

IPv6 at Multilink



July 2009, Port of Spain

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Agenda

Global Telecom environment in Haiti
Multilink

IPv6 @ Multilink

Motivations

Network

Services

Challenges

The future of IPv6 in Haiti

Global Telecom environment in Haiti

3 cellular operators (3 millions)

3 main ISPs (WISP)

Satellite links in country side

IXP with four participants (AHTIC)

Transit

Microwave Dom Republic

Satellite

Fiber Teleco – Batelco ?

Multilink

WISP - 2003

600 Customers (Corporate...)

Services (3,5 GHz)

- Layer 2 VPN

- Internet

- Lease line

- Colocation

Presence

- Port au Prince and Cap Haitien

Founding member of AHTIC, Teralink...

One of the four participants at the Haitian
IXP

Motivations to go to IPv6

IPv4 exhaustion

Gain experience on new technology

Use IPv6 ourselves before pushing it on customers' network

IPv6 integration as part of network restructuration

The approach

Get IPv6 connectivity and prefix

Elaborate an address plan

Deploy IPv6 to servers and users

Set up IPv6 security

Integrate IPv6 to services

Collect statistics

Test, Implement, Evaluate, Validate and Deploy ⁶

Resources

Operational : Tuesday, May 5th, 2008
at 23:30

Ownerid: HT-MUSA-LACNIC

aut-num: 27767

inetnum: 200.80.96/20

Inetnum: 200.80.112/20

inetnum: *2001:1370::/32*

IPv6 -

www.cidr-report.org

27767 MULTILINK SA

Adjacency: 1 Upstream: 1 Downstream: 0
Upstream Adjacent AS list
[AS6939](#) HURRICANE - Hurricane Electric, Inc.

Announced IPv6 Prefixes

Rank	AS	Type	Originate	Addr Space (pfx)	Transit	Addr space (pfx)	Description
882	AS27767	ORIGIN	Originate:	4294967296 /32.00	Transit:	0 /0.00	MULTILINK SA

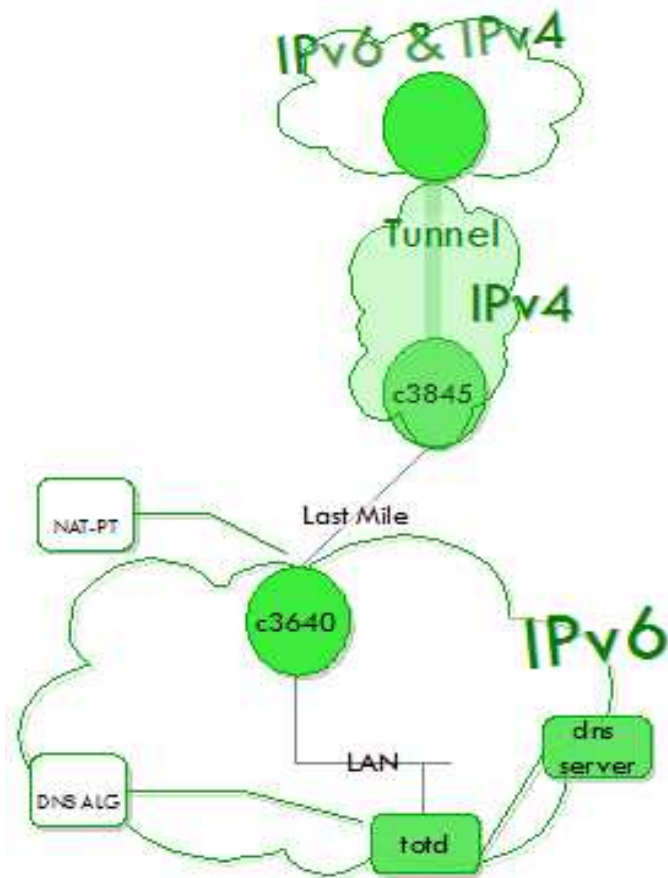
Aggregation Suggestions

This report does not take into account conditions local to each origin AS in terms of policy or traffic engineering requirements, so this is an approximate guideline as to aggregation possibilities.

Rank	AS	AS Name	Current	Wthdw	Aggte	Annce	Redc
1027	AS27767	MULTILINK SA	1	0	0	1	0 0.00%

Prefix	AS Path	Aggregation Suggestion
2001:1370::/32	4777 2500 6939 27767	

IPv6 Network



Many thanks
to :



