

Red Hat: Project Quay, DoD, IBM Shares, Prometheus, DPDK/vDPA

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- [Red Hat Introduces open source Project Quay container registry](#) [2]

Today Red Hat is introducing the open sourcing of Project Quay, the upstream project representing the code that powers Red Hat Quay and Quay.io. Newly open sourced, as per Red Hat's open source commitment, Project Quay represents the culmination of years of work around the Quay container registry since 2013 by CoreOS, and now Red Hat.

Quay was the first private hosted registry on the market, having been launched in late 2013. It grew in users and interest with its focus on developer experience and highly responsive support, and capabilities such as image rollback and zero-downtime garbage collection. Quay was acquired in 2014 by CoreOS to bolster its mission to secure the internet through automated operations, and shortly after the CoreOS acquisition, the on-premise offering of Quay was released. This product is now known as Red Hat Quay.

- [DoD Taps Red Hat To Improve Squadron Operations](#) [3]

The United States Department of Defense (DoD) partnered with Red Hat to help improve aircraft and pilot scheduling for United States Marine Corps (USMC), United States Navy (USN) and United States Air Force (USAF) aircrews.

- [There's a Reason IBM Stock Is Dirt Cheap as Tech Stocks Soar](#) [4]

Red Hat has a strong moat in the Unix operating system space. It is bringing innovation to the

market by leveraging Linux, containers, and Kubernetes. And it is standardizing on the Red Hat OpenShift platform and bringing it together with IBM's enterprise. Red Hat has a strong moat in the Unix operating system space. It is bringing innovation to the market by leveraging Linux, containers, and Kubernetes. And it is standardizing on the Red Hat OpenShift platform and bringing it together with IBM's enterprise. This will position IBM to lead in the hybrid cloud market.

- [Federated Prometheus with Thanos Receive \[5\]](#)

OpenShift Container Platform 4 comes with a Prometheus monitoring stack preconfigured. This stack is in charge of getting cluster metrics to ensure everything is working seamlessly, so cool, isn't it?

But what happens if we have more than one OpenShift cluster and we want to consume those metrics from a single tool, let me introduce you to Thanos.

In the words of its creators, Thanos is a set of components that can be composed into a highly available metrics system with unlimited storage capacity, which can be added seamlessly on top of existing Prometheus deployments.

- [Making high performance networking applications work on hybrid clouds \[6\]](#)

In the previous post we covered the details of a vDPA related proof-of-concept (PoC) showing how Containerized Network Functions (CNFs) could be accelerated using a combination of vDPA interfaces and DPDK libraries. This was accomplished by using the Multus CNI plugin adding vDPA as secondary interfaces to kubernetes containers.

We now turn our attention from NFV and accelerating CNFs to the general topic of accelerating containerized applications over different types of clouds. Similar to the previous PoC our focus remains on providing accelerated L2 interfaces to containers leveraging kubernetes to orchestrate the overall solution. We also continue using DPDK libraries to consume the packet efficiently within the application.

In a nutshell, the goal of the second PoC is to have a single container image with a secondary accelerated interface that can run over multiple clouds without changes in the container image. This implies that the image will be certified only once decoupled from the cloud it's running on.

As will be explained, in some cases we can provide wirespeed/wirelatency performance (vDPA and full virtio HW offloading) and in other cases reduced performance if translations are needed such as AWS and connecting to its Elastic Network Adapter (ENA) interface. Still, as will be seen it's the same image running on all clouds.

● [Pod Lifecycle Event Generator: Understanding the ?PLEG is not healthy? issue in Kubernetes](#)^[7]

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[1] <http://www.tuxmachines.org/taxonomy/term/142>

[2] <https://www.redhat.com/en/blog/red-hat-introduces-open-source-project-quay-container-registry>

[3] <https://www.tfir.io/dod-taps-red-hat-to-improve-squadron-operations/>

[4] <https://investorplace.com/2019/11/ibm-stock-cheap-techn-stocks-soar/>

[5] <https://blog.openshift.com/federated-prometheus-with-thanos-receive/>

[6] <https://www.redhat.com/en/blog/making-high-performance-networking-applications-work-hybrid-clouds>

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