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How CA and Microsoft are Collaborating to Enable the IoT Driven Application Economy

ca technologies

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Introduction

The accelerating pace of business change was documented by Dr. Richard Foster of Yale University[1] who stated that "The average lifespan of an S&P 500 company has decreased by more than 50 years in the last century, from 67 years in the 1920s to just 15 years today." Foster added that "By 2020, more than three-quarters of the S&P 500 will be companies that we have not heard of yet." One of the implications of the accelerating pace of business change is that IT organizations are under increasing pressure to enable companies to continue to transform themselves.

An article in Forbes[2] discussed a major business transformation that is currently underway. According to that article, by 2020 more than seven billion people and businesses, and at least 30 billion devices, will be connected to the Internet. This hyper connectivity is referred to as the Internet of Things (IoT) and according to McKinsey Global Institute[3], the IoT has the potential to create economic impact of $2.7 trillion to $6.2 trillion annually by 2025.

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While the future impact of IoT is enormous, we currently live and work in an IoT driven application economy where everything is increasingly driven by connected, mobility-enabled applications. In today's IoT driven application economy, customers are far more likely to experience your brand and interact with your enterprise through a software application than a live person. Examples of how the IoT driven application economy is causing fundamental business change include:

- In the consumer brand industry, Nike is changing from a sneaker company to a fitness lifestyle company, driven by their ability to collect and analyze large volumes of data.
- In the transportation industry, on board diagnostics that continuously share data are changing the way people service their cars; car companies get intelligence for development; dealerships form relationships; and insurance companies charge.

IT Infrastructure Enablers

One of the key infrastructure enablers of the IoT application economy is that software is more advanced than ever. But enterprises realize that using sophisticated software isn't sufficient if they don't also bolster their staff to take advantage of the power of the software to help them respond to business opportunities. One example of a company bolstering its IT staff to take advantage of new business opportunities is JPMorgan Chase which now has more software developers than Google[4].

1 http://www.bbc.co.uk/news/business-16611040

2 http://www.forbes.com/sites/gartnergroup/2014/05/07/digital-business-is-everyones-business/

3 McKinsey Global Institute, Disruptive technologies: Advances that will transform life, business, and the global economy, May 2013.

4 Anish Bhimani at http://www.ini.cmu.edu/news/2013/05/speaker_bhimani.html

"With CA UIM for Windows Azure, organizations can leverage broad metrics about the Windows Azure cloud and its instances, and incorporate them into a sophisticated monitoring suite."

Over the last several years, public cloud computing solutions have become extremely popular because in addition to featuring consumption-based pricing they offer lower cost, greater scalability and more flexibility than are possible with traditional enterprise-provided solutions. Analyzing the huge volumes of data that are typically associated with IoT can require a large amount of compute and storage as well as sophisticated analysis tools. However, because of Microsoft Azure's growing collection of integrated IoT services, storage, processing and analysis are becoming more affordable which expands the ability of enterprises to cope with the growing volumes of data, whether they are just getting started with IoT or if they are expanding an existing IoT solution. Azure's IoT services also equally relevant when applied to business opportunities or when applied to help IT organizations make sense out of a rapidly growing volume of management and security related data.

One concern that organizations often have with the use of any public cloud solution is how they confirm if their customers are experiencing optimal performance and if they aren't, is the organization notified immediately. As part of the collaboration between CA and Microsoft, CA's Unified Infrastructure Management (UIM) has been enhanced to enable it to proactively monitor the performance of the Windows Azure platform.

With CA UIM for Windows Azure, organizations can leverage broad metrics about the Windows Azure cloud and its instances, and incorporate them into a sophisticated monitoring suite that offers SLA reporting, graphical dashboards and alarms, as well as Web-based reporting portals.

As mentioned, Nike is transforming their business based in large part on their ability to collect and analyze large volumes of data. The phrase big data refers to working with a collection of structured and unstructured data sets that is so large and complex that it is difficult, if not impossible to process them using traditional techniques. Big data needs to be processed by a flexible, scalable compute models that evolves as your business evolves. Microsoft's vision is to enable all users to gain actionable insights from virtually any data. To achieve this vision, Microsoft has a comprehensive big data solution that supports all data types. The solution provides sophisticated analytics and a rich 3D virtualization capability that makes it easy to analyze and visualize multiple data sources.

Rockwell Automation is an example of a company that is using Microsoft Azure's IoT services to extend its business and provide managed monitoring and support for its products in the oil and gas industry. The company has developed cloud-based solutions, using software, sensors and devices to predict equipment failures along the supply chain, track its performance in real-time, and help refine designs and processes to prevent those failures in the future.

