Why Do You Block IPv6?

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What is IPv6 and how is it different from IPv4?

IPv4 is the 4th revision of the Internet Protocol (IP) which is used to identify devices on a network. While IPv4 is the most widely deployed Internet Protocol as it is a 32-bit system which means it only allows for 2^32 addresses, meaning there can be a maximum of 4,294,967,296 addresses or devices at any one time.

IPv6 is a 128-bit address system that allows for a significantly higher number of addresses or devices at a single time. By comparison, this works out as:

- **IPv4 (32 Bit)-** 4,294,967,296 addresses (or 1 address or device per every 1.62 people)
- IPv**6 (128 Bit)-** 340,282,366,920,938,463,463,374,607,431,768,211,456 addresses (which according to Steve Leibson is enough to "assign an IPv6 address to every atom on the surface of the Earth, and still have enough addresses left to do another 100+ earths.")

While various strategies have been deployed to extend the shelf-life of IPv4, the Internet will eventually be forced to move to IPv6 due to the limited addresses. Adoption of IPv6, however, has been slow – mainly due to upgrade costs, backward capability concerns, and sheer laziness. Consequently, although all modern Operating Systems support IPv6, the vast majority of websites do not yet bother to support IPv6.

This has led websites that support IPv6 to adapt to a dual-tiered approach. When connected to an address that only supports IPv4, they will serve up an IPv4 address, but when connected from an address that supports IPv6, they will serve up an IPv6 address.

Unfortunately, most VPN software fails to direct IPv6 traffic through the VPN tunnel, so when

you connect to an IPv6 enabled website, your browser will make an IPv6 DNS request outside the VPN, which is therefore handled by your ISP.

Private Internet Access offers IPv6 Leak Protection by automatically disabling IPv6 traffic while connected to the VPN. This ensures that no IPv6 traffic leaks out over your standard Internet connection when you are connected to the VPN. This includes 6to4 and Teredo tunneled IPv6 traffic. This will not block IPv6 on Windows XP if you have manually enabled it.

To protect our users from any compromises in their privacy and security, we have made it so that the new client (v1.0 and up) has IPv6 Leak Protection enabled by default and removed the option to disable it.