



*"Double-Take Availability acts as the foundation of HCT's offsite backup plan by replicating data to a DR site. In addition, replica servers at the DR site provide high availability capabilities. When we performed a failover, the standby EDI SQL server took over for the production SQL server. The integrity of the data files on the backup EDI SQL server were verified and the databases were successfully mounted."*

Edward Ko, Director of HCT, IM Department

## Business Profile

Company Name:  
HCT Transportation

Headquarters:  
Taipei, Taiwan

Industry:  
Transportation

Revenue:  
8 Billion NTD (272 Million USD)

Employees:  
3,000

Business Environment:

- Established in 1983
- Offers professional logistic design capabilities tailored to clients' needs
- Provides integrated warehousing, logistics and information management services throughout the golden triangle
- Maintains leadership in electronic commerce

Vision Solutions Product:  
Double-Take® Availability

Implementation Team:  
Vision Solutions  
Shihlin Electric  
Fortune Co.  
Zero One Tech

## Critical issue

HCT Transportation's systems must be operational around-the-clock to process an average of 300,000 daily information transactions. For several years, HCT relied on tape backup and offsite tape management for disaster recovery. Due to the critical nature of their systems, tape restoration could not support the company's objectives going forward since it took too long to recover.

## Results

- Operations can continue on physical and virtual environments even when an outage occurs.
- Eliminates data loss and facilitates recovery in minutes.
- Supports customer retention because business clients enjoy uninterrupted access to their applications.
- Facilitates failover testing to ensure that their recovery strategy will work as planned.
- VMware ESX increases efficiency and reduces physical hardware requirements.

## Technologies

- Double-Take Availability
- VMware ESX
- Microsoft Windows Server

## Business Challenge

HCT Transportation's information management infrastructure is based on an e-commerce trading platform built with resiliency so it can well serve HCT's valuable customers. HCT offers the finest services to their customers and has instilled great confidence in them.

Over the years, the number of physical production Windows-based servers grew to 20, with an equivalent number of servers allocated for disaster recovery. Given this growth, their previous method of offsite tape media-based disaster recovery had become too time consuming. Beyond an unacceptable recovery time, the complexity of their computing environment and recovery process increased dramatically.

Another challenge was the fact that the size of their database had grown to 2TB. This also greatly protracted their recovery time. Finally, current tape restoration methods were manual and hence, very error prone.



## Solution

The solution to their problem was found in a Physical to Virtual (P2V) architecture with 20 physical production servers replicating to a VMware virtualized environment comprised of four VMware ESX servers at the disaster recovery site. Double-Take Availability is installed on each VMware ESX server to act as a proxy server coordinating the P2V replication. Double-Take Availability is responsible for converting and auto provisioning the target VMs to correspond to the source physical server. It also performs monitoring and automatic failover capabilities when the source physical servers fail.

Double-Take Availability provides a cost effective disaster recovery solution with failover capabilities that takes just a few minutes to failover. Double-Take Availability also offers real-time, byte-level replication to keep data in-sync between the source servers and the target VMs. In addition, it provides heartbeat failover monitoring to ensure seamless failover when a source server network failure has been detected. Double-Take Availability integrates with a VMware ESX API to activate the target VMs automatically when failover occurs. Today, HCT enjoys real-time data synchronization from the production to disaster recovery site. And when the production site fails, the interruption of service to users is minimal. HCT now has a Recovery Time Objective that falls within the range of 20-30 minutes.



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◆ High Availability ◆ Disaster Recovery ◆ Systems and Data Management ◆