



IBM Technical Summit 2013

Démarquez-vous

17 octobre | IBM Client Center Paris

Cloud and Continuous Delivery

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A Personal Story

- I have made major changes in my professional life
- I want to share with you
 - ▶ What I saw happening
 - ▶ What I did
 - ▶ What I learned
 - ▶ Why I think it might matter to you too



Major Change Coming

- There are periods of relative stability (e.g. mainframe, client/server, web 1.0/2.0) and times of major dislocation
- In periods of stability, we use technology to work better, faster.
- In major dislocations, we completely change how we work
- I think we are headed for a major dislocation



My personal crisis

- From mastery to mystery

- ▶ Conferences
- ▶ University faculties



Retire or respond?

- I resigned my CTO position
- I set out to figure out this new world
 - ▶ What is really going on?
 - ▶ Why is it going on?
 - ▶ What will be the consequences?

What I saw: technology change



- Java, C#

- WebSphere App Server

- DB2, Oracle

- WebSphere NT

- XML

- Python, Ruby, PHP, Perl, Javascript, Scala, Lua, ...

- UWSGI, (G)Unicorn, Mod-WSGI, Mongrel, Passenger, node.js

- MongoDB, Cassandra, HBase, CouchDB, ZooKeeper, ...

- HA/Proxy, memcached

- JSON, RDF

What I saw: leadership change



■ IBM, Oracle,
Microsoft, HP, ...

■ Amazon, Google, Netflix,
Etsy, Facebook, ...,
dozens of others,
especially “born on the
web” companies



What I did

- Learned a lot of new technology
- Implemented a lot of smaller applications
 - ▶ No IBM/vendor technology (“know your enemy”)
 - ▶ Cloud native, Multi-tenant, Continuous deployment, Secure, mobile front-ends and “single-page apps”, linked data integration, ...
- Hope to build something significant to deploy
 - ▶ Work in progress



What I learned

- Fundamental change in development process
- Primary driver is speed-to-business-value
 - ▶ Dramatic reduction in cycle times
 - ▶ Cycle ends with measured value, not delivery
- Secondary drivers
 - ▶ Scaling
 - ▶ Cost
- Not considered
 - ▶ Investment protection/stability



Facebook

- <https://www.facebook.com/video/video.php?v=10100259101684977>
- “Every work day Facebook is safely updated with hundreds of changes including bug fixes, new features, and product improvements.”



Etsy

- “The premier destination for hand-made goods, vintage items, and craft supplies”
- <http://www.slideshare.net/beamrider9/continuous-deployment-at-etsy-a-tale-of-two-approaches>
- Deploy Stats: 2012
 - ▶ Deployed to production 6, 419 times
 - ▶ On average 535 per month, 25/day
 - ▶ Additional 3851 config-only deploys
 - ▶ 196 different people deployed to production
 - “Engineers deploy the site”.
 - “also Designers, Product Folk, Upper Management, ... ”



How is this done?

- No separation between development and production
- Abandoning the concept of a release
- Total automation of test, deployment and management
- Incrementally enable changes and instantly revert them



It does not stop at delivery

- <http://www.infoq.com/presentations/etsy-deploy>
- In the old days, development responsibility stopped at delivery to operations
- Continuous delivery/deployment extend the cycle to production
- Final step extends to measurement of business result

Example: How MongoDB supports speed

■ Acquisition

- ▶ Nothing to do

■ Installation/deployment

- ▶ "apt-get install mongodb-10gen"

■ Configuration

- ▶ None for simple configurations, declarative/command-driven for advanced cases

■ Programming

- ▶ Extremely simple, flexible, easy-to-use API (c.f. JDBC/RDBMS)

■ Evolution

- ▶ Nothing to do on schema change

■ Operations

- ▶ Backup procedures etc. must be implemented, or ...
- ▶ MongoLab, MongoHQ – database as a service



Generalization: Focus on speed

■ Acquisition

- ▶ Instant, but not necessarily free

■ Installation/deployment

- ▶ Simple script commands used for initial deployment and cloud automation scripts

■ Configuration

- ▶ As little as possible, declarative/command-driven where necessary

■ Programming


- ▶ Extremely simple, flexible, easy-to-use API s
 - encourage API competition, not standardization

■ Evolution

- ▶ Initial setup is only one step. Incremental change must be extremely easy. Creating value fast is all about accelerating change.

■ Operations

- ▶ Must be cloud elastic scalable
- ▶ Must be hostable



Example 2: Language

- Python, Javascript, JSON versus Java, XML
 - ▶ Programming in dynamic languages is quicker
 - Not everyone agrees
 - ▶ JSON aligns with programming languages constructs (reduces impedance)
 - ▶ Many competing APIs for the same function
 - Only the most effective survive
 - Be ready to switch



Who is this for?

