OPTIMIZING BMC HELIX CONTAINER DEPLOYMENTS WITH BMC HELIX CONTINUOUS OPTIMIZATION

BMC Helix Continuous Optimization is used by our customers to achieve their service assurance and optimization goals. Powerful visualization, prediction, optimization, and automation capabilities enable organizations to realize significant cost-savings and guarantee stability across on-premises and multi-cloud IT estates.

BMC also leverages these powerful features to optimize our own BMC Helix software-as-a-service (SaaS) platform and on-premises software.

One of the mantras we repeat to our customers is, "Your optimization efforts are not a one-time thing. They're continuous." BMC's SaaS operations teams continuously monitor and optimize the BMC Helix SaaS platform using BMC Helix Continuous Optimization to ensure we're efficiently delivering stable, cost-efficient services to our customers who use our modern, scalable, containerized BMC Helix platform.

As demand changes, BMC Helix Continuous Optimization automatically recommends and automates optimal configurations for memory, CPU, and Java Virtual Machine (JVM) settings, and horizontal pod autoscaling (HPA). Employing the solution internally also helps BMC ensure that we're allocating the right resources, without over-provisioning, to guarantee a stable and highly performant service for our customers. The BMC Helix SaaS platform continually delivers 99.99 percent average availability across all regions spanning 30+ subscription services, exceeding our service level agreement (SLA) commitment.

BMC Helix Continuous Optimization has also enabled us to significantly optimize the BMC software solutions that our customers deploy in their on-premises, public or private cloud context. As part of a recent project to improve the resource requirements of BMC Helix ITSM, we identified optimizations that will allow our customers to reduce their Kubernetes compute footprint by more than 20 percent—without making any changes to BMC code.

BMC Helix Continuous Optimization provided visibility and actionable insights into the behavior of how BMC Helix Service Management application behaves under load at every level of the Kubernetes architecture. The intuitive user-interface allowed our engineers to explore optimization opportunities for CPU, memory, and storage across clusters, namespaces, nodes, and pods.

