

Conversando acerca del mundo IP.



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<http://www.6ip.cu> | <http://www.cu.ipv6tf.org>

Reunión Directores de Informática

29 de abril de 2011

Entorno



Globalización

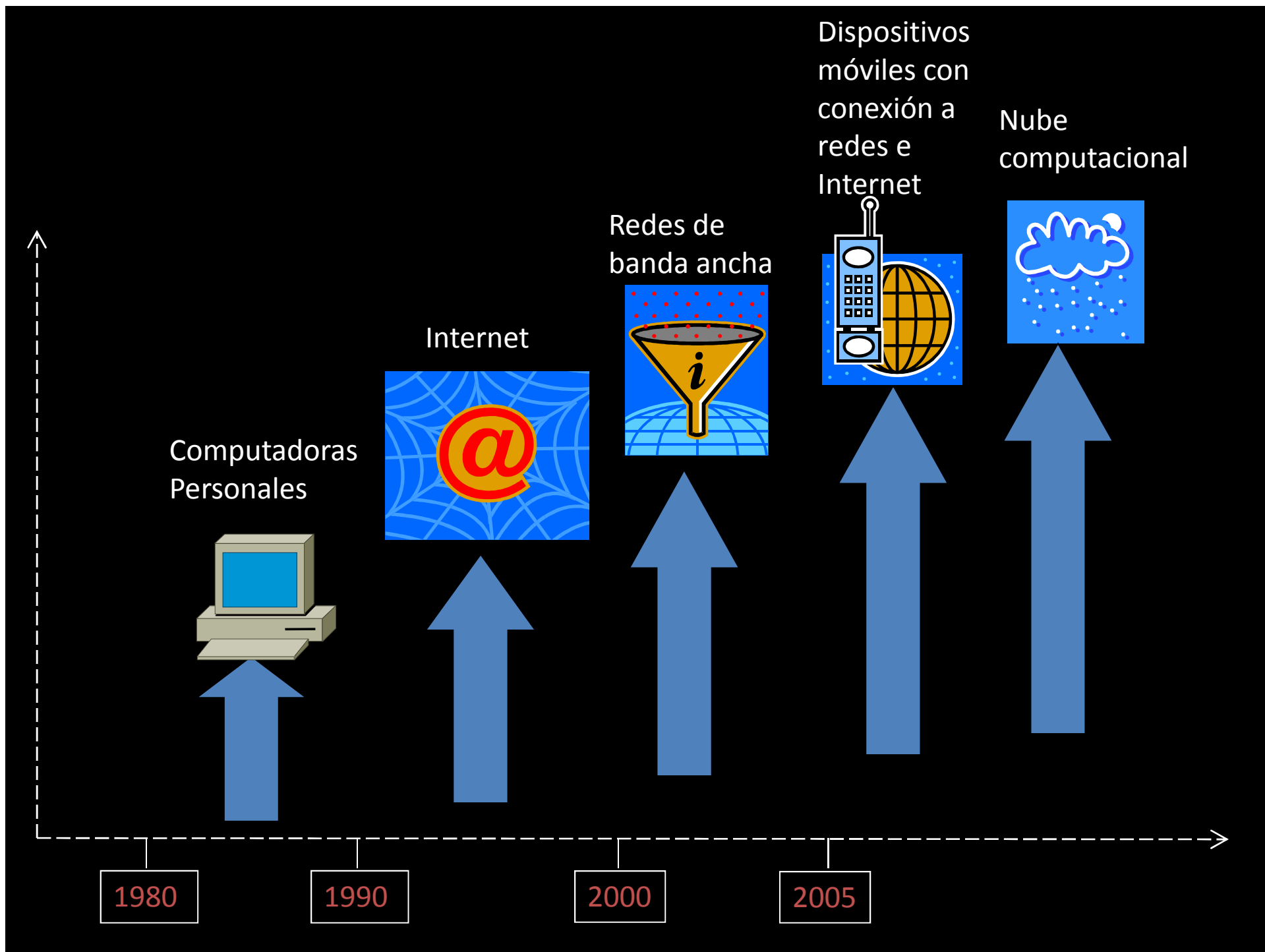
Convergencia de servicios empleando el protocolo IP (*IP es el estándar de facto*)

Gran cantidad de dispositivos portátiles con capacidad de red

Aumento de la conectividad de alta velocidad

Amplia utilización de Tecnologías inalámbricas

Tendencia a “poner todo en la Red”



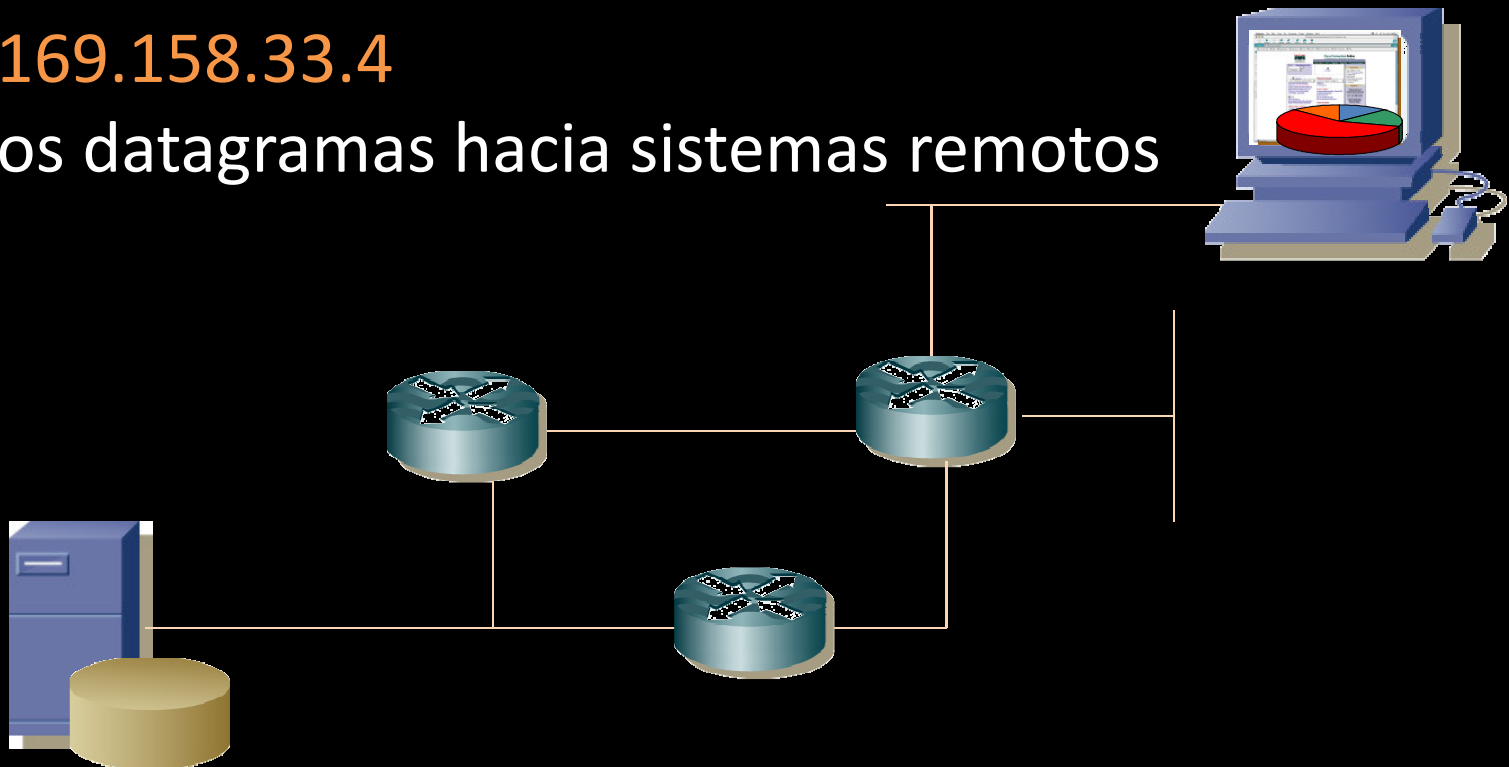
El protocolo **IP** es el común denominador

- Define el esquema de direccionamiento Internet

Ej: 200.55.149.1

169.158.33.4

- Enruta los datagramas hacia sistemas remotos



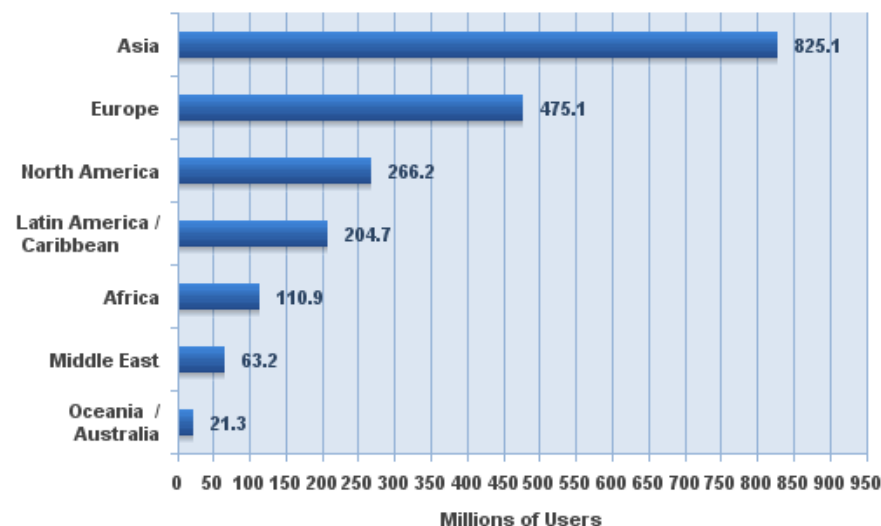
Aumenta la población en Internet

WORLD INTERNET USAGE AND POPULATION STATISTICS

World Regions	Population (2010 Est.)	Internet Users Dec. 31, 2000	Internet Users Latest Data	Penetration (% Population)	Growth 2000-2010	Users % of Table
Africa	1,013,779,050	4,514,400	110,931,700	10.9 %	2,357.3 %	5.6 %
Asia	3,834,792,852	114,304,000	825,094,396	21.5 %	621.8 %	42.0 %
Europe	813,319,511	105,096,093	475,069,448	58.4 %	352.0 %	24.2 %
Middle East	212,336,924	3,284,800	63,240,946	29.8 %	1,825.3 %	3.2 %
North America	344,124,450	108,096,800	266,224,500	77.4 %	146.3 %	13.5 %
Latin America/Caribbean	592,556,972	18,068,919	204,689,836	34.5 %	1,032.8 %	10.4 %
Oceania / Australia	34,700,201	7,620,480	21,263,990	61.3 %	179.0 %	1.1 %
WORLD TOTAL	6,845,609,960	360,985,492	1,966,514,816	28.7 %	444.8 %	100.0 %

NOTES: (1) Internet Usage and World Population Statistics are for June 30, 2010. (2) CLICK on each world region name for detailed regional usage information. (3) Demographic (Population) numbers are from the U.S. Census Bureau. (4) Internet usage information comes from data published by [Nielsen Online GfK](#), local Regulators and other reliable sources. (5) For definitions, disc [Surfing Guide](#). (6) Information in this site may be cited, giving the due credit to Miniwatts Marketing Group. All rights reserved worldwide.

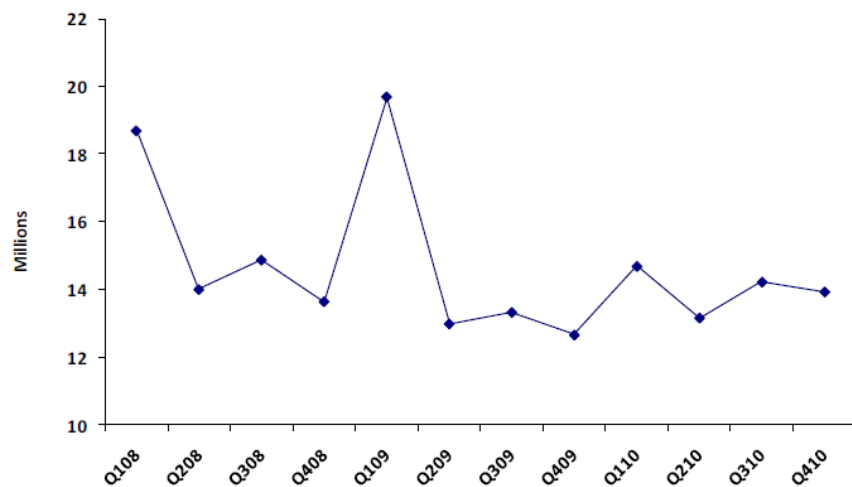
Internet Users in the World by Geographic Regions - 2010



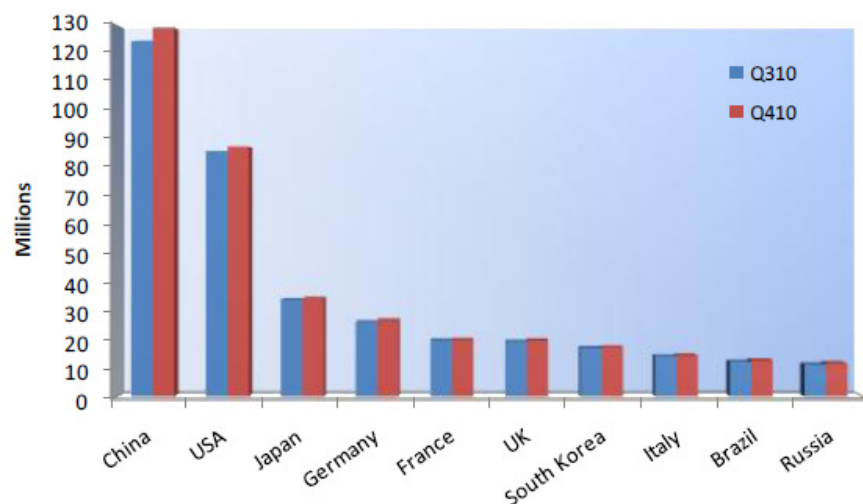
Source: Internet World Stats - www.internetworldstats.com/stats.htm
 Estimated Internet users are 1,966,514,816 on June 31, 2010
 Copyright © 2010, Miniwatts Marketing Group

Fuente: <http://www.internetworldstats.com/stats.htm>

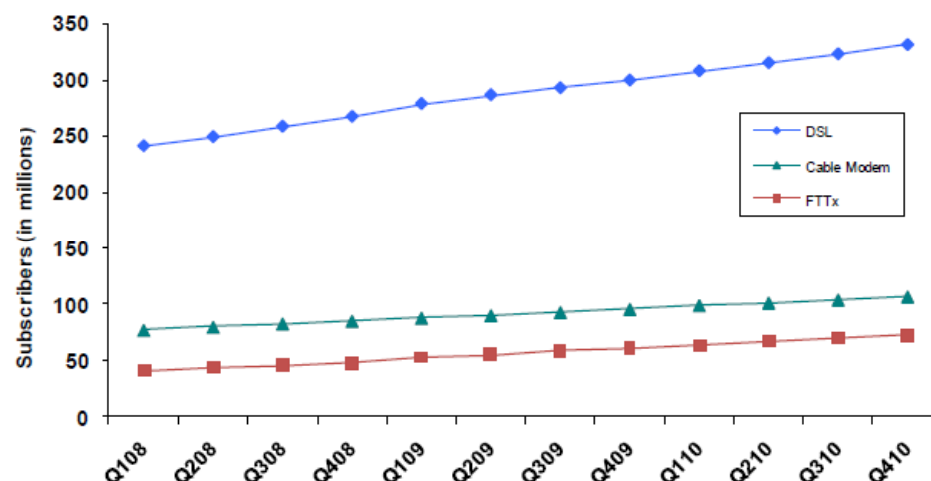
Estadísticas acerca de las conexiones de Banda Ancha



Nuevas suscripciones 2008-2010



Principales suscriptores 2do semestre 2010



Tendencias tecnológicas 2008-2010

Fuente: Point Topic <http://point-topic.com/index.php>

Estadísticas acerca de servicios de IPTV

	2009Q4	2010Q4	% increase
Asia-Pacific	4,978,200	6,918,767	38.98
Eastern Europe	1,707,438	2,470,282	44.68
Latin America	123,871	228,211	84.23
Middle East and Africa	133,652	218,500	63.48
North America	6,010,351	7,834,267	30.35
South and East Asia	5,859,000	9,447,000	61.24
Western Europe	14,879,057	18,247,400	22.64
Global total	33,691,569	45,364,427	

Nuevas suscripciones (por región) 2009-2010

Region	Country	2009Q4	2010Q1	2010Q2	2010Q3	2010Q4	% growth in year
Western Europe	France	8,555,000	9,018,305	9,400,750	9,814,640	10,255,000	19.87
South and East Asia	China All Territories	6,526,000	7,002,000	8,178,000	9,078,000	10,002,000	53.26
North America	USA	5,641,000	6,071,898	6,485,374	,839,053	7,301,800	29.44
Asia-Pacific	South Korea	2,370,219	2,576,663	2,909,136	3,205,026	3,645,650	53.81
Asia-Pacific	Japan	1,774,981	1,861,127	1,960,743	2,081,457	2,213,117	24.68
Western Europe	Germany	1,121,000	1,216,400	1,304,200	1,387,500	1,513,200	34.99
Western Europe	Belgium	752,000	814,000	868,000	920,000	975,000	29.65
Western Europe	Spain	798,757	824,520	832,116	845,400	858,200	7.44
Western Europe	Italy	826,000	825,000	824,514	831,000	819,000	-0.85
Western Europe	Sweden	654,000	692,000	715,000	739,500	770,000	17.74

Principales suscriptores (por país) 2009-2010

Fuente: Point Topic <http://point-topic.com/index.php>

¿Cómo se gestionan las direcciones IP?