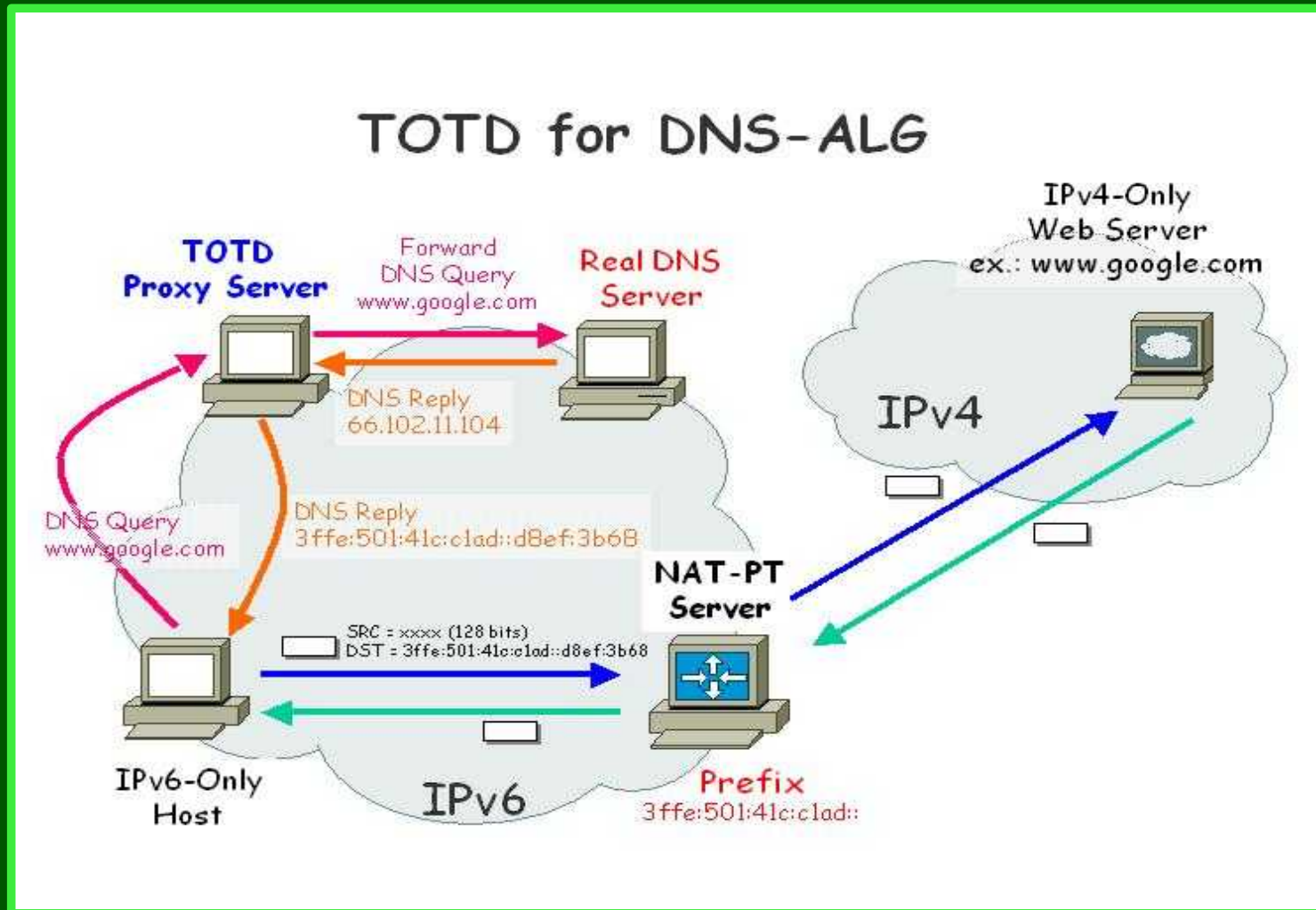
NAT-PT rfc2766

NAT-PT "Network Address Translation + Protocol Translation" uses a pool of V4 addresses for assignment to V6 nodes on a dynamic basis as sessions are initiated across V4-V6 boundaries. The V4 addresses are assumed to be globally unique.

NAPT-PT "Network Address Port Translation + Protocol Translation", would allow V6 nodes to communicate with the V4 nodes transparently using a single V4 address.

rfc2766 has been deprecated by rfc4966 - Reasons to Move the Network Address Translator - Protocol Translator (NAT-PT) to Historic Status

Trick Or Treat Daemon (TOTD) DNS-proxy for IPv4/IPv6 translation



Services

IPv6 Connectivity
IPv6 – Last Mile

DNS, NAT-PT...

next...

Other services (reverse DNS, dhcpv6,
pop3, smtp, http, ntp, jabber ...),
Routing protocols
IPv6 deployment at the core Network
Peering
Security
Native IPv6 Transit

Challenges

Resource constraints

people

time

money

why try to BREAK something that works
fine (IPv4 DNS) ??

Incentives to go v6

The future of IPv6 Adoption in Haiti

Training

Local – University – ccTLD – AHTIC

Regional (WALC, LACNIC, NANOG, IETF,...) and

Mailing list

Quick win projects

ISP – IXP

Government

University – ccTLD

Develop services

IPv6 Task Force

Capacity Building

Date: 28 y 29 de Agosto de 2008

Venue: Hotel Montana, Sala Rossignol

Organizer: AHTIC – LACNIC

Reference: Taller IPv6 de AHTIC

<http://lacnic.net/en/eventos/ipv6/haiti.html>

~ 30 Participants

ISPs

CCTLD

Private/Public institutions

University

Government



IPv6 Tour 08/09



August 28-29, 2008

Port au Prince, Haiti

Mèsi

thanks