

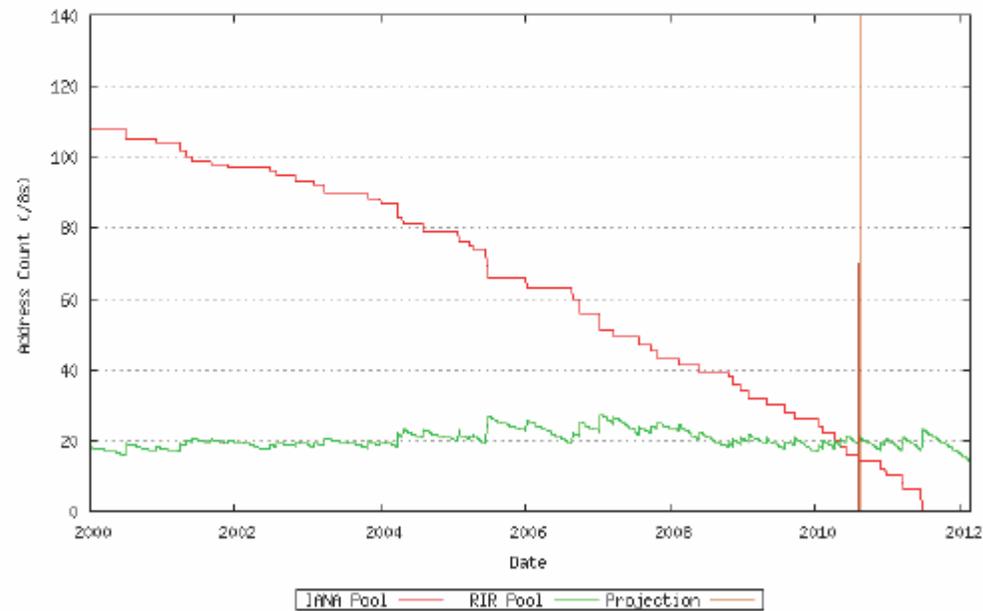


IVI trials

X. Li, C. Bao

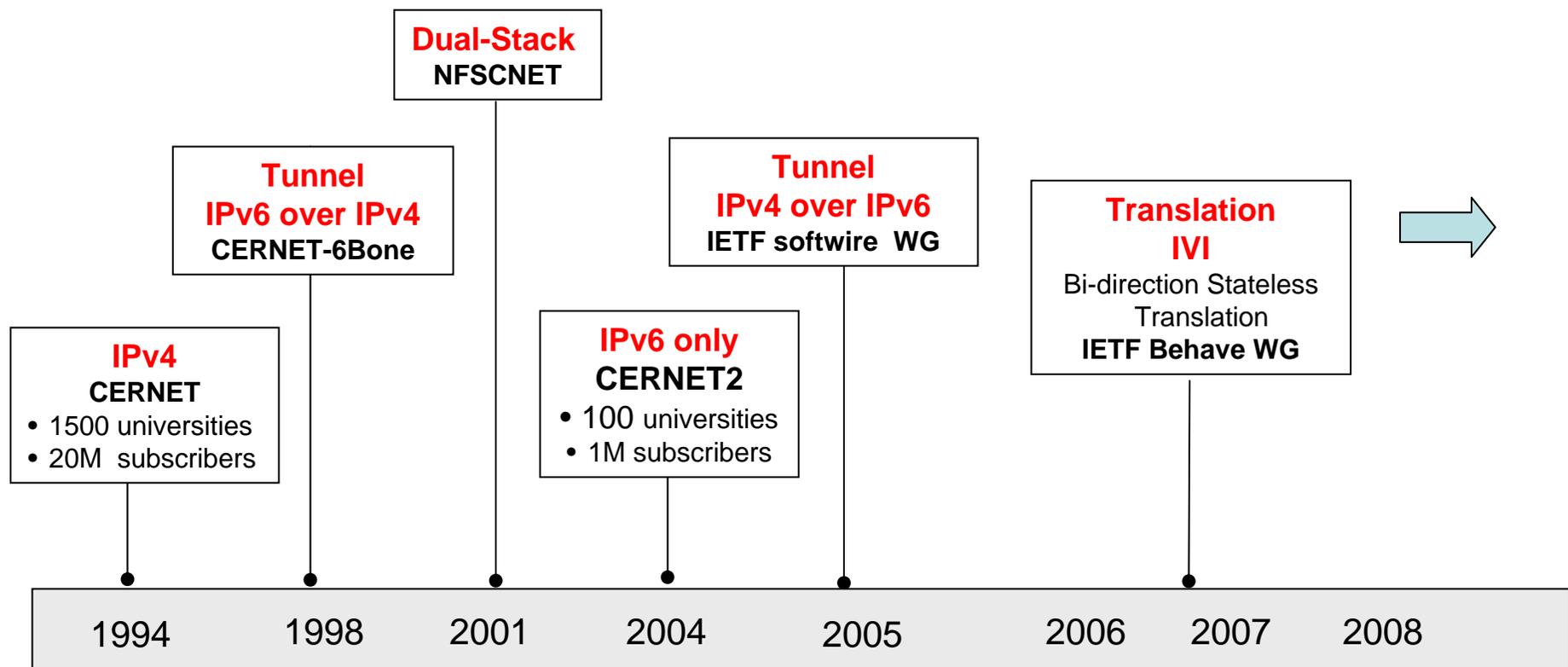
2010-08-25

Projected Exhaustion of IANA Unallocated Pool

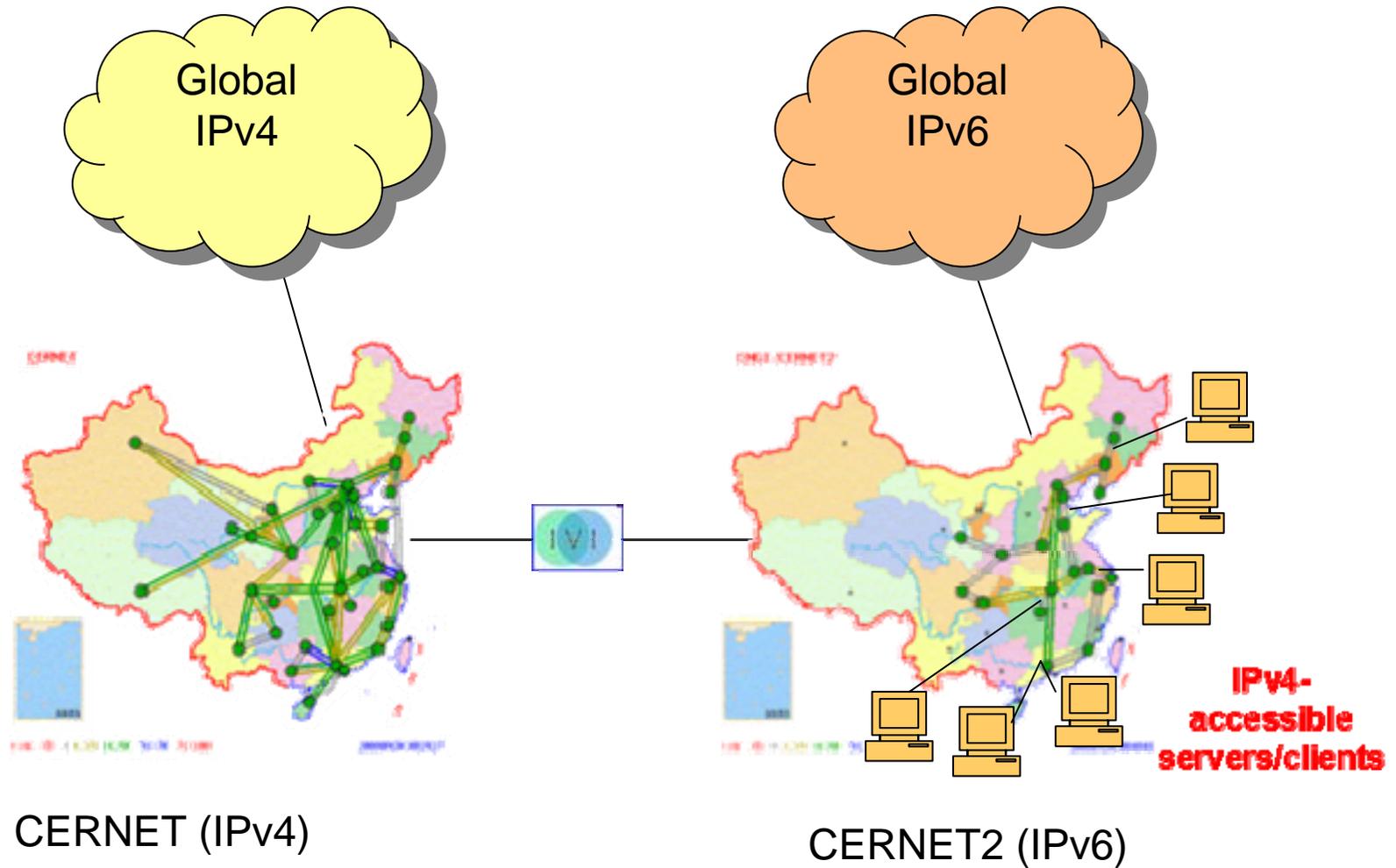


<http://www.potaroo.net/tools/ipv4/>

CERNET IPv6 transition experience



CERNET /CNGI-CERNET2



Promotion of IPv6

IVI presentations in previous APNIC meetings

via v6

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APNIC 26 25 - 29 AUGUST 2008 CHRISTCHURCH - NEW ZEALAND

