

# Banca Monte dei Paschi di Siena

Virtual Desktop Infrastructure By Sun Microsystems Helps Bank Optimize IT Management and Reduce Energy Consumption

Customer Success Story

## Industry

- Financial Services

## Business Issues

- Simplify trading room management
- Reduce IT maintenance times
- Increase system availability and reliability in mission-control environment
- Reduce the number of machines located next to operators' workstations

## Solution

The bank's finance division implemented a virtualization solution consisting of Sun Ray™ virtual display clients, Sun Ray servers running the Solaris™ 10 Operating System, and VMware.

## Business Results

- Reduced number of trading room systems by 65% using Sun Ray virtual display clients
- Reduced energy consumption and heat output
- Improved working conditions for finance operators
- Simplified client management with Sun's virtualization solutions
- Increased speed of client updates, IT maintenance, and computer deployment

## Products/Services/Solutions

- Sun Ray Software
- Sun Ray 2FS Virtual Display Client
- Solaris 10 Operating System
- Sun Fire X2200 M2 server
- Sun Fire X4200 M2 server
- Sun StorageTek 3510 FC Array

## URL Reference

[sun.com/customers](http://sun.com/customers)

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## Success at a glance

Banca Monte dei Paschi di Siena, formed in 1472, is the oldest operating financial institution in the world. Headquartered in Siena, Italy, it operates more than 1,800 branches throughout Italy. The organization has 28,000 employees and 4.5 million customers in Italy.

The bank's trading operation locations are a key part of the bank's business. Technical support at these locations is handled by MPS Capital Services, a recently formed finance organization. MPS needs to ensure reliability and business continuity for trading operations, because interruptions in service have significant and immediate business repercussions. "The activity that takes place in the trading room concerns the derivatives market and has an important effect on the Group in terms of value," explains Fabio Beconcini, head of UNIX® systems at Banca Monte dei Paschi di Siena. "Technology in the trading room is very important because refresh timescales are in the order of tenths of seconds and decisions need to be made fast. There is no room for IT system latency."

Previously, the bank's trading room contained 75 Windows-based desktop workstations, each with three to four supporting systems. However, this configuration had reduced the amount of space available to each user, and so many machines in a small space caused excessive heat.

## Centralizing Servers and Virtualizing Clients

After evaluating systems from several IT vendors, MPS Capital Services chose to implement a solution from Sun Microsystems. This new Virtual Desktop Infrastructure (VDI) solution is based on the consolidation and centralization of servers and the virtualization of clients through the use of Sun Ray™ 2FS virtual display clients, Sun Ray servers running the Solaris™ 10 Operating System, and VMware technology. The solution implementation was completed very quickly by certified Sun partner TAI. "Our partnership with Sun is a long-lasting and profitable one," says Paolo Ricchiuto, TAI's CEO. "Collaboration on the Banca Monte dei Paschi di Siena project has given us the opportunity to really demonstrate our consolidated experience in open systems and Sun solutions, benefiting the traders of one of the most prestigious Italian banks."

TAI deployed 75 Sun Ray 2FS virtual display clients, which are linked to three Sun Fire™ x2200 M2 server systems in the bank's data center. Banca Monte dei Paschi di Siena decided to virtualize 45 of the Sun Ray 2FS clients based on the load and utilization method of the various systems. The machines dedicated to more critical applications, which need higher uptime because they relate to market activity, were made remote machines. With this new solution, each user in the trading room can now access a virtual desktop located on a central server. Altogether, the



number of physical systems in the trading room has been reduced by 65 percent.

In addition, TAI implemented Sun Virtual Desktop Infrastructure Software and consolidated user applications and operating systems using VMware on virtual machines. Users access business applications using a Sun Ray 2FS client. Virtualizing on VMware technology has also enabled the migration of each operating environment to a virtual machine located in a VMware ESX server farm. This allows each user to have a personalized operating environment just as with a full desktop PC, but gives IT employees the ability to centrally manage those environments.

#### **Reducing Consumption and Optimizing Management**

Once the solution was in place, the bank experienced immediate and measurable energy savings. Unlike the bank's previous solution, the average Sun Ray virtual display client uses considerably less energy to operate. Sun Ray clients also do not require fans, and if one should break down, business activity is not compromised.

The solution's centralized approach has also greatly simplified the bank's infrastructure management, making it faster and more reliable, and helping to

reduce errors. The bank can now perform maintenance and trading room system updates by connecting remotely to the datacenter, without having to be onsite. The availability of virtual backup images allows the bank's IT managers to restore operation immediately on another virtual machine and then perform analysis to resolve the problem. Deployment of new workstations is also now faster and more efficient.

In addition, the bank can now implement disaster recovery and business continuity solutions based on virtualization. "Disaster recovery currently takes place via a series of systems located at our Florence site," explains Alessandro Dello Russo, project manager at Banca Monte dei Paschi di Siena. "The extension in utilization of virtual machines would create a third site, accessible either from the production site or from the disaster recovery site, maintaining an alignment between production machines and those used for recovery. In the event of a disaster, all users would find their own system just as they left them." In the near future, the bank may extend this approach to other trading rooms. "We're very satisfied with the results obtained, and are looking into the possibility of exporting a similar solution to the other bank offices responsible for finance activities," concludes Beconcini.

"In addition to helping us resolve the problem of heat emission and improving management considerably, the Sun Ray solution opened up new opportunities for our future in terms of disaster recovery and business continuity based on virtualization. It also proved to be much more flexible and versatile than a more traditional offering."

#### **Fabio Beconcini**

Head of UNIX Systems, Banca Monte dei Paschi di Siena