



# IBM Technical Summit 2013

Démarquez-vous

17 octobre | IBM Client Center Paris





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## DevOps / SmartCloud Orchestrator

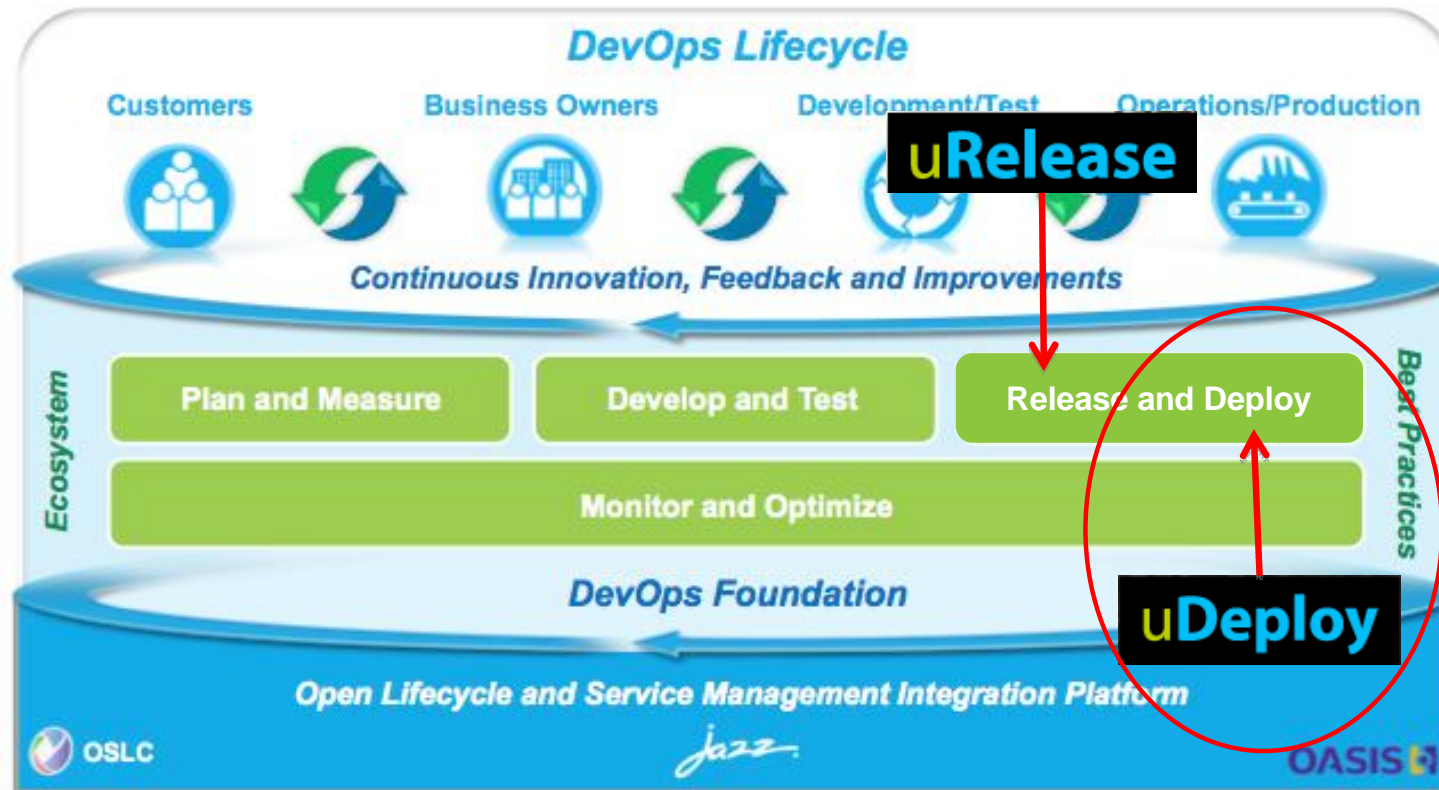
**Dominique Lacassagne**

Cloud Architect

# DevOps / SmartCloud Orchestrator (“SCO”)

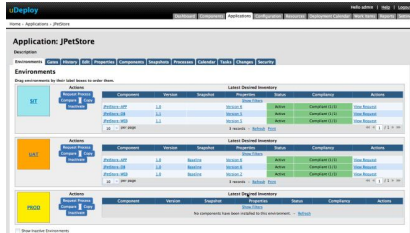
- Introduction: where does SCO fit in the DevOps story?
- A quick review of SCO main features
- SCO demo
- SCO / uDeploy integration

