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Veritas NetBackup™ Appliance and Amazon Web Services team up to improve efficiency of data protection

OVERVIEW

Global Manufacturer Creates Efficient Data Protection Solution with NetBackup and Amazon Web Services

China International Marine Containers Ltd. (CIMC) has manufacturing facilities in nearly 20 countries around the world. When it initiated a global digital transformation project, it decided to run its enterprise resource planning (ERP) system in the cloud. The company needed fast, reliable backups for both cloud-based data and information stored in the corporate data center, and it needed to retain a copy of all ERP data on-premises to meet the Chinese standard for disaster recovery. The company turned to a solution from Veritas™ that replicates data between an on-premises appliance and Amazon Web Services (AWS) cloud storage. The solution satisfies disaster recovery concerns, while significantly improving efficiency of data protection companywide.

DIGITAL TRANSFORMATION IN A TRULY GLOBAL BUSINESS

From semi-submersible platforms for offshore drilling to modular buildings to heavy trucks, semi-trailers, and airport equipment, China International Marine Containers Ltd. is a manufacturer with truly global operations. In 1980, as China took initial steps toward relaxing restrictions on business ownership, CIMC was one of the first joint ventures to take shape. The company was founded through a partnership between the state-owned China Merchants Group and the Denmark-based East Asiatic Company Ltd. (now known as Santa Fe Group A/S).

CIMC's original purpose was to build shipping containers. It manufactured its first 20-foot-long dry cargo container in Shekou, Shenzhen, in 1982. Since then, the company has grown to support many different aspects of the logistics and energy industries. CIMC now has more than 300 subsidiaries, employing 51,000 people, across Asia, North America, Europe, and Australia.

In 2017, CIMC initiated a digital transformation with the goal of gradually shifting its focus from product manufacturing to manufacturing services, increasingly leveraging information for competitive advantage. To achieve this transformation, the company needed to create a common IT platform across all its business units, including manufacturing facilities around the world. Because its operations were so dispersed, running enterprise systems in the cloud made sense, as cloud-based solutions are easily accessible to users around the world. However, CIMC understood the potential risks of a cloud-based IT infrastructure.

CIMC

ORGANIZATION PROFILE
Industry: Manufacturing
Headquarters: Shenzhen, China
Employees: 51,000

KEY CHALLENGES

As part of a digital transformation initiative, CIMC is moving all key business applications to the cloud, a shift it started by deploying a cloud-based ERP system. The company needed fast and reliable data protection for both on-premises and cloud-based data, as well as cost-effective replication of backups between the locations.

SOLUTION

The company rolled out a Veritas NetBackup™ Appliance in its corporate data center and a cloud-based instance of NetBackup using flexible Amazon Web Services (AWS) storage for short-term data retention. After two days, backups are transferred to Amazon S3 storage for longer-term retention. Replication between the data center and AWS provides disaster recovery.

BENEFITS

- Significantly lower total cost of ownership (TCO) for data protection and disaster recovery processes
- 66% lower bandwidth costs, thanks to NetBackup Auto Image Replication (AIR)
- Compliance with GB/T 20988-2007 achieved
- Disaster recovery achieved through data replication between on-premises data center and cloud storage
- 1 minute recovery point objective (RPO) for current data
- 30 minute recovery time objective (RTO) for data less than 2 days old
- 4 hour RTO for older data

As CIMC migrated its data and workloads into the cloud, it needed to maintain seamless visibility into all business data, whether the information is stored on premises or in the cloud. And through all phases of the project, information security, data protection, and disaster recovery needed to remain top priorities.

APPLIANCE MEETS DATA CENTER NEEDS

CIMC had worked with Veritas™ for many years. As CIMC planned to build out a single corporate ERP system on the SAP HANA Enterprise Cloud platform, Veritas suggested the company take a phased approach to its digital transformation. Eventually CIMC will run all its business systems in the cloud, but phase one involved getting the ERP system up and running. This meant some critical business data would be stored on premises, while other important data resided in the new cloud platform.

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>
> *Jinjie Pan, CIO,*
> *China International Marine Containers Ltd.*

The company wanted one solution to protect both on-premises and cloud-based data. It already used Veritas NetBackup™ for data protection. However, its legacy processes relied on a tape library, which entailed manual media management and did not fit well with the digital-transformation drive to streamline and automate processes wherever possible.

