

Oracle Technical Forum -- Charon Overview



Thomas Siebold

Started with Digital Equipment Corporation:
10'1978

digital

Joined Compaq Computer: 1997

COMPAQ

Downsized by Hewlett Packard: 12'2009



Will retire: 19. Nov. 2018

Now my own boss

Senior Sales Engineer for Stromasys EMEA

- Who is Stromasys?
- What is Charon?
- Charon universe
- Solution galaxy
- Customer examples



- Established in 1998 through a management buyout of Digital Equipment Corporation's (DEC) European Migration and Porting Center
- Based in Geneva, Switzerland, customers in more than 50 countries
- Over 90 dedicated engineers and support people world-wide
- Over 5,000 customers world-wide
- In-depth expertise in OpenVMS and Tru64



Company structure



Geneva, HQ & EMEA



Boston, HQ

Engineering

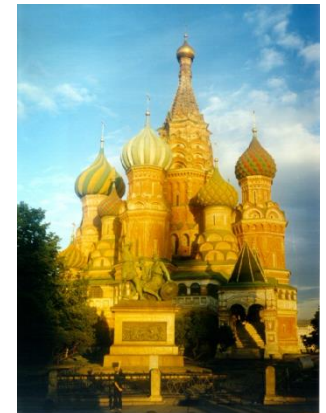


Raleigh NC, NMSA

London
Paris
Ulm
San Francisco
Singapore
Bangalore



Shenzhen



Moscow

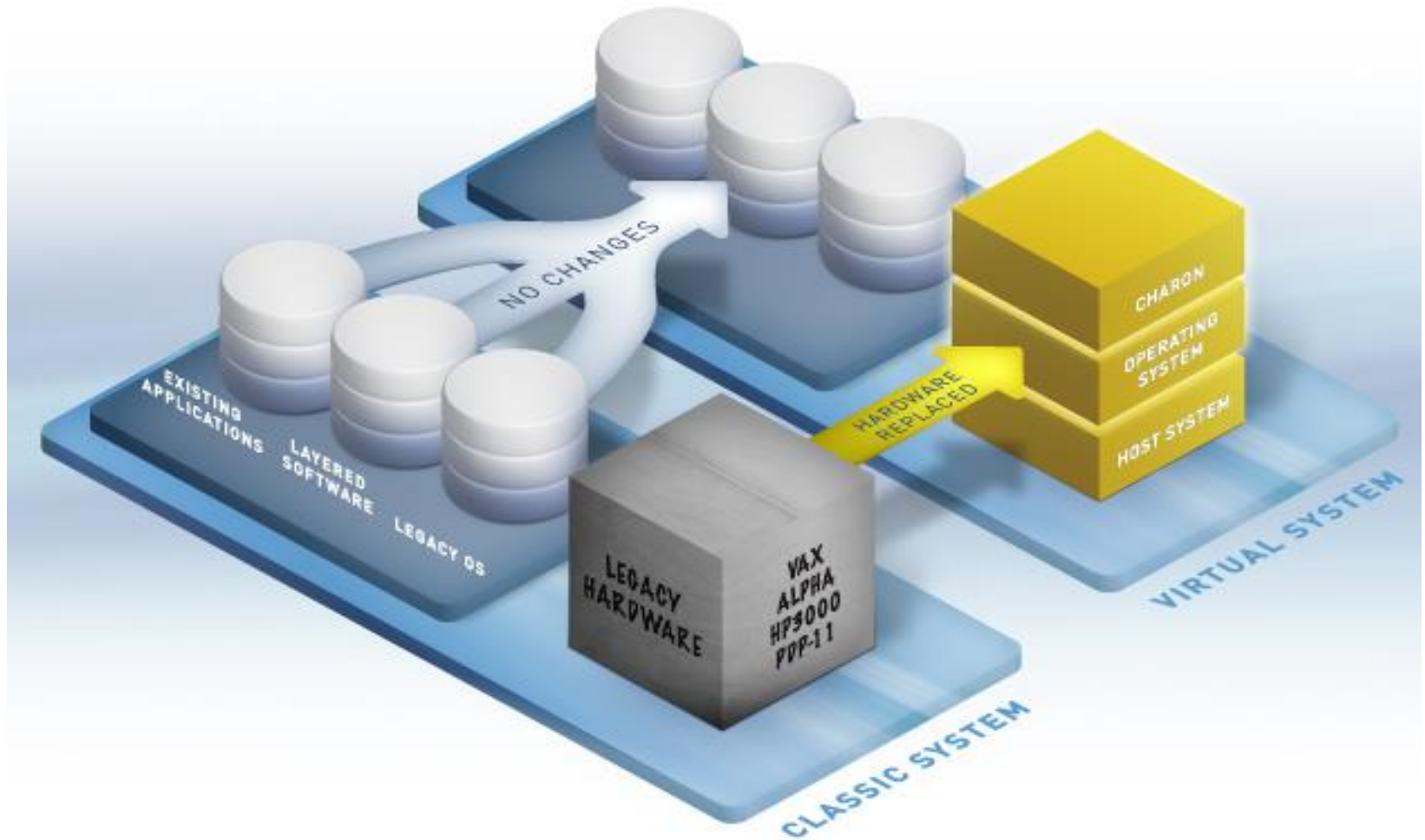


HongKong, APAC

Company Milestones



Cross-Platform Virtualization: The Principle



CHARON Universe

- Over 3,000 licenses sold

