

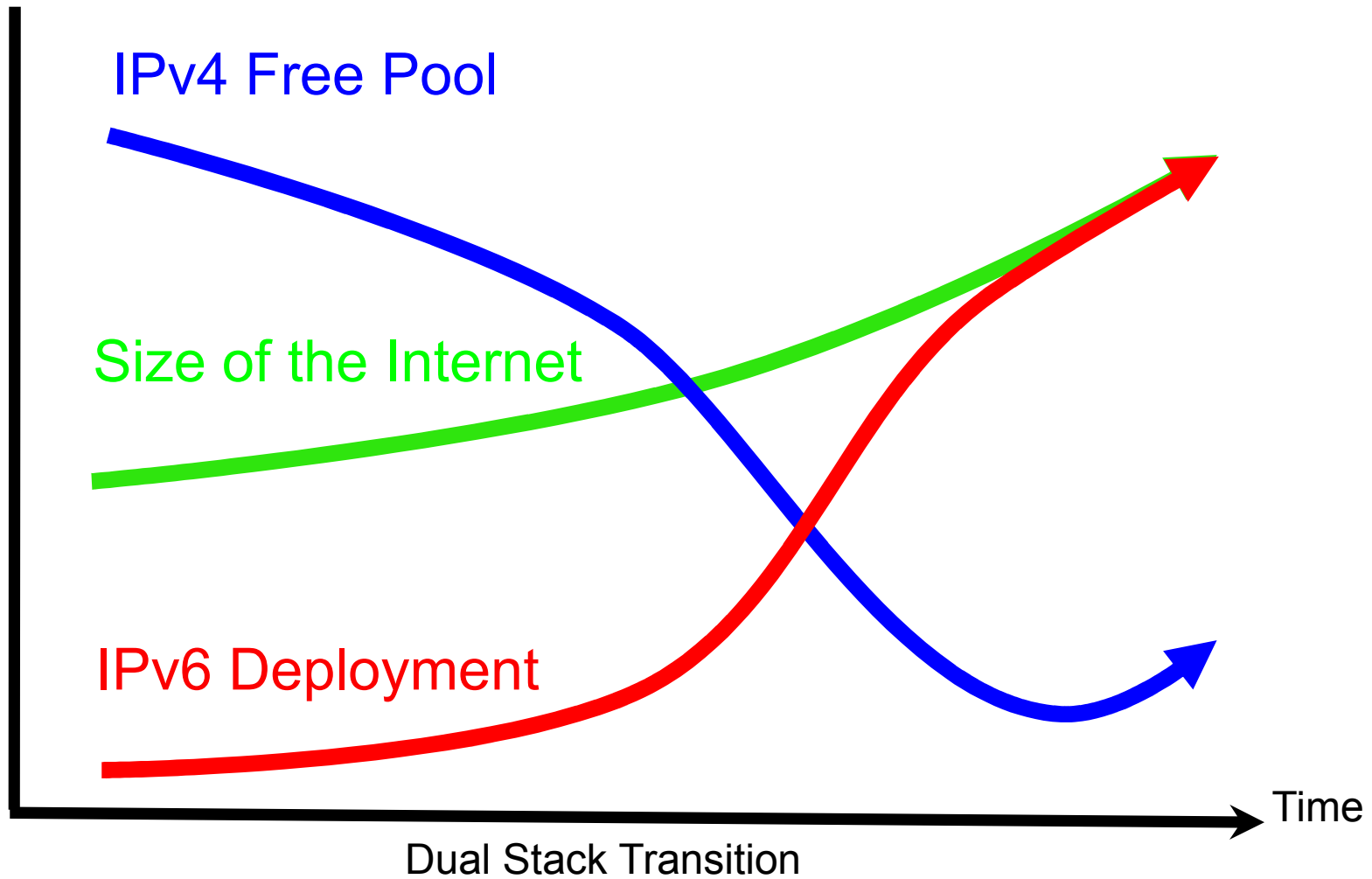
IPv6 – This time we're serious



Benoit Lourdelet blourdel@cisco.com

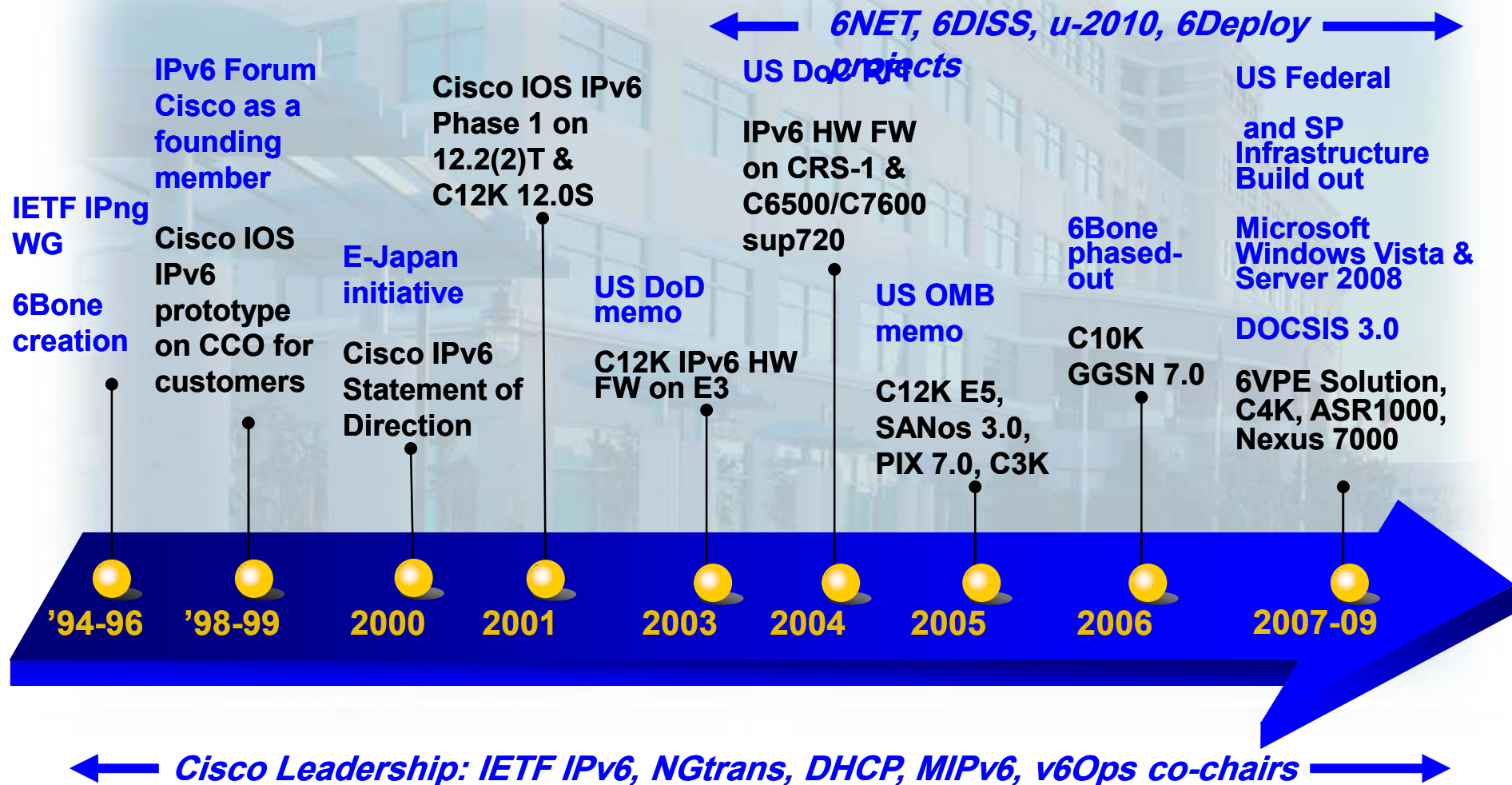
IPv6 Product Manager, NSSTG

The Plan

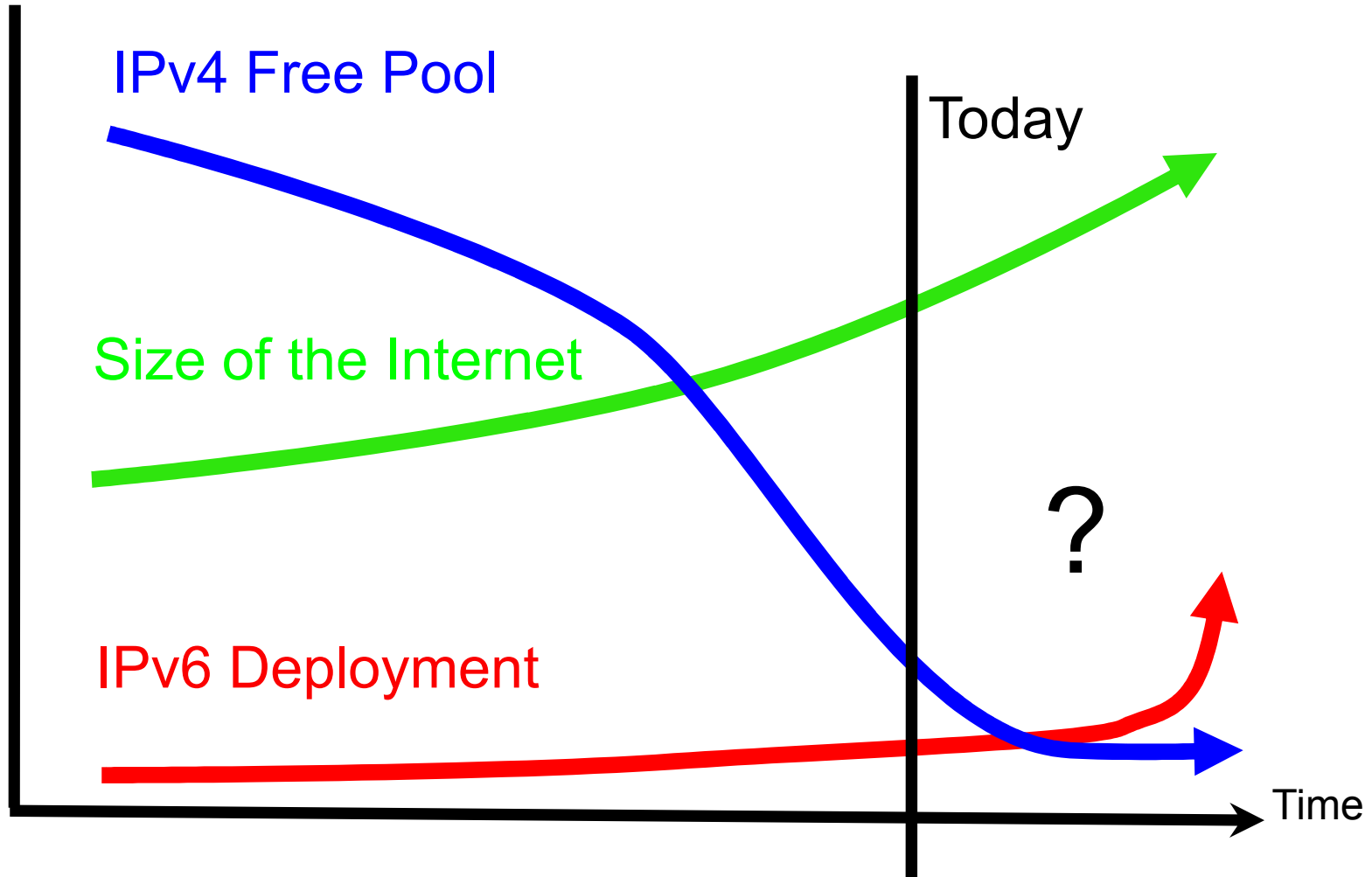


www.cisco.com/go/ipv6

Scaling the Internet for our Future Generations

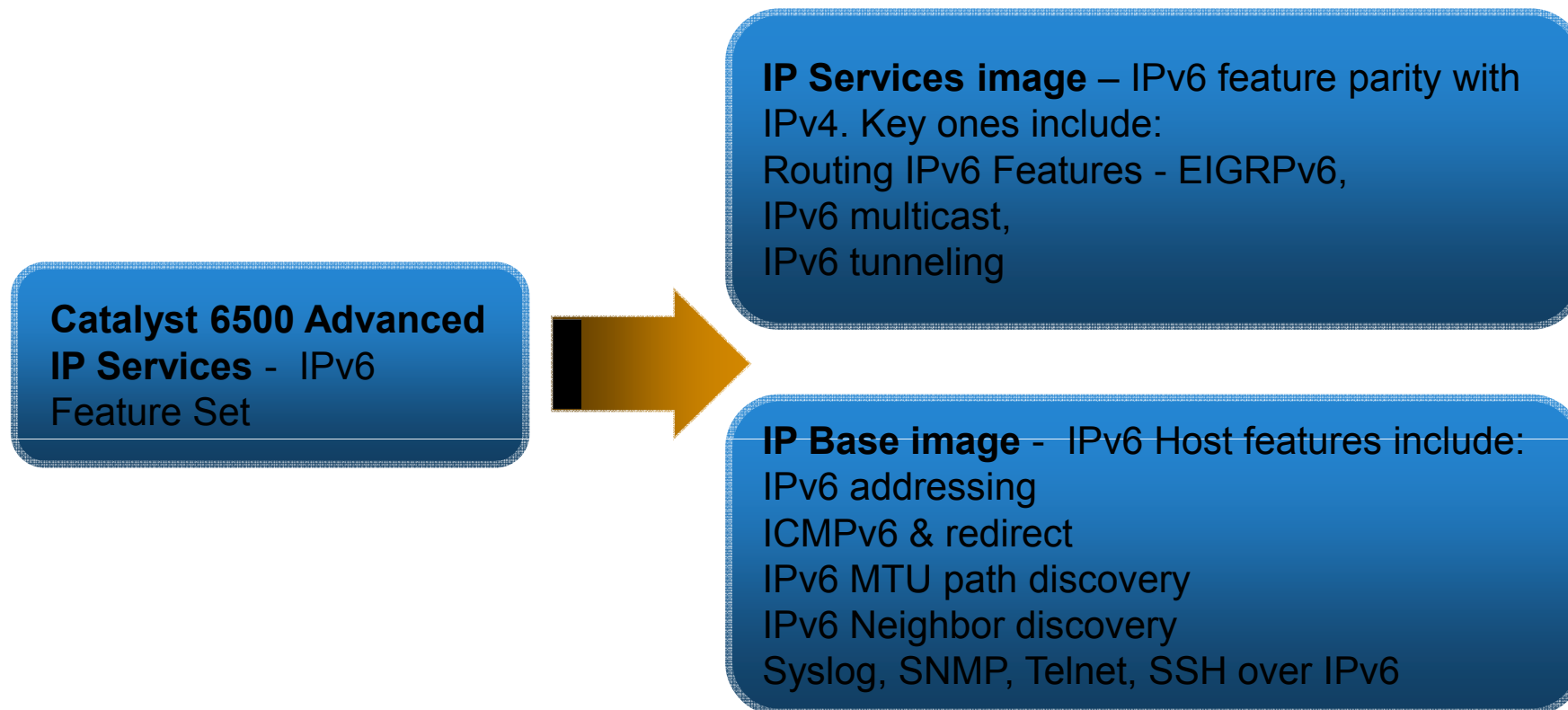


The Reality



Cisco IPv6 Licensing

IPv6 feature licensing follows the IPv4 Model



