We Make The Internet Work For You

The Akamai Intelligent Platform

- 95,000+ Servers
- 1,000 Networks
- 650+ Cities
- 72 Countries

Accelerating Daily Traffic Of:

- 6+ Terabits/second (Tbps)
- 17+ million hits per second
- 1+ trillion deliveries/day
- 30+ Petabytes/day
- 10+ million concurrent streams

Hyperconnected world

15 billion devices in 2015*

1 zettabyte of traffic in 2015*

WiFi/Mobile will account for 54% of IP content*

*Cisco Visual Networking Index: Forecast and Methodology, 2010-2015

Broadband penetration

	Country/Region	% Above 5 Mbps	QoQ Change	YoY Change
–	Global	27%	11%	26%
1	Netherlands	68%	22%	40%
2	Hong Kong	59%	6.7%	27%
3	South Korea	58%	-3.5%	-22%
4	Belgium	57%	9.9%	43%
5	Latvia	56%	27%	30%
6	Japan	55%	-0.1%	-8.9%
7	Czech Republic	55%	13%	63%
8	Romania	52%	1.2%	7.7%
9	Denmark	52%	21%	39%
10	Switzerland	50%	25%	107%
…				
13	United States	42%	7.3%	38%

Figure 13: High Broadband Connectivity, Fastest Countries/Regions

Broadband penetration

Global Rank	Country/Region	Q2 '11 Peak Mbps	QoQ Change	YoY Change
3	Romania	33.7	2.9%	25%
6	United Arab Emirates	26.8	3.5%	265%
7	Belgium	26.8	8.5%	41%
8	Portugal	26.2	5.2%	55%
9	Netherlands	25.3	15%	58%
10	Hungary	24.4	14%	72%
12	Switzerland	23.9	13%	55%
14	Czech Republic	22.6	9.6%	56%
17	Norway	21.2	15%	56%
20	Slovakia	20.5	11%	44%
22	Denmark	20.3	17%	45%
23	Germany	20.1	9.9%	46%
24	Sweden	19.9	4.4%	7.8%
25	Ireland	19.8	6.5%	44%
27	Finland	19.3	17%	68%
28	United Kingdom	18.9	10%	41%
29	Austria	18.6	19%	63%
30	Spain	18.6	18%	74%
37	Italy	16.6	11%	44%
39	Poland	16.4	18%	81%
42	France	15.6	9.5%	32%
46	Turkey	15.1	11%	69%

Figure 32: Average Peak Connection Speed by European Country

Global Rank	Country/Region	Q2 '11 Avg. Mbps	QoQ Change	YoY Change
4	Netherlands	8.5	14%	31%
6	Czech Republic	7.4	13%	39%
7	Switzerland	7.3	17%	43%
8	Romania	6.8	2.3%	-0.1%
9	Belgium	6.4	4.8%	22%
10	Denmark	6.4	13%	23%
12	Norway	6.3	18%	35%
13	Ireland	6.1	8.4%	19%
15	Hungary	5.8	13%	31%
17	Finland	5.7	16%	39%
19	Slovakia	5.5	15%	33%
20	Portugal	5.4	9.3%	37%
21	Germany	5.3	11%	28%
22	Sweden	5.3	6.2%	-4.2%
23	Austria	5.3	20%	40%
25	United Kingdom	5.0	9.0%	28%
33	Poland	4.3	21%	47%
34	Italy	4.2	15%	40%
38	Spain	3.9	15%	42%
39	France	3.9	8.8%	17%
48	United Arab Emirates	3.2	-18%	117%
56	Turkey	2.7	10%	54%

Figure 30: Average Measured Connection Speed by European Country

State of the Internet

	Country/Region	Q2 '11 Unique IP Addresses	QoQ Change	YoY Change
–	Global	604,578,592	3.4%	21%
1	United States	143,487,908	0.6%	9.2%
2	China	76,441,611	3.9%	27%
3	Japan	44,816,252	8.7%	29%
4	Germany	34,785,032	0.4%	12%
5	France	24,312,469	1.3%	6.9%
6	South Korea	23,104,975	3.5%	15%
7	United Kingdom	22,843,333	1.4%	36%
8	Brazil	15,427,943	9.0%	29%
9	Italy	14,370,098	5.4%	32%
10	Spain	13,136,538	1.7%	15%

Figure 5: Unique IPv4 Addresses Seen By Akamai

Sweden - 6,560,657

Norway - 3,295,283

Finland - 2,815,374

Denmark - 2,545,633

Why the urgency now?

