Australia IPv6 Summit

DTS Case Study

Overview

- Catalyst for IPv6 adaptation
- Readiness assessment
- Planning
- Implementation
- Informing Clients and partners
- Outcomes/Benefits

DTS Introduction

Operating since 2001, we focus exclusively on business and public sector organisations.

Suppliers of:

- Internet
- Managed IP WAN's
- Verse IP Telephony
- Managed Services
- Hosted Services

Expanded to Australia in 2007, now have clients in all major centres within New Zealand and Australia.

Catalyst for IPv6 adaptation

Rather than diminishing IPv4 resources, clients have been key drivers as they look to future proof services.

Clients driven to request IPv6 services based on IPv4 address space exhaustion becoming widely publicised.

Research, Network Review and Planning

Research including guides, best practice documentation and IPv6 related RFCs.

Involved examining the following:

» routers & switches
» Web servers
» Mail Servers
» DNS servers and associated services
» Radius
» International gateways
» Domestic peering
» IP address management systems
» IP accounting platform (NTMS)
» Circuit providers

Additional Drivers for IPv6

Tenders started to list IPv6 capability as key requirement

Opportunity to be early adaptors and market ourselves as such

Existing client expectations and market awareness

Not being early adaptors would be costly in the long run. Possibility of losing both potential and existing business.

How we did it

Network Rollout plan and documentation

Upgrade IOS on routers and switches where required

Core network routing and prefix allocation per vlan/interface

Hurricane electric tunnelling and verification of IPv6 reachability

IPv6 static address assignment for name servers and verification of name resolution over IPv6.

IPv6 Auto addressing of all other servers, configuration of IPv6 name servers on all server resolver configs and verification of IPv6 reachability of them.

Setup reverse DNS zone files for our IPv6 prefixes and delegate reverse DNS at APNIC portal , configuration of AAAA records for all servers, move DTS domain and addition of AAAA glue records.

Checking to ensure that IPv6 works with mail server, SMTP, POP, IMAP.

Both Plesk and cPanel have chosen to wait to some arbitrary later date to add IPv6 as a feature to their products and as a result the IPv6 enabled web hosting server would be a simple installation of 'virtualmin' on an IPv6 enabled Centos host.

Post Implementation Tasks

Internal education and re-education of the sales and technical teams

Be careful to disable router advertisement on customer and service provider facing interfaces unless you intend to use stateless auto configuration.

Production Environment Deployment

First customer, Harmonic Aotearoa, was eager to get going and happy to be part of initial roll out.

Short time later our primary provider of International bandwidth became natively IPv6 capable and we switched off our Hurricane Electric tunnel.

Subsequent clients have migrated to IPv6 via DTS, and with DTS's help.

Getting the Message Out

It was key that we derive real benefit given the resource put into this project.

Social media, primarily Twitter and Facebook, have provided us with the medium to reach a large audience.

Outcomes

Zero rating IPv6 traffic to encourage adaptation has gained us plaudits from within the industry.

We have become the IPv6 web hosting provider for Internet NZ.

A number of clients now running IPv6, and they are relating their positive experience widely.

Brand awareness has increased, twitter following has grown, and website visits have risen drastically.

Questions?