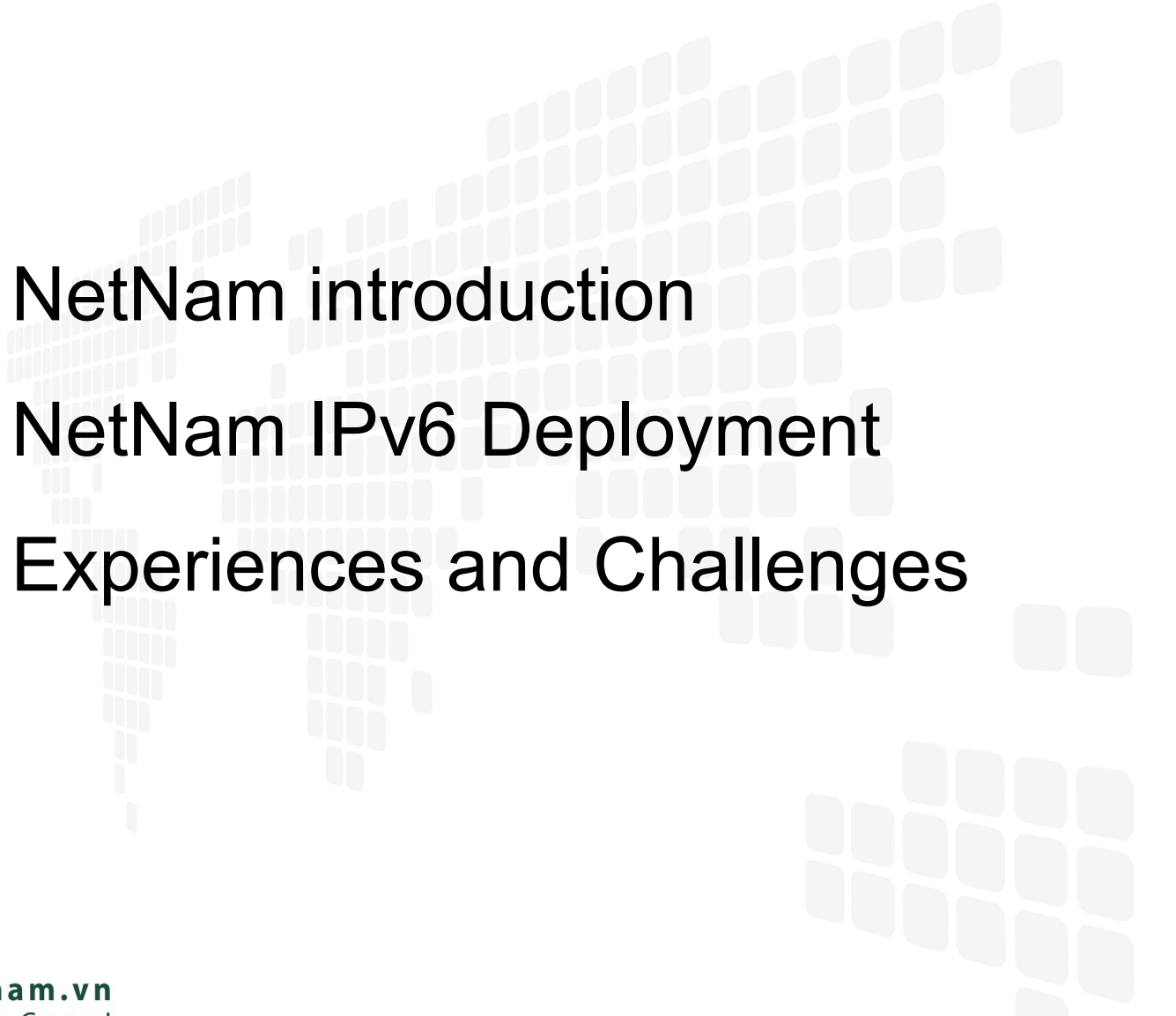




 www.netnam.vn
Your Net, We Care!

