

The Changing Value of an IP Address

IPv6 passed 50%. IPv4 set a record. Both are true.
RONOG, September 2026



Two predictions I made. One survived.



RONOG, 2024

"Continuous shortage of IPv4. Limited supply, increased demand, slow transition to IPv6."

Held up.



2025

"/16 blocks below \$20 and falling. No urgency signal. IPv6 complete around 2045."

Did not.

Prices turned, market volume hit a record, and IPv6 crossed 50% and then stalled. Here is what that means for the value of an address.

Same six months. Same Internet.



50.10%

of traffic to Google arrived over IPv6

28 March 2026. First time in history.



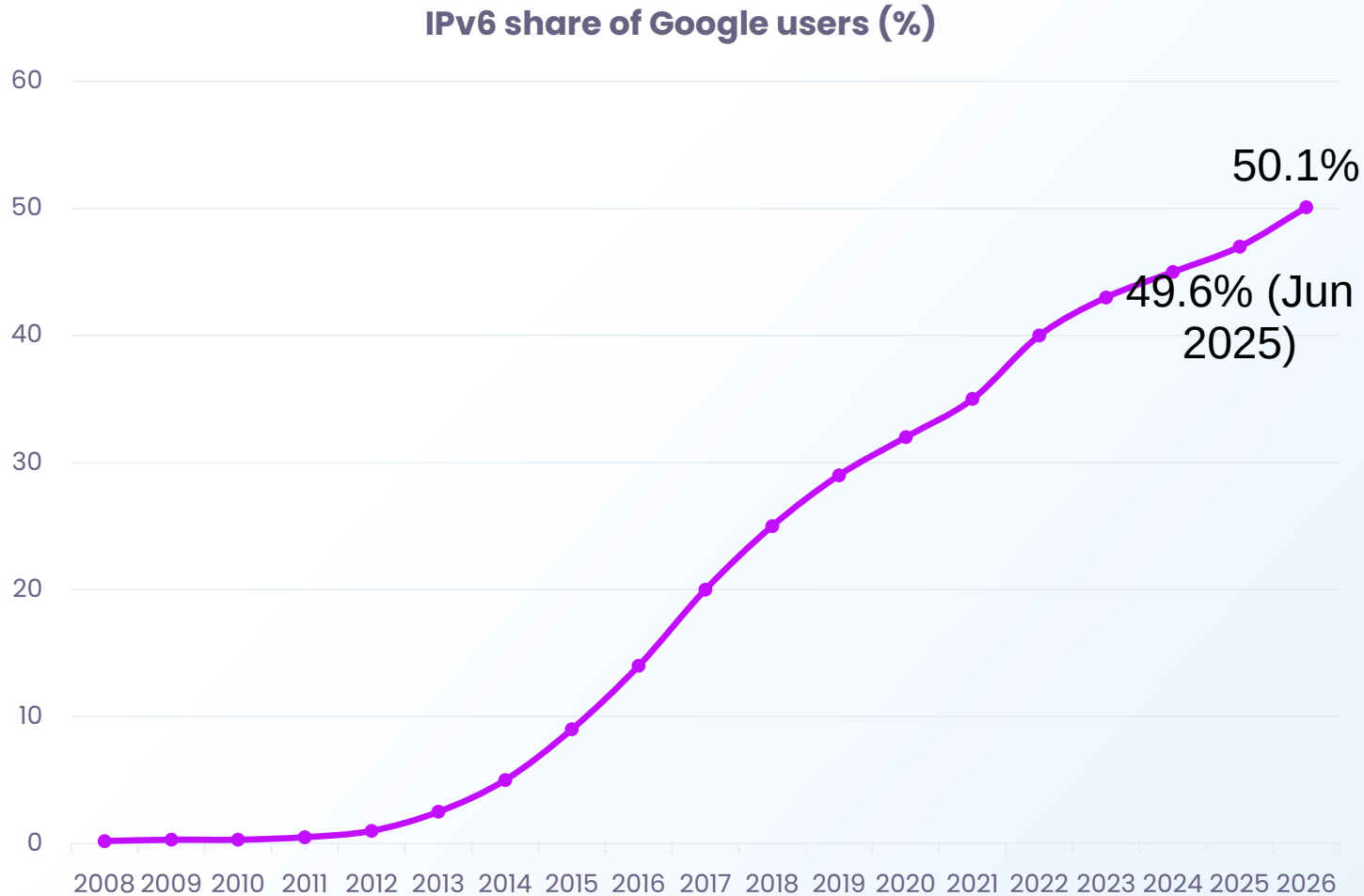
59M

IPv4 addresses on pace to change hands on the market in 2026

+10% vs 2025. +28% vs the five-year average. Highest on record.

Most of us expected these two numbers to move in opposite directions. In 2026 they moved together.

28 years to cross the line



Which 50%?

- **Google:** 50.1% of users on 28 Mar 2026. Hovering around the line since.
- **APNIC Labs:** ~43% capable. Measures differently, runs lower.
- **Cloudflare:** ~40% of requests. Traffic, not users.
- **ISOC Pulse:** 43% average across all sources.
