

Big Data Analytics 100x Faster: AccelStor and Chain Sea Build a Powerful Public Opinion Platform for Hotai Motor

“AccelStor has successfully resolved our big data analytics performance bottleneck by significantly increasing data processing speed, resulting in enhanced efficiency and a better user experience. Amazingly, AccelStor’s NeoSapphire all-flash array shortens data processing time from 1,200 seconds to just 10 seconds.”

*Yao-Tsue Shen,
Digital Services Manager,
Chain Sea Information Integration*



Customer Profile

Hotai Motor Co., Ltd.

As a market leader in the Taiwan automotive industry, Hotai Motor is the first overseas distributor for Toyota. Hotai Motor also distributes many other well-known vehicle brands, such as Lexus and Hino, and its sales revenue consistently ranks first in Taiwan’s automotive market.

Chain Sea Information Integration Co., Ltd.

Chain Sea Information Integration is one of the biggest CRM integration solution providers in Taiwan and an expert in big data and smart services. With its extensive experience in building big data analytics platforms, Chain Sea has helped Hotai Motor establish a powerful Insight platform for public opinion analysis.

Challenge

Increasing Demand for Public Opinion Analysis

With the rapid development of mobile services and social networking websites, up to 92% of consumers nowadays seek opinions online via community-based or public networks before making purchase decisions. Hotai Motor’s challenge was

to collect and analyze massive volumes of public opinion data as quickly as possible in order to understand customers’ needs in a timely fashion and offer services tailored to them, as well as to more effectively handle social media issues. Seeing these potential benefits, Hotai Motor chose to work with Chain Sea Information Integration to build an Insight platform for public opinion analysis.

The resulting Insight platform includes a MongoDB server installed with Elasticsearch, an Insight website management server, and a server hosting crawler. The crawler scans websites and social media platforms and extracts information relevant to Hotai Motor so as to gather timely feedback from their customers.

Solution

Conducting keyword searches and analysis can be quite complex and usually generates massive amounts of data, which traditional data processing application software is inadequate to deal with. Chain Sea faced a performance bottleneck caused by the growing data volume; the whole data processing operation could take up to 1,200 seconds. Such low data processing efficiency made it less likely for Hotai Motor to receive timely public opinion analysis and immediately respond to social media issues. In the process of establishing the platform, Chain Sea identified the performance bottleneck as coming from the disk storage that was used for the Elasticsearch and MongoDB servers. After testing many

