

**Internet Topics: World IPv6 Day**

With the exhaustion of IPv4 addresses now a reality, the need for IPv6 is becoming more widely recognized. However, the implementation of IPv6 is not proceeding very rapidly. As devices are connected to the Internet via a variety of access environments around the world, it appears the impact of implementing IPv6 is difficult to gauge. This led to the creation of World IPv6 Day, in which well-known content providers take the initiative in performing worldwide IPv6 trials to promote IPv6 implementation and issues to a wide range of ISPs and related organizations. The first to announce their participation in the project were Google, Facebook, Yahoo!, Akamai, and Limelight Networks, with ISOC\*<sup>1</sup> (Internet Society) creating a website\*<sup>2</sup> for it. The outline of the project was determined through discussions between participating organizations and those assisting the project. A suitable day was chosen after the exhaustion of the central pool of IPv4 addresses managed by IANA.

From 9 AM on June 8, 2011 Japan time, content providers participating in World IPv6 Day will make their main content compatible with IPv6. In other words, an AAAA record will be added to the host name, and this state maintained over a period of 24 hours. Many sites from countries around the world have already agreed to participate, including several sites in Japan. On the day, an increased amount of content will be accessible using IPv6. In some respects it is unfortunate that there is still a need to implement IPv6 trials, despite the fact that many sites such as <http://www.ij.ad.jp> already support IPv6. However, we believe that there is value in organizing World IPv6 Day to promote the implementation of IPv6 across the globe.

In Japan, information about World IPv6 Day is provided via organizations such as JANOG\*<sup>3</sup> (Japan Network Operators Group), with details supplied and discussions held on April 13, 2011 in a meeting regarding World IPv6 Day trends and measures that was attended mainly by ISPs. We know that when users connect to a walled-garden IPv6 network, issues can occur depending on the PC implementation and the applications used. These issues can be avoided through application updates, etc., but even more important is providing a better IPv6 access environment to users to encourage active participation in World IPv6 Day. However, in Japan the methods for providing this are limited, so only a limited number of ISPs can provide IPv6 access in time. It is necessary to consider support measures such as recommending that users upgrade their software through user support, and making it possible to select a suitable protocol by changing the policy table. Additionally, some ISPs may need to look into measures for controlling AAAA record responses on DNS cache servers to avoid unnecessary fallback.

The website <http://www.attn.jp/worldipv6day/> has been established to provide information about World IPv6 Day in Japanese, and the presentation materials from the meeting held on April 13 have also been made available. Additionally, an announcement promoting these activities jointly signed by the Internet Association Japan, the IPv6 Promotion Council, the Japan branch of ISOC (currently being reactivated), and the WIDE Project was sent out to member organizations as notice that World IPv6 Day is to be held. Those considering participating in World IPv6 Day should check the URL above as well as the ISOC website and then carry out registration procedures. We would also recommend that ISPs consider all possible measures in advance to limit the impact of any confusion on the day to a minimum.

The smooth implementation of IPv6 is an important issue and challenge for Internet usage. With World IPv6 Day fast approaching, participating organizations and cooperating groups are actively evaluating and implementing their preparations, measurements, and necessary responses. IJ will also continue to cooperate with related organizations to ensure that this World IPv6 Day initiative is a success, and that future IPv6 implementation and World IPv6 Days are fruitful endeavors.

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\*1 An international nonprofit organization established to take a lead role in Internet-related standardization, education, and policies.

\*2 The ISOC (Internet Society) website for this project (<http://isoc.org/wp/worldipv6day/>).

\*3 A group that discusses, evaluates, and introduces matters related to Internet technology and operations.