Kiwis - where the hell are they!

Presented by
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InternetNZ
October 2010

InternetNZ
www.internetnz.net.nz

www.ipv6.org.nz

Activity in New Zealand

- IPv6 Task Force set up
- Trust formed, joined IPv6 Forum
- Internal Affairs
- Funding from Government and InternetNZ
- Review of Status of Task Force members
- Survey

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Discussion Groups

The IPv6-techsig Archives

You can get more information about this list.

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June 2009:	[Thread] [Subject] [Author] [Date]	[Gzip'd Text 13 KB]
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sign up at www.ipv6.org.nz
- ipv6_maillist@internetnz.net.nz
- ipv6-techsig@internetnz.net.nz

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Wiki

page | discussion | view source | history

Design Resources

Alphabetical order. No warranty expressed or implied. Feel free to add your organisation

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- Printable version
- Permanent link

Company Name	Company IPv6 Contact	IPv6 Policy Development	IPv6 Architecture	IPv6 High Leve Desig
Braintrust Ltd	Nathan Ward	Yes	Yes	Yes
Catalyst IT Ltd	Andrew Ruthven	Yes	Yes	Yes
Cisco Systems	Richard Wade	Yes	Yes	Yes
eintellego Pty Ltd	Skeeve Stevens	Yes	Yes	Yes
FX Networks	Neil Fenemor	Yes	Yes	Yes
Google, Inc	Lorenzo Colitti	Yes	Yes	Yes
IPv6Now	Kevin Karp	Yes	Yes	Yes

TechSIG wiki.ipv6.org.nz
- deployment assistance
- local tech resource links

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IPv6 Coordinator

Example Network / Internet Service Provider   Aug 2010

	Soft Actions	Hard Outcomes
Current/Done	**Current Soft (as at Aug 2010)** Decision to begin adopting IPV6 in 2009 Member of Taskforce IPV6 Embedded in investment plans where network and services are to be modified IPV6 Embedded in Technology refresh cycles Focus on vendor product roadmaps & procurement Completed network audit Assessing requirements for V6 compliance for VOIP	**Current Hard (as at Aug 2010)** IPV6 on Core network complete IPV6 International transit network complete Service available to some customers via Tunnelled access solutions
Future/Intended	**Future Soft** Training capability for Operations, Service management and Enterprise Soln's groups Maintain focus on Vendor roadmaps Optimize investment in new equipment Manage introduction of IPV6 Services to market	**Future Hard** Customer care and management processes IPV6 Connectivity to new consumer customers Provision of various IPV6 services

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IPv6 Coordinator – feedback – TF members

- Agreement needed on CPE standards
- Priority to upgrade websites
- Vendors/purchaser relationship critical
- 18 months for IPv6 competency
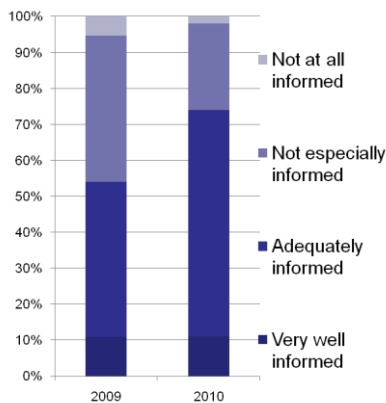- Lack of awareness of training need

InternetNZ
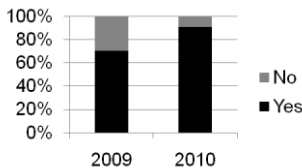www.internetnz.net.nz

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IPv6 Readiness Survey 2010

- 100 CIOs in NZ

- 46% response rate up from 37%
- 29% > 5000 desktops
- 74% public sector up from 60%
- 26% private sector down from 40%

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Good news!

"A significant jump in those at least adequately informed to 74% from 54%"

Legend:
- Not at all informed
- Not especially informed
- Adequately informed
- Very well informed

2009   2010

- No
- Yes

2009   2010

"91 percent were aware of the run-out predictions, up from 70%"

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The not so good news!

"Most management (71%) remain blissfully unaware of IPv6 as a risk or opportunity"

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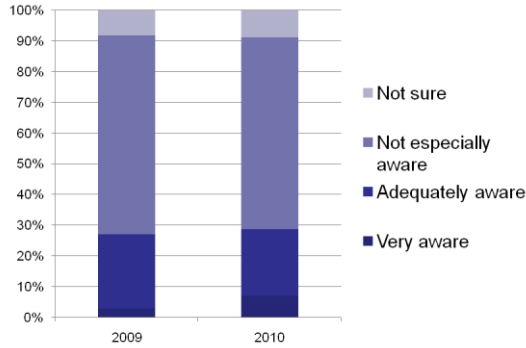
"Most have plans to implement IPv6 website / public Internet services, including email & DNS"

