

IPv6 Home Network Front End Naming Delegation

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draft-mglt-homenet-front-end-naming-delegation-01.txt - IETF85

Goal of the Document

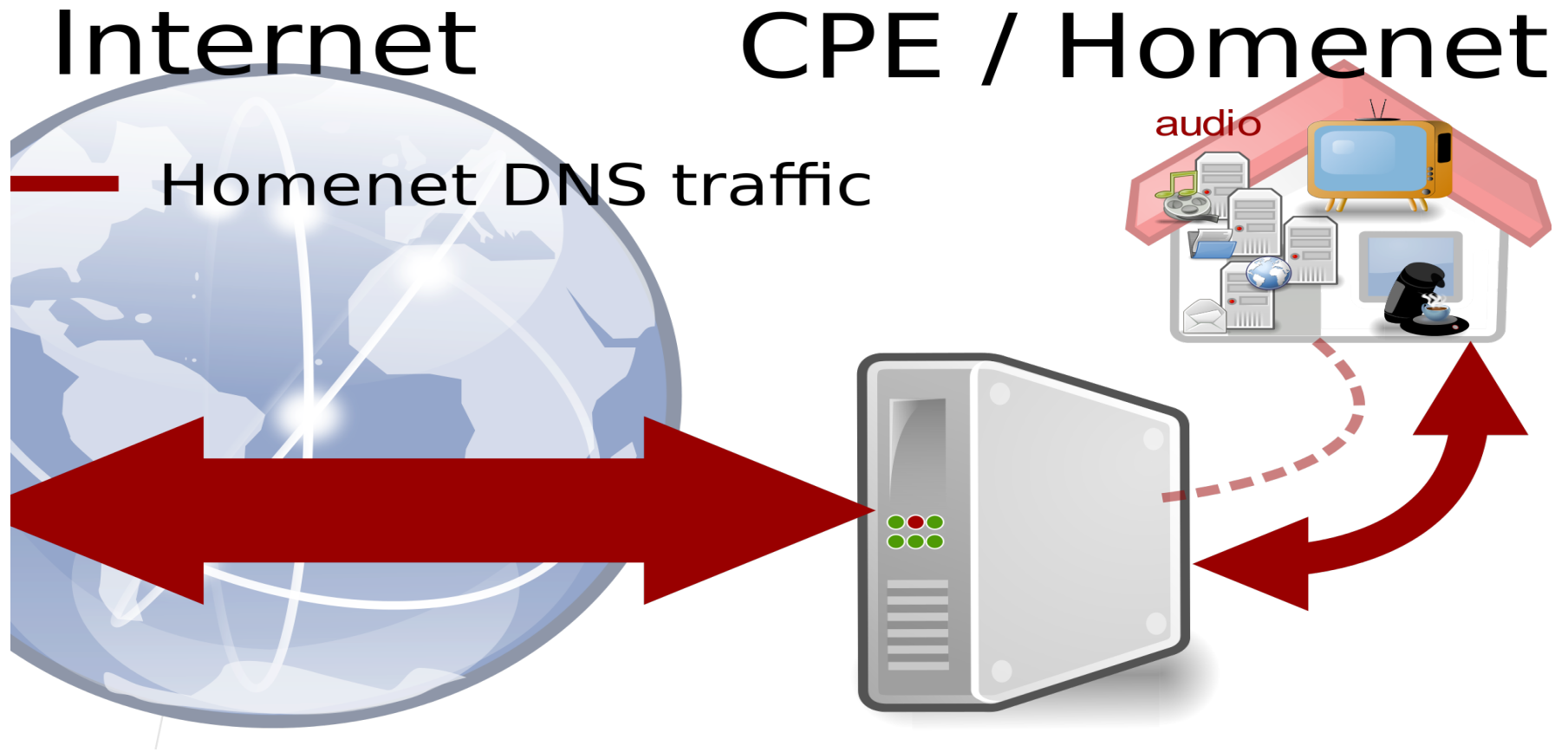
This document describes a Naming Architecture:

- Fulfills Home Network Naming requirements
- Does not exposes the CPE to resource exhaustion.