# Rappel: le cycle de vie Devops

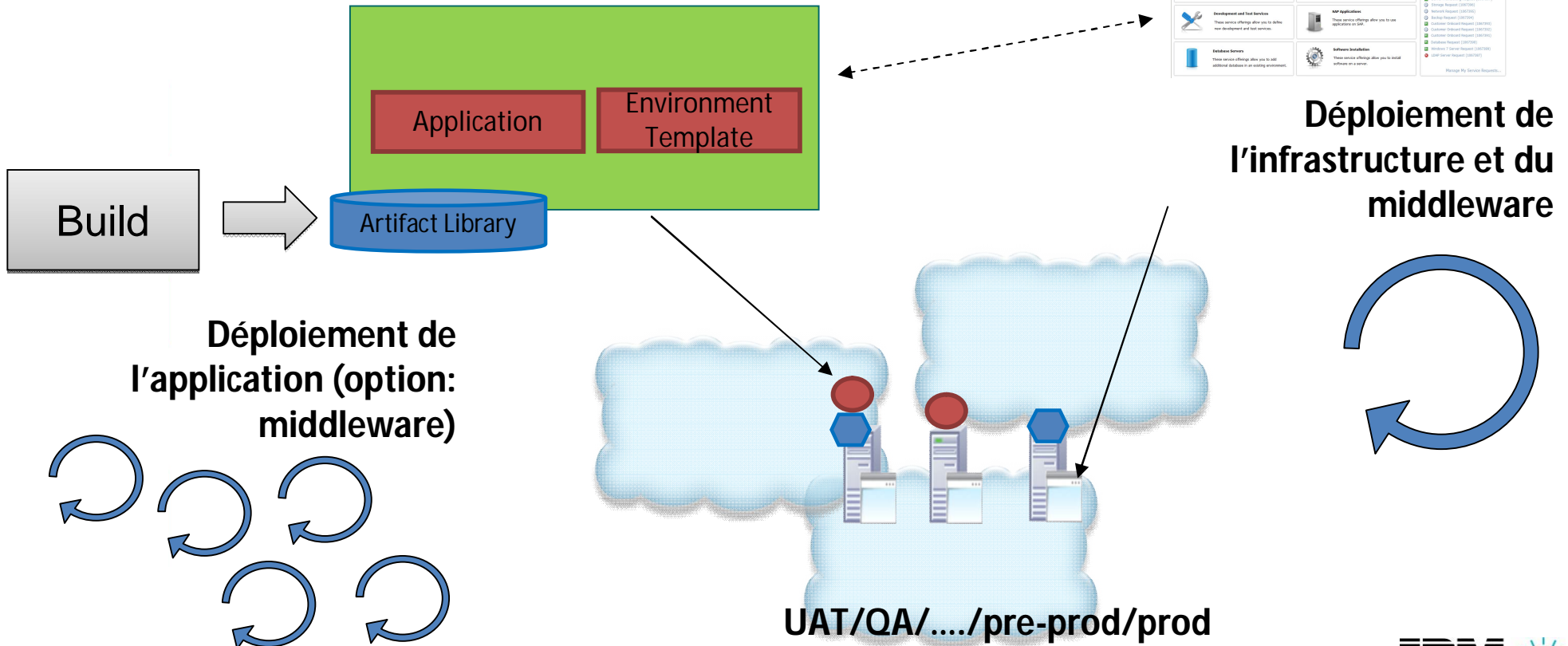
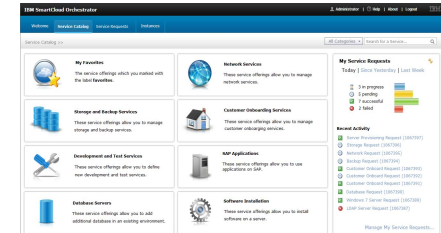


