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## INTRODUCTION

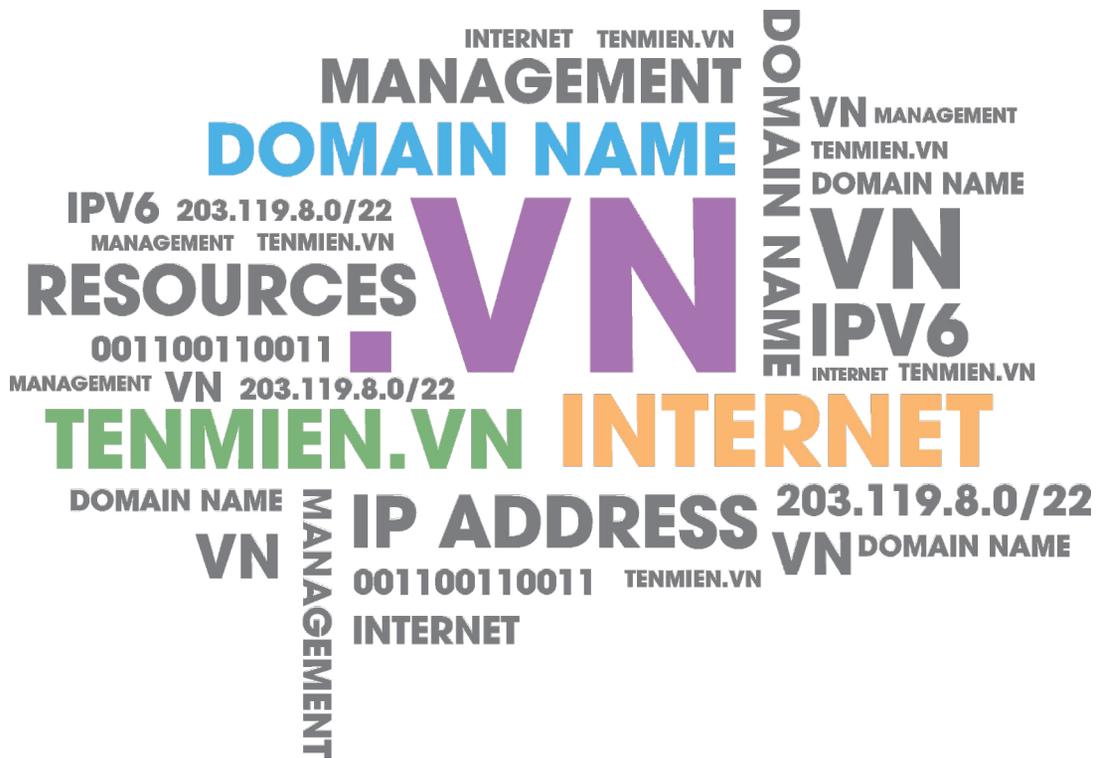
In 2015, the domestic economy has achieved some minor improvements with difficulties, despite the complexity of the world's politics and slow economic recovery. Meanwhile, both the completion of the legal regulations and development of technical infrastructure have contributed to the management of Internet resources with sustainability and stability in Viet Nam.

Vietnam Internet Network Information Center (VNNIC) would like to introduce the "**Report on Viet Nam Internet Resources 2015**" to the readers. This annual report provides data, information and analysis on the growth, development and characteristics of Internet resources in 2015, which reflects the development of the Internet in Viet Nam, in pace with the growing global Internet.

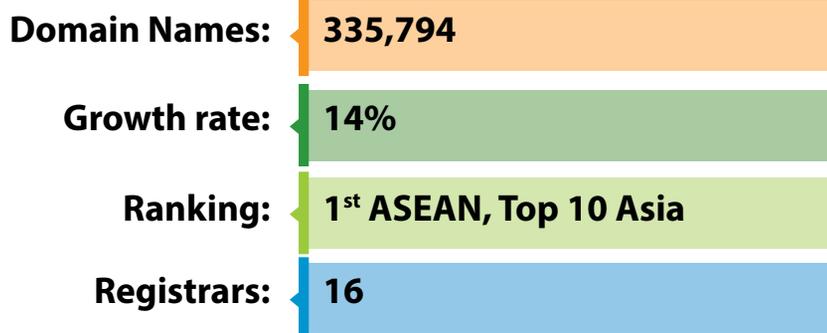
VIETNAM INTERNET NETWORK INFORMATION CENTER



# VIET NAM INTERNET RESOURCES: STATISTICS AND ANALYSIS



# ASCII “.VN” COUNTRY CODE TOP LEVEL DOMAIN NAME



## 1. “.VN” IN THE WORLD

Since 2011, “.vn” has always been the most registered ccTLD in the ASEAN region, and now expanding to the Asia region. According to APTLD statistics of Asia’s top ccTLD with highest number of registrations by Oct 2015, “.vn” ranked in top 10 with more than 330,000 domain names registered.

TABLE 1: TOTAL REGISTRATIONS OF 10 CCTLDS IN ASIA (OCT 2015)

Ranking	Country/Territory	ccTLD	Total registrations
1	China	.cn	12,515,067
2	Japan	.jp	1,400,632
3	Korea	.kr	1,076,603
4	Iran	.ir	696,602
5	Taiwan	.tw	628,080
6	Viet Nam	.vn	330,852
7	Malaysia	.my	300,462
8	Hongkong	.hk	284,898
9	Singapore	.sg	179,071
10	Indonesia	.id	147,246

(Source: APTLD Member Statistics and Growth Report Oct 2015  
 Link: <http://www.aptd.org/page/document-area>)

In the monthly member statistics and growth reports of APTLD since Sep 2015, “.vn” had been within the top 5 ccTLDs in Asia with the highest growth for the month in terms of absolute values of registrations.

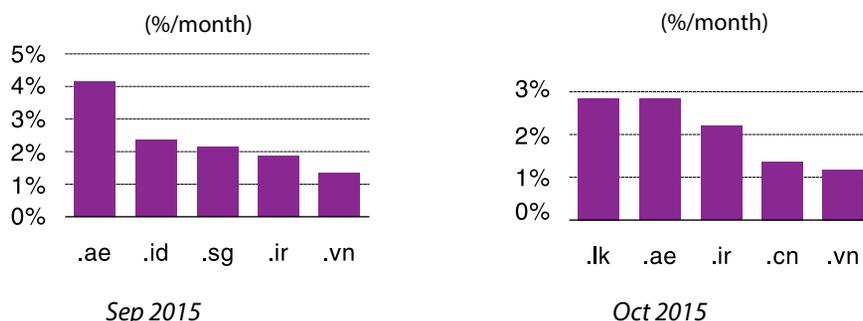


Figure 1: Top 5 ccTLDs among APTLD with the highest growth for the month in terms of absolute values of registrations (Sep & Oct 2015) (Source: APTLD)

## 2. “.VN” GROWTH OVER THE YEARS

### 2.1 “.vn” cumulative number and growth rate

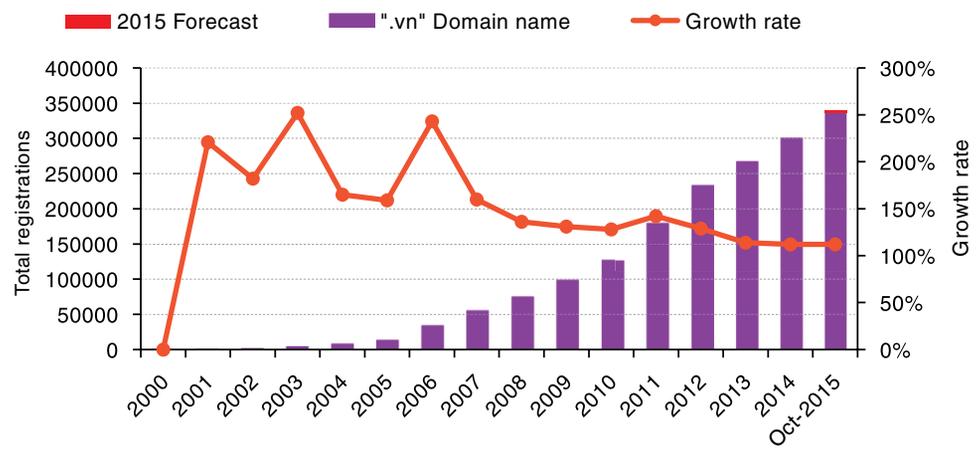


Figure 2: Cumulative number of registrations and growth rate over the years (2000-2015)

TABLE 2: CUMMULATIVE NUMBER OF REGISTRATIONS AND GROWTH RATE OVER THE YEARS (2000 – 2015)

Year	Renewal	Growth rate	Year	Renewal	Growth rate	
2000	543	0%	2008	75,715	136%	
2001	1,198	221%	2009	99,185	131%	
2002	2,176	182%	2010	127,364	128%	
2003	5,478	252%	2011	180,332	142%	
2004	9,037	165%	2012	232,749	129%	
2005	14,345	159%	2013	266,028	114%	
2006	34,924	243%	2014	299,153	112%	
2007	55,872	160%	2015	Oct 2015	335,794	112%
				Forecast	340,000	114%

In comparison with other ccTLDs in the region, in 2015, “.vn” has still kept a quite comparatively steady growth regarding the previous years. By Oct 2015, the growth rate of “.vn” reached about 12%, with the forecast rate of year-end 2015 at about 14%. APTLD reports on 2015 registrations showed that several ccTLDs had witnessed a fall in the growth rate, or even negative development with forecast growth rate at 0-5%; where as “.vn” still kept the positive rate (10-15%) under the pressure from the competition of New gTLDs – which reached such a 139.8% growth rate from May to Aug 2014, while ccTLDs only reached 1.7% (Domain Name Stat Report – CENTR, Sep 2014).



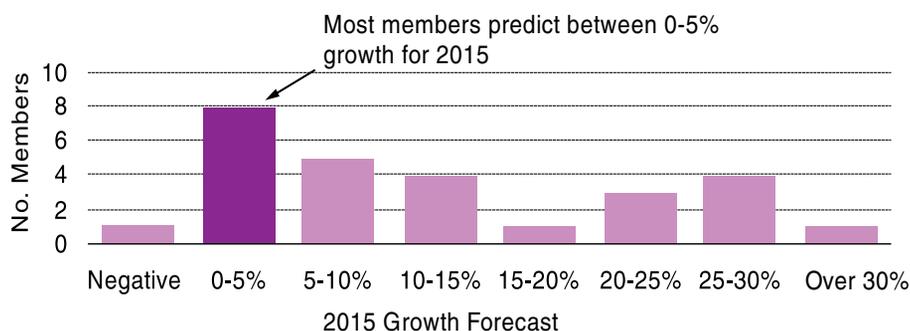


Figure 3: Forecast growth of ccTLDs (APTLD)

(Source: APTLD Registrations Analysis 2015: Status and trends of ccTLD in Asia Pacific Region.

URL: [www.aptd.org/page/document-area](http://www.aptd.org/page/document-area)

TABLE 3: GROWTH RATE OF CCTLDS

No.	Country/Territory	ccTLD	Growth (Sep 2014)	Growth (Oct 2015)	Growth over year
1	China	.cn	1.3%	1.4%	15%
2	Japan	.jp	0.2%	0.1%	1%
3	Korea	.kr	-5.4%	-0.1%	-1%
4	Iran	.ir	-	2.2%	24%
5	Taiwan	.tw	-2.0%	0%	-13%
6	Viet Nam	.vn	1.1%	1.2%	14%
7	Malaysia	.my	2.2%	-0.6%	31%
8	Hongkong	.hk	0.6%	0.3%	6%
9	Singapore	.sg	0.8%	0.1%	7%
10	Indonesia	.id	4.0%	1.2%	28%
11	Kazakhstan	.kz	1.1%	0.1%	5%
12	Thailand	.th	-0.4%	0.7%	3%
13	Saudi Arabia	.sa	0.9%	0.6%	12%
14	Qatar	.qa	0.4%	0.7%	12%
15	USA	.us	-0.6%	-0.7%	-6%

(Source: APTLD Member Statistics and Growth Report Oct-2015.

Link <http://www.aptd.org/page/document-area>)

## 2.2 “.vn” new registrations and growth rate

Under the circumstance of new gTLDs expansion, the number of “.vn” new registrations still kept the steady growth.

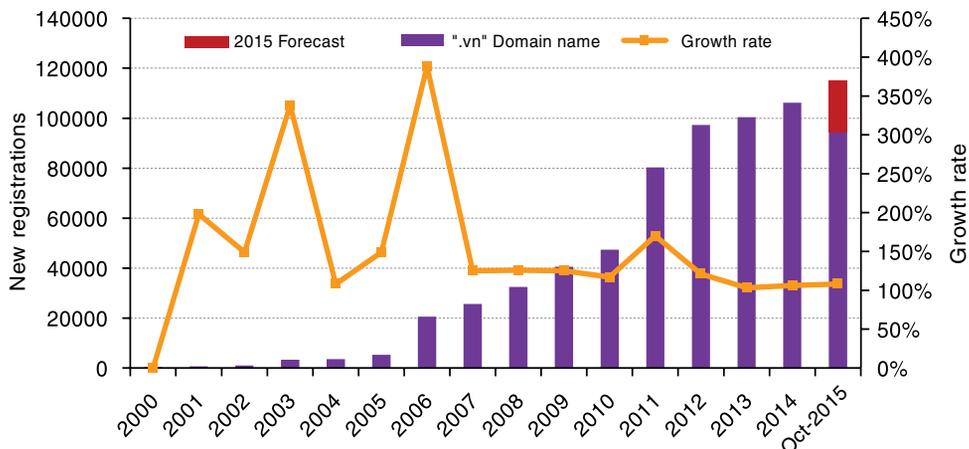


Figure 4: New registrations and growth rate (2000 – 2015)

TABLE 4: NEW REGISTRATIONS AND GROWTH RATE (2000 – 2015)

Year	New registrations	Growth rate	Year	New registrations	Growth rate	
2000	330	0	2008	32,388	126%	
2001	655	198%	2009	40,576	125%	
2002	978	149%	2010	47,302	117%	
2003	3,302	338%	2011	80,246	170%	
2004	3,559	108%	2012	97,315	121%	
2005	5,308	149%	2013	100,382	103%	
2006	20,579	388%	2014	106,206	106%	
2007	25,680	125%	2015	Oct 2015	95,017	89%
				Forecast	115,300	108%

By Oct 2015, the number of new registrations in 2015 reached over 95,000 domain names, showing a slight increase of 10.2% in comparison with last year’s period. 2015, The growth rate is more than 2013 and 2014. This resulted from the efforts of VNNIC and the Registrars with the promotional activities for “.vn” ccTLD, such as strengthening the relationship with customers, and improving the service quality for customers. APTLD registration analysis report of 2014 (published in the 1<sup>st</sup> quarter of 2015) concluded that “.vn” ranked in the higher end of both new registration rate (36%) and retention rate (73%).



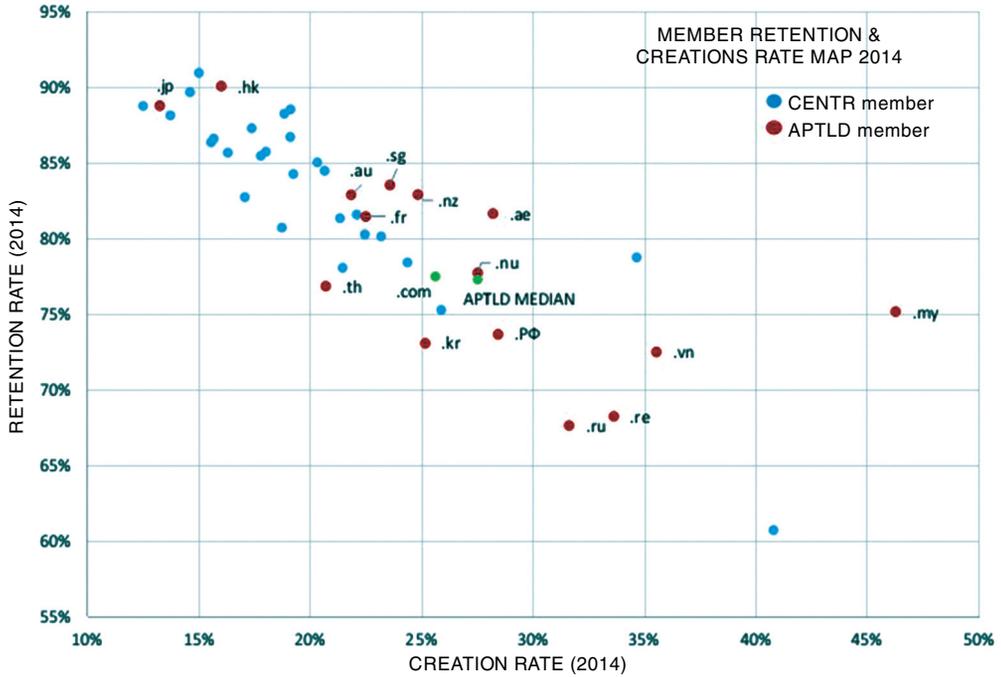


Figure 5: New registration and retention rate of ccTLDs in 2014

(Source: APTLD Registrations Analysis 2015: Status and trends of ccTLD in Asia Pacific Region.

URL: [www.aptd.org/page/document-area](http://www.aptd.org/page/document-area))

### 2.3 New registrations by registrar

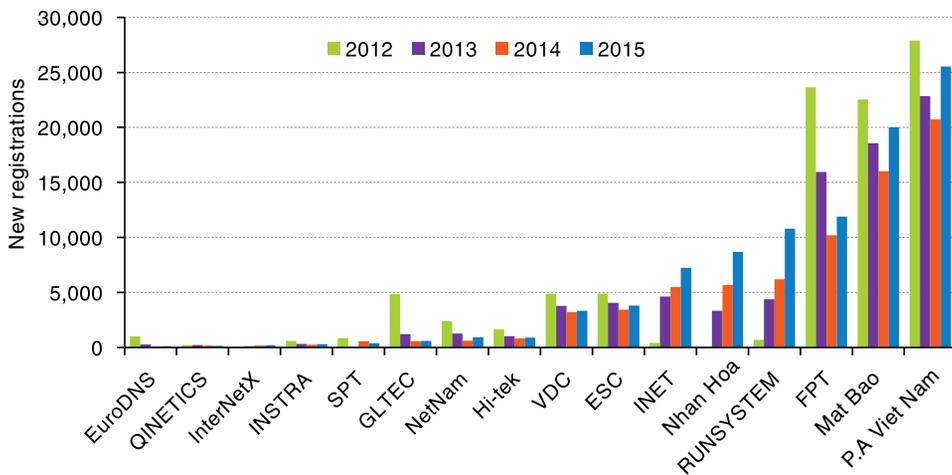


Figure 6: New registrations by registrar (2012-2015)

## 2.4 NEW REGISTRATION BREAKDOWN

### 2.4.1 New registrations by geographical area

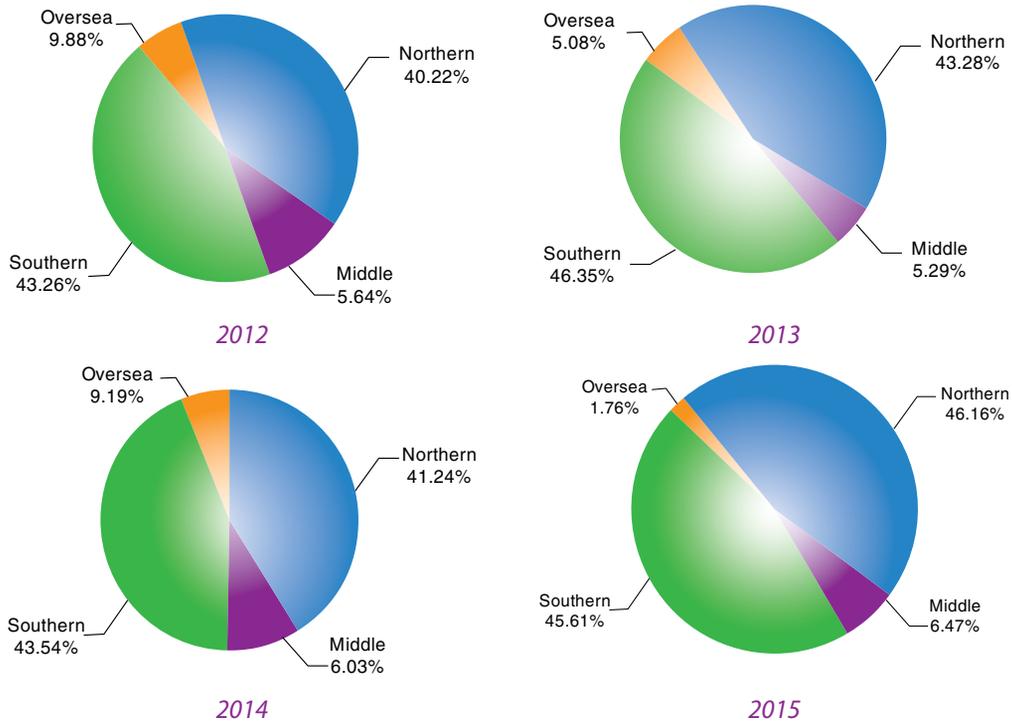


Figure 7: New registrations by geographical area (2012 – 2015)

