

Virtualized IT Landscape

After the migration at the Bayerische Hof, the following systems, among others, are operating from the new virtual environment:

- Micros-Fidelio Version 6
- Micros-Fidelio Sales & Catering
- MS Exchange
- Serenata @mail for V6 and for S&C
- Micros-Fidelio Materials Control
- Micros 9700
- TAC Reservation Assistant
- Time Management
- WinBasys
- Museum Plus
- HR

Serenata IntraWare GmbH
Berg-am-Laim-Str. 47
81673 Munich, Germany
Phone: +49 (0) 89-929003-0
Fax: +49 (0) 89-929003-20
info@serenata.com
www.serenata.com



Serenata Reshapes the IT Landscape at the Hotel Bayerischer Hof in Munich with a New Virtualized Solution

By implementing a new IT infrastructure, the Bayerische Hof has secured the IT operation for the next five years minimum and profits from more efficient systems and enormous performance increases.

The year 2007 marks the complete redesign of the system infrastructure at the Hotel Bayerischer Hof, München (HBH). The contract for the tendered project was awarded to Serenata IntraWare GmbH in cooperation with Dell.

Starting point for the IT redesign in the hotel was a technology that had come to its limits in performing the processes required for the luxury hotel with 373 rooms and suites, four restaurants, six bars, the night club, the Blue Spa with pool and fitness room, the large ballroom and 40 further function rooms, as well as the "Komödie im Bayerischen Hof" theatre with 560 seats.

The management was dissatisfied with the lack of extensibility and the inconsistent system environment. In addition to varying versions of the operating system Windows, Novell, Unix, AS/400, and Siemens 8862 were running parallel. Furthermore, there was no central backup; data was backed up partially to workstations with large disks.

The design of a comprehensive and lasting solution only became possible by taking advantage of the most recent IT developments.

Norbert Sigl, Director Economics & Finance at the Hotel Bayerischer Hof explains: "Similar to many other hotels, our last major investments had been carried out in context with the Year 2000 conversions. It was time for an encompassing modernization of our IT infrastructure."

The new solution which has been implemented successfully in the meantime, is based on a virtualization of the server environment. Virtualization means the disconnection of the physical hardware from the operation system, by which you can achieve a better utilization

of the IT resources and more flexibility. For example, you can run any application and operation system on the same server, completely independent of the underlying hardware. Moreover, the number of required machines is consolidated; you switch from many small servers to a few high-performance servers. They are more efficient, stable, involve less maintenance and are even extendible. In addition, they require less space and electricity.

In the case of the Hotel Bayerischer Hof, the virtual machine concept was implemented as follows: instead of 27 required servers and interface PCs, the hotel today works with only 8 physical servers. This includes a VMware ESX Cluster with 3 hosts, on which 23 virtual machines are running, another 4 Citrix MetaFrame servers for the thin clients as well as one backup server. From this platform, all networks and interfaces as well as all software applications are operating. Instead of PCs, 100 workstations were equipped with thin clients.

The storage of the hotel data today takes place to a central Storage Area Network (SAN). This collective storage facility contains the data of all users and all software applications. The users now access their software applications via Citrix. By centralizing the software in the Citrix environment, the central management of all access rights and central user administration is possible. What is more, the management of clients has been drastically simplified. The separate backup server takes care of the permanent data storage.

The hardware concept was selected to be failsafe in such a way that a maximum of system reliability was achieved. In cooperation with Dell Computer, Serenata compiled an offer covering all hardware investments. Additionally, the migration of all existing applications and all user and group data to the new infrastructure was planned and carried out step by step in the Bayerische Hof by the Serenata system specialists. Today, after the successful migration of all systems, most of the applications in use at the luxury hotel, such as for example the Property Management System, the Sales and F&B solutions but also MS Exchange and time tracking are operating in the new virtual environment.

(For details please see gray box on the left.)

“An absolute main requirement for the conversion was a further guaranteed 365 day 24-hour-operation at our hotel,” explains Norbert Sigl. “It had to be evident to us that the conversion could be carried out step by step without significant system downtime.”

The new VMware-based Cluster solution provides the hotel with several surplus values. Firstly, there are the obvious cost savings achieved in the investments. Taking merely the hardware and licence costs, the hotel saved more than Euros 100,000 in comparison to conventional fail-safe systems. Secondly, the system management today is much more transparent and easier to control. Thirdly, the running maintenance costs (for example for servicing) and the software license costs have been minimized. Fewer servers also mean that the internal service and management expenditure is easier and more transparent.

