

NC State University Poole College of Management

Helping businesses uncover new opportunities with IBM big data

NC STATE Poole College of Management

Overview

The need

The Poole College of Management at NC State University wanted a platform to help students turn big data into knowledge for better decision making.

The solution

The University implemented an IBM big data solution – to help its students effectively manage and analyze large volumes of structured and unstructured data from a variety of sources.

The benefit

Helped identify new business opportunities more than 200 times faster and with fewer resources for a chemical company; increased IT efficiency; enabled students to apply big data analytics to real-world business problems.

North Carolina State University (NC State) is one of the largest technical universities in the Southeast United States. Located in Raleigh, NC State serves more than 34,000 students and is recognized for its leadership in science, technology, engineering and mathematics.

The Poole College of Management at NC State focuses on delivering “management education for a technology driven, global marketplace.” The school integrates teaching, research and active engagement with businesses to give students real-world experience in uncovering new business opportunities.

Because of this, helping students understand how to leverage big data is an important component of the school’s curriculum. NC State business students are given class assignments that include working with local businesses to see how new technologies—such as big data analytics—can be applied. Students gain real-world experience, while the businesses benefit from the new insight these advanced technologies offer.

“What we found is that certain software platforms work better than others for extracting and analyzing large amounts of information. With InfoSphere BigInsights, we can take structured and unstructured data regardless of the source— from machines, from the Internet, from internal databases—put it together and start to extract information from it,” says Dr. Michael Kowolenko, Senior Research Scholar, Poole College of Management, NC State University



Solution components

Software

- IBM® InfoSphere® BigInsights™
- IBM Content Analytics with Enterprise Search
- IBM Content Analytics Studio

Hardware

- IBM PowerLinux™ 7R2
-

“In a half-day workshop, we were able to show the chemical company how big data analytics work and identified four new partners. This work previously would have taken them more than six months and many more people.”

— Dr. Michael Kowolenko, Senior Research Scholar, Poole College of Management, NC State University

“We hear a lot today about the amount of data approaching us,” says Dr. Michael Kowolenko, a senior research scholar with the Poole College of Management at NC State. “The problem is: You have to know what to do with big data. You have to know what questions to ask. You have to understand how to extract that information. By combining technology with a good educational platform, we can help our business students learn how to turn big data into knowledge for better decision making.”

Cost-effectively managing and analyzing big data

As the Poole College of Management evaluated big data platforms that its students could use when working with local businesses, staff looked for a solution that could efficiently handle an extremely large volume and variety of structured and unstructured data.

The college selected an IBM big data solution, including IBM® InfoSphere® BigInsights™ and IBM Content Analytics software.

InfoSphere BigInsights software makes it simpler for the organization to use Apache Hadoop and build big data applications. It incorporates the administrative, discovery, development, provisioning, and security features that businesses need, along with best-in-class analytical capabilities.

IBM Content Analytics software uses sophisticated natural language processing to understand the meaning and context of human language within textual information from documents, online content, emails and much more.

“What we found is that certain software platforms work better than others for extracting and analyzing large amounts of information,” says Dr. Kowolenko. “With InfoSphere BigInsights, we can take structured and unstructured data regardless of the source—from machines, from the Internet, from internal databases—put it together and start to extract information from it. We use IBM Content Analytics Studio for natural language processing and IBM Content Analytics software to visualize the results.”

Increasing system efficiency and responsiveness

In addition to implementing IBM big data software, Dr. Kowolenko’s team also used IBM PowerLinux™ servers to create high-performance, energy efficient, and reliable cloud computing environment for delivering its new big data applications.

“What we found is that certain software platforms work better than others for extracting and analyzing large amounts of information. With InfoSphere BigInsights, we can take structured and unstructured data regardless of the source—from machines, from the Internet, from internal databases—put it together and start to extract information from it.”

— Dr. Michael Kowolenko, Senior Research Scholar, Poole College of Management, NC State University

“As we started working with larger data sets, we became acutely aware that we were using a lot of processing,” says Dr. Kowolenko. “We needed to consider the whole platform, both systems and software.”

“The way the PowerLinux server’s internal storage is set up and the way it optimizes its core, works really well in this environment,” says Dr. Kowolenko. “It has also delivered very robust performance over the last few years.”

Obtaining insight more than 200 times faster

The platform has been instrumental in helping students learn how to apply big data analytics to a wide range of business problems.

“We have helped businesses determine where to invest in research and development, who to hire, and what startups to invest in through VC [venture capital] analysis,” says Dr. Kowolenko. “We have hit a number of verticals in applying the big data tools to extract information and turn that into knowledge.”

For example, students recently helped a chemical company identify potential partners for new business opportunities. With the IBM big data solution, students were able to uncover new prospects in just a few hours—more than 200 times faster than before.

“In a half-day workshop, we were able to show the chemical company how big data analytics work and identified four new partners,” says Dr. Kowolenko. “This work previously would have taken them more than six months and many more people.”

For more information

To learn more about IBM big data solutions please contact your IBM representative or IBM Business Partner, or visit the following website: ibm.com/software/data/bigdata

For more information about IBM InfoSphere BigInsights software, visit: ibm.com/software/data/infosphere/biginsights

For more information about IBM Content Analytics software, visit: ibm.com/software/products/us/en/subcategory/SWN40

For more information about IBM PowerLinux servers, visit: ibm.com/systems/power/hardware/7r2/

To get involved in the conversation, visit: ibmbigdatahub.com

For more information about North Carolina State University, visit: www.ncsu.edu



© Copyright IBM Corporation 2014

IBM Corporation
Software Group
Route 100
Somers, NY 10589 U.S.A.

Produced in the United States of America
September 2014

IBM, the IBM logo, ibm.com, BigInsights, InfoSphere and PowerLinux are trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the web at "Copyright and trademark information" at ibm.com/legal/copytrade.shtml.

This document is current as of the initial date of publication and may be changed by IBM at any time. Not all offerings are available in every country in which IBM operates.

The client examples cited are presented for illustrative purposes only. Actual performance results may vary depending on specific configurations and operating conditions.

THE INFORMATION IN THIS DOCUMENT IS PROVIDED "AS IS" WITHOUT ANY WARRANTY, EXPRESS OR IMPLIED, INCLUDING WITHOUT ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND ANY WARRANTY OR CONDITION OF NON-INFRINGEMENT. IBM products are warranted according to the terms and conditions of the agreements under which they are provided.



Please Recycle