- ICANN allocated final IPv4 address blocks on February 3, 2011
- IPv4 addresses allocated to Regional Internet Registries are expected to be depleted in 2012
- APNIC exhaustion occurs before 2012

Impact of APNIC austerity measures

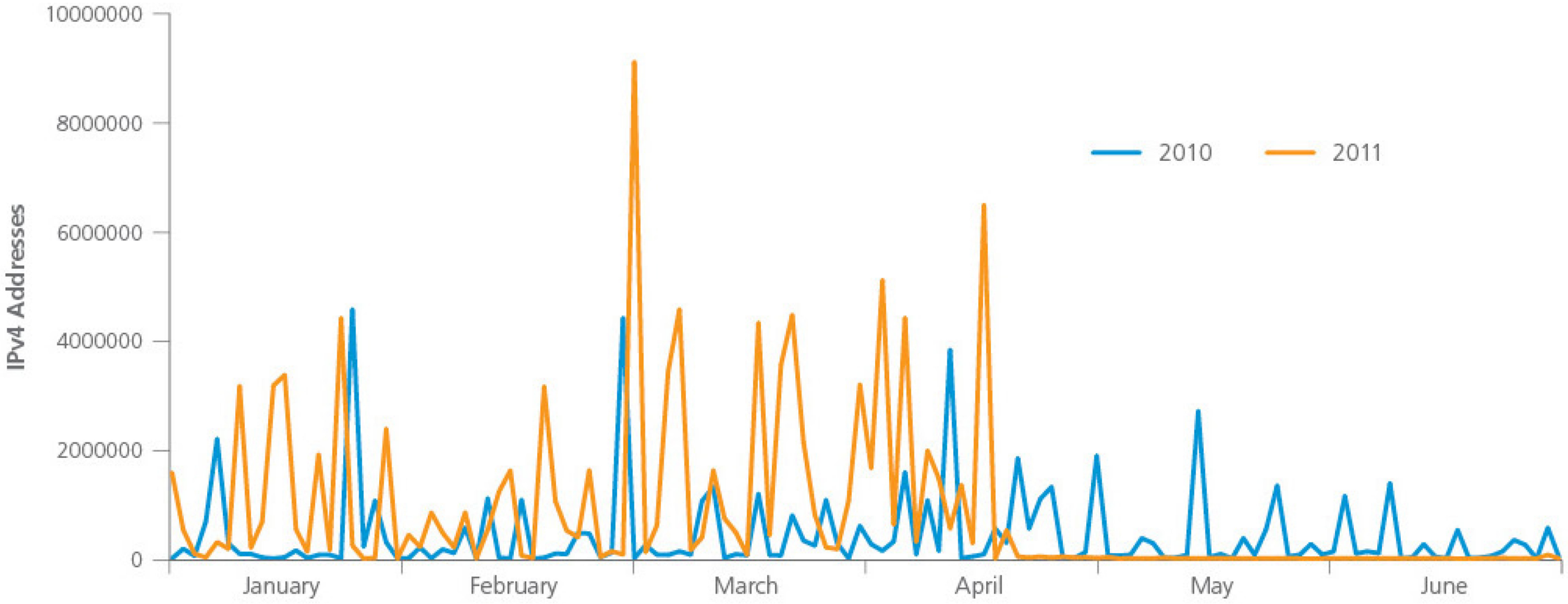


Figure 6: IPv4 Addresses Allocated/Assigned by APNIC, 1H 2010 & 2011

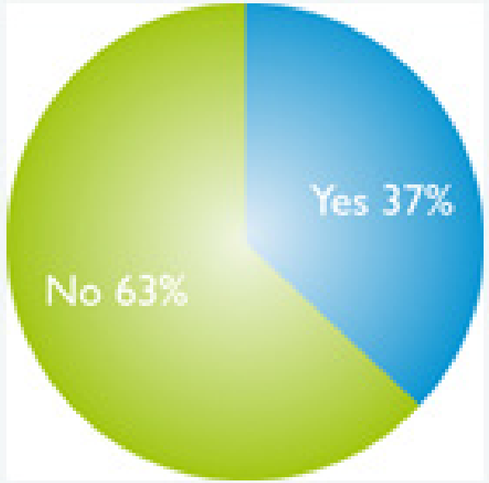
How are we doing with IPv6 adoption?

