

ColoMachine Servers Power Innovative Information Security Lab At James Madison University



James Madison University

James Madison University, located in Harrisonburg, Virginia, offers a cutting-edge, Internet-based Information Security Master's program in Computer Science. The students, over 80 people scattered around the globe, participate in interactive classes that equip them with the information security knowledge and skills needed to design, implement and maintain modern information infrastructure and systems.

One of the final courses, taught by Dr. Brett Tjaden, includes a semester-long exercise in which students are

assigned a computer in the Information Security Laboratory to administer. During the semester, each student is responsible for:

- Securing his/her host
- Performing reconnaissance on classmates' machines
- Attacking classmates' computers
- Defending his/her own host

This allows students to develop a better understanding of real-world security threats and how to defend their system against them.

The problem was that the department did not have the technology to conduct this part of the course. They needed a server that could support the machines and give them the

Learn how ColoMachine helped a progressive university master's program provide remote learning students with the technology they needed to secure and administer their machines.

Business Problem:

- Needed cluster servers that were cost-effective, scalable and saved space

Solution:

- A 20-blade cluster ATXBlade 1100 server

Cost:

\$11,626

functionality and flexibility to perform these exercises. Dr. Tjaden, Dr. Charles Abzug, and department head Dr. Malcom Lane were tapped to find a product that would suit these purposes.

"Physical access was obviously not important, since these would be 20 or so machines that no one would ever sit in front of," said Dr. Tjaden. "We didn't have anything, really and were building the Information

Continued

Security lab from scratch.”

The department decided to search for a new server for the program. A major concern was the cost. With a strict budget, the team

realized they needed to find a reliable product that not only met their specifications but it had to be cost effective as well.

Added to that list was a concern about the space the server would occupy. It had to save space and be easy to store. “We could not dedicate a lab to housing our server,” said Tjaden.

ColoMachine.com was one several vendors initially considered. Its pre-configured server offering and competitive pricing made it an attractive candidate. The ATXBlade 1100 Intel

Pentium 4 cluster server met the criteria and ultimately was selected as the solution. The department purchased a 20-Cluster ATXBlade-based server.



Dr. Tjaden And The Cluster Server

ATXBlade™ cluster servers are ultra-high density server nodes that consist of ten independent blade servers. The ATXBlade 1100 server supports up to 10 single Pentium 4 Processor ATXBlade servers in an

8U rack space. Each ATXBlade server is an independent server complete with its own central processing unit, memory, power source, video controller, network controller, data storage, and operating

system. It provided the capability the department was looking for to serve

both its current and future needs. “The Colomachine servers product provided good functionality at a great price,” said Tjaden.

Scalability is another key feature of the server. This was important for the James Madison University staff, as they were looking at expanding this program at a later time if it were successful.

The ATXBlade 1100 server scales up to 60 ATXBlade servers per standard rackmount cabinet. The system is flexible and supports different combinations of ATXBlade servers in the same housing unit—from Pentium 3 to Pentium 4 and Dual Intel Xeon

processors.

Another criterion the department measured Colomachine and other vendors against

was the product's compatibility with recent applications including Windows



ATXBlade1100 Server

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2003 and Redhat Linux 9.0. In fact, the ATXBlade 1100 server is compatible with a range of operating systems and applications, including Windows NT 4.0 Workstation and Server, Windows 2000 Professional and Server, Windows XP Professional, Windows 2003 Server and Redhat 8 and 9.

In addition to the James Madison University team's functional needs, there was an additional need--speed. Not

just for the processor or system, but for delivery and installation. "We were towards the end of one semester and needed the product at the beginning of the next semester--we were in a real time crunch," said Tjaden. "The thing I liked about Colomachine.com was, aside from cost, that they were willing to work with us."

Colomachine.com agreed to deliver the product within ten

days of the order being placed to meet the tight timeline. The server was delivered and installed in time for the new semester.

Ongoing server maintenance would not be an issue, as the ATXBlade 1100 is easy to maintain. Fast installation and replacement of an

ATXBlade server-less than 5 minutes--makes it a convenient and user-friendly option for an entry-level server purchase.

The product's 1 year limited warranty ensures that should there be an issue with the server, customer service and support are available.

James Madison University's pilot program has been run successfully and the Colomachine.com server has met all expectations. There are now plans to continue expansion of the program to the physical campus. "We were doing this

as a test run to see if we could use this in other on campus classes eventually and plan to get money for more machines and labs for our physical campus," said Tjaden.

For more information on the ATXBlade1100 server for your organization, go to <http://www.atxblade.com/xb1100/main.htm>.