CUSTOMER CASE STUDY

GRAB SCALES TO MEET GROWING RIDE BUSINESS DEMAND WITH RED HAT ANSIBLE TOWER

In just a few years, ride-hailing platform Grab has grown rapidly and now manages more than 3.5 million journeys each day. To deploy new application features to production hundreds of times each week, the company needed to gain greater infrastructure scalability and stability, as well as simplify management for its growing engineering team. By deploying Red Hat Ansible Tower, an enterprise open source IT automation and management solution, Grab increased its app uptime to 99.99%, reduced development and deployment time, and streamlined infrastructure management with role-based access and automated deployments. As a result, Grab's users can access the app when needed, and its IT teams can ensure systems are stable and scale to match feature and user base growth.

SOFTWARE

Red Hat® Ansible® Tower

HEADQUARTERS

TECHNOLOGY

3,000+ EMPLOYEES
2 MILLION+ DRIVERS
3.5 MILLION+ DAILY RIDES

"Without Red Hat Ansible Tower, we would not have been able to grow at the pace that we have been, and our business would not be where it is today."

DITESH GATHANI
HEAD OF ENGINEERING, SINGAPORE, GRAB

BENEFITS

- Improved scalability to support 300% year-over-year growth
- Increased system reliability to reduce app downtime by 40% and achieve 99.99% uptime
- Simplified IT system management with easy-to-use solution, including user-friendly interface and greater automation

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"With Red Hat Ansible Tower, we deploy more, faster, so that we can focus on solving real customer issues, not completing more and more routine operational tasks."

DHARMARTH SHAH
SITE RELIABILITY ENGINEER, GRAB

RAPID GROWTH CREATES SCALABILITY AND AVAILABILITY CHALLENGES

Founded in 2012, Grab is Southeast Asia's number one on-demand transportation platform, with transportation services available in 142 cities across seven countries. The Grab mobile application has been downloaded more than 60 million times. With more than 3.5 million rides booked and paid for every day through the app, Grab is also one of the region's biggest mobile payment companies.

Grab's systems have grown by around 300 times their initial size in the last three years, with app downloads increasing more than 300% year-over-year. Multiple cities are added to its services every week. In the last six months, Grab's ride business has more than doubled.

To keep pace with demand, the company was deploying to production hundreds of times weekly and rapidly expanding its engineering team up to double its previous size to keep pace with demand, but its IT environment became increasingly complex as a result.

"There is tremendous demand for our services, and our software systems began to grow rapidly," said Ditesh Gathani, head of engineering, Singapore at Grab. "New features were built to handle this growth, but we had problems efficiently handling the resulting complexity. We were still running a lot of custom scripts, but we can't compromise on code quality because changes in production immediately affect millions of users."

This complexity also led to service disruptions. "The way we were doing deployments manually led to anxiety for our passengers and drivers because our systems were not reliable," said Ditesh. "These processes also created anxiety for our engineers. They were scared that if they deployed a new feature, something would break."

Grab's IT teams needed a consistent, reliable way to deploying new features to production, without affecting app quality or availability for its passengers or drivers.

"We want to empower every engineer with the autonomy to make positive changes as fast as possible," said Dharmarth Shah, site reliability engineer at Grab. "To do that, we need a process that also lets us perform audits to ensure reliability and stability."

ENTERPRISE PLATFORM STREAMLINES I.T. MANAGEMENT ACROSS ENVIRONMENTS

Grab sought an open source software solution to its growth-based challenges. "We contribute to open source communities and use many open source technologies, including Linux for our operating system and deployment solution," said Dharmarth.

The company evaluated several solutions—including Chef, SortStack, and Puppet—before choosing Red Hat Ansible Tower as its new infrastructure and configuration management tool.

Red Hat Ansible Tower is an enterprise IT automation engine built with open source technology. Ansible Tower simplifies and automates cloud provisioning, configuration management, application deployment, intra-service orchestration, and many other IT tasks and processes.

In addition to providing orchestration and software deployment for Grab's software systems, Ansible Tower also integrates with Amazon Web Services (AWS), the platform used by Grab for public cloud deployment. As a Red Hat Certified Cloud and Service Provider, AWS offers trusted, enterprise-grade cloud and managed services with robust security protections and comprehensive integration with Red Hat technologies.

After deciding to deploy Red Hat Ansible Tower, Grab automated all of the backend systems supporting its services in just two months.

ANSIBLE TOWER IMPROVES FRONT- AND BACK-END APP EXPERIENCE

STREAMLINED SCALING TO MEET GROWTH DEMANDS

To keep pace with rapid business growth, Grab's IT systems and staff must to be able to scale systems and resources quickly in response. Using Red Hat Ansible Tower as a deployment tool, Grab can take advantage of Ansible playbooks that their engineers have written to automate its daily deployments, freeing time and staff resources for more business-critical work.

In addition, Ansible Tower eliminates the need for a central operations team by providing role-based access for engineers and IT teams. They can make changes and deployments as needed via an easy-to-use interface—without potential delays from needing to obtain approval. Changes are recorded by Ansible Tower for later audits and quality control checks.

"Red Hat Ansible Tower is a crucial tool in our deployment pipeline," said Dharmarth. "It helps us ensure our multiple daily deployments are predictable and consistent. With Ansible Tower, we deploy more, faster, so that we can focus on solving real customer issues, not completing more and more routine operational tasks."

