Cloud orchestration without boundaries

IBM Cloud Orchestrator from A to Z

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IBM SWG Cloud & Smarter Infrastructure – Nordic System z

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Optimizing IT and Service Management

- **Increase delivery velocity and quality** of new business services
- **Resolve problems faster** for increased quality of service and reduced costs
- **Predict & prevent issues** before they impact end users
- **Drive efficiencies** in business processes and asset utilization

Stakeholder Dashboards

- IT Operations
- Development
- Line of Business

Operations

- Provide end-to-end insight for smarter business decisions

Performance

- Applications | Infrastructure
- Ensure right availability of your critical business solutions

Analytics

- Proactive outage avoidance and faster problem resolution

Automation

- Service Desk | Process | Workload
- More agility, with lower cost and risk

Key Adjacencies

- Endpoint Management
- Storage Management

Applications | Systems | Middleware | Wireless | Network | Buildings | Security | Storage | Assets
Mission of IT Process Automation

“We want to Accelerate the Pace of your Business Innovation”

Optimize

Focus on Operational Costs
• Consolidation and modernization
• Operations Automation
• Risk and compliance Management
• Manual policy to analytics driven optimization

Drives Need

Innovate

Focus on Speed and Agility
• Assemble solutions from verified components and services
• Fast deployment and redeployment
• Agile to DevOps model
• User first delivery model

Drives Investment

Optimized IT Delivery
What is Orchestration?

While it may sound complex, the concept of IT orchestration is actually pretty simple. Orchestration is simply the coordination of automated tasks and activities across teams, tools, and environments.

Why Should I Care?

In each of those tasks, tools, and teams there are inefficiencies, and when they operate independently in silos the effect is multiplied.

What’s the Bottom Line?

Speed. It takes more time, and more resources for IT to deliver services, particularly in production. This can have a very direct impact on the profitability of the business.
IBM Cloud Orchestrator

Cloud Management

Cloud Orchesturator

- Self Service Catalog
  - Pre-defined menu of Services

Cloud Automation

- Open, scalable platform

Cloud Marketplace

- Pattern sharing/re-use, from engine
  - Rich set of ready to use patterns

Infrastructure Management

IBM Wave
- Simple, intuitive, graphical z/VM management tool

OM XE for z/VM and Linux
- Monitor performance of z/VM and Linux guests

Ops Mgr, Backup/Restore
- Operational management
- Backup/recovery of z/VM & Linux

Add on:
- Cost management
- High Availability
- Security
- Application Performance Management
What we have heard from 5000+ Private Cloud Engagements

- Costly, error prone manual and duplicative processes delay innovation and impact competitiveness
- Deployment of applications to other disparate cloud results in governance and security issues
- We have lots of tools, to manage isolated automation tasks, but getting everything coordinated is challenging and takes a lot of time
- It takes weeks to deploy an application using a 100 page manual today
- Need to reduce capital expenses on IT
- There is always more to provisioning than just installing software, such as approvals, adding user access, or updating load balancer or firewall policies
- Do not have the skills and resources to setup a cloud management infrastructure in-house
- Need to manage the lifecycle of that application once provisioned – keep it running, compliant, and data protected
- Need the flexibility, security and control that a private cloud offers, but they don’t want the complexity or expenses that come with many cloud implementations
- LOB is asking for faster turn around time on requests that cannot be meet through traditional resources
Common use cases start to emerge in the business challenges

Empower your end users
- LOB is asking for faster turnaround time on requests that cannot be met through traditional resources
- Costly, error prone manual and duplicative processes delay innovation and impact competitiveness
- Must maintain control of increasingly complex cloud environment

Service Orchestration
- Need to manage the lifecycle of that application once provisioned – keep it running, compliant, and data protected
- There is always more to provisioning than just installing software, such as approvals, adding user access, or updating load balancer or firewall policies
- We have lots of tools, to manage isolated automation tasks, but getting everything coordinated is challenging and takes a lot of time

Workload Orchestration
- It takes weeks to deploy an application using a 100 page manual today
- Deployment of applications to other disparate cloud results in governance and security issues
- After deployment of individual components, there is further work required to assemble a multi-server environment and install apps

Cloud Management as a Service
- Need to reduce capital expenses on IT
- Need the flexibility, security and control that a private cloud offers, but they don’t want the complexity or expenses that come with many cloud implementations
- Do not have the skills and resources to setup a cloud management infrastructure in-house
Empower your end users

“Costly, error prone manual and duplicative processes delay innovation and impact competitiveness”

“LOB is asking for faster turn around time on requests that cannot be meet through traditional resources”

“Must maintain control of increasingly complex cloud environment”
What If you could ..... 

Transform your IT organization into a self-service delivery center

Reduce full software stack provisioning times from weeks to less than 20 minutes

Leverage a template to stand up infrastructure with monitoring and backup without needing to code workflows in less than 5 minutes

Provide unified management of heterogeneous public, private and hybrid environments: VMware, KVM, PowerVM, SoftLayer, Amazon, System z
In 5 minutes a Cloud Admin can create a service offering!

