

Red Hat Adds Open Source Might to Massachusetts Open Cloud's Big Data Analysis

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Collaborative open cloud initiative built on backbone of Red Hat OpenStack Platform and Red Hat Ceph Storage

BOSTON--(BUSINESS WIRE)-- Red Hat, Inc. (NYSE: RHT), the world's leading provider of open source solutions, today announced the Massachusetts Open Cloud (MOC), an initiative dedicated to the creation of publicly-available cloud computing resources for running big data workloads, has standardized on Red Hat OpenStack Platform and Red Hat Ceph Storage for its open, scalable and flexible cloud infrastructure. Combined with Red Hat Consulting and Red Hat Training services, MOC now has the highly-available, open architecture it required to drive innovation in big data along with the skills and knowledge to continue evolving their offering.

As a non-profit organization formed by a consortium of private and public institutions (including Boston University, Harvard University, Northeastern University, the Massachusetts Institute of Technology, and the University of Massachusetts), MOC's mission has been to develop a common, cloud-based infrastructure to provide researchers and businesses with the tools to gain insight from rapidly growing volumes of data. This meant turning the model for traditional public clouds on its head by developing an open, collaborative infrastructure rather than one controlled by a single entity in a closed environment. Additionally, scale and flexibility have been key technology concerns for MOC, along with keeping costs down by using industry standard hardware.

MOC leaders quickly established that they wanted to base their infrastructure on the OpenStack cloud framework given its open source nature and the technology's broad community of contributors. To help ensure that their infrastructure had the necessary levels of support, MOC selected Red Hat OpenStack Platform, given Red Hat's technical expertise and leading position within the OpenStack community. To help manage the massive volumes of data that MOC's workloads would generate, with the flexibility and component services support required by OpenStack, they also selected Red Hat Ceph Storage as their cloud storage tier.

Red Hat is an OpenStack leader - both in contributions to the upstream OpenStack community and its ability to deliver a production-ready OpenStack platform to enterprise customers. Red Hat OpenStack Platform, a highly scalable, production-ready Infrastructure-as-a-Service (IaaS) solution, has emerged as an open source cloud platform of choice for a growing number of global organizations. Co-engineered with Red Hat Enterprise Linux and backed by Red Hat's support lifecycle, Red Hat OpenStack Platform offers an open foundation for cloud deployments. Similarly, Red Hat Ceph Storage is an open, massively scalable, software-defined storage solution. It is used within the OpenStack community, offering a single efficient platform designed to support the varied and demanding storage needs of cloud architectures.

With assistance from Red Hat Consulting and a dedicated Red Hat Technical Account Manager, MOC deployed three storage clusters built on Red Hat Ceph Storage in support of Red Hat OpenStack Platform, spanning more than 700 terabytes of data across production, R&D, and testing environments. All of this was done with only three full-time dedicated staff members on standard hardware, further reducing operational costs.

Thanks to the open cloud infrastructure built on Red Hat technologies and expertise, MOC has gained:

Greater scalability and reliability in expanding its storage network to meet the growing needs of its researchers as they develop innovative, data-intensive applications and conduct detailed analysis. They've also gained the ability to more rapidly recover from downtime with a lower risk of losing critical research data, thanks to inherent features of Red Hat Ceph Storage like dynamic data distribution and no single point of failure.

Access to expert training and support from Red Hat Training and Red Hat Consulting, respectively, to gain a deeper understanding of these new technologies and to gain a proactive view as to their future technology needs, especially as demand grows.

Reduced operational costs at the storage tier, with Red Hat Ceph Storage running on commodity hardware without diminishing reliability, stability, or capacity to scale.

The future of MOC is all about growth and scale, as MOC is now discussing development of a 20 petabyte production storage cluster to power further big data innovation. They are also taking advantage of emerging technologies like Linux containers and container orchestration engines by deploying Red Hat OpenShift Container Platform as a proof-of-concept to explore developing, hosting and scaling applications and the benefits of containers in simplifying storage resources.

Supporting Quotes

Chris Wright, vice president and chief technologist, Red Hat

"Building a fully open, scalable and flexible public cloud is not a small endeavor, especially when the express purpose of the initiative is to tackle big data applications and analysis. MOC is an excellent example of how purpose-built cloud computing can work at scale without relying on proprietary technologies or specialized hardware, and we are pleased to continue to support the initiative as together we help to drive innovation in the big data world."

Piyanai Saowarattitada, director, Engineering, MOC

"Red Hat Ceph Storage provides a solid, scalable platform for big data applications, letting our researchers focus on analytics and innovation instead of data collection and storage. We're confident that Ceph can scale to meet our storage needs, no matter how large. Even with data-heavy applications like Hadoop and MapReduce, Red Hat Ceph Storage delivers everything we expected from a performance-focused storage platform."

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