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www.ipv6.org.nz
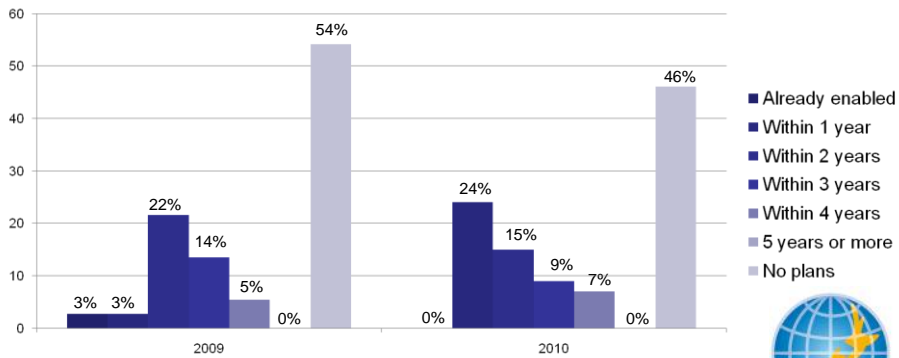
"Over half still have no plans for IPv6 on internal networks"

Legend:
- Already deployed
- Within 1 year
- Within 2 years
- Within 3 years
- Within 4 years
- 5 years or more
- No plans

2009: 3%, 5%, 19%, 11%, 3%, 3%, 57%
2010: 4%, 17%, 13%, 2%, 7%, 2%, 54%

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IPv6 Network Readiness

Legend:
- Don't know
- Does not support IPv6
- Can be upgraded to support IPv6
- Supports IPv6
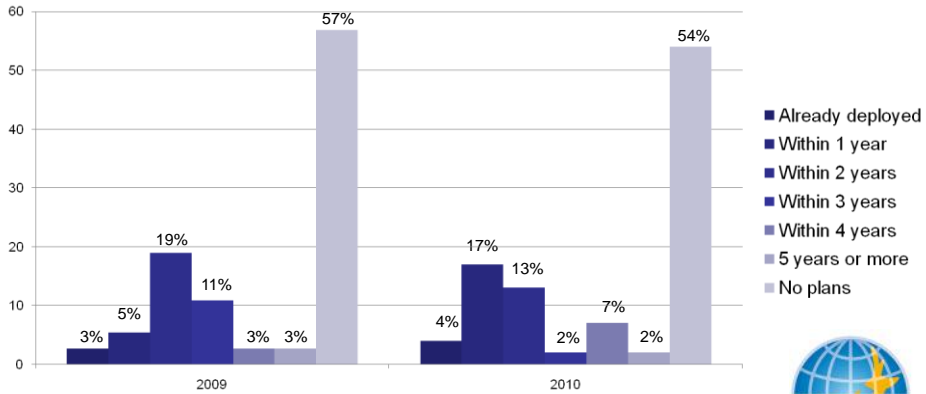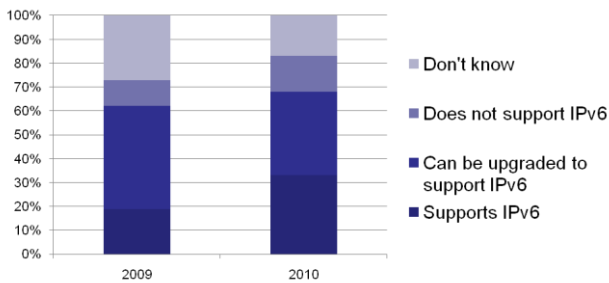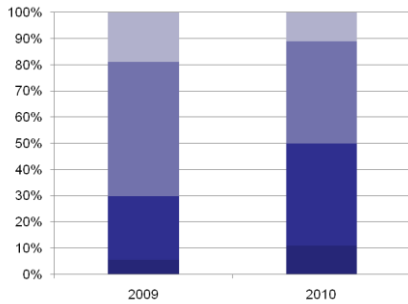
"More networks (68%) can now support IPv6 or be upgraded but still a few "don't knows" and more that have identified they can't"

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RFPs and RFIs

"For half, IPv6 is now a factor regarding purchasing decisions, including RFPs and RFIs"
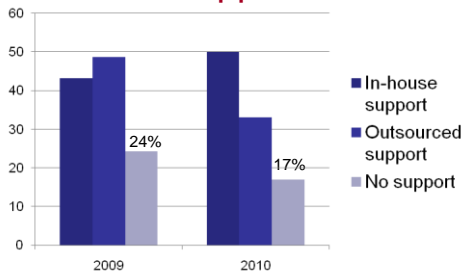
- Not important at all
- Not especially important
- Very important
- Extremely important
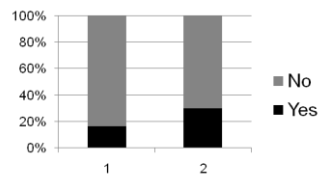

"54% now include IPv6 in their roadmaps, up from 41%"

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Network support

- In-house support
- Outsourced support
- No support

"Plenty of IPv6 skills / IPv6 network support, either in-house and/or out at 83% up from 76%"

Telco briefing

- No
- Yes

"70% say teleco providers haven't briefed them on their plans to support IPv6"

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What benefits/difficulties have you encountered?