- Market segment:

- Stand-alone systems for process control or administration systems
- Military and industrial stand-alone or embedded systems
- Corporate VAX data centers using high performance cluster systems

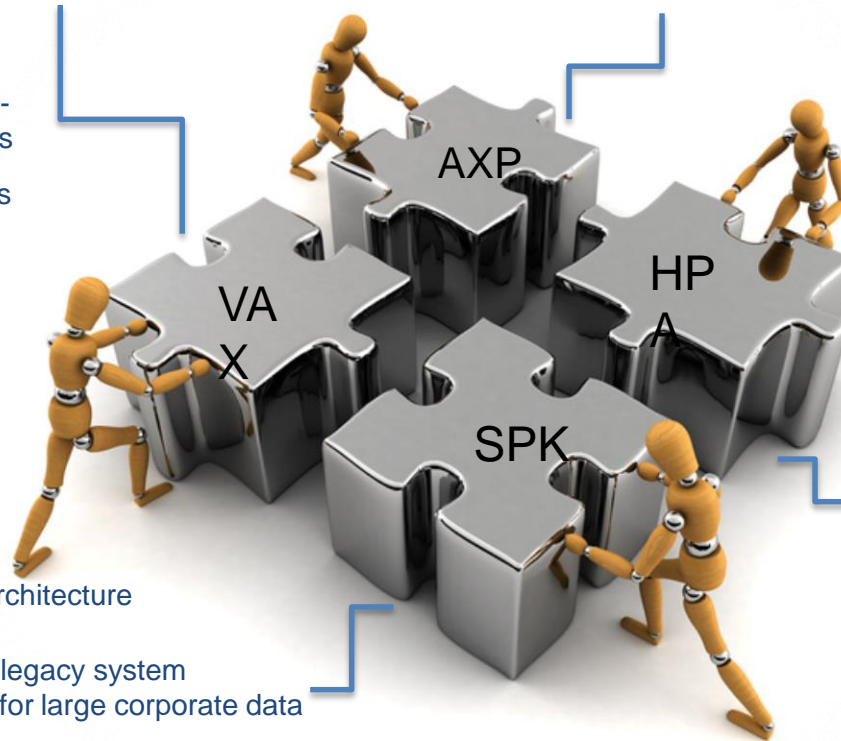
- Developed for SUN SPARC architecture

- Market segment: high volume legacy system consolidation on server farms for large corporate data centers

- Our emulator currently functions exactly like the SPARC station 20 hardware

- Over 2,000 licenses sold

- Market segment: worldwide market similar to VAX, but more frequently found in administrative systems



- CHARON-HPA runs HP 3000 MPE operating system and its applications

- Market segment: online order processing, inventory control and general administration

- Unique environment: application migration rewriting requires investments of \$1 million+ for clients/users

Cross-platform Server Virtualization

Hardware virtualization at the server level

- No emulation of legacy OS
- No patching of legacy OS
- No emulation of any component of software stack
- Legacy OS and application run unchanged