# Continuous Delivery

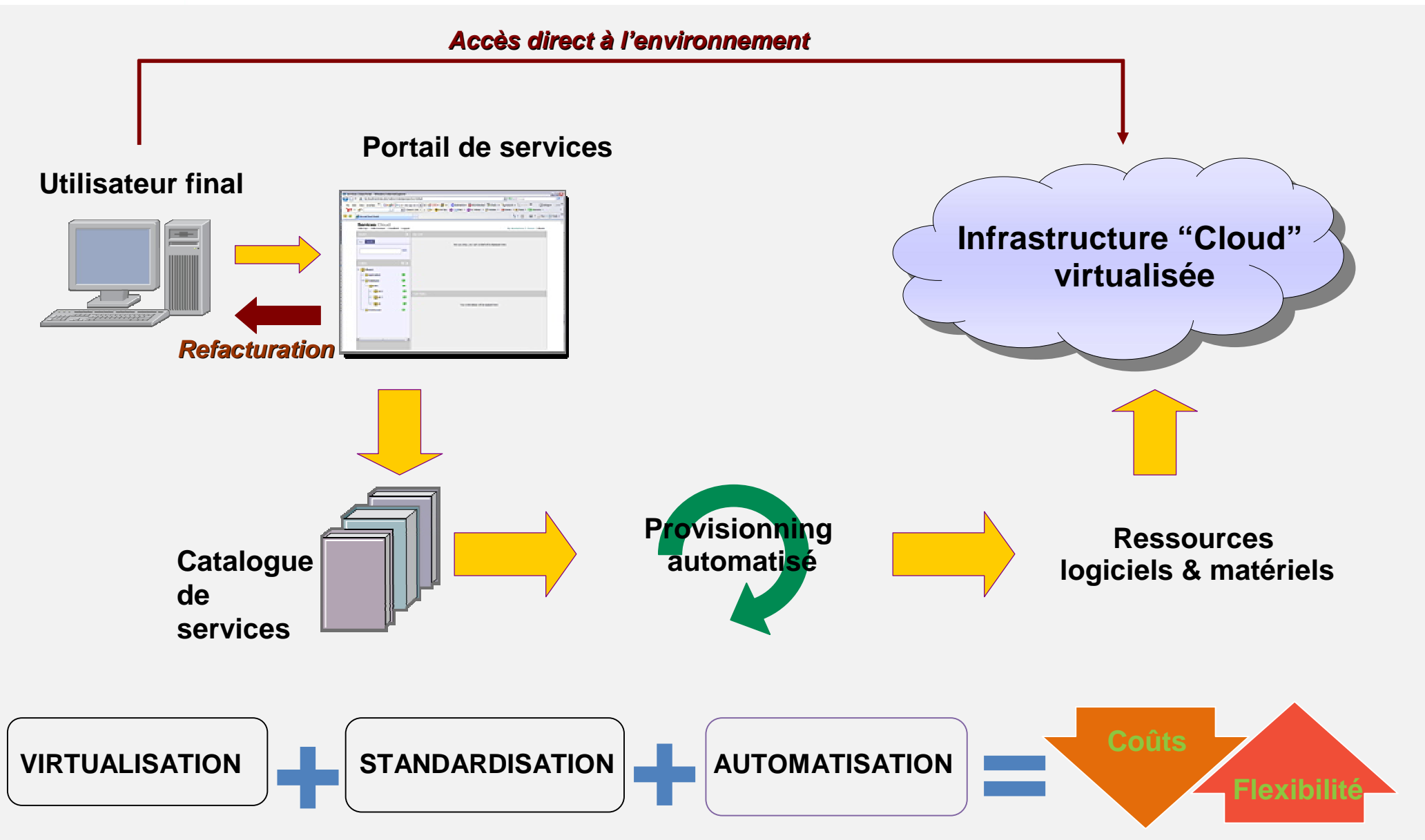
## IBM UrbanCode uDeploy



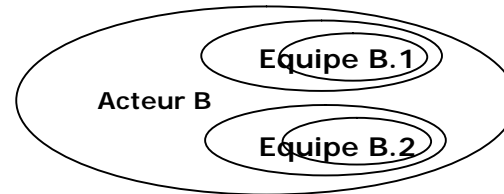
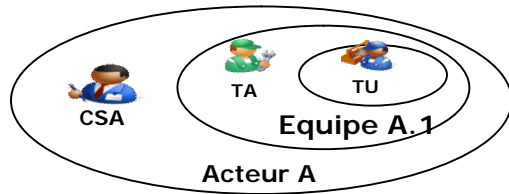
## SmartCloud Orchestrator



# Un gestionnaire de Cloud c'est



# Déployer une infrastructure peut être beaucoup plus que pousser des VMs...il y a un besoin d'orchestration



Catalogue de service 1

...

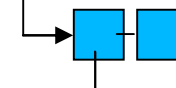
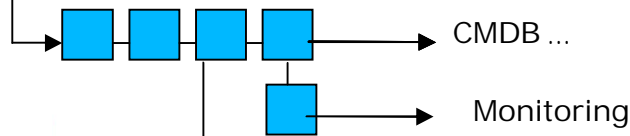
Catalogue de service n

Offre1  
Déployer socle applicatif 1

Workflows end to end

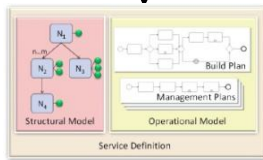
...

Offre n  
Modifier firewall



## Orchestration de services

(interactions entre équipes, approbations, réservations & quotas, mise en exploitation, facturation, mäj CMDDB, intégration systèmes tiers...)



**Pattern – images, vSys, vApp**  
(cohérence des actions autour d'un modèle de service)

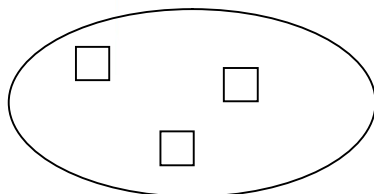
**Orchestration d'applications**  
gestion capacité, placement, élasticité...)

