

COMPARISON GUIDE

Open Source and DIY Scripting vs. Commercial Automation Platforms

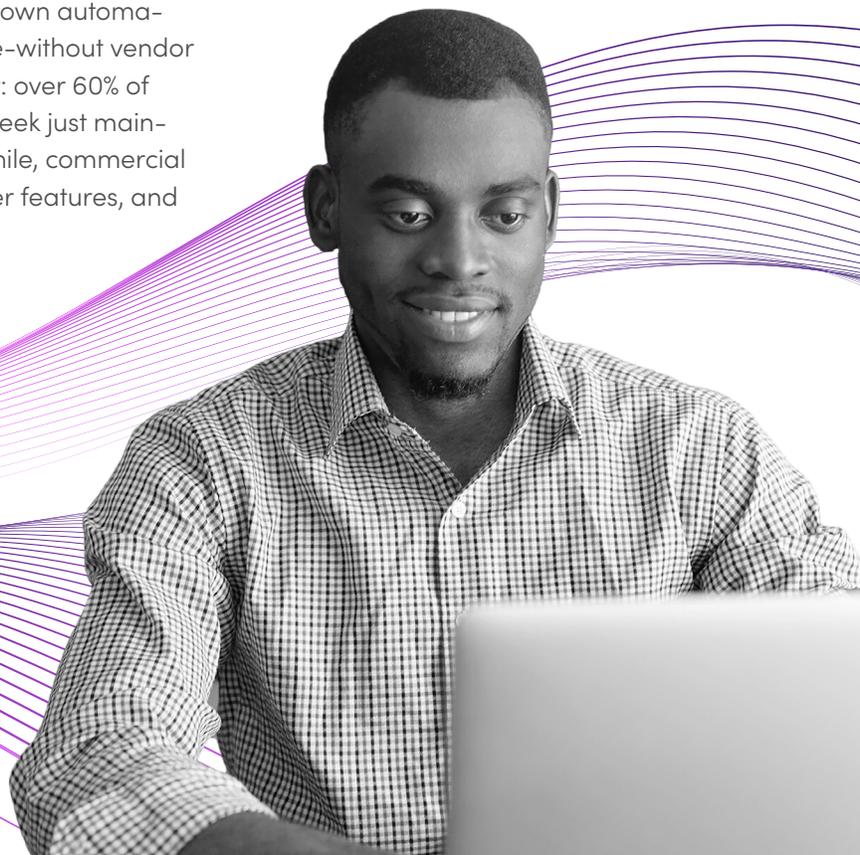
Network automation is at a crossroads. Despite the rapid evolution of IT operations and the proliferation of commercial automation platforms, most network engineering teams still rely on homegrown scripts and open-source tools to keep their environments running. From Python scripts to Ansible playbooks, these do-it-yourself solutions have become the backbone of network automation across industries.

Why do these custom, code-heavy approaches persist, even as IT leaders invest in commercial tools for other parts of the technology stack? The answer lies in a complex mix of budget realities, organizational culture, and the unique demands of network operations. Engineers value the flexibility, control, and immediate problem-solving power that scripting provides. At the same time, they face mounting challenges: maintaining sprawling collections of scripts, ensuring security and compliance, and scaling automation across increasingly complex, hybrid networks.

Enterprise Management Associate's (EMA) 2025 research reveals that 64% of enterprises use homegrown automation, and 57% rely on open-source software—without vendor support. Yet, this approach comes at a cost: over 60% of DIY teams spend six or more hours each week just maintaining and debugging their tools. Meanwhile, commercial platforms promise faster deployment, richer features, and

enterprise-grade support—but often struggle to win over network teams who see them as expensive, inflexible, or ill-suited to their unique needs.

This report explores why scripts and playbooks continue to dominate network automation, what value and pitfalls this brings, and how vendors might bridge the gap. Through in-depth interviews with industry experts, we examine the real-world motivations, challenges, and aspirations behind today's network automation strategies—and consider what it will take to move from a patchwork of projects to a true automation product.