ICANN (1999)

IANA (1981)
(Internet Assigned
Numbers Authority)

ARIN (1995)

American
Registry
for Internet
Numbers

APNIC (1993)

Asian-Pacific
Network
Information
Center

RIPE-NCC (1992)

Réseaux IP
Européens

LACNIC (2002)

Latin America
Network
Information
Center

AFRICNIC (2005)

Africa
Network
Information
Center

Virginia, USA Brisbane, Australia Amsterdam, Holanda Montevideo, Uruguay Ebène, Mauritius
Number Resource Organization (**NRO**) - 2003

Registros locales de Internet (LIR), Registros Nacionales de Internet (NIR), Proveedores de Servicios de Internet (ISP), Infraestructuras críticas (NAP, IX, RIR, ccTLD, rootDNS), Organizaciones (end-user)

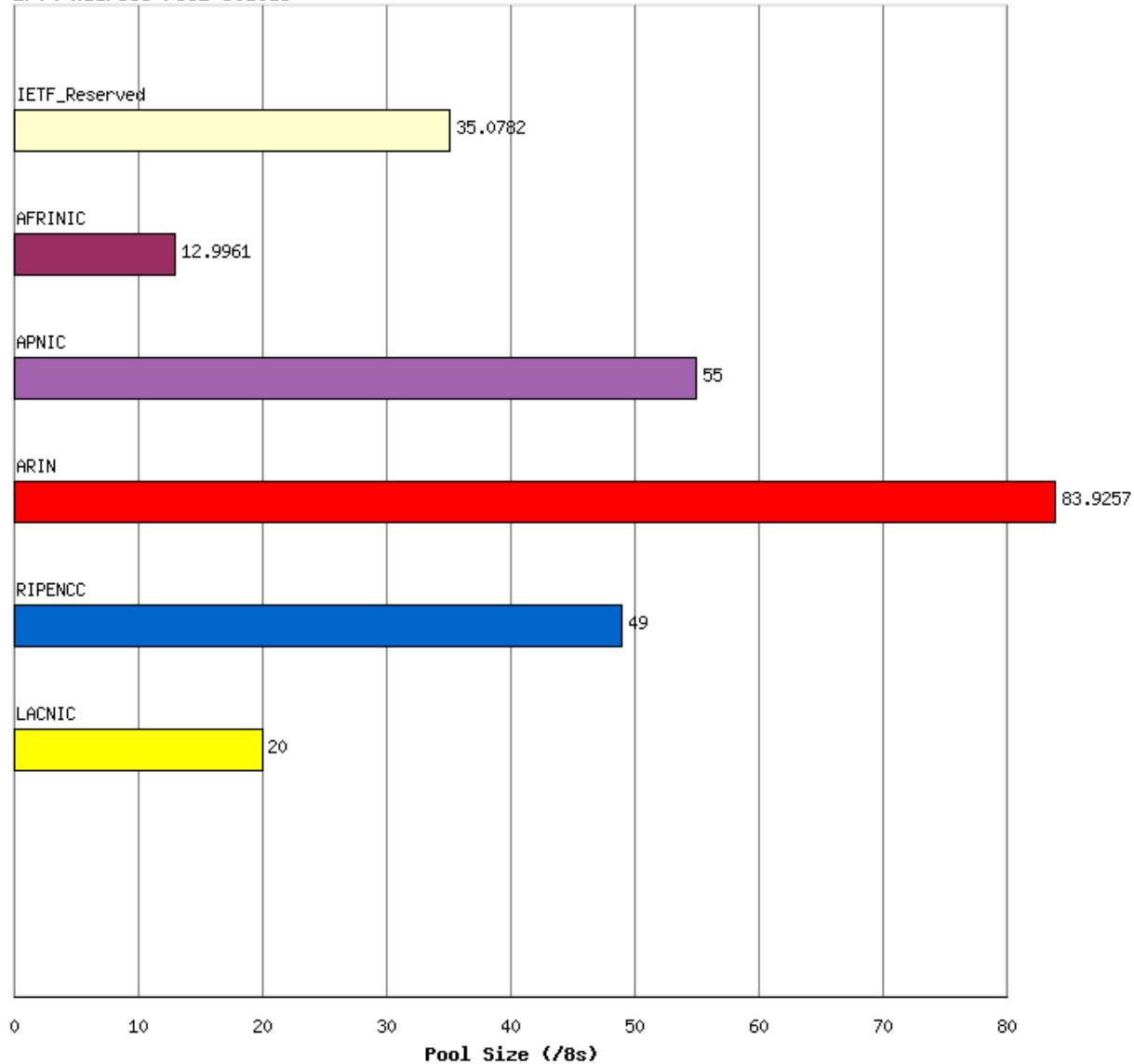
Computadoras, dispositivos móviles, dispositivos móviles, consolas de juego, etc.

Registros Regionales de Internet por área geográfica

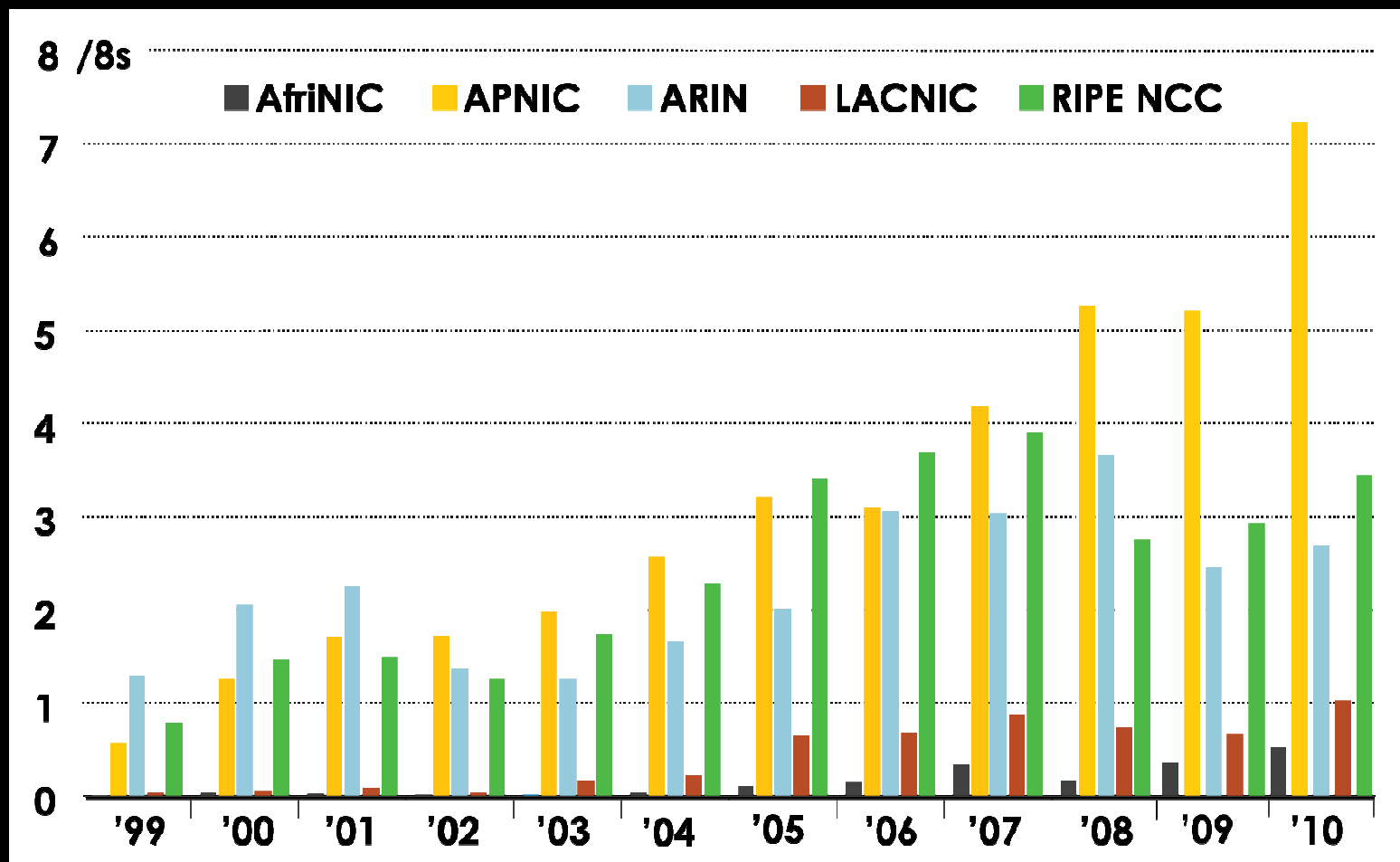


Direcciones IPv4 (/8) asignados a cada RIRs (abril 2011)

IPv4 Address Pool Status

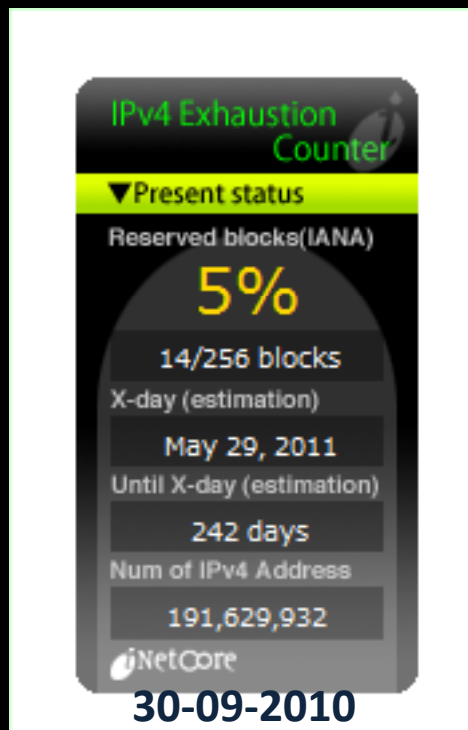


Direcciones IPv4 (/8) asignados por los RIRs a sus clientes (dic. 2010)



Fuente: NRO Internet Number Resource Report Diciembre/2010 (<http://www.nro.net>)

Se agotaron las direcciones IPv4 (/8) (3 de febrero 2011)



Conferencia conjunta ICANN, NRO, IAB sobre el agotamiento del espacio de direcciones IPv4. [Miami, Florida, USA - 3 Febrero, 2011]



Paul Wilson (Director General of APNIC), Adiel A. Akplogan, (CEO of AfrinIC), Elise Gerich (ICANN Vice President for IANA), Raul Echeberria (Chair of the Number Resource Organization (NRO)), Rod Beckstrom (ICANN President and CEO), Axel Pawlik (Managing Director of the RIPE NCC), John Curran (President and CEO ARIN)

Foto Pablo H. <http://www.flickr.com/photos/58961438@N03/5414329514/sizes/l/in/photostream/>

Algunos aspectos que pueden modificar erróneamente la percepción nacional



Existen PCs, pero...

Conectividad domesticas de baja velocidad (fundamentalmente dialup)

Pobre conectividad a Internet

- Servicios
- Acceso

Poco desarrollo en servicios de datos sobre móviles

entonces.... ¿Como sigue la película?



Estimados de costo para reventa de direcciones IPv4

IPv4 Cost Worksheet

V4 Address Costs			Martin Hannigan martin@theicelandguy.com				
FX Euro	1.37067		FX Yuan	9.15608			
Cost Dollar	\$ 4.00		FX Sterling	0.8662		FX AS OF 05 OCT 2010	
Cap Cost	10%		FX Yen	114.25			
Diff	5%						
Size	Addr Count		Cost Dollars	Cost Euros	Cost Sterling	Cost Yuan	Cost Yen
/32	1	\$	4.00	5.48	3.46	36.62	457.00
/31	2	\$	8.00	10.97	6.93	73.25	914.00
/30	4	\$	16.00	21.93	13.86	146.50	1,828.00
/29	8	\$	32.00	43.86	27.72	292.99	3,656.00
/28	16	\$	64.00	87.72	55.44	585.99	7,312.00
/27	32	\$	128.00	175.45	110.87	1,171.98	14,624.00
/26	64	\$	256.00	350.89	221.75	2,343.96	29,248.00
/25	128	\$	512.00	701.78	443.49	4,687.91	58,496.00
/24	256	\$	1,024.00	1,403.57	886.99	9,375.83	116,992.00
/23	512	\$	2,048.00	2,807.13	1,773.98	18,751.65	233,984.00
/22	1,024	\$	4,096.00	5,614.26	3,547.96	37,503.30	467,968.00
/21	2,048	\$	8,192.00	11,228.53	7,095.91	75,006.61	935,936.00
/20	4,096	\$	16,384.00	22,457.06	14,191.82	150,013.21	1,871,872.00
/19	8,192	\$	32,768.00	44,914.11	28,383.64	300,026.43	3,743,744.00
/18	16,384	\$	65,536.00	89,828.23	56,767.28	600,052.86	7,487,488.00
/17	32,768	\$	131,072.00	179,656.46	113,534.57	1,200,105.72	14,974,976.00
/16	65,536	\$	262,144.00	359,312.92	227,069.13	2,400,211.44	29,949,952.00
/15	131,072	\$	524,288.00	718,625.83	454,138.27	4,800,422.87	59,899,904.00
/14	262,144	\$	1,048,576.00	1,437,251.67	908,276.53	9,600,845.74	119,799,808.00
/13	524,288	\$	2,097,152.00	2,874,503.33	1,816,553.06	19,201,691.48	239,599,616.00
/12	1,048,576	\$	4,194,304.00	5,749,006.66	3,633,106.12	38,403,382.97	479,199,232.00
/11	2,097,152	\$	8,388,608.00	11,498,013.33	7,266,212.25	76,806,765.94	958,398,464.00
/10	4,194,304	\$	16,777,216.00	22,996,026.65	14,532,424.50	153,613,531.87	1,916,796,928.00
/9	8,388,608	\$	33,554,432.00	45,992,053.31	29,064,849.00	307,227,063.75	3,833,593,856.00
/8	16,777,216	\$	67,108,864.00	91,984,106.62	58,129,698.00	614,454,127.49	7,667,187,712.00

Fuente: In the face of depletion: IPv4 Cost - Martin Hannigan (NANOG 50, 05 octubre 2010)

Microsoft compra direcciones IPv4 a Nortel Networks

Court Approves Nortel's Sale of IPv4 Addresses to Microsoft

Apr 27, 2011 12:27 PM PDT | Comments: 1 | Views: 3,756

By Benson Schliesser

[Comment](#) | [Print](#)



Yesterday morning (26-April-2011), in US Bankruptcy Court for the District of Delaware, Judge Kevin Gross signed an order authorizing Nortel's sale of IPv4 addresses to Microsoft. This is an important moment for the Internet community, as it represents the beginning of a new market-based mechanism for the distribution of scarce IPv4 address resources. As the various Regional Internet Registry (RIR) organizations exhaust their supply, traditional "needs-based" distribution will become impossible. But an address market approach will enable organizations to continue growing their IPv4 networks (while transitioning to IPv6, as the economical choice).

The court's order ([found here](#)) was signed without objection at a hearing attended by representatives from [Nortel](#), [Microsoft \(GFS\)](#), [ARIN](#), [Addrex](#), various creditors and observers. It specifically authorizes the sale of various IPv4 address blocks, totaling 666,624 individual IPv4 Internet Numbers, for USD \$7.5M (or \$11.25 each). The sale agreement, filed with the court and approved by this order, identifies the seller's "exclusive rights to use and transfer" the Internet Numbers. The sale agreement also states that Microsoft, as the buyer, has agreed to enter into a [Legacy Registry Services Agreement \(LRSA\)](#) with ARIN.

Numbe
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Of cou
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RSA is
Whois
merely
about
to sign
regard

IN THE UNITED STATES BANKRUPTCY COURT
FOR THE DISTRICT OF DELAWARE

----- x
In re :
Nortel Networks Inc., et al.,¹ : Chapter 11
Debtors. : Case No. 09-10138 (KG)
: Jointly Administered
: RE: D.I.'s 5143, 5252, 5253,
: 5280, 5283
----- x

ORDER (I) AUTHORIZING AND APPROVING THE SALE OF INTERNET NUMBERS FREE AND CLEAR OF ALL LIENS, CLAIMS, ENCUMBRANCES AND INTERESTS; (II) AUTHORIZING AND APPROVING ENTRY INTO A PURCHASE AND SALE AGREEMENT; (III) AUTHORIZING THE FILING OF CERTAIN DOCUMENTS UNDER SEAL AND (IV) GRANTING RELATED RELIEF

a legal structure for
actions in the ARIN

greement
IN and Mic
is no indic
on of upda
he sale ag
ctively, any
e Microsoi
on of need
t did justify

20. Pursuant to Bankruptcy Rule 6004(h), this Order is stayed until the expiration of 14 days after entry hereof. Thereafter, the Agreement shall be effective and enforceable by and against the Seller and the Purchaser, and the Debtors are authorized to take all steps necessary to consummate the Transaction contemplated in the Agreement.

Dated: April 26, 2011
Wilmington, Delaware

THE HONORABLE KEVIN GROSS
UNITED STATES BANKRUPTCY JUDGE

qualify for the transfer, but this raises a question about why Microsoft chose to buy these addresses

Fuente: http://www.circleid.com/posts/20110427_court_approves_nortels_sale_of_ipv4_addresses_to_microsoft/

Un nuevo protocolo: IPv6

- ✓ IPv6 (Internet Protocol versión 6) es el mas reciente desarrollo del protocolo IP
- ✓ Sus especificaciones han sido diseñadas por la Fuerza de Tareas de Ingeniería para Internet (IETF).
- ✓ IPv6 es consecuente con las tecnologías desarrolladas en base al protocolo IPv4, reelaboradas según una nueva filosofía.
- ✓ Resuelve eficientemente las limitaciones nativas de IPv4.

Definición de los Estándares Fundamentales (1993-2000)

Proyectos y Redes Pilotos en Internet, Laboratorios (1996-2000)

Productos básicos para redes y Salida de Plataformas al Mercado (2000-2003)

Planeación y Elaboración de Propuestas Estratégicas (RFP's) (2003-2007)

Desarrollo de Aplicaciones para plataformas heterogéneas (2004-2006)

Comienzo de Infraestructura IPv6 de los ISPs (2004-2007)

Sistemas y Redes Completas IPv6 (2008)

Evolución como estándar De Jure y De Facto, Desarrollo de Modelos, Nuevas Opciones (2011-????)

