

# 6to4 at Home

Roque Gagliano  
Carlos Martinez

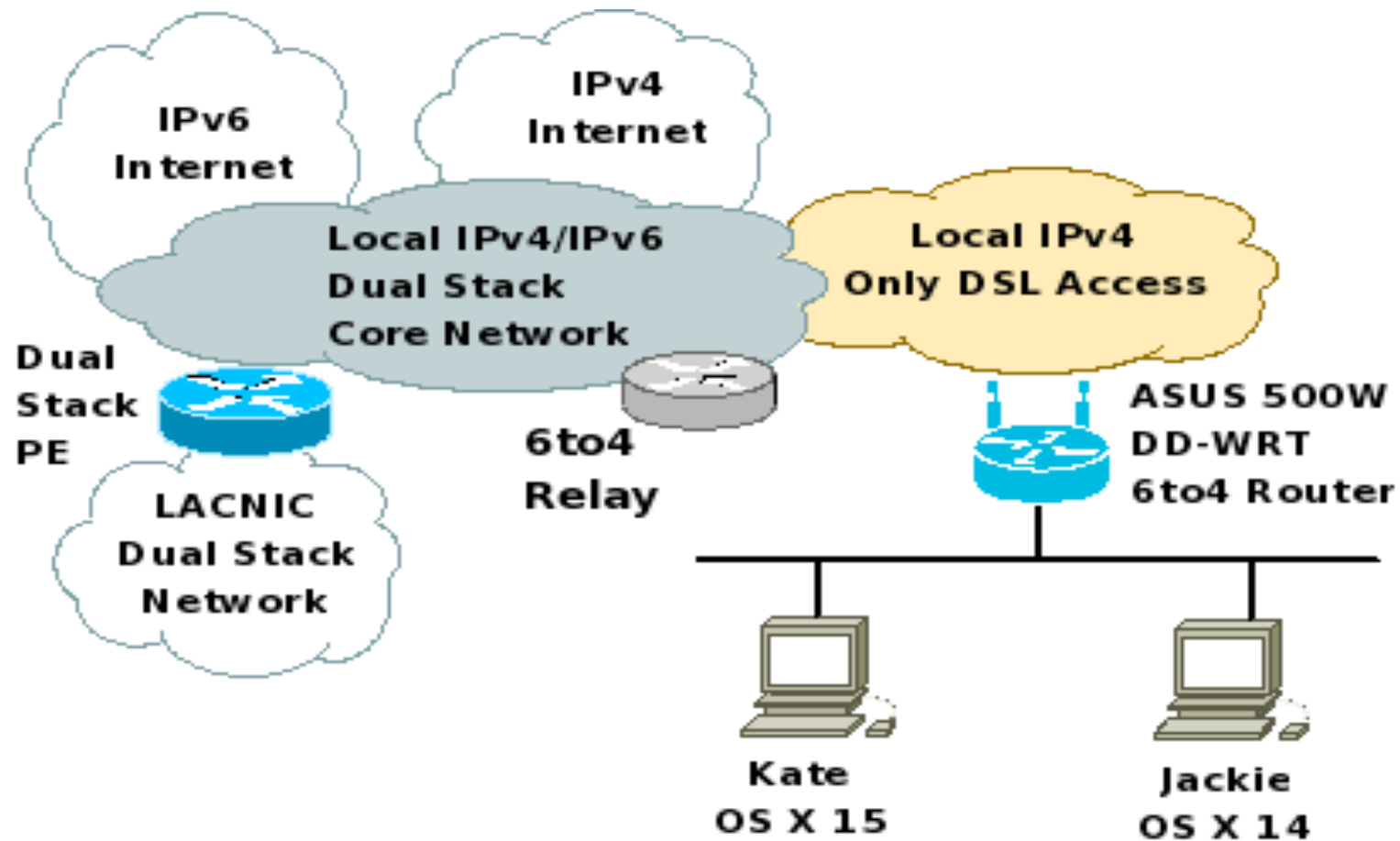
# the problem

- our ISP has an IPv6 “enabled” network but not IPv6 services for residential customers...
- our servers run v6 natively with that same ISP.
- we wanted to experience v6 at home

# two solutions:

- I run IPv6 at the home network gateway running DD-WRT.
- Carlos decided to run IPv6 at a linux box behind the NAT box.

