Outsourcing Home Network Authoritative Naming Service

draft-mglt-homenet-front-end-naming-delegation-04.txt

D. Migault, W. Cloetens, C. Griffiths, R. Weber

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Scope of the Document

End Users need to publish on the Internet a Homenet Zone

- Have services in their home networks
- Want to reach these service from the Internet
- Want to use names instead of IP addresses

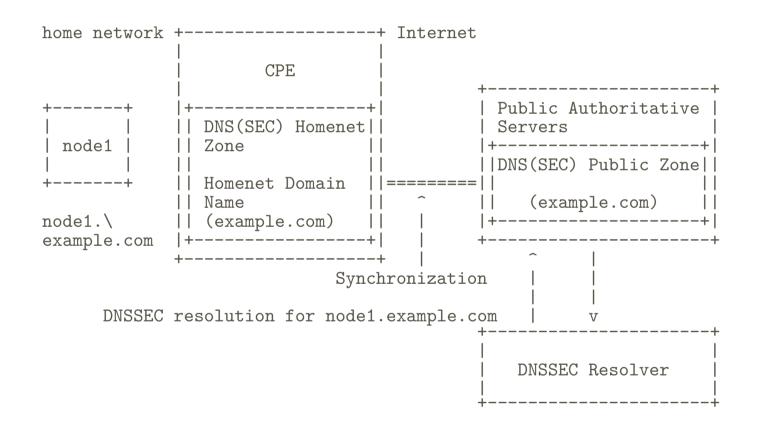Homenet devices are not designed to host the Authoritative Service

- Subject to resource exhaustion attacks

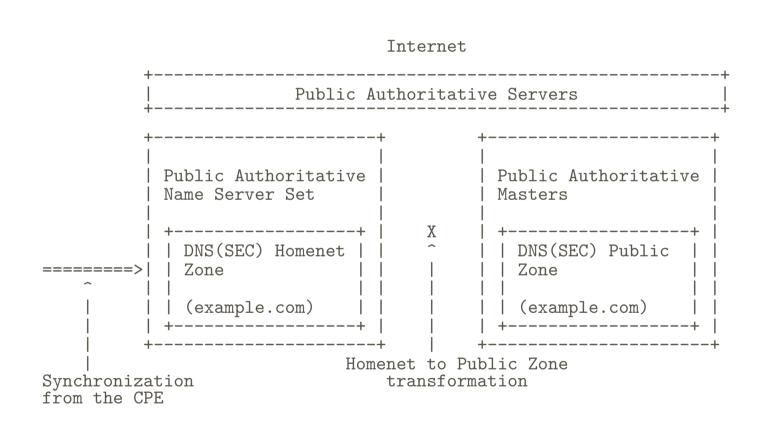The document exposes how to outsource the Authoritative Service to a third party

- It is an informational document
- It recommends to use a Master / Slave architecture
- Re-use existing protocols
- Defines terminology

Architecture Description

```
home network +------------------+ Internet
             |                  |
             |       CPE        |
             |                  |                 +----------------------+
+-------+    |+----------------+|                 | Public Authoritative |
|       |    || DNS(SEC) Homenet||                | Servers              |
| node1 |    || Zone           ||                 |+-------------------+|
|       |    ||                ||                 ||DNS(SEC) Public Zone||
+-------+    || Homenet Domain ||========||        ||                   ||
            || Name           ||   ^     ||        ||  (example.com)    ||
node1.\     ||  (example.com) ||   |     ||        |+-------------------+|
example.com |+----------------+|   |      +----------------------+
            +------------------+   |          ^       |
                     Synchronization          |       |
                                              |       |
     DNSSEC resolution for node1.example.com  |       v
                                        +----------------------+
                                        |                      |
                                        |   DNSSEC Resolver    |
                                        |                      |
                                        +----------------------+
```

Architecture Description

```
                              Internet
         +---------------------------------------------------+
         |               Public Authoritative Servers        |
         +---------------------------------------------------+

         +-------------------+          +---------------------+
         |                   |          |                     |
         | Public Authoritative |       | Public Authoritative |
         | Name Server Set   |          | Masters             |
         |                   |          |                     |
         | +---------------+ |    X     | +----------------+ |
         | | DNS(SEC) Homenet | |    ^    | | DNS(SEC) Public | |
========>| | Zone          | |    |    | | Zone            | |
   ^     | |               | |    |    | |                 | |
   |     | | (example.com) | |    |    | | (example.com)   | |
   |     | +---------------+ |    |    | +----------------+ |
   |     +-------------------+    |    +---------------------+
   |                     Homenet to Public Zone
   |                          transformation
Synchronization
from the CPE
```

Change log

Current version clarified the text and addresses the following issues:

- Outsourcing DNSSEC Zone.
  - ▸ Expose why it is recommended for the CPE to sign the Zone
- Secure Delegation
  - ▸ Expose how secure delegation could be set
- DNS Views
  - ▸ Recommend not using them
- Reverse Zone
  - ▸ Expose the reverse zone particularity.

Next

I beleive we have addressed all received comments (Thank you for the feed backs)

A last comment suggested to be more generic and not use the term CPE:

- Should we keep the term CPE and explicitely mention it is an example
- s/CPE/Internet Homenet Authoritative Server/
- other opinion?

Any other comment?

Thank you for your attention