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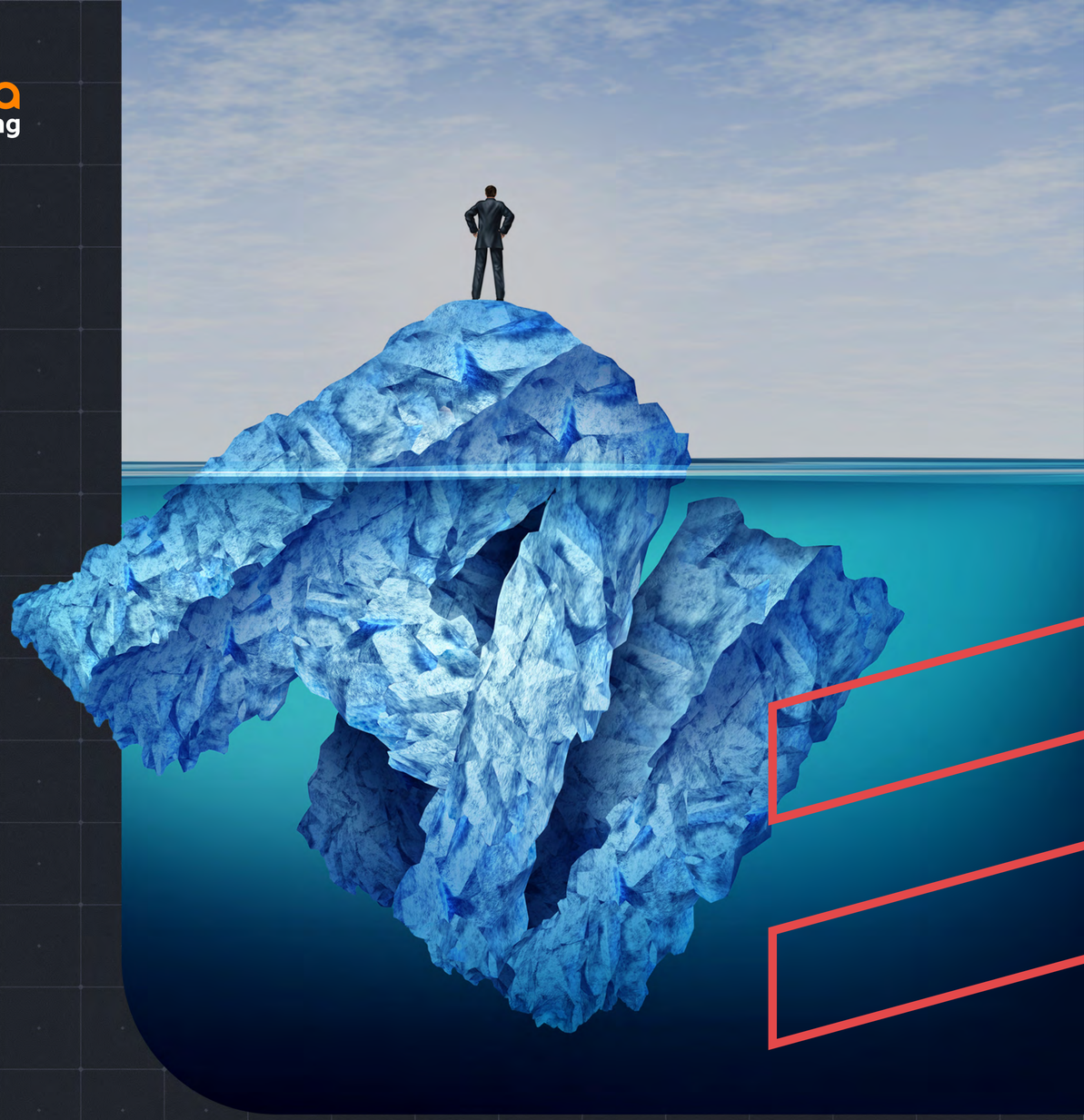
What lies beneath Is your network AI-ready?

Every organisation is investing in AI tools, but few are paying attention to the network layer that makes them work. Here's what AI-ready actually looks like, and how to find out where you stand.



