



## Wireless Access, Centralized System Management Increase Agility at Guardia di Finanza

### Overview

**Country:** Italy

**Industry:** Government

#### Customer Profile

The 66,000 employees of Guardia di Finanza work at 1,400 offices to prevent and investigate financial crimes throughout Italy and the European Union.

#### Business Situation

Increased demand for services, an aging and highly distributed network, and manual, paper-based processes prevented GDF from satisfying ministerial directives.

#### Solution

A mobile wireless computing system, advanced security features, cryptographic SmartCards, and centralized data management helped GDF access data and applications wherever employees worked, avoid the costs of an expensive proprietary network, and deploy and manage a highly distributed system with less time and effort.

#### Projected Benefits

- Time spent in each of 9,000 administrative processes reduced by an average of 5 to 10 days
- Deployment costs reduced by 50 percent
- Costs of managing 150 local Windows NT Server 4.0 domains avoided

“The ability to respond rapidly and accurately to both changes in the financial marketplace and the requirements of our internal customers is the essence of agility that Windows Server 2003 provides.”

Colonel Paolo Valle, Chief Information Officer, Guardia di Finanza

A Rapid Economic Justification (REJ) analysis validates that by upgrading its IT infrastructure from Microsoft® Windows NT® Server version 4.0 to one based on Microsoft Windows Server™ 2003, Guardia di Finanza (GDF), the Italian financial police, can increase the workflow in several critical processes by threefold with the same personnel and a smaller budget.

The new infrastructure contributes to a threefold increase in knowledge worker uptime (time that GDF investigators in the field have available all of the information resources of their office environment) and 30 percent less total cost of ownership (TCO) per mobile user.

Based on projected REJ results, GDF expects to reduce the costs of handling and archiving paper documents to virtually zero and to centrally manage three times more user objects with 18 percent less annual server TCO.



“We have centralized the entire management infrastructure of more than 100,000 objects and replicated and synchronized four times more information than we did with our previous system—and we did it in the half the time!”

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 Chief Information Officer  
 Guardia di Finanza

### Situation

The work environment at Guardia di Finanza (GDF), Italy’s financial law enforcement agency, is characterized by a steady stream of financial information, rapid changes in day-to-day market conditions, increasing demand for agency services, and a limited budget.

These conditions challenged GDF staff members to search large volumes of paper-based information, respond quickly and accurately to evidence of fiscal wrongdoing, and effectively manage limited resources. In 2002, the Italian Minister of Innovation directed GDF to:

- Ensure that at least 40 percent of all GDF services and data are available online and remotely accessible.
- Ensure that at least 40 percent of the agency’s internal e-mail is secure by adopting digital signature technology and improving network security.

The Italian Ministry of Finance also required GDF to support the Ministry’s effort to increase the recovery of default tax payments by reducing the time that GDF investigators spend in the office and increasing the time they can efficiently spend in the field by three times compared to the time spent in the office.

Implementing the ministerial requirements as well as fulfilling the mission of their own agency required GDF to modernize an IT infrastructure that serves 66,000 employees, who work at more than 1,400 different sites throughout Italy and is supported by an 18-member IT administration staff in the central office. Given the rising demands on resources

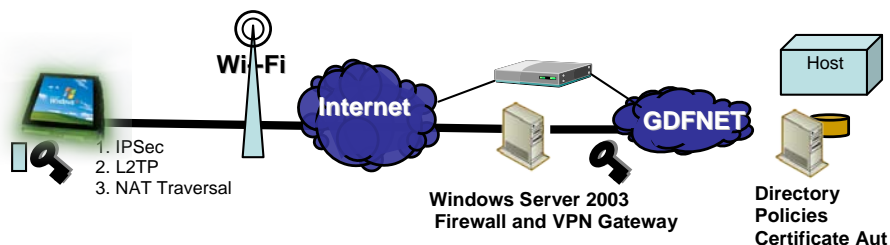
and a shrinking budget, GDF realized that sometimes, it was necessary to “spend one Euro to save three.” As a result, the agency sought a modern server platform that provided an innovative solution that could maintain short-term productivity. The new system also needed to:

- Improve user productivity by enabling agency investigators to respond more quickly to service requests.
- Replace paper-based processes with faster, more secure remote access via a General Packet Radio Service (GPRS) and wireless network solution that helped to expand services with limited personnel and IT resources and helped to eliminate costly paper archives.
- Increase data integrity while lowering the cost of providing critical IT services.

### Solution

Before deploying Microsoft® Windows Server™ 2003, GDF’s highly decentralized IT infrastructure was based on Microsoft Windows NT® Server version 4.0. GDF offices were connected with a low-cost telecommunication network that was built as part of another public works project.

