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DTS IPv6 Case Study

Brendan Ritchie - CEO

Overview

- **DTS introduction**
- **Catalyst for IPv6 adaptation**
- **Decision to push forward – Key factors**
- **Planning/Enabling**
- **Offering IPv6 in production environment**
- **Outcomes/Benefits**

DTS Introduction

dts

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.

Additional Drivers

FOMO - Government and large corporate tenders were starting to include IPv6, or IPv6 roadmap, as a requirement

Client/industry partner expectation and growing market awareness due to widespread reporting on the issue in mainstream media

Value for the DTS. Ability to differentiate ourselves and add value to existing services

Social media. We always need good content with key messages for our blogs, Twitter and Facebook

Growth in managed router revenue. Outdated CPE would need replacing, providing opportunity.

Targeting our key demographic. Most interest coming from bigger players, which matches our idea of an ideal client

Decision to Push Ahead

Cost versus return, as always, biggest determining factor.

To understand likely costs we needed to assess….

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

We had issues…

Commercially available web server software not v6 capable.

IP database could not deal with v6 at all, so we looked hard at open source options.

IP accounting platform was never designed with v6 in mind.

International transit provider not natively capable until June 2011, tunnel to Hurricane Electric needed.

Planning

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

Sourcing guiding content and documenting internally.

Pricing – v4 vs. v6 address space and data charges.

Services to be Enabled

- 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.
- Setup reverse DNS zone files for our IPv6 prefixes and delegate reverse DNS at APNIC portal.
- IPv6 Auto addressing of all other servers and verification of IPv6 reachability of them.

Services to be Enabled (cont'd)

- 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. Not ideal but necessary until cPanel or Plesk get their act together.
- Configuration of IPv6 name servers on all server resolver configs
- Configuration of AAAA records for all servers
- Move DTS domain and addition of AAAA glue records.

Getting the Message Out

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

Social media, primarily our blog and Twitter, 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 and NZ IPv6 Task Force

A number of clients now running IPv6, all new clients have /56 allocated as standard.

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

Summary/Questions?