

NetBrain Saves Multi-National Conglomerate Over 16,000 Hours per Year as Single Pane of Glass Network Troubleshooting Solution

Quick Facts

**US Energy corporation
IT services division**

Business Units Covered:
Four large business units

Users Served:
300,000

Locations:
1800

**Network Devices
Managed:**
17,000 - 18,000

NetBrain Use Cases:
Network Mapping,
Visualization, Automation,
Compliance, Security,
Troubleshooting, Change
Management

About This Customer

The IT services department at this US-based multinational conglomerate is contracted by three other major vertical market business units within the company to manage their network backbone and provide core IT services like DNS, email, timekeeping, etc. They have visibility into 60% - 70% of these department's networks and manage a little under half of their 45,000 connected devices.

These environments are tremendously complicated. When asked to rate their complexity on a scale of one to five, a Sr. Staff Network Operations Engineer replied "Seven." They make extensive use of AWS and Azure public clouds, as well as a private cloud run by a VMware SDDC Manager, and rely on SD-WAN to reliably connect thousands of locations.

The Challenge

The customer's IT services department needed to understand their network topology and reduce the labor required to keep their documentation up to date. With a team of a hundred network engineers and many more contractors, this was a significant task. New engineers struggled to understand how individual network technologies were stitched together, leading to hundreds of wasted hours each month creating network topology drawings that quickly went out of date. Outdated drawings caused problems with auditors, complicated troubleshooting, and made taking inventory of certain network devices a tedious, time-consuming process. The networks this department was managing were extremely dynamic with over 60,000 changes per year, exacerbating all these issues.

The diversity of these networks made robust multi-cloud and multi-vendor support a necessity. This corporation used every network vendor in existence and needed a "single pane of glass" tool to manage this huge, complex, fast-changing hybrid environment. Based on past experience in another role, their Vice President of Digital Network Operations suggested NetBrain as a possible solution. After evaluating a couple of options, they settled on using NetBrain with the VP of NetOps championing the project and a Sr. Staff Network Operations Engineer leading the roll-out.

The Solution

Implementation NetBrain was reasonably smooth, given the size and complexity of the networks being managing. The Sr. NetOps engineer set up the necessary servers for NetBrain and had their deployment team take over while he worked on setting up the appropriate privileges, access credentials, SNMP, etc. This customer's routing tables go into tens of thousands of records and cover 600,000 end systems and 2,000 sites, so network discovery was done in batches starting with small subnets and then broadening. All in all, it took only a month to fine-tune the platform and discover over 30,000 devices.



When operations engineers want to troubleshoot an incident, assess the impact of a change, or to interact with devices in real time, they go to NetBrain. ”

Sr. Staff Network
Operations Engineer at a
US-based multi-national
conglomerate

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NetBrain has been a journey for us – it has gone well beyond my original expectations. ”

VP of Digital Network Operations at a US-based multi-national conglomerate

It took some time to get engineers used to pointing and clicking in NetBrain rather than typing traditional commands straight into the command line interface (CLI), and to build the infrastructure necessary for NetBrain to operate at the scale this multi-national customer demanded. Over time, usage picked up dramatically and NetBrain gained wide adoption. The Sr. NetOps engineer estimates that it took about six months to grow their user population from 150 NetBrain user accounts to 600 user accounts. During this time his team customized the platform to their very complex environment, built integrations to other network management tools and enterprise systems, and educated their engineers on NetBrain's capabilities. But this up-front time investment paid off many times over once NetBrain was fully customized and integrated with this customer's other tools and engineers had adjusted their workflows to incorporate these new capabilities.

One clever way this Sr. NetOps engineer overcame their organization's reliance on their traditional and now dated processes was by including NetBrain in a user council for IT tools, which allowed immediate understanding of his engineer's feedback and the ability to offer recommended best practices for each of NetBrain's core capabilities. They put a great deal of effort into configuring NetBrain to assure that it met the users' exact needs. "We had great support from NetBrain to build integrations with our other network monitoring systems," said the Sr. NetOps engineer. "Those strategic integrations and the resulting consolidated views are a big part of the reason why people want to use NetBrain every day."

