Continuous Deployment

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White House defe
recovery chief
By Ed Henry, CNN Senior White House Corres
June 18, 2010 7:07 p.m. EDT

Navy Secretary Ray Mabus has been appointed by
Obama to create a plan to help Gulf restoration effor

STORY HIGHLIGHTS
- Environmental group official says Ray Mabus should focus on Gulf full-time
- But another says his appointment good, says "Gulf is in good hands"
- President picked Navy Secretary to create long-term Gulf Coast restoration plan

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two jobs.

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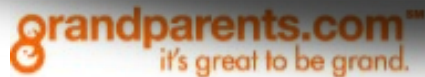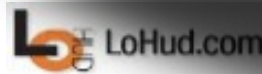- Windows XP SP2 retirement looms, puts users in tough spot - Computerworld Computerworld
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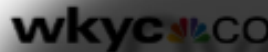
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What is continuous deployment?

Work procedures and culture that allow code
deployment to production in very short cycles
(every 1-15 minutes)


```
~ $ svn ci -m"Implementing
the super-sharp images algo
#deploy:ImageServer #to:ny
"
```

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What was so bad before ?

What was so bad before?... a lot

- Inefficient Waits (wait for QA, wait for other features etc)

- Feedback to Dev wasn't immediate

- Inefficient Context Switch

- Big Changes – Big Problems.

Motivation

- Business responsiveness !!!
- Reduce Risk
- Improve efficiency
- *Fun Fun Fun....*

HOW

Continuous Deployment -Culture

Everyone need to care about **everything**!

➔ build

➔ tests

➔ quality

➔ production

➔ monitoring

➔ Business

New code is 5 minutes away from
production!!!!

Continuous Deployment -Culture

- Service Oriented Architecture (>30 services)
- Trunk is always stable
- Review Board
- Fast Automated testing(CI) (<5 minutes)
- Monitoring
- Staging, A/B testing, Product flags

Continuous Deployment -Culture

Small Changes – Reduce Risks

Kent Beck: *You can spill a bucket but you can't spill a Hose.*

Continuous Deployment -Culture

- No Broken Windows!

Broken Windows Theory

Continuous Deployment - Culture

- Empower developers to change production.
- Follow your code to Production and monitor it.
- Pay attention to production – not test.
- Developer knows his system best.
- Quality is the developer Responsibility – QA is assisting.
- "What's the worse that could happen?"

How does it work?

- Tasks Queue – continuously prioritized.
- Developer handles one task – from design to production.
- Fast and Automatic testing.
- Fast and automatic deployment cycles.
- Product Flags.

INGREDIENTS
Deployer

Continuous Deployment Themes

- Release is a marketing decision.

- Deployment is an engineering decision!
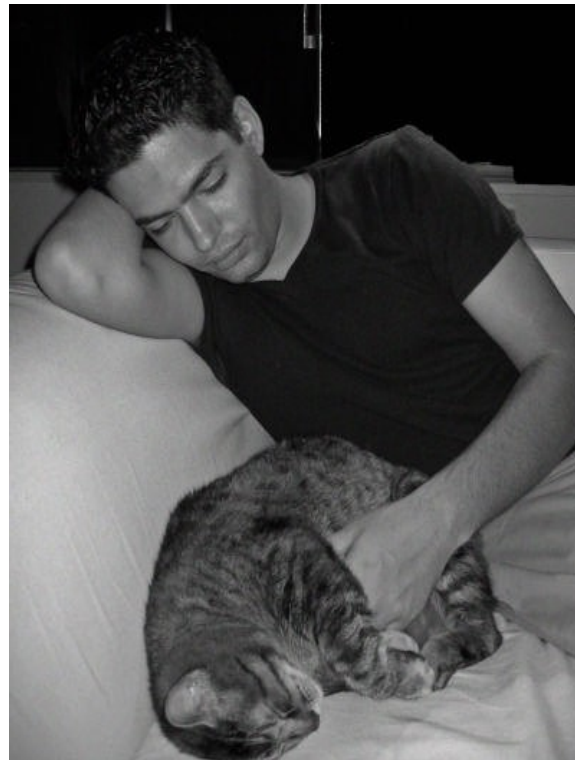
Fun Numbers

- 5-50 production changes a day!!!

- More then 2000 code tests running in less then 4 minutes.

- More then 700 production services tests runs every 10 minutes.

- It takes ~30 minutes from code complete to ~100 machines deployed.

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Risks and Mitigations

- With so many releases – things can easily break

  - Immune system gives short TTD.

- When something is broken... Oy Vey!!!

  - Fast deployment system gives short TTR.