MASQUE CONNECT-UDP Listener

draft-schinazi-connect-udp-listen

IETF 114 – Philadelphia – 2022-07-27

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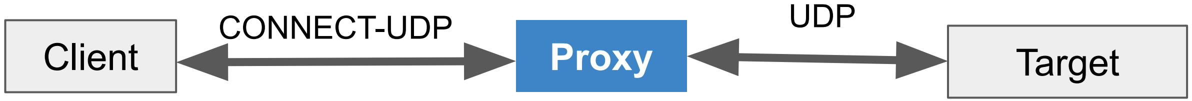
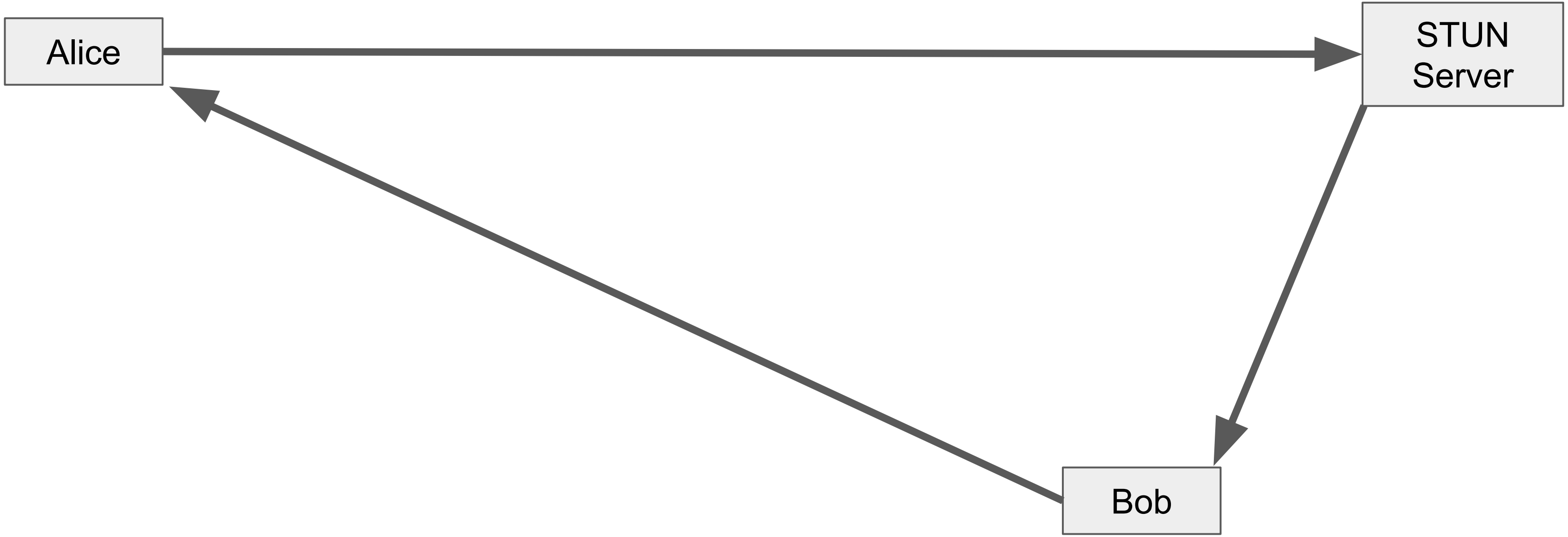
CONNECT-UDP is great, but...