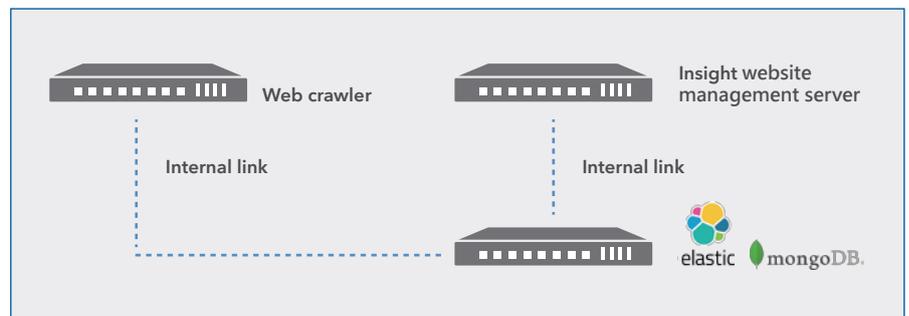


Figure 1 : Architectural Diagram of Hotai Motor’s Insight platform

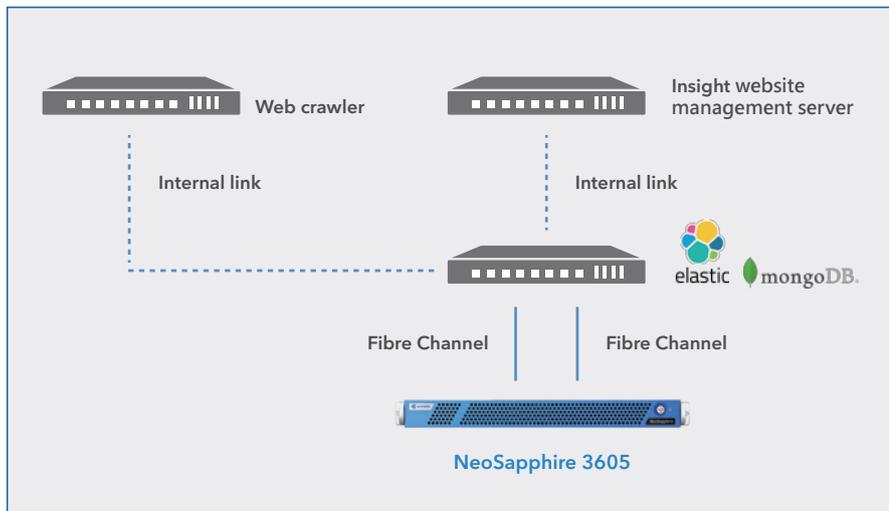


Figure 2 : Architectural Diagram of Hotai Motor's Insight platform after adopting AcceleStor's NeoSapphire 3605

storage systems, Chain Sea chose AcceleStor's NeoSapphire all-flash array to beat the bottleneck.

Benefits Introduced

Data processing speed increased 100x with NeoSapphire all-flash array

After introducing the NeoSapphire 3605 to the platform, Chain Sea saw a 100x increase in performance. Data processing time was shortened significantly, from 1,200 seconds to just 10 seconds. Following the remarkable enhancement in performance, the overall search quality and efficiency also improved greatly, enabling Hotai Motor to receive timely public opinion data.

Yao-Tsue Shen said, "The key to our solution is the integration of the big data platform with the all-flash storage. AcceleStor and Chain Sea share the same vision and goals. Combining both companies' capabilities has created a stunning big data analytics experience for Hotai Motor." Deployment of the NeoSapphire 3605 was simple, too: Using 16Gb/s Fibre Channel to connect the NS3605 all-flash array with the Elasticsearch and MongoDB servers, public opinion analysis data could be quickly processed and stored in the all-flash array. It only took two hours to

introduce the NS3605 into the original infrastructure. What's more, AcceleStor's technical support team provided free and fast first-rate technical consulting and setup support.

Ultra-High Performance with AcceleStor's Core Technology: FlexiRemap®

The NeoSapphire 3605 is powered by AcceleStor's core technology – FlexiRemap® – a unique software architecture featuring a proprietary data remapping algorithm designed to work based on the fundamentals of flash memory. The NS3605 has brought the following major benefits to Hotai Motor:

- 1. Outstanding Performance:** FlexiRemap® software technology unleashes the true potential of every CPU and SSD in the storage system, enabling the NeoSapphire 3605 to offer an outstanding 360K IOPS for 4KB random writes and process data 100x faster to greatly improve the performance of the Insight platform.
- 2. Robust Data Protection:** Proprietary data remapping technology and a global wear leveling algorithm reduce unnecessary I/O overhead, enabling data to be distributed evenly across SSDs, maximizing SSD utilization.
- 3. Superior Price-Performance Ratio:** AcceleStor's software-defined approach unleashes the true performance of storage hardware and ensures sustained

high performance and robust data protection, providing customers with superior price-performance flash storage.

Conclusion

With the rapid development of the Internet, the impact of social media and public opinion on purchase decisions is powerful. Making decisions more rapidly by grasping useful information quantitatively and in a timely manner has become critical for businesses. To achieve this goal, Chain Sea Integration Information helped Hotai Motor build an Insight platform for public opinion analysis. By introducing AcceleStor's NeoSapphire 3605 all-flash array to Hotai Motor's storage system, Chain Sea saw a remarkable improvement in performance, search quality and efficiency, enabling Hotai Motor to receive timely public opinion data and tailor their marketing strategies to customers.

Accomplishments

- ▶ Data processing speed increased by 100x
- ▶ Easy and flexible deployment
- ▶ Complete and timely technical support

Products Introduced

- ▶ NeoSapphire 3605 All-Flash Array