

Welde - old brewing art with the latest technology!

Protecting production security by Virtualization infrastructure

At a glance

BACKGROUND

The 1752 founded private Welde brewery in Plankstadt has an annual production of 100 000 hectoliters. With their 50 workers under the direction of Dr. Hans Spielmann their annual sales amount about 10 Mio. Euro. Besides the trademark Welde No1 Premium Pils sorts like “WeldeEX”, “WeldeGold”, different wheat beers, as well as trendy alcoholic beverages like “REMIX” and “Welde-WeizenGrape” are part of the portfolio which in combination with the “dancing” bottle represent the modern image of Welde.

In 1994 Dr. Hans Spielmann originated the “WeldeKunstPreis” and labels ever after a limited number of “WeldeLustFlaschen” with labels designed by artists.

CHALLENGE

The Welde brewery was been controlled since 2008 by BRAUMAT Compact 2.0, PCS7 V 7.0 from Siemens. This system requires the operating system Windows XP or Windows Server 2003. These operating systems are not supported by Microsoft any longer and there is no hardware available on the market.

SOLUTION

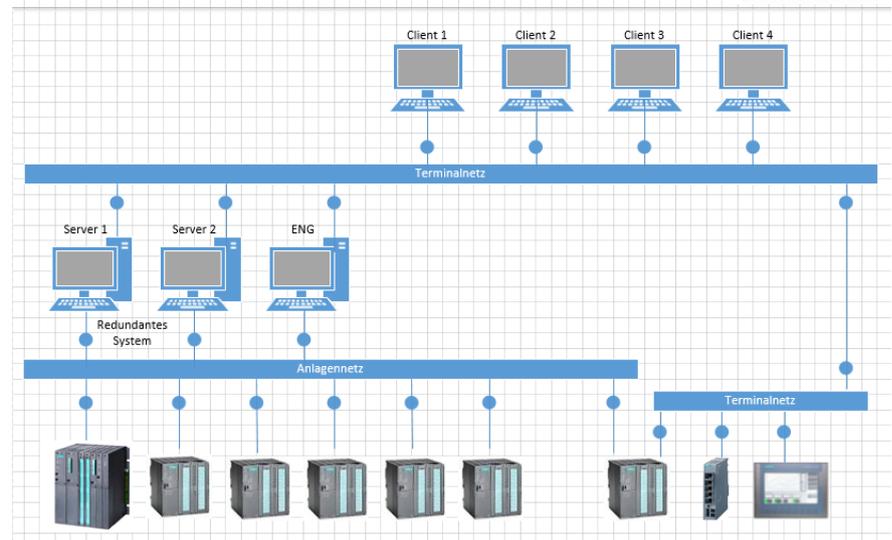
The existing system shall be virtualized and mapped to 2 ESXi hosts from VMware.

The bottle with the worldwide unique design: The “WedelustFlasche” – the trademark of the Welde brewery. Besides the design of the Welde bottle also the production of the beer complies with latest imagination. Due to the installation of BRAUMAT compact through PSA - Gesellschaft für Automatisierungs- und Integrationstechnik mbH from Heidelberg the Welde brewery benefits from integrated and efficient process automation which boosts the productivity of the processes and protects the future of the investments.

Long-term perspectives and efficient production processes are necessary for sustainable corporate development, production reliability and reliable operation.

Since Welde Brewery uses the BRAUMAT Compact 2.0, PCS7 V 7.0 system from Siemens which is depending on Windows XP and Windows Server 2003, it became necessary to find a sustainable alternative. The support for both operating systems was significantly reduced by Microsoft and then totally discontinued in April 2014. Matching hardware is no longer available on the market.

Network Structure before Virtualization



Several computers are integrated in the process control system.

After extended testing Welde brewery decided in favor of a “virtualization of the process control system”. The PSA – Gesellschaft für Automatisierungs- und Integrationstechnik mbH mapped the system to 2 ESXi hosts from VMware. All physical computers from server 1 to the clients were virtually emulated on each of the 2 ESXi hosts. The virtual control system now included 4 servers, 2 engineering stations and 8 clients.

After installation of the virtual world, the physical servers 1 and 2 were taken off the network. The virtual servers now took over all tasks. The physical computers of the clients now serve as Thin Clients.

ADVANTAGES

- Existing process control system can be retained
- Efficient engineering
- Independent from new hardware
- Rapid commissioning
- Short conversion time Zukunftssicher
- Future-proof
- Reduktion of the total cost of ownership (TCO)

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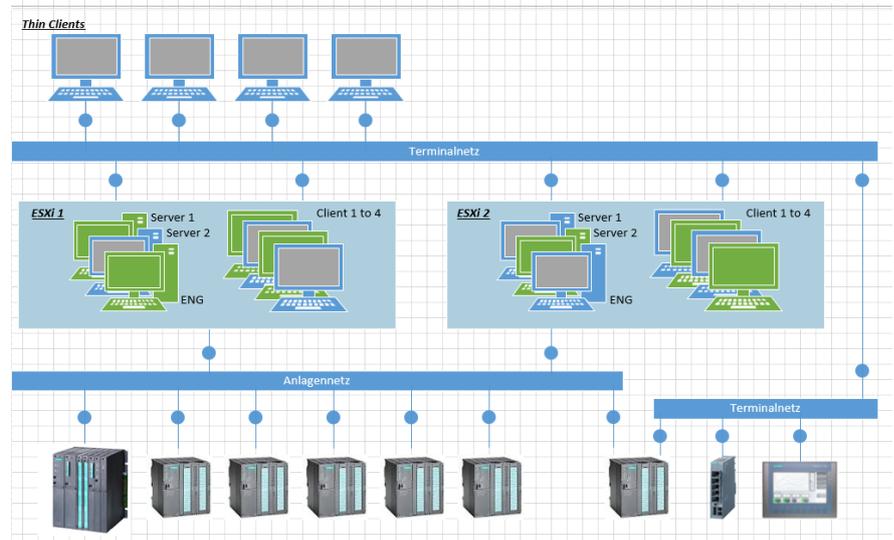
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//www.welde.de/r05/welde_gb_us.htm

Via VNC (Virtual Network Computing) or RDP (Remote Desktop Protocol) these thin clients turn into virtual clients. Switching from the physical world to the virtual world takes a few minutes!

Network Structure after Virtualization



The previously redundant system is now mapped twice to 2 ESXi hosts.

Active on ESXi host 1

- Server 1, ENG, client 2 and client 4

Active on ESXi host 2

- Server 2, client 1 and client 3

Protect your Production Reliability by the Virtualization of your Infrastructure!

The development of new hardware or operating systems gets faster and faster. On an almost daily basis we hear from newly launched systems. Outdated hardware and older operating systems disappear from product portfolios. The reliability of many plants is endangered by this development.

Most companies have some older applications that still run on a Windows 2003 server – such as time recording, stock control or material flow! But what, if this computer crashes?

We successfully implement the virtualization of complete process control systems in various industries.

Some examples are:

- cement plant (PCS7 V5 CEMAT V5)
- cement plant (PCS7 V6.1 CEMAT V6.1)
- gravel plant (WinCC V6)
- and others

The virtualization of process control systems is a modern alternative to an upgrade. This solution is an economically interesting and future-proof solution for every company in all areas of industry.