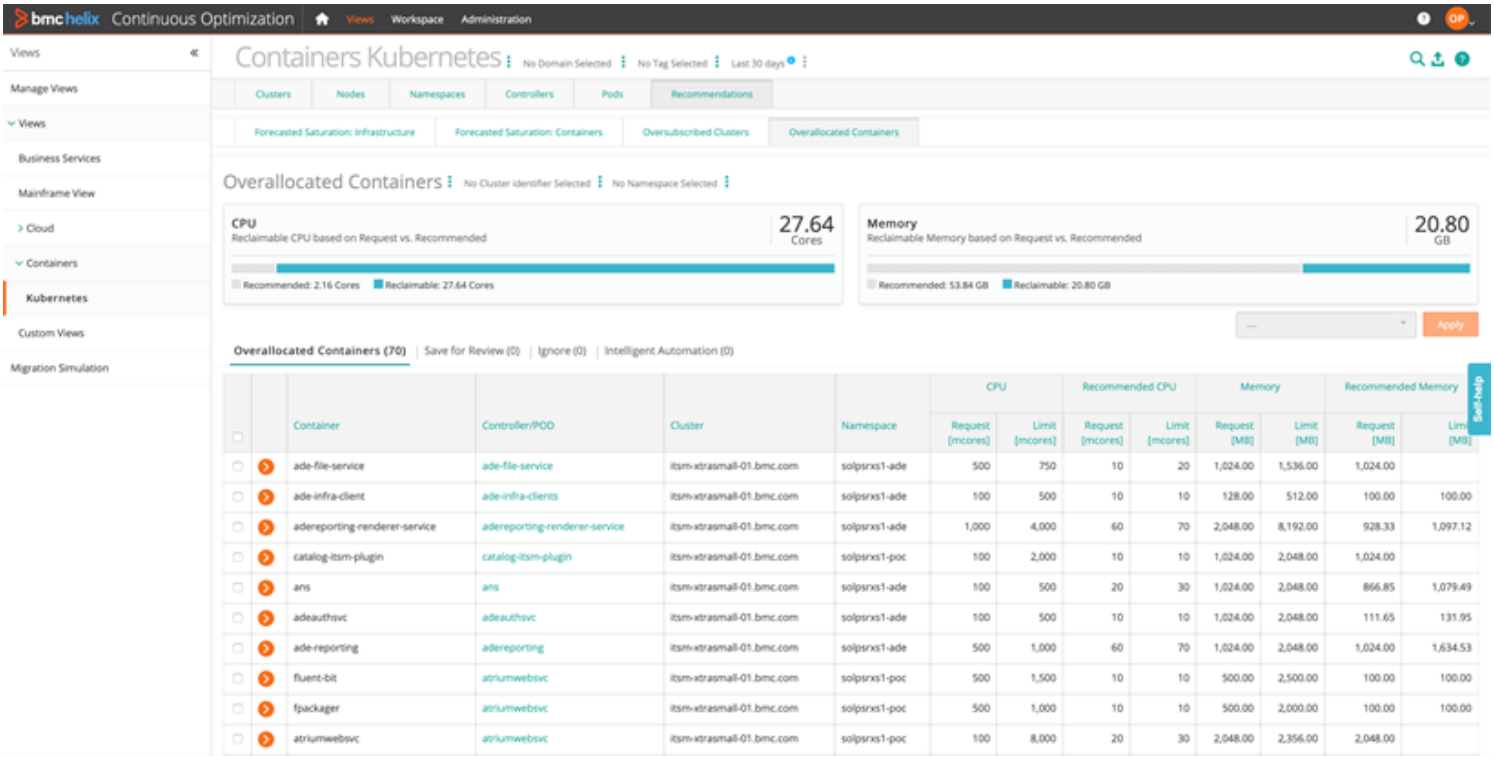
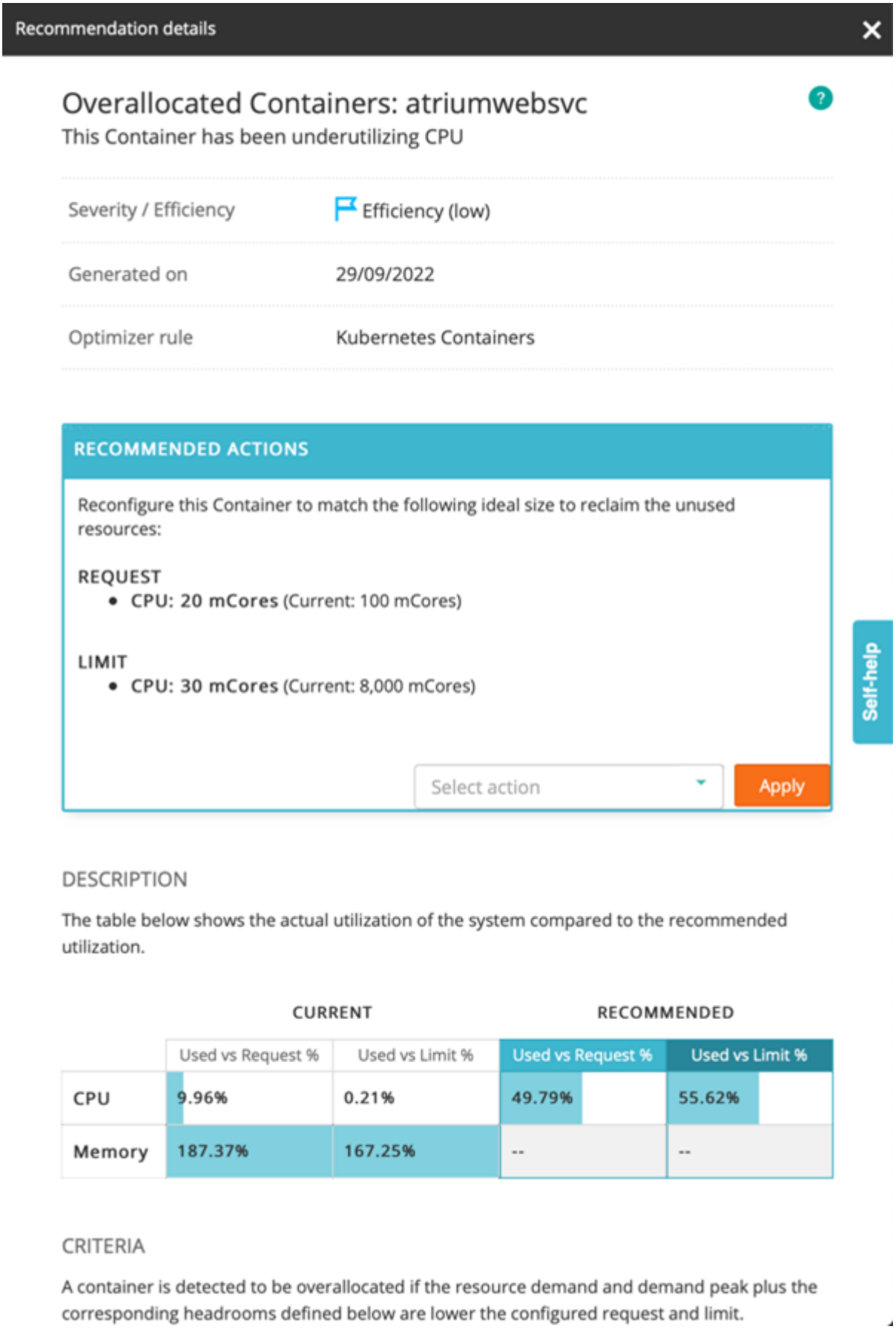


