Red Hat Ansible Automation Improves IT Agility and Time to Market

An IDC White Paper, Sponsored by Red Hat

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Business Value Highlights

498%
five-year ROI

5 months
to payback

$1.13 million
in additional new revenue gained per year

68%
more productive IT infrastructure management teams

68%
faster deployment of new storage resources

41%
more efficient application environment management teams

135%
more applications developed per year

25%
more efficient IT security teams

53%
reduction in unplanned downtime

EXECUTIVE SUMMARY

IDC conducted research that explored the value and benefits of organizations using Red Hat Ansible Automation to standardize and automate IT operations and configuration activities across their environments. IDC interviewed multiple decision makers about their experiences using Red Hat Ansible Automation. This research found that these organizations were realizing significant productivity, agility and operational benefits by using Ansible Automation's programmatic software driven approach to IT automation. Ansible Automation users report increased IT and DevOps agility, improved standardization and compliance, and better control over cost of infrastructure and cloud resources.

All Ansible Automation customers interviewed rely on a Red Hat subscription to provide support, testing and training services. Based on IDC's calculations, these Red Hat Ansible Automation users realized discounted benefits worth $1.17 million per organization per year. Major types of business value realized include:

- Increased IT operational productivity across a variety of infrastructure teams due to the standardization and automation of many configuration tasks and IT operations processes
- Faster deployment of new computer, networking, and storage infrastructure resources
- More efficient and secure application lifecycle management
- Increased scale and speed of application development and deployment using fully automated CI/CD tool chains to accelerate time to market
- Improved application performance and availability due to reductions in unplanned downtime

Situation Overview

Increasing enterprise adoption of multicloud, hybrid IT architectures, DevOps continuous integration and deployment lifecycles, and container and Kubernetes platforms for production applications are dramatically increasing the operational complexity of many IT infrastructure environments. As applications are deployed using microservices, and workloads become more and more distributed, the end-to-end application experience becomes highly dependent on the alignment and resiliency of many interconnected compute, network, database, storage, source control and related resources.

IT operations teams are tasked with maintaining application performance, security and reliability while simultaneously optimizing costs and ensuring compliance with corporate policies. Traditional manual and script-based approaches to IT infrastructure configuration, security and application deployment are unable to keep up with the demands of today's complex environments. Automation is no longer optional. Rather, automation is required to ensure that IT can keep up with the needs of the business.

The question for IT teams today is how to best select and implement automation solutions that will scale and be able to adapt over time to the introduction of new and varied technologies and operational models. Programmatic, software driven approaches to automation allow IT teams to create standardized automation programs that can be managed using source control, shared across the organization, and integrated using API driven architectures. For organizations moving toward containers and Kubernetes, it is critical that they adopt code-based approaches to configuration management in order to be able to integrate infrastructure operations into CI/CD workflows.

To be effective in today's agile environments, enterprises are turning to these types of programmatic, infrastructure-as-code approaches to configuration, provisioning, security and application release automation.

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Many organizations begin their journey toward programmatic software driven automation using open source solutions. Open source communities such as Ansible are providing a rich supply of reusable automation building blocks, called playbooks and roles in the Ansible Galaxy community. These freely available playbooks and roles can be customized and integrated to create templates and workflows that can be managed under centralized source control and reused as needed across the organization.

The open source communities offer enterprises access to rapid innovation but do not provide enterprise class support, testing, hardening or validation. Open source solutions typically lack many important enterprise scale capabilities like API access,

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graphical user interfaces, and security testing and certification. As a result, many Ansible users, including the Red Hat customers profiled in this paper, rely on Red Hat subscriptions to provide hardened, supported Ansible Automation software including Ansible Tower, Ansible Engine and Ansible modules for many use cases including public clouds, virtual machines, network, security and more.

Red Hat Ansible Automation

Red Hat Ansible Engine ships with a library of tested and supported Ansible modules for a range of use cases including network, compute and cloud. Red Hat Ansible Tower is the centerpiece of the Red Hat Ansible Automation family.

