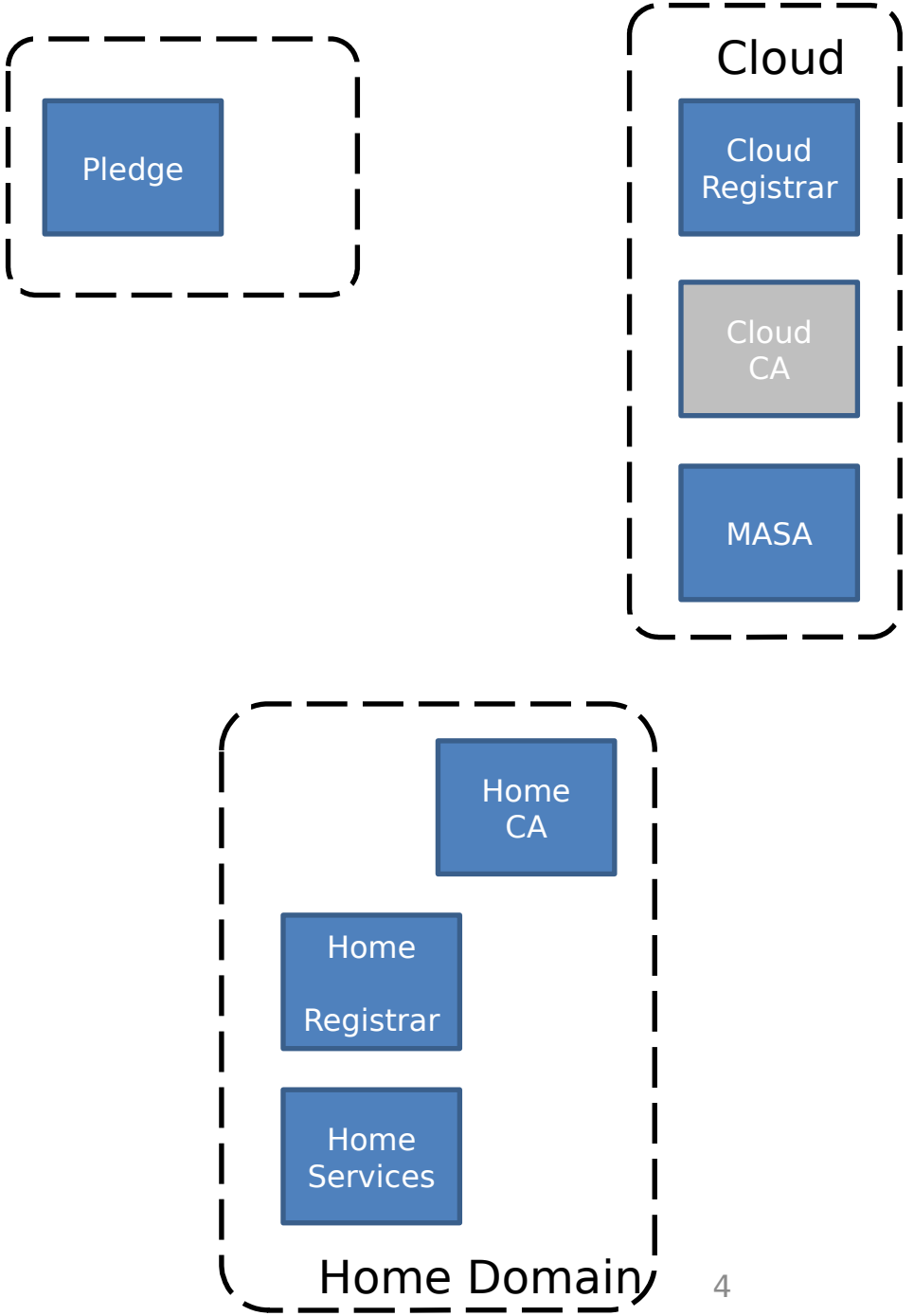
Architecture

- Pledge connects to Cloud Registrar on bootstrap and requests Voucher
  - Mutual TLS enforced using IDevID and implicit TA
  - Assumption is that Pledge has internet access
- Choices, choices, choices
  1. ~~Does~~ Cloud Registrar issue Voucher or 3xx to Home Registrar~~?~~!
  2. ~~If Cloud Registrar issues Voucher, does it also issue suitably namespaced LDevID, or does~~ it redirect to EST requests to home Registrar~~?~~
  3. ~~If Cloud Registrar issues LDevID, how does it tell the Pledge about its home domain?~~



Scenario 1: Cloud Registrar Redirects

- Cloud Registrar replies with a ~~3xx~~ **307** to the Voucher Request
- Pledge completes full BRSKI flow against Home Network



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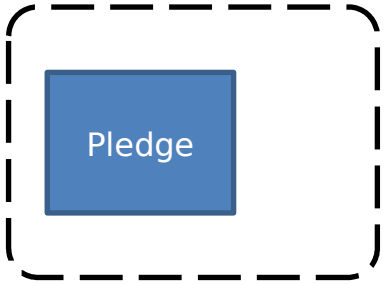

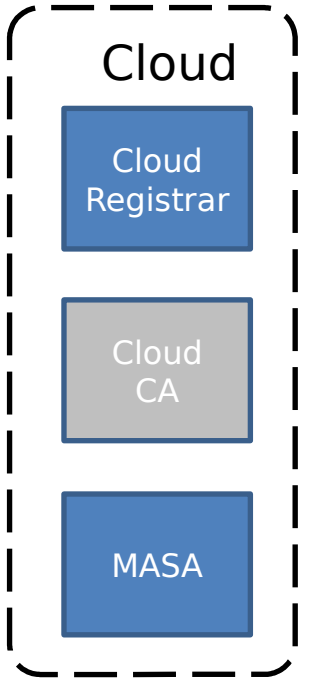

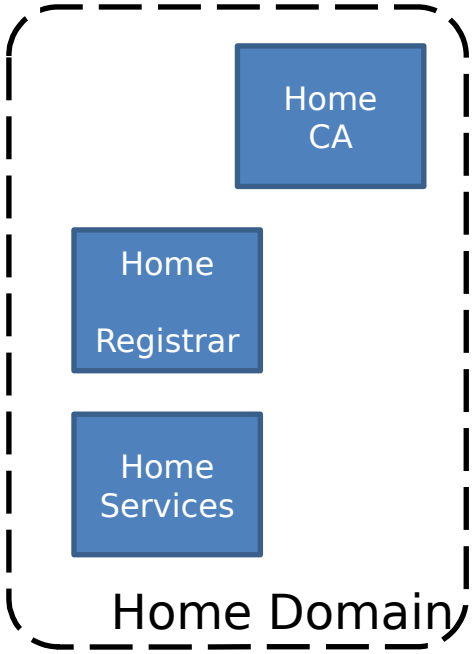

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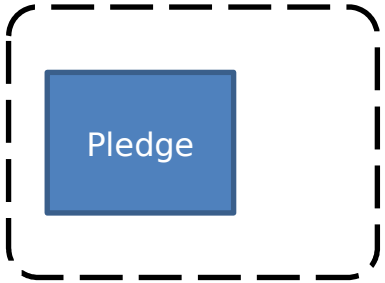

