

Automated Network Ticket Resolution with NetBrain & ServiceNow

Modernizing ITSM with AI, Automation, and Real-Time Digital Twin Observability

Executive Summary

Today's enterprise networks span hybrid environments, cloud services, and legacy infrastructure, all of which strain traditional ITSM workflows. While ServiceNow remains the backbone of enterprise ticketing, resolving network-related tickets still demands human triage, manual CLI investigation, and long resolution times.

NetBrain's integration with ServiceNow delivers a new approach: zero-touch diagnostics, dynamic network mapping, and proactive prevention, all triggered the moment a ticket is created. With NetBrain R12, enterprises can automate up to 95% of network tickets, reduce MTTR by more than 50%, and empower Tier-1 teams to operate with Tier-3 insight.

The Challenge: Network Complexity Meets Escalating Ticket Volume

- **Manual Triage:** Engineers still spend 30 to 60 minutes gathering context before taking action.
- **Escalation Bottlenecks:** Tier-1 lacks tools or visibility, pushing tickets to senior engineers.
- **High MTTR:** Most tickets take too long to resolve, especially in hybrid and multi-vendor environments.
- **No Proactive Learning:** Resolved issues aren't turned into preventive measures. Incidents repeat.

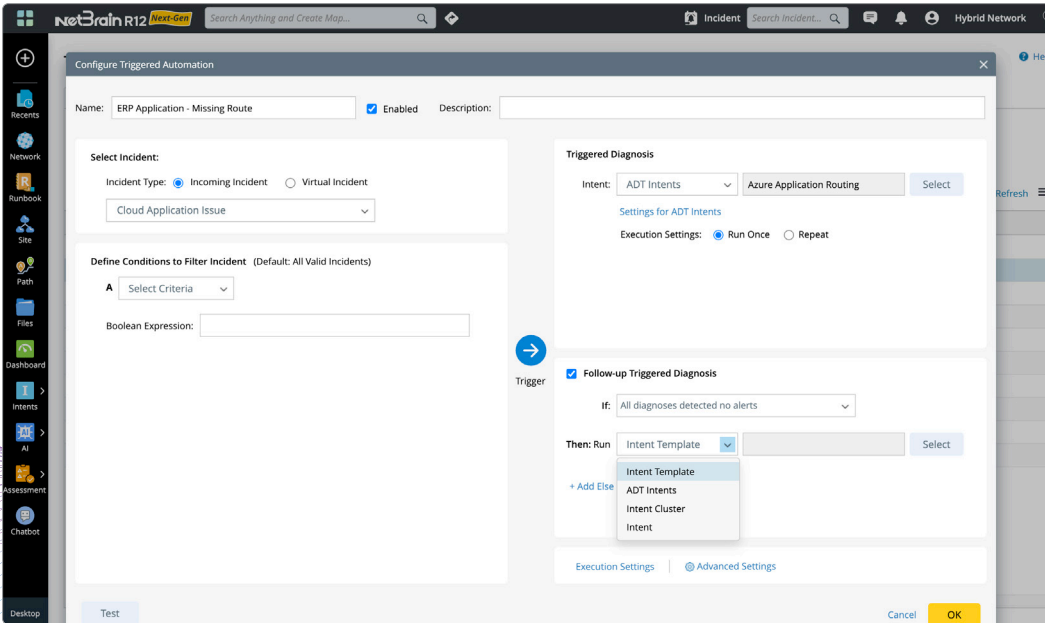
NetBrain + ServiceNow: Closing the Gap with Automation

NetBrain transforms how network tickets are diagnosed and resolved inside ServiceNow.

How It Works:

1. Ticket Created in ServiceNow

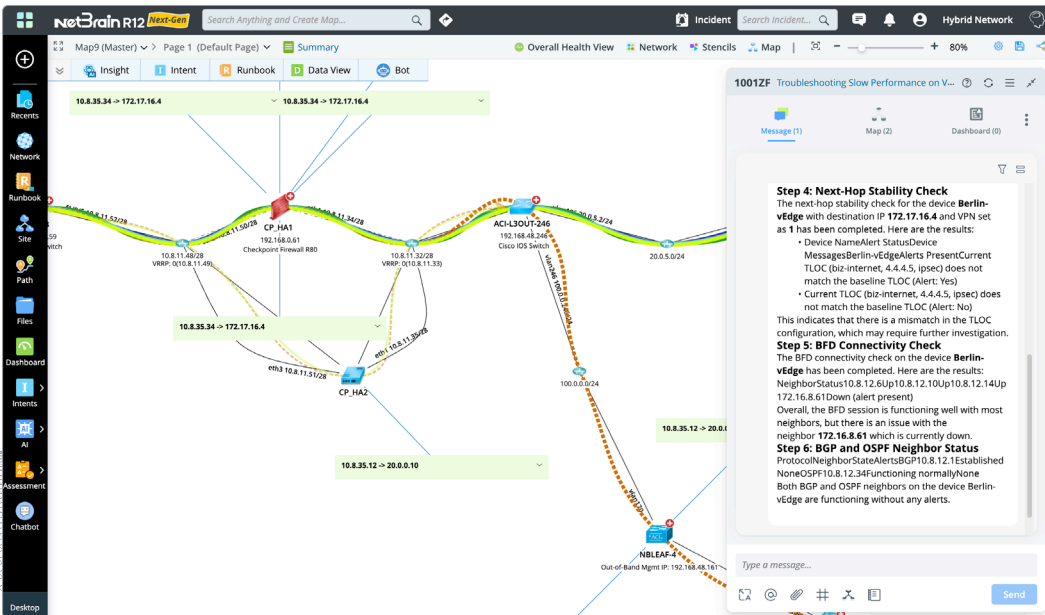
→ Triggers NetBrain diagnostics using metadata rules.



