NETBRAIN NEXT-GEN

No-Code Network Automation and AI Platform for Hybrid Network Observability

Network operations face growing challenges including staff shortages to address manual troubleshooting, diagnosing slow applications and outages, and increasing security risk.

According to Gartner, “By 2026, 60% of network operations personnel will rely on GenAI for Day 2 management up from <5% in early 2024.”

Successful IT operations directly influence overall business success.

To fulfill the need for efficient, strategic operations, NetBrain created a network observability platform powered by automation and AI to prevent network outages due to human error. It facilitates painless audits reduces risk, ensures continuous application delivery especially during change windows, and continuously audits your network to meet business and IT service demands.

NetBrain’s no-code network automation and AI platform, Next-Gen, becomes part of the operational fabric by uniquely auto-discovering a live hybrid-cloud network and generating automation in minutes without the need for programming or developer- led projects.

AI-POWERED AUTOMATION

Agentic and GenAI
GenAI Natural Language Interface chatbot

Ask questions like:
“Show me all devices with outdated TLS versions”
“Diagnose packet loss between AWS and HQ”

Outputs: Step-by-step root cause analysis, summary reports, observability dashboards, and topology maps.

Predictive AI Insights Anomaly Detection

Flags hidden risks (e.g., “QoS policy drift detected on 12 switches”).

Correlates traffic patterns with past outages.

Intent Validation: Checks if network configs match business goals (e.g., “VOIP priority not enforced”).

Adaptive Learning
LLM-Powered Knowledge Base Learns Your Network and Automation

Indexes past tickets, runbooks, and device docs → answers L1 queries instantly.

Learns from engineer feedback to improve diagnoses.

Hybrid-Cloud Observability

- **Real-Time Digital Twin**

  Hybrid topology, traffic flows, and cloud services (AWS/GCP/Azure).

  Live A-B hybrid-cloud path mapping for application flows.

- **Observability Dashboards**

  Health/security/compliance/utilization in one view.

  Geo-mapped device status (red/green).

- **Golden Config Enforcement**

  Continuous scans for drift (CVE/NIST/performance).

  Pre-built templates (Cisco BCS) + custom rules.

- **No-Code Assessment Library**

  Reverse-engineers network designs → auto-discovers golden configs for Network Source of Truth.

  Captures tribal knowledge as reusable runbooks.

- **Event-Triggered Remediation**

  Third-party APIs (e.g., ServiceNow) auto-diagnose/close tickets.

  Triple Defense auto-remediation for changes (pre/during/post).

The NetBrain Difference

NetBrain Next-Gen is based upon a comprehensive live digital twin which understands the complexion of the network and cloud services as well as the precise work that must be delivered by the network.

It enables network engineers to become network automation engineers by transforming their operational ideas into executable automation in minutes without code. With NetBrain, network automation becomes a standard part of troubleshooting, change management, and outage prevention workflows.

Game-Changing Differentiators:

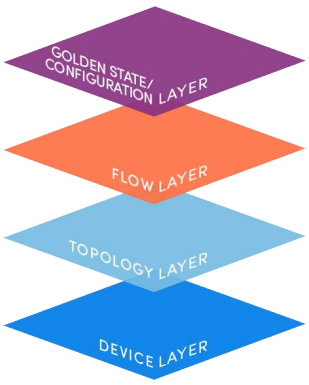
1. **Real-Time Digital Twin** – Live model of your entire network (devices, flows, intent)
2. **No-Code AI-Powered Automation** – Build, troubleshoot, and fix with drag-and-drop + GenAI
3. **Self-Healing Network** – Auto-diagnose, remediate, and learn from outages
4. **Closed-Loop Change Safety** – AI impact analysis → approval → auto-rollback
5. **True Multi-Vendor** – Works with any device (CLI/API/SNMP) out of the box
6. **Hybrid-Cloud Visibility** – End-to-end observability from on-prem to cloud/SDN

— All in one platform.

Live Digital Twin

NetBrain creates a live Digital Twin of your network, automatically capturing complete infrastructure details—including device properties, configurations, L2/L3 topology, and path analysis for ACL, QoS, Multicast, and NAT policies. Discover is an engine that scans your entire environment (both on-premises and cloud platforms like ACI/AWS) to deliver real-time network visibility, whether you're working with live operations or offline data.