Red Hat Ansible Automation encompasses several products which are typically purchased and used together to provide a comprehensive, supported automation experience. Red Hat Ansible Engine provides a core command line execution environment for Ansible modules, playbooks and roles. Red Hat Ansible Engine ships with a library of tested and supported Ansible modules for a range of use cases including network, compute and cloud. Red Hat Ansible Tower is the centerpiece of the Red Hat Ansible Automation family. Red Hat Ansible Tower provides enterprise scale operations, analytics and security as well as integrations to source control and third-party systems such as ServiceNow. It can be deployed on both VM and container-based infrastructure and can integrate with on-premises and public cloud infrastructure resources. Red Hat Ansible Tower is based on technology available in the AWX open source community. Specifically, Red Hat Ansible Tower supports large-scale and cross-domain environments by providing:

- An open REST API that enables integration with source control systems to maintain Ansible modules, tasks, playbooks and roles and to enable developers and third-party platforms, including container application platforms such as OpenShift, to integrate with Ansible workflows using API calls
- A visual dashboard for creating and managing complex, multi-playbook automation templates, tracking automation status, generating compliance and usage reports and connecting multiple Tower clusters for large scale environments
- Integrations with the Galaxy and Ansible.com open source community sites to easily assess, evaluate and share modules, tasks, playbooks and roles
- Log monitoring and integrations with third-party log analytics tools
- Centralized and auditable system credential management, security and access control
- Inventory synchronization with a broad range of asset tracking and CMDB source to ensure that automated actions are aligned with the most current system state and configuration data
- Management of access control and user credentials

The Business Value of Red Hat Ansible Automation

Study Demographics

IDC conducted research that explores the value and benefits for organizations of using Red Hat Ansible Automation to manage their IT infrastructure. The project included nine interviews with organizations using Ansible Automation that have experience with or knowledge about its benefits and costs. All customers rely on Red Hat Ansible Tower subscriptions to ensure enterprise scale and control of operations.

During the interviews, companies were asked a variety of quantitative and qualitative questions about the impact of the solution on their IT infrastructure operations, businesses, and costs. Table 1 presents the study demographics and profiles. Organizations interviewed had an employee base of 14,564, most of whom were using IT services. Those services were supported by an IT staff of 641 employees and 357 developers overseeing 101 business applications. (Note: all numbers cited represent averages.) In terms of geographic representation, most companies were US-based with Australia, the UK, and Brazil also represented. Industries represented include the manufacturing, healthcare, IT, telecommunications, government, and finance sectors.

TABLE 1

Firmographics

	Average	Median
Number of employees	14,564	3,000
Number of IT staff	641	150
Number of developers	357	100
Number of employees using IT services	14,528	3,000
Number of External Customers	2,057,541	6,500
Number of business applications	101	100
Number of business applications, containerized	18	2
Company revenue	$9,028B	$708.5M
Countries	US (6), Australia, UK, Brazil	
Industries	Manufacturing (3), Healthcare (2), IT, Telecommunication, Government, Finance	

Source: IDC, 2019

Choice and Use of Red Hat Ansible Automation

The companies surveyed described usage patterns for Red Hat Ansible Automation and provided a snapshot of their overall IT and business environment as well. They also discussed both the value proposition and rationale behind their choice of Red Hat Ansible Automation. Customers cited a number of benefits including the ability to meet DevOps requirements for private cloud and the ability to customize thereby making it easier for DevOps resources to be deployed rapidly and easily. They also cited business benefits such as total cost of ownership, the ability to offer standardized automation, and the fact that their developers were already familiar with and comfortable working on open source technology. Study participants made specific observations about these benefits:

- **Enabled more agile IT operations:** *"We've been in digital transformation for two years and trying to adopt agile ways of doing business. Red Hat Ansible Tower was one of the best tools we purchased because we could easily start automating the most simple tasks in our company, especially the ones for IT operations. We were doing things manually and Ansible Tower was a really good choice because it has given us more ways to easily implement automation."*

"Standardizing our infrastructure configuration is a big benefit. Red Hat Ansible Automation allows us to lock in standards across the business, which has been good for us."

- **Fostered standardization across the business:** *"Standardizing our infrastructure configuration is a big benefit. Red Hat Ansible Automation allows us to lock in standards across the business, which has been good for us."*
- **Helped bring multiple teams together:** *"The benefits…included business considerations such as total cost of ownership. Specialty developers on my team are used to employing a lot of open source products and are big Red Hat fans. Ultimately, we found that it's easier to manage resources with Red Hat Ansible Automation."*
- **Integrates with an agile DevOps model:** *"We were changing into an agile DevOps-focused organization and we needed tooling that could meet requirements for DevOps capabilities for our private cloud. Because we are using products from multiple vendors, we needed a tool that was flexible enough to cope with the existing suite of products as well as any new requirements. Red Hat Ansible Automation's support of key deployed infrastructure and software along with the ability to quickly and easily do custom functionality meant that the new DevOps capability could be deployed and provide business benefits pretty rapidly."*

Table 2 provides more data on the IT environments that characterized surveyed companies as well as the reasons these organizations selected supported Red Hat Ansible Automation. Overall, an average of 27 applications were supported by Ansible Tower within these organizations. Every organization interviewed wanted to standardize their infrastructure configuration and provisioning. Most organizations turned to Red Hat Ansible Automation to run their IT environment, deploy a private/hybrid/multicloud environment, and assist in their application modernization efforts. Multiple customers also looked to Red Hat Ansible Automation to help bring different IT groups closer together.

