

# IP Addressing with References (IPREF)

draft-augustyn-intarea-ipref-00  
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# Addresses with References

- Reference
  - an opaque unsigned integer: 134276
- IPREF Address



- IPv4 or IPv6
  - 192.0.2.123 + 3427
  - 2001:DB8::123 + 2371
- actually, any network address + reference

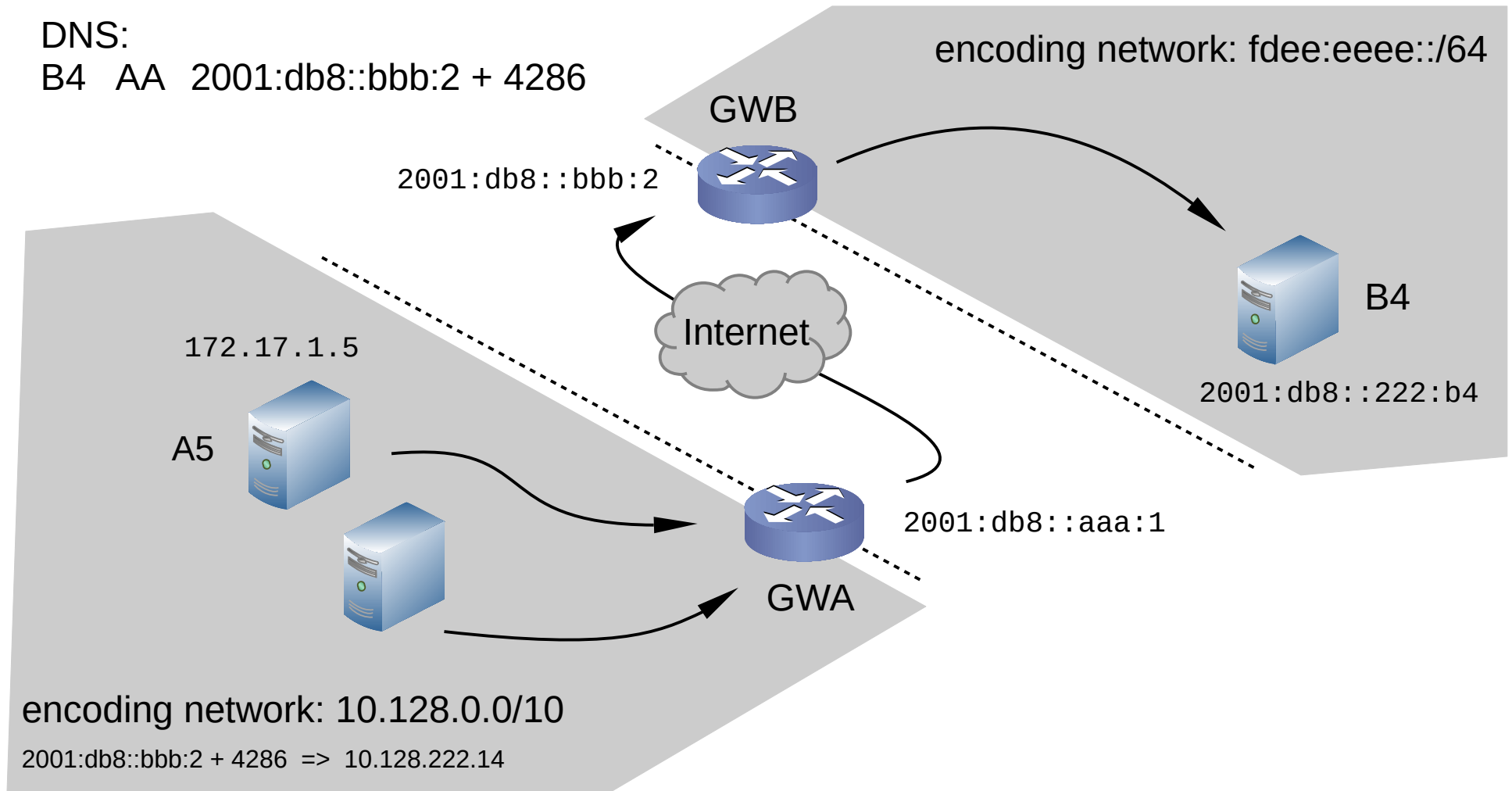
# Only Private Networks

- IPREF is for *private* networks
- *private* – to – *private* only
- ...but notice, ‘public’ addresses are merely exposing hosts located on *private* networks.