# 6to4 and DD-WRT



# 6to4 and DD-WRT

- IPv6 (and particularly 6to4) supported since v22 (voip or standard built).
- However v24 removed IPv6 support...lack of space for new wireless driver was the reason.
- Custom builds can be used, but not official support: <http://www.crushedhat.com/downloads/DD-WRT/>

# 6to4 in DD-WRT take 1: Linksys WRT350N



# 6to4 and DD-WRT take II: ASUS WL-500W

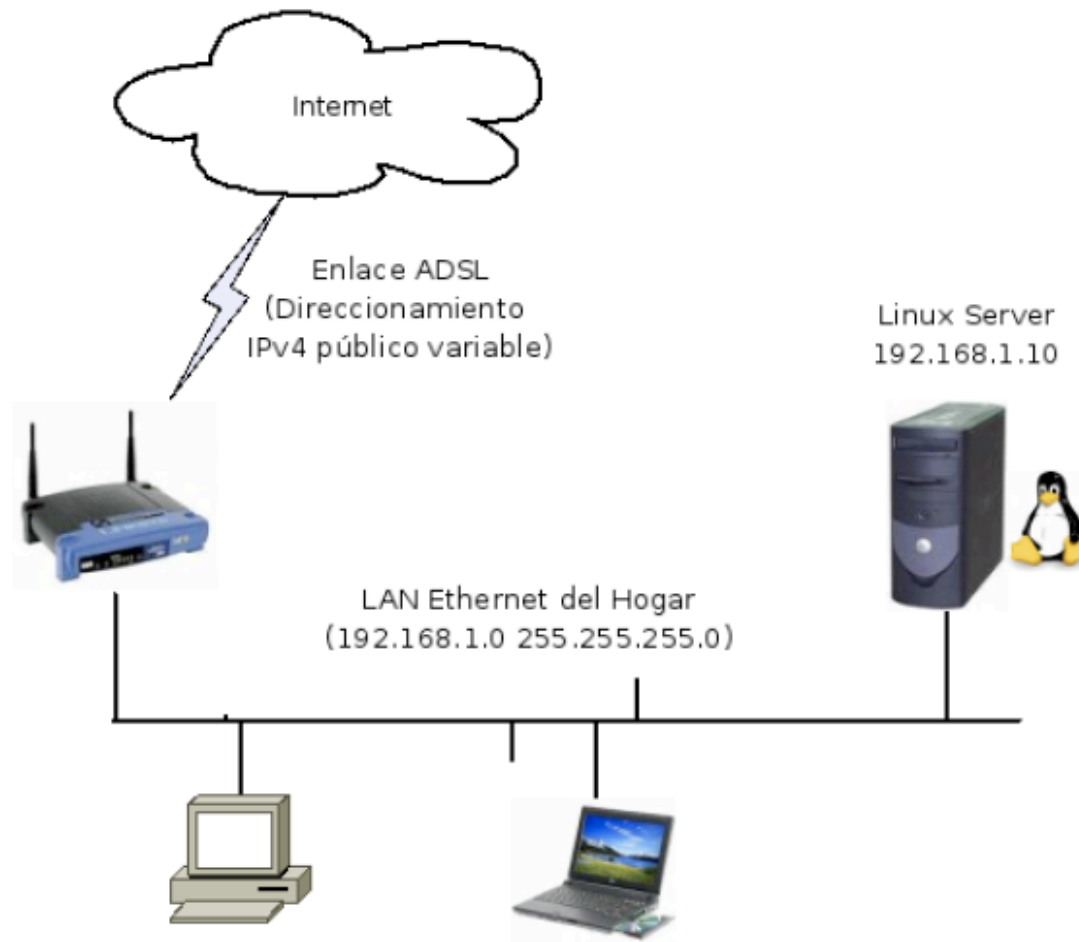
- Steps following howto:
  1. Enable IPv6 ---> trivial.
  2. Enable Radvd ---> trivial.
  3. Configure Radvd ---> medium complex.
  4. Configure Initial Script ---> medium complex.
- However, my ISP changes my public address every 12 hours ---> custom cron script that check changes in public addresses.
- No statefull ip6table available...

# Dynamic External interface problem.

- the external public IPv4 address change every 12 hours.
- even if I change the Route Adv. message for the new address, the old prefix is still “alive” in the clients --> no connectivity.
- two options:
  1. send also a Route Adv. for old prefix with AdvValidLifetime = 0 when change detected.
  2. re-configure interface radvd with low AdvValidLifetime and MaxRtrAdvInterval.



# 6to4 behind the NAT box:



# 6to4 behind the NAT box:

- start-up script configured for automatic configuration.
- same script in cron for checking address changes.
- Public IPv4 address got using <http://whatismyip.com>

# 6to4 experience:

- local access to IPv6 sites connected to same ISP with similar results as in IPv4.
- access to site with good 6to4 relays also pretty good (ex. apnic.net).
- however...do we have a problem with URPF for 192.88.99.1? One relay did gave local access to 6to4 customers but was enable to connect through IPv4 transit providers.

# thank you!



scripts available at:

<http://www.uy6tf.org.uy>

[http://cagnazzo.name/drupal/sites/default/files/6to4-linux-dynip-0.3.tar\\_\\_0.gz](http://cagnazzo.name/drupal/sites/default/files/6to4-linux-dynip-0.3.tar__0.gz)