Who is Agoda?
Singapore headquartered, digital travel platform Agoda (Nasdaq: BKNG) offers over 2 million properties worldwide and provides travelers easy access to flights and packages. Agoda employs 4,000+ staff in 25 markets.

Feeding the Appetite for Analytics
Since its 2007 acquisition by Booking Holdings (Nasdaq: BKNG), Agoda’s business has grown rapidly, and data volumes have grown exponentially faster. As a customer-first and data-driven company, Agoda aims to leverage data to build a frictionless booking journey for its customers on its platforms. Agoda constantly measures, tests and refines its platform’s performance and usability to enhance customer experience. And as the company adds features and analyzes how customers use them, employees generate more ideas for new features, creating a virtuous circle.

Idan Zalzberg, VP Data at Agoda, says: “Over the past five years we have seen several orders of magnitude growth in data usage. We aim to empower every employee to enhance our services by giving them the easiest possible way to analyze all that data.”

At any given time, Agoda is running more than 1,000 experiments—essentially, A/B tests—on its website as it tries out different features to improve the customer experience. The company collects vast quantities of clickstream data on user interactions so that it can measure the impact of changes and come up with new ones. With a 20 PB data lake to analyze and employees hungry for near-real-time analytics, Agoda needed to ensure the highest possible query performance.

Optimizing Price-Performance
Queries at Agoda are typically highly complex, as the company tries to understand very nuanced responses to its experimental changes. “Our employees want to be able to identify even the smallest variations in behavioral patterns,” explains Idan Zalzberg. “They also want to be able to look back at historical behavior and model how a front-end change might impact the customer journey.”

Agoda tested several high-performance database platforms and found that it could not beat a highly optimized Vertica Analytics Platform cluster. “For the same cost, Vertica was better by tens or even hundreds of percentage points,” says Idan Zalzberg.

Anonymized behavioral clickstream data from Agoda.com is collected in a Hadoop data warehouse, then optimized using a homegrown ETL tool. A subset of the data required for the most performance-intensive analytics is then synchronized to Vertica Analytics Platform. Idan Zalzberg comments: “If you don’t offer really great performance for an interactive data tool,
With high-speed analytics from Vertica, we can tune our website intelligently to stay ahead of other players in the market.

IDAN ZALZBERG
VP Data
Agoda

people won’t use it. This is why Vertica has been a crucial element in helping us become a true data-driven enterprise.

**Streamlining Customer Journeys**

Agoda invests heavily in designing and delivering a high-quality user experience. The product it offers—travel services, including accommodation, flights, and packages—is usually also available through other websites and channels. Agoda therefore strives to differentiate itself by ensuring the best supply, deals and experience—all of which depend on gaining rapid insight from large volumes of data.

“We serve millions of customers daily, and website usability is a major competitive factor,” says Idan Zalzberg. “Customers will stick with us if we provide high-quality products and a streamlined experience, and accommodation owners will offer optimized pricing if we give them the best marketplace. With high-speed analytics from Vertica, we can tune our website intelligently to stay ahead of other players in the market.”

With Vertica Analytics Platform, Agoda can detect and remove frustrations and inefficiencies in the customer journey, crunching through billions of records in complex join patterns in a matter of seconds. The power of the Vertica solution gives Agoda employees complete freedom to examine complex patterns of user behavior without delay, helping the company constantly enhance its website.

“Vertica’s performance is extremely consistent, which is vital to maintain our data-driven culture,” says Idan Zalzberg. “Another favorable element is that licensing is based on storage rather than processing—so there’s no financial impact as our use of analytics rises. We’re now looking forward to adopting Vertica in Eon Mode on-premise so that we can more easily find the ideal price-performance balance for different use cases. Vertica will continue to play a key role in giving us the insight to make the best business decisions.”

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