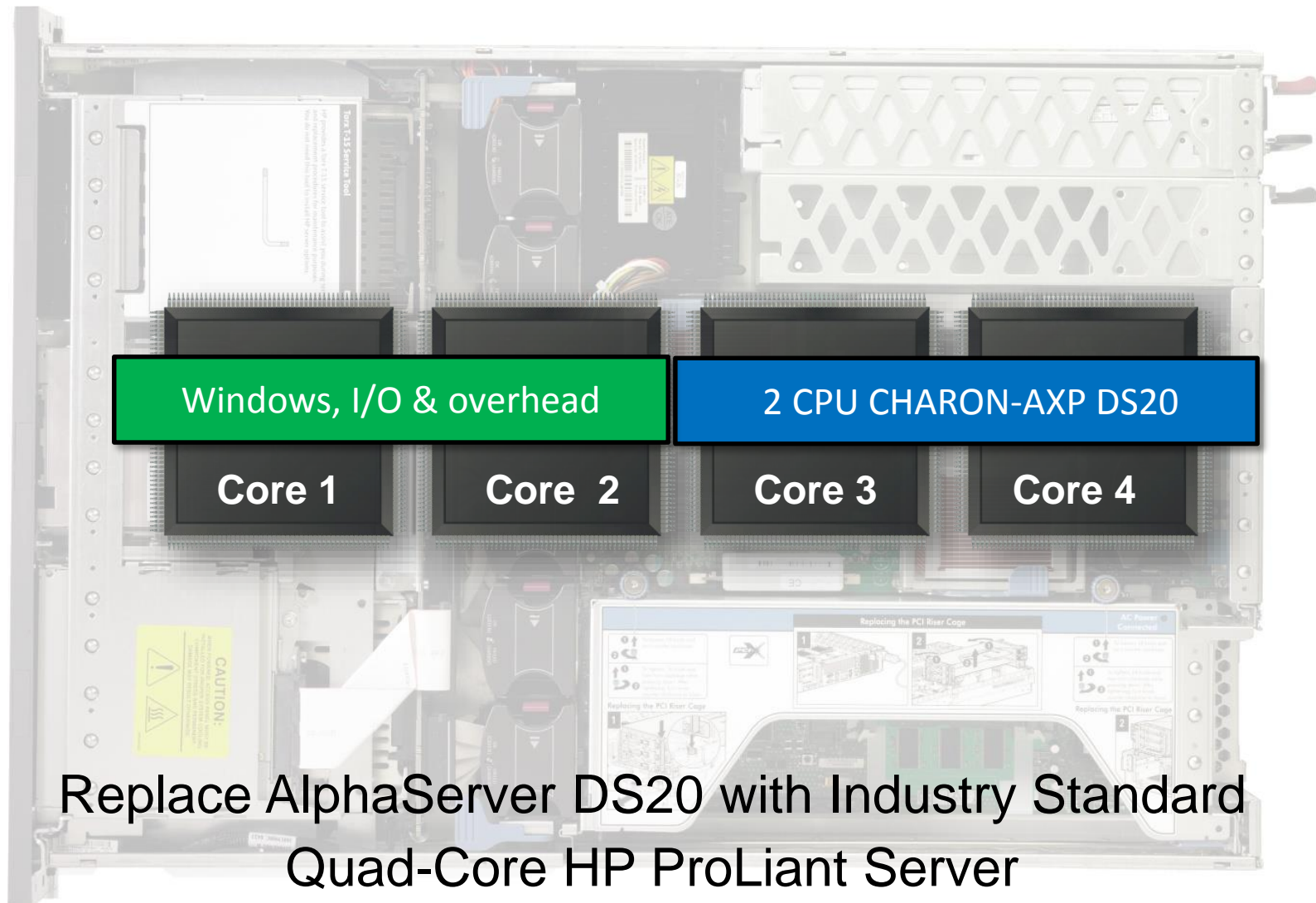


- Increases performance with modern CPUs, storage systems, and networks
- Preserves current investments
 - Keep current applications and business processes
 - No re-training or re-staffing
 - No impact on day-to-day operations
 - No re-certification
- Reduces cost of ownership
 - Reduced footprint, energy consumption, cooling needs
- Minimum effort and low risk to migrate
- Tangible ROI on new platform



