CASE STUDY:

The School District of Lee County Transforms IT Infrastructure to Linux on IBM Z and Open Source Software for Critical Applications

The School District of Lee County (SDLC) is the 9th largest school district in Florida and the 32rd largest in the United States. They educate approximately 94,000 students from pre-Kindergarten through 12th grade across more than 120 schools, with thousands of additional adult learners.

Founded in 1887, SDLC has been a pioneer in modernizing education. As home to the world's first Microsoft Certified High School as well as the largest public sector installation of Peoplesoft, they have served as a model for other school districts across the state and nation to leverage technology to advance student achievement. The district's IT infrastructure supports 13,000 employees working across roughly 900 technology-enabled buildings and 118,000 computers.

To ensure systems run smoothly and they adequately support school functions, it is paramount SDLC stay current with technology—yet the district is contending with declining budgets while simultaneously growing by thousands of students each year. Their decisions need to be strategic in order to provide optimal performance at a low cost.

THE BUSINESS CHALLENGE

SDLC was running the IBM System z9 Business Class (BC) mainframe, which was more than a decade old and configured with only 8 Gigabytes of memory. The most critical business application, Student Information System (SIS) was the only application running on the z9 BC, using the VSE operating system. Other systems and processes were outdated, disconnected, and slow. Users were dealing with disparate data sources and constantly experiencing data access issues. For example, budget planning involving 51 departments was still relying on MS Excel spreadsheets to allocate the county's $1.5 Billion budget. The process would take four months, with continual revisions and rollups with every change.

These types of inefficiencies affected productivity and, in turn, morale. The user community complained about the outdated systems and the board members had the perception that the district was working in yester-year. In addition, mainframe licensing costs were a staggering $300,000 per year and the z9 was approaching end-of-life.

"The z9 mainframe had less memory than my phone, but still powered one of SDLC's most critical applications." *(Trey Davis, CIO, SDLC)*

THE SOLUTION

Since limited budget is an insurmountable fact, SDLC IT needed to proceed one step at a time. The first step in modernizing SDLC's IT infrastructure was to equip its 100 IT employees to better support the end users, beginning with replacing the z9 BC. When it came to guidance for their mainframe modernization hardware and software decisions, SDLC leadership called in Mainline Information Systems.

Based on initial discussions of SDLC's goals, Mainline and SDLC created a strategy: to maintain all critical applications on a single, centralized platform that offered the latest technological advantages. The system of choice: z13s.

Customer: The School District of Lee County

Headquarters: Fort Myers, FL

Business Need:
Their outdated z9 BC mainframe could not adequately support the goal of being a world-class school district.

Business Value Provided:
Linux on Z allows SDLC to continue running legacy systems while supporting next-generation agile application development using open source software.

THE BUSINESS CHALLENGE

- Existing mainframe had only 8 GB of memory and ran just one critical application
- Systems and processes were outdated, disconnected, and slow
- Mainframe licensing costs were $300,000 per year
- SDLC had a limited budget to replace the mainframe

THE SOLUTION

- Maintain all critical applications on a single, centralized platform
- Mainline's proposed Linux on Z solution allows for continued support of legacy systems
- Linux on Z supports next-generation agile development using open source software
- Mainline worked side-by-side with SDLC to plan, install, and set up the mainframe, processors, hybrid storage, licensing, and open source OS

THE RESULTS

- Improved performance; budget planning time was reduced significantly
- Development costs have been reduced through the ability to use open source software
- Siloed systems have been consolidated into a holistic IT environment
- Implementation was ahead of schedule

The z13s would provide the best of both worlds: continued support of the decades-old SIS running on the VSE operating system until SDLC had the budget to convert, and the ability to support next-generation agile application development using open source software targeted to run on Linux on Z.

"Taking advantage of open source and IFLs will allow us to operate in coexistence mode for the next few years," commented Trey Davis.

Mainline worked side-by-side with SDLC to plan, install, and set up:

- IBM z13s with four Integrated Facility for Linux (IFL) processors and 1 terabyte of memory
- IBM DS8884 hybrid storage
- z/VM licenses on four LPARS sharing the four IFLs
- Ubuntu open source operating system

"Mainline helped with the planning and implementation of VM and Linux, effectively guiding our infrastructure decisions. Given our compressed timeline, Mainline's help was integral to a smooth installation and migration. I've gotten more done in 12 months than the 12 years prior, compliments of our organizational redesign and Mainline's assistance!" *(Tom Brown, Senior Systems Programmer, SDLC)*

"We're very comfortable with our investment, and extremely satisfied with our strategic partnership with Mainline. Their diligence and flexible scheduling helped us implement ahead of schedule. We don't think of Mainline as a vendor, but as a partner."

Trey Davis
CIO, SDLC

THE RESULTS

With the implementation of the z13s and Linux on Z, SDLC achieved their goals of:

- Consolidation to create a holistic IT environment
- Coexistence with other platforms
- Operational efficiency
- Synchronized databases
- Reduced development costs through ability to use open source software
- Improved performance
- Scalability

The streamlined budget process mentioned earlier was the first major mainframe initiative on the z13s. The redesigned Budget Preparation System was delivered by the SDLC Agile Team in time for the 2018-2019 cycle and reduced the budget planning time significantly.

In addition, the move to the IBM DS8884 SSD storage significantly reduced batch processing time, support time, and maintenance costs allowing the small IT staff to dedicate their focus on strategic initiatives.

For more information, call your Mainline account representative or call Mainline directly at 866.490.MAIN(6246).