Network management shouldn’t be tedious.

It should be automated.

**HP Network Automation software**

HP Network Automation software tracks, regulates, and automates configuration and software changes across globally distributed, multivendor networks.

The power of network automation

Today Global 2000 companies, government agencies, and service providers use automation to keep network management costs contained, effectively manage network changes, and implement new deployments such as cloud and virtual environments while providing the quality and responsiveness that their businesses demand. HP Network Automation software goes beyond multivendor network configuration management to help you prevent errors before they occur and deliver measurable cost savings using process-driven network automation.

The end result is a resilient, maintainable, and cost-effective network that is compliant with both company standards and government regulations.

**Network lifecycle automation**

HP Network Automation automates the complete operational lifecycle of network devices from provisioning to policy-based change management, compliance, and security administration.

When combined with HP Network Node Manager i (NNMi) software, you get an integrated solution that unifies network fault, availability, and performance with change, configuration, compliance, and automated diagnostics. Network Automation is one component of the HP Automated Network Management Suite which provides a holistic, automated approach across the network management domain of fault, availability, performance, and change, configuration, compliance and process automation.

Automation particularly helps environments with large networks, complex network devices, and high costs associated with manual integrations among disparate management systems. It provides a graphical integration workspace, which lets you easily define complex and manually intensive workflows. This empowers network operating centers to achieve greater results with easily deployed workflow automation without the need for scripting.

HP Network Automation provides process-powered automation. When combined with HP Operations Orchestration software, HP Network Automation takes workflow automation to a new level, letting you automate IT workflows beyond traditional network change and configuration management. Automation is of little value if your devices are not supported. That is why HP Network Automation supports an exhaustive set of network devices from over 90 vendors, and includes virtual devices, giving you comprehensive network change and configuration management coverage for an extensive range of devices. HP also offers Network Driver Studio (NDS)—a tool that allows users to self-develop device drivers that interoperates with Network Automation. The NDS enables end users to develop new drivers to manage network devices not supported by Network Automation out-of-the-box.

For customers with Cisco and HP Networking devices, HP Network Automation offers unique capabilities for unmatched change, configuration, and compliance management of those devices.

**Network lifecycle automation**

HP Network Automation automates network change control and compliance processes across the network lifecycle.

Enforce policies, standardize operations, and meet compliance.

Bringing networks into compliance with corporate or regulatory standards is a nontrivial, labor-intensive, and ultimately difficult task. HP Network Automation helps you meet compliance standards through a network compliance model that maps device information, including configurations and run-time diagnostics, as well as policies and user roles, into a normalized structure to prevent compliance violations before they occur.

Built-in best practices immediately measure network compliance against industry-accepted best practices. HP Network Automation incorporates policies such as the National Security Agency (NSA) router configuration guidelines.

Network run-time compliance enforcement helps you continually meet network compliance requirements. HP Network Automation extends policy-based compliance to include the run-time state of your network to proactively detect problems. It tests and manages releases so devices adhere to policies. Run-time enforcement also validates the run-time state of devices, which can vary from information captured by monitoring systems.
Supported device vendors

Create customized reports using the HP Business Service Automation (BSA) Essentials reporting package, which is included with the HP Network Automation solution. Flexibly generate reports that comply with the Information Technology Infrastructure Library (ITIL) standard, the Payment Card Industry (PCI) standard, or any other internal or external report standard.

You can validate new changes against policies automatically to proactively avoid misconfigurations and noncompliant changes. If changes do not comply, HP Network Automation alerts you to make appropriate corrections before applying them to a device.

HP Network Automation can manage dual-stack and pure Internet Protocol version 6 (IPv6) environments. It meets security requirements for managing Simple Network Management Protocol version 3 (SNMPv3) configurations and can communicate over SNMPv3. Next-generation Cisco IOS XR devices are also supported, protecting your strategic investments in Cisco network infrastructure.

Increase network visibility and decrease mean time to repair.
HP Network Automation provides visibility and control over globally distributed, multivendor networks. This helps you to dramatically reduce manual misconfigurations that cause the majority of security breaches and network downtime.

HP Network Automation gathers detailed information about network devices and records configuration changes for managed devices. Notifications of changes give you immediate visibility into planned, unplanned, and unauthorized changes.

