

White Paper

Red Hat's Insights Adds Predictive Capabilities to Drive Business Value

Sponsored by: Red Hat

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IN THIS WHITE PAPER

This IDC White Paper covers the essential role of management software in delivering resiliency and security for today's digital business. Enterprise IT is challenged with supporting today's complicated multicloud environments, with over 93% of companies telling IDC they have multiple clouds, including public and hybrid environments. Finding and identifying potential issues with proactive recommendations is essential for today's digital enterprise. Cutting through the complexity of multiple clouds and distributed web services used by many cloud-native applications requires IT operations and site reliability engineering (SRE) teams to have access to the best predictive analytics. Enterprises' requirements for infrastructure management solutions and the role of proactive responses are covered. An overview of the Red Hat Insights service for managing, monitoring, securing, and optimizing Red Hat application environments is presented. Red Hat can ensure quick start-up and advanced capabilities by using software as a service's (SaaS') scale and ease of use to deliver its Insights solution. Challenges and opportunities for the future are examined.

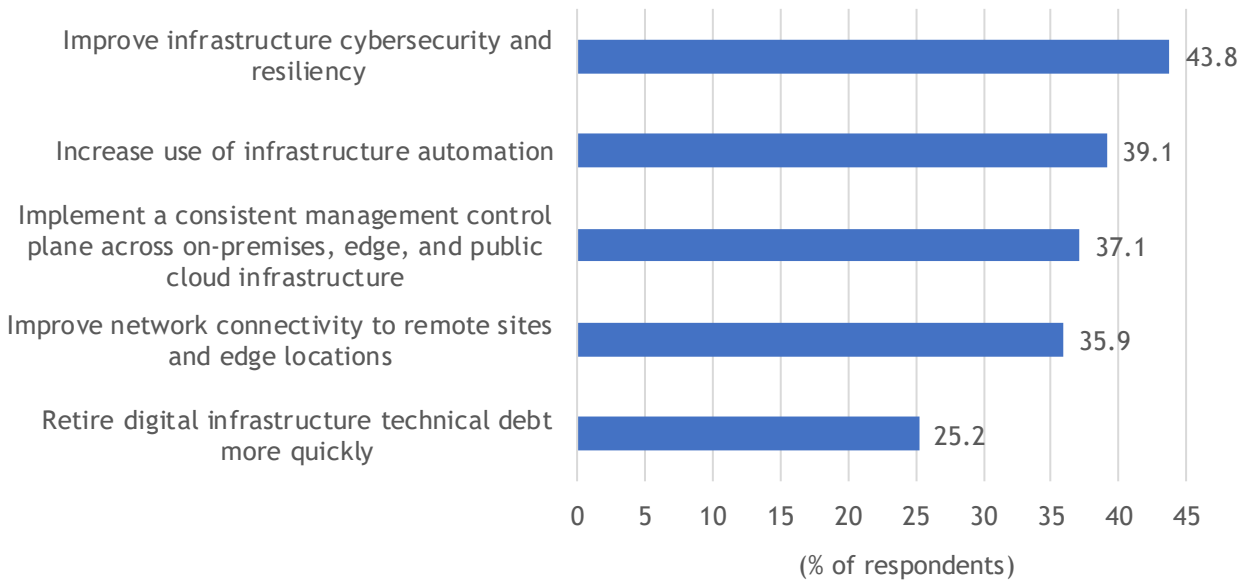
SITUATION OVERVIEW

The number 1 area enterprises identified for IT investment in the next two years is improved resiliency and cybersecurity, followed closely by increasing automation. As companies move to more digital business models, well-performing and available applications are critical for success. With no sign of cybersecurity threats abating, companies must stay one step ahead of hackers. Figure 1 presents the top 5 investment areas for an organization for the next two years.