Figure 1. A sample of dashboards showing Kubernetes container usage and suggestions for improved efficiency.



Actionable insights

Using BMC Helix Continuous Optimization enables full visibility into the resource usage and patterns to provide actionable right-sizing recommendations based on each customer's historical and current

resource utilization. We are also able to simulate future events such as:

- New user onboarding
- Business events that may increase or decrease resource utilization
- Deployment and data center change preparations

This allows us to allocate the required resources to support our customers' mission-critical business services using BMC products on-premises. By modeling each service in our products leveraging the BMC Helix platform and the BMC Helix IT Operations Management suite—which includes BMC Helix Discovery integrated with BMC Helix Continuous Optimization—we are further able to correlate business drivers (mission-critical KPIs like "number of logins" or "number of users opening a support ticket") with system metrics, enabling predictive service assurance, health, and optimization.

Benchmarking once is not enough

Typically, benchmarks are used for sizing applications and resources. These benchmarks are like t-shirt sizing: small, medium, and large. But do all t-shirts fit you the same way? No. When it comes to a perfect-fitting t-shirt, you need a tailored fit.

Benchmarks are set and hopefully revisited occasionally. In a digital world that's driven by constant change, continuous optimization of resource allocation is a business imperative to staying competitive and maintaining service levels.

Continually optimizing is optimal

As you develop and deploy new services to support the popularity growth of your current offerings, you'll need to continually assess whether you have the proper sizing for your environment. Too little, performance suffers. Too much, your bottom line suffers.

It's tedious work to manually model, analyze, and calculate sizing or determining if migrating from on-premises to cloud or from one public cloud provider to another makes sense. More so when you must do it often.

BMC Helix Continuous Optimization takes care of the leg work for you:

- Gain visibility across the enterprise, including legacy applications and on-premises, physical, virtual, containerized, Kubernetes, pod, and cloud infrastructure resources.
- Understand the overall health of business services using comprehensive, consolidated views of application and infrastructure metrics to maximize performance and minimize cost. Predictive saturation forecasting helps you avoid failures and slowdowns.
- Deploy applications on time by reserving IT resources when needed.
- Receive actionable risk mitigation and cost savings recommendations for your containerized environments integrated with BMC Helix Intelligent Automation.
- Perform advanced what-if simulation analysis for your business services based on the critical KPIs (business drivers) impacting your business.
- Simulate and analyze cloud migrations and Kubernetes workload impact before implementation.

As we continually enhance our BMC Helix solutions (both SaaS and on-premises), BMC Helix Continuous Optimization plays an important role in development and deployment to ensure we

deliver an efficient solution to our customers.