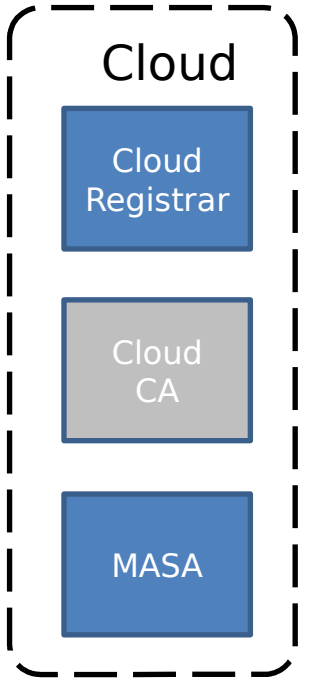

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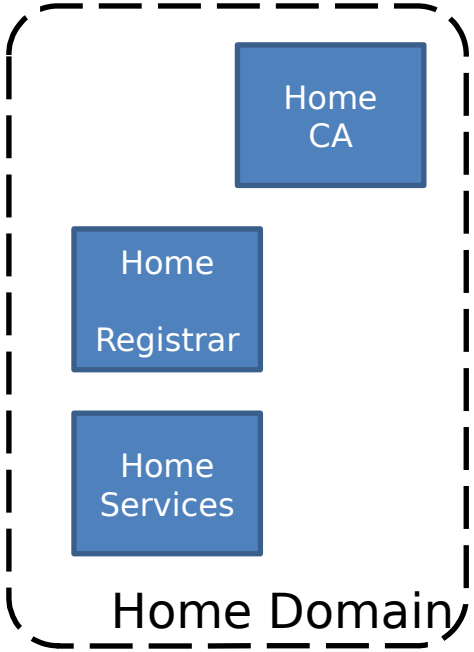

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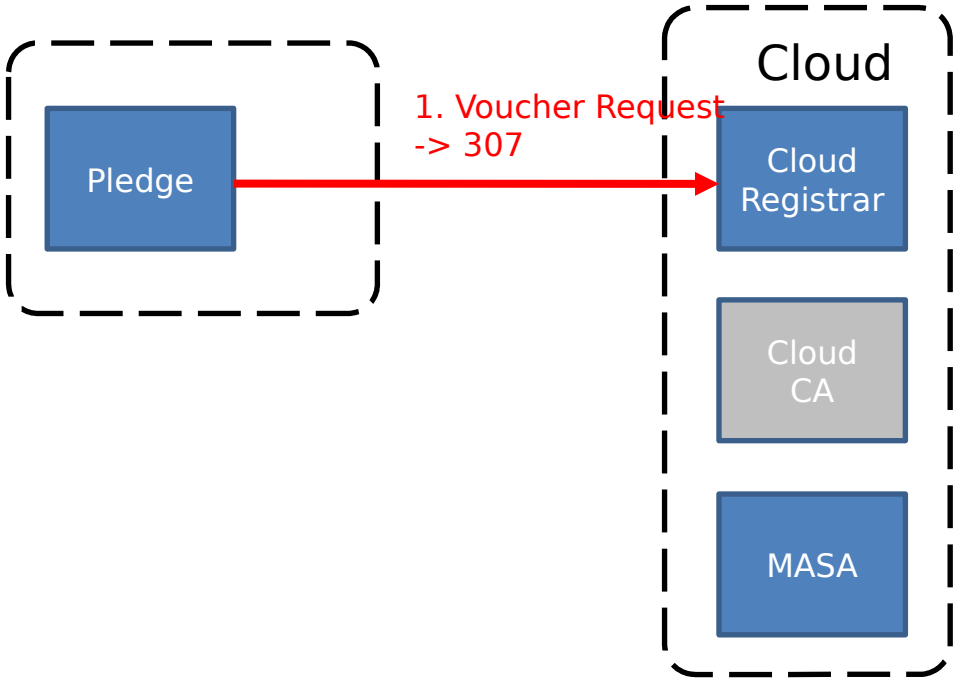

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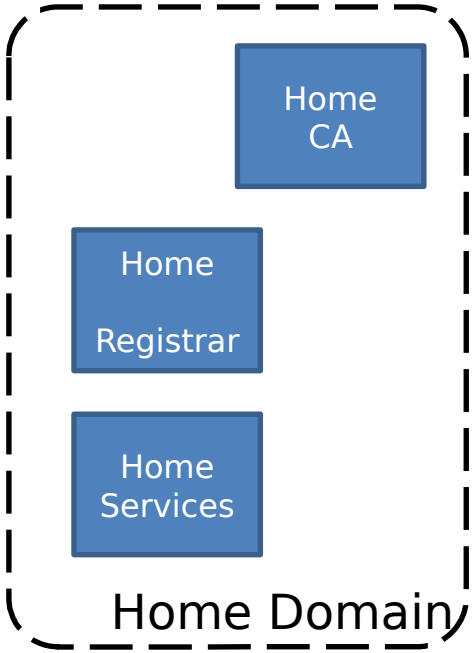