In 5 clicks an end user can deploy the service!

All with the following attributes:
- Integrated approval workflow
- Deploy across multiple VMs
- Integrates Endpoint Manager to apply compliance policies
- Integrates monitoring with existing ITM
- Integrates backup with existing TSM
- Adds additional storage volumes
- Adds additional software on top of the pattern

Demo available here: https://www.youtube.com/watch?v=l9HCxsAyjPU
Example: Create a self service offering that automates the deployment of DB2 Enterprise Edition that is instantly connected to your service management tools in minutes

1: name it

2: select the DB2 pattern

3: specify size

4: Add Service Management (monitoring, backup, patch)

Empower your end users

“I need to create a new DB2 Enterprise offering”

Ready! 5 clicks and under 5 minutes
Proof Point

The Need:

During the 2-week Wimbledon Championships, the All England Lawn Tennis and Croquet Club (AELTC) must radically scale its ability to engage fans online and through social media, placing extraordinary short-term demands on IT infrastructure.

The Solution:

As Wimbledon’s cloud provider, IBM deployed IBM Cloud Orchestrator software to support a highly agile and scalable cloud environment, rapidly provisioning and deprovisioning virtual IBM® System x® servers as needed.

IBM accelerated service deployment by 50 percent, providing the Wimbledon digital team with the agility necessary to respond to massive changes in demand.
“It takes weeks to deploy an application using a 100 page manual today”

“After deployment of individual components, there is further work required to assemble a multi-server environment and install apps”

“Deployment of applications to other disparate cloud results in governance and security issues”
Automate the lifecycle of complex, multi-tier applications across development, test and production environments

Select from an existing library of more than 200 application patterns

Deploy software on-premise or in public clouds seamlessly
Solution ➔ Workload Orchestration

- Easy to build and maintain **multi-tier topology patterns** through a simple to use pattern technology provided by IBM’s advanced patterns engine
- Access **Marketplace** of over 250 out of the box patterns speeds delivery of new services
- Growing IBM and **third party ecosystem** of federated automation content for fast deployment of services
  - Over 1500 Chef automation packages
  - 20,000+ IBM Endpoint Manager automation ‘fixlets’
Proof Point

Wuxi Lake Cloud decreased e-commerce service deployment times by as much as 85 percent and accelerates system recovery after unplanned downtime by 75 percent.

The Need:
Wuxi Lake Cloud sought to automate its e-commerce development processes in order to help accelerate customers’ e-commerce service deployments and reduce incidents of system errors and crashes.

The Solution:
IBM® Cloud® Orchestrator provides a pre-configured, pre-installed and pre-optimized pattern deployment method which quickly adapts to each customers’ unique system architecture.
“There is always more to provisioning than just installing software, such as approvals, adding user access, or updating load balancer or firewall policies”

“We have lots of tools, to manage isolated automation tasks, but getting everything coordinated is challenging and takes a lot of time”

“Need to manage the lifecycle of that application once provisioned – keep it running, compliant, and data protected”
Integrate deployed applications automatically to your management tools and processes (Monitoring, Backup, Security Compliance, and Approvals) to go-live as quickly as you develop and test.

Leverage a Visual, drag/drop style orchestration designer to automate the whole process beyond just software installation without any need for coding.

Leverage out of the box integration for storage, network, change and configuration lifecycle management.

Get out of the box support for shell scripts, Chef recipes, Java programs, TPM workflows, etc.
Solution → Service Orchestration

- **NEW!!** "Wizard" to help quickly build services and publish to the catalog.
- Deliver services without coding workflows!
- Go live in production in a *fraction of the time*!

**Stand up infrastructure with monitoring, backup, patch as easy as 1,2,3**

1. Choose your **workload**
2. Add your service management capability
3. Publish with the push of a button

In under 5 minutes!!

Web Applications, WebSphere, LAMP Stack, **hundreds more** ...

Monitoring, Backup, Compliance

“I am nervous we are spending time and money *integrating things* that should naturally fit together.”
"With one click in four minutes we can give the fully managed server to our customer. The history has been that when we create the new solution, we need to make sure the backups are up and running, secure, patched, monitored and it needed to go through five to six teams inside Enfo...With SCO, we can actually do it with one click in a matter of minutes." -- Juha Kukka, Manager of Service Design ENFO

**The Need:**

"Some of the challenges we see on customers are actually the problem with ever-changing IT landscape. Every month there will be some application, new versions coming, new versions on Windows." -- Juha Kukka

**The Solution:**

"Enfo has created a new cloud platform during the last half year...We chose SmartCloud Orchestrator mainly because of the best-in-class business projects manager, which is inside the product." -- Juha Kukka.
Business Challenges

**Cloud Management as a Service**

“Do not have the skills and resources to setup a cloud management infrastructure in-house”

