

# DNS Outsourcing Infrastructure

-front-end-naming-delegation, -naming-architecture-dhc-options

2021-04-23 homenet interim meeting

**Migault, Richardson, Hunter et al.**

# Summary

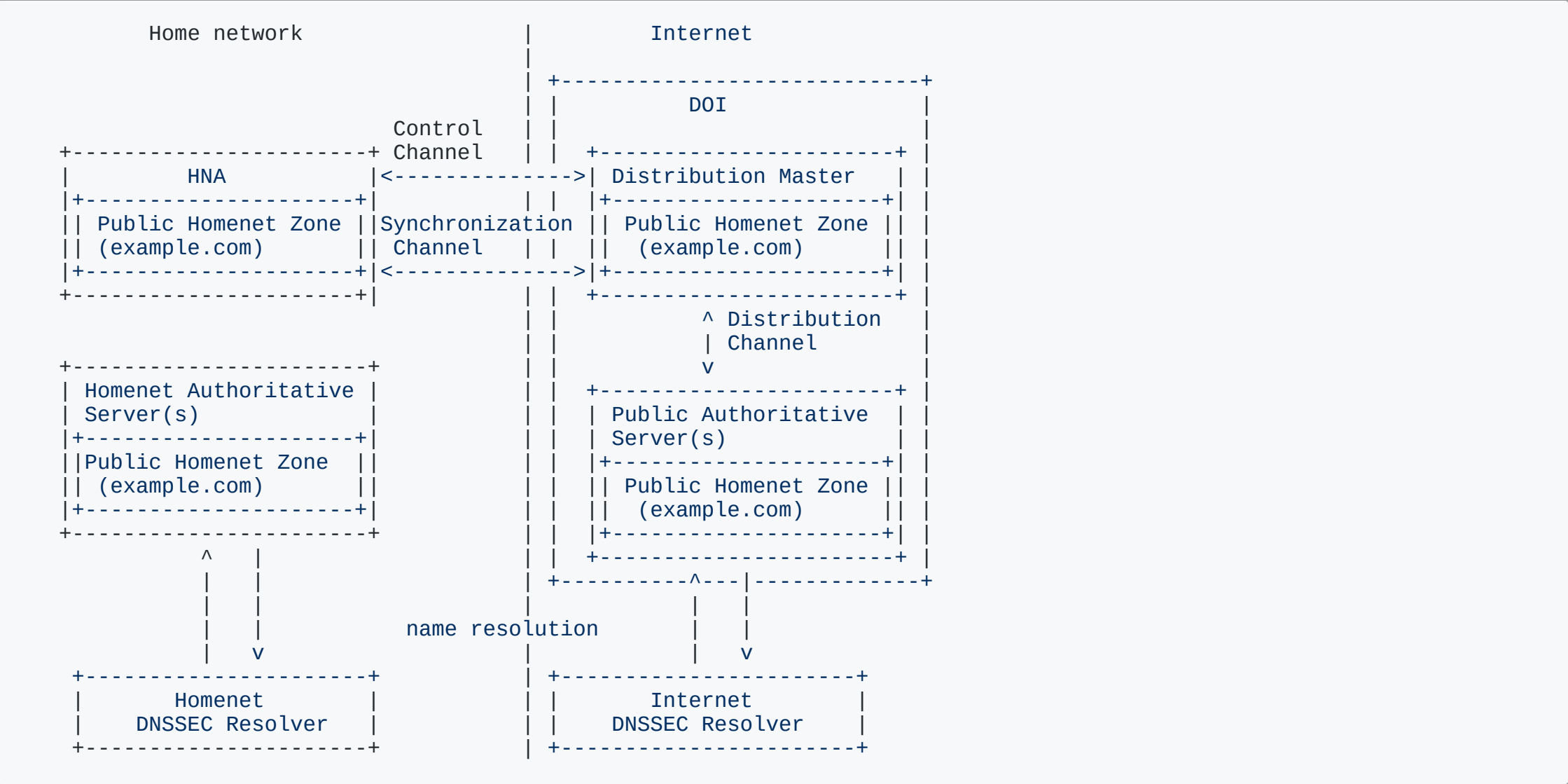
## Changes on [-front-end-naming-delegation](#)

- uniform terminology
- clarification (DNS message used to provide information to the DM)
- information model to configure the HNA (Thanks Carsten!)
- remove unnecessary text ( - 5 pages )

## Changes on [-naming-architecture-dhc-options](#)

- synchronize the configuration parameters provided by the DHCP Options with the information model
- remove unnecessary DHCP Options
- add a IANA / Security consideration section (Thanks Bernie!)

We believe both drafts are ready for WGLC.



# Channels between the HNA and the DM

Distribution Channel (out of scope)

Synchronization Channel ( Primary / Secondary DNS )

Control Channel runs over DNS over TLS

- HNA retrieves AXFR responses from the DM (NS, AAAA, A, SOA)
- HNA sends DNS updates to the DM (secondary, DS, STOP)

## Information Model for Outsourced information

```
hna-configuration = {  
    "registred_domain" : tstr,  
    "dm"                : tstr,  
    ? "dm_transport"   : "53" // "DoT" // "DoH" // "DoQ"  
    ? "dm_port"        : uint,  
    ? "dm_acl"         : hna-acl // [ +hna-acl ]  
    ? "hna_auth_method": hna-auth-method  
    ? "hna_certificate": tstr  
}
```

# Configuration using DHCP

ISPs have a **special** place in this eco-system

- handling ip.ip6.arpa
- already assigning names to homenets
- (sometime) provide / manage the CPE

DHCP Client

DHCP Server

DHCP Request ----->

ORO(OPTION\_REGISTERED\_DOMAIN  
OPTION\_DIST\_MASTER  
OPTION\_REVERSE\_DIST\_MASTER)

<----- DHCP Response

OPTION\_REGISTERED\_DOMAIN  
OPTION\_DIST\_MASTER  
OPTION\_REVERSE\_DIST\_MASTER)

**Thanks!**