

Marist College gets the most out of its cloud environment



Efficiently providing advanced business analytics capabilities for education and research

Overview

The need

Marist College needed a more efficient way to support its business analytics capabilities and extend their availability to students, faculty and businesses for education and research.

The solution

The college implemented an IBM® SmartCloud™ solution that used its existing cloud environment to deliver business analytics functions and efficiently provision cloud resources on demand.

The benefit

Delivering analytics through the cloud enabled the college to reduce IT administration time and costs. The cloud also helped the college save USD350,000 in the college's production environment.

Founded in 1929, Marist College is a private liberal arts college based in Poughkeepsie, New York. Not only is the college one of the leading institutions of the arts and sciences in the Northeast US, it also has a strong international presence with a branch campus in Florence, Italy and academic programs in 31 countries. In addition to providing traditional course curricula, the college offers online Bachelor's and Master's degree programs to students internationally and also provides education for a number of US corporations.

Providing technology for education and research

Regarded as an innovator for integrating technology and education, Marist College is constantly looking for new ways to use technology to expand upon the educational services and courses it offers. Recognizing analytics as a powerful capability that could play an important part in the future careers of its students, Marist College sought to make its existing business analytics technologies available to students and professors in a variety of academic and research programs. The college also sought to provide analytics capabilities and supporting compute resources to small businesses and other educational institutions across the US.

Importantly, from the very beginning of its initiative, Marist College identified a challenge that had cropped up in its previous efforts to provide analytics capabilities to students—faculty members were spending excessive amounts of time setting up and configuring systems and software to deliver analytics technologies. According to Bill Thirsk, vice president for information technology and chief information officer at Marist College, “Professors were spending more time acting as help-desk support than actually teaching.”



“This is a great example of how a business or a college can take advantage of an opportunity if they are cloud-enabled.”

—Bill Thirsk, vice president for information technology and chief information officer, Marist College

This issue prompted the college’s IT management team to begin looking for a more cost-efficient way to provide access to analytics—a solution that could reduce the amount of technical support and the associated support costs.

Taking advantage of a flexible infrastructure

With a mission to create a new model for delivering analytics technology to a worldwide audience of users, Marist College worked with IBM to create a solution. Taking into consideration needs for power, efficiency and flexibility, the logical conclusion was to use cloud computing.

Fortunately, the college had previously implemented a cloud infrastructure to support its administrative and educational systems. Based on this foundation, IBM worked with the college to implement an IBM SmartCloud solution, providing a cost-effective way for the college to deliver analytics capabilities using its existing cloud. “This is a great example of how a business or a college can take advantage of an opportunity if they are cloud-enabled,” says Thirsk.

Currently, the college’s cloud helps to provide analytics technology to a wide variety of programs, including technical disciplines and also business, liberal arts and communications programs. “Students learn how to apply analytics and use them as a tool in their field of study—discovering how to use the technology to solve business problems,” says Roger Norton, dean of the School of Computer Science and Mathematics.

Smarter Computing: The IT Infrastructure of a Smarter Planet

After deploying a cloud infrastructure to run a wide-range of administrative systems, Marist College wanted to extend its cloud capabilities to better serve its academic environment. By implementing an IBM SmartCloud solution, the college was able to extend its business analytics technology to its research environment using the college’s existing cloud, extracting even more value from its IT investments.

The IBM SmartCloud solution has enabled the college to support demanding research applications and provide access to analytics for students and faculty as well as to businesses and other universities. The solution has provided other key benefits to the college, as well. By enabling fast and simplified provisioning of cloud resources in support of analytics, the college has significantly reduced its administration requirements and associated costs compared to its previous efforts. Marist college has also realized significant financial benefits through its cloud, including savings of USD350,000 by using the cloud to support the college’s ERP system.