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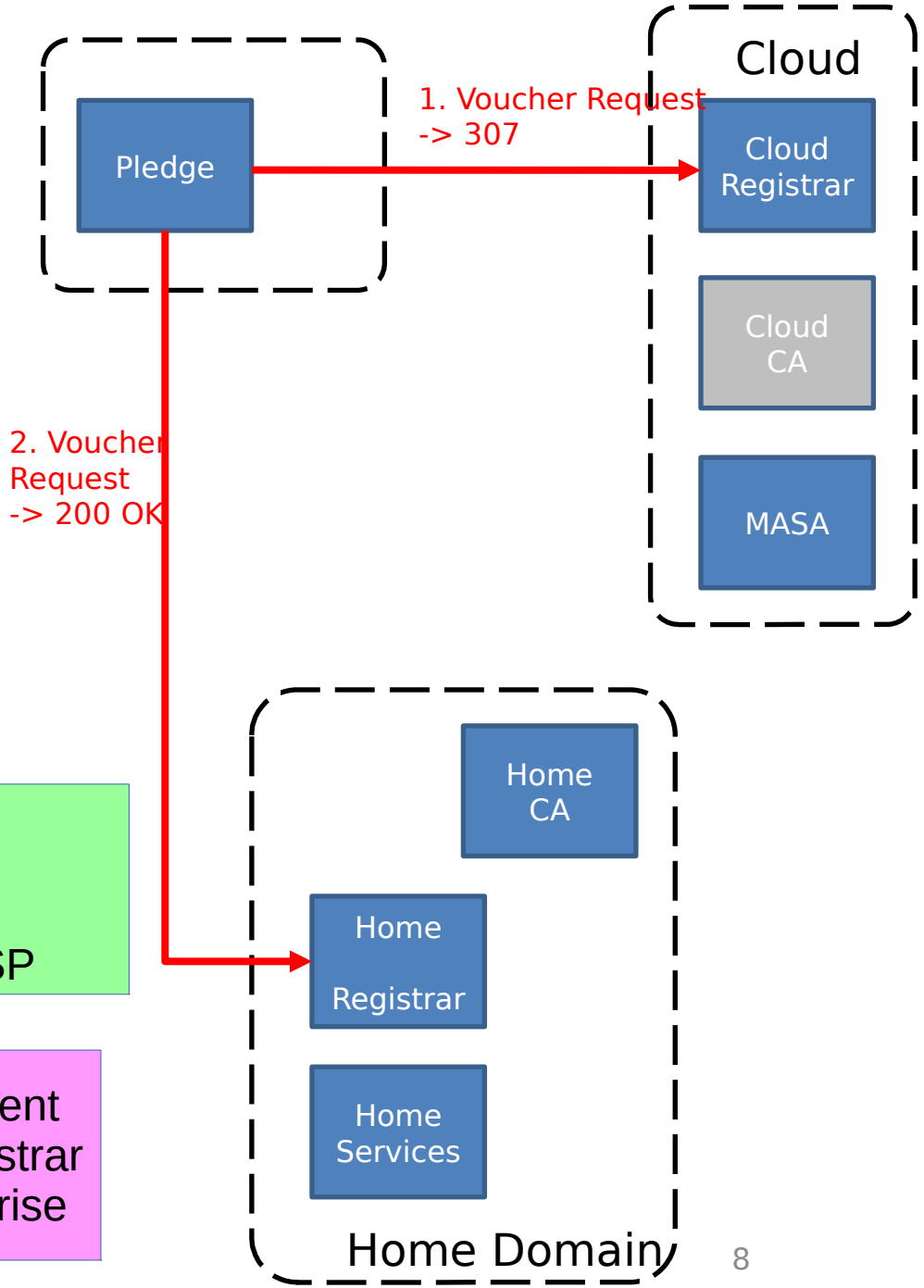

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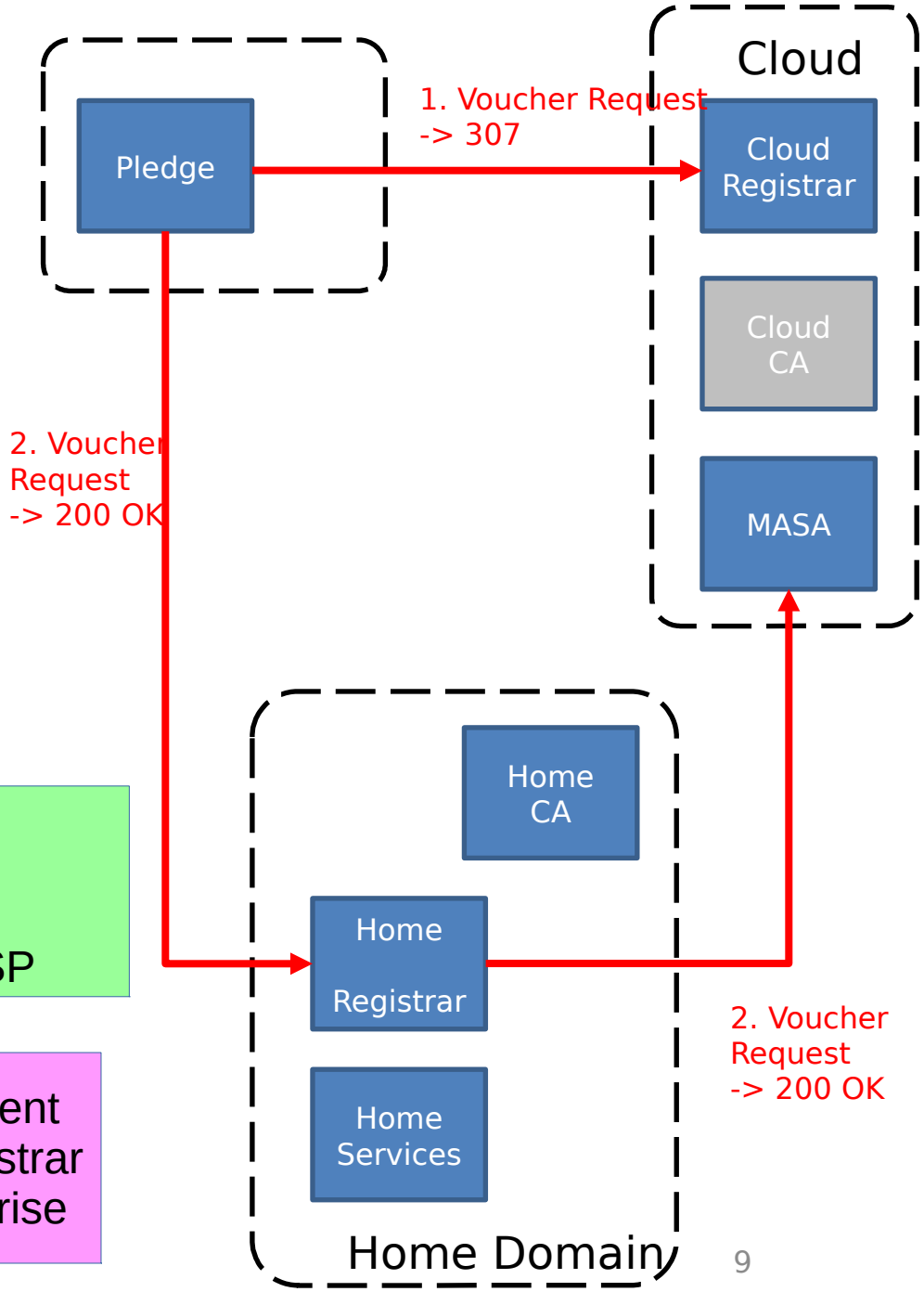

