



Kyndryl Bridge[™] in Action at Mitsubishi Motors

Transforming IT Operations with AIOps and Automation



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In the automotive industry, IT reliability is becoming increasingly crucial as business models evolve with technological innovations such as electrification, autonomous driving and connected cars. Meanwhile, companies are faced with the challenge of dealing with an increasing number of technologies which result in an increase in IT costs and a shortage of IT personnel to manage the expanded systems. With over 20 years of partnership with Kyndryl, Mitsubishi Motors Corporation has also been working to resolve similar issues.

Our goal

In order to minimize the impact of IT failures and improve business resiliency, Mitsubishi Motors and Kyndryl decided to automate updates and operations of conventional mission-critical systems wherever possible to prevent the increase in operational personnel and operating costs. We started measures to visualize the entire complex system, prevent failures and shorten disaster recovery times.

Our approach was to set joint goals as a top-down team led by executives from both companies, with annual reviews to monitor progress and any issues. These joint goals consisted of three measures.

The first measure was architectural transformation which involved developing a cloud-based infrastructure and standardizing designs. Standardization was an integral part of automation because without it, the reusability of scripts developed for automation would be low and productivity would not increase.

The second measure was the transformation of the operating model. The goal was to integrate the operational systems and processes, which were previously separate at each location, to enable remote execution of operations across various sites. This integrated approach was adopted because the productivity of automation would not increase if the processes and systems were not in sync.

The third measure was operational transformation. In addition to automating routine tasks and the monitoring of operators, as well as the operation of SE (system engineer) servers, we also aimed to improve user convenience by developing a menu of services.

For each joint goal, we set clear completion criteria and measurable targets for each fiscal year.

Our solution

In order to solve these challenges, we began using Kyndryl Bridge, a collaborative, open-integration platform that modernizes IT operations in IT departments. Among the wide range of Kyndryl Bridge services, Mitsubishi Motors used a service called AlOps. The two main capabilities of AlOps are observability and automation of the IT environment.

To provide observability, AIOps integrates data with the various software used by the customer. It then collects data on in the IT environment, analyzes it and provides dashboards to the user with insights into current conditions, trends and actions.

AlOps also has agentless configuration management tools that enable automation. These tools can be used to collect inventory information on components such as servers, storage and networks that are to be managed. It can also automatically perform configuration changes, patches, and version upgrades. By combining visualization and automation, it is possible to automate the entire process from issue detection to repair when an incident occurs.

Additionally, AlOps is linked to a chat function, making it possible to respond to incidents from a smartphone. Operations such as checking system status, isolating failures, instructing the execution of playbooks and automatically summoning stakeholders from anywhere, at any time. This is so-called ChatOps (operations utilizing chat), which reforms work styles of SEs involved in infrastructure operations, leading to improvements in the service quality of the systems used by Mitsubishi Motors.

Automation had been applied across a broad range of areas and Mitsubishi Motors was actively promoting service cataloging and self-service SE operations related to the overall lifecycle management (construction, operation, maintenance, and termination) of servers, which usually requires a large number of personnel. We were working towards zero-touch operations that perform without human intervention.

However, it was not enough to simply introduce the AlOps tools, it was also

necessary to master them. To this end, Mitsubishi Motors was putting the following measures into practice.

Incident Reduction and Automated Remediation Actions

By analyzing collected data, AlOps lists potential incidents that can be reduced or automated to eliminate unnecessary incidents. This function not only reduces the total number of incidents, but also reduces disaster recovery time by automatically remediating without human intervention. In the meantime, it is essential to consistently set monthly incident reduction and automation targets, check daily server trends one by one and make the appropriate responses.

Automated Actions for Security Health Checks

In order to reduce security risks, it is necessary to reduce vulnerabilities and make systems robust. However, attackers are always developing new methods, so software needs to be constantly updated. Considering its permanence, performing this task requires significant time and security expertise. For this reason, AlOps implements an automated security health check function to solve these problems. The function can verify proactively collected inventory information and vulnerability information as well as monitor deviations. Additionally, by setting automatic repair, it can automatically fix vulnerabilities as soon as they are found.

Assembling the Automation Development Team

Many users are unable to devote work-hours required for shifting automation during daily operations. And that is why Kyndryl assembled a dedicated automation team, and we have been able to steadily promote automation toward agreed goals without affecting day-to-day operations.

