SOLUTION BRIEF

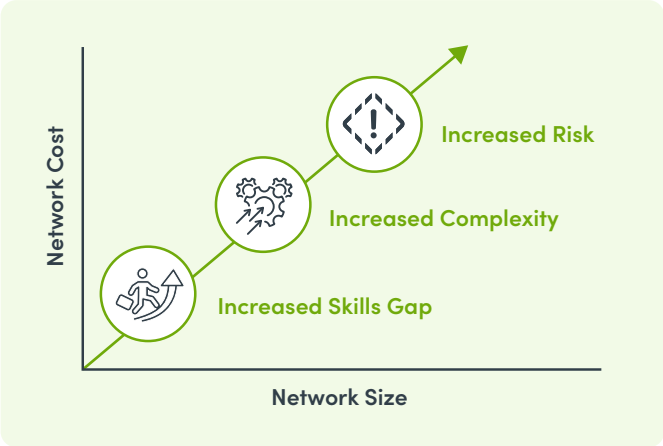
Reducing the Cost of NetOps

If you have been working with Enterprise or MSP (Managed Services Provider) networking for a while, you have seen the phrase "intent-based networking" and promises that these technologies will revolutionize networking and lead to the rise of the self-healing network. While these headlines sound exciting, the actual impact that previously introduced intent-based networking solutions have had on the enterprise landscape has been insignificant.

As it turns out, each vendor's promise of Intent-Based Networking falls apart as soon as you encounter a multi-vendor and cloud-connected environment - which every organization already has today! In addition, previous intent-based and network automation solutions all focus on Day 0 and Day 1 network operations – which is in fact, the smallest of the opportunities associated with operational efficiency since it only focuses on the rollout of new network devices including initial deployment, provisioning, configuration, and other tasks.

The Untapped Opportunity: Day-2 Automation

The BIG opportunity to increase operational efficiency in NetOps is Day-2 operations. Day-2 begins after initial deployments and lasts for years. It is this efficiency of this on-going NetOps function that drives the network's TCO upward without bounds.



For decades, the ratio between network size and operational cost has always been directly proportional. As the infrastructure scope or complexity increased, so did the resources, maintenance times and total operational costs. NetBrain changes all of that by focusing on the repetitive nature of operations, the maturity of automation and by focusing on managing the desired outcomes, not the litany of boxes that comprise every topology.

NetBrain has embraced the long-standing promise of Intent-Based Networking to deliver a fundamentally different approach to network management at scale. It allows you to continuously verify your multi-vendor hybrid network's ability to do essential work and verifies it's compliance with design, performance and security requirements.

NetBrain focuses on the delivery of IT services over the lifespan of your network (Day 2), not only the health of the underlying equipment. In this way, it continuously verifies the compilations of network intents to proactively prevent misconfiguration from manifesting into network outages or service degradations, reported or not.

Day 2 Network Automation

- Used by network teams in some midsize and larger enterprises, across multiple network domains
- Primarily to address troubleshooting and incidents/tickets
- Provides guided troubleshooting and ties in with ticketing systems
- These are more event-driven (site down, performance issue, ticket generated)
- Often helps to automate collection of device operational state
- Can be called by SOAR tools as part of a security playbook
- More mature enterprises evolve to anomaly detection after evolving from primarily reactive alert type triggers (for example, ticket initiated, yet after user affecting incidents have occurred)

Preventing network outages and service degradations has been the most sought-after holy grail of network operations for years. NetBrain intent-based automation enables customers to attain this capability, and quickly becomes a key means to dramatically reduce operational costs and risk.

Networks Intents are Business Intents

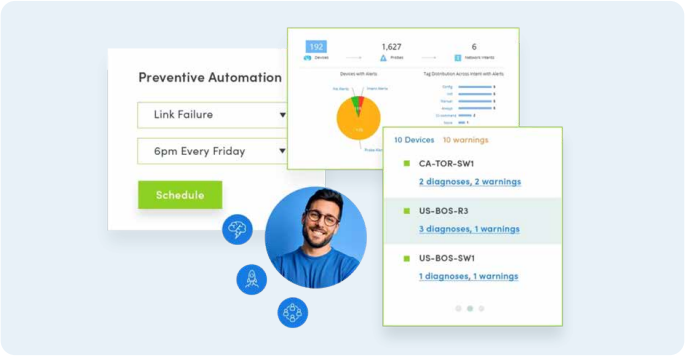
While there are many general-purpose network automation solutions on the market that focus on making sure networks are deployed correctly and optimized based on best practices, the ability to apply automation to the much bigger issue of on-going NetOps challenge has eluded the marketplace. The challenge has always been attempting to manage a network at the device level, rather than focusing on the desired outcomes of the network. NetBrain changes all of that and manages the hybrid multi-vendor network based on what services it can deliver, rather than at the underlying device level.

While we may be conditioned to think of enterprise networks as stacks of box-shaped appliances and miles of network cable, beyond the physical (or virtual) shell of network infrastructure, networks are comprised of tens of thousands of desired behaviors or "network intents." Network intents simply put, are the outcomes we expect our network infrastructure to deliver for a specific need (like the proper delivery of an application or service). For example, a typical network of 1,000 devices can easily be described as 100,000 Network Intents, when you consider all the unique and overlapping application specific network requirements.