Virtualization Options: 1 to 1 Replacement

Example: 2 CPU AlphaServer DS20



Solutions galaxy

Military /
Defense



NORTHROP GRUMMAN



Bundeswehr



THALES

Car Industry



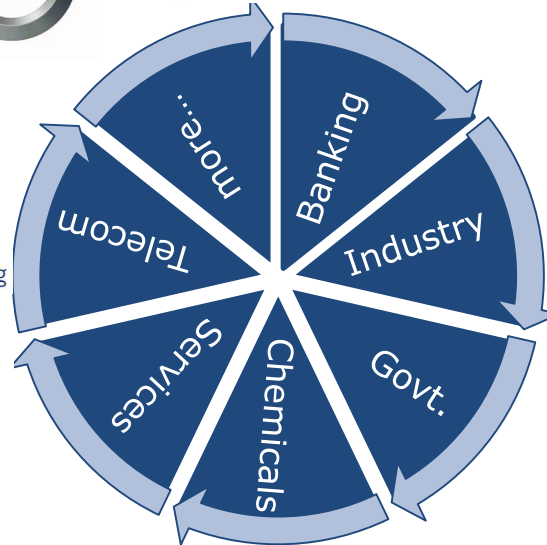
SCANIA



Aerospace



DFS Deutsche Flugsicherung



AIRBUS

BOEING

Chemical /
Pharmaceutical



Janssen

IT /
Electronics



ORACLE



LEXMARK

STROMASYS



AMK-THK Hospital, Singapore



Welcome to
Ang Mo Kio - Thye Hua Kwan Hospital

■ Hospital management
with all resources

■ Hardware old:

- 2 AlphaServer DS20E 666Mhz
- 2 CPUs per node
- TRU64 V5.1 Memory Channel cluster
- 300 GB disk space
- Oracle (DB), SAP (ERP)
- TCP/IP printers

■ Databases contain information
on patients, doctors, ...

■ Hardware new:

- HP DL360p Gen8-4 Intel Xeon E5-2643 (3.5 GHz / 6 cores)
- 40 GB RAM
- 2 TB disks, Raid
- Windows Server 2012
- Charon-AXP/ES40 1CPU (commercial issues)

■ Production and development
system (Backup system)

Challenges

- “Merge” two systems into one
- Update to Tru64 V5.1 non-TruCluster instance
- At merge time, after update Tru64, rewrite some specific configuration files (cluster -> single node)
 - Migrate specific cluster scripts to start jobs (Oracle and SAP)
- Reduced downtime (working in an Hospital area!!)

What we learned

- Testing with client in Singapore and server in Geneva revealed no performance bottleneck
- Perceived performance of CHARON environment was better than with physical environment
- ORACLE and SAP were migrated without changes

Anonymous, Austria



- ▣ Operations control & information
- ▣ NC program creation and distribution
- ▣ Old hardware (1993):
 - DEC4000/610
 - 512MB
 - DSSI for page/swap files
 - HSZ50 Storage
 - OpenVMA V7.1-2
 - RDB 6.0-0

New hardware (2012):

- HP ProLiant DL380, Xeon X5650 CPU (6C, 2.6Ghz)
- HP P4000 Storage
- Windows 2008 Server R2
- CHARON AXP/SMA (AlphaServer 1000)
- VMware

Challenges:

- Network interfaces changed names, EZA0 -> EWA0
- (DEC4000 -> AS 1000)
- Need to change network configurations for DECnet, TCP/IP, LAT