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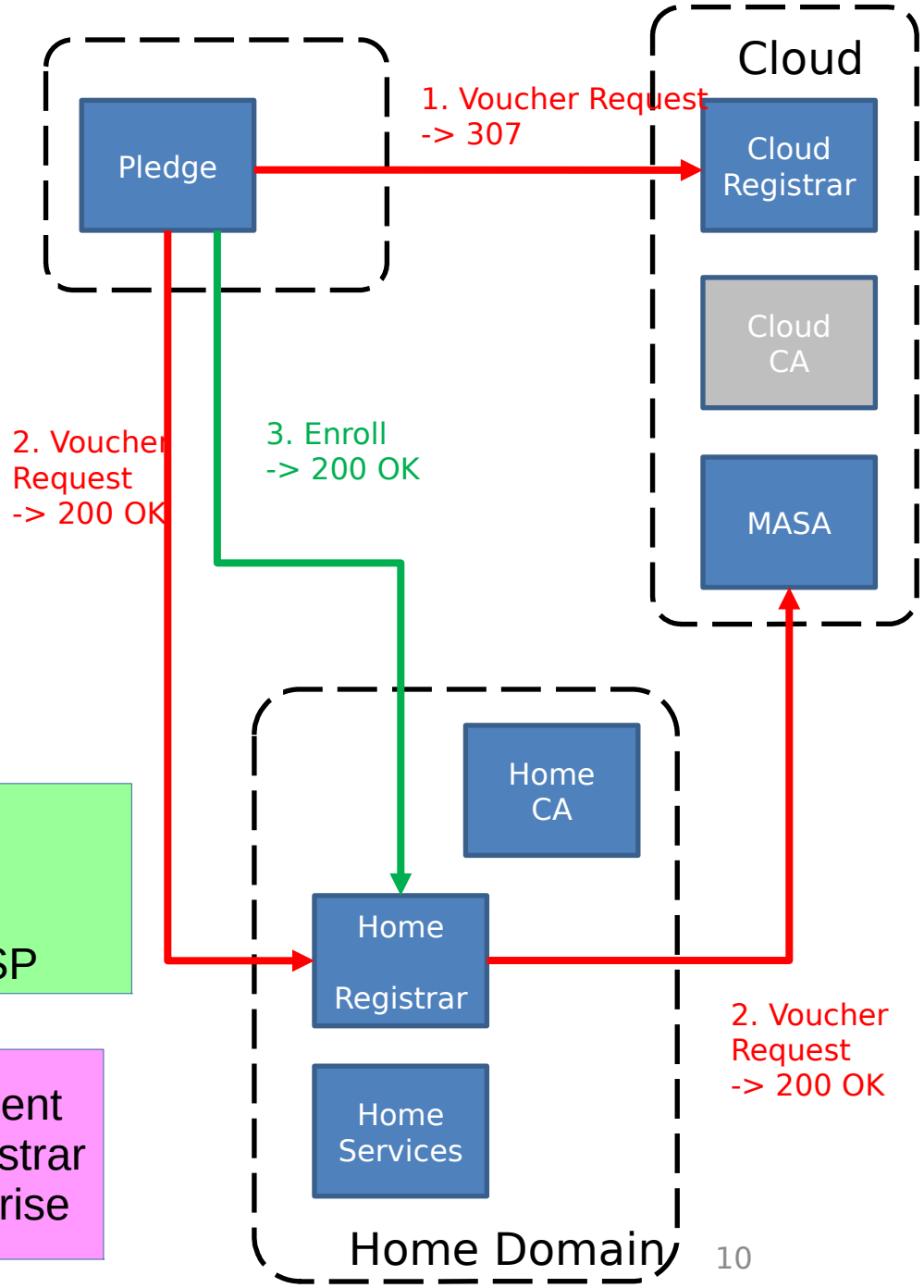

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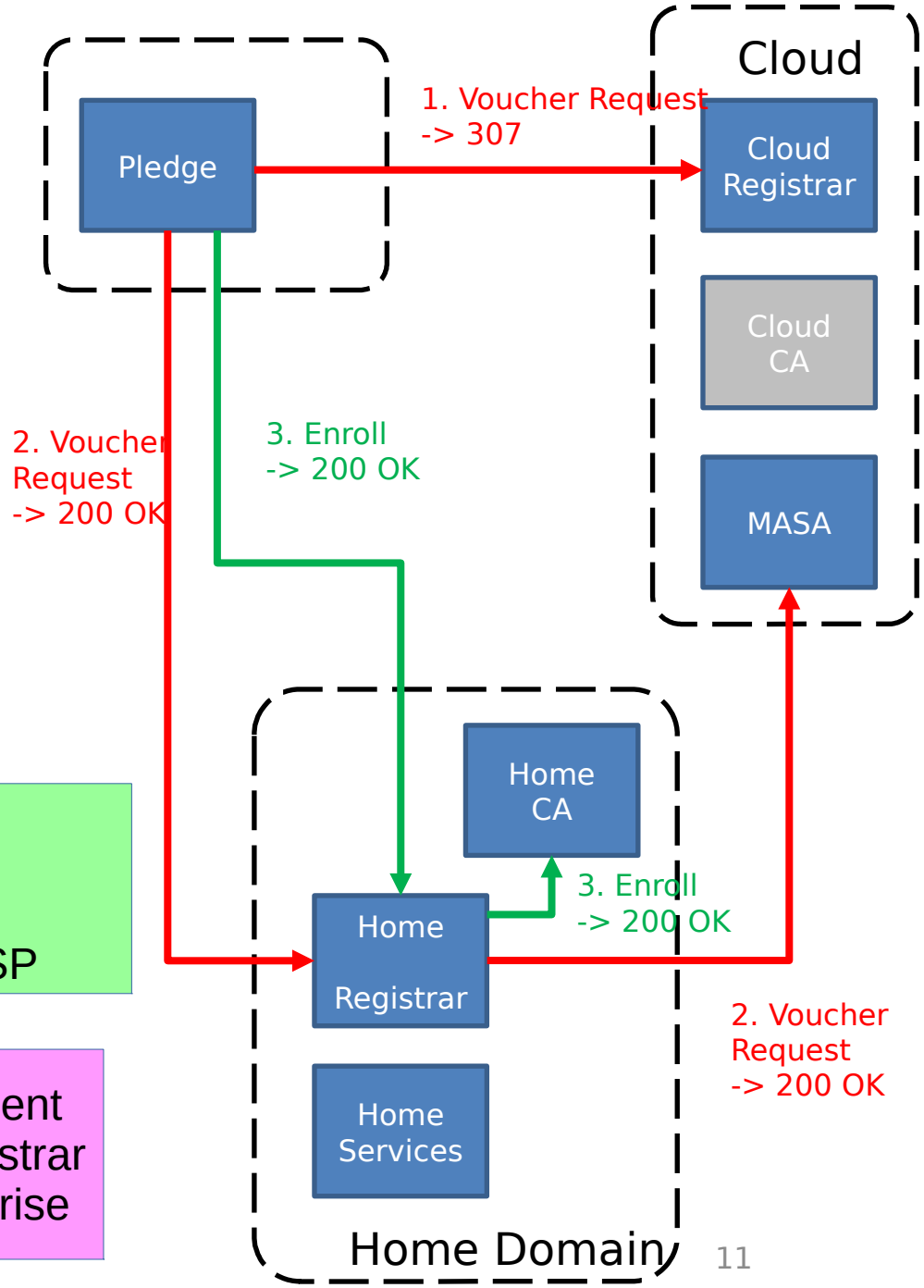