Home Program NRO Election SIG Elections Remote participation Fellowship Sponsorship

Break

IPv6 in New Zealand
[Nathan Ward](#)
 Slides (328 KB)
 Video (47.8 MB / 14 mins)
 Audio (16 MB / 14 mins)
 Transcript

IPv6 transition: perspectives from Japan
[Izumi Okutani, JPNIC](#)
 Slides (464 KB)
 Alternate slide format (464 KB)
 Video (70.8 MB / 19 mins)
 Audio (21.5 MB / 19 mins)
 Transcript

Prefix-specific and stateless address mapping (IVI) for IPv4/IPv6 coexistence and transition
[Xing Li, CERNET](#)
 Slides (884KB)
 Video (65 MB / 20 mins)
 Audio (23.8 MB / 20 mins)
 Transcript

From IPv4 only to v4/v6 dual stack
[Tomoya Yoshida, NTT](#)
 Slides (2 MB)
 Video (57.3 MB / 18 mins)
 Audio (20.5 MB / 18 mins)
 Transcript



Agenda		
09:00	CERNET IPv6 experiences Xing Li, CERNET	Slides 2.6 MB Transcript Audio 28.1 MB Video 136.1 MB
	What should content provider and data centres do? Katsuyasu Toyama, JPNAP / Internet Multifeed Co.	Slides 2.1 MB Transcript Audio 21.3 MB Video 83.9 MB
	Implementing IPv6 in a small to medium ISP Christian Dwinantyo, D-NET	Slides 1.1 MB Transcript Audio 24.1 MB Video 113.0 MB

Translation technologies

- 1:1 IVI
 - Stateless in the core
- 1:N dIVI
 - Stateless in the core
 - Partial state in the edge
 - Can save IPv4 addresses
 - No need for ALG

Vendor supports

IETF standard process

Network Working Group
Internet-Draft
Obsoletes: 2765 (if approved)
Updates: 4291 (if approved)
Intended status: Standards Track
Expires: January 11, 2011

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Microsoft Corporation
M. Bagnulo
UC3M
M. Boucadair
France Telecom
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CERNET Center/Tsinghua University
July 10, 2010

IPv6 Addressing of IPv4/IPv6 Translators
draft-ietf-behave-address-format-09.txt

behave
Internet-Draft
Obsoletes: 2765 (if approved)
Intended status: Standards Track
Expires: November 19, 2010