TABLE 2

Red Hat Ansible Automation Usage

Ansible Usage	**Ansible Customer Respondent**								
	1	2	3	4	5	6	7	8	9
Automating DevOps workflows	✔	✔	✔	✔	✔	✔	✔	✔	✔
Standardizing infrastructure config/ provisioning	✔	✔		✔	✔	✔	✔	✔	✔
Run complex IT environments	✔	✔	✔		✔	✔	✔	✔	✔
Deploy private/hybrid/ multicloud	✔	✔	✔		✔	✔	✔	✔	
Application modernization	✔			✔	✔	✔	✔	✔	✔
Bring different IT groups closer together	✔				✔	✔			✔

Source: IDC, 2019

The Business Value of Red Hat Ansible Automation

IDC's research explored the value and benefits of using Red Hat Ansible Automation to manage IT infrastructure. Survey data was applied against a sophisticated business value algorithm to arrive at quantified and verifiable benefits.

Using this methodology, IDC found that Red Hat customers realized significant benefits by leveraging Red Hat Ansible Automation to increase IT infrastructure management team productivity, enable faster deployment of resources such as compute and storage, optimize application development and management team tasks and processes, and reduce unplanned downtime affecting business users. Specifically, these organizations were:

- Deploying applications faster thereby decreasing time to market
- Managing IT systems more efficiently
- Building a strong foundation for DevOps
- Increasing the number of applications and features developed

In the aggregate, these benefits helped their businesses operate more efficiently and effectively in pursuit of business goals. Study participants discussed how they are using Red Hat Ansible Automation to achieve these benefits:

- **Faster business agility:** *"By automating a lot of mundane and tedious tasks with Red Hat Ansible Automation, we are improving the productivity of various teams. This improves our business competitiveness. Our business is able to achieve its objectives much faster by having the tools and applications we need."*
- **More efficient IT operations:** *"Our resource and staff efficiency is great with Red Hat Ansible Automation. Platform deployments have dropped from taking several days or weeks to hours by removing requirements to have multiple team members get involved in the build process. In terms of business continuity, we've got patches and updates that can be applied with Red Hat Ansible Automation with a significantly higher success rate. This means that end users aren't inconvenienced with planned or unplanned outages during the day. We're also managing to keep our platforms a lot more consistent by using the same deployment method across our operations. This ensures that development, test, pre-production and production environments are aligned while reducing typical infrastructure and patching-based errors."*

"By automating a lot of mundane and tedious tasks with Red Hat Ansible Automation, we are improving the productivity of various teams. This improves our business competitiveness. Our business is able to achieve its objectives much faster by having the tools and applications we need."

"From an end user's standpoint, Red Hat Ansible Automation has helped with expectations. Business units expect something to be delivered on time and it is."

- **Quicker to market:** *"Because of Red Hat Ansible Automation, we are able to deliver faster. That's very valuable for the business. As the result of this higher reliability, we can deliver applications without any problems. For example, we do not have to roll back applications from production. All of this is helping us to get more clients."*
- **Better on-time delivery:** *"From an end user's standpoint, Red Hat Ansible Automation has helped with expectations. Business units expect something to be delivered on time and it is."*

Improved Efficiencies in IT Infrastructure Operations

Red Hat customers described improvements and the IT staff efficiencies that resulted from the use of Red Hat Ansible Automation, particularly Red Hat Ansible Tower. These included optimizing and automating routine and frequently repeated tasks such as configuration and change management, patching, provisioning, and security updates. Activity streams were recorded in audit trails of all changes made to Ansible Tower including job creation and credential storage. This enabled more streamlined delivery of applications and services to Red Hat OpenStack Platform, VMware, and Amazon Cloud environments.

The ability to scale was cited as especially important. In smaller team environments using best practices for playbooks, security and delegation are manageable with unsupported open source tooling. However, when a larger and more diverse set of users begin using open source, many participants write their own playbooks with considering corporate standards or attempt to automate activities outside their designated span of control. In this type of environment, competing playbooks and overlapping automations can create havoc. Customers wishing to implement large-scale, programmatic automation recognized that use of the Red Hat Ansible Tower subscription helps bring order to the chaos by managing source control integrations, scheduling automations, synchronizing inventories, managing operator access and logging all actions. Administrators are provided a real-time view of job status updates and playbook runs with a visual dashboard for job scheduling and graphical inventory management.