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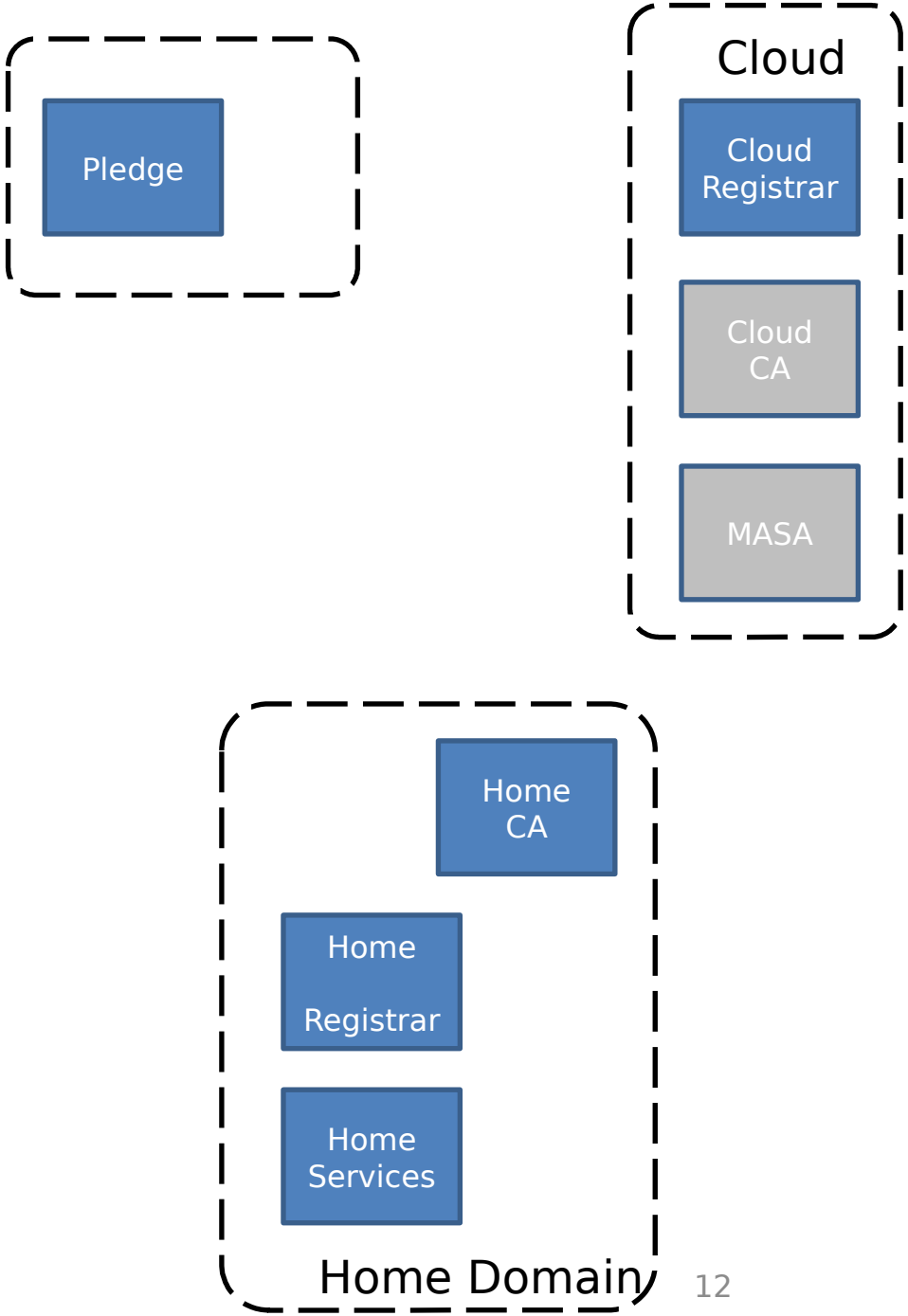
- Cloud Register issues Voucher
  - voucher contains extension pointing to Enterprise EST server
- Enterprise EST server performs enrollment based upon IDevID trust



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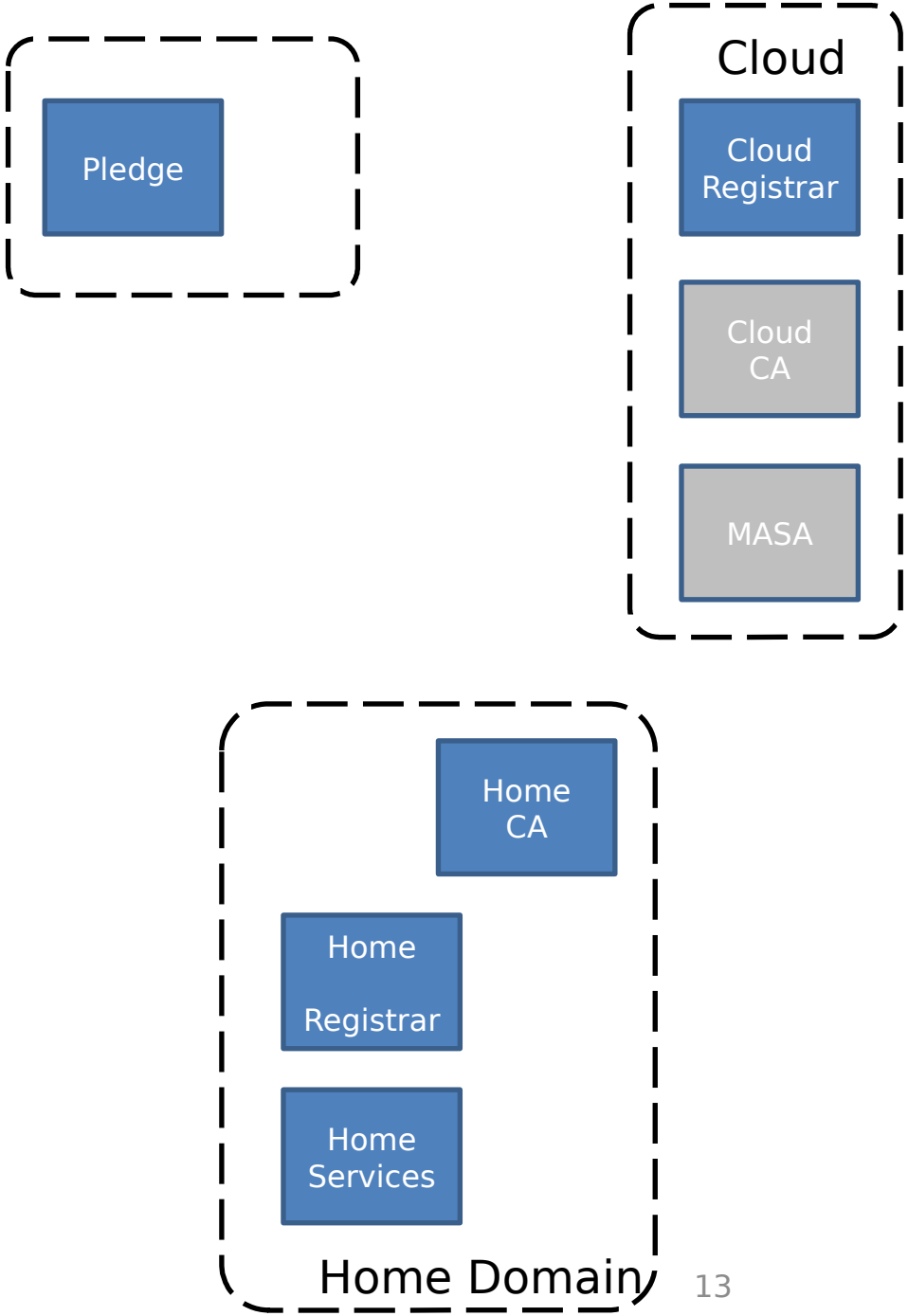