**Catalyst 6500 Advanced
IP Services - IPv6
Feature Set**

IP Services image – IPv6 feature parity with IPv4. Key ones include:
Routing IPv6 Features - EIGRPv6,
IPv6 multicast,
IPv6 tunneling

IP Base image – IPv6 Host features include:
IPv6 addressing
ICMPv6 & redirect
IPv6 MTU path discovery
IPv6 Neighbor discovery
Syslog, SNMP, Telnet, SSH over IPv6

Release and platforms

- Catalyst 6500 series : 12.2(33)SXI. Shipping
- Catalyst 3K series : 12.2(50)SE . Shipping
- NX-OS : Shipping
- IOS-XR : Shipping
- Cisco 7600 series : 12.2SRE Q4CY09
- Cisco ASR 1000 series: ASR 2.5 Q4CY09
- Cisco 3800/2800/1800,7200 series : 12.4(11th)T Q4CY09
- Catalyst 4500 series : 12.2(52)SG Spring 09

"Many of the products and features described herein remain in varying stages of development and will be offered on a when-and-if-available basis. This roadmap is subject to change at the sole discretion of Cisco, and Cisco will have no liability for delay in the delivery or failure to deliver any of the products or features set forth in this document."

Impact of IPv4 Run-Out on Service Providers

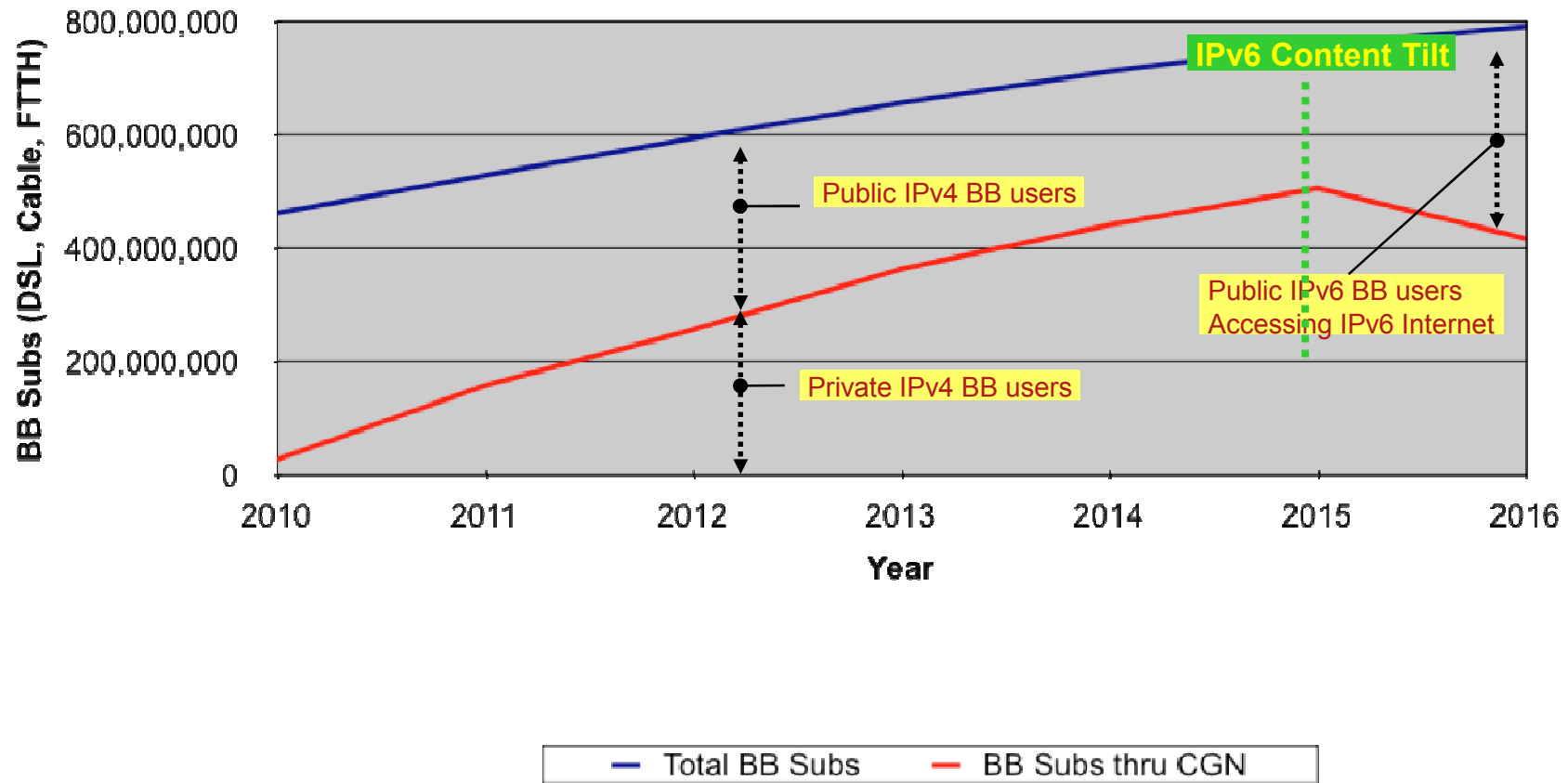
- Difficult to add/support new IPv4 customers
- May find smaller IPv4 address blocks but this will
 - increase routing table bloat
 - increase opex
- Difficult to plan for Next-Gen IP Services like mobility and sensor networks
- Business Continuity could be impacted

