

Networking the AI Data Center



Get ROI from your AI with optimized GPU computation.



AI infrastructure spending will increase Data Center CAPEX by **15% to over \$500 Billion** by 2027

Source: Dell'Oro Group

THE PROBLEM

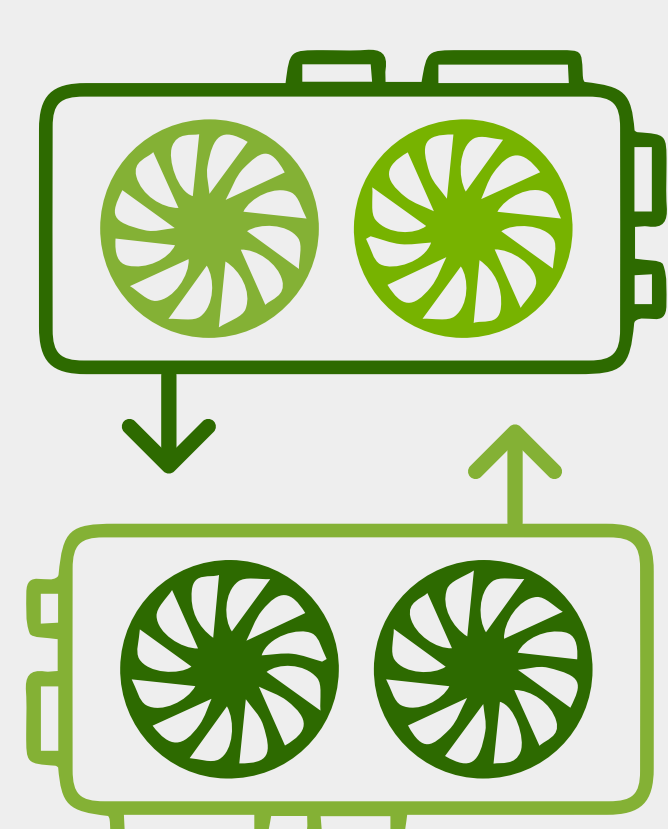
\$400,000+

per GPU-powered AI training server

Source: Juniper research

The cost of running special-purpose Graphics Processing Units (GPUs) in 2023

GPU compute resources are costly, but necessary for AI-driven data center network infrastructure. To get the most out of these resources for AI training, you must be tactical and economical. Otherwise, training will be limited by network constraints, rather than compute capabilities.

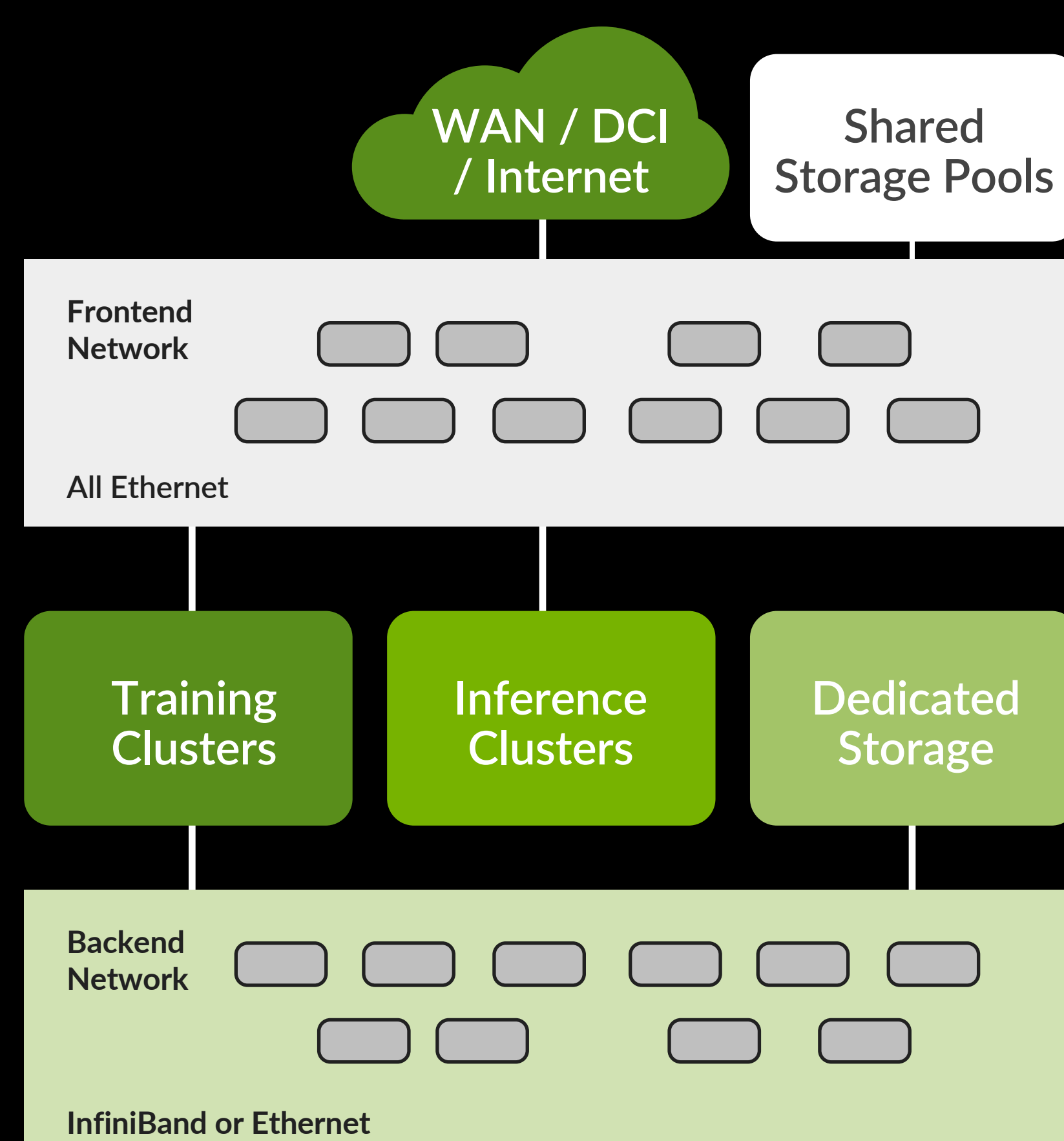


Parallel processing across GPUs increases efficiency. However, poor network design can lead to tail latency, negating your efficiency gains and delaying job completion time.

THE SOLUTION

An AI Data Center Network can help

As an open, future-proof, and proven solution for enterprise networks, Juniper's AI Data Center Network improves the return on your infrastructure investment.



Massively scalable performance

Fastest job completion time.

- Optimize GPU efficiency
- ASIC diversity allows customers to pick, select, and mix compute based on location, price, performance, and preference
- Support Juniper ASICs and Broadcom chips in our families of AI data center networking products



Industry-standard openness

Designed to work with existing infrastructure.

- Industry-driven ecosystems promote innovation and drive down costs
- 400G and 800G Ethernet technology with the backing and expertise of the industry to deploy cost-effective innovations without vendor lock-in
- QFX/PTX, with 400G and 800G market leadership, is an industry-best solution



Experience-first operations

Automate and simplify AI networking.

- Automate and simplify networking for the backend, frontend, and storage fabrics
- Maximize current DC-IT resources, lower operational requirements, and reduce operating expenses
- Juniper Apstra, as the only intent-based, multivendor data center solution, is inherently designed for efficient, economical AI learning



See how Juniper powers the AI revolution with enhanced data transfer, lossless transmission, and congestion-control technologies.

Go deeper into the challenges and solutions of AI data center networking.

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