



Starwood Hotels & Resorts Worldwide

Starwood Gains Speed and Flexibility Using ObjectStore's In-Memory Capabilities



Starwood Hotels and Resorts Worldwide, Inc. is an American hotel and leisure company headquartered in Stamford, Connecticut. One of the world's largest hotel companies, it owns, manages and franchises some of the most well-known brands in the hotel industry.

Industry

Hospitality

Problem

Starwood has enormous workloads on their central Oracle database and needed to optimize their ability to quickly quote hotel availability and pricing without impacting the rest of their system.

Solution

Starwood brought in ObjectStore as the in-memory database to their internal availability engine, eliminating the need for an object-relational data access layer which dramatically simplified the code.

Results

Starwood gained speed and flexibility through the software development life-cycle as well as the ability to architect or re-architect portions of the system on the changing needs of the outside environment or internal development initiatives.

Starwood Hotels & Resorts Worldwide, Inc. is one of the leading hotel and leisure companies in the world with more than 1,200 properties in some 100 countries and over 180,000 employees at its owned and managed properties. Starwood is a fully integrated owner, operator and franchisor of hotels, resorts and residences under the renowned brands: St. Regis®, The Luxury Collection®, W®, Westin®, Le Méridien®, Sheraton®, Four Points® by Sheraton, Aloft®, Element®, and Tribute Portfolio™.

Business Challenge

When you see a Starwood brand on any travel website, that price and room availability originates from the Starwood Availability Engine. The demand on that system is significant – imagine consumers, Starwood agents, and travel search engines all tapping the system worldwide for all of the Starwood brands. Heavy workloads on Starwood's Availability Engine, a key part of the overall Valhalla Central Reservation Service Oriented Engine stack, brought forth the need to separate and optimize the "read" capabilities for their availability quotation and pricing path. The challenge was doing this without impacting the rest of the internal systems. Separating the capabilities allowed for fault-tolerance, which is basically the ability to serve pricing information to consumers if outages occurred with other systems.

The Leading In-Memory Database System for Real-time Responsiveness and Transformation

Starwood also needed faster performance. Many consumers of Starwood's room pricing and quotation information have strict Service Level Agreements (SLAs) on response time. The system needed to evolve in a very performance-centric way without disrupting or being disrupted through technology dependencies and limits.

Solution

Starwood brought in ObjectStore as the in-memory database to their Availability Engine, eliminating the need for an object-relational data access layer which dramatically simplified the code. The ObjectStore tool is focused on the developer, which allows for a holistic view on how a feature is developed with performance in mind from inception. The database portion of the product became simpler to manage with lightweight utilities allowing for a quick ramp time for operations management.

Choosing ObjectStore was based on a few key factors that were going to make Starwood successful:

- Best in class object-based persistence platform
- Developer-centric development model, allowing for concentration on object-oriented design without the need of translating to a relational form
- Application-level enterprise caching
- Cache management through configuration
- Multiversion concurrency control (MVCC) read configuration allowing for the decoupling of contention on writes/reads.

Results

When you see a Starwood brand on any travel website, that price and room availability originates from the Starwood Availability Engine which is built with ObjectStore inside. With the help of ObjectStore's in-memory capabilities, the Starwood Availability Engine processes over 30 million quotation requests daily at sub-second response times, 1 million real time daily asynchronous updates from multiple sources and up to 600 Simple Object Access Protocol (SOAP) transactions per second in sustained volume accounting for 8 TB of pricing/availability data presented daily. Ultimately Starwood gained speed and flexibility through the software development life-cycle, and the ability to architect or re-architect portions of the system on the changing needs of the outside environment or internal development initiatives.

About Ignite

Founded in 2000, Ignite is a privately-held company that was reinvented in 2013 on the heels of an ownership and senior management change. Ignite's mission from that point forward has been to develop and deliver an expanding set of unique business applications that help organizations perform better by enhancing the capabilities and impact of their workforce.

Ignite operates with focus on a simple, lead objective – 100% Customer Success – which ensures success is measured through the achievements of customers. Ignite is headquartered in Austin, Texas. For more information on Ignite's solutions, visit www.ignitetech.com



"The pricing and room availability information presented to our customers in the end equates to billions of dollars of revenue to our company. It all starts with a foundational piece of our system that has to be performance centric, consistent and resilient – a cash register of sorts. That is ObjectStore."

– Tom Seremet
Director of Availability Technologies
Starwood Hotels and Resorts