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May 18, 2010

IP/ICMP Translation Algorithm
draft-ietf-behave-v6v4-xlate-20

behave
Internet-Draft
Intended status: Informational
Expires: November 19, 2010

F. Baker
Cisco Systems
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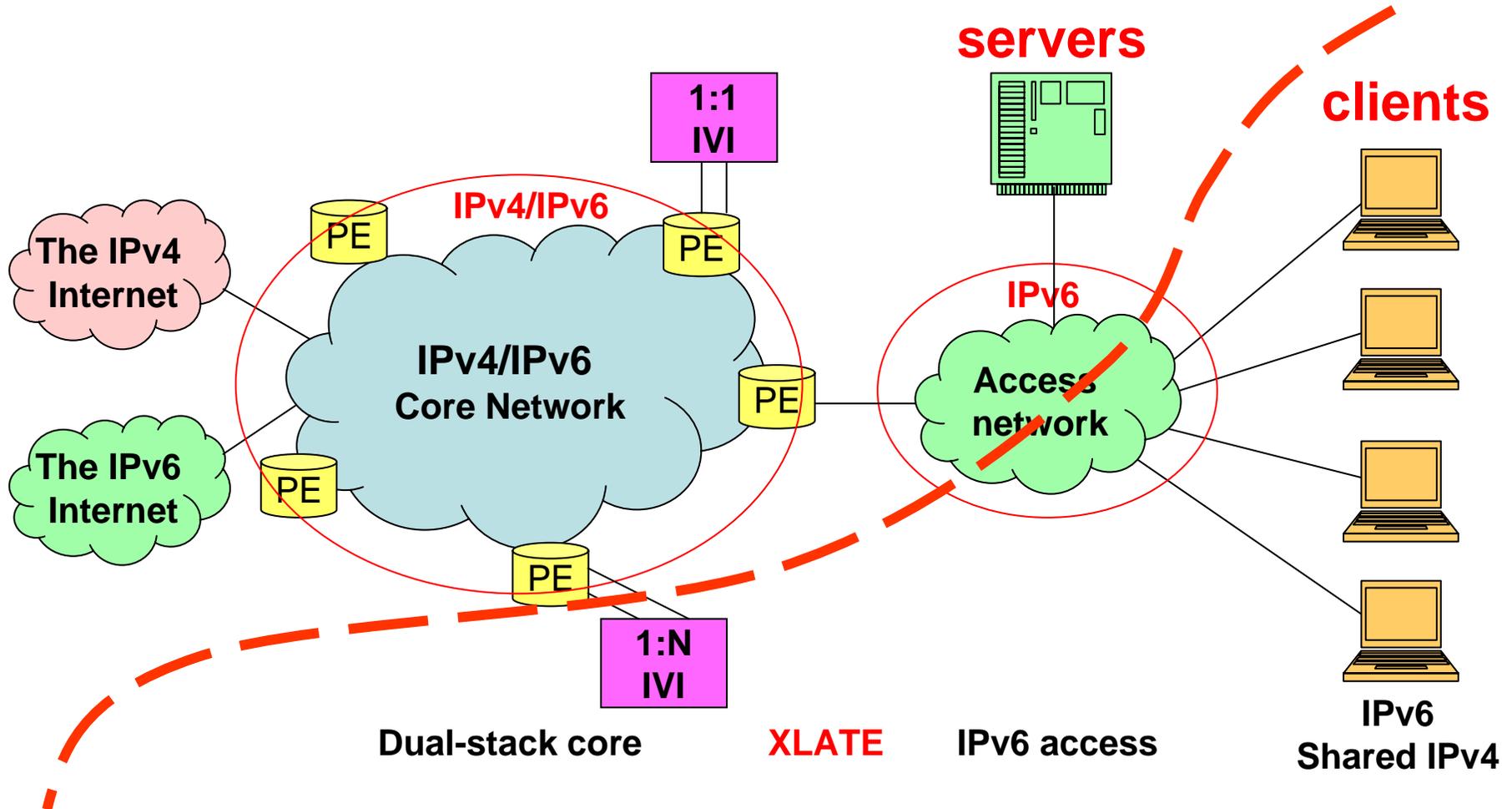
Framework for IPv4/IPv6 Translation
draft-ietf-behave-v6v4-framework-09

Network Working Group
Internet-Draft
Intended status: Informational
Expires: July 10, 2010

X. Li
C. Bao
M. Chen
H. Zhang
J. Wu
CERNET Center/Tsinghua University
January 6, 2010

The CERNET IVI Translation Design and Deployment for the IPv4/IPv6
Coexistence and Transition
draft-xli-behave-ivi-07

Deployment

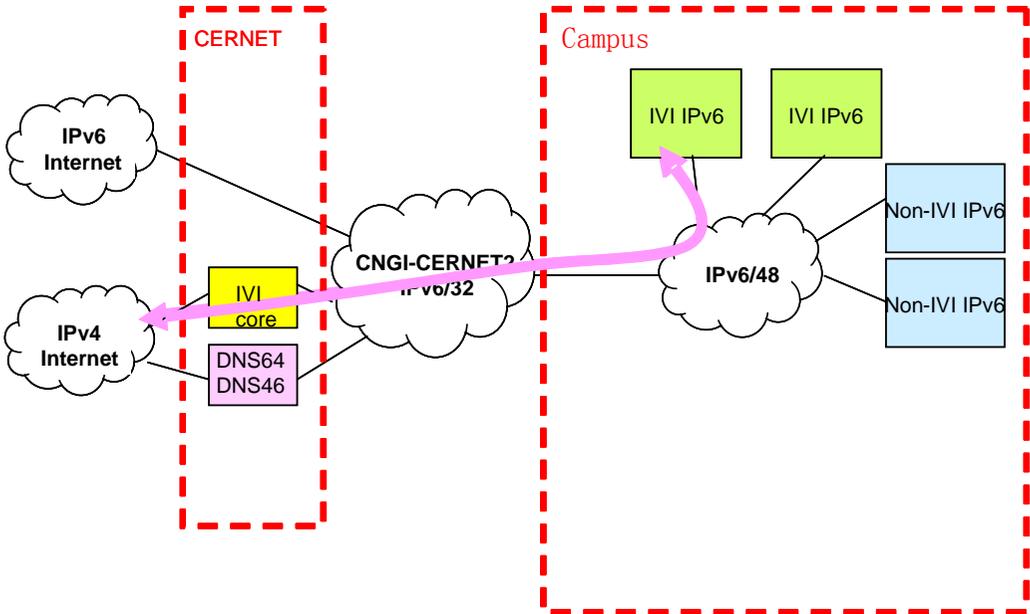


Trials



- CNGI-CERNET2
 - 100 campus networks
- China SP
 - ASDL users
 - Service continuity
 - Support existing applications
 - Transit to IPv6