Screenshot of NetBrain's Triggered Automation configuration showing how incidents like "Cloud Application Issue" launch diagnostics when created in ServiceNow.

2. Automation Runs Instantly

→ NetBrain builds a Dynamic Map, executes CLI commands, and verifies Golden Intents.



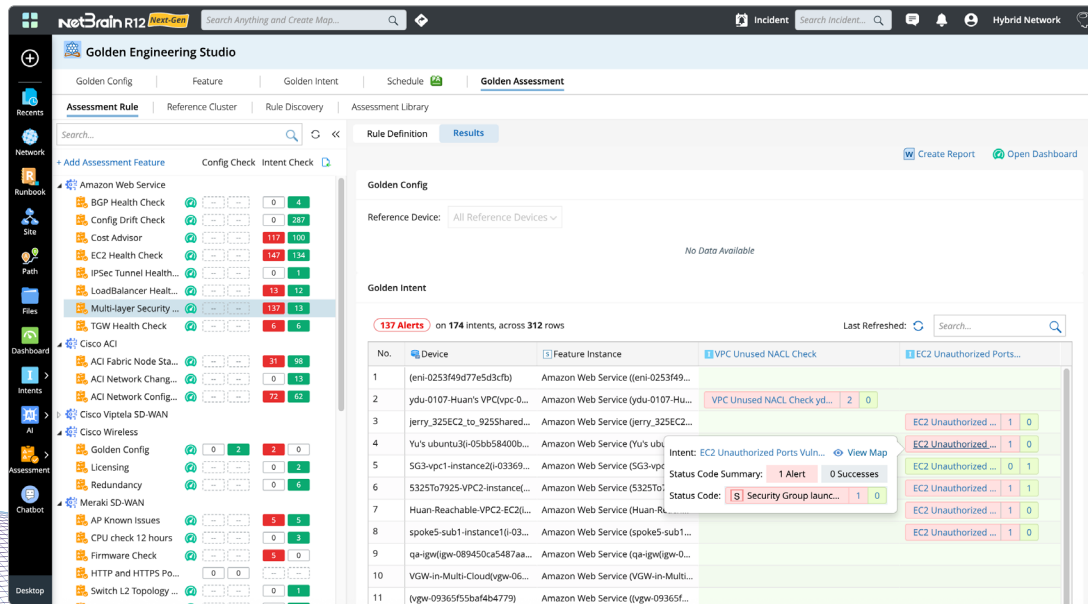
Dynamic Map created in response to a ServiceNow ticket, displaying hop-by-hop diagnostics, network devices, and AI-guided steps.

3. Results Returned to the Ticket

→ AI summarizes findings and appends them directly to the incident.

What's New for ServiceNow Users

- **AI Co-Pilot:** Natural language input triggers real-time diagnostics and resolution steps.
- **AI Insight:** Identifies root causes, automation impact, and unresolved network risks.
- **Automation Insight:** Tracks which tickets are resolved through automation and which need escalation.
- **Golden Assessments:** Codify resolved issues into reusable, compliance-tested diagnostics.



Golden Assessments dashboard showing health and configuration checks across cloud environments. Automates ongoing validation and risk prevention.

Common Use Cases

- **Application Latency:** A ticket triggers NetBrain to map the flow and detect QoS or interface congestion.
- **Firewall Misconfiguration:** Golden Intent detects a missing ACL during a change window.
- **NTP Drift:** An incident auto-triggers a drift check across peer devices and resolves before escalation.
- **Change Validation:** Pre- and post-change Golden Assessments are tied to ServiceNow change tickets.
- **VoIP Call Quality Issues:** NetBrain maps RTP paths, checks QoS policies, and identifies asymmetric routing or ACL blocks that cause one-way audio or jitter.
- **Wi-Fi Outages:** Automates diagnostics across APs, controllers, and VLANs to pinpoint root causes like DHCP failures or RF interference.

Business Benefits

- Up to 95% of tickets auto diagnosed
- MTTR reduced by 50%+
- Fewer escalations and manual handoffs
- SME knowledge captured in no-code automation
- Enhanced documentation for audit and compliance

Built for Enterprise ITSM Integration

- Certified REST API integration with ServiceNow
- Compatible with Flow Designer and IntegrationHub
- TLS 1.2 and 1.3 encryption, secure credential vaults
- On-prem or hybrid support via optional MID Server
- Fully aligned with 2025 ServiceNow integration standards

About NetBrain

A pioneer since 2004, NetBrain is democratizing network automation through GenAI. With its intuitive no-code automation platform, NetBrain empowers network architects, operators and engineers to harness the power of AI and automation, transforming complex operational processes into efficient workflows. By automating network troubleshooting, change, and assessment workflows, NetBrain helps organizations boost operational efficiency, reduce MTTR and mitigate risk. Unifying GenAI and human intelligence, NetBrain provides comprehensive hybrid network observability through continuous network assessment automation and visualization technology, enabling IT organizations to be proactive, make informed decisions and drive innovation.