



“With XenDesktop we achieve a higher availability of PC workplaces with much less expense and no longer have to deal with driver problems or peculiarities of client hardware. Truly said, we are already looking forward to rolling out Windows 7 as a virtual desktop in the company.”

Armin Geyer,  
Project Manager,  
Isola GmbH

## The desktop of the future arrives at Isola

Isola, founded in 1912, has specialized in the production of high grade base materials for circuit board production since 1992. Today Isola is one of the world leaders in this field and operates production locations and sales offices in Europe, Asia and the United States. Isola headquarters have been located in Chandler, Arizona since it was purchased by a consortium of Texas Pacific Group and Redfern Partners.

### The Challenge – Reduce complexity through virtualization

The IT department of Isola GmbH in Düren is now mostly responsible for users of the German company branch but at the same time supports the other locations with know-how and services, for example, in the SAP® field. “Our IT strategy operates under the premises of failure safety and automation,” says Project Manager Armin Geyer. “On the one hand we must ensure that critical systems are available for production 24/7 and on the other hand we want to reduce manual administration processes to a minimum.”

Implementation of these objectives in everyday practice was not always that simple, since Isola operates a very complex and heterogeneous IT infrastructure. More than 250 applications are used in production and management and the computer center also deliberately uses a mix of Linux®- and Windows®-based server systems. When in the past year a major replacement of server hardware was pending, the IT department wanted to utilize the opportunity and simplify administration of the environment by implementing a virtualization solution.

In selecting the appropriate server virtualization technology, those responsible proceeded systematically. “We prepared a requirement profile and by means of a matrix compared the strengths and weaknesses of the solutions available on the market,” explains Geyer. “The key criteria were performance, total costs and administration. We also placed high value on full support for SUSE™ Linux Enterprise.” At the end of an intensive selection phase, Isola decided on Citrix® XenServer™. “The server virtualization solution from Citrix was able to convince us on paper and in all the performance tests,” says Geyer.



## XenServer is the platform for business-critical applications

Jointly with the IT partner Computacenter, the numerous server systems that must be available 24/7 were migrated to virtual machines. Oracle® database servers and Lotus® Domino® servers, file servers, active directory servers and process control computers for production are now also running on XenServer. For administration of the virtualized server environment the IT department is using XenCenter™, the management environment of XenServer. Geyer is particularly enthusiastic about the integrated XenMotion™ functionality, which makes it possible to migrate virtual machines running in production. “This function is the greatest gift that one can give an IT department. If BIOS updates are now pending or servers are to be equipped with RAM, we can accomplish this quite elegantly during normal work time. We simply shift the virtual server to another host and then conduct the maintenance work at our leisure.”

### Key benefits

- Consolidates the server hardware
- Reduces the cost for administration and energy supply
- Increases operational reliability of server systems and desktops
- Accelerates setup of new IT workplaces
- Simplifies lifecycle management of desktops and applications

### Applications delivered

- Microsoft® Office
- OpenOffice
- SAP GUI
- Lotus Notes®
- Internet Explorer®
- Adobe® Acrobat® Reader
- Different special applications

### Networking environment

- Citrix® XenServer™, Enterprise Edition running on HP ProLiant DL380 G5 servers
- Citrix® XenDesktop™, Enterprise Edition running on Dell PowerEdge 2950 servers
- Citrix Provisioning Server™ for Datacenters
- Microsoft Windows Server® 2003
- Rangee thin clients

## Virtual desktops from the datacenter

Following the positive experiences in server virtualization, Isola began to investigate desktop virtualization. The company used to use an automatic software distribution tool to bring the roughly 250 different applications to the individual workplace computers. However, with the increasing number of applications and workplaces, this method was becoming increasingly more labor intensive. “The installation of new applications required considerable coordination expense, handling was quite inflexible and the terminal equipment was also not available sometimes for long periods during updates,” says Geyer. In the search for an alternative, the idea arose of operating the complete user environments as virtual desktops in the datacenter.

Isola examined different virtual desktop infrastructure solutions and decided on Citrix® XenDesktop™. “The decisive points were mostly the multimedia capabilities of the Citrix technology and the good interaction of the individual infrastructure components,” says Geyer. “Computacenter had also introduced considerable technical know-how in the planning phase and developed a solution that precisely fit our requirements.”

One objective above all was to keep administration expense as low as possible. With the implemented XenDesktop solution, Isola need not set up and administer its own virtual desktop for each workplace, rather a standard image of the operating system can be used for any number of users. With the provisioning technology of XenDesktop, the virtual desktop image is streamed to the virtual machines, which now run in five XenServer hosts. The applications for the different user groups are not hard-wired to the desktop image but are brought to the virtual desktop via application streaming. For this purpose, Isola uses the integrated Citrix® XenApp® functionality of XenDesktop. The individual user profiles are also dynamically assigned to the desktops.

## Simple administration, reduced energy consumption and maintenance expenses

“Setting up a new user desktop has become child’s play in this environment—what used to take an average of five to six hours can now be accomplished in a few minutes,” says Geyer. “From an administration standpoint we are very pleased that we are now profiting from the high availability functions of XenServer even in the desktops. Should a host computer fail, virtual desktops are automatically restarted on the remaining servers.”

The first thin clients for access to the virtual desktops were implemented by Isola in the production area. Here, robust end equipment without moving components offers major advantages, since dust or heat can do little harm to them. Alongside this, the company also reduced its energy bill: About 8,000 Euro—the estimate of the project manager—is already being saved by Isola the first year thanks to the energy-saving thin clients.

User comfort is not restricted by XenDesktop desktop virtualization—quite the contrary: Just a few seconds after login the virtual user environment is available to the user. The lengthy boot process has been eliminated, since the instant-on function of XenDesktop keeps each desktop in the idle mode. Isola also deliberately decided on the use of the high performance thin client that also support resource-intensive multimedia applications like video streams in conjunction with the HDX™ technologies of Citrix.

## A view into the future – Windows 7 as virtual desktop

After the production workplaces, numerous desktops in management and in the training area will now also be virtualized. Overall the plan is to expand the solution initially to about 200 of the 300 workplaces. Geyer is fully convinced of virtualization. “We have achieved major progress in all areas: our datacenter is almost empty, the air conditioning system has become too large, the administration expense has declined significantly and at the same time the operational reliability of our server system has risen. The situation looks the same in the desktop area. With XenDesktop we are achieving higher availability of PC workplaces at lower cost and no longer have to deal with driver problems or peculiarities of client hardware. Truly said, we are already looking forward to rolling out Windows 7 as virtual desktop in the company.”



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### About Citrix

Citrix Systems, Inc. (NASDAQ:CTXS) is the leading provider of virtualization, networking and software as a service technologies for more than 230,000 organizations worldwide. Its Citrix Delivery Center, Citrix Cloud Center (C3) and Citrix Online Services product families radically simplify computing for millions of users, delivering applications as an on-demand service to any user, in any location on any device. Citrix customers include the world's largest Internet companies, 99 percent of *Fortune* Global 500 enterprises, and hundreds of thousands of small businesses and prosumers worldwide. Citrix partners with over 10,000 companies worldwide in more than 100 countries. Founded in 1989, annual revenue in 2008 was \$1.6 billion.

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