### 2.4.2 New registrations by registrant

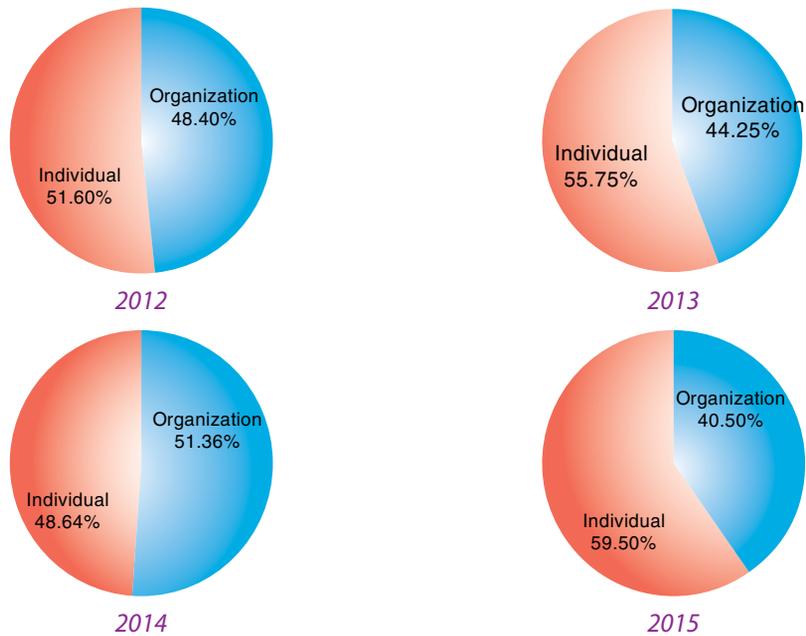


Figure 8: New registrations by registrant (2012 - 2015)



### 2.4.3 New registrations by extension

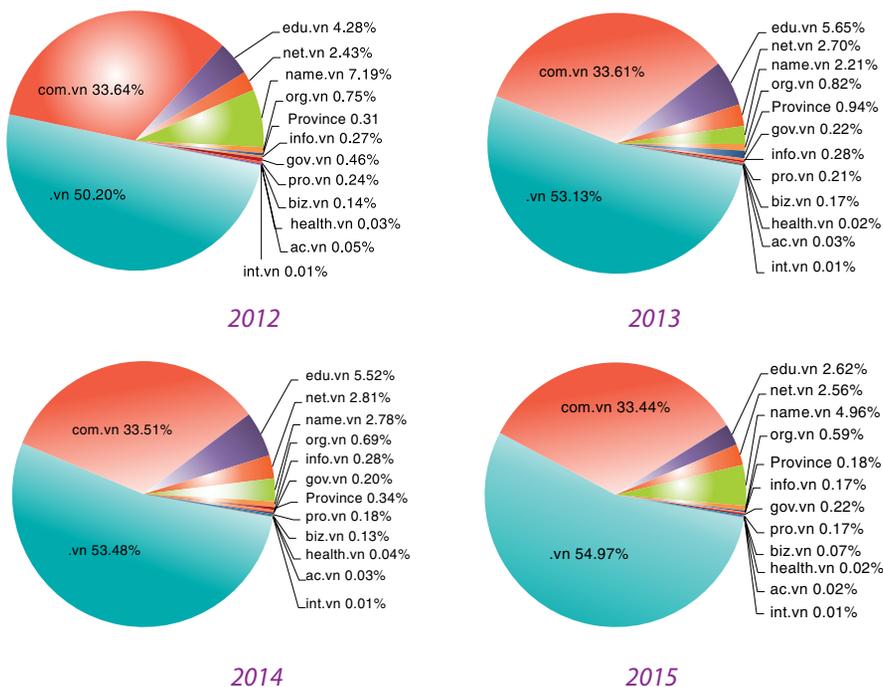


Figure 9: New registrations by extension (2012 - 2015)

TABLE 5: NEW REGISTRATIONS BY EXTENSION (2012 - 2015)

Extensions	2012	2013	2014	Oct 2015
.vn	50.20%	53.13%	53.48%	54.97%
com.vn	33.64%	33.61%	33.51%	33.44%
edu.vn	4.28%	5.65%	5.52%	2.62%
net.vn	2.43%	2.70%	2.81%	2.56%
name.vn	7.19%	2.21%	2.78%	4.96%
org.vn	0.75%	0.82%	0.69%	0.59%
info.vn	0.27%	0.28%	0.28%	0.17%
gov.vn	0.46%	0.22%	0.20%	0.22%
pro.vn	0.24%	0.21%	0.18%	0.17%
biz.vn	0.14%	0.17%	0.13%	0.07%
health.vn	0.03%	0.02%	0.04%	0.02%
ac.vn	0.05%	0.03%	0.03%	0.02%
int.vn	0.01%	0.01%	0.01%	0.01%
Province	0.31%	0.94%	0.34%	0.18%

### 3. “.VN” DOMAIN NAME BREAKDOWN BY CATEGORY

At the end of Oct 2015, there is over 335,000 of active “.vn” domain names in the system.

### 3.1 Domain breakdown by extension

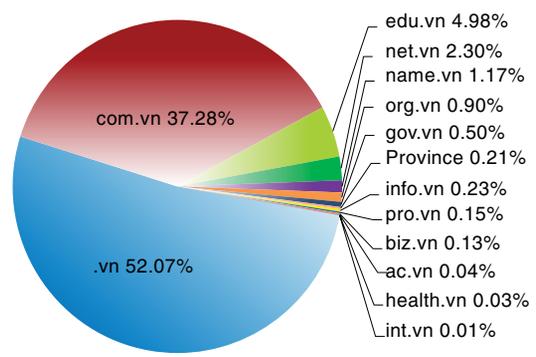


Figure 10: ".vn" domain breakdown by extension

TABLE 6: ".VN" DOMAIN BREAKDOWN BY EXTENSION

Extension	Percentage	Extension	Percentage
.vn	52.07%	Province	0.21%
com.vn	37.28%	info.vn	0.23%
edu.vn	4.98%	pro.vn	0.15%
net.vn	2.30%	biz.vn	0.13%
name.vn	1.17%	ac.vn	0.04%
org.vn	0.90%	health.vn	0.03%
gov.vn	0.50%	int.vn	0.01%

The domain names under ".vn" and ".com.vn" continued to be dominant with approximately 89%, while the second level ".vn" domain names accounted for more than 50% of total.

### 3.2 Domain breakdown by geographical area

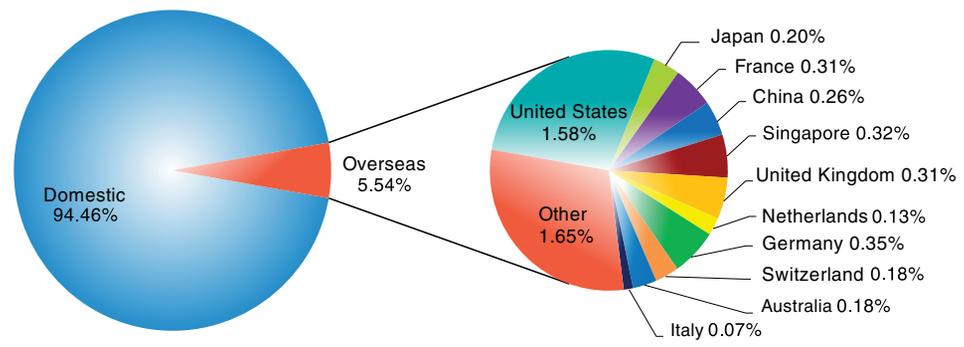


Figure 11: ".vn" domain breakdown by geographical area

In 1999, the first domain name were registered by a foreign registrant. After 16 years, the overseas market share of ".vn" has still remained relatively small, accounting for only 6.76% in 2014, and even lower (5.54%) in 2015 of total ".vn" domain names in the system.



TABLE 7: “.VN” DOMAIN BREAKDOWN BY GEOGRAPHICAL AREA

Country	Percentage	Country	Percentage
Domestic	94.46%		
Overseas	5.54%	USA	1.58%
		Japan	0.20%
		France	0.31%
		China	0.26%
		Singapore	0.32%
		UK	0.31%
		Netherlands	0.13%
		Germany	0.35%
		Switzerland	0.18%
		Australia	0.18%
		Italy	0.07%
		Other	1.65%

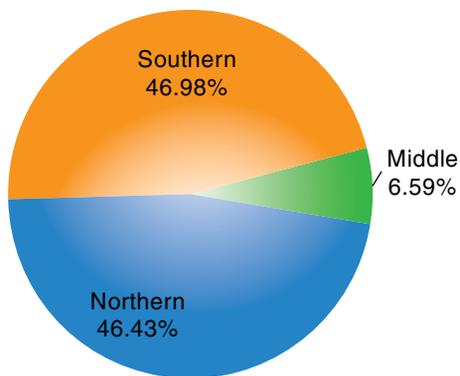


Figure 12: “.vn” domain breakdown by domestic region

TABLE 8: TOTAL “.VN” DOMAIN NAME BY PROVINCE

Provinces	Percentage	Provinces	Percentage	Provinces	Percentage
An Giang	0.21%	Ben Tre	0.23%	Can Tho	0.58%
Ba Ria - Vung Tau	0.74%	Binh Dinh	0.42%	Cao Bang	0.03%
Bac Giang	0.32%	Binh Duong	1.36%	Da Nang	1.67%
Bac Kan	0.03%	Binh Phuoc	0.19%	Dak Lak	0.37%
Bac Lieu	0.05%	Binh Thuan	0.24%	Dak Nong	0.04%
Bac Ninh	0.52%	Ca Mau	0.08%	Dien Bien	0.05%

Provinces	Percentage	Provinces	Percentage	Provinces	Percentage
Dong Nai	1.32%	Kon Tum	0.05%	Quang Ninh	0.55%
Dong Thap	0.19%	Lai Chau	0.01%	Quang Tri	0.12%
Gia Lai	0.18%	Lam Dong	0.43%	Soc Trang	0.10%
Ha Giang	0.04%	Lang Son	0.08%	Son La	0.08%
Ha Nam	0.24%	Lao Cai	0.13%	Tay Ninh	0.18%
Ha Noi	39.32%	Long An	0.36%	Thai Binh	0.45%
Ha Tinh	0.23%	Nam Dinh	0.57%	Thai Nguyen	0.40%
Hai Duong	0.53%	Nghe An	0.58%	Thanh Hoa	0.62%
Hai Phong	1.27%	Ninh Binh	0.30%	Thua Thien - Hue	0.27%
Hau Giang	0.06%	Ninh Thuan	0.09%	Tien Giang	0.24%
Ho Chi Minh City	40.48%	Phu Tho	0.23%	Tra Vinh	0.15%
Hoa Binh	0.12%	Phu Yen	0.12%	Tuyen Quang	0.08%
Hung Yen	0.42%	Quang Binh	0.22%	Vinh Long	0.09%
Khanh Hoa	0.74%	Quang Nam	0.42%	Vinh Phuc	0.34%
Kien Giang	0.25%	Quang Ngai	0.19%	Yen Bai	0,08%

### 3.3 Domain breakdown by registrant

Regarding the registrants of “.vn” domain name, there was a fall in the share of organizational registrants and a rise in the share of individual registrants which has increased more than 7% after three years (2012-2015).



Figure 13: “.vn” domain breakdown by registrant (2012 – 2015)

### 3.4 Domain breakdown by business sector

According to the business sector of registrants, the majority of “.vn” domain names were registered by commercial entities such as companies, corporations, groups (56.56%). The financial sector accounted only 0.50% keep the same rate of 2014. Educational institutions and schools accounted for 4.20%. Government authorities accounted for 1.62%.

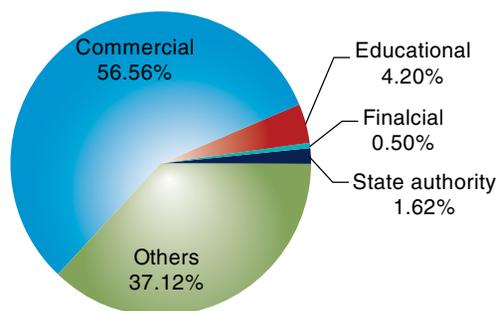


Figure 14: “.vn” domain breakdown by business sector

TABLE 9: “.VN” DOMAIN BREAKDOWN BY BUSINESS SECTOR

Sector	Commercial	Educational	Financial	State authority	Others
2014	47.94%	3.07%	0.59%	1.66%	46.73%
2015	56.56%	4.20%	0.50%	1.62%	37.12%

#### 3.4.1 “.vn” registration in educational sector

By Oct 2015, the number of “.vn” domain registered by educational institutions was 4.2% of the total which more than 50% were under “.edu.vn” and 72.40% of that having Websites. Domain names under “.edu.vn” was one of the extension with highest rate of having Websites among “.vn”.

Among the categories of schools and educational institutions, the percentage of “.vn” registration was as follows:

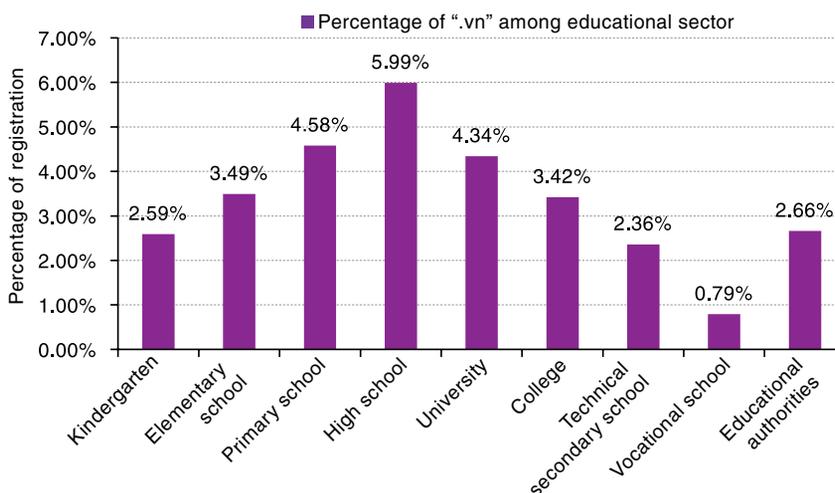


Figure 15: Usage of “.vn” among educational sector, by category

### 3.4.2 “.vn” registration in government authority sector

Within the government authority sector, “.gov.vn” accounted for over 30%. By Oct 2015, there were more than 1700 “.gov.vn” domains registered in the system with over 1400 domain names have Website accounted for 84.45% (in comparison with 81,9% in 2014). There were “.gov.vn” registrations in almost all provinces and cities, among which Ha Noi had the highest number with more than 35% of all registrations, which reflects the trend in ICT application in governmental activities.

TABLE 10: PERCENTAGE OF “.GOV.VN” BY PROVINCE

Provinces	Percentage	Provinces	Percentage	Provinces	Percentage
An Giang	0.47%	Ha Giang	0.47%	Ninh Thuan	0.41%
Ba Ria - Vung Tau	0.76%	Ha Nam	0.88%	Phu Tho	0.94%
Bac Giang	1.23%	Ha Noi	37.18%	Phu Yen	0.88%
Bac Kan	0.47%	Ha Tinh	2.11%	Quang Binh	0.94%
Bac Lieu	0.41%	Hai Duong	0.76%	Quang Nam	4.16%
Bac Ninh	1.00%	Hai Phong	2.17%	Quang Ngai	0.76%
Ben Tre	0.65%	Hau Giang	0.23%	Quang Ninh	1.29%
Binh Dinh	1.11%	Ho Chi Minh City	6.10%	Quang Tri	1.41%
Binh Duong	0.76%	Hoa Binh	0.70%	Soc Trang	0.18%
Binh Phuoc	1.88%	Hung Yen	0.70%	Son La	0.70%
Binh Thuan	0.82%	Khanh Hoa	1.23%	Tay Ninh	0.23%
Ca Mau	0.35%	Kien Giang	1.11%	Thai Binh	0.35%
Can Tho	0.94%	Kon Tum	0.53%	Thai Nguyen	1.52%
Cao Bang	0.70%	Lai Chau	0.41%	Thanh Hoa	2.35%
Da Nang	1.88%	Lam Dong	1.11%	Thua Thien - Hue	0.65%
Dak Lak	1.99%	Lang Son	0.35%	Tien Giang	0.53%
Dak Nong	0.23%	Lao Cai	0.53%	Tra Vinh	0.35%
Dien Bien	1.06%	Long An	0.35%	Tuyen Quang	1.00%
Dong Nai	1.52%	Nam Dinh	0.59%	Vinh Long	0.41%
Dong Thap	0.65%	Nghe An	1.82%	Vinh Phuc	0.65%
Gia Lai	0.65%	Ninh Binh	0.82%	Yen Bai	0.59%

### 3.5 Length of domain name

The average length of “.vn” domain name is 9.825 characters, mostly with the average length of 4-10 characters (count by domain label). There are more than 500 domain names with only numbers in domain label.



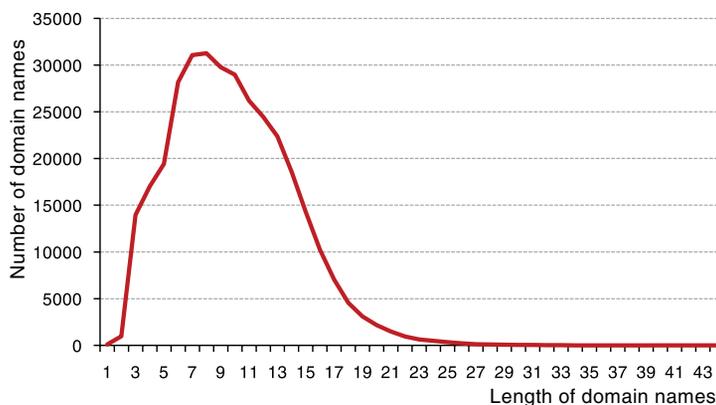


Figure 16: Domain name length of ".vn"

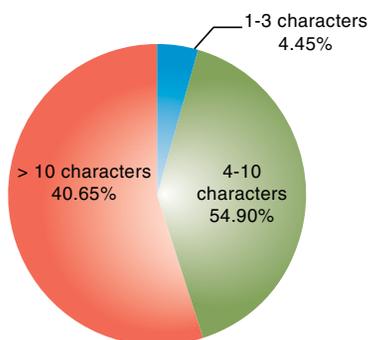


TABLE 11: ".VN" DOMAIN NAME BREAKDOWN BY LENGTH

Number of characters	1-3	4-10	>10
Number of registrations	4.45%	54.90%	40.65%

Figure 17: ".vn" domain name breakdown by length

TABLE 12: 10 LONGEST ".VN" DOMAIN NAMES

No.	Domain name
1	congtycophandautudothivakhucongnghiepsongda7.vn
2	creche-ecoles-college-francaise-europeenne.com.vn
3	duanghethuathanhtrinhbaovedisanthiennhien.vn
4	thcsnguyenbinhkiem-trieuphong-quangtri.edu.vn
5	nganhangthuongmaicophanvietnamthuongtin.com.vn
6	hoisanphukhoa-kehoachhoagiadinhtpcantho.vn
7	nganhangthuongmaicophanvietnamthuongtin.vn
8	truongthcs-trunghocphothonglonghuudong.edu.vn
9	crowneplazawesthanoihtelandresidences.com.vn
10	crowneplazawesthanoihtelandresidences.vn

## 4. “.VN” DOMAIN NAME USAGE

### 4.1. Web Hosting

Of all “.vn” domains, 61.85% has active Websites, among which 86.48 % domain names use Web Hosting server with domestic IP addresses and 13.52% using Web Hosting server with overseas IP addresses.

