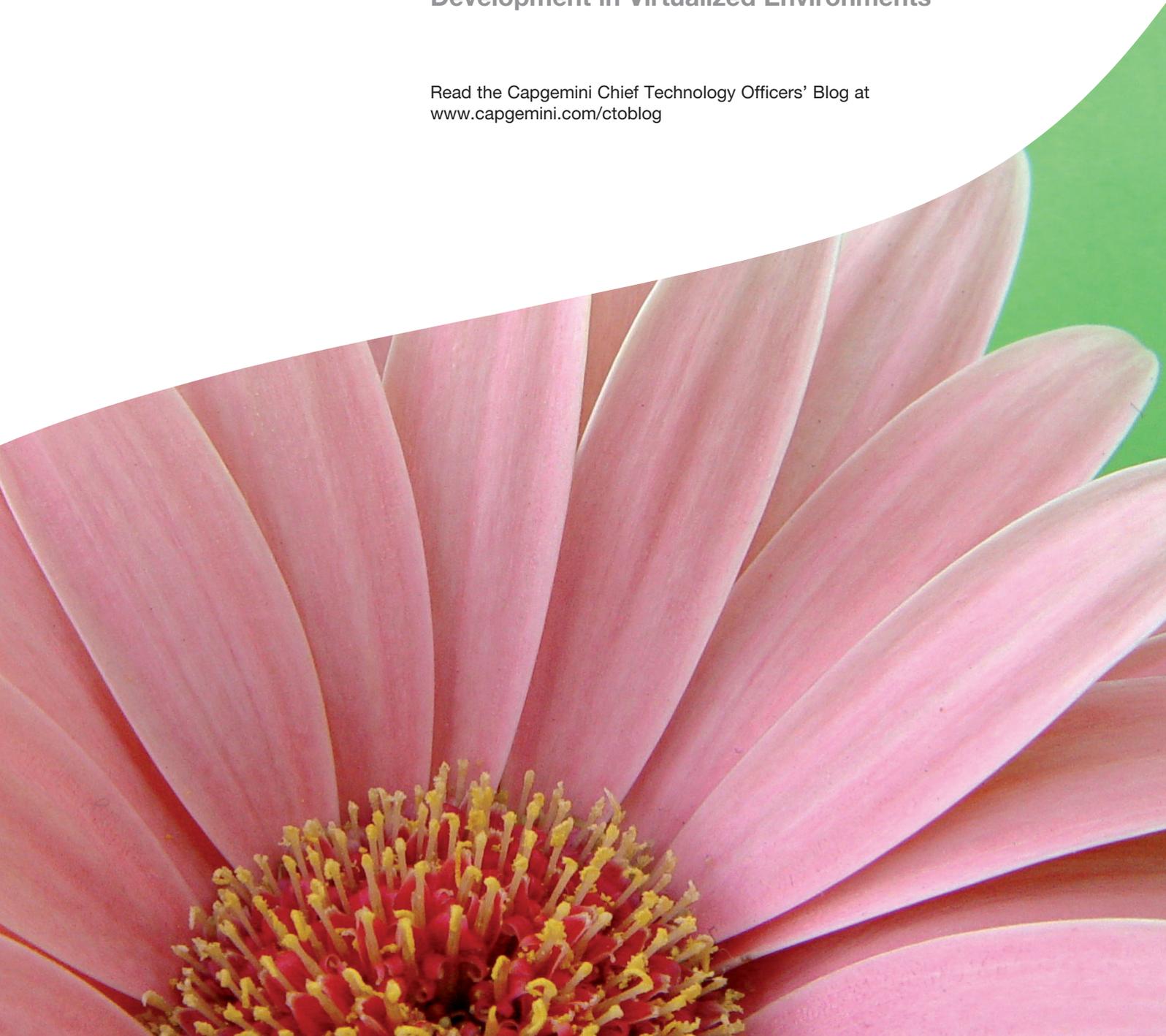


Changing The Game: Monthly Technology Briefs

June 2010

Development in Virtualized Environments

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www.capgemini.com/ctoblog



Development in Virtualized Environments Gains Ground

VMForce is the new joint creation announced at the end of April between two famous technology pioneers: VMware driving Virtualization and Salesforce.com, the successful 'as a service' provider. VMForce claims to provide for Java-based development what Microsoft Azure has provided for the .NET-based development. Both have a link to the Distributed Management Task Force, DMTF, and work on creating the Open Virtualization Format, OVF, standard that aims to introduce a standardized virtualization (abstraction) layer onto which any developer can write, without having to understand how the software will run on the virtualized resources, underpinning the layer. Together, these developments represent a significant change to software development.

