

Changing the Game: Monthly Technology Briefs

August 2011

**Business and Technical Services
Orchestration versus System Integration**

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Business and Technical Services Orchestration versus System Integration

The role and capabilities of a system integrator is generally understood when applied to building solutions involving enterprise applications. Enterprise applications are broadly defined by three technical characteristics linked to enterprise architecture; close coupled, state-full, and deterministic. A 'Services' environment delivered by a cloud has none of these characteristics - being loose-coupled, stateless and non-deterministic. Accordingly, solutions are built in a very different manner that is usually referred to as 'Orchestration'. Both the terms **System Integration** and **Orchestration** are too broad to really provide any real understanding of the complexities that they must address.

A Services environment has two distinct sides:

- the **Business Services** that build unique processes by combining existing or new service elements, with the term *Service* referring to small individual pieces of code that provide a single function, and
- the **Technology Services** that provide the common functional environment or platform of capabilities to 'run' the Business Services.

It is a vitally important characteristic of providing services from a Cloud Computing model that this separation is understood and maintained. The sheer scale of the number of services operating, the frequency of change expected, and the increasing number of external services that will require the ability to 'run' on-demand, requires the automated provisioning approach.

As per some definitions, the cloud is about scale and as such 'automated workflows are essential'; others remark that the decoupling (abstraction) of the Business Services from the Technology Services is the true definition of 'Agile Computing' in support of the 'Agile Enterprise'. A correctly build cloud solution will place the Technology Services with one/more Infrastructure as a Service (IaaS) or Platform as a Service (PaaS) providers. This also frees the Business Service solution provider to orchestrate the business solution without any concern as to where, or how, it will be 'run', allowing the focus to remain solely on the business activities and alignment.

This is wholly and completely different from the building and deploying of an application where the provisioning and optimizing of a server is a key task. In much the same way, business services orchestration assembles processes from standardized services that were intended to be integrated. This is as opposed to System Integration that is focused largely on overcoming the inconsistencies and barriers between applications and their attendant computational technology systems. Virtualization of servers may reduce the time and cost of deployment by reusing existing servers better, but in client-server applications the relationship with the server remains an important characteristic.

Clearly, the more complex side is the design and construction of the IaaS and PaaS layers to provide Technology Services and the key step to achieving this is by the use of **Service Catalogues**. Though not new, service catalogues are to be accorded a new, expanded and significantly more important role and be based on industry standards to ensure that they are able to support not only internally developed business services, but also the increasing numbers of services from external sources and processes.

Service catalogues cluster together the individual elements of technologies, such as a server, network, security appliances, etc. to provide building blocks that will support different types of business services. As an example, the service catalogue set to support an external set of business services used by clients would be different to the service catalogue set used for secure processes with nominated partners, which would include a more comprehensive set of governance and security elements. Correctly established, Enterprise Service Catalogues provide the baseline **Infrastructure** that is common to, and shared by, all business users and the business services.

Service catalogue sets can be used for internal traditional IT functions such as establishing a service catalogue set to support testing. Service catalogues can also incorporate internal and external computational resources, or even direct different business services to run on different resources mixing internal and external resources so that security services could be run internally and routine business services of an intra-business process would run externally. IBM and HP are establishing services catalogues to support vertical sector intra-business processes in markets such as financial services, smart cities, or retail, but this will still necessitate individual users to both build and deploy their own business services, and service catalogues to cover their elements of the extended processes.

At an enterprise level, service catalogues enable 'business agility' which is usually defined as the ability to create, change, deploy, and pay for, business beneficial capabilities to compete in the market place through the front office, as opposed to automate stable back-office procedures with traditional IT. The de-coupling of the technology element together with the automation of provisioning enables business users to use simple visual tools to chose, combine, and edit business processes without the need to consider these elements, or even the enterprise level governance requirements. In addition, developers are able to focus on the creation of libraries of business services that will provide a richness capability, or to react rapidly to write and add new services in response to changing market conditions.

An enterprise can expect to have tens of thousands of business services covering its own and those of its clients, suppliers, partners and industry in use. An effective set of technology service to support and safely enable these in a fully automated manner is essential. Conversely, the freedom to respond agilely to the market with new services or processes is equally essential, as it delivers the new business value. The role of the Systems Integrator will continue to be required to support the Enterprise Applications based on transactional client-server, but a new set of skills is required to support Services Integration and enable enterprises to change their business model.

