



Date for your diary – World IPv6 day 8th June 2011

What is World IPv6 day?

World IPv6 day is organized by the Internet Society and this year some of the biggest content providers on the Internet such as Google, Facebook, Yahoo and Akamai are going to be taking part in the biggest experiment yet to find “IPv6 brokenness”.

What is going to happen?

These large internet players already have IPv6 enabled services but they have put them on special domains such as ipv6.google.com and www.v6.facebookbook.com. So if you lookup the regular www.facebook.com you only get an IPv4 address returned and if you lookup www.v6.facebook.com you only get an IPv6 address returned (the IP address being 2620:0:1cfe:face:b00c::3 by the way!). On 8th June for a period of 24 hours these websites will turn on IPv6 DNS replies for their main URLs – www.facebook.com and www.google.com

What might break?

The predictions are that a very small amount of people (estimates vary from 0.05% to 0.15%) will not be able to reach these pages for the day.

The purpose of these big content providers taking part for the first time is that they will be able to compare usage levels with comparable days and identify the scale if any in the reduction in traffic. In addition because they are such highly frequented websites if they start “dropping off the Internet” people will notice and report the issues which will help tease out as yet unidentified issues.

Known issues are with some versions of the Opera/Firefox web browser, some versions of Apple OS and Windows Vista – these have bugs that when presented with an IPv6 and an IPv4 address choose only the IPv6 address or take a very long time to fallback to the IPv4 address. This is a problem when over 99% of Internet users only have IPv4 connectivity so cannot reach the IPv6 address at the moment.

Why do this?

It is an important exercise for two reasons. Firstly as the Internet transitions to IPv6 it is important to remain backwards compatible with IPv4 as the two are likely to exist in “dual stacked” systems for many years this day should prove whether that is possible. Secondly if it all goes to plan it gives confidence to other websites to start moving their content to IPv6.



What is Spitfire doing on IPv6 day?

Nothing!! If we start trying to do clever IPv6 things on this day also and customers run into problems we won't be sure whether it was something we did or something Google or Akamai did.

What to do if I or my customers get problems on that day?

A first step is to try and work out if it is only affecting some users on some devices and not others. The problems are expected to be on certain operating systems with certain web browsers. If people have a second browser on their machine try to get them to connect to the site using that.

Apple Mac users are expected to be disproportionately affected if an office has both Windows and Apple Macs see if it is only one type of operating system that is affected.

If problems are reported reaching major websites on this day then try turning IPv6 off – which is done on the network settings:

Many of these issues are caused by the device “thinking” it has IPv6 connectivity but hasn't actually got it and both Apple and Microsoft now ship their operating systems with Ipv6 enabled by default. By disabling it you should stop these issues.

Here are three examples of how this can be done, it is obviously by no means exhaustive.

On Apple Mac OS X

“System Preferences” --> “Network” --> “Advanced” --> “Configure IPv6” Change from “Automatically” to “Off”

On Windows 7:

Control Panel -->Network and Sharing Centre--> Change Adaptor Settings -->Right click on Local Area Connection – Click properties --. Uncheck “Internet Protocol Version 6”--> click “OK”

On Firefox you can disable IPv6 lookups by typing “about:config” in the URL bar, ignore the “Here be Dragons” warning and toggle “network.dns.disableIPv6;false” to true.

Should I just turn off IPv6 support anyway just to be safe?

We don't recommend that you turn off IPv6 support unless you have problems on the day because some day soon you are going to need it. If you do have problems that you have proved to be related to IPv6 connectivity it is recommended that you upgrade the operating system / browser to a version that works correctly.



Is there any test I can perform prior to the big day?

Try the German language website

<http://www.heise.de/>

They have already done what Google and Facebook are going to do on IPv6 day. If you can reach that OK you probably will not have any problems. It is one of the largest news sites in Germany so it **should** never be down and is currently one of the World's largest dual-stacked websites.

What happens at the end of IPv6 day?

It is expected that after 24 hours the DNS records will be changed back so everyone can look at the results and sit back and take stock.