- Less than 0.4% of the top 1 million domains seen by Alexa are reachable by IPv6 [1]
- Only 10.5% of networks are currently running IPv6 [1]
- Gartner estimates it will cost companies 6% of their annual IT budget to change their IT environment from IPv4 to IPv6 [2]

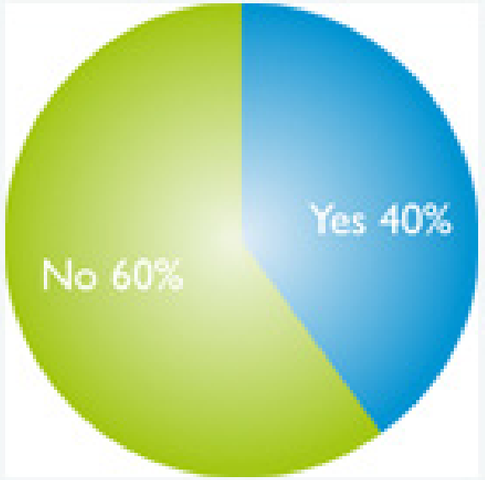
1. http://bgp.he.net/ipv6-progress-report.cgi
2. http://www.zdnet.co.uk/news/networking/2011/01/13/google-facebook-to-trial-ipv6-access-on-key-domains-40091424/

State of readiness

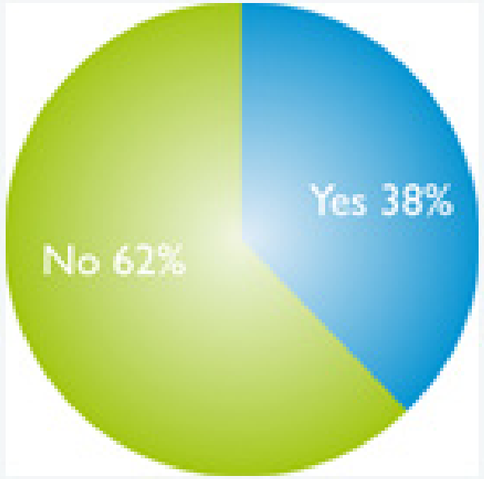
Have you deployed or are you ready for immediate IPv6 deployment?



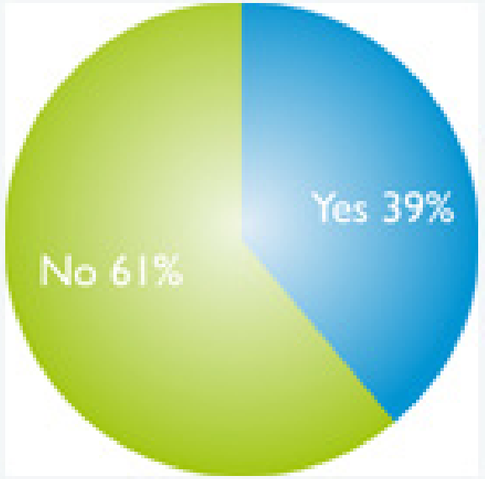
Does your organization have a formal plan to deal with the deployment of IPv6?



Has your organization budgeted for future resource allocation for IPv6 deployment?



