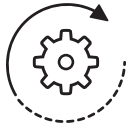# RED HAT ANSIBLE Automation

redhat

STREAMLINE YOUR NETWORK WITH RED HAT ANSIBLE AUTOMATION

SOLUTION BRIEF

71%
of communications service providers believe that process automation is the most important enabler of long-term operational excellence.[1]

THE TELECOMMUNICATIONS INDUSTRY IS CHANGING

In today's fast-paced, digital world, communications service providers (CSPs) need to be more efficient, agile, and reliable than ever before. Modern network architectures and technologies like network functions virtualization (NFV) can speed service delivery, increase flexibility, and boost productivity. However, traditional network configuration management approaches can greatly diminish the benefits of these new technologies. Manual configuration can lead to inconsistencies that negatively impact operations. Errors can propagate through scaling and can be difficult to troubleshoot and repair. Manual tasks are time-consuming, reducing network operations staff productivity. To avoid these issues, you need a new, modern approach to network management.

AUTOMATE FOR SUCCESS IN THE NEW DIGITAL ECONOMY

Automating network management and operations is critical to getting the most from your network infrastructure. Automation drastically reduces the time spent on tedious and repetitive tasks, increasing efficiency. Accelerate IT processes from days to minutes and bring new technology into service faster for faster time to revenue. Staff can accomplish more in less time, reducing operational costs. Automated analysis, detection, and resolution of issues minimizes systematic errors and reduces risk. Consistent configuration and management across multivendor environments improves uptime and compliance with regulations and policies.

MOVE FORWARD WITH RED HAT ANSIBLE AUTOMATION

Delivered as both product and support and support-only offerings, Red Hat® Ansible® Automation provides a simple, powerful, and agentless framework for network, server, and application automation. It provides a single language for automation across technologies and organizations. With Red Hat Ansible Automation, you can add stability, scalability, and repeatability to your network management processes without changing the underlying management of your network. The automation framework allows you to optimize your applications by migrating them across your network. The software supports integration of more than 900 third-party technologies and products using modules developed and released through the vibrant, growing Ansible Galaxy ecosystem.
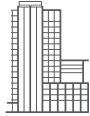
STREAMLINE TELECOMMUNICATIONS WORKLOADS

With Red Hat Ansible Automation, you can optimize many telecommunications workloads. The following use cases show the benefits of automation.

NETWORK AUTOMATION

Red Hat Ansible Automation is ideal for managing networks with components from multiple vendors and different operating systems and configuration methods. It abstracts device-specific implementation details from network management, allowing you to focus on network configuration values. In a typical configuration process, the tool attaches to and reads information from each network

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1 EY, "Digital transformation for 2020 and beyond," 2017.

device—including devices present, device capabilities, and operating systems in use. Red Hat Ansible Automation uses this information to intelligently and conditionally configure each device. It then validates the network configuration by comparing information re-read from each network device with the expected values. Finally, the tool logs any inconsistencies as configuration issues requiring remediation.

SOFTWARE-DEFINED NETWORKING AND NETWORK FUNCTIONS VIRTUALIZATION

As CSPs move beyond traditional, proprietary hardware solutions to modern network architectures and technologies like NFV, efficient management of the underlying hardware infrastructure becomes critical. With networking modules included in Red Hat Ansible Automation, you can streamline configuration of physical networking devices and ensure that they are operating correctly from initiation to provisioning to more effectively manage your infrastructure. Additionally, Red Hat Ansible Automation can create new instances of Red Hat OpenStack® Platform and Red Hat Ceph Storage so that your NFV environment can scale automatically according to demand.

CONTINUOUS COMPLIANCE

Red Hat Ansible Automation helps you consistently meet regulatory requirements across network infrastructure. Continuous monitoring of your network infrastructure validates that it is operating as expected. Prevent configuration drift and maintain the ephemeral state of network devices. Red Hat Ansible Automation reads the device state and configuration information of all network devices, compares them to expected values, and reports any conflicts. As a result, you can plan for remediation in the appropriate maintenance window. And, with Red Hat Ansible Tower, you can schedule this validation process on a one-time or repeating basis according to business requirements.

NETWORK MIGRATION AND TESTING

Network modernization necessitates migrating services between networks. During these migrations, strict procedures are required to ensure network availability and quality. However, even with established processes, errors can occur through manual execution. You can use Red Hat Ansible Automation to validate these procedures before migration, reducing the risk of errors during the migration process. Additionally, by automating migration tasks, you can reduce service downtime and complete migrations faster.

CONCLUSION

Automation is critical for success in a digital world, especially as both customer demand and network complexity grow. Red Hat Ansible Automation lets you automate network management to decrease risk though consistent and compliant configuration deployment. Contact your Red Hat representative to find out how Red Hat Ansible Automation can help your business move forward.

Learn more at redhat.com/telco and redhat.com/ansible.