In addition to the ability to scale automation to support complex deployments, Red Hat customers reported that the process of deploying an application was able to be done in a more standardized and optimized fashion, which saved time and increased productivity. Other customers emphasized how the dashboard provided good visibility to team members for the array of projects in play. Study participants also noted that Red Hat Ansible Tower made it easy to embed

functionality into existing tools and processes. They commented on these and other benefits:

- **Helped bring multiple teams together:** *"Red Hat Ansible Tower is phenomenal for bringing our IT teams together. The server, security, network, and database teams can all work on their separate tiers and then use Red Hat Ansible Automation to create their own playbooks. From there, we can daisy chain those playbooks using Tower with much less interaction between the engineers required to make that work. They don't need to actually sit in a room like they did before and hash it out manually."*

"Ansible Tower saves a lot of time with tedious tasks. Before, only a few of our people knew how to do these tasks. Now more people...can use the tool to manage IT projects and see what they are supposed to be doing for each project."

- **Improved IT focus with better visibility:** *"Ansible Tower saves a lot of time with tedious tasks. Before, only a few of our people knew how to do these tasks. Now more people...can use the tool to manage IT projects and see what they are supposed to be doing for each project. This saves the team a lot of time in terms of productivity and manageability while also providing a dashboard to see which projects are ongoing and which have problems that need to be addressed."*

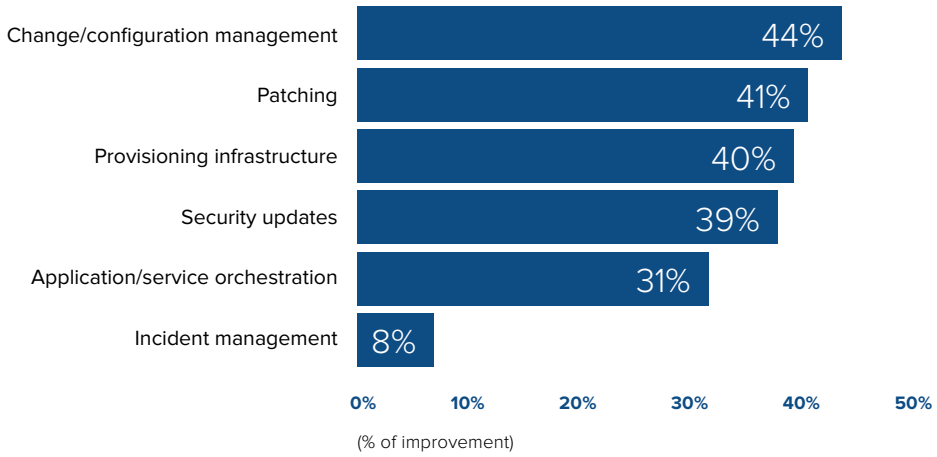
- **Improved infrastructure management:** *"Before, we didn't have any tool for automating our infrastructure, only a bunch of scripts that were used to deploy and manage the automation. Now the process is faster because it's very easy to implement automation using Red Hat Ansible Automation. We also didn't have the need to train for Ansible so people could get started quickly. And I think we're saving a lot annually."*

- **Improved application deployment:** *"The advantages of Red Hat Ansible Automation are clear. It gives us a very standardized way to deploy applications. Everyone can read or write Ansible playbooks for deploying applications. So the process of deploying an application is very standardized and optimized."*

Figure 1 quantifies these benefits by zeroing in on a group of typical tasks involved with infrastructure management. While improvements were realized in all key areas, the greatest improvements were identified in the areas of configuration and change management (44%), patching (41%) and provisioning (40%). Additional metrics are presented in the figure.

FIGURE 1

Infrastructure Management Staff Time Efficiencies



Source: IDC, 2019

These benefits were further quantified in terms of financial benefits that Red Hat customers realized as the result of efficiencies introduced by Red Hat Ansible Automation. Table 3 presents IT infrastructure management productivity impacts in terms of FTE levels which showed a 68% improvement and yielded a salary value of $460,000.