Solution components

Hardware

- IBM® zEnterprise® 114 with Integrated Facility for Linux
- IBM zEnterprise BladeCenter® Extension
- IBM BladeCenter
- IBM System x®
- IBM Power Systems™

Software

- IBM Cognos® Business Intelligence version 8 for Linux on IBM System z®
 - IBM SPSS® Modeler
 - IBM DB2® for Linux
 - IBM DB2 for z/OS®
 - IBM z/OS
 - IBM z/VM®
 - SUSE Linux
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Leveraging the multi-purpose cloud

In addition to supporting research functions with advanced analytics capabilities, Marist College also uses its cloud environment to run several of its critical business and education-related functions such as admissions, registration, accounting and enterprise resource planning (ERP), as well as websites, educational services and marketing.

The cloud infrastructure has enabled the college to create the Enterprise Computing Research Laboratory. With funding from the National Science Foundation, the college has been able to create this laboratory and make it available to the enterprise computing community across the US.

Marist College also has utilized its cloud to deliver several important services to students and faculty. The college's knowledge center offers educational training services to a broad audience and uses cloud resources that can be provisioned quickly and automatically. The cloud supports desktop services for students, including a virtual computing lab, which provides a development and testing environment not only for students but also for local entrepreneurs with the goal of creating and testing innovative new business ideas.

Reflecting on the college's vision for creating its cloud environment, Thirsk comments, "When considering solutions, we had to ask several questions: How much is it going to cost? Is it sustainable? Are we meeting our needs with as few resources as possible? The cloud configuration provided the answers we were looking for."

Defining the cloud behind the capabilities

The IBM SmartCloud solution at Marist College is based on the IBM zEnterprise® 114 mainframe with Integrated Facility for Linux engines running a combination of IBM z/OS®, IBM z/VM® and SUSE Linux operating systems. The solution also includes an IBM zEnterprise BladeCenter® Extension with IBM BladeCenter, and IBM System x® servers and IBM Power Systems™. For its analytics software, the college uses IBM Cognos® Business Intelligence for Linux on IBM System z® and IBM SPSS® Modeler. The college primarily uses IBM DB2® for Linux and also IBM DB2 for z/OS to provide database support for college courses.

The Marist cloud typically runs close to 1,000 virtual machines at a time in support of its research, production and educational services. Considering the cloud's flexibility and efficiency, Thirsk says, "The advantage for us on the management side is that we can virtually provision different types of servers without having to go through the previous hassles of putting in a new system. And we can do it very quickly in a matter of days, as opposed to waiting weeks."

Not only has the cloud provided improved flexibility and speed of service delivery, it has also enabled the college to recognize significant cost savings in its production environment. By deploying its ERP solution using the cloud infrastructure instead of using a distributed environment, the college was able to save an estimated USD350,000—including investment, installation and maintenance costs. "I was amazed by how much our staff was able to do in this cloud environment at such a low operating cost," says Thirsk.

Forming a strong partnership for success

Just as the college has benefitted from working with IBM to implement its IBM SmartCloud solution, IBM has realized the advantages of working with Marist College, which collaborates with IBM to provide IT education for technologies including IBM z/OS and business analytics. In return, Marist College has access to IBM hardware, software and services at the IBM Poughkeepsie facility, which is located only a few miles from the college. "It's a very unique relationship that we have with IBM and it really creates a strong partnership," says Norton.

Marist College hopes to continue working with IBM on several innovative projects. To build upon its success in analytics, the college plans to provide this technology outside the classroom to small businesses by helping to create the New York State Cloud Computing and Analytics Center. The college also plans to join the High Performance Computing Consortium and to contribute its cloud capabilities to collaborate with the research of other institutions.

Although Marist College already has reaped many benefits from its cloud environment, the college hopes to find new ways to maximize its capabilities, continuing to provide the educational and IT resources to ensure ongoing success for students, faculty and businesses around the world.

For more information

To learn more about Smarter Computing from IBM and how we can help you integrate, automate, protect and transform your IT, contact your IBM representative or IBM Business Partner, or visit:

ibm.com/smartercomputing

To learn more about IBM SmartCloud solutions, please visit:

ibm.com/cloud-computing/

For more information about Marist College, please visit: marist.edu

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