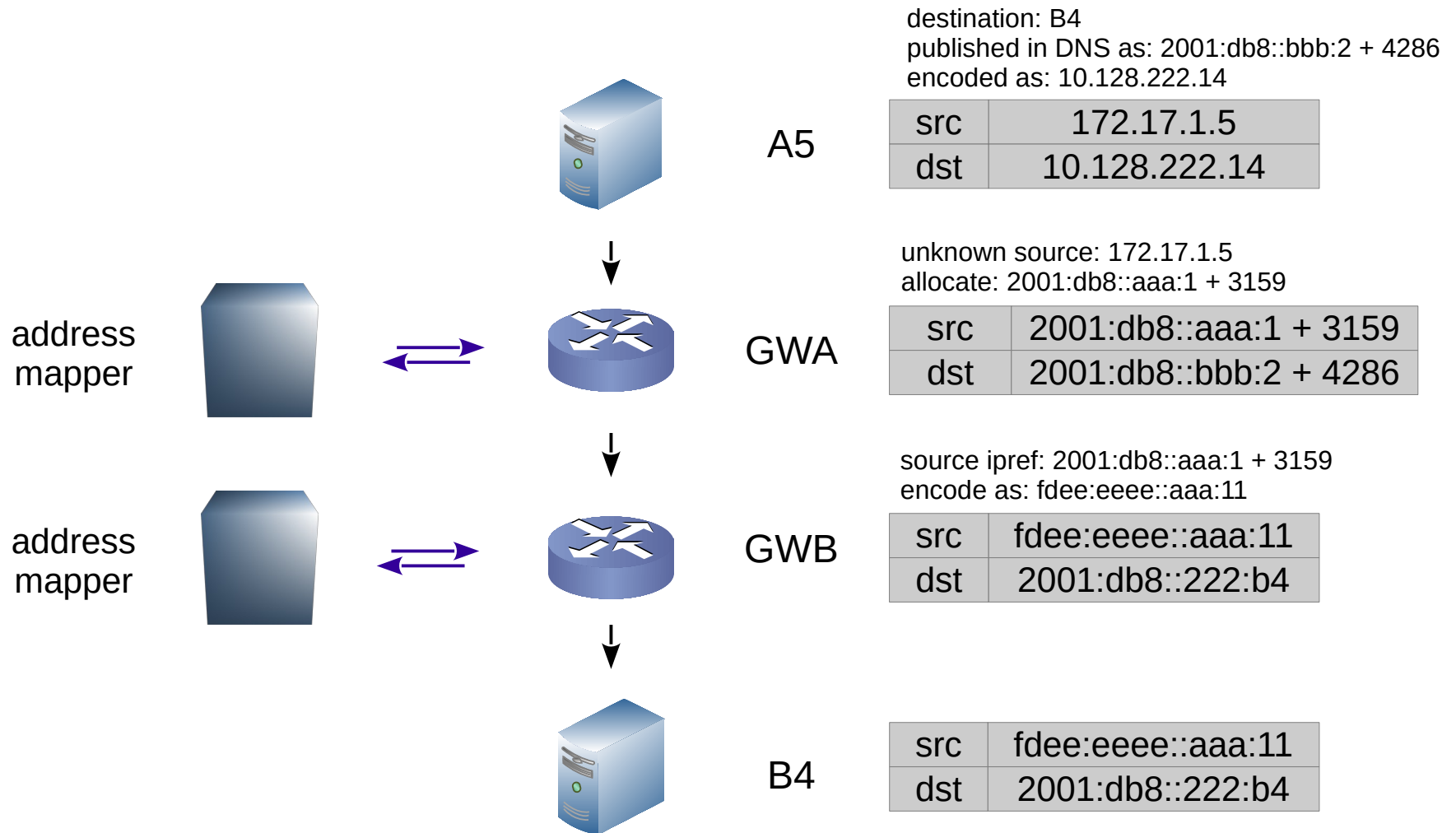
# Private Networks

DNS:

B4 AA 2001:db8::bbb:2 + 4286



# Address Rewriting



# IPREF Name Resolution

- IPREF addresses are publishable
- Works just like standard DNS name resolution
  - for example host: b4.example.com  
2001:db8::bbb:2 + 4286
- Probably needs a new record type...
  - like AA
- ...but works fine with TXT records for now

# IPREF Notes

- IPREF operates entirely within layer 3
- IPREF gateways may be edge routers but don't have to be
  - may be located inside local networks behind edge routers
  - may be placed 'behind NAT'
- Only IPREF gateways deal with references
  - gateways strip references before forwarding to local networks
  - all local hosts, routers, and switches are standard
  - all Internet hosts, routers, and switches are standard
- IPREF does not replace anything
  - does not replace IPv4 or IPv6
  - does not replace VPNs, NAT, or firewalls

The End