



2025 State of Connectivity

Industry Trends, Pricing Trends, & More





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Introduction

We at [Lightyear](#) are rethinking the enterprise telecom experience from first principles, and a significant component of doing so involves helping enterprises better inform telecom decisions with objective data. Unfortunately, the telecom powers that be have made it difficult to obtain any objective, vendor-agnostic data that might be helpful in your decision-making efforts. Thankfully, in the course of building Lightyear, we've run 100,000+ telecom RFPs, secured 1,000,000+ price quotes, and compiled statistically significant bits of vendor / industry data that we can utilize to help you better understand this notoriously opaque industry. Our dataset exhaustively spans industries, geographies, company size profiles, ISPs, and more, and it grows exponentially alongside our growth in enterprise momentum.

In this report's first segment (Industry Trends), we'll utilize our unique vantage point to summarize a few timely industry trends we've observed that are relevant to common enterprise connectivity design and procurement decisions. In the second segment (Pricing / Bandwidth Trends), we'll share aggregated insights from our dataset that can provide you with current pricing and bandwidth industry benchmarks.

Thank you for spending some time with us today, and I hope you get something of value from this report.



Dennis Thankachan
CEO, Co-Founder
Lightyear



Lightyear's State of Connectivity Report

Industry Trends





Impact of Global Inflation on Bandwidth Pricing

Bandwidth costs are supposed to drop every year, all of the time... right? Right?!? Not so fast. For the first time since founding Lightyear, we've come to see this trend revert temporarily, with bandwidth costs actually increasing year-over-year under certain circumstances. In a normal year, you'd reliably see 5-10% annual declines in cost per megabit for dedicated connectivity bandwidth, but clearly 2024 was not a normal year.

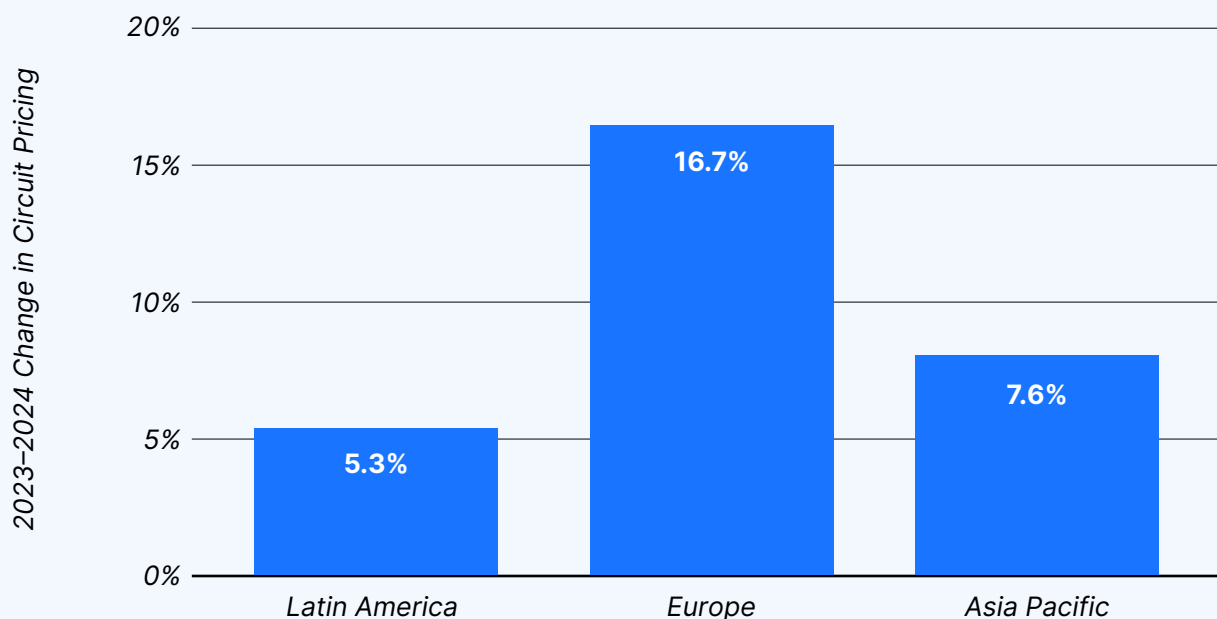
In the US, we saw ISP pricing nominally unchanged from 2023 to 2024 (which represents inflation relative to historical trends), but internationally, we saw cost inflation in select markets, with certain markets seeing more precipitous inflation than others. See some aggregated data in the chart below.

