IMPROVING THE CUSTOMER EXPERIENCE, REDUCING COSTS

In 2011 Marriott International searched for a partner to help reduce costs and improve the response times of its existing legacy storage. At the time, Marriott was paying for ten times more storage than it was using in order to keep up performance for its mainframe reservation system. In addition, Marriott.com, which accounts for 25 percent of Marriott’s bookings, was experiencing response delays, impacting the customer reservation experience.

After considering solutions from EMC, Hitachi, and IBM, Marriott consolidated its reservation system and other mainframe applications on EMC® VMAX® 20K enterprise storage, which includes both flash and disk drives.

As a result of VMAX, Marriott improved reservation system response times tenfold and stopped wasting storage capacity. In addition, VMAX enabled realtime business intelligence and reporting, providing improved decision making. By consolidating storage onto just four VMAX arrays, the company saved 30 percent on its hardware footprint and costs, and cut its power costs in half.

ENVIRONMENT

Marriott deployed four VMAX 20K systems comprising eight terabytes of flash drives and 81.5 terabytes of SATA drives. The VMAX 20K supports all of the company’s IBM System z mainframe applications.

Flash drives exclusively store the Marriott Automated Reservation System for Hotel Accommodations (MARSHA), which runs on IBM z/Transaction Processing Facility (z/TPF). SATA drives support applications running on IBM z/OS, including Marriott Rewards, payroll, and travel agency commission systems.

In addition, Marriott uses EMC SRDF® software to replicate mainframe data from its production data center in Frederick, Maryland to a disaster recovery site 230 miles away.

Misha Kravchenko, Marriott’s vice president of mainframe services, comments, “The VMAX was the better option because it combines flash and spinning disk on one storage system. It’s more efficient and delivers excellent performance for a very demanding reservation system.”

“The tight integration of EMC’s management software with our z/TPF and z/OS mainframe environments also makes VMAX easier to manage,” he adds.
IMPROVING THE CUSTOMER EXPERIENCE

As a global hospitality leader with one of the world’s largest online consumer retail sites in booking value, Marriott must consistently deliver an outstanding customer experience.

Previously, Marriott was only using 10 percent of its legacy EMC storage to run the company’s high-demand mainframe reservation system as a way to increase performance. That meant paying for ten times more storage than was used.

With the number of web and mobile bookings growing 25 percent annually, Marriott eventually hit a wall on how many transactions it could handle. Equally concerning were the slower response times on Marriott.com, which accounts for 25 percent of Marriott’s bookings.

Now that MARSHA is pinned to flash storage in the hybrid VMAX, Marriott has unleashed the performance of its reservation system. In fact, MARSHA response times plunged from 400 to 40 milliseconds—a tenfold improvement.

"With flash, there’s no wasted capacity and we’re giving our customers a great online experience," says Kravchenko. "That means more bookings and revenue for Marriott."

VMAX also gave Marriott’s z/OS applications a healthy boost in performance and capacity. As a result, the company has expanded Marriott Rewards with Flash Perks, which sends members emails alerting them to short-term offers for reduced room rates and other travel-related specials.

"We used to limit the number of specials we offered to our rewards customers so that Marriott.com didn’t get overwhelmed," notes Kravchenko. "But with VMAX, we can comfortably handle the sudden surge in people clicking on our website every time we send out a Flash Perk. Our rewards customers get more great savings offers and we fill more hotel rooms."

"With VMAX, we can comfortably handle the sudden surge in people clicking on our website every time we send out a Flash Perk. Our rewards customers get more great savings offers and we fill more hotel rooms."

Misha Kravchenko
Vice President of Mainframe Services at Marriott International

REALTIME INTELLIGENCE PROPELS DECISION MAKING

The horsepower of VMAX has transformed Marriott’s intelligence and reporting capabilities. Previously, Marriott had a wealth of business data but could only mine a portion of it due to performance limitations. Batch jobs had to run overnight, delaying delivery of reports to decision makers until the next day.

"VMAX has opened up our rich data repositories to deeper data mining and opportunities to use this information more strategically in the business," states Kravchenko.

"Giving our executives access to realtime business intelligence and reports helps them make faster, more informed decisions. This is a critical part of steering our company toward future growth," he continues.

STORAGE SPACE AND COST SLASHED BY 30 PERCENT

With a hybrid approach combining flash and disk drives on a single system, VMAX delivered the performance Marriott needed for MARSHA without the cost and management strain of having a separate all-flash array.
In fact, the multipurpose VMAX allowed Marriott to consolidate its z/TPF and z/OS mainframe environments. Running these environments side-by-side on VMAX reduced the number of mainframe storage arrays from seven to four.

"By consolidating onto VMAX, we've saved 30 percent in our hardware footprint and cost," reports Kravchenko. "And our power requirements were cut in half."

**MANAGEMENT THROUGH A SINGLE PANE OF GLASS**

Marriott now has a single pane of glass to manage storage for all of its mainframe applications.

"Since the EMC storage management software is tightly integrated with z/TPF and z/OS, we can upload code, provision storage, and change configurations, all in real time without taking down the systems," says Kravchenko.

He adds that the flexibility of EMC software also makes it easy to manage data replication and disaster recovery.

"In testing, we easily meet our recovery point objective of one minute and often see a recovery time of 15 minutes, well under our target of 30 minutes."

**MARRIOTT IT POWERS THE BUSINESS**

Kravchenko explains that IT focuses on powering Marriott's success through technology.

"One of our key tenets in IT is anticipating technology trends and quickly adapting to emerging opportunities. Another is delivering innovative technology reliably, predictably, and cost effectively. Lastly, we enable business leaders to use information for strategic decision making. The VMAX helps us embrace those tenets very well."