Key takeaways

1. AI tools get all the attention, but the network is the layer that makes them work. Most organisations are investing above the waterline without looking at what's underneath.
2. AI raises the stakes for network performance and reliability, with greater bandwidth demands, lower latency requirements and a higher cost of failure.
3. AI-native networking, AI built into the network itself, is already helping to solve the readiness problem. The AI your organisation needs to prepare for this is available today.
4. A structured network assessment is the practical starting point: discover what you've got, identify the gaps and build a prioritised roadmap to get AI-ready.

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Garth Sperring leads Nexon's networking and cybersecurity practice, overseeing network architecture, SD-WAN, security and managed services. A telecommunications engineer and solutions architect by background, Garth works closely with organisations building reliable, secure network foundations for cloud, AI and hybrid infrastructure.

The AI conversation nobody's having

Boardrooms across Australia are working fast to deploy copilots, automate workflows, build smarter customer interfaces and put AI and machine learning to work across operations.

Global investment is surging, with AI infrastructure spending hitting US$82 billion in a single quarter in 2025, up 166% year-on-year.[1]

There is momentum in Australia too, however the Reserve Bank found that enterprise-wide AI adoption remains at an early stage, largely piecemeal and often employee-led rather than employer-led.[2]

Meanwhile, the federal government's AI Adoption Tracker shows adoption climbing fast, with 68% of businesses with 20 to 199 employees and 82% of those with 200 to 500 now using AI in some form.[3]

There's plenty of activity, but less thought about how it all fits within a broader technology platform. Most of that energy is going into the AI tools people can see – chatbots, copilots, analytics dashboards – but fewer are asking a more fundamental question: Is my network ready for all this?

US$82 billion

AI infrastructure spending in a single quarter, up 166% YoY

68-82%

of Australian businesses with 20+ employees now using AI

> Organisations get a bit blinded by the light. They see the AI applications, they get excited about what's possible, and they don't always consider the performance and security of what's running underneath.

Garth Sperring
General Manager – Network & Cyber, Nexon

The network is the layer that makes every AI tool work. It carries the data, connects users to applications and keeps everything moving. And right now, it's the part of the AI conversation that is being ignored.

[1] IDC, Artificial Intelligence Infrastructure Spending to Reach $758Bn USD Mark by 2029, 2025
[2] Reserve Bank of Australia, Technology Investment and AI: What Are Firms Telling Us?, 2025
[3] Department of Industry, Science & Resources, AI Adoption Tracker, 2025

Why AI is raising the stakes for your network

Since organisations made the mass migration to the cloud and SaaS, network connectivity has been the foundation of daily operations. AI is a catalyst for renewed focus on that foundation, because it amplifies the demands in three ways.

AI workloads are more intensive

AI applications need more bandwidth and lower latency than traditional software. A 2026 study of more than 1,300 networking professionals worldwide found that while 99% of organisations are adopting AI, fewer than half believe their networks can actually support the bandwidth and low latency those workloads require.[4]

The gap between what AI demands and what most networks can deliver is wide – and growing.

AI is increasingly customer-facing

AI chatbots and virtual assistants are becoming the front door to business services. Consider a simple example: you log into your bank's portal looking for a statement from a closed account. You can't find it through the menu, so you ask the AI chatbot. Within seconds, it identifies the account, finds the year and delivers the document. It's fast, intuitive and increasingly the experience customers expect.

If the network is down or slow, that important interaction leaves customers frustrated.

The cost of failure is climbing

As AI becomes embedded in core operations, network outages become business outages. Recent research found Australian organisations with more than 500 employees face average financial losses of $251,000 from a single unplanned downtime event, and recovery takes an average of 7.4 days.[5]

When AI is driving real-time customer interactions, the impact compounds quickly.