This new development environment is aimed at supporting dynamic and different business requirements that demand software to be developed very quickly and implemented as a Service, SaaS, with payment on consumption. The difference between this and traditional Enterprise Software development is marked, and is based on very different needs. Put simply, enterprise software intended for back-office core processes has to be 'built to last', run in a secure, reliable environment, and is, therefore, usually monolithic in construction. As against this, the new requirements are usually focusing on front-office needs featuring rapid builds to provide local optimization of a business, or even a user, requirement, with the resulting software built for frequent change, with use in more 'open' or less secure environments often by simpler development processes using scripting or even services assembly.

This shift has already led to more developments taking place on Amazon, Google, and other hosting services, but this is more likely to be based on immediate availability of low-cost effective Infrastructure as a Service, IaaS. By contrast, using either the Microsoft Azure or Salesforce.com Force frameworks puts the emphasis on delivering SaaS and though all these companies claim to offer a Platform as a Service, PaaS, only Microsoft Azure, and now VMForce, could really be said to be offering more advanced features. These features move beyond the offering of a pre-configured, standardized virtual instance of a server currently on offer under IaaS.

VMForce has concentrated its efforts on IaaS, and to date has offered improvements to software development based around using virtual environments in which to run developments. Developers can work on their own machines as clean 'machines'. And Salesforce.com, who uses their Force platform to provide SaaS, already offers many useful services, which most importantly are combined with a database. The resulting combination creates a platform on which a number of popular Java scripting languages can be used with the capability to incorporate existing services and database elements. The whole environment functions around 'drag-and-drop' and removes some of the most time consuming and complex parts of the development process.

This simplification paves the way for more automation, and less skill in the entire process, leading to the oft-repeated phrase of development shifting for the user being carried out by the user. Another feature is the incorporation of the Salesforce.com Chatter collaboration tool that may make it easier for groups of people to work together in the development and on-going changes to their mutual project.

Microsoft Azure provides a similar approach to VMForce for developing Microsoft-based solutions, which like VMForce, is currently based on a proprietary external hosting, in this case a Microsoft datacenter. In a similar fashion, Azure offers developers a full-service platform including SQL Azure Database to manage data-based tasks and synchronization. Also included is the Azure

AppFabric Service Bus and Access control to manage that is used to manage integration to existing Windows-based applications. Though the term .Net is not to be used to describe tools and techniques provided by Azure, it is essentially the familiar .Net development environment with the addition of a new framework that removes the need for developers to understand and manage the necessary elements beyond that of the immediate user requirements.

Though VMForce and Azure are currently proprietary solutions, both Microsoft and VMware, together with others like IBM and Oracle, all belong to the OVF that published in January 2010 version V1.1.0 its standard for creating a common virtualization layer. It aims to provide a common interface for all software development that would allow it to run on any virtualized resources under the layer. In the longer term, this is likely to become a critical standard and produce a move towards interchangeable platforms and development tools. If OVF reaches its aims, then it will support enterprises' ability to mix-and-match their choices to develop, implement, and operate software as services over mature platforms leading to the in-house, hosted, or hybrid cloud services becoming the norm. In this model, it will be possible to continue to operate secure monolithic enterprise applications as well as be able to have rapid agile development deployed and run on clouds.

The impact of this and other technologies is discussed in the [Capgemini CTO Blog](#).

