

# Problem Diagnosis Automation System – Automation Library

Modern network infrastructures have a lot more in common than most people realize, and although the equipment and topology details vary widely, the kinds of operational needs are surprisingly the same.



## Reduce the Number of Required Resources and Human Errors

The first of these operational needs is related to the dearth of network service and remediation tasks large enterprises experience. These can number into the thousands per month, but if the concept of similarity is considered, there may only be a few dozen unique types of problems, each of which is repeated hundreds or thousands of times. This presents a huge opportunity for optimization by leveraging automation to address these relatively few situations. These common types of problems can be solved once, and then by capturing those resolutions, simply applied to subsequent occurrences, dramatically reducing the number of resources required, increasing the consistency of resolutions, and reducing human error. In fact, up to 95% of all service tickets can be accelerated by applying reusable automation in this manner.



## Reduce the Amount of Service Tickets

The second type of common operational need is the ability to be proactive. By understanding each of the enterprise applications in use and their individual network requirements, any digital infrastructure can be monitored to assure those conditions continuously exist. It is quite common for new applications to have an adverse effect upon previously installed applications, so having the ability to verify the production network operating conditions in the context of the applications that reside upon the network is key to strategic operations. By proactively looking for issues before they impact the business, problems can be eliminated before outages or service degradations occur. It has been estimated that 50% of all problems can be eliminated using proactive verification.

## NetBrain Problem Diagnosis Automation System

This is the reason NetBrain’s Problem Diagnosis Automation System (PDAS) was invented. NetBrain allows network automation to be applied to every problem, big or small, without complex programming or long expensive development cycles. It allows the expertise of your subject matter experts to be available when the SME themselves are not – a huge factor when it comes to scaling network infrastructures. The result is higher service availability, lower operational costs, shorter ticket duration, and more consistent problem resolutions.

PDAS and its available NetBrain’s Automation Library service provides a continuously expanding library of pre-built expertise-based automation units ready to use right out of the box. These automation units address the most common scenarios seen in the vast majority of enterprises for event-driven responses, such as those reported via a network helpdesk service ticket), as well as for proactive design-level compliance, security, and application performance support verifications.

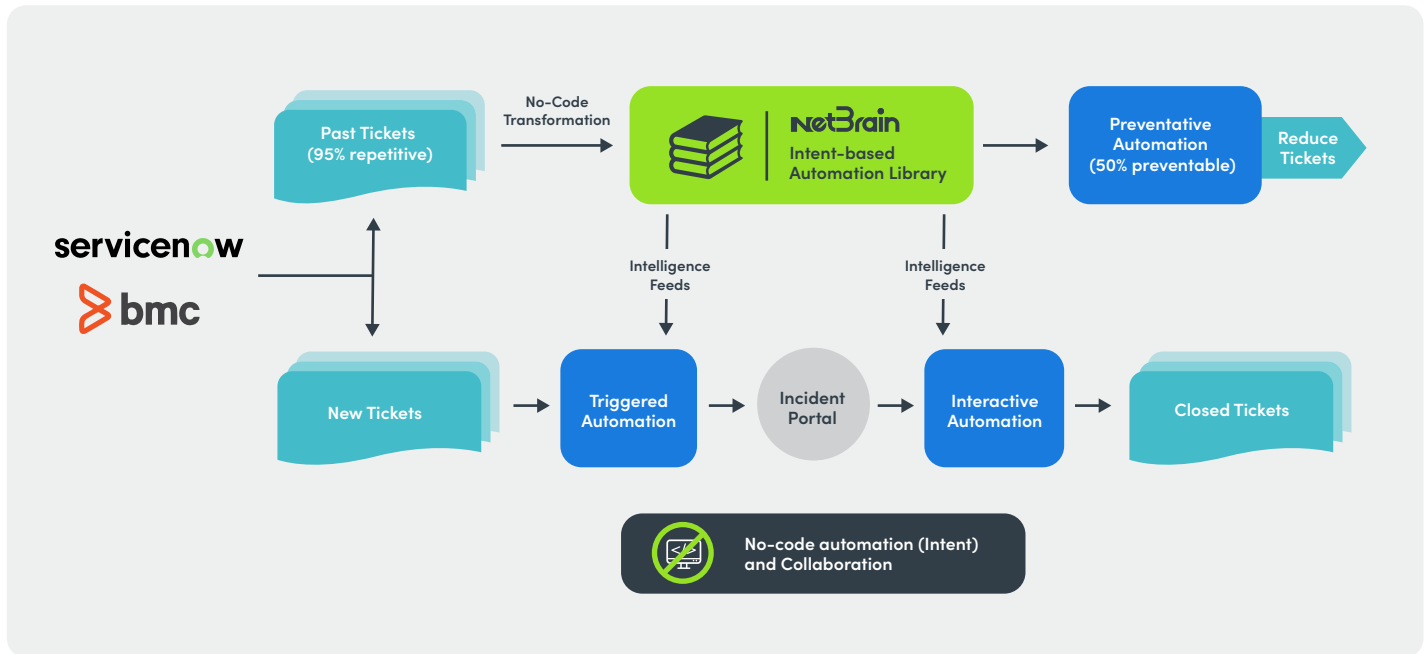
- Verifying QoS, ACL, or multicast rules are in place.

Examples of common problem diagnosis situations contained in the PDAs Automation Library:

Intent-driven NetBrain PDAs Automation Library	
Design-Level Enforcement	Event and Ticket Remediation
<p><b>Design / Feature / Technology / Security</b></p> <ul style="list-style-type: none"> <li>• Must-have or forbidden routes</li> <li>• QoS, ACL, or multicast rules</li> <li>• HA/failover/redundancy rules</li> </ul>	<p><b>Network</b></p> <ul style="list-style-type: none"> <li>• Access errors</li> <li>• Configuration errors and drift</li> <li>• BGP or OSPF errors</li> </ul>
<p><b>Incident &amp; Feature Agnostic</b></p> <ul style="list-style-type: none"> <li>• Sufficient CPU, Memory, Power</li> <li>• Link utilization, Latency, Interface status</li> <li>• Device and service reachability</li> </ul>	<p><b>Device</b></p> <ul style="list-style-type: none"> <li>• Host or Service Unreachable</li> <li>• Printer/Database Device unavailable</li> <li>• Permission restrictions</li> </ul>
<p><b>Key Applications and Paths</b></p> <ul style="list-style-type: none"> <li>• Voice, Internet, VPN path availability and performance</li> <li>• DCI Paths performance and quality</li> <li>• Validating key application path availability and quality</li> </ul>	<p><b>Application</b></p> <ul style="list-style-type: none"> <li>• Data unavailable</li> <li>• Voice Choppy</li> <li>• Slow App Response Times</li> </ul>

The Automation Library is extensible as well. Through no-code mechanisms built into the PDA System, your own subject matter experts can create additional situation and site-specific automation routines without any coding and add them to the Automation Library. Any network engineer or operator can use the automation routines to quickly and accurately solve problems when they reoccur. Subject Matter Expertise becomes available when the subject matter experts are not!

The NetBrain Automation Library is leveraged throughout the PDA System. When coupled with an ITSM/ITOM system, NetBrain PDAS triggered automation will draw from the automation library to implement the most useful set of diagnostics in response to specific events.



## NetBrain Automation Library Subscription Service

The NetBrain Automation Library is available exclusively as part of our Managed NetBrain Premium professional services subscription. For the duration of the Premium services contract, customers are entitled to a subscription to the NetBrain Automation Library and assistance from our NetBrain Automation Center of Excellence (COE) to help you select, adapt and implement the latest in NetBrain Automation.

### 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.