[4] Broadcom / Dimensional Research, The State of Network Operations, 2026: AI and its Effect on Enterprise NetOps
[5] Splunk, Downtime: A Rising Challenge for ANZ Organisations, 2025
[6] Gartner, 40% of Enterprise Apps Will Feature Task-Specific AI Agents by 2026

> It comes down to two things. Reliability – always-on, with redundancy and failover to prevent a single point of failure. And performance – making sure the network is optimised so that users and customers aren't lagging, especially in real-time interactions.
>
> **Garth Sperring**
> General Manager – Network & Cyber, Nexon

According to Gartner, 40% of enterprise applications will include AI agents by the end of 2026, up from less than 5% in 2025.[6] Each agent places new demands on the network.

Signs your network may not be ready

If any of these sound familiar, your network may need attention before AI workloads go further:

- You're running on a single carrier with no failover if it goes down
- Your team spends time manually troubleshooting Wi-Fi or connectivity issues
- There are devices on your network that nobody can fully account for
- Your SD-WAN was configured a year or more ago and hasn't been reviewed since
- Users complain about lag on video calls and cloud applications, but you can't pinpoint why
- You have no visibility over what staff are pasting into public AI tools

What an AI-ready network means

AI-ready infrastructure can give rise to thoughts of data centres, GPUs and compute power, the things that matter for organisations building their own AI models.

However, for the mid-market majority in Australia – the organisations consuming AI primarily through cloud platforms and SaaS applications – the readiness question is more about the network that powers the visible AI tools that teams are already using. And that network is a multi-layered infrastructure, with critical layers beneath the surface.

What's below the waterline

Above the waterline sits everything that gets the attention, like chatbots, copilots and analytics platforms. Below is the network layer that makes them function, and embedded within that layer is something most organisations haven't yet considered: AI working inside the network itself.

This is the concept of an AI-native network, one that's been built from the ground up with AI embedded in its operations. AI-native networking uses machine learning to profile every device on the network, detect anomalies in real time, identify root causes of problems and recommend fixes – often before anyone notices there's an issue.

The AI applications above the waterline need a capable, high-performance network to run on. And the most effective way to build and manage that network is with AI.

The impacts are here already

Organisations running AI-native platforms have reported up to 90% fewer network trouble tickets and 85% faster infrastructure upgrades.[7]

In one case, a national retail chain used AI-powered networking to identify interference patterns affecting 40% of its stores – a problem that would have taken weeks to diagnose manually.[8]

In an IDC study, 83% of IT leaders said AI-powered network management improved the alignment between their network and broader business objectives.[9]

90% fewer
network trouble tickets with AI-native platforms

[7] HPE Aruba Networking, What Is an AI-Native Network Really?, 2025
[8] HPE Aruba Networking, 3 Common Challenges Solved by AI-Powered Networking, 2025
[9] IDC, Worldwide AI in Networking Special Report, 2024

Start with security guardrails

Cloud providers secure their platforms, but they can't control how your people use them, what they share, what they paste into AI tools and who has access to what. That means each organisation must set their own governance, access controls and monitoring.

Identity and access management

Left unchecked, AI tools like Microsoft Copilot can often access everything the user can. If document permissions in SharePoint or similar platforms haven't been configured carefully, AI becomes a fast path to sensitive information that was never meant to be surfaced – salary spreadsheets, board papers, personal information or contracts.

Verifying identity and enforcing role-based access are essential before any AI rollout.

AI firewalls and governance controls

A new category of cloud-based AI firewall and proxy solutions is emerging, purpose-built to sit between users and AI applications. These tools inspect prompts and responses for sensitive data, flag when confidential documents are being pasted into public AI platforms and enforce organisational policies across browsers and SaaS applications. They address workforce-level concerns such as shadow AI usage (staff adopting AI tools without IT oversight), sensitive data leakage and compliance enforcement, giving organisations visibility and control without blocking access entirely.

Monitor what your people share with AI tools and add controls before something leaks.

Both layers are part of securing foundations. Lock down who can access the tools and define precisely what they can share.

How to start building an AI-ready network

For understandable reasons, network infrastructure has evolved as a patchwork of links, workarounds and fixes, with layers added over the years without a clear picture of how it all connects.

While this can work in a traditional environment, AI workloads expose the weaknesses in ways that manual processes didn't.

