

Asian Development Bank saves hundreds of hours by automating infrastructure management with Red Hat



Software and services

Red Hat® Ansible® Automation Platform

Red Hat Consulting

The Asian Development Bank (ADB) supports member countries' social and economic development with loans, grants, equity investments, and other services and resources. To continue offering relevant, timely services in the face of natural disasters, climate change, and pandemics, ADB sought to modernize and automate its IT infrastructure. With Red Hat Ansible Automation Platform, running in a managed cloud environment, ADB has saved hundreds of work hours each year. Automated monitoring, patching, and remediation help protect the organization's IT environments and resources from vulnerabilities and human errors. As a result, ADB's IT teams can focus on building and delivering innovative, user-friendly digital services.



"Ansible Automation Platform helps us complete work faster, safer, and with more resiliency. Red Hat is helping to make the Asian Development Bank more modern and adaptable."

Pierre Passin

Deputy Director-General, Asian Development Bank

Financial services

3,500 staff

3,000 contingency workers

Benefits

- Saved hundreds of work hours every year by automating database cloning, patching, and recovery
- Improved infrastructure security and reliability
- Optimized automation strategy with expert guidance

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Supporting social and economic needs in developing nations

Headquartered in the Philippines, Asian Development Bank (ADB) works to eradicate extreme poverty in the Asia-Pacific region by providing developing member countries with loans, grants, equity investments, and technical assistance. During the first year of the COVID-19 pandemic, ADB committed more than US\$30 billion in loans and budget support for vaccine purchasing and other healthcare needs.

Effective disaster recovery is key to ADB's operations, as volcanic eruptions, earthquakes, floods, and political unrest are common in the Philippines. To maintain reliable social and economic development support, ADB sought to shift from paper-based, manual tasks to digital, automated processes, backed by cloud-native resiliency.

"The COVID-19 pandemic helped us realize that in the face of new and ongoing demand, our traditional infrastructure approach would no longer be sustainable," said Pierre Passin, Deputy Director-General, Asian Development Bank. "Meeting an increasing demand for digital services required us to modernize, standardize, and automate our operations."

Building a cloud-based, automated foundation to meet growing demand

ADB decided to use Red Hat Ansible Automation Platform, running in a managed cloud environment, as the new infrastructure supporting its IT and business operations. Red Hat Ansible Automation Platform uses reusable, human-readable playbooks, templated jobs, and workflows to help organizations automate routine manual tasks into efficient, centralized execution environments.

"We chose Ansible Automation Platform because Red Hat is the top vendor in the enterprise automation platform market. As a bank, unsupported community technology is too high of a risk to deploy in our business environment. Red Hat offers comprehensive expert support," said Passin.

Simplifying infrastructure administration and security

Saved hundreds of work days per year

ADB has significantly reduced the time needed to complete provisioning, patching, and other infrastructure management tasks with Ansible Automation Platform. Previously, database cloning required three teams to coordinate for 6-8 hours each Saturday—the database team, the UNIX team, and the storage team. Now, that same process takes just 3 hours and can be completed automatically, without requiring manual weekend work, saving the organization 100 work days each year. The organization also saves around 20 work days per month with automated patching processes and around 2 hours per incident with automated data recovery.

"People inside our IT department definitely noticed the difference when work that used to take months was suddenly only taking days," said Passin. "We've freed up their time to focus on more valuable, innovative projects, like building new services, and helped them work more independently."

A key part of these improvements is not only eliminating manual processes but also taking advantage of integration with existing tools through Ansible Content Collections. These certified or supported packages include modules, plug-ins, roles and other components to connect technology from across ADB's IT infrastructure with Ansible.

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"We don't have to spend time figuring out how to manage our Datadog cloud monitoring agents, for instance, because Ansible already has a collection for that," said Krista Lozada, Senior IT Specialist for Innovation and Engineering, Asian Development Bank. "Our access management tool also has an Ansible collection."

Improved infrastructure security and reliability

The bank has taken advantage of the flexible integration capabilities of its Red Hat technologies to adopt an Infrastructure as Code (IaC) approach based on Terraform as part of its shift to automated, central processes. As a result, ADB has not only improved infrastructure management but also security. Comprehensive visibility and monitoring, combined with automated patching and remediation, help the organization rapidly address Common Vulnerabilities and Exposures (CVEs).

These capabilities also support greater system stability, with the ability to complete recovery and failover in the event of natural disasters or other emergencies 2 hours faster than before. Operations can be shifted to a backup datacenter in a single, remote step.

Replacing manual processes from infrastructure management with Ansible Playbooks and certified Ansible content has also helped ADB adopt an immutable infrastructure approach, where new virtual servers are provisioned if modifications are needed, rather than modifying existing servers. This approach helps the organization prevent performance or security issues due to human error from adjustments of live servers.

"If, for example, an administrator forgot to turn a firewall back on after shutting down a server, automated monitoring restores the firewall without requiring a staff member to intervene," said Miguel Martinez, Senior IT Officer, Asian Development Bank. "We now have peace of mind that our systems, resources, and services are secure and consistent."

Optimized automation strategy with expert guidance

ADB worked closely with Red Hat Consulting during several Services Discovery Sessions to identify and prioritize use cases for its new automation technology, then plan an optimal architecture and complete provisioning.

"This is not just an IT project. It is a holistic change in how we work and how we approach infrastructure," said Lozada. "Red Hat's expert consultants helped us ensure our Ansible Automation Platform deployments meet industry security standards as well as our performance and availability requirements."

Expanding the benefits of automation to new teams and business needs

After ADB's initial success with Red Hat technology, more teams across the organization are planning to adopt a central, automated approach to key processes. ADB's core IT team will share their experience and best practices to help teams independently use and maintain automation resources.

The IT team is also evaluating how Ansible Automation Platform could support additional organization-wide use cases, such as managing configuration drift for monitoring agents across thousands of servers and network devices.

"Ansible Automation Platform helps us complete work faster, safer, and with more resiliency," said Passin. "Red Hat is helping to make Asian Development Bank more modern and adaptable."

About Asian Development Bank

The Asian Development Bank (ADB) envisions a prosperous, inclusive, resilient, and sustainable Asia and the Pacific, while sustaining its efforts to eradicate extreme poverty in the region. ADB assists its members, and partners, by providing loans, technical assistance, grants, and equity investments to promote social and economic development.



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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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