

The Importance of IPv6 for Wireless Network Providers

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In less than a generation, the Internet has grown from a lab experiment to the primary vehicle for communication, inspiring new technologies and spawning new industries at an astonishing rate. Each new product and platform designed to connect to the Internet shares common DNA in the form of Internet Protocol (IP) addresses. With the growing scarcity of IPv4 addresses and the increasing need to deploy IPv6, wireless network providers (among many others) need to prepare their products and networks in order for the Internet to continue to grow.

As wireless providers plan for next generation mobile networks, they must keep in mind that IPv4 exhaustion won't just limit growth, but may also impact and even impair their existing customers. Wireless providers must adopt and deploy IPv6, the newer and larger IP address version, in order to ensure continued growth.

While some providers (such as T-Mobile and Verizon Wireless) have already permanently enabled IPv6, there are still many network operators that have yet to obtain an IPv6 address block and begin working toward deployment. Providers can get started by determining if they qualify to receive IPv6 addresses directly from their appropriate Regional Internet Registry (RIR) or if they should work with their upstream Internet Service Provider (ISP).

If you have a large network and are located within the ARIN service region, which

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includes Canada, the US, and many Caribbean and North Atlantic islands, you can check community-developed policies to find out if you qualify. If you already hold IPv4 address space (or even if you don't), it is easy to get an IPv6 allocation, because ARIN's liberal IPv6 allocation policies have been designed to encourage IPv6 adoption. Once you know you're eligible for IPv6 resources, then it's simple to request resources.

In the next two or three years, there will likely be increasing numbers of IPv6-only customers. There are already cases where networks are predominantly IPv6-connected. In France, Korea, and Japan, these networks use IPv4 primarily for backwards compatibility. As this trend continues, the companies that provide direct IPv6 connections should progress smoothly, while others are left scrambling to catch up via last-minute efforts. Wireless providers that roll out IPv6 for their customers now will have the competitive advantage over those who choose to delay their inevitable IPv6 deployment.

For wireless providers looking to get started with IPv6, we suggest they check out resources such as the Internet Society's Deploy 360, NANOG's Best Current Operational Practices, and ARIN's IPv6 Info center and IPv6 Wiki.

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