Accelerating the delivery of Innovation with DevOps

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Goal: Build an End-to-End Delivery Pipeline
Three Key Business Drivers

1. Driving Business Agility
2. Driving Innovation
3. Scaling for the Enterprise
Success Patterns

#1 - Driving Business Agility

- Collaborative Development
- Continuous Delivery
- Shift Left Test
- Shift LeftOps Engagement
- 'Lean' Application Delivery
Collaborative Development

- Teamwork
- Continuous Integration
- Single source of truth
- Scrum and SAFe team process support
- Transparency
Continuous Delivery
…through deployment automation

- Manage application components and versions
- Manage configurations across all environments
- Offer secure ‘self-service’ capabilities
- Increase transparency
- Ensure governance and compliance
Shift Left Test
...deploy what is ready, virtualize the rest

- Deployment Automation
  - Service Virtualization
    - Deploy what is ready, virtualize the rest
  - Test Automation
    - Continuously test in production-like env.
  - Quality Management
    - Manage quality across the delivery lifecycle

Test Environments
- virtual components
  - Databases
  - Internal Messages
  - Third-party Services

Simultaneously test across multiple test stages

Dynamic Infrastructure

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Shift Left Ops Engagement

- **Deploying Infrastructure** is the biggest bottleneck for the Delivery Pipeline
- **Software Defined Environments**
- Practitioner *self-service* access to environments
- **Engage Operations early**
Lean Application Delivery

- Agile Project Management
- Reduce Batch size
- Right Architecture
- Integrated Delivery Pipeline
- ‘Continuous Funding’
- Continuous Improvement
Success Patterns

#2 - Driving Innovation

• Rapid Delivery for Innovation/Experimentation
• Architecting for the Cloud
Driving Innovation:
Rapid Development and Feedback for Experimentation

• Minimum Viable Product/ Capability
• Canary Testing
• A/B Testing

How "Thinking Like A Developer"
Disrupts The Boardroom
Jeff Smith – IBM CIO //ibm.biz/jeffsmith
Architecting for the Cloud
….Containers + Microservices

**The developer**
Worries about what’s “inside” the container
- Code
- Libraries
- Package Manager
- Apps
- Data
- API’s

**The Ops guy**
Worries about what’s “outside” the container
- Logging
- Remote access
- Monitoring
- Network config
All containers start, stop, copy, attach, migrate, etc. the same way
#3 - Scaling for the Enterprise

- Release Automation for multi-speed IT
- Standardization across the enterprise
Applications, teams and environments
….lead to multi-speed IT and hybrid applications

Rapid iterations
- Plan
- Develop
- Build
- Test
- Deploy
- Production

Cloud Native

Automation
- Continuous synchronization and planning
- Continuous testing
- Continuous deployment and monitoring

Planning / Transformation

Alignment

Slower iterations
- Plan
- Develop
- Build
- Test
- Deploy
- Production

Cloud Ready

Automation
- Continuous synchronization and planning
- Continuous testing
- Continuous deployment and monitoring

Alignment
Standardization across the Enterprise: Application Deployment to Hybrid Environments

Cloud Native

Deployment Automation

Cloud Ready

SCM → Build → Package Repo → Deploy

Test → Stage → Prod

Cloud Foundry

Containers

Virtual Machines

IBM Cloud Orchestrator

IBM PureApplication System

IBM Cloud Manager with OpenStack

On-prem IaaS

On-prem Traditional IT

IBM Bluemix

Amazon Web Services

Microsoft Azure

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Building a DevOps Culture grounded in lean and agile principles

- Setup a DevOps Center of Excellence
- **Everyone** is responsible for Delivery, including external Stakeholders
- Common Measures of Success

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“By the way, while you were off sick we located the bottle neck.”

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DevOps Workshop
A Lean Approach to Continuous Delivery
Wednesday, April 20, 10:00 AM – 1:30 PM
Doubletree LAX / El Segundo, 1985 E. Grand Ave., El Segundo, CA

Share ideas, collaborate and learn how to get started on your DevOps transition.
Join experts and clients for this interactive and experiential DevOps Workshop.

Register at: ibm.biz/workshopCA
Continue your DevOps journey

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