

NTT Communications

IPv6 Gateway Service

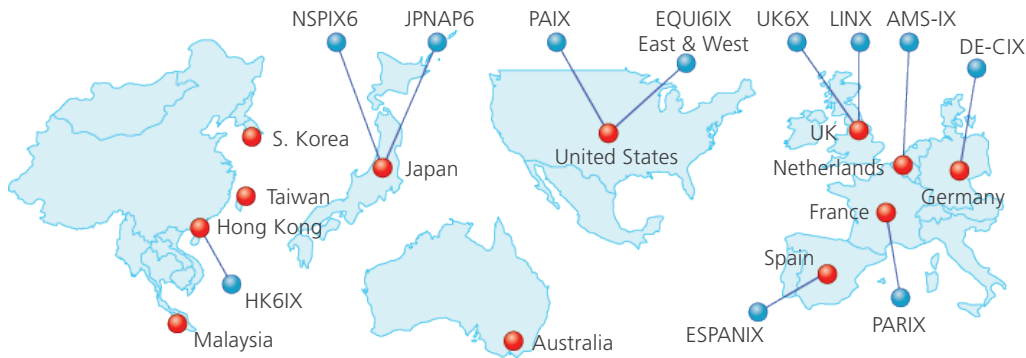
Make your transition to IPv6 seamless with NTT Communications.



It's Time

The most recent Burton Group Catalyst Conference portrayed the switch to IPv6 as one of the most important developments affecting major U.S. companies. The Internet as we know it is changing. And at NTT Communications, we're not just sitting back, watching the change set in, we're at the forefront, influencing its every turn. IPv6 is here.

At NTT Communications, we know IPv6. We've been directly involved with the development and deployment of IPv6 technology since 1996. Our IPv6 technology was the first of its kind available in the U.S. and the first globally. NTT Communications will give you access to the world's first commercial-grade Global Tier 1 IPv6 Backbone. Our backbone spans Asia, Europe, North America and Australia, demonstrating our true global connectivity.



NTT Communications' IPv6 Global Backbone

- IPv6 Exchange Point
- NTT Global IPv6 Service Availability

We invite you to join our network and experience the limitless freedom of our IPv6 Native, Tunneling, and Dual Stack Gateway Services. We also offer a Unified Threat Management™ IPv6 Managed Firewall solution to provide you with an even greater level of security. It's time to step into the future of the Internet.

Our Awards

NTT Communications was recognized by the World Communication Awards as having the Best Technology Foresight for its work in the field of IPv6 (2002) and Best New Service for our IPv4/IPv6 Dual Stack Service (2004). That's in addition to offering the Best Carrier Service in the Asia-Pacific (2002), being voted the Best Global Carrier (2004), and receiving recognition for Best Customer Care (2005) and Best Managed Service (2007). Boardwatch magazine also recognized NTT Communications for excellence in customer service and customer satisfaction. With the highest bond rating of any Telecom in the world, in 2007 NTT Communications was ranked the second highest Telecommunications Company on the Fortune Global 500 list (#40).

Make the shift with the world leader in IPv6.



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WHY IPv6?

IPv6 was designed to overcome the limitations of IPv4, one of which is that IPv4 only allows for 4 billion nodes on the Internet. The American Registry for Internet Numbers (ARIN) warns that at the rate the Internet is growing, we'll actually run out of available Internet space by the year 2012. With about 1.173 billion users (17.8% of the world's population) from a very diverse user base, the Internet needs room to grow.

Here's where the benefits of IPv6 come in. IPv6 dramatically increases address space from 32 to 128 bits, which provides 340 undecillion (340×10^{36}) addresses. This will allow for every person on the planet to be designated millions of IP addresses. That's anticipated to be enough space to accommodate the expansion of the Internet to include EVERY electronic device in the world – now and in the future.

Instead of forcing your network administrators to renumber their entire network every time you change ISPs, IPv6 utilizes prefix propagation, which makes renumbering entire networks considerably easier. And with IPv6, businesses can utilize automatic configuration to deploy desktops, laptops, and servers anywhere in a company's network worldwide without having to be on site. That makes for a measurably more productive use of time and money.

And the list of improvements goes on. IPv6 provides more flexible support for mobile computing devices, such as laptops, PDAs, cell phones, wristwatch computers, GPS tracking devices, and any other brilliant technology yet to be developed. IPv6 supports automatic transparent address reconfiguration while a device is in use, which provides better support for secure communications. IPv6 also improves on QoS support. Time sensitive applications, such as video or VoIP, can be prioritized over less critical applications.

IPv6 is gradually replacing IPv4. During the transition, IPv6 and IPv4 will co-exist, with traffic steadily moving to IPv6. Our global backbone has already been fully upgraded to run dual stack – both IPv4 and IPv6. Make your transition with NTT Communications at your pace.



