

IBM Announces SmartCloud Orchestrator Based on Open Standards

IBM SmartCloud Orchestrator

“It is not only about open standards, but it is about how these standards all play together for the benefit of the customer,” said Angel Diaz, VP IBM Standards, Open Source, and Cloud Labs, at the IBM PULSE Open Cloud Summit in early March of 2013. From the opening event to the final keynote, IBM Pulse 2013 was strongly and consistently focused on how to leverage OpenStack, TOSCA (Topology and Orchestration specification for Cloud), and OSLC (Open Service for Lifecycle Collaboration) to create tangible customer value. Most excitingly, IBM and SAP presented a demonstration of how customers will soon be able to implement TOSCA patterns through IBM SmartCloud, eliminating the traditional pain points that come with standing up, managing and governing SAP environments.

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At Pulse 2013, IBM announced the Beta of IBM SmartCloud Orchestrator, based on OpenStack, TOSCA and OSLC. SmartCloud Orchestrator constitutes IBM’s new unified and open cloud management platform, consisting of three main layers (see Figure 1). The **infrastructure services layer** is based on OpenStack for provisioning, configuring and managing storage, compute and network resources. The **platform services layer** includes virtual machine image lifecycle management capabilities and pattern services. The latter refers to IBM’s so-called patterns of expertise, which include exact deployment and management instructions for the entire business service. The **orchestration services layer** is based on IBM’s Lombardi acquisition, offering an easy-to-use business process management solution.

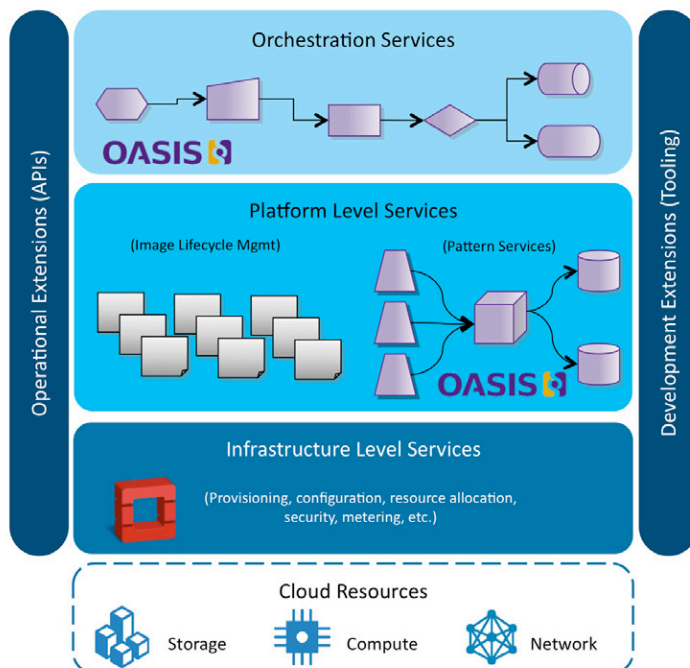


Figure 1 - IBM SmartCloud Orchestrator

IBM announced that later in 2013 the platform services layer and the services orchestration layer will both support the TOSCA standard. SmartCloud Orchestrator supports OSLC for continuous delivery across heterogeneous development environments and is able to deploy workloads to a software-based private cloud, IBM’s integrated PureSystems or public clouds such as Amazon EC2 or IBM’s SmartCloud Services.

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Workloads can then easily be moved to a different location if requirements change, offering customers to freely choose the most suitable cloud, without vendor lock-in that typically comes with committing to a specific technology stack. Enterprise Management Associates (EMA) was excited to see that the user interface for managing all three layers -resource management, Patterns of Expertise and BPM- is well integrated and offers role-based access.

The Business Value of IBM's Standards Based Approach

IBM SmartCloud Orchestrator being based on OpenStack, TOSCA and OSLC delivers clear cut customer value today. EMA expects this customer value to constantly increase as more and more software and cloud vendors adopt these standards.

OpenStack: Orchestration of Compute, Networking and Storage

The launch of SmartCloud Orchestrator is big news for the cloud marketplace, as IBM will soon be shipping a hybrid cloud platform that is based on OpenStack. IBM is harvesting the results from the company's determined engagement with the OpenStack foundation, having contributed a significant amount of development resources and existing intellectual property. Based on contributions by IBM and other industry leaders, OpenStack promises to develop into the de facto industry standard for compute, storage and network provisioning and lifecycle management (see Figure 2).

