Telstra

Five reasons AI is driving a rethink in connectivity

In an AI-first world, the physical network underlay is as critical as the software it supports. While overlay routing such as SD-WAN is commonplace in enterprises, not all underlay is the same. The public Internet is a 'best-effort' environment where routing often prioritises low cost over high performance. For AI, this is a dealbreaker: high jitter and sub-optimal paths can stall expensive GPU clusters, while real-time inference demands high bandwidth, predicable routing and low latency.

To understand the implications, we delve deeper into the five reasons why AI is driving a rethink in connectivity, as outlined by analyst Omdia in its recent research, along with questions to ask your network provider.

1 AI network traffic patterns are less predictable

Because AI training and inference involve massive, synchronised data surges to GPUs, your service provider must be equipped to handle throughput spikes that can be 10-100 times larger than standard web traffic. Physical fibre cables, peering pointsand routing logic all matter to convey AI workloads safely.

Questions to ask:

- Can you map your network's physical proximity to major AI hyperscalers and edge PoPs, and do you offer single-hop direct interconnections to minimise latency for AI processing?
- What dynamic, multi-path routing policies do you have in place to ensure that AI traffic is automatically rerouted in real-time if a primary path experiences congestion?

2 The public internet was not designed for AI

The public Internet was designed for best-effort delivery, which is inherently at odds with the compliance and determinism that AI processes require. To move to a controlled AI fabric, enterprises must scrutinise how their providers bypass the Internet's limitations. This demands high-quality physical network underlay coupled with an identity-aware, policy-driven routing layer to steer traffic.

Questions to ask:

- How does your network architecture handle congestion?
- What is the maximum speed available for Internet, MPLS & EPL Services?
- What SLAs are provided on latency & packet delivery ratios

3 Security demands physical and virtual control

To help your enterprise maintain end-to-end security, you need to look past the software layer and scrutinise the physical foundations of your service provider's network. It is vital to acquire secure, high-performance connectivity to your SSE platform. You should consider choosing higher-performance, lower-latency network paths that strengthen your security posture.

Questions to ask:

- What underlay optimisation do you employ to ensure that high-performance, low-latency paths to essential SSE security points of presence (PoP)?
- On which of your network services is MACSec supported?

4 Data sovereignty requires a network audit

Sovereignty brings complex new compliance responsibilities to enterprises, and they vary by country. Data localization and sovereignty rules may also introduce cross-region networking traffic asymmetries. App and data may stay in country, but identity and access control may sit in another region. Sovereignty may restrict or prevent cloud data replication, archiving or disaster recovery to foreign regions.

Questions to ask:

- How do you ensure that sensitive AI data remains within specific geographic or sovereign boundaries while in transit? What are the solutions?
- Can you provide an AS Path between two sites which minimizes the number of AS hops?

5 Resilience has a wider definition in a multi-cloud world

As workloads become distributed across hyperscalers, edge zones, and remote endpoints, resilience must be redefined as the ability to maintain secure, high-performance connectivity regardless of where the data lives or moves. Resilience is becoming multi-faceted, factoring type of workload, required data paths to ensure performance and not just about securing uptime.

Questions to ask:

- Can you provide a physical map of your cloud on-ramps and demonstrate that our traffic has at least two geographically and physically diverse paths to each of our hyperscaler regions?
- What is your historical mean time to recovery (MTTR) for cloud-interconnect failures, and how do you protect our traffic from border gateway protocol (BGP) route leaks?
- How does your network architecture ensure that security inspections (SSE/SASE) don't become a single point of failure or a performance bottleneck as workloads move dynamically between the edge and the cloud?

Why choose Telstra International?

Physical network choice
We provide diverse network paths connecting major Asian cities including Tokyo, Hong Kong, Seoul, Taipei and Singapore.

Resilient links
We have access to 30 cable systems and operate 38 cable landing station across Asia, Australia and the US. This includes 15.2Tbps of dedicated subsea network servicing.

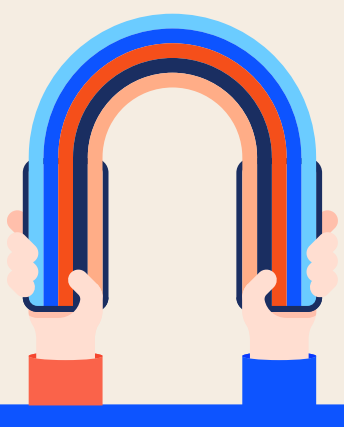
Reliability
Our proactive investments in subsea infrastructure keep them operating in challenging environments. And with technical experts based in more than 20 countries, we offer reliability across the globe.

High-bandwidth services
Our EPL services extends from 10Mbps to 400Gbps, with a choice of bandwidth increment options. We offer service levels for service delivery, availability and round-trip delay (RTD).

Low latency links
Our strong international peering capabilities ensures short hop connectivity to global content and users.

Reach and proximity to hyperscalers
We provide connectivity through PoPs in close to 200 countries and territories and have a presence in over 600 data centres.

Trusted provider
Our track record spans over 70 years as a leading and award-winning connectivity provider and our information security processes are certified to ISO/IEC 270001 standards.



About Telstra International

Telstra International is a trusted digital infrastructure and connectivity partner in Asia Pacific and the global arm of Telstra, a leading Australian telecommunications and technology company. We provide secure and resilient connectivity solutions to meet the growing needs of thousands of technology, enterprise, and wholesale customers, with a global network that leverages more than 30 cable systems spanning over 400,000 kilometres.

Contact your Telstra account representative for details

telstraenquiry@team.telstra.com

telstrainternational.com