

IPv6 adoption picture is in pink but not rosy

August 6 2012, by Nancy Owano

(Phys.org) -- On June 6th World IPv6 Launch Day reminded the world of an industry-wide effort to help accelerate the use of IPv6 and to get websites to enable IPv6 permanently. Reports are coming in from stats-gatherers that adoption of the new standard is already off to a solid start, but levels of optimism and assessments of successful growth vary from one source to another. Some reports say growth is still slow while others look at the same numbers and say adoption is on a real roll.

ZDNet carried a Sunday headline, IPv6 Growth Explodes. The report was citing the findings of Akamai, where Erik Nygren is Chief Architect.

“The IPv6 preference rate for many dual-stacked sites has been steadily rising by a few percent week-over-week since World IPv6 Launch,” [he noted](#). Since World IPv6 Launch, Akamai has seen IPv6 adoption continue to steadily grow. "Over the past year, we've seen some of the largest growth coming from major ISPs within the US, as they roll out production IPv6 support to their end-users, including Verizon Wireless, AT&T, and Comcast,” Nygren added.

IPv6 is not backward-compatible with IPv4, requiring network operators to run both protocols side-by-side for the foreseeable future

Over three million Americans are now on IPv6, says *Enterprise Networking Planet*, but adoption still has a long way to go.

IPv6 is a 128-bit addressing space that provides significantly more

addresses than the 32-bit address space of IPv4. The change is necessary; for the Internet to continue to grow, IPv6 is needed for new addresses. Website majors such as Facebook, Google, YouTube and Netflix are running IPv6 today.

For IPv6 to transition smoothly, there must be Internet access points, including service providers and equipment vendors and a number are stepping up to the plate. Cisco's Linksys and D-Link are vendors that have committed that home routers shipped will be IPv6 ready by default.

China has penetration of approximately 0.42 percent according to the Asia Pacific Network Information Centre (APNIC). That translates into approximately, 2.12 million IPv6 users in China.

Japan also ranks highly at 1.97 percent user penetration or nearly 2 million users.

APNIC's global survey pegs IPv6 penetration in the U.S at 1.35 percent. That translates into an estimated IPv6 user base of 3.3 million users, the largest base of users in the world.

Geoff Huston, an Australian researcher and chief scientist at APNIC, says there hasn't been enough market momentum surrounding IPv6 to declare it a sure thing. There was a rise in IPv6 usage to about one percent in the United States, but he says the protocol needs to be at a 20 percent usage rate to ensure that it will succeed. An [interviewer](#) recently asked Huston what type of advice over adoption would he give if he were in a roomful of U.S. CIOs. "IPv6 is in everybody's interest, including the enterprise. If I was an enterprise network manager, what I would do is make sure that any equipment I'm buying from here on through is protocol neutral," he said. He would want equipment that can demonstrate IPv6. "I would be doing my security infrastructure and my firewalls with IPv6. I'd be doing that now. I'd be enabling my public

services -- Web, email -- with IPv6. I'd be doing that now..."

U.S. government agencies meanwhile face a September 30, 2012 deadline for ensuring that all public-facing Web sites and services support IPv6. "In order to facilitate timely and effective IPv6 [adoption](#), agencies shall upgrade public/external facing servers and services (e.g. web, email, DNS, ISP services, etc) to operationally use native [IPv6](#) by the end of FY 2012," according to the memo from Vivek Kundra, Federal Chief Information Officer.

More information:

www.arin.net/knowledge/v4_deplete_v6_adopt.pdf

www.cio.gov/documents/IPv6memofinal.pdf

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