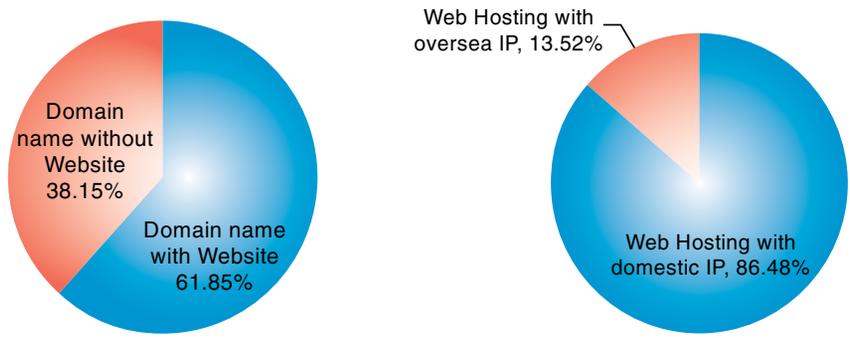


Figure 18: “.vn” domain with active Website

TABLE 13: “.VN” DOMAIN WITH ACTIVE WEBSITE

Domain name with Website	61.85%	Web Hosting with domestic IP	86.48%
		Web Hosting with overseas IP	13.52%
Domain name without Website	38.15%		

As for domain extension, under “.vn” and “.com.vn” domain name had the highest number of Websites.

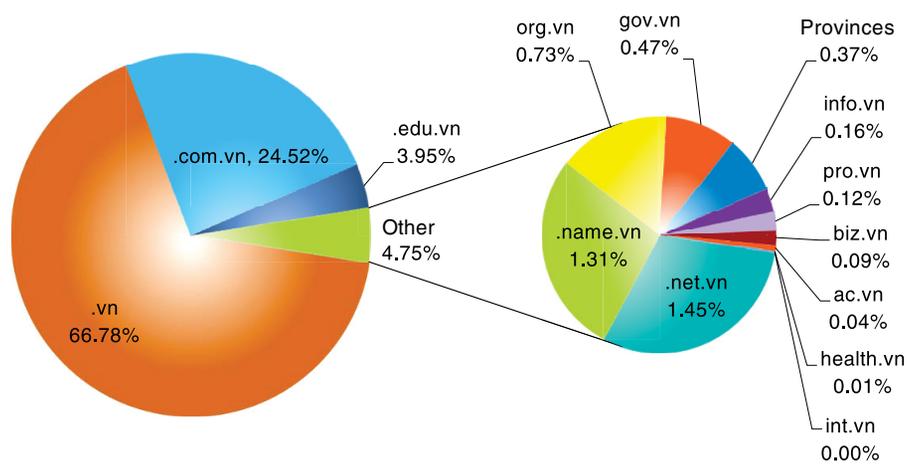


Figure 19: Percentage of all active Websites, by domain extension



TABLE 14: PERCENTAGE OF ALL ACTIVE WEBSITES, BY DOMAIN EXTENSION

Extension	Percentage	Extension	Percentage
.vn	66.78%	Province	0.37%
com.vn	24.52%	info.vn	0.16%
edu.vn	3.95%	pro.vn	0.12%
net.vn	1.45%	biz.vn	0.09%
name.vn	1.31%	ac.vn	0.04%
org.vn	0.73%	health.vn	0.01%
gov.vn	0.47%	int.vn	0.00%

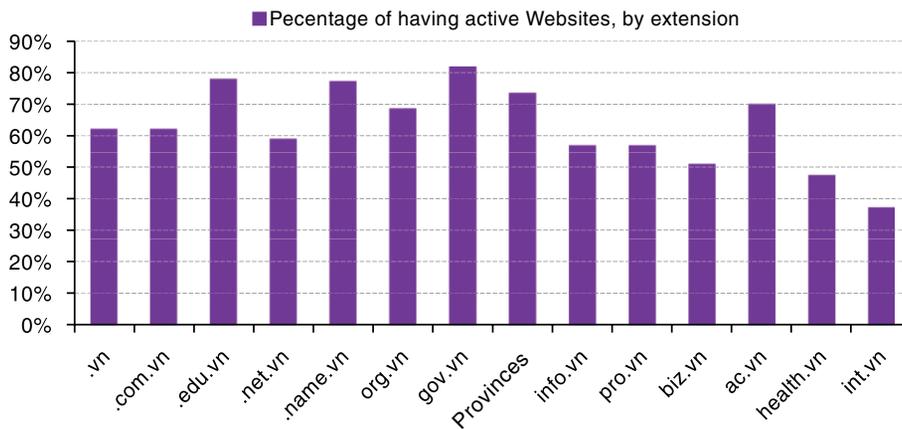


Figure 20: Percentage of having active Websites, by extension

TABLE 15: PERCENTAGE OF HAVING ACTIVE WEBSITES, BY EXTENSION

Extension	Percentage of having Website	Extension	Percentage of having Website
vn	58.79%	Provinces	76.20%
com.vn	59.98%	info.vn	63.39%
edu.vn	72.40%	pro.vn	75.25%
name.vn	62.02%	biz.vn	62.93%
net.vn	51.75%	ac.vn	79.33%
org.vn	73.58%	health.vn	48.24%
gov.vn	84.51%	int.vn	28.57%

Regarding IP address of those Websites, 24.51% belonged to IP prefixes allocated to VNPT, followed by FPT (19.79%), P.A Viet Nam (13.87%) and ODS (9.76%).

TABLE 16: TOP 20 VNNIC IP MEMBERS WITH MOST “.VN” WEB HOSTING MARKET SHARE

IP member	Market share
VNPT-VN	24.51%
FPT-VN	19.79%
PA VIETNAM-VN	13.87%
ODS-VN	9.76%
VTDC-VN	5.43%
NHAN HOA-VN	3.92%
VIETEL-VN	2.85%
QTSC-VN	2.70%
CMCTELECOM-VN	1.86%
SUPERDATA-VN	1.82%
GDS-VN	1.29%
NETNAM-VN	1.17%
RUNSYSTEM-VN	0.88%
NEWLIFE-VN	0.81%
VDATA-VN	0.80%
VHOST-VN	0.69%
CMCTI-VN	0.62%
SPT-VN	0.59%
HANELCOM-VN	0.57%
Others	6.07%

### 4.2 DNS Hosting

Of all “.vn” domains, more than 85% domain names use DNS hosting server with domestic IP addresses, 13.52% using DNS hosting server with overseas IP addresses. Of all “.vn” domain names used owners’ own servers (DNS server with name is subdomain of superordinate domain) 93.44% with domestic IP addresses and 6.65% with overseas domestic IP.

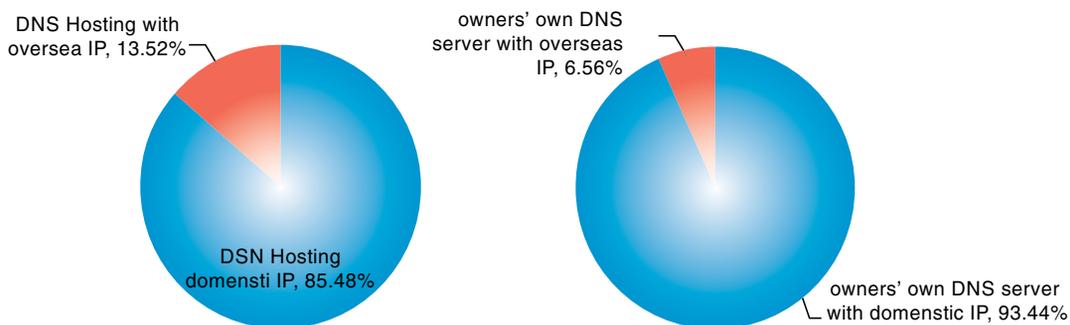


Figure 21: DNS hosting of “.vn” domain name



Of all “.vn” domain names, P.A Viet Nam, Mat Bao and FPT are the biggest DNS Hosting service providers.

TABLE 17: DNS HOSTING SERVICE BY “.VN” REGISTRAR

“.vn” registrar	Market share
Mat Bao	31.30%
FPT	20.23%
P.A Viet Nam	17.24%
GMO RunSystem	7.28%
ESC	6.66%
Nhan Hoa	5.70%
GLTEC	3.21%
VDC	2.65%
NetNam	2.62%
HITEK	1.31%
SPT	1.61%
iNET	0.17%

## 5. TOP 50 “.VN” DOMAIN NAMES MOST QUERIED IN 2015

TABLE 18: TOP 50 “.VN” DOMAIN NAMES MOST QUERIED IN 2015

Ranking	Domain	Ranking	Domain	Ranking	Domain
1	dantri.com.vn	18	yahoo.com.vn	35	vtvplay.vn
2	zing.vn	19	digipower.com.vn	36	haiquan.vn
3	google.com.vn	20	24h.com.vn	37	thietkewebsitegiarenhat.vn
4	vtc.vn	21	mfilm.vn	38	ants.vn
5	digipower.vn	22	vtcgame.vn	39	vdc.com.vn
6	adnetwork.vn	23	gmail.com.vn	40	fshare.vn
7	kiemhiep.com.vn	24	vccloud.vn	41	vng.vn
8	saigonnet.vn	25	dominos.vn	42	tintuc.vn
9	eclick.vn	26	vcmedia.vn	43	truykich.vn
10	cmcti.vn	27	admicro.vn	44	whitehat.vn
11	vtcebank.vn	28	360game.vn	45	baoviet.vn
12	bkavca.vn	29	lazada.vn	46	textlink.vn
13	vtcmobile.vn	30	aid.vn	47	mhbs.vn
14	123pay.vn	31	udn.vn	48	123host.vn
15	sendo.vn	32	bimson.vn	49	sacombank.com.vn
16	adtimaserver.vn	33	manhtri.vn	50	dongasaigon.vn
17	fptplay.net.vn	34	iss.edu.vn		

## 6. “.VN” ACCREDITED REGISTRAR SYSTEM

By Oct 2015, there are 16 “.vn” accredited registrars (05 oversea registrars).



### 6.1 Market share of registrars

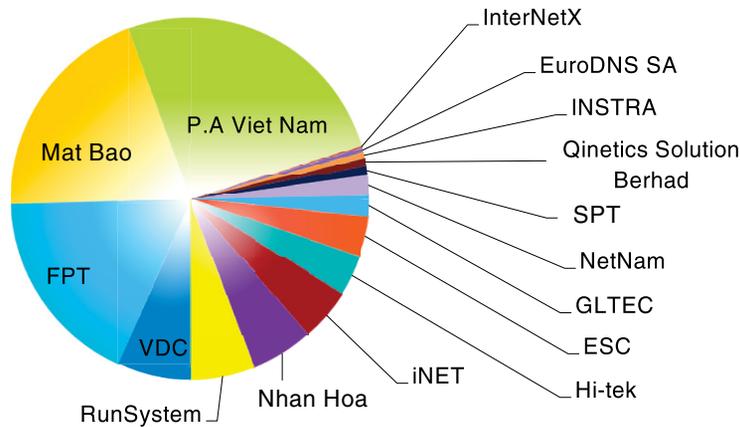


Figure 22: Market share by registrar

TABLE 19: MARKET SHARE BY REGISTRAR

Registrar	Market share	Registrar	Market share
InternetX	0.22%	HITEK	3.67%
EuroDNS	0.41%	iNET	4.72%
Instra	0.52%	Nhan Hoa	5.67%
WebNIC	0.68%	GMO RunSystem	5.76%
SPT	0.86%	VDC	6.64%
NetNam	1.71%	FPT	18.00%
GLTEC	1.85%	Mat Bao	19.83%
ESC	3.63%	P.A Viet Nam	25.83%



## 6.2 Market share of registrars in the northern region

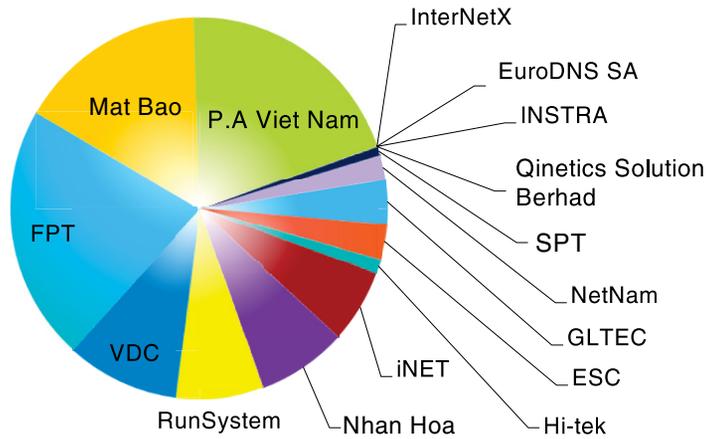


Figure 23: Market share in the northern region, by registrar

TABLE 20: MARKET SHARE IN THE NORTHERN REGION, BY REGISTRAR

Registrar	Market share	Registrar	Market share
FPT	21.75%	ESC	3.04%
P.A Viet Nam	20.17%	NetNam	2.10%
Mat Bao	16.14%	Hi-tek	1.22%
VDC	9.70%	SPT	0.77%
Nhan Hoa	7.75%	Instra	0.02%
RunSystem	7.42%	WebNIC	0.01%
iNET	6.28%	EuroDNS	0.00%
GLTEC	3.63%	InterNetX	0.00%

## 6.3 Market share of registrars in the middle region

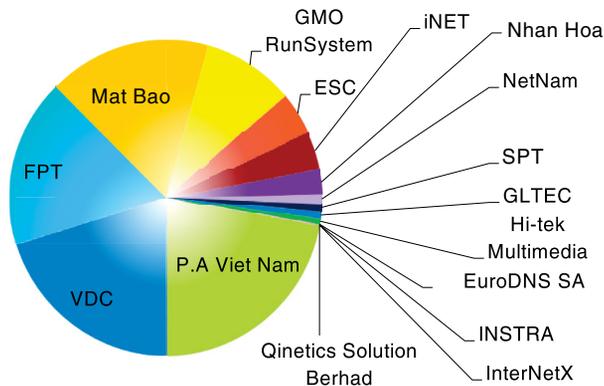


Figure 24: Market share in the middle region, by registrar

TABLE 21: MARKET SHARE IN THE MIDDLE REGION, BY REGISTRAR

Registrar	Market share	Registrar	Market share
P.A Viet Nam	22.16%	NetNam	0.87%
VDC	20.38%	SPT	0.82%
FPT	17.15%	GLTEC	0.71%
Mat Bao	16.82%	Hi-tek	0.55%
RunSystem	9.52%	EuroDNS	0.09%
ESC	4.42%	InterNetX	0.00%
iNET	3.95%	WebNIC	0.00%
Nhan Hoa	2.53%	Instra	0.03%

### 6.4 Market share of registrars in the southern region

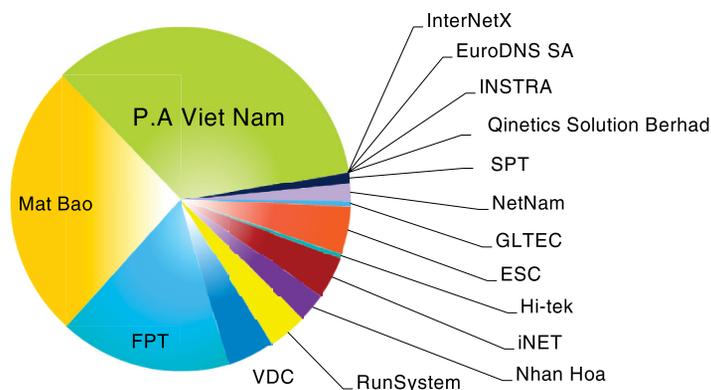


Figure 25: Market share in the southern region, by registrar

TABLE 22: MARKET SHARE IN THE SOUTHERN REGION, BY REGISTRAR

Registrar	Market share	Registrar	Market share
P.A Viet Nam	34.69%	NetNam	1.58%
Mat Bao	26.04%	SPT	1.04%
FPT	16.27%	GLTEC	0.48%
VDC	4.50%	Hi-tek	0.43%
ESC	4.49%	Instra	0.02%
iNET	3.88%	WebNIC	0.00%
RunSystem	3.77%	EuroDNS	0.00%
Nhan Hoa	2.81%	InterNetX	0.00%





# VIETNAMESE INTERNATIONALIZED DOMAIN NAME (IDN “.VN”)

**Domain Names:** 926,065

**Ranking:** 1<sup>st</sup> in the world

///



## 1. VIETNAMESE INTERNATIONALIZED DOMAIN NAME (IDN “.VN”) GROWTH

After the milestone of 1 million IDN “.vn” registered in 2014 – the highest number of IDN registrations in the world, the Ministry of Information and Communications focused on promotion of real use of IDN to prevent the waste of internet resources. Since Oct 2014, besides the continuous promotion of the free services (Web Direct, Web Template, DNS Hosting, DNS Delegation), VNNIC also executed the program of filtering and revoking IDNs registered without real use. Until Oct 2015, more than 180,000 domain names were revoked. In addition, VNNIC has provided the service of auto-renewal for registrant to actively renew their registrations. More than 8,400 IDNs “.vn” has been auto-renewed.

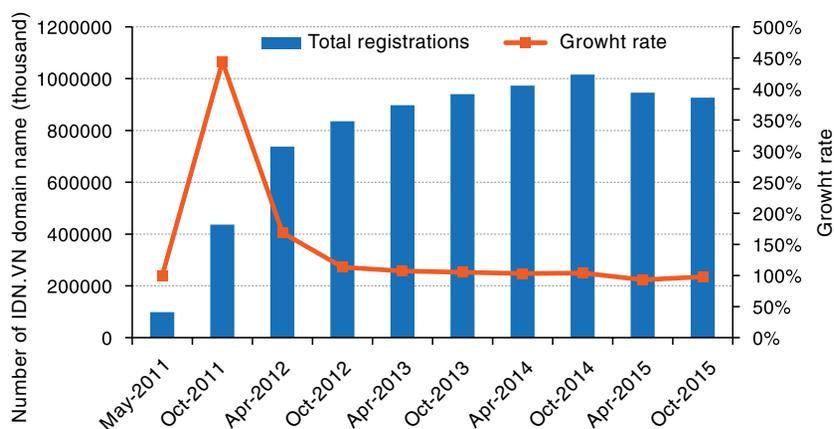


Figure 26: IDN “.vn” growth

TABLE 23: IDN “.VN” CUMULATIVE GROWTH

Date	Total registrations	Growth rate
May 2011	98,279	100%
Oct 2011	436,062	444%
Apr 2012	737,704	169%
Oct 2012	835,872	113%
Apr 2013	897,298	107%
Oct 2013	940,292	105%
Apr 2014	972,720	103%
Oct 2014	1,015,701	104%
Apr 2015	945,717	93%
Oct 2015	926,065	98%

## 2. IDN “.VN” BREAKDOWN

### 2.1 IDN “.vn” breakdown by registrant



Figure 27: IDN “.vn” breakdown by registrant

### 2.2 IDN “.vn” breakdown by geographical area

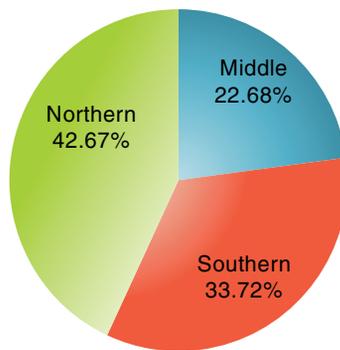


Figure 28: IDN “.vn” breakdown by geographical area

## 3. IDN “.VN” SERVICE USAGE

### 3.1 Service breakdown

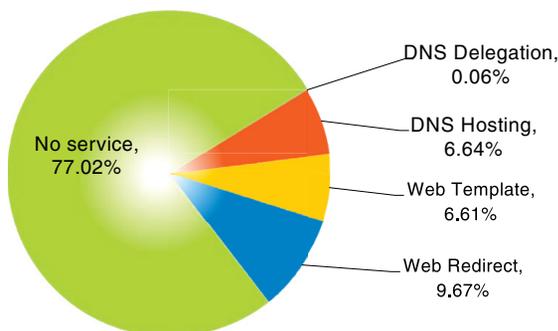


Figure 29: IDN “.vn” service usage breakdown

TABLE 24: IDN “.VN” SERVICE USAGE

Service	Percentage
DNS Delegation	0.06%
DNS Hosting	6.64%
Web Template	6.61%
Web Redirect	9.67%
No service	77.02%



There are currently 4 types of services freely provided for IDN “.vn”: Web redirect, Web template, DNS hosting and Delegating DNS. However, the service usage rate of IDN “.vn” was about 23% of the total number of registered domain names, still higher than 16% of 2014.