FIGURE 1

Digital Infrastructure Investment Priorities

Q. What are the most important investments your organization needs to make in the next two years to ensure future digital infrastructure success?



n = 876

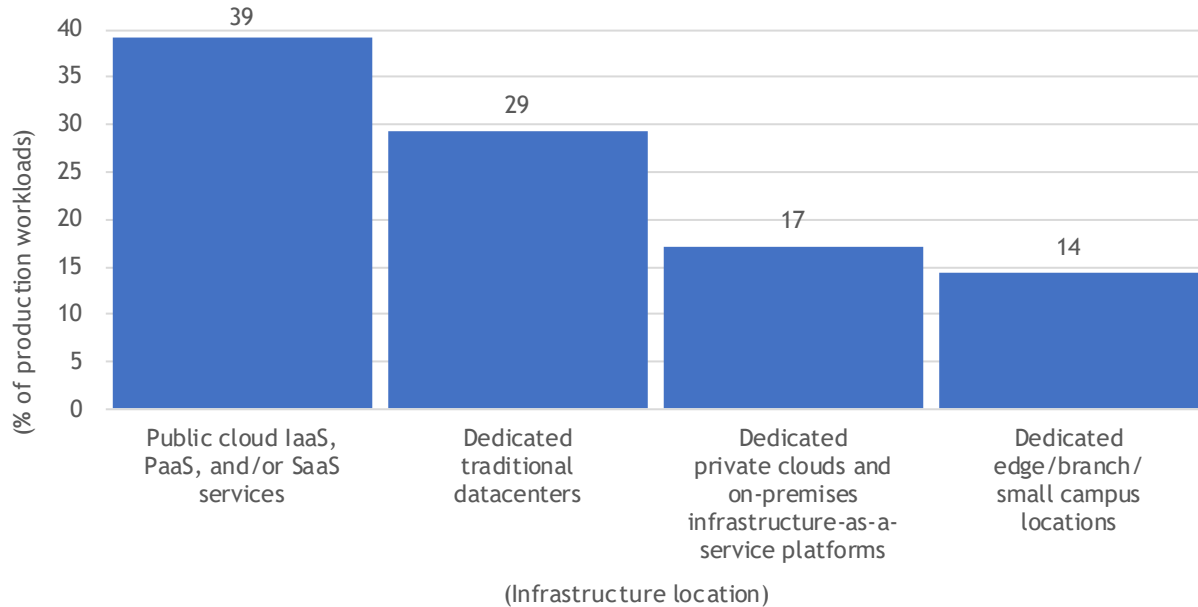
Source: IDC's *Future of Digital Infrastructure Worldwide Sentiment Survey*, June 2023

IDC also surveyed enterprises worldwide to see how their workloads will look in the next two years. The past few years have seen significant adoption of the public cloud. Still, even by 2025, companies will remain in hybrid mode, with over 60% of production running in on-premises datacenters or company-owned edge locations. The edge is the fastest-growing location for new workloads. Figure 2 breaks down future workloads by location.

FIGURE 2

Production Workload Infrastructure Location

Q. *What is your best estimate of your organization's current allocation of production computing workloads and storage capacity deployments in two years?*



n = 835

Source: IDC's *Future of Digital Infrastructure Worldwide Sentiment Survey*, June 2023

The combination of hybrid cloud architecture continuing for the foreseeable future and the need for enterprises to invest in improved resiliency with more automation means enterprises recognize the need to address issues before they cause an outage or a breach. Line-of-business owners in digital businesses are asking for the pace of innovation to quicken. Companies expect new capabilities to extend beyond basic analytics and move into proactive, predictive recommendations.

IDC recommends these capabilities are necessary to enable IT operations and line-of-business owners to successfully support the current and future needs of a modern enterprise, including:

- Management of vulnerabilities and ensuring continuous compliance monitoring
- Central and easy access to knowledge and best practices in solving incidents and proactively addressing issues such as availability, stability, and performance
- Ability to identify known configuration risks in the operating system (OS) and the underlying infrastructure (whether on premises or hybrid cloud) and how new workloads impact performance, stability, or security
- Operational dashboards and custom views for IT and business stakeholders based on system, risk type, severity, or change impact
- Troubleshooting issues faster through proactive notifications of changes in configuration of cloud resources, also known as "drift"

- Transparency through reports, dashboards, and analytics with recommended actions and guidance
- Integration to implement action through automation