créer serveur  
ajouter middleware

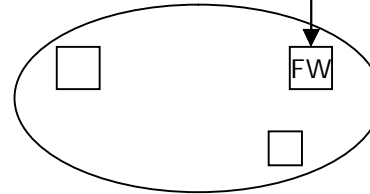
**Workflows techniques**

Modifier règle

**Orchestration technique**  
(scripts, API hyperviseurs...)

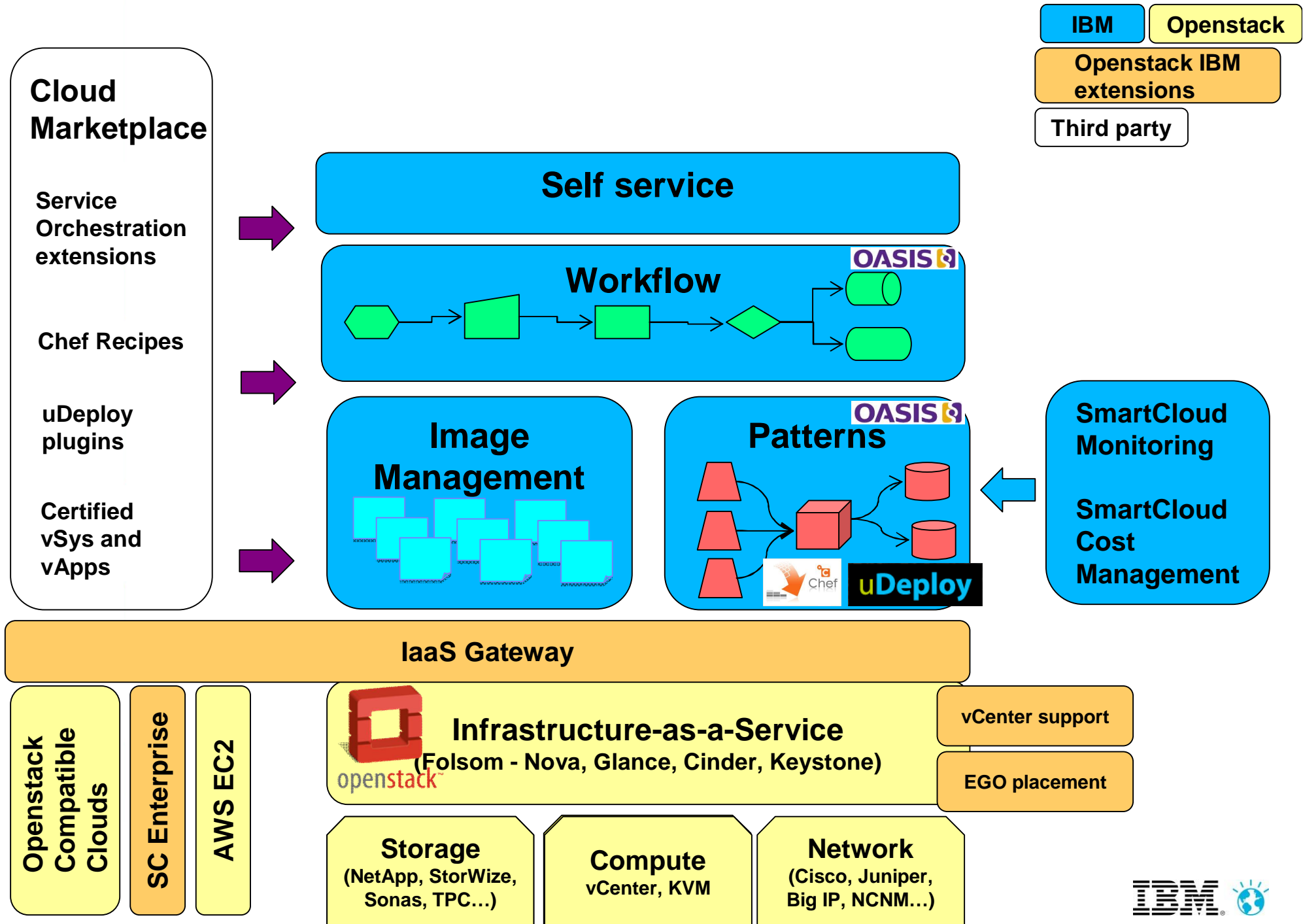


**Pools de ressources ...**  
serveur,  
stockage, réseau,  
sécurité



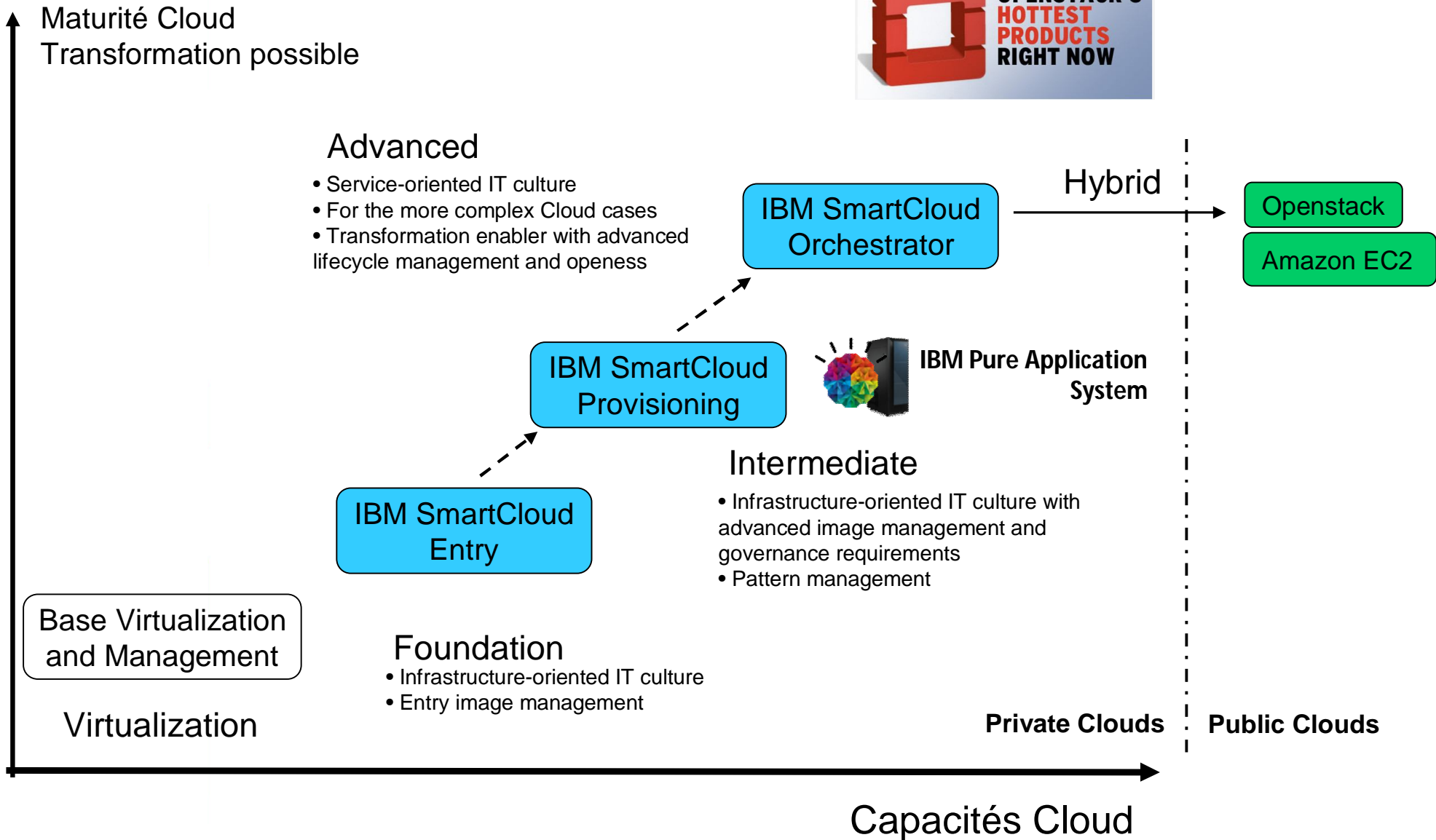
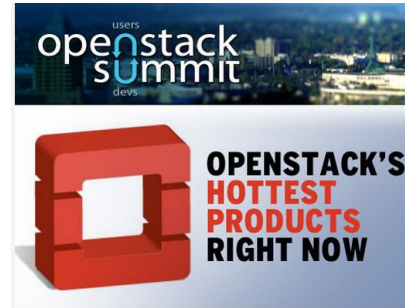
**Bulles de sécurité**