An AI readiness assessment cuts through that complexity by examining the end-to-end chain, including office Wi-Fi, LAN switching and the SD-WAN layer, as well as reviewing the security controls and cloud applications your people depend on.

The end-to-end network chain

At each point, you're asking: where are the gaps, where are the single points of failure and where is performance falling short of what AI workloads will demand?

A 4-step assessment process

For organisations without large internal networking teams, this is often best done with a partner who can see the whole picture and manage it going forward. A practical assessment follows four steps.

1 Step 1: Discover

Map the environment – network topology, device inventory, management tools and security controls already in place.

2 Step 2: Workshop

Prioritise with stakeholders – validate the performance limitations, explore future business initiatives and define what good looks like.

3 Step 3: Analyse

Assess the current state using maturity scoring, secure posture, network management and gap analysis that accounts for future AI workloads.

4 Step 4: Recommend

Deliver a prioritised roadmap including new solutions, platform enhancements and managed service options.

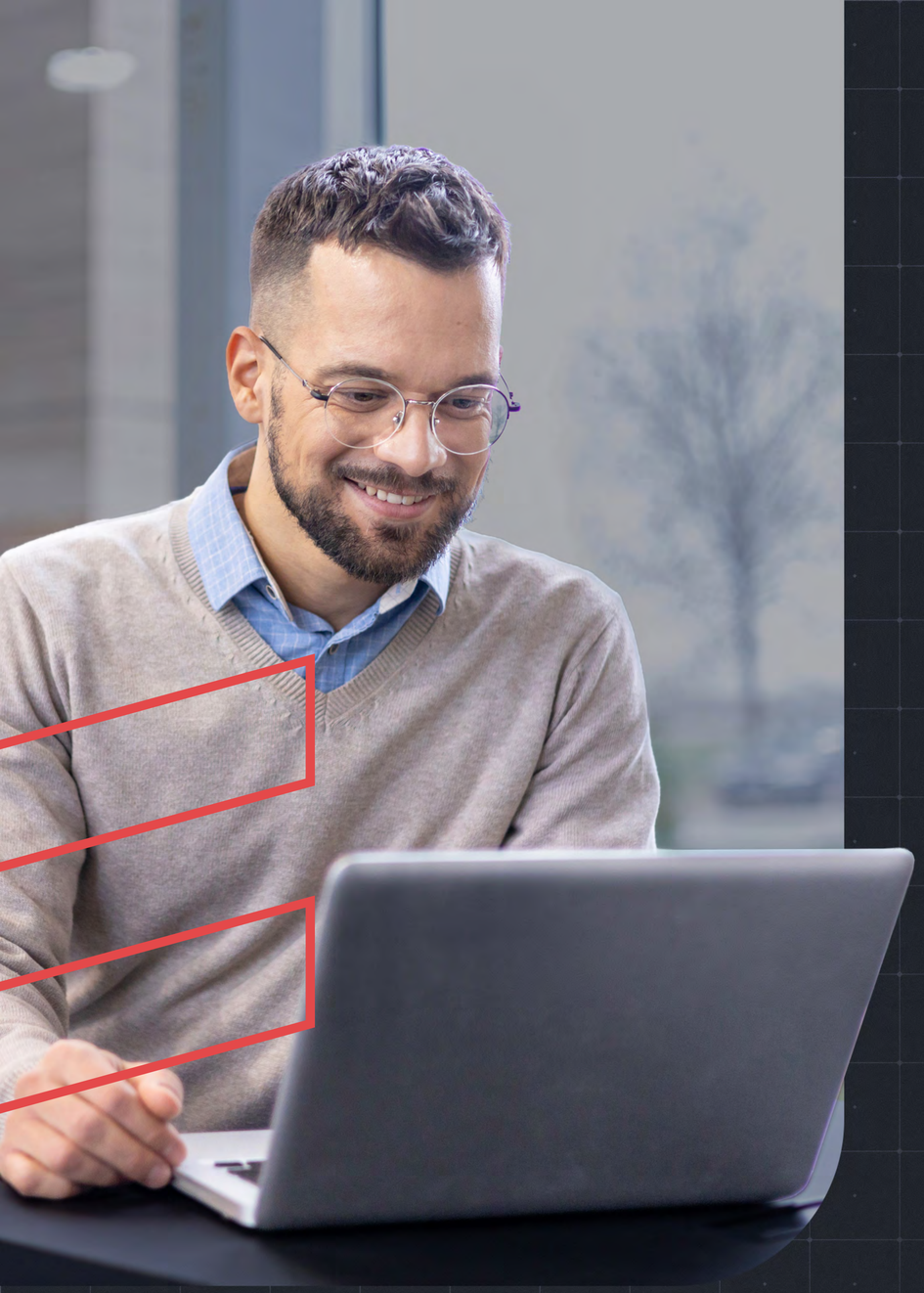
> One of the things we come across over and over again is carrier dependency. An organisation relies on a single carrier, and one outage takes them down completely. When you bring redundant links from multiple carriers into the SD-WAN, you eliminate that single point of failure. It's one of the quickest wins in any assessment.
>
> **Garth Sperring**
> General Manager – Network & Cyber, Nexon

