Now That We've Moved Everything to IP, What Could Possibly Go Wrong?

Written by Bob Snyder
27 January 2011

Meet IPv6 and the Broken Web.

Like most stories, the story of how IP will break down in 2012 is more complicated than the simple explanation put forward.

When we deplete available IPv4 addresses this year, to continue growth, the internet must switch to the new standard, IPv6. This seems to rival climate change in the public's ability to absorb and react to this fact.

But IPv4 depletion denial is only the simple affliction. Now the industry recognizes a second syndrome that will strike down several million internet users (even if they aren't in denial)...and your clients may be on that list.

Companies like Yahoo (where IPv6 development has been going on since 2008 and where last year it has become the company's largest IT infrastructure project after refresh) expect millions of users to suffer "IPv6 brokenness" when the industry switches over to the new standard.

IPv6 brokenness will cripple millions of users who think they have IPv6 connectivity on their systems, but have it configured in such a way that their system believes they have a working IPv6 Internet connection when in reality... they don't.

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Caused by misconfiguration, web browser settings, misbehaving network equipment, or even faulty firewall settings, the malady at first will confound the stricken...like a chickenpox where the symptoms are masked because you have measles at the same time.

Your clients with IPv6 broken syndrome will think their system is fine. When they see the first sign of symptoms-- timeouts on particular web sites that can be anywhere from 5 seconds to several minutes--they will smug and assume that it is the web site that suffers an IPv6 problem or the rare outage.

Clients may repeatedly curse the specific web site as further attempts fail, comforted by the fact that because they can see other web sites are up and running fine-- it can't possibly be their own system.

In IPv6 brokenness, when the client opens a browser the first major web site that goes dual-stack (that supports IPv6 and IPv4 simultaneously) will appear broken while other web sites will appear to be up.

Mark June 8th on your diary because Google, Yahoo and Facebook will hold "World IPv6 Day"-- a 24-hour trial of IPv6 connectivity that allows participating web sites to gauge the true level of IPv6 brokenness.

World IPv6 Day will help people understand that it may not be a particular site that's down. Multiple sites will be in this together and will ALL appear to be down to end users suffering from IPv6 brokenness.

So on June 8th, if you or your client don't know that it's World IPv6 Day, and you visit participating web sites, you will suffer an experience of IPv6 brokenness-- whether you like it or not.

Think of it in terms of the recent digital switchover in TV that many of us have experienced in Europe: all the major TV stations are shutting down on one day to make sure you know you need to match your household equipment to their infrastructure-- or else.

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The timing of the IPv6 switchover is important. It's the confusion around timing that creates IPv6 denial-- and climate change for that matter. If we knew the exact date the world would run out of petrol or that the polar caps would melt, we would feel assured. But with so many variables and so many valiant (and clever) attempts to patch over the problem instead of resolving it, we lull the public into believing we can forestall the oncoming crisis.

Most of us know that less than 5% of the world's IPv4 address space remains unallocated. Once IPv4 addresses are depleted, we will need to either support IPv6 or stop the growth of the internet as surely as runing into a brick wall.

Many of us know February as when the last remaining IPv4 addresses will be assigned. We will look for signs of problems...but nothing will happen.

Because those addresses will only be sent from the central pool to the regional registries in February and regional registries will hand out the remaining blocks of IPv4 addresses to network operators by October.

It's only then, in Q4, that companies like Yahoo will turn on IPv6 on its main Web address.

Go [World IPv6 Day](#)