Prevent network downtime and increase stability.
Studies show that peer reviews reduce the number of defects in a network by almost four times. HP Network Automation automates peer reviews, ticketing, and approval processes to reduce the time between approving a configuration change and implementing it on your network.

You can approve changes through a flexible, integrated approval model that integrates with third-party ticketing systems. With a single click, configuration code is pushed to your network during scheduled maintenance. Approvers can review a change in the context of your device configuration and of the business units that the change affects.

HP Network Automation delivers powerful access control list (ACL) automation and management capabilities. You can quickly react to emerging threats and vulnerabilities. ACL templates are provided to reduce complexity and provide consistency.

The Security and Compliance service from HP BSA Essentials is a security alert service that delivers triaged, network security vulnerability data as actionable compliance policies in HP Network Automation. You can immediately identify all vulnerable devices across your network. Alerts include instructions and patches for rapid remediation.

An entire network can be managed on a single instance of Network Automation, unless requirements dictate the need for increased scalability and redundancy of the application. Customers can choose to implement Horizontal Scalability and Multi-Master architecture by purchasing additional non-production licenses. Satellite licenses are also available to allow customers to manage overlapping IP addresses and provide better WAN bandwidth management while using Network Automation.

Enable disaster recovery and remote management.
HP Network Automation stores device software images and configurations. It can grow as your network increases in size and complexity. It offers automated network management for geographically dispersed networks. If you need to replace a device, simply deploy the original software image and configuration to bring the device back into operation easily, quickly, and efficiently.

The Multi-Master and Satellite features offer real-time visibility and control for your enterprise network, including support for remote locations around the world. Multi-Master provides failover support for your network, automatically replicating information to multiple locations, allowing the new locations to use information immediately. It also lets network teams use best practices and knowledge across multiple locations and provides operational consistency across your enterprise. Satellite lets you manage your remote network devices from a central location, supporting overlapping ranges and/or WAN links.
Key features and benefits

- Reduce costs by automating time-consuming manual change, configuration, and compliance tasks.
- Pass audit and compliance requirements easily with proactive policy enforcement and audit and compliance reports (ITIL, Cardholder Information Security Program, Health Insurance Portability and Accountability Act, Sarbanes-Oxley Act, Gramm-Leach-Bliley Act, and others).
- Improve network security by recognizing and fixing security vulnerabilities before they affect the network, using an integrated security alert service.
- Increase network stability and uptime by preventing the inconsistencies and misconfigurations that are at the root of most problems.
- Use process-powered automation to deliver application integrations, which deliver full IT lifecycle workflow automation, without scripting.
- Support SNMPv3 and IPv6, including dual-stack IPv4 and IPv6 support. HP Network Automation supports both of these technologies to provide flexibility in your protocol strategy and implementation.
- Use automated software image management to deploy wide-scale image updates quickly with audit and roll-back capabilities.
- Manage virtual switch and virtual context environments to support new cloud computing and virtual network deployments.

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HP Services

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- Fast answers giving you technical expertise and remote tools to access fast answers, reactive problem resolution, and proactive problem prevention
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Comprehensive training

HP provides a comprehensive curriculum of HP Software and IT Service Management courses. These offerings provide the training you need to realize the full potential of your HP solutions, increase your network optimization and responsiveness, and achieve better return on your IT investments. With more than 30 years of experience in meeting complex education challenges worldwide, HP knows training. This experience, coupled with unique insights into HP Software products, positions HP to deliver an outstanding training experience. For more information about these and other educational courses, visit hp.com/learn.

For more information

Track, regulate, and automate configuration and software changes with HP Network Automation software. Visit hp.com/go/nasoftware.

HP Network Automation capabilities

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<th>Feature</th>
<th>Description</th>
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<tr>
<td>Automated Network Management</td>
<td>HP Automated Network Management (ANM) enables customers to reduce costs and increase agility across all network operations. Unlike point product approaches, HP offers an integrated solution that unifies network fault, availability, and performance with change, configuration, compliance, and automated diagnostics. For network teams that need to contain costs while improving network performance and policy compliance, ANM is surprisingly affordable and provides rapid return on investment.</td>
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<tr>
<td>Process-powered automation</td>
<td>Using integrated, single-source software, automate IT workflows for otherwise manual processes, accomplished primarily through complex scripting.</td>
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<tr>
<td>Real-time configuration and asset tracking</td>
<td>In real time, detect configuration and asset information changes made across a multivendor device network, regardless of how each change is made.</td>
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## HP Network Automation capabilities (cont.)

