Best Practices for Persistent References in DNS (draft-sheth-identifiers-dns)

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What does this document target?

- Application Service Providers who provide or rely on associations between a global DNS domain name and use case specific, persistent references

- Proposes DNSSEC to provide a globally consistent, cryptographically verifiable association

- Nonce-based DCV may not be practical for these use cases

Draft link: https://datatracker.ietf.org/doc/draft-sheth-identifiers-dns/
DCV link: https://datatracker.ietf.org/doc/draft-ietf-dnsop-domain-verification-techniques/

Examples of Persistent References

- CAA record (RFC8659)

  example.com IN CAA 0 issue "ca1.example.net"

- Wallet address (draft-chins-dnsop-web3-wallet-mapping, ENS)

  example.com IN WALLET “coin1:address1”
  example.com IN TXT “coin1:address1”
  example.com IN TXT “ENS1 dnsname.ens.eth address1”

- Social media handle (AT Proto/Bluesky)

  _atproto.example.com IN TXT “did=did:plc:<user-did>”

Comparison with DCV BCP

	Persistent References	DCV BCP
Record Content	Use case specific data	Random nonce*
DNSSEC	MUST*	SHOULD*
Periodic Re-validation	MUST	Up to Application Service Provider*
Application Service Providers Involved	Generally 2+	Generally 1

Next Steps

- This type of use case is becoming more common, so want to provide guidance on how to do it safely and reliably

- How can we achieve this guidance:
  - Working with DCV BCP to include persistent references
  - Pursue as a stand-alone draft?

- Let us know your feedback!