Monitoring for SUSE OpenStack Cloud—AI Powered, Full Stack and Automated

OpenStack gives you flexibility, hyper scale and room to grow. With this level of freedom comes complexity and the need to keep track of all the moving parts. Manually hunting down elusive performance problems in highly distributed systems can be a tedious process. Dynatrace tells you where and why highly distributed applications break down, pinpointing application and infrastructure issues in seconds using artificial intelligence. Automated and hands-free, Dynatrace gives you deep insights into your SUSE® OpenStack Cloud environment.

Monitoring for SUSE OpenStack Cloud at a Glance:
+ Auto-discovery of your OpenStack Cloud and the entire technology stack in under 5 minutes
+ Real-time view of all OpenStack services and supporting services like message queues and databases
+ Immediate access to log files pointing to the root cause of system health issues
+ AI-driven root cause analysis
+ Automatic correlation of real user and business metrics, performance data from your applications, and OpenStack control pane events

The Challenge
Modern application environments based on OpenStack run thousands of nodes with multiple hypervisor technologies, distributed across data centers around the globe. Taking care of operations and maintenance in such a distributed system is challenging. OpenStack troubleshooting is a non-trivial task, which takes time, knowledge and experience. Hundreds of log files are written by numerous services with several configuration files to countless virtual and physical machines—the possibilities for errors seem endless. Manual root cause analysis is like looking for the needle in the haystack. While conventional monitoring tools typically cover only a single monitoring domain, like resource utilization or log analysis, Dynatrace provides you with a single unified solution.

The Solution
The Dynatrace OneAgent works out-of-the-box, and requires zero configuration, which means setting up monitoring for OpenStack is easy. The auto-discovery of the OpenStack components enables you to see performance metrics within minutes.

Once deployed on your hosts, Dynatrace gives insights into resource utilization, OpenStack services, availability, service performance, and log files on a single dashboard.

Powered by AI, Dynatrace goes beyond correlation and gives you causation. Because Dynatrace captures and tags every transaction, it provides causation-based data on current system problems.

Since Dynatrace collects 100% gapless data, you don’t have to rely on averages and transaction samples to determine the normal behavior of your applications. Instead, Dynatrace AI auto-baselines all components of your technology stack.
Dynatrace was built with the world’s largest application environments in mind and scales to any size. We defined an approach to ensure performance and scalability over the application lifecycle—from development to production.

Last but not least, Dynatrace tracks every deployment, every build moving through your delivery pipeline, all user behavior, and the impact on your supporting OpenStack infrastructure. It integrates with whatever technology stack you build on and whatever container based technology you’re using to orchestrate and manage your dynamic application environments on top of OpenStack.

How It Works with SUSE
Dynatrace comes with built-in support for SUSE OpenStack Cloud providing a full picture of your environment in real-time. Dynatrace OneAgent auto-discovers and instruments all components in your technology stack—from the infrastructure layer up to the application running on SUSE OpenStack Cloud. A single dashboard gives you deep insights into your OpenStack environment and everything running in it:

- OpenStack controller nodes
- OpenStack services
- Supporting services like message queues and databases
- OpenStack compute nodes, including their resource utilization and availability
- Overview of your instances, their health, and individual resource consumption

Tap into the actionable data Dynatrace serves up for you: From the root cause of performance problems to resource and capacity optimization. Identify over- or undersized workloads and get assistance in locating resource bottlenecks. When performance issues arise, Dynatrace provides immediate access to log files pointing to the root cause of system health issues.

For More Information
Website: www.dynatrace.com/openstack
Blog: www.dynatrace.com/blog/openstack
Press release: www.dynatrace.ai/openstack-pr