CONSIDERING RED HAT INSIGHTS

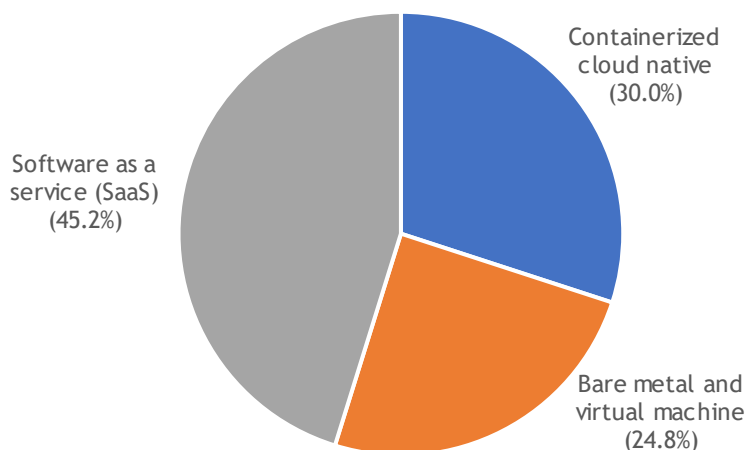
Red Hat Insights is a proactive management, reporting, and analytics solution offered by Red Hat via software as a service. There is no cost for current enterprises with a Red Hat subscription to one or more Red Hat applications that Insights supports. The applications supported by Insights include Red Hat Enterprise Linux (RHEL), Red Hat OpenShift, and Red Hat Ansible Automation Platform. These core infrastructure applications from Red Hat integrate directly with Insights and Red Hat's SaaS-based platform. Red Hat gives enterprises complete control over how much data these applications send to Red Hat's SaaS platform, so confidential or proprietary information can be kept on premises if desired.

SaaS-based solutions have become the most popular method for delivering applications (see Figure 3). SaaS solutions are quicker to implement since Red Hat installs all back-end infrastructure and applications for Insights in the cloud. Organizations also benefit from all ongoing support and upgrades of the Insights environment handled by Red Hat. SaaS implementation of Insights means it can scale out quickly and efficiently to support new capabilities like advanced predictive analytics that may be too resource intensive for some enterprises to run on premises or too expensive to host in their dedicated public cloud instances. Red Hat Insights is available via any web browser, giving IT operations simple access to the central console and the decades of Red Hat experience included with Insights' best practices.

FIGURE 3

Production Workloads Deployment Approach

Q. Overall, what percentage of production workloads do you estimate are currently deployed in the following manner?



n = 853

Source: IDC's *Future of Digital Infrastructure Worldwide Sentiment Survey*, June 2023

This single web console unlocks the latest Red Hat predictive intelligence and analytics enhancements. With the ability to detect potential configuration issues or security vulnerabilities, Insights allows IT teams to be proactive. Digital businesses increasingly demand higher service-level agreements (SLAs) of higher-performing applications and better resiliency. These SLAs are necessary to improve the customer experience and are driving the need for solutions like Insights.

Red Hat Insights can be used in various use cases across different industries and organizations to enhance Red Hat environments' management, security, and performance. In addition, Red Hat continues to innovate by streamlining the management experience using templates to quickly deploy security patches without the need for Red Hat Satellite.

The following are some everyday use cases for Red Hat Insights:

- **Security and vulnerability management:**
 - Identifying and addressing security vulnerabilities and threats across the Red Hat systems
 - Monitoring for compliance with security standards and regulations
 - Applying recommended security configurations to harden critical systems
- **Performance optimization:**
 - Analyzing system performance to identify bottlenecks and resource usage issues
 - Tuning system settings and configurations to improve overall performance
 - Preventing performance-related downtime or slowdowns for better resiliency
- **Image building:**
 - Building standardized Red Hat Enterprise Linux operating system images that meet the company's security and compliance requirements
 - Deploying images to public cloud, hybrid cloud, or edge locations
- **Knowledge base:**
 - Best practices from thousands of Red Hat engineers and decades of experience to help IT operations solve issues quicker
- **Capacity planning:**
 - Forecasting resource usage and capacity requirements to avoid resource shortages
 - Scaling your Red Hat environments proactively to accommodate growing workloads
- **Risk mitigation:**
 - Proactively detecting issues that could lead to system downtime or security breaches
 - Taking action to mitigate risks before they impact operations
- **Dashboard and reporting:**
 - Insights provides a user-friendly dashboard that offers a centralized view of the health and status of the Red Hat environment. It also generates reports useful for delivering complete visibility into the landscape.
- **Compliance and auditing:**
 - Ensuring your Red Hat systems comply with industry standards, regulations, and internal policies
 - Generating compliance reports and audit logs to demonstrate adherence to requirements
 - Monitoring and alerting for configuration drift