TABLE 3

IT Infrastructure Management, Productivity Impact

	Before Red Hat	With Red Hat	Difference	% change
Management of IT infrastructure, equivalent FTEs	6.8	11.4	4.6	68%
Staff time value per year	$681,000	$1,142,000	$460,000	68%

Source: IDC, 2019

Infrastructure resource configuration and deployment management is a key activity area for IT infrastructure teams in the companies surveyed. Analysis of study participants' data indicated improvements in this area as well. Table 4 presents IT agility metrics for three key categories within infrastructure resource configuration and deployment: server resources, configuration processes, and storage resources. As shown, the time required to deploy new server resources (measured in days) showed a 55% improvement while staff time required to deploy new storage showed a 68% improvement.

TABLE 4

IT Agility Metrics

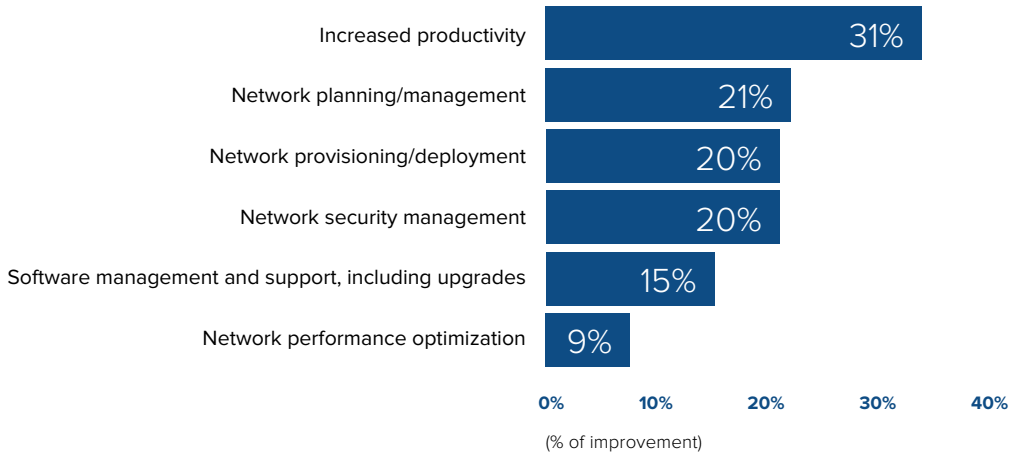
	Before Red Hat	With Red Hat	Difference	% change
Server resources				
Time to deploy new server resources, days	1.8	0.8	1.0	55%
Staff time to deploy new server resources, hours	13.0	6.8	6.3	48%
IT Configuration				
Staff time to configure resources, hours	7.8	2.7	5.1	66%
Storage resources				
Time to deploy new storage, days	2.0	0.7	1.3	66%
Staff time to deploy new storage, hours	11.5	3.7	7.8	68%

Source: IDC, 2019

Another key IT infrastructure area that IDC looked at was network management. Figure 2 shows the staff time efficiencies for this function that were realized via the use of Red Hat Ansible Automation. Here the greatest improvements included overall staff productivity (31%), network planning and management (21%), and network security management (44%). Additional metrics are presented in the chart.

FIGURE 2

Network Management Staff Time Efficiencies



Source: IDC, 2019

Application development was another area of improvement. Red Hat customers reported that Red Hat Ansible Automation had positive impacts on the process of application development. Table 5 presents application development staff impacts for two key areas: building new applications and adding new features. As shown, the number of new applications developed annually improved by a substantial margin (135%). In addition, the number of new features that could be developed increased from 32 to 56 per year, representing a 75% improvement.

TABLE 5

Application Development Staff Impacts

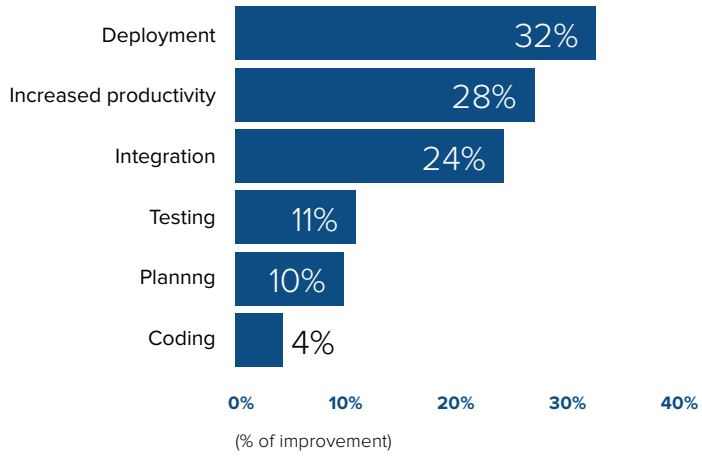
Application Development Staff Impacts	Before Red Hat	With Red Hat	Difference	% change
Developers, productivity impact	8.2	6.8	1.4	17%
Developer salary cost per year	$821,000	$677,000	$144,000	17%
New Applications, New Logic				
Number per year	6.8	16.0	9.2	135%
Development lifecycle, weeks	21.2	13.5	7.7	36%
New Features				
Number per year	32.2	56.2	24.0	75%
Development lifecycle, weeks	6.2	2.6	3.6	59%