Network Automation: Scale & Scope Comparison

Feature/Criteria	Open Source & DIY Scripting	Commercial Platforms (e.g., NetBrain)
Network Source of Truth	<ul style="list-style-type: none"> • Static inventory • Siloed scripts lack cross-network visibility • Undocumented tribal knowledge 	<ul style="list-style-type: none"> • Auto-discovered multi-layer digital twin of live network • Complete set of exportable inventory reporting • Dynamic hybrid-cloud and multi-vendor mapping and pathing]
Scale	<ul style="list-style-type: none"> • Difficult to manage at enterprise scale • Maintenance burden increases with every new script • Fragmented solutions across teams and sites 	<ul style="list-style-type: none"> • Designed for enterprise, MSP, multi-vendor, and hybrid environments • Centralized management and outage assessment library • Scales automation easily across thousands of devices and sites
Scope	<ul style="list-style-type: none"> • Theoretically unlimited (can automate any use case) • Each new use case requires custom development • Often focused on specific, immediate needs 	<ul style="list-style-type: none"> • Broad, with out-of-the-box support for common Day-2 operations (troubleshooting, compliance, change validation, etc.) • Easily extended via templates and no-code workflows • Supports end-to-end automation across the network lifecycle
Integration	<ul style="list-style-type: none"> • Manual, custom coding needed for ITSM, monitoring, inventory, etc. • Integrations often brittle and require ongoing maintenance 	<ul style="list-style-type: none"> • Built-in integrations with ITSM, monitoring, inventory, and other enterprise systems • Extensible through APIs and connectors • Consistent and reliable integration at scale
Governance & Security	<ul style="list-style-type: none"> • Ad hoc, difficult to enforce standards or access controls • Security and compliance depend on individual script quality 	<ul style="list-style-type: none"> • Centralized governance, auditing, and security controls • Compliance and access policies enforced platform-wide • Multi-factor authentication and RBAC
User Access & Skills	<ul style="list-style-type: none"> • Requires advanced coding/scripting skills • Automation limited to skilled engineers 	<ul style="list-style-type: none"> • No-code/low-code interface with automated visual parsing and Boolean logic – no development required • Integrated AI to orchestrate and summarize automation based on declarative knowledge documents and natural language queries • Enables broader team participation, including junior staff
Maintenance	<ul style="list-style-type: none"> • High ongoing maintenance and troubleshooting • 61% of teams spend 6+ hours/week on upkeep (EMA) 	<ul style="list-style-type: none"> • Vendor-supported, automated updates and troubleshooting • Lower operational overhead
Consistency	<ul style="list-style-type: none"> • Inconsistent results and documentation • Risk of errors and outages from script changes 	<ul style="list-style-type: none"> • Templated, repeatable publishable troubleshooting and change management workflows • Proactive validation assessments and alerting • Guardrails and validation reduce risk of outages
Support & Accountability	<ul style="list-style-type: none"> • Community/self-support only • No vendor accountability if tools fail 	<ul style="list-style-type: none"> • Vendor support and SLAs • Prebuilt industry outage assessment automation library • Accountable, with rapid issue resolution and updates
Cost	<ul style="list-style-type: none"> • No licensing fees, but hidden costs in maintenance, errors, and downtime 	<ul style="list-style-type: none"> • Upfront investment, but ROI through reduced downtime, faster resolution, and lower maintenance burden

Key Takeaways

- Open source/homegrown scripting offers flexibility and can theoretically automate any task, but struggles with scale, consistency, integration, and governance as environments grow.
- Commercial platforms like NetBrain are purpose-built for enterprise scale and broad operational scope, offering centralized management, out-of-the-box integrations, and no-code extensibility-making them better suited for organizations aiming to operationalize automation as a strategic, scalable product.

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