

New Internet standard gives global network room to grow (Update)

June 6 2012, by Rob Lever



A man surfs the internet at a cafe in Beijing, 2011. A new Internet standard giving the global network more room to grow came into effect Wednesday, a move that users probably won't notice.

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The switch occurred at 0001 GMT Wednesday, when Internet operators switched to a new standard called IPv6 that allows for trillions of "IP" numbers or addresses, up from the current 4.3 billion.

"To ensure the Internet can continue to grow and connect billions more people and devices around the world, thousands of companies and millions of websites have now permanently enabled the next generation of Internet Protocol (IPv6) for their products and services," the Internet

Society, an advisory panel, said.

"Participants in World IPv6 Launch include the four most visited websites in the world -- Google, Facebook, YouTube, and Yahoo! -- as well as home router manufacturers and Internet Service Providers in more than 100 countries. By making IPv6 the 'new normal,' these companies are enabling millions of end users to enjoy its benefits without having to do anything themselves."

Vint Cerf, one of the inventors of the Internet standard, who is now the "chief Internet evangelist" at Google, said the change gives the Internet room to grow.

"When the Internet launched operationally in 1983, its creators never dreamed that there might be billions of devices and users trying to get online," he said.

"Yet now, almost three decades later, that same Internet serves nearly 2.5 billion people and 11 billion devices across the globe. And we're running out of space."

Some analysts say there may be annoyances for people using older equipment, because the "path" to websites using compatible equipment may be different.

But Johannes Ullrich of the SANS Technology Institute said the transition appeared to be going smoothly.

"So far, there are no big issues with the IPv6 transition," he told AFP.

He said many Internet operators are using a method known as "Happy Eyeballs" which allows traffic to be routed over IPv6 or the older IPv4 equipment depending on which is more efficient.

The technology firm Nominum surveyed 67 major Internet service providers in North America, Japan, Europe and Latin America and found that 97 percent of them have either already implemented or plan to implement IPv6.

"European ISPs appear to have the greatest risk of not making the transition in time since under current policies the Regional Internet Registry for Europe is projected to run out of IPv4 addresses later this year," Nominum said.

The full transition will take several years, and old IPv4 devices and networks should continue to function as before.

Each piece of hardware -- including home computers, tablets and mobile devices -- has a unique IP address to connect to the Web.

With about seven billion people on the planet, the IPv4 protocol doesn't allow for everyone to have a gadget with its own online address.

The situation has been equated to not having enough telephone numbers for every user.

If there are not enough addresses, neighbors will have to start sharing IP addresses, which can slow things down.

Over time, home Internet users will need to switch devices such as routers and modems to be compatible with the new system. But Internet service providers have been preparing and say current equipment will function as before.

US equipment maker Cisco is projecting that by 2016, there will be nearly 18.9 billion network connections, or nearly 2.5 connections for each person on earth, compared with 10.3 billion in 2011.

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Citation: New Internet standard gives global network room to grow (Update) (2012, June 6)
retrieved 11 July 2024 from <https://phys.org/news/2012-06-internet-trillions-ip.html>

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