



Automate Problem Diagnosis with ServiceNow Integration

Benefits:

- Automates up to 95% of tickets
- MTTR can be reduced by half or more
- Prevents up to 50% of tickets
- Leverages existing SME resources
- No-Code required for setup and usage

Modern businesses rely on their hybrid network infrastructures which need to be up and running 24 hours a day, 365 days a year. It's their lifeblood. These hybrid networks must support edge, data centers, cloud-based services, and a litany of software-defined networking technologies, each of which dramatically increases the overall complexity and the amount of ongoing operations required.

The result? A myriad of network service tickets, continuously flowing to keep the network up and running in support of the business. And these network service tickets may number into the hundreds or thousands per week – many of them solving the same issues that have already been resolved countless times before. With average Mean-Time-To-Repair of several hours, the total operational resources required adds up quickly.

Repeatedly troubleshooting the same common issues is time-consuming, tedious, and inefficient. Although adding more service desk personnel historically has been a common and tactical solution to this problem, it fails to achieve the desired results – higher service availability, lower operational costs, shorter task duration, and more consistent ticket resolutions. And with skilled candidates even harder to find today due to a wealth of global socio-economic pressures, scaling through headcount is simply not a strategic plan for IT Operations.

There must be a *better* way – a way that leverages existing resources by magnifying their efforts. The NetBrain's Problem Diagnosis Automation System, as a tightly integrated part of your IT Service Management (ITSM) strategy, makes your network operations more intelligent and more repeatable. And when you integrate NetBrain PDA into your ITSM workflows, NetBrain does most of the work before your operators even get involved! This dramatically reduces your MTTR, by decreasing the reliance on network operators' manual processes.

NetBrain enhances traditional network operations challenges in 3 ways:

- Reducing ticket duration and overall MTTR by automating the most common tasks associated with your most common problems. In most cases, up to 95% of all tickets can have their duration reduced by half.
- Providing guided remediation using network intelligence from a library of pre-built automation units. The NetBrain PDAs system itself along with these pre-built automation units can be used by operators as they complete ticket resolution.
- Continuous validation of desired network intents to ensure the production hybrid network delivers the connectivity services as required by the software application architects.

The PDA System allows enterprises to address up to



of their network service tickets

Solution Overview

NetBrain's fourth generation PDA System is the industry's only intent-based network automation and visibility platform that can significantly reduce operational overhead associated with managing hybrid edge-to-cloud networks. When connected to an ITSM system like ServiceNow, the PDA System allows enterprises to address up to 95% of their network service tickets, commonly reducing their ticket service times by at least half. When used proactively, the PDA System even prevents up to 50% of abnormal network conditions that would otherwise lead to the creation of even more service tickets.

NetBrain PDAs is based on a fundamental understanding of the *intent of any network*. Whereas all other network operations solutions treat hybrid networks as the compilation of thousands of connected devices that must be individually managed, NetBrain looks at hybrid networks as the realization of thousands of network design intents. As such, NetBrain automates IT service delivery by assuring that network intentions are defined and preserved. And it lets users change the configuration of any network by redefining the intended behaviors of the network, not forcing them to adjust the individual devices themselves. By understanding the intentions of application architects and business leadership, the NetBrain solution dramatically simplifies the management of any network.

And since managing business intentions is much more easily understood by business leadership (versus the litany of diverse device detail already in place), NetBrain PDAs allows you to easily apply intent-based automation across the entire network, without the need for operators to understand the minutia of every device.

How NetBrain PDAs works to extend the value of ServiceNow:

- Automating a "best first response" diagnosis for 95% of all problems. ServiceNow tickets triggers NetBrain to find the automation most applicable to the ticket type.
- Automatically identifying the vicinity of the ticket reported and generating specific topology maps (physical and logical) for that reported condition.
- Empowering network operators to collaborate and leverage members of the team using a library of automated runbooks increasing the intelligence when taking additional actions.
- Automatically documenting the full ticket response investigation and subsequent operator-led remediations, preserving the context of each service operation for future reference.
- Identifies when the network can no longer support the required application-defined connectivity intents to proactively prevent abnormal conditions from affecting production.





