

Fujitsu develops new solution for smooth datacenter migration to IPv6 networks

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Fujitsu today announced that it has developed the SA46T/SA46T-AS Datacenter Solutions, a technology enabling datacenters to migrate smoothly from IPv4 to IPv6. This technology is based on SA46T, which makes it possible to carry IPv4 transmissions over an IPv6 network, as well as for SA46T-AS, which is capable of sharing a single IPv4 address across multiple servers.

This [technology](#) boosts the number of IPv4 networks that can be accommodated on an [IPv6 network](#) to approximately 4.3 billion, which in practical terms means there is no upper limit on accommodating customer systems at a datacenter. Another advantage is that a single IPv4 address can be shared among some 65,000 machines. Sharing can be conducted among either physical or virtual servers, which means existing IPv4-based servers can continue operating and new servers can be added in the future. Servers can be incrementally adapted to IPv6 even after depletion of the IPv4 address space.

The institutions that control IP addresses internationally and in the Asia-Pacific region have depleted the IPv4 address space, and are promoting a transition to IPv6 with the World IPv6 Launch. Datacenters that operate cloud and outsourcing services typically use VLAN technology, which logically divides the IPv4 addresses used by their customers' systems in order to accommodate them without interference. This means that at most about 1,000 companies (assuming 4 VLANs per customer) can be accommodated. Furthermore, with depletion of the IPv4 address space, it will become impossible to expand services run on IPv4, making

support for IPv6 a pressing matter.

To resolve these issues, [Fujitsu](#) has developed the SA46T/SA46T-AS Datacenter Solutions technologies that will enable datacenters to make a smooth transition to IPv6.

The technology will be demonstrated at Interop Tokyo 2012 (June 13–15 at Makuhari Messe) while connected to the Interop show network.

Fujitsu is proud to be able to offer a Japan-sourced technology to the worldwide Internet community for continued use of IPv4 during the full-scale transition to [IPv6](#), and will be proposing it to the IETF as a candidate for standardization.

Features of the SA46T/SA46T-AS Datacenter Solutions

1. Accommodate roughly 4.3 billion IPv4 addresses on an IPv6 network using SA46T

Today's mainstream VLAN technology, which accommodates customer systems using IPv4 addresses by logically dividing them to avoid [interference](#), can only accommodate up to 4,000 IPv4 networks, or about 1,000 companies (assuming 4 VLANs per customer). This solution can accommodate up to 4.3 billion IPv4 networks, meaning there is effectively no upper limit on the number of customer systems in a datacenter.

2. Share one IPv4 address among multiple servers using SA46T-AS

By using TCP and UDP port numbers as identifiers to allocate traffic,

one IPv4 address can be shared among some 65,000 devices, which can be either physical or virtual servers. This makes it possible to continue operating IPv4-based services even after the IPv4 address space has been used up, and even to add [servers](#).

Provided by Fujitsu

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