GREATER RELIABILITY FOR MINIMAL DOWNTIME

Previously, Grab faced reliability challenges, with only 87% uptime for its service app. Downtime was often caused by manual, error-prone deployment processes.

"With such rapid growth, the only way to sustainably maintain and expand our app is with a well-defined foundation," said Ditesh. "I especially remember an application downtime issue where we had cab drivers queuing at our office early in the morning, as it affected their daily productivity and livelihood."

By implementing Ansible Tower, Grab eliminated 40% of downtime in just a few months, and increased its aggregate uptime to 99.99%. As a result, the company can better ensure customers and drivers can access its services.

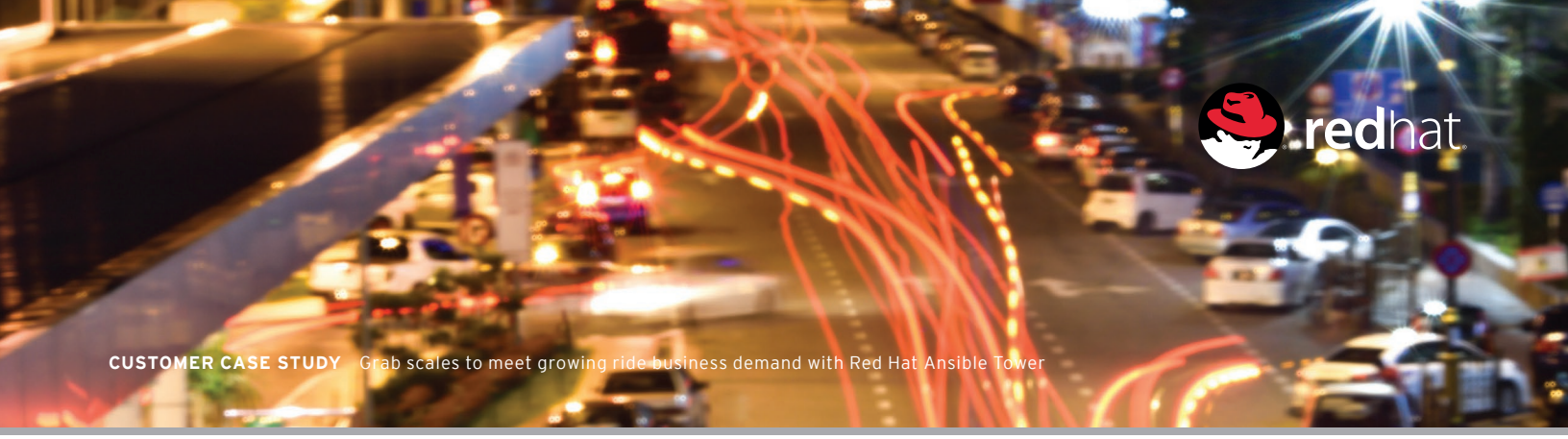
SIMPLIFIED I.T. MANAGEMENT

With the graphical user interface provided by Red Hat Ansible Tower, managing development and deployment configurations is easier for Grab's IT teams.

"Red Hat Ansible Tower offers informative graphs and updates on the progress of deployments, so the engineers were very comfortable with it," said Ditesh. "Compared to other tools for configuration management, Red Hat Ansible Tower is very simple, yet very powerful. It has a very low entry barrier for admins not familiar with programming. Anybody who knows shell script can use it."

The auditing feature in Red Hat Ansible Tower records any changes to ensure that any errors can be quickly and easily corrected. In addition, integration with AWS helps Grab's teams reduce time spent on administrative tasks and work more efficiently.

"Open source tools and technologies help make platform monitoring, debugging, and scaling easier," said Dharmarth. "Red Hat Ansible Tower is crucial to configure everything consistently, across multiple environments."



GROWTH CONTINUES WITH NEW OPPORTUNITIES

Over the last 12 months, Grab has used its new IT environment to introduce many innovative services. These services include GrabNow, a digital ride-hailing service, as well as JustGrab, an on-demand transport network, and GrabPay Wallet, a QR code-based offline payment service.

Despite its rapid initial growth, Grab plans to accelerate its expansion, with a goal of becoming Southeast Asia's premier consumer transport and payment web-based platform. Red Hat Ansible Tower will be a key part of the systems supporting this expansion.

"Without Red Hat Ansible Tower, we would not have been able to grow at the pace that we have been, and our business would not be where it is today," said Ditesh. "We would still be struggling with the same problems we had three years ago. Red Hat's solution has helped us to think about our future and invest in technology that will help us explore new opportunities. We look forward to continuing working with Red Hat as part of our growth strategy."

ABOUT GRAB

Grab is Southeast Asia's leading ride-hailing platform. Grab solves critical transportation challenges to make transport freedom a reality for 620 million people in Southeast Asia. Grab's core product platform includes commuting solutions for drivers and passengers, with an emphasis on convenience, safety, and reliability, as well as its proprietary mobile payments platform, GrabPay. Grab currently offers services in Singapore, Indonesia, Philippines, Malaysia, Thailand and Vietnam.

www.grab.com

ABOUT RED HAT

Red Hat is the world's leading provider of open source software solutions, using a community-powered approach to reliable and high-performing cloud, Linux, middleware, storage, and virtualization technologies. Red Hat also offers award-winning support, training, and consulting services. As a connective hub in a global network of enterprises, partners, and open source communities, Red Hat helps create relevant, innovative technologies that liberate resources for growth and prepare customers for the future of IT.

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