It only allows using a single 5-tuple



Example use-case: WebRTC



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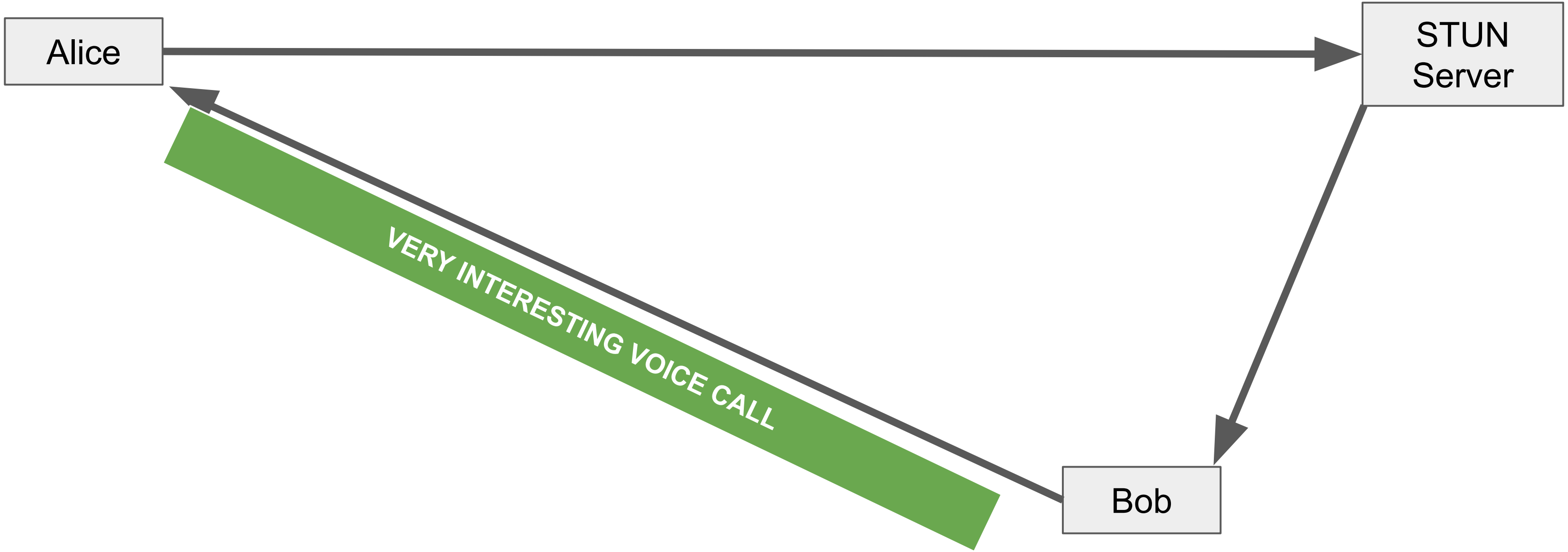
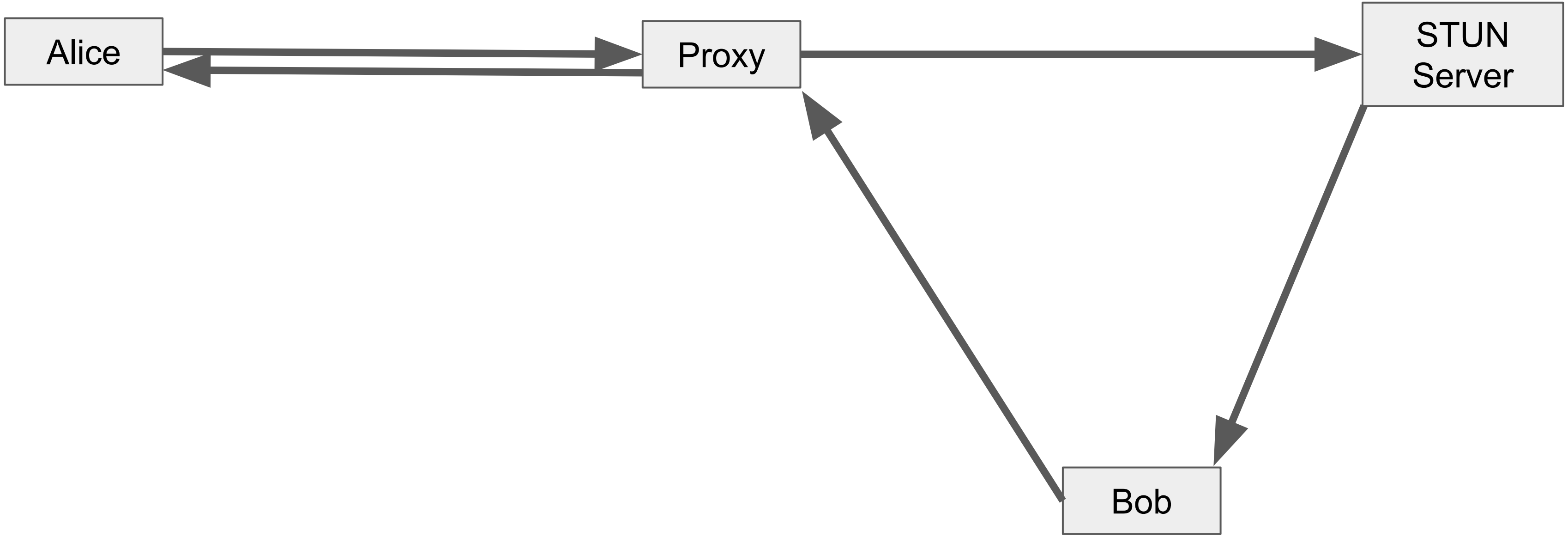
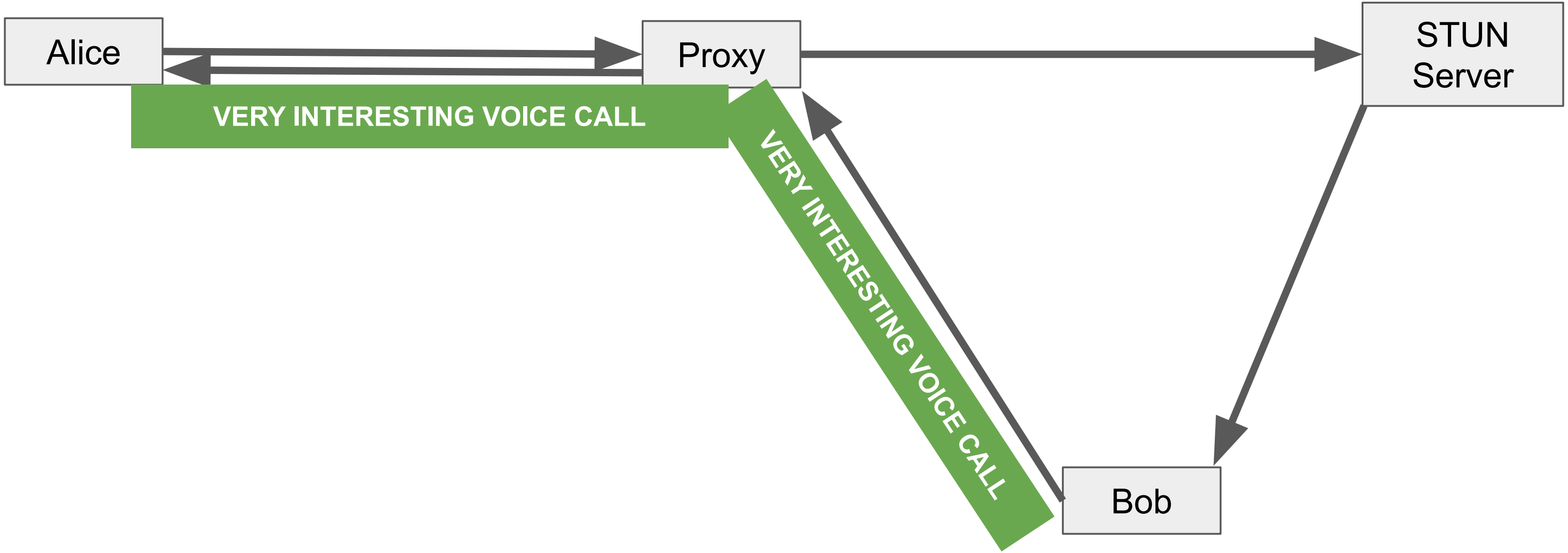