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WHAT'S THE RUSH FOR IPv6?

On August 2, 2005, the Office of Management Budget issued Memorandum M-05-22, "Transition Planning for Internet Protocol Version 6 (IPv6)" stating that by June 30, 2008, all Federal Government agency network backbones must transition so they're able to support IPv6.

The memorandum requires that the agencies' network backbones be ready to transmit both IPv4 and IPv6 traffic, and to support IPv4 and IPv6 addresses, by the June 30, 2008 deadline. Agencies must be able to demonstrate they can perform at least the following, without compromising IPv4 capability or network security:

- Transmit IPv6 traffic from the Internet and external peers, through the network backbone (core), to the LAN.
- Transmit IPv6 traffic from the LAN, through the network backbone (core), out to the Internet and external peers.
- Transmit IPv6 traffic from the LAN, through the network backbone (core), to another LAN (or another node on the same LAN).

NTT Communications has been awarded a GSA Schedule 70 contract by the U.S. General Services Administration (GSA) for the offering of our IPv6 products. As the recognized leader in IPv6 networking, we're proud to be trusted by the U.S. Government as the first company on the GSA Schedule 70 offering IPv6 commercial off-the-shelf (COTS) transit services.

The Internet is moving in a new direction. Once the government switches over to IPv6, contractors, suppliers, and anyone who sells service to the government will follow their lead. Our IPv6 transit services are ready for every business prepared to take the next step into the future of the Internet.

The transition has already begun.



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REAL WORLD APPLICATIONS

With the improvements IPv6 brings, NTT Communications is poised for market leadership. Mobile phones will gain extended battery life for the 1.3 billion devices now in service. Traffic monitoring systems can adjust for traffic flow by holding lights green or red longer. Ad hoc networks can easily be created via IPv6 to allow for peer-to-peer networking and more secure connections from end-to-end, not just router-to-router with IPSEC inherent to the protocol. Healthcare monitoring systems, such as those for blood pressure, blood sugar, and heart rate can be better regulated, as can Supervisory Control And Data Acquisition (SCADA) systems, such as electric and water meters, and weather monitors. With IPv6, prefix propagation and automatic configuration simplify deployment of all networked devices.

And then there's shipping. IPv6 allows for tracking of individual items on massive shipments, when combined with RFID tagging, while IPv4 cannot spare the address space required. Imagine a container of supplies being shipped over seas, and some items are removed. IPv6 allows those individual items to be tracked, and found. Or think of airline baggage tracking. Forget the days of paying \$100-200 in claims for lost baggage. With IPv6 and RFID technology, each bag is marked and individually tracked to ensure its arrival at any destination. Or even library book tracking. Putting Wi-Fi and Mobile IPv6 into the RFID tag will allow the location of a book to be tracked both inside and outside of the library. Using IPv6, Wi-Fi, and LowPAN (e.g. Bluetooth), networks can be created to report a book's location when it's near a mobile phone.

In Japan alone, NTT Communications has supplied millions of IPv6 addresses for Fiber-To-The-Home (FTTH), the Next Generation Network (NGN), Japan's Public Switched Telephone Network (PSTN), and the DSL market. Subsequently, NTT Communications has partnered with the Japan Meteorological Agency (JMA) to develop an earthquake early detection system. A partnership of NTT Communications, Halex Corp. and VAL Lab in Japan, connects our IPv6 network, information distribution server, and receipt software to JMA's server so that the earthquake warning information can be distributed before the massive energy hits the people, buildings and city/community infrastructure. This system can be developed to initiate automated fire-suppression system, to stop elevators, close natural gas and petroleum pipeline valves, and to initiate a variety of other safety protocol.

At NTT Communications, IPv6 is not seen as the wave of the future, but more pointedly, IPv6 *is* the future of the Internet.

Our Protection Services

NTT Communications has improved upon the inherent security features of IPv6 with the creation of our Unified Threat Management™ IPv6 Managed Firewall solution. This solution provides our IPv6 customers with a higher level of security throughout their organization. With around-the-clock monitoring of hackers and other Internet-related threats, we've always got you protected.

From deployment to protection (and beyond), NTT Communications has you covered.