- **Patch and update management:**
 - Monitoring for available patches and updates for Red Hat and third-party software
 - Automating the application of patches and updates to maintain system security and stability
- **Configuration management:**
 - Analyzing system configurations to ensure they adhere to best practices and organizational standards
 - Providing recommendations for configuration changes to enhance security and performance
- **Integration with support services:**
 - Streamlining the interaction with Red Hat support by generating support cases directly from Insights recommendations
 - Facilitating quicker issue resolution with the help of Red Hat's support team
- **Customization and automation:**
 - Adapting Insights to your specific environment by creating custom rules and policies
 - Automating remediation actions based on Insights recommendations through the Ansible Automation Platform
- **Historical analysis:**
 - Tracking changes and improvements in your RHEL environment over time
 - Evaluating the effectiveness of remediation efforts and making data-driven decisions
- **Multicloud and hybrid cloud environments:**
 - Managing and monitoring RHEL systems in diverse cloud and on-premises environments from a single interface
- **Scale and complexity management:**
 - Managing large and complex deployments more effectively by leveraging Insights' automation and recommendations
 - Ability to scale with SaaS, regardless of a company's environment or size, so performance and analytics are available environmentwide.
- **Proactive issue detection:**
 - Red Hat Insights monitors your RHEL environment for potential vulnerabilities and security threats. It can detect problems before they impact your system's performance or security.
- **Cost savings:**
 - By preventing downtime, improving resource utilization, and enhancing security, Red Hat Insights can save costs by reducing operational and security-related expenses.
- **Customized recommendations:**
 - Insights provides recommendations tailored to the organization's specific Red Hat environment, considering the unique configurations and requirements.
- **Third-party integration:**
 - Customers can take advantage of Insights using existing toolsets with direct integration for third-party tools such as ServiceNow, Splunk, Slack, Google Chat, Microsoft Teams, and event-driven Ansible.

- Red Hat Insights offers API access, which allows for automation and integration with third-party monitoring and management tools, enhancing your overall IT workflow.
- With webhook integration capabilities, Insights can be configured to send POST messages to specific endpoints.

CHALLENGES

Red Hat Insights provides rapid implementation for existing and new customers via its SaaS-enabled delivery. Logs and metrics are obtained from server infrastructures and are analyzed by Red Hat Insights. In the past, customers have been hesitant to upload critical systems data to the cloud. Red Hat has responded by allowing customers to select as much or as little data as they are comfortable with sending to Red Hat Insights. This capability is significant to healthcare and financial services organizations with on-premises datacenters due to compliance and data privacy regulations. Red Hat should continue to lead with this capability and reiterate this message to sensitive customers.

While Insights is included at no charge with many paid subscriptions, other vendors offer third-party paid solutions for managing a company's application infrastructure. Enterprises should avoid the spawl of management and automation solutions, which can increase internal support and training costs. IDC recommends standardizing on one platform whenever possible.

CONCLUSION

The crucial role of management software in providing resilience and security for digital businesses is evident in the evolving requirements of line-of-business owners. IT faces the challenges of managing complex multicloud and cloud-native application environments proactively. Red Hat's answer is Insights enabled with predictive analytics enable companies to better manage, monitor, secure, and optimize a company's Red Hat application and cloud environments. As a SaaS-based product, Red Hat can provide an agile and scalable solution to provide real-time recommendations based on decades of experience via a central web console. Enterprises should evaluate Insights' predictive analytics to solve issues before incident tickets are opened to the first-line support. By doing so, companies can be confident they are in control by deciding what data to send to Red Hat Insights. Red Hat Insights offers enterprises a versatile tool that can be adapted to a wide range of use cases, helping organizations maintain the health, security, and efficiency of their RHEL systems while reducing operational risks and costs.

Cutting through the complexity of multiple clouds and cloud-native applications requires enabling IT operations with the best proactive, predictive analytics-capable management solution.

RELATED RESEARCH

- *Red Hat Summit 2023: Don't Let AI Overshadow Other Important New Products* (IDC #US50854323, July 2023)
- *Red Hat Announces Trusted Software Supply Chain Enhancing Software Supply Chain Security Capabilities* (IDC #lcUS50779223, June 2023)
- *Dell Technologies World 2023: Delivering on the Vision for Multicloud and Edge* (IDC #US50788623, June 2023)
- *Oracle, Red Hat Unite on OCI Support for RHEL* (IDC #lcUS50218923, January 2023)

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