- Live model of the entire multi-vendor, hybrid-cloud network
- Intent, traffic forwarding, topology, and device data
- Underpins no-code automation and dynamic maps
- Provides real-time telemetry
- Includes API connections to the most popular third-party network monitoring tools
- Contains an Intent repository of golden network configurations, policies, and service-level designs required for the successful delivery of the application needs of the business

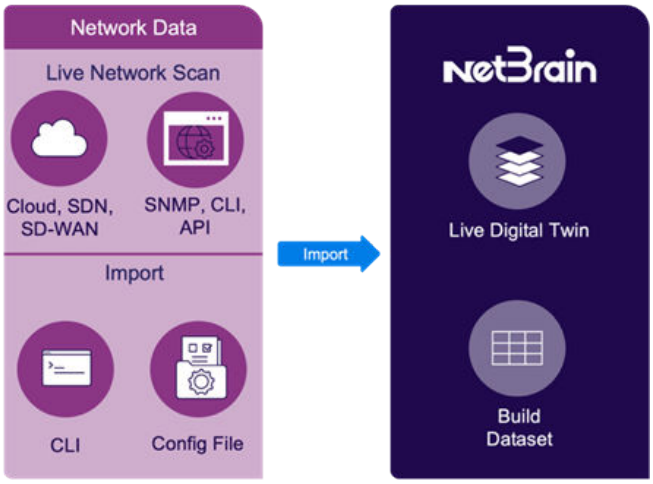


Automate Network Discovery

Streamline device configuration management, improve accuracy, and help network teams work more efficiently by automating hybrid-cloud network discovery.

Golden Engineering Studio

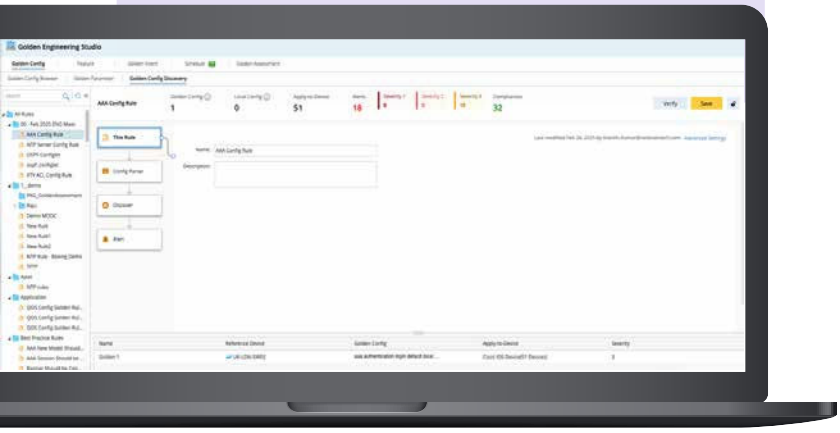
Automatically discovers and documents your hybrid network's Layer 2 devices, configurations, and operational states. Easily designate reference devices to establish golden baselines for continuous automated assessments.



Automated Discovery
Comprehensive L2 device and configuration detection across hybrid environments

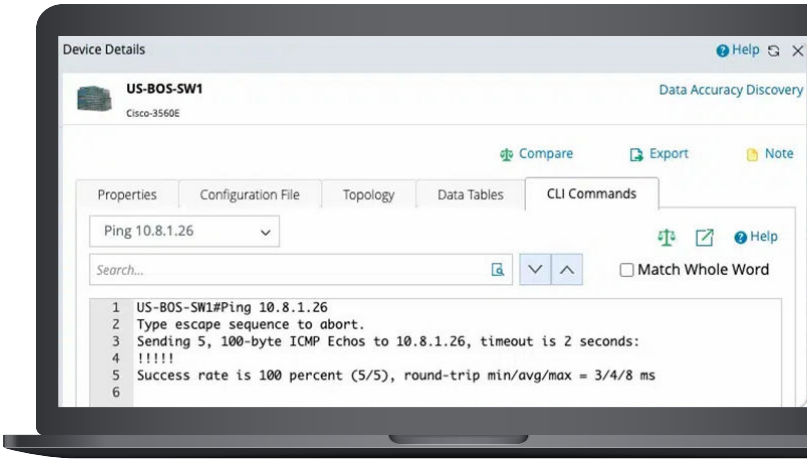
Baseline Creation
Set reference devices as golden standards for network assessments