Towards IPv6

- Long-term solution and end-game is IPv6
- Customer Transition Strategies may differ
 - some may wish to prolong IPv4 usage for as long as possible
 - others may take more aggressive approach and deploy IPv6 sooner (IPv4/IPv6 Coexistence)

Potential Market Size is based on WW BB Subscriber Accessing Public Internet

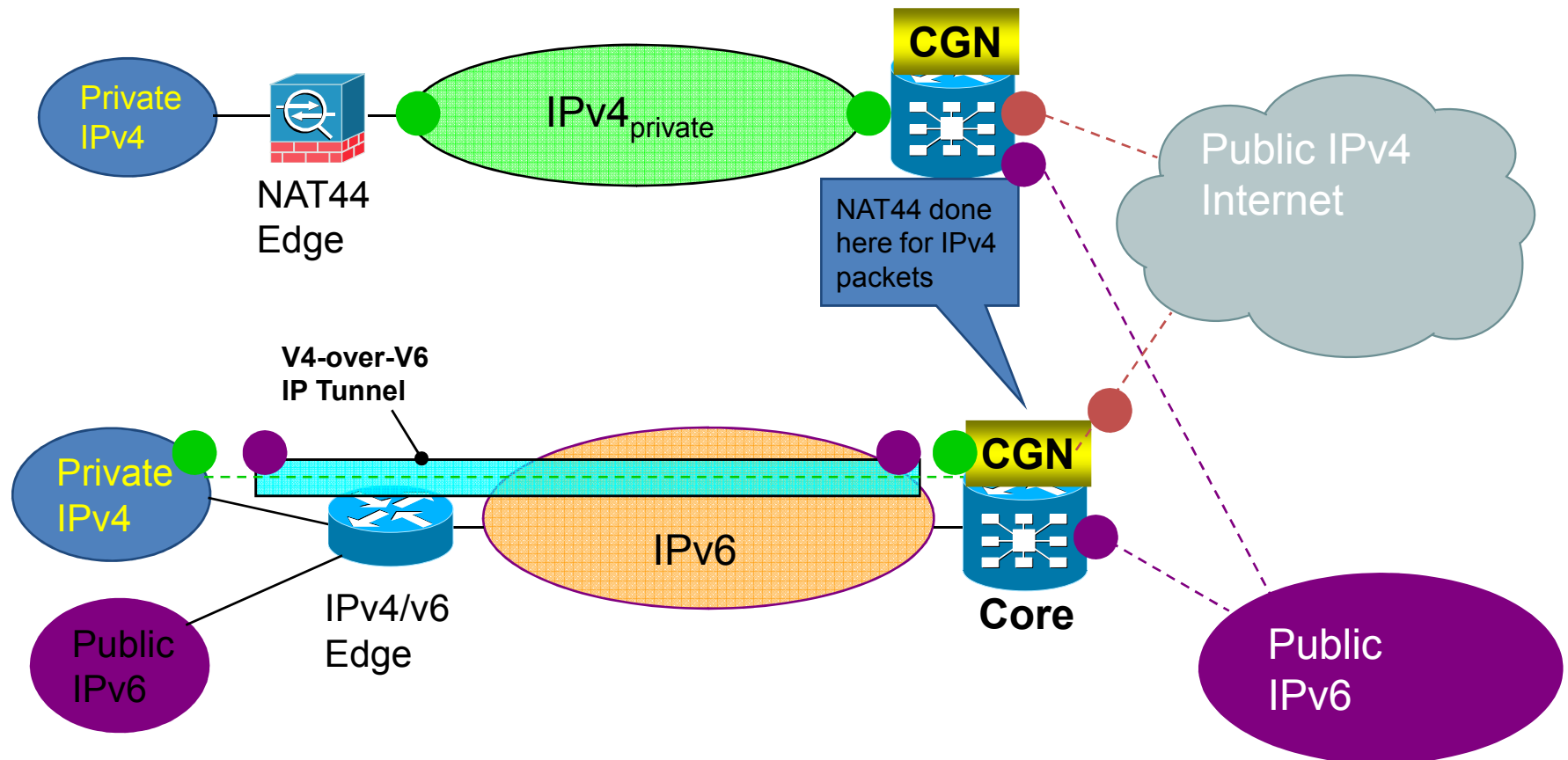
Projected BB Sub Usage of CGN



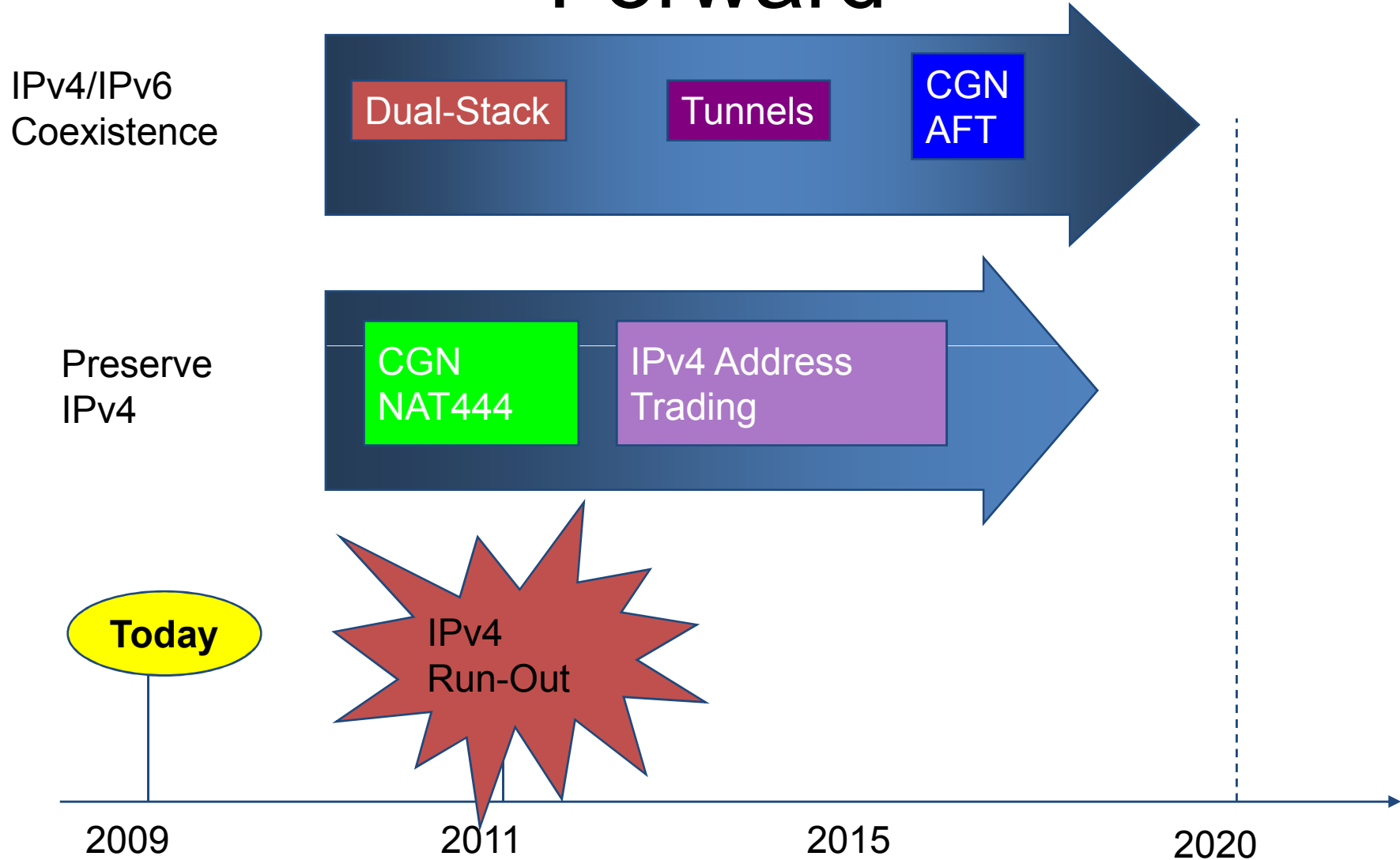
* source: Infonetics 2008

What is a Carrier Grade NAT?