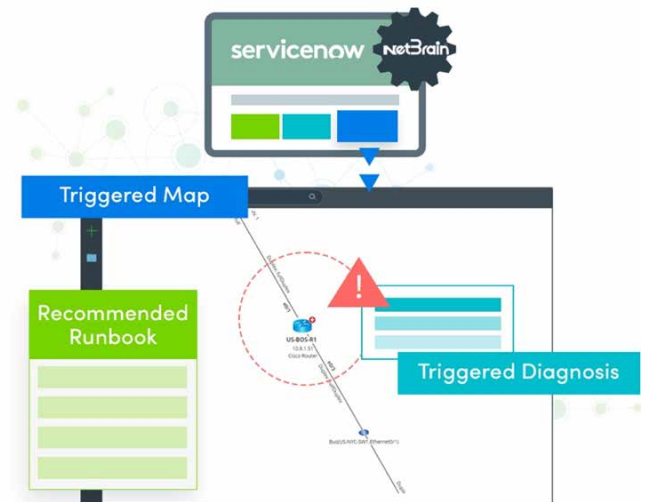
ServiceNow automatically triggers NetBrain PDAs to begin problem diagnosis the instant any service ticket is generated, **not hours or days after the problem has been reported**

The key to lower MTTR is Triggered Automation

NetBrain’s out-of-the-box connector for ServiceNow tightly joins the two systems together enriching the value of your ServiceNow deployment. And the connector setup is simple: once the connector installed, the NetBrain administrator performs all remaining configuration steps without the need to involve ServiceNow admins.

After configuration, ServiceNow automatically triggers NetBrain PDAs to begin problem diagnosis the instant any service ticket is generated, not hours or days after the problem has been reported, facilitating the resolution of intermittent or transient issues.

Once triggered, NetBrain PDAs automatically springs into action and finds the network information it needs from the service ticket record using advanced traffic path discovery. NetBrain PDAs takes real-time information from routing tables, NAT policies, ACLs, VRFs, MAC address tables, and even layer 2 devices into consideration when discovering the problem. Then, the PDA System generates a real-time visual map of all the involved network devices in the problem area. This typically includes maps that identify devices, paths, vicinities and intents.

