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Air Force base CIO finds an alternative to PCs and thin clients

Sep 17, 2002 | [Suzanne Thornberry](#) | [E-Mail](#)Rating: 4.1 / 5 | [Rate this article](#)Discussions: **40 Post(s)** | **0 NEW** | [View posts](#)

Each year, the IT department at [Hill Air Force Base](#) near Ogden, Utah, replaces one third of its PCs with new models. But Capt. Timothy Ohrenberger, CIO at the base and Information Services Flight Commander at Hill AFB Clinic, wanted to look at secure alternatives to PCs that would require less staff time to install and support.

He'd considered thin clients in the past, but they couldn't run the software required by the base's medical facility. Then he heard about a hybrid option from [ClearCube Technologies, Inc.](#) that provides a fully functioning Pentium PC and hard drive mounted on a blade that resides in the server room. End users have access to any PC applications they may need, but the boxes on their desktops have been replaced by much smaller C/Ports to connect their monitors, mice, and keyboards with their PC blades.

Although the ClearCubes cost more initially, he saw a potential for payoff down the road. "What caught my attention, was the reduction in manpower required to support the environment," Ohrenberger said.

Implementation is expected to save more than \$250,000 annually in system maintenance costs with the estimate based on a plan to replace just one third of the desktops in the unit.

Streamlined installation

With permission from the Air Force, Ohrenberger began a trail of ClearCube in May 2002. Ohrenberger chose to install the pilot system on a network in an annex of the base medical clinic. A ClearCube system has four components:

- **CPU blade:** A Pentium-based computer with a hard drive
- **Case:** A housing for up to eight CPU blades
- **C/Port:** A device at the user's desk that provides connections for the monitor, keyboard, mouse, and other peripherals
- **Management software:** Hardware management tools and applications that take advantage of the centralized system architecture

Ohrenberger, his staff, and representatives from ClearCube installed 44 PC blades in six racks—enough for the unit's 42 users, plus two spares. The team assembled the cabinets and blades in less than 40 minutes. The next day, the team cloned all 44 blades in less than nine minutes. Ohrenberger estimates that the cloning process would have taken three hours and 40 minutes with conventional PCs. As a result, he believes the ClearCubes reduced time spent on cloning by 96 percent.

When the team members removed the old PCs from desktops and brought in the C/Ports, they discovered another installation step that takes less time to complete with ClearCubes. The staff spent about 11 minutes installing and configuring each ClearCube desktop, vs. 28 minutes for each desktop PC.



A ClearCube blade contains a CPU and hard drive.

Timely service and daily backups provide benefits

When he analyzed some common support tasks, Ohrenberger found that his team and end users could save time using ClearCubes rather than PCs. For example, a technician could remotely clone a blade in nine minutes, instead of spending 43 minutes to bring a desktop PC to the cloning station, perform the operation, and hook it up again. "It saves a lot of desk-diving," Ohrenberger said. The shorter downtimes help the end users get back to work more quickly.

Behind the scenes, the system also helps users by backing up files. Although all users can keep documents on a file server, Ohrenberger says many PC users often keep files on their hard drives. "With a ClearCube, we typically snapshot each one of the blades and store it on another blade, so it inherently has its own backup area," Ohrenberger said. They simply partition the 20-gigabyte drives into partitions of 10, and back up one user's active partition onto another's second partition once a day.



Capt. Ohrenberger and a staff member prepare to place a blade in the rack.

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