IT Management Enablers

In order for a company to successfully adopt any technology, it must be possible to manage and secure that technology. With that in mind, CA is offering a suite of IoT services that complement Microsoft Azure's IoT services in three key areas:

- Monitor and manage things
- Build and extend applications
- Assure the customer's experience

"CA Continuous Application Insight enables technology teams to improve quality, increase delivery speed and optimize customer experience."

Monitor and manage things

The CA monitor and manage portfolio of IoT services is focused on the person responsible for choosing the technology to enable the necessary data collection, intelligence, management and control. This portfolio of services helps that person address data collection, real time monitoring and management challenges with CA's scalable, efficient architecture and specially designed software components such as the Gateway technology[5], with real-time data collection from all relevant devices, systems, and applications. The data is collected and made available through the IoT information model for monitoring, reporting, alerting, and other insight into your IoT infrastructure.

Build and extend applications

This portfolio of CA IoT services is focused on a broad group of IT professionals including the people responsible for managing APIs, software developers, and the DevOps team. For example, as an organization builds IoT-based applications and/or extends its existing applications with IoT-based data, the CA API management suite[6] helps the organization confidently use and publish API's that address the organization's concerns about security and privacy.

The CA Devcenter portfolio helps software developers and DevOps teams develop high quality applications faster by leveraging tools that create virtual integrations, enable parallel development and continuous testing, and automated orchestration. One member of that portfolio, CA Service Virtualization, simulates constrained or unavailable systems across the entire software development lifecycle (SDLC). This enables developers, testers and performance teams to work in parallel for faster delivery and higher application quality and reliability. CA API Management and CA Service Virtualization are additional examples of the collaboration between CA and Microsoft as the two companies are discussing integrated efforts in those key growth areas.

CA Continuous Application Insight[7] enables technology teams to improve quality, increase delivery speed and optimize customer experience. It does this by uniquely providing the intelligence and transaction-level visibility to break down the complexity of modern applications, pinpointing and suggesting remediation of discovered problems in intuitive ways.

CA Cloud Manager[8] is an enterprise-grade cloud management platform designed to transform an organization's entire IT operating model with on-demand environments and help the organization to achieve significant cost and time-to-market improvements. It gives application developers unrestricted access to essential IT resources and enables the organization to automate the deployment and management of enterprise platforms across private, public and hybrid clouds.

Assure the user's experience

An organization's IoT initiative will not be regarded as being successful unless the organization can assure a satisfactory user experience. CA helps organizations assure the user's experience with a wide range of products including CA Application Performance Management (CA APM) and CA Mobile App Analytics (CA MAA).

5 http://www.ca.com/us/securecenter/ca-api-gateway/details.aspx

6 http://www.ca.com/us/~/media/Files/DataSheets/ca-api-security-management-suite.PDF

7 http://www.ca.com/us/devcenter/ca-continuous-application-insight.aspx

8 http://www.ca.com/us/devcenter/ca-cloud-manager-powered-by-servicemesh.aspx

CA APM is a comprehensive mobile-to-mainframe application performance management tool that is designed to help IT deliver critical business services with greater efficiency while delivering a seamless user experience. To achieve this goal, CA APM delivers application performance monitoring tools that provide insight for in-depth root-cause diagnostics, embedded multi-variant analytics and enterprise-scale metric analysis.

CA MAA provides the key to understanding the mobile app user experience across the entire DevOps application lifecycle. It does this by providing comprehensive mobile application monitoring combined with powerful data analytics which enables visualization of the user's experience and of the health of applications.

Call to Action

CA Technologies (NASDAQ: CA) creates software that fuels transformation for companies and enables them to seize the opportunities of the application economy. Software is at the heart of every business, in every industry. From planning to development to management and security, CA is working with companies worldwide to change the way we live, transact and communicate – across mobile, private and public cloud, distributed and mainframe environments. Learn more at **ca.com**.

Founded in 1975, Microsoft (Nasdaq "MSFT") is the worldwide leader in software, services, devices and solutions that help people and businesses realize their full potential. No other company has such a complete portfolio, from IaaS to PaaS and SaaS, from productivity and social solutions to ERP, from smartphones to PPIs. Microsoft offers the most connected, comprehensive set of cloud solutions (Windows Azure, Office 365, Microsoft Dynamics), with an unmatched breadth and depth of capabilities from platform to productivity apps to business solutions. Microsoft's integrated portfolio of cloud services works across devices and is supported by one of world's largest developer and partner ecosystem. From a customer perspective this means a lower cost and complexity associated with the product/services integration, IT provider management and support.

Visit **Microsoft Azure** to learn more.

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CA Technologies (NASDAQ: CA) creates software that fuels transformation for companies and enables them to seize the opportunities of the application economy. Software is at the heart of every business, in every industry. From planning to development to management and security, CA is working with companies worldwide to change the way we live, transact and communicate – across mobile, private and public cloud, distributed and mainframe environments. Learn more at **ca.com**.