- DNS readiness. People understanding that problem and its implications
- **Many old in-house developed apps.**
- Exhaustion of the IPv4 address space will not affect internal ops for a long while but fragmentation of that address space will complicate data exchange
- **Vendor equipment had all the commands to configure, but did not actually support IPv6.**
- High cost of equipment.
- **Overcoming educational issues, fitting it in with other priorities**
- Getting the technical staff up to date across the faculties.
- IPV4 to V6 interworking.

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What would help speed up your IPv6 deployment

- Talking to our Outsourced Vendor
- **A business driver or benefit, or being forced to by a provider**
- Greater industry awareness and communication
- Understanding of the risk/issue
- **More information about IPv6 at technical and senior management level on the potential impacts, costs, benefits, and training available**
- Understanding how this could/will impact on organisational capability
- Improved solutions governance. Defined plan for asset renewal for older applications.
- **New public-facing business or service opportunities.**
- Router/switch upgrades (any new kit already requires IPv6 compatibility).
- Better support from home ISP's.
- IPv6 consideration in all-of-government infrastructure initiatives.
- **Supplier-led initiatives to offer mobile IP network services on IPv6 with address translation**
- An escalation in the need to roll it out earlier. We're working to a plan, plus we have heaps of IPv4 addresses, so the need will be driven by external parties
- Commitment of funds to a LAN upgrade
- More information in mainstream media to raise awareness at senior management level. Making management more aware in IT and business publications

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Other comments

- **Organisations need to understand how IPv6 affects them. We recognise the issue as initially being external facing web site**
- What is IPv6 !!!   ???
- **We have an allocation of IPv4 addresses that more than met our needs and internally we use private addresses so don't know why we need to change? I imagine that we may look to change when we do a PC refresh in 2 - 3 years.**
- RFC 1918 generally means that traditional enterprise networks are not a strategic focus for IPv6... ... better-understood NAT+RFC1918 solutions are likely to prevail instead
- **Don't think IPv6 implementation and the lack of IPv4 addresses will be an issue for large organisations like ours.**
- the key for us will be the adoption rates and the effect of IPv4 addresses running out has on smaller organisations that we deal with and on ISP's
- **One of the most important security aspects is the challenge of making sure that every thing we do for IPV4 we are able to do for IPV6**

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NZ Statistics Department ISP Survey

- 63 ISPs responded - 66 last year
- 17% had IPv6 available to subscribers
- 22% have no plans to provide IPv6
- Main barriers to installing: lack of resources (50%), lack of user demand (44%), other business priorities (44%)

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Case Studies and Developments

Department of Internal Affairs

THE DEPARTMENT OF INTERNAL AFFAIRS
Te Tari Taiwhenua

.govt.nz DNS and Website

dia.govt.nz

- IPv6 address schema
- Audit Network for readiness
- dual stack government website.
- Address all sites LAN interfaces on one.govt WAN routers with dual stack
- Present learnings to govt CIOs

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IPv6
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Case Studies and Developments

WAND NETWORK RESEARCH GROUP

AMP MEASURING SYSTEM

erg.wand.net.nz

| ipv4 | ipv6 |
| latency | loss | hops | mtu |

Destination

Source:	auckland	fx-aknnr	inspire	karen-auckland	karen-christchurch	karen-dunedin	kar-nap
auckland		278		0	18	22	6
catalyst							
citylink							
csotago							
fx-aknnr	278		8				
iconz							
inspire		8					
massey-pn	13	163	12	11	21	25	1
maxnet							

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Case Studies and Developments

**CLEARFIELD
SOFTWARE**

**WHOLE
NETWORK**

clearfield.com

- Adopted IPv6 in June 2010
- No enquiries from clients
- US upstream hosting provider not capable
- Australian upstream hosting provider is capable

Case Studies and Developments

**DTS
(ISP)**

**EXTERNAL
FACING**

dts.net.nz

- Adopted IPv6 on Internet facing systems.
- Peering at WIX and APE
- IPv6 tunneling to the US
- Cost of upgrading - zero

Case Studies and Developments

FUJITSU

HOSTING FACILITY

nz.fujitsu.com

- Adopting IPv6 in hosting facility – 80-90% there.
- To build an IPv6 DNS server
- Have native IPv6 connectivity
- Use Allied Telesys switches and Fortinet firewalls

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Case Studies and Developments

WORLDXCHANGE

ISP

wxc.co.nz

- Been dual stack for 4-5 years
- Consumer trial – 35 people
- General switch-on soon

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