### 3.2 Service usage breakdown by geographical area

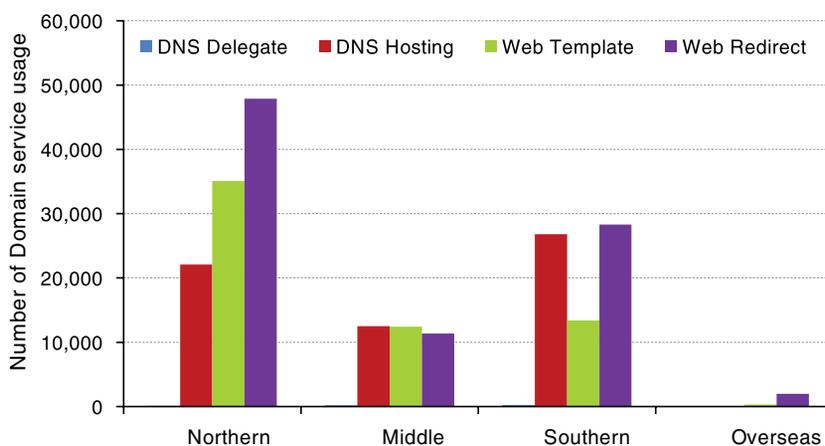


Figure 30: IDN “.vn” service usage breakdown by geographical area

TABLE 25: IDN “.VN” SERVICE USAGE BREAKDOWN BY GEOGRAPHICAL AREA

Service	Northern	Middle	Southern	Overseas
DNS Delegate	94	184	244	0
DNS Hosting	22,104	12,520	26,791	34
Web Template	35,076	12,410	13,396	303
Web Redirect	47,882	11,345	28,315	1,981

### 4. TOP 50 IDN “.VN” MOST QUERIED IN 2015

TABLE 26: TOP 50 IDN “.VN” MOST QUERIED IN 2015

Ranking	IDN “.vn”	Ranking	IDN “.vn”
1	ảnhđềppro.vn	7	tâmlytrẻcon.vn
2	ảnhđềppc.vn	8	tinapplechínhhãng.vn
3	mỹphảmsakura.vn	9	điểmthimới.vn
4	xedepyamaha.vn	10	cáchchảmsócbé.vn
5	trungtâmgiասutháinguyền.vn	11	xesốyamaha.vn
6	chípmon.vn	12	cảnhộthesunavenue.vn

Ranking	IDN “.vn”	Ranking	IDN “.vn”
13	phápthuật.vn	32	xetaycôn5số.vn
14	jomootháinguyên.vn	33	xe-rước-dâu.vn
15	baodaiphonechínhhãng.vn	34	tâmlýmẹbầu.vn
16	anviênonline.vn	35	hội-quán-ăn-uống.vn
17	nguyễnhảionline.vn	36	càiwín8.vn
18	việclàmtiếngnhật.vn	37	phép-màu.vn
19	báo123.vn	38	xeduyayamaha.vn
20	điểmthimớinhất.vn	39	anh hùng thiếuniên.vn
21	bệnhcaohuyếttáp115.vn	40	dulichhe.vn
22	cây cảnh hoànggiáp.vn	41	dietcôntrung.vn
23	otogiárẻ.vn	42	giasutn1.vn
24	quáncafebụi.vn	43	hoàngkha.vn
25	làmđẹpnhũthế nào.vn	44	trị nám và tàn nhang hiệu quả.vn
26	siêu xe hàng khủng.vn`	45	văn hóa đồng dương.vn
27	giá thumua laptop.vn	46	dọn-nhà-trọn-gói.vn
28	diadiemăn uống.vn	47	công-thức-nấu-ăn.vn
29	khóa chống trộm xem máy tốt nhất.vn	48	chơi với bé.vn
30	hài360.vn	49	chuẩn bị có con.vn
31	nhập hội.vn	50	bổ menu ôi con.vn

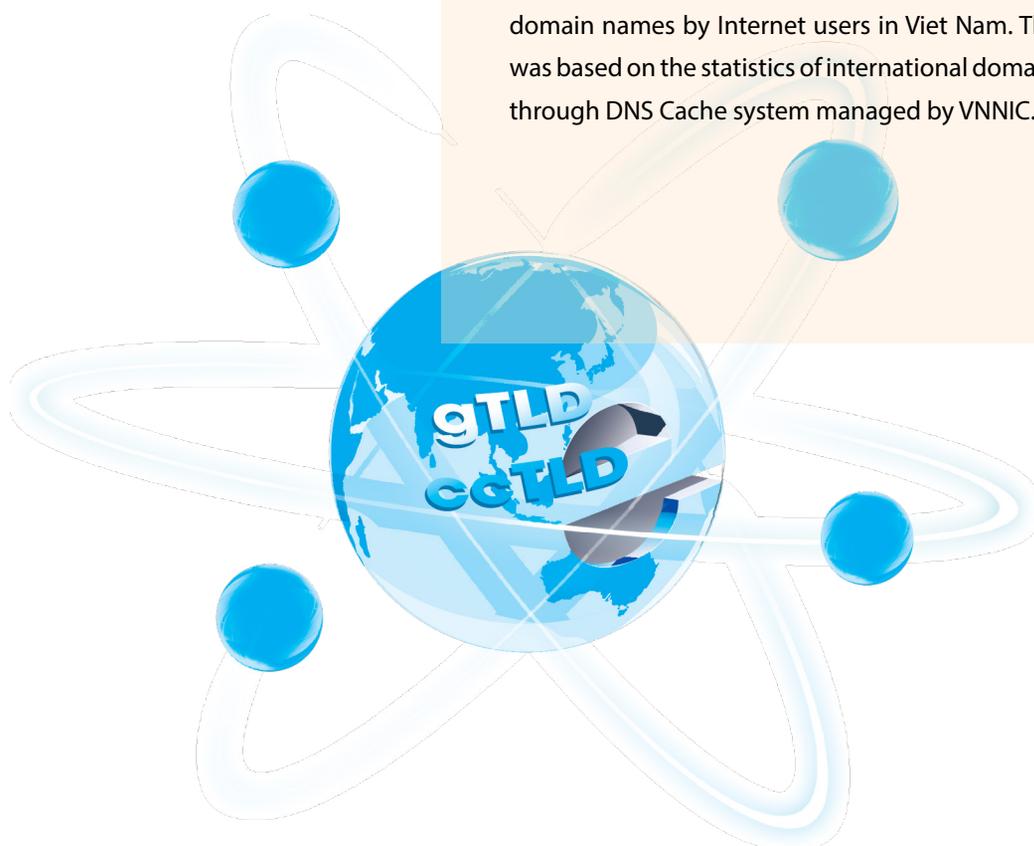




# INTERNATIONAL DOMAIN NAMES USED IN VIET NAM

International domain names are domain names under the generic top level domain names (gTLDs) and other country code top level domain names (ccTLDs).

This section of the report analyzes the indicators relating to the breakdown and usage of international domain names by Internet users in Viet Nam. The analysis was based on the statistics of international domains queries through DNS Cache system managed by VNNIC.



## 1. INTERNATIONAL DOMAIN NAME USAGE IN VIET NAM

### 1.1 International domain name breakdown

#### 1.1.1 gTLDs vs ccTLDs (not ".vn")

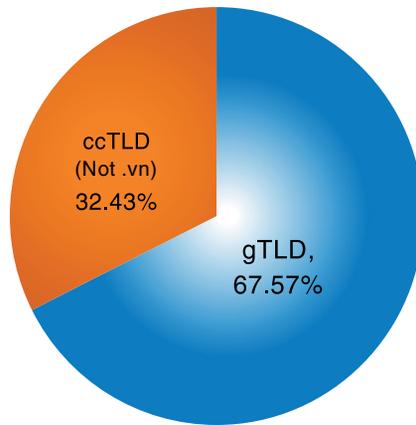


Figure 31: gTLDs vs ccTLDs (not ".vn")

TABLE 27: GTLDS VS CCTLDS (NOT ".VN")

Domain	gTLD	Other ccTLDs (not ".vn")
Percentage	67.57%	32.43%

#### 1.1.2 gTLD queries breakdown by extension

".com" domain names dominated the number of queries with about 80.45%, followed by ".net", ".org", ".info", ".biz". In 2014, New gTLDs like ".xyz", ".berlin"... were officially introduced to the domain market and widely promoted to users. However, the percentage of queries of those New gTLDs in Viet Nam was rather unnoticeable.

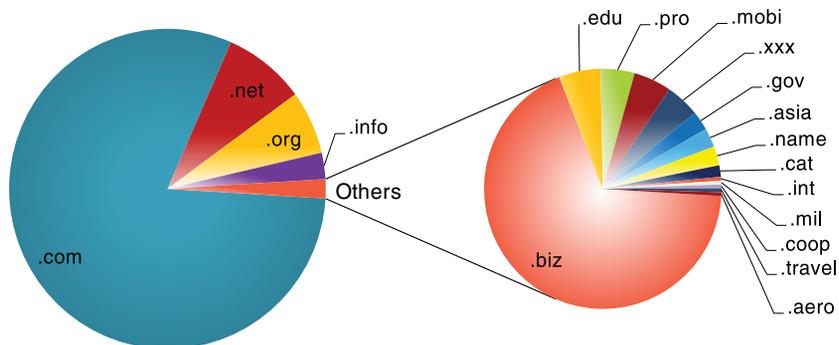


Figure 32: gTLD queries by extension

TABLE 28: GTLD QUERIES BY EXTENSION

Extension	Total queries	Extension	Total queries
.com	80.60%	.gov	0.05%
.net	8.38%	.asia	0.05%
.org	6.42%	.name	0.05%
.info	2.66%	.cat	0.03%
.biz	1.32%	.int	0.01%
.edu	0.11%	.mil	0.01%
.pro	0.09%	.coop	0.01%
.mobi	0.10%	.travel	0.01%
.xxx	0.09%	.aero	0.01%

### 1.1.3 Top 20 ccTLDs most queried in Viet Nam

TABLE 29: TOP 20 CCTLDS QUERIED IN VIET NAM

Ranking	Country	ccTLD	Number of queries	Ranking	Country	ccTLD	Number of queries
1	Russia	.ru	1,065,821	11	France	.fr	177,020
2	Germany	.de	592,394	12	England	.uk	145,817
3	United States	.us	427,961	13	Switzerland	.ch	136,798
4	China	.cn	308,755	14	European Union	.eu	130,321
5	Australia	.au	296,416	15	Kazakhstan	.kz	120,674
6	Netherlands	.nl	275,423	16	Colombia	.co	112,861
7	Italy	.it	267,444	17	Denmark	.dk	109,236
8	Poland	.pl	266,224	18	Czech Republic	.cz	99,022
9	Brazil	.br	218,693	19	Spain	.es	97,440
10	Canada	.ca	206,948	20	Sweden	.se	94,812

### 1.2 Average length of gTLDs queried in Viet Nam

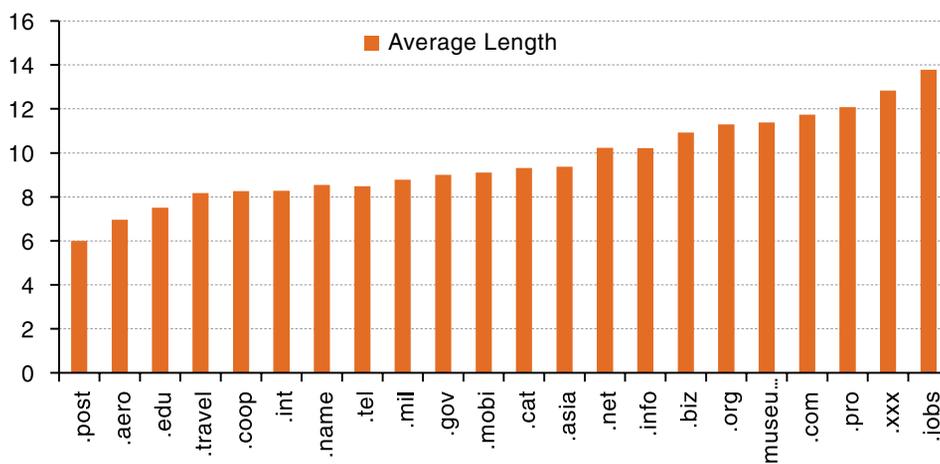


Figure 33: Average length of gTLDs queried in Viet Nam



TABLE 30: AVERAGE LENGTH OF GTLDS QUERIED IN VIET NAM

Extension	Average length	Extension	Average length
.post	6.000	.cat	9.308
.aero	6.959	.asia	9.374
.edu	7.513	.net	10.224
.travel	8.173	.info	10.223
.coop	8.264	.biz	10.928
.int	8.279	.org	11.300
.name	8.550	.museum	11.380
.tel	8.479	.com	11.742
.mil	8.774	.pro	12.085
.gov	9.005	.xxx	12.842
.mobi	9.107	.jobs	13.78

### 1.3 Top 50 gTLDs most queried in 2015

TABLE 31: TOP 50 GTLDS MOST QUERIED IN 2015

Ranking	Domain	Ranking	Domain	Ranking	Domain
1	google.com	18	hotmail.com	34	vnexpress.net
2	akadns.net	19	googlevideo.com	35	tp-link.com
3	facebook.com	20	googleapis.com	36	garenanow.com
4	akamaihd.net	21	zapro.org	37	avast.com
5	akamai.net	22	googleusercontent.com	38	dyndns.org
6	akamaiedge.net			39	mailshell.net
7	amazonaws.com	23	live.net	40	w3.org
8	apple.com	24	psg.com	41	tplink.com
9	yahoo.com	25	clashofclans.com	42	msn.com
10	cloudapp.net	26	twitter.com	43	ieee.org
11	doubleclick.net	27	google-analytics.com	44	aol.com
12	youtube.com	28	skype.net	45	opera.com
13	gstatic.com	29	baomoi.com	46	googleadservices.com
14	thegioicongso.com	30	live.com	47	flurry.com
15	kaspersky.com	31	gmail.com	48	parse.com
16	cloudfront.net	32	sina.com	49	dhs.gov
17	microsoft.com	33	ksmobile.com	50	blackberry.com

## 2. RATIO OF SERVICE USAGE AND SERVICE PROVISION FOR INTERNATIONAL DOMAIN NAMES IN VIET NAM

### 2.1 Service usage of international domain name

#### 2.1.1 Web Hosting

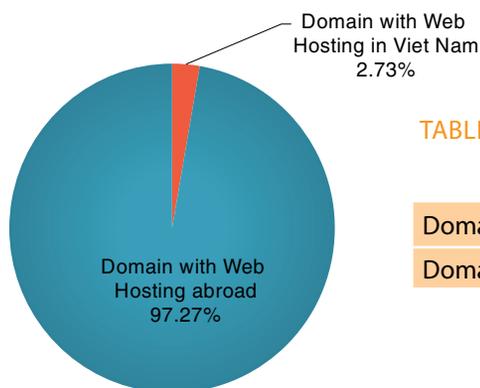


TABLE 32: INTERNATIONAL DOMAIN NAME WITH ACTIVE WEBSITES

Domain with Web Hosting in Viet Nam	2.73%
Domain with Web Hosting abroad	97.27%

Figure 34: International domain name with active Websites

Regarding the extensions, “.com” domain names had the most queries with 69.85%, followed by “.net”, “.org” and “.edu”.

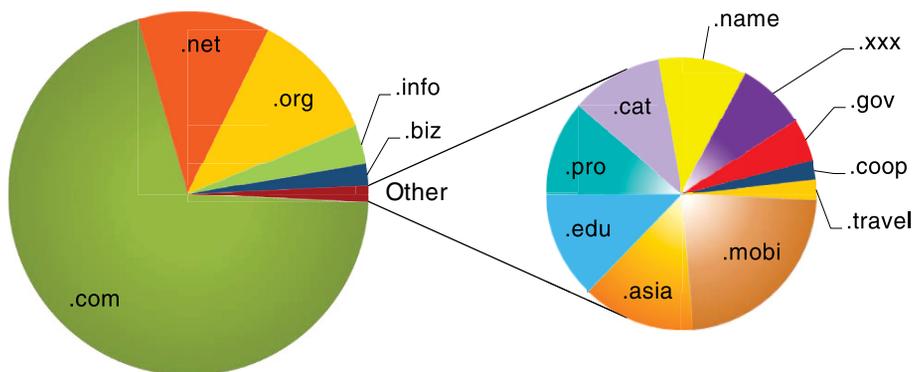


Figure 35: gTLDs with active Websites most queried, by extension

TABLE 33: GTLDS WITH ACTIVE WEBSITES MOST QUERIED, BY EXTENSION

Extension	Queries	Extension	Queries
.com	69.85%	.mobi	0.31%
.net	11.79%	.asia	0.18%
.org	11.62%	.edu	0.17%
.info	3.49%	.pro	0.15%
.biz	1.91%	.cat	0.15%

Extension	Queries	Extension	Queries
.name	0.14%	.coop	0.03%
.xxx	0.11%	.travel	0.03%
.gov	0.07%		

Regarding the Web hosting service in Viet Nam for international domain names, VNPT, FPT and P.A Viet Nam led the market.

TABLE 34: TOP 20 PROVIDERS WITH MOST WEB HOSTING SERVICE FOR INTERNATIONAL DOMAIN NAMES

Ranking	Netname	Percentage
1	VNPT	23.81%
2	FPT	18.66%
3	P.A Viet Nam	14.14%
4	ODS	12.79%
5	Viettel - CHT	4.56%
6	Nhan Hoa	4.41%
7	QTSC-VN	3.46%
8	CMCTELECOM-VN	3.07%
9	SUPERDATA-VN	2.26%
10	VDATA-VN	2.06%
11	VIETEL-VN	1.90%
12	NETNAM-VN	1.59%
13	GDS-VN	1.39%
14	NEWLIFE-VN	1.05%
15	HANELCOM-VN	0.98%
16	DTS-VN	0.68%
17	VHOST-VN	0.47%
18	FIBO-VN	0.42%
19	SPT-VN	0.39%
20	Others	1.90%

### 2.1.2 DNS Hosting

Of all the international domain names queried through DNS Cache system (managed by VNNIC) there is 2.17% using DNS Hosting servers with domestic IP address.

Among those using domestic DNS Hosting, 30% used the service provided by the “vn” Registrars.

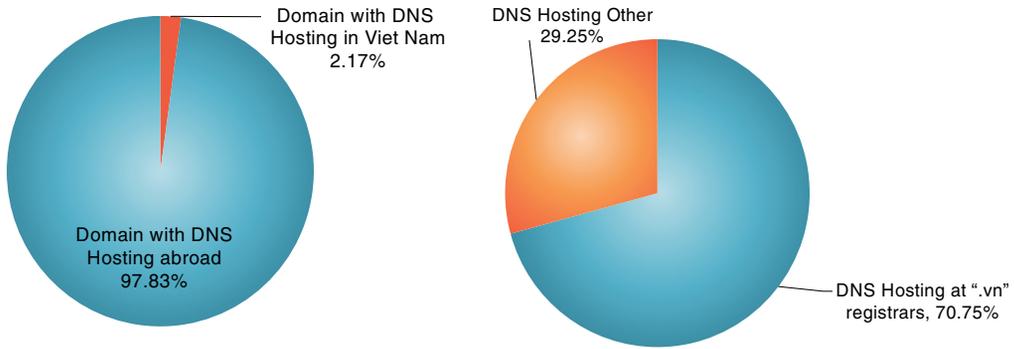


Figure 36: International domain names with DNS Hosting

TABLE 35: INTERNATIONAL DOMAIN NAMES WITH DNS HOSTING

Domains with DNS Hosting in Viet Nam	2.17%	DNS Hosting at ".vn" registrars	70.75%
		Other	29.25%
Domains with DNS Hosting abroad	97.83%		

In 2014, the three Registrars with the most DNS Hosting services for international domain name were P.A Viet Nam (35.35%), Mat Bao (18.59%) and FPT (9%). In 2015, GMO Runsystem has risen to the top 2.