- **The pace:** 3–4 points a year in 2020–2023. About 1 point a year since 2024. Jun 2025 to Mar 2026: +0.5.
- **Read it as:** at one point a year, the second half takes decades, not a decade.

Why an IPv6 majority did not shrink IPv4 demand



WHERE IPv6 WON

Eyeballs

- Mobile networks: IPv6-only with 4G/LTE was cheaper than more CGNAT.
- Large residential ISPs: one decision, millions of users.
- Content at the edge dual-stacked years ago.
- Every new user is an IPv6 user by default.



WHERE IPv4 STILL RULES

Servers

- Every public service still needs a v4 address to reach the other half.
- CGNAT pools, VPN egress, email reputation, legacy B2B integrations.
- Cloud and AI clusters: each tenant, endpoint and proxy wants its own v4.
- Every new service is still an IPv4 consumer.

Dual stack splits the Internet into two markets. User growth pulls IPv6 up. Service growth keeps IPv4 demand steady or rising. Both will be true for decades.

Romania: a lot is already working



93%

of Romanian IPv4 prefixes covered by ROAs (IPv6: 88%). Europe runs far lower.



80%

of 925 active networks connect through an IXP. Traffic stays local.



282

Mbps average fixed broadband download. Among the fastest in Europe for a decade.



