

PH INTERNET LANDSCAPE

Achie Atienza APRICOT 2023 - AP* Sofitel Philippine Plaza Manila 26 February 2023



PH IN NUMBERS

7,641

(high tide)

2,000 Inhabited (26%) 3 Major Island groups

113.44M (as of Feb 2023)

MANILA Capital

10

International Submarine Cable systems 670

Autonomous System Number (ASNs)

14

Data Center (DC)

Facilities

Local Internet eXchange Points (IXPs)

10

eXchange Poin

International Cable Landing Stations (CLS)

Reference: APNIC, Google Note: additional info, not yet publicly available

Palawan

Sulu Sea

🛧 Manila

Philippines

Negros

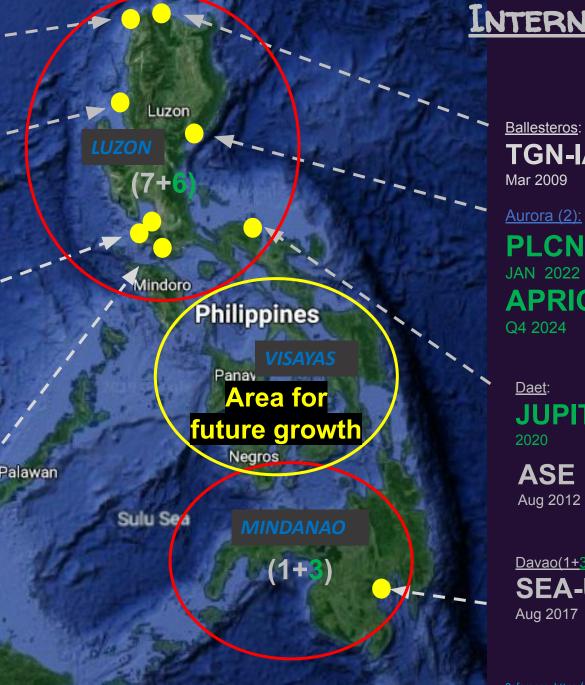
Mindoro

ΜΙΝΠΔΝ

BAH

nds





INTERNATIONAL CABLE SYSTEMS

Subsea Cables : 9+10* • CLS : 7+2 **TGN-IA** Pandemic Effect? 10/19 cables **APRICOT** starting 2020 JUPITER 9/10 cables during/post Pandemic ASE Aug 2012 Davao(1+3): <u>APRICOT</u> **Bifrost** SEA-US Q2 2024 Q4 2024 <u>ACC-1</u> 2025

Reference: https://www.submarinecablemap.com/#/country/philippines



Majority of IPv4 space still managed by Globe and PLDT, but growth and demand drives good competition (or vice versa)

G	lo	b	e	<

PLDT

1	ASN	NETWORK	IPs
-	AS9299	Philippine Long Distance Telephone Company	3,023,616
	AS4775	Globe Telecoms	679,168
	AS6648	Bayan Telecommunications, Inc.	365,568
	AS132199	Globe Telecom Inc.	314,368
	AS17639	Converge ICT Solutions Inc.	297,728
	AS9658	Eastern Telecoms Phils., Inc.	267,520
	AS10139	Smart Broadband, Inc.	176,384
	AS7629	EPLDT	173,568
	AS23944	SKYBroadband SKYCable Corporation	131,072
	AS3550	Ateneo de Manila University	63,488
	AS17970	SKYBroadband SKYCable Corporation	49,152
	AS55821	RADIUS TELECOMS, INC.	47,104
N	AS23930	IP-Converge Data Center, Inc.	38,144
	AS18190	SunValley New Oriental	29,440
	AS45754	Clear Path Networks Inc	17,408
	AS9927	A Multihomed ISP Company	17,408
1	AS56207	ComClark Network & Technology Corp	16,384
	AS4759	TEXTRON CORPORATION	16,384
	AS17895	Globalreach eBusiness Networks, Inc.	16,128
1	AS56099	Asian Vision Cable	15,360
	AS135607	Infinivan Incorporated	14,080
	AS17894	AyalaPort Makati, Inc. / Data Center Operator	13,312
	AS38325	WTP	13,056
	AS134707	RoyalCable Flash	11,264
1	AS18187	Source Telecoms Inc.	10,240
	AS18233	Philippine Telegraph and Telephone Corporation,	10,240
	AS9821	Department of Science and Technology	10,240
	AS38553	Internet Service Provider and Data Center	9,984
1	AS45499	Cablelink & Holdings Corp.	9,216

New Players / Rebrand / Expansion

DITO AS139831 (3rd Player)