Continuous Validation
Automatic comparison against established best-practice configurations

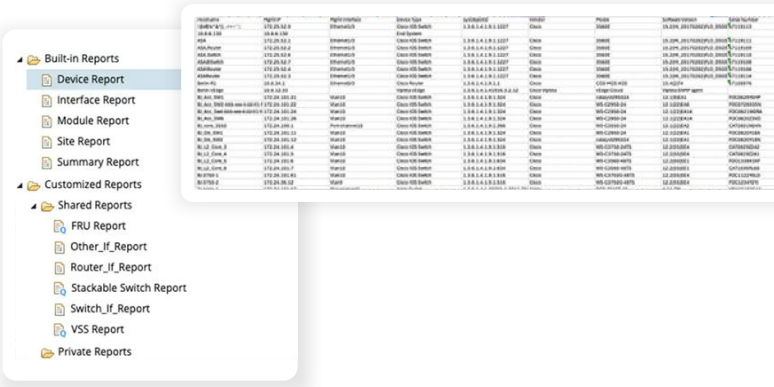


Inventory Reporting

Get imported device details including properties, configuration files, topology, data tables, and CLI.



All device data is available to export as a Microsoft Excel or CSV file report.

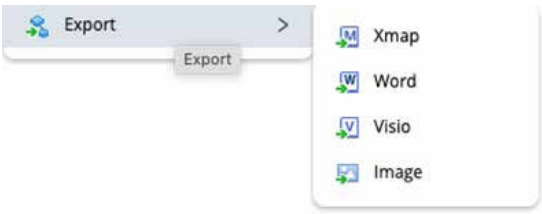


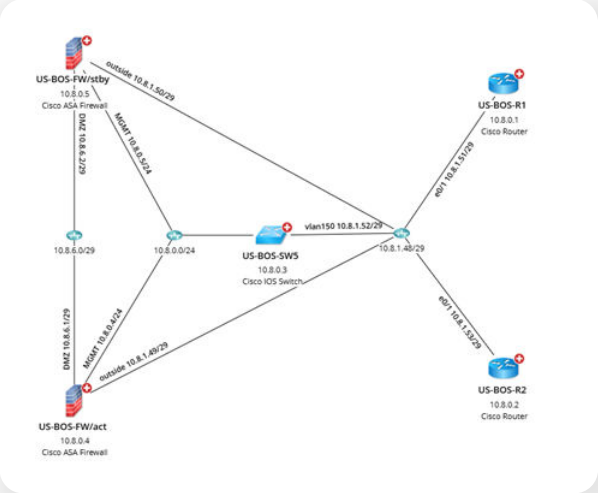
Live Network Mapping and Pathing

A live Digital Twin models your entire multi-vendor network—from edge to cloud—in real-time. It automatically maps your network topology with precision, including bi-directional hybrid-cloud traffic paths, while integrating validation and 3rd-party data for complete visibility.

Dynamic Mapping

Use the datasets and automation to identify misconfigurations and violations on Day 1 and generate live network device, topology, and hybrid-cloud path maps.





A-B Pathing

View and analyze live, historical, and golden hybrid-cloud application paths and compare traffic flow patterns over time.

Continuous Network Assessment

What if every outage, attack, and change post-mortem also revealed 'ticking time bombs' across your hybrid network? -so you could check the rest of your network for the same cause of the outage at the same time.

From Post-Mortem to Network-Wide Assessments

Even the best networks experience outages. The key is how you respond. NetBrain's Post-Mortem Assessments dive deep into outages, attacks, and changes, uncovering root causes and enabling quick resolutions. By scanning your entire network for similar risks, you can remediate issues before they cause another outage. This holistic approach not only makes your network more reliable, but it also builds trust.

But the real value lies in what happens next—NetBrain helps you turn these insights into actionable automation. NetBrain's Golden Assessment (part of the Golden Engineering Studio) further lowers the barrier to automation discovery and creation and continuous outage prevention.