TABLE 36: DNS HOSTING SERVICE PROVIDED BY ".VN" REGISTRARS

Ranking	Registrar	Percentage
1	P.A Viet Nam	29.49%
2	GMO RunSystem	24.35%
3	Mat Bao	14.67%
4	FPT	13.98%
5	ESC	10.05%
6	NetNam	1.99%
7	Nhan Hoa	1.88%
8	HITEK	1.23%
9	GLTEC	1.08%
10	VDC	0.89%
11	SPT	0.38%
12	iNET	0.00%



## 2.2 Domestic service provision for international domain names

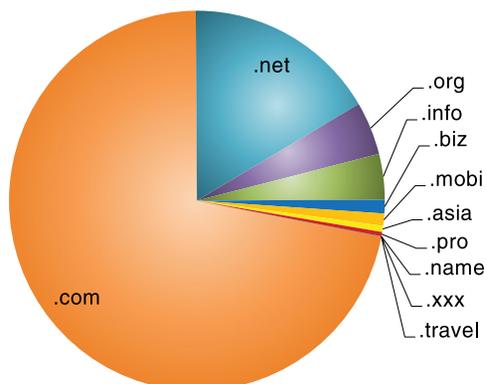
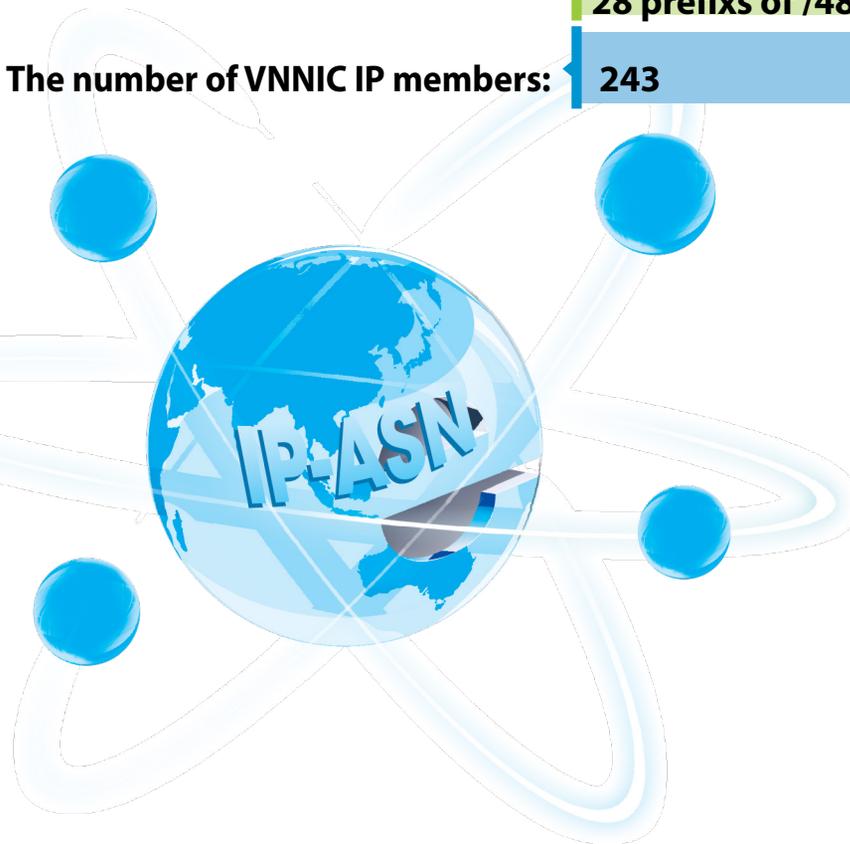
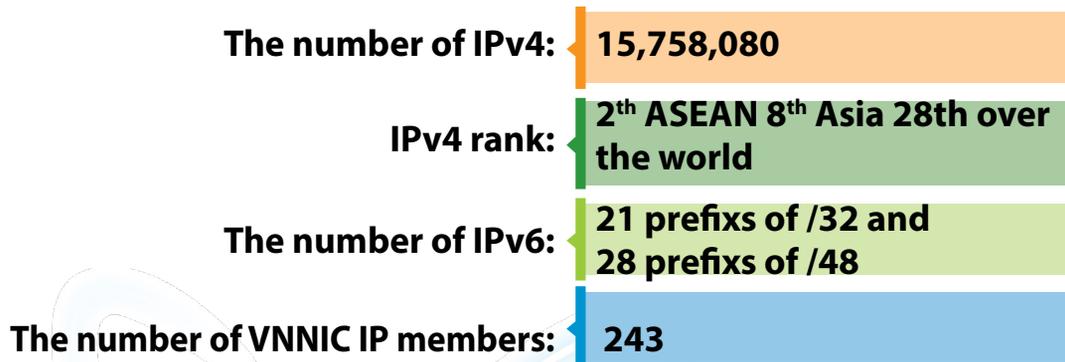


Figure 37: gTLDs with most domestic services, by extension

TABLE 37: GTLDS WITH MOST DOMESTIC SERVICES, BY EXTENSION

Extension	Percentage
.com	71.85%
.net	16.61%
.org	4.53%
.info	3.88%
.biz	1.17%
.mobi	1.04%
.asia	0.52%
.pro	0.36%
.name	0.03%
.xxx	0.01%
.travel	0.01%

# INTERNET PROTOCOL ADDRESS (IP) & AUTONOMOUS SYSTEM NUMBER (ASN)



## 1. IPv4 ADDRESS

### 1.1 IPv4 address growth over the years

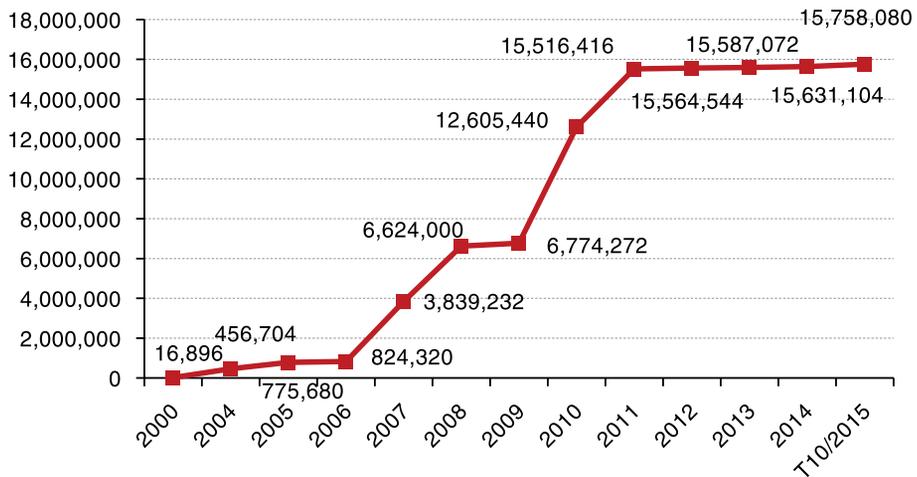


Figure 38: IPv4 address growth over the years

The more Internet develops, the more demand of IP addresses. Since VNNIC was established in 2000 and became NIR of Viet Nam in 2003, the number of IPv4 addresses grew significantly, especially from 2006 to 2011. By October, 2015, the number of IPv4 addresses allocated to Viet Nam is 15,758,080 ranked the second in the ASEAN, the 8<sup>th</sup> in Asia and the 28<sup>th</sup> in the world.

### 1.2 IPv4 delegations

Since May, 2015, VNNIC officially implemented the policy of re-delegation of returned IPv4 address block in Viet Nam along with APNIC policy. VNNIC Members are eligible to receive up to a /22 IPv4 from the region returned pool, in addition to the /22 that they can receive under the "last /8" policy. This gives VNNIC members up to two /22 (2,048) IPv4 addresses from these address block, while the space is available.

Since the advent of the recovered pool, there has been a marked increase in IPv4 requests. 52 requests had come to the recovered pool (non-103/8) in 89 suggesting during past 6 months.

In some past years, without the re-delegation policy, there were approximately 30 – 40/22 prefix IPv4 delegations per year. However, just 10 months of 2015, Viet Nam has been delegated 124/22 blocks IPv4 addresses.

### IPv4 delegations from 103/8 Pool and Recovered Pool (non-103/8)

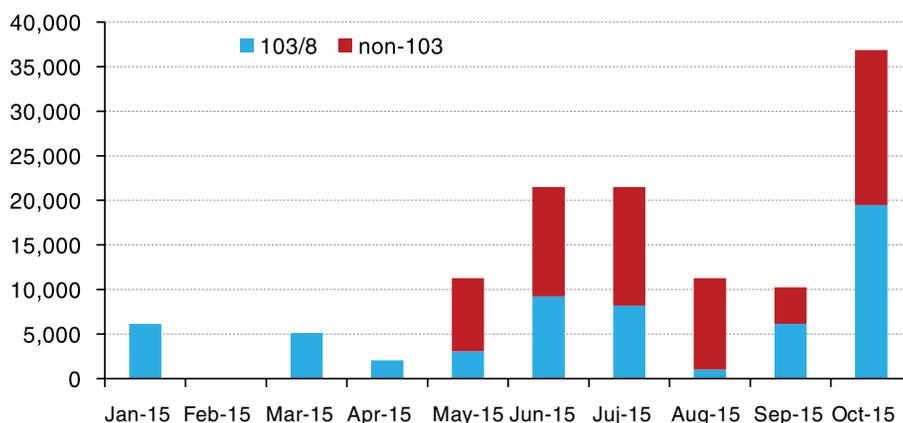


Figure 39: IPv4 delegation from 103/8 Pool and Recovered Pool

### 1.3 Viet Nam's rank of the number of IPv4 addresses in the ASEAN Region and in the world

By October 2015, the number of IPv4 addresses in Viet Nam was 15,758,080. Viet Nam ranked the second in the ASEAN, the 8<sup>th</sup> in Asia and the 28<sup>th</sup> in the world in term of IPv4 addresses. Comparing the addresses in 2014, although the number of IPv4 addresses increased better than last year, the percent of Viet Nam IPv4 space rose from 0.36% to 0.37%, however, the rank of IPv4 addresses comparing with other countries is 28<sup>th</sup> (in 2014, the rank was 26<sup>th</sup>).

TABLE 38: RANKING OF COUNTRIES FOR THE NUMBER OF IPv4 IN THE WORLD

(Source: <http://potaroo.net>)

Index	Country/Territory	Number of IPv4 addresses	% of IPv4 space
1	USA	1,614,906,368	37.6%
2	China	335,890,688	7.82%
3	Japan	203,121,152	4.73%
4	UK	123,020,056	2.86%
5	Germany	118,580,864	2.76%
6	South Korea	112,379,648	2.62%
7	Brazil	81,715,712	1.90%
8	France	79,506,736	1.85%
9	Canada	73,014,272	1.7%
10	Italy	53,721,920	1.25%
11	Australia	48,688,448	1.13%
12	Netherlands	45,937,376	1.07%



Index	Country/Territory	Number of IPv4 addresses	% of IPv4 space
13	Russia	45,512,192	1.06%
14	India	37,435,648	0.87%
15	Taiwan	35,478,744	0.83%
16	Sweden	29,855,080	0.69%
17	Spain	29,450,304	0.69%
18	Mexico	28,797,696	0.67%
19	Belgium	28,427,648	0.66%
20	South Africa	26,487,296	0.62%
21	Poland	20,607,560	0.48%
22	Switzerland	19,828,664	0.46%
23	Argentina	18,902,784	0.44%
24	Indonesia	17,773,568	0.41%
25	Egypt	17,320,192	0.40%
26	Colombia	17,269,760	0.40%
27	Turkey	16,366,336	0.38%
28	Viet Nam	15,758,080	0.37%
29	Norway	15,683,984	0.37%
30	Finland	13,620,480	0.32%

TABLE 39: RANKING OF COUNTRIES FOR THE NUMBER OF IPV4 IN ASEAN

 (Source: <http://potaroo.net>)

Index	Country	Number of IPv4 addresses
1	Indonesia	17,773,568
2	Viet Nam	15,758,080
3	Thailand	8,937,472
4	Malaysia	6,653,696
5	Singapore	6,311,936
6	Philippines	5,423,616
7	Cambodia	271,104
8	Brunei	204,288
9	Laos	65,280
10	Myanmar	46,848
11	Timor-Leste	12,544

## 1.4 VNNIC IP Members growth

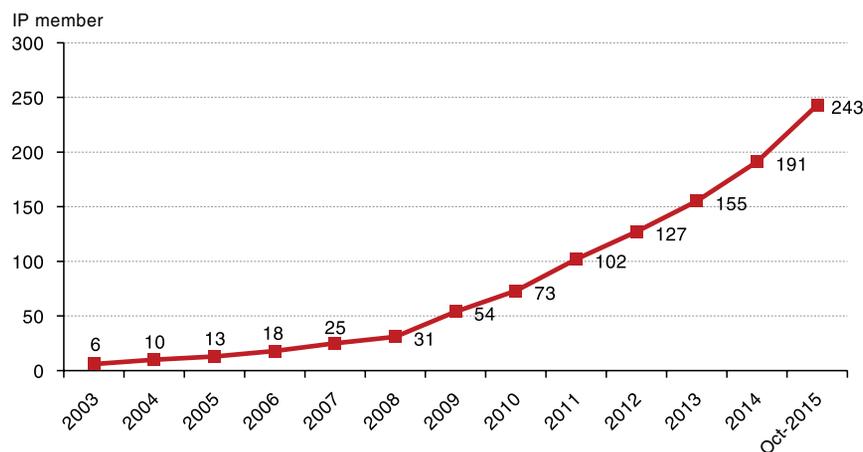


Figure 40: Growth of VNNIC IP members (2003 – 2015)

As following Internet development, there has been a marked increase of IP demand in spite of the IPv4 exhaustion. Thus, the number of VNNIC IP members increased significantly, especially from 2008 to now, approximately 30 - 40 new members per year. In the first 10 months of 2015, there were 52 new IP members. As a result, the total membership figure reached 243 as of October, 2015.

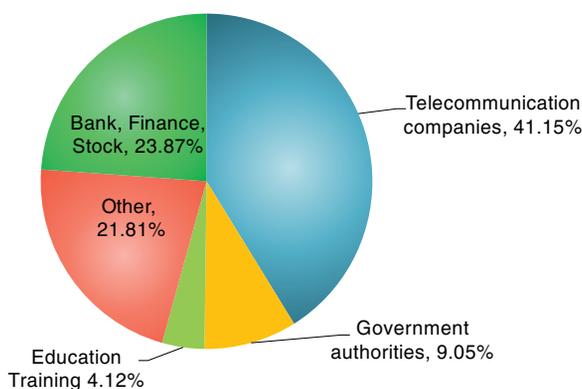


Figure 41: VNNIC IP Members by category

On the same trend as the previous years, there has been almost of IP members for ICT Enterprises field, 41.15 % of the total number of VNNIC members, (2014, 41%). Consequently, the ICT Enterprises members had more than 98% IPv4 addresses in Viet Nam.

## 2. AUTONOMOUS SYSTEM NUMBER (ASN)

The number of ASNs allocated to Viet Nam were 266, including 156 two-byte and 110 four-byte ASNs. The total number of ASNs VNNIC allocated to members reached 207, by adding 21 four-byte ASNs and 3 two-byte ASNs since the beginning of 2015.

The number of ASNs

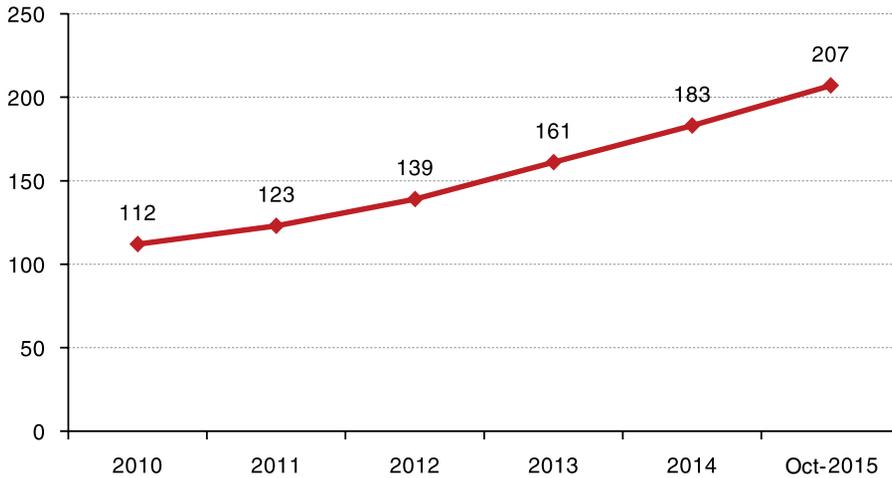


Figure 42: The number of ASNs in Viet Nam (2010-2015)

### 3. IPv6 ADDRESS PROMOTION IN VIET NAM

#### 3.1 IPv6 promotion events in 2015

06/5/2015	VNNIC organized the conference "Viet Nam IPv6 Day - IPv6 Application for mobile broadband"
7/2015	VNIPv6TF delegation had working visits with major ISPs, mobile enterprises and content providers
16/7/2015	VNNIC and Viet Nam Internet Association (VIA) co-organized the IPv6 training course for ICT leaders
27/7/2015	VNIPv6TF and the Office of the Party Central Committee co-organized the IPv6 advanced training course
15/9/2015	VNNIC organized the IPv6 training course for staff of Quang Ninh provincial authorities

### 3.2 Number of IPv6 addresses in Viet Nam over the years

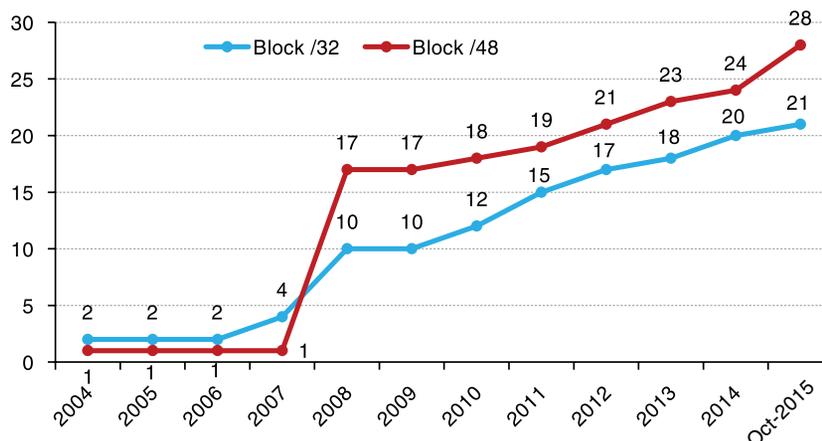


Figure 43: Number of IPv6 addresses in Viet Nam over the years

In 2004, the first IPv6 block was allocated by APNIC to Viet Nam. There was an explosive increase in the number of IPv6 addresses in 2008 because the Minister of Information and Telecommunications issued Directive No. 03/2008/CT-BTTTT of May 6<sup>th</sup>, 2008 on IPv6 deployment and promotion in Viet Nam. At that time, other ISPs were continuously allocated IPv6 addresses, such as Viettel, NetNam, Hanoi Telecom.

After that, number of IPv6 addresses grew stably to reach 21/32 blocks and 28/48 blocks as of October, 2015. Almost all major ISPs in Viet Nam were allocated IPv6 addresses for IPv6 service application.

### 3.3 National IPv6 network

The National IPv6 Network was launched on May 6<sup>th</sup>, 2013 at Viet Nam IPv6 Day event (Viet Nam IPv6 Launch). The Network was set up by connecting National DNS network, IPv4//IPv6 dual stack VNIX Network and ISP network.



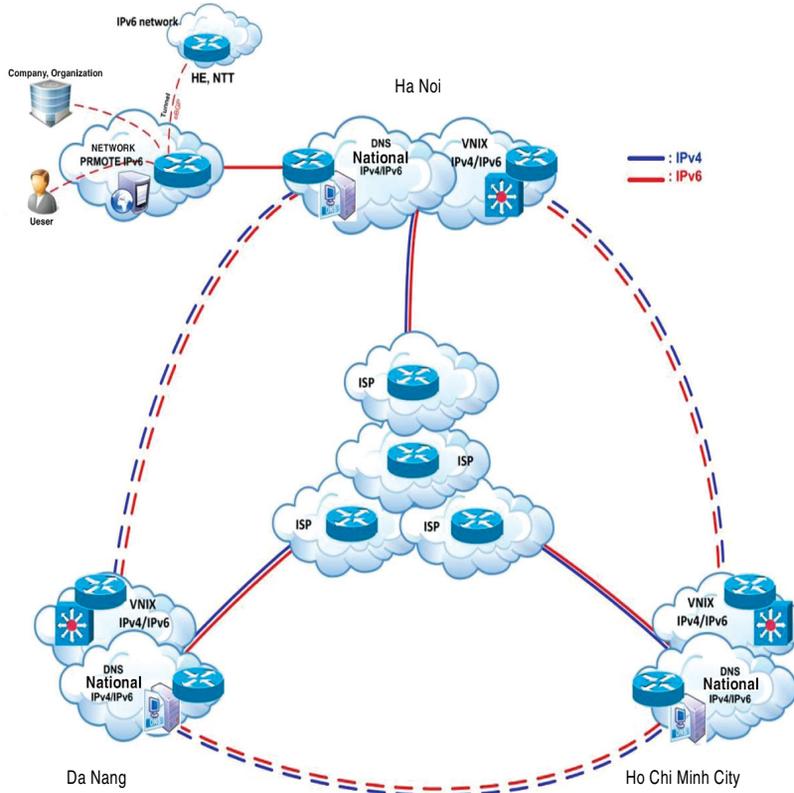


Figure 44: Viet Nam National IPv6 Network

There were 10 ISPs connecting to VNIX, such as VNPT, Viettel, NetNam, FPT and etc., 04 ISPs having international IPv6 connection to HKIX, AKAMAI, HE, Google, Microsoft, Yahoo and so on.