- “..A NAT or NAPT device used by many subscribers, where 'many' would be on the order of dozens to hundreds of thousands of subscribers. This might NAT between any combination of IPv4 and IPv6..”



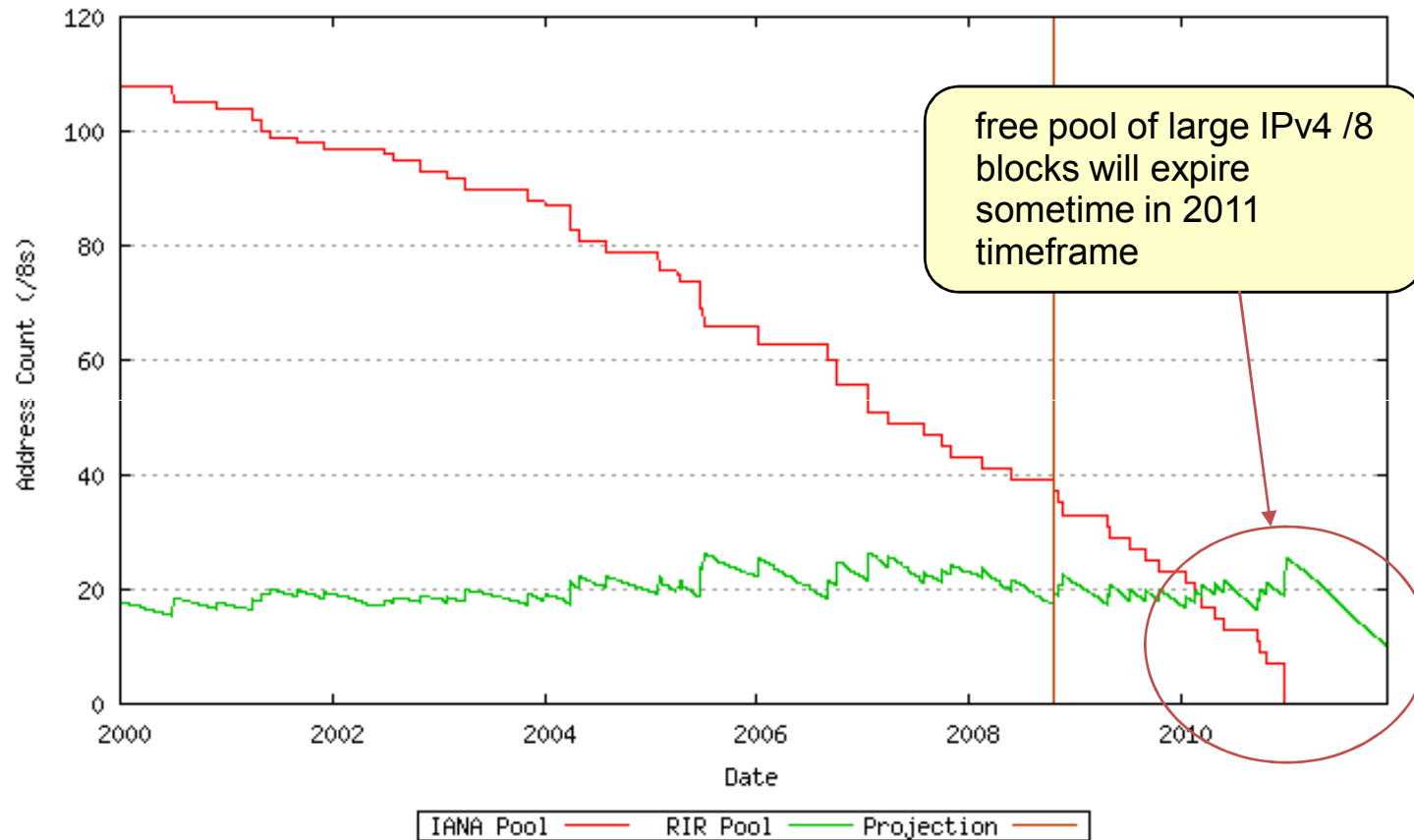
Cisco Strategies to Move Forward





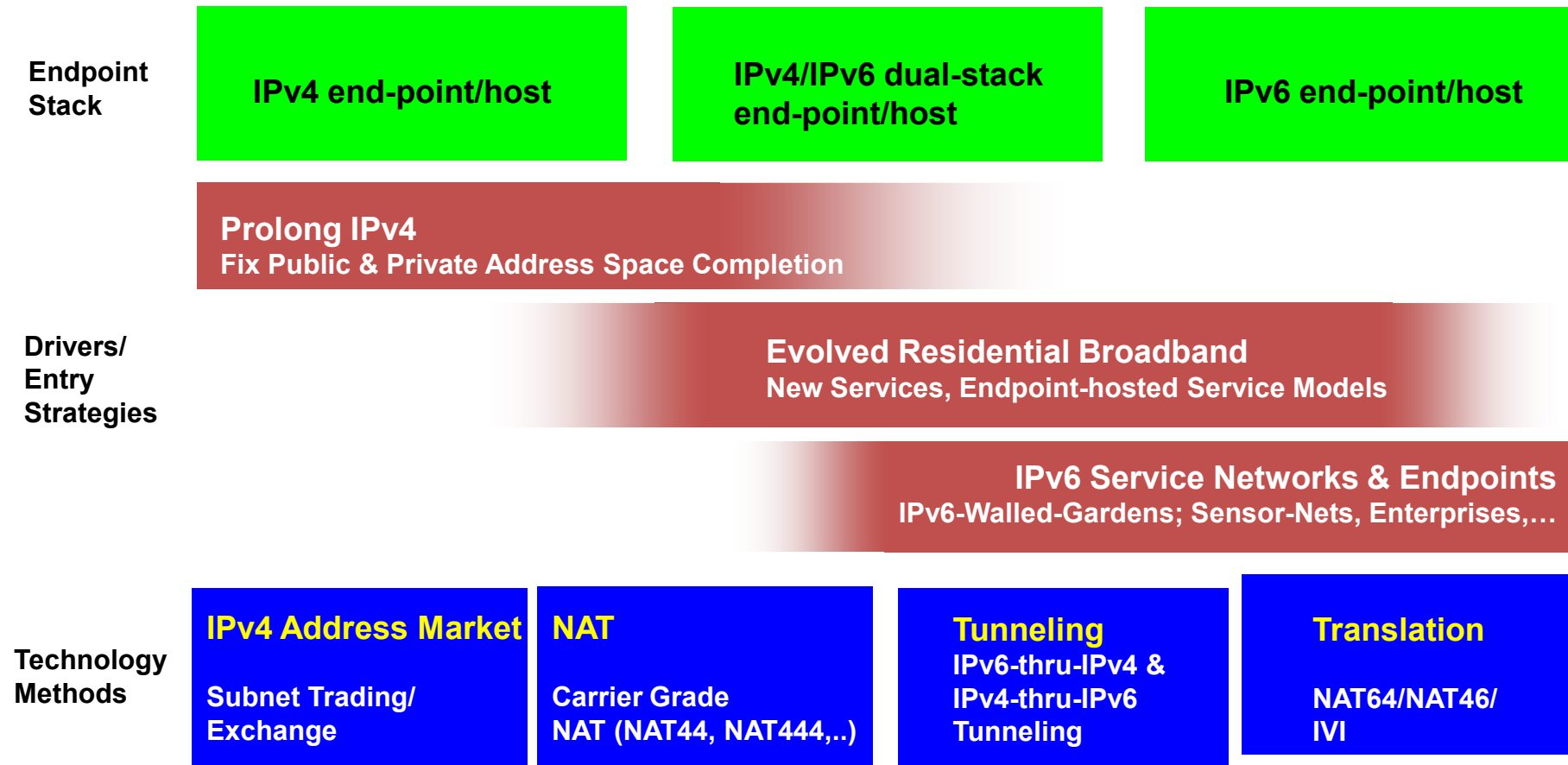
CISCO

IPv4 Address Completion



- see <http://www.potaroo.net/tools/ipv4/index.html> for more details

Entry Strategies, Drivers, and Associated Technologies



High Capacity Forwarding Cisco IPv6 Solutions

- **Cisco CRS-1**
OC-768, OC-48, 10GE and GE line cards
- **Cisco 12000 series**
Internet Service Engine 3 – up to 3.8Mpps per LC
Internet Service Engine 5 – Up to 16Mpps per LC
- **Cisco 10000 PRE2/PRE3/PRE4**
- **Cisco ASR 1000 series**
- **Cisco 7600 and Catalyst 6500 series**
Sup. Engine 720, 720-3BXL, 32W, 32/PISA, RSP720 – u
200Mpps (EANTC report)
IPv6 tunneling—Configured, Automatic, 6to4 and ISA
tunnels in hardware
- **Nexus 7000 series, MDS 9500 series**
- **Catalyst 4500 series**
Supervisor Engine 6E
- **Catalyst 3750/3560 & 3750E/3560E series**