Leading Company Results (Revenues)

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Q3	Cisco ↑ 27% @ \$10.4bn
Q2	HP ↑ 13% @ \$30.0bn
Q1	SAP ↑ 5% @ \$2.5bn

Movements by Industry Leaders

Cisco have announced further products to their **Secure Borderless Network approach**, based on the recently acquired ScanSafe Intelligent Reporting software, which provides intelligent insights into user behaviour. Cisco is **reviewing its go-to-market channel strategy** and moving from technology specialization such as security products to solution architectures such as borderless networking. Cisco will **acquire MOTO, a design company** specializing in products and product strategies for the consumer market. A **new relationship with CA Technologies** to develop virtualized data centers through the combination of CA Service Assurance and Automation with Cisco Unified Computing System. Cisco is **acquiring CoreOptics**, a specialist in high-speed digital optical networks. www.cisco.com

Oracle Utilities Mobile Workforce Management 2.0 upgrade adds significant new capabilities to integrate with work plans, routing, staff selection, etc. **Sun Netra 6000 specialised Server for Telecoms Carriers** is based on Sun Blade 6000 modular system but with specialized features for telecoms. **Primavera Inspire for SAP 7.0 Portfolio Management** extends the capabilities of the Primavera P6 Enterprise Project Portfolio Management suite. **Sun Partner Community support** is integrated within the Oracle Partner Network. **Secerno, a provider of database firewalls** is to be acquired. www.oracle.com

HP Converged Infrastructure now includes new Integrity high-end mission critical blade servers with new 2, 4, and 8 socket Itanium 9300 Quad Core processors. HP has **agreed to buy Palm**, the Smartphone provider with a view to invigorating the brand and the products under the HP name. HP has introduced **17 new models into the Pavilion and Compaq Notebook ranges** for consumer and business use. www.hp.com

Intel is moving into Smartphones with new versions of its Atom chip claiming more performance and lower power consumption than its principle competitors. **Intel Capital** announced its continuation in investments with \$15 million in sectors such as Health and Education technologies as well as core areas such as carrier grade Ethernet. www.intel.com

IBM is acquiring Cast Iron Systems, a specialist provider of tools to integrate Web-based services with traditional applications in support of their hybrid public/private cloud strategy. **Three new WebSphere Appliance-based offerings** based on Cast Iron Systems products have been immediately added to the IBM range. **NetSuite OneWorld Business Management tools** will be offered as services running on the IBM Cloud Services. **The new SPSS Modeler** tool merges data from various social sources such as Blogs, Twitter, WiKis, etc. to provide various insights into people and their behavior or views. **InfoSphere BigInsights provides data analysis** across large amounts of web data, with insights on how to make business changes to optimize. IBM SQL Skin provides a conversion for **Sybase Database users to migrate to IBM DB2**, following on the announcement of the purchase of Sybase by SAP. www.ibm.com

Microsoft has released a pre-beta preview of Internet Explorer 9, IE 9, with more compliance to standards, better performance, and improvements to Java

Scripting. Microsoft Communicator has been ported to Nokia SmartPhones. New versions of **Office Suite 2010 and SharePoint 2010** have been released together and, as part of this, SharePoint 2010 adds support for the light-weight **Office Web Applications, OWA**, suite, thus offering collaboration users a functional set of tools. **Microsoft Modeling the World initiative** will take on cloud-based super computing. www.microsoft.com

SAP Innovations 2010 was a key feature of SAP SAPHIRE showcasing a strategy to provide existing SAP customers with ways to adopt and integrate new user devices, open services from other providers, and existing SAP ERP ones, and to use common data and business intelligence across the whole extended environment that this will create. **SAP IN-Memory innovation** in the use of data is a key new part of how SAP intends to support its clients in handling and effectively using increasing amounts of all kinds of data. **SAP has acquired Sybase** in recognition that Mobility platforms now form a key part of business applications delivery, though SAP stated its interest in developing ways of using data, there was no comment on the acquisition bringing database knowledge and patents to SAP. New versions of **SAP Business by Design SaaS suite** components offer small and medium enterprises (SME) single- or multi-tenancy options with better analytics and user graphics. A new **NetWeaver Composition Environment** features business process and business rules additions to extend orchestration capabilities. **Sybase Mobility Platform** is claimed to be the most comprehensive framework in the industry bringing together the existing tools into a single integrated environment. www.sap.com