What's the cause of the inflation? Hard to say, but it's likely that inflating supply and labor costs have

made their way into bandwidth pricing with somewhat of a lag in timing. Building out and providing dedicated connectivity services involves specialized hardware, construction labor, and service labor, all of which have gone up in cost over the past few years. In some international markets, inflation has persisted at a higher than normal rate beyond the duration experienced in the US, which may have led to excess cost increases in certain areas. It's also worth noting that Europe, which saw higher inflation in our dataset, has lower cost per megabit pricing on average than the other two markets we evaluated, which may explain the excess.

Will this continue? It's hard to say, but with falling global inflation more recently, hopefully not!

2023–2024 Change in Circuit Pricing by Region





Waves Overtaking Ethernet Point-to-Points in Enterprise WANs

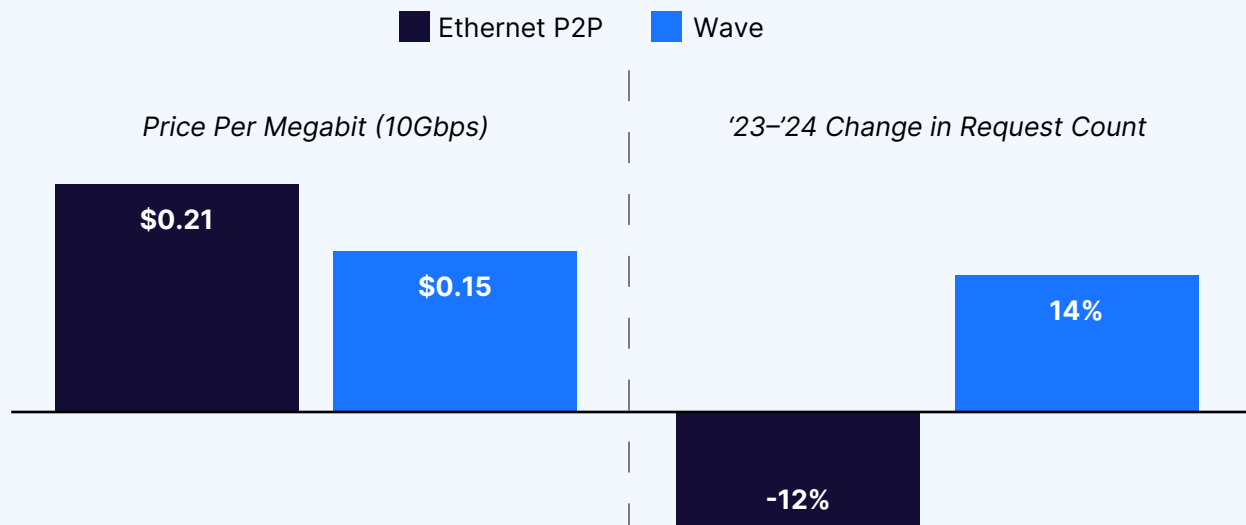
Today, enterprises have more options than ever when thinking through wireline WAN links. When transmitting data from A to Z, you can of course utilize the public internet, but when privacy, security, and reliability of transmission matters a bit more, you'll more likely utilize an [Ethernet Point-to-Point](#), which utilizes Ethernet protocol to privately transmit data between two locations across a static fiber route.

Over the past several years however, [Wavelength \(Wave\) circuits](#) have become a more popular option for private, secure, highly reliable data transmission between two points. Wave circuits utilize Dense Wavelength Division Multiplexing (DWDM) technology to transmit more data over the same fiber, allowing for due higher bandwidth capabilities, cheaper cost-per-megabit service, and more predictable latency at times. If you need 100 Gbps or more of bandwidth, you may only be able to achieve this with a Wave circuit.