# Anatomie des gestionnaires de Cloud IBM

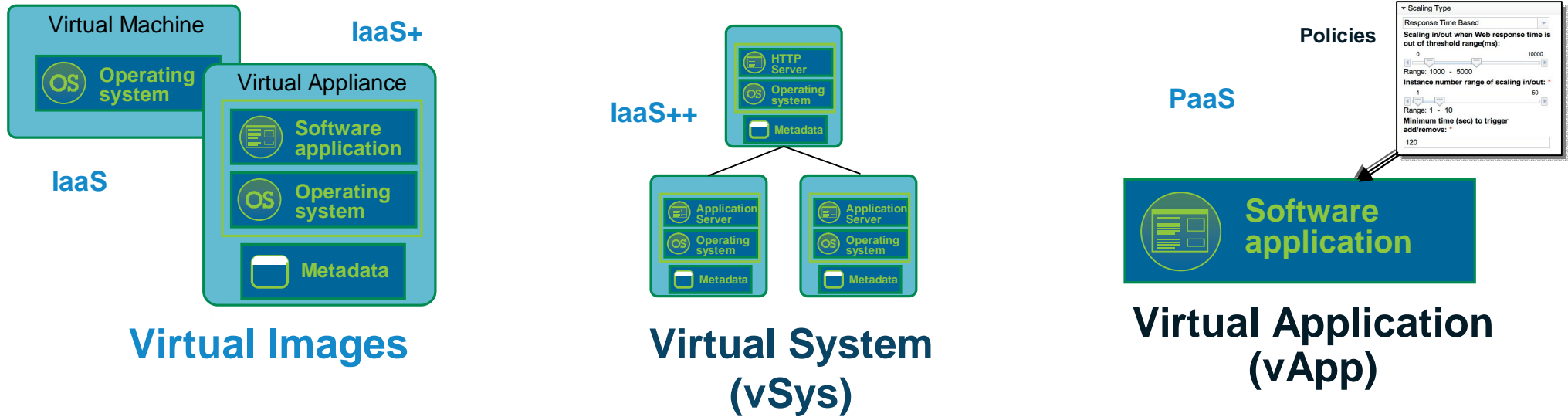




# Les offres de gestionnaire de Cloud IBM



# De l'laaS au "PaaS": support de différents types de "workloads"



- Standard software installation and configuration on OS
- Images created through extend/capture
- Traditional administration and management model
- Infrastructure driven elasticity

**Maturity: most enterprises are here. IT culture.**

- Automated deployment of middleware topologies & application
- Traditional administration and management model but all VMs can be managed as single object
- Application and infrastructure driven elasticity

**Maturity: more advanced needs. More business aligned.**

- Highly automated deployments using expert patterns
- Business policy driven elasticity & management
- Built for the cloud environment
- Leverages elastic workload management services

**Maturity: innovative. Development shops.**

← **Cloud-enabled apps** →

**Cloud-centric apps**

# Les "applications virtuelles" (vApp)

The screenshot displays the IBM PureApplication System interface, specifically the Virtual Application Builder for a DayTrader application. The main window shows the configuration for a WebSphere Application Server. A central dialog box titled "Scaling Type" is open, detailing the scaling policy. The dialog includes a dropdown menu set to "Response Time Based", a range slider for "Scaling in/out when Web response time is out of threshold range(ms)" with a range of 1000 - 5000, a range slider for "Instance number range of scaling in/out:" with a range of 1 - 10, and a text input field for "Minimum time (sec) to trigger add/remove:" set to 120. The background interface shows a left-hand "Assets" panel with categories like Application Components, Database Components, Messaging Components, and OSGi Components. On the right, a "Hints" panel provides details for the Enterprise Application, including Name (TradeLite), EAR file (artifacts/tradelite.ear), and various timeout settings. A "Scaling Policy" section is also visible, mirroring the configuration shown in the dialog box.