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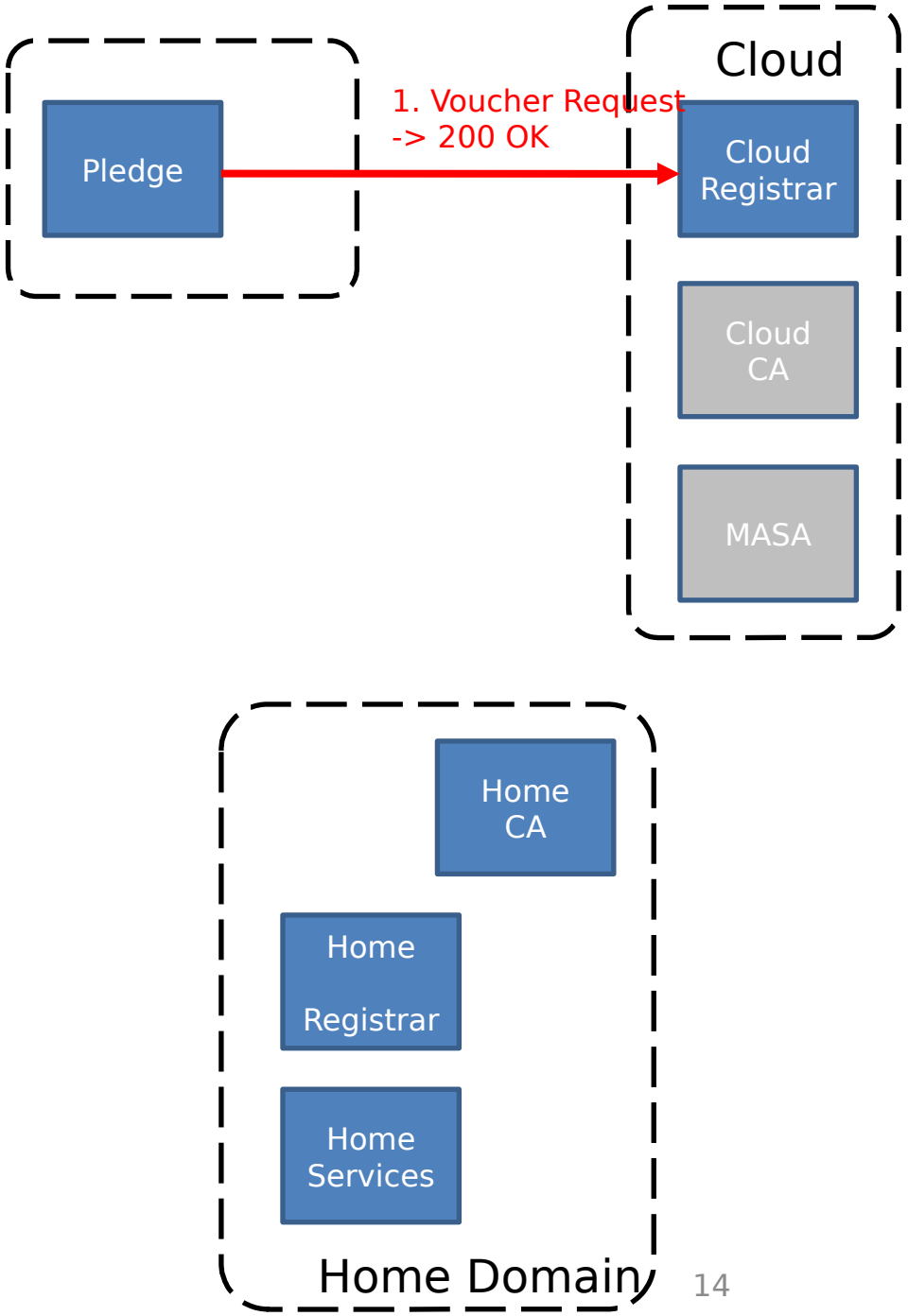

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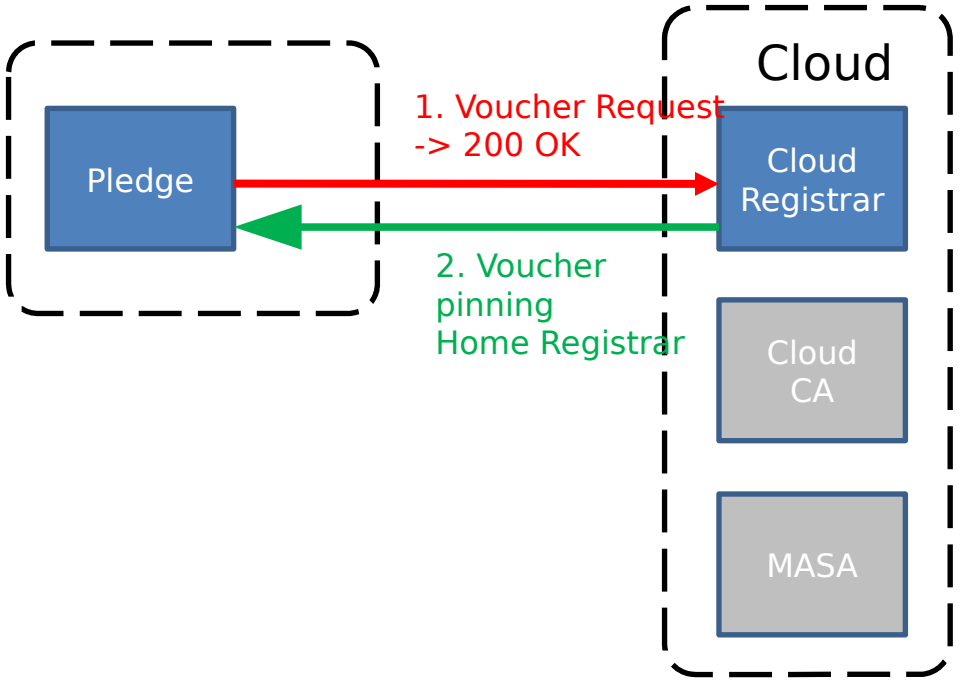

