



### Organization

University of Milan, Italy  
Dipartimento di Matematica  
“Federigo Enriques”

### Industry

Education

### Size

Department: 77 Professors,  
and about 800 Students

### Challenges

- Require Linux and Windows
- Need to Run Applications Remotely
- Required Centralized Management
- Students and Staff Required Mobility

### Key Impacts

- Remote access
- Hybrid Linux and Windows Support
- Improve Security and Uniformity
- Faster Software Roll-outs

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## Deploying Virtual Desktops in the Educational Sector

The Department of Mathematics “Federigo Enriques” at the University of Milan implemented a virtual desktop solution using Virtual Bridges VERDE to support their classroom and lab environments for educational purposes. The university workstations operate Windows and Linux and are connected to the LAN with Internet access. The available applications include mathematical-statistical software, programming languages, software for the processing of scientific texts, office automation software, network tools and more.

### Business Challenge

The Mathematics Department was looking for a solution that would allow them to setup labs and classrooms for a total of 120 seats that would support both Windows and Linux operating systems.

All users needed to work on CPU intensive workloads such as mathematical and statistical simulation packages or programming languages while at the same time being able to also use standard office packages.

Users also required the capability to quickly switch between a Windows and Linux desktop or simultaneously work with both while still being able to access the same user data and save the results of their work on a USB storage device.

### Solution

After having considered and tested several VDI solutions on the market, the Department of Mathematics chose Virtual Bridges VERDE because it met its requirements and expectations.

VERDE was also chosen over other market solutions because of its simple-to-use management and because its built-in storage acceleration features meant the University could spend a lot less on server and storage hardware.

Furthermore, the LEAF client software allowed the Department of Mathematics to more easily migrate to VDI by using existing hardware (older PCs already owned), making the solution cost effective.

Users are now able to choose the most appropriate operating system to run mathematical simulation applications and are able to access their shared storage or their own data on a personal USB stick from any physical or virtual desktop.

## Virtual Desktops Provide Unique Features

According to the coordinator of computer services, Dr. Alessio Alessi, the key points of the virtual desktop infrastructure (VDI) focus on a series of unique features, as follows:

- **Desktop virtualization separates the operating system and applications from the client.** This way, the virtual desktop is enabled on the servers of the Department's facility. The related services to clients make use of the network. Access can take place from thin clients, laptops, mobile devices or standard PCs.
- **VDI provides a desktop model whose agility and flexibility are increased** compared to traditional solutions, besides making a more efficient use of resources. Instances of virtual desktops can be prepared, distributed, refreshed and managed from a central workstation rather than individually from each computer in each classroom or lab. Furthermore, it is still possible to run some applications locally and others remotely on the virtual desktop, depending on your application needs.
- **Use of VDI promotes mobility.** The same desktop can be used in different places (for example, to prepare lessons) without the need for additional interventions. The only requirement for the user is the ability to connect one's computer to the network to run the applications available for the virtual desktop.
- **VDI reduces and facilitates the system maintenance operations.** To update a group of virtual desktops, it's sufficient that the administrator apply this update to the master image. By the same method, it's possible to add a new application and make it available more quickly than in a traditional environment.
- **VDI improves the features, uniformity and stability of the system.** Each time the virtual desktop is restarted, its status is restored to the original configuration. This gives the system improved security from viruses and ensures uniformity in the operating environment.

**The Department of Mathematics has chosen VERDE by Virtual Bridges** to achieve these goals and to ensure staff and students an innovative and modern environment.

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**"Virtual Bridges VERDE is a simple to configure and easy to manage solution; and it allows our students to have access from home to the software and applications needed for homework."**

**- Dr. Alessio Alessi, IT Services Coordinator of the Mathematics Department**

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