“Need the flexibility, security and control that a private cloud offers, but they don’t want the complexity or expenses that come with many cloud implementations”

“Need to reduce capital expenses on IT”
Have a flexible subscription pricing

Minimal upfront investment

Continuous delivery of new capabilities and immediate code fixes

Lower risk with a try & buy approach
Solution → IBM Cloud Orchestrator on Cloud

A new consumption model where IBM manages the infrastructure running on Soft Layer

- Each client receives own instance
- Daily backups of data and configuration
- System administration, patching and upgrades
- Access to current release function
- 99.8% Availability SLA
- 24 x 7 Support for Sev 1
- Try & Buy - 30 day FREE Trial
- Customer can purchase the offering online

Delivered via IBM Service Engage (Click Here)

1. Learn about Orchestrator
2. Explore the features
3. Try the product – live!
IBM Cloud Orchestrator – Fit for Purpose

- Organizations looking for a low CAPEX solution
- Cost sensitive organizations requiring an agile pricing model – monthly pricing per managed virtual server
- Need to gain early access to new capabilities
- Manages to on-prem and off-prem resources

**Total Flexibility** – start where you want and move when you want to the other model.
Summary

Empower your end-user with a self-service delivery of infrastructure and software

Accelerate application and middleware deployments through workload patterns and Chef recipes

Integrate deployed applications automatically to your management tools and processes

Get started on our SaaS solution with flexible subscription pricing and minimal upfront investment
Next Steps

1. Evaluate your current IT processes. **Are there any**
   **that could benefit from automation and orchestration?**
2. Do a preliminary ROI assessment using IBM’s ROI
3. Engage your IBM Sales Rep for a live demo or Proof of Concept using our ready to use infrastructure at Service Engage([http://ibmserviceengage.com](http://ibmserviceengage.com))
Thank you for listening!

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Software Group – Cloud & Smarter Infrastructure
What’s New in IBM Cloud Orchestrator 2.4?
IBM Cloud Orchestrator – What’s New?

1

Reduce Time to Value: accelerate service delivery, reduce operational costs

- Service templates with a wizard to speed creation of new services

- Automate a cloud service in minutes
  - Requests an approval
  - Deploy across multiple VMs
  - Integrates Endpoint Manager with automated patching and compliance policies
  - Integrates monitoring with existing ITM
  - Integrates backup with existing TSM
  - Adds additional storage volumes
  - Adds additional software on top of the pattern

- Integrated high availability for simplified production install

- New hosted version of ICO - Service Engage enables trial and proof of concepts in minutes

- Easy to customize with customer specific branding (logos, colors, banners)

- Lighter to deploy with ICO footprint reduced by 50%
Greater **flexibility and choice** for service providers

- **Full Multi-Tenancy** to support Service Providers implementing clouds
  - Multiple **tenants** with a single ICO
    - Each tenant gets their own isolated cloud regions to host their services
    - Administrative authorities can be delegated to each tenant

- Supports the **widest variety** of on premise platforms including VMware, KVM, Power, System z.

- **Expanded public cloud** support with SoftLayer in addition to existing Amazon EC2

- Support **OpenStack's ecosystem** of Storage and Networking options

Further exploitation of Openstack components in ICO v2.4
New cloud services can be delivered faster and with lower skills

- Create images easier and faster
  - Use standard images to build your patterns
  - Support for Glance image library in OpenStack

- Deploy more patterns
  - IBM’s advanced pattern engine with: automated scaling, software install, Chef recipe import, pattern editor, marketplace of content
  - OpenStack Heat is now available as an alternative pattern engine in addition to IBM’s pattern engine

- Easier to build and maintain multi-tier topology patterns through simpler pattern technology provided by IBM’s advanced patterns engine

- Access Marketplace of over 250 out of the box patterns speeds delivery of new services

- Growing IBM and third party ecosystem of automation content for fast deployment of services
  - 20,000+ IBM Endpoint Manager automation ‘fixlets’
  - Over 1500 Chef automation packages
IBM Cloud Orchestrator – What’s New?

4

Accelerating time to Value with a library of automation packages

Integrations with Service Management Domains

**Lifecycle Management**
- IBM Endpoint Manager
- Chef server (000s)
- Urban Code uDeploy
- Microsoft SCCM
- Puppet

**Disaster Recovery**
- Tivoli Storage Manager

**Environmental Services**
- Active Directory
- LDAP Support
- Windows Scripting
- Persistence

**Service Desk**
- SmartCloud Control Desk
- ServiceNow

Over 250 IBM and industry patterns

- OpenStack IaaS
- Virtual System Patterns
- PureApplication System
- Tivoli Service Automation Manager
- WebSphere
- DB2
- Mobile
- Business Intelligence
- Juniper
- F5

- SharePoint
- SQL Server
- Approval processing
- Scripting utilities
- IEM Fixlets (00,000s)
- Email
- Database
- Java
- Web Services
- Brocade Communications