Access: navigating the options

Faced with a myriad of options, why should you choose a Tier-1 network provider?

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Foreword

Decoding the jargon and fairly evaluating the myriad of access options.

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David has over 20 years of experience working with large global enterprises and public sector organisations to define and meet their infrastructure and security needs. This has included wired and wireless networks for Internet of Things (IoT) applications and agile, intelligent infrastructure to support demanding applications like artificial intelligence (AI).

The past decade or so has seen a massive shift to cloud-based services. Traditional business apps have been replaced by Software as a Service (SaaS). And now, when companies develop new services, many turn to Infrastructure as a Service (IaaS) such as Amazon Web Services (AWS). But disruption doesn't stand still. New technologies, like IoT and AI, are driving a new wave of business re-invention. Often, the procurement process for network fails to consider critical factors that could dictate the future performance of the business. In this paper, I share some key things I think it's important to understand when evaluating providers. This is based on many years of helping global enterprises and public sector organisations define, procure and manage the infrastructure they need.

Getting the infrastructure for success

As "the Cloud" is effectively another name for the internet, it's unsurprising that many companies have increased their use of internet access to connect their sites to each other and the applications their businesses need to operate. There are savings to be made, but procuring these services purely based on cost presents several potential pitfalls.

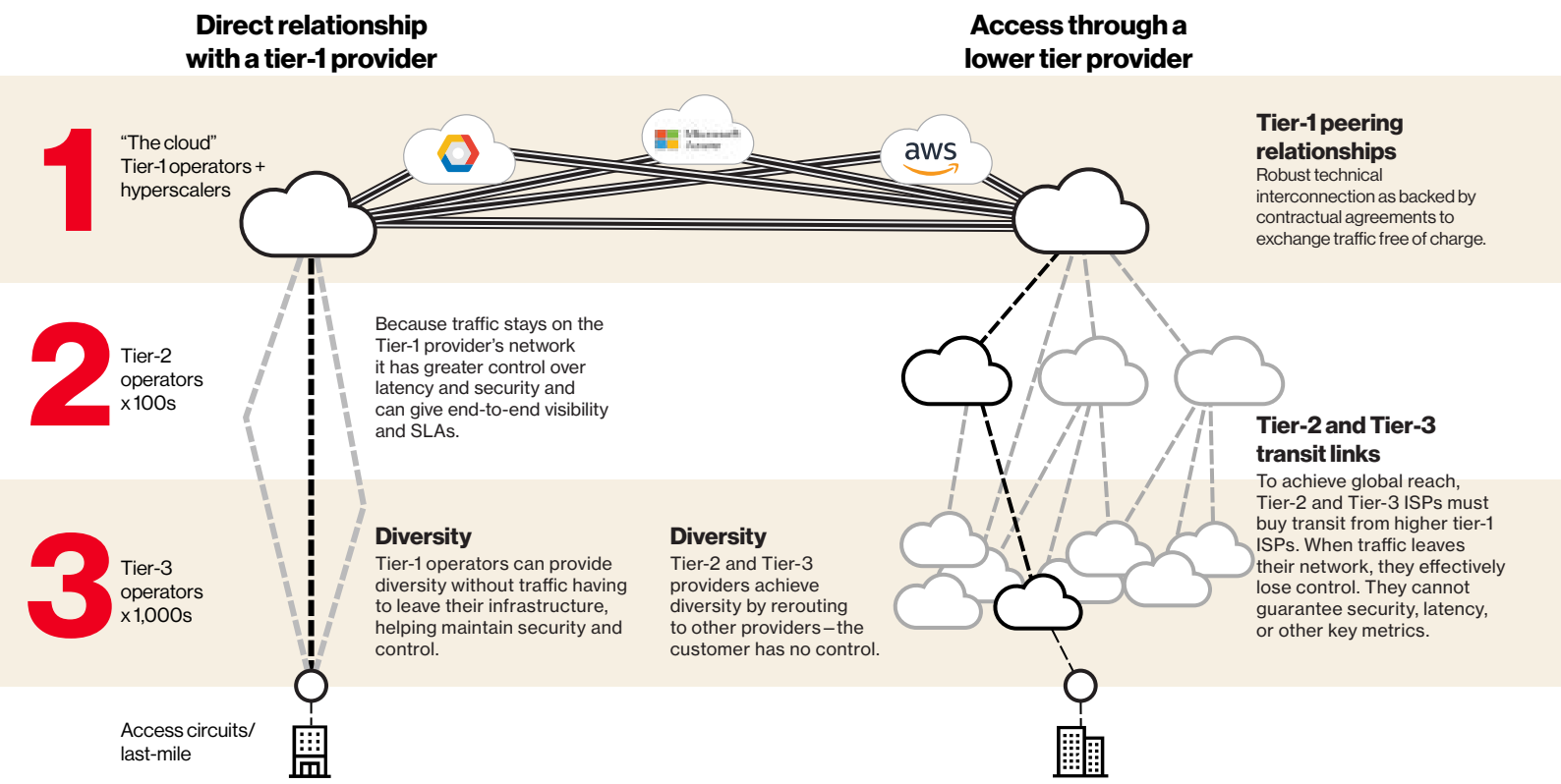
There are so many connectivity options on offer, not just from established telecommunication companies, it's often difficult to assess the performance and reliability of the different choices.