IPv6. Generalidades

- ✓ Espacio de direcciones de 128 bits (permite construir 340,282,366,920,938,463,463,374,607,431,768,211,456 direcciones)
- ✓ Representación en formato hexadecimal siguiendo la notación establecida en CIDR (numero de red/prefijo)

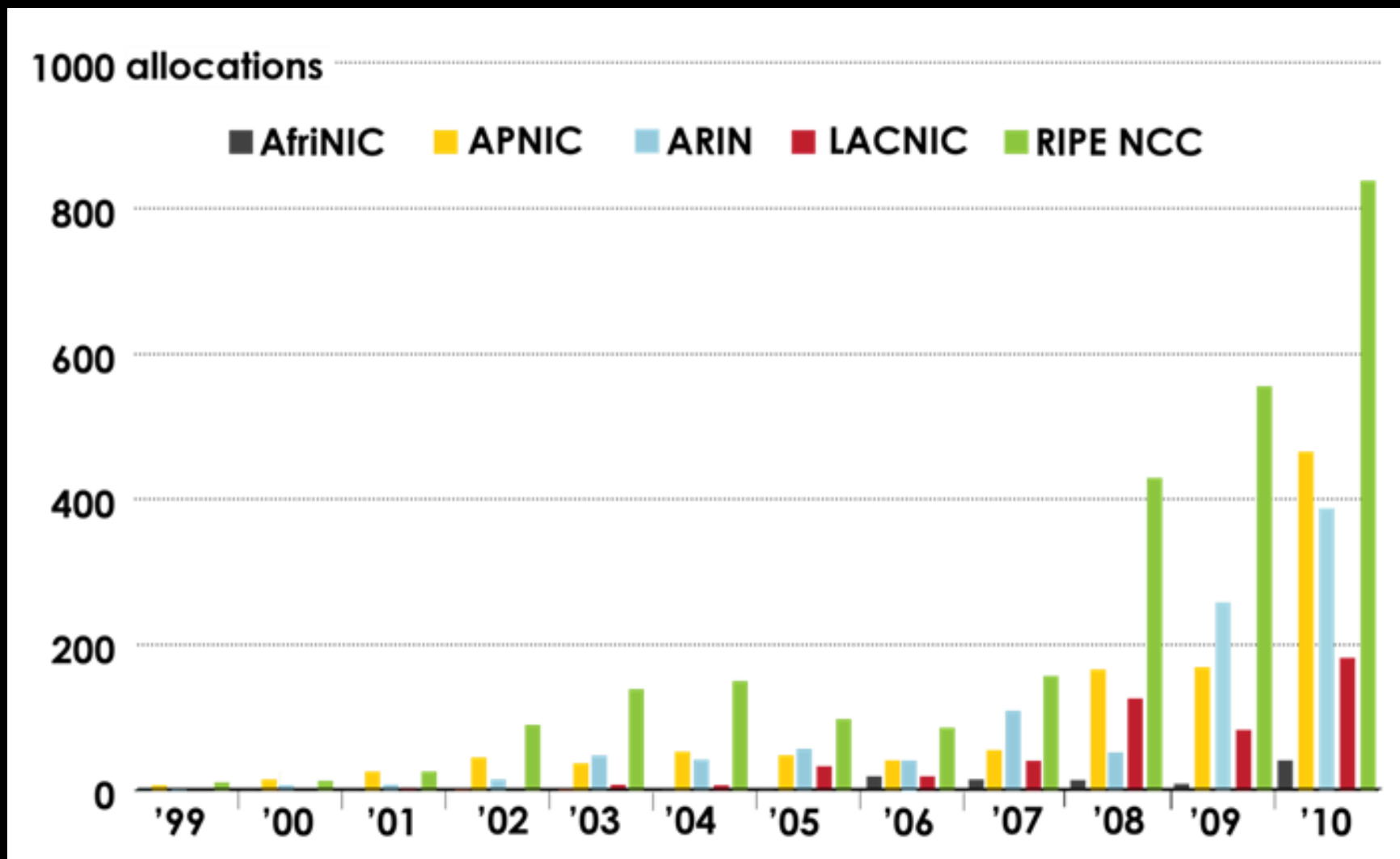
Ej: **2001:0000:130F:0000:0000:09C0:876A:130B**
2001:0000:130F::/48

- ✓ Incluye IPSEC como parte nativa del protocolo
- ✓ Incluye Multicast como funcionalidad básica
- ✓ Soporte nativo a movilidad IP
- ✓ Incluye opciones para gestionar Calidad de Servicio
- ✓ Verdadero “plug and play”



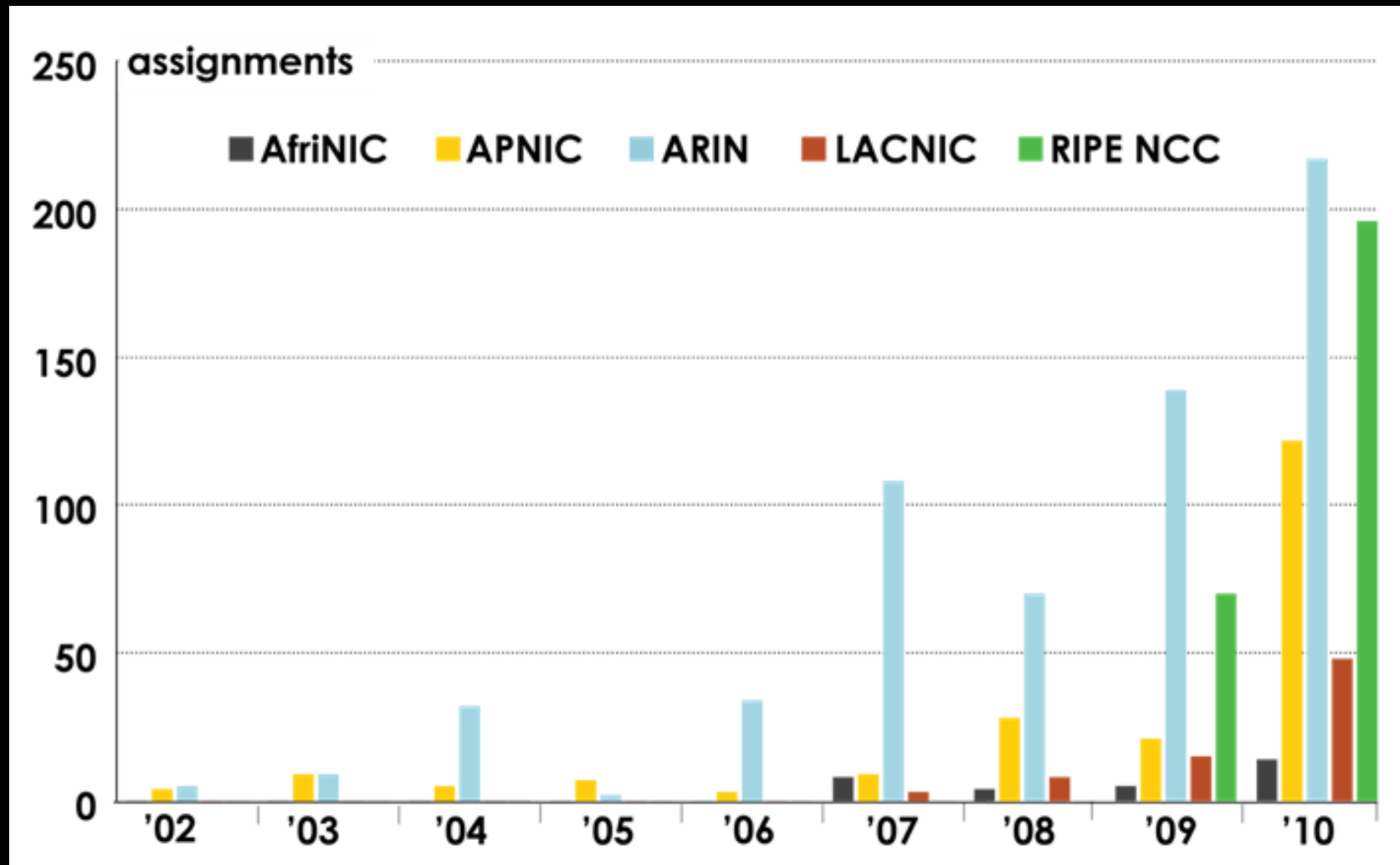
IPv4 → IPv6

Bloques IPv6 asignados por cada RIR a LIR/ISP (hasta diciembre 2010)



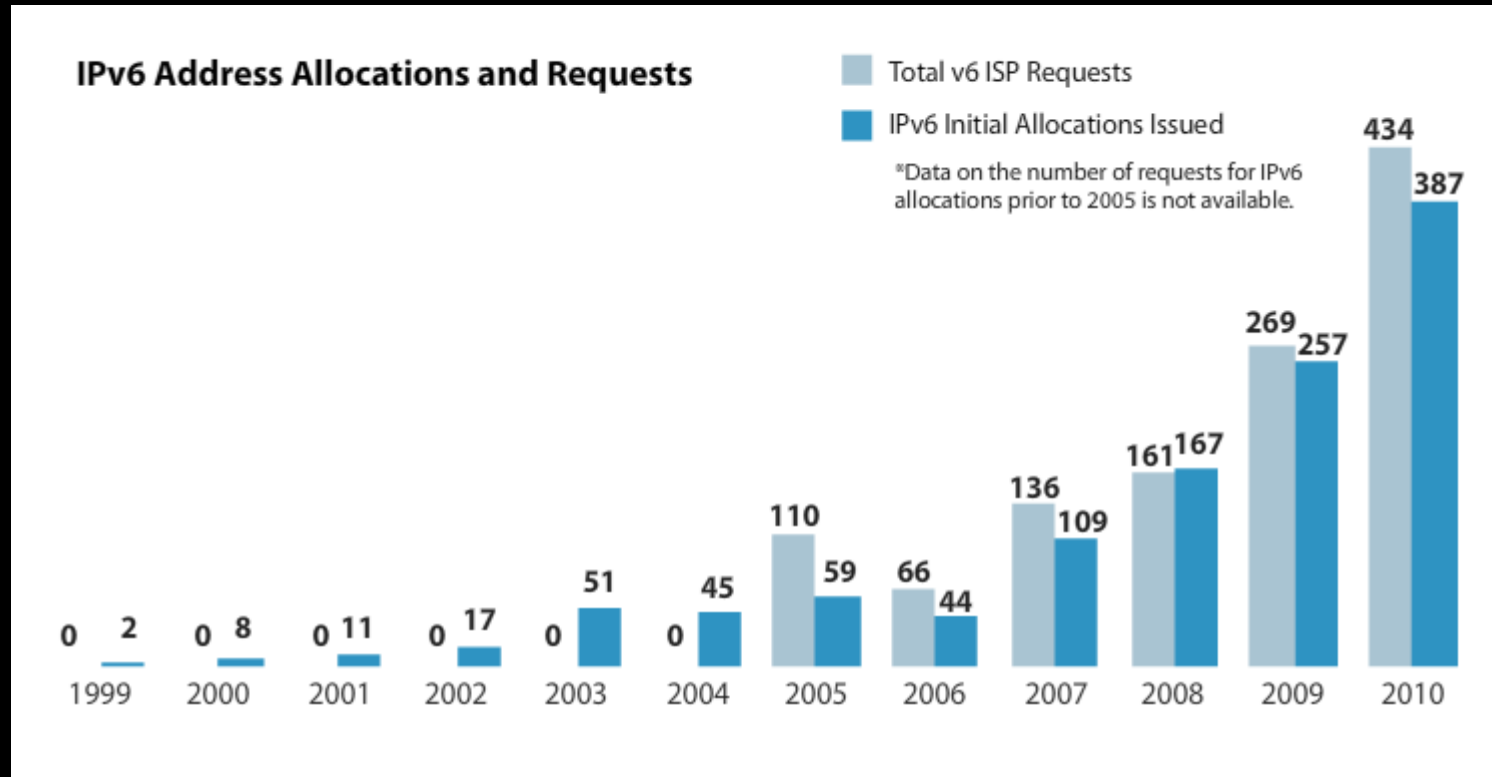
Fuente: NRO Internet Number Resource Report Diciembre/2010 (<http://www.nro.net>)

Bloques IPv6 asignados por cada RIR a usuarios finales (hasta dic. 2010)



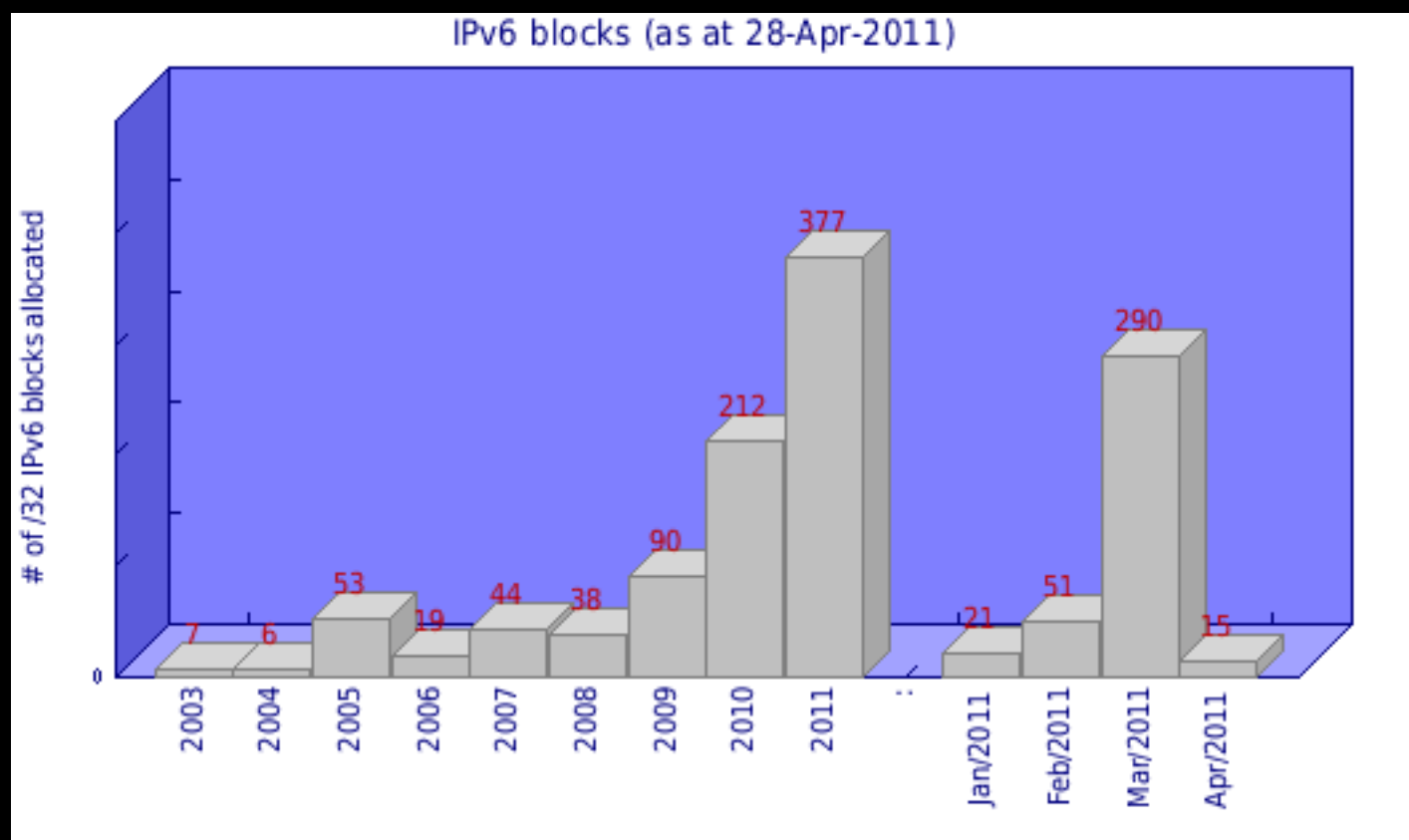
Fuente: NRO Internet Number Resource Report Diciembre/2010 (<http://www.nro.net>)

Bloques IPv6 asignados por ARIN a usuarios finales (hasta dic. 2010)



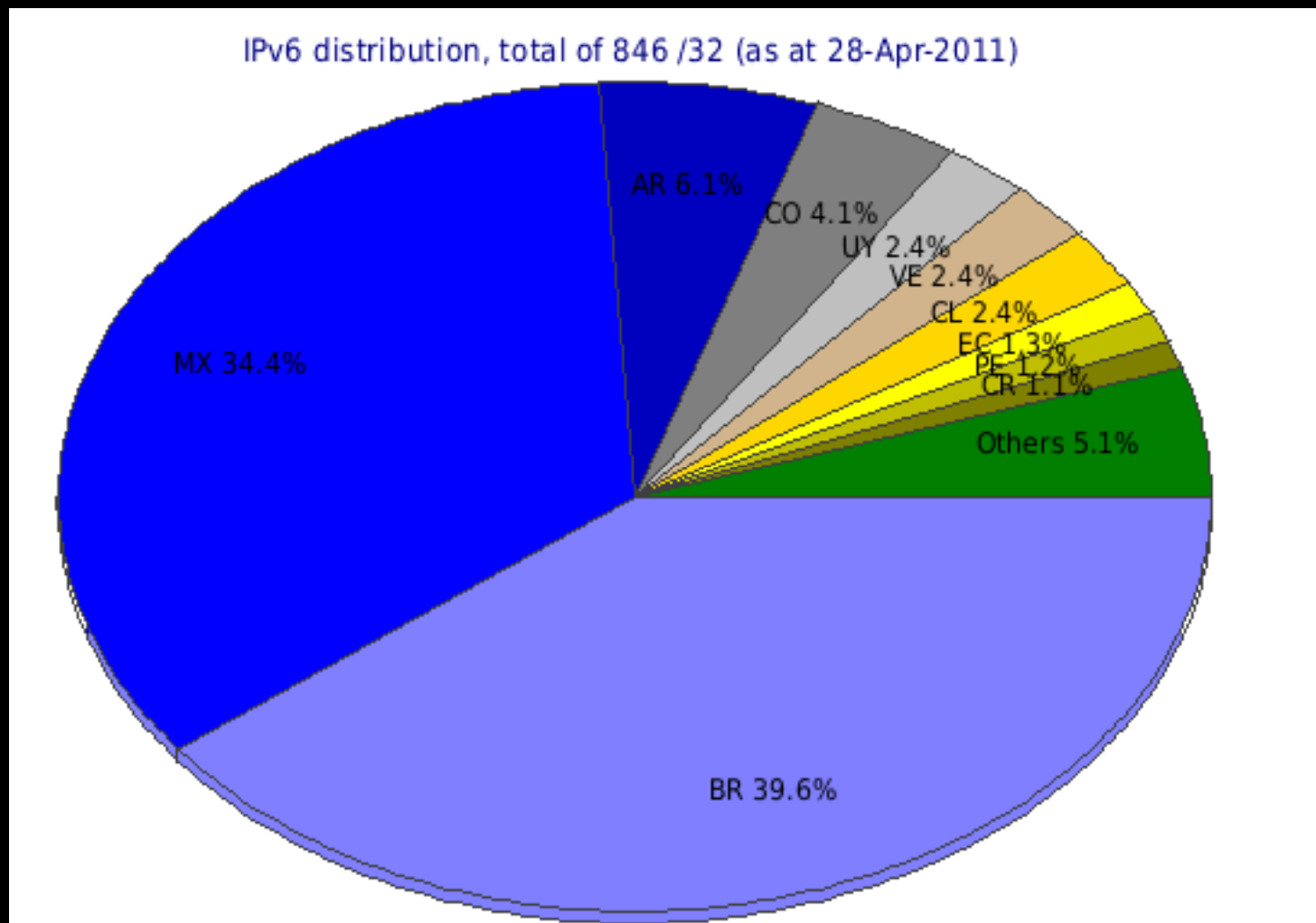
Fuente: https://www.arin.net/about_us/corp_docs/annual/2010/

Estadística regional Latinoamérica y El Caribe (28 de abril 2011)



