DNSv6 at AFNIC

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Why IPv6 for a NIC?

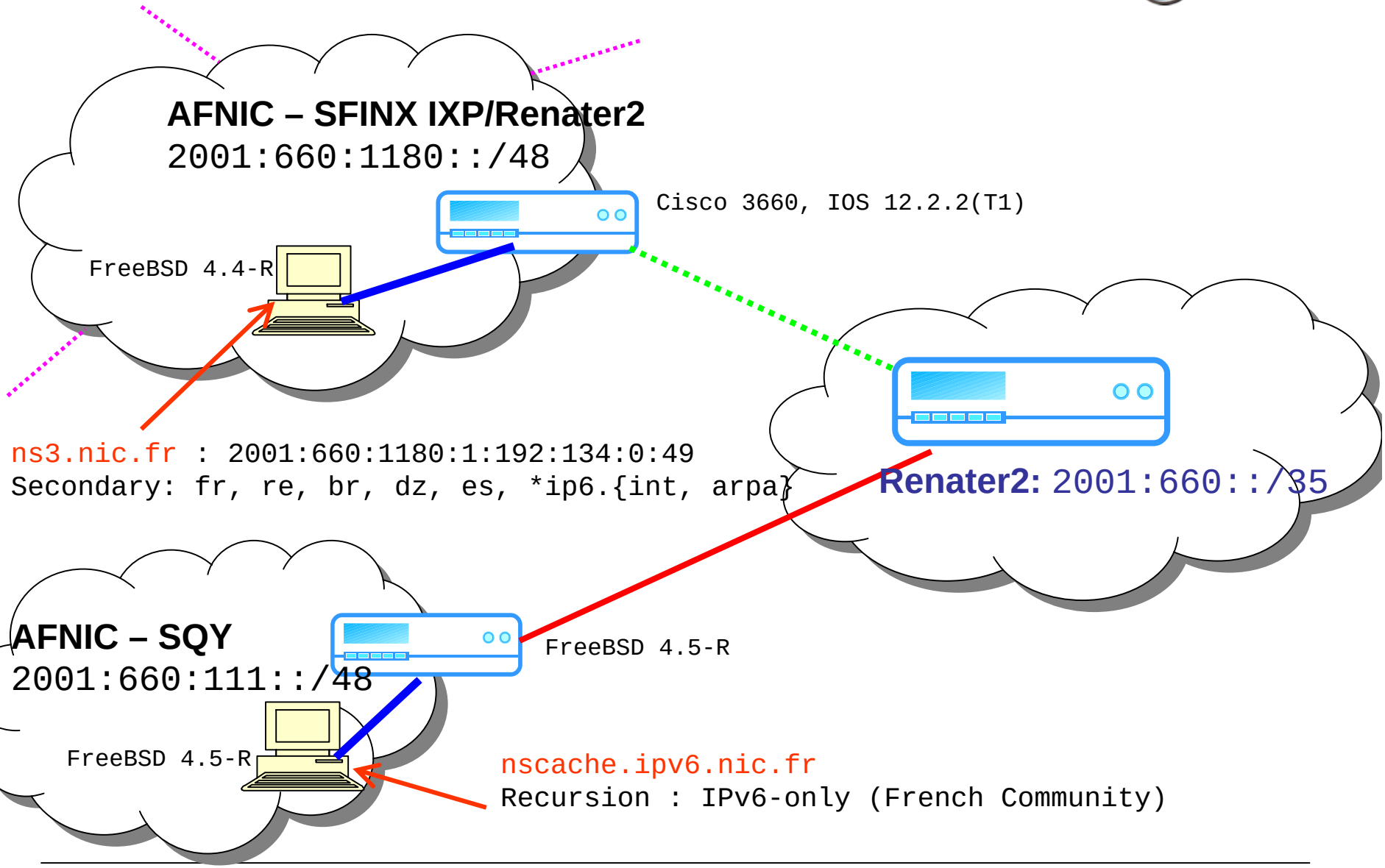
- DNS is one of the most critical applications for Internet operation
- IPv4 is reaching its limits ➔ we should get ready for IPv4→IPv6 transition/migration: DNSv6 is the starting point of every IPv6 application
- DNS service continuity between IPv4 and IPv6 worlds is a key issue

What have we achieved so far?

- Native support of DNSv6 (with IPv6 transport) on number of our DNS servers (for experience acquisition)
- Officially host a secondary DNSv6 on `ns3.nic.fr` (SFINX IXP, `2001:660:1180:1:192:134:0:49`) for:
  - ccTLD zones:
    - `fr, re` // delegated to AFNIC
    - `br, dz, es`
  - Reverse zones:
    - `ip6.int, e.f.f.3.ip6.int`
    - `{6,7}.0.1.0.0.2.ip6.{int,arpa}` // 4 Ripe blocs
    - and many others for G6/Renater2

What have we achieved so far (2)?

- DNSv6 Cache Forwarding Service:
  - Name Resolution service for IPv6-only sites
  - Efficient and scalable for a well defined community (for instance French IPv6 community)
  - Service running on `nscache.ipv6.nic.fr`


AFNIC – SFINX IXP/Renater2
2001:660:1180::/48
Cisco 3660, IOS 12.2.2(T1)
FreeBSD 4.4-R
ns3.nic.fr : 2001:660:1180:1:192:134:0:49
Secondary: fr, re, br, dz, es, *ip6.{int, arpa}
Renater2: 2001:660::/35
AFNIC – SQY
2001:660:111::/48
FreeBSD 4.5-R
FreeBSD 4.5-R
nscache.ipv6.nic.fr
Recursion : IPv6-only (French Community)

What are we looking for?

- Collaboration with RIPE region NICs in the DNSv6 field:
  - **Help** NICs (which are new in IPv6) to start DNSv6
  - **Migrate** secondary service from `ns2.nic.fr` to `ns3.nic.fr` (IPv6-capable) for the following `ccTLDs` (if they wish it):
    - `cz, ge, hu, ie, ma, nl, mt, pt, ru, si, tn, ua`
  - **Consider** other forms of secondary service exchange for other ccTLDs that wish IPv6 support

- We are open to any other ideas/suggestions:

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