Made in IBM Labs : Une invention cloud pour éviter les pannes dues aux catastrophes naturelles

IBM et le Marist College innovent dans le domaine du cloud pour prévenir les interruptions d'activité coûteuses

Paris - 22 nov. 2013: IBM et le Marist College testent actuellement une innovation dans le domaine du cloud computing qui pourrait aider à prévenir les perturbations des services de communication causées par les ouragans et autres catastrophes naturelles.

Lorsqu'un événement météorologique majeur se produit, à l'image de l'ouragan Sandy particulièrement meurtrier et destructeur de l'année dernière, les opérateurs de télécommunication ne disposent que de quelques heures voire moins pour protéger leurs systèmes avant que la catastrophe ne survienne, alors que déplacer les applications et services voix et données en lieu sûr (processus appelé réapprovisionnement) prend généralement plusieurs jours.

Cette invention conjointe d'IBM et du Marist College pourrait réduire le temps de réapprovisionnement de plusieurs jours à quelques minutes, évitant ainsi les perturbations et les pannes de réseau coûteuses.

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Made In IBM Labs: Testing Cloud Invention To Prevent Natural Disaster Outages

IBM and Marist College Innovation Could Avert Costly Business Disruptions

Armonk, N.Y. - 21 Nov 2013: IBM (NYSE: [IBM](#)) and [Marist College](#) are testing a new [cloud computing](#) innovation that could help prevent disruptions in voice and data communications services caused by hurricanes and other natural disasters.

When a major weather event occurs, such as last year's deadly and destructive Super Storm Sandy, data network operators may have just a few hours or even less to protect critical communications systems before disaster strikes, but moving voice and data application and services to a safe location–a process called re-provisioning–typically takes days. The cloud computing [disaster prevention invention](#) that IBM and Marist are currently testing could slash re-provisioning time from days to minutes -- avoiding costly network disruptions and outages.

"A year ago, Sandy left millions of individuals and businesses in the Northeast without electronic communications for days, weeks and even months -- in some cases, data centers were literally under water," said IBM Distinguished Engineer Casimer DeCusatis. "With our invention, a data center operator could quickly and simply move data and applications to another data center outside the danger zone in minutes -- from a remote location using a tablet or smartphone."

Cloud Invention to Disaster Prevention

IBM's cloud networking innovation uses [software-defined networking (SDN)](#) technology and is being tested in Marist's SDN Innovation Lab. SDN enables data center operators to more efficiently control data flows within physical and virtual networks. The SDN advancement IBM and Marist are testing will enable an IT professional to remotely access and make changes to network resources via a wireless device and open source network controller developed by Marist.

This cloud-based solution could significantly reduce or eliminate the loss of services and data in a major weather event or other crisis that threatens voice and data network resources. It is now being demonstrated to clients and is expected to be commercially available in 2014.

Marist's SDN Innovation Lab, which is sponsored by IBM, focuses on evaluating new technology, inventions and use cases related to SDN, a foundational technology for cloud computing that enables the dynamic management of network resources through automated software programs.

The SDN Innovation Lab also supplements and supports IBM's cloud computing research efforts by evaluating new inventions and technologies; developing first-of-a-kind opportunities with clients to test inventions in real-world applications; and promoting education in the area of SDN to build a pipeline for students with the right skills to join the workforce after graduating. The SDN Innovation Lab has been operating for several years and earlier this year became part of the New York State Center for Cloud Computing and Analytics.

"Our SDN Innovation Lab provides a cloud networking test bed for early SDN adopters, including IBM clients, and also offers an opportunity to evaluate new technologies across our entire infrastructure here at Marist College," said Robert Cannistra, senior professional lecturer for computer science and information technology at Marist. "We gain practical experience with the latest technology that we can apply to our own operations and curricula, and our students gain valuable knowledge they can apply to their future careers."

Testing New Innovations

Other IBM cloud inventions and projects being tested at the SDN Innovation Lab include:

· The [recently announced](#) "noisy neighbor' invention ([U.S. Patent #8,352,953](#)) for dynamically managing network bandwidth for systems running within a cloud that experience dramatic or unexpected peaks and valleys in demand for services.

· A patent-pending IBM invention that creates a "heat map" of network activity within a cloud to automatically predict and prevent congestion before it occurs. This invention is included in IBM Flex System servers and System Networking offerings.

· A prototype streaming video invention that monitors server CPU and memory function to dynamically shift the video stream from one virtual machine to another within a cloud while it's running, to ensure picture quality and continuous transmission.

· An open-source SDN controller that will allow developers to build redundancy, high availability and automation

into cloud networks. The controller is based on IBM's DOVE technology, which is being donated to the Linux Foundation's OpenDaylight Project.

Additional research partners in the Marist SDN Innovation Lab include Columbia University, City University of New York, the State University of New York at New Paltz, and California Institute of Technology (Caltech). Corporate sponsors include Adva Optical Networking, Big Switch Networks, Ciena Corporation and NEC.

More information about IBM's invention and patent leadership is available at this link.

IBM Systems and Technology Group offers a full range of server, storage and networking offerings supporting public, private and hybrid cloud implementations that integrate with IBM's cloud software and services.

Photos of the work being done at the SDN Innovation Lab at Marist College are available at this link.