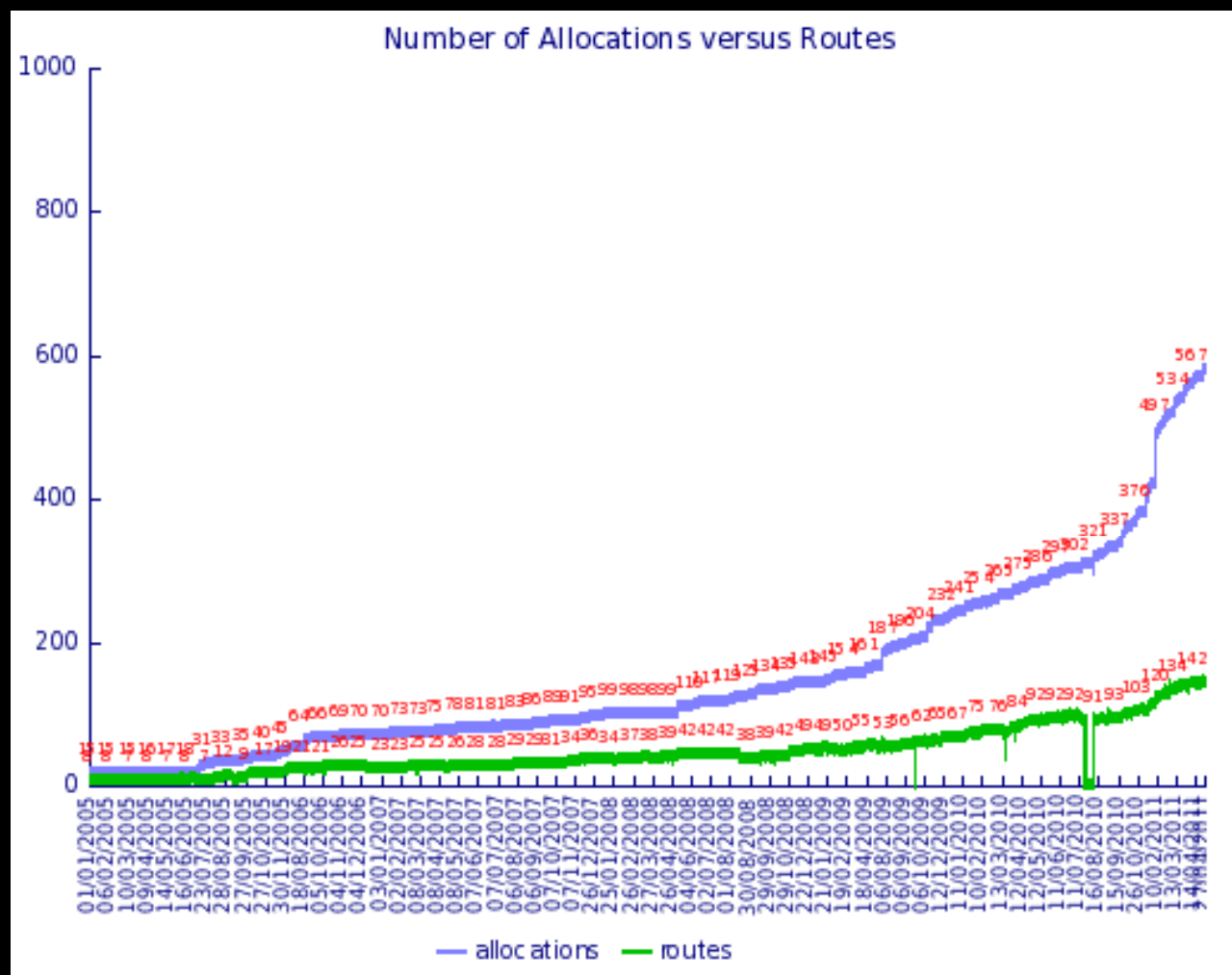
Fuente: <http://portalipv6.lacnic.net/es/ipv6/estad-sticas/regionales>

Estadística regional Latinoamérica y El Caribe

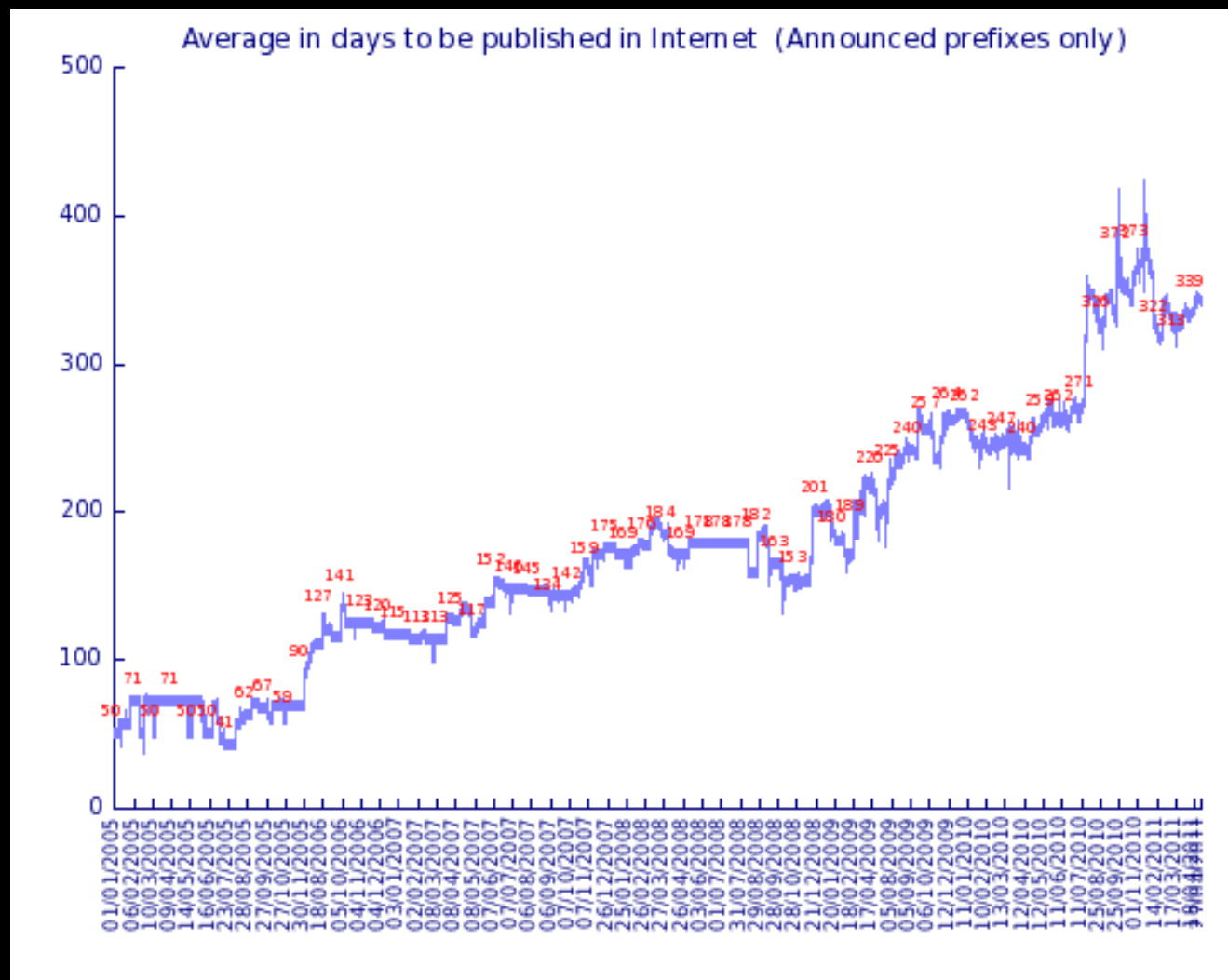


Fuente: <http://portalipv6.lacnic.net/es/ipv6/estad-sticas/regionales>

Estadística regional Latinoamérica y El Caribe (28 de abril 2011)

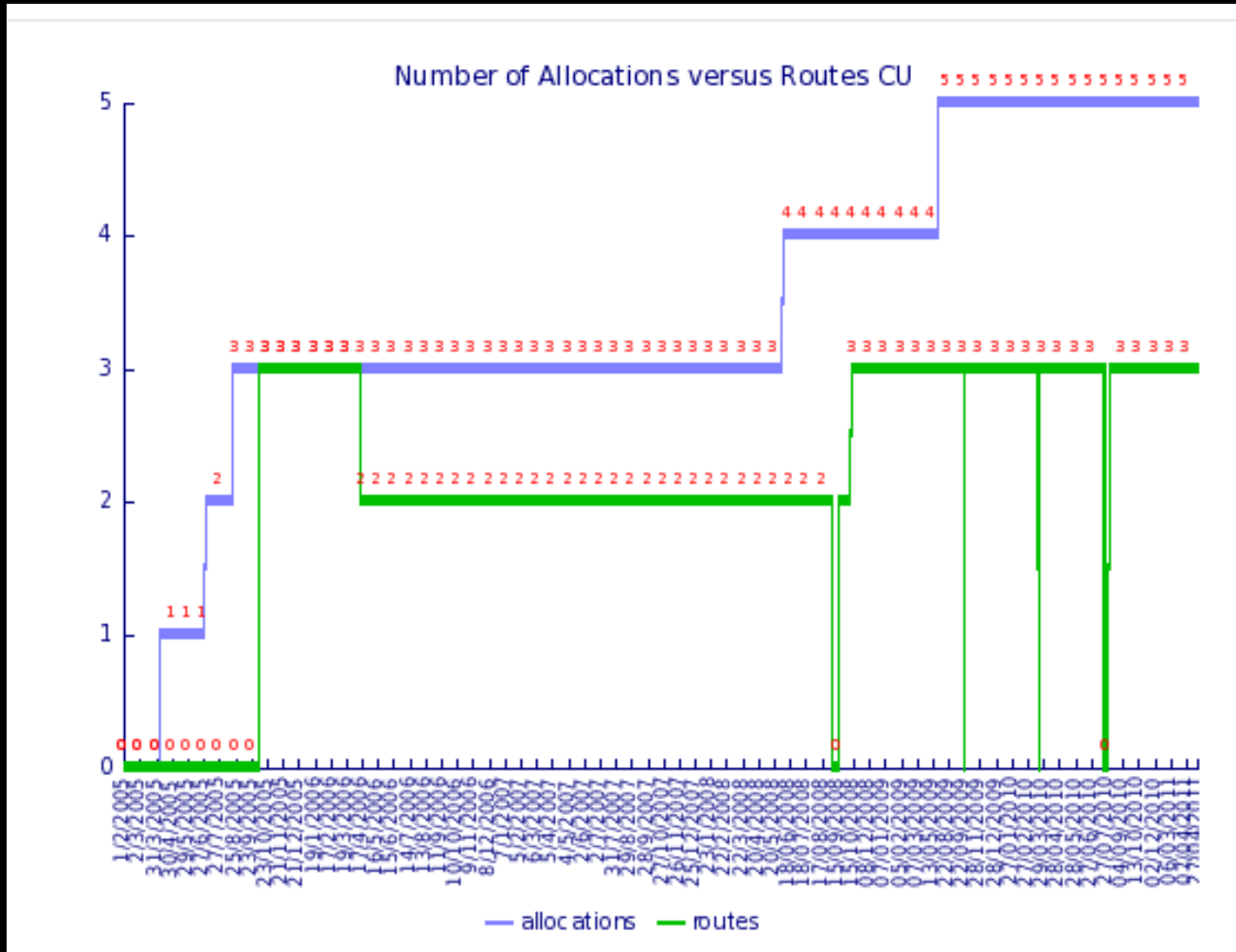


Estadística regional Latinoamérica y El Caribe (28 de abril 2011)



<http://portalipv6.lacnic.net/es/ipv6/estad-sticas/regionales>

Estadística IPv6 Cuba (28 de abril 2011)



Bloque Visibles en Internet (hasta 28 de abril 2011)

2001:1340::/32 (asignado 6 de abril de 2005)

CITMATEL

2001:1358::/32 (asignado
29 de junio de 2005)

ETEC

2001:13c8::/32 (asignado
18 de agosto de 2005) NAP

Bloques no visibles en Internet (hasta 28 de abril 2011)

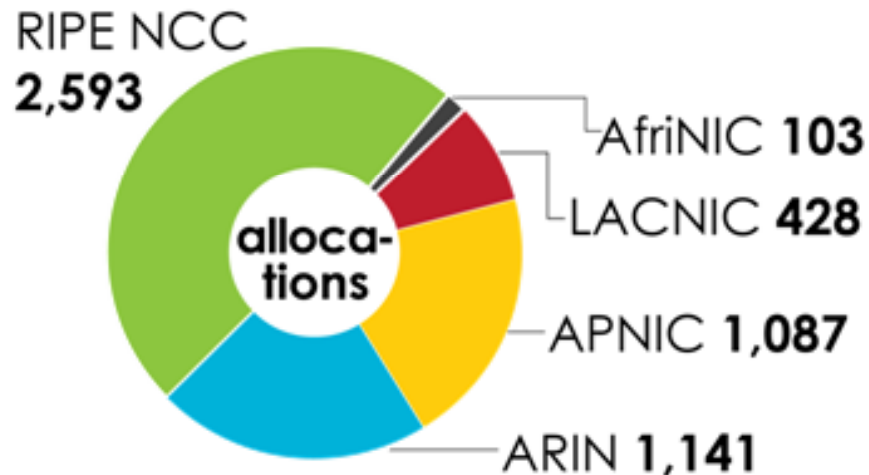
2800:230::/32 (asignado 4 de junio de 2008) SITRANS

2800:360::/32 (asignado 29
de mayo de 2009)
INFOMED

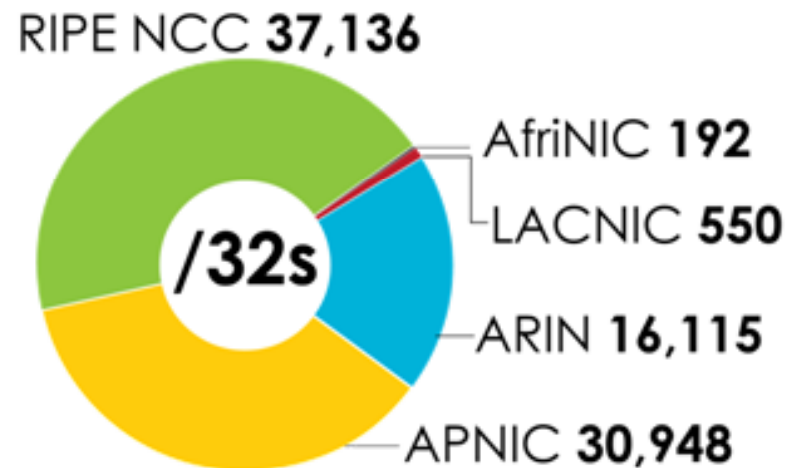
<http://portalipv6.lacnic.net/es/ipv6/estad-sticas/por-pa-s?value=CU>

Bloques IPv6 asignados por cada RIR (hasta diciembre 2010)

How many total allocations have been made by each RIR?



In terms of /32s, how much total space has each RIR allocated?



Fuente: NRO Internet Number Resource Report Diciembre/2010 (<http://www.nro.net>)

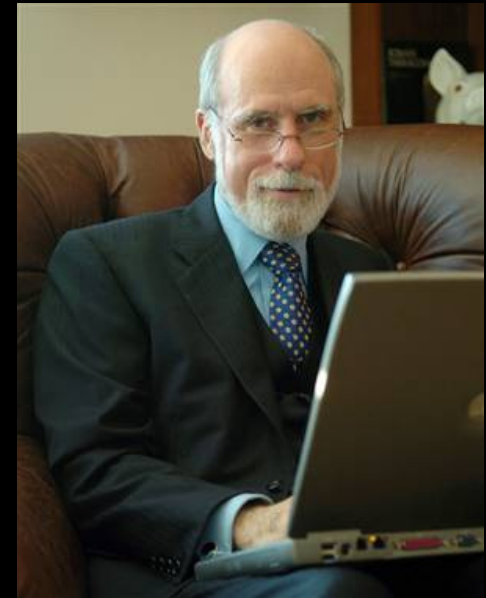
¿Por qué no se ha masificado IPv6?

- **Errónea percepción del problema**
 - NAT resuelve el crecimiento de la red
 - Se gana buen dinero con IPv4
- **Errónea promoción de IPv6**
 - IPv6 es un invento de los fabricantes
 - IPv6 es muy complejo
 - IPv6 no es la maravilla que me dijeron
 - ¿Para que gastar dinero para hacer lo mismo?
- **Buscando la aplicación que obligue al cambio**
- **Inercia**
- **IETF**
- **No hay una fecha definida**
- **Falta de divulgación**



El trabajo técnico para IPv6 está hecho. IPv6 está listo. Esto es un asunto de negocios en la industria de servicios de Internet. La comunidad de Proveedores de Servicios de Internet necesita prestar atención... Ellos están manteniendo la mentalidad de que “nadie está solicitando esto”. Ellos no están evaluando la continuidad de negocios como debieran. Cuando finalmente despierten, IPv6 va a ser una pesadilla y no podrán implementarlo correctamente.

Entrevista a Vinton Cerf en “The Times Online” (30 de septiembre 2008)



IP en objetos inteligentes



ipso
Alliance — promoting the use of IP for Smart Objects

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- Overview
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Documents

- IPSO Alliance Introduction
- FAQ White Papers
- Why IP?
- Lightweight OS
- 6LoWPAN

Marketing

- Press Releases
- Marketing Events

Current News: (click to read press release) First Successful Global Interoperability Test

Time Selects IP for Smart Objects Alliance and "The Internet of Things" a best invention of 2008!



Time's Best Inventions of 2008

30. The Internet Of Things

In September, a

ARTICLE TOOLS
Print



<http://www.ipso-alliance.org/Pages/Front.php>

IP en dispositivos domésticos



"Hikari-TV" IPVT (NTT)



- Retransmission of Terrestrial Digital Broadcasting (HD) 'Hikari-TV' is the first RTDB provider.