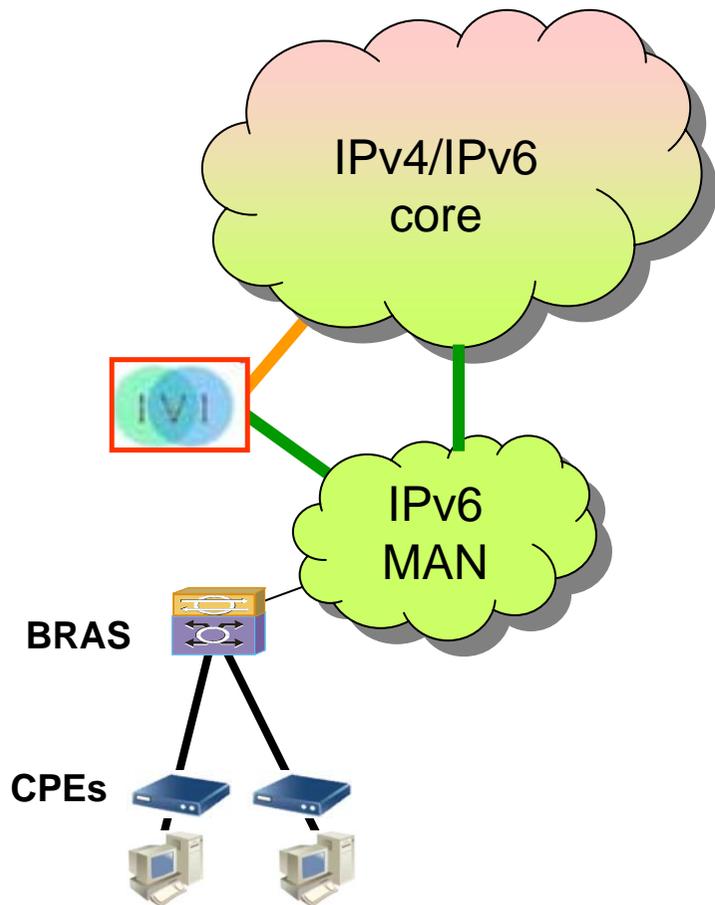
CNGI-CERNET2 trial



	单位名称	城市	IPv4 地址	IPv6 地址
1	北京大学	北京	58.200.128.0/24	2001:da8:ff3a:c880::/64
2	清华大学	北京	58.200.129.0/24	2001:da8:ff3a:c881::/64
3	北京航空航天大学	北京	58.200.130.0/24	2001:da8:ff3a:c882::/64
4	北京邮电大学	北京	58.200.131.0/24	2001:da8:ff3a:c883::/64
5	中国人民大学	北京	58.200.132.0/24	2001:da8:ff3a:c884::/64
6	北京理工大学	北京	58.200.133.0/24	2001:da8:ff3a:c885::/64
7	北京师范大学	北京	58.200.134.0/24	2001:da8:ff3a:c886::/64
8	中央民族大学	北京	58.200.135.0/24	2001:da8:ff3a:c887::/64
9	中国地质大学	北京	58.200.136.0/24	2001:da8:ff3a:c888::/64
10	北京交通大学	北京	58.200.137.0/24	2001:da8:ff3a:c889::/64
11	对外经济贸易大学	北京	58.200.138.0/24	2001:da8:ff3a:c88a::/64
12	北京科技大学	北京	58.200.139.0/24	2001:da8:ff3a:c88b::/64
13	北京工业大学	北京	58.200.140.0/24	2001:da8:ff3a:c88c::/64
14	中国农业大学	北京	58.200.141.0/24	2001:da8:ff3a:c88d::/64
15	北京化工大学	北京	58.200.142.0/24	2001:da8:ff3a:c88e::/64
16	北京语言大学	北京	58.200.143.0/24	2001:da8:ff3a:c88f::/64

100 universities

SP trial



SP:

- Stateless in the core
- IPv6 single stack access network
- Use public IPv4 address effectively
- Simple log

User:

- A fractional IPv4 (1/128)
 - 512 concurrent sessions
 - No need for DNS64
 - No need for ALG
- A /64 IPv6
 - 64K concurrent sessions