NetNam IPv6 Deployment: Experiences and Challenges

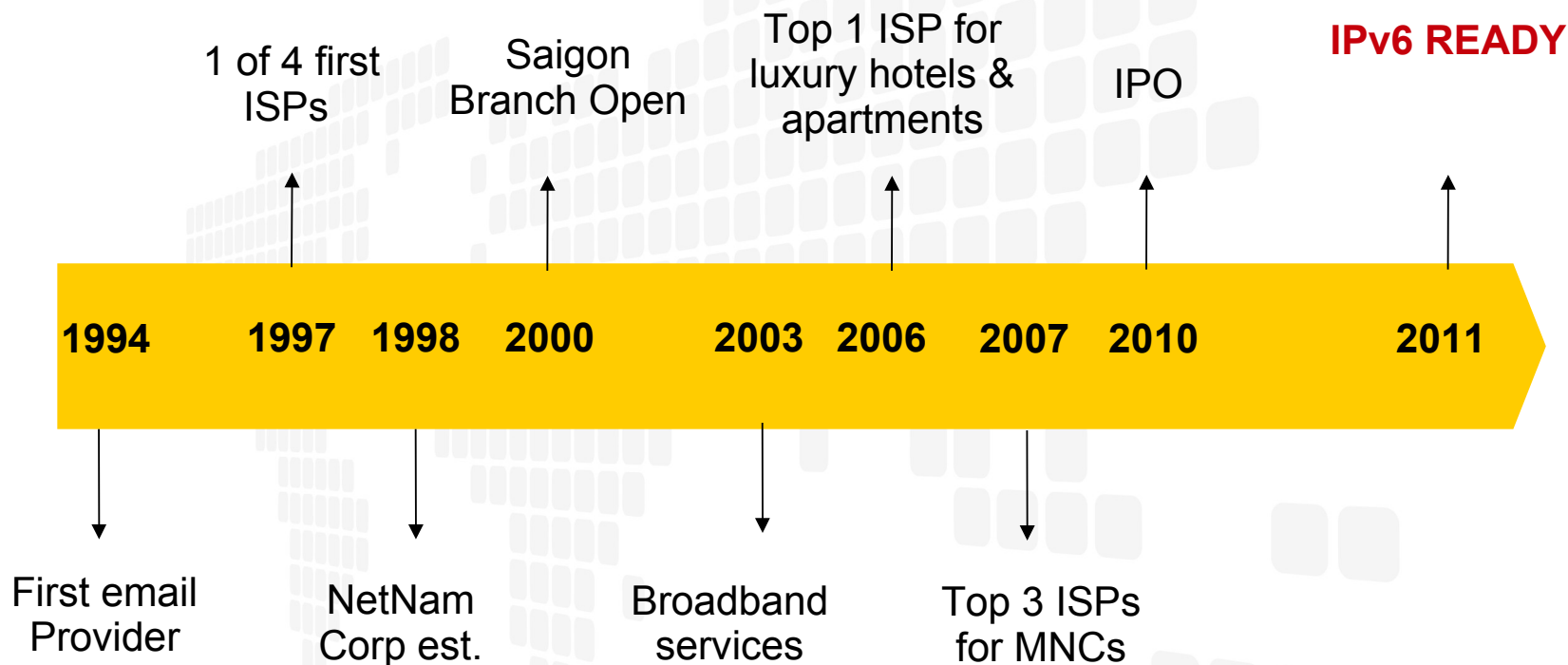


NetNam introduction

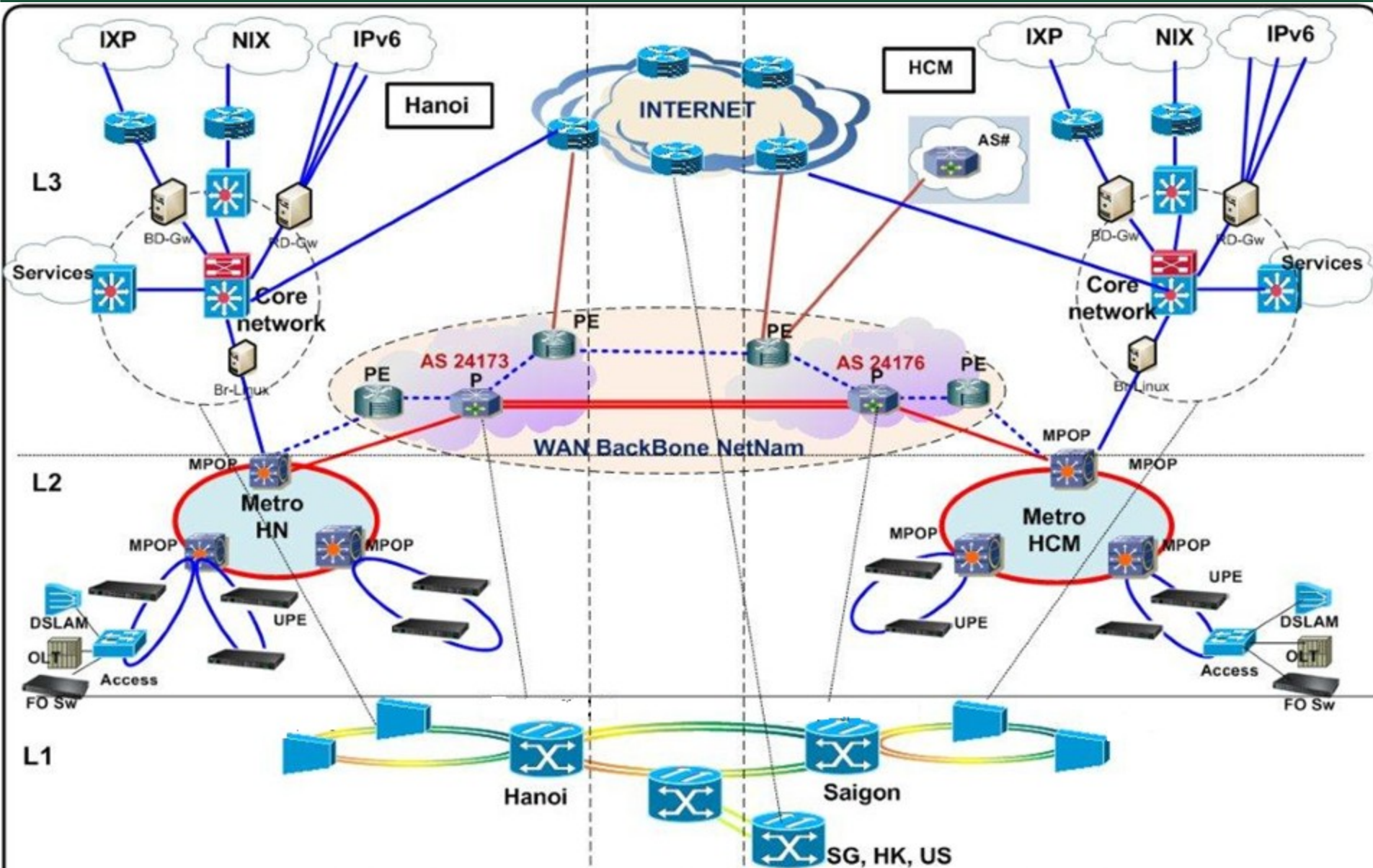
NetNam IPv6 Deployment

Experiences and Challenges


NetNam ISP milestones



