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“PC Blades: Enabling a Secure, Digital Environment”

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An Alternative to Traditional PCs



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A Case Study: Oklahoma Heart Hospital

**OKLAHOMA
HEART HOSPITAL**

Enabling a Secure, All-Digital Environment



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Problem:

- Meeting the goals of an all-digital hospital while improving security according to HIPAA regulations and ensuring a completely sanitized environment.

Solution:

- Deploy the PC Blades in every patient room, operating room, "cath" lab, and emergency room.
- Instant access to track updates of medical records and retrieve current patient information throughout any location in the hospital.
- Increased security of hardware and data assets
- Centralize location of all blades simplifies ongoing support, maintenance, or upgrades – increasing uptime.



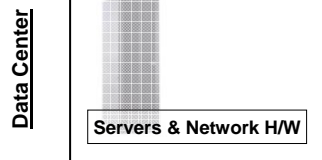
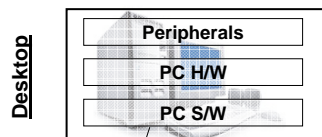
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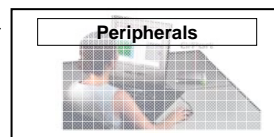
The Idea – Centralize the PC Infrastructure



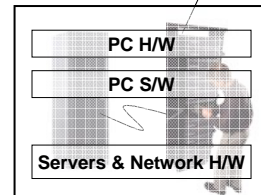
Current Box PC Environment



PC Blade Environment



Keep only peripherals, like monitor, keyboard, and mouse at the desk.



Centralize the computing, storage, and networking infrastructure and manage remotely.

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The Benefits of Centralized PCs in Healthcare



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Hardened Security and Control

- All PCs are secured in the Data Center
- Data is 100% secure from unauthorized downloads
- Unlicensed software cannot be uploaded
- User Port is secured in Patient/Exam Rooms

Cleared Desktop Environment

- User Port takes 1/5th the space of a PC
- User Port has no fans, generates no heat
- User Port can be locked down & contained

High Availability

- >99.9% uptime in critical environments
- 15 minute time to fix

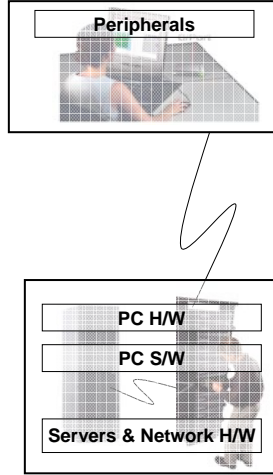
Increased Manageability

- Centralized PC Blades are easy to maintain
- Upgrades can be performed remotely
- Moves, adds, changes are virtualized

Decreased Support Costs

- 40% reduction in support costs
- Meet security requirements w/o increasing costs
- Eliminate costly desk side visits

PC Blade Environment



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Overview of the PC Blade Solution



IT Manager

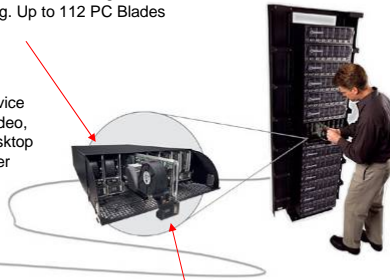


Cage - Houses up to eight PC Blades in a 3U high enclosure with integrated switching. Up to 112 PC Blades can be housed in a standard rack.

User Port - A small desktop device connects the keyboard, mouse, video, audio and USB devices on the desktop to the PC Blade via CAT-5 or Fiber network cable.



User/Client



PC Blade - A rack-mounted, Intel-based computer that delivers computing to each desktop from a centralized location. Each user connects to a PC Blade with Intel's latest P4 processors, memory, HD and power supply. The PC Blade can drive single and/or multi-monitors.