Google Maps gain integration with Google Earth to provide many features of Google Earth such as 3D views in maps as well as the positioning and movement capabilities to aid viewing. Google claims performance improvements to **Mobile Image Search** for iPhone and Android 2.1. **3D Desktop Provider BumpTop** has been acquired for their expertise in creating 3D software. A new tool has been added to Google Apps to allow administrators to **manage cookies remotely**, thus disabling a device from access certain services etc. **Google Ventures will invest \$100 million** during 2010 in start-ups that bring new services and capabilities to the Internet and Web. A new release of **Beta Chrome Browser** is supposed to lift performance by a claimed 30 percent. **Goggles Mobile Search tool** adds to its text recognition feature of camera photographed text translation into another language. **VMware are working** to add their SpringSource-based Java programming capability (see VMForce last month) to Google App Engine. **Android 2.2** is claimed as the fastest browser-based operating system and the latest version comes with more than twenty new tools as well as the speed boost. www.google.com

Amazon Kindle users will be able to load version 2.5 software that other than improving management of their reading matter also allows Facebook and Twitter access. A promised port of Kindle will **add Android** to the existing Apple support. **Amazon S3 service comes at a lower cost** if the new Reduced Redundancy Storage option is selected though Amazon claims this still offers 99.99 percent reliability. www.amazon.com

Open Source Update

Linux Operating System Kernel 2.6.34 update is now available but founder Linus Torvalds says it has nothing major in it just a range of fixes, however it does contain Ceph to enable the storage of very large workloads and handle very large storage systems to be used. www.linux.com

SUSE Linux Enterprise 11 has a service pack update to cover bug fixes. www.novell.com

RedHat Cloud Access service allows Enterprise Linux clients to run their operations on the Amazon Web Services Cloud under RHEL version 5.5.

www.redhat.com

Canonical Ubuntu 10.04 (lucid lynx) desktop OS upgrade claims certification to 100 applications plus changes to improve use with Cloud environments from Ubuntu and Amazon. www.canonical.com

MySQL Enterprise Monitor 2.2 update offers improved integration with user credentials through LLDAP, better administration and tuning tools.

www.oracle.com

Google Video standard VP8 will be open sourced within the WebM project of Mozilla and Opera, as an alternative to the H.264 formal standard supported by conventional suppliers such as Apple and Microsoft. www.webmproject.org

Standards Watch

The WiFi Alliance and Wireless Gigabit Alliance will co-operate to certify the new 60Ghz WiFi standard thus ensuring a stable standard to produce a faster take up. Visit ZD Net Asia <http://www.zdnetasia.com/wi-fi-alliance-partners-wigig-for-60ghz-62063160.htm>

The EU Patent Office has clarified the patent law in respect to Software by stating 'to be granted a patent a program must provide a technical solution to a technical problem' thus preventing business methods from being patented. Visit the European Patent Office web site <http://www.epo.org/patents.html>

The International Telecommunications Union, ITU, Clouds Standards Group has been established to help create a global ecosystem of inter-operable systems that can handle data to support complex areas such as air transport or climate change. <http://www.itu.int>

More Noteworthy News

Gartner believes a rethink in Enterprise Architecture is needed to incorporate a design-based approach. Gartner call this 'Hybrid Thinking' to bring together the structure and discipline of conventional Enterprise Architecture with the user-oriented aspects of 'services' and 'clouds'. www.gartner.com

Researcher NPD claims Android is outselling iPhone in the USA market place with 28 percent share against 21 percent for iPhone and 36 percent for Blackberry. www.npd.com

Concerns over Chinese-built networking products have resulted in the Indian Government banning their use from the market following similar concerns elsewhere that the products contain a remotely-operated MalWare bug designed to shutdown the Internet. http://www.mercurynews.com/ci_14991775

EMC has laid out their vision for enterprises with virtualization around the **new VPLEX Storage appliances** that provide for storage what virtualization has previously done for servers, to strengthen internal operations, partnerships to develop the use of their **Content Management products** through shared cloud-based services, and tie-ups with Microsoft around **SharePoint** and an undefined move with **SAP** as immediate steps. Two further new products have been added to the Enterprise Storage products Data Domain Boost; an optimizing tool for managing connections between server and backup storage systems, **Fully Automated Storage Tiering, FAST**, manages priorities between various files and demands across the storage systems. www.emc.com

Apple has acquired mobile chip designer, Intrinsity that specializes in low-power fast-chip optimization for mobile devices. **Mobile Search Specialist Siri** is to be acquired, providing voice-based search request technology. In their first month on sale, more than **1 million iPads** have been sold. www.apple.com