NetNam Network Diagram



NetNam – Overall network infrastructure



NetNam IPv6 deployment: Experiences and Challenges

NetNam IPv6 Deployment Roadmap

Phase 1

Phase 2

Phase 3

**IPv6 Research
Evaluation, decision**

IPv6 Experimental

**Deployment
Services Provision
Solution Provision**

2002

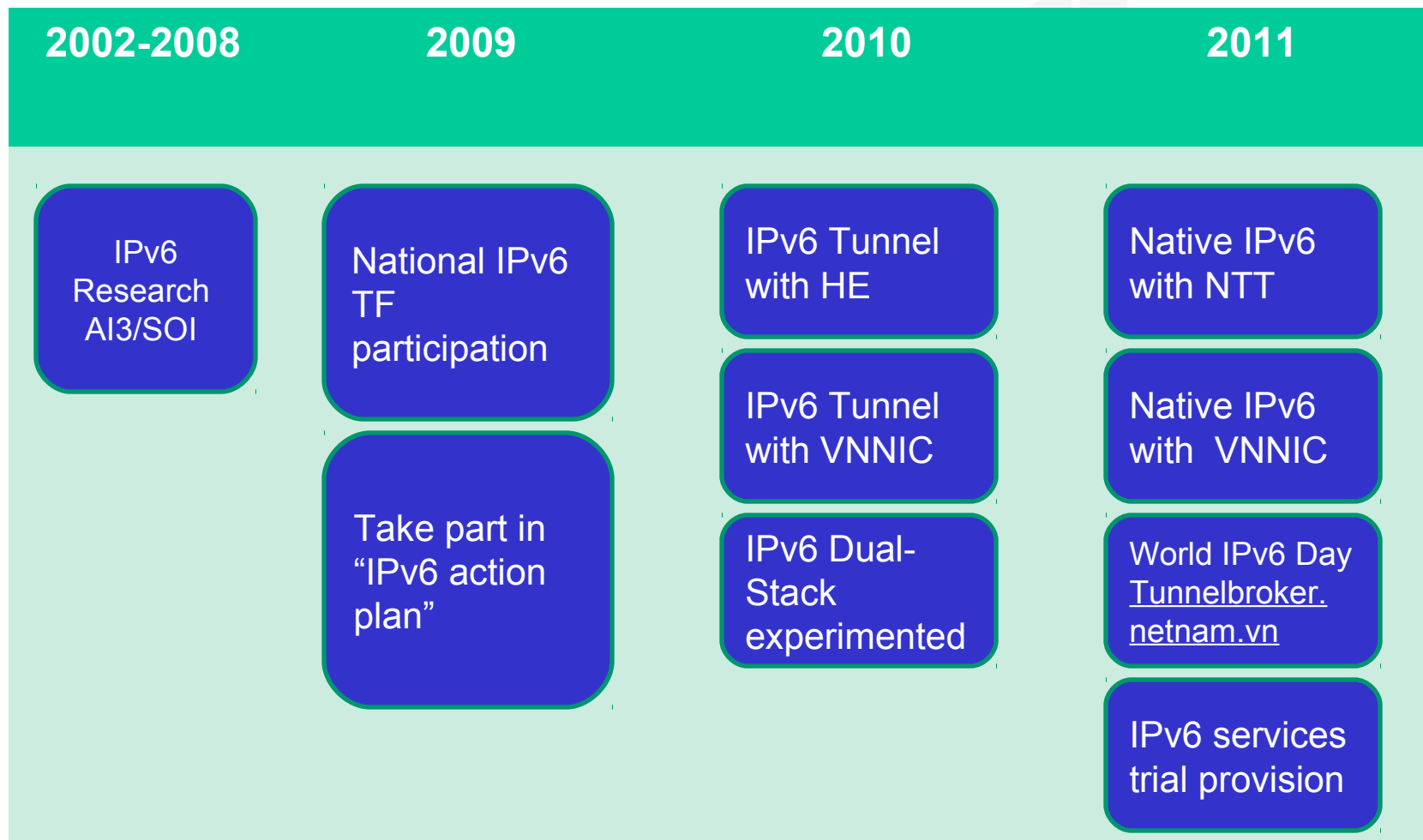
2009

2010

2011

2015

NetNam IPv6 Deployment Roadmap (cont.)



NetNam IPv6 Deployment Roadmap (cont.)