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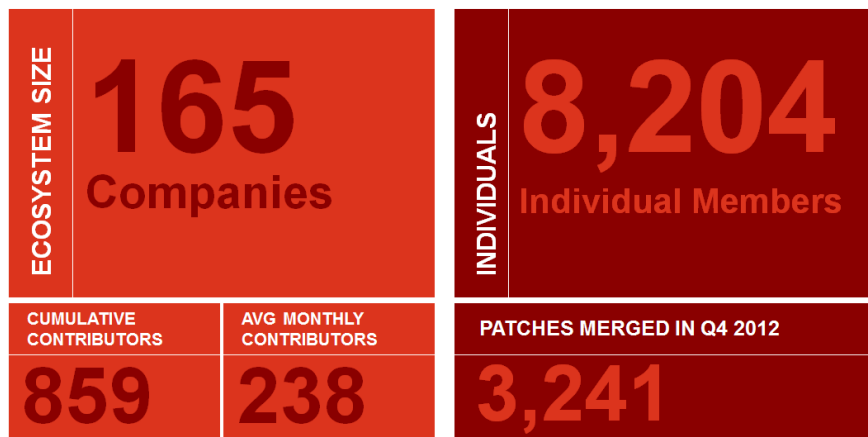


Figure 2 - OpenStack Buy-in by Numbers

TOSCA: Patterns of Expertise and Image Lifecycle Management

On top of the OpenStack infrastructure services layer, IBM has placed its image lifecycle management and patterns of expertise platform level services. Patterns of expertise are XML-based definitions of infrastructure configurations required to optimally provision and manage the compute, networking, storage, operating system and middleware resources for specific application workloads. Deploying application environments based on these definitions ensures compliance and consistency, while eliminating deployment and maintenance errors that can often lead to performance, reliability and security problems. Patterns of expertise also drastically shorten the provisioning process for applications and business services.

TOSCA standardizes these patterns of expertise to make workloads portable between any clouds that adhere to the TOSCA specifications. The key value proposition of TOSCA consists of the delegation of the description of workload provisioning blueprints and management instructions to domain experts, instead of IT operations staff. TOSCA compliant patterns can then be deployed and managed, basically by the push of a button, in any cloud that supports the TOSCA standard. This deployment process is executed within the often heterogeneous customer environment, consisting of a plethora of existing software by numerous vendors, such as Microsoft, VMware, HP, CA Technologies, BMC and IBM. This ability to consistently and efficiently deploy and manage complex application environments within highly heterogeneous IT environments constitutes the core value proposition of TOSCA. Figure 3 illustrates the four core elements of TOSCA -Nodes, Relationships, Artifacts and Service Templates.

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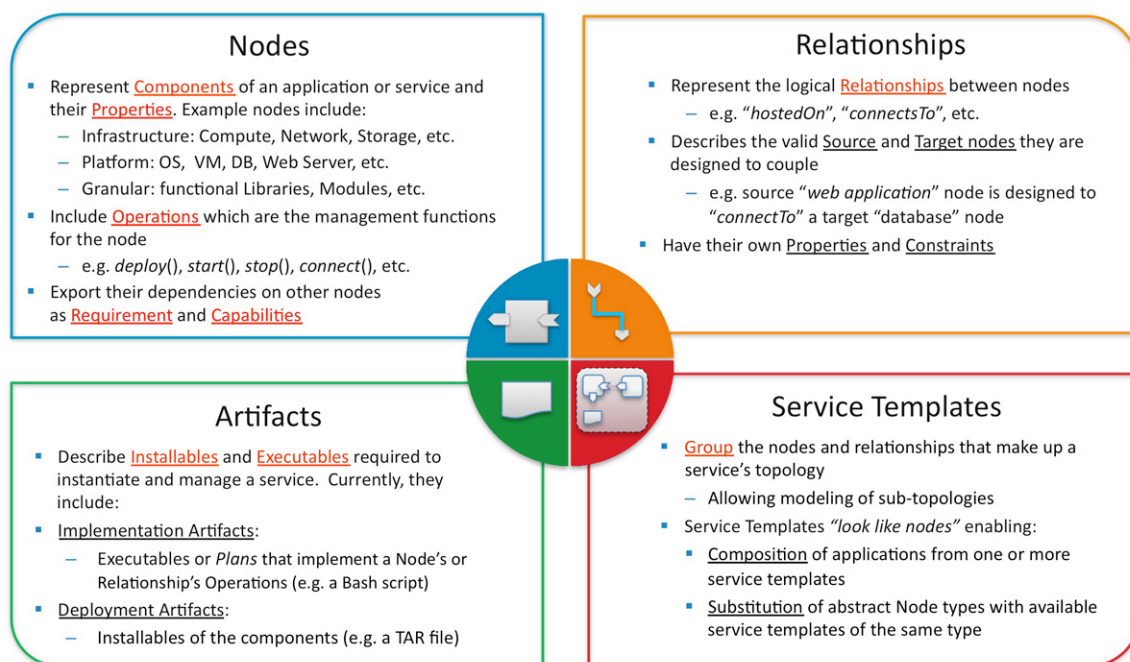


