

Draft: started 2026-05-09 • Tagged [/meta=also](#), [/http](#)

The HTTPS record, for proper HTTP/3 support

△ A **sketch**. I'll probably end up drawing it instead. △

It's nothing that no one else has written about, but no one seems to say it *briefly*.

HTTP/1 and HTTP/2 all operate over TCP.

When you connect to an `https://` URL:

1. Your client tries talking TLS to TCP port 443.
It says “hi! I want to talk to `chrismorgan.info`” (TLS ClientHello with SNI).
2. The server says “I can do that, see my certificate!
I support `h2` and `http/1.1`” (TLS ServerHello with ALPN).
3. Your client says, “great, I’ll take `h2`” and begins to talk HTTP/2.
4. In its first response, the server says “oh BTW I also support `h3` over there” (HTTP `alt-svc` field).
5. Your client says, “good to know, maybe next time, but for now I’m already invested here”.

The HTTPS Resource Record (DNS record type) is a way for servers to announce *ahead of time* that they support HTTP/3.

HTTP/3 operates over UDP/QUIC, which (simplifying) makes it better than HTTP/1 and HTTP/2



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[Site map](#)



can't really do the same thing.)

HTTP/3 is better than HTTP/1.0, HTTP/1.1 and HTTP/2.

Prerequisite: support HTTP/3

I'm using [Caddy](#).

You loaded this document over **HTTP/2.0**.

Alas, I guess your client doesn't support HTTP/3, or at least doesn't pay attention to HTTPS records. Disappointing.

1. Use an HTTP server that supports HTTP/3.
I'm using [Caddy](#).

This will let people connect over HTTP/3 (UDP), but they'll almost certainly connect over HTTP/2 (TLS) first, and only switch to HTTP/3 for subsequent connections.

2. Add an DNS record of type HTTPS, containing this:

```
1 . alpn="h3,h2" ipv4hint=140.245.224.237 ipv6hint=2603:c024:8000::68
```

SvcPriority TargetName SvcParams (SvcPriority 0 = alias mode, all other values service mode, so write 1.) If you want to define an alias, like CNAME: `0 lawnmower.chrismorgan.info.` would make chrismorgan.info look up lawnmower.chrismorgan.info.