

Online travel company keeps its website humming 24/7/365

Priceline.com reaps the competitive advantages of near 100% uptime and seamless upgrades and migrations



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*Ken Jones, Senior Vice President of IT Operations
priceline.com*

Quest™

CUSTOMER PROFILE

priceline.com®

Company	Priceline.com, LLC
Industry	Travel and Tourism
Country	United States
Employees	500+
Website	www.priceline.com

BUSINESS NEED

To remain competitive as an online business, priceline.com needs both high availability and high performance from its website and back-end databases.

SOLUTION

Priceline.com enjoys nearly 100 percent uptime, quick issue resolution, and lower hardware and storage costs with reliable replication and proactive performance monitoring solutions from Quest Software.

BENEFITS

- Enhanced customer satisfaction and retention with 99.9% website availability
- Avoided expensive outages normally associated with upgrades
- Enabled seamless migration from Sun SPARC to Linux Intel
- Virtually eliminated database outages by proactively identifying emerging issues

SOLUTIONS AT A GLANCE

- Data center and cloud management
- Database replication and integration
- Windows server management

When your website is your business, high availability is critical. Priceline.com is an online travel company that helps customers obtain the best value for airline tickets, car rentals, hotel stays, cruises and more. The company has thrived in the highly competitive online travel industry by ensuring nearly 100 percent availability and high performance of its website and back-end systems with solutions from Quest Software.

HIGH AVAILABILITY AND HIGH PERFORMANCE ARE CRITICAL

For well over a decade, priceline.com has relied on SharePlex® and Foglight® Performance Analysis to ensure high availability and high performance for its very active website and Oracle® databases.

“We’re not like a Target or a Walmart, with a storefront where people can walk in,” explains Ken Jones, senior vice president of IT operations for priceline.com. “If you’re an online business and you’re not up, you’re not making money.”

High performance is equally critical for priceline.com. “In the online travel world, consumers have many options, so your website must be fast as well as available,” adds Jones. “You want to be able to retain the customer and close a transaction.”

MULTIPLE 9S OF AVAILABILITY THANKS TO RELIABLE REAL-TIME REPLICATION

To ensure high availability, priceline.com uses SharePlex to maintain multiple real-time replicas of all of its critical transactional Oracle databases. This active-active scenario enables priceline.com to maintain multiple 9s of uptime, even through the inevitable upgrades and maintenance required by any server or database.

“We’ve been using SharePlex for a very long time — since version 1.0,” notes Jones. “We have been able to achieve close to 100 percent uptime for years

at a time on our critical databases using SharePlex. We maintain multiple copies of our critical databases and we can switch our applications seamlessly between them, so we can perform rolling upgrades to new database versions, do hardware or software maintenance on our servers, or even take systems out — all without interrupting service for our customers.”

This high availability with SharePlex stands in stark contrast to the expensive downtime required for database or server upgrades without a replication solution in place. “If we had to perform a database upgrade, and we had only one copy of the database, we’d take a huge outage — a couple of hours each time,” notes Wes Iwanski, director of database administration, priceline.com. “The cost would be enormous.”

“I can’t remember the last outage we had due to a database issue. If we see we have an issue on a server, our applications simply failover to a healthy database server and avoid the problem.”

*Ken Jones
Senior Vice President of IT Operation
priceline.com*

PRODUCTS & SERVICES

SOFTWARE

SharePlex

Foglight Performance Analysis

Spotlight on Active Directory Pack

Reporter

Unified Communications Command Suite (UCCS) – Analytics

Unified Communications Command Suite (UCCS) – Diagnostics

A SEAMLESS MIGRATION FROM SUN SPARC TO LINUX INTEL

In addition to all the lesser upgrades and migrations over the years, priceline.com also used SharePlex to seamlessly upgrade its entire environment from one architecture to another. “We were able to migrate from a Sun SPARC architecture to a Linux Intel architecture seamlessly, without an outage, using SharePlex,” notes Jones. “We performed the migration over two or three years, migrating 12 nodes, one environment at a time, encompassing many Oracle 11g databases. And we’ll be using SharePlex to upgrade to Oracle 12c in the near future.”

HIGH PERFORMANCE AS WELL AS HIGH AVAILABILITY

To ensure high performance as well as high availability, priceline.com has relied on Foglight Performance Analysis nearly as long as SharePlex — since 2001. With Foglight Performance Analysis, priceline.com’s database teams can spot emerging issues and resolve even the most elusive and complicated bottlenecks and inefficiencies. “We use Foglight Performance Analysis pretty much every day,” says Iwanski. “Any time there is an issue — for instance, if we experience high load on a database server — we’ll go into the Foglight performance tool, SQL Optimizer, to see the offending SQLs and resolve the issue quickly.”

