DO WE NEED AN SML?

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PROBLEMS OF A CENTRALIZED SML

Scalability

- Hosting costs
- Support costs

Responsibility

- Sovereignity and Trust

Identifier Rigidity (for e.g. CoC)

- What if multiple SPs
- What if multiple branches
- What if not all (want to be) reachable under common identifier
- What if identifier is shared with others

HIGH-LEVEL APPROACHES TO DECENTRALIZE THE SML

Shared responsibility for central zone
- *still central zone, not really decentralized*

Delegated
- *small central zone, delegated by e.g. country, sector, ICD code, etc.*
- *requestor must know the delegation value to construct the full DNS qname*
- *somewhat reflects how DNS itself works*

Multiple zones
- *where requestors know which zone to use*
- *similar to how the global WHOIS services work*

Some (distributed) key-value pair database

WHAT IS THE WORLD'S LARGEST DISTRIBUTED KEY-VALUE PAIR DATABASE?

DNS!

IMAGINE THE OPPOSITE APPROACH

No SML at all

SMP reference directly in DNS

○ Follow bdxl-1.6 U-NAPTR format

○ under domain of participant's choosing

For the hypothethical company '*Example Inc.*':

```
peppol.example.net. 60 IN NAPTR \
100 10 "U" "Meta:SMP" "!.*!http://prod.some-smp.net!" .
```

THIS WOULD BE VERY FLEXIBLE

Could use multiple domains, e.g.

- orders.example.net
- invoices.example.net
- peppol.berlinoffice.example.net

Could still used (sp-hosted) central services, e.g.

- customer.myserviceprovider.net
- *but this would require some agreement on transitions to other SP (could be simply cname)*

BUT IT WOULD BE A GIANT CHANGE IN UX

No default identifier to look up anymore
- Communicating the exact peppol identifier would be required
- *"Send your invoices to peppol address x.example.net"*

Additional Participant Responsibilities
- No longer the SMP/SML that maintains the DNS entry

No central list of all identifiers anymore

Additional services could mitigate some of these

THIS IS A REQUIREMENTS QUESTION

Is identifier rigidity a feature or a problem?

Who should maintain capability discovery entry?

- the participant, or
- their (SMP) SP

Would we want the additional end-user responsibility that comes with this flexibility?

FURTHER READING

Original blog entry on this topic:

https://ionite.net/news-articles/2024-02-27_do_we_need_an_sml/

Related work:

https://businesspaymentscoalition.org/electronic-invoices/

QUESTIONS?

Tomatoes can be sent via the Peppol network.