IBM PureApplication System - [ Pattern Type: Web Application Pattern Type 2.0 ] Virtual Application Builder - [ DayTrader ]\*

Diagram List View Source

Save Save As Layout

Assets

Asset name

Application Components

- Additional archive file
- Enterprise Application WebSphere Application Server
- Existing Web Service Provider
- Policy set
- Web Application WebSphere Application Server

Database Components

- Data Studio web console
- Database DB2
- Existing Database DB2
- Existing Database Informix
- Existing Database Oracle
- Existing IMS Database

Messaging Components

- Existing Messaging Service WebSphere MQ
- Queue WebSphere MQ
- Topic WebSphere MQ

OSGi Components

- Existing OSGi Bundle Repository
- OSGi Application WebSphere Application Server

Transaction Processing Components

- Existing CICS Transaction Gateway ⚠
- Existing IMS TM

Layers

Enterprise Application WebSphere Application Server

Name: TradeLite

EAR file: artifacts/tradelite.ear Edit Delete

Total transaction lifetime timeout (seconds):

Async response timeout (seconds):

Client inactivity timeout (seconds):

Maximum transaction timeout (seconds):

Interim fixes URL: Click select button to update

Select

Ignore inapplicable ifx updates:

Maximum Session Count:

Scaling Policy Web/Enterprise Application

Enable session caching:

Maximum Session Cache Grid Size: UNCAPPED

Scaling Type

Response Time Based

Scaling in and out when Web response time is out of threshold range(ms):

Range: 1000 - 5000

\* Instance number range of scaling in/out: Range: 1 - 10

\* Minimum time (seconds) to trigger add or remove: 120



# Utiliser l'écosystème de patterns certifiés (IBM PureSystems Centre)

## ibm.com/PureSystems/Centre

- Gain access to a broad community of IBM and certified partner expertise
- Download optimized, deployable application patterns from 100+ leading ISV partners
- Search by solution area, industry or system
- Download fixes and patches
- Access to developer community

**Also run your existing applications today\***



# Pour l'utilisateur final: un catalogue self-service

The image displays the IBM SmartCloud Orchestrator interface, which is a self-service catalog for end-users. The main page shows a navigation bar with 'Welcome', 'Service Catalog', 'Service Requests', and 'Instances'. Below this, there are several service categories:

- My Favorites:** The service offerings which you marked with the label favorites.
- Network Services:** These service offerings allow you to manage network services.
- Storage and Backup Services:** These service offerings allow you to manage storage and backup services.
- Customer Onboarding Services:** These service offerings allow you to manage customer onboarding services.
- Development and Test Services:** These service offerings allow you to define new development and test services.
- SAP Applications:** These service offerings allow you to use applications on SAP.
- Database Servers:** These service offerings allow you to add additional database in an existing environment.

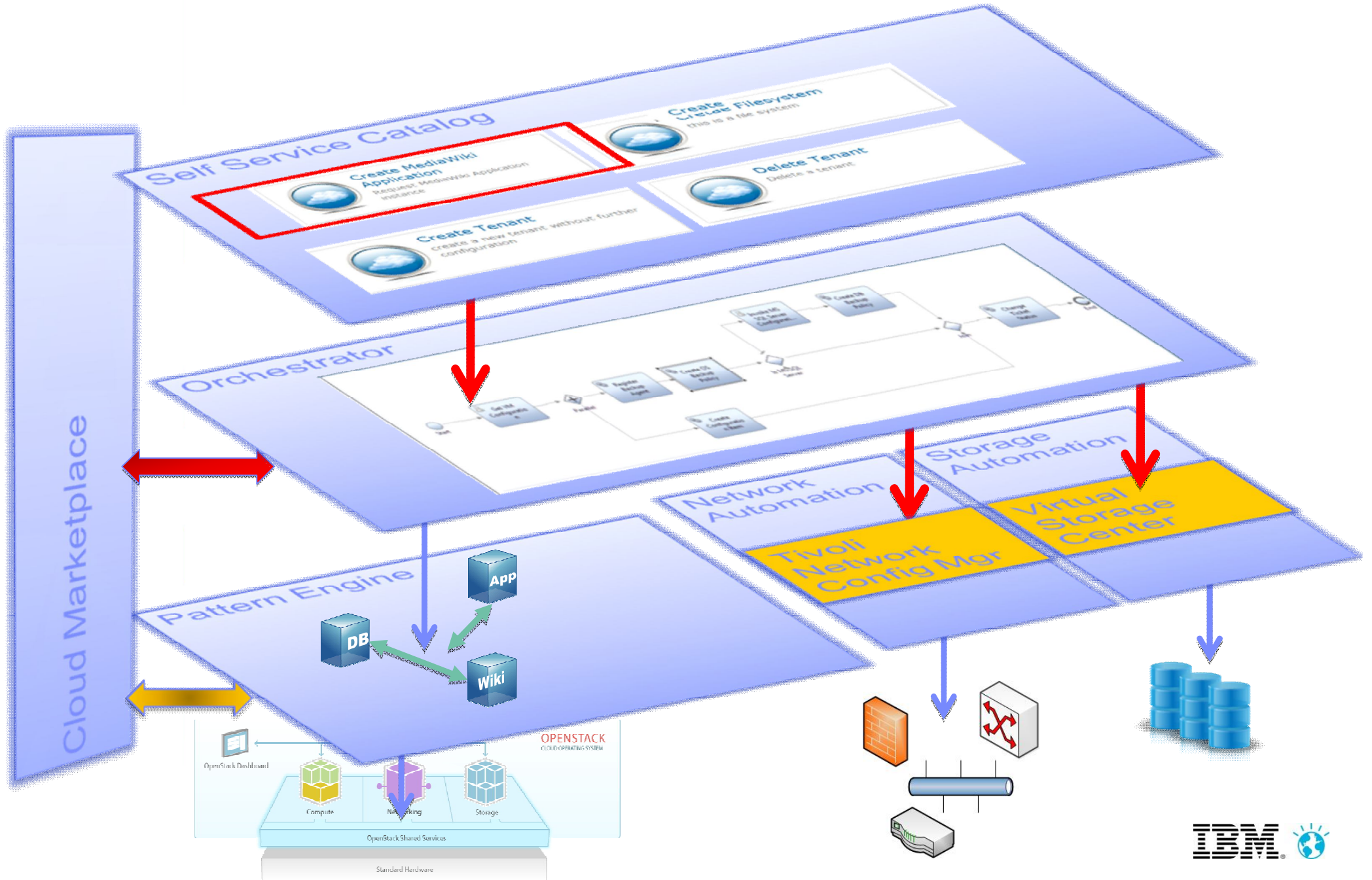
On the right side, there is a 'My Service Requests' section showing a summary of requests: 3 in progress, 5 pending, 7 successful, and 2 failed. Below this is a 'Recent Activity' list with items like 'Server Provisioning Request (1067397)', 'Storage Request (1067396)', 'Network Request (1067395)', 'Backup Request (1067394)', and 'Customer Onboard Request (1067393)'. A search bar is located at the top right of the main page.