Source: IDC, 2019

As discussed previously, study participants reported that Red Hat Ansible Automation integrated well with an agile DevOps model and could meet requirements for DevOps in a private cloud environment. IDC quantified these benefits using the Business Value Model. Figure 3 shows DevOps efficiencies by activity. As indicated, deployment tasks recognized a 32% improvement. In addition, there were similar improvements in the areas of productivity (28%) and integration (24%).

FIGURE 3

DevOps Efficiencies by Activity

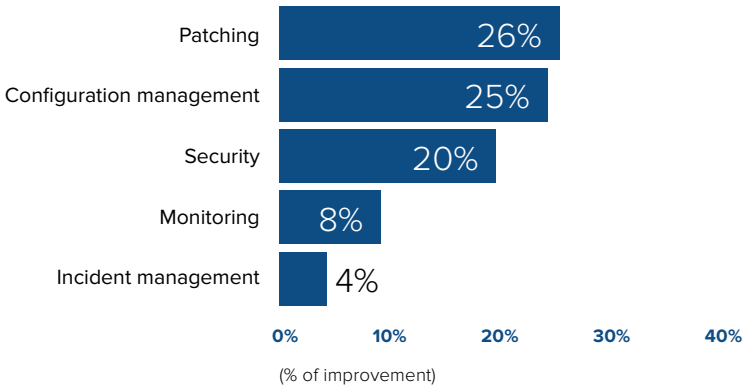


Source: IDC, 2019

Figure 4 presents application management staff time efficiencies. As shown, there were improvements in all areas including patching (26%), configuration management (25%) and security processes (20%).

FIGURE 4

Application Management Staff Time Efficiencies



Source: IDC, 2019

Table 6 presents application development impacts specifically with respect to the process of software management and associated annual staff time costs for the same, both of which showed a 41% improvement after introducing Red Hat Ansible Automation.

TABLE 6

Application Management, Productivity Impact

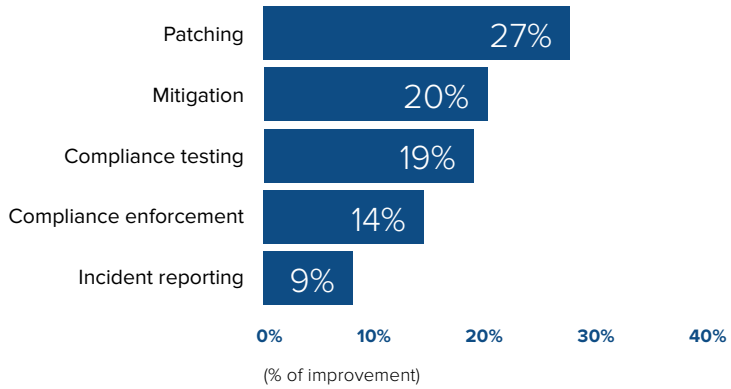
	Before Red Hat	With Red Hat	Difference	% change
IT application management, equivalent FTEs	5.7	8.1	2.3	41%
Staff time value per year	$574,000	$808,000	$234,000	41%

Source: IDC, 2019

Study participants pointed out that these benefits also extended to security teams. IT security staff time efficiencies are shown in Table 4 referencing core tasks typically performed by these teams in the organizations surveyed. As shown, the time required for patching showed a 27% improvement. In addition, compliance testing and enforcement both showed approximately 20% improvement.

FIGURE 5

IT Security Staff Time Efficiencies



Source: IDC, 2019

The efficiencies afforded by Red Hat Ansible Automation also had positive impacts for security team productivity as shown in Table 7. Overall, both FTE-measured productivity and savings as a result of staff time efficiencies showed at 25% improvement after deployment of Red Hat Ansible Automation.

TABLE 7

IT Security, Productivity Impact

	Before Red Hat	With Red Hat	Difference	% change
IT security, equivalent FTEs	4.7	5.8	1.1	25%
Staff time value per year	$467,000	$581,000	$114,000	25%

Source: IDC, 2019

Because the automation capabilities of Red Hat Ansible Automation optimized IT operations and procedures, there were less impacts in terms of help desk issues and concerns reported by study participants as shown in Table 8. Improvements were recognized with both the number of calls made to help desks and the tickets generated annually (16%), and the average time to resolve issues as measured in hours (26%). Additional metrics are shown in the table.