- Started with “born on the web companies”
- Getting traction now with “systems of engagement” – front-office - in enterprises
 - ▶ Lower risk, higher reward. Often create value by composition of existing capability.
- Not yet having much impact on “systems of record” - back-office systems
 - ▶ Too much at stake?
- Safety-critical? Regulated? Constrained by physical or chemical processes?
 - ▶ I don't know yet



What should *you* do?

- Start exploratory projects like mine
- Be prepared to retrain your organization
 - ▶ Selection and Acquisition of software
 - ▶ Programming
 - ▶ Deployment
 - ▶ Operations
 - ▶ Your organization and processes
- Be prepared to change your values
 - ▶ Speed-to-value, not caution
 - ▶ Delivery of measured value, not function or code
 - ▶ Innovation and competition, not standardization



Where to focus

■ Automation

- ▶ Cloud deployment
- ▶ Test

■ Some Relevant IBM technologies

- ▶ Softlayers/Smart Cloud
- ▶ Evolutions of IBM middleware for cloud
- ▶ Evolutions of IBM management software for cloud
- ▶ DevOps products
- ▶ Test automation products

Relevant Sessions

Horaires	Planning sessions				
08h30-09h00	Café d'Accueil				
09h00-11h30	Séance plénière (Grand Auditorium René Descartes) <ul style="list-style-type: none"> • Accueil et agenda (Thierry Lelièvre, IBM France Rational Brand Leader) • Tendances du marché en développement Logiciel (Christian Bonnafont, Vice President IBM France Software Group) • La révolution de la livraison logicielle en continu pour les développeurs (Martin Nally, Vice President & IBM Fellow) • Business in Motion (Stefano Stinchi, Vice President Rational Europe IOT) • Table Ronde DevOps & Mobilité (Philippe Bauquel & Dominique Guilbaud, IBM France Lab) • Présentation Code Rally (Thomas Banks, Technical Evangelist, Websphere Application Server Liberty profile) • Conclusion (Thierry Lelièvre, IBM France Rational Brand Leader) 				
11h30-11h45	Inter-session / Pause café				
	DevOps (Salle Concorde)	Mobile (Salle Louvre / Tuileries)	Agile/ALM (Salle Longchamp)	System & Software Dev (Salle Rivoli)	BP's and Other (Salle Opéra)
11h45-12h30	DevOps1 - IBM DevOps, Vision et Roadmap	Mobile1 - IBM MobileFirst Application Platform - Développer, déployer et gérer des applications mobiles multi-plateformes avec IBM Worklight	ALM1 - L'agilité appliquée à nous-mêmes	S&SDev1 - L'atelier d'Ingénierie Systèmes et Logiciel Embarqué, nouveautés 2013	BP&O1 - Introduction à l'offre ARCAD Pack for Rational, le nouveau standard en matière de Gestion du Cycle de Vie des Applications sur IBM i
12h30-14h00	Cocktail Déjeunatoire				
14h00-14h45	DevOps2 - De l'intégration continue à la livraison continue	Mobile2 - IBM MobileFirst Application Platform - Mise en place d'une filière de développement mobile au travers d'un scénario end-to-end	ALM2 - Solution Rational de gouvernance des développements sous-traités (GADO)	S&SDev2 - Retours d'expérience des outils pour l'Ingénierie Systèmes	BP&O2 - Les priorités Rational pour les Partenaires
14h45-15h00	Inter-session				
15h00-15h45	DevOps3 - Accélérez le déploiement de vos applications avec IBM UrbanCode Deploy et IBM UrbanCode Release	Mobile3 - IBM MobileFirst Security	ALM3 - Test fonctionnel d'applications sur mobile avec Rational Test Workbench	S&SDev3 - Plan de convergence Pacbase	BP&O3 - Construire des applications agiles en utilisant l'environnement de développement et l'écosystème WebSphere Liberty (session en anglais)
15h45-16h15	Inter-session / Pause café				
16h15-17h00	DevOps4 - Mettre en place un Cloud avec SmartCloud Orchestrator	Mobile4 - Analysez et optimisez l'expérience utilisateur mobile avec Tealeaf CX Mobile	ALM4 - Les licences Token : en connaître le détail et les avantages	S&SDev4 - Planifier l'adoption de RTC Enterprise Edition dans le cadre d'une migration de gestion de configuration Mainframe	BP&O4 - Accélérez vos tests et développements avec le Cloud, découvrez SoftLayer, la dernière acquisition Cloud d'IBM
17h00-18h00	Cocktail de clôture				



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**Be grateful you are working in such an
exciting industry and times**
Thank You