For example, SQL Optimizer helps priceline.com identify and tune queries that were tuned in a development environment and run poorly in production. “In the production environment, problems can emerge — suddenly the load on the server jumps and everything starts running slow,” Iwanski explains. “Foglight helps us isolate the bad query and tune it, so we can quickly bring the load back down to normal levels. Being able to catch bad queries and tune them with Foglight Performance Analysis saves us a ton of capital on hardware, software, and storage — we don’t have to oversize our hardware to compensate for bad queries.”

In fact, with Foglight Performance Analysis spotting emerging issues and SharePlex providing seamless failover, database outages are virtually nonexistent for priceline.com. “I can’t remember the last outage we had due to a database issue,” explains Jones. “If we see we have an issue on a server, our applications simply failover to a healthy database server and avoid the problem.”

REPORTING

To further enhance performance, priceline.com uses its SharePlex database replicas to offload reporting from its production systems. “Business users are not really aware of SharePlex, but because we push reporting to the secondary and tertiary nodes, they can run their reports when they need to without impacting the website,” explains Jones. “Years ago, we used to have people who would try to do reporting using the primary server, and some huge query would impact website performance. With SharePlex, we can let them run any reports they like without any risk of hurting website performance for customers.”

PERFORMANCE AND RELIABILITY THAT OUTPACES THE COMPETITION

Exercising due diligence over the years, priceline.com has periodically surveyed the market for solutions that might improve upon SharePlex and Foglight Performance Analysis. According to Iwanski, nothing has even come close.

“We looked at Oracle’s Data Guard product years ago when it first became available, but it didn’t stand up to SharePlex,” he recalls. “We also looked at GoldenGate when Oracle acquired it, but we were so happy with SharePlex that there was no reason for us to investigate it beyond a cursory look. Beyond those two tools, there’s nothing else out there that’s even comparable to SharePlex for Oracle databases.”

“We can perform rolling upgrades to new database versions, do hardware or software maintenance on our servers, or even take systems out — all without interrupting service for our customers.”

*Ken Jones
Senior Vice President of IT Operations
priceline.com*

“Being able to catch bad queries and tune them with Foglight Performance Analysis saves us a boatload of money on hardware upgrades — we don’t have to oversize our hardware to compensate for bad queries.”

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RELIABLE REPLICATION WITH SUPPORT FOR NEW TECHNOLOGIES

For priceline.com, SharePlex delivers reliable replication year after year. “SharePlex is simply always there, reliably replicating our data, without any issues, day in and day out,” says Iwanski. “End users don’t even know it’s there, but the database team wouldn’t be without it.”

Moving forward, priceline.com is exploring using Hadoop to enhance its infrastructure, and SharePlex is ready to help, with direct Oracle-to-Hadoop replication available in SharePlex Connector for Hadoop.

FAST, PROFESSIONAL SUPPORT AND EASY PRODUCT UPGRADES

As a SharePlex customer for nearly 15 years, priceline.com has experience with Quest product support and SharePlex upgrades. They are happy with both. “Usually when we open a ticket with Quest support, the issue is resolved within a couple hours,” says Iwanski. “Upgrading to a new version of SharePlex is easy — usually new versions of SharePlex are backwards compatible, so we can upgrade a replica and then switch and upgrade the primary. The whole process is transparent to users, just like database upgrades or server upgrades.”

WINDOWS MANAGEMENT TOOLS FOR A COMPREHENSIVE SOLUTION

Priceline.com also relies on a number of Quest Windows management solutions, including Spotlight® on Active Directory Pack, Reporter, Unified Communications Command Suite (UCCS) – Analytics, and UCCS – Diagnostics. With these tools, priceline.com can spot and quickly resolve emerging issues in Active Directory, email, IM, VoIP, mobile,

conferencing and more, as well as improve security and compliance.

“With 1,500 production systems to manage, it’s very important that we’re able to see the health of our Active Directory environment. For instance, making sure that the load is where it should be and that we have the appropriate capacity,” explains Pat Brown, director of server engineering at priceline.com. “Spotlight on Active Directory provides an easy console to view all that information and quickly identify any issues, whether we’re in the office or at home. Similarly, UCCS – Diagnostics provides us with an instant yet in-depth look at Exchange and Lync queues.”

And with Reporter, priceline.com is able to automate insightful reports to keep Active Directory clean, secure and compliant with SOX and PCI DSS regulations — which is critical for online transactions. “Reporter offers an easy interface to provide quick information for management,” says Brown.

ABOUT QUEST

Quest helps our customers reduce tedious administration tasks so they can focus on the innovation necessary for their businesses to grow. Quest® solutions are scalable, affordable and simple-to-use, and they deliver unmatched efficiency and productivity. Combined with Quest’s invitation to the global community to be a part of its innovation, as well as our firm commitment to ensuring customer satisfaction, Quest will continue to accelerate the delivery of the most comprehensive solutions for Azure cloud management, SaaS, security, workforce mobility and data-driven insight.

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