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Security

- Securing patient data (HIPAA)
- Preventing theft of hardware



Solution

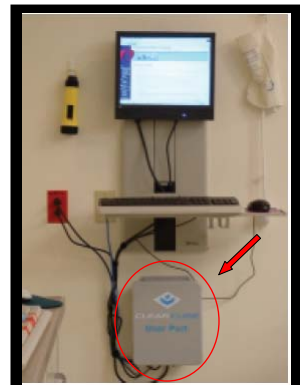
- At the user port data cannot be uploaded or downloaded to the local device
- PC blades are housed in the data center under lock and key
- Preventing theft of patient data and physical assets



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“By using PC Blade technology, we’re able not only to have a more secure data environment by keeping all the hard drives and any critical patient data under lock and key, but also by anyone stealing any equipment out of our hospital, there’s absolutely no chance of anyone leaving with any critical patient data.”

- Jeff Jones, MIS Team Lead





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Work Environment

- Space
- Preventing contaminants/ bacteria being spread by PC fans
- Noise, heat and dust

Solution

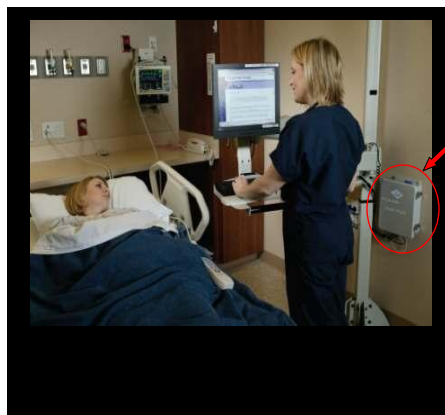
- Gain space
- No moving parts eliminate contamination issues
- No noise or heat at the patient bedside



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“Putting a PC in every patient room was certainly plausible, it just really wasn’t that practical. We needed something that was silent, that wasn’t going to produce a lot of heat or noise that wouldn’t interfere with the comfort level of the patient staying at our hospital. PC Blades enabled us to put the best performance and the best flexibility into those rooms without taking away up the precious space that was remaining.”

- Jeff Jones, MIS Team Lead





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Uptime

- Aiming for 100% uptime
- Reducing time to repair



Solution

- Moving to a Blade environment helps increase uptime
- Higher availability is due to software and PC Blade technology



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“We look at the benefit of PC Blades differently than most people. Many people look at it for security or management. We look at it for the service level that we can provide to the end user, the flexibility for customization. We’re all digital. We want to be on the leading edge, and you can’t do that when you’re tied down with a dumb terminal.”

- Jeff Jones, MIS Team Lead



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Poor Manageability

- Upgrades/support requiring physical visits
- PC in hard to reach places

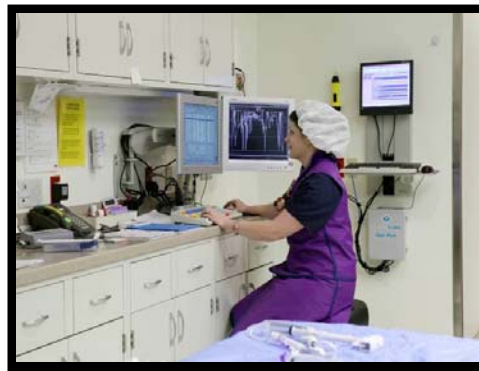
Solution

- Centralized blades are easy to maintain
- Upgrades can be performed remotely



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“The best part of the PC Blades is that they are transparent to the doctors and nurses. They are able to easily access their patient records no matter where they are, and we can manage them remotely without interfering with their day-to-day operations.”

- Jesse Whitehead, Medical Systems Specialist



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High Support Costs

- Are you under pressure to reduce support staff personnel?
- Costly site visits

Solution

- Capability to switch to a spare blade quicker
- No more costly road trips to fix a machine!



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1. Benefits of PC Blades in hospital environment
2. Centralized PC in a secure location
3. Increased manageability
4. Reduction in operating costs
5. Increased availability