Why wouldn't you use Wave circuits with all of these benefits at a lower average cost? To provide Wave services, carriers must roll out specialized electronics, historically making them available only in select geographies. More recently however, Wave service availability has grown materially, and we're seeing them pop up much more frequently in Lightyear quote requests and enterprise purchases. Over the past year, Wave circuit quote requests have grown 14% year-over-year with Ethernet Point-to-Point requests dropping by over 12%. Also, you can see that for a 10 Gbps link, Waves come in at a near 30% lower cost on average.

It's worth noting that Ethernet Point-to-Point request volume still significantly outweighs that of Waves today, but it'll be interesting to monitor whether the shift accelerates.

Waves vs. Ethernet P2P: '23-'24 Request Volume & Cost Per Meg (10 Gbps)





NaaS: What is it? What are the Benefits and Drawbacks?

What is it with telecom providers and acronyms? Part of the never-ending “X as a Service” trend, telcos, cloud providers, and focused startups are now offering “[Network as a Service](#)” products, aiming to deliver you with scalable, on-demand network infrastructure that can be provisioned and consumed like your cloud software or public cloud services.

Unfortunately, what qualifies as NaaS can differ materially based on what provider you’re evaluating. Public cloud and major data center providers have offered NaaS products for years, with products like Google Cloud Interconnect / Cloud Router / Cloud Firewall or Equinix Fabric allowing users to virtually spin up and consume network infrastructure surrounding their cloud or co-location deployments.

More recently, we’ve seen telcos like [Verizon](#) and [Lumen](#) offer NaaS solutions, and these are quite different. With Lumen’s NaaS service, you can sign up and digitally purchase Lumen network services with “usage-based pricing and on-demand flexibility,” which is somewhat reminiscent of SaaS. Similarly, dedicated NaaS companies like Megaport are built around offering such “on-demand” connectivity that can be provisioned out of a software portal. However, telco NaaS services face material limitations from what we’ve seen. You still need to install and provision a physical circuit in most cases, which faces the same challenges and complexities you’re likely familiar with: build-outs, capacity, etc. These services work well in areas where bandwidth is plentiful and connectivity can be easily provisioned (internet exchanges and co-location data centers) and less well in areas where this isn’t the case (most physical locations). Further, scalable and flexible bandwidth comes at

a cost premium. Often, NaaS services are priced, from what we’ve seen, at a premium to the regular underlying connectivity products they’re abstracted from.

Finally, there are NaaS upstarts, like [Nile](#), that are more focused on turning the LAN from a capex endeavor into an opex endeavor, effectively offering hardware, software, and managed services to ensure you have a reliable and secure LAN experience. This is quite different from what telco or cloud NaaS is after, and could be a good fit for enterprises who’d like to outsource LAN management. Is this much different from outsourcing your LAN management to an MSP? Today, maybe not.

These offerings are all in early stages, so time will tell what sticks and where substance lies.



