DIMAR Group boosts resilience and flexibility

With IBM virtualization technologies

Overview

The need

DIMAR Group operates in retail, marketing consumer products through a multi-channel distribution network. As the business grew, the central IT unit reacted by adding more servers and storage devices, and the IT landscape became increasingly complex. Over time, management, energy and data center costs began to rise.

The solution

DIMAR Group migrated its solutions from another vendor's Unix to IBM® AIX®, running on virtualized servers based on IBM BladeCenter® PS701 blade servers with IBM POWER7® processors. For Microsoft Windows-based systems, DIMAR Group deployed IBM BladeCenter HX5 and HS22 blades with Intel processors, and IBM System Storage® DS5100 devices.

The benefit

Moving to a virtualized infrastructure on BladeCenter has reduced the number of physical servers from 50 to four IBM blades, and reduced energy costs by around 90 percent.

Founded in 1975, DIMAR Group operates in retail, marketing consumer products through a multi-channel distribution network that includes cash and carry, franchising, discount and supermarket operations. With 174 stores and 2,000 employees located mainly in western Liguria and southern Piemonte, DIMAR Group is ready for the rapid and frequent changes that characterize the northern Italian market.

DIMAR Group is expanding rapidly, and there are constant requests from the business to the IT function to provide a data center capable of dynamically supporting the group's new and ever-increasing business needs. Such needs might refer to increased demands on system performance, resilience and reliability, as well as flexibility in the management of different environments.

Adding more servers and storage devices to the existing infrastructure was an unsustainable approach, therefore DIMAR Group wanted to find a way to meet new market demands, to improve its business continuity and disaster recovery options, and to enable a sustainable long-term growth strategy.

After a careful analysis of the offers provided by its long-term technological partner and other competitors, DIMAR Group chose to deploy an IBM solution. This choice was mainly due to the participation of DIMAR Group in workshops and other specific events, where IBM was able to demonstrate the uniqueness of its solution: being able to create an architecture built in two different sites, centralizing different operating environments (IBM AIX, IBM i, Windows, Linux) on a single virtualized platform.

Each of these environments can sustain its specific application workload, according to the different needs of DIMAR Group's business units. Computing resources, memory capacity and storage availability can be assigned dynamically to the different applications, using the advanced virtualization and management tools provided by the IBM platform.

Designed for Data

- DIMAR Group processes and analyzes huge quantities of data in data warehouse applications and databases stored on two IBM System Storage DS5100 arrays, each with 5 TB capacity. DIMAR Group manages the workload to ensure that all users receive fast analysis that serves their business needs.

Tuned to the Task

- DIMAR Group benefits greatly from the integrated BladeCenter platform with both POWER7 and Intel Xeon processors. IBM AIX workload is assigned to logical partitions on PS701 blades, with resources that are automatically allocated thanks to IBM PowerVM®. Windows workload is assigned to virtual servers on BladeCenter HX5 and HS22 blades.

Managed with Cloud Technologies

- DIMAR Group uses IBM PowerVM and VMware vSphere to create a private cloud for both POWER7 and Intel-architecture processing. The DIMAR IT team focuses on meeting internal service level agreements, without needing constantly to think about the underlying IT infrastructure and storage.

Driving Innovation

- DIMAR Group is changing its business model from a purely reactive one to a more proactive one. This is made possible by a cloud-enabled infrastructure that can be re-shaped and re-molded to meet new growth and higher workload demands on-the-fly, with no waiting time and no need to invest in new hardware for each new requirement.

This is a single architecture which combines:

- performance (IBM Power Architecture® and IBM X-Architecture®)
- flexibility (multiple environments within a single chassis)
- expandability (through addition of single components)
- security (constantly protected and safe data with advanced deduplication solutions)
- reliability (no single point of failure and ever reliable re-start)

The IBM team also showcased the advantages of IBM BladeCenter, which would allow DIMAR Group to take advantage of the benefits of Power® and Intel-architecture solutions within a single BladeCenter chassis.

The IBM team designed a simple but customized solution based on two IBM BladeCenter H chassis, each with PS701, HX5 and HS22 blades. The chassis have been installed at two different sites, enabling the creation of a high-availability cluster which guarantees an excellent level of operational continuity.

To manage its growing storage needs, DIMAR Group replaced its existing storage devices with two IBM System Storage DS5100 arrays, which provide optimized storage for DIMAR Group's demanding applications. The company uses the built-in synchronous and asynchronous replication services to copy data between locations to ensure that there is always one copy of critical information available.

IBM also installed and configured the switches that connect the two data centers. The result is a solution that, benefitting from a high level of automation, ensures the reliable and seamless execution of business operations.

Data is backed up to IBM System Storage TS3200 tape libraries using IBM Tivoli® Storage Manager. An IBM System Storage TS7650 ProtecTIER® Deduplication Appliance acts as a virtual tape library to reduce the total amount of data stored and to accelerate backup and recovery. Deploying IBM PowerVM enables DIMAR Group to achieve higher resource utilization. PowerVM also provides enormous flexibility, allowing DIMAR Group to move processing resources between virtual servers to match changing demand patterns.

The twin IBM BladeCenter and DS5100 systems located at each data center support DIMAR Group's disaster recovery and resilience requirements. The IBM solution optimizes the group's use of IT resources, improving service and boosting the return on investment (ROI). The availability and resiliency of the IT environment have been maximized and maintenance, management, energy consumption and hardware footprint costs have been reduced.

Solution Components

Hardware

- IBM® BladeCenter® PS701
- IBM BladeCenter HX5
- IBM BladeCenter HS22
- IBM System Storage® DS5100
- IBM System Storage TS7650 ProtecTIER® Deduplication Appliance
- IBM System Storage TS3200 Tape Library

Software

- IBM AIX®
- IBM Tivoli® Storage Manager
- IBM PowerVM®
- IBM PowerHA®

Services

- IBM Global Technology Services®

Moving to a fully virtualized server infrastructure on BladeCenter has reduced the number of physical servers from 50 to four IBM blades, and reduced energy costs by around 90 percent. The simplified server infrastructure, with fewer physical network and SAN connections, has helped DIMAR cut IT management costs by 50 percent. The IBM solution includes comprehensive disaster recovery capabilities, allowing DIMAR to lower its operational risk.

For more information

To learn more about smarter computing from IBM and how we can help you integrate, automate, protect and transform your IT, contact your IBM sales representative or IBM business partner, or visit: **ibm.com**/smartercomputing

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