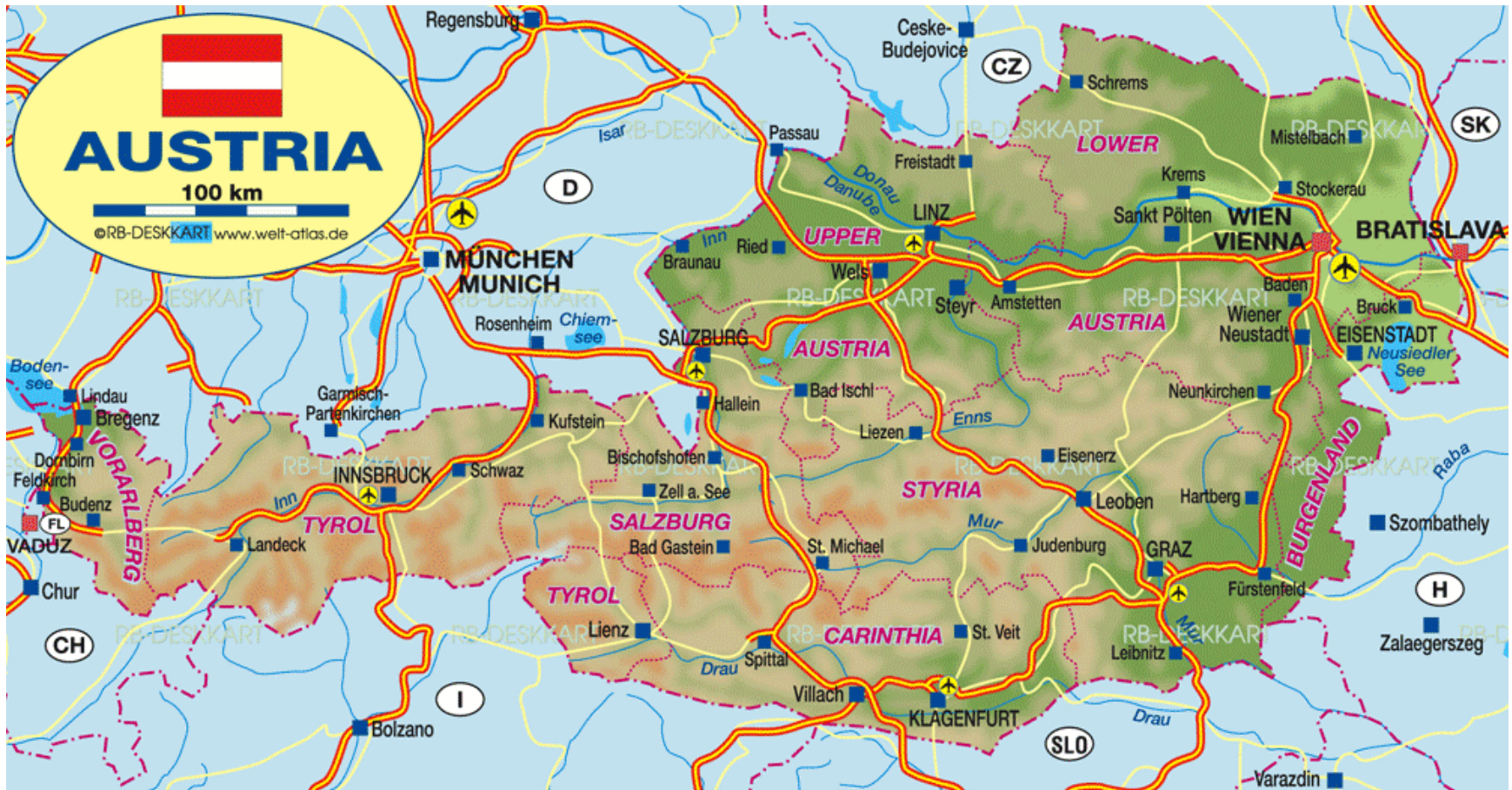
Anonymous, Munich



- Course management system
- Database contains information related to
 - courses
 - participants
 - banking details
 - ...etc...
- Hardware old:
 - AlphaServer DS20 & Alphaserver 1200, Open VMS 7.3-2
 - Oracle RDB 7.2
 - Decforms, SQL, Cobol, Pascal
 - System Manager will work until retirement

- Hardware new:
 - HP Blades
 - Vmware
 - Charon-AXP/DS20
 - Windows Server
- Challenges
 - Migration was *prevented* by system manager
 - ... took place after his retirement

Anonymous, Austria



Control System, Anonymous (Austria)

VAX 7730

- 1 GB memory
- CI-based storage (HSJx0, TZ87 tape library)
- local DSSI storage
- RDB

Reason for migration:

- office (and data center) moved to a different building
- equipment had not been powered off for several years

Status new:

- host: vSphere V5 virtual machine running Windows Server 2008 R2
- CHARON-VAX /XL+ emulating a VAX 4000 Mod. 108
 - 512 MB memory

Application development, system build & test

Challenges

- first attempt: use VAX 6310 emulation
 - use TUK50 to get tape drives with the same device names (MUAnnn:)
 - but TUK50 (unibus) adapter only supports $\leq 32\text{MB}$ memory configurations
- Solution: VAX 4000 Mod. 108 allowed mapping all devices without name changes
- except for network adapters, but FDDI adapters were replaced by Ethernet anyway

Benefits

- Migration to modern hardware
- Survive building move and eventual shutdown of old hardware
- No need to rewrite application
- System runs flawlessly

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Product descriptions

Application notes

Documentation

Utility downloads

Partner pages



Questions