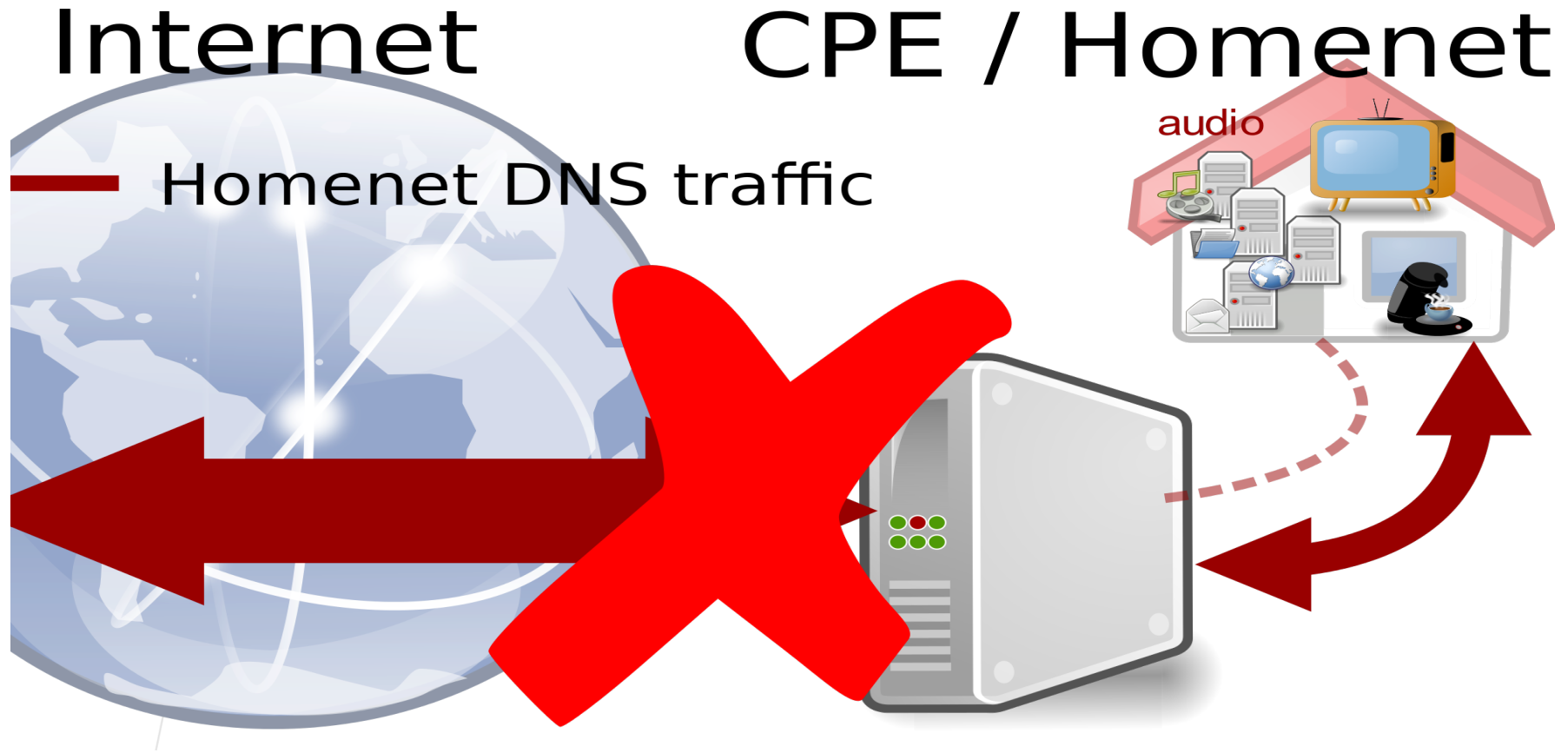
We considered comments from the previous presentation:

- ISPs has NO specific function
- Only uses widely deployed DNS configurations (Master/Slave)

