

BALANCE RED HAT OPENSIFT CLOUD WORKLOADS WITH CROSSVALE

PARTNER SOLUTION BRIEF

“We see companies today using this facility of unused instances for development and operations closed environments for testing. However, more importantly, we now see it used in production for enterprise-ready, business-critical applications.”

CONOR BRANKIN,
CEO CROSSVALE

AMAZON EC2 SPOT INSTANCES AND SPOT FLEET HELP CUSTOMERS MANAGE CAPACITY AND COSTS.

“With Amazon EC2 Spot instances, we easily save 85-90% in costs. That, in turn, allows us to experiment with less risk and ultimately develop higher-quality products for our customers.”

JOE GARDNER,
PRINCIPAL CLOUD ARCHITECT,
NATIONAL INSTRUMENTS

INTRODUCTION

Organizations deploy container-based applications across cloud environments to reduce development efforts, increase flexibility, and improve time to deployment. Despite these efficiency gains, cost savings have proven elusive as public cloud costs tend to be locked-in with a vendor. In addition, spare capacity to meet fluctuating demands can be expensive and difficult to manage. Crossvale CloudBalancer seamlessly monitors and manages workloads to control cost and capacity for Red Hat® OpenShift Container Platform by:

1. Harnessing multiple public clouds, such as Amazon Web Services (AWS) Elastic Compute Cloud (EC2), Google Compute Engine (GCE), and Microsoft Azure.
2. Removing the risk of either private or public cloud service downtime by ensuring the containerized applications can either burst out onto the public cloud or be rapidly spun up on another cloud provider within minutes.
3. Reducing the costs of over-provisioning by bursting out onto the cloud when demand increases and retracting when demand drops.

Some providers, such as AWS, provide the facility to bid on unused instances. Amazon EC2 Spot instances and Spot Fleet are examples of these services. Spot instances are spare compute capacity in the AWS cloud, available to you at steep discounts compared to on-demand prices. Spot Fleet is a collection of Spot instances. CloudBalancer monitors these instances and automates the activation of new clusters and the movement of applications to these clusters. Crossvale CloudBalancer delivers significant cost savings by ensuring that you maintain the best price point at all times.

AUTOMATE CAPACITY

CloudBalancer manages any workloads that can be run in Red Hat OpenShift Container Platform. It uses OpenShift Container Platform to execute the seamless transition of containerized applications from one node to another when CloudBalancer detects the need for rebalancing. It takes advantage of the public cloud application programming interfaces (APIs) to keep track of the status of each node currently in the cluster and new nodes that need to be added to the cluster. It then uses OpenShift Container Platform APIs to evacuate terminated or stopped nodes and monitor the health of the cluster.

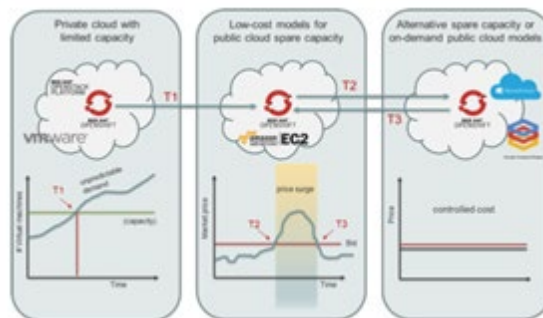
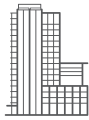


Figure 1. CloudBalancer monitors and controls the clusters across varying cloud providers.



ABOUT RED HAT

Red Hat is the world's leading provider of open source software solutions, using a community-powered approach to provide reliable and high-performing cloud, Linux, middleware, storage, and virtualization technologies. Red Hat also offers award-winning support, training, and consulting services. As a 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.

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CloudBalancer is a containerized application designed to run within a Red Hat OpenShift node, taking advantage of all the standard logging and metrics normally enabled on the cluster. CloudBalancer has an intuitive graphical user interface (GUI) that allows monitoring of the balanced cloud and modification of cloud capacity and policies. It also has a Representational State Transfer API (REST API) that can be used to interrogate the status of the balanced cloud and modify its policies in real time.

RED HAT OPENSIFT CONTAINER PLATFORM

Red Hat OpenShift Container Platform brings Linux® containers and Kubernetes to the enterprise. The platform helps organizations develop, build, deploy, and manage new and existing applications across physical, virtual, or public cloud infrastructures. It accelerates application development with automated workflows that make it easy to move from source code to production-ready container images for deployment. Red Hat OpenShift Container Platform is built on open source standards and is a proven, reliable container platform for organizations of any size.

CROSSVALE AND RED HAT STRATEGIC ALIGNMENT

Crossvale is a certified Red Hat Premier Business Partner. With over 100 Red Hat-certified accreditations, Crossvale delivers the knowledge and experience to assist organizations with the implementation of Red Hat platforms.

CONCLUSION

Crossvale CloudBalancer for Red Hat OpenShift implementations solves your cost and capacity problems. As demand fluctuates, CloudBalancer continuously evaluates options for your applications, automating the movement of application instances to available virtual machines. Using this combined solution, you can:

- **Manage public cloud costs.** Move workloads automatically to take advantage of discounted spare capacity in the cloud.
- **Increase flexibility.** Optimize availability across different clouds to protect business resiliency and scale capacity to meet fluctuating business demands.
- **Expand portability for enterprise applications.** Implement beyond test and development environments to include enterprise applications with proven technologies.

NEXT STEPS

Contact sales@crossvale.com for a demonstration of CloudBalancer capabilities and a free assessment of the potential savings for your organization.

ABOUT CROSSVALE

Crossvale, Inc. provides technological expertise, solutions, and platforms that fix business challenges related to, and affected by, IT infrastructure and its associated processes. Its competencies range from software integration to enterprise and solution architecture. No matter the size of the project or customer, Crossvale can complement your staff with the knowledge and experience to digitally transform your business.