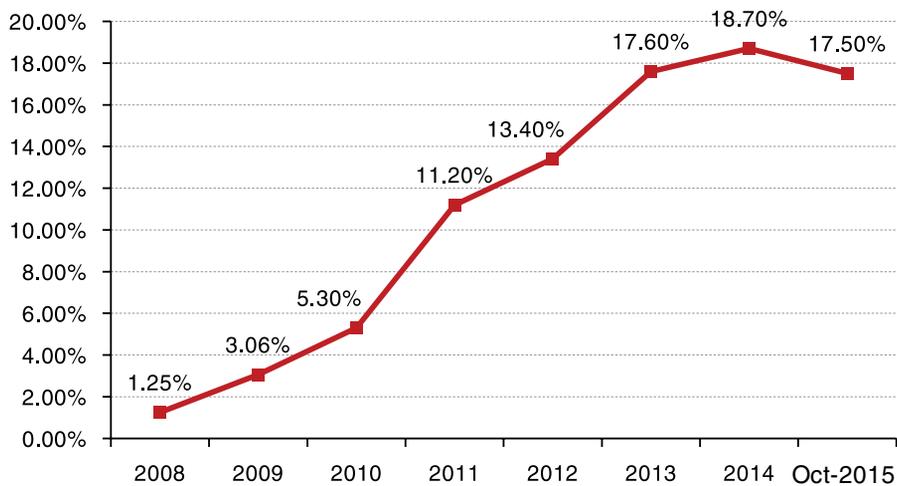
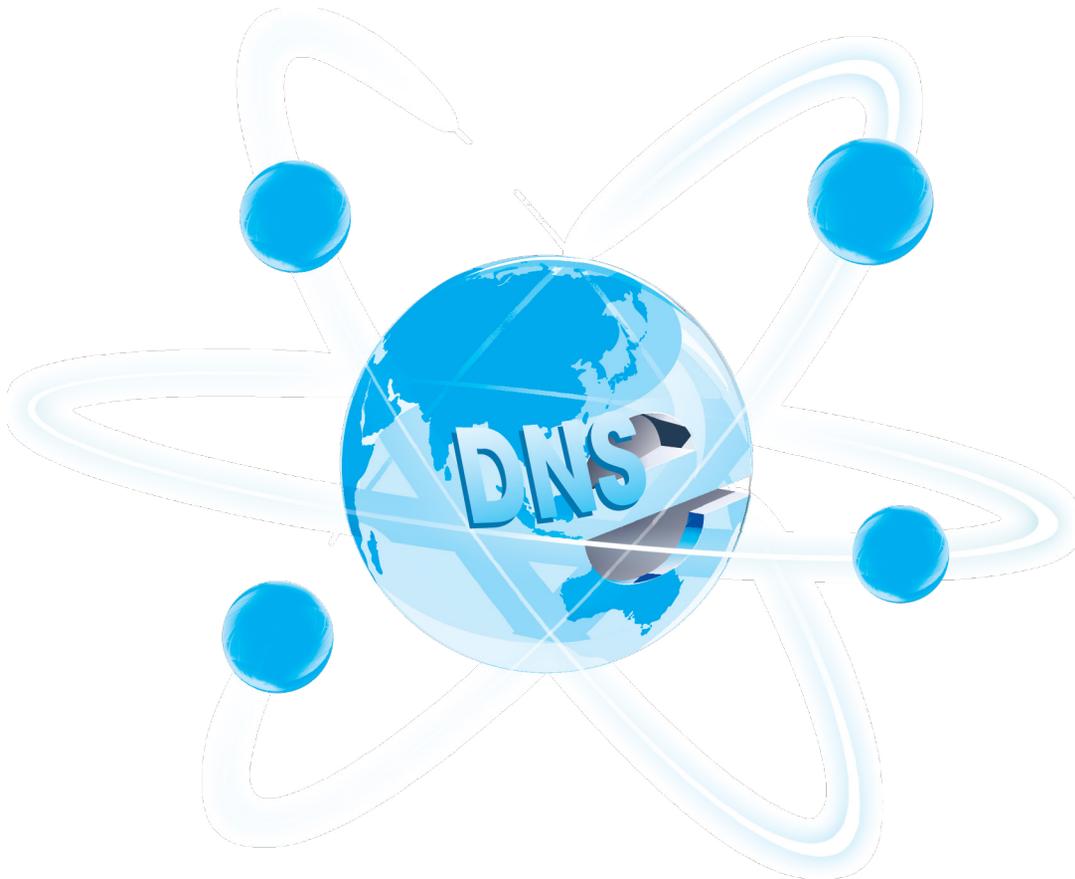


Figure 45: Number of AAAA (IPv6) record queries through VNNIC's DNS over the years

# “.VN” DOMAIN NAME SYSTEM (DNS)



The Domain Name System (DNS) are important components of the Internet which is a system used to convert a computer’s host name into an IP address on the Internet.

The “.vn” DNS includes 07 clusters (05 domestic and 02 oversea) with more than 70 sites all over the world, supporting the latest technologies such as Anycast, load balancing, IPv6.

“.vn” domain name queries from users all over the world can be served very fast through the nearest DNS server in the system. VNNIC deployed a domestic IPv6 DNS cluster, together with 02 IPv6 oversea clusters, so that Internet users can query “.vn” safely, stably and quickly on both IPv4 and IPv6 networks. Furthermore, 02 caching DNS system was implemented to support the Internet access and quality of “.vn” and gTLD services.

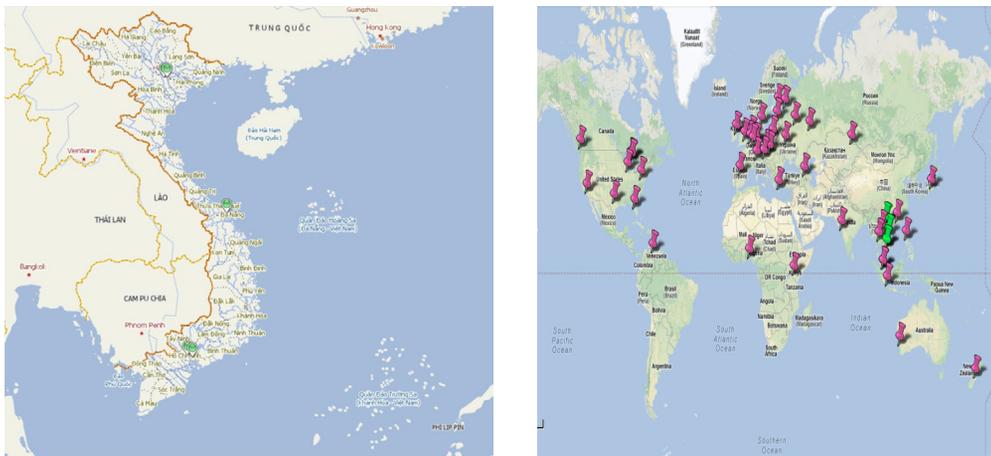


Figure 46: Distribution of “.vn” DNS servers

## 1. DNSSEC DEPLOYMENT PROJECT FOR THE NATIONAL DNS SYSTEM

On Oct 23<sup>rd</sup> 2014, the Minister of Information and Communication signed the decision to approve the project of DNSSEC deployment for the .VN DNS system.

The deployment plan for DNSSEC by VNNIC will include 3 phases:

Phase 1: Preparation (2015): Improving public awareness about DNSSEC; providing basic knowledge for ISPs, “.vn” registrars, state agencies; publishing DNSSEC guidebook and specifications; planning and preparing human, technical, financial resources for the deployment.

Phase 2: Implementation (2016): Officially implementing DNSSEC specifications on national DNS system; connecting DNSSEC to DNS root system, international DNS; ISPs, “.vn” registrars, state agencies upgrading DNS system to test connection to national DNS with DNSSEC.

Phase 3: Accomplishment (2017): Complete and upgrade the national DNS and “.vn” management system; ISPs, “.vn” registrars, state agencies officially implement DNS system with DNSSEC, providing Internet users in Viet Nam with services and products with DNSSEC specifications.

In 2015, VNNIC has executed many activities in accordance with the above deployment plan, such as: implementation of DNSSEC trial system; development of management softwares; registration of domain names for DNNSEC; 03 training courses on DNSSEC for ISPs, registrars and IT enterprises in Ha Noi and Ho Chi Minh city...

## 2. DNS QUERY STATISTICS

### 2.1 Number of queries

By Oct 1<sup>st</sup>, 2015, the number of “.vn” ccTLD queries reached over 99.808 million queries.

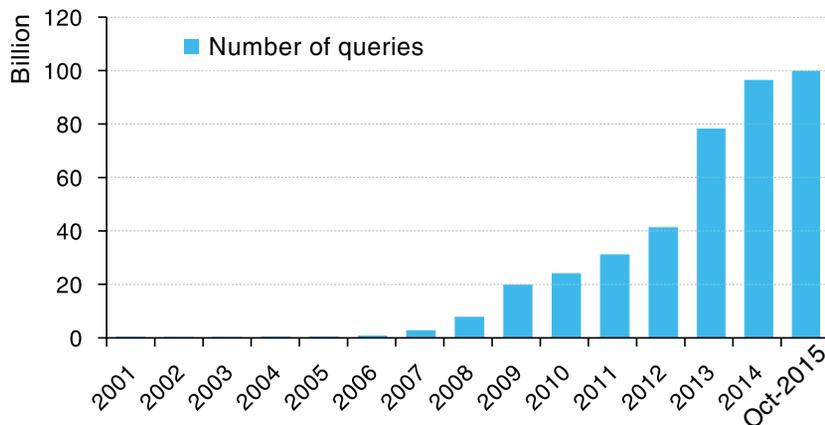


Figure 47: Number of queries to the national “.vn” DNS

### 2.2 Number of “.vn” vs international domain name queries

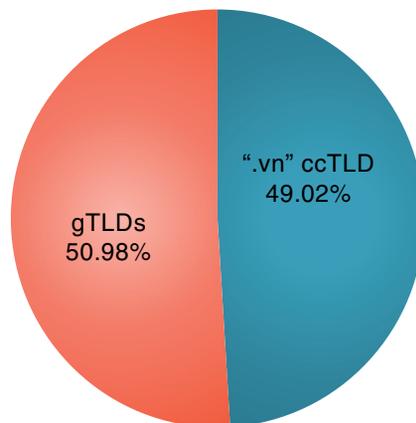


Figure 48: “.vn” vs international domain queries.



### 2.3 “.vn” queries breakdown by extension

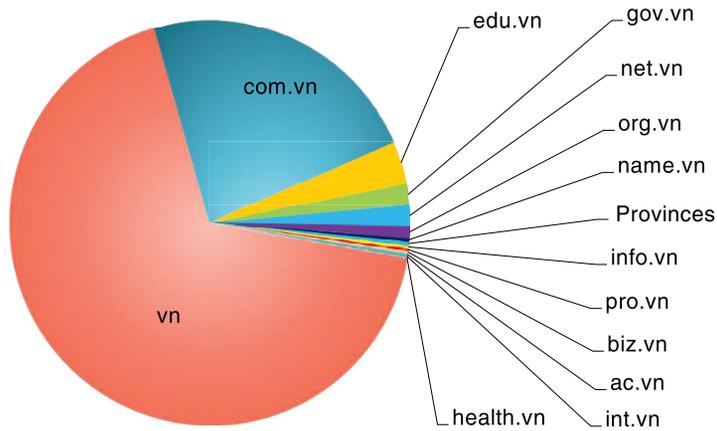


Figure 49: Number of queries by extension under “.vn”

TABLE 40: NUMBER OF “.VN” QUERIES BY EXTENSION

Extension	Queries	Extension	Queries
vn	67.75%	Province	0.29%
com.vn	22.98%	info.vn	0.25%
edu.vn	3.43%	pro.vn	0.19%
gov.vn	1.70%	biz.vn	0.19%
net.vn	1.62%	ac.vn	0.18%
org.vn	0.95%	int.vn	0.13%
name.vn	0.30%	health.vn	0.04%

### 2.4 gTLD queries breakdown by extension

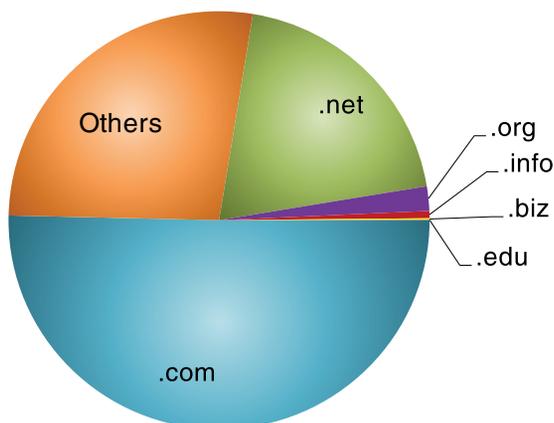
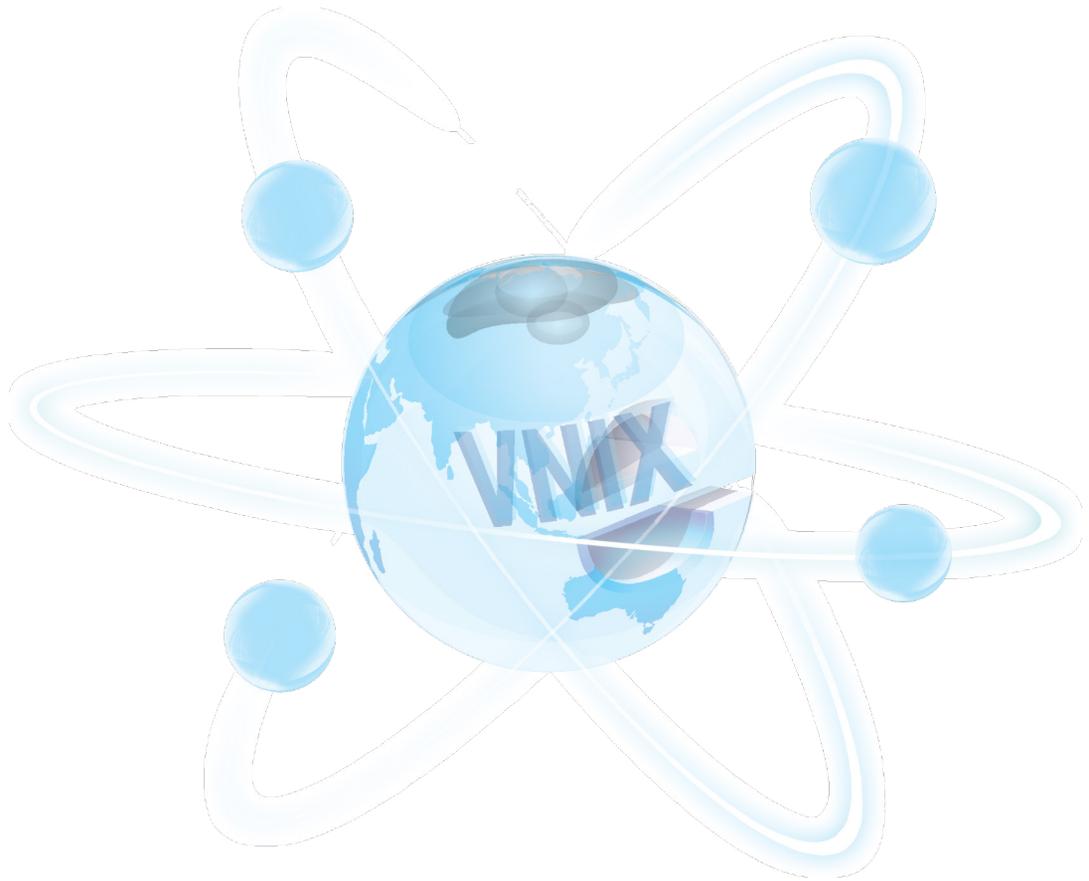


Figure 50: Number of international domain queries by extension

TABLE 41: NUMBER OF INTERNATIONAL DOMAIN QUERIES BY EXTENSION

gTLD	Queries
.com	50.36%
.other	27.21%
.net	19.83%
.org	1.89%
.info	0.56%
.biz	0.12%
.edu	0.03%





# VIET NAM NATIONAL INTERNET EXCHANGE – VNIX

Internet Exchange Point (IX) is a physical infrastructure through which independent networks exchange Internet traffic, and plays a crucial role for the development of Internet.

Viet Nam National Internet eXchange (VNIX) was established in Nov 2003 to develop, enhance and improve the quality of Internet in Viet Nam. The legal framework for the management of Internet connection and operation of VNIX was promulgated in the Decree No. 72/2013/ND-CP on July 15<sup>th</sup>, 2013, on the management, provision and use of Internet services and Internet Information. Throughout the development, VNIX has been contributing greatly to the growth of Internet in Viet Nam, by supporting domestic ISPs with multicast and bilateral connections, even to international IXs; reducing cost and operation fees for service providers.

VNIX is operated according to BGP layer 2, with Router Server managing routing information exchange with participants' routers between which Internet traffic exchanges directly. VNIX support IPv4/IPv6 dual stack.



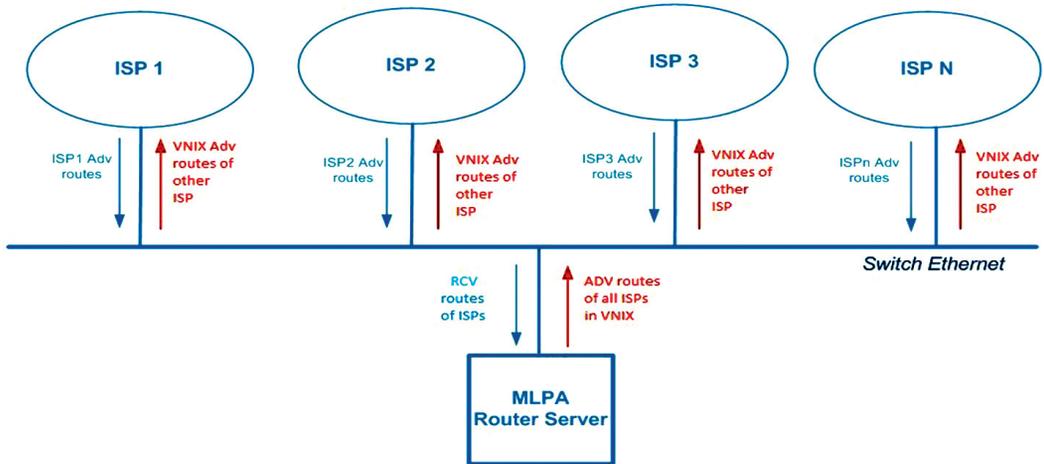


Figure 51: VNIX operation model

## 1. VNIX EXCHANGE POINT

VNIX is deployed at 04 major sites in Ha Noi (Yen Hoa, Hoa Lac), Da Nang, and Ho Chi Minh City. There was 37% of total bandwidth via Ha Noi IX, 61% via Ho Chi Minh IX and 2% via Da Nang IX.

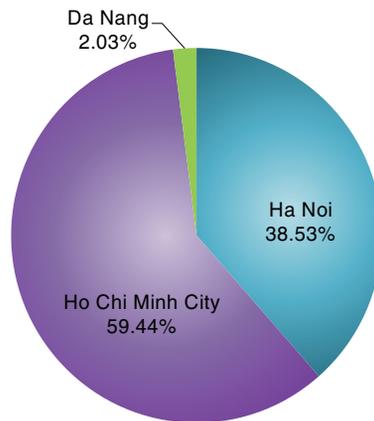


Figure 52: VNIX Exchange Points in Viet Nam

## 2. VNIX MEMBERS

No.	VNIX member	VNIX point	Bandwidth
01	VNPT Net	Ha Noi, Ho Chi Minh city	50 Gbps
02	VIETTEL Net	Ha Noi, Ho Chi Minh city, Da Nang	32 Gbps
03	CMCTI	Ha Noi, Ho Chi Minh city, Da Nang	21 Gbps
04	VTC Intecom	Ha Noi, Ho Chi Minh city	11 Gbps
05	VinaData	Ho Chi Minh city	10 Gbps
06	NetNam	Ha Noi, Ho Chi Minh city	03 Gbps
07	SPT	Ha Noi, Ho Chi Minh city	03 Gbps

No.	VNIX member	VNIX point	Bandwidth
08	HTC	Ha Noi, Ho Chi Minh city	02 Gbps
09	GDS	Ha Noi	02 Gbps
10	SCTV	Ho Chi Minh city	02 Gbps
11	MOBIFONE Global	Ha Noi, Ho Chi Minh city	02 Gbps
12	FPT Telecom	Ha Noi, Ho Chi Minh city	02 Gbps
13	ODS	Ho Chi Minh city	01 Gbps
14	NewLife	Ho Chi Minh city	01 Gbps
15	DTS	Ho Chi Minh city	01 Gbps
16	VNTT	Ho Chi Minh city	01 Gbps
17	Diginet	Ha Noi	01 Gbps
18	VTVcab	Ha Noi	01 Gbps

### 3. VNIX GROWTH

#### 3.1 VNIX members

Since its establishment, VNIX has significantly contributed to the development of information and Internet infrastructure, and helped save the costs for telecommunication companies. The number of VNIX members and connection points grew over the years.



