

# Desktop and Server Virtualization-Biloxi School District.

## A Common Problem

Biloxi School District found itself challenged by an increase in technology initiatives, but their district is primarily comprised of older computers which require frequent repairs, replacement, and upgrades to accommodate the new technology requirements. These technology initiatives which focus on advanced placement programs like STEM (Science, Technology, Engineering and Math) and ALP (Advanced Learner Program) require upgraded hardware and Windows operating systems. Due to budget cuts, the technology staff has been reduced, and funding for technology was decreased, yet all technology demands have increased with educational initiatives like Common Core, district assessments, computer-based learning, online learning systems, and online testing.

Mike Jennings, Director of Technology, put it this way, “We needed to get the STEM Program and ALP into more labs, but couldn’t afford traditional PC’s for all the labs. Our elementary lab PC’s are end of life and needed to be replaced with Windows 7 devices. Desktop virtualization and zero clients allowed Biloxi schools to expand technology requirements to students, provided us the ability to flip classroom {lab} images without the IT overhead, meet the online testing requirements, and most importantly, effectively spend taxpayer dollars for current technologies and future expansion.”

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## Background

The district began looking into virtual desktops as a solution a couple of years ago for computer lab replacements. Each lab has 30 computers and 2-4 labs per campus. However, the initial total cost of ownership for a typical VDI solution to meet performance requirements for 300-400 devices was way out of budget and could not be justified versus a physical desktop replacement.

Mr. Jennings started researching various solutions for VDI and found a school district nearby at Moss Point, MS that was very successful with VDI using HVE Connexions VDI technologies. Mr. Jennings visited the Moss Point campuses and recalls, “I was thoroughly impressed with the implementation, technology, and the overall acceptance from the teachers, students, and administration. Observing the daily usage and seamless adaption of VDI was impressive. Biloxi Schools tried VDI a couple of years ago and it was a complete failure with just a small user base; Moss Point was using HVE’s implementation throughout several campuses, and all I heard was great things about online testing, performance, and hands off IT support needed. I was also pleasantly surprised on server virtualization solutions implemented as well from HVE. It was time to contact HVE Connexions to help our district in several technology areas.”

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## Profile

**Location:** Biloxi, MS

**Students:** 5537

**Staff:** 425

## Overview

**Number of Virtual Desktops:** 400  
(with room to expand)

## Who is using Virtual Desktops?

- Biloxi HS Labs
- Biloxi JHS Labs
- Biloxi Gorenflo Elem Labs
- Biloxi North Bay Elem Labs

## Hardware:

(3) HVE-101 Appliances  
(2) HVE-BIX-6 Appliances

**Zero-clients:** 300 Zero Clients

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## The HVE Solution

In June of 2015, Biloxi Schools issued an RFP for 300 VDI desktops to go into production using Teradici zero clients as replacement devices for the older physical desktops located at Biloxi High School STEM labs, Biloxi Junior High labs, and (2) elementary labs and a converged all SSD solution for server virtualization for offloading student information systems and file share processing. HVE and Howard Technologies provided the best solution based on overall architecture, real-world solutions, and cost-savings. The overall solution included three (3) HVE-101-N's high performance VDI appliances integrated with VMWare Horizon View and two (2) HVE Stage "Business in a Box" converged server virtualization platforms. All of HVE's solutions utilized eMLC SSD high-endurance SSD technologies. Once the RFP was awarded, HVE along with its technology channel partner Howard Technologies, implemented all aspects of the project in July 2015, and the systems were ready for production at the start of the 2015-2016 school year. In March 2016, Mr. Jennings reported, "We were amazed that the installation and system turn-up to production only took a couple of days. So far this year our labs with VDI have delivered the technology for STEM and other requirements. Online testing this year has been the smoothest we have ever observed. The HVE technology is used daily and just works; my IT staff likes that. I appreciate technology that delivers what is promised, and HVE has exceeded expectations in my book. The overall HVE solution is well integrated within VMWare architecture."

Following a successful 2015-2016 school year with HVE's technologies, Biloxi Schools is looking forward to expanding the desktop and server virtualization solutions district wide. Mr. Jennings stated, "Biloxi Schools will be 100% HVE next school year, and this is a no-brainer financial and practical decision."

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## Outcomes

This project has not only provided immediate cost savings to the district, but has provided future cost savings. The TCO is less than a normal PC-based computer lab: this VDI solution extends the life of a PC-based lab of 5 years an additional 2 years, lowering the overall cost per unit. Bottom line, Biloxi Schools has met the technology requirements and has platforms and architecture for years to come.

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## About HVE ConneXions

HVE's engineering philosophy is to create Manageable, Scalable, and Reproducible and Predictable (MSRP) solutions. We base our solutions on proven virtualization technologies running on high-performance, next generation hardware. The result is an overall cost-effective and high-performance environment that scales to customers' needs.

*"This was the most successful testing period we have ever had plus we were able to get our STEM program off the ground for our students. We are extremely excited to move forward with HVE."*

*—Mike Jennings,*

*Director of Technology,  
Biloxi School District.*



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