



INSIGHTS | TECH BRIEF

Achieving Consistent Data Center Outcomes with Juniper Apstra

Designing a modern data center often exposes a gap between initial plans and the actual network in production. Historically, data centers expanded organically, combining disconnected systems never intended to work in concert. That approach no longer holds. With average construction costs nearing \$1,000 per square foot—and additional fiber infrastructure costs layered on—today's data centers must be precisely architected from day one.²

One growing use case is the integration of AI workloads. According to a 2025 McKinsey study, 92% of enterprises plan to increase AI investments, yet only 1% describe their implementations as mature. In such a high-stakes environment, precision is not optional.³

The Purpose-Driven Data Center

Modern data centers aren't just storage and compute hubs. They've become the operational core for delivering services—hosting cloud platforms, analytics engines, hybrid collaboration tools, and connected devices. Their impact now reaches far beyond uptime metrics, touching business-level outcomes like customer retention, revenue expansion, and product delivery timelines.

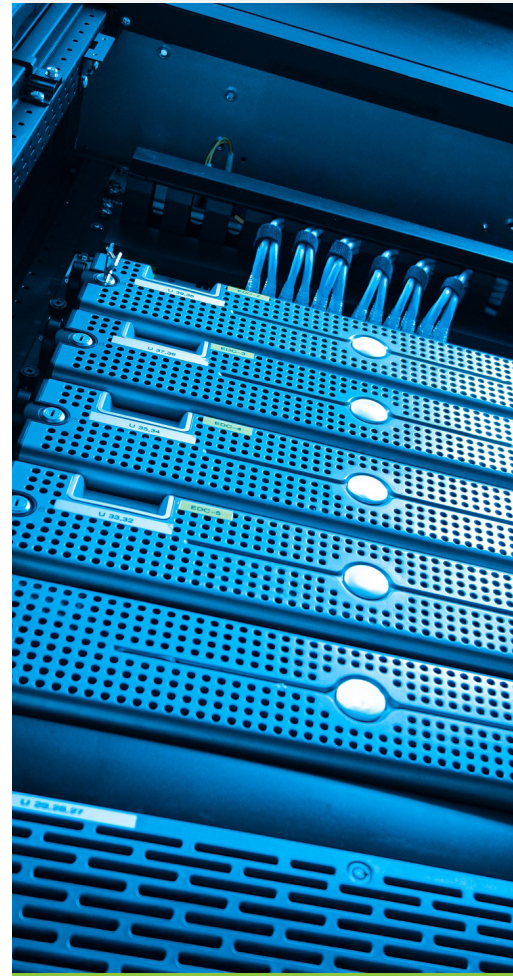
A Practical Approach to Network Design

The success of your business heavily depends on the efficiency of your datacenter, making it crucial to opt for a design that serves your business, not just at the outset, but throughout its lifecycle. Selecting a solution for designing and managing your datacenter requires several essential features:

- Holistic integration of all datacenter components towards a single, intent-driven goal
- A unified centralized platform that simplifies operations for your support team while providing AI-native insights for proactive management
- Extensive automation of routine tasks to reduce manual effort and errors
- Continuous validation of network performance by leveraging real-time analytics to detect anomalies and better align with design objectives

43%

of IT leaders reported that AI-enabled technology is the top new investment area for the next two years.¹



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- Advanced security measures that implement zero trust principles and leverage automated policy enforcement to ensure continuous compliance and business resilience

This may sound like a tall order, and it is, however, Juniper Apstra, in partnership with WEI, delivers it. Juniper's Apstra intent-based networking platform is a single, AI-native software solution that streamlines the design, deployment, and management of data center networks, from core to edge.

What can this proven recipe for modern data center transformation look like and what can it do for your organization? Start with Juniper Apstra, which delivers impressive results like 90% faster deployments, 83% reduction in operational expenses, and a 320% return on investment.⁴ Now add WEI's expertise in customizing Apstra solutions to unique environments like yours and you have a winning formula.

State Your Intent And Stick To It

Your data center's intent on Day 0 incorporates critical goals that must be maintained through Day 2 operations. This is challenging due to evolving needs and configuration drift. Juniper Apstra's intent-based blueprints address this by enabling you to define, automate, and continuously validate your network's alignment with these objectives.