An inset window shows a detailed view of the 'Invoice Management on SAP' service. It includes a 'Request Details' form with the following fields:

- Service name:** Specify a name..
- Service level:** A dropdown menu with options: Gold, Silver, Bronze.

At the bottom of the form are 'Submit' and 'Cancel' buttons. A yellow notification banner above the form states: 'Your request has been submitted. Click on the link if you want to monitor the service now.' with a timestamp of '28 Sep 2012 09:03 AM' and a 'View All (n)' link. The right side of the inset window shows a 'My Service Requests' summary and a 'Recent Activity' list, including 'Invoice Management on SAP Request', 'Server Provisioning Request', 'Storage Request', 'Network Request', 'Backup Request', 'Customer Onboard Request', 'Customer Onboard Request', 'Customer Onboard Request', 'Database Request', and 'Windows 7 Server Request'. A 'Manage My Service Requests...' link is at the bottom of the inset window.

# Démo de SCO



# Projeter ses applications sur le Cloud (1) : définir un environnement pour l'application dans uDeploy

The screenshot displays the uDeploy web interface for the application 'JPetStore'. The top navigation bar includes 'Hello admin | Help | Logout' and a menu with 'Dashboard', 'Components', 'Applications', 'Configuration', 'Resources', 'Deployment Calendar', 'Work Items', 'Reports', and 'Settings'. The breadcrumb trail is 'Home > Applications > JPetStore'.

## Application: JPetStore

Description

Environments: [Gates](#) [History](#) [Edit](#) [Properties](#) [Components](#) [Snapshots](#) [Processes](#) [Calendar](#) [Tasks](#) [Changes](#) [Security](#)

### Environments

Drag environments by their label boxes to order them.

**SIT**

Actions: [Request Process](#) [Compare](#) [Copy](#) [Inactivate](#)

Component	Version	Snapshot	Properties	Status	Compliance	Actions
JPetStore-APP	1.0		Version 5	Active	Compliant (1/1)	<a href="#">View Request</a>
JPetStore-DB	1.1		Version 5	Active	Compliant (1/1)	<a href="#">View Request</a>
JPetStore-WEB	1.1		Version 5	Active	Compliant (1/1)	<a href="#">View Request</a>

10 per page | 3 records - [Refresh](#) [Print](#)

**UAT**

Actions: [Request Process](#) [Compare](#) [Copy](#) [Inactivate](#)

Component	Version	Snapshot	Properties	Status	Compliance	Actions
JPetStore-APP	1.0	Baseline	Version 6	Active	Compliant (1/1)	<a href="#">View Request</a>
JPetStore-DB	1.0	Baseline	Version 6	Active	Compliant (1/1)	<a href="#">View Request</a>
JPetStore-WEB	1.0	Baseline	Version 2	Active	Compliant (1/1)	<a href="#">View Request</a>

10 per page | 3 records - [Refresh](#) [Print](#)

**PROD**

Actions: [Request Process](#) [Compare](#) [Copy](#) [Inactivate](#)

No components have been installed to this environment. - [Refresh](#)

Show Inactive Environments

# Projeter ses applications sur le Cloud (2) – mettre l'agent uDeploy dans les VMs

IBM SmartCloud Orchestrator - Mozilla Firefox: IBM Edition

File Edit View History Bookmarks Tools Help

IBM SmartCloud Orchestrator

https://xvm066.boeblingen.de.ibm.com/dashboard/design/patterns/editor?id=1

Administrator | Help | About | Logout

Welcome Instances **Catalog** Reports Cloud System Patterns

**Pattern Editor**

Editing SAP ERP Pattern

Deploys to ESX hypervisors. Last updated on Aug 13, 2012 2:03:42 PM | Ordering | Advanced Options

Search...

Showing parts for ESX.

