TeliaSonera

IPv6 Deployment Plans

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Network Strategy for IPv6 at TeliaSonera

- We want to have support for IPv6 in all of our IP Networks both Mobile and Fixed within two years
- That doesn’t mean that we are migrating all our systems to IPv6. IPv6 is an upgrade to the existing IPv4 Internet and will not affect all services
- IPv6 will be provided in parallel with IPv4. One connectivity service two protocols
- The address allocation is the starting point for the introduction of IPv6 in the production environment

TeliaSonera IPv6 Allocation

- TeliaSonera has received a large IPv6 address allocation: 2001:2000::/20 (remember the HD-ratio factor)
- Will be used by all units within TeliaSonera
- Meant to cover the IPv6 address need for the foreseeable future
- Allows for /32 allocations to small ISPs that are our transit customers
- Customer allocations will normally be /48
- The allocation of IPv6 addresses makes its possible to work with a long term plan for a production environment for IPv6
- IPv6 is important for the network evolution, both within the fixed and within the Mobile Network

What have we done so far:

- We transport IPv6 traffic, both nationally and internationally.
- TeliaSonera has had a commercial IPv6 network since 2001
  - Connectivity for ISPs, large enterprises and institutions using configured tunnels
- 6to4 relay support in some national networks.
- Tested IPv6 in mobile networks, demonstrated IPv6 in GPRS during roaming.

TeliaSonera IPv6 next steps

- Continue implementing IPv6 in the IP-core, move to native IPv6 transport when possible
- Ensure that increase in IPv6 load can be handled, long-term planning
- Continue implementing IPv6 further out in the network (closer to the end customers)
- Prepare for native IPv6 access for corporate customers
- Prepare for migration of private customers platforms

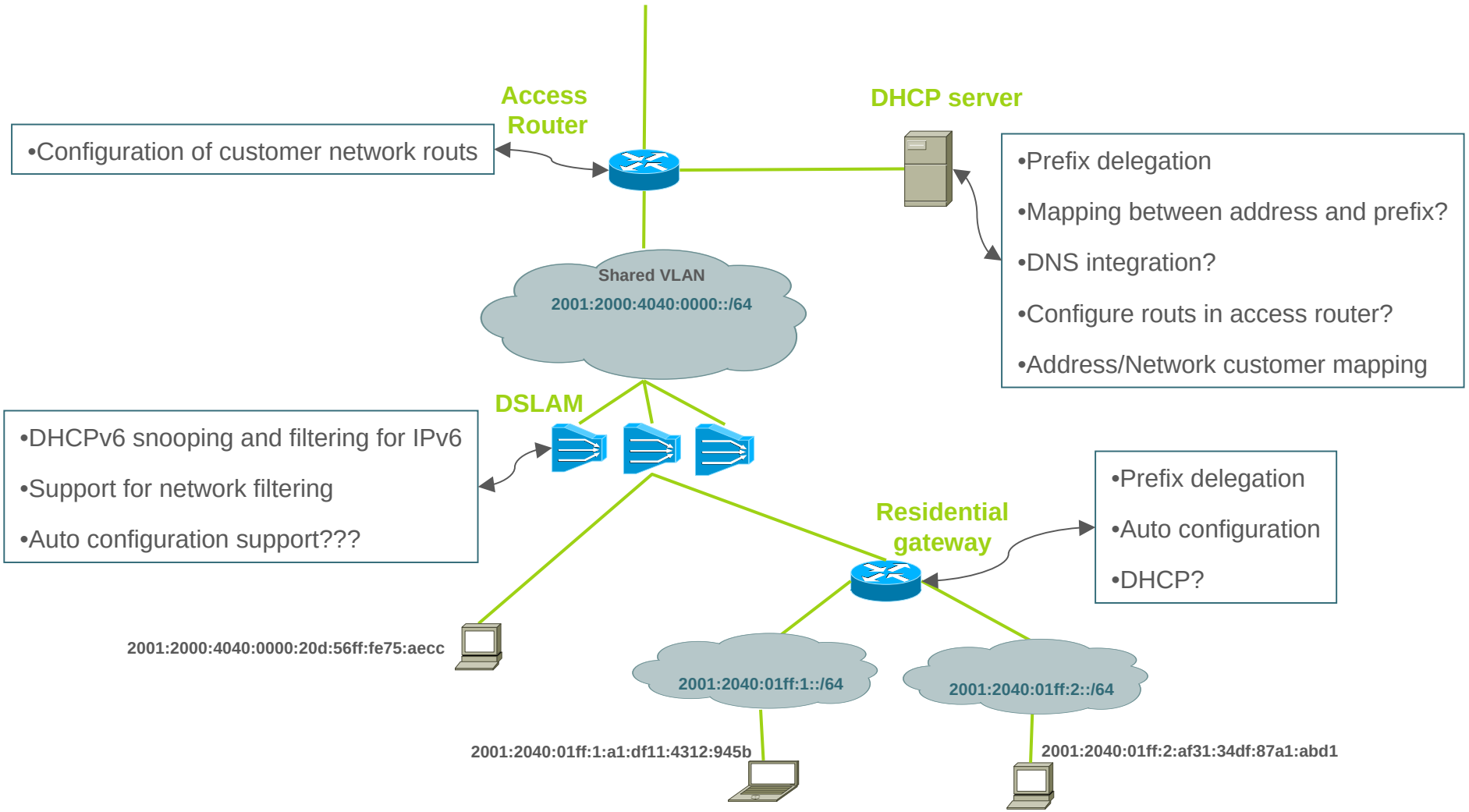
Technical solutions for introducing IPv6

- 6PE
  - Gives the possibility to wirespeed even of the some routers don’t have IPv6 hardware support
  - Minimizes the impact on the core
    - No need to change IOS on core routers
  - Lack of multicast support might be a showstopper
- Dualstack when possible
  - Access should always be dualstack
- Support for 6to4 and Teredo to make it possible for residential customers to use IPv6 even if the access network isn’t upgraded.
- Focus on long term solution
- Try to deploy native IPv6 whenever possible

Technical difficulties

- Core is straightforward, but high risk
- Access is complicated
- Network and customer management requires a lot of work
- Lack of support from vendors is still a big problem in some areas

Residential IPv6 Access Requirements



Corporate IPv6 Access Requirements