

China Broadband Communications Co. Case Study

Nexenta Supports Cloud Computing for Chinese Businesses at CBCcom

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Summary

Challenge: Constantly expand storage capacity
Solution: NexentaStor High Availability (HA) Cluster
Platform: Dell
Use Case: Storage for cloud-based services

Benefits:

- High scalability, easier management, and lower TCO
- No storage vendor lock-in

Business Overview

Established in 2007, CBCcom is a leading ICT service provider in China. It is committed to providing domestic and international enterprises with high-quality end-to-end telecom solutions, integrated IT services, and cloud computing IaaS, PaaS, and SaaS services. CBCcom has a nationwide private IP broadband network and VPN network, CBCnet, which meets the most advanced international telecom operation standards and can be connected with international operators through the only state-approved international IP gateway. CBCcom's non-congestion IP broadband network delivers high-quality network services for enterprises.

As the only network infrastructure supplier affiliated with the Cloud Valley, CBCcom provides the Chinese cloud computing industry with network infrastructure services and cloud services. It integrates the technological advantages of more than 20 cloud businesses and provides customers with a full range of customized cloud solutions. Currently, CBCcom is the standard service provider of AT&T and the international service partner of China Mobile International Limited. Its customers include Accenture, Boss, Carrefour, Cisco, and Western Digital.

Challenges

With online customer numbers growing, the CBCcom cloud computing platform constantly needs more virtual machines and storage. The company wanted a storage system that can provide dynamic expansion and a file system that carries vast amounts of data. CBCcom selected a Software-Defined Storage (SDS) approach because it offered seamless expansion of capacity and a good response rate.

System Configuration

- Dell R720 + MD3060e + MD1200
- 64 4TBGB NL-SAS drives (enterprise-class) supporting hot-swapping
- 4 STECZeusRam SSDs supporting hot-swapping as ZIL cache, 2 400GB SSDs as secondary cache
- Dual-processor control and Active-Active mode
- Sixteen standard 16GB (256GB) 1600MHz DDR3, enterprise-class memory

Solution

As a long-term partner of Dell, a Nexenta partner, CBCcom knew about the high scalability and security of ZFS, and wanted it for its proven architecture and technological maturity.

The company decided to take a phased approach to SDS for its cloud platform, launching 200TB of usable capacity in the first phase, and planning to launch an 800TB usable storage pool later, after customers and administrators have become familiar with the system. Using Nexenta's unique hybrid storage pool technology, a total of 64 disks are used as 8 vdevs to ensure available capacity. SSDs are used respectively as read and write caches, improving the overall system performance. HA technology provides overall high availability and eliminates the risk of single-point failure.

This solution provides a NAS platform for the video trading service of one of CBCcom's customers, Topvstore.com. Topvstore.com needed an online trading platform for massive video products—a platform based on cloud computing technology and integrating the high-speed Internet and private network transmission, intelligent video retrieval, DRM copyright protection, e-commerce, and other applications. The TOPV cloud video service platform provides cloud storage, cloud transcoding, and cloud transaction services specific to upstream and downstream TV stations, cable network operators, video sites, IPTV, mobile TV, and all other types of mobile media in the industry chain.

CBCcom uses the ACL function of NexentaStor to help its customers manage their users. On a cloud platform, this function helps customers simplify the authority management work that a multi-tenant environment requires.

Since NexentaStor provides the functionality of configuration block and file services in the same pool, the customer can easily configure the block devices used by the VM and SMB shared directory at the same time to store video files. Previously, having two separate configurations increased the difficulty of management, future capacity planning, and forecasting.

With SDS, planning for future capacity expansion is easier because the controller configuration is relatively more flexible. CBCcom has ordered two additional SAS HBA cards, avoiding the installation of controller HBA cards during expansion and reducing maintenance time.

Benefits

By using the Nexenta / Dell software-defined storage solution, CBCcom has been able to free itself from hardware vendor lock-in, which has cut costs. Also contributing to the solution's low overall TCO are unified scheduling and management of IT resources and the data plane, and the elimination of repeated construction and generation of heterogeneous platforms. These greatly enhance efficiency and optimize the use of CBCcom's IT resources.



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