100%

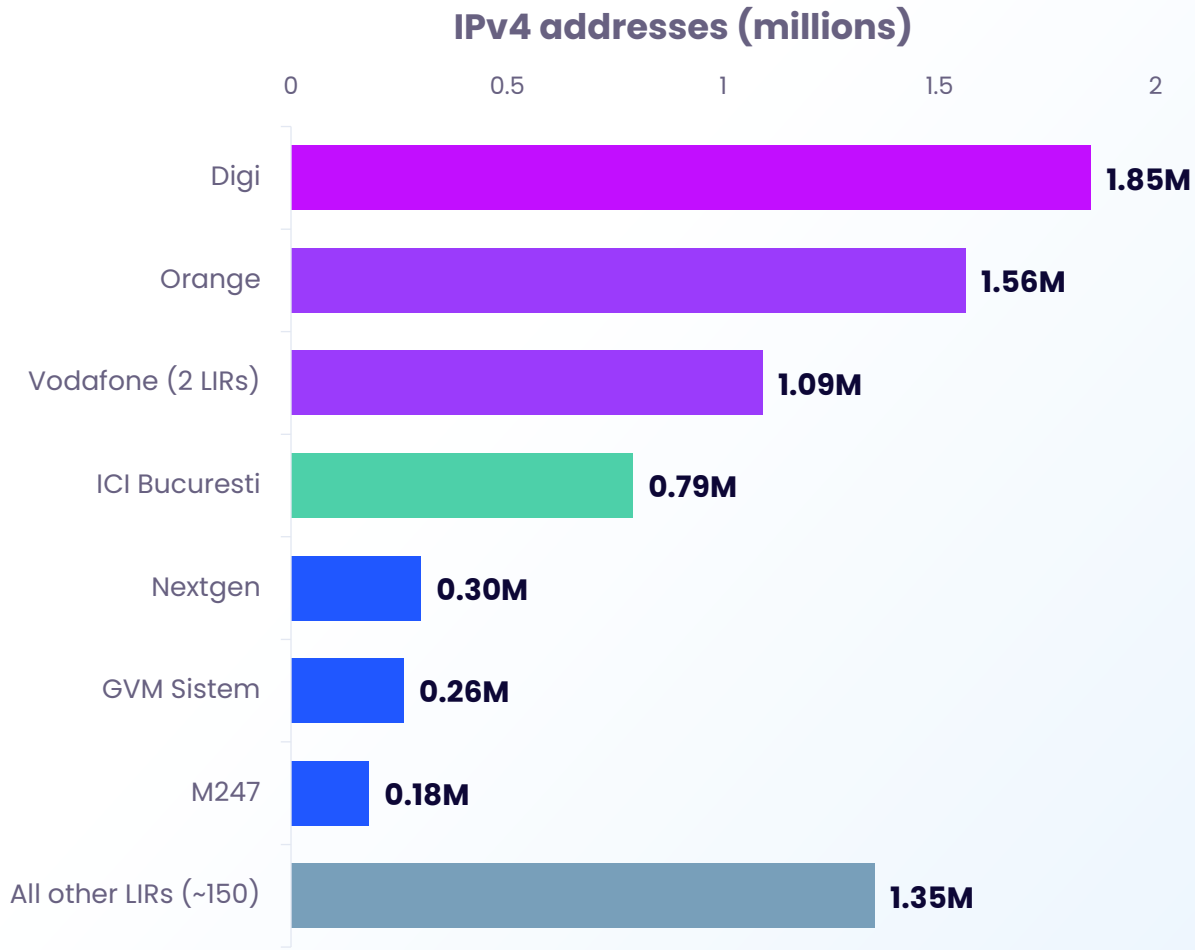
4G coverage, 61% 5G. Mobile is where IPv6 usually arrives first.



AN EARLY MOVER FEW REMEMBER

Digi (then RCS&RDS) got its first IPv6 allocation in 2003, peered with Google over IPv6 in 2009 and carried a full IPv6 table the same year. Romania was doing IPv6 before most of Western Europe had a plan for it.

Romania: 7.4 million IPv4 addresses, and where they sit



7.38M

IPv4 addresses allocated to Romanian LIRs.
About 0.39 per resident.

72%

held by the five largest holders. Five balance sheets decide the IPv4 curve and how much IPv4 comes to market.

29% → ?

