



TPBank Boosts **Software Testing Performance** and **Team Proficiency** to Handle the Upsurge of Mobile Users



Overview

The intricacies of TPBank's system have posed a significant challenge for the testing team to conduct comprehensive quality checks. To solve the problems, the bank engaged with **KMS Solutions**, a premier technology consulting and service provider with proven software testing expertise in BFSI - for a personalised strategy to automate the testing process and enhance the team's expertise.

Challenges

- Lack of continuous integration (CI) in the testing process
- Limited knowledge about Katalon and unfinalised workflow
- Partial automation of scripts

Solutions

- Automated scripts for different OSes and environments
- Seamless integration with advanced tools
- Enhancing proficiency through comprehensive training programs

Results

- Ensuring the testing team can have sufficient knowledge within two weeks of training
- Successfully applying CI and integrating Jenkins into testing environments
- Reducing the initial plan duration from 3 months to 2 months

The Leading Bank of the Digital Age in Vietnam



TPBank, short for Tien Phong Commercial Joint Stock Bank, is a prominent commercial bank based in Vietnam. It was established in 2008 and has since grown to become one of the leading banks in the country.

During its 15 years of operation, the bank has offered a diverse array of banking services, including personal banking, corporate banking, international trade services, and e-banking solutions. This comprehensive range of offerings has allowed TPBank to attract and cater to a wide range of customers, contributing to its successful expansion.

According to the report from TPBank, in 2022, the bank experienced remarkable growth with the addition of 3.7 million new users, increasing the total number of individual users to 8.5 million, marking a noteworthy growth rate of 60%.

When the Upsurge in Mobile App Users Becomes a Challenge

As the customer base expands, the volume and complexity of testing scenarios also multiply. TPBank's testing teams must handle a larger number of transactions, simulate various user interactions, and validate the performance and stability of the software systems under heavier workloads. This requires the adoption of automated testing throughout the process and continuous integration (CI) to enable frequent and efficient software releases.

The maintenance and synchronisation of manual test scripts can become cumbersome, particularly when dealing with complex software systems. However, due to a lack of knowledge and expertise in Katalon, a widely used test automation tool, TPBank's testing team was only able to utilise half of its capacity when generating automated test scripts.

Besides, the lack of a CI system further compounds the testing challenges for TPBank. The implementation of the CI system plays a vital role in the bank's testing process since it enables TPBank to seamlessly integrate and test software changes, reducing the likelihood of delays, bottlenecks, and sluggish development cycles.

Additionally, due to the broad spectrum of banking services, each accompanied by its own distinct set of workflows, the complexity involved in managing these workflows intensifies with the expansion of the customer base.



An End-to-end Testing Strategy: From Automated Scripting, Integration, to Training Programs

Recognising the critical importance of thorough testing in ensuring their software systems' stable performance and security, TPBank has leveraged the expertise and comprehensive solutions offered by trusted testing service providers. Hence, the bank took a strategic step towards conquering the complexities of enterprise software testing by engaging with KMS Solutions - a leading technology consulting and service provider with a demonstrated track record of software testing excellence in the BFSI sector.

By analysing the challenges that TPBank encountered, KMS Solutions has devised a comprehensive strategy that addresses various aspects of the bank's software testing requirements.

- **Streamline Testing Process With Advanced Automation Scripting**

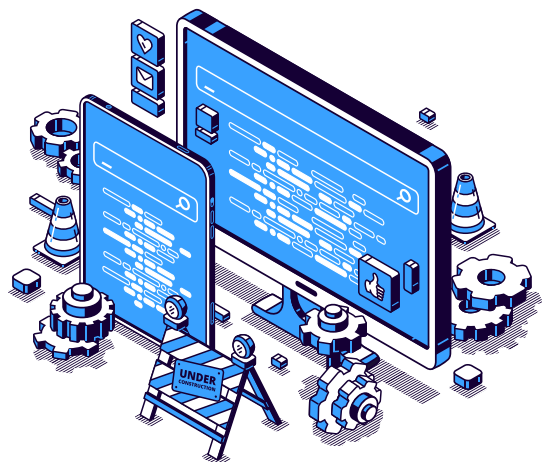
As TPBank operates within a complex software ecosystem, leveraging automated testing becomes essential to maximise efficiency and effectiveness. By leveraging their expertise in automation scripting for mobile platforms (Android, iOS), APIs, SAAP, and databases, KMS Solutions aims to streamline TPBank's testing processes and ensure comprehensive test coverage. Automation scripting will help reduce manual effort, enhance accuracy, and speed up the overall testing cycle.



