

# Red Hat and dotCloud Collaborate on Docker to Bring Next Generation Linux Container Enhancements to OpenShift Platform-as-a-Service

SEP 19, 2013

*Collaboration aims to bring developers simpler, more secure, lightweight, and portable environments for applications*

RALEIGH, N.C. & SAN FRANCISCO--(BUSINESS WIRE)-- Red Hat, Inc. (NYSE: RHT), the world's leading provider of open source solutions, and dotCloud, the company behind Docker, an open source project to pack, ship, and run any application as a lightweight container, today announced a technical collaboration based on next-generation Linux Containers technology to help drive the next evolution of [OpenShift by Red Hat](#), Red Hat's Platform-as-a-Service (PaaS) offering. The collaboration between the OpenShift, Red Hat Enterprise Linux, and Docker teams aims to combine the versatile capabilities of Docker with the security and stability of Red Hat Enterprise Linux Gears in OpenShift. OpenShift developers will benefit from a simpler, more secure, lightweight, and portable environment for applications.

The OpenShift platform is built on the solid foundation of Red Hat Enterprise Linux and provides secure, scalable, Linux Container-based multi-tenancy via Red Hat Enterprise Linux Gears. On this platform, OpenShift offers support for various programming languages, frameworks, Red Hat JBoss Middleware, databases, and other services, and also enables OpenShift customers, partners, and community members to integrate their own technology through OpenShift cartridges. These features combine to power the OpenShift Online public PaaS and bring OpenShift Enterprise private PaaS software to enterprise datacenters.

Docker is an open source engine that enables any application and its dependencies to be encapsulated as a lightweight container that will run in almost any Linux environment: bare metal, virtualized, public cloud, or private cloud. Docker's user space library and utilities tool chain takes advantage of both Linux Container enhancements found in the modern Linux kernel and innovations found in the operating system such as the file system and namespace layers. Docker uses this foundation in the Linux kernel to provide lightweight runtime environments and offer a simple user experience, focused on getting the maximum benefit from the operating system in a highly portable manner.

Docker and OpenShift currently leverage the same building blocks to implement containers, such as Linux kernel namespaces and resource management with Control Groups (cGroups). Red Hat Enterprise Linux Gears in OpenShift use Security-Enhanced Linux (SELinux) access control policies to provide secure multi-tenancy and reduce the risk of malicious applications or kernel exploits.

Through the collaboration, Red Hat and dotCloud are working together on several joint community efforts, including:

Packaging Docker for the Fedora Project, a Red Hat sponsored and community-supported open source collaboration. Red Hat and dotCloud are collaborating with members of the Fedora Project community to package Docker for Fedora, making Docker available for all Fedora users with upcoming releases, and also providing the initial packaging work that will ultimately enable Docker to more easily build and deploy on Red Hat Enterprise Linux.

Collaboration on filesystem dependencies, specifically designed to remove Docker's dependency on AuFS (Advanced Multi Layered Unification Filesystem) to meet mission-critical requirements from enterprise customers. Together, Red Hat and dotCloud have developed a new approach to provisioning based on the device-mapper thin provisioning technology included in Fedora, Red Hat Enterprise Linux, and other distributions. This approach provides the same elegant user experience in a way that is more compatible with upstream kernel versions.

Collaboration on container provisioning, resulting in Red Hat's work to enable libvirt, the open source virtualization API project, as an option for creating containers within Docker, bringing enterprise-grade networking capabilities along with it. This approach will enable users to take full advantage of the robust networking capabilities of libvirt while maintaining the user experience of Docker provisioning.

Collaboration on OpenShift to integrate Docker with OpenShift's cartridge model for application orchestration. This integration will combine the power of Docker containers with OpenShift's ability to describe and manage multi-container applications, enabling customers to build more sophisticated applications with enhanced portability.

## Supporting Quotes

*Ashesh Badani, general manager, Cloud, Red Hat*

"Developers want PaaS offerings that enable them to design and code applications without losing time on technology integration and how their application infrastructure is architected. They want applications that are truly portable and will run wherever they want. Through our collaboration on Docker, we're bringing innovation from the community to OpenShift, our enterprise-class PaaS offerings, to reinforce our goal of bringing operational efficiency and flexibility to developers."

*Ben Golub, Chief Executive Officer, dotCloud*

"The collaboration between dotCloud and Red Hat is an exciting development both for Docker as well as PaaS and containerization in general. We are thrilled by the level of hands-on contribution we've seen from the RHEL, Fedora, and OpenShift teams at RedHat, and

believe the combination will bring unique capabilities to further accelerate application development."