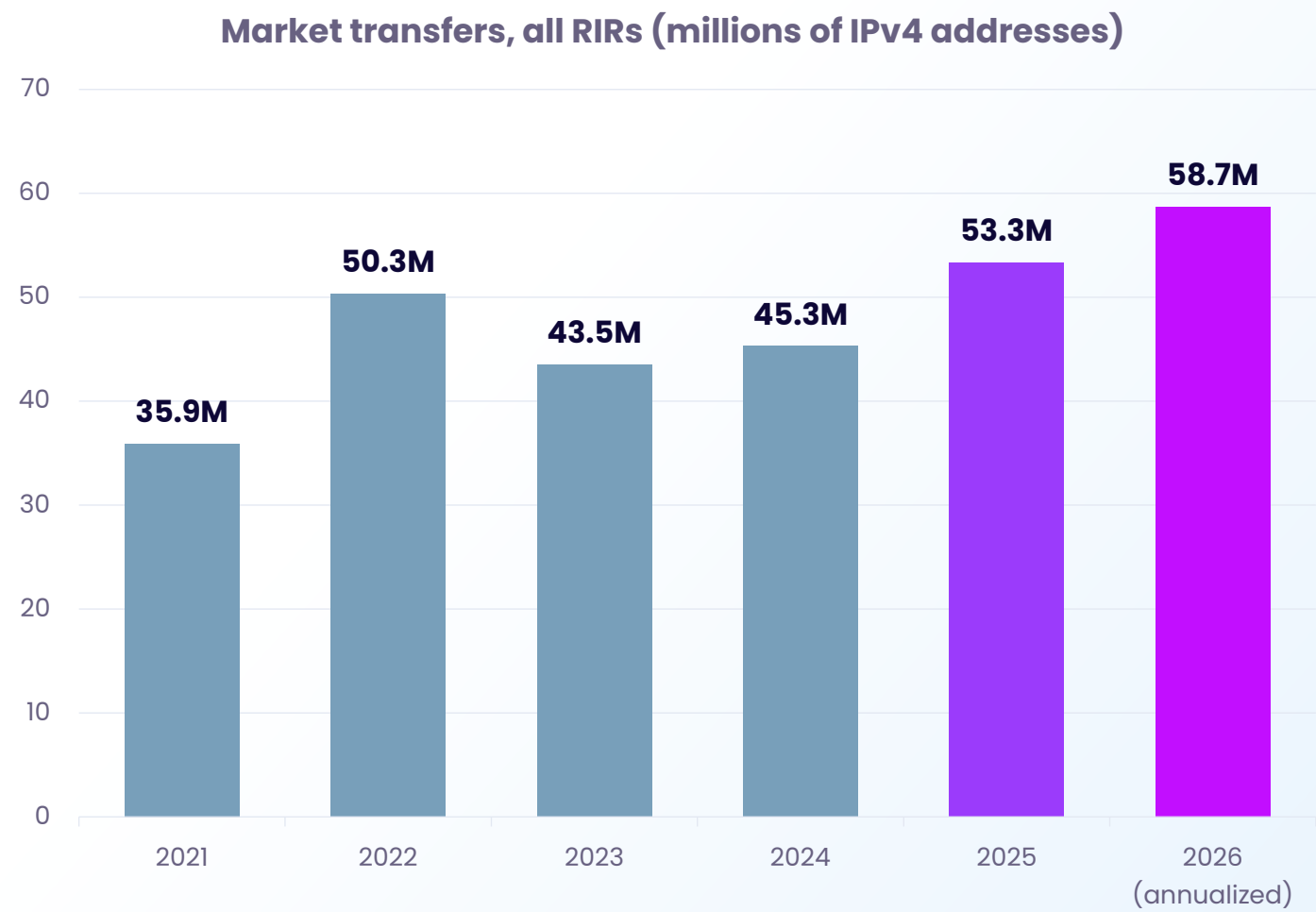
IPv6 users today vs 34% in Europe. One large ISP move takes Romania past the average.



The IPv4 side of 2026

Record volume. Two price stories. New kinds of buyers.

The busiest transfer year on record



What moved

- **43M** addresses changed hands on the market by 25 September 2026.
- **+10%** over 2025 on the current pace, 28% above the 2021-2025 average.
- **M&A excluded.** Corporate transfers added 119M in 2024 and 93M in 2025; they move ownership, not supply.
- **A liquid market**, not a squeeze: volume grew while the blended price fell. Supply came out and was absorbed.

Source: RIR transfer logs, all five RIRs, resource transfers only (M&A excluded), to 25 Sep 2026. 2026 annualized on 268 days.

Which price are you looking at?



LARGE BLOCKS (/16 AND UP)

\$9 → \$12–15

+33% to +55% per IP, January to June 2026

- Ten-year lows in 2025 pulled buyers back in.
- Cloud, telco and AI infrastructure buy in bulk.