Be ready for AI and the next big thing

At the same time, expectations are growing. Companies don't just want ever-greater bandwidth, they need extremely low latency (the time it takes to send a request and receive the response) to enable them to deliver near-real-time interactions.

Treating networking as a commodity could lead to being locked into a contract for a service that doesn't meet your needs now—let alone into the future. That could have a huge impact on customer service, innovation and results. That makes having a basic understanding of how global networks work essential for those leading the procurement process.

The three-tier model



The day-to-day experience of technology in our personal lives has left many people with the false impression that the internet just exists and is free to access—all you need to do is find a way to connect to it. That's understandable, but a dangerous assumption if it's your business's performance that's on the line, not your streaming experience.

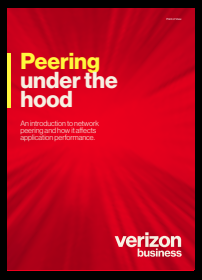
Tier-1 ISPs

The best speed, security and availability exists when locations are directly connected to a Tier-1 ISP because they have vast resources, influence and technical superiority—including sophisticated self-healing capabilities and artificial intelligence (AI) to proactively spot and resolve issues. Tier-1 ISPs talk to the major cloud providers on equal terms and often peer with them directly. They're also able to exert influence on other operators—including choosing which lower-tier operators they peer with and on what terms.

Tier-2 ISPs

To achieve global reach, Tier-2 operators buy transit from Tier-1 ISPs. When traffic leaves their network, they effectively lose control. They cannot guarantee security, latency, or other key metrics.

The amount of transit that they need to purchase will directly impact performance. Shared peering points can become congested during peaks in demand. Businesses buying access services from these operators cannot see bottlenecks like this, so they never get full visibility of how their network is actually performing or where there are pinch points that could be affecting application performance.



Peering under the hood

The places where traffic is exchanged between network providers are called peering points. Tier-1 operators have contractual free interchange agreements with each other and often with leading cloud service providers. Lower tier operators peer too, but may face capacity restrictions and charges, which can affect performance, particularly at busy times. Learn more about peering in this other paper from this series:

15-minute read

Tier-3 ISPs and other operators

Because they are even further removed from the core of the internet, Tier-3 ISPs have even less control over the delivery of your data, as it needs to pass through multiple peering points on its journey, latency is likely to be much higher and less consistent. SIs and OEMs are lacking in ability to be the custodian of your data reaching its destination in the safest and fastest possible way. Where you've found there is no alternative but to use a SI or OEM vendor, it's essential you have some understanding of which tier of ISP they are using and what influence they have over the provider in the event of an issue.

Beware

The hidden costs

Tangibilising the intangible

It's harder to quantify the potential costs associated with poor reliability, latency and delays resolving issues, but it's essential to factor these in to get a true total cost of ownership (TCO). Not doing so could expose your business to substantial risks over the course of the contract. The cost of these "intangibles" could very quickly become a real problem.

Lost opportunities

Downtime is more than a technical inconvenience, it's a proven revenue killer. The vast majority (93%) of business leaders in an Oxford Economics study said that outage-related revenue loss was a regular reality.[1] While not as severe, poorly performing services can also damage employee productivity and impede customer service, leading them to look elsewhere.

Impaired productivity

Poor application performance due to network issues can have a direct impact on employee productivity. The impact can last long after the issue is resolved has been resolved as employees strive to "catch up" and get things back in order. Ongoing/recurring issues can have a huge detrimental effect on employee morale.