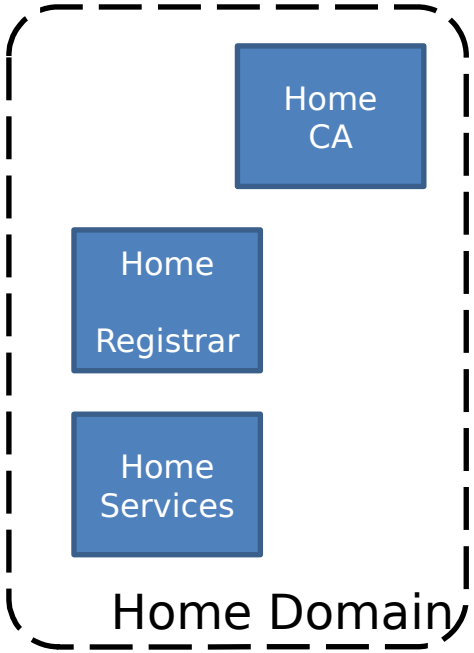

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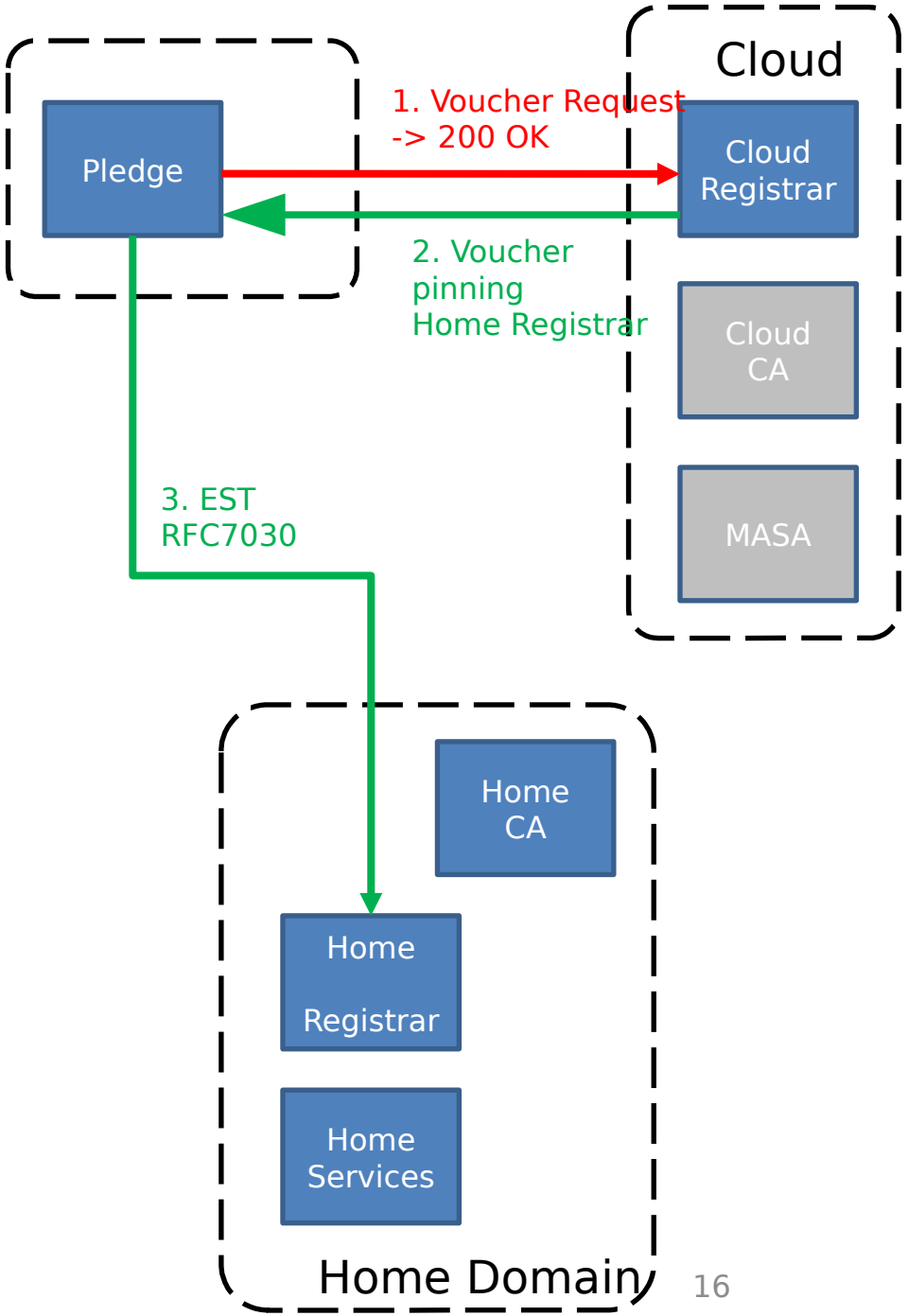