BLENDED AVERAGE (ALL BLOCK SIZES)

\$31 → \$20

–36% per IP, H1 2025 to H1 2026

- /24s are 37% of all deals and set the average.
- Small blocks softened; the whole distribution shifted down.

Both headlines are correct, and one number did not move at all: holder income from leasing stayed at \$0.30–0.35 per IP per month through the whole swing. Holders who leased through the 2025 dip kept the asset and now sit on a block worth 33–55% more.

Who is buying in 2026



LATE 2025

Hyperscalers pause

Big buyers step back after years of accumulation. Large-block prices reach ten-year lows.



H1 2026

SMBs step in

Hosting companies, small ISPs and other businesses that need IPv4 to keep operating bought at the discount. Telcos like Vodafone, RETELIT and 2Connect bought for growth.



MID 2026

Google returns

Largest single recipient of the month, while running one of the most IPv6-ready networks on earth.

- **Demand is spreading**, not concentrating. When the largest buyers paused, hundreds of smaller ones took their place: hosting, small ISPs, cloud, data companies, infrastructure operators.
- **Buyers pay for clean blocks**: good reputation, routing history, correct RPKI and registry records. "IPv4 exists" and "IPv4 I can announce next week" are different products.
- **Clean is rare**: on one lease platform every incoming address is checked against 90+ blocklists. Fewer than 15% of subnets pass clean on first upload.

Demand is rising on every meter you can read



+10%

market transfer volume vs 2025, 28% above the five-year average. 43M addresses moved by 25 September.



467 days

the first LIR in the RIPE queue has waited for one /24. 757 LIRs behind it.



+33–55%

large-block price in five months. Prices rise when buyers outnumber sellers.



\$1T+

data center capex in 2026, about 100 GW of new capacity planned by 2030. Every rack needs reachability.



Wider

buyer base: telcos, ISPs, hosting, cloud, data and AI companies, no longer a few hyperscalers.



12.5M

addresses under lease on one platform, 17.5M listed. Listings grew from 4.2M in 2024 to 8M in 2025. Lessees: 1,200, 1,600, now 2,500.

Supply is finite and demand is broadening. For a holder, that is the definition of a rent-earning asset.

Does AI need more IPv4? Three different answers

Data center capex crosses \$1 trillion in 2026. More GPUs do not automatically mean more public addresses. It depends where the demand sits.



Training clusters

Mostly private addressing inside the fabric. Little public IPv4 needed per GPU.

IPv4 demand: LOW



Inference and APIs

Every public endpoint, tenant, region and proxy egress wants a routable v4 address to reach the IPv4 half.

IPv4 demand: REAL



Data collection and agents

The models are trained on the open web. Crawlers, agents and proxy networks need many geographically diverse, clean addresses.

IPv4 demand: NEW AND GROWING

AI infrastructure spend clearly lifts address demand. Attributing specific transfers to AI is inferred from buyer identity, not measured. Call it a tailwind and let the market data carry the argument.

AI created a new kind of tenant for IPv4

Search engines crawled the web with a few thousand addresses. The AI data layer works differently, and it changes what a clean block is worth.



What they do

Collect training data, refresh knowledge, run agents that browse on a user's behalf, price-check, translate, verify. Legitimate, funded, and growing fast.



What they need

Many addresses, spread across countries and networks, with clean history. Sites serve different content by geography and rate-limit by address. Diversity is the product.



What is changing

Cloudflare's Web Bot Auth lets legitimate crawlers sign their requests. Identity moves up the stack; the address becomes one signal of several, and a trusted one commands a premium.



Measured on one lease platform: AI and data-collection lessees grew 40% from 2024 to 2025, then another 150% in the past year. Their profile is short to medium terms, geographic spread, verified tenants, premium for clean history. That is served by leasing, not by selling.

What continued IPv4 dependence actually costs



Address access

Purchase, lease, or a cloud provider's per-address charge.



Compatibility

CGNAT capacity, translation, and where charged, data processing.