Figure 53: Number of VNIX members (2003 – 2015)

#### 3.2 Connection bandwidth

VNIX connection bandwidth increased over the years and reached the highest number of 41.94 Gbps on September 30<sup>th</sup> 2015.



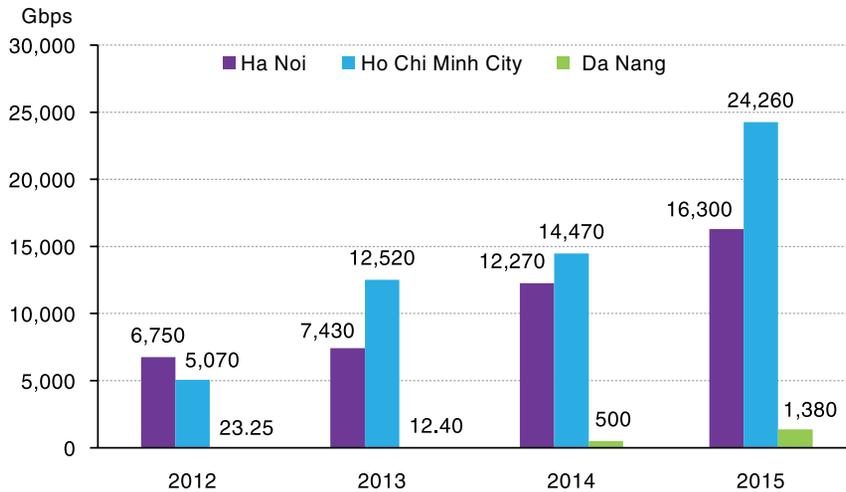


Figure 54: Maximum VNIX bandwidth (2012 – 2015)

### 3.3 VNIX traffic

As of October 2015, ISPs have connected and exchanged 339,339 TB (Terabyte) via VNIX. The weekly average traffic volume reached 2,031,972 GB (Gigabyte), which increased more than 1.57 times compared to the number in 2014.

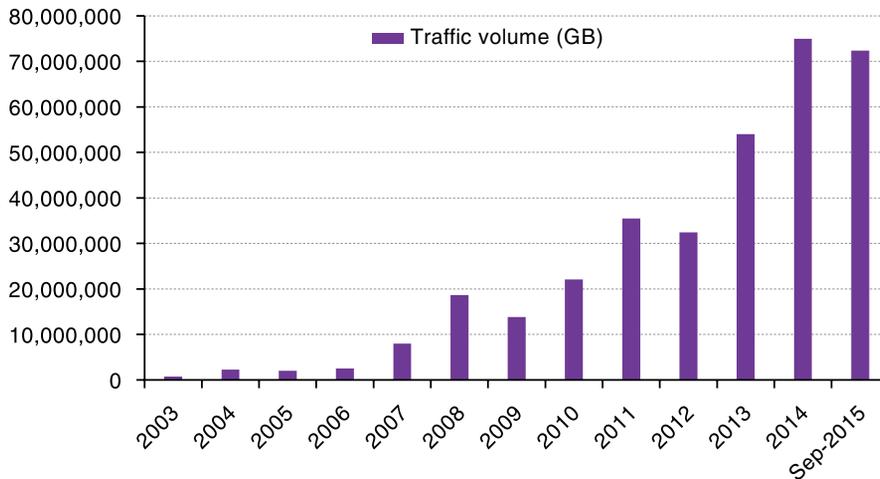


Figure 55: Cumulative traffic via VNIX (GB)

In April, 2013, VNIX cooperated with ISPs to connected and exchanged IPv6 traffic through VNIX. From that time on, the IPv4/IPv6 dual stack started to be applied on Viet Nam’s Internet, after major ISPs were ready for the services and equipment on IPv6 basis. Until now, there have been 09 ISPs which have IPv6 traffic via VNIX including VNPT-NET, VIETTEL Net, CMCTI, FPT...

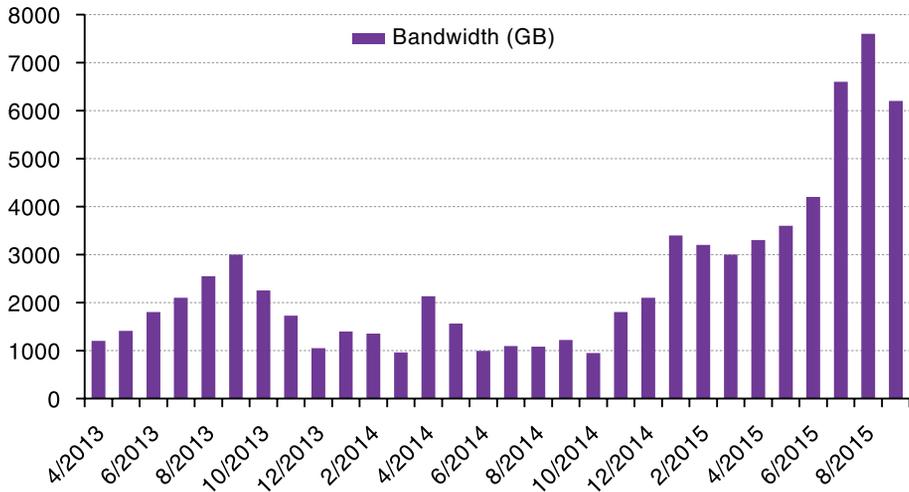


Figure 56: VNIX connection bandwidth via IPv6 (GB)

### 3.4 Inbound/Outbound traffic

There were differences between the volume of download and upload traffic of VNIX members via VNIX.

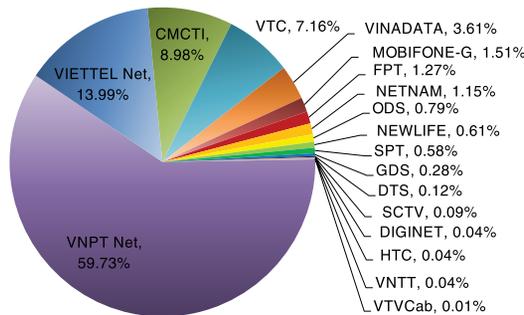


Figure 57: The inbound traffic volume via VNIX (IN via VNIX)

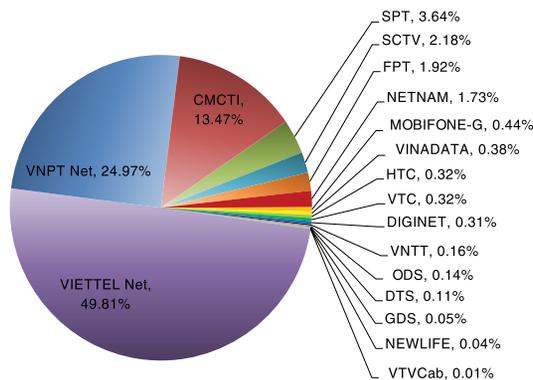


Figure 58: The outbound traffic volume via VNIX (OUT via VNIX)



### 3.5 Connection bandwidth via port

In 2008, VNIX started supporting high-speed Internet connectivity line (10Gbps) via VNIX. ISPs also started to adopt technology application to in order to match the demand for VNIX traffic. Consequently, the total bandwidth of 10Gbps ports was higher than that of 1Gbps ports. The total bandwidth via VNIX reached 146 Gbps by Oct 2015.

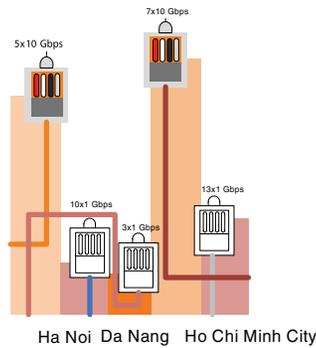


Figure 59: VNIX connection bandwidth

## 4. ROUTING ON VNIX

VNIX supports routing activities and traffic exchanges among Internet service providers in Viet Nam. Other organizations having independent networks also can connect to VNIX. The number of /24 IPv4 blocks and /64 IPv6 blocks announced via VNIX are depending on how many IP addresses and customers of VNIX members.

### 4.1 Number of IP advertised via VNIX by members

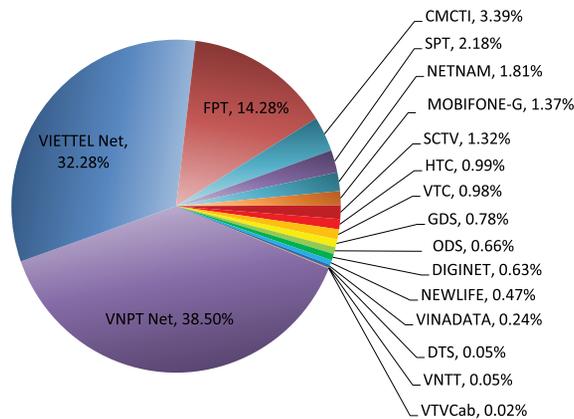


Figure 60: IP Prefix announcement via VNIX

### 4.2 IP Prefix advertised via VNIX

The minimum IP block for VNNIC members to be announced via VNIX was /24 for IPv4 and /64 for IPv6. Based on routing policy of each member, members may advertise bigger block (prefix). Total number of IP prefix advertised via VNIX of a member partially reflects their network's scale.

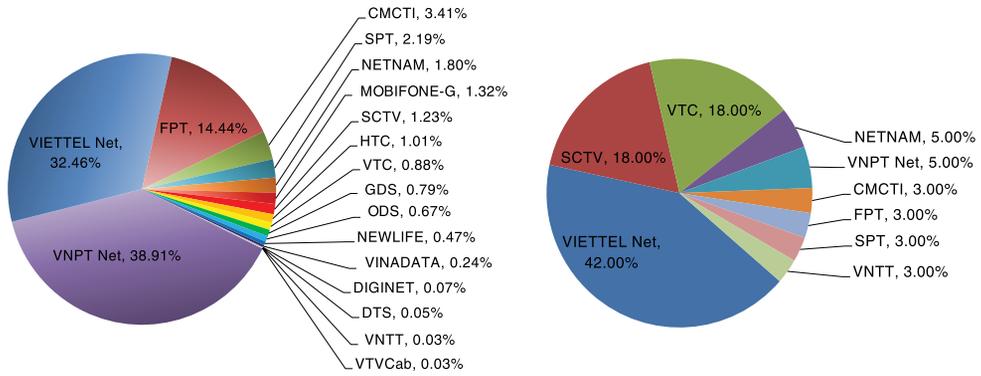


Figure 61: IP prefix advertisement via VNIX





# INTERNET USAGE STATISTICS IN VIET NAM

**Contents was combined  
by Viet Nam E-commerce Association (VECOM).  
Statistics were calculated by October 2015.**



## 1. HABITS OF INTERNET USER IN VIET NAM

### 1.1 Duration of daily Internet access

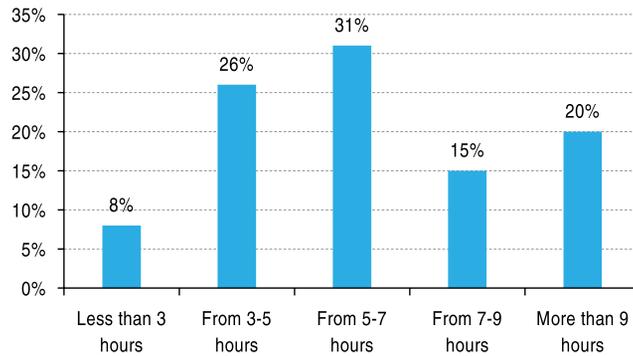


Figure 62: Duration of daily Internet access

### 1.2 Time of daily Internet access

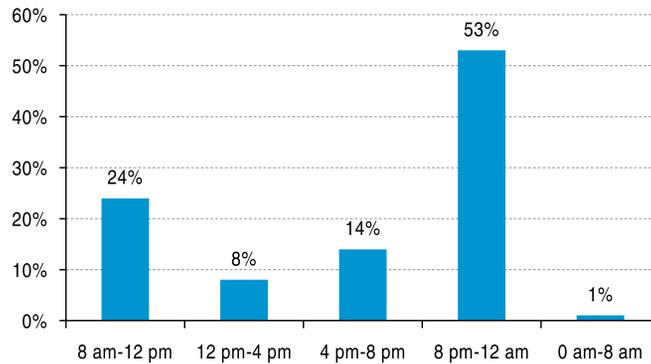


Figure 63: Time of daily Internet access

### 1.3 Usage and frequency of Internet User

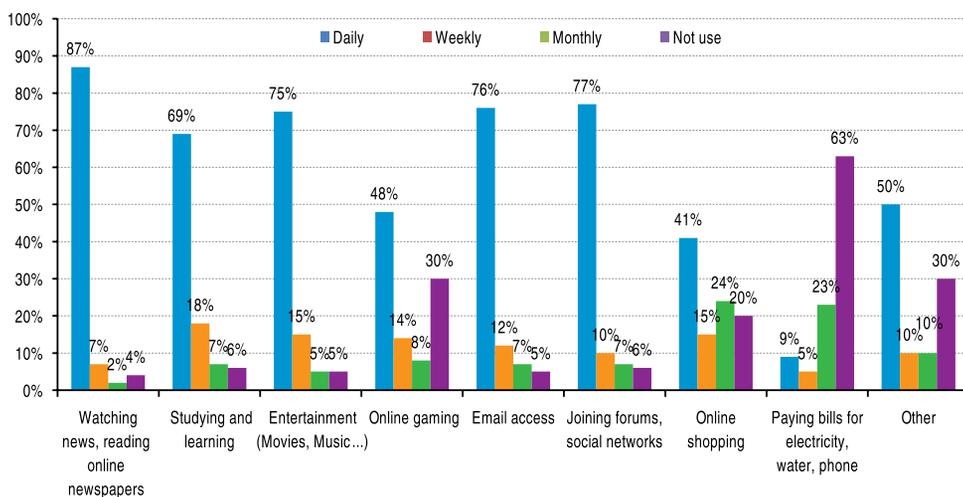


Figure 64: Usage and frequency of Internet User

## 2. INTERNET USAGE FOR BUSSINESS ACTIVITIES

### 2.1 Rate of Enterprise having own Website for business

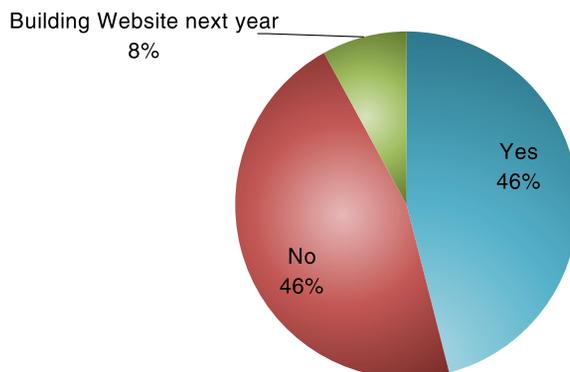


Figure 65: Rate of enterprise having own Website for business

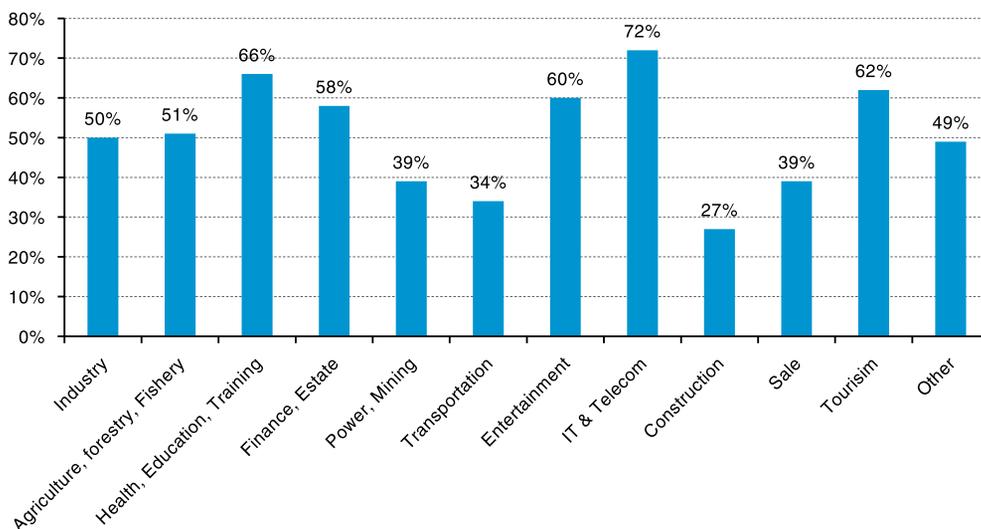


Figure 66: Rate of Enterprise having own Website for business, by sector

### 2.2 Using Email of enterprise in business

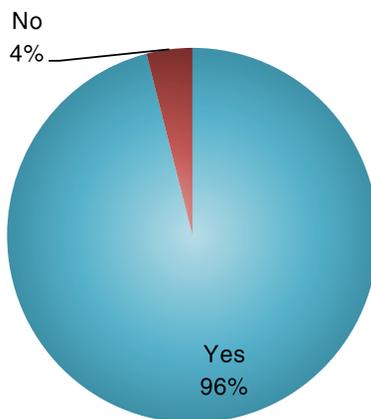


Figure 67: Rate of using Email in business



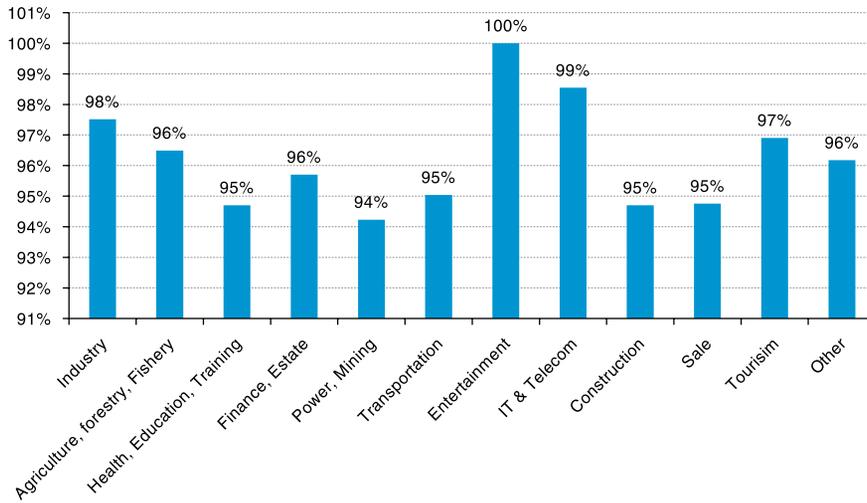


Figure 68: Rate of using Email in business, by sector

### 2.3 Selling through social networks of enterprise

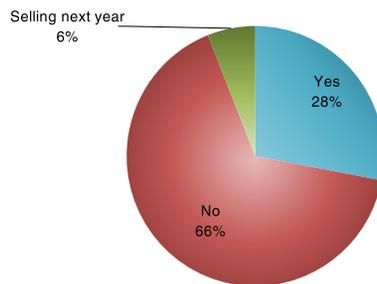


Figure 69: Rate of selling through social networks

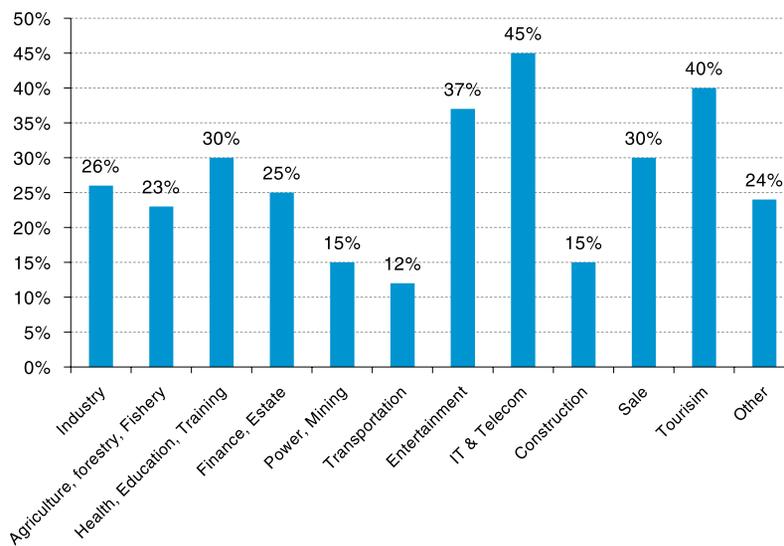


Figure 70: Rate of selling through social networks, by sector

### 3. THE USAGE OF ONLINE PUBLIC SERVICES

#### 3.1 Accessing information rate on the State agency's Website of enterprise

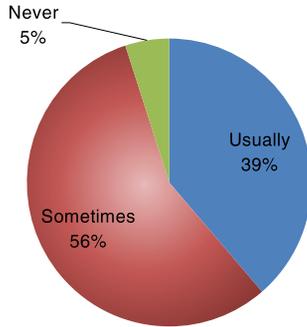


Figure 71: Rate of accessing information on the State agency's Website

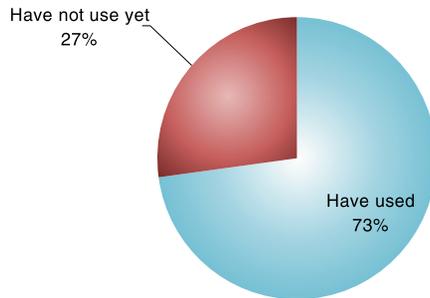


Figure 72: Rate of using online public services

#### 3.2 Enterprise's evaluation about online public services

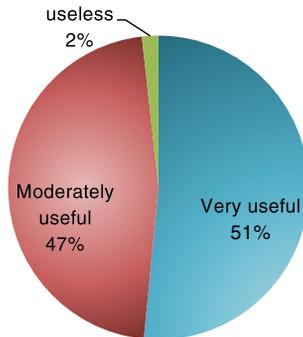


Figure 73: Enterprise's evaluation about online public services





# VIETNAM INTERNET NETWORK INFORMATION CENTER (VNNIC)



## VNNIC'S ACTIVITIES IN 2015

### VNNIC granted the second level Labour Decoration on 15<sup>th</sup> anniversary



*VNNIC leaders of all generations received the second level Labour Decoration from Mr. Le Nam Thang*

On Apr 24<sup>th</sup>, 2015, at VNNIC's headquarter at Hoa Lac Hightech Park, VNNIC proudly celebrated the 15<sup>th</sup> anniversary and reception of the second level Labour Decoration.

