

Red Hat OpenShift monitoring

Openshift requires a new approach
beyond traditional monitoring



Microservices demand better monitoring

Cloud-based applications rely on microservices for their significant business benefits, including accelerated application development, compartmentalized code streams, and independently scalable services. Industry analysts, such as Gartner in their blog “Microservices: Building Services with the Guts on the Outside,” note that while microservices simplify an application environment, their complexity makes monitoring core to an implementation’s success.

The decoupled nature of services and applications in Red Hat® OpenShift environments require a more sophisticated application performance monitoring approach. Dynatrace addresses this need with their all-in-one, fully automated, Red Hat OpenShift monitoring solution that allows you to quickly and easily gain insight into the health of your applications and environment. Together, Dynatrace and Red Hat are redefining the way microservice environments are managed and monitored.



Dynatrace gives us deep visibility into our container-based applications running on Red Hat OpenShift which helps us proactively identify performance and application issues before they impact users.”

— John Rzeszotarski,
Director of Continuous Delivery and Feedback,
KeyBank

Find the proverbial needle in the haystack

It is impossible for humans to manually manage and troubleshoot such highly dynamic and distributed environments, where systems are composed of hundreds, if not thousands, of microservices. A simple alerting system would be of little help. Dynatrace employs artificial intelligence (AI) to inspect a system in real time, automatically discovering, baselining, and analyzing the architecture to understand the root cause of a problem and analyze the impact to your business.

- Dynatrace uses automated machine learning to provide comprehensive visibility into all components quickly and easily. Its unique capabilities include:
 - Auto-discovery. Dynatrace Smartscape® technology automatically detects and displays all the components and dependencies that comprise your environment, providing you with a real-time blueprint of your application architecture.
 - Auto-baselining. Dynatrace uses AI to understand the difference between desirable and unwanted behaviors emerging from each component. It can also dive deep into the code to uncover methods being invoked and how they contribute to the overall performance of the system.
 - Auto-problem analysis. Dynatrace rapidly identifies failures, component involvement, and root causes. Machine learning helps evaluate issues, determine if it warrants an alert, and provide valuable insights for better business decisions.



Figure 1. Dynatrace Smartscape view of a complex microservices environment. Multiple failures are in red, but the display also confirms that system redundancies prevented any end-user impact

Working together for better solutions

Red Hat and Dynatrace collaborate through the Red Hat OpenShift Primed partnership program to ensure optimization of the solution for all Red Hat OpenShift environments—no matter if you're running in a private, public, shared, or dedicated context.

Dynatrace OneAgent is Red Hat Container Certified and certified to run on Red Hat Enterprise Linux® Atomic Host. A sophisticated agent technology, Dynatrace OneAgent is easy to use and deploy, with no configuration required.

Red Hat OpenShift and Ansible by Red Hat

Red Hat OpenShift helps you develop, deploy, and manage new and existing applications across physical, virtual, or public cloud infrastructures, providing elastic compute resources for performance scalability. It accelerates application development and deployment with automated workflows that make it easy to move source code from version control into Docker-formatted container images for deployment. Built on open source code and made enterprise-ready, Red Hat OpenShift is a secure, proven, and reliable platform for businesses of any size.

Ansible by Red Hat is a simple, agentless IT automation technology that can improve processes, optimize applications, and provide a single language for DevOps practices across your organization. Ansible by Red Hat enables you to provision and configure systems, deploy applications to Red Hat OpenShift, or manage your cloud seamlessly with automated playbooks. Dynatrace offers Ansible by Red Hat roles for the automated roll-out of the Dynatrace OneAgent to the nodes of a Red Hat OpenShift cluster.

Innovation for improved business processes

With our collaborative work and the use of artificial intelligence, Dynatrace and Red Hat together are redefining the way microservice environments are managed and monitored—enabling you to make more informed business decisions.



OpenShift is a platform to allow you to run decoupled services and applications, which can be a monitoring nightmare, but Dynatrace's insights makes it less scary."

— Chris Morgan,
Technical Director, Red Hat OpenShift Ecosystem



Figure 2. A microservices environment architecture.

About Red Hat

Red Hat is the world's leading provider of open source software solutions, using a community-powered approach to reliable and high-performing cloud, Linux, middleware, storage, and virtualization technologies. Red Hat also offers award-winning support, training, and consulting services. As a connective hub in a global network of enterprises, partners, and open source communities, Red Hat helps create relevant, innovative technologies that liberate resources for growth and prepare customers for the future of IT.

Dynatrace — software intelligence for the enterprise cloud

Dynatrace provides software intelligence to simplify enterprise cloud complexity and accelerate digital transformation. With AI and complete automation, our all-in-one platform provides answers, not just data, about the performance of applications, the underlying infrastructure and the experience of all users. That's why many of the world's largest enterprises, including 72 of the Fortune 100, trust Dynatrace to modernize and automate enterprise cloud operations, release better software faster, and deliver unrivalled digital experiences.

Learn more at dynatrace.com

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