opsani

FinTech Leader Saves Over $3M/Year on SaaS Operations with Opsani

Opsani Cloud Optimization delivers 68% savings and a 12% performance boost

Customer

"The Company" provides SaaS financial management solutions. The App involved has over three million active users. After a successful transition to the cloud, the Company reduced idle servers and could elastically provision resources. During the shift, they also completed a fully automated DevOps toolchain and CI/CD pipeline.

Challenge

The Company undertook a successful transition to the cloud. However, post-transition, their cost and performance metrics did not meet expectations. Performance-tuning by the Company's DevOps team failed to resolve the problem. New releases were frequently being delayed. The Company needed to find a way to reduce server idleness and elastically provision resources.

Engineers were looking to:

- Improve performance predictability
- Determine efficient resource settings
- Optimize Java performance
- Protect or improve user experience
- Expedite new releases

Solution

The first step for the engineers was to define a measurable performance unit. They chose to optimize response time at a fixed load. Throughput and error counts were also monitored to bound the solution set. Opsani added plugins to integrate with the current CI/CD system so it could collect data from existing monitoring tools, detect changes and feed resource and configuration parameters into the SaaS service for optimization.

Next, Opsani took some time to calibrate and analyze the data to condition the AI and ML which would help Opsani's engine produce better configurations.

Executive Brief

The Company provides SaaS financial management solutions for over three-million active users. Opsani became involved after they completed the lift-and-shift of their application to the cloud. Within the quarter, Opsani's AI-drove cloud optimization system produced both increased performance and reduced cost. As a result, the customer saved millions per year and achieved a positive ROI in the same quarter.

Industry	Financial Services
App Resources	1300+ Virtual Machines
Cloud Spend	$5 Million / Year AWS
Implementation	Less than one quarter

12%
Performance Increase

68%
Cost Reduction

232%
Better Application Efficiency

All within a one quarter ROI Period

Without this data conditioning, the AI and ML would produce suboptimal results. With the setup complete, optimization began. In the first run, Opsani adjusted only JVM parameters. In just days, the system was able to boost performance by 10%.

The team then began a more expansive optimization run. Using AI and ML, Opsani automatically selected, tested and tuned resource parameters including combinations of memory, CPU, and instance count to optimize for best efficiency.
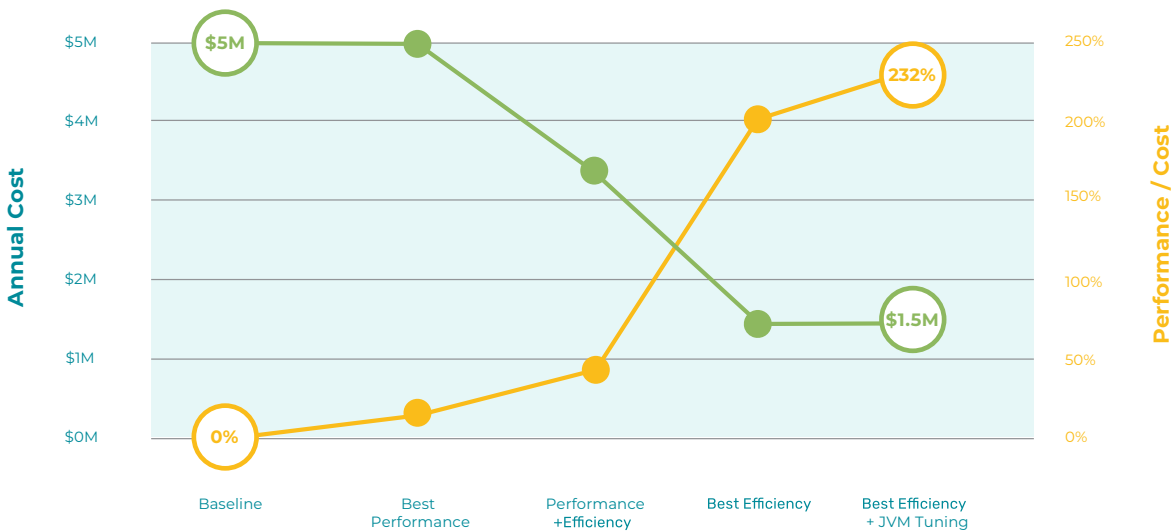
Opsani AI produced results within a week of the optimization start.

Results

Within month one, the Company's application experienced a host of performance benefits:

- With Opsani, 90% percentile (P90) latency time came down from 150 milliseconds to 110 milliseconds
- Availability improved by an average of ten seconds
- Operations experienced a 10x reduction in page notifications
- "GC full events" decreased by 91%
- Restarts decreased by 78%
- A total of 5,000 minutes of uptime were recovered within the month
- Release cycles made quicker by an entire week

On top of this, cloud optimization enabled the Company's teams to unlock some major cost savings. They were running 50 different application clusters with 30 machines per cluster. Once Opsani optimized the application, the Company were able to reduce the number of machines quite significantly, and go to a slightly larger machine.

With Opsani, cost came down by 74%, equating to hundreds of thousands of dollars cut from the monthly AWS bill.

In less than a week, the system autonomously ran numerous tests and produced compelling results. By automatically adjusting resource parameters across the full application stack, Opsani AI identified configurations to achieve the Lowest Cost, Best Efficiency, and Best Performance. Ultimately, the Company chose the most efficient configuration, saving $3.5M annually on cloud infrastructure, improved performance by 12% and boosted efficiency 232%. Performance is now consistent which improves the user experience. With Opsani's AI Cloud Optimization integrated into their CI/CD toolchain, the Company has now implemented automated continuous optimization for all future releases. This allows for continuous findings for the optimal runtime configuration settings that are too complex for humans. As they prepare to update their middleware libraries, the Opsani AI is integrated, CI/CD/CO.

Benefits

After engaging with Opsani, the Company achieved positive ROI in the same quarter the project started and is now saving millions in cloud spend annually. The customer gained control over cloud cost and increased the time to market for added features which deliver both top and bottom-line growth to their business.