

Tanobel modernizes applications and preserves legacy investments



Headquarters

Surabaya, East Java

Industry

Manufacturing

Size

4000+ employees

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Tanaka Murinata

IT Director, Tanobel

With its drinking water manufacturing and distribution business growing quickly, Indonesia's Tanobel needed to ensure its IT systems were resilient and performing optimally. Users needed to be able to run analytics and reports at speed to ensure their products adhere to regulatory requirements. Red Hat OpenShift Virtualization provides a unified platform where Tanobel can take advantage of the simplicity and speed of cloud-native application development while preserving existing virtual machine (VM) workload investments. Systems perform better, are more resilient, and can easily scale workloads horizontally.



Software and services

Red Hat® OpenShift®

Red Hat OpenShift Virtualization

Red Hat OpenShift Data Foundation

Red Hat Consulting

Red Hat Learning Subscription

Benefits

- Improved performance and scalability
- Increased resilience and zero downtime
- Synchronized environments and continuous integration/ continuous delivery (CI/CD) workflow improved code quality
- Training and knowledge transfer equipped IT teams to advance digital transformation

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Tanaka Murinata IT Director, Tanobel

High-quality water contributing to a healthier Indonesia

Founded in 2003, Tanobel's manufacturing and distribution businesses have been growing quickly. Its drinking water products—including Cleo, Anda, Vio, and SuperO2—are available throughout Indonesia. This growth aligns with its vision to become the leading national food and beverage company.

The Indonesian company aims to produce quality products that contribute to a healthier Indonesia. To ensure its drinking water products are of the highest quality, it adheres to an international standard production process. Technology plays a crucial role in ensuring processes run smoothly and standards are met. Engineers need to be able to run critical reports and analytics at speed. For that, they need critical Enterprise Resource Planning (ERP) systems to run and commit data on time and for computing resources to scale when needed.

"We wanted to implement a data lake to support our business' reporting and analytics requirements," said Tanaka Murinata, IT Director, Tanobel. "But performance dropped when we installed the object storage it needed on the traditional storage solution. The data lake systems ground to a halt."

To address the issue, Tanaka decided to replace Tanobel's virtualized environment, Windows servers, and storage area network (SAN) appliances with a modern, hyperconverged compute and storage solution. He also needed the solution to support Tanobel's distributed architecture. And with the market competitive, cost was at the front of his mind.

Adopting a resilient and performant modern application environment

Having had previous success with Red Hat technology, Tanaka contacted Red Hat to explore Red Hat Virtualization. Red Hat instead proposed its latest infrastructure modernization solution, Red Hat OpenShift Virtualization, which would allow Tanobel to take advantage of the simplicity and speed of cloud-native application development while preserving existing VM workload investments–all within the same unified platform.

Red Hat Enterprise Linux^{*} is provided free of charge with OpenShift Virtualization, making for a cost-efficient solution. "Every container and every VM that runs on OpenShift Virtualization comes with a Red Hat Enterprise Linux bundled in, so we don't have to pay for the operating system separately," said Tanaka. "This was a major benefit for us. OpenShift Virtualization really excels from a licensing standpoint."

Tanobel began its modernization journey by outsourcing Red Hat OpenShift Platform Plus implementation on bare metal to a third-party systems integrator. Red Hat experts assisted with the design and configuration ahead of the implementation. "Red Hat Consulting helped us size our bare metal server: the CPU requirements, the storage requirements, the memory requirements, and the network connections," said Tanaka. "They were super helpful. They gave us confidence that we were buying the right hardware."

The company then migrated existing Windows and database workloads to the virtualized environment provided by OpenShift Virtualization before branching out to focus on containerization. Today, OpenShift Virtualization's virtualized environment supports a handful of applications that don't support containerization and some database instances. OpenShift Container Platform has also helped Tanobel advance with containers, with 90% of workloads now running on OpenShift Container Platform. The container environment supports a Dremio data lake (thanks to its Kubernetes Operator) and almost 300 newly developed microservices, including web services and application programming interfaces (APIs).



Providing the IT performance, scalability, and resilience a high-quality product needs

Improved performance and scalability

"We've seen a significant impact on performance with our new Red Hat infrastructure," said Hendra Tala'a, IT Manager, Sariguna. "We have one scheduled job that we run daily. It took an hour to run with the legacy infrastructure, but with the Red Hat infrastructure, it takes less than 10 minutes. Performance improvement is significant."