What are Apstra Blueprints?

Juniper Apstra uses blueprints to collect all the applicable information needed to operate a network based on user-defined intent. These blueprints allow your team to specify desired network outcomes, such as performance, security, and topology requirements. These blueprints become the source of truth that Apstra continuously validates network performance against to detect configuration drift or anomalies in real time. Blueprints are also repeatable. This means you can leverage templates to create multiple consistent designs, enabling rapid and reliable service deployment.

Like traditional blueprints, Apstra ensures consistent, secure and resilient network operations, but don't think of Apstra blueprints as a static diagram. Apstra's AI-native analytics proactively detect issues like failing clients or insufficient capacity and suggest resolutions. These capabilities make blueprints more dynamic and responsive to real-time network conditions. Other innovative features include:

- Maps applications to network resources, providing visibility into how infrastructure supports critical services, optimizing AI workload performance
- Assesses the potential effects of network changes on applications, ensuring performance assurance and minimizing disruptions
- Leverages AI-native insights via Juniper Mist AI and Marvis for real-time visibility, anomaly detection, and centralized management across distributed networks
- Stores configuration history that allows rapid rollback to previous network states in multivendor environments, reducing resolution times
- Gathers granular metrics on switch health, optics, power, fans, and temperature to support future AI-native predictive maintenance

Multivendor Support And Adaptability

"Set it and forget it" doesn't work in today's fast-evolving data centers. To keep pace with innovation and business growth, your infrastructure must stay agile and adaptable.

Juniper Apstra avoids vendor lock-in by supporting the industry's broadest range of hardware and software, including open standards. This flexibility lets you choose the best technology for your needs-now and in the future. Apstra also integrates seamlessly with leading automation tools like Terraform and Ansible, empowering your team to work with the solutions they know and trust.

Embedded Zero-trust Security

Flexibility without security creates vulnerabilities, which is why Juniper Apstra integrates Zero Trust principles directly into its architecture. It does things like automating network segmentation to create secure zones that restrict lateral threat movement. It also enforces least privileged access through automated, intent-based security policies. In fact, Apstra continuously monitors your environment against predefined security parameters to instantly detect and addresses deviations. In short, Apstra helps prevent potential breaches before they occur.

Hybrid Cloud IBN Support

Intent-based networking (IBN) has evolved beyond traditional on-premises environments. Juniper Apstra simplifies hybrid network management by seamlessly integrating on-premises data centers with public and private clouds to handle AI, IoT, and edge computing workloads. This hybrid capability is powered by Juniper Apstra Cloud Services (ACS), a suite of cloud-hosted, AI-native applications providing real-time visibility, predictive analytics, automated operations, and multivendor support across diverse hybrid network environments. The integrated approach enables organizations to maintain consistent policies, security standards, and operational practices across all infrastructure components, regardless of location or underlying technology.

The Power Of Analytics

The potential of Intent-Based Networking (IBN) is more than just a compelling narrative. It is proving to be a game changer for enterprises of all verticals. Juniper customers leveraging Apstra are experiencing measurable benefits such as:

- 70% reduction in Mean Time to Resolution (MTTR)
- 80% improvement in operational efficiency
- A payback period of under six months



Talk to WEI today

If you're looking to harness the power of intent for your datacenter and maintain it across its lifecycle, we encourage you to contact WEI and consult with our IBN experts. As a partner of Juniper, we've directly observed the transformative impact Juniper Apstra has on our clients. Allow us to assist you in identifying and realizing the necessary outcomes for your datacenter and the business it supports.

Sources:

1. IDG research commissioned by WEI 2021
2. Breaking Down Data Center Cost: Building vs. Outsourcing
3. AI in the workplace: A report for 2025 | McKinsey
4. Juniper Apstra Simplifies Data Center Management for Managed IT Services | Official Juniper Networks Blogs

About WEI

WEI is an innovative, full service, customer centric IT solutions provider.

Why WEI? Because we care. We go further.

WEI is an expert in business technology improvement, helping clients optimize their technology environments and work efficiently. WEI works with clients to understand goals, integrate strategy with technology solutions, and leverage their current IT environment into one company-wide model to increase utilization and efficiencies around their unique business processes.