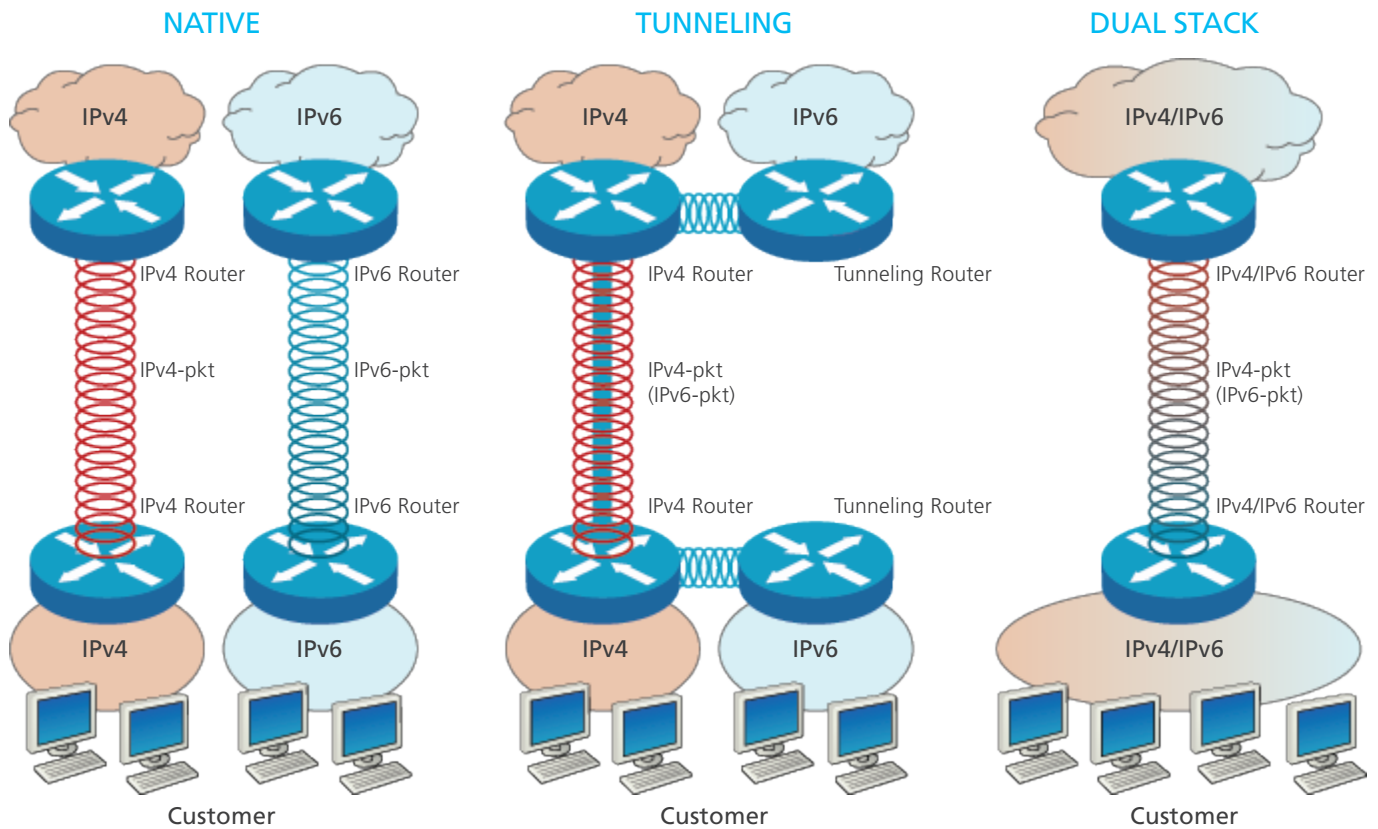
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NTT COMMUNICATIONS GLOBAL BACKBONE SERVICES



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NTT COMMUNICATIONS IPv6 SERVICE HISTORY

- 1996:** NTT Communications' labs start one of the world's largest global IPv6 research networks
- 1998:** Verio begins participation in PAIX native IPv6 IX
- 1999:** NTT Communications begins IPv6 tunneling trial for Japanese customers
- 2000:** Verio obtains IPv6 sTLA from ARIN
- 2001:** NTT Communications pioneers the world's first IPv6 connectivity services on a commercial basis
- 2002:** World Communications Awards (WCA) gives NTT Communications the "Best Technology Foresight" award for its IPv6 global products
- 2003:** NTT/Verio launches IPv6 Native, Tunneling, and Dual Stack commercial service in North America
- 2003:** Communications Solutions magazine names NTT/Verio IPv6 Gateway Services "Product of the Year"
- 2004:** NTT Communications' IPv6 Native and Dual Stack services become available around the globe
- 2004:** NTT Communications wins the World Communications Awards "Best New Service" award for IPv6/IPv4 Global Dual Service
- 2005:** Dual stack Virtual Private Server released, making NTT Communications the first ISP to offer an IPv6 Managed Firewall service
- 2006:** NTT Communications launches the IPv6 Transition Consultancy
- 2007:** NTT Communications is awarded GSA Schedule 70 contract for IPv6 IP transit



Contact us today to get started.

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