The anniversary was attended by Mr. Le Nam Thang, Deputy Minister of the Ministry of Information and Communications (MIC), many leaders and former leaders of MIC, and representatives of MIC's departments and authorities, associations, registrars, ICT enterprises, public media...

During the 15 years of development, VNNIC has overcome the initial difficulties of infrastructure and human resources to fulfill all tasks and functions of managing the Internet resources, operating the national DNS servers and VNIX, in order to promote and strengthen the growth of Internet in Viet Nam. It can be said that the history of VNNIC went together with the expansion of Internet within our border and integration into the global environment, leading to the higher status of VNNIC in local and international communities.

In order to recognize the achievements and contributions of all generations of VNNIC staff to the development and protection of the country, Mr. Le Nam Thang, on behalf of the President of Viet Nam, presented the second level Labour Decoration to VNNIC, third level Labour Decoration to the departments and staff of VNNIC.

### VNNIC granted ISO/IEC 27001:2013 certificate

ISO 27001:2013 is an information security standard for an information security management system (ISMS), which serves as such an important and effective solution to protect the data resources and operation of all organizations.

From November 2014, VNNIC implemented the ISMS based on ISO 27001:2013 standard in the operation of IDC and the national DNS servers of ".vn", as well as in other important

technical systems that VNNIC operates such as VNIX, domain name management system, and domain name database.

On Jun 8<sup>th</sup> 2015, D.A.S officially granted the ISO/IEC 27001:2013 certificate to VNNIC. This will enhance the management and security of information within VNNIC.



*VNNIC received the ISO/IEC 27001:2013 certificate from D.A.S representative*

### **Circular No. 24/2015/TT-BTTTT of Aug 18<sup>th</sup>, 2015 of the Ministry of Information and Communication, guiding on the management and use of Internet resources.**

On Aug 18<sup>th</sup>, 2015, Ministry of Information and Communications (MIC) issued the Circular No. 24/2015/TT-BTTTT on the management and use of Internet resources in Viet Nam, guiding the registration, allocation, assignment, use, return, suspension, revocation, and dispute settlement for authorities, organizations and individuals that participates in the Internet area in Viet Nam.

The circular introduces several new regulations in managing and using Internet resources, such as:

Internet resources are under concentrated planning and management to ensure the reliability, security and effectiveness of Internet activities,

Internet resources related to the sovereignty, national benefits and security, Party and state organizations and authorities, social-political organizations are prioritized protection against violation;

The management and use of Internet must fulfill the criteria: having appropriate purpose and subject, following the regulations, no harming to the lawful rights and benefits of other organizations and individuals.

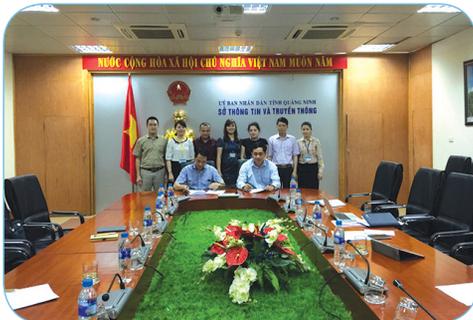


**VNNIC signed the cooperation agreements with Department of Information and Communications of Dong Nai province (Jan 23<sup>rd</sup>, 2015), Quang Ninh province (Apr 07<sup>th</sup>, 2015) and Dong Thap province (Aug 25<sup>th</sup>, 2015)**

In 2015, VNNIC signed the “Cooperation Agreement on the promotion of communications and management of Internet resources” with Department of Information and Communications of Dong Nai, Quang Ninh and Dong Thap provinces to collaborate in promotional activities with the purpose of raising public awareness about Internet resources like “.vn” domain name, IDN, IPv6 deployment, as well as executing inspection programs on the registration and use of Internet resources, and exchanging data of Internet statistics in those provinces.



*VNNIC and Dong Nai’s Department of Information and Communications signing the cooperation agreement*



*VNNIC and Quang Ninh’s Department of Information and Communications signing the cooperation agreement*



*VNNIC and Dong Thap’s Department of Information and Communications signing the cooperation agreement*

**VNNIC and KISA signed MoU** On February 11<sup>th</sup>, 2015, the signing ceremony of the Memorandum of Understanding (MoU) between VNNIC and Korea Internet & Security Agency (KISA) took place at the office of Ministry of Information & Communications (MIC) in Ha Noi.

Since its establishment in 2000, VNNIC and the predecessor organizations of KISA,



*VNNIC and KISA signing MoU*

such as KRNIC and NIDA had executed many practical cooperation activities, including an cooperation agreement signed between VNNIC and KRNIC in 2002 which led to the support for management policies and consultancy of VNNIC's technical system for Internet resource management, as well as the mutual support of both organizations at international fora and activities.

### **The International Conference on Domain Name Dispute resolutions and Intellectual Property organized in Ha Noi.**

On Oct 15<sup>th</sup>, 2015, the Ministry of Information and Communications (MIC) organized the International conference on Domain name dispute resolutions and Intellectual property in Ha Noi. The conference was attended by Mr. Pham Hong Hai, Deputy Minister, representatives of the leaders of functional units of MIC; Ministry of Science and Technology (MOST) and related ministerial bodies; associations in Viet Nam and in the Asia-Pacific region; international experts in the domain name dispute settlement area such as Prof. David Bernstein – Professorial Lecturer in Law, New York University Law School and George Washington University Law School, WIPO List of Neutrals; Mr. Jia Rong Low, Global Stakeholder Engagement (GSE) Senior Director, ICANN's Asia Pacific Hub in Singapore; Mr. Derek Pullen, Director of the Telecommunication Dispute Resolution (TDR) service, Business Director, Fairway Resolution Limited, New Zealand, and other local specialist.

This conference provided a very important opportunity to all the participants to exchange information and discuss on the policies and regulations on domain name dispute resolutions and intellectual property, the experiences to deal with policy making process all over the world, in order for the completion of domain name dispute resolution policy in Viet Nam.



*Mr. Pham Hong Hai, Deputy Minister of MIC in his opening speech*



*Mr. Tran Minh Tan, Director General of VNNIC – sharing the status of dispute settlement regarding domain name and IP in Viet Nam*





*Prof. David H. Bernstein sharing his experiences in dealing with domain name dispute cases*



*Participants in the conference*

### The conference “IPv6 application for mobile broadband” organized on Viet Nam IPv6 day

On May 06<sup>th</sup>, 2015 – Viet Nam IPv6 Day, the conference “IPv6 application for mobile broadband” was organized by VNNIC – Standing committee for Viet Nam IPv6 Task Force – under the host of MIC at its headquarter in Ha Noi.

The event’s theme was IPv6 application for mobile broadband, with the participations of many domestic and international experts and managers from local and foreign ISPs, enterprises and organizations. At the conference, various experiences and information were shared, especially from Korean ISPs and manufacturers, which updated listeners with status of IPv6 deployment for mobile networks such as 4G LTE. This year event has helped VNIPv6TF to raise awareness in domestic communities about the necessity of IPv6 application for mobile broadband



*Mr. Le Nam Thang – Deputy Minister of MIC speaking at the conference*

### VNIPv6TF worked with enterprises on IPv6 deployment

In order to execute the plan of VNIPv6TF in 2015, in July 2015, the delegation of VNIPv6TF held the working visit to 07 companies which are ISPs, telecommunication enterprises or content service providers in Ha Noi.

Those working visits reviewed and assessed the current IPv6 deployment and transition plan in these enterprises, under the circumstance of the national IPv6 action plan coming to

the end of Stage 2 (2013 – 2015), so that the action plan would be updated with proper alternatives of promotional activities.



*VNIPv6TF working with enterprises on IPv6 deployment*

### **VNIPv6TF and the Office of Party Central Committee hosted IPv6 training course**

During Jul 27-29 2015, VNNIC – Standing committee for VNIPv6TF cooperated with the IT Center of the Office of Party Central Committee to host the advanced IPv6 training course for technical team in various offices of Party organizations in No. 1A Hung Vuong St., Ha Noi.

In this course, those officials were provided with updates of IPv6 deployment in Viet Nam and in the world, promotion policies and activities, basic knowledge and practices of IPv6 including setting up IPv6 network, devices, services... With all the information, it is expected that the Office of Party Central Committee would soon execute the IPv6 transition plan for its network.



*VNIPv6TF and the Office of Party Central Committee at the opening ceremony of the course*

### **VNNIC organized DNSSEC training courses for enterprises and community**

In Jun and Jul, 2015, VNNIC organized several DNSSEC training courses in Ha Noi and Hochiminh city for more than 70 participants who were technical staff and managers of ISPs, “.vn” registrars to prepare for the execution of DNSSEC implementation plan which was approved by the Minister of Information and Communications in the Decision No. 1524/QĐ-BTTTT of Oct 23<sup>rd</sup>, 2014.



*DNSSEC training course by VNNIC*



Those training courses served as an important part of the plan in 2015 which was to improve the human resources for DNSSEC implementation in DNS of ISPs, registrars, organizations in Viet Nam, whereas VNNIC had been preparing the DNNSEC deployment in the national DNS servers. VNNIC will continue to support the implementation process in those organizations, not only human, but also technical, financial and communication support to ensure the pace of the plan.

### VNNIC participated in Internet Day 2015



VNNIC participated in Internet Day 2015

On November 19<sup>th</sup> 2015, VNNIC participated in the conference “Internet of Things” organized by Viet Nam Internet Association (VIA) on Viet Nam Internet Day 2015, with the promotion of Internet development initiatives in Viet Nam.

The event was well attended with more than 200 participants from various organizations, including the leaders of Government Office, Ministry of Information and Communications, Ministry of Trade and Industry, Ministry of Defence, Ministry of Internal Affairs, Ministry of Education and Training, Ministry of Science and Technology; Department of Information and Communications in provinces, local and international ICT enterprises like Google, FPT, VNG, Qualcomm... Especially, the session “IPv6 deployment will decide the future of Internet” presented by Mr. Nguyen Hong Thang – Deputy Director General of VNNIC gained much attention from participants.



## VNNIC AND INTERNET RESOURCE MANAGEMENT IN VIET NAM DEVELOPMENT

Vietnam Internet Network Information Center (VNNIC) is an affiliation to the Ministry of Information and Communications (MIC), founded on 28<sup>th</sup> April 2000, and carries out the functions of managing, allocating, supervising and promoting the use of Internet resources (“.vn” domain name, address (IP), Autonomous System Number (ASN)); providing Internet-related guidance, statistics on Internet; and joining international activities on Internet. Besides, VNNIC also manages and operates the important structures such as the Viet Nam Internet Exchange (VNIX) and the national DNS system.

With the results of the growth and development of Internet resources, information activities and user guidance, VNNIC has been playing an important role in the promotion and development of Internet in Viet Nam as well as the integration of Viet Nam into the global Internet.

### VNNIC

2000-2002

#### 2000:

- Viet Nam Internet Network Information Center (VNNIC) was established.
- The management of “.vn” registration was officially taken from the Authority of Post Policy.

#### 2001:

- Became a member of Asia Pacific Top Level Domain Name Association (APTLD).
- The functions of management and operation of DNS was officially taken over from VNPT.

2003-2005

#### 2003:

- Provided Viet Nam Internet statistics.
- Viet Nam Network Internet Exchange (VNIX) was established.
- Recognized by Asia Pacific Network Information Center (APNIC) as the National Internet Registry of Viet Nam (NIR).
- Vietnamese Internationalized Domain name (IDN.VN) promotion project was granted VIFOTEC award.
- Opened the second branch, predecessor of the Ho Chi Minh branch.

#### 2004:

- Granted the award “Best organization with applied science –technology for the period 2002-2004” by the Ministry of Science and Technology

#### 2005:

- Opened the branch in Da Nang City.

#### 2006-2008

##### 2007:

- Applied fully the Registry-Registrar model for “.vn”.

##### 2008:

- Opened the branch in Ho Chi Minh City.

#### 2009-2013

##### 2009:

- The Viet Nam IPv6 Task Force (VNIPv6TF) was established, VNNIC acting as Standing Committee.

##### 2010:

- Celebrated the 10<sup>th</sup> anniversary and granted the Third class labour decoration.

##### 2013:

- Became the 143<sup>rd</sup> official member of ccNSO (ICANN)
- Granted ISO9001:2008 certification.

#### 2014-2015

##### 2014:

- Manage the project of DNSSEC deployment for the national “.vn” DNS approved in the Decision No. 1524/QĐ-BTTTT date Oct 23<sup>rd</sup>, 2014.
- The Decision No. 1509/QĐ-BTTTT was issued to amend the Decision No. 433/QĐ-BTTTT date Mar 29<sup>th</sup>, 2011 on the national IPv6 Action Plan.

##### 2015:

- Celebrated the 15<sup>th</sup> anniversary and granted the Second class labour decoration.
- Granted ISO27001:2013 certificate.
- The Circular No. 24/2015/TT-BTTTT date Aug 18<sup>th</sup>, 2015, guiding on the management and usage of Internet resources was issued.

## ASCII “.vn” domain

1997-2002

**1997:**

- The first ASCII “.vn” domain name was registered.

2003-2005

**2003:**

- Decision No. 92/2003/QĐ-BBCVT on management and use of Internet resources – the first legal document on Internet resource management was issued, which allowed individuals to register “.vn” domain name.

**2005:**

- The Decision No. 27/2005/QĐ-BBCVT on management and use of Internet resources was approved, allowing the registration of second level domain under “.vn” and replacing Decision No. 92/2003/QĐ-BBCVT

## Internationalized Domain name (IDN “.VN”)

2000-2002

**2001:**

- Conducting research on IDN “.VN”.

2003-2005

**2003:**

- IDN “.VN” research project was granted VIFOTEC award.
- Testing the IDN “.VN” registration.

### 2006-2008

#### 2006:

- The public registration for second level domain name under “.vn” was opened.

#### 2007:

- Applied fully the “Registry-Registrar” model for “.vn”.

#### 2008:

- The Circular No. 09/2008/TT-BTTTT on the management and use of Internet resources and the Circular No.10/2008/TT-BTTTT date Dec 24<sup>th</sup>, 2008 on the settlement of disputes over Viet Nam’s country code domain name “.vn” were issued.

### 2009-2013

#### 2010:

- The number of “.vn” reached 100,000. Viet Nam became the second largest country in ASEAN in terms of ccTLD registrations.

#### 2011:

- The registration and maintenance fees of “.vn” domain name were reduced (average 30%). The registration of 1, 2 character second level domain was allowed.
- Viet Nam became the largest country in ASEAN in terms of ccTLD registrations.

#### 2012:

- The number of “.vn” reached 200,000. Viet Nam continued to be the first largest country in ASEAN in terms of ccTLD registrations.

### 2014-2015

#### 2014:

- Launched the domain management system (SRS) with EPP standards.
- Viet Nam ranked 7<sup>th</sup> in Asia in the number of ccTLD registrations.

#### 2015:

- The number of “.vn” reached 300,000. Viet Nam continued to be the first largest country in ASEAN in terms of ccTLD registrations.
- Continued the series of event “Protecting ese trademarks with “.vn” domain name” by VNNIC and registrar
- Enhancing the protection of domain name relating to sovereignty, national benefits and security, state and party organizations and authority, in accordance with the Circular No. 24/2015/TT-BTTTT date Aug 18<sup>th</sup>, 2015.

### 2006-2008

#### 2007:

- IDN “.VN” registration was limited to ASCII “.vn” domain name holders.

### 2009-2013

#### 2011:

- Opened free registration period for IDN “.VN”, starting the booming period of IDN “.VN”.
- Free service of Web-redirect was provided.

#### 2012:

- Free services of Web template, DNS hosting, DNS delegation were provided.

### 2014-2015

#### 2014:

- 1 million IDN “.VN” reached.

#### 2015:

- Filtering and revoking IDNs registered without real use has been executed.
- The auto-renewal service has been provided.

## IP/ASN

2000-2002

**2000**

- Asia Pacific Network Information Center (APNIC) allocated the IP addresses directly to IP members which were Vietnamese ISPs (VNPT, Viettel, FPT).

2003-2005

**2003:**

- Recognized by APNIC as the National Internet Registry (NIR) of Viet Nam.
- APNIC member accounts of VNPT, VIETTEL, FPT were transferred to VNNIC

**2004:**

- The first IPv6 address block was allocated.

## VNIX

2000-2002

**2003:**

- Viet Nam Network Internet Exchange (VNIX) was established with first point in Ha Noi and two members VNPT and Viettel

**2004:**

- 2<sup>nd</sup> VNIX point in Ho Chi Minh city

**2005:**

- All members upgraded to 1Gbps-minimum requirement

### 2006-2008

#### 2007:

- 1 million IPv4 addresses reached.
- The exhaustion of IPv4 came near

#### 2008:

- MIC issued a directive on the promotion of IPv6 deployment
- Set up the national IPv6 testing network

### 2009-2013

#### 2009:

- The Vietnamese IPv6 Task Force was established.

#### 2010:

- 10 million IPv4 addresses reached.

#### 2011:

- IPv4 pool exhausted. APNIC and VNNIC adopted the allocation policy of the exhaustion period.

#### 2012:

- First national IPv6 event was hosted by VNNIC.

#### 2013:

- May 6<sup>th</sup> was recognized as Viet Nam IPv6 Day, with the official launching of IPv6 network and services.

### 2014-2015

#### 2014:

- MIC issued a decision on amending the national IPv6 action plan of IPv6, adding more participants such as online newspaper, information portals, social networks, “.vn” domain registrars, international domain registrars in Viet Nam, software companies, and network equipment providers, to the plan.

#### 2015:

- The conference “IPv6 Application for mobile broadband” was held on Viet Nam IPv6 Day.
- Circular No. 24/2015/TT-BTTTT date Aug 18<sup>th</sup>, 2015 stated about accepting IP/ASN transfer from oversea to Viet Nam. .

### 2006-2008

#### 2007:

- All 07/07 ISPs with infrastructure licenses connected to VNIX.

#### 2008:

- VNIX supported 10 Gbps connection

#### 2009:

- 11 ISPs connected to VNIX

### 2009-2013

#### 2010:

- VNIX officially deployed IPv6, becoming the first network in Viet Nam to support IPv4/IPv6 dual stack.

#### 2012:

- Added two more VNIX points in Da Nang City and Hoa Lac, Ha Noi

#### 2013:

- National IPv6 network was launched

### 2014-2015

#### 2014:

- 10 members connected to VNIX via IPv6.

#### 2015:

- Traffic reached 138Gbps.
- The total number of members reached 17.

## REFERENCES

1. APTLD, Stats Update: Market and APTLD Members October, 2015.
2. Ranking of countries for the number of IPv4 in the world (Source: <http://potaroo.net>.)