The Results

NetBrain is now the primary troubleshooting solution for this IT services department, and they make heavy use of its network mapping and automation capabilities. "We wanted to reduce the time it takes for a network engineer to gather information about an incident, especially a high-priority incident," said an engineer.

The IT services department now has 600 user accounts with close to 300 active users each day and has integrated NetBrain deeply with other tools like Splunk, ServiceNow, their event management system, and more. These simple integrations were highlighted as a strength of NetBrain. NetBrain also captures the expertise and problem-solving knowledge from this department's existing network build team and makes it available programmatically to the entire operations team to further increase operational efficiency. NetBrain has truly become a single pane of glass for all this IT department's network troubleshooting efforts and the primary – often only – troubleshooting solution for engineers.

This customer's goal for using NetBrain was to reduce the time required to resolve an incident by speeding up incident-specific data gathering and sharing reusable remedial tasks as best practices, and in this respect, it is a runaway success. A business impact analysis estimated that NetBrain saved them 16,000 troubleshooting hours in 2022 on about 63,000 tickets by automating a series of routine diagnostic tests. These preliminary tests used to take on average 15-20 minutes to run for every ticket; now NetBrain runs them automatically before the engineer even touches the ticket, reducing mean-time-to-resolve (MTTR) in the process.

The company's IT leadership also discovered that they could help teams outside of NetOps become more efficient by giving them limited access to NetBrain for specific purposes. For example, this customer's security team must investigate every legitimate security threat that they detect, which previously involved asking NetOps where a certain IP address was physically located. Now, with restricted access to NetBrain, the security team can get the precise physical location and rack connection detail of the IP address in question themselves in minutes, rather than the hour or two it would previously take NetOps to answer the question.

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We can look at this amalgamation of data, much of which comes from NetBrain, and use it to make business decisions to benefit us. ”

VP of Digital Network Operations at a US-based multi-national conglomerate

The NetOps team at this customer also built an integration with one of their homegrown tools that gives IT managers a consolidated view of the specific network sites they manage. IT managers can now get topology maps of their network sites without putting in a request to NetOps. In the past, these low-priority requests would take days or weeks to be fulfilled. Now with NetBrain, maps can be generated in real-time and on-demand with no service ticket required!

The Vice President of Digital Network Operations for this customer uses NetBrain multiple times a week to better inform his decisions at the executive level. He particularly loves being able to investigate “mystery hops” in network traffic that are slightly beyond the border of what their team has visibility into as well as the ability to quickly identify malfunctioning devices. NetBrain also made the IT department’s annual IT assessments much easier by giving them quick access to device information for specific sites so they can see what needs to be maintained.

What the Future Holds

This customer is preparing to spin off certain business units, which will involve significant changes to their network infrastructure. They expect NetBrain will be a key partner during this process and are constantly assessing new features in the product for use in these new environments. They are especially interested in taking advantage of NetBrain’s cloud integrations and making more extensive use of its no-code automation.

The VP of Digital Network Operations at this customer also plans to leverage NetBrain’s ability to visually show compliance with industry-specific regulatory requirements (i.e., FIPS, CMMC, etc.). This would be extremely valuable for their customers in highly regulated industries like nuclear, energy and aerospace.

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Now we’re getting very sophisticated in our analysis and are looking for NB to be our source of truth for maintenance, compliance and more. It’s our collection vehicle to tap into other tools to represent that composite picture of data to make decisions on. ”

VP of Digital Network Operations at a US-based multi-national conglomerate

This visual compliance topology map would tell them what to fix before a government inspector comes in and could even be provided to the regulating agency directly.

The VP estimates that this customer was in the “crawl” phase of network maturity when they first considered NetBrain and are currently through “walk” and well into “run.” He’s confident NetBrain will continue to be a valuable and growing transformation solution as their needs evolve.

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.