



Changing the Menu

SVCB is a menu of endpoints

Alt-SvcB hands you a different menu



STOET

KOFFIE

- Koffie - €2,10
- Grote koffie - €3,10
- Koffie verkeerd - €2,40
- Cappuccino - €2,30
- Grote cappuccino - €3,30
- Latte macchiato - €2,50
- presso - €2,10
- Hele espresso - €3,10
- Espresso macchiato - €2,10
- white - €3,30

SPECIALS

- Crazy Caramel - €3,10**
Latte macchiato met karamelshot & slagroom
- Chai latte - €2,60**
Masala of vanille
- Dirty chai - €3,10**
Chai latte met espressoshot
- Pumpkin Spice Latte - €3,10**
Latte macchiato met pumpkinshot & slagroom
- Warme chocolademelk - €2,60**
Wit, melk of puur
- Babychino / babychoco - €1,-**
Warme melk of warme chocolademelk met mini marshmallows
- Slagroom - €0,40**

THEE

- Iran Clipper - €2,10**
Breakfast, Earl Grey, Kamille, Groen, met framboos & mint, Rooibos, Ginger of Green Tea Chai
- thee - €2,60
- rooibos of muntthee
- Vanille & sinaasappelthee - €2,60**
- Hele & sinaasappel - €2,85**
- Hele & sinaasappel**

EXTRA'S

- Kokos- & havermelk - €0,50**
We hebben ook sojamelk zonder meerprijs
- Decaf - €0,50**
- Extra shot - €1,-**
- Karamelshot - €0,25**
- Marshmallows - €0,30**

Division of Responsibility



Origin/endpoint properties:

- CDN switching
- Protocols supported
- ECH configuration
- IP:port information



Switch to a different endpoint
(...which might have different properties)

Why might you need a different menu?

DNS mis-resolution

- Resolver is far from client
- Resolver doesn't forward Client Subnet to DNS authoritative

Anycast misrouting

- Anycast reached a suboptimal endpoint

Controlled endpoints

- Some server endpoints aren't public, but you're eligible for them (due to network, capabilities, etc.)

Protocol availability

- Server supports more preferred protocol than client used, on this or a different endpoint

Load shedding

- Server wishes to move load, but not urgently

First Connection: SVCB Lookup of www.example.com

1 h3pool alpn=h3 ech="123..."

2 . alpn=h2

3 backup-yoko alpn=h3 ech="abc..." alt-only



First Connection: SVCB Lookup of www.example.com

1 h3pool alpn=h3 ech="123..."

2 . alpn=h2

3 backup-yoko alpn=h3 ech="abc..." alt-only





SERVERS WILL MELT DOWN.

