Improving IPv6-only experience on Linux

IETF Hackathon

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What is the issue

It works well, **except for some *small* issues**:

- **IPv4 literals** don't work (outside Chrome)
- Legacy and/or **low-level apps** may not work well (eg. VirtualBox)

How are others solving this

- **Android:** There is in-device CLAT translating residual IPv4 to IPv6
- **Apple:** App developers are forced **not to produce broken apps** and there is a CLAT as well
- **Windows:** There is a CLAT but **only if you plug in an USB modem**

What have we done

- A **daemon in Python** listening for PREF64 option in Router Advertisements
- A **Go implementation** of RFC 7050 NAT64 prefix discovery
- **Perl script** `clatd` adjusted to support `nat46` kernel module in place of `TAYGA`

We are not done yet

- There's still no comprehensive easy-to-use solution
- We really need to convince the developers of `NetworkManager` and `systemd-networkd`

Wrap up

Team members (all first-timers):

- Ondřej Caletka
- David Čepelík
- Radek Zajíc (remote)

Repositories:

- PREF64 RA Daemon
- Support for in-kernel nat46 in clatd
- GoDNS64 a Go implementation of RFC 7050 NAT64 prefix discovery