

State of IPv6 Deployment in Nepal

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Agenda

- ❖ IPv6 Readiness
- ❖ Drivers
- ❖ Why Deploy

Readiness

❖ Transit

- ❖ International Transit - Operational
- ❖ NPIX - Operational

❖ Core Network

- ❖ Most major ISPs are ready

❖ Last Mile

- ❖ No reported service in production outside R&E
- ❖ Some test/beta deployments
- ❖ Some large-scale deployment in plans

❖ Content

- ❖ International - Most (if not all) major content providers are ready
- ❖ Domestic: Very limited IPv6 content

❖ Consumer devices

- ❖ Popular low-cost WiFi APs are not capable
- ❖ Most new ones are ready

IPv6 at Last Mile

- ❖ Limited to Test Deployment
 - ❖ Corporate Customers asked for it
 - ❖ There was some peculiar need
- ❖ Mandatory Deployment
 - ❖ Standard Policy (eg. NREN)
- ❖ Hobby
 - ❖ Several ISPs have very limited IPv6 deployment
- ❖ Medium Specific
 - ❖ 2G/3G
 - ❖ Most CPE is capable, backhaul/distribution/core network is not
 - ❖ Fiber and Wireless
 - ❖ Not all CPEs are capable

Why IPv6

- ❖ IPv4 Pool depletion
 - ❖ Can't get more IPv4 address from RIR
 - ❖ You could buy IP, but is expensive for our market
- ❖ IP Address infrastructure needed more than ever
 - ❖ Developing country, growing Internet penetration
 - ❖ Huge growth on Internet usage through mobile
 - ❖ More houses / businesses / enterprises connecting
- ❖ NAT breaks things
 - ❖ Huge investment in CGNAT
 - ❖ Does not solve the problem, just delays it

IPv6 Drivers

- ❖ Government Policy
- ❖ Customer Demand
- ❖ Financial Incentive
 - ❖ Deploying IPv6 saves money, finally
 - ❖ Dual Stack
 - ❖ Most big Content Providers serve in IPv6
 - ❖ Most traffic takes v6 path
 - ❖ Less load on CGNAT boxes - More customers per box, save \$\$

IPv6 - Next few months

- ❖ Wide scale deployment by several ISPs at the last mile
 - ❖ Transition Techniques
 - ❖ Dual-Stack
- ❖ More domestic contents in IPv6
- ❖ More IPv6 traffic generation
- ❖ Large scale IPv6 Deployment

“IPv6 for better connected Nepal”

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