Microsoft SQL Server
Customer Solution Case Study

# Shipper Supports Expansion by Boosting Speed, Control, and Savings with Microsoft

**Customer:** Mediterranean Shipping Company (MSC)
**Web Site:** www.mscgva.ch
**Customer Size:** 35,000
**Country or Region:** Switzerland
**Industry:** Transportation and logistics - Maritime container shipping

**Customer Profile**
Founded in 1970, Mediterranean Shipping Company (MSC) is a leading international shipping line headquartered in Geneva, Switzerland.

**Solution Spotlight**
- Boosts service levels and supports expansion
- Accelerates data access by shifting 10 percent of the processing load to secondary databases
- Reduces risk by speeding automatic failover by 100 percent
- Improves security and cuts costs

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"SQL Server 2012 AlwaysOn gives us an integrated high-availability and disaster recovery solution that delivers around-the-clock data access and fast performance for less money."

Fabio Catassi, Chief Technology Officer, Mediterranean Shipping Company

As the second-largest shipper in the world, Mediterranean Shipping Company (MSC) must access and share operational data with global employees and partners all day, every day to deliver excellent service. In 2011, the company began to update core systems with new software from Microsoft to implement innovative availability and disaster recovery capabilities. As a result, MSC can facilitate growth by speeding data access, minimizing downtime, improving security, and reducing costs.

## Business Needs

Mediterranean Shipping Company (MSC) operates 450 ships that move cargo to 335 ports on six continents. The privately owned company expands the volume of goods that it ships each year by double-digit percentages, with minimal changes to employee headcount. To facilitate growth, MSC needs to maintain 99.999 percent availability while improving performance and lowering costs—which is no small achievement given the complexity of the company's IT architecture. Twenty mission-critical MSCLink systems, which run on the Microsoft platform, support operational processes, business intelligence, and secure electronic data interchange (EDI) for tens of thousands of global users. "Our MSCLink systems exchange EDI messages with hundreds of external systems managed by government agencies and transportation partners," says Fabio Catassi, Chief Technology Officer at MSC. "If any of our systems would go down, our operations would quickly stop because we couldn't comply with international laws or manage cargo logistics."

To provide for high availability and disaster recovery in the past, MSC used features such as database mirroring in Microsoft SQL Server 2008 R2 Enterprise

Microsoft SQL Server 2012

data management software. Although the configuration protected against outages, the mirrored copies of servers—which resided on server computers and duplicated storage area networks (SAN)—sat idle. In an environment where increasing demand pushes production systems to the limit, any unused resources are a costly investment. "A single system can process 100 million transactions each day, so we need to get as much performance as possible out of every one of our systems," explains Bob Erickson, Executive Vice President of Software Development at Interlink Technologies, the MSC subsidiary that develops and manages the company's MSCLink software.

MSC sought an availability and disaster recovery solution that could deliver reliable and fast access to data while minimizing expansion costs.

## Solution

To address its challenges, MSC decided to upgrade its MSCLink systems to Microsoft SQL Server 2012 Enterprise to take advantage of capabilities such as SQL Server 2012 AlwaysOn. It improves availability and disaster recovery processes and makes it possible for customers to offload some processes to active secondary databases. "We continue to choose the Microsoft platform because it is a perfect match for our needs in terms of product quality and support," says Catassi. "When we started using SQL Server 16 years ago, we were ranked twentieth in our industry. Today thanks to a great team of people and with the help of Microsoft technologies, we are the second-largest carrier based on slot capacity and the number of container vessels operated."

In July 2011, MSC implemented SQL Server 2012 on a system that supports operations in Freeport, The Bahamas. IT personnel at Interlink Technologies installed SQL Server 2012 on three Dell PowerEdge R900 server computers that also run the Windows Server 2008 R2 Enterprise operating system. In the production environment, a server in New Jersey and a server in New York support one AlwaysOn availability group, which manages 65 gigabytes of data and about 100,000 queries each day. The group includes five primary databases in New Jersey and five secondary, read-only replica databases in New York. In addition, IT personnel plan to migrate reporting and backup processes from the primary databases to the secondary databases. IT personnel use the third server computer for testing other features in SQL Server 2012. For example, administrators use Extended Events to receive instant notification about changes to AlwaysOn configurations; Product Update to integrate and accelerate software updates; contained database authentication to strengthen security; and the FileTable and ColumnStore Index features to streamline data access.

Transitioning the Freeport production system to SQL Server 2012 was fast and seamless and took less than 30 seconds for the failover. MSC plans to upgrade all of its MSCLink systems by the end of 2012.

## Benefits

With SQL Server 2012, MSC can support its rapid growth by speeding data access, minimizing downtime, increasing security, and cutting costs.

**Increases Performance and Supports Expansion**

MSC can boost service levels and facilitate growth by increasing hardware usage, which, in turn, speeds performance. Catassi explains, "With SQL Server 2012 AlwaysOn, we expect to shift 10 percent of the processing load from primary databases to secondary databases." The company plans to further speed data access with features such as ColumnStore Index, which improves query performance by grouping and storing data by column.

**Reduces Risk of Downtime**

Despite its complex environment, MSC can implement SQL Server 2012 without jeopardizing service levels. Javier Villegas, Database Administrator at Interlink Technologies, says, "When we upgraded to SQL Server 2012, the system maintained 100 percent compatibility with our applications and thousands of EDI services." AlwaysOn also minimizes the risk of downtime because it supports up to four secondary databases for each primary database—and failover takes less time. "In our SQL Server 2012 AlwaysOn test configuration, automatic failover is twice as fast as our previous solution," says Erickson.

**Improves Security and Cuts Costs**

With SQL Server 2012, IT personnel can increase insight and control over mission-critical systems—with less effort—using features such as Extended Events, Product Update, and contained database authentication. "We are excited about implementing contained databases with SQL Server 2012," says Erickson. "By doing so, we can bring security to the database level so that we can increase control over each system—and simplify our global security model." The increased control and efficiency ultimately boost service levels, facilitate expansion, and minimize costs. Catassi says, "SQL Server 2012 AlwaysOn gives us an integrated high-availability and disaster recovery solution that delivers around-the-clock data access and fast performance for less money than other hardware or software replication solutions."

### Software and Services

- Microsoft Server Product Portfolio
  - Windows Server 2008 R2 Enterprise
  - Microsoft SQL Server 2012 Enterprise

### Hardware

- Dell PowerEdge R900 server computers



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