The State of MPLS in 2025

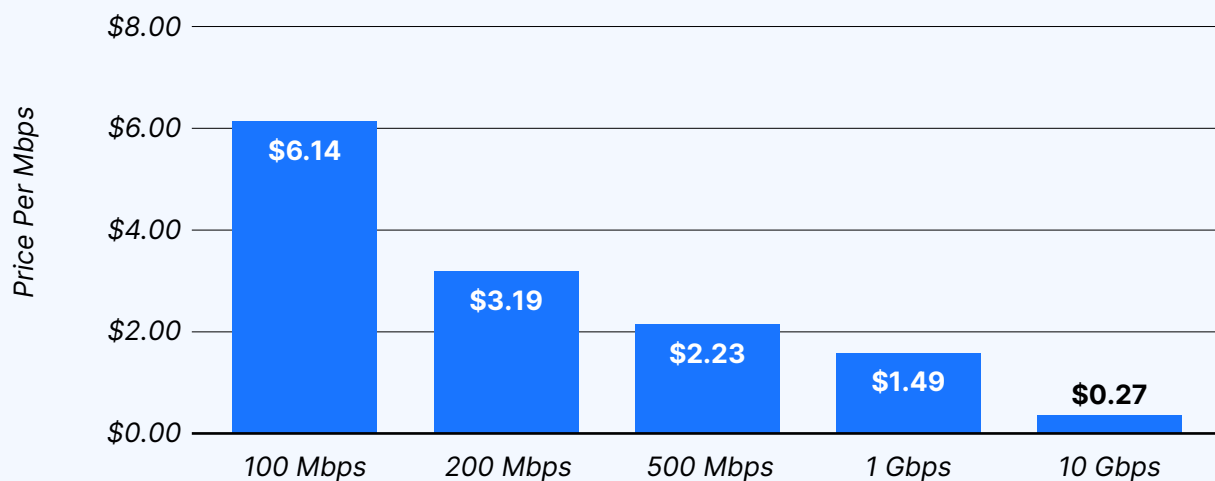
MPLS in 2025?! You read that right. Although the vast majority of MPLS networks have been ripped and replaced with cheaper commodity internet connectivity and some sort of SD-WAN overlay, some enterprises still utilize [MPLS services](#).

According to TeleGeography, by 2022, [nearly 90% of surveyed enterprises](#) were in the fully installed or rollout phases of SD-WAN adoption, and by 2024, [DIA had overtaken MPLS](#) across enterprises in their survey set. All of this makes sense, as internet connectivity is cheaper and offers more flexibility than MPLS. According to [Aryaka's 2024 Network Transformation report](#), 10% of enterprises have no MPLS in their network, while 76% of surveyed enterprises will be out of the MPLS business within 3 years. But also, 9% of enterprises will utilize MPLS as well as alternatives on a continued basis, and 5% will invest in more MPLS? Why are enterprises still leveraging this technology today? Although MPLS networks can be a pain to manage, they're excellent in circumstances where an enterprise may have a meshed network topology with significant needs for predictability, privacy,

and security, and where network cost / flexibility are afterthoughts. This cost / benefit calculus surrounding MPLS can be compounded in circumstances where making network technology changes could pose significant risk or liability. Example circumstances where this logic applies and we see MPLS in use today include those of large financial institutions (banks, payment networks), healthcare networks, large enterprise operations in parts of the globe where connectivity sourcing is particularly difficult, and more.

Below, we outline average per-megabit costs observed across various MPLS throughput tiers from quotes collected by Lightyear over the past year. At most bandwidth tiers, pricing is 20-30% higher than what you'd typically see for a comparable bandwidth DIA circuit, which is not surprising given that MPLS is typically delivered as a Type 2 service. More surprising is that the 10 Gbps bandwidth tier has pricing only slightly higher than that observed for similar bandwidth DIA services - higher bandwidth transport truly does yield economies of scale, even in MPLS-land!

Price Per Megabit of MPLS by MPLS Bandwidth Tier





Lightyear's State of Connectivity Report

Pricing / Bandwidth Trends





2024 Dedicated Internet Access (DIA) Pricing

[Dedicated Internet Access \(DIA\)](#) encompasses ISP products with guaranteed, symmetric, dedicated bandwidth backed by SLAs for uptime and potentially other performance metrics. DIA is the gold standard for a business's primary connectivity option if connectivity matters at all to the business.

