Press Release

International Standard Documentation (RFC 6877) Issued for 464XLAT Architecture That Addresses Problem of IPv4 Address Exhaustion

On April 3, 2013, international standard documentation (RFC 6877 "464XLAT: Combination of Stateful and Stateless Translation") [*2] was formally issued for the 464XLAT architecture, jointly proposed to the Internet Engineering Task Force (IETF) [*1] by three companies, Japan Internet Exchange Co., Ltd. ("JPIX," hereinafter), NEC AccessTechnica, Ltd. and T-Mobile USA, Inc. (listed in alphabetical order).

The 464XLAT jointly proposed by the three companies is an IPv4 address sharing architecture that combines the existing international standard technologies RFC 6145 (IP/ICMP Translation Algorithm) and RFC 6146 (Stateful NAT64: Network Address and Protocol Translation from IPv6 Clients to IPv4 Servers) to enable the provision of IPv4 services on IPv6-only networks.

As the architecture uses translation (protocol conversion) techniques, its advantages include being easy to implement through enhanced functionality even when performing the IPv4/IPv6 cross-protocol communication required during the IPv4/IPv6 cross-over period.

Note that the architecture is based on findings from the IPv6v4 Exchange Service [*3] operated by JPIX as a trial service since July 2010.

JPIX has proceeded with preparations for launching the IPv6v4 Exchange Service as an official service and will continue to work on support for IPv6 service deployed by ISPs.

NEC AccessTechnica has provided home gateways implemented with the 464XLAT technology for the IPv6v4 Exchange Service and will consider the provision of products implemented the 464XLAT technology to other communications providers in Japan and overseas.

(*1): The Internet Engineering Task Force
http://www.ietf.org/

(*2): RFC 6877
http://tools.ietf.org/rfc/rfc6877.txt

(*3): IPv6v4 Exchange Service
http://www.jpix.ad.jp/en/service/ipv6v4.html

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[About JPIX]
Japan Internet Exchange Co., Ltd. (JPIX) was established in 1997 for the purpose of providing an environment for Internet service providers (ISPs) to exchange traffic with one another from a neutral standpoint. JPIX provides high-quality Internet exchange (IX) services with exchange equipment installed in Otemachi, Tokyo.
An IX plays an important role supporting the backbone of the Internet, and one was begun as a pioneering NSPIXP project by the research organization WIDE at the dawn of Japan's Internet presence. In response to WIDE's significant achievements, JPIX launched a commercial IX. Since its launch, the service has earned the trust of many customers and expanded its hubs to Osaka and Nagoya. Today JPIX represents Japan's largest IX, both in terms of the volume of traffic exchanged and number of connecting customers, and assumes a vital role as the heart of Japan's Internet.

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