Operations

Troubleshooting, logging, reputation handling, registry records.



Opportunity cost

Surplus space held with no defined future use, earning nothing.



THE CLOUD MADE IT VISIBLE

\$0.005

per public IPv4 address per hour on AWS, in use or idle

\$43.80

per address per year. 1,000 addresses = \$43,800.

That charge pushed idle supply into the market from 2024 and is a big reason the blended price fell.

IPv6 adoption and IPv4 retirement are different measurements. Traffic moving to IPv6 frees a usable prefix only when you remove the dependency that keeps it.



If you hold addresses

The transition will take decades. Idle space is the only asset on your network earning nothing while you wait.

Your IPv4 space is three different assets



1. Space you still need

Customer-facing services, CGNAT pools, mail, VPN, anything the IPv4 half must reach.

Keep it. Dual-stack it.



2. Reserve

Growth headroom, migration buffers, blocks tied up in old assignments and dated reputation.

Clean it up. Set a horizon. Lease the idle part.



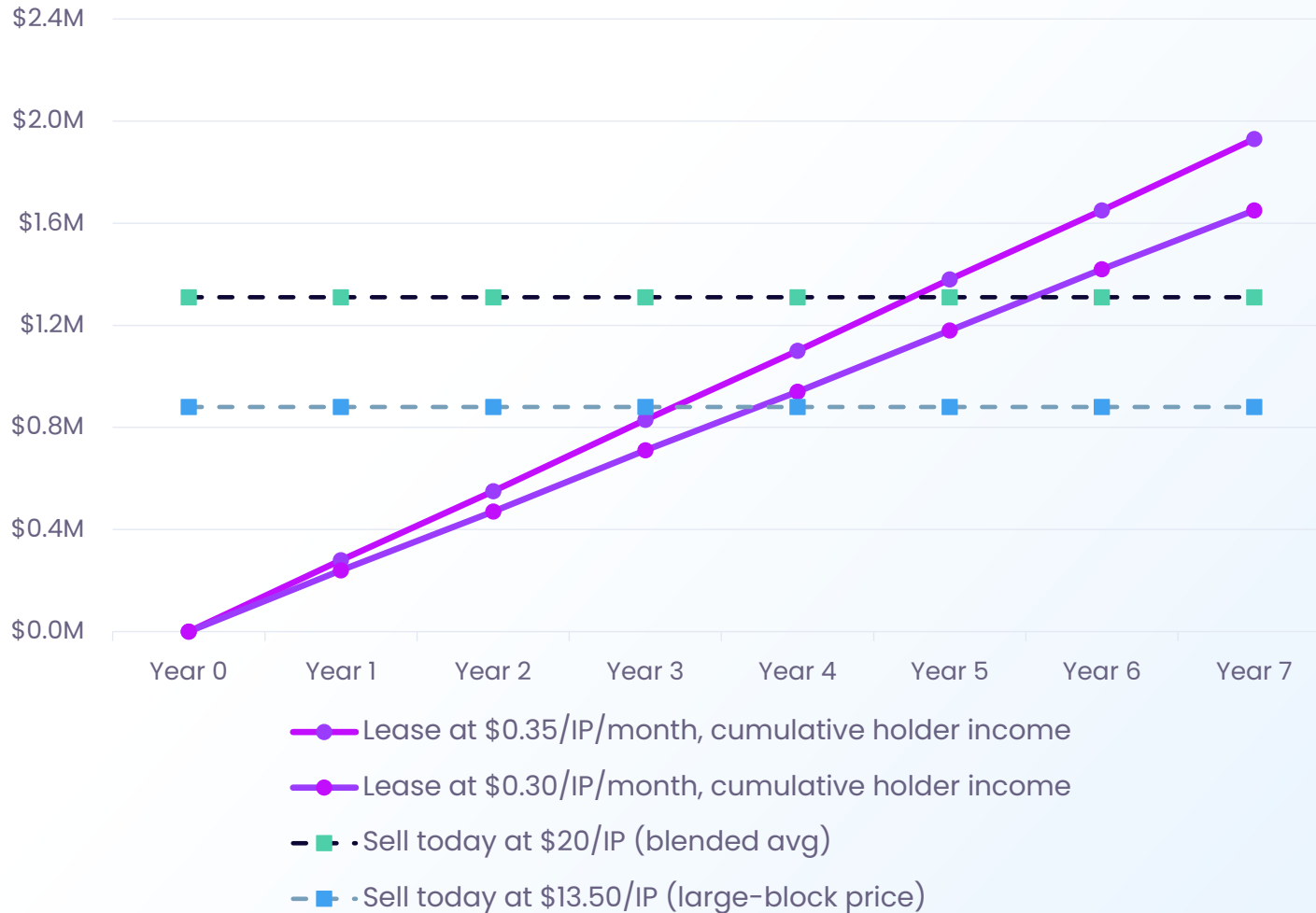
3. Space you can put to work

Unadvertised, unassigned, or freed by IPv6-only internal networks, 464XLAT, or consolidation.

The bucket that funds the transition.

- **Unadvertised is not the same as available.** Roughly 16% of allocated IPv4 is not in the BGP table; some is in private use or legally stuck. Bucket 3 still exists in almost every network older than ten years.
- **The exit bill:** IPv6 work costs money. Bucket 3 is the part of your balance sheet that can pay for it.

Keep, sell or lease: a /16 in 2026 numbers



The math

- **65,536 IPs** at \$0.30–0.35/IP/month to the holder = \$236K–275K per year.
- **Crossover:** 4.8–5.6 years vs a \$20 sale, 3.2–3.7 years vs a \$13.50 large-block sale.
- **Sell:** capital now, asset gone. Whoever sold a /16 in 2025 sold at the ten-year low.
- **Lease:** recurring revenue, you keep the asset and the option to sell later at a better price.
- **The horizon:** at one IPv6 point a year, the purple line keeps climbing for decades. Every year of dual stack is a year of revenue collected or forgone.