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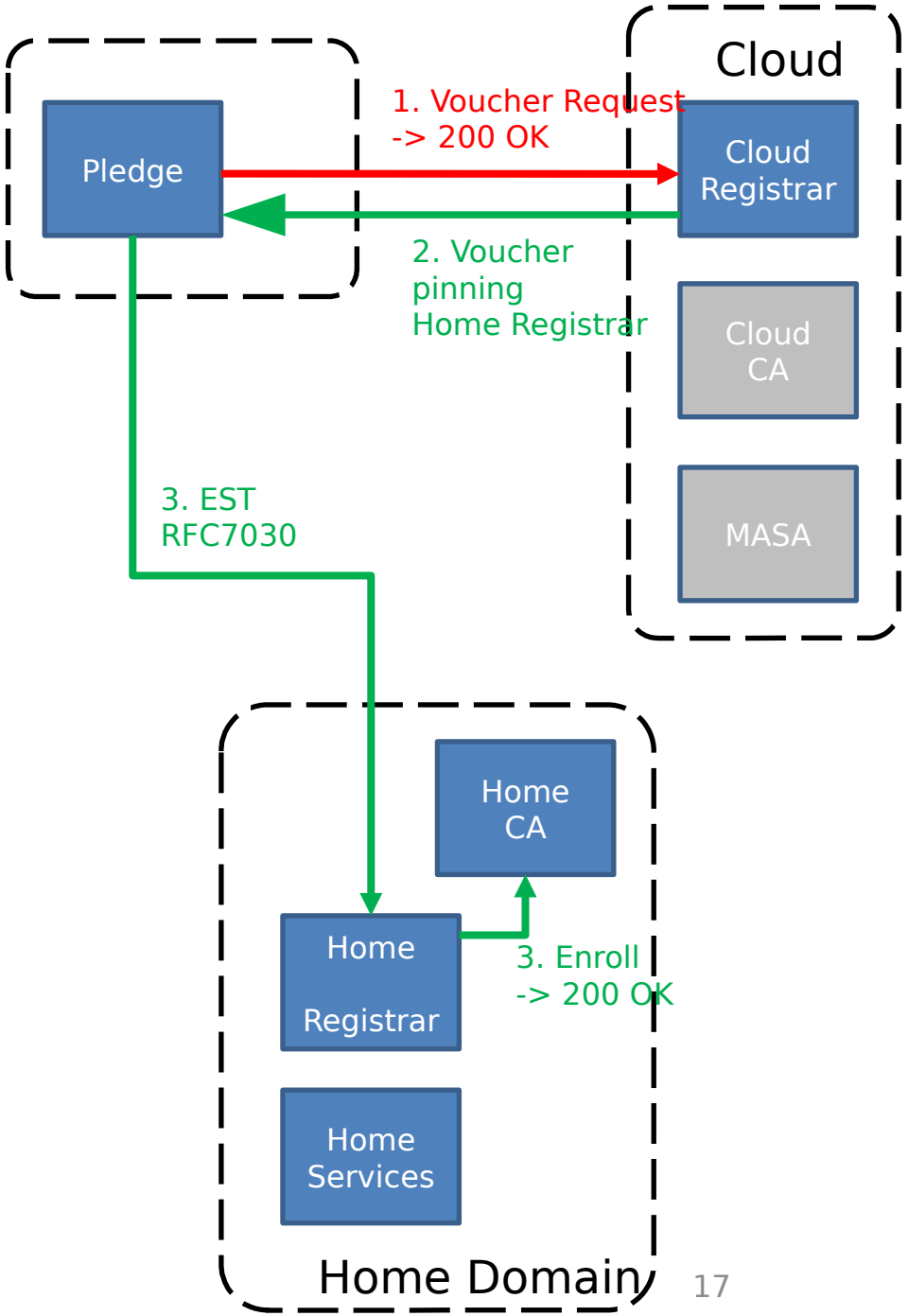

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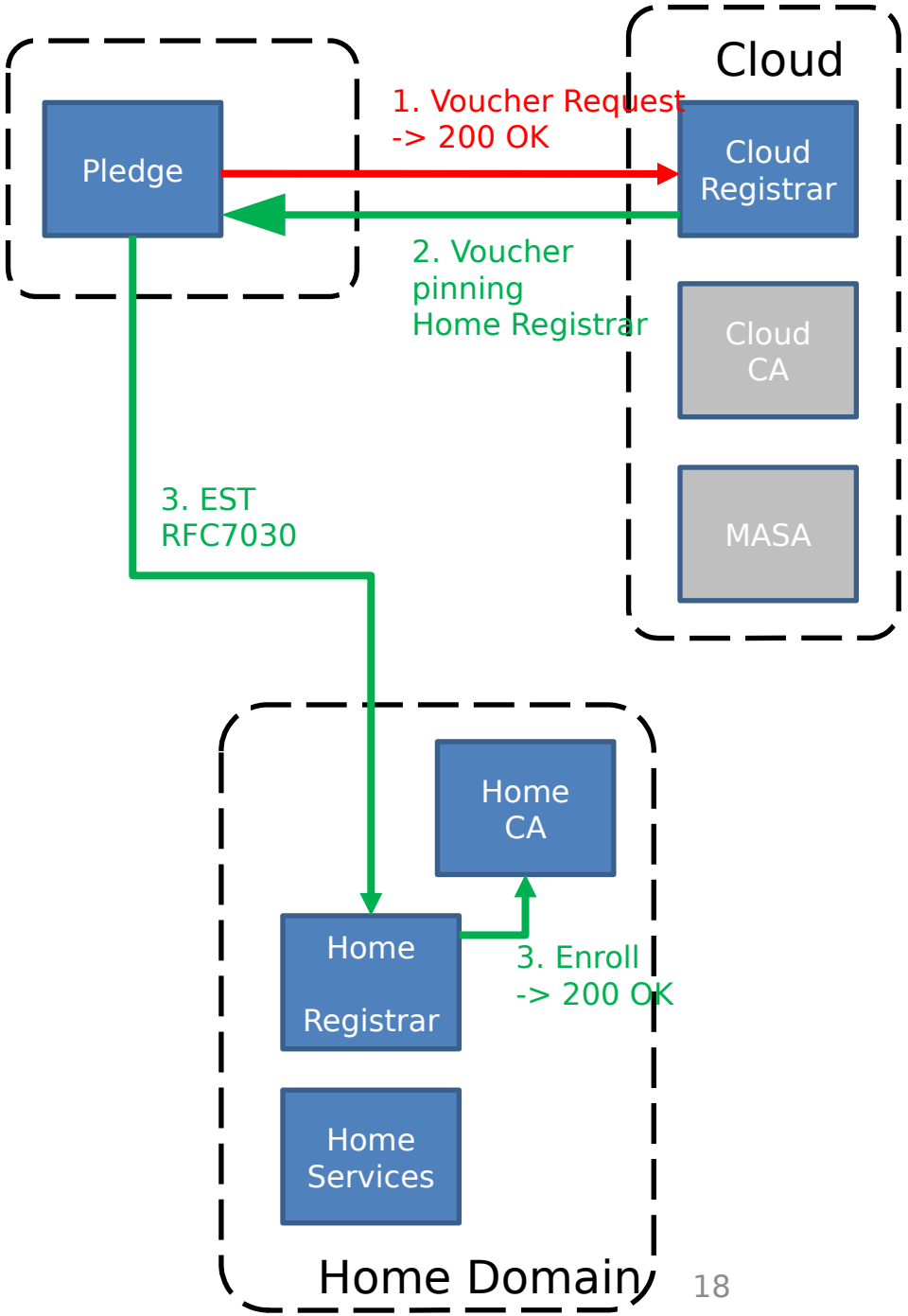
Strong similarity to Intel SDO, etc.



Work remaining to do

1) properly articulate the applicability for each use case
2) define the voucher extension (YANG) for the RFC7030 extension needed for scenario 2.
3) consider if supporting CMP (SCEP?) is desired, and how to do this for scenario 2

Next steps

WG could consider adoption if

it agrees with the problem statement.