2012-
2015

Full support system for IPv6

Provide IPv6 connections

Provide IPv6 services

Provide IPv6 transition services

IPv6 deployment solutions

IPv6 Deployment solution for Edge network

- Dual stack
- IPv6 BGP with NTT

IPv6 Deployment solution for core network

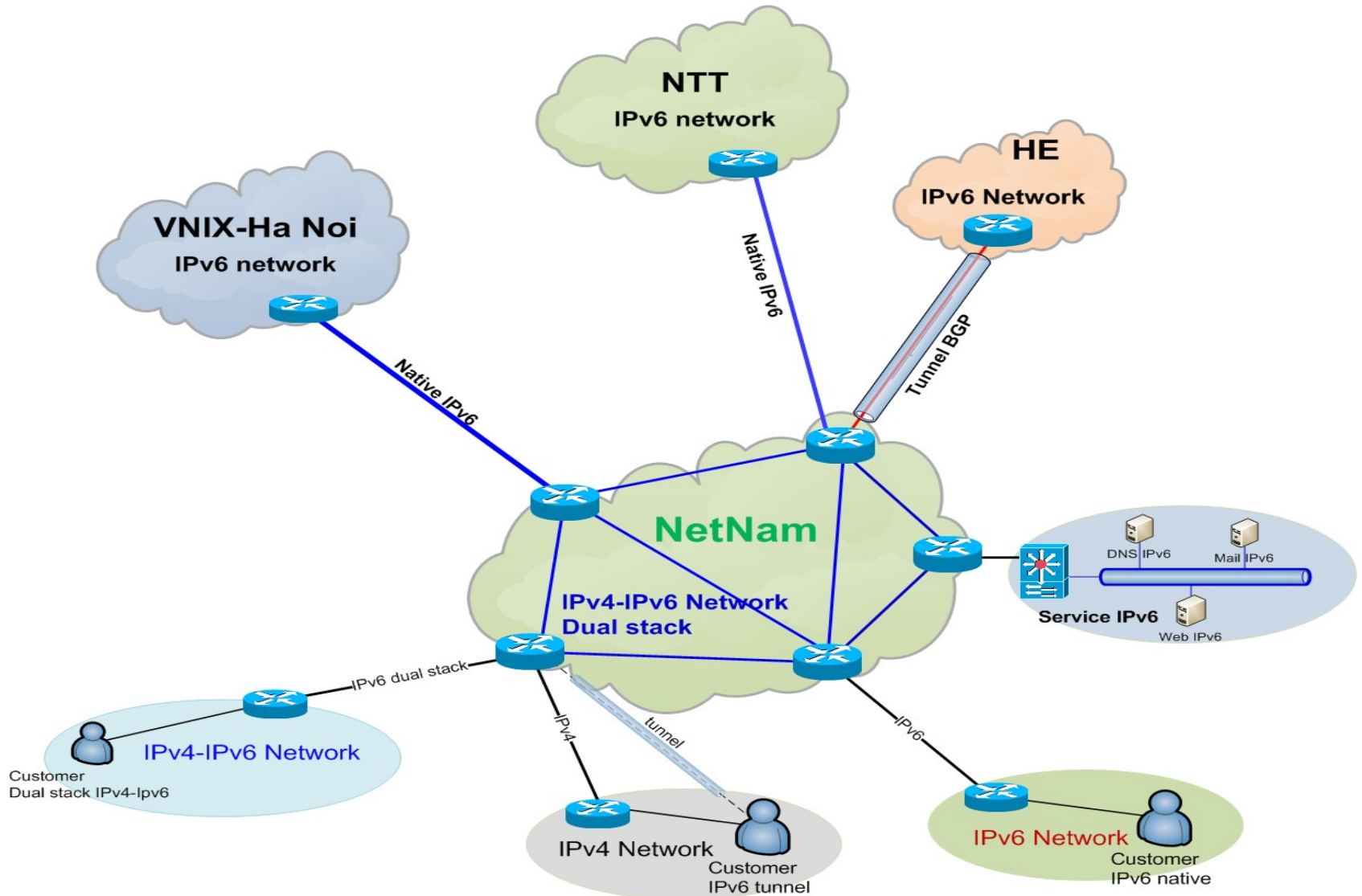
- Upgrade core network to support IPv6
- Use IPv6 tunnel to connect IPv6 clouds through IPv4 infrastructure in transition time

IPv6 deployment solution for service network

- Upgrade all servers to IPv6 Dual Stack
- Services IPv6
 - DNS
 - Email
 - webhosting

IPv6 deployment solution for access network

NetNam IPv6- Ready



Net access services:

or directly connect customers (Leasedline, Fttx,....)

