draft-friel-acmeintegrations

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TL;DR

 Describes how ACME RFC 8555 can be integrated with multiple existing client / device certificate enrolment mechanisms without requiring any changes required to ACME

Multiple Client / Device Integration Use Cases

1. EST

- RFC 7030: Enrollment over Secure Transport
- 2. BRSKI
 - draft-ietf-anima-bootstrapping-keyinfra: Bootstrapping Remote Key Infrastructures
- 3. BRSKI Cloud Registrar
 - draft-friel-anima-brski-cloud: Specifies BRSKI behaviour with default cloud registrar
- 4. TEAP
 - RFC 7170: Tunnel Extensible Authentication Protocol
- 5. TEAP Update and Extensions for Bootstrapping
 - draft-lear-eap-teap-brski: PKCS#10 / PKCS#7 Updates and BRSKI Extensions

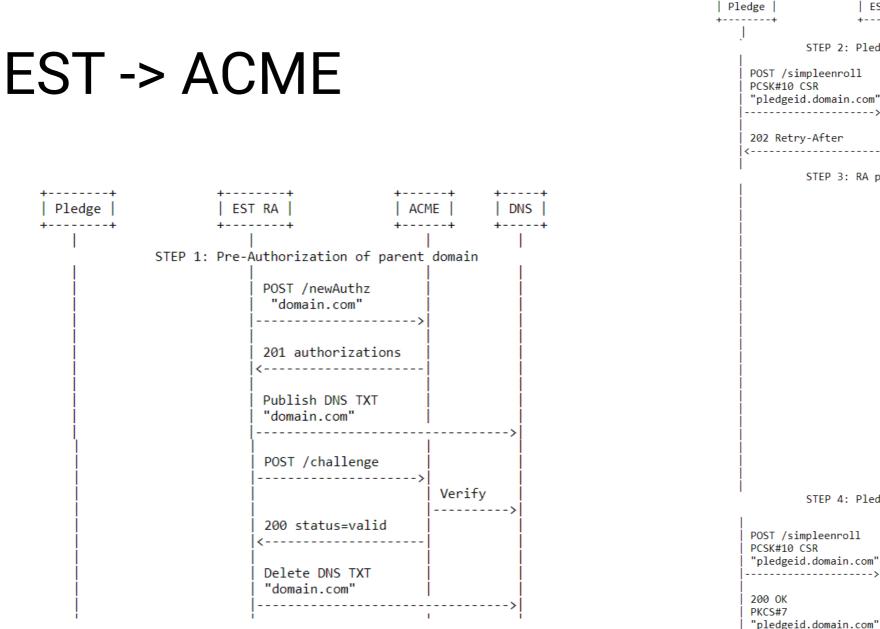
What has changed since IETF 105

- ACME subdomain use case split out into separate document
 - draft-friel-acme-subdomains
- BRSKI Cloud Registrar use case added
 - draft-friel-anima-brski-cloud

Client / device certificate integrations

• EST

- Defines the protocol that clients use to enrol with an EST Registration Authority (RA) using PKCS#10 / PKCS#7 payloads
- EST does not define the mechanism that the RA uses to talk to the CA
- BRSKI certificate enrolment leverages EST
 - EST<->ACME Integrations are equally applicable to BRSKI
- TEAP
 - Defines the protocol that clients use to enrol with a TEAP server using PKCS#10 / PKCS#7 payloads
 - TEAP does not define the mechanism that the TEAP server uses to talk to the CA



EST RA ACME +---+ +----+ STEP 2: Pledge enrolls against RA STEP 3: RA places ACME order POST /newOrder "pledgeid.domain.com" -----> 201 status=ready **<**-----POST /finalize PKCS#10 CSR "pledgeid.domain.com" 200 OK status=valid <-----POST /certificate -----> 200 OK PEM "pledgeid.domain.com" *<----*STEP 4: Pledge retries enroll

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DNS

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Discussion

- To do: Security considerations
- Integrations span across ACME, ANIMA, EMU WGs
- Where does this belong?
- Is there interest in continuing this work?
- Next Steps?