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

Leading Company Results (Revenues)

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Full Year	Microsoft ↑12% @ £69.94bn			
Q4	Microsoft ↑4% @ £17.4bn			
Q3	Apple ↑82% @ \$28.6bn			
Q2	IBM ↑12% @ \$26.7bn	Intel ↑22% @ \$13.1bn	Nokia ↓7% @ €9.3bn	SAP ↑12.5% @ €3.3bn

Movements by Industry Leaders

Cisco AppHQ is the new business applications store for the Cisco Cius Tablet and is claimed to be different in that it allows IT administrators to control what users do at the store. Cisco has **updated its portfolio of Cloud products** adding **VMware vCenter** to the Cisco Unified Computing System a new **Fabric Interconnect unit** supporting 48 ports at 960 Gbits to support up to 320 servers. **Cisco has announced that 6500 employees will be made redundant amounting to 9% of its workforce but at executive levels it will be 15% of jobs cut.** www.cisco.com

Oracle is to acquire FatWire Software, a provider of 'Web Experiences' or the design and analytics of online web sites. **Oracle Argus Safety On Demand** is part of Oracle Health providing cloud-based services for compliance, health and safety. **Oracle Enterprise Linux 5 update 6**, Oracle VM 2.2.1, VM Manager 2.1.5, Cluster File System 2 and MySQL Database 5.5.10 **all gain new VM Templates designed to simplify deployment and provide optimized approaches.** Oracle has lodged a **claim against Google for \$2.6bn** in damages for 'java Infringements' in Android. Oracle **is to acquire Pillar Data Systems**, a SAN Storage appliances vendor. **Oracle Virtual Desktop Client App for iPad** is now free from the Apple App Store and is claimed to provide the same capabilities as any PC client. **Oracle Virtual Desktop Infrastructure 3.3** adding Oracle Linux as a supported host platform with other improvements. **Oracle Java 7 release candidate** is described as an evolution offering support for code running in other languages and multi-core processors, as well as improvements to graphics and sound media and new APIs. **SAP Applications are certified to run on the Oracle Exadata Database Machine.** **Oracle CRM OnDemand R19 SaaS** adds support for Mobility working from Apple and BlackBerry devices. **Oracle Health Sciences Information Manager 1.2** with Oracle Health Sciences Information Gateway 1.2 updates add functionality for sharing information in Health communities. **Oracle WebCenter roadmap for a complete and cohesive range of products to manage online internal and external functions** for users covering online marketing, social networks, portal management and content management integrated to Oracle Fusion Middleware. **Oracle Exadata Storage Extension Rack** adds the capabilities to handle Petabytes of data to the Exadata appliance. Oracle is adding **Environmental Tools** to track carbon emissions and energy consumption to its e-Business Suite and JD Edwards EnterpriseOne suites. **Oracle is to acquire Ksplice**, a provider of tools that allow real-time updates to Linux without needing any downtime. **Oracle Clinical Trial Payments Process Integration Pack** provides financial management for clinical trials and integrates with other Oracle Financial management suites. **Oracle User Productivity Kit 11.0** update for managing deployment of IT Projects. **Oracle Unified Directory 11g**, a 'next generation' approach to integrating Storage, Synchronisation and Proxy for Identification management, is a part of Oracle Fusion Middleware 11g. **Oracle Enterprise Data Quality** brings together several elements to create a new quality of Master Data Management and Data Integration. **Oracle VM VirtualBox 4.1** provides more functionality for open source, cross platform virtualization.

Oracle FLEXCUBE Universal Banking 11.3 provides a complete framework for understanding the elements of a dynamic banking environment. www.oracle.com

HP TouchPad Tablet with WebOS 3.0 is now released and is positioned as a fully functional business tablet adding multi-tasking and Flash, unlike its principal competitor the iPad. **HP WebOS** is to be licensed to other Tablet and Smartphone vendors. **HP WebInspect Real-Time** supports real-time run testing of application code to find security risks. **The HP Application Life Cycle suite** gains **Application Lifecycle Intelligence (ALI)** to monitor code development, **Application Accelerator 5** collaboration working environment, and to follow a Service Virtualization tool. www.hp.com

Intel demonstrated the World Smallest Cloud Data Center, about the size of a shoe box, powered by Xeon processors and able to offer an SME the capability to run true cloud services capability with support for Open Standards, etc. **Intel is to acquire Fulcrum**, a designer of Ethernet Switches to use the expertise to add switching to its Zeon Platform chipsets. www.intel.com

IBM Research breakthrough in Memory using Phase-Change Memory speeds of read-write of up to 100 times faster can be achieved as well as longer life and potentially higher storage densities. **IBM zEnterprise 114 'a mini mainframe'** as an entry model for fast growth areas such as local government in third world countries or certain SME markets where the benefits of the IBM Mainframe software applications might be important. **IBM XIV Storage Appliances** range has had a massive update with Solid State Drives, Infiniband, and other features bringing large increases in performance capabilities. www.ibm.com

