

■ Reference Project Intel®

Active Management Technology



METRO Group boosts efficiency and cuts costs by using Remote Management

METRO Cash & Carry POS system benefits advanced from remote management capabilities. By using Intel® Active Management Technology on BEETLE /M-II plus POS Systems, significant improvements in terms of availability and cost reduction were achieved.

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Reference Project

Intel® AMT on Wincor Nixdorf POS Systems

PROJECT OBJECTIVES

METRO Group is one of the largest and most international retailing companies, maintaining more than 2,100 stores in 32 countries with a total workforce of some 300,000 employees. The corporation comprises many store brands managed by four services companies, including METRO Cash & Carry, with stores in Europe, Asia and Africa. METRO Cash & Carry caters to professional customers including hotels, restaurants, caterers and small grocery retailers, as well as public-sector institutions such as hospitals and government agencies. The Cash & Carry principle is that customers themselves select the purchases from the wholesale store shelves, then pay and take the goods with them.

With more than 650 locations in 29 countries, METRO Cash & Carry deploys over 15,000 point-of-sale (POS) systems that are continuously supported by IT personnel at the headquarters. Since these systems represent a significant portion of the company's store IT infrastructure, METRO Group wanted a POS solution capable of achieving the

following total cost of ownership (TCO) objectives:

- Increase IT efficiency by improving POS remote management capabilities
- Lower costs by reducing the power consumption of the POS systems

To achieve these goals, METRO Group had to overcome some significant challenges.

KEY CHALLENGES

Limited Remote Diagnostics

Trying to repair POS systems, PCs and servers using remote diagnostics, IT technicians frequently faced roadblocks because systems were shut down or operating systems froze. As a result, it was impossible to read event logs and error messages or view the system configuration, such as hardware devices and software components. The only course of action, dispatching an onsite technician to diagnose and remedy the problem, was costly and time-intensive.

POS Systems Always On

METRO Group's headquarters in Düsseldorf regularly exchanged electronic data with every one of its POS systems. To avoid interfering with the checkout workflows at the point of sale, these updates were dispatched at night and not during the business hours. Consequently, POS systems could not be switched off at the end of the day, so they consumed power 24 hours a day.

IMPROVING REMOTE MANAGEMENT

Facing fierce competition in the retail sector, METRO Group was looking for new ways to increase efficiency and cut costs. With respect to its IT organization, METRO Group saw an opportunity to service POS systems more quickly and at lower cost by deploying an improved remote management system. After thoroughly studying the features of the Intel® Active Management Technology (Intel® AMT), METRO Group decided to implement this technology for its METRO Cash & Carry POS systems.

Intel AMT enables IT professionals to query devices, even if they are powered off or when key device components, like the operating system, CPU, hard disk drive or network drivers, are failing. This is possible because Intel AMT adds new circuitry to Intel® processor and chipsets that communicates with the remote management console without intervention from the computing system.

METRO Group selected the BEETLE /M-II plus POS system from Wincor Nixdorf, a company with a proven track record serving international rollouts.



The BEETLE POS system is based on the Intel® Q35 Express chipset and supports Intel AMT and other METRO Group requirements, such as a retail-hardened system design, a rich set of configurable peripheral interfaces and longevity of the system. Through the deployment of the BEETLE /M-II plus and a more capable remote management system, METRO Cash & Carry achieved its TCO objectives and noted the following successes:

KEY SUCCESSES

Improved diagnostic capabilities

Delivering more diagnostic functionality, Intel AMT permits METRO Group administrators to remotely access system configuration and event data regardless of its state, including when it's shut down. The new BEETLE POS systems are constantly storing event logs and other important data, like temperature, fan speed and BIOS boot problems, which can point to the root cause of a system error. Since this remote management solution does not rely on any system software, it continues to function even if the operating system or other system software is corrupted.

Moreover, Intel AMT sends complete and precise information on the software and hardware inventory to METRO Group helpdesk staff. This data, including model/serial numbers and BIOS settings, is saved in the BEETLE motherboard's non-volatile

memory, which is accessible regardless of the system state. METRO Group anticipates these functions will enable IT professionals to quickly identify the underlying causes of system faults and determine how to repair the system.

Lower power consumption

This innovation, combined with the deployment of power efficient Intel® processors and 80PLUS power supply unit technology of the BEETLE, lowers the BEETLE systems' power consumption, which generates considerable cost savings and protects the environment.

Fewer onsite repair visits

Enabling more repairs over the network, Intel AMT-based solutions can remotely install operating systems and application software, even when POS systems are powered off or the software isn't functional. This feature redirects the boot drive of a given BEETLE system to a remote drive, which typically resides on the network and contains a 'golden' software image.

For example, Intel AMT, which complements METRO Group's legacy solutions, will install software on BEETLE systems remotely, thereby fixing software issues more quickly. Similarly, management console redirection enables system administrators of METRO Group to review BIOS setup parameters and change them, if required. These system

The BEETLE /M-II plus POS Systems offer further technical highlights additional to the functions the METRO Group uses already.

- Energy-efficient Intel Desktop Processor-Technology with highest performance levels
- Flexible I/O POS interfaces
- Power saving 80 PLUS power supply
- Advanced Intel® Technology Options (AMT, VT, TPM)
- Onboard RAID Controller
- Optional, integrated uninterruptible power supply

Those features leads to variable capabilities of the BEETLE /M-II plus in different environments of the retail world.

METRO Group

METRO AG



Cross-divisional companies

Successful implementation at METRO Cash & Carry



management tasks can be performed without user or onsite technician support. Errors that previously required onsite technicians can now be handled remotely, which dramatically shortens system downtime and saves man hours.

OUTLOOK

METRO Group believes automation of software deployments will grow in significance in the retail industry. All of the experience gathered during the installation of the AMT-enabled BEETLE POS systems will be analyzed for new product groups. The compatibility of Intel AMT across various platforms would facilitate the implementation of substantially improved management solutions within METRO Group's existing store IT infrastructure.

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