

## Competitive Exams: Current Affairs 2011: IPv6

### IPv6

The Internet is running out of addresses in the numerical format. The last blocks of addresses under the IPv4 or Internet Protocol version 4 system have now been allocated to different regional registries around the world.

The IPv4 system provides for a massive 4.3 billion numerical combinations but strong growth in communications in many countries has depleted the stock. A numerical address on the Internet is required in order to be found (as in the case of real property). The alphabetical web addresses of familiar sites such as Google or Facebook have a numerical sequence behind them, which is read by computers.

The IPv4 combinations that remain, which number only in the millions, will be exhausted soon, badly affecting Internet expansion.

The next version of the protocol, IPv6, has the capability of providing trillions of addresses, which can comfortably meet rising demand created by an explosion of connected devices such as smartphones. Already, more than two trillion addresses have been made available to network providers by the Internet Assigned Numbers

Authority.

India, which has been alert to the issue of exhaustion of IPv4 addresses, is pursuing a National IPv6 Deployment Road Map, with a 2012 deadline for central and State government departments and public sector units to become compatible.

Some of the Internet service providers have also been working to incorporate the new protocol in anticipation of a dry-out of IPv4 addresses.

A strong partnership between the government and other stakeholders will ensure that there are no islands of incompatible networks. There will be no switching off of existing operations: They will remain live while the new protocol will cater to growth needs.

Moreover, the economic importance of the Internet has encouraged major commercial entities to work for IPv6 compatibility.

Courtesy: The Hindu and Times of India

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