> Cable TV Providers Offering Internet Services

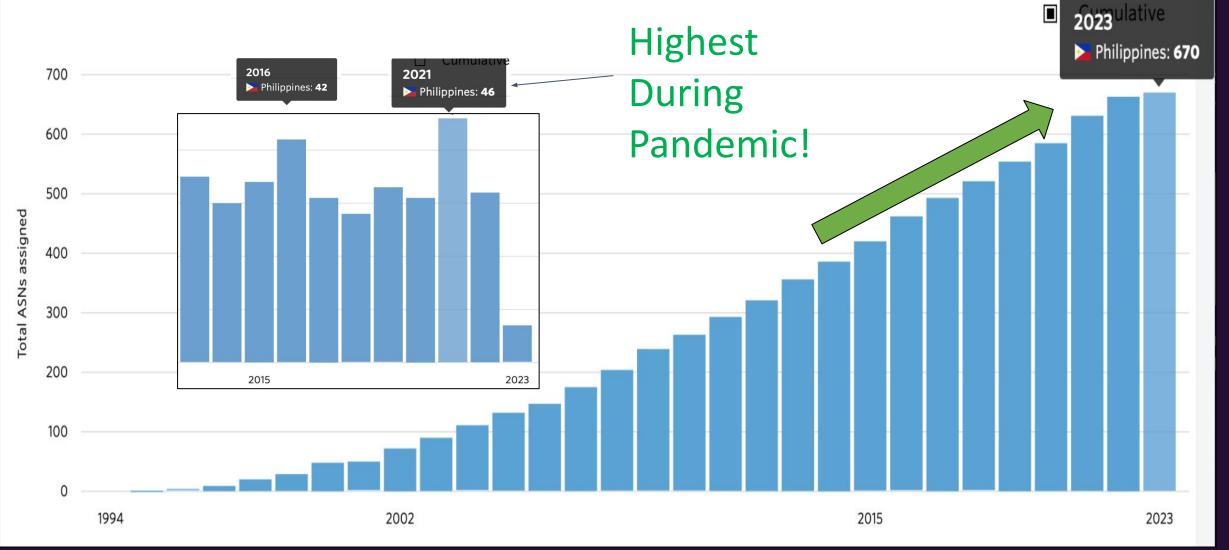
> > Radius (Power utility) Wifi City = SourceTel) PT&T... Fiber

Reference: https://ipinfo.io/countries/ph Whois

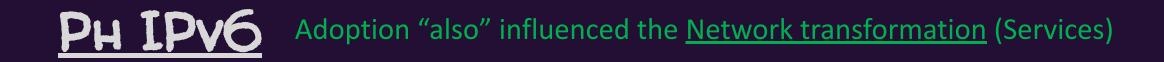
Ph ISPs by local function

Telco ISPs Multi-service providers / Mobile Operator **ISPs Internet Service Providers** Cable TV Cable TV providers offering Internet Services Enterprise Managed infrastructure (Businesses) Academe Managed infrastructure (Schools/Research) Government Managed infrastructure (Government) PAPTELCO Managed Infrastructure (Private) Philippine Association of Private Telecommunications Companies

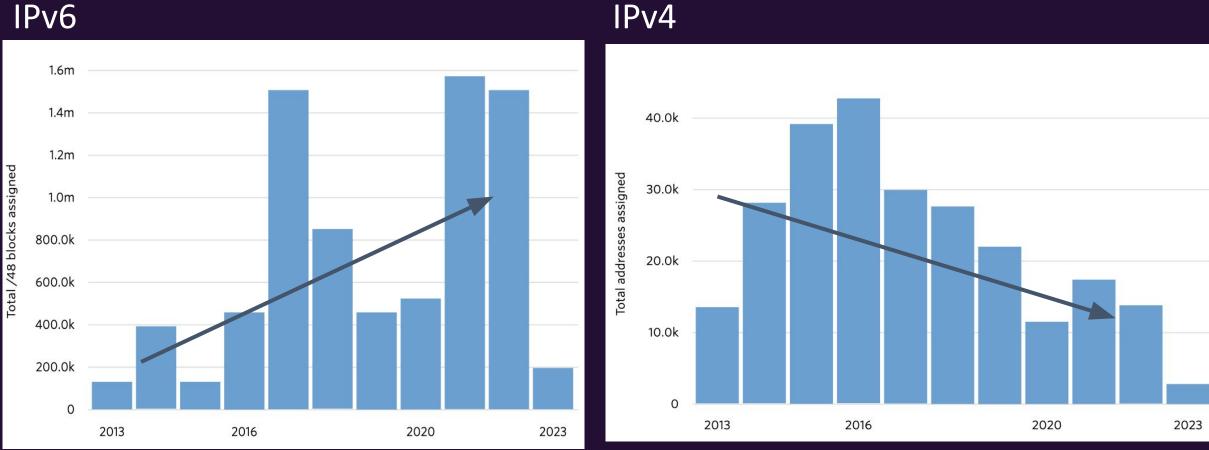
PHASNS Continuous growth of new networks "Driven by Peering!"