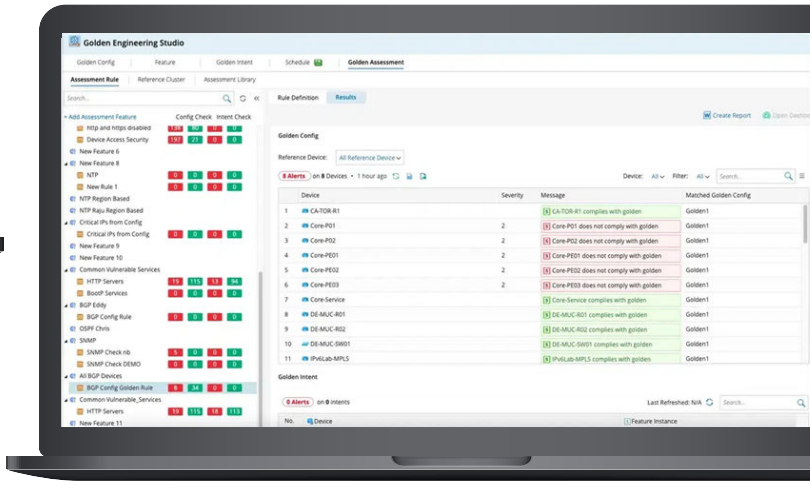
Use NetBrain's no-code automation and AI to diagnose the issue. A post-mortem assessment dives deep into an outage, uncovering its root cause and letting you auto-remediate the fix. But we don't stop there—by turning the assessment and remediation into automation, you can scan your entire network to find similar risks that might be lurking so you can fix them before they strike again.

Golden Assessments

Outages are often the result of unnoticed misconfigurations, policy violations, or hidden risks. Automated assessments continuously monitoring for violations and prevent them ***before*** they occur to address vulnerabilities proactively, preventing outages and improving network reliability. Automatically know what's in your network – every design and state – at any point in time.

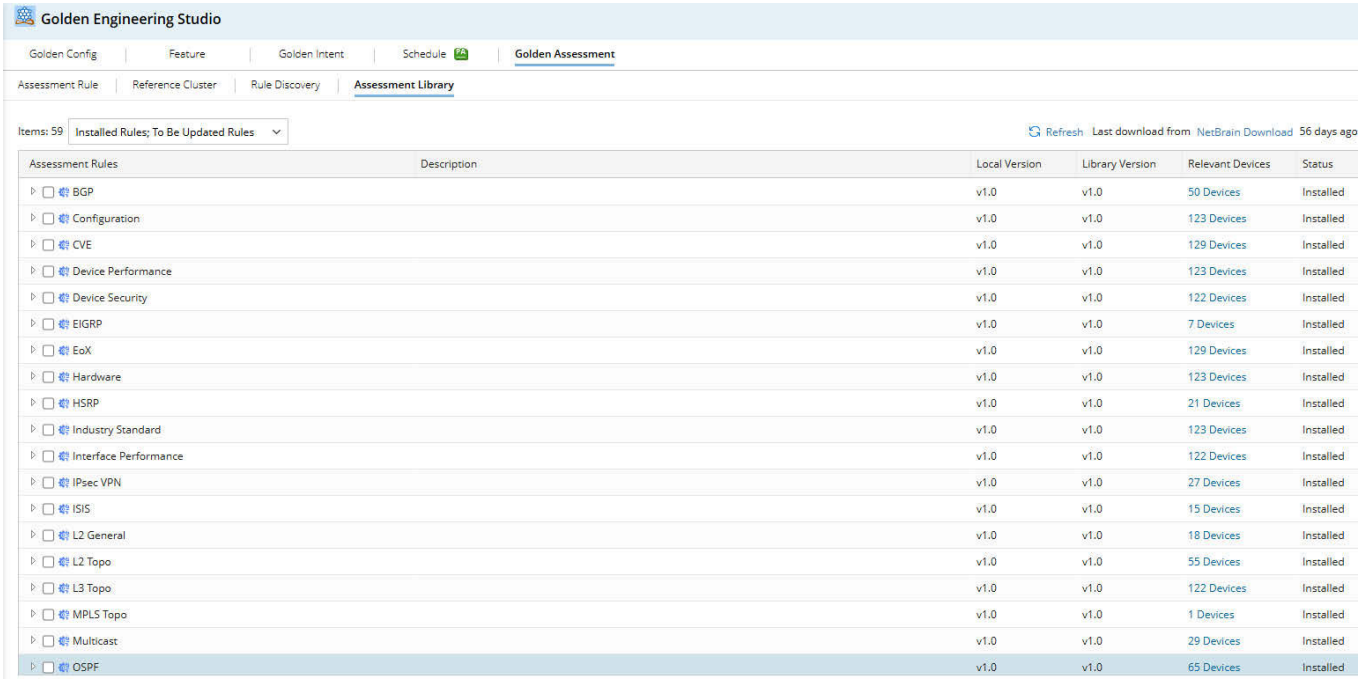
In the Golden Engineering Studio:

Assign reference devices for automated evaluations.