Illustrative. \$0.30–0.35/IP/month is typical net income to the holder in 2026; sale prices from IPv4 marketplace and broker reports, H1 2026. Excludes taxes and price changes.

The honest question: does monetization slow IPv6 down?



IT CAN, IF YOU LET IT

- Easy IPv4 access lowers the pressure to migrate.
- Recurring income can make the status quo comfortable.
- Leasing extends the dual-stack decade. Better to say so than to be told.
- **Better incentive:** tie the revenue to a measured reduction in your own dependence. Free a /24 by removing a dependency, then lease that /24.



AND THE REVENUE COMES WITH A JOB

- **Resource status:** ALLOCATED PA can be sub-allocated; ASSIGNED PI cannot. Check policy and contract first.
- **Routing:** ROAs, IRR objects and the authorized origin must match before the block is announced.
- **Tenant vetting:** KYC, monitoring, and an accountable abuse response. Payment does not transfer responsibility. Done well, 98% of abuse cases close automatically.
- **Exit plan:** notice period, records cleanup, recovery of the prefix.

A lease is a service you run, not a coupon you clip. Run well, it is also the cleanest space on the market.

What this means for you



Deploy IPv6 where it is cheap now.

Half your users already have it. Mobile and new residential footprints first. Plan for coexistence, not a switch-off date.



Budget IPv4 as OPEX, not a one-time buy.

The price floor is gone and large blocks moved 33-55% in five months. Lease what you need short-term, buy only what you will hold for years.



Audit what you hold, then lease the surplus.

Clean records, RPKI, reputation, then put every idle block to work. Demand for clean, flexible space has never been broader, the transition will take decades, and every year you wait is revenue you do not get back.

Last year I said 2045. The honest update: the first half took 28 years and the pace has slowed to about a point a year. Plan for dual stack as the operating model for decades, and price your addresses accordingly.

Q&A





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