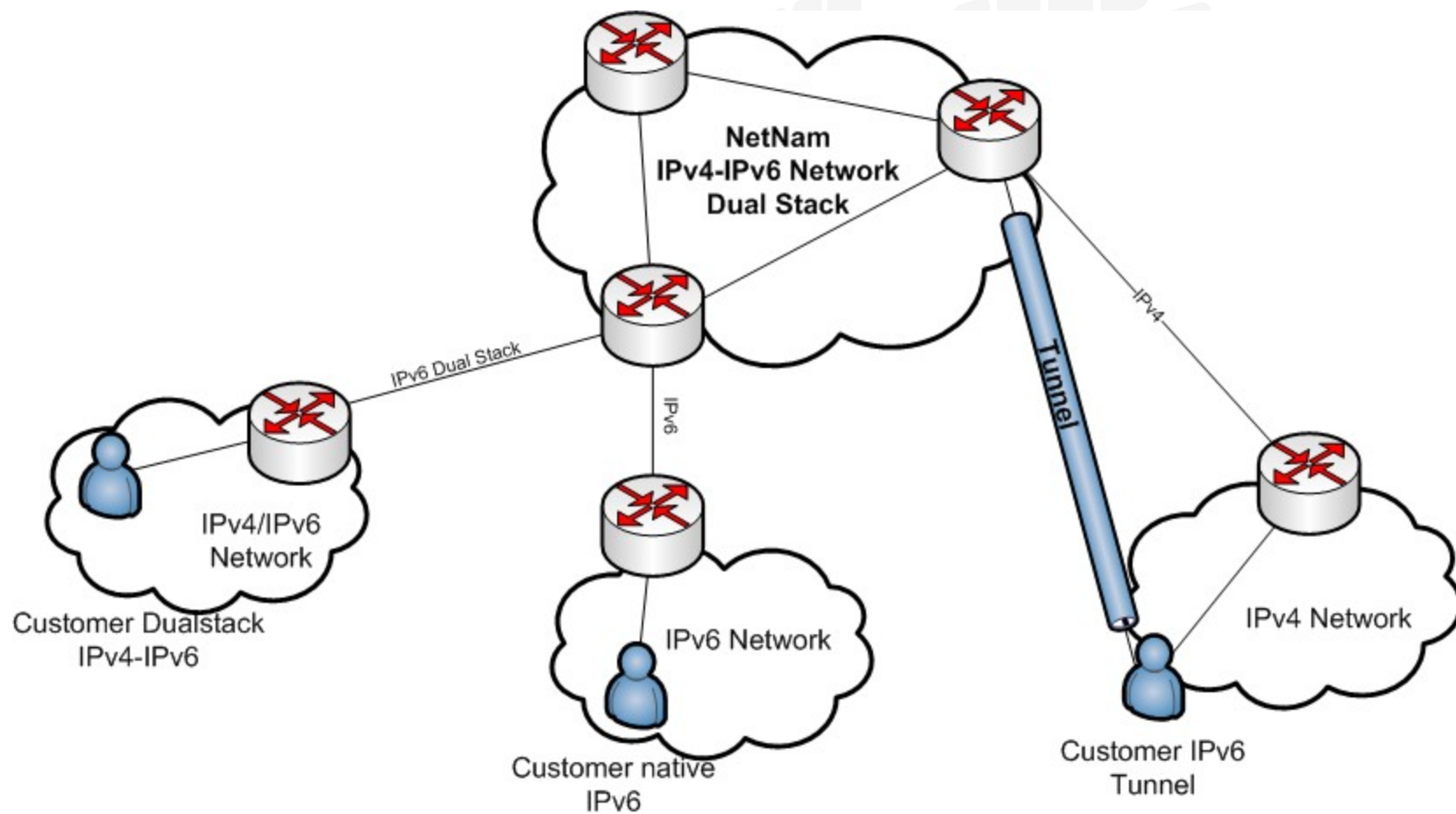
S transit customers (native, dual stack)

unnel

ng, VPS, Colocation....