Ultimately, KMS provides an automation testing framework suitable for TPBank's characteristics and helps the team successfully execute the testing model.

- **Ensure Continuous Testing With Seamless Testing Tools Integration**

To further optimise their testing workflow, TPBank enlisted KMS Solutions' assistance in seamlessly integrating essential testing tools. By integrating Katalon TestOps, Jenkins, and Jira with the CI system, the bank can facilitate the automatic triggering of tests whenever codes are changed.

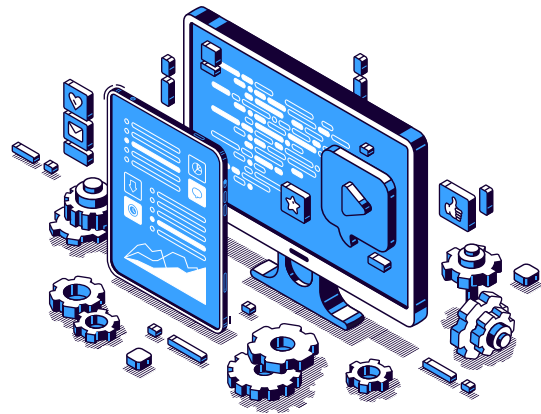




Through the integration of Jenkins CI, TPBank was able to establish an automated build and test execution system, providing fast and reliable feedback on code quality. With the adoption of Jenkins CI, the TPBank team can seamlessly examine the most recent code changes and automatically initiate builds of the code along with the tests.

● Empower The Testing Team Through Customised Training Programs

In order to adequately equip themselves for upcoming digital transformation initiatives, TPBank proactively arranged a training program on software testing for a group of 15–20 members, with the support of KMS Solutions. The company designed and delivered both basic and advanced software testing training sessions tailored to the specific needs of TPBank's team, ensuring a comprehensive understanding of software testing concepts, methodologies, and advanced techniques.



After a 2-week training course, TPBank's testing team successfully obtained the essential skills and a profound comprehension of Katalon Studio for automation testing. The team gained mastery in utilising the Katalon tool to record and create automation test scripts and improve their mindsets in incorporating effective automation practices to drive efficiency and productivity.



KHÁNH ĐỖ

Digital Testing Architect

The collaboration between KMS Solutions and TPBank has been a testament to the power of partnership and expertise in driving remarkable outcomes. Together, we have achieved accelerated project completion, successful implementation of CI and Jenkins integration, and a significant boost in the knowledge and capabilities of the TPBank testing team. This collaboration has paved the way for the bank's success in the digital age, ensuring cutting-edge software testing practices and delivering superior customer experiences.



Completing the Project a Month Ahead of the Original Plan

Despite the initial expectation of completing the automation testing process in 3 months, TP Bank successfully integrated automation testing into their process & enhance the testing team capabilities within just 2 months thanks to the strong collaboration with KMS Solutions.



NGUYỄN THUỖ LINH

Head of Business Analysis and Testing
IT Department



While working with the KMS Solutions team, we were greatly impressed by their enthusiasm and proactive approach. Their prompt responses and valuable suggestions proved instrumental in resolving coding issues, optimising tool utilisation, and addressing common challenges faced by TPBank. Moreover, their expertise enabled them to efficiently tackle technical hurdles encountered while implementing new projects. KMS Solutions proved to be an invaluable partner, consistently delivering effective solutions to support TPBank's objectives and ensure the smooth execution of our initiatives.



About KMS Solutions

KMS Solutions empowers BFSI companies to optimize operations, drive innovation, and enhance product & service offerings through the seamless integration of cutting-edge technologies and tailored solutions

To learn more about KMS Solutions and our work, visit: kms-solutions.asia