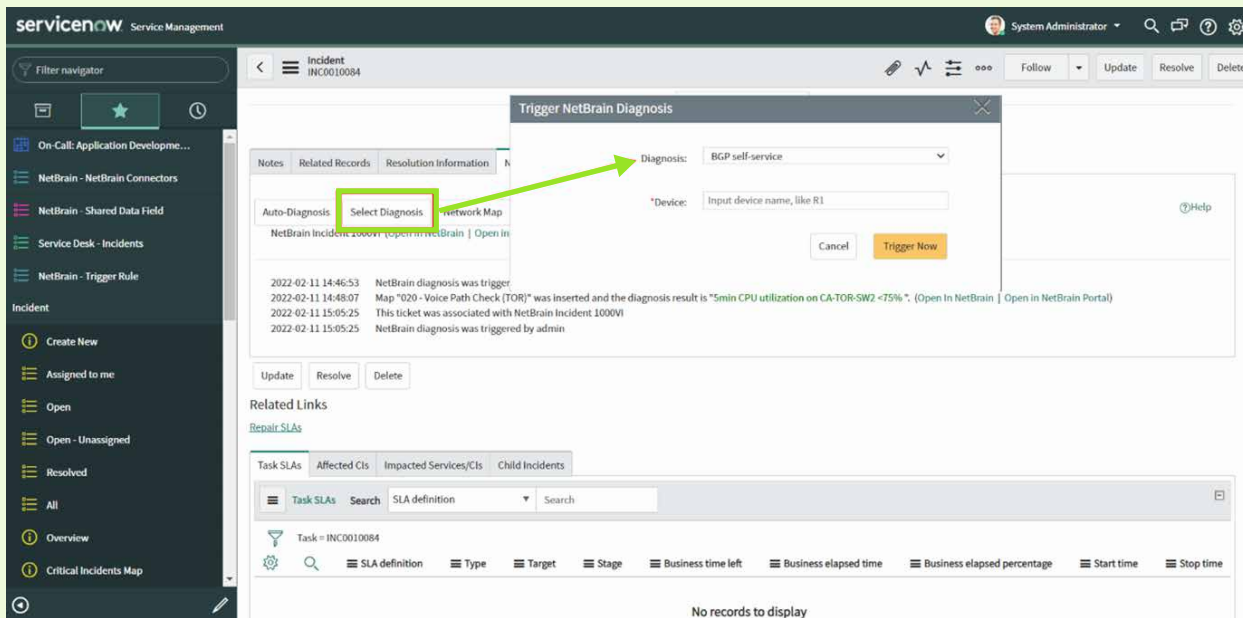


NetBrain enhances all event processing stages as defined by ServiceNow, including Problem, Incident, and Change. After generating detailed maps of the problem area referenced in the ticket, the user defines the most applicable types of automation to execute, including health and performance checks.

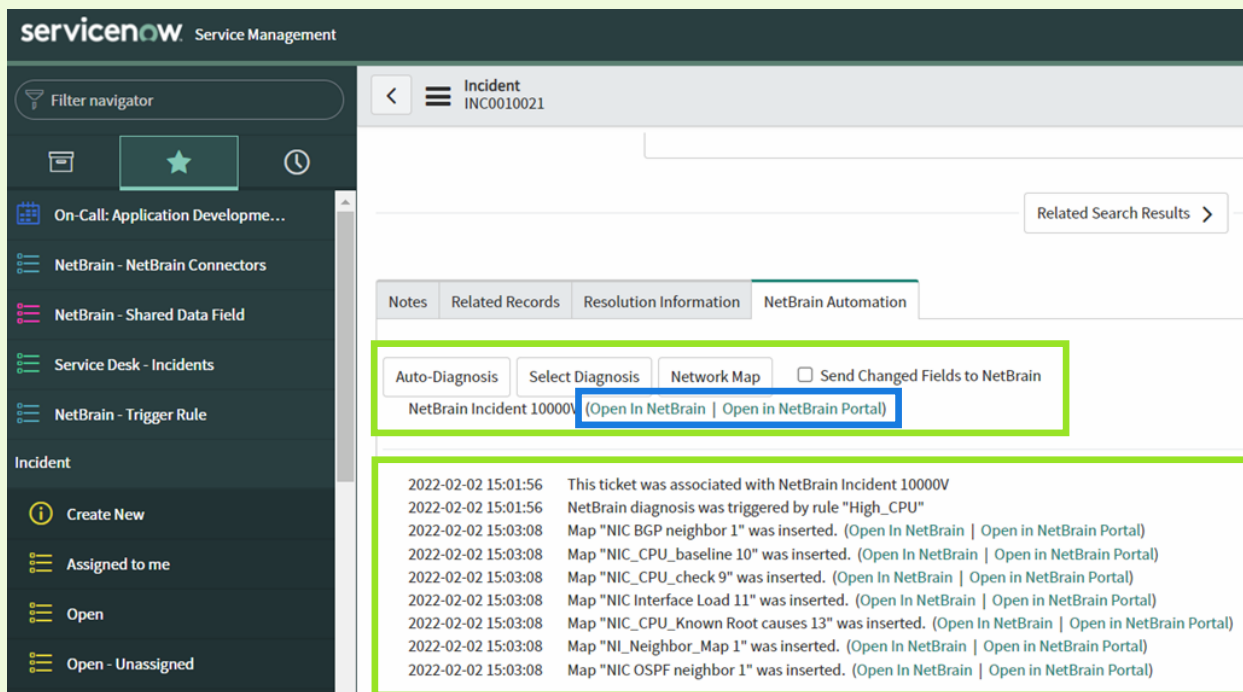


NetBrain PDAs handles the most common and repetitive diagnostics which would otherwise be executed by responding engineers or operators. These include checking networking device CPU and memory utilization, port status, OSPF neighbor status, path integrity, QoS parameters, protocol and address security filters, forward/backward paths, and much more. Ultimately all this diagnostic information, along with the maps that had been previously generated are made available to the ServiceNow system.