<table>
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<tr>
<th>Feature</th>
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<tbody>
<tr>
<td><strong>Compliance control</strong></td>
<td>Perform rapid troubleshooting and manage network compliance by comparing devices to defined, best-practice standards. Control noncompliance with automatic remediation of devices that violate standards. Speed internal and external audit processes with network compliance reports for ITIL, SOX, HIPAA, PCI DSS, and more. Validate device operating states in real time to stay in compliance.</td>
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<tr>
<td><strong>Diagramming and visualization, including layer 2 and 3 modeling</strong></td>
<td>Generate a graphical representation of your network. Identify which devices are inactive or out of compliance. Use filters to immediately view isolated specific network segments.Capture a snapshot of the current state of the network, including topology and virtual LAN (VLAN) information. Identify the hosts connected to specific switches or interfaces by MAC address.</td>
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<tr>
<td><strong>SNMPv3 and IPv6 management</strong></td>
<td>Manage dual-stack and pure IPv6 environments. Manage SNMPv3 configurations and communicate over SNMPv3.</td>
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<tr>
<td><strong>Automated software image management</strong></td>
<td>Update Cisco images and feature sets quickly, reliably, and easily.</td>
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<tr>
<td><strong>Real-time audit trail</strong></td>
<td>In real time, store a complete audit trail of configuration changes (hardware and software) made to network devices, including critical change information.</td>
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<td><strong>Role-based access control</strong></td>
<td>Configure granular, customizable user roles to control permissions on device views, device actions, and system actions. Support common authentication systems, such as Terminal Access Controller Access Control System Plus (TACACS+), Radius, SecurID, Active Directory, and Lightweight Directory Access Protocol (LDAP).</td>
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<tr>
<td><strong>Network lockdown</strong></td>
<td>Manage device access and authorization through a centralized control model that is integrated with your standard workflow and approval processes.</td>
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<td><strong>Template-based device provisioning</strong></td>
<td>Automate routine configuration tasks for updates, such as password or community string changes. Reduce the time needed to build automation scripts and increase accuracy with auto-generated scripts derived from device sessions.</td>
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<tr>
<td><strong>Device operating system management</strong></td>
<td>Deploy and monitor operating system images from a centralized network management system. Control the deployment of images for specific requirements to prevent mistakes before they happen.</td>
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<tr>
<td><strong>Automated software synchronization and image management</strong></td>
<td>Create a repository, and synchronize all device software images across your enterprise network. Use image management to automatically identify, download, and install the recommended software image for your network devices.</td>
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<tr>
<td><strong>Automation engine</strong></td>
<td>Create complex automation flows, integrating internal and third-party systems. Leverage more than 200 system triggers to drive automation.</td>
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<tr>
<td><strong>Workflow and approvals</strong></td>
<td>Enforce change processes in real time. Model complex approval processes with flexible rules. Force approvals for changes, including changes made by a direct command line interface (CLI) session. Combine multiple tasks into a project workflow to determine whether the system should proceed to the next step.</td>
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<tr>
<td><strong>Multi-Master and Satellite</strong></td>
<td>Implement high-availability and disaster-recovery solutions with Multi-Master and Satellite deployments. Administrators can effectively manage geographically dispersed networks without a single point of failure.</td>
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<td><strong>Horizontal scalability</strong></td>
<td>The Horizontal scalability feature offers you added flexibility in how you can grow capacity while controlling software and hardware costs.</td>
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<tr>
<td><strong>HP Server Automation software integration</strong></td>
<td>Understand which servers are affected by changes to specific network devices. HP Server Automation and HP Network Automation integration provides a comprehensive view and automation of your entire IT infrastructure.</td>
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<tr>
<td><strong>Quick launch</strong></td>
<td>One-click launching of tasks for faster user organization and execution of common tasks. It’s like a browser bookmark, but for saving, organizing, and launching NA tasks similar to how bookmarks work for Web pages.</td>
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