VERITAS™

Metro de Madrid

20 Years Trusting the High Reliability of Veritas InfoScale™

Metro Madrid provides transportation services to more than two million users every day. To keep critical services available around the clock and to simplify and automate cluster management between its two data processing centers (DPCs), Metro Madrid has trusted Veritas InfoScale™ for the past 20 years. User friendliness, heterogeneous systems compatibility, and automated disaster recovery capabilities make Veritas InfoScale key to ensuring the business continuity and quality service of Metro Madrid.

Metro

ORGANISATION PROFILE

Site: www.metromadrid.es

Industry: Public Administration (Transportation)

Headquarters: Madrid, Spain

Employees: 7,000

KEY CHALLENGES

Because it provides services to more than two million commuters every day, Metro de Madrid ("Metro Madrid") must ensure high availability of its systems, databases, and critical apps, in an automated fashion.

SOLUTION

Metro Madrid has been utilising Veritas InfoScale for twenty years to manage high availability and contingency environments thanks to automated capabilities, ease of use, heterogeneous systems compatibility, and efficiency.

BENEFITS
• Automated disaster recovery
• 99.99% reliability
• Compatibility with heterogeneous systems
• Service-level improvement

Inaugurated in October 1919 by King Alfonso XIII, Metro Madrid is currently the longest metro line in Spain, and the third longest line in Europe, after London and Moscow. The 193 miles and 301 stations provide services to the city of Madrid and the extended metropolitan area, facilitating the commute of more than two million users each day (584 million in 2016).

Operational efficiency and service quality are the two strategic pillars of this organization. Metro Madrid's information systems division supports these objectives by "providing value-added services that contribute to improvements in the efficiency of business processes, and ensure application performance and service, management and infrastructure systems", according to division manager Javier Tagarro.

With a staff of 95 highly qualified technical professionals, the division manages two DPCs in Madrid, about 3 miles apart, which host the applications and computer systems required for operations.

❝Without Veritas Solutions it would be very hard to ensure the service level agreements we currently offer.❞

Javier Tagarro
Information Systems Division Manager
Metro Madrid

In the past 20 years, Metro Madrid has utilized Veritas InfoScale Solutions (previously known as Storage Foundation/Veritas Cluster Server) to manage its high-availability and contingency environments, as well as server storage copies over an EMC and NetApp storage area network (SAN). Distributed between both DPCs, total storage capacity exceeds 1,000 terabytes.

Thanks to the automated failover functionality in InfoScale, Metro Madrid has continuous automated recovery capabilities in the event of a disaster, ensuring infrastructure availability and supporting applications and databases for critical business services.

Efficiency, Scalability, and Simplicity

"For as long as we have utilized InfoScale, it has been easy to install and configure, scalable, and problem free," Tagarro adds. The solution's compatibility with heterogeneous systems has also been essential, given Metro Madrid's complex technology environment.

That environment includes an Oracle Server (recently migrated from Oracle M9000 to SPARC M6), Fujitsu and HP running Solaris OS, Red Hat and Windows Server, as well as more than 1,000 virtual machines running VMware and Oracle VM, and Oracle, SQL Server and MySQL databases.

In fact, "Veritas products make up for some deficiencies in the operating system," Tagarro notes, "and this makes them invaluable in ensuring the quality of our computer services. The most outstanding feature of this solution is the fact that it provides system flexibility and automation in a simpler fashion than local tools."

TECHNOLOGY ENVIRONMENT

- **Servers:** Oracle M6, T5, T4, Blade T6340; Fujitsu PRIMERGY BX900, PRIMERGY RX300; HP G6, G7, G8, HP BladeSystem C7000
- **OS:** Solaris 10 and 11; Red Hat 6 and 7; Windows Server 2012
- **Virtual Machines:** more than 1,000 (VMware and Oracle VM)
- **Databases:** Oracle, SQL Server, MySQL
- **Storage:** EMC VNX 5500, 5600, 5700, EMC VMAX3, EMC Centera; NetApp FAS 2050

SOLUTIONS

- Veritas InfoScale

SERVICES

- Veritas Essential Support (24x7x365)

VERITAS™

" The main advantages of Veritas InfoScale are the high availability automated service, hot swapping disk management capabilities, the graphic console, and its flexibility. **"**

Javier Tagarro
Information Systems Division Manager
Metro Madrid

An exclusive Veritas InfoScale feature that helps standardize, centralize, and automate the management of clusters and storage servers in an agnostic and graphic fashion, enables IT staff to monitor system, application, and database availability without having to gather any additional information.

"Without Veritas solutions, it would be very difficult to ensure the service level agreements we currently offer," Tagarro says, summing up the high-availability service automation, hot swapping disk management, graphic console, and flexibility of Veritas InfoScale. "Veritas Essential Support (24x7x365) also deserves a special mention," he adds. "It's fast and efficient and gives us direct access to Spanish-speaking technicians."

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

Veritas InfoScale

Veritas World Headquarters
500 East Middlefield Road
Mountain View, CA 94043 USA
(866) 837-4827
www.veritas.com

" Veritas products make up for some of the operating system deficiencies, and this makes them invaluable in ensuring the quality of our computer services. **"**

Javier Tagarro
Information Systems Division Manager
Metro Madrid

A good example would be the hot-swapping disk management functionality, which Tagarro says is essential for data migration among storage servers and for the snapshot. Together with the high-availability feature, volume-level snapshotting (for those cases where there is no need or availability of snapshots at the storage server level) and dynamic multi-pathing are the most commonly used features of this solution.

Central Management Console
InfoScale also simplifies management tasks considerably. The Veritas InfoScale Operations Manager feature allows staff to manage clusters and linked storage servers from a central console. The graphical control panel makes monitoring even easier.

VERITAS™