For any ticket, any user can continue diagnostics by selecting from a menu of intents on what they would like to check further inside of ServiceNow. Even without access to NetBrain PDAs, engineers can still run diagnosis using Select Diagnosis and view results by opening the NetBrain Portal. The results are then added to the ticket and to the ServiceNow Incident Pane.



The result? The NetBrain documentation and diagnostic results are populated and available inside the ServiceNow ticket itself. The provided detail shows each step of the triggered events with the timestamps, such as creating an incident, creating a map, and each of the steps executed within a Runbook or Guidebook.



And since NetBrain PDAs stores all reference detail back inside the service ticket, responding network technicians and engineers can streamline their continued remediation efforts, shaving hours off the time it takes to resolve any ticket. And if the user needs more detail, he/she can open the NetBrain Incident Portal directly to get richer data and other related diagnostic history.

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.

Multi-tenant for Managed Service Provider (MSP)

The diagnosis trigger supports multiple tenants and domains for MSPs to manage their clients' networks in isolation. The connector supports the multi-tenant environment by mapping the related ServiceNow data (called Scope) to NetBrain tenants and domains. The ServiceNow Scope is used to match a triggered API call to a NetBrain tenant. The Scope is the display name (label) identifying which client a ServiceNow ticket belongs to, such as company name and customer ID. Ultimately, the MSP has a stronger and more differentiated business service-delivery offering when their NetBrain and ServiceNow solutions are interconnected. NetBrain PDAs enables the MSP to offer services with lower MTTR.

Decreasing the number of Service Ticket Through Prevention

In addition to decreasing the duration of handling ServiceNow tickets through the triggered automation sequences described elsewhere, the NetBrain PDAS system becomes more intelligent over time, allowing intentions to be captured and executed in an on-going fashion to assure service delivery capabilities are always available as the business applications demand.

Network intents can enforce design constraints, validate quality of service and performance goals are being met, can audit security policies that are in effect, confirm application path preferences are being respected, and various levels of throughput exist between business services. By capturing these intents (through the embedded no-code mechanism) and storing each in the PDAs Automation Library, these intents can be used proactively to assure that fewer service outage tickets get generated in the first place. The autonomy of the network increases, while the intelligence of the automation library itself expands, enabling further reductions to MTTR over time.

ServiceNow and NetBrain PDAS working together

NetBrain extends the ServiceNow ITSM capabilities to your hybrid network to reduce your MTTR and prevent outages. By connecting directly to ServiceNow at the program level, NetBrain PDAs triages and documents every network service ticket, including a full set of diagnostic tests, before operators begin working on any service ticket. With NetBrain, more than 95% of all network service tickets can be automated, reducing their duration by more than half. And moreover, it can detect abnormal network conditions before they impact production, further reducing the number of service tickets that IT must handle. This serves to lower the risk profiles of the entire network infrastructure, since risk-producing abnormalities are corrected before they affect business.

NetBrain PDAs is built upon the concept of network intents. No-code technology allow the network to be defined as a series of network intent, rather than an aggregation of hundreds or thousands of box-level devices. This simplifies the goal of network management to be service-delivery oriented. NetBrain and ServiceNow focus on maintaining service delivery, and when problems occur, reducing the time it takes to address each. NetBrain PDAs redefines network automation, making it more intelligent, more available, and more responsive to supporting the business. Let us help you explore the possibilities.