Discovery of Oblivious Services via Service Binding Records

draft-ietf-ohai-svcb-config-00

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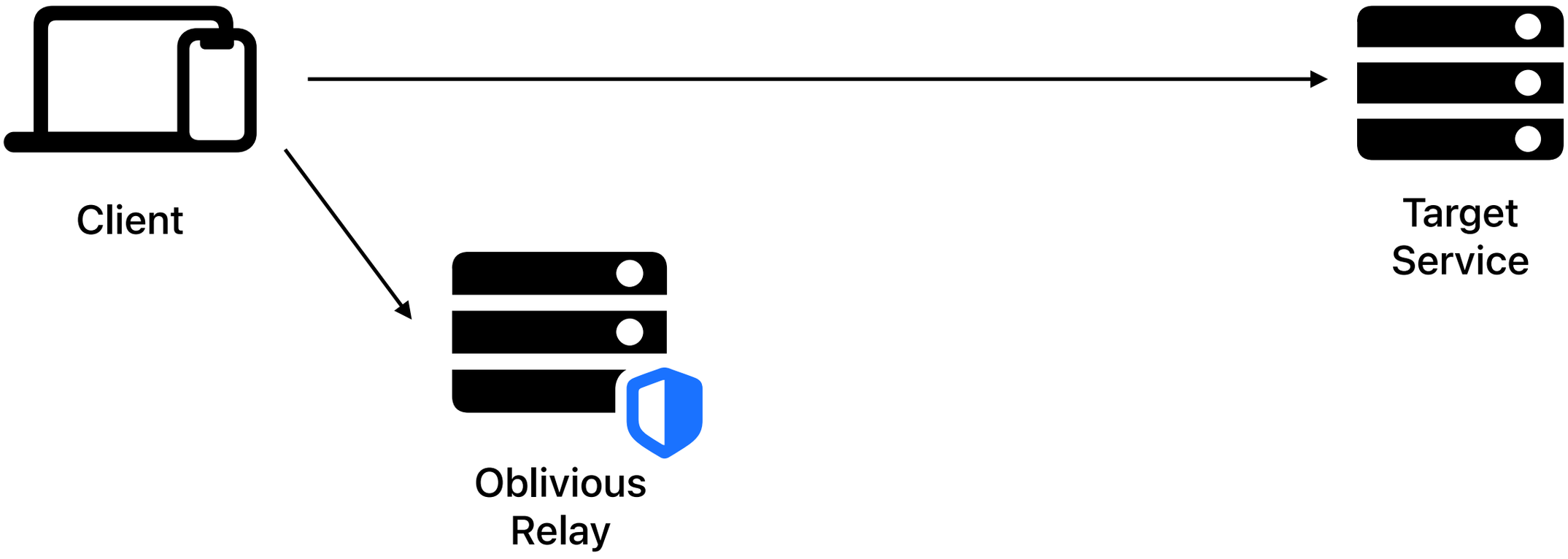
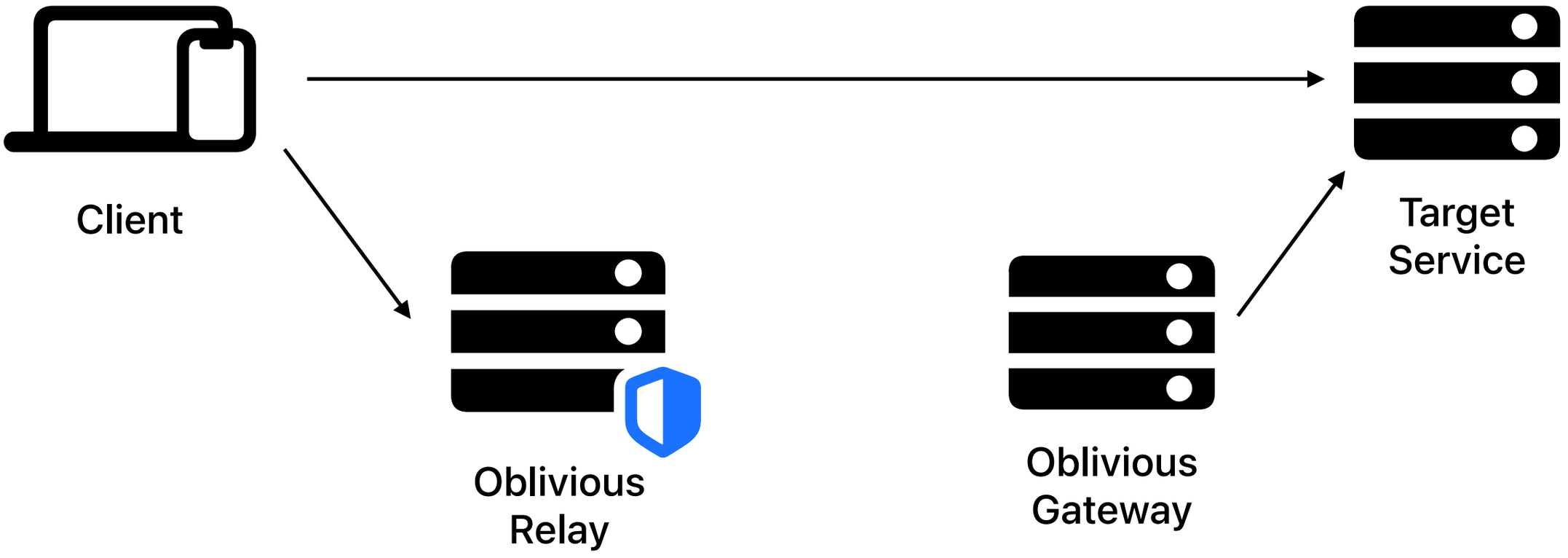
Discovery model

