

Red Hat Accelerates Application Delivery with New Linux Container Innovations

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Lightweight Red Hat Enterprise Linux-based host environment and integrated developer services enable organizations to streamline application development and deployment across the open hybrid cloud

SAN FRANCISCO--(BUSINESS WIRE)-- Red Hat, Inc. (NYSE: RHT), the world's leading provider of open source solutions, today announced several new Linux Container innovations in support of the company's vision for streamlined application delivery and orchestration across bare metal systems, virtual machines and private and public clouds via containers and Docker technology. These innovations include:

Project Atomic - a new community project to develop technologies for creating lightweight Linux Container hosts, based on next-generation capabilities in the Linux ecosystem. The tools that result from Project Atomic will allow creation of a new variant of Red Hat Enterprise Linux - Red Hat Enterprise Linux Atomic Host - which Red Hat plans to debut with Red Hat Enterprise Linux 7.

GearD - a new OpenShift Origin community project to enable rapid application development, continuous integration, delivery, and deployment of application code to containerized application environments.

High-Touch Beta Program - an expansion of the Red Hat Enterprise Linux 7 high-touch beta program to include Red Hat Enterprise Linux Atomic Host and Docker container technologies that will enable select customers to evaluate these new container technologies in enterprise environments.

Linux Containers and Docker have quickly emerged as key open source application packaging and delivery technologies, combining lightweight application isolation with the flexibility of an image-based deployment method. This can provide several benefits, including:

Application portability, allowing for the deployment of the application container across a variety of container hosts.

Minimal footprint, which reduces the overhead of deploying new application containers.

Simplified maintenance, reducing the effort and risk of patching applications and their dependencies.

Lowered development costs, as enterprises need only develop, test and certify applications against a single container runtime.

Open source container technologies also pave the way for an application-optimized infrastructure for the open hybrid cloud, one that can simplify the entire application lifecycle, from development and deployment to maintenance and management. As an increasing number of enterprises embrace DevOps philosophies, Red Hat expects container technologies will play a significant role in how organizations deliver and manage applications.

With the growing popularity of both Infrastructure-as-a-Service (IaaS) and Platform-as-a-Service (PaaS), application containers also help prevent cloud lock-in. By separating infrastructure services from the application, containerized applications can move freely between not only different clouds, but also physical and virtual environments, consuming only the needed services and delivering upon the extreme flexibility promised by the open hybrid cloud.

With these new container initiatives, Red Hat seeks to bring the transparency and standardization with which it has codified so many other technology ecosystems, from virtualization to the cloud, to containers. By offering an enterprise class, container-specific host along with new container capabilities in the world's leading enterprise Linux platform and a certification program for containerized applications, along with an extensive ecosystem of support and services, Red Hat is the first and only IT leader to offer a comprehensive vision of containerized application delivery for the open hybrid cloud, including portability across bare metal systems, virtual machines and private and public clouds.

"Atomic" Container Hosts

[Project Atomic](#) aims to provide technologies to create lightweight host operating systems for containerized applications that can be applied to Fedora, CentOS and Red Hat Enterprise Linux. The "Atomic" container host provides the essential functionality for running application containers like Docker, while maintaining a small footprint and allowing for atomic updates. This means simplified maintenance, but also enables higher levels of verification, control, and even roll-backs of applied updates.

Project Atomic will provide the upstream community for Fedora and CentOS Atomic hosts, along with a new Red Hat Enterprise Linux offering: Red Hat Enterprise Linux Atomic Host. Red Hat Enterprise Linux Atomic Host couples the flexible, lightweight and modular capabilities of Linux Containers with the reliability and security of Red Hat Enterprise Linux in a reduced image size that will enable easy movement of Red Hat Enterprise Linux-certified applications across bare metal systems, virtual machines and private and public clouds.

Key [Red Hat Enterprise Linux](#) features are inherited by Red Hat Enterprise Linux Atomic Host, including:

systemd, a powerful, flexible process manager that will help manage the administration of containers.

Security-Enhanced Linux (SELinux), which offers military-grade security and isolation to a container environment.

compatibility with the forthcoming Red Hat Enterprise Linux 7 as well as Red Hat's certified Red Hat Enterprise Linux and Container ecosystems.

With the [GearD project](#), Red Hat further enables customers to tap the power of containerized applications. Red Hat expects that new developer and application services resulting from GearD in [OpenShift Origin](#), the open source project that forms the community for Red Hat's suite of [OpenShift PaaS](#) offerings, will drive future innovations in both OpenShift Enterprise and OpenShift Online.

GearD was created to provide:

Integration between application containers and deployment technologies like Git, enabling developers to quickly go from application source code to containerized application stacks deployed onto production systems.

The ability to connect and orchestrate multiple application containers spanning multiple container hosts, enabling developers to deploy complex, composite applications while making efficient use of infrastructure resources.

Flexible and dynamic routing of network traffic to the composite applications.

Additional services to address the needs of both application developers and IT operations administrators as they deploy and leverage containerized application platforms and DevOps practices.

Availability

The Project Atomic and GearD community projects are both available immediately at <http://www.projectatomic.io> and [openshift.github.io/geard](https://github.com/openshift/geard), respectively.

A High-Touch Beta Program including Red Hat Enterprise Linux Atomic Host and Docker container technologies will be available for select customers in the coming months. General availability for Red Hat Enterprise Linux Atomic Host will be announced at a later date.

Supporting Quotes

Paul Cormier, president, Product and Technologies, Red Hat

"As the cloud enters the computing mainstream and applications, not infrastructure, become the focus of enterprise IT, the operating system takes on greater importance in supporting the application and the infrastructure, without sacrificing the basic requirements of security, stability and manageability. Our newly-announced container offerings, including Red Hat Enterprise Linux Atomic Host, will drive this vision forward, helping enterprises embrace streamlined application delivery through the power of Linux Containers and Docker, and enabling the free movement of applications across cloud, virtual and physical environments, a key tenet of the open hybrid cloud."

Eric Brewer, vice president of Infrastructure, Google

"At Google we make extensive use of Linux application containers to support our production systems. They offer high levels of run-time isolation and deployment flexibility that both reduce the complexity of managing distributed applications, and increase our overall operating efficiency. We have been pleased to seed the open source community with the technologies we use (like Linux Control Groups and LMCTFY, our application container stack), and are working closely with Red Hat on contributions to introduce strong application container hosting to the open source community."

Webcast

Paul Cormier, president, Products and Technologies, Red Hat, will host a webcast live from Red Hat Summit to discuss today's announcement at 2 p.m. EDT (11 a.m. PDT) on April 15, 2014. Following remarks, press and analysts are invited to participate in a question and answer session.

To join the webcast or view the replay after the event, visit: <https://vts.inxpo.com/Launch/QReg.htm?ShowKey=19002&AffiliateData=pr>

Additional Resources

Learn more about [Project Atomic](#)

Learn more about [GearD](#)

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Forward-Looking Statements

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