At the suggestion of Veritas, CIMC looked into Veritas NetBackup purpose-built appliances. The Veritas NetBackup 5240 Appliance can store up to 294 TB of data. Because it deduplicates on both the client side and the target side, the appliance dramatically reduces the footprint of backups. This decreases the storage volume that a company's backups consume by as much as 50 times, and it can reduce bandwidth consumption by 99 percent.

Another selling point was NetBackup Auto Image Replication (AIR), which replicates backup images to a remote NetBackup domain for electronic vaulting and disaster recovery readiness. Its wide area network (WAN) optimization capability enables a transfer rate for cloud backups that is up to 10 times faster than the WAN connection would otherwise be.

CIMC chose to deploy a Veritas NetBackup 5240 Appliance with 103 TB of storage capacity in its on-premises data center in Shenzhen. Initially, the appliance protected the company's mail system and core databases, which reside in the data center. The appliance worked very well, and CIMC was pleased with the solution.

EXPANDING DATA PROTECTION TO THE AWS CLOUD

The following year, CIMC began rolling out SAP HANA. The company wanted to create a NetBackup instance in the cloud to protect the ERP system's data, and to provide disaster recovery for the on-premises appliance. CIMC decided the solution should run in a public cloud and considered four possible providers: Amazon Web Services, Microsoft Azure, Alibaba Cloud, and HUAWEI Cloud. After thorough due diligence, CIMC chose AWS.

Now, SAP HANA and the SAP development servers are backed up to a cloud-based NetBackup media server, from which data is deduplicated and transferred to Amazon Elastic Block Store (EBS) storage volumes within AWS. NetBackup AIR automatically replicates data from the NetBackup appliance in the corporate data center to the cloud-based instance of NetBackup via a secure virtual private network (VPN).

The solution also replicates backup data in the other direction, from the cloud to the on-premises appliance. This enables CIMC to comply with GB/T 20988-2007, the Chinese standard for disaster recovery, by storing a copy of all ERP data on premises.

For longer-term retention, the data is replicated after two days to AWS S3 storage via NetBackup CloudCatalyst. CloudCatalyst leverages NetBackup Accelerator to deduplicate and compress the data, enabling it to deliver full, traditional backups at the speed of a typical incremental backup.

LOWER TCO FOR DATA PROTECTION

The data redundancy between the Shenzhen data center and the AWS public cloud provides peace of mind for CIMC's IT managers. Meanwhile, the NetBackup processes provide significant efficiency and cost savings.

NetBackup AIR reduces bandwidth consumption for data transfers by about two-thirds, so the bandwidth costs of transferring data out of the public cloud are 66 percent lower than they would be without this technology. NetBackup AIR also shrinks the time window of mutual synchronization between the sites. This means that for recent data, the frequency of backups is now one minute, which enables CIMC to achieve a one-minute recovery point objective (RPO). And in the event of a data loss, recent data can be recovered (recovery time objective, or RTO) in just 30 minutes. Information that is more than two days old, stored in long-term backup, can be recovered in just four hours.

Just as important, the solution centralizes data protection processes for CIMC business units around the world. IT staff can manage both on-premises and cloud-based backups through a single unified, streamlined, and standardized management console. Moreover, using the elastic resource deployment of Amazon EBS data storage ensures that CIMC pays only for the exact amount of storage it needs for its short-term backups. Together, these efficiency improvements reduce the total cost of ownership (TCO) of the data protection solution.

"Veritas has the industry-leading technology and solid industry background knowledge, with a professional local team," says Jinjie Pan, CIO of CIMC. "Veritas is becoming our most important partner for digital transformation strategy. Through the Veritas data management solution, we can meet business requirements and pave the way for our future innovation."

FOR MORE INFORMATION

Please contact your local Veritas Sales Representative or Business Partner, or visit:

Vertias NetBackup

ABOUT VERITAS TECHNOLOGIES LLC

Veritas Technologies empowers businesses of all sizes to discover the truth in information—their most important digital asset. Using the Veritas platform, customers can accelerate their digital transformation and solve pressing IT and business challenges including multi-cloud data management, data protection, storage optimization, compliance readiness and workload portability—with no cloud vendor lock-in. Eighty-six percent of Fortune 500 companies rely on Veritas today to reveal data insights that drive competitive advantage. Learn more at www.veritas.com or follow us on Twitter at @veritastechllc.

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