ACME @ IETF 115

10 November 2022

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Internet Engineering Task Force

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Note Well

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Definitive information is in the documents listed below and other IETF BCPs. For advice, please talk to WG chairs or ADs:

- BCP 9 (Internet Standards Process)
- BCP 25 (Working Group processes)
- BCP 25 (Anti-Harassment Procedures)
- BCP 54 (Code of Conduct)
- BCP 78 (Copyright)
- BCP 79 (Patents, Participation)
- https://www.ietf.org/privacy-policy/(Privacy Policy)

Resources for IETF 115 in London

- Agenda https://datatracker.ietf.org/meeting/agenda
- Meetecho and other information: https://www.ietf.org/how/meetings/115/preparation
- If you need technical assistance, see the Reporting Issues page: http://www.ietf.org/how/meetings/issues/

Agenda

- Note Well, Technical difficulties, and Administrivia
- Document Status (chairs)
- Current work items:
  - draft-ietf-acme-dtnnodeid-10 (Sipos)
- (Potential) new work:
  - draft-bweeks-acme-device-attest-01 (Weeks)
  - draft-todo-chariton-dns-account-01-01
- AOB

Document Status

- No new RFCs (3rd meeting in a row) ☹
- acme-client has been allowed to expire
- acme-ari: -00 WG draft submitted
- acme-authority-token
  - Version -09 submitted last month
  - Approved!
- acme-authority-token-tnauthlist
  - Versions -09 and -10 submitted since Philadelphia
  - Still has DISCUSSes that require a revision

Document Status

- dtnnodeid
  - Latest revision from September
  - Presentation today
  - Still waiting on IANA registry changes
- acme-integrations
  - Version -10 from September
  - AD evaluation
  - Revised I-D needed

Document Status

- acme-subdomains
    - No new revision
    - In IETF LC

draft-ietf-acme-dtnnodeid

ACME DTN Node ID Validation

IETF 115 ACME WG

Brian Sipos
JHU/APL

Current Status of Draft

- Latest is https://www.ietf.org/archive/id/draft-ietf-acme-dtnnodeid-10.html
- Changes since -09:
  - Corrected typos
  - Added aside paragraphs to explain the experimental nature of each aspect of the validation method
  - COSE Hash Algorithms is now RFC 9054
- Known issues remaining:
  - The companion document to update the IANA sub-registry for Bundle Protocol is up for DTN WG adoption

draft-bweeks-acme-device-attest

draft-bweeks-acme-device-attest

Brandon Weeks
IETF 115

Changes since IETF 114

- Clarifying that verification procedures are out of scope
- IANA registry creation for attestation statement formats
  - Borrowed from draft-wallace-lamps-key-attestation-ext

Drafts encapsulating attestation statements (evidence)

- draft-bweeks-acme-device-attest
- draft-fossati-tls-attestation
- draft-wallace-lamps-key-attestation-ext

Implementations of the current draft

- iOS / tvOS
- step-ca certificate authority

draft-todo-chariton-dns-account-01

DNS-ACCOUNT-01

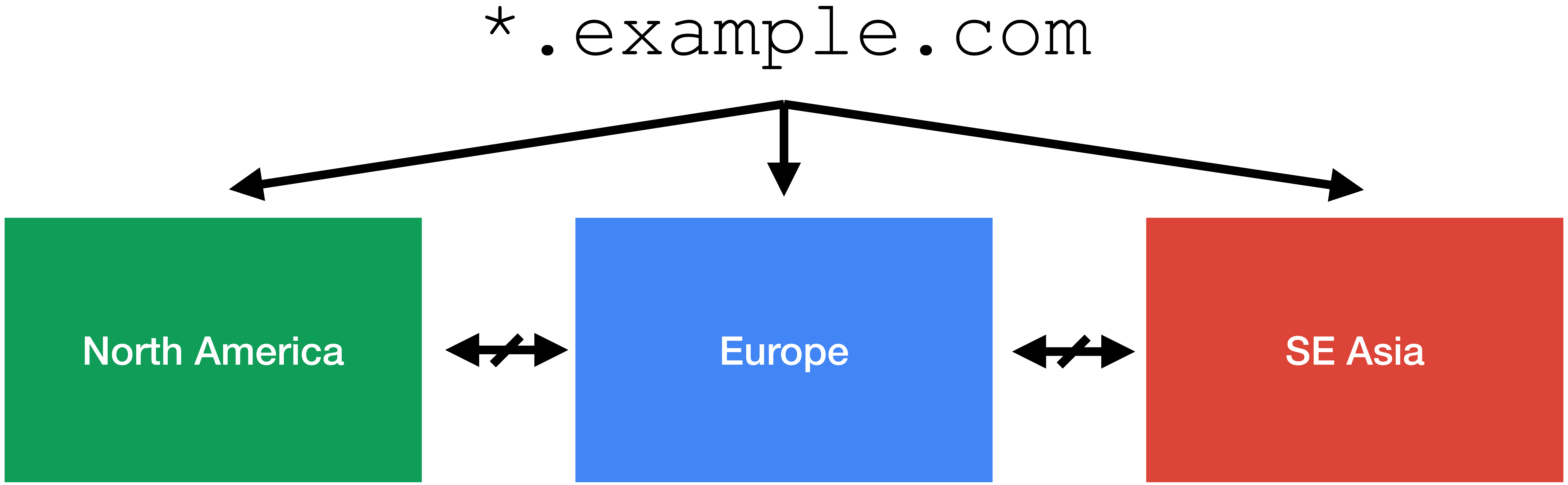
Antonios Chariton, Amir Omidi, James Kasten,
Fotios Loukos, Stanisław Janikowski