Intents include things such as network design, performance expectations, security policies, and application paths, among many others. They range from the purely technical (e.g., packet size) to domain specific (e.g., access control policy) to business-driven (e.g., throughput or latency for a customer-facing or real-time application).

How does Intent-based Automation work?

Network Intents describe any hybrid infrastructure as a function of the services each part delivers. Intents describe the points of connectivity with their expected performance and the security profile and policies that you put into effect for that connection. A typical network is described by up to 100 times the number of hardware, software and virtual devices that are actually deployed, with the specific needs of each and every application codified into network intents.



NetBrain's Problem Diagnosis Automation System (PDAS) uses Network Intents to verify, enforce and report on the status of the network in real-time to support remediation efforts, automatically in response to external events, or proactively to assure the network is in a known state.

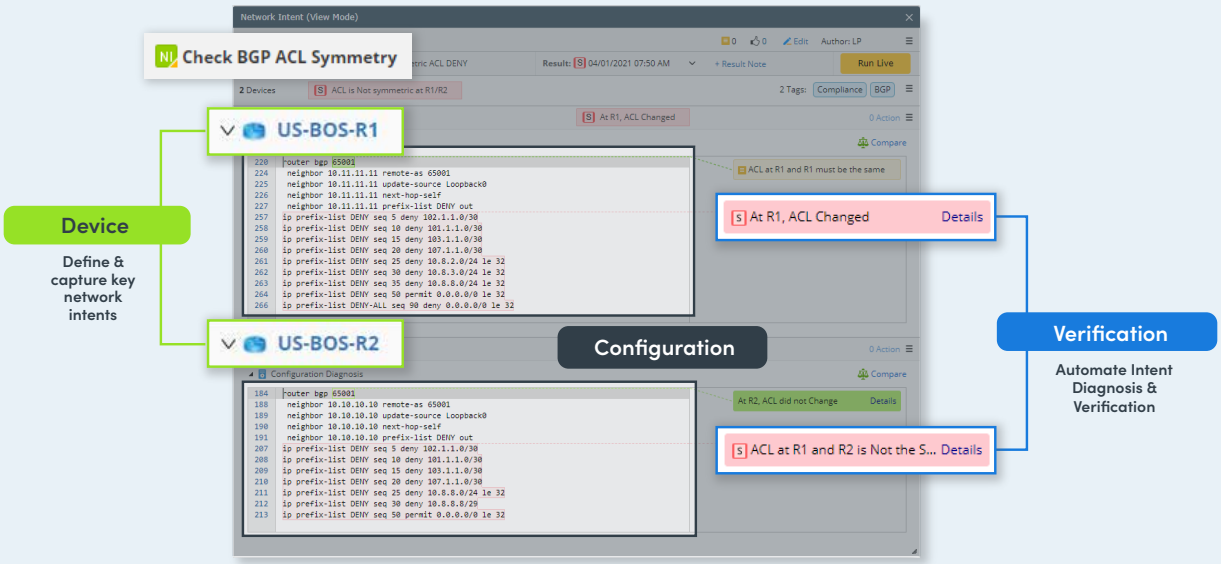
Whereas all other network management solutions focus on the health of the network equipment, NetBrain focuses on the ability for the network to deliver services. Intent-Based automation speeds network diagnostics when:

- service tasks arise by helping technicians investigate network issues
- a service desk has initiated a network issue request, or
- proactively by continuously verifying network functions to prevent small issues from manifesting into outages or services degradations.

Enforcing Network Connectivity, Performance and Security

NetBrain's Intent-based preventive automation assures the network is delivering the business outcomes it was built to achieve and does so at a cost that is in line with business needs. As new applications come online, NetBrain assures us that previously deployed applications continue to work as needed by the business. And with large organizations typically deploying hundreds of applications, the NetBrain Problem Diagnosis Automation System's becomes the comprehensive repository of network requirements and the automated enforcement of those requirements.

NetBrain Problem Diagnosis Automation System prevents outages, with more than HALF of which are preventable, by providing automated enforcement of design rules, network connectivity, performance and security as defined by Network Intents. NetBrain sets network operations on a path to efficiency that scales for every IT person, every network, and every task.



Managing By Intent Drives Down the Cost of Network Operations

NetBrain is fundamentally different than any other approach in use across enterprise and MSP networks. It delivers on the promise of Network Intent-based networking across any hybrid multi-vendor network using automation to preserve the desired behaviors needed by every application.

NetBrain PDAS captures the entire design of the hybrid network as thousands of intents that describe the connectivity, performance characteristics, and security profiles needed by each service. NetBrain then uses this intent-based model of the network to verify the network's ability to deliver applications reliably, to prevent network outages, to allow you to make changes to the network safely and to reduce remediation times when network issues do occur.

NetBrain PDAS includes an advanced no-code engine that allows subject matter experts to capture their expertise so it can be shared and re-used by others across the organization. This reduces escalations and the delays associated with them.

All these technologies work together at scale to leverage automation to fundamentally change the NetOps paradigm.

About NetBrain Technologies

Founded in 2004, NetBrain is the market leader for NetOps automation, providing network operators and engineers with dynamic visibility across their hybrid networks and low-code/no-code automation for key tasks across IT workflows. Today, more than 2,500 of the world's largest enterprises and managed service providers use NetBrain to automate network problem diagnosis, generate real-time documentation, accelerate troubleshooting, and enforce enterprise architectural rules.

NetBrain

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