Microsoft Office 365 is officially launched after being available as a beta for some time making the Office Suite available as a cloud hosted service with a focus initially on SMEs. **Microsoft Phone 7.1 beta** is available for download. A **second preview version of Internet Explorer 10** with a SDK is available and includes major performance and security improvements as well as new HTML 5 based features and better user interfacing. Microsoft is opening up its techniques by which it collects data on **WiFi spots for location services** to demonstrate that it is non-intrusive. Microsoft has partnered with **Baidu, the leading Chinese Search Engine** company, to use Microsoft Bing to carry out the English language searches. Currently, Baidu is estimated to have nearly three quarters of the Chinese search market. A **Windows Phone 7 Server Connector** allows IT administrators remote access and management of user phones. www.microsoft.com

SAP Transportation Management 8.0 update is now available. **SAP Business One 8.81** adds Mobility access and a new Integration Framework. **SAP Sales OnDemand** provides a SaaS support tool for sales staff providing a mix of real-time data, social networking and integration with existing SAP environments delivered on a variety of mobile devices. www.sap.com

Google+ Social Network, a new try to rival Facebook, is currently being tested as an invitation-only community, and to be extended to the business community as a critical business community tool. **Google Gmail User interface** is to be updated through a series of minor changes. **Android Market Mobile App shop** is being revised into a wider set of products including books and online videos direct to Android devices without needing a PC intermediate. www.google.com

Apple iPhone 5 will launch in September, with an initial batch of 15 million units placed into contract manufacturing. **Apple App Store trademark legal case** has lost the preliminary hearing, with the judge stating the term is 'more descriptive than distinctive' at the same time as Apple announced **downloads from the Apple App Store have reached 15 billion**. The **Apple App Store Volume Purchasing Program** is to be started to allow enterprise administrators to blanket-buy and deploy Apps. **Apple OS X 10.7 (Lion)** release for its Mac PC ranges is now available for download and new PCs will come with OS X 10.7 pre installed. **Apple MacBook Air** now gains new processors and Thunderbolt I/O which is claimed to double operating performance. **Apple Mac Mini** gains new Intel processors, Thunderbolt I/O and improved graphics handling.

www.apple.com

Open Source Update

Redhat JBoss is to be updated into an 'application fabric' to become a more suitable platform for clouds by being able to run on a wide range of computational platforms, the transition will start with the next release of **Application Server 7**. A similar path is to be taken with the **MRG 2**, the Message RealTime and Grid Platform update to support **Linux 6.1**. A preview version is now available for **JBoss Application Server 7 (AS7)** with up to ten times quicker boot, lower memory requirements and a full certified Java EE6 Web Profile integration. **RedHat Enterprise Linux 5.7** adds some features from the newer RHEL 6.1 to aid migration and subscription management as well as performance improvements. www.redhat.com

Mozilla Firefox's next version browser **Aurora** is now available for testing with better memory management, quicker start-up, synchronization of passwords and bookmarks amongst the improvements. **Firefox 5.0.1 update is specifically to solve crashes when used with Mac OS X 10.7**. www.mozilla.com

Standards Watch

The Wireless Gigabit Alliance WiGig 1.1 standard has been released and, despite its early release, it is claimed to be advanced enough to support testing and certification of the Physical and Media Access layers.

www.wirelessgigabitalliance.org

European Commission Data Breach disclosure standard to allow all enterprises to be able to report mandatory data breaches on the same system has entered the consultation stage. <http://www.enisa.europa.eu/act/it/library/deliverables/dbn>

More Noteworthy News

NetApplications state Apple iPads account for 1% of all web browsing globally and over 2% on the USA, thus further encouraging consumer-oriented business to want to place their 'services' in the Apple AppShop. **The mainstream browsers market-share** continues to show a loss by Microsoft Internet Explorer now down to 54% but still as numero uno, with Firefox at second position at 22%, and Chrome growing fastest at slot number three with 13%.

www.netapplications.com

IDC state cloud and mobility security market is worth \$4bn in 2011 and will hit \$6bn by 2015 at current growth rates, with around one third being around mobility devices and the rest around securing cloud services. www.idc.com

VMware vSphere 5 Cloud Platform is claimed to provide a new level of automation of operations and comes with an entirely new licensing model to simplify use of multiple processors and pooled capacity. VMware Cloud Infrastructure Suite has been updated to maximize its use of the capabilities provided by the new vSphere 5 platform. www.vmware.com

Skype iPad provides the Skype VoIP service for the iPad whereas Apple Facetime is usable by the iPad but is focused on the iPhone. www.skype.com

Tibco Tibbr Enterprise Social Networking Tool update adds unified communication and the ability to implement calls directly by users to give TibCasts. www.tibco.com

Strato HiDrive Cloud Storage now has a new File Manager to give an overview of available storage through a web browser interface. www.strato.com

CA Mainframe 2.0 Management System is claimed to allow a new younger generation the ability to manage older Mainframes without needing as much knowledge of the quirks of legacy operating systems. www.ca.com