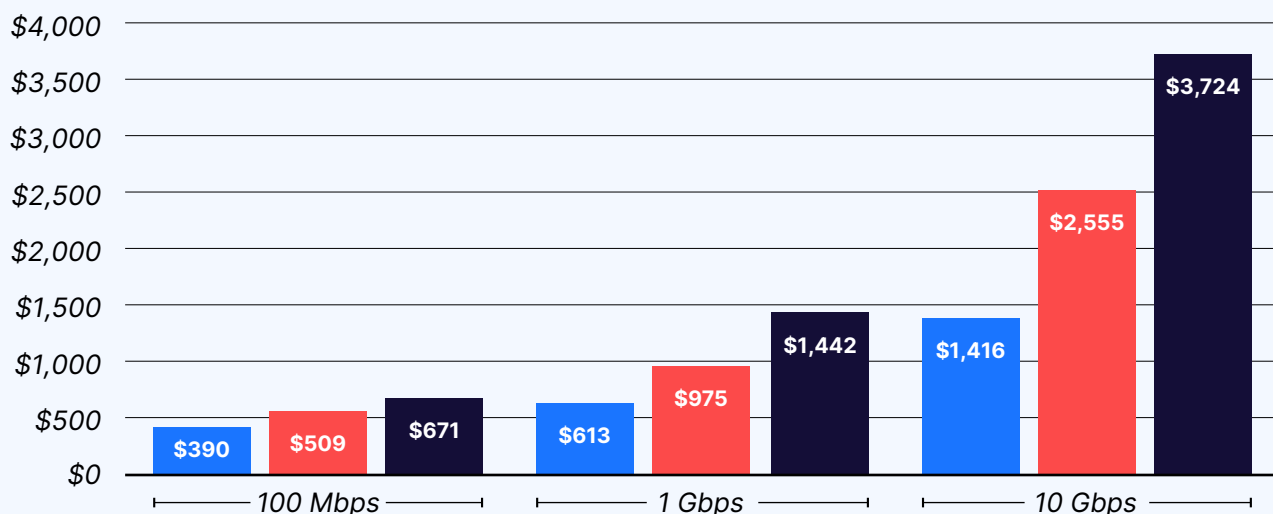
DIA pricing is impacted by a number of factors. Higher bandwidth always yields higher cost, when all other variables are held equal. The cost to deliver the connection is another major factor influencing cost (often the most influential factor). If the connection is "off-net" and construction is required, that'll significantly impact costs. Connectivity in a co-location data center is often relatively cheap, as many ISPs are "on-net" with plentiful bandwidth to provision without construction. Contract term length also matters to cost: shorter terms mean higher cost, as the ISP must amortize the cost of service delivery over a shorter time-frame. Most commonly, we'll see 36-month terms for DIA services.

Below, see summary data for 2024 DIA quotes from the Lightyear dataset across three bandwidth tiers. All quotes analyzed are in the US on a 36-month term, but include a diverse mix of US geographies, ISPs, and on-net vs. off-net situations. This allows the averages and high / low percentiles to give you a better gauge of what to expect depending on what variables come into play when quoting DIA on your own. Sourcing an off-net circuit in a complex geography? Expect pricing to be above median, maybe at the high-end of the distribution. Sourcing in a well populated colo? Expect pricing to be at the low-end of the distribution. *(Note: some low-cost colo-centric providers are excluded from the data so as not to swing results too deeply).*

Since the last time we did this exercise in 2023, 100 Mbps pricing has compressed quite a bit, while 1 Gbps and 10 Gbps pricing have compressed slightly, but less so.

