

Company: Cathay United Bank

Company Description: Cathay United Bank was first established in 20 May 1975 and has served its customers for over 42 years. Cathay United Bank currently has 165 branches in Taiwan. Our overseas presence leaves 67 footprints in 11 countries and areas, including 2 subsidiaries, 1 joint venture bank, 6 overseas branches and 5 representative offices.

Nomination Category: Product & Service Categories - Business Technology Solutions

Nomination Sub Category: Cloud Platform

Nomination Title: Establish an Automated Cloud Platform, achieving AI Ops process automation, test automation, and technological innovation

1. Which will you submit for your nomination in this category, a video of up to five (5) minutes in length about the the nominated new or new-version product or service, OR written answers to the questions for this category? (Choose one):

Written answers to the questions

2. If you are submitting a video of up to five (5) minutes in length, provide the URL of the nominated video here, OR attach it to your entry via the "Add Attachments, Videos, or Links to This Entry" link above, through which you may also upload a copy of your video.

3. If you are providing written answers for your submission, you must provide an answer to this first question: If this is a brand-new product, state the date on which it was released. If this is a new version of an existing product, state the date on which the update was released:

The Automated Cloud Platform went live on 2024/12/20.

4. If you are providing written answers for your submission, you must provide an answer to this second question: Describe the features, functions, and benefits of the nominated product or service (up to 350 words):

Total 342 words used.

To enhance competitiveness amid digital transformation, Cathay United Bank established the "Automated Cloud Platform." Using hybrid cloud architecture, it integrates existing cloud and on-premises test environments, SRE automation, and incident response tools, aiming for AI Ops automation, test automation, and innovative technology.

Main Application Scenarios of the Automated Cloud Platform

1. **Hybrid Cloud Container Platform: Serving as a staging area before cloud migration, capable of multi-cloud management of K8S cluster environments.**

The Automated Cloud Platform is a flexible and highly available hybrid cloud container platform that is not restricted by the underlying environment. Teams can easily migrate applications and dynamically allocate resources between public/ private clouds based on actual needs. It also provides a unified management interface to simplify operations and management in a multi-cloud environment.

1. **Operations Management: Integrated cloud and on-premises monitoring, comprehensive and improved monitoring services.**

We integrated incident response tools (Prometheus, Zabbix, Alertmanager, Bindplane, Thanos Querier) into the Automated Cloud Platform. Centralized management and a unified dashboard enable real-time monitoring, quick issue resolution, and comprehensive system health analysis. Additionally, we implemented an AI LLM model for IT monitoring data, enabling timely anomaly alerts, reducing downtime, and predicting potential issues.

1. **Cloud Testing: Flexible expansion of testing resources through cloud services, accelerating overall development and testing time.**

Using cloud services like AWS Device Farm, K6, and WireMock, we can conduct tests on various desktop browsers and mobile devices, ensuring APP compatibility and test automation. Cloud testing allows for easier resource expansion, dynamic resource allocation based on needs, improved utilization of testing environment resources, and reduced operational costs.

1. **Automation and Self-Service: Simplifying workflows significantly through automated and self-service integration services.**

We connect various systems through webhooks to reduce manual operations and achieve service automation. Using IaC tools like Ansible for automating resource files. Combining InfluxDB and Grafana for centralizing and visualizing test data, which can automatically generate test reports, significantly enhancing the transparency of test results and the efficiency of quality trend analysis. In response to the rise of GAI tools, we also completed the POC for AI-generated API test cases.

5. If you are providing written answers for your submission, you must provide an answer to this third question: Outline the market performance, critical reception, and customer satisfaction with the product or service to date. State monetary or unit sales figures to date, if possible, and how they compare to expectations or past performance. Provide links to laudatory product or service reviews. Include some customer testimonials, if applicable (up to 350 words):

Total 283 words used.

The "Automated Cloud Platform" ensures seamless integration of testing and development through methods such as test automation and technological innovation. It enhances testing efficiency and coverage while continuously promoting test data governance. After implementing this project, overall process efficiency and test coverage have significantly improved, while ensuring quality at all stages:

1. **Improvement in Automated Test Coverage**

- Average unit test coverage reaches 40% to 80%.
- Average Priority 1 automated test coverage for UI/ API reaches 90%.
- Average API test automation coverage reaches 90%

2. **Improvement in Test Case Completeness**

- The results of the stress testing indicate that it can help improve the accuracy of the system's actual load capacity by 20%.

- Device Farm achieves 90% coverage of fully compatible user devices.

3. **Improvement in Testing Efficiency**

- Smoke testing accelerates pre-test screening, reducing overall testing time by 10%.
- Self-built automation framework improves test script development efficiency by 30% and execution performance by an average of 2.5 times.

- Automated testing can reduce regression testing time by more than 2 times on average; introducing automated testing for API tests can reduce regression testing time by 10 times on average.

- AQUA API testing execution platform can save 90% of API testing time.

- AQUA test data regeneration accelerates test data preparation, reducing preparation time by 90% on average.

- Automated test nodes combined with test integration, data storage (InfluxDB), and visualization tools (Grafana) can significantly enhance test phase inspection manpower, reducing issue identification time by 50% on average.

- Smoke testing can significantly reduce online verification time by 80%.

- AI-generated scripts are expected to improve API automation script generation efficiency by 90%.

4. **Resource Utilization**

- Containerized testing tools improve test environment utilization by 50%.
- Test hardware purchasing strategy reduces acquisition costs by 30%.

6. You have the option to answer this final question: Reference any attachments of supporting materials throughout this nomination and how they provide evidence of the claims you have made in this nomination (up to 250 words):

Total 137 words used.

In this report, we provide two supporting materials.

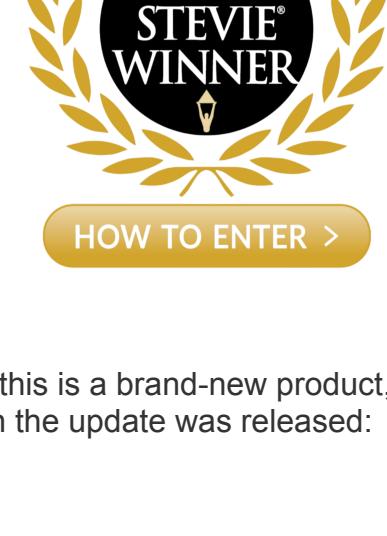
“Supporting Materials 01” mainly details the automation of testing, the testing platform, and technological innovations for the automated cloud platform. The document elaborates on various testing methods in test automation, the functionalities, execution methods, and interfaces of the testing platform. The technological innovation section explains different innovative applications step by step and showcases images of actual results. Finally, it lists the actual outcomes and impacts after the project's completion.

“Supporting Materials 02” explains and illustrates the architectural design for the main application scenarios of the automated cloud platform. This includes hybrid cloud container platforms, operations management, cloud testing, automation, and self-service, as well as workflow optimization for AI Ops. Through this document, you can clearly understand the architecture, components, tools, and operational processes we have planned for these projects.

Attachments/Videos/Links:

[Establish an Automated Cloud Platform, achieving AI Ops process automation, test automation, and technological innovation](#)

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