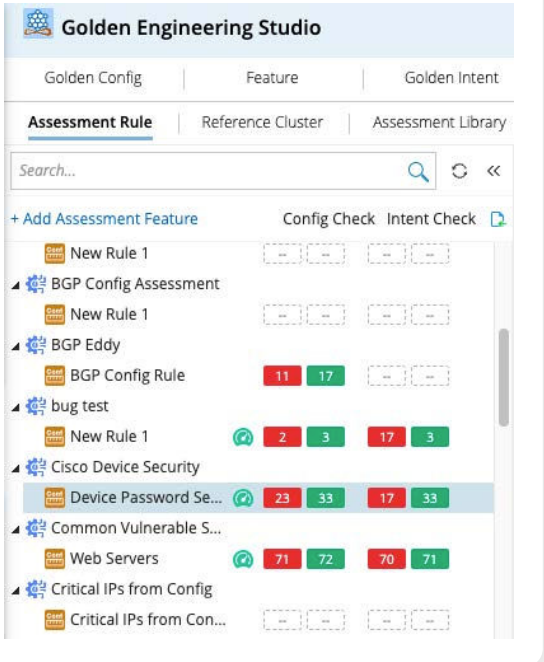
Golden Assessment Library

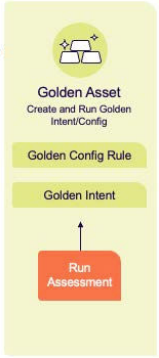
Download pre-built assessment templates of industry-wide knowledge from Cisco (Business Critical Service), NetBrain, and trusted partners into the Golden Engineering Studio to provide "herd immunity." These - plus customizable no-code creation options - enable you to apply outage, breach, and network change learnings and industry best practices to deliver actionable insights that protect your network from outages.



Qualify Golden Rules

Set up Golden Assessment Rules to automatically check if devices match the reference devices' "gold standards" relevant to your unique network.





Auto-Generate Golden Assets

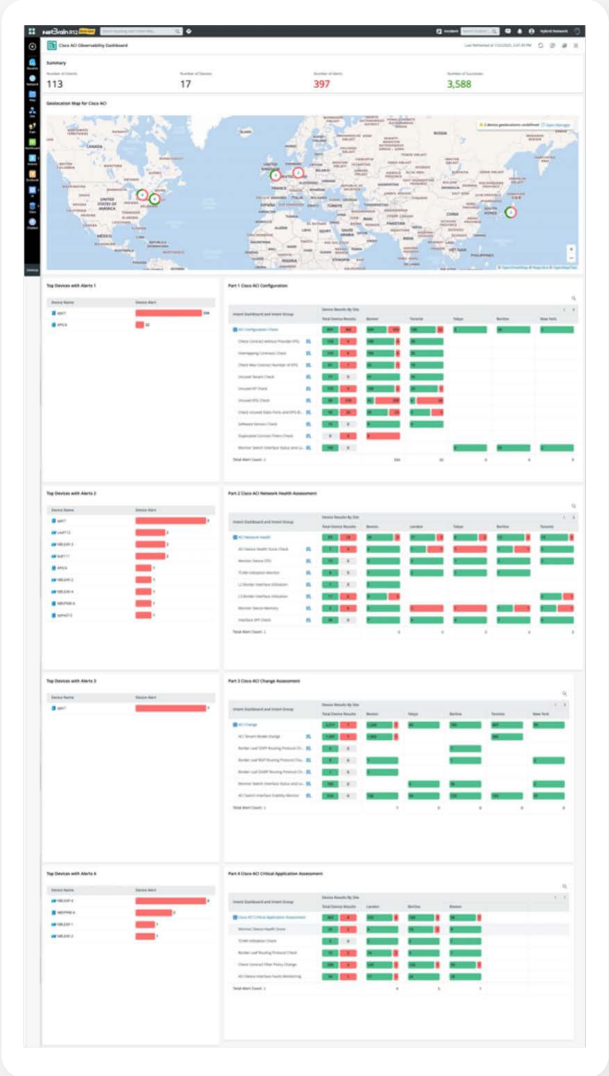
Golden Assessment takes auto-discovering what's in your network a step beyond Reverse Engineering to make device discovery more efficient.

