



# Java SE Advanced Fuels Business Growth and Operational Savings at Medallia

## Tangible Benefits and ROI Seen in Weeks

CUSTOMER CASE STUDY | 2017

Medallia built the Medallia Experience Cloud™ platform, a successful customer experience management SaaS application, on Java and other technology. The business intelligence (BI) of Medallia Experience Cloud offers real-time reporting across large data sets, requiring the highest in performance and reliability. Java SE Advanced has helped increase efficiency, while keeping hardware requirements and associated costs down in the process.

### Java SE Advanced Helps Medallia Tackle Challenges

Focused on customer convenience with the highest levels of performance and availability, Medallia built Medallia Experience Cloud as a SaaS offering. Doing so required a modern web architecture, with a Java application built on Java-based middleware at its heart. To meet the demands of its customers' real-time reporting needs, Medallia needs to manage large volumes of in-memory data sets per user. To maintain efficiency, Java heap requirements were in the range of 500GB of memory per customer. Additionally, to satisfy the resource demands of their real-time reporting features, Medallia would need to dedicate servers with up to 56 cores to some of their largest customers.

The benefits of this approach give Medallia and their customers a competitive edge, but technical challenges related to managing Java heap and Java GC overhead kept their developers busy. For example, requesting a report that takes a few seconds longer to generate than it should results in both frustration and negative business impact. The associated tuning and optimization work Medallia performed to avoid this situation meant less time focused on building new features and supporting new customers. It also meant an ever-increasing amount of time spent tuning infrastructure. Java SE Advanced has eliminated all of this by giving Medallia engineers even greater visibility and control over Java heap usage details and garbage collection (GC) activity.

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### THE MEDALLIA EXPERIENCE

With a customer experience management SaaS application, growth was limited only by the efficiency of the team. Critical to Medallia's success are:

- Advanced BI functionality
- Real-time reporting
- Performance and reliability
- Developer agility
- A foundation built on Java



### JAVA SE ADVANCED VALUE PROPOSITION

Achieve control and management of Java across your enterprise.

Reach new levels of performance and reliability through the use of advanced Java tools.

Remain up to date with the latest versions of Java, while maintaining support with updates to older versions as needed.

Improve application development agility and increase productivity.

Gain key insights into application and Java VM operational data.

## The Tools for Success

Before using Java SE Advanced, Medallia had to dedicate resources to tune its Java heap. Home-grown instrumentation efforts at the server level offered some insight into application activity and performance, along with control over application tuning and optimization both in production and while in development. However, developers' time was better spent focused on enhancing the core application.

Java SE Advanced tools such as Java Flight Recorder and Java Mission Control provided Medallia with production diagnostics and application insight they needed, with negligible performance overhead. For example, with Java Flight Recorder, developers and IT staff now have deeper insight into Java's GC activity, such as how objects are promoted within the heap and when they're collected, even offering fine-grained control over how memory management occurs within the Java VM and application. Additionally, Java Mission Control has shown developers exactly how changes to their code affect the Java VM, with guidance on how to improve it.

Medallia also uses Java SE Advanced to analyze performance and behavior at a very detailed level. They can profile applications and servers while they execute, identify key happenings within the JVM and application, and capture a profile to analyze immediately. As a result, developer and operations staff have become more efficient, as they spend less time monitoring and tuning, and more time focused on customer enhancements.

## Big Returns with Minimal Effort

Medallia tried other performance and profiling tools in the past, but typically saw performance impact and overhead in the 25% to 30% range. Comparatively, Medallia has found that the use of Java Flight Recorder and Java Mission Control introduces less than 1% overhead, negligible performance impact, with no code or system changes making it suitable for use in production systems. In fact, Medallia technical staff have found that the default performance profile and tuning settings built into Java SE Advanced has been so effective that the need to perform further optimizations have been reduced, freeing developers to focus on key business tasks. In a nutshell, Java SE Advanced was the superior choice.

Over the course of just a few months of using Java SE Advanced, Medallia has become more efficient and has seen improved compute efficiency and resource utilization in terms of both memory and CPU. Additionally, Java SE Advanced has eliminated the need for developers to write their own specialized log output and instrumentation code, along with the manual analysis that proved inefficient previously. Every developer cycle saved with Java SE Advanced is valuable in terms of productivity.

## An Agile Approach to Business Growth with Java SE Advanced

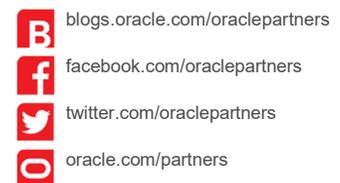
In addition to production system profiling, Medallia uses Java SE Advanced in development to optimize code *before* it gets to production. It has also allowed them to create an administrative tool to profile and adjust their application on the fly. As a result, Java SE Advanced has helped Medallia become more agile and efficient, building feedback loops from production systems to help tune runtime activity as part of their development sprints.



*"We saw significant return on investment from Java SE Advanced in a matter of weeks. The savings in resources has helped us reduce our hardware requirements, resulting in a savings of over \$200,000 so far. With improvements accumulating over time, we expect the savings to grow even as we grow our customer base. In fact, the additional headroom from Java SE Advanced has allowed us to grow the business beyond our initial projections, while making us more profitable."*

**NAGGI ASMAR**  
VP OF DEVELOPMENT  
MEDALLIA

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FOR MORE INFORMATION  
Contact: 1.800.ORACLE1



Integrated Cloud Applications & Platform Services

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## Call to Action: Get Started with Java SE Advanced Today

Java SE Advanced offers your enterprise the following:

- » The advanced Java monitoring and management tools you need at the enterprise level
- » Ongoing patches and security updates beyond those made publicly available
- » Management and control of Java deployments with the Advanced Management Console
- » 24x7 access to a dedicated Oracle support team.

More information on the Java SE Advanced support and tools can be found at:

[www.oracle.com/us/technologies/java/standard-edition/advanced-suite](http://www.oracle.com/us/technologies/java/standard-edition/advanced-suite)

If you feel that your organization may benefit from a complimentary 'Java Healthcheck', a specialist from Java team can walk you through the steps to understand how Java is being used across your organization and how you can proactively manage it going forward. Contact Oracle at: [javacomms\\_ww@oracle.com](mailto:javacomms_ww@oracle.com).

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