service

Internet access services



NetNam IPv6 services - Tunnel Broker

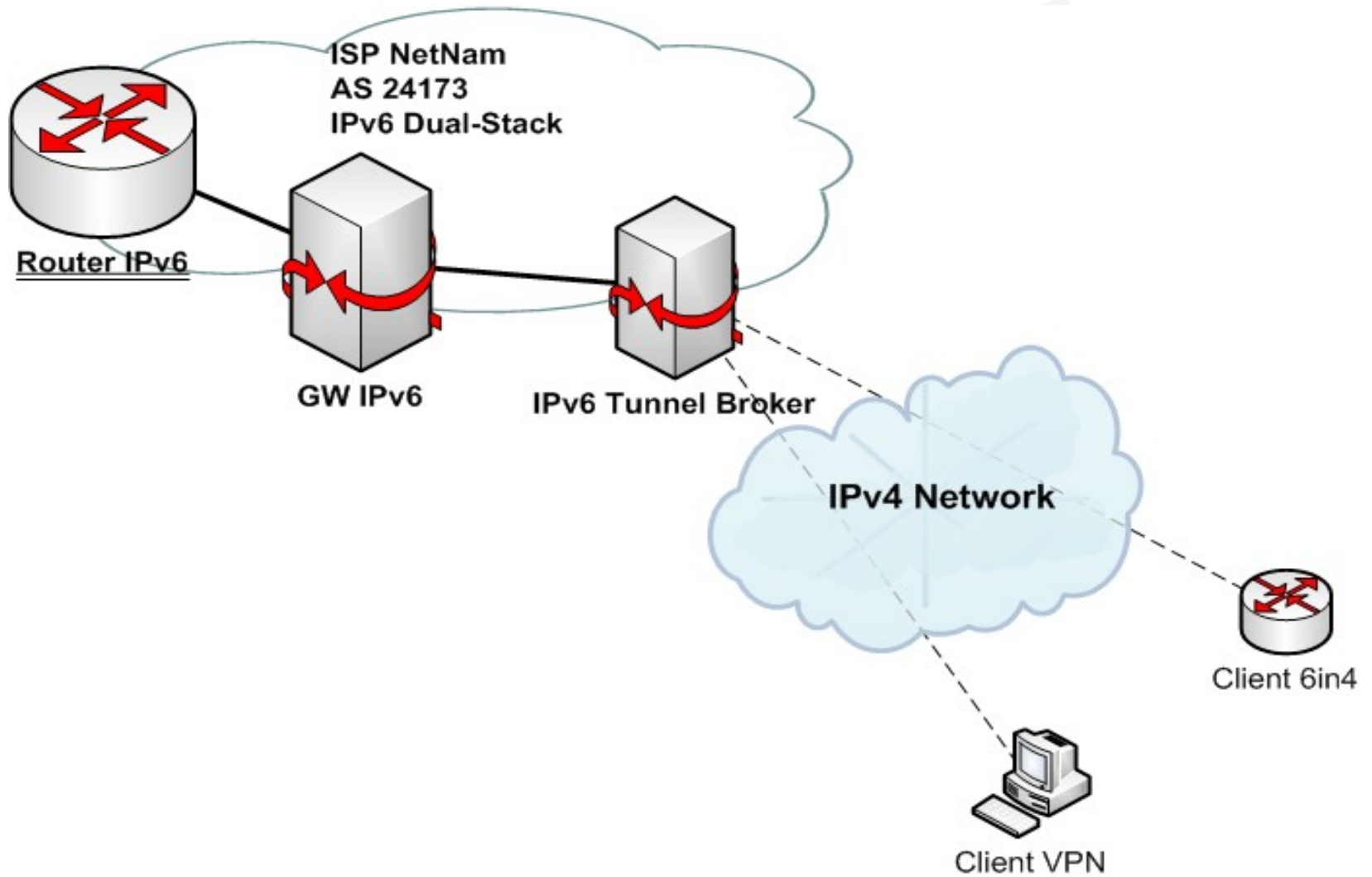
<http://tunnelbroker.netnam.vn>

- Provide IPv6 Client VPN for end users
- Provide 6in4 tunnel for Website/server,... which want to establish IPv6 connections



Tunnel Broker 

Tunnel broker NetNam



NetNam IPv6 services

Hosting , VPS, Colocation

- Dual Stack Hosting
 - go6.vn
 - tunnelbroker.netnam.vn
 - netnam.vn
- Dual Stack service for customer network:
 - NetNam office was upgraded to dual stack from April 2012

Experiences

- With a simple network infrastructure, pure ethernet, It is more flexible in developing IPv6 in non-telco ISP
- Opensource software for quickly deploy IPv6 services in NetNam network

The KAME project

1998.4 - 2006.3



Use IPv6 HTTP and you will watch [the dancing kame](#)



Challenges

- IPv6 investment : devices, educate, planning
- Synchronize between IPv6 deployment plan and infrastructure upgrade plan
- Challenges in upgrading management tools to support IPv6

Challenges

- IPv6 support in difference OS : Linux, Windows, MacOS
- IPv6 support for end user devices
- Routing exchange between difference device vendors : Cisco, Zyxel, Linux OS

Let's go six....

go6.vn

Thank you!

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