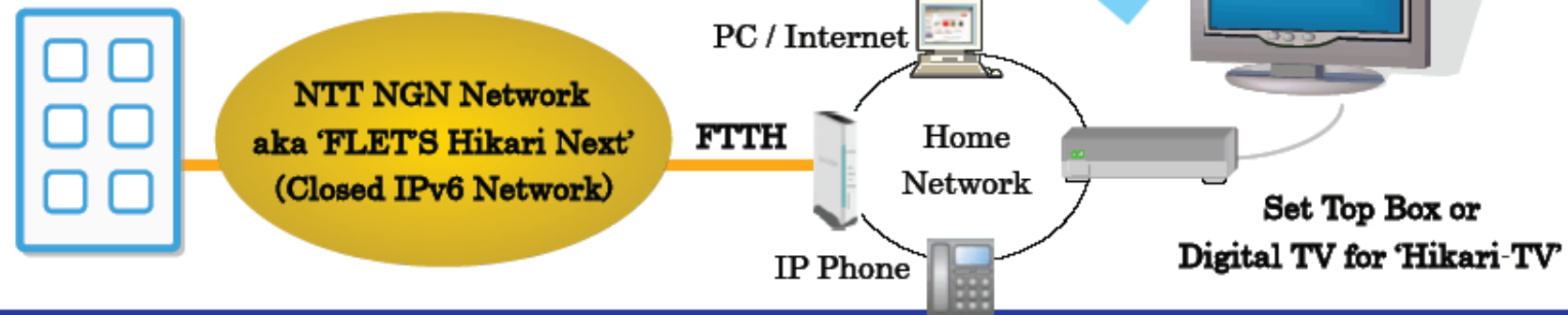
- Channel service
76 channels (including HD channels)

- VOD service
Over 10,000 titles

- Karaoke service
Over 13,000 titles



plala 'Hikari-TV' Content Delivery Network



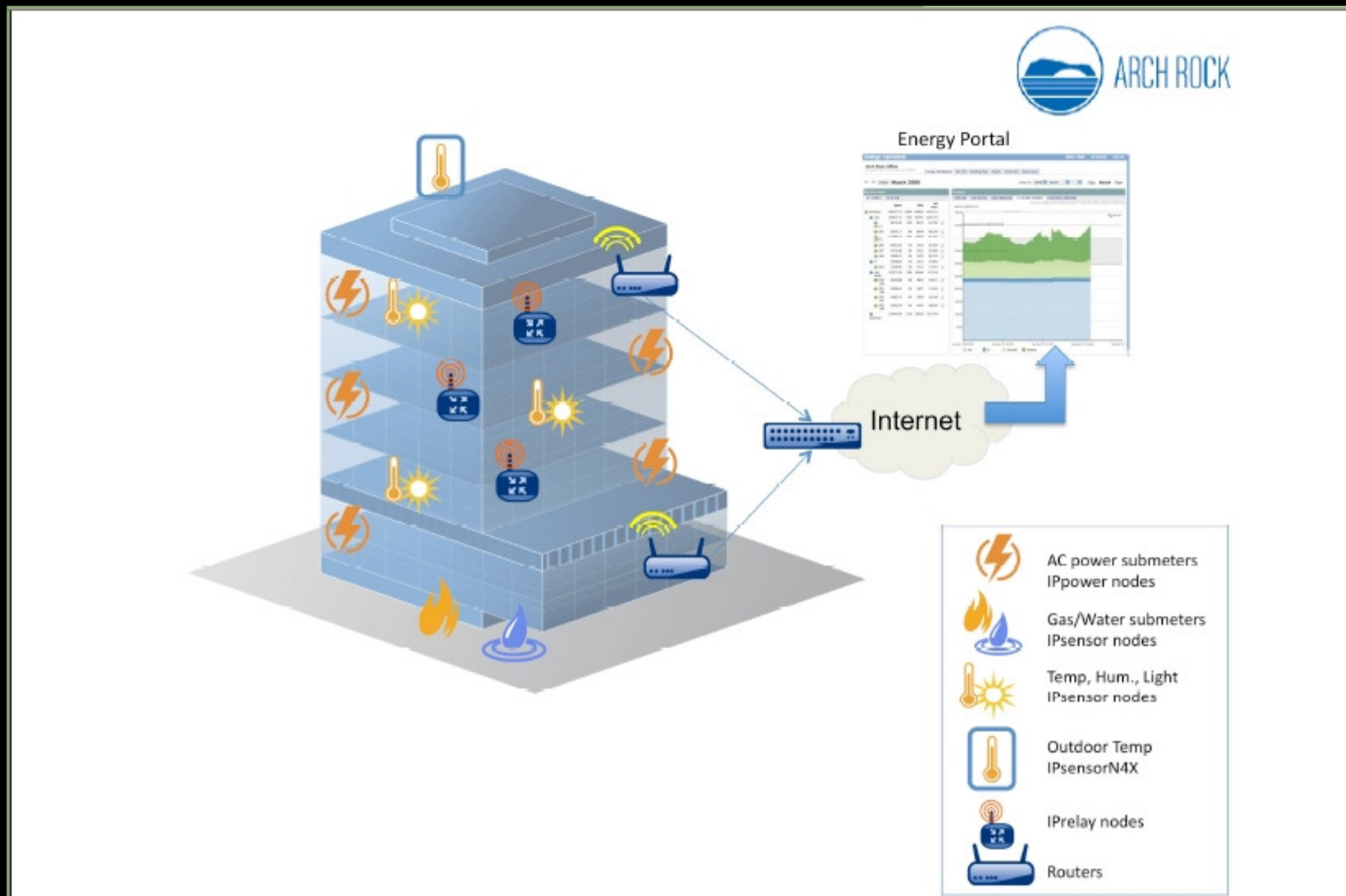
Toshiba y Sharp fabrican TVs digitales que incluyen la función "Hikari-TV"

La casa multimedia



Tomado de WLAN Applications and IPv6 - Rick Jeng (Ralink Technology) (2 Septiembre 2008)

Optimización de Energía (Arch Rock)



<http://www.archrock.com>



PRO RESEARCH

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Cisco Buys Up Arch Rock for the Smart Grid

By Katie Fehrenbacher | Sep. 2, 2010, 8:01am PDT | No Comments

Tweet



5 people like this.



Cisco's smart grid assault continues. This morning, the networking giant announced that it plans to acquire Arch Rock, a

The sheer size of the Smart Grid opportunity has attracted the attention of the nation's leading network vendors. BCC Research predicts the Smart Grid market will grow from \$17.3 billion in 2008 to \$37.4 billion in 2014. Among the network vendors that are eyeing this opportunity are Cisco, IBM, Microsoft and Google.

Smart Grid "is huge," Shockley says. "This is the biggest re-engineering of a data communications structure outside of a telco that I've seen in the last 15 years... There's no doubt in my mind that every data communications company in North America is looking at this." <http://www.networkworld.com/news/2009/102909-smart-grid-ipv6.html?page=3>

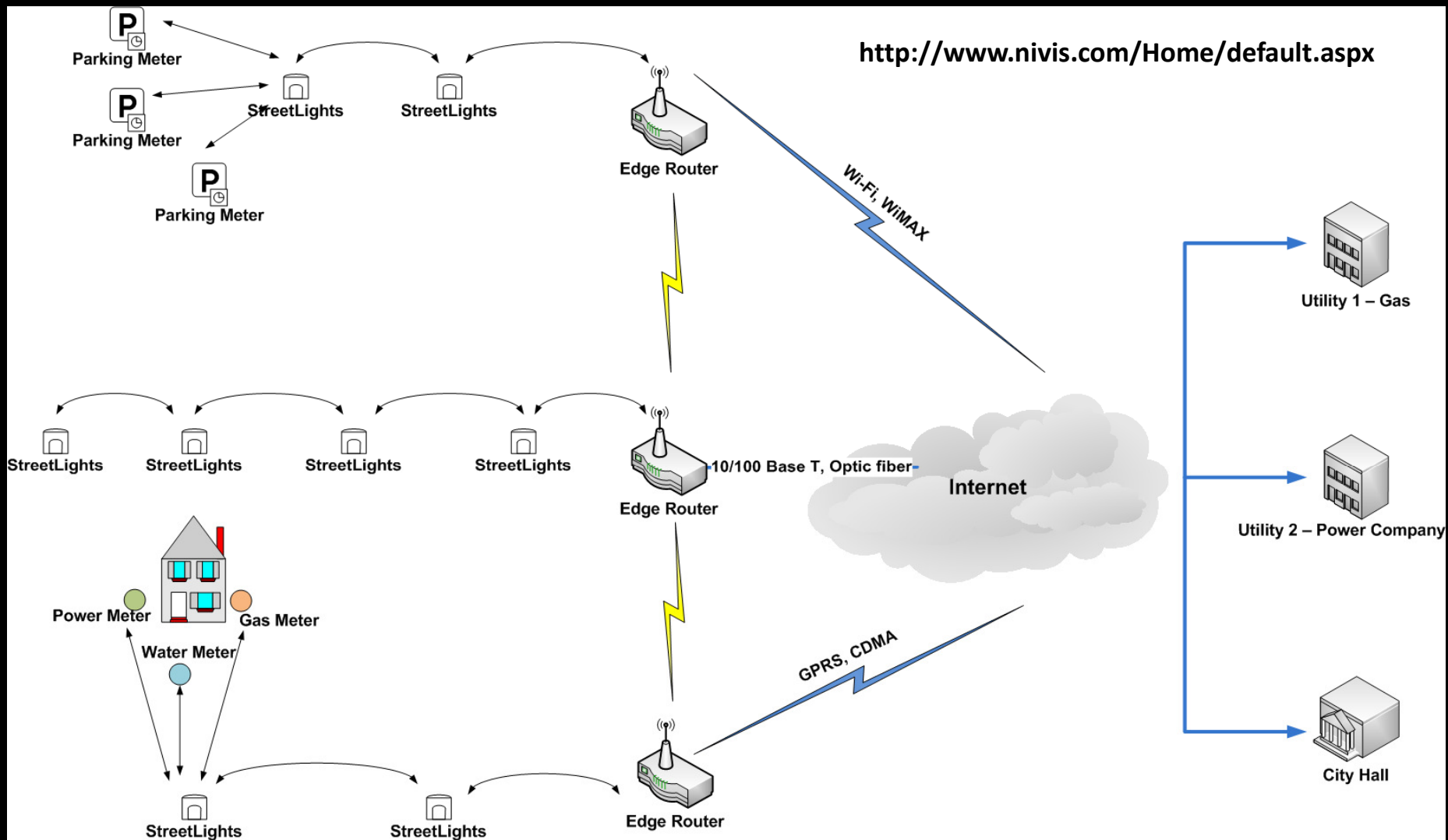
selling wireless
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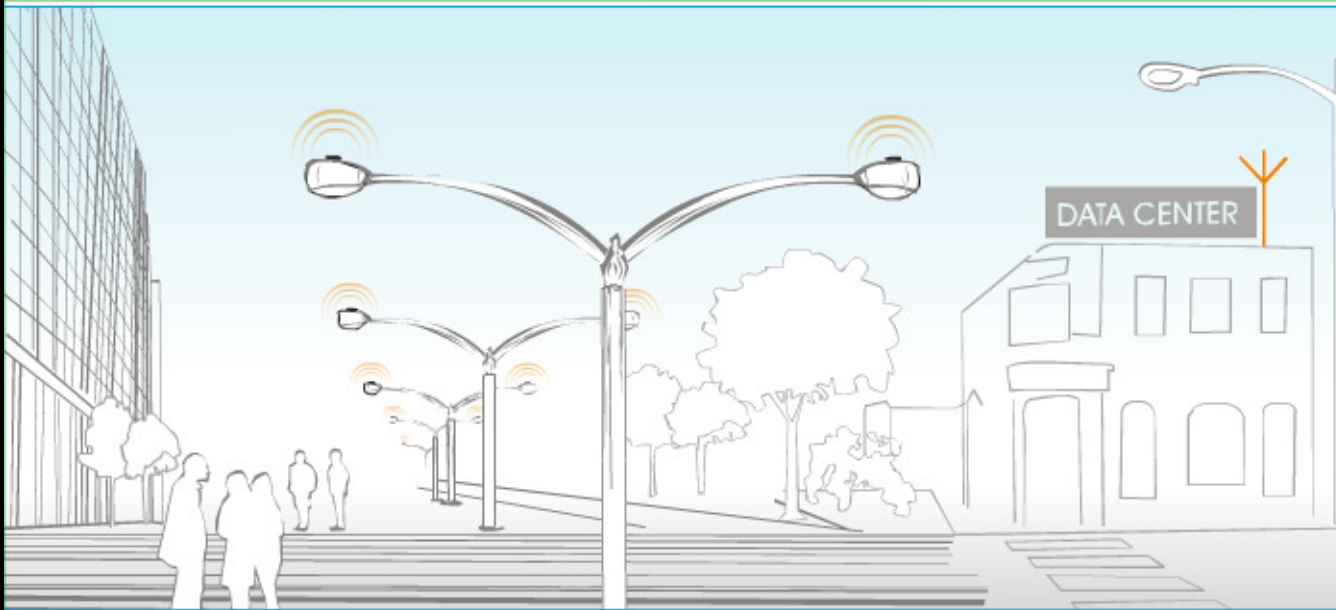
Like 7K

Monitoreo de servicios (Nivis)



Fuente: Embedded IP(v6) Networks. The Internet of Things is on the way - Geoff Mulligan (IETF 6LoWPAN Chair, IPSO Alliance Chairman)

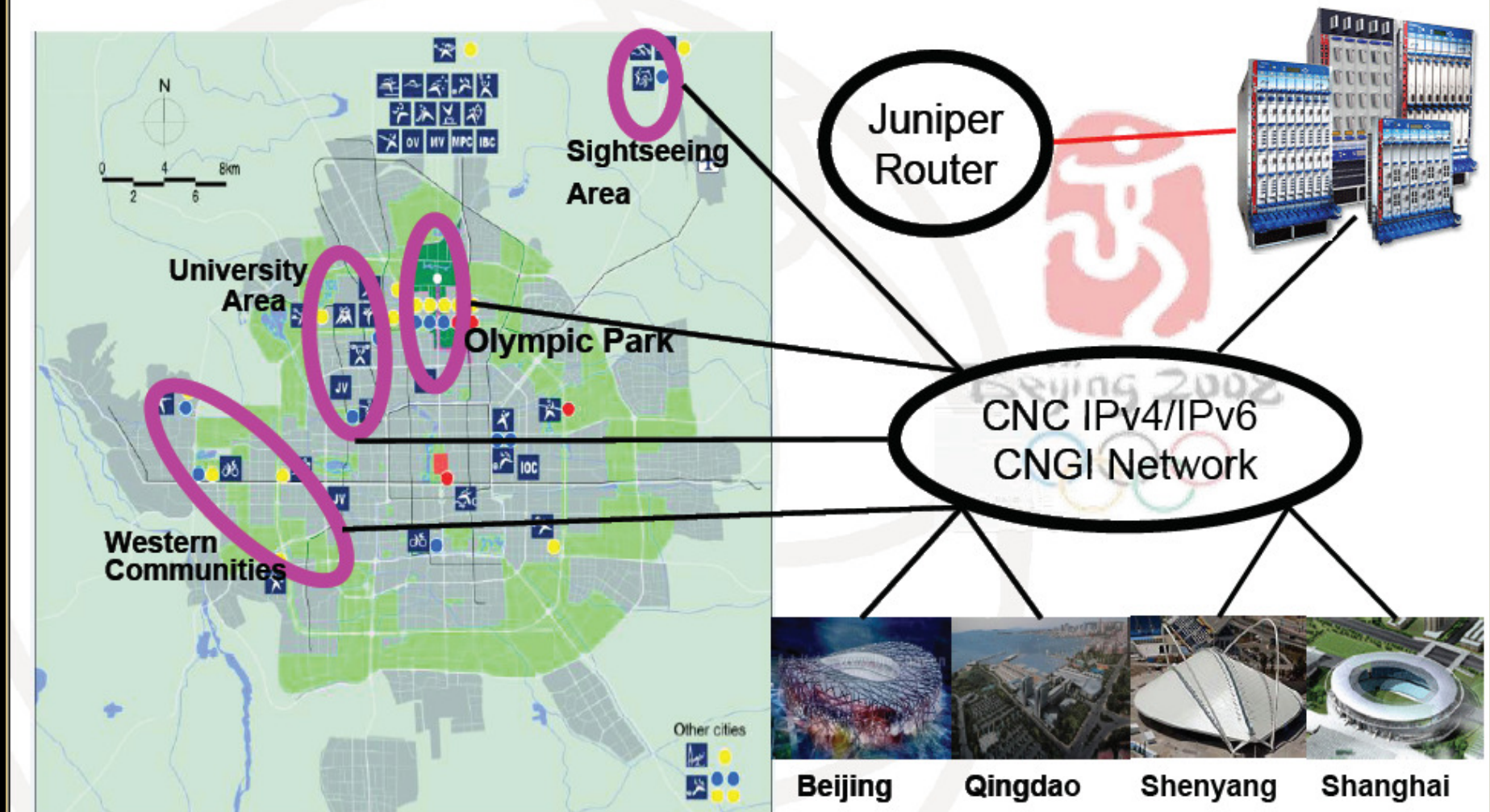
Monitoreo de servicios (Nivis)



<http://www.nivis.com/Home/default.aspx>

Conexión entre instalaciones Olimpiada Beijing 2008

Olympic Access Service



Red de vigilancia Olimpiada Beijing 2008 (demo)

Olympic Surveillance - Demo

中国网通IPv4/IPv6视频监控系统
窗口 (M) 设备 (D) 配置 (C)

- 数字北京大厦B座11层
 - TOC1
 - TOC2
 - TOC3
 - TOC4
- 数字北京大厦B座10层机房
 - MDR1
 - MDR2
- 数字北京大厦B座10层过道
 - aisle1
 - aisle2
- 数字北京大厦A座11层
 - Hall1
 - Hall2
- 数字北京大厦A座10层
 - can1
 - can2
 - can3
 - can4
- 黄村TEL
 - HCTER1
 - HCTER2
 - HCTER3
- 朝阳公园沙滩排球场
 - CBVTER

