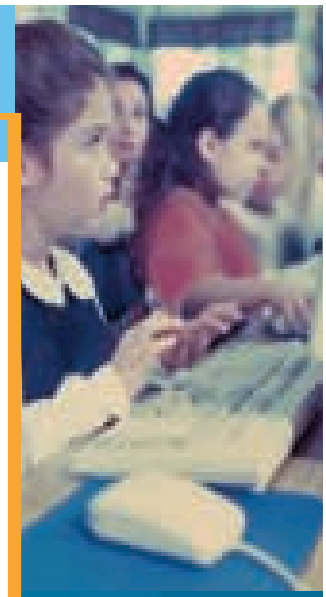
Oklahoma City Schools Protect New LAN with Liebert's Foundation™ MCR



In 1999, the Oklahoma City School District faced harsh realities about its computing infrastructure. After deciding to establish a Local Area Network (LAN) between schools to bring Internet access down to the student level, challenges inherent in the year-round operation of school buildings led to the decision to protect its servers and other sensitive electronic equipment from security, power and temperature risks.

The District's average building age was 57 years. As such, HVAC and electrical systems were old, outdated and required adaptive solutions to support 21st century electronic requirements. Additionally, Oklahoma City experiences high temperatures during the spring and summer months, along with greater-than-average atmospheric dust. Power surges, spikes and other aberrations also were issues of consideration.

For years, IBM Netfinity servers, Cisco routers and Mod 3500 switches and rackmount filter boxes were housed randomly and openly in schools, inviting damage from heat, dust and power disturbances. Unprotected equipment also posed security and safety challenges from possible tampering by students and others. This equipment requires proper cooling and air cleanliness – neither of which was maintained at acceptable levels during summer months when indoor temperatures averaged between 80 and 85 degrees. Servers were up and running throughout the year; therefore, the threat of equipment damage, failure and data loss was ever-present.

The challenge became one of protecting a large distributed computing environment utilizing finite resources. Two alternatives existed: construct 10' x 10' raised-floor data centers at each school at an estimated cost of $50,000 to $60,000 each, or specify self-contained support systems to house all sensitive electronic equipment at a greatly reduced cost per critical node.

After Mark Cliff of Oklahoma City-based VAR Maestro was retained in 1999 to establish the LAN, Liebert Representative Scot Akins, President of Oklahoma City-based R.B. Akins Company was contacted by Cliff in the spring of 2001 to recommend a solution. Criteria included all-in-one air and power conditioning capabilities, security, cost-efficiency, reliability, scalability, 24x7 service and support, and software enabling remote monitoring.

Akins recommended the Liebert Foundation Mini-Computer Room (MCR), a self-contained system for computers and test equipment with built-in UPS and computer-grade air conditioning. Beginning in May 2002, 55 units were installed. A second order for an additional 30 units is pending.

No other manufacturer offered a complete system to match the District's requirements. The Foundation MCR is secure from tampering while maintaining access points for cable at the top, bottom and side to side. "We wanted to make sure that the cabinets would be locked and that they could not be unplugged," Cliff recalled. "All electrical goes straight into the MCR, and eventually, the telephone switches will go to a voiceover technology. The MCR will be the heartbeat of each school."

The Foundation MCR's Environmental Control Module (ECM) air conditioner drives cool air through sensitive equipment on all levels, while its Back-Up Cooling Module (BCM) provides cooling during a loss of utility power or high internal temperature conditions.

Foundation MCRs utilize software and Web cards that send out alarm traps to the network control center and query any UPS on the network. When service needs arise, Akins will swap a spare module with any that requires repair, thus eliminating downtime and the expense of sending equipment out of state. The Foundation MCR's UPS component is a GXT unit that supports District servers and enables installation of an external battery cabinet on each unit.

"District officials have given very favorable comments about the Foundation MCRs," Akins said. "They kicked the tires quite a bit before going with it, and they've seen what it can do. Liebert was the only company for this job."

Environmental Protection

Power Protection

Monitoring

Security

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Mini Computer Room

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