With the Cluster and the central SAN environment as well as the external backup server, the hotel achieves a high fault tolerance in comparison to the old system. The entire data storage takes place within the central SAN environment, which in turn is backed up at regular intervals. Thanks to the server virtualization, the performance has been increased significantly. By distributing the required processes via the virtual servers, the performance of all machines is balanced optimally. Thus, for example, the night audit for the Fidelio Property Management System at the Hotel Bayerischer Hof today only takes a quarter of the time required previously. The staff at the hotel are also very pleased since the applications after the conversion run roughly twice as fast, which has drastically increased the efficiency, especially of time-consuming processes, such as for example time tracking or payroll accounting.

Concluding the project, Herr Sigl summarizes: “We are pleased with the positive development of this strategic project. In addition to the higher fault tolerance and the simplified management, the conversion to a new IT infrastructure provides us with an enormous flexibility. We can extend the solution at anytime without running into problems and we have secured the IT operation at the hotel for at least the next five years.”

The Mission

The Hotel Bayerischer Hof is one of the showpieces in Germany's hotel industry, and has always been prominent for combining history with modern comfort. The luxury hotel wants to re-assume this leading role also in the area of communication and data processing. The plan is to implement a new IT infrastructure consisting of fewer servers, a central data storage area and a central backup facility. By implementing the conversions, the IT operation at the hotel is to be secured for the next five years (at preferably little additional investments.)

The Scenario

Since the substantial investments that were carried out in context with the year 2000 conversions, no more hardware or infrastructure measures have been carried out.

Main Requirement: In the Hotel Bayerischer Hof, a 365*24-hour-operation has to be guaranteed. The projects have to be carried out step by step without significant system downtime.

Implementation

- Almost failsafe system reliability and fault tolerance thanks to fallback procedures. No single point of failure is left. One of the three ESX hosts in the cluster or one of the four Citrix servers can fail without interfering with the user or the operation.
- Ideal use of server consolidation and virtualization. Reduce the number of servers from former 27 to only 8 physical servers, on which 23 virtual machines are operating.
- Number of PCs in the hotel are reduced to a minimum. Instead; thin clients are implemented. They are controlled via Terminal Services (more than 100 of the 120 workstations at the hotel are replaced with thin clients.)
- Installing a new thin client workstation is a matter of five minutes.
- New central Storage Area Network (SAN) for storing all application and user data.
- User access to all software applications is carried out via Citrix. This means that all user and access rights can be controlled centrally.
- External backup server guarantees a permanent data storage
- The VMware Cluster can - and in the future will - include further virtual machines. Apart from the additional software licenses, no more costs are incurred by this step.
- Implementing a new virtual machine is carried out in less than an hour.

Main Benefits

- Enormous performance increases for all systems
- Easier management and support of the system environment thanks to a simplified structure and the consolidation of servers.
- Advanced technical infrastructure
- Reduction of operative costs
- Extensive investment protection for at least 5 years
- The solution can be extended easily
- Automatic balancing: the 4 Citrix servers as well as the 3 ESX Hosts in the Cluster distribute the load automatically
- Almost failsafe system reliability and fault tolerance thanks to fallback procedures. No single point of failure is left. One of the three ESX hosts in the cluster or one of the four Citrix servers can fail without interfering with the user or the operation.

Munich-based **Serenata IntraWare GmbH** has established itself as a leading provider for central IT solutions in the hotel industry. With the aim to transform data into knowledge, Serenata integrates its products with existing PMS systems seamlessly. The core element is the management information system for hotel chains, Serenata NetHotel. By means of a central data warehouse and the use of Internet technology, data is centrally analyzed, and the foundation for new markets is created. With NetHotel, Serenata offers a Customer Relationship Management (CRM) solution, which enables hotel chains to develop a customer-centric business strategy. Through strategic cooperation with prominent IT partners, Serenata increases its competence as the main contact for central user-solutions from a sole provider. For more information, please visit www.serenata.com.

The multiple award-winning Hotel Bayerischer Hof with 373 rooms including 60 suites owned by the Volkhardt family for four generations ranks among the leading German hotels. The ballroom as well as 40 function rooms provide the right surrounding for events with up to 2.500 guests. With a breathtaking view over the city of Munich the wellness area Blue Spa - designed by star architect Andrée Putman - offers well-being at the highest level. The Hotel Zur Tenne in Kitzbühel, Austria and winery Weinkellerei Gebr. Volkhardt, are also part of the group.