MDR1 带宽: 129 kbps

TOC4 带宽: 171 kbps

TOC3 带宽: 176 kbps

can3 带宽: 143 kbps

aisle1 带宽: 496 kbps

TOC2 带宽: 207 kbps

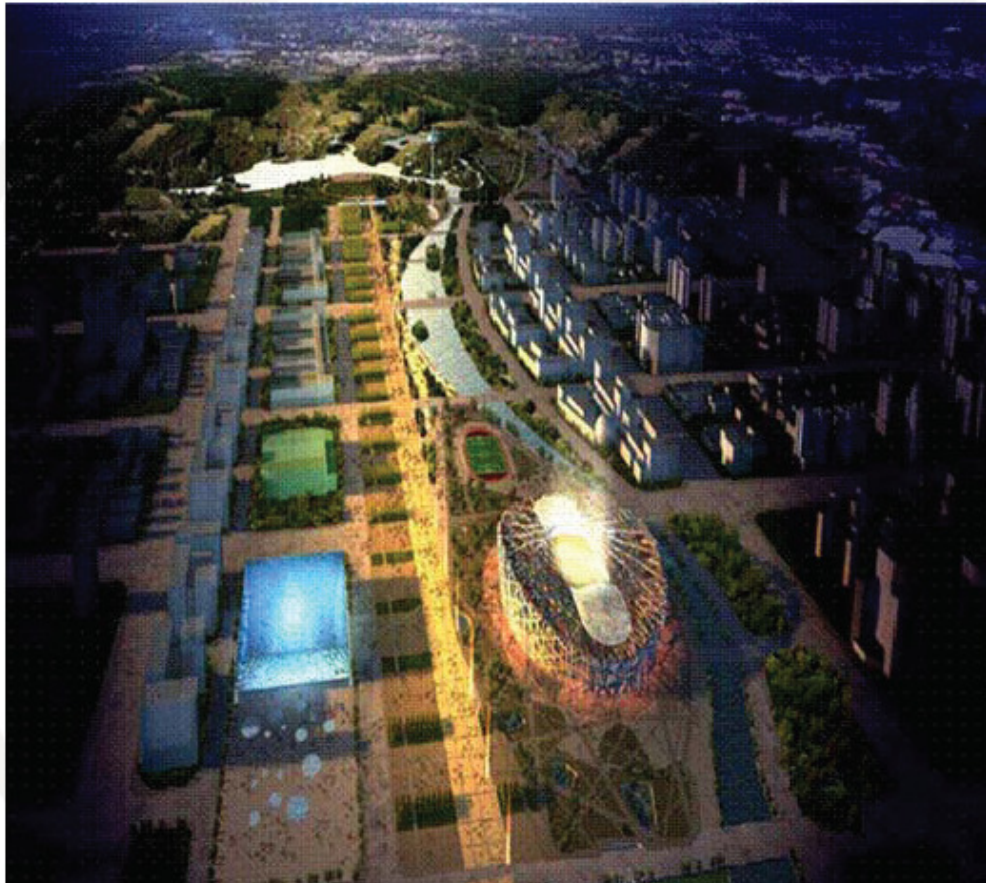
Hall2 带宽: 266 kbps

can1 带宽: 130 kbps

TOC1 带宽: 139 kbps

Olympic IPv6 Lighting System

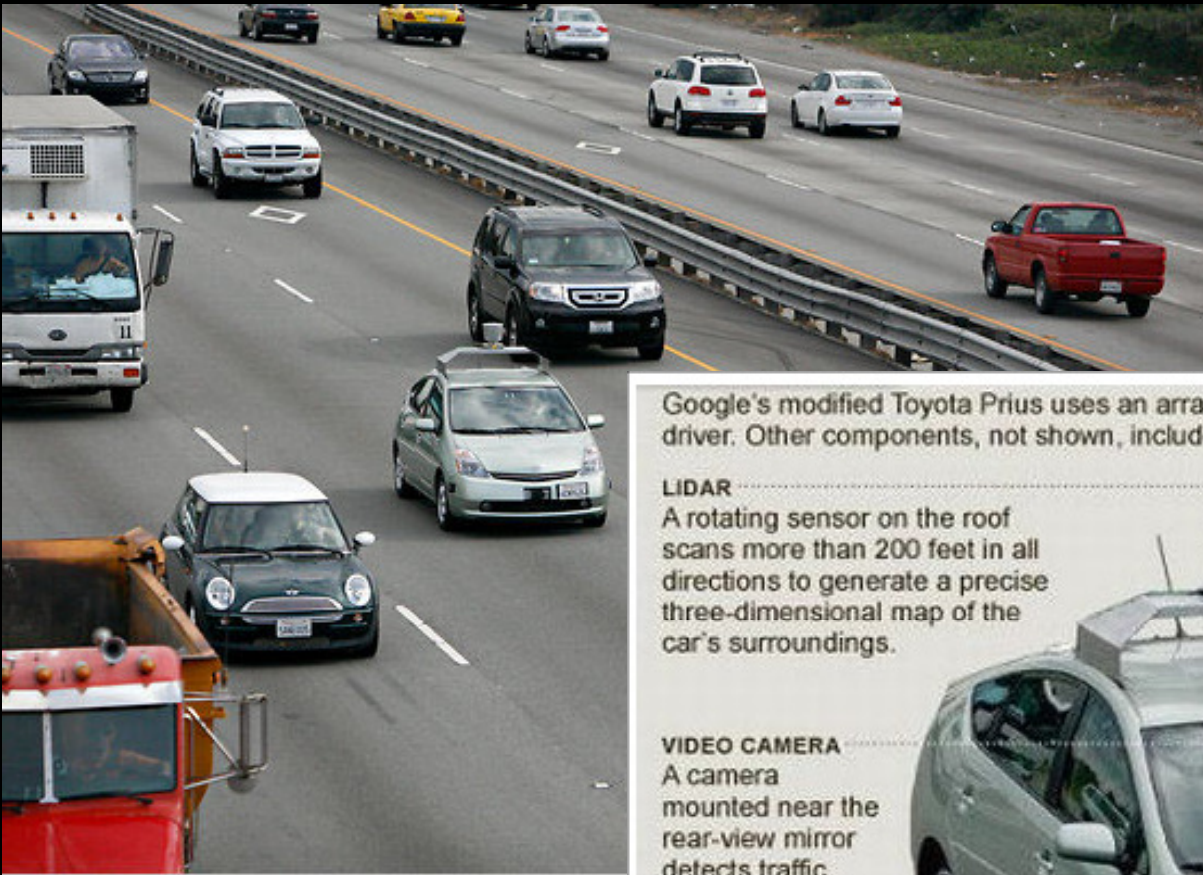
Lighting System- Main Stadium District Control by IPv6 Facility Manage & Control



Lightening Management & Control

- Using IPv6 based Facility Networking
- Area Management System, i.e., not single facility but multiple facilities
- 1.4kmx2.4km with 18,000 lights
- 1 000 IPv6-based control nodes

Auto robot de Google (Octubre 2010)



Google's modified Toyota Prius uses an array of sensors to navigate public roads without a human driver. Other components, not shown, include a GPS receiver and an inertial motion sensor.

LIDAR

A rotating sensor on the roof scans more than 200 feet in all directions to generate a precise three-dimensional map of the car's surroundings.

VIDEO CAMERA

A camera mounted near the rear-view mirror detects traffic lights and helps the car's onboard computers recognize moving obstacles like pedestrians and bicyclists.



RADAR

Four standard automotive radar sensors, three in front and one in the rear, help determine the positions of distant objects.

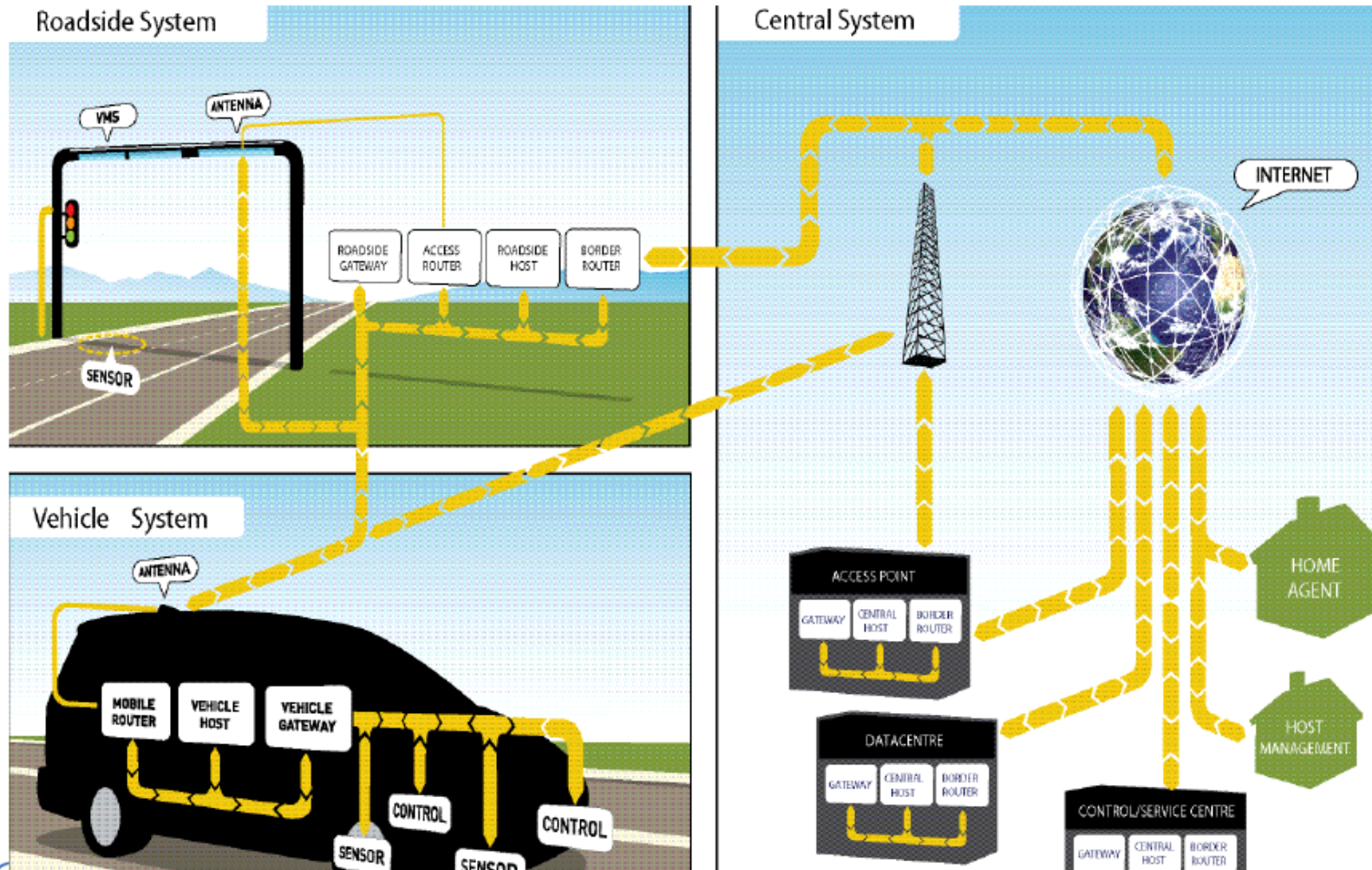
POSITION ESTIMATOR

A sensor mounted on the left rear wheel measures small movements made by the car and helps to accurately locate its position on the map.

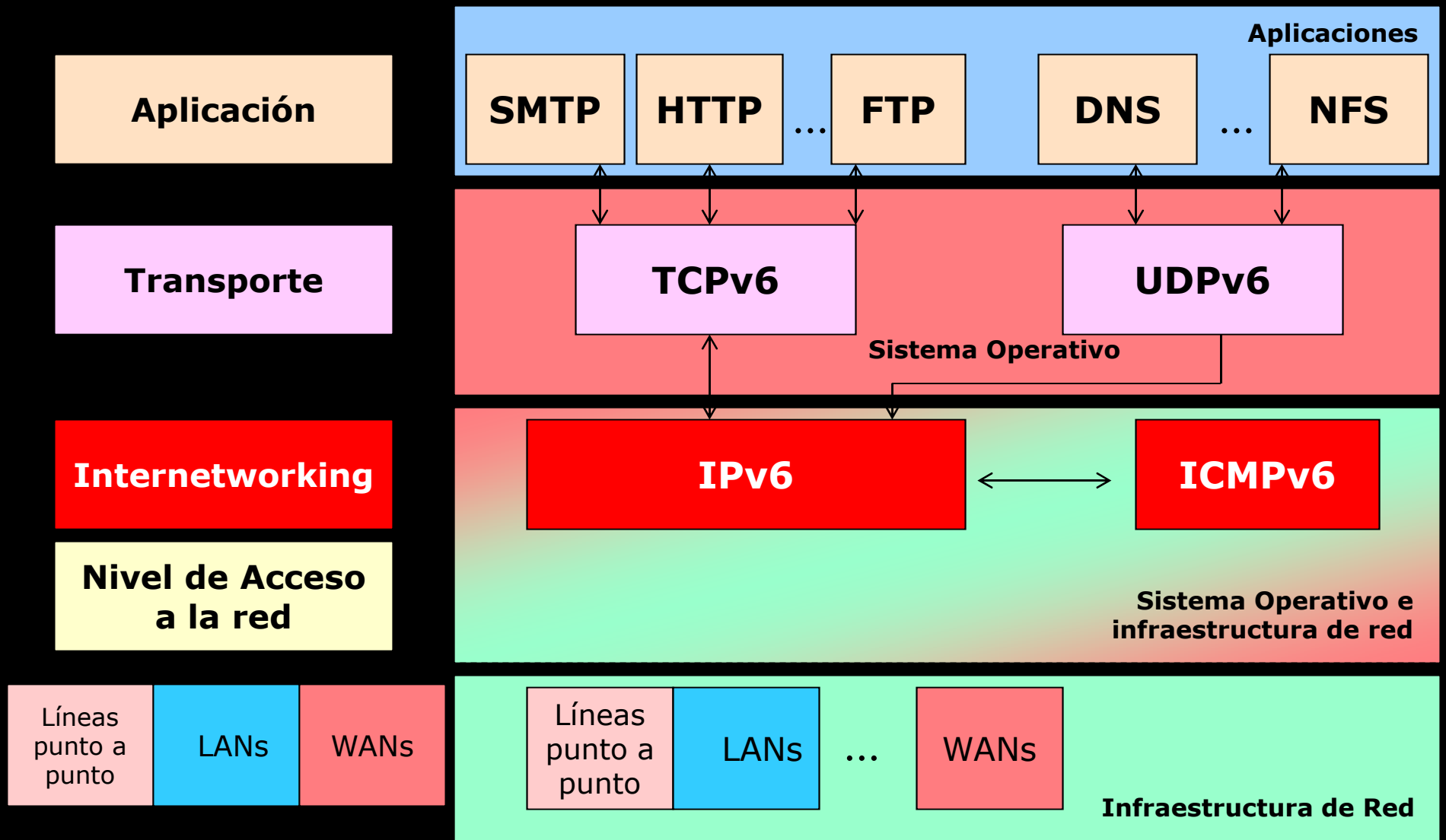


CVIS (Sistema cooperativo de infraestructura vehicular) [Francia]

CVIS: IPv6 Communication between subsystems



IPv6: una evolución dentro del mundo IP

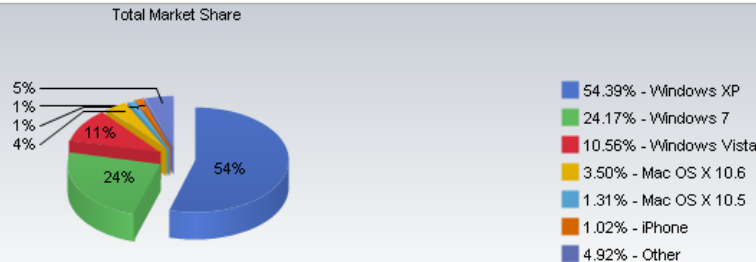


Sistemas operativos con soporte IPv6

Sistemas operativos con soporte IPv6: Microsoft Windows Vista, Windows Server 2008, Windows Server 2003, Windows XP, Windows CE (4.1 o superior), Red Hat Linux (7 o superior), Debian, SUSE Linux (10.x o superior), Fedora, Ubuntu, FreeBSD (4 o superior), HP-UX, Apple MAC OS, Sun Solaris (8 o superior), Tru64 UNIX, Symbian (7 o superior)

Operating System Market Share

March, 2011



Operating System	Total Market Share
Windows XP	54.39%
Windows 7	24.17%
Windows Vista	10.56%
Mac OS X 10.6	3.50%
Mac OS X 10.5	1.31%
iPhone	1.02%
Java ME	0.98%
Linux	0.96%
iPad	0.70%
Mac OS X 10.4	0.37%
Android 2.2	0.34%
Symbian	0.34%
Windows 2000	0.25%
Android 2.1	0.17%
Windows NT	0.16%
iPod	0.15%
BlackBerry	0.13%
X11	0.12%
Pike v7.8 release 517	0.08%
Mac OS X (no version reported)	0.05%
Unknown	0.04%
Windows 98	0.03%
Android 1.6	0.03%
Windows CE	0.02%

Fuente: <http://marketshare.hitslink.com/>

Desarrollo de aplicaciones IPv6

Plataforma de desarrollo con soporte IPv6: JAVA SDK, .NET 1.1 o superior, Visual Studio 2003 o superior

Programas de certificación que incluyen IPv6:

Apple Bonjour Conformance test 1.2.3

- Microsoft's Premium "Certified for Windows Vista" (ver lista de programas certificados en <https://winqual.microsoft.com/member/softwarelogo/certifiedlist.aspx>)

```
Lastly, we released Bonjour Conformance Test 1.2.3, which now runs natively on both PowerPC and Intel Macs and adds support for testing IPv6 devices. It also includes a bunch of minor fixes.
```

```
You can get it here...
```

```
<http://developer.apple.com/networking/bonjour/ ConformanceTest-1_2_3.zip>
```

```
Cheers,
```

```
-Marc
```

```
http://lists.apple.com/archives/Bonjour-dev/2007/Jun/msg00024.html
```

Soporte de aplicaciones de Red para Linux y BSD

http://www.deepspace6.net/docs/ipv6_status_page_apps_multi.html

Los fabricantes

Algunos soportan IPv6 completamente en prácticamente todos sus productos.

- ✓ *Cisco (Cisco IOS 12.x prácticamente para todas sus plataformas) [Ipbase 7200-7500, ¿y los simples mortales?]*
- ✓ *Juniper Networks (JunOS prácticamente para todas sus plataformas)*

Algunos soportan IPv6 de forma parcial (solo en determinados productos)

- ✓ *Huawei (equipos gama media y alta) [¿y los de gama baja?]*
- ✓ *Allied-Telesyn [complicada forma de actualización]*
- ✓ *D-Link (routers mas nuevos)*

Otros productores con poco o ningún interés en IPv6

- ✓ *Planet*

Los fabricantes

El problema principal en estos momentos para el país está en el equipamiento de red (L3 switches y routers).