2024 DIA Pricing Summary by Bandwidth Tier

10th Pctle Median 90th Pctle





2024 Broadband / Best Effort Pricing

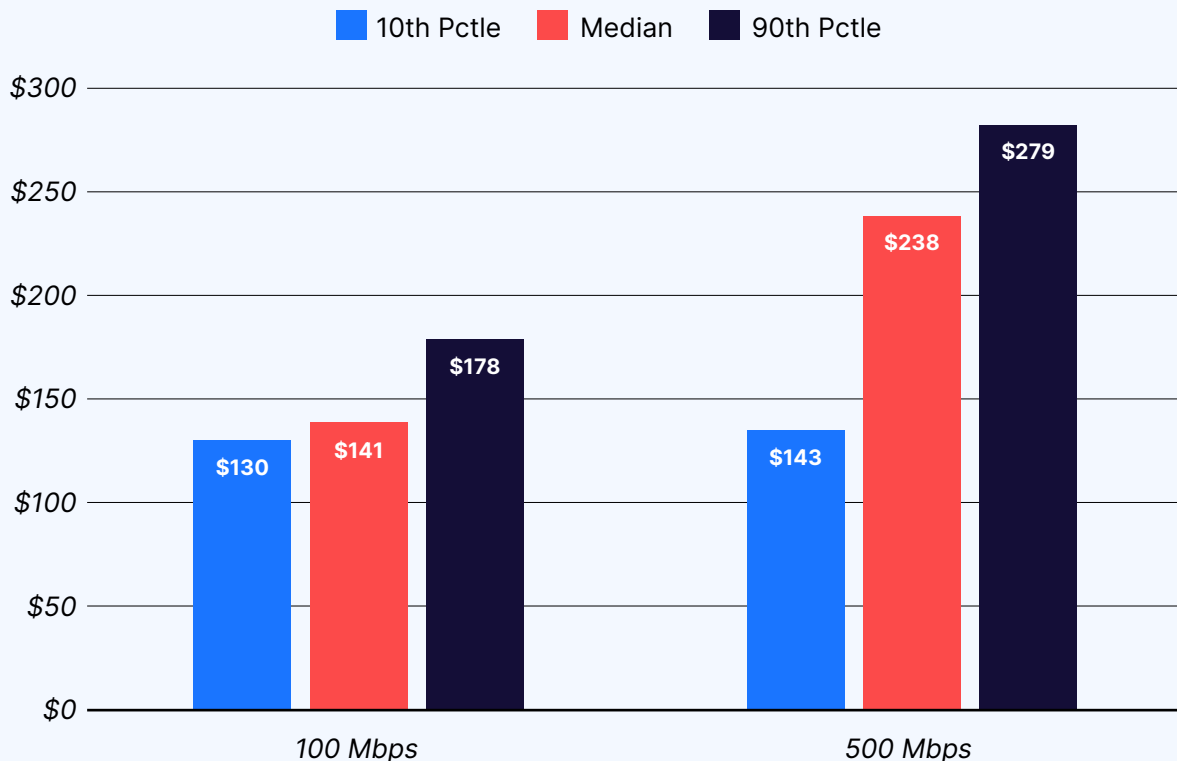
Broadband, or best effort, connectivity is more similar to the connectivity options you'd utilize at your home. Business broadband offerings differ quite a bit, but they're typically shared (rather than dedicated) connections, lack SLAs, and come with asymmetric bandwidth (much more download than upload speed). Further, broadband connectivity is marketed at maximum speeds, meaning if you have a "100 Mbps connection", that's the best speed you'll likely get and in reality it will likely be lower most of the time. As a positive, many business broadband options can be purchased on a month-to-month term with no contractual commitment!

Note: not all broadband products are created equal. Some broadband services come with sym-

metric bandwidth, and now even SLAs. That said, most often business broadband service is packaged as outlined above.

Below, see summary data for US business broadband quoted in 2024 within Lightyear's dataset. It's much cheaper than DIA, which makes sense given the lack of construction, SLAs, and support offered. It's also worth noting that broadband comes with fewer bandwidth tier options. There are not a ton of 1 Gbps business broadband options available today, and almost nothing beyond that available bandwidth-wise. As broadband technology continues to shift, this may change.

