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CASE STUDY

> "Internet cloud as a service must focus on high speed and on-demand supply. When building a cloud we aim to guarantee customer satisfaction. Fast deployment, faster response and elastic resource allocation are the essential requirements. Hitachi Unified Compute Platform breaks the bottleneck of traditional architectures, helping us rapidly build a fast highly available cloud infrastructure."
>
> *Yu Yongtao*
> *CTO*
> *Beijing Internet Harbour Company*

Beijing Internet Harbour Technology Company Builds Cloud Services With Hitachi Unified Compute Platform Solution

Challenge: Facing the fierce competitive market, the new system needed to improve customer satisfaction, ensure continuous system operation and curb costs.

Solution: Hitachi Unified Compute Platform supports unified management and supply of compute, network and storage resources.

Outcome: New cloud infrastructure runs 24/7, significantly saving 40% in total cost of ownership (TCO).

The Challenge

Beijing Internet Harbour Technology Co., Ltd. (Internet Harbour) established in 2009, is a professional service provider for internet-based high-tech enterprises. Its main offerings include internet data center services (IDC and value-added services) and cloud computing services. The company also provides a wide range of value-added services to customers, such as load balancing, distributed nation-wide networking, intelligent DNS service, network security services, private cloud and hybrid cloud solutions and services. Internet Harbour employs its professional experience and resources to help its end users to reduce IT costs, improve productivity and reliability.

Like many organizations providing internet cloud services, Internet Harbour was faced with several challenges. The company needed to remain price competitive by maximizing its resources and reducing total cost of ownership. While at the same time it needed to build an agile platform that could respond efficiently and ensure consistent, smooth operations and improve end-customer satisfaction.

Ongoing rapid growth of data and escalating storage and storage management expenses increasingly challenge companies in the cloud computing industry. Like may of these companies, Internet Harbour was looking for ways to reduce costs without compromising service.

Building an agile, efficient and continuous infrastructure requires compute resources and storage disk resources with faster processing ability, but it also increases investment cost. Reducing TCO often means that purchase of compute and

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Beijing Internet Harbour Technology Co., Ltd.

INDUSTRY
IT Services

SOLUTIONS
Converged, Cloud, Flash, Hitachi Unified Compute Platform for VMware Horizon View

HARDWARE
Hitachi Virtual Storage Platform G400, Hitachi Accelerated Flash (2), Hitachi Compute Blade 500 (32)

SOFTWARE
Hitachi Storage Virtualization Operating System, Hitachi Dynamic Provisioning

SERVICES
Device deployment, tiered placement and system tuning provided by Hitachi Data Systems Global Services and Hitachi TrueNorth Partner CSC Technology (Beijing) Company Ltd.

Outcomes

- New agility allows rapid business response.
- Reduced power consumption by 20%
- Reduced overall TCO by 40%.

Hitachi Data Systems

storage resources must be limited, which can further affect satisfaction of the services provided. To balance these apparently conflicting goals is no easy task.

In recent years, Internet Harbour considered using a distributed compute architecture to meet uptime and cost requirements, but the testing results were not impressive. The company found that the distributed architecture was not as stable as the company needed it to be. In addition, performance and response times were not able to meet personalized requirements for the broad range of customers using the platform. These issues, combined with higher costs for research and development, operation and management led them to look for a new alternative.

The Solution

To address these challenges and enable faster service deployment, Internet Harbour finally chose a Hitachi Unified Compute Platform (UCP) solution to address agility, performance and business continuity issues.

Using its own networking components the Hitachi Unified Compute Platform for VMware Horizon View solution was designed with Hitachi Virtual Storage G400 (VSP G400) with Hitachi Accelerated Flash (HAF), plus Hitachi Compute Blade 500 (CB 500). Internet Harbour deployed a UCP solution in both the Beijing and the Shanghai data centers.

The solution also included Hitachi Command Suite software, which allowed Internet Harbour to take full control of its data infrastructure and optimize availability, capacity utilization and service levels. This software consolidated management across all the storage systems to more easily align resources to various business application needs.

To simplify management and improve the return on storage investment, Internet Harbour's IT team used Hitachi Dynamic Provisioning software to thin provision the VSP G400 approach made the process of allocating storage much simpler, faster and less demanding on the infrastructure team. It also led to savings in space and power requirements because unused storage was able to be reclaimed, minimizing the amount of physical hardware needed.

To support fast response times, the VSP G400 systems work with Hitachi Dynamic Tiering, which uses high-speed flash module drives (FMDs) as a front end for disk storage. This tiering enables the storage to match the high-speed computing of CB 500 and increase the agility of the entire system.

The Outcomes

Faster deployment and online operation: Unlike the company's distributed systems, which took a year to test and deploy, the UCP solution was tested and installed in just one month. This solution allowed Internet Harbour to significantly reduce production deployment time and enable a quick business launch.

Agility for customer satisfaction: Hitachi Compute Blades and Hitachi Accelerated Flash support a highly efficient system, with increased processing to meet user demand. The FMDs in VSP G400 are dedicated to Internet Harbour VIP users and their database applications. Internet Harbour's testing of the Hitachi solution revealed that IOPS are five times higher than reached with common solid-state disks, so the company can meet the demands of its users.

Infrastructure cloud for business continuality: With high availability and reliability, the UCP solution created a reliable infrastructure for continuous operations, 24/7.

Simplified management and reduced maintenance: By implementing a unified solution and simplified management tools, Internet Harbour was able to manage all Compute Blade servers and VSP G400 storage centrally. This allowed the company to reduce the number of hardware operation and maintenance staff needed by 50%. Internet Harbour now can spend more time on other tasks and reduce staff costs overall.

Reduced footprint and power consumption: The new UCP with flash solution reduced the IT footprint, which lead to a 20% reduction in power consumption.

Reduced total cost of ownership: The combined reduction in staff and power reduced the overall TCO by 40%.

Chief Technology Officer at Internet Harbour, Yu Yongtao concludes, "Internet cloud as a service must focus on high speed and on-demand supply. When building a cloud we aim to guarantee customer satisfaction. Fast deployment, faster response and elastic resource allocation are the essential requirements. Hitachi Unified Compute Platform breaks the bottleneck of traditional architectures, helping us rapidly build a fast, highly available cloud infrastructure."

About HDS

Digital transformation improves enterprises' cost-efficiency, time to market, customer experience, and revenue through better data management. Hitachi Data Systems uses data to power the digital enterprise. HDS.com.

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