SERVER OVERLOADED

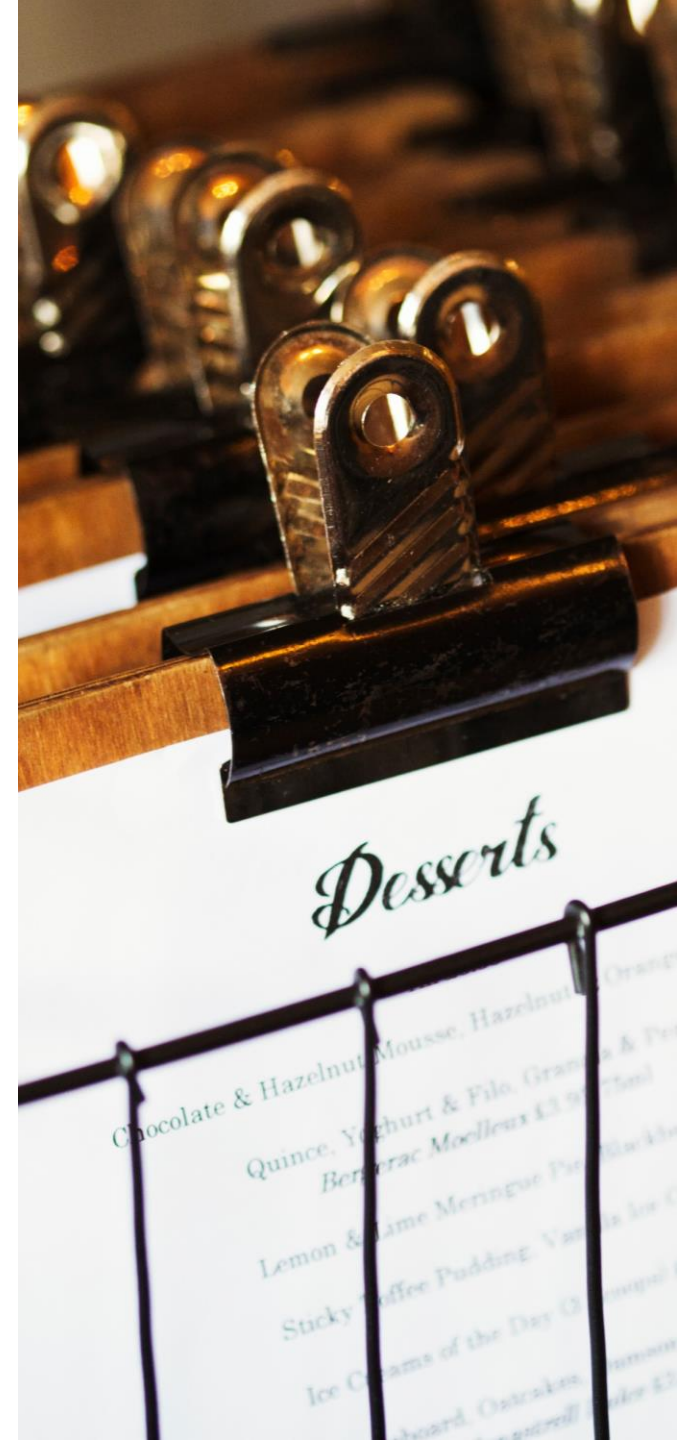
Alt-SvcB: fallback-yoko.example.com

Alt-SvcB Reaction: SVCB Lookup of fallback-yoko.example.com

1 backup-yoko alpn=h3

2 backup-yoko2 alpn=h2 ech="abc..."

3 backup-tyo2 alpn=h2 echo="123..."