Salesforce.com and VMware have partnered to offer Java developers improved capabilities by being able to use various SalesForce.com services embedded into their enterprise level developments. www.salesforce.com
www.vmware.com

VMware is acquiring GemStone Systems, a Java data and cache memory expert vendor, to be part of its SpringSource capabilities. www.vmware.com

Twitter is acquiring CloudHopper, an SMS messaging infrastructure startup, whose technology will enable the continued scaling of SMS services. www.twitter.com

RIM BlackBerry Pearl 3G is the smallest Blackberry by size and the first with a conventional keypad as well as the trademark BlackBerry tracker ball, aiming to capture non-traditional BlackBerry clients who want a Smartphone. **BlackBerry Mobile Voice System, MVS, platform** has been updated to version 5, adding integration to Cisco Unified Communications Manager as well as integration with desktop phones using WiFi and Voice over IP, VoIP. A **preview of BlackBerry 6 operating system** reveals it to be based on the same platform as iPhone and Android, with social networking and multimedia via a touchscreen. www.blackberry.com

AMD is introducing six-core desktop chips for new high-end multimedia requirements with its new Phenom 11x6 chip set. The **AMD Vision brand is being refreshed** with new chip packages for the Notebooks and the inclusion of Desktop units for the first time. www.amd.com

Nokia has affirmed its commitment to the Symbian OS by announcing that it will be the operating system for the new Nokia N8 Smartphone. www.nokia.com

Symantec is acquiring PGP and GuardianEdge, both well known encryption technology providers with complementary product ranges. The new **Hosted Endpoint Protection** provides SMEs with a web-based service to protect their use of hosted services. The **acquisition of Verisign Authentication Services** operations adds a new angle to preventative safety and support. www.symantec.com

Symbian has added a Web App Development kit supporting a wide range of scripting tools to encourage developers to write on their Mobile Operating System platform. www.symbian.com

Skyfire 2.0 adds Adobe Flash capabilities to Android OS by translating the format into HTML 5, a solution that may have wider use given that neither Microsoft nor Apple intend to support Adobe Flash, stating a preference for using new standards to develop the Rich Internet Applications, RIA, market. www.skyfire.com

Nokia Ovi store now offers Microsoft Communicator Mobile for Nokia for download, and in future this will be pre-installed on new Nokia Smartphones. www.nokia.com

Adobe Flash Access 2.0 updates the Flash Media Rights Management Server with extended capabilities to manage distribution and use of media content. **Adobe**

DreamWeaver CS5 HTML5 extends existing DreamWeaver capabilities to include the new HTML 5 standard and is available as a free download. www.adobe.com

CA is changing its name to CA Technologies as more reflective of its moves to deliver 'Services' from Clouds and a change in the technology era. **Cloud-Connected Management Suite** with four sub-components; Cloud Insight, Compose, Orchestrate, and Optimize incorporates some existing tools into a new more comprehensive set of capabilities. **CA Mainframe 2.0 offering is being extended and updated** starting with the flagship Mainframe Software Manager product and covering an additional 16 tools plus adding an all-new health check tool. www.ca.com

Lenovo has refreshed key NoteBook and PC ranges with the new Z series Notebook and IdeaCentre all-in-one home consumer PCs, plus adding more models to its new **ThinkPad Edge Notebook** range. www.lenovo.com

Dell is offering new Latitude E series Laptops featuring increased security and remote management with the aim of improving support for web-based hosted services operations. www.dell.com

Toshiba Satellite Pro laptop range has new models claimed to be inexpensive but high-end in performance for business users with the relatively unusual feature of a separate numeric entry keypad. www.toshiba.com

Skype Manager continues to move towards enterprise support with a new management console, to provide centralized enterprise implementation and control, and includes automation of purchase of Skype Credit. www.skype.com



About Capgemini and the Collaborative Business Experience™

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model called Rightshore®, which aims to get the right balance of the best talent from multiple locations, working as one team to create and deliver the optimum solution for clients. Present in more than 30 countries, Capgemini reported 2009 global revenues of EUR 8.4 billion and employs 90,000 people worldwide.

More information is available at www.capgemini.com

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