

Malaysia modernizes social security with Red Hat technology



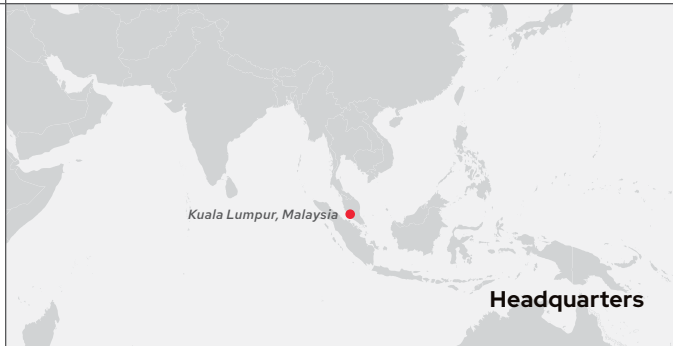
Malaysia's social security organization, Pertubuhan Keselamatan Sosial (PERKESO), sought to modernize its user experience with responsive, digital services. To support this new approach, PERKESO replaced its legacy payment platform with a custom application, built with Red Hat integration technology and running on Red Hat Enterprise Linux. The organization also created new business rules, managed by Red Hat application services and runtimes solutions. Using this new architecture to replace 75% of manual processes has helped PERKESO introduce more efficient, easier-to-access services and adapt to rapid growth.

Software and services

Red Hat® Enterprise Linux®
 Red Hat Fuse
 Red Hat Process Automation Manager
 Red Hat JBoss® Enterprise Application Platform
 Red Hat JBoss Web Server
 Red Hat Consulting

Partner

Wiseyes



Government

3,400 employees
54 branches

Benefits

- ▶ Eliminated 75% of manual processes to save time and money
- ▶ Supported rapid increase in online engagement from 20% to 90%
- ▶ Reduced service time to market from months to days

“Red Hat solutions have been integral to our transformation strategy. Our success so far creates a way forward to digitize the entire social security system, from contributions to benefits payments.”

Dr. Mohammed Azman bin Aziz Mohammed
 CEO, Pertubuhan Keselamatan Sosial (PERKESO)

“With accidents, waiting months for approval can significantly affect an insured person’s chance of working again. Now, contributions are updated daily, with the fastest claim approval taking just four minutes.”

Edmund Cheng

Chief Strategy and Transformation
Officer, Pertubuhan Keselamatan Sosial
(PERKESO)

Modernizing social security services

Malaysia’s Pertubuhan Keselamatan Sosial (PERKESO) provides social security payments and administration to millions of employees and their dependents. As part of a wide strategic transformation initiative, PERKESO decided to modernize its legacy system architecture, a monolithic, custom platform that included mainly hard-wired block modules connected to isolated web services and batch processing scripts.

Additionally, remuneration and claims distribution required citizens to make in-person visits to banks or PERKESO offices, sometimes taking several hours. The COVID-19 pandemic created further complexity, with national lockdowns preventing in-person visits to banks and branches.

“Contributions were done manually, so people had to visit an office or bank to submit forms that were then physically transported back to PERKESO,” said Edmund Cheng, Chief Strategy and Transformation Officer, PERKESO. “We then had to manually match contribution information with bank transaction records before entering it into the system. This process was time-consuming and prone to errors.”

Building a digital service environment with enterprise open source

To improve accuracy and enhance its customer experience, PERKESO sought to replace its manual, in-person transactions with more flexible virtual processes. After evaluating several Linux solutions, PERKESO decided to use Red Hat’s enterprise open source Linux platform, deployed on-premise, as the foundation of its new transaction environment based on Red Hat’s security-focused, flexible technology portfolio.

“Red Hat is much more organized compared to other Linux vendors or distributions, because they offer a dedicated team to support the web servers, APIs, and other components,” said Edmund. “With Red Hat, we have everything we need to support our operations in a single technology suite.”

Working with local IT specialist and Red Hat partner Wiseyes, as well as Red Hat Consulting, PERKESO deployed Red Hat Enterprise Linux and a custom, modular application integrated with Red Hat Fuse, a distributed integration platform that connects everything from legacy systems and application programming interfaces (APIs) to Internet of Things (IoT) devices and more.

The organization also created new digital business workflows with Red Hat Process Automation Manager, a platform for developing containerized microservices and applications that automate business decisions and processes. These workflows and processes were deployed on Red Hat JBoss Enterprise Application Platform (EAP) and Red Hat JBoss Web Server to support critical web services and applications.

Improving citizen and business engagement with less time and cost

Eliminated 75% of manual transaction processing

With its new application running on Red Hat Enterprise Linux and integrated with its legacy systems through Red Hat Fuse, more than 400,000 employers throughout Malaysia can complete contribution submissions, payments, and other processes through PERKESO’s digital channels. Additionally, millions of employees can now access their profiles and contribution-related information online to stay better informed about their benefits.