Reference: https://stats.apnic.ne



Dual stack for "IPT, Broadband & Mobile Services"



IPv4

IXPs

Manila(9)** ComclarkIX MIX GETAFIX GIX/NIGX PCTA-IX PHIX PhOpenIX VIX DE-CIX

> Cebu(4) GETAFIX GIX PhOpenIX VIX

*Davao(3) GETAFIX GIX PhOpenIX **more soon

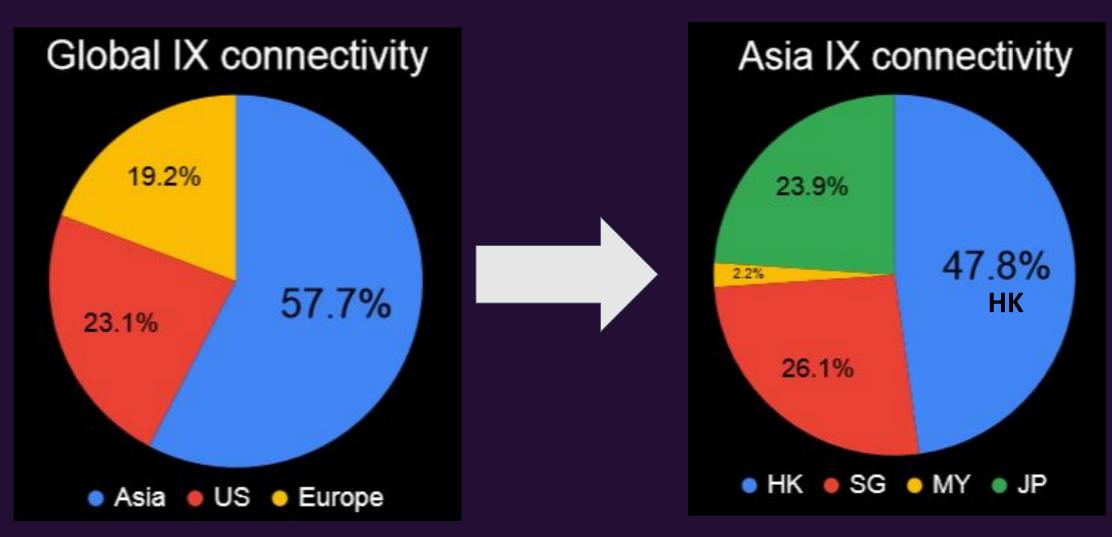


IXP & DC LANDSCAPE IXPs (9+1*), DCs (11+3) **Data Centers** Luzon(11+3) Bee Info Tech Comclark DataOne **Digital Edge Eastern Communications** FlowDigital* **IP** Converge **VST-ECS Globe Telecom** PHCOLO PLDT STT **Tech Global** TIM Visayas - Cebu(2+1) **Globe Telecom** PLDT STT Mindanao - Davao(2+1) **Globe Telecom PLDT** STT *soon

ference: https://www.submarinecablemap.com/#/country/

GLOBAL IX CONNECTIVITY

Traffic remains Asia centric (Historically US) - PNI port size increases (100G)



KEY LOCAL TRENDS ... OR LESSONS

<u>**Ph Positioned</u> as Alternative/New <u>Regional hub</u></u> New players (New ASNs) from Cable TVs</u>**

Port size - growing to 100Gs (or nx100) Policy - more open to Peering (<u>"learned"</u> the benefits) Expansion - <u>IXP connectivity</u>, link diversity, multiple sessions

Geo politics - still BAU but increasing demand for clean pipe services Regulatory - Anti Child porn (RA 9775) Top Traffic - Social Media/OTT and own content

KEY LOCAL TRENDS ... OR LESSONS

Increasing International collaboration

Data Center: Globe Data Center & STT New DCs (Digital Edge, FLOW)

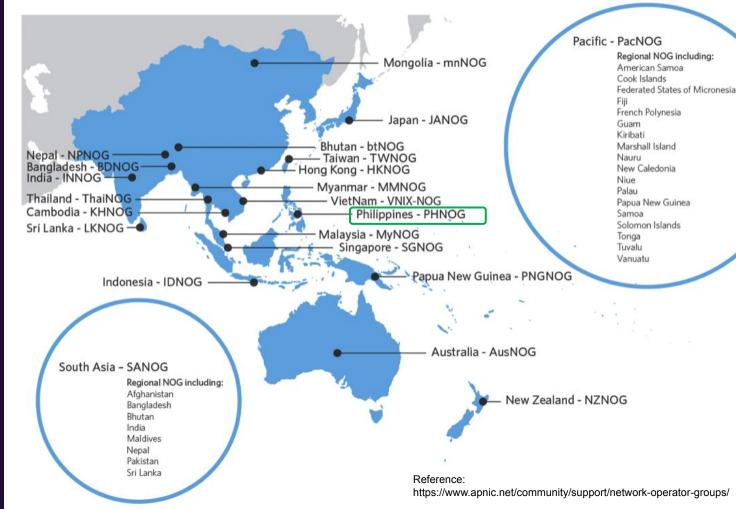
IXP: GETAFIX & DE-CIX...more coming

Cable System: New subsea links (9) Satellite: Starlink

Community: US AID/Beacon, AORA (Open RAN)

PEOPLE NETWORK : Community (PhNOG)

NOGs in the ASIA PACIFIC



Philippine Network Operators Group

Neutral Ground Knowledge sharing Collaboration

ANO NA?

" Diskarte "

We'll find a way :)

WALANG KATAPUSAN . . .

- No Finish Line -



Internet of Conscience

MARAMING SALAMAT!

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