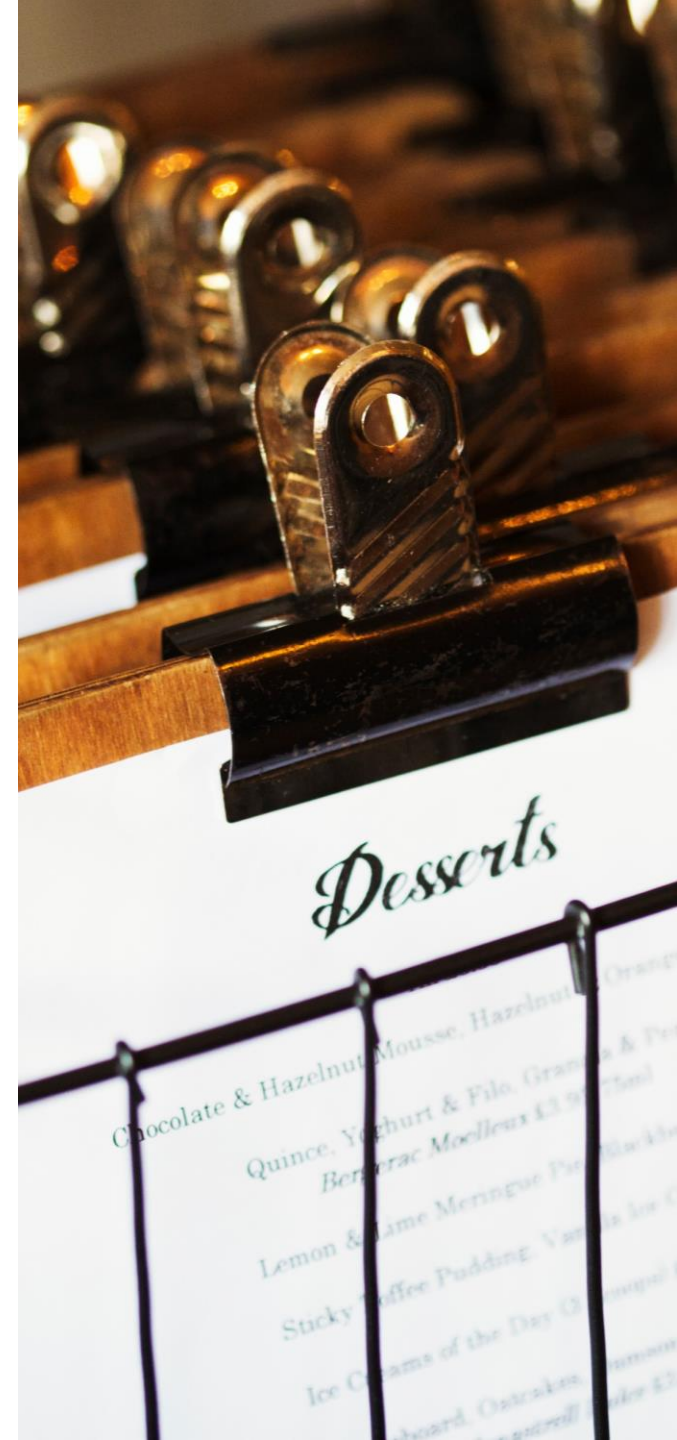


Alt-SvcB Reaction: SVCB Lookup of fallback-yoko.example.com

1 backup-yoko alpn=h3

2 backup-yoko2 alpn=h2 ech="abc..."

3 backup-tyo2 alpn=h2 echo="123..."



Later Connection: SVCB Lookup of www.example.com

1 h3pool alpn=h3 ech="123..."

2 . alpn=h2

3 backup-yoko alpn=h3 ech="abc..." alt-only



Later Connection: SVCB Lookup of www.example.com

1 h3pool alpn=h3 ech="123..."

2 . alpn=h2

3 backup-yoko alpn=h3 ech="abc..." alt-only



Much Later Connection: SVCB Lookup of www.example.com

1 h3pool alpn=h3 ech="123..."

2 . alpn=h2



Much Later Connection: SVCB Lookup of www.example.com

1 h3pool alpn=h3 ech="123..."

2 . alpn=h2





Let's Discuss....

Pointing Directly to a Host

Currently, Alt-SvcB points to an alternative name, which must have SVCB records or the process fails.

Legacy Alt-Svc supported pointing to a literal hostname or IP address.

Do we need to support SVCB-less targets? If so, how does that integrate with the existing flow?

“Desirable” Security Properties?

RFC 7838 says:

Therefore, if a client supporting this specification becomes aware of an alternative service, the client SHOULD use that alternative service for all requests to the associated origin as soon as it is available, provided the alternative service information is fresh ([Section 2.2](#)) and the security properties of the alternative service protocol are desirable, as compared to the existing connection. A

Do we want equivalent text, or are we willing to degrade when the origin suggests we go elsewhere?

Do we want to be more prescriptive about “desirable” w.r.t. whether ECH is offered?

Does that answer depend on whether ECH was actually used?

Stickiness on Return Visits (1/2)

Goals for stickiness:

- Clients continue to use the alternative for future connections, provided that...
 - ...the client continues to be routed to the same CDN, for multi-CDN cases
 - ...the origin still wants the client to be redirected
- Clients immediately stop using the alternative for future connections when these conditions change

Draft currently achieves with `alt-only` SvcParam and continuing to use entries if found on a return visit.

Stickiness on Return Visits (2/2)

- Requires an origin to continue to explicitly publish all alternatives which should still be used.
- Large DNS responses don't work well; risk of running into this ceiling
- Origins might be disinclined to publish large list of nodes in DNS

Is there a way to implement stickiness with a named group instead of a single alternative endpoint?

Is `alt-only` a necessary component of this design?

Path Forward for RFC 7838?

- Currently adopted RFC 7838bis to address minor issues with Alt-Svc
- Alt-SvcB is an individual I-D

Do we want to:

- Still fix RFC 7838 even though we're recommending it not be used?
- Adopt this draft and obsolete 7838 when it publishes?
- Incorporate the contents of this draft into the WG 7838bis draft?

Any
Implementors?