Output Observability Dashboards

Continuous assessments and observability dashboards guide everyone to collaboratively leverage automation for daily tasks.

NetBrain provides at-a-glance visual summaries of your multi-vendor network's performance, security, and compliance—including geo-mapped views of device locations and regional health status. Interactive dashboards offer real-time health indicators (red/green), auto-remediation, and auto-remediation for faster decision-making.

Continuously assess security risks (NIST/CVE), configuration drift, application health, and connectivity—ensuring optimal performance and failover readiness. AI-powered insights and role-based dashboards enable seamless collaboration, while change-impact analysis helps prevent outages before and after updates.



Automate Manual Troubleshooting and Change Workflows

Automating troubleshooting and change management shifts hybrid operations left from human manual effort to machine-centric, eliminating practical limits on scalability.

Automate Troubleshooting

Troubleshooting consumes more than two-thirds of all network operations resources. Engineers, inundated with service requests, independently resolve issues without considering their own or peers' past work.

NetBrain's no-code automation turns one-time troubleshooting fixes into reusable intents, reducing repetitive manual work.

Key Technologies

1. **Map-Based No-Code Auto-Diagnosis and Remediation**
   - Automatically map hybrid-cloud networks with real-time diagrams and diagnostic results.
   - After non-compliance (failover, drift, security, performance, configuration, or connectivity) is detected, generate change commands from the "golden" configuration. Auto-remediate in one click and verify the result in the change runbook.

2. **Auto-Close Tickets**
   - Automatically close non-actionable tickets for more efficient monitoring and resolution.

3. **Triggered AI-Automation**
   - The agentic AI engine answers any API call for automated diagnosis automatically mapping the area, referencing the automation to solve it, and closing the incident.

4. **AI Bot**
   - Facilitate incident response for L1 operators for simple network requests. Enable operations teams to ask diagnostic questions and troubleshoot using natural language for input and output. Eliminate time-consuming hand-offs and escalations.

5. **Next-Gen Runbook**
   - Packages intent-based policies, CLI, network maps, AI insights, and documentation into containerized troubleshooting and change automated workflow templates - enabling one-click deployment of complex network operations.

Use Cases

- Your 3rd-party monitoring/ITSM tool creates an incident generating an API call to NetBrain. NetBrain's Troubleshooting Automation Framework (TAF) uses AI Insight to automatically query automation results using the reasoning power of LLM (Large Language Model).
- During troubleshooting, NoC staff use NetBrain to automatically map the affected area and then run available automation from the Automation Insight-a central place to view the automation results associated with the devices on the map. Then, leverage AI Insight (based on the AI Large Language Model (LLM) and Retrieval-Augmented Generation (RAG)) to query the network drastically reducing Mean Time to Repair (MTTR) and improving Mean Time to Identify (MTTI).
- Minimize human intervention and reduce the number of false positives and noisy monitoring events that become tickets and can inundate your network. NetBrain runs tests at regular intervals. It automatically closes non-actionable tickets for more efficient monitoring and resolution or auto-prioritizes and alerts the right team for true problems (even transient ones).

Automate Change Safely

Change Management is a critical aspect of network it can have unintended effects on the network, even if executed correctly.

Triple Defense Change

NetBrain's Triple-Defense change ensures safe changes that are operations and aligned with service-delivery needs. It produces a shareable change automation dashboard for each change.

Before Change

Assess the desired change with respect to all the rules and policies to ensure no violations would occur.

During change

Assess the impact of each requested change on the network.

After change

Confirm the network is delivering services properly and then add this new configuration requirement to the automation library to verify future change's impact on current requirements.

About NetBrain

Since 2004, NetBrain has been a pioneer in network automation, empowering IT teams to transform operations by combining the power of innovative no-code and AI technology. Its Next-Gen platform shifts from reactive visibility to proactive observability, automating troubleshooting and change management workflows to gain operational efficiency, reduce human error, and deliver actionable insights. Powered by a real-time Digital Twin and intent-based automation, NetBrain facilitates automation creation at scale and lowers the barrier for automation adoption at all levels.

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