Example use-case: WebRTC with a Proxy



Example use-case: WebRTC with a Proxy



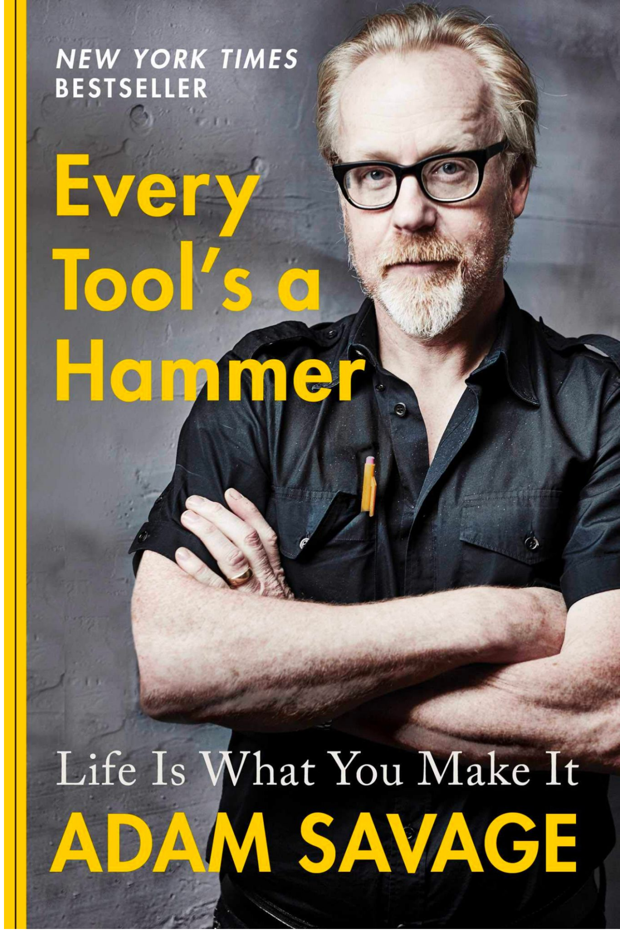
We could use CONNECT-IP for this

WebRTC is implemented by Web browsers

Web browsers don't have an IP stack

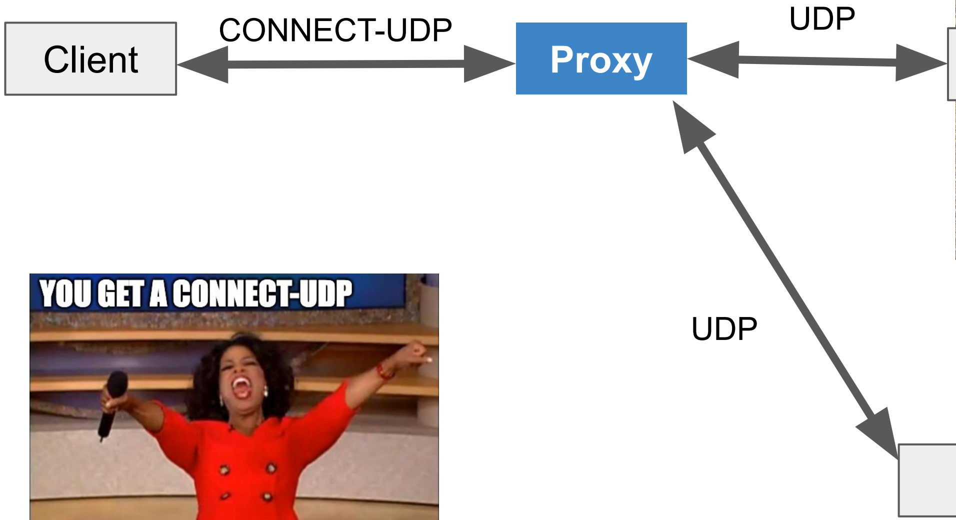
Every datagram carries an IP header

A lot of complexity when all you need is UDP



CONNECT-UDP is great!

Now with ∞ more 5-tuples!



How does it work?

```
HEADERS
  :method = CONNECT
  :protocol = connect-udp
  :scheme = https
  :path = /masque/udp/*/*/
  :authority = proxy.org
  capsule-protocol = ?1
  connect-udp-listen = 42
```

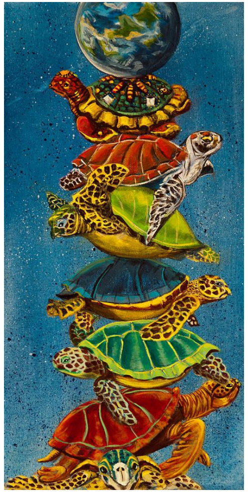
```
DATAGRAM QUIC Frame {
  Type (i) = 0x30..0x31,
  [Length (i)],
  Quarter Stream ID (i),
  Context ID (i) = 42,
  IP Version (8),
  IP Address (32..128),
  UDP Port (16),
  UDP Payload (..),
}
```

QUIC

HTTP/3

CONNECT-UDP

CONNECT-UDP-Listen



Context ID registered by header – payload then contains IP & port

Next Steps

We're interested in this for Chrome's Privacy Proxy efforts

Is the WG interested?

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