To provide more services to new and existing government customers with existing resources, GDF needed an IT infrastructure that was modern, agile, and cost-effective. Developing a costly proprietary system was not an option, so GDF officials worked with the Italian office of Microsoft Services to provide a solution that included:



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- A wireless extension of the computing system, which provided GDF investigators with rapid online access to the data and application resources of their office while they were in the field.
- More secure workflow and communications management provided by strong user authentication with cryptographic SmartCard technology, which is enabled by Windows Server 2003 Public Key Infrastructure (PKI) and IP Security (IPSec). The new GDF

infrastructure supports TripleDES (Data Encryption Standard) level of encryption.

- More efficient, scalable, and cost-effective centralized data management and network access based on the Microsoft Windows® Active Directory® directory service. This helped to make software and devices easier to deploy and more cost-effective to manage and helped to enable secure, single sign-on capabilities for remote users.

### Benefits

The solution provided GDF investigators with quick access to data and application wherever they worked, avoided the costs of an expensive proprietary network, and deployed and managed a highly distributed system with less time and effort, which enabled the agency's IT department to be more efficient.

#### **Wireless Access to Data and Application Resources Triple Agents' Time in the Field**

When investigating a case, GDF agents would gather information in the field and then go back to their office and compile their notes. If follow-up was necessary, agents would go back to the field, acquire the additional information, and

Business Goal	Technology	Solution Strategy	Projected Business Benefits
Improve field investigator access to data and applications	<ul style="list-style-type: none"> <li>▪ Leverage low-cost public Wi-Fi connections for mobile computing</li> <li>▪ Tablet PCs, PDAs and laptop PCs with Encrypted File System (EFS)</li> <li>▪ IPSec, Network Address Translation (NAT) Traversal.</li> </ul>	Create a wireless computing platform that provides investigators with quick access to applications and data in office or in the field.	<ul style="list-style-type: none"> <li>▪ Faster account follow-up by field agents.</li> <li>▪ Time spent in the field increased threefold.</li> <li>▪ Fewer user errors.</li> </ul>
Increase operational efficiency for a more secure solution	<ul style="list-style-type: none"> <li>▪ Centrally managed digital signatures enabled by PKI and Layer 2 Tunneling Protocol (L2TP)</li> <li>▪ Windows Active Directory directory service and Group Policies</li> </ul>	Use advanced security management technology to help provide secure identity assurance that enables direct connectivity from remote offices without operator assistance.	<ul style="list-style-type: none"> <li>▪ Increased workflow by threefold with no increase in staff.</li> <li>▪ Virtually eliminated cost of handling and archiving paper documents.</li> <li>▪ Reduced time spent in 9,000 administrative processes by at least an average of 5 to 10 days.</li> </ul>
Simplify IT deployment and management while increasing number of users	<ul style="list-style-type: none"> <li>▪ Windows Server 2003 platform scalability</li> <li>▪ Windows Active Directory directory service</li> <li>▪ Server Remote Management</li> </ul>	Use IT management capabilities to consolidate resource and identity management services to 1,400 offices throughout Italy and integrate with the European Union.	<ul style="list-style-type: none"> <li>▪ Deployment costs reduced by 50%.</li> <li>▪ Avoid costs of managing 150 local Windows NT Server 4.0 domains.</li> <li>▪ TCO per mobile user reduced 30%.</li> <li>▪ Server TCO reduced by 18%.</li> <li>▪ Scaled 30,000 Windows NT Server 4.0 managed objects to 100,000 Windows Server 2003 Active Directory objects.</li> </ul>

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repeat the paper-based data entry process in their office. This manual process was time-consuming and increased the time investigators spent in the office instead of in the field gathering information. This situation often resulted in missed opportunities to follow up when information was more readily available.

To provide investigators with quick and easy access to all the data and applications they need to work in the office or in the field, GDF replaced their paper-based processes with digital mobile wireless computing.

The new wireless computing capabilities consisted of Tablet PCs, laptop PCs, personal digital assistants (PDAs), and public Wi-Fi connections based on the 802.11 industry standard. A virtual private network (VPN) solution enabled by Microsoft Windows Server 2003 helped GDF investigators to:

- **Follow up leads more quickly.** By entering data onto their mobile computer or device and uploading the file while they were in the field, investigators could reduce delays in providing the other teams in the agency with vital information.
- **Increase by threefold the amount of time investigators spent in the field.** By providing investigators with access to all of the data and applications of their office while they were in the field, the GDF solution enabled agency investigators to perform follow-up investigations without returning to their offices to document the new information. As a result, investigators could spend more time conducting field investigations.
- **Reduce user errors and simplify IT administration tasks** by providing self-service for time-consuming tasks such as registering user SmartCards with the correct server.

#### **Improved Network Security Eliminates Paperwork and Accelerates Workflow**

Before deploying the Windows Server 2003-based solution, GDF staff members and local Microsoft Services consultants completed an 80/20 analysis. The analysis revealed that at GDF, four workflow patterns represented most of the 9,000 distinct paper-based administrative processes the agency engaged in each year. Agency officials immediately recognized that digitizing the business processes in the GDF infrastructure could accelerate the speed of decision making and reduce the time and cost of archiving documents and other paper handling procedures.