**Parts (6/6)**

- OS Part  
RHEL-57-64-CCS  
4.0.0, ESX, RedHat Enterprise Linux 64-Bit (Red Hat Enterprise Linux Server)
- RHEL55-32-Small  
RHEL55-32-Small  
0, ESX, RedHat Enterprise Linux 5 (Red Hat Enterprise Linux 5 (32-bit))
- SAP-Central Instance-RHEL-61  
SAP-Central Instance-RHEL-61  
0, ESX, RedHat Enterprise Linux 5 (Red Hat Enterprise Linux 5 (32-bit))
- SAP-Database-DB2-RHEL-61  
SAP-Database-DB2-RHEL-61  
0, ESX, RedHat Enterprise Linux 5 (Red Hat Enterprise Linux 5 (32-bit))
- SAP-Dialog Instance-RHEL-61  
SAP-Dialog Instance-RHEL-61  
0, ESX, RedHat Enterprise Linux 5 (Red Hat Enterprise Linux 5 (32-bit))
- win2003x64.basic  
win2003x64.basic  
0, ESX, Microsoft Windows Server 2003 64-Bit (Microsoft Windows Server 2003, Enterprise Edition (64-bit))

**Scripts (3/3)**

**Add-Ons (4/4)**

OS Part 1.0

- Configure YUM Repository
- lwd\_Registration
- lwd\_VMCompliance
- Configure Firewall
- uDeploy Agent Installer V4

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- Configure YUM Repository
- lwd\_Registration
- lwd\_VMCompliance
- Configure Firewall
- uDeploy Agent Installer V4

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Draga and drop uDeploy agent in VM container

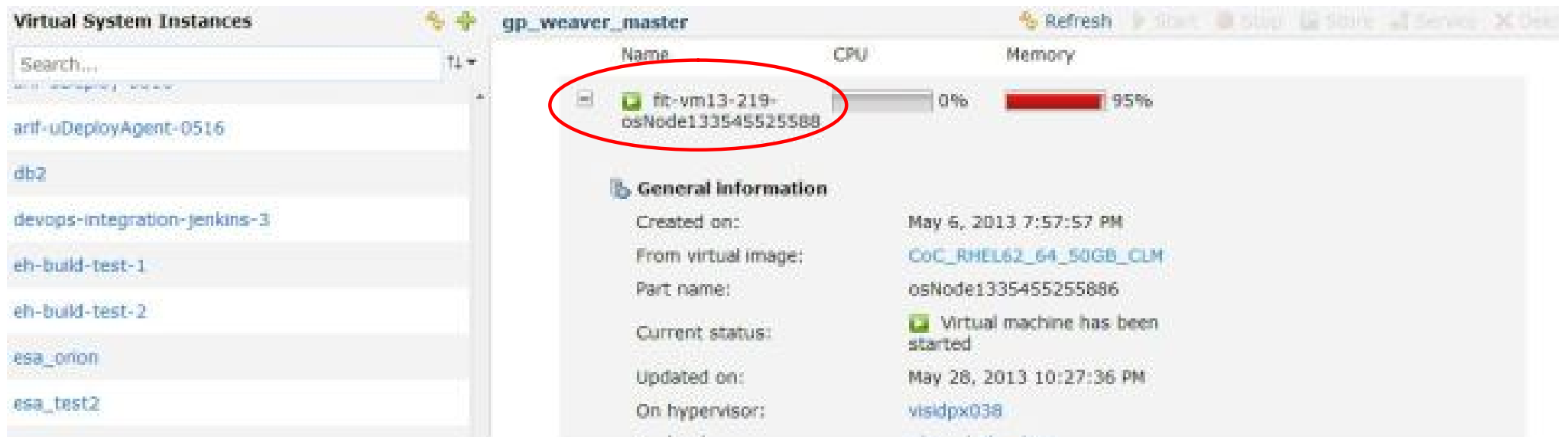
Library of virtual templates, software packages, scripts, add on ( disks, network cards, users)

vSys and vApp editor





# Projeter ses applications sur le Cloud (3) : une fois l'infrastructure déployée, récupérer les adresses des VMs



The screenshot displays a cloud management interface. On the left, a list of 'Virtual System Instances' is shown, including 'anf-uDeployAgent-0516', 'db2', 'devops-integration-jenkins-3', 'eh-build-test-1', 'eh-build-test-2', 'esa\_orion', and 'esa\_test2'. The main panel shows details for the instance 'gp\_weaver\_master'. A table lists the VMs, with one entry circled in red: 'fit-vm13-219-osNode133545525588'. Below the table, the 'General information' section provides details for the selected VM, including its creation and update dates, virtual image, part name, current status, and the hypervisor it is running on.

Name	CPU	Memory
fit-vm13-219-osNode133545525588	0%	95%

**General information**

- Created on: May 6, 2013 7:57:57 PM
- From virtual image: CoC\_RHEL62\_64\_50GB\_CLM
- Part name: osNode1335455255886
- Current status:  Virtual machine has been started
- Updated on: May 28, 2013 10:27:36 PM
- On hypervisor: visidpx038

# Projeter ses applications sur le Cloud (4) : mettre à jour l'environnement avec les adresses des agents (VMs)

Home » Configuration

## Configuration of JKESampleMTM in Development

### Resources and Groups

Resource / Group	Type	# Resources	Actions
<a href="#">agent - fit-vm13-219.rtp.raleigh.ibm.com</a>			<a href="#">Remove</a>

[Add a Resource](#) [Add a Resource Group](#)

### Environment Properties

No environment properties have been defined by this component.

### Environment Properties (All Components)

Version 1 of 1

[Add Property](#) [Batch Edit](#)

Name	Value	Description	Actions
No properties found. - <a href="#">Refresh</a>			

[Add Property](#) [Batch Edit](#)

**Des questions?**