IBM

Accelerating a move to open-source cloud

Reducing reliance on a single cloud provider was crucial
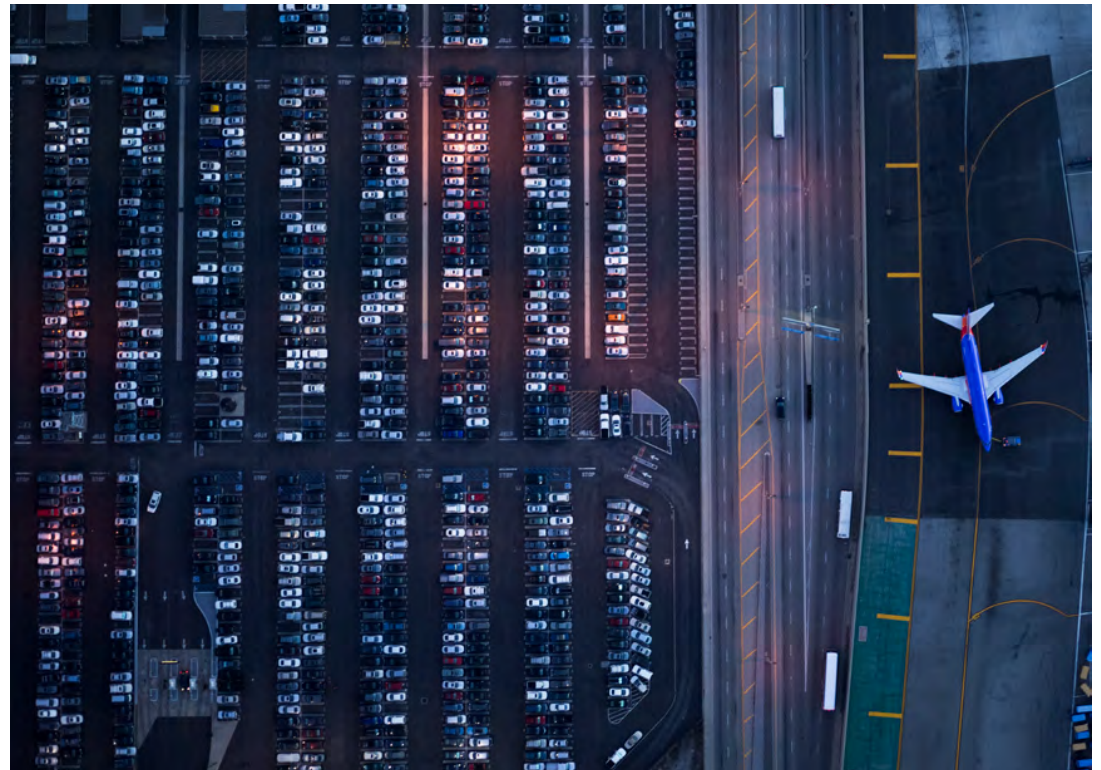
by Diana Ost

7-minute read

C OVID-19 disrupted lives and businesses around the globe in 2020; for rental car company Booking Group and its partners, the pandemic resulted in rental car stock shortages and wildly fluctuating demand as travel opened up.

In spite of the chaos in the market, Booking Group was looking to grow. Booking Group has been a major provider and leader for rental transport around the world for 12 years, offering its services in more than 150 countries.

Booking Group had previously selected a single-cloud proprietary platform that lacked the potential for open-source and cloud-native application development. The company was concerned about proprietary formats and vendor lock-in on its single-cloud platform. To reduce its reliance on a single cloud provider, Booking Group decided to investigate open-source cloud with an option for building cloud-native applications designed specifically for cloud.

Booking Group sought a provider with a hybrid multicloud model that supported deploying critical workloads, such as booking reservations and financial reports,

into multiple clouds. The company's goals also included access to open-source and cloud native applications to build the flexibility it needed to meet its dynamically changing business needs.

Other priorities were ensuring the company had real-time data access to keep up with increasing rental vehicle demand and to cope with fluid pricing based on shortages. Adding cloud-native applications as microservices also would allow the company to provide faster code updates without touching the whole application.

