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Businesses should not delay move to IPv6, caution experts

While studies indicate North American IT managers don't yet feel any pressing need to switch over to IPv6, experts say it's advisable for businesses to get started now.

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by Brian Jackson



North American businesses should start switching over to Internet Protocol version 6 (IPv6) now, as in a little over four years there won't be any IPv4 addresses left, analysts say.



The IPv6 format was created in the mid-1990s when the [Internet Corporation for Assigned Names and Numbers](#) (ICANN) realized the four billion addresses available through the prevailing format - IP version 4 (IPv4) - was dwindling rapidly.

Marina del Ray, Calif.-based ICANN manages and coordinates the [Domain Name System \(DNS\)](#) to ensure every address is unique and all Internet users find valid addresses.

While studies indicate North American IT managers don't yet feel any pressing need to switch over to IPv6, experts say it's advisable for businesses to get started now.

"If you're expecting significant growth in your network...move to IPv6," says David Conrad, vice-president of research at ICANN.

The IPv6 format has been installed on six of the Internet's 13 root servers.

This means for first time ever, servers can translate domain names -such as <http://www.itbusiness.ca> - into hexadecimal format addresses.

Conrad notes that there isn't a mandatory day to switch off IPv4 addresses forever, and the two networks will run in parallel for years to come.

However, they are incompatible.

And by August 2012 it is estimated there won't be any more IPv4 addresses left.

The impending IPv4 address depletion isn't quite like the Y2K-crunch, say analysts.

The industry has had years to prepare for this and businesses should see a smooth transition if they start implementing change soon.

One Canadian expert says companies need to make sure their network hardware components such as routers and switchers are up-to-date, and they have the latest version of their OS installed.

“Basically, they’re going to have to figure out where their infrastructure interacts with the Internet,” says Scott Murphy, vice-president of Waterloo, Ont.-based consulting company Data Perceptions Inc.

“There’s also going to be a training element. IPv6 is significantly different from IPv4.”

He says businesses will also need to manually upgrade any in-house software that deals with IPv4 format addresses.

Another Canadian IPv6 consultant says larger enterprises and service providers are most affected by shrinking IP availability.

Larger enterprises need to plan ahead “because it starts with their purchasing,” says Marc Blanchet, president of Viagénie Inc., a Quebec-based group that advises businesses on IPv6 migration. “They need to verify their purchasing is IPv6 enabled and compliant.”

Larger and more complex infrastructure means more hardware to replace and programs to update, he notes. Service providers will want to make sure their customer’s hardware is up to date.

Blanchet says if service providers are not able to supply any more IP addresses to their customers. “that’s going to be a big limitation on their growth.”

Philadelphia-based [ComCast Corp.](#) is involved in the most public IPv6 support in North America to date, Blanchet says. The cable television and Internet service provider requires multiple IP addresses for each of its over 24 million customers.

ComCast initiatives, however, are not typical of companies in North America in responding to Internet address squeeze.

A survey from consulting firm BT INS in Mountain View, Calif. shows that 58 per cent of IT professionals in the continent have no intention of switching over to IPv6 and more than one-quarter had “no concern” over IPv4 address depletion.

Observers say such complacency may come from the greater availability of IPv4 addresses in North America as compared to elsewhere.

This apathy is evident despite the virtually unlimited number of addresses on offer with the new IPv6 format (2 to the power of 128 to be exact).

Plus, the new format was designed with built-in security and auto-configuration to be more alluring to network managers.

The American Registry for Internet Numbers warned that migration to IPv6 is necessary in last May.. The European Internet Registry followed suit last October.

“At some point in time, you’ll have to do something,” Blanchet warns companies. “The clock is ticking.”

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