2024 Broadband Pricing Summary by Bandwidth Tier



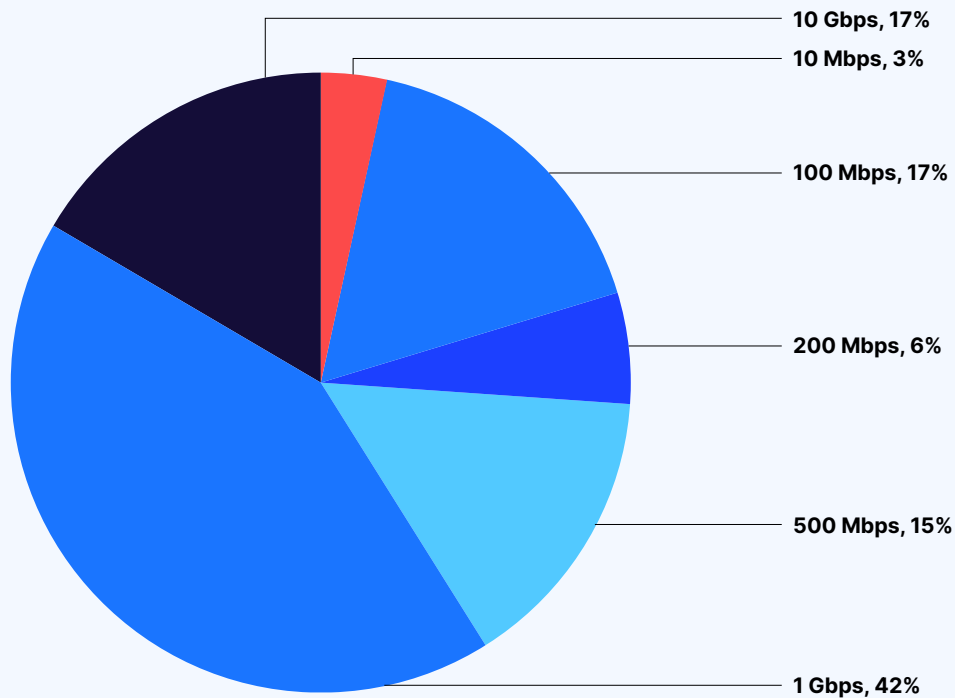


DIA Bandwidth Sourced

What bandwidth tiers are enterprises selecting most frequently when sourcing DIA connectivity? See below for a distribution from our dataset. We've observed average bandwidth tiers selected trending up over time, which isn't particularly surprising. Today, 59% of connectivity sourced is 1 or

10 Gbps! Soon enough, I'm sure 100 Gbps links will make up a real share of this pie. When Lightyear was founded, 100 Mbps was the "standard" option we saw most enterprises pick.

2024 DIA Bandwidth Tiers Across Lightyear's Data



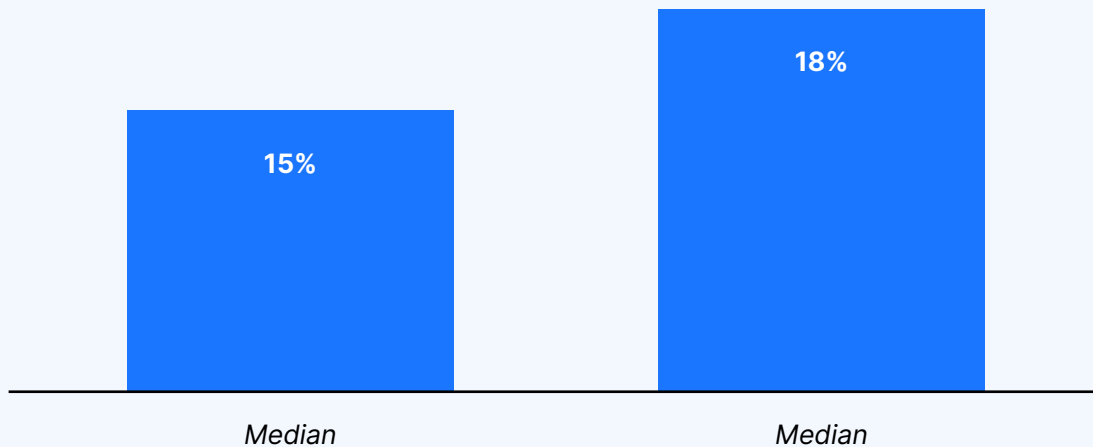


Type 1 vs. Type 2 Access

When you purchase connectivity from a provider who is leasing last-mile infrastructure from another service provider, you're purchasing "Type 2" connectivity. When enterprises work with aggregators (like GTT or Granite) or only work with a small number of ISPs, Type 2 can make up a significant portion of an enterprise's network. Type 2 comes with a [number of differences](#) from Type 1

