



Mitsubishi UFJ e-Smart Securities Optimizes Package Management and Automates Deployment with JFrog

Mitsubishi UFJ e-Smart Securities has historically faced challenges around optimizing deployment and package management. By adopting the JFrog Software Supply Chain Platform, the company has transformed its approach to DevOps and realized significant improvements in security, efficiency, and speed.



Integrated Security at Every Stage of the Development Lifecycle



Single System of Record for Secure Automated Software Releases



End-to-end Auditing and Tracing of Software Artifacts



"I think the most fundamental thing is customer satisfaction. We are a brokerage firm, so it makes no sense if our clients can't trade when they want to. We chose JFrog for its ease of debugging from a developer's perspective, speed, and ease of use. We had to read the source code to understand the relationship between modules, and JFrog made it easier to visualize this."



Mr. Yuki Yoshida

IT Strategy Group, System
Development Department
Mitsubishi UFJ e-Smart Securities
Until September 2024

About the Company

Mitsubishi UFJ e-Smart Securities (previously known as au Kabucom Securities Co.), is an online brokerage under Mitsubishi UFJ Financial Group. The company provides online securities trading services to a large number of customers in Japan. Its trading system is broadly divided into two parts: a front-end system for users and a back-end system for managing securities accounts.

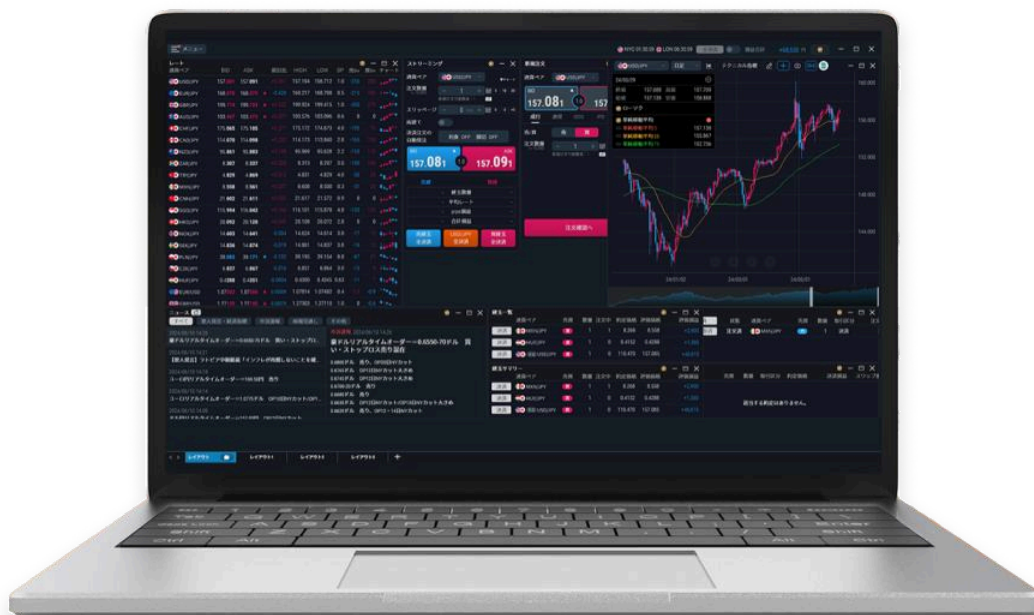
Their trading system includes a front-end for order execution and market information – like investment information, market news, and stock price charts – and a back-end for managing assets with external institutions such as Japan Securities Depository Center, Inc. and financial institutions.

Overview

Mitsubishi UFJ e-Smart Securities, an internet brokerage firm, has partnered with UL Systems, Inc., an IT consulting firm, to streamline and secure the deployment process of functions and services to provide secure and multi-functional securities trading products to its customers.

UL Systems, Inc. is an IT consulting firm specializing in tailored IT solutions, including software development, system integration, and digital transformation. They focus on creating secure, scalable systems to enhance efficiency, ensure compliance, and meet market demands. Leveraging technologies like cloud computing and agile methodologies, UL Systems helps businesses streamline operations, improve customer experiences, and stay competitive, and they have a strong track record of delivering services to leading companies, primarily in the finance, manufacturing, information and communications, public sector industries, and more.

To meet the demands of a dynamic market and avoid significant gains or losses, Mitsubishi UFJ e-Smart Securities realized the urgent need to minimize system downtime and improve security and compliance in order to provide a platform that customers could use in a timely manner – a requirement for time-sensitive trading activities. By bringing in UL Systems, Mitsubishi UFJ e-Smart Securities sought to modernize their legacy systems for improved efficiency, scalability, and user experience. Therefore, UL Systems, in addition to offering expertise in issue analysis and system modernization, promoted the adoption of JFrog as part of delivering solutions aligned with the technical and operational goals of the financial institution.



"JFrog is simple and secure, and in addition, it is like a warehouse for managing assets. The fact that we can easily manage not only specific packages, but also containers, registries, and other modules by storing them in Artifactory, and that we can manage versions is another advantage."



Mr. Ryo Nakamoto
UL Systems

"I like the fact that we can use the Simple Package and that it is easy to debug from a developer's perspective. Also, since we can manage assets as binaries, it resolves dependencies, and since we can manage them as final artifacts, we can ensure traceability, which I think is one of JFrog's strengths that no other company can match. With its introduction, the deployment speed to our development environment has become automated and overwhelmingly faster simply by setting the time."



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Challenges

Before implementing JFrog, Mitsubishi UFJ e-Smart Securities had deployed on-premise, using files located on file servers, with no explicit repository management. This approach did not allow for file tracking, so the only way to determine which files were up-to-date and correct was to rely on stamp-based checks. In addition to lengthy or inconsistent deployment times, this situation also created challenges around efficient package management.