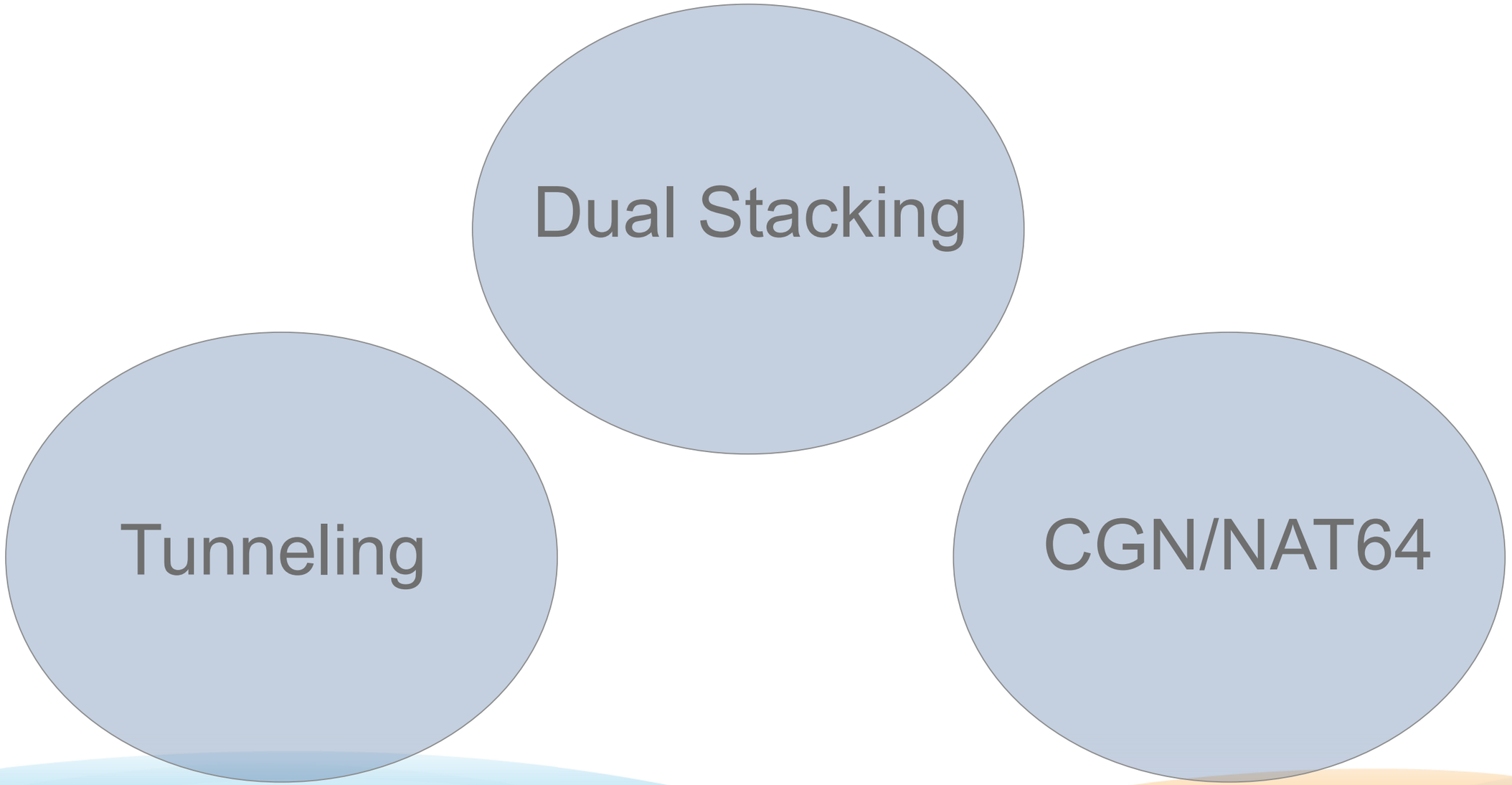
Has your organization allocated resources (human or financial) for IPv6 deployment?



A Decade of Transition Is Upon Us

- IPv6 must be adopted for continued Internet growth
- IPv6 is not backwards compatible with IPv4
- We must maintain IPv4 and IPv6 simultaneously for many years
- It will take until at least 2020 to clear legacy IPv4 systems (such as Microsoft Windows XP)