Migrating its critical workloads, such as booking reservations and financial reports, to an open-source cloud provider would help Booking Group take advantage of cloud-native applications. Booking Group could also gain the flexibility to move workloads based on its own dynamically changing business needs.

The environment was provisioned within only

4

months

Booking Group has

20,000

global locations

Engaging open cloud and cloud-native apps

Booking Group turned to IBM for help with adopting, deploying, implementing and managing a new, flexible hybrid-cloud strategy.

Because IBM Cloud® is built on open-source technology, it will support the agility Booking Group needed to meet customer rental demands and the capability to swiftly adjust to price volatility driven by fluctuating rental stock. Booking Group can also easily incorporate cloud-native technologies into its new environment, along with the capability to add cloud-native application development into its toolbox. Putting cloud-native
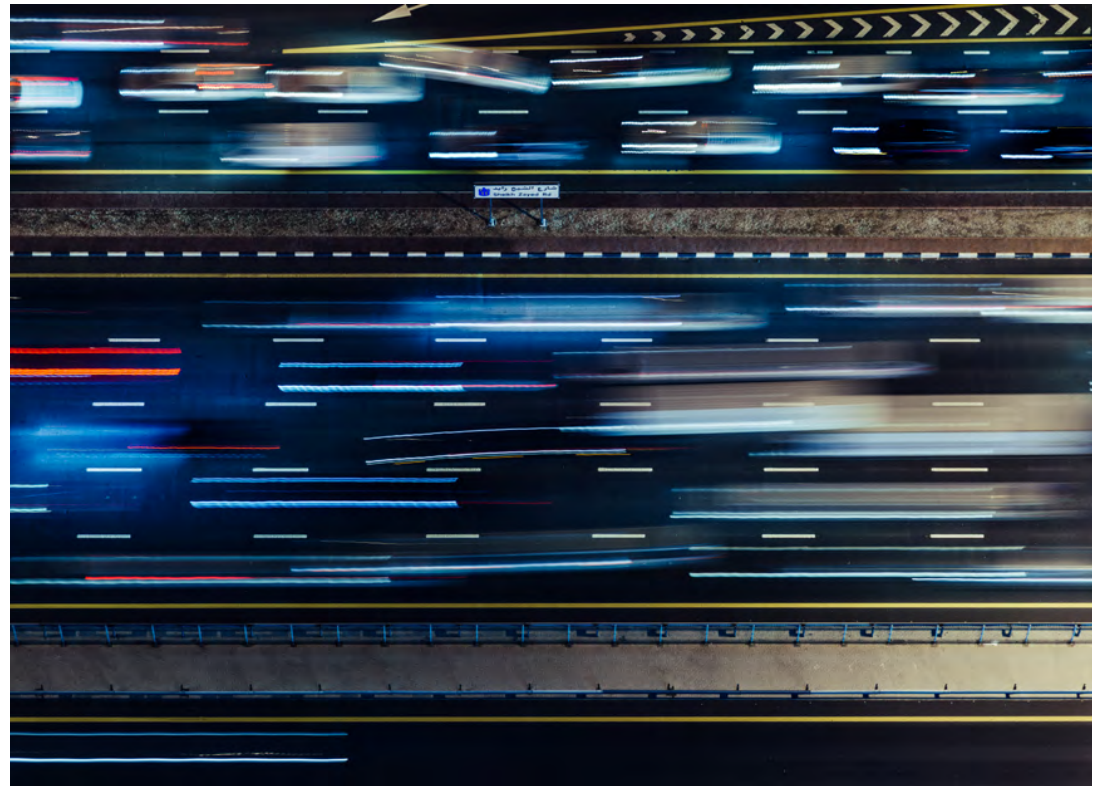
applications to work with open-source technology provides easier data accessibility and data portability.

IBM Cloud met all the company's requirements and left room for growth. The open hybrid cloud strategy supports deploying workloads into multiple clouds, and also provides efficiencies by which Booking Group could choose to build a common operations and integration framework in the cloud. IBM Cloud also provides a full stack cloud platform with over 170 products and services covering data, storage, containers, AI, Internet of Things (IoT), networking and blockchain to support future growth.