The on-demand horizontal scalability enabled by Red Hat technology plays a crucial part in performance improvement. Tanaka shared the example of the Dremio data lake Tanobel uses for analytics. "Our Dremio deployment is one master pod and three executor pods in OpenShift, said Tanaka. "Red Hat OpenShift allows us to spread the workload horizontally if we need to scale. Adding more executor pods is easy, we open the console, make a few clicks, and scale almost instantly."

In contrast, spreading the workload horizontally was impossible in Tanobel's legacy environment. It would mean creating a new VM, installing the latest operating system, installing the application, configuring environments, and testing before it can be commissioned for production.

Increased resilience and zero downtime

The new environment has substantially reduced downtime, benefiting end users, developers, and operations. "Containerized applications can repair themselves without impacting users," said Tanaka. "If an application goes down, OpenShift allows it to spawn a new instance immediately."

Moreover, with infrastructure designed to be highly available, the loss of one or two nodes or even a whole cluster wouldn't affect end users either. "We recently had some hardware failures with two disk drives on the same cluster," said Murinata. "But running on Red Hat OpenShift Data Foundation meant we didn't experience any data loss or feel any performance degradation from losing the two disk drives. And once the disk drives were repaired, we just popped them back in. A few clicks and everything was back to normal."

Tanaka also feels that Red Hat technology has made Tanobel more resilient to ransomware, thanks to regular security updates on Red Hat products. "Very frequent upgrades lower the risk of ransomware attacks," said Tanaka.

Synchronized environments and CI/CD workflow improved code quality

The higher code quality empowered by Red Hat technology has also contributed to the overall resilience of Tanobel's systems because developers can test their applications in the same environment as they developed them. "Developers have confidence that their test environment is identical to their development environment," said Hendra. Deploying their application is much easier—they can move it with the click of a button. In the legacy environment, developers would ensure the test VM was running identical software to the development machine.

Hendra also describes how Tanobel now has greater transparency on code versions. The CI/CD workflow supported by Red Hat technology means developers must deploy code to the Git repository and then trigger Git to deploy code to the server. "Developers can't just make changes to code on the server to make it work and then forget to put it back into the code repository," said Tanaka. This helps in terms of code quality and deployment quality, and it helps the developer, too."



Enhanced support and training from Red Hat

"The support from Red Hat is super–better than other vendors we've worked with," said Agus Prabowo, IT Infrastructure Head, Tanobel. "We report a case and someone will look at it and respond very quickly. It's very impressive." Agus shared an example of an issue with an operator upgrade that prevented a report from running. His team let the Red Hat support team know, and they responded within one day to say they had verified the problem and would come up with a solution.

Red Hat Learning Subscription has allowed Tanobel's developers and operations team to grow from zero knowledge of containers to experts in OpenShift Virtualization, with Red Hat Consulting offering ongoing support for any query they can't resolve themselves. The teams attend three four-hour online sessions a month where they learn about new ways of working and put that learning into practice with practical examples.

"Our learning curve was steep because our modernization journey has meant we have completely changed our way of working," said Tanaka. "The online training modules from Red Hat have helped our teams go from being quite anxious to confident in building and deploying containerized applications."

Continuing a modernization journey with a cloud-native platform

Tanobel plans to continue its application modernization journey with Red Hat by building newer microservices and applications to run in containers on OpenShift Virtualization. The company's roadmap also includes building a disaster recovery facility and preparing for the cloud.

"We are working on our design for our disaster recovery capability," said Tanaka. "Red Hat OpenShift will allow us to send backup data to the cloud. If we ever need to recover the data, we can take it from the data storage to run our workloads. Using OpenShift will allow us to do that faster and with more control."

Looking further into the future, Red Hat OpenShift will allow Tanobel to build a hybrid environment where instances running in the cloud are identical to those running on premise. "We expect our OpenShift experience in the cloud to be just the same as it is on premise," said Tanaka. "Our Red Hat technologies will continue to be essential as we carry on our application modernization journey."

About Tanobel

Tanobel is the corporate identity of PT Sariguna Primatirta, the first producer of Bottled Drinking Water (AMDK) in Indonesia. Focused on presenting the best quality products, every bottle of water is made through an international standard production process using the HACCP food safety system. Its products include Cleo, Vio, Anda, SuperO2, and S-Tube.



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