TABLE 8

Help Desk, Productivity Impact

	Before Red Hat	With Red Hat	Difference	% change
Calls/tickets per year	319	268	51	16%
Average time to resolve (hours)	3.3	2.4	0.9	26%
Help Desk, equivalent FTEs	15.7	11.8	3.8	25%
Staff time cost per year	$1,567,000	$1,183,000	$384,000	25%

Source: IDC, 2019

Unplanned Downtime Impacts

Red Hat customers also spoke to IDC about the positive impacts of the Red Hat Ansible Automation in terms of unplanned downtime and overall business productivity. Surveyed organizations were able to reduce the incidence of outages, a benefit that also extended to line of business (LOB) users. This was related to the ability to standardize configurations and workflows for deploying applications, more easily automating infrastructure operations, and gaining better visibility into

the status of IT automation workflows. More consistent completion of patches and updates meant that end users were not inconvenienced with planned or unplanned outages.

Table 9 presents unplanned downtime event impacts. The number of instances of unplanned downtime per year showed a 40% improvement. When instances did occur, the time required to address them was also diminished and showed a 34% improvement.

TABLE 9

Unplanned Downtime, Productivity Impact

	Before Red Hat	With Red Hat	Difference	% change
Instances per year	29.4	17.6	11.7	40%
MTTR	3.8	2.5	1.3	34%
Unplanned downtime incidents, equivalent FTEs	15.3	7.3	8.0	53%
Value of lost productivity	$1,072,000	$509,000	$563,000	53%

Source: IDC, 2019

Unplanned downtime also had impacts on business operations as shown in Table 10. Specifically, the total revenue loss avoided per year on a per organization basis amounted to $829,657.

TABLE 10

Unplanned Downtime Business Impacts

	Per organization
Total revenue loss avoided per year per organization	$829,657
Total recognized revenue, IDC model, per year	$124,449

Source: IDC, 2019

Impacts on Business Operations

Customers explained to IDC how Red Hat Ansible Automation optimized performance of many core IT tasks that support critical business operations in their companies. In addition, they discussed how these improvements had ripple effects throughout their organizations, resulting in higher levels of employee productivity, better business outcomes, increased revenue, and faster time to market. Other benefits included improved decision making, faster compliance and freeing up IT staff time to focus on revenue-oriented projects. Study participants elaborated on these benefits:

- **Enable businesses to capture more revenue streams:** *"We definitely get more revenue with Red Hat Ansible Automation. There are several areas that we're not billing for today because we don't have the capacity to do it. Once we automate the billing process, we think that the revenue potential is exponential. This is the centerpiece of our strategy going forward."*

"Because Red Hat Ansible Automation is freeing up time, our employees are able to spend more time on business-oriented activities, which has led to more sales for our organization."

- **Free up time to focus on revenue-oriented projects:** *"Because Red Hat Ansible Automation is freeing up time, our employees are able to spend more time on business-oriented activities, which has led to more sales for our organization."*
- **Help achieve faster compliance:** *"Red Hat Ansible Automation helps with compliance because there's one standard you have to meet and as long as you do that, you know you're in compliance. Ansible Automation helps by giving us better standardization and making sure that we don't have any back doors open."*
- **Provide better predictive ability:** *"Red Hat Ansible Automation is helping us get to market faster because we can better predict the markets we want to go into right now...This is being enabled by the applications on Red Hat Ansible Automation that monitor our business outcomes, allowing better decision making."*
- **Reduce business risk:** *"There's less risk to our organization because you don't have to code a lot. Usually additional coding can introduce extra vulnerabilities."*

Table 11 presents quantified benefits for business operations and user impact after deployment of Red Hat Ansible Automation. As shown, total additional annual revenue realized on a per organization basis was significant and calculated at $299,658.

TABLE 11

Business Operations and User Impact

	Per organization
Total additional revenue per year per organization	$299,658
Total recognized revenue, IDC model, per year	$44,949

Source: IDC, 2019

ROI Analysis

IDC projects that these organizations will, over five years, realize discounted benefits of $7 million per organization. When compared against a discounted investment of $1.2 million per organization, these Red Hat customers will see an ROI of 498% and a breakeven on their investment in 4.6 months.