Booking Group worked with IBM to create the technology solution to support its new, flexible multicloud strategy. Together, Booking Group and IBM decided upon a foundation

"By working with IBM Cloud, we were interested in obtaining a wider scope of technologies. Moreover, we preferred to apply our workloads within an open-source environment and with commonly used cloud-native technologies."

Igor Demchakov, Co-founder and Chairman of the Board, Booking Group

built on IBM Cloud and the IBM Cloud Kubernetes Service, plus the IBM® Virtual Private Network (VPN) on IBM Cloud Virtual Server for Virtual Private Cloud (VPC). IBM Cloud Databases for PostgreSQL serves as the database for the solution.

IBM Cloud is built on open standards to provide flexibility, portability and cloud services that can be enabled using open APIs. IBM has been a driving force in the evolution of open-source technology, helping enterprises create, adopt and scale open source to serve their business goals.

Booking Group chose Kubernetes to provide a fully managed Docker container service based on the Open Container Initiative (OCI) that uses an open industry container standard.

Kubernetes allows intelligent scheduling, horizontal scaling and self-healing. The company can deploy containerized apps onto a pool of compute hosts and manage those containers easily.

The VPN provided by IBM allows the company to choose from several VPN access points, each associated with a data center or network point of presence. Booking Group can simply log in to IBM Cloud by selecting from any of one the VPN data center portals around the globe.

Booking Group chose IBM Cloud Databases for PostgreSQL for its flexibility and extreme efficiency when running deep, extensive data analysis across multiple data types, including structured and unstructured data.

IBM recommended that Booking Group use virtual servers for VPCs for its logically isolated networks where cloud compute, storage and networking resources are deployed. IBM VPCs consist of virtual machines (VMs) within IBM's VPC infrastructure, which is a public cloud construct. Because the VPC is a logically isolated network — that is, a private network — within the public cloud, the company's data and applications do not mix or share space with any other customer accounts. This means that Booking Group can deploy secured private spaces by way of a single-tenant infrastructure within the multi-tenant public cloud. The company retains full control over how resources and workloads are accessed — and by whom.

Balancing inventory for better customer service

Booking Group achieved direct access to IBM Cloud products and offerings that integrated seamlessly with its systems. Thanks to the cloud-native and open-source approach, the company preserved the option to move workloads to different clouds based on business needs without difficulty. Putting cloud-native applications to work with open-source technology also gave the company the capability to build and update applications quickly.

Booking Group took only four months to make the entire environment available. The IBM Cloud and Booking Group teams instituted a gradual workload transfer during the analytical business solution stage to meet this goal.

The company can now securely deploy workloads for reservations, reports and financial information, among others. Booking Group now has access to data that offers insight into up-to-date car rental demand, allowing the company to make inventory adjustments in real time. This insight into demand and inventory has resulted in an immediate benefit for customers. Booking Group can allocate cars based on location and customer demand to fulfill anticipated needs. With this approach, Booking Group can remain agile and provide the best experience for their customers.

IBM Cloud applies market-leading data protection capabilities to provide a security-rich environment for data at rest, in motion and in use. Booking Group and its partners can achieve continuous security for enterprise applications and workloads with built-in isolation and access management.

"It was crucial
to preserve the
possibility of moving
the workloads
without difficulties
to a different cloud
provider."

Igor Demchakov, Co-founder and Chairman of
the Board, Booking Group
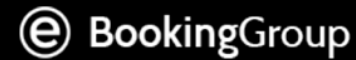
BookingGroup

About Booking Group

A leader in the car rental industry, Booking Group (external
link) has been a major force around the globe for 12 years
with services in 150 countries. Headquartered in both
Latvia and in the US, Booking Group has 850 partners
worldwide and over 20,000 global locations, including in all
major airports. Booking Group strives for constant growth to
bring extra value to its customers.

Solution components

- IBM Cloud®
- IBM Cloud Databases for PostgreSQL
- IBM Cloud Kubernetes Service
- IBM Cloud Virtual Server for Virtual Private Cloud (VPC)
- IBM® Virtual Private Network (VPN)