Key transition technologies to get us to IPv6



Challenges with a hybrid internet

Broken location aware services

Broken Applications

Poor Performance

Making the IPv6 Internet Work for You

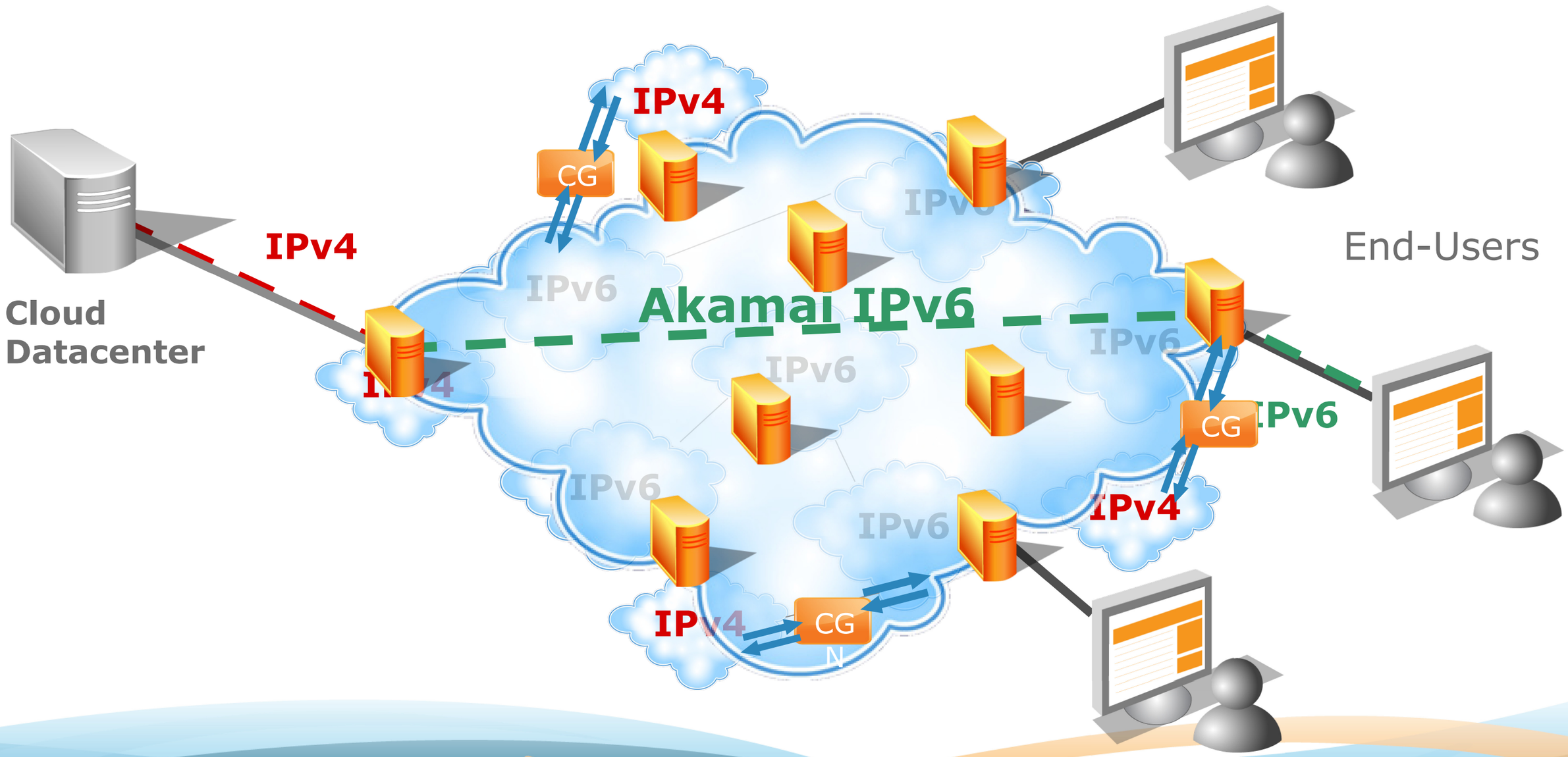
IPv6 On The Akamai Intelligent Platform

- 500+ nodes
- 90+ cities in 30+ countries
- 80+ Networks
- 6 Continents

Akamai's Goals for IPv6 Support

- Service requests natively over IPv4 & IPv6
- Provide accelerated delivery despite fragmented IPv6 connectivity & carrier bottlenecks
- Provide IPv6 geolocation capabilities

Akamai Platform Support for IPv6



Summary

- IPv6 must be adopted across the Internet for continued growth
- “Dual Stack” environments & Network Address Translation will help bridge the IPv4 & IPv6 Internet clouds
- Begin preparing *now* for the transition to IPv6 & leverage available planning/testing resources
- Akamai is a key partner for IPv6 enabling your Web sites & applications