As a result, PERKESO has reduced the number of manual processes used by close to 75%, leading to less costs for the organization to administer services and significant time savings for businesses and citizens.

“Contributions used to be updated every six months. With accidents, waiting months for approval can significantly affect an insured person’s chance of working again. Now, contributions are updated daily, with the fastest claim approval taking just four minutes,” said Edmund. “With the time saved, we can focus on caring for citizens, such as workers who are disabled or suffer injuries.”

Scaled to accommodate rapid online business growth

PERKESO has also used its shift to more efficient digital processes to accommodate growth in both its user base and the industries protected—for example, self-employed workers such as taxi or ride-share drivers.

“We’ve seen online access grow rapidly from 20% to 90% of employers as our services and related information have become more accessible and transparent,” said Dr. Mohammed Azman bin Aziz Mohammed, Chief Executive Officer, PERKESO. “We’ve also experienced a decrease in the number of complaints or issues.”

This foundation for growth was key during the COVID-19 pandemic. National lockdowns prevented visits to banks or offices at the same time that Malaysia’s wage subsidy program received 20,000 applications per day.

“We now have a much more robust and agile environment to deliver our services. With our digital approach based on Red Hat technology, we were able to scale our infrastructure to meet the massive, unexpected workload requirement during the pandemic to continue providing a consistent, reliable service experience,” said Edmund.

Improved service development time from months to days

PERKESO can now develop and deploy new services in response to shifting conditions and user requirements in days, rather than months—and ensure systems remain up-to-date at the pace of business.

“We used Red Hat Process Automation Manager to create object-oriented business rules that help us speed management—for example, when cases moved quickly from branch to branch during the COVID-19 pandemic,” said Edmund. “Red Hat Fuse keeps our platforms connected with various back-end applications, such as reporting.”

Exploring mobility and IoT

PERKESO is now planning an ambitious enterprise open source technology roadmap to support future innovation. Projects include development of a mobile app, as well as integration of IoT devices—for example, using health data from wearable devices for users who opt in to help predict and prevent medical conditions or issues.

“For users that participate, we could offer data-based lifestyle recommendations to support better public health,” said Edmund. “For instance, if a device indicates unusual heartbeat detection, we could use a predictive model to infer that perhaps the wearer experiences an accident—and integrate that data with our compensation systems if a claim is made. Real-time data is critical to our success going forward.”

About Wiseyes Solutions

Established in 2004, Wiseyes Solutions Sdn. Bhd. is a rapidly growing information and communication technology (ICT) company in Malaysia. The word “Wiseyes” is a combination of “Wise” and “Eyes”. Thus, Wiseyes brought the meaning of having the insight knowledge and capabilities of foresight true knowledge.

<https://www.wiseyes.net>

With the announcement of Malaysia’s 2021 MyDigital initiative, focused on national digital transformation and adoption, the digital service project at PERKESO serves as an example of how other government agencies can use enterprise open source and cloud technologies to improve services and expand coverage.

“PERKESO’s vision is to be the world’s premier provider of innovative social security services,” said Mohammed. “With lower operating costs and improved processes, we can serve our customers more effectively. Red Hat solutions have been integral to our transformation strategy. Our success so far creates a way forward to digitize the entire social security system, from contributions to benefits payments.”

About PERKESO

Malaysia’s Pertubuhan Keselamatan Sosial (PERKESO) is the main provider for national employment services in the country. In 2020, it covered 473,845 active employers and 7.11 million workers were registered. In the same year, it paid about RM17.6 billion (roughly US\$4.2 billion) worth of benefits to more than 613,000 recipients. With COVID-19, PERKESO was also entrusted to implement government initiatives under the various economic stimulus packages to assist affected employers and workers. Within the public sector, PERKESO is at the forefront of adopting digital technologies in its operations and in dealing with customers, namely employers and employees.



About Red Hat Innovators in the Open

Innovation is the core of open source. Red Hat customers use open source technologies to change not only their own organizations, but also entire industries and markets. Red Hat Innovators in the Open proudly showcases how our customers use enterprise open source solutions to solve their toughest business challenges. Want to share your story? [Learn more.](#)



About Red Hat

Red Hat is the world’s leading provider of enterprise open source software solutions, using a community-powered approach to deliver reliable and high-performing Linux, hybrid cloud, container, and Kubernetes technologies. Red Hat helps customers develop cloud-native applications, integrate existing and new IT applications, and automate and manage complex environments. [A trusted adviser to the Fortune 500](#), Red Hat provides [award-winning](#) support, training, and consulting services that bring the benefits of open innovation to any industry. Red Hat is a connective hub in a global network of enterprises, partners, and communities, helping organizations grow, transform, and prepare for the digital future.

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