



Telefónica O₂ Germany

Citrix Application Delivery for Telecommunications

“With XenDesktop, we can ensure that developers are able to operate their virtual Windows XP desktop, including all applications, as smoothly as their locally installed user environment—irrespective of the geographic distance to be covered.

”
Klaus Stein
Lead Project Manager,
Telefónica O₂ Germany
GmbH & Co. OHG

Key benefits

- Supports cost-effective, efficient outsourced software development
- Safeguards intellectual property used by external developers
- Provides high application performance even in geographically remote locations
- Avoids need to have developers travel to corporate office

Telefónica O₂ Germany Sends Virtual Desktops on a World Tour

Telefónica O₂ Germany GmbH & Co. OHG belongs to Telefónica Europe and is part of the Spanish telecommunications company Telefónica S.A. The company offers its customers in Germany contract-based and prepaid cell phone products, as well as mobile data services using GPRS and UMTS technology. In addition, the company provides high-speed DSL Internet connectivity and fixed-line telephone service.

The company's telecommunications products are distributed through approximately 570 O₂ retail stores and O₂ partner stores throughout Germany. Further, O₂ has expanded its distribution network over the past few years by means of a joint venture with Tchibo and cooperation with service providers such as mobilcom, debitel, Talkline, Telco and Victorvox.

The challenge: expanding Citrix application delivery to external developers

For several years, the company has been using Citrix Presentation Server™ to deliver a comprehensive point of sale (POS) application to retail shops. The application covers practically all of the distribution partners' business processes—from the till system, through logistics, to reporting. “We run the application on a central Citrix Presentation server farm and deliver it to our partners via protected Internet connections,” explains Klaus Stein, lead project manager at O₂. “The advantages from our point of view are clearly centralized administration and data management, and simple and secure Web-based access, as well as the ability to deliver application updates to all partners at the same time.”

O₂ cooperates closely with partner companies not only in distribution, but also in the development of applications. The telecommunications provider outsources some of its software programming to external service providers. “Taking this into account, our IT organization was directed to develop a solution for remote access for external specialists,” said Stein. “The aim was to avoid having to bring programmers to Germany and instead make development possible from any location.”

Those responsible for IT at the telecommunications provider discussed various solutions to this challenge. “One idea was to send fully configured desktop PCs to the developers,” said Florian Loos, an IT architect at O₂. “This approach came to nothing, however, because of the massive logistical expense and secondly, because of security considerations. It had to be guaranteed under any circumstances that critical company expertise does not leave the company.”

Networking environment

- Citrix Presentation Server™ running on HP servers
- Citrix® XenDesktop™, Advanced Edition running on 2 HP ProLiant servers
- Microsoft® Windows Server® 2003
- 100 PCs at different locations

Implementing a Citrix desktop virtualization solution

With support from **Bechtle AG**, a Platinum Citrix Solution Advisor, the company therefore began to consider the topic of desktop virtualization for the first time. In this procedure, the entire desktop environment is separated from the client device and runs via a virtual machine on a central server. Users access their individual desktop environment over a network connection while the operating system and all applications run entirely in the datacenter.

This approach provided a single answer to all of O₂'s various requirements. Together with the Bechtle Competence Center for virtualization, the IT organization developed a consistent concept with the aim of protecting the company's intellectual property without negatively impacting the productivity of the external programmers. "A fundamental consideration was that the developer desktops in Munich would run in an environment completely isolated from the rest of the company's IT," explained Stein. "At the same time, we decided that the developers' end devices should not be included in the local network for external partners." As further security measures, encryption of communications between clients and servers via SSL VPN, as well as authentication of users by client certificates, were incorporated.

The topic of performance was then crucial in O₂'s decision regarding a virtual desktop solution. As power users, software developers require a very high-performance environment. Even in the case of access via long distances and connections with a higher level of latency, they must still be able to work with their applications smoothly.

"Based on our previous experience with Citrix technology and its good performance, we decided to implement a Citrix XenDesktop solution for desktop virtualization with the ICA protocol," said Stein.

High-performance desktop delivery, even across long distances

The ICA® protocol developed by Citrix supports the delivery of virtual user desktops via any network connection and does so up to twice as quickly as other solutions. Integrated SpeedScreen™ technology ensures high-performance screen representation and eliminates delays for keyboard entries and mouse clicks so that applications can also be used via connections with a high level of latency. Stein emphasized that these factors played a decisive role for O₂. "With XenDesktop, we can ensure that developers are able to operate their virtual Windows XP desktop, including all applications, as smoothly as their locally installed user environment—irrespective of the geographic distance to be covered."

Around 100 virtual desktops were set up on two physical servers in the first stage. At peak times, 50 developers are accessing their user environments via Citrix® XenDesktop™, Advanced Edition at the same time. The feedback received from external partners is consistently positive, according to Stein. "Even in India, the response times for the applications are completely acceptable. The programmers can work at a high level of performance with the many development tools that we make available through the virtual desktops."

A successful business case for desktop virtualization

"We are already able to talk about a successful business case," continued the lead project manager. "The IT organization is therefore considering an extension to the XenDesktop solution. With the existing solution, it would be possible to incorporate other external service providers and supply them with applications. From a technological point of view, other extensions can also be considered. Those responsible for IT are currently dealing with topics such as lifecycle management and provisioning of

the virtual desktop, integration of virtual applications, and performance monitoring for access over long distances. It is now being investigated whether additional components of XenDesktop could be used in the future.”

Applications delivered

- Virtual desktop (Windows® XP SP2) with application-specific development tools for external development partners
- Point of Sale application for O2 stores and partner stores

About the Citrix Solution

Citrix Presentation Server™ is part of the Citrix XenApp™ product family, the new name for Presentation Server. It is the de facto standard for delivering Windows® applications at the lowest cost to any user, anywhere. Citrix® XenDesktop™, a member of the Citrix Delivery Center™ product family, allows customers to virtualize Windows® desktops in the datacenter and deliver them on demand to office workers in any location.

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