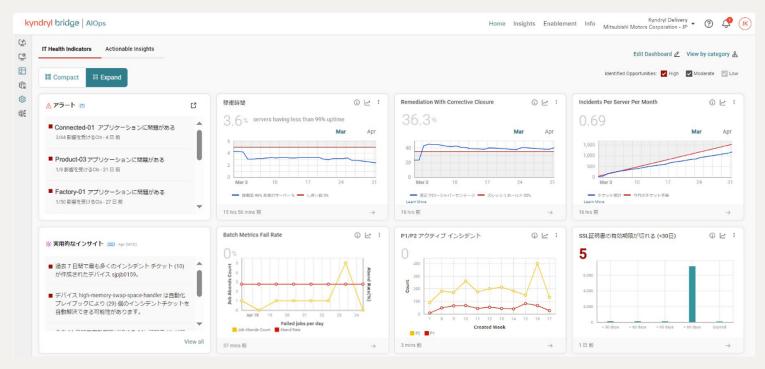


Figure 1 Kyndryl Bridge Integrated AlOps Dashboard



477 operator work-hours reduced per month



SE call time reduced from an average of 16 minutes to 1 minute





The number of incidents had been reduced by 65% from 3,200 per month in October 2022 to 1,100 in March 2024



37%

Of the 1,100 incidents, 37% were automatically recovered from failures



Requested work that took an average of 7 days reduced to 2 days self-service tools



Average recovery time from system outage reduced from 2 hours to 35 minutes through ChatOps



Reduced employee hours by 26.6 FTE in 2023, as a result of automation

Business outcomes

Mitsubishi Motors and Kyndryl have accelerated automation efforts since 2017. As of 2024, automation has been completed in the following areas.

- Operator monitoring
- · Operators' routine work
- Server construction work
- · Security Health Checks
- PC kitting
- · ID management
- · Configuration management
- Self-service through service portals
- ChatOps

The automation efforts have led to the following benefits in terms of cost savings and improved IT reliability:

- 477 operator work-hours reduced per month
- SE call time reduced from an average of 16 minutes to 1 minute
- A 65% decrease in incidents from 3,200 per month in October 2022 to 1,100 in March 2024
- 37% of 1,100 incidents automatically recovered from failures
- Requested work reduced from an average of 7 days to 2 days through self-service
- Recovery time from system outage reduced from an average 2 hours to 35 minutes through ChatOps
- Reduced employee hours by 26.6 FTE in 2023, as a result of automation

A new mindset

From another perspective, the result is that there was a significant shift in operational thinking and mindset.

Previously, the system was operated passively, with response actions triggered by alerts detected by the monitoring system. With Kyndryl Bridge, it is now possible to take action based on Al-driven insights from the dashboard. Proactive operation results in preventing small problems even before alerts. The data-driven operation that is now in place makes it possible to continuously evolve operations while using data to understand and evaluate opportunities for operational improvement and their effectiveness based on Kyndryl's best practices. The insights provided by Kyndryl Bridge are prioritized and posted to the dashboard in the form of a backlog. One of the results of this initiative has been a change to an agile and proactive attitude: instead of keeping issues at the backlog, the entire team holds a daily huddle where they share the actions the actions that need to be taken that day, and the backlog is steadily eliminated.

"IT has become foundational in supporting societal infrastructure and our corporate management success. It's a challenging agenda for IT to overcome skills shortages and optimize costs, while continuing to run high quality IT for our company. Kyndryl Bridge serves as a platform to solve such challenges. Mitsubishi Motors is aiming for further IT advancements and cost optimization in the future, and we look forward to seeing Kyndryl Bridge continue to evolve as a driver of these initiatives."

Masao Kuruma
 Corporate Officer, CIO
 Division General Manager, Global IT Division
 Mitsubishi Motors Corp.



What's next?

Kyndryl Bridge enables visualization and automation across the entire IT business by integrating and automating data with systems managed by Kyndryl as well as systems operated by third parties. Customers can also view the Kyndryl Bridge dashboard themselves, allowing them to see at a glance whether or not their IT setup is healthy overall without having to contact vendors.

In addition, there is a future initiative to visualize electric power. Kyndryl Bridge's services include Sustainable Advisor, a service that provides observability and automation for power management. Not only can it monitor power usage and CO2 emissions for servers running in data centers and the cloud, but it also provides insight into green or general energy trends and what can be done to reduce power and CO2 emissions. For example, if a customer is using a server with an unnecessarily large capacity, Kyndryl Bridge will advise on how much power and CO2 could be saved by reducing the size of the servers.



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