Inferior employee experience

IT issues like laggy video calls and slow transactions are bad for the bottom line and can be very frustrating for staff, leading to poor morale and reduced motivation. In a survey of over 6,000 workers by Ricoh Europe, 28% cited employee experience as a reason they would look for another job.[2]

Lower customer satisfaction

We've all heard an agent say, "Bear with me a minute, the system is slow today." You probably rolled your eyes. Sluggish service, long queues due to slow transaction processing and other issues tied to poor connectivity damage the customer experience and can quickly affect loyalty. In 2024, 90% of IT leaders reported that outages or disruption had reduced customer trust in their organisation.[3]

Damage to reputation

Ongoing performance issues can lead to long-term damage to shareholder confidence, the company's share price and its ability to attract the best talent. Nearly two-thirds (64%) of workers say they would avoid a company with a reputation for poor IT systems and digital workplace issues.[4]

Bring. it. on.

We're ready for the challenge

As a global Tier-1 operator we're directly connected to the other Tier-1 operators and we have the ability to dynamically allocate bandwidth between these ISPs to provide the service you need. No matter how demanding your needs are, we're confident that we can step up to the challenge and enable your application providers and DevOps teams to execute services with speed and be responsive to the needs of both your company and your customers.

Better now and ready for the future

We have extensive experience of establishing and managing peering arrangements with Tier-2 providers. Therefore, if your business currently has a network that uses multiple providers, we can perform a managed takeover, manage these providers on your behalf and build strategies to optimise these circuits by transforming them into a state that gives them the fastest possible route to the Tier-1 backbone.

In most cases, we can offer direct access to our own Tier-1 private internet backbone, giving your business:

- Better and more consistent application experience
- Improved visibility and reporting
- End-to-end performance metrics and service-level agreements

This can help:

- Resolve issues more quickly, freeing up IT resources
- Improve the employee experience
- Boost productivity
- Increase security and protect your reputation
- Improve responsiveness
- Increase customer satisfaction
- Optimise IT spending and inform future infrastructure spend

And as the volume of data that you gather grows, you can rest assured that Verizon will be able to scale services to maintain performance and help you get more from that data.

Let's talk

From IoT to real-time analytics and AI, Verizon can help you stay at the forefront of using technology to monitor, manage and improve operations. If you still have questions after reading this paper, get in touch with us at: verizon.com/business/en-gb/contact-us

The Network Procurement series

This paper is one of a series exploring the growing demands on enterprise networks and important questions companies should ask during the procurement process to help ensure that the solution they chose are truly enterprise-grade and will meet their current and needs.

Something big is coming

Data | IoT | AI

This paper explores some of the key drivers behind the explosive growth in the volume of data enterprises are gathering and what that means for network planning.
verizon.com/business/resources/articles/iot-genai-data-explosion.pdf

Access: navigating the options

Performance

There are many decisions to make when buying networking. Understanding the three tiers of the internet is critical to thoroughly evaluating the options. This paper explains what they mean for network performance and security.
verizon.com/business/resources/articles/tier-1-isp-enterprise-connectivity.pdf

Network peering

Cloud | Performance | Reliability

Peering is fundamental to network performance and consequently enterprise applications, particularly ones based in the cloud. Despite this, it's rarely discussed during procurement. Read this short paper and put that right.
verizon.com/business/resources/articles/network-peering.pdf

Are you in the dark about performance?

Data | Performance | Manageability

Read this paper to learn how the decision to split the procurement of physical (underlay) and logical (overlay) networks can affect network performance, visibility and managability.
verizon.com/business/resources/articles/overlay-underlay-network-procurement.pdf

Better together

Security | Performance | Manageability

Cyberthreats continue to grow in volume and sophistication. This short paper offers six reasons to consider greater integration between cybersecurity and networking to improve protection while reducing workload and cost.
verizon.com/business/resources/articles/unified-network-security-services.pdf

Supercharge your AI applications

AI | Performance

Artificial intelligence (AI) promises to be the most disruptive technology since the internet became mainstream around 30 years ago. This paper explains why network performance is critical to the performance of many AI applications and realising the anticipated benefits.
verizon.com/business/resources/articles/network-infrastructure-ai-platforms.pdf

1 Oxford Economics, The hidden costs of downtime: The $400B problem facing the Global 2000, 2024
2 Ricoh Europe, European employees dissatisfied by outdated technology in the workplace, 2024
3 Pagerduty/Censuswide, Customer impacting incidents increased by 43% during the past year- each incident costs nearly $800,000, 2024
4 Ivanti, 2025 Digital Employee Experience Report, 2025

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