- *cuidado con el hardware barato que comenzará a aparecer (viajando de Norte a Sur)*

<http://www.ripe.net/ripe/draft-documents/ipv6-ict-requirements.html> (Propuesta de política de adquisición de equipamiento RIPE (Unión Europea))

<http://www.ipv6ready.org/?page=phase-1> (Evaluación IPv6 Ready Fase1)

<http://www.ipv6ready.org/?page=phase-2> (Evaluación IPv6 Ready Fase2)

<http://www.antd.nist.gov/usgv6/usgv6-v1.pdf> (USGv6 Profile Version 1)

http://jitc.fhu.disa.mil/apl/ipv6/pdf/disr_ipv6_50.pdf (DoD IPv6 Standard Profiles v5.0)

Adopción IPv6. Otros datos

Los tres primeros sistemas operativos empleados en teléfonos móviles soportan IPv6:

Linux (<http://www.linux.org/>)

Symbian (<http://www.symbian.com>)m

Windows Mobile (<http://www.microsoft.com/windowsmobile/default.mspx>)

Los principales fabricantes de plataformas de red están listos para IPv6: Cisco, Foundry, Juniper, Alaxala, Huawei, and Nortel (IPv6 Ready Logo, www.ipv6ready.org)



Algunos proveedores de tránsito IPv6 a nivel global

Proveedores de tránsito IPv6 nativo a nivel global

- ❑ Cable & Wireless
- ❑ Flag Telecom
- ❑ France Telecom / Open Transit
- ❑ Global Crossing
- ❑ Level 3
- ❑ NTT/Verio
- ❑ Telecom Italia Sparkle
- ❑ Tiscali
- ❑ VSNL International / Teleglobe

Proveedores de tránsito IPv6 (mediante túneles) a nivel global

- ❑ AT&T
- ❑ Sprint
- ❑ UUNET/MCI/Verizon

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU



WORLD TELECOMMUNICATION STANDARDIZATION
ASSEMBLY
Johannesburg, 21-30 October 2008

Resolution 64 – IP address allocation and encouraging the deployment of IPv6

La Unión Internacional de Telecomunicaciones e IPv6

RESOLUTION 64

IP address allocation and encouraging the deployment of IPv6

(Johannesburg, 2008)

The World Telecommunication Standardization Assembly (Johannesburg, 2008),

recognizing

- a) Resolution 102 (Rev. Antalya, 2006) of the Plenipotentiary Conference, and its instructions to the Director of the Telecommunication Standardization Bureau;
- b) the results of the ITU workshop on IPv6, which took place on 4-5 September 2008;
- c) that IPv4 to IPv6 migration is an important issue for Member States and Sector Members,

noting

- a) that IP addresses are fundamental resources that are essential for the future development of telecommunication/information and communication technologies IP-based networks and for the world economy;
- b) that many countries believe that there are historical imbalances related to IPv4 allocation;
- c) that large contiguous blocks of IPv4 addresses are becoming scarce and that it is urgent to promote migration to IPv6,

considering

- a) that, among the relevant stakeholders in the Internet community, there is a need to continue discussions related to IPv6 deployment so that countries better understand these important issues;
- b) that IPv6 deployment is an important issue for Member States and Sector Members,

resolves

to instruct Study Groups 2 and 3, each according to its mandate, to study the allocation and economic aspects of IP addresses, taking into consideration the challenges and issues identified in the report of the chairman of the 4-5 September 2008 workshop on IPv6,

instructs the Director of the Telecommunication Standardization Bureau, in close collaboration with the Director of the Telecommunication Development Bureau

- 1 to initiate a project to assist developing countries¹, responding to their regional needs as identified by the Telecommunication Development Bureau (BDT); this project should be carried out jointly by the Telecommunication Standardization Bureau (TSB) and BDT, taking into consideration the involvement of those partners willing to participate and to bring their expertise;

Guadalajara Conference ends with landmark achievements

Agreement on Internet issues gets thumbs up!

Summary overview of Internet resolutions

One major innovation in all these Internet resolutions is their resolve to explore ways and means for greater collaboration and coordination between ITU and relevant organizations – including, but not limited to the Internet Corporation for Assigned Names and Numbers (ICANN); regional Internet registries (RIRs); the Internet Engineering Task Force (IETF); the Internet Society (ISOC) and W3C on a reciprocity basis – involved in the development of IP-based networks and the future Internet, through cooperation agreements, as appropriate, in order to increase the role of ITU in Internet governance so as to ensure maximum benefits to the global community.

Facilitating the transition from IPv4 to IPv6 - New Resolution



This new resolution is ITU's first Plenipotentiary resolution focused on IPv6, and breaks new ground for ITU as it seeks to modernize and adapt its work to Internet Protocol (IP)-based next-generation networks. Considering the imminent exhaustion of IPv4 addresses and that specific actions must be defined for the transition to IPv6, it recognizes the opportunities opened up for the development of ICTs by IPv6 and that the early adoption of IPv6 is the best way forward to avoid scarcity of IP addresses and the follow-on effects of IPv4 address exhaustion.

The resolution seeks to step up the exchange of experiences and information regarding the adoption of IPv6 with all stakeholders and create opportunities for collaborative efforts to support the transition to IPv6. It seeks to assist Member States which require support in the management and allocation of IPv6 resources. It notes the work of the existing IPv6 working group set up by the 2009 Session of Council and asks it to undertake detailed studies of IP address allocation for both IPv4 and IPv6 addresses. It also calls for ITU to

study and monitor current allocation mechanisms, identify any flaws arising and communicate proposals for changes to existing policies, if appropriate. It invites Member States to develop specific initiatives at the national level fostering interaction between governmental, private and academic entities and civil society.

Broadband Forum

Broadband Forum - Home - Windows Internet Explorer

http://www.broadband-forum.org/

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Engineering smarter and faster connections

2010 Broadband Forum Focus
IPv6 transition, DSL & fiber access, mobile backhaul, energy efficiency, end-to-end architecture, TR-069 remote management and the launch of the new Broadband Forum Certification Program

Upcoming Meetings:
San Francisco, USA
Dec 6-10

www.broadband-forum.org

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3G Americas Recommends IPv6 Transition Considerations

'The time is now' for planning and implementation throughout the wireless ecosystem



February 25 2009

Bellevue, WA –

3G Americas, a wireless industry trade association representing the GSM family of technologies including LTE, today announced that it has published a research report titled, *IPv6 Transition Considerations for LTE and Evolved Packet Core*. The educational white paper outlines recommendations needed in the Americas region to further build and expand upon a March 2008 white paper titled, *Transitioning to IPv6*, which 3G Americas encourages members to use as a guide for planning a smooth and successful IPv6 transition.

Verizon expects 4G launch next year

By Marguerite Reardon, CNET News.com on February 19, 2009

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Summary

The wireless provider's chief technology officer discusses his expectations of the next-generation network and names the vendors that are building it.

Topics

BARCELONA--Verizon Communications' chief technology officer dished out details Wednesday on the company's soon-to-be-built 4G wireless network that's set to go live in 2010.

Verizon will begin testing the service this year and launch it commercially in at least 25 to 30 markets in the United States in 2010, CTO Dick Lynch said during an interview with CNET News after his keynote speech Wednesday at the 2009 GSMA Mobile World Congress here.

"We are modeling the roll-out after our EV-DO deployment. So we expect to get to about the same level in the first year of deploying LTE that we got with EV-DO, which is about 25 or 30 markets. That is probably a reasonable estimate," he said, referring to the Long Term Evolution network.

Verizon will continue to build out the 4G wireless network and expects to blanket the continental U.S. and Hawaii with the new wireless network by 2015.

created a requirement for always-available IP addresses. kely to exhaust by 2012. As IPv4 addresses are being ations) are being deployed at an increasing rate and, be a major issue for vendors and particularly operators in ends that rather than wait for the inevitable difficulties to transition to IPv6 as soon as possible.

ecosystem of operators, vendors and regulators to fully ensure our great industry continues to prosper," stated

Ejemplo de organización de la transición: Gobierno norteamericano



UNITED STATES DEPARTMENT OF COMMERCE
National Telecommunications and
Information Administration
Washington, DC 20230

Internet Protocol Version 6 (IPv6) Workshop: The Impact of the Adoption and Deployment of IPv6 Addresses for Industry, the U.S. Government, and the Internet Economy

September 28, 2010, 9:00 a.m. - 12:30 p.m.

**First Amendment Lounge of the National Press Club, 519 14th Street, N.W., 13th Floor,
Washington, DC**

AGENDA

8:30 a.m. Registration

9:00 a.m. – 9:15 a.m. *Opening Remarks*

Ejemplo de organización de la transición: Gobierno norteamericano



EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. 20503

September 28, 2010

MEMORANDUM FOR CHIEF INFORMATION OFFICERS OF EXECUTIVE
DEPARTMENTS AND AGENCIES

FROM: Vivek Kundra *Vivek Kundra*
Federal Chief Information Officer

SUBJECT: Transition to IPv6

The Federal government is committed to the operational deployment and use of Internet Protocol version 6 (IPv6). This memo describes specific steps for agencies to expedite the operational deployment and use of IPv6. The Federal government must transition to IPv6 in order to:

- Enable the successful deployment and expansion of key Federal information technology (IT) modernization initiatives, such as Cloud Computing, Broadband, and SmartGrid, which rely on robust, scalable Internet networks;
- Reduce complexity and increase transparency of Internet services by eliminating the architectural need to rely on Network Address Translation (NAT) technologies;
- Enable ubiquitous security services for end-to-end network communications that will serve as the foundation for securing future Federal IT systems; and,
- Enable the Internet to continue to operate efficiently through an integrated, well-architected networking platform and accommodate the future expansion of Internet-based services.

Ejemplo de organización de la transición: Gobierno norteamericano

Objetivos

- Propiciar el exitoso despliegue y expansión de iniciativas esenciales relacionadas con las tecnologías de la información en el ámbito federal, tales como Nubes computacionales (cloud computing), banda ancha y tecnología Grid inteligente (SmartGrid); las cuales requieren de redes robustas y escalables.
- Reducir la complejidad e incrementar la transparencia de los servicios de Internet, por medio de la eliminación de las tecnologías NAT.
- Permitir servicios de seguridad omnipresentes para las comunicaciones de extremo a extremo (end-to-end), que servirá como fundamento para la seguridad futura de las tecnologías de la información en el ámbito federal.
- Facilitar la continuidad en la eficiente operación de Internet, por medio de una plataforma de red integrada y con la arquitectura adecuada, tal que permita acomodar la futura expansión de servicios basados en Internet

Ejemplo de organización de la transición: Gobierno norteamericano

Acciones

- Actualización de servicios y servidores públicos (DNS, WWW, E-Mail, etc) para emplear IPv6 de forma nativa al concluir el año fiscal 2012 (30 de septiembre 2012)
- Actualizar las aplicaciones clientes que se comunican con servidores públicos en Internet para operar de forma nativa al concluir el año fiscal 2014 (30 de septiembre 2014)
- Designar un Gestor para Transición IPv6 para el 30 de octubre de 2010. Esta persona es la responsable de guiar las actividades de transición IPv6 en la agencia, así como participar en esfuerzos mayores relacionados con IPv6 en el ámbito federal según sea necesario
- Asegurar que las redes cumplan con los requerimientos de la Regulación de Adquisición Federal (FAR) para cumplir con el perfil USGv6 (U.S. Government version 6) y los programas de prueba para completar y calificar sus capacidades IPv6
- Se anexa al documento cronograma de reuniones del IPv6 Task Force con las diferentes agencias federales (Noviembre 15, 2010 a Enero 21, 2011)

IPv6 en Cuba. Cronología

- Creación de la Fuerza de Tareas IPv6 de Cuba (*IPv6 TF Cuba*) (La Habana, dic. 2003)
- Se da a conocer internacionalmente IPv6 TF Cuba (LACNIC VI, Uruguay, abril 2004)
- Se publica el portal www.cu.ipv6tf.org y es referenciado en el mapa global de las fuerzas de tarea IPv6 (mayo 2004)
- Latif Ladid, presidente del Forum IPv6 envía mensaje de bienvenida a IPv6 TF Cuba (junio 2004)
- Se celebra el 1er Taller IPv6 en Cuba (La Habana, noviembre 2004)
- Se adquieren bloques de direcciones IPv6 para Cuba
 - 2001:1340::/32 (ISP CITMATEL, 6/4/2005)
 - 2001:1358::/32 (ISP ETECSA, 29/6/2005)
 - 2001:/13c8::/32 (NAP CUBA, 18/8/2005)
- Conexión Internacional IPv6 (6/10/2005)
- LACNIC IPv6 Tour 2005 (La Habana, 6-7/10/2005)
- IPv6 en DNS Raiz .cu (2005) [Aún sin visibilidad internacional]
- Participación en FLIP6/LACTF en LACNIC X (Venezuela, Mayo 2007)
- Se adquiere el bloque 2800:230::/32 (SITRANS, 11/6/2008)
- Emisión de Resoluciones MIC sobre IPv6
- Taller IPv6 (con participación de LACNIC y proyecto 6deploy) (La Habana, 15/10/2008)
- Se adquiere el bloque 2800:360::/32 (INFOMED, mayo/2008)

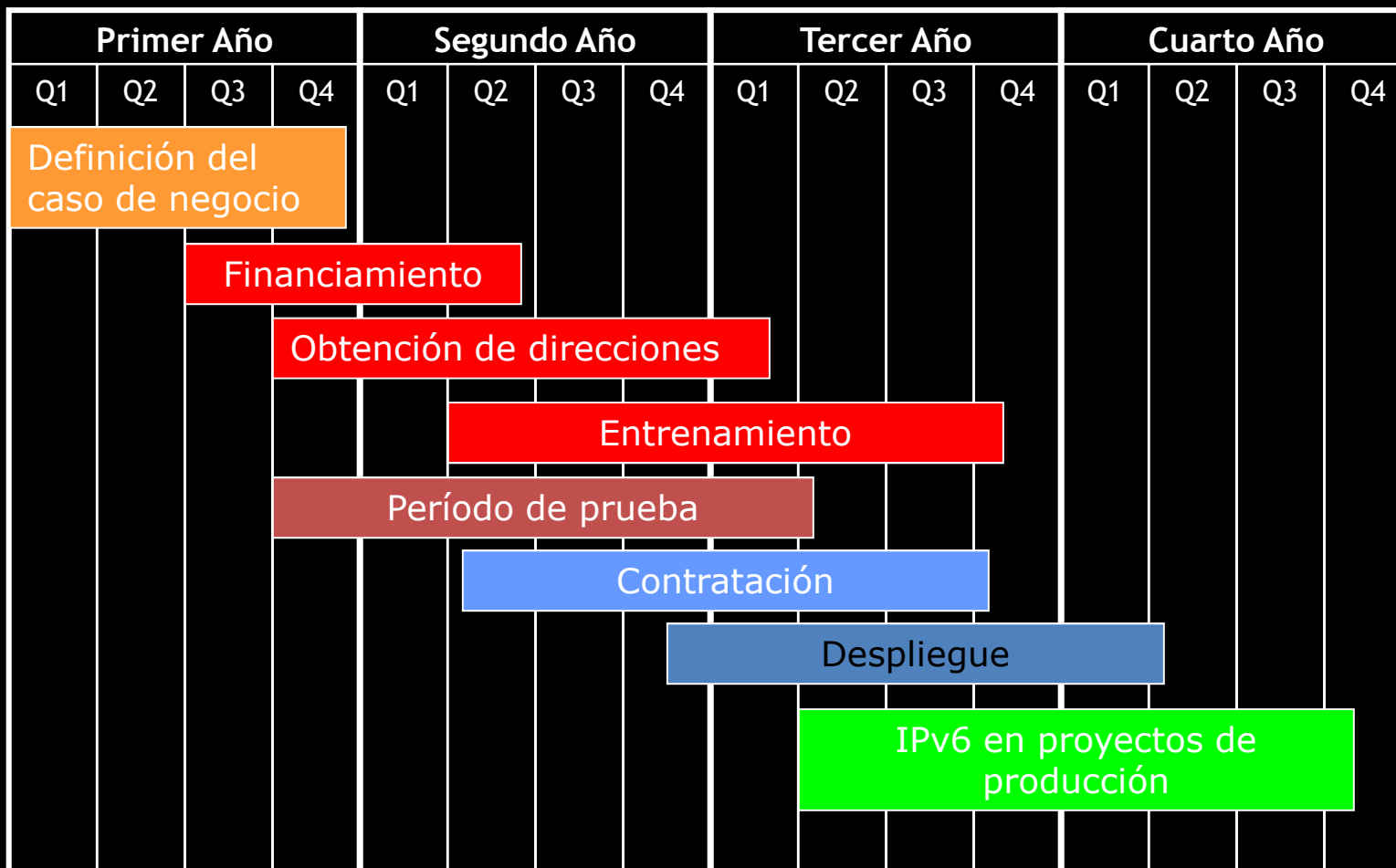


IPv6 en Cuba. Marco regulatorio vigente

- Se adquieren bloques de direcciones IPv6 (mayo a agosto 2005)
- Promoción**
- Se publica documento *Fundamentos para la Política sobre los Planes de Utilización y Asignación de Direcciones IPv6* (IPv6 TF Cuba, agosto 2005)
 - Se emite *Instrucción 5/2007 (DRN_MIC): Solicitud de direcciones experimentales de IPv6 para proyectos pilotos* (MIC, 20 de agosto 2007)
- Introducción**
- Se emite **Resolución 138/2008**: Solicitud de Recursos de Internet a LACNIC (6 de junio 2008)
 - Se emite **Resolución 140/2008**: Requisitos para la importación y exportación de productos y tecnologías compatibles con IPv6 (6 de junio 2008)
 - Se emite **Resolución 156/2008**: Metodología para la introducción del protocolo IPv6 en el país. (14 de agosto 2008)
 - Taller IPv6 (con participación de LACNIC y proyecto 6deploy) (La Habana, 15/10/2008)
 - Se publica el portal IPv6 TF Cuba como www.6ip.cu (nov. 2008)



Modelo de despliegue



Fuente: IPv6 and Broadband. IPv6 Cluster. 2005

¿Que sigue haciendo dudar la adopción de IPv6?

Falta de conocimientos

- ✓ *IPv6 Tour (LACNIC)*
- ✓ *6deploy*
- ✓ *Tutoriales en linea (6deploy, 6diss, <http://ipv6.br>, etc.)*
- ✓ *Certificaciones Cisco, Juniper, Hurricane Electric*
- ✓ *Reuniones LACNIC*
- ✓ *WALC*
- ✓ *Eventos regionales/nacionales*
- ✓ *Libros (impresos y/o electronicos)*

Aplicaciones de Gestión

Soporte por parte de los fabricantes

Seguridad en red

SOFTWARE TESTING SURVEY
BE PART OF THE 2010 INDEX

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EVENTS

20 million engineers need IPv6 training, says IPv6 Forum



By Stuart Corner
Tuesday, 07 September 2010 16:01

[IT Industry - Strategy](#)

The IPv6 Forum - a global consortium of vendors, ISPs and national research & Education networks - has launched an IPv6 education certification programme in a bid to address what it says is an IPv6 training infrastructure that is "way too embryonic to have any critical impact."



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institutes, vendors and training specialists."

The programme certifies and identifies courses, engineers and trainers with silver & gold logos and requires IPv6 implementation on the web site of the education programme.

IPv6 Forum chairman, Vint Cerf, said: "This program has been designed to prepare a wide range of players for the implementation and use of IPv6. It is intended as an aid to capacity building and a way to promote IPv6 awareness."

The Forum said: "It is estimated that some 20 million engineers are working on the current Internet worldwide at ISPs, corporate and all other public and private organisations and they will need quality training on IPv6. This is a gigantic task since it's the first upgrade of the Internet and most probably the last one for decades to come."