GDF is introducing an automated document handling system that also helps the agency to cooperate safely with other European agency operations. The enabling platform, which was customized for each of the four workflow categories, was based on the Windows Server 2003 Certificate Authority. This technology, which takes advantage of Microsoft Exchange® Server 2003, enables GDF to send email messages compliant to the SMIME security standards between nodes of the workflow.

Expediting GDF paper-based processes required the secure exchange of sensitive information such as financial records. Digital signatures were used to assure the identity of individuals and security of data whenever information was sent electronically. The use of PKI and IPSec technology in Windows Server 2003 provided a legally acceptable way for GDF to help secure sensitive communications. This solution used a Windows Server 2003-based VPN with Smart Card access to assure a virtually unbreakable system.

By securing documents with an easy-to-use and universally accepted technology, GDF reduced the time and related costs of sending documents throughout the agency's document

tracking and handling system. The solution reduced document transit time for each of 9,000 documented processes by at least an average of 5 to 10 days depending on the process and provided network performance statistics that identify bottlenecks.

#### **Management Helps Reduce Server TCO**

To help GDF manage IT resources distributed throughout Italy and the European Union, the Microsoft solution had to include integrated management capabilities that could:

- Remotely control more than 150 Windows Server 2003 servers in GDF's territory.
- Help ensure a high level of security.
- Selectively delegate specific privileges and reserve others to global-level management.
- Provide access to different administrative services over a unified interface.

To provide truly integrated resource management, the network had to be able to:

- Scale the management of approximately 30,000 managed objects (the maximum limit of Windows NT Server version 4.0) to 100,000 Active Directory objects. Without updating the infrastructure, the only method to manage Windows NT Server would have been to create almost 150 local domains and administer each domain individually.
- Implement the most advanced technologies and security processes to protect proprietary information. This required replicating four times more data than previously.

By using the Windows Remote Installation Service (RIS) technology, GDF tested all desktop and server operations of the solution in a pilot program managed from GDF's central office. In that test, Windows Server 2003 demonstrated the effective performance of all required applications. Uptime of 99.956 percent for 6 months with peaks of up to 10,000 users was achieved using beta software that was not yet commercially available. The system went from a pre-

configured installation to what today is a full-bodied, customized configuration. By installing a replica from media, GDF could install a new server and put it into production in less than a twelfth of the time required by the previous IT infrastructure. With the support of one Microsoft Services professional, GDF was able to deploy an average of 19 servers per week. The Windows Server 2003-based solution also provided GDF with these benefits:

- Mobile user TCO reduced by 30 percent.
- Server TCO reduced by 18 percent.
- Server deployment costs reduced by 50 percent.
- Operational costs avoided by consolidating the system management of 150 local domains into a single, centralized domain.
- Service continuity improved to 99.956 percent availability on pre-commercial software.

Colonel Paolo Valle at GDF remarked, "During the development project, Windows Server 2003 technologies enabled incremental synchronization of all the information associated with each user and service throughout more than 150 regional locations.

By using Windows Server 2003, we unified and rationalized the management interface, which helped to improve operations by optimizing work flows. We have centralized the entire management infrastructure of more than 100,000 objects and replicated and synchronized four times more information than we did with our previous system—and we did it in the half the time! As a result, the deployment costs of our Windows Server 2003 system are 50 percent less than those of our Windows NT Server 4.0 platform."

By updating its server platform to include mobile wireless connectivity, digital signatures, and centralized resource management, GDF not only reconfigured its network but changed from a local, independent authority to one that

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For more information about Guardia di Finanza, visit the Web site at <http://www.guardiadifinanza.it>.

interoperates on a European level. As Colonel Paolo Valle at GDF explained, "With other technologies, a change of this magnitude would have cost us months of work. Instead, our solution was designed and implemented in a matter of weeks. The ability to respond rapidly and accurately to both changes in the financial marketplace and the requirements of our internal customers is the essence of agility that Windows Server 2003 provides."

### Microsoft Windows Server 2003

Microsoft Windows Server 2003 enables you to create a highly productive platform for powering connected applications, networks, and Web services. Windows Server 2003:

- Helps you deliver a reliable, secure, scalable platform for applications and network services.
- Makes it easy for you to deploy, manage and use.
- Empowers you with a complete server platform to quickly build connected solutions.
- Enables you to maximize business value by leveraging the largest partner solution ecosystem.

For more information about Windows Server 2003, please visit <http://www.microsoft.com/windows.netserver>.

## Software and Services

### Products

- Microsoft® Office System  
Microsoft Office 2003 Standard Edition
- Microsoft Windows Server™ System  
Microsoft Exchange® Server 2003

### Services

- Active Directory®

### Technologies

- IP Security (IPSec)
- Layer 2 Tunneling Protocol (L2TP)
- Triple Data Encryption Standard (Triple DES)
- Public Key Infrastructure (PKI)
- Encrypted File System (EFS)
- Network Address Translation (NAT) Traversal

## Partner

Microsoft Consulting Services

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