Table 12 presents IDC's analysis of the overall benefits and costs related to surveyed organizations' use of Red Hat Ansible Automation, with an emphasis on the benefits created by the use of Red Hat Ansible Tower. IDC projects that these organizations will, over five years, realize discounted benefits of $7 million per organization. When compared against a discounted investment of $1.2 million per organization, these Red Hat customers will see an ROI of 498% and a breakeven on their investment in 4.6 months.

TABLE 12

Five Year ROI Analysis

	Total
Benefit	$7,050,000
Investment	$1,178,000
Net present value	$5,872,000
ROI (NPV/Investment)	498%
Payback (months)	5
Discount factor	12%

Source: IDC, 2019

Challenges and Opportunities

The shift to programmatic, code-driven approaches to automation represents a significant pivot for many traditional system administrators who have long depended on customized scripts, manual processes, or proprietary tools. Automation languages such as Ansible, which are largely human readable, can often provide a faster path to value than those that rely on more sophisticated programming languages.

In addition to ensuring that administrators have the confidence and skills to take advantage of modern automation, enterprises also need to ensure that they have adequate control over security, access, source control and reporting.

In addition to ensuring that administrators have the confidence and skills to take advantage of modern automation, enterprises also need to ensure that they have adequate control over security, access, source control and reporting. Many organizations are subject to strict compliance, audit, and change control reporting requirements and need to implement code-based automation with an eye toward satisfying those requirements.

Finally, many organizations needlessly complicate their automation environments and operational agility by allowing individual groups to select tools independently. While getting multiple groups up to speed on a common automation language may take some time, the benefits of having consistent, standardized configurations and automation platforms in use across the organization can quickly payback the investment by reducing the time and cost of configuring, deploying and updating complex, interdependent resources while better coordinating end-to-end operations and security.

Summary and Conclusion

Modern, enterprise scale IT environments will continue to become more and more complex and dense as enterprises migrate towards multicloud, container and microservice-based architectures. Simultaneously, every aspect of the business is becoming digital and directly dependent on high levels of infrastructure availability, security and application performance. IT operations and DevOps teams require robust, consistent approaches to automation that allow integration, reuse and rapid time to value. Automation becomes a strategic multiplier of IT operations productivity while reducing human error and improving digital performance.

This IDC study shows that Red Hat Ansible Automation customers are realizing significant productivity and cost savings while improving security and time to market for business-critical applications. With Red Hat Ansible Automation, organizations are creating reliable, repeatable workflows that can scale seamlessly as the operational needs of the organization increase.

IDC ANALYZE THE FUTURE

Appendix - Methodology

IDC's standard ROI methodology was utilized for this project. This methodology is based on gathering data from current users of Red Hat Ansible Automation specifically selected for their active use of supported Red Hat Ansible Tower as the foundation for the model. Based on interviews with organizations using Red Hat Ansible Automation, IDC performed a three-step process to calculate the ROI and payback period:

- **Gathered quantitative benefit information during the interviews using a before-and-after assessment of the impact of Red Hat Ansible Automation.** In this study, the benefits included staff time savings and productivity benefits, and operational cost reductions.
- **Created a complete investment (five-year total cost analysis) profile based on the interviews.** Investments go beyond the initial and annual costs of using Red Hat Ansible Automation and can include additional costs related to migrations, planning, consulting, and staff or user training.
- **Calculated the ROI and payback period.** IDC conducted a depreciated cash flow analysis of the benefits and investments for the organizations' use of Red Hat Ansible Automation reports over a five-year period. ROI is the ratio of the net present value (NPV) and the discounted investment. The payback period is the point at which cumulative benefits equal the initial investment.

IDC bases the payback period and ROI calculations on a number of assumptions, which are summarized as follows:

- Time values are multiplied by burdened salary (salary + 28% for benefits and overhead) to quantify efficiency and manager productivity savings. For purposes of this analysis, based on the geographic locations of the interviewed organizations, IDC has used assumptions of an average fully-loaded $100,000 per year salary for IT staff members, and an average fully-loaded salary of $70,000 for non-IT staff members. IDC assumes that employees work 1,880 hours per year (47 weeks x 40 hours).
- The net present value of the five-year savings is calculated by subtracting the amount that would have been realized by investing the original sum in an instrument yielding a 12% return to allow for the missed opportunity cost. This accounts for both the assumed cost of money and the assumed rate of return.

- Further, because IT solutions require a deployment period, the full benefits of the solution are not available during deployment. To capture this reality, IDC prorates the benefits on a monthly basis and then subtracts the deployment time from the first-year savings.

Note: All numbers in this document may not be exact due to rounding.

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