MySpace is to be acquired by Specific Media, a digital content provider, in a deal that sees News Corp quitting the slowly shrinking MySpace and Specific Media gaining News Corp as a shareholder. www.myspace.com

Nokia Operator Branded Messaging (OBM) business unit is to sold to Synchronica, a mobile messaging company, who will acquire Nokia's email, instant messaging, and social networking services. www.nokia.com

Dell Data Protection/Encryption (DP/E) manages end points on the network thus allowing various mobile devices to have to log in and onto a managed policy when they join the network. **Dell is acquiring Force10 Networks** to add their Ethernet Gbit Networking products to their Data Center solutions capability after having had an alliance together in the past. www.dell.com

SecurEnvoy Secure Access 6.0 turns a Smartphone into a security token generator able to provide a one-time authentication pass-code. www.secureenvoy.com

Twitter is acquiring BackType, the provider of BackTweets - an ability to track and analyze Tweets in real-time - to support marketing campaigns, etc. the acquisition is seen as a way to enhance the value of Twitter and its monetization. www.twitter.com

Compuware is acquiring DynaTrace, an provider of specialist tools for application performance management that it will use to extend the Compuware Gomez Application Performance Management Platform. www.compuware.com

Facebook adds Skype video-calling service through an embedded link in a Facebook page. The unique proposition is that the receiver of the call doesn't need to be a user of either Skype or signed up to the Facebook service as the code will load immediately and they will be connected in seconds. www.facebook.com

Kognitio Pablo Business Intelligence extension allows local IT departments to create a virtual OLAP cube over Kognitios WX2 database. www.kognitio.com

Lenovo ThinkPad and Edge Notebooks aimed at enterprise and SME markets respectively now offer new models with options of Intel or AMD processors, rapid boot, and the Vantage Communications Utility package to allow specifications to be tailored. **Lenovo ThinkPad Tablet** based on Android 3.1 is scheduled to ship soon has been announced and a big specification includes a stylus, front and rear cameras for video conferencing running on a dual core 2.1Ghz processor. www.lenovo.com

Ingres and MicroStrategy Performance is a combination of Ingres VectorWise Database and MicroStrategy Business Intelligence tools for mobile devices.

www.ingres.com www.microstrategy.com

AeroHive adds new access points for mobiles - two internal and one external claiming much better transmit and receive speeds with extra transmitter/receiver sensitivity for Tablets and Smartphones. www.aerohive.com

Citrix is acquiring Cloud.com, the provider of CloudStack - a suite of products to build and operate cloud platforms. www.citrix.com www.cloud.com

Nortel Patents have been acquired for \$4.5bn by the Rockstar Consortium of Microsoft, Apple, Sony, EMC, Ericsson and BlackBerry, after USA anti-competition probe passed the deal. www.nortel.com

SAS 9.3 'does more than before, faster than before, is the claim and that includes using new 'analytics accelerators' to optimize third party databases from Terradata, Greenplum, and Netezza. www.sas.com

Parallels Desktop 6 for Mac Enterprise Edition offers desktop virtualization for Mac Users with IT department able to control various policy and support.

www.parallels.com

Adobe is acquiring EchoSign, the leading provider of web-based digital signing software used in their own offerings by many leading industry players including SAP and Google. www.adobe.com

Polycom is offering a starter bundle Telepresence Pack for \$17,999 comprising three conference room sets and five desktop kits, all using the Polycom compression technology claimed to need less bandwidth than other systems. www.polycom.com

RIM BlackBerry Tablet OS v1.0.7 is an important update adding the ability to use a SD card to save files and for files to be uploaded via an SD Card as used in BlackBerry smartphones. **BlackBerry** are making 2,000 staff redundant following recent poor results. www.blackberry.com

DynaTrace 4 Application Platform Management is claimed to have ten new important capabilities, work out-of-the-box, and now incorporates DynaTrace PurePath software to offer deep analysis of business transactions at all stages.

www.dynatrace.com

Riverbed Technology is acquiring Zeus Technology, a vendor of WAN optimization and certain types of network performance analytic tools.

www.riverbedtechnologies.com

Wolfram Research Computable Document Format (CDF) introduces a new approach to creating documents that offer mixed multimedia and real time data, a potentially high growth sector, and are played via a free to user downloaded CDF player in the manner of Adobe Flash while the creation of the content requires Wolfram Mathematica 8 software. www.wolfram.com

Apple iOS 5 beta 4 has been made available including WiFi synchronisation with iPad, iPhone and iPod devices on the same WiFi network. <http://www.apple.com/>



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the results they want. A deeply multicultural organization, Capgemini has developed its own way of working, the Collaborative Business Experience™, and draws on Rightshore®, its worldwide delivery model.

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