DNS-01

_acme-challenge.example.com

```
_acme-challenge.example.com
IN CNAME
challenge-solver.example.org
```

Multi-Region Deployments



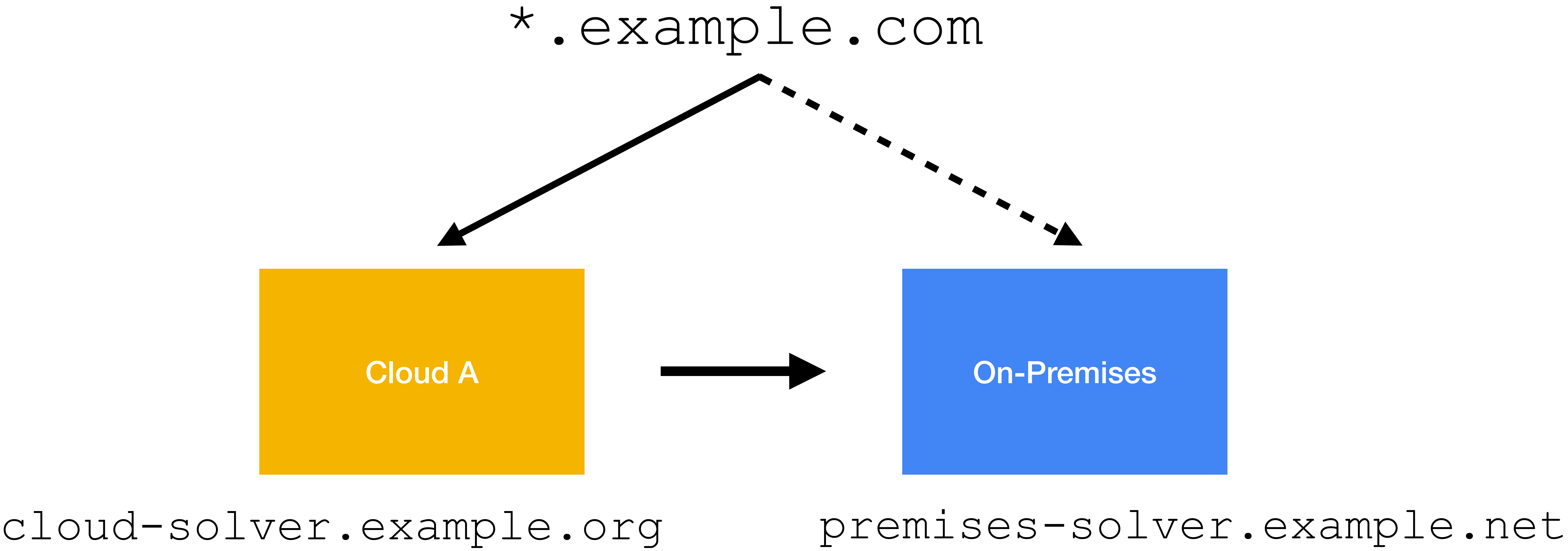
*.example.com

North America

Europe

SE Asia

0-Downtime Migrations



Things to avoid

- Manual work
- Copying of private keys around
- Downtime
- Dependencies between autonomous regions

```
_acme-challenge.example.com
IN CNAME
challenge-solver.example.org
```

```
_acme-challenge.example.com
IN CNAME
challenge-solver.example.org
challenge-solver.example.net
```

DNS-ACCOUNT-01

_acme-challenge_aqsjotdikmbjarmm

acme-challenge****aqsjotdikmbjarmm

#1

`_acme-challenge_aqsjotdikmbjarmm`

```
aqsjotdikmbjarmm

base32(sha256(AccountResourceURL)[0:9])
```

aqsjotdikmbjarmm

base32(sha256(AccountResourceURL)**[0:9]**)

#2

```
_acme-challenge_aqsjotdikmbjarmm
IN CNAME
solver01.example.org

_acme-challenge_igdhq74wtezyyhzv
IN CNAME
solver02.example.net
```

WebPKI

CA/B F BR 3.2.2.4.7

Resources

- Latest HTML Draft
  - https://daknob.github.io/draft-todo-chariton-dns-account-01/
- Latest TXT Draft
  - https://daknob.github.io/draft-todo-chariton-dns-account-01/draft.txt
- Datatracker
  - https://datatracker.ietf.org/doc/draft-todo-chariton-dns-account-01/

AOB