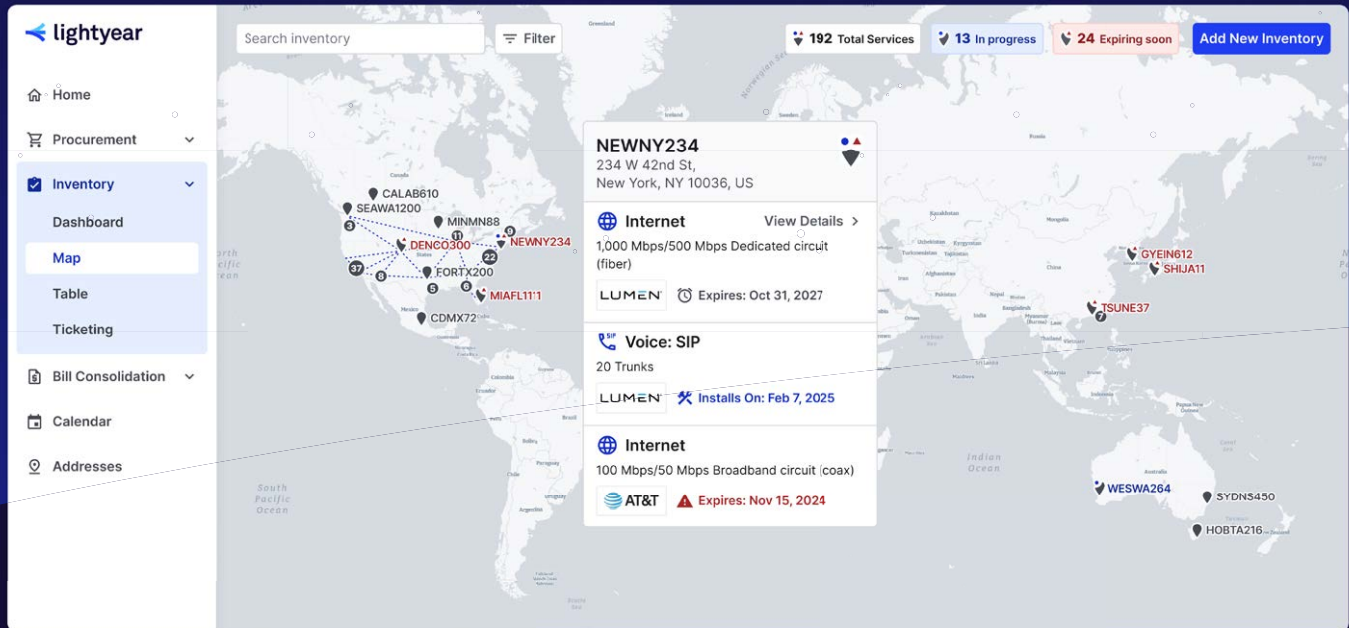
access, most notably that it's "marked up" by the provider utilizing another provider's infrastructure. By how much exactly? See below for average differences observed in our dataset in pricing for Type 1 access vs. Type 2 access on 100 Mbps DIA quotes. It's worth noting that the observed mark-up can differ materially based on circumstances of what's quoted.

2024 Type 1 vs. Type 2 Observed "Markup"



ABOUT LIGHTYEAR

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Procurement

Lightyear's network and pricing intelligence deliver the best possible options and pricing for your telecom needs with minimal effort.



Network Inventory Manager

Eliminate spreadsheets. Track network inventory details in a digital "system of record" and automate carrier workflows like MACDs and renewal processing.



Bill Consolidation

Eliminate the headache of tracking and paying telecom invoices with a simple monthly consolidated bill audited by Lightyear.



White Glove Support

Leverage Lightyear as an extension of your IT team for help with implementations, network engineering, .KMZ review, and more.

70%+
time savings

1,200+
global carrier access

20%+
cost savings

1M+
price quote data points

Trusted by 350+ enterprises





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