Some improvements deliver immediate value – AI-powered troubleshooting and automated device profiling, for example, can reduce the volume of network support tickets from day one.

Others are longer-term infrastructure decisions: modernising the SD-WAN layer, building in carrier redundancy to ensure always-on connectivity. The assessment gives you a clear picture of both.

Questions to ask yourself —

- Do you know what would happen to your operations if your primary carrier went down?
- Can your network team identify every device connected to your network right now?
- Do you have visibility over what your staff are pasting into public AI platforms?



Making all the pieces work together

No single technology covers the full picture. The network is an end-to-end system – Wi-Fi, LAN, WAN, security, carrier connectivity – and getting it right means understanding how all the pieces work together.

HPE Aruba Networking provides the AI-native networking platform – the technology that delivers capabilities below the waterline. AI-powered device profiling, intelligent troubleshooting, anomaly detection, self-healing connectivity and root cause analysis are built into the platform rather than added on after the fact. It's designed to collect high-quality telemetry from across the network and use it to deliver insights that make operations simpler, faster and more reliable.

Nexon brings the end-to-end domain expertise to put that technology to work. With deep capability across networking, security and cloud, Nexon sees the whole chain from the access layer through to the carrier and the application.

Nexon also works with organisations to deploy and optimise the AI tools built on top of that foundation, from intelligent chatbots and virtual assistants to analytics and AI-powered customer experiences.

Critically, Nexon is carrier-independent, maintaining relationships with Telstra, Optus, Vocus and other major providers to deliver the multi-carrier, active-active SD-WAN configurations that eliminate single points of failure.

For organisations without dedicated network engineering teams, Nexon's managed services provide the oversight and optimisation that keep everything running.

> The network has always been an imperative. AI is just bringing that back to the front. The organisations that take the time to look at what's underneath – really look at it, end to end – are the ones that'll get the most out of everything they're building on top.

Garth Sperring
General Manager – Network & Cyber, Nexon

Take the first step: AI Network Readiness Assessment

Nexon's AI Network Readiness Assessment is a structured, expert-led evaluation of your current network environment. Following the four-step framework described above – Discover, Workshop, Analyse, Recommend – gives you a clear picture of your network's current maturity, the gaps that need attention and a prioritised roadmap to get AI-ready.

The assessment covers the full end-to-end network chain, including Wi-Fi, LAN, WAN, remote access, carrier dependencies and security controls.

You'll receive a detailed report with maturity scoring, gap analysis and recommendations spanning short, medium and long-term initiatives, including managed service options where they make sense.

Ready to find out if your network is AI-ready?

Book an AI Network Readiness Assessment with Nexon.

About Nexon Asia Pacific

Nexon is an award-winning digital and IT services partner for mid-market, enterprise and government organisations across Australia. We offer clients a uniquely broad suite of solutions requiring end-to-end capabilities coupled with specialist expertise in security, cloud and digital solutions. As a certified and accredited local and state government provider, CREST and ISO-certified, Nexon partners with world-class technology vendors to deliver innovative and integrated solutions.

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