From a DevOps perspective, Mitsubishi UFJ e-Smart Securities and UL Systems also identified the following challenges:

Development challenges:

The development team faced challenges related to artifact tracking, version management, and deployment processes, making it difficult to maintain clarity and control over their workflows.

- ⊗ **Tracking Changes:** The team struggled to track changes to artifacts and record the times those changes were made.
- ⊗ **Artifact Comparisons:** Identifying differences between newly built artifacts and existing ones was a challenge.
- ⊗ **Environment Mapping:** It was unclear which artifacts were deployed in specific environments and this led to confusion across the team.
- ⊗ **Deployment Management:** Managing the deployment of artifacts was a complex and time-consuming process.
- ⊗ **Version Control:** The team had limited ability to use and switch between different versions of the same artifact.

Operations challenges:

The operations team encountered inefficiencies in sorting, deploying, and managing releases, particularly across production and multiple environments, which hindered smooth and error-free deployment cycles.

- ✖ **Release Object Sorting:** Manually sorting and listing release items during deployment was inefficient and prone to errors.
- ✖ **Production Deployment:** Deploying items to production manually was time-consuming and increased the risk of mistakes.
- ✖ **Multi-Environment Deployment:** Rolling out release items to multiple environments required significant effort and coordination.

"In the CI pipeline, artifacts are registered and versioned, while in the CD pipeline, these artifacts are retrieved and released. This enhances collaboration between development and operations teams, improving release efficiency. Furthermore, by leveraging JFrog Xray's open-source vulnerability scanning capabilities, product security can be ensured."



Mr. Tetsuo Hayashi
UL Systems

Solution

Together, Mitsubishi UFJ e-Smart Securities and UL Systems selected the JFrog Platform as a comprehensive solution to address these challenges. The team chose to deploy the JFrog Platform as SaaS on Amazon Web Services (AWS) to take advantage of the scalability of AWS infrastructure, and primarily leverages the following JFrog features to accomplish their goals:

JFrog Artifactory: Centralized the management of all binaries, ensuring that the company could store, track, and manage all artifacts with consistent security and compliance controls. Leveraging Artifactory also provided the ability to federate development environments in different locations between servers and AWS, and create a more efficient centralized repository for the entire organization.

JFrog Xray: By integrating with JFrog Artifactory, Xray provides real-time insight into potential risks, including pre-release vulnerability information beyond what an open database can provide.

JFrog Distribution: Leveraging JFrog Distribution has allowed Mitsubishi UFJ e-Smart Securities to overcome network limitations and securely deploy deliverables to different environments, maintaining consistency and security throughout the development lifecycle.

"I feel that JFrog is also useful when using assets. We pull in Ansible AWX modules to run when internet communication is difficult in a secure production environment. We can pull everything from JFrog Artifactory, which acts as a container registry in that case and also manages Ansible modules, and communicates over a private link, not the Internet."



Mr. Ryo Nakamoto
UL Systems

Results

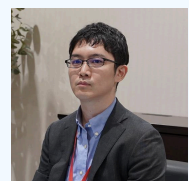
The partnership between Mitsubishi UFJ e-Smart Securities and JFrog has been instrumental in transforming the development and operational processes. By implementing the JFrog Platform, Mitsubishi UFJ e-Smart Securities gained the following benefits:

- ✔ **Integrated security at all stages of development:** JFrog Xray's comprehensive scanning capabilities enabled Mitsubishi UFJ e-Smart Securities to detect and address vulnerabilities early in the development cycle, reducing the risk of security breaches and the need for costly rollbacks.
- ✔ **Single system of record for secure, automated software releases:** Integrating JFrog's tools enabled a shift-left approach, allowing developers to perform vulnerability checks early in the development process. This not only reduced labor costs but also improved the overall release cycle and streamlined the entire DevSecOps process for Mitsubishi UFJ e-Smart Securities".
- ✔ **End-to-end audit and traceability:** With JFrog Artifactory, binary management is more efficient, reducing the time and effort required to track and deploy software components across different environments.
- ✔ **Enterprise-proven scale and governance:** The JFrog platform provides the scalability needed to meet growing demand, ensuring that the company continues to deliver cutting-edge solutions to its customers.
- ✔ **Centralized management:** The ability to set policies and continuously monitor compliance across all repositories has allowed Mitsubishi UFJ e-Smart Securities to maintain strict security standards while reducing manual monitoring.
- ✔ **Secure distribution across environments:** With JFrog Distribution, Mitsubishi UFJ e-Smart Securities is now able to overcome network limitations and securely deploy deliverables to different environments, maintaining consistency and security throughout the development lifecycle.

The implementation of the JFrog Platform has not only improved security and compliance, but has also increased efficiency and reduced costs. As a result, Mitsubishi UFJ e-Smart Securities is better positioned to deliver secure and innovative solutions to its clients and has seen an increase in profits, particularly in the client segment.

We invite DevOps and Security professionals in the financial sector to schedule a [one-on-one demo](#) or take an [online guided tour](#) and see how the JFrog Platform can transform your operations with advanced security, efficiency, and speed.

"One of the key success factors in this implementation is that we have been able to provide our clients with a secure and innovative solution. With JFrog, we can now easily check our repositories for vulnerabilities and deploy much faster. The goal is to bring overhead as close to zero as possible."



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ABOUT JFROG

JFrog empowers thousands of DevOps organizations globally to build, secure, distribute, and connect any software artifact to any environment using the universal, hybrid, multi-cloud JFrog Platform.



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