# A Well-known URL for publishing ECH config data

https://datatracker.ietf.org/doc/html/draft-ietf-tls-wkech

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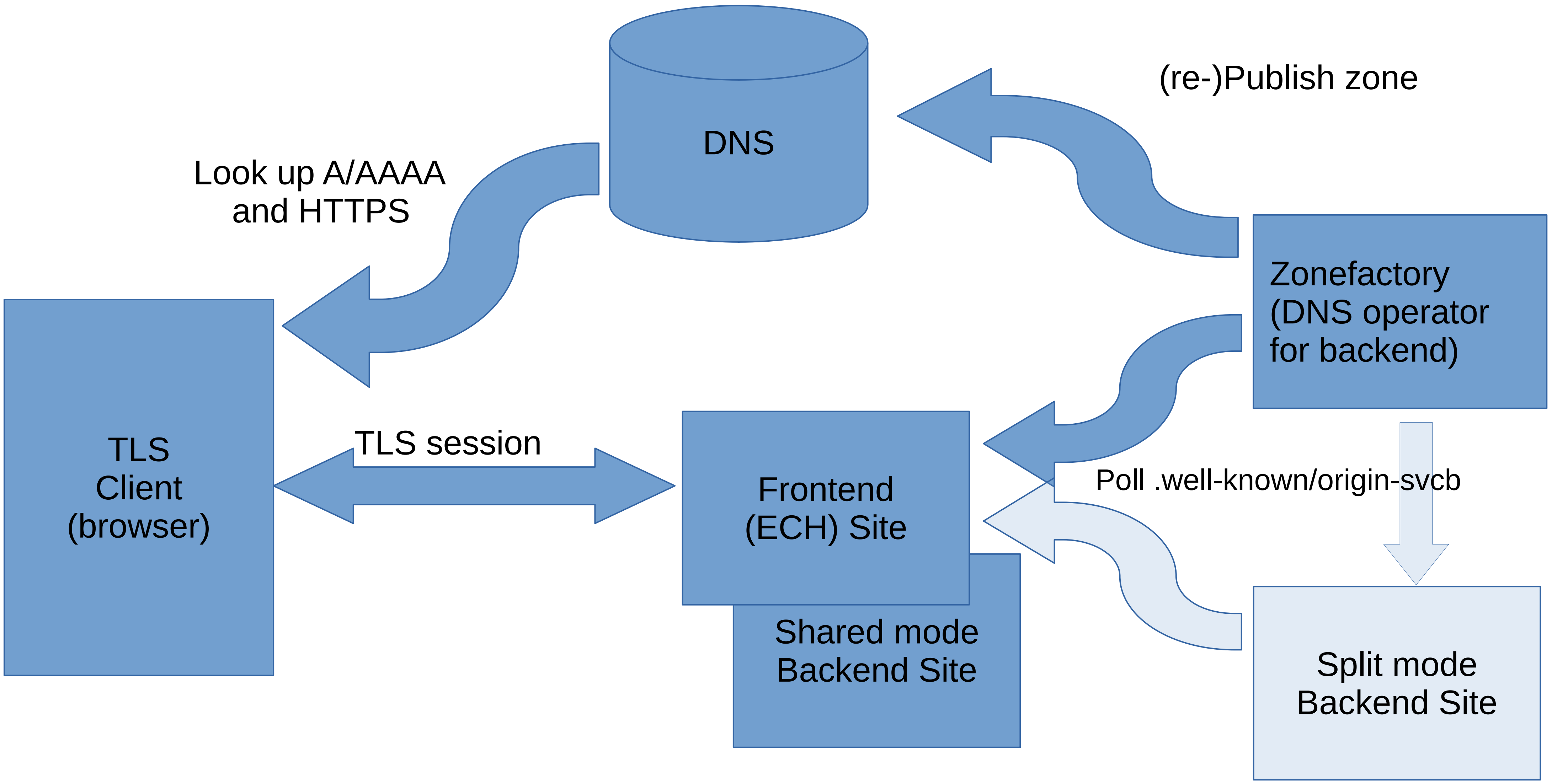
# Description

- ECH keys used by web servers (at client-facing server/CFS) may be updated regularly (e.g. hourly) and are published to DNS in HTTPS RRs
- Other HTTPS RR content, e.g. ALPN values, might also be better managed at a CFS
- A “Zone Factory” (ZF) polls for this information via a .well-known URL, getting back a JSON structure
- If JSON changes from last time, then validate content and all being good, publish
- Git repo for spec: https://github.com/sftcd/wkesni


DNS
Look up A/AAAA and HTTPS
(re-)Publish zone
Zonefactory (DNS operator for backend)
TLS Client (browser)
TLS session
Frontend (ECH) Site
Shared mode Backend Site
Poll .well-known/origin-svcb
Split mode Backend Site

# State of Play

- Draft -08 published 2025-07-07
- Note: draft previously bounced around dispatch/dnsop/tls before landing here
- Authors think it’s ready for WGLC
- There’s an implementation (bash scripts on CFS side, python on ZF side) with a small test deployment
  - https://github.com/defo-project/zone-factory/tree/mo-dep
  - Seems to work fine

# Example

```
$ curl https://defo.ie/.well-known/origin-svcb
{
 "regeninterval" : 3600,
 "endpoints" : [ {
    "priority" : 1,
    "params" : {
      "ipv4hint" : ["213.108.108.101"],
      "ech" :
"AID+DQA8bwAgACAD99Nn5w3yRXF5GRcXzKNErYYtlxH5+IS5dQJzdHq3bgAEAAEAAQANY2
92ZXIuZGVmby5pZQAA/
g0APH8AIAAgkq9+fORtmI8hXAtKayssOOm+NSP+4j6HaIhS4R5G+EIABAABAAEADWNvdmVy
LmRlZm8uaWUAAA==",
      "ipv6hint" : ["2a00:c6c0:0:116:5::10"]
    }
 }]
}
```

# Open Issues

- Be more precise with “pass the checks”:
  - https://github.com/sftcd/wkesni/issues/53
- Better ZF definition
  - https://github.com/sftcd/wkesni/issues/52

# Recently Closed Issues

- Default priorities
  - https://github.com/sftcd/wkesni/issues/46
- Delete DELETE
  - https://github.com/sftcd/wkesni/issues/45
- Some ZFs could use CAA
  - https://github.com/sftcd/wkesni/issues/44
- Don’t publish private keys
  - https://github.com/sftcd/wkesni/issues/42
- Who’s authoritative for which JSON bits
  - https://github.com/sftcd/wkesni/issues/41
- JSON encoding lists
  - https://github.com/sftcd/wkesni/issues/40

# Conclusion

- Ready for WGLC?
  - Presumably with a related call to the dnsop list in parallel or sequentially