Client wants to use a target service, and also has a trusted Oblivious Relay it works with



Discovery model

Target service works with an Oblivious Gateway for OHTTP access (may be co-located)



Discovery model

Goal is to let the client use its relay to reach the target through the cooperating Oblivious Gateway

Mechanisms

DNS SVCB/HTTPS parameter for gateway discovery (effectively a boolean parameter)

Well-known URI for gateway requests

Key configuration lookup on gateway URI

These mechanisms are designed to ensure that a discovered gateway and its config are bound to the target

Examples

DNS response (SVCB/HTTPS)

```
svc.example.com. 7200  IN HTTPS 1 . ( alpn=h2 oblivious )
```

Oblivious gateway location

```
https://svc.example.com/.well-known/oblivious-gateway
```

Key configuration query

```
GET /.well-known/oblivious-gateway HTTP/1.1
Host: svc.example.com
Accept: application/ohttp-keys
```

SVCB Parameter Name

Issue #30

Current parameter name is "oblivious"

Suggestion to change this to "ohttp" to avoid future ambiguity

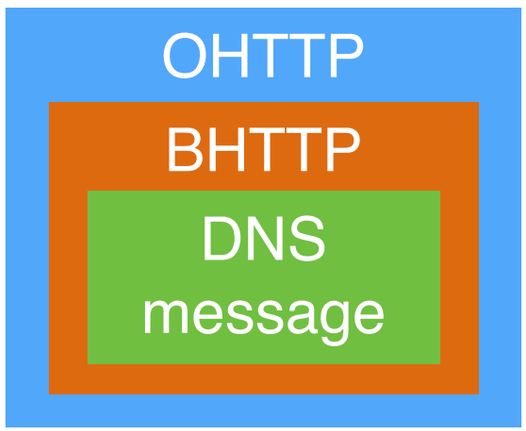
Media type for DNS

Issue #29

One use case is for _dns SVCB records (not HTTPS) to discover Oblivious DoH gateways

Currently not clearly written, however

Path forward:



Inner media type: message/bhttp

Outer media type: message/ohttp-*

Target is a DoH resolver

DDR Verification

Issue #28

For DNS resolver discovery, discovery from _dns.resolver.arpa normally requires clients to validate an IP address in the target certificate

> Text describes that the client either checks directly, or uses a separate proxied (CONNECT) request to the target
>
> Is this sufficient?