Figure 3 - The Four Core Elements of TOSCA

OSLC - Enabling Collaboration and Continuous Delivery

OSLC allows customers to develop and deploy software components seamlessly across their individual tools for change management, automation, requirements management, quality management, monitoring, and release management (see Figure 4). OSLC compliant software platforms are able to exchange data in real time through federation, without moving the actual data sources and without the need for actual integration via code. OSLC is all about avoiding “tool fights” between departments or even companies -as everyone can select their tools of choice- and simply constitutes the common point of integration for applications and data sources, within constantly changing environments.

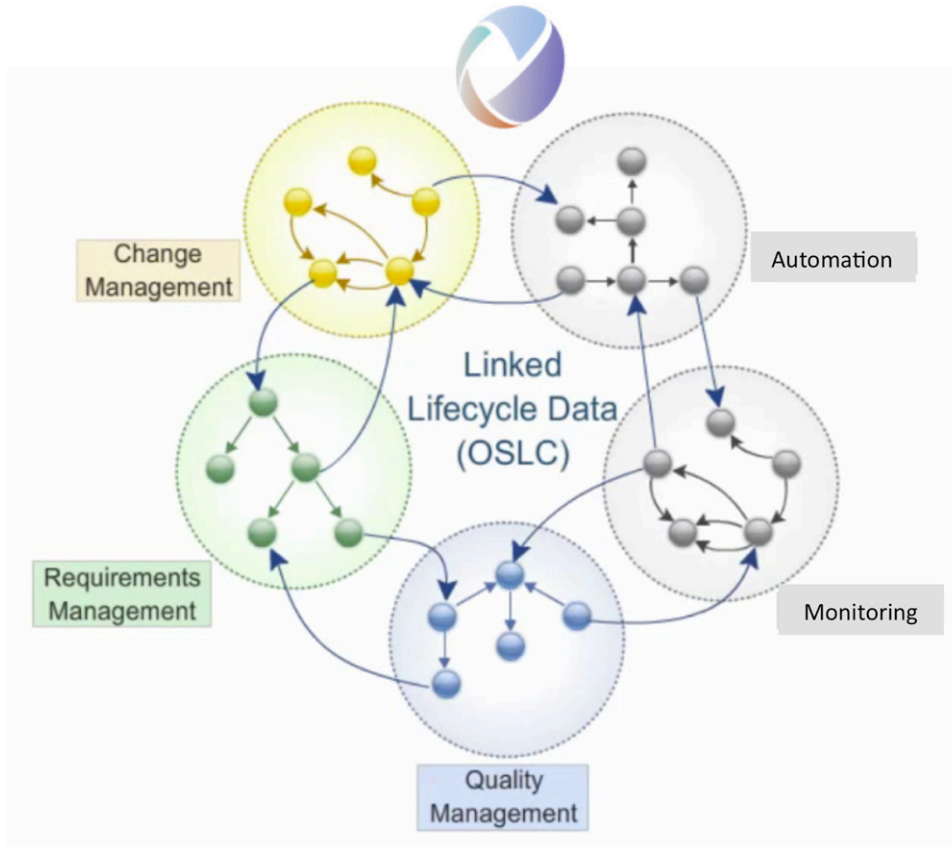


Figure 4 - OSLC as the Common Point of Integration

EMA Perspective

Utilizing open standards and open source technologies leads to open implementations that enable customers to benefit from an entire universe of best of breed solutions, without the traditional worry of vendor lock-in. OpenStack, TOSCA, and OSLC are essential steps toward this end goal. All of these standards playing together bring consistency into the service deployment and management process, while eliminating costly errors and reducing the overall deployment and software lifecycle management effort.

IBM's Angel Diaz compared enterprise IT's ongoing struggle between managing existing infrastructure and finding the time to provide new innovative business solutions to changing the tires of a speeding car. IBM's SmartCloud Orchestrator, powered by OpenStack, TOSCA (coming soon) and OSLC, takes away much of the need for actively steering the car, enabling enterprise IT to comfortably change the tires and possibly even upgrade the engine.

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About EMA

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