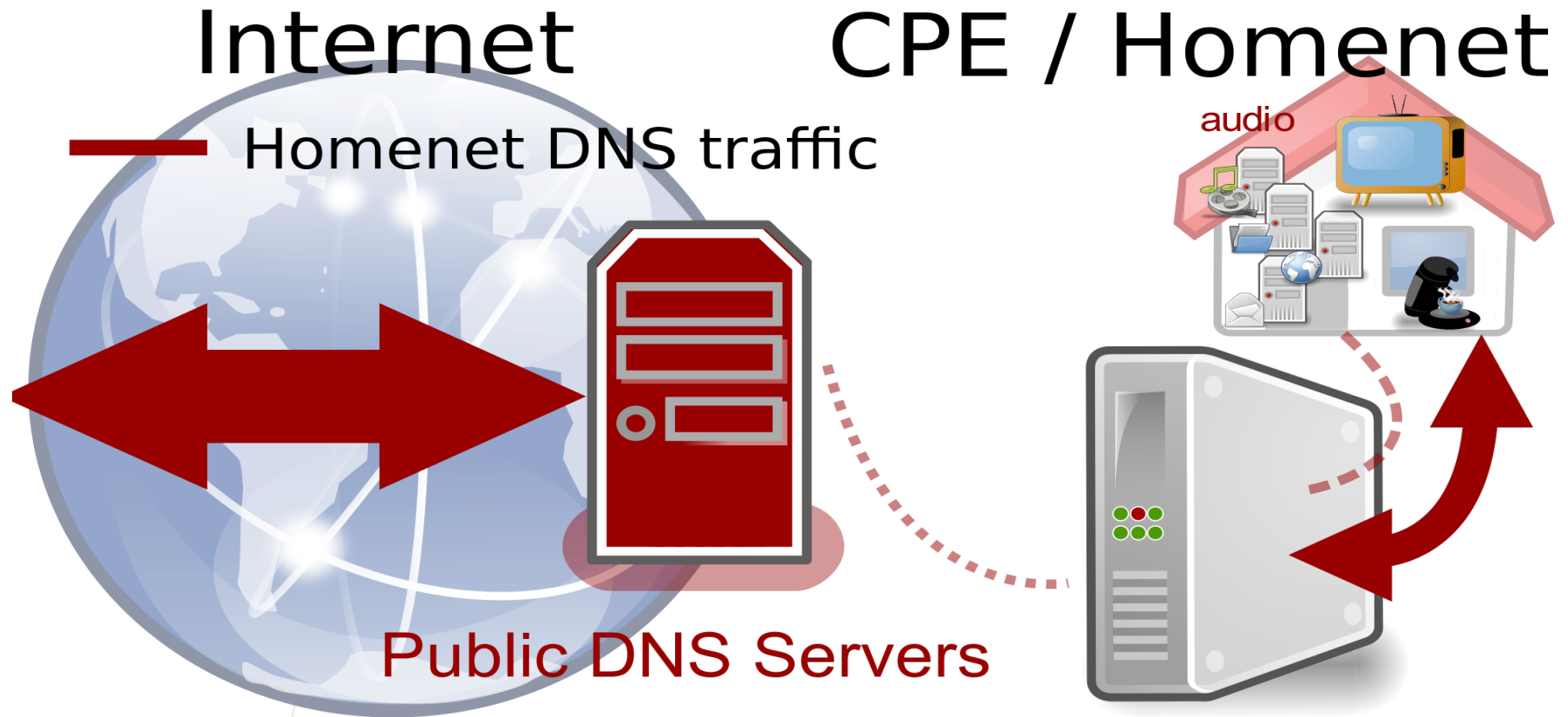
Problem Statement



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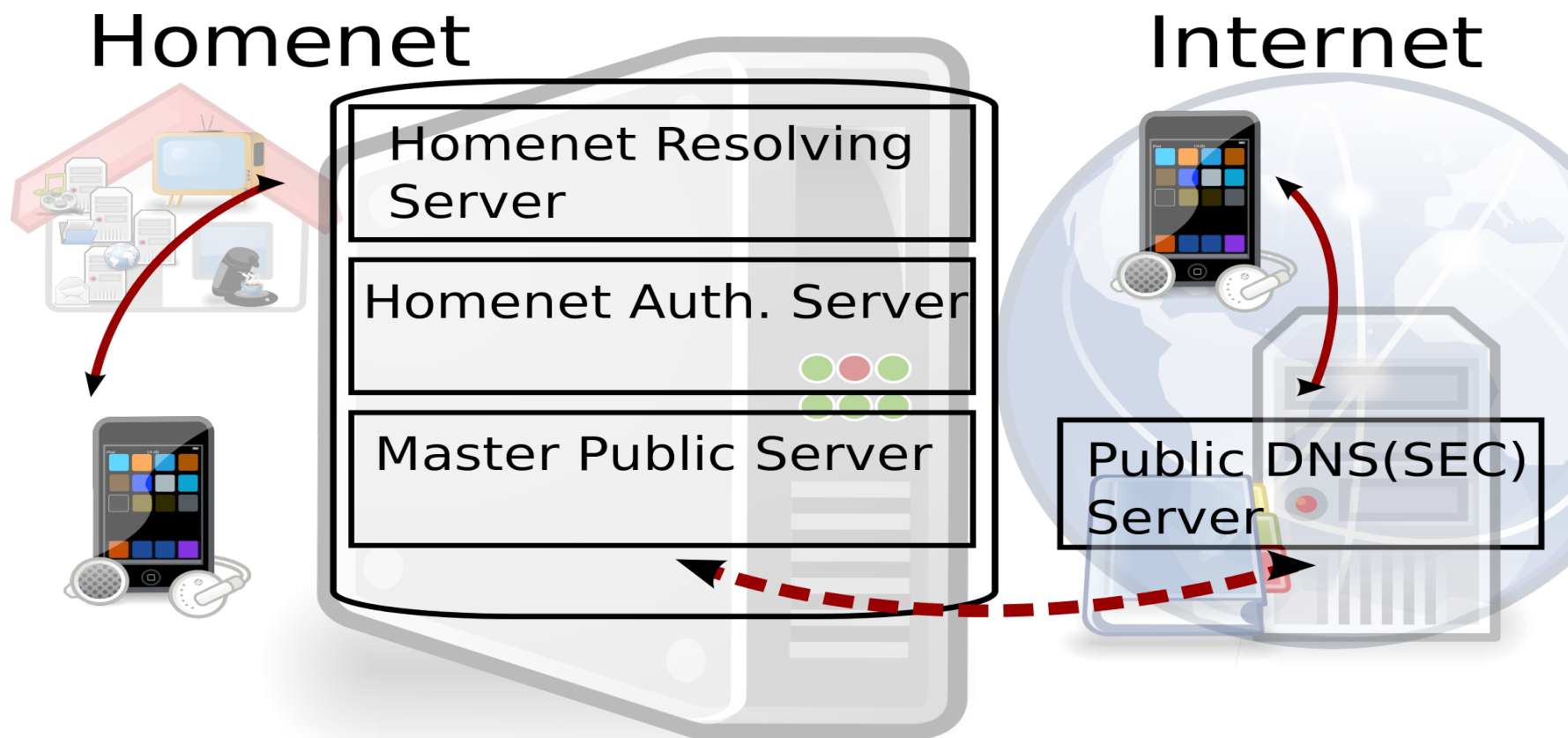
Problem Statement



Architecture Requirements

- Public DNS Servers MUST handle Homenet DNS(SEC) queries coming from the Internet
- CPE MUST NOT handle DNS queries coming from the Internet
- CPE Hidden Master IP address MUST NOT be published in DNS zone data
- CPE MUST answer Homenet DNS(SEC) queries from the Homenet
- CPE MUST be able to manage the Zone hosted on the Public Servers
- CPE SHOULD be able to provide different views (Public, Private, ...)

Architecture Description



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- Homenet Resolving Server
 - ▶ DNS resolutions for Homenet Nodes
 - ▶ Internet or Authoritative Server
- Homenet Authoritative Server
 - ▶ Hosts the Homenet View
 - ▶ Answers Homenet nodes only
- Master Public Server
 - ▶ Hosts the Public View
 - ▶ Answers Internet nodes only
- Master / Public Server Synchronization
 - ▶ DNS Master / Slave mechanism, AXFR, IXFR, NOTIFY
 - ▶ Master only answers to Slave / Homenet Resolving Server queries
 - ▶ Transaction secured with TKEY, IPsec, DTLS...

CPE Configuration

Public Server informations are:

- Public DNS(SEC) Servers (Zone Configuration)
 - ▶ FQDN
 - ▶ IP addresses (Optional with DNSSEC)
- Public Server Management Name (Master/Slave)
 - ▶ FQDN
 - ▶ IP addresses (Optional with DNSSEC)
- Authentication
 - ▶ Method
 - ▶ Data

CPE Configuration

Setting the Views:

- Public Server
- Homenet Domain Name
- Rules Homenet / Public Views
- DNSSEC Data

Position toward Homenet Architecture

- Naming configuration is automatically performed by the CPE
- End User assigns names to device and CPE attached them to Internet Domain ("search" field)
- Co-exists with current Naming architecture
- Devices can be seen in multiple private / public Internet spaces
- Works in case the Internet connection is broken

Next Steps

- Address functions of MDNS within Homenet LAN
- Publishing details northbound via Hidden Master

Thank You for your attention