For more information

Learn more about [Docker](#)

Learn more about [dotCloud](#)

Learn more about [OpenShift by Red Hat](#)

Learn more about the [Fedora Project](#)

Join the [Fedora Cloud SIG mailing list](#)

Connect with Red Hat

Learn more about [Red Hat](#)

Get more [Red Hat news](#) or subscribe to the [Red Hat news RSS feed](#)

Follow [Red Hat on Twitter](#)

Join [Red Hat on Facebook](#)

Watch [Red Hat videos on YouTube](#)

Join [Red Hat on Google+](#)

Connect with Docker

Follow Docker [on Twitter](#)

Take the [Docker interactive tutorial](#)

Join Docker on [IRC](#)

Join Docker on [Google](#)

Go to the [Docker repository on GitHub](#)

About Red Hat, Inc.

Red Hat is the world's leading provider of open source software solutions, taking 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 the 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. Learn more at <http://www.redhat.com>.

About dotCloud

dotCloud is the commercial entity behind the open source Docker project. Docker (<http://docker.io>) is an open source engine for deploying any application as a lightweight, portable, self-sufficient container that will run virtually anywhere. By delivering on the promise "Build Once...Run Anywhere," Docker has seen explosive growth, and its impact is being seen across devops, PaaS and hybrid cloud environments. Five months after launching, the Docker community is expanding rapidly: Docker has been downloaded over 90,000 times, has received over 5,500 Github stars, and is receiving contributions from more than 150 community developers. Over 13,000 "Dockerized" applications are now available at the Docker public index.

dotCloud is venture backed by [Benchmark](#) (Peter Fenton), [Trinity Ventures](#) (Dan Scholnick), [AME Cloud Ventures](#) (Yahoo! Founder Jerry Yang), [Y Combinator](#), and [SV Angel](#) (Ron Conway).

Forward-Looking Statements

Certain statements contained in this press release may constitute "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements provide current expectations of future events based on certain assumptions and include any statement that does not directly relate to any historical or current fact. Actual results may differ materially from those indicated by such forward-looking statements as a result of various important factors, including: risks related to delays or reductions in information technology spending; the effects of industry consolidation; the ability of the Company to compete effectively; the integration of acquisitions and the ability to market successfully acquired technologies and products; uncertainty and adverse results in litigation and related settlements; the inability to adequately protect Company intellectual property and the potential for infringement or breach of license claims of or relating to third party intellectual property; the ability to deliver and stimulate demand for new products and technological innovations on a timely basis; risks related to data and information security vulnerabilities; ineffective management of, and control over, the Company's growth and international operations; fluctuations in exchange rates; and changes in and a dependence on key personnel, as well as other factors contained in our most recent Annual Report on Form 10-K (copies of which may be accessed through the Securities and Exchange Commission's website at <http://www.sec.gov>), including those found therein under the captions "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations". In addition to these factors, actual future performance, outcomes, and results may differ materially because of more general factors including (without limitation) general industry and market conditions and growth rates, economic and political conditions, governmental and public policy changes and the impact of natural disasters such as earthquakes and floods. The forward-looking statements included in this press release represent the Company's views as of the date of this press release and these views could change. However, while the Company may elect to update these forward-looking statements at some point in the future, the Company specifically disclaims any obligation to do so. These forward-looking statements should not be relied upon as representing the Company's views as of any date subsequent to the date of this press release.

*Red Hat, the Shadowman logo and JBoss are registered trademarks of Red Hat, Inc. in the U.S. and other countries. Linux is a registered trademark of Linus Torvalds.*

*The OpenStack™ Word Mark and OpenStack Logo are either registered trademarks / service marks or trademarks / service marks of the OpenStack Foundation, in the United States and other countries and are used with the OpenStack Foundation's permission. We are not affiliated with, endorsed or sponsored by the OpenStack Foundation or the OpenStack community.*

Red Hat, Inc.  
Stephanie Wonderlick, 571-421-8169  
[swonderl@redhat.com](mailto:swonderl@redhat.com)  
or  
dotCloud/Docker  
Heather Fitzsimmons, 650-800-7160  
[heather@mindsharepr.com](mailto:heather@mindsharepr.com)

Source: Red Hat, Inc.

News Provided by Acquire Media