The IPv6 Forum's 'Education Logo Program' has as its prime objective is "to encourage and accelerate education on IPv6 and promote thereby swifter adoption of IPv6 in the education curriculum and programs of the universities, research



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LACNIC IPv6 Tour 2005 - 2009



Fuente: Reporte Anual del Foro Latinoamericano de IPv6 y LAC IPv6 TF (Mariela Rocha, Chair LAC IPv6 TF) [LACNIC XIII, Mayo 2010]

Actividades de capacitación IPv6 LACNIC 2011



Febrero: Seminario Virtual "Mecanismos de Transición" (16 de Febrero)

Marzo: Seminario Virtual "IPv6 Básico" (16 de Marzo)

Abril: Taller Regional para Operadores (6-8 de Abril - Buenos Aires)

Seminario Virtual "Seguridad IPv6" (29 de Abril)

Presentación de resultados en actividades de identificación de necesidades

Mayo: Talleres IPv6 LACNIC XV (15-16 de Mayo - Cancún, México)

FLIP6

Junio : World IPv6 Day (8 de Junio)

Seminario Virtual "Mejores Prácticas BGP-IPv6" (15 de Junio)

Talleres IPv6 CLARA (20-24 de Junio - Tegucigalpa, Honduras)

Julio: Taller Regional de Operadores CARIBBEAN III (14, 15 de Julio - Surinam)

Seminario Virtual "Mejores Prácticas IGPs-IPv6" (20 de Julio)

Agosto: Seminario Virtual "IPv6 en redes Móviles" (11 de Agosto)

Talleres IPv6 (15-17 Agosto - Quito, Ecuador (TBC))

Talleres IPv6 (17-19 Agosto - Lima, Perú (TBC))

Talleres IPv6 (22-24 Agosto - Santiago de Chile, Chile (TBC))

Septiembre: Taller Regional de Operadores (7-9 de Septiembre - Costa Rica)

Seminario Virtual "Aspectos de Seguridad de IPv6" (14 de Septiembre)

Octubre: Talleres IPv6 LACNOG 2011 (19 de Octubre - TBC)

Noviembre: Seminario Virtual "MPLS IPv6" (23 de Noviembre)

Diciembre: Seminario Virtual "Métricas IPv6 2011" (7 de Diciembre)

IPv6 en Cuba. Algunas acciones necesarias identificadas

- **Capacitación** priorizada de personal técnico en los próximos 5 años por parte de Organismos. Hacer un Plan cumplible.
- Participación Nacional e Internacional en Talleres y cursos sobre la temática IPv6.
- Puesta en marcha de **proyectos pilotos**
- ETECSA debe cumplir con las solicitudes de **anuncios de bloques IPv6 y ASN que se han realizado** y avanzar en el plan de despliegue a nivel nacional.
- Hacer cumplir con lo establecido por las Resoluciones emitidas por el MIC sobre el tema IPv6 (***fundamentalmente la resolución 140/2008***)

Próximas acciones en la región LACNIC XV (2011)



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[Agenda](#)

[Biografías](#)

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¡No deje de participar en LACNIC XV, el encuentro de Internet más importante de América Latina y el Caribe!

¿Cuándo?

Del 15 al 20 de mayo de 2011

¿Dónde?

En la ciudad de Cancún, México en las instalaciones del Hotel Gran Meliá Cancún

¿Por qué participar?

El 2011 quedará marcado en la historia de Internet como el año en que se agotó el stock central de direcciones IPv4. LACNIC XV será una excelente oportunidad para conocer de primera mano cómo se prepara la industria de la región y del mundo para enfrentar este desafío.



Registro



Agenda



Lista de Inscriptos



Acerca de Cancún



Viajar



Patrocinadores

Últimas Noticias:

- Ciudadanos Brasileños: visa Mexicana on line
- Descuentos con American Airlines
- Pago de matrícula disponible on-line (24/03)
- Descuento para Participantes de LACNIC XV con Copa

<http://www.lacnic.net/sp/eventos/lacnicxv/index.html>

Próximas acciones en la región Global IPv6 Summit Mexico (2011)



The banner features a stylized orange city skyline against a yellow background. On the left, a green tag reads 'GLOBAL IPv6 SUMMIT MEXICO 2011'. In the center, a black robot with a screen on its chest displays the text: '... conexión imposible ... requiere dirección IP ...'. Below the robot, a green bar contains the text 'Conferencias Magistrales + Seminarios + Certificación en IPv6'. A red bar below that reads 'En Guadalajara del 6 al 10 de Junio 2011'. Underneath, a grey bar says 'Centro del Software + Hotel Hilton Guadalajara'. A horizontal navigation bar with green buttons includes: 'Inicio', 'Acerca del evento', 'Sedes', 'Agenda', 'Certificación IPv6', 'Seminarios', 'Conferencistas', and 'Registro'. A red ribbon banner reads 'Guadalajara será ¡La capital de IPv6 en México!'. To the right, a green bar says '¡Sólo faltan!' above a table showing the countdown: 38 days, 14 hours, 34 minutes, and 53 seconds. Below this, a red bar says 'Evento organizado por' above the 'GOBIERNO FEDERAL' logo and the Mexican coat of arms. At the bottom, a paragraph states: 'Nos complace anunciar la tercera edición del evento Global IPv6 Summit México que se llevará a cabo del 6 al 10 de junio de 2011 en la ciudad de Guadalajara. El evento se renueva y en esta ocasión las actividades se dividirán en tres jornadas:'.

GLOBAL IPv6 SUMMIT MEXICO 2011

Conferencias Magistrales + Seminarios + Certificación en IPv6

En Guadalajara del 6 al 10 de Junio 2011

Centro del Software + Hotel Hilton Guadalajara

Inicio Acerca del evento Sedes Agenda Certificación IPv6 Seminarios Conferencistas Registro

Guadalajara será
¡La capital de IPv6 en México!

Nos complace anunciar la tercera edición del evento **Global IPv6 Summit México** que se llevará a cabo del 6 al 10 de junio de 2011 en la ciudad de Guadalajara.

El evento se renueva y en esta ocasión las actividades se dividirán en tres jornadas:

¡Sólo faltan!

DÍAS	HORAS	MIN	SEG
38	14	34	53

Evento organizado por

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Internet | Protected Mode: On

<http://www.2011.ipv6summit.mx/>

Próximas acciones Día Mundial IPv6 (2011)



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World IPv6 Day

About World IPv6 Day

On 8 June, 2011, Google, Facebook, Yahoo!, Akamai and Limelight Network will be amongst some of the major organisations that will offer their content IPv6 for a 24-hour "test flight". The goal of the Test Flight Day is to motivate organizations across the industry – Internet service providers, hardware makers, operating system vendors and web companies – to prepare their services for IPv6 to ensure a successful transition as IPv4 addresses run out.

Please join us for this test drive and help accelerate the momentum of IPv6 deployment.

How To Take Part

Interested in joining the other organisations that are taking part in this initiative? Select your type of organisation below and you'll find everything you need to participate in World IPv6 Day:

Other participating organisations Many networks and hosting companies are enabling others to get online using IPv6. Networks are deploying IPv6 and enabling end users to use IPv6. Hosting companies are enabling websites to deliver their content over IPv6. The companies below are all participating in World IPv6 Day:

- Comcast
- Time Warner Cable
- Rackspace
- Softlayer
- Voxel
- Steadfast Networks
- Dynamic Internet
- Host.md
- Frobbitt
- OLM.net
- NFSI Telecom

g in World IPv6 Day
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World IPv6 Day

List of Participants

The following organisations are joining the Internet Society in actively participating in World IPv6 Day. This page lists companies who have made public commitments to participate in this event and links to any material they may be offering to accompany their participation. Check back here for updates with additional details on participants in this event. On June 8 the websites listed here will offer their content over IPv6. We will display a status dashboard indicating the IPv6 status on this day. Please contact us to indicate your interest in participating in World IPv6 Day and to have your company added to the list below.

- Google (www.google.com; www.youtube.com)
- Facebook (www.facebook.com)
- Yahoo! (www.yahoo.com)
- Akamai
- Limelight Networks

Participating websites (See below for other participating organisations)

- Cisco (www.cisco.com)
- Meebo (www.meebo.com)
- Genius (www.genius.com)
- W3C (www.w3.org)
- Universidad Nacional Autonoma de Mexico (www.unam.mx)
- Rensselaer Polytechnic Institute (www.rpi.edu)
- NYI NET (www.nyi.net)
- Host Europe (www.hosteurope.de)
- Xphiastec (www.xphiastec.com)
- Tom's Hardware (www.tomshardware.com)
- NUST School of Electrical Engineering and Computer Science (seecs.nust.edu.pk)
- Twenga (www.twenga.com)
- Plurk (www.plurk.com)
- Terra (Brazil) (www.terra.com.br)
- Jolokia Networks (jolokianetworks.com)
- Juniper Networks (www.juniper.net)
- Microsoft Bina (www.bina.com)

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Verisign to Participate in World IPv6 Day



By [Rajani Baburaian](#)

[TMCnet Contributor](#)

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converged network needs.*

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[Verisign](#), a provider of Internet infrastructure services, [announced](#) it will participate in the Internet Society's [World IPv6 Day](#), a 24-hour global test drive of IPv6 slated for June 8, 2011.

DNS FUNDAMENTALS

Fuente: <http://dns-news.tmcnet.com>

February 03, 2011

DNS: US Government selects VeriSign to Operate .gov Domain Name Registry



By [Narayan Bhat](#)

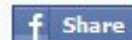
[TMCnet Contributor](#)

Internet security and infrastructure provider [VeriSign, Inc.](#), has been [selected](#) by the [General Services Administration](#) (GSA ([News](#) - [Alert](#))), an administrative arm of the U.S. government, to operate the nation's [domain name registry](#) for .gov.

VeriSign ([News](#) - [Alert](#)) did not give any details of the financial part, but analysts say this is a huge deal because it covers federal, state and local government units.



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NTT Communications Group to Join World IPv6 Day Trial

Posted on: Thursday, 28 April 2011, 01:00 CDT

TOKYO, April 28, 2011 /PRNewswire/ -- NTT Communications (NTT Com) and its three subsidiaries of NTT Plala, NTT PC Communications and NTT America jointly announced on April 28 that they will participate in World IPv6 Day, a worldwide testing of the IPv6 protocol, to demonstrate its readiness to ensure successful transition from the IPv4 environment.

Sponsored and organized by the Internet Society (ISOC) and major content providers such as Google and Facebook, the event is a 24-hour testing of public IPv6 deployment starting on June 8, 2011. Participants will enable IPv6 on their main Websites for 24 hours, providing their Web content over IPv6 while testing connections to isolate any possible issues that may affect users in the IPv6 environment.

NTT Communications Group has been a leading contributor to the IPv6 deployment ever since the company helped the Internet Engineering Task Force (IETF) to establish the IPv6 basic protocol in 1995, and participated in a number of projects led by respective governments including the IPv6 Information Appliance Trial in Japan and 6NET hosted by the EU. NTT Com Group is also noted for launching the world's first commercial IPv6 service in 2001, OCN IPv6 Tunnel Connection Service, in Japan.

Today, IPv6 technologies are deployed in various content delivery services of NTT Com Group, including NTT Com's emergency earthquake news flash and NTT Plala's Hikari-TV with 1.4 million subscribers. Overseas, NTT Com's global backbone was the first network of its kind to offer a commercial dual-stack IPv6 transit service, initially in the United States and later globally. The company's highly experienced IPv6 engineers remain in the forefront of IPv6 implementation.

At a news conference on February 3, 2011 in Miami, Florida, the Internet Corporation for Assigned Names and Numbers (ICANN) joined the Number Resources Organization (NRO), the Internet Architecture Board



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IPv6

SOLUTIONS

Technology Solutions

- DHCP
- DNS
- DNSSEC
- IP Address Management
- IPv6
- Microsoft DNS/DHCP Management
- Network Change & Configuration Management
- Orchestration/IF-MAP
- Virtualization

Business Drivers

Industries

IPv6 Challenge

Are You Ready for IPv6?

Test your IPv6 readiness: Take the challenge now and enter to win an iPad!

1. Click "Show Me the Address!" when you are ready to begin
2. You will be shown an IPv6 address for 20 seconds—try your best to remember it
3. After the address disappears, enter what you have memorized into the box, and hit "Submit" to find out if you are ready for IPv6



If you correctly entered the IPv6 address, you can enter to win the iPad prize drawing!

From March 1, 2011 through June 30, 2011, everyone who completes the "Are You Ready for IPv6?" Challenge will have the chance to win an Apple® iPad! You can enter the prize drawing once.

Show Me the Address!

IPv6 Video



www.v6.face
2620:0:1:cfes

DNS expert Cricket Liu:
Getting your DNS ready for
World IPv6 Day

[Watch now](#)



Be Ready for IPv6 Migration and Beyond

Join us on June 7, 2011 for a worldwide IPv6 event

[REGISTER NOW](#)

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- www.conference.cn/ipv6/2008, 2007-2001

(2) Feature reports by top media:

- http://tech.sina.com.cn/z/IPv6_2011/index.shtml
- <http://www.c114.net/topic/2021.html>
- <http://it.sohu.com/s2011/ipv6/>
- <http://tech.163.com/special/000949QP/2011IPv6M.html>
- <http://tech.ifeng.com/special/ipv6/>
- http://tech.sina.com.cn/focus/ipv6_2009/index.shtml
- <http://tech.163.com/special/00093AN1/IPv62009.html>
- http://tech.sina.com.cn/focus/IPv6_08/index.shtml
- http://tech.sina.com.cn/focus/IPv6_07/index.shtml

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Speakers

More...



Hu Qiheng
President of the Internet Society of China



Wu Hequan
CNGI team leader; Vice President of Chinese Academy of Engineering



Vint Cerf (Video Message)
the father of the Internet



Paul Wilson
Paul Wilson, President of APNIC
Speech Topic: IP Address Depletion and Distribution Updates: The Co-existence of the v4 and v6 Worlds



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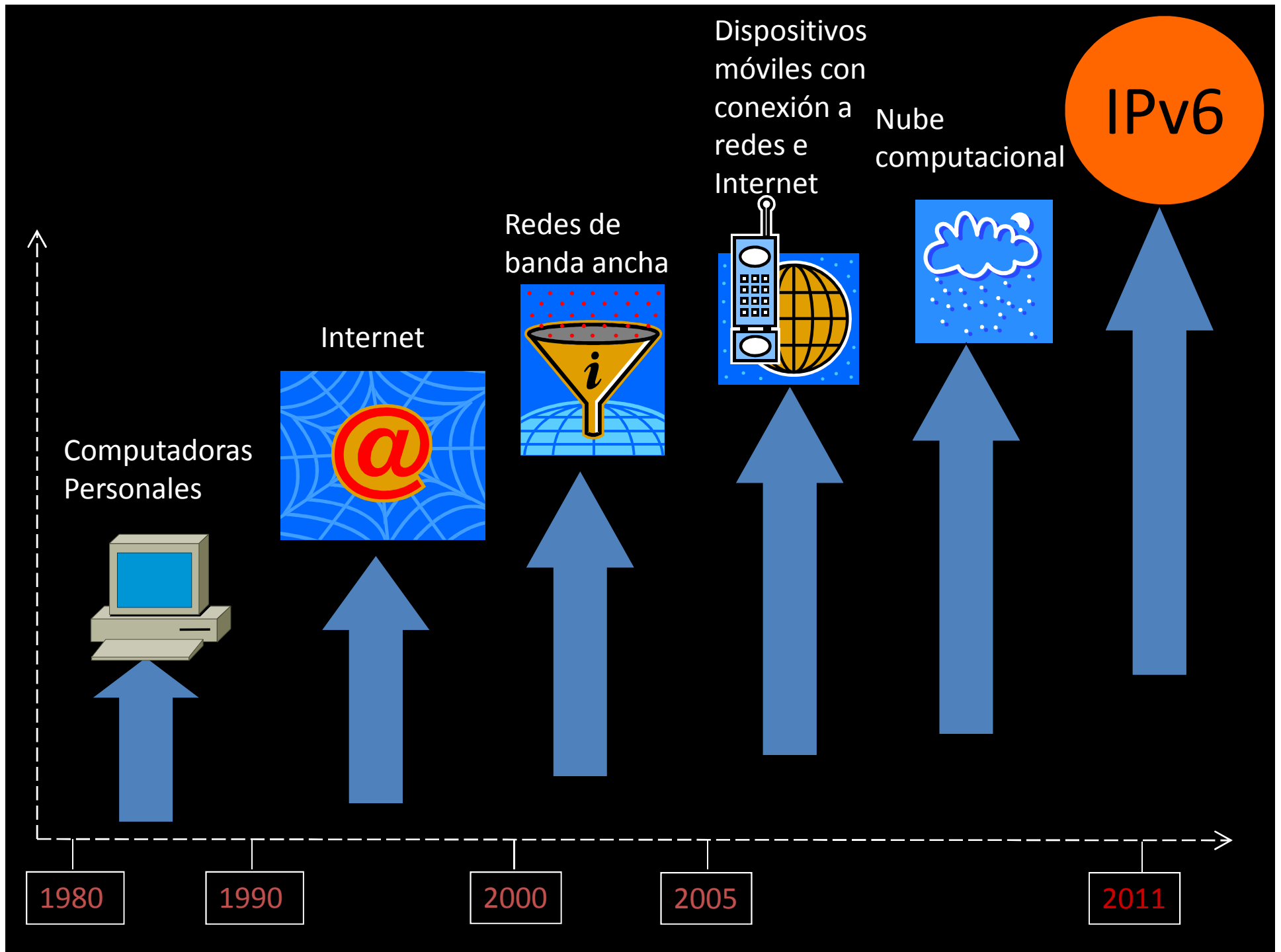


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Se trata de **Integrar**, mas que *Transitar* al nuevo protocolo. Es incorrecto emplear el término *Migrar* para describir el proceso

Conclusiones

- ✓ IPv6 ya está aquí, es una realidad... ¿acaso crees que no tienes tráfico IPv6 cerca?
- ✓ IPv6 no es magia, es una tecnología con sus virtudes y defectos
- ✓ IPv6 no es algo que pueda ponerse o quitarse según se necesite. Es la plataforma para futuros servicios y aplicaciones IP
- ✓ El entrenamiento de las personas involucradas en IPv6 es decisivo.
- ✓ Estamos ante una oportunidad única de participar (ventajosamente) en un cambio tecnológico mundial.
- ✓ IPv6 es una ventana para obtener liderazgo en estos temas, en nuestra región.
- ✓ IPv4 e IPv6 coexistirán por un buen tiempo
- ✓ El Sistema de nombres de dominio es crítico para el exitoso despliegue de IPv6
- ✓ Adoptar IPv6 no es sinónimo de llevar lo que hoy existe con IPv4 al nuevo protocolo. IPv6 creará nuevas oportunidades en sectores hoy no conectados (automóviles, edificios, dispositivos de consumo, etc).
- ✓ Con “fincas” es imposible lograr avances
- ✓ Todo el que aspire a tener buenas opciones en el mercado laboral en la próxima década, tiene que asumir desde ahora IPv6

La oportunidad favorece a la mente preparada - Luis Pasteur

Siempre hay espacio en la cima – Daniel Webster

Ante todo, la preparación es la llave del éxito - Alexander Graham Bell

Algunas fuentes de información sobre IPv6

- ❑ Cisco: <http://www.cisco.com/ipv6>
- ❑ Linux IPv6: <http://www.bieringer.de/linux/IPv6/>
- ❑ Microsoft: <http://www.microsoft.com/ipv6>
- ❑ Portal IPv6 Cuba <http://www.6ip.cu>
- ❑ Portal IPv6 Latinoamérica <http://portalipv6.lacnic.net>
- ❑ Programa IPv6 Ready <http://www.ipv6ready.org>
- ❑ Forum IPv6 <http://www.ipv6forum.com>
- ❑ Repositorio RFC <http://www.rfc-editor.org>

