Putting Together the IPv6 Puzzle, With Just a Few Missing Pieces

June 8, 2011

Today is World IPv6 Day [1], and if you are even aware of it, you may not be breaking out the champagne to celebrate. Recognition of the importance of the IPv6 transition is a noble endeavor, and everyone who delivers Internet content should realize that they have a duty to make sure their content is accessible to everyone. Right now, however, this transition is a difficult one. For the vast majority of us, the only thing we can do to "celebrate" IPv6 Day is to find out when IPv6 services will be available to us.

At CDT, we had hoped to light up IPv6 today, but failing that, we want to serve IPv6 traffic as soon as possible. We want to ensure that when v6 does become more the norm, we'll be ready. We've done all we could do to serve IPv6 traffic today, but there were a number of roadblocks to making that happen. So what have we done?

The first hurdle we had to assess was how to route IPv6 traffic. When I first started assessing our IPv6 readiness, I realized that our server firewall was not even capable of recognizing IPv6 traffic. A firewall is simply mandatory for CDT - not everybody likes the idea of an open Internet around the world, as evidenced by a range of attacks on CDT's server from more technologically restrictive countries. For 100 dollars more per month, we've got the cheapest IPv6 capable firewall our host provides. It's not completely set up yet, because we now have to receive a new IPv4 address, which should propagate late on the 15th of this month. Once the firewall has been fully set up, we'll need to alter all of our webserver host entries (the rules that govern how users access our domains and subdomains) to reflect the new IPv4 address and our new IPv6 address.

Unfortunately, that's about all we can do at the moment. Rackspace, our web host, will not be giving out IPv6 addresses until June 15th. Our badgering has put CDT on the short list to receive an address, and once that's done, all we will need do is to edit our webserver host entries to reflect our new IPv6 address as well as the IPv4 address. At this point, we'll be fully capable of receiving direct IPv6 traffic. On our end, however, this is theoretical, as we have no means of truly testing our website on a large scale.

Our ISP, like most, is in the IPv6 testing phase. It's due to be complete "sometime next year," and then a slow rollout will commence. Unless you're at a university with a solid technology department, chances are high that you won't have an IPv6 address until late next year at the earliest. Yes, you can use a tunneling service like Windows' Teredo [2] or Hurricane Electric's tunnel [3], but Teredo doesn't have a DNS server – you'd have to enter your IPv6 addresses manually – and setting up Hurricane's tunnel is not for neophytes.

In short, CDT doesn't have much to offer for World IPv6 Day. It did, however, get us much closer to the goal of serving IPv6 traffic, so that when the day does come that users start to browse the Internet using IPv6, CDT will be ready. At this point, that's not a bad result. If you'd like to test your IPv6 readiness, head to test-ipv6.com [4]. Don't be distraught by your score yet, but if you host a website, check with your host to make sure they'll be ready for the IPv6 transition, and make sure your ISP has IPv6 plans as well. If anything, you'll have bragging rights when you're the first person you know who can handle IPv6 traffic. You big nerd.

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