Release Management

CompSci 408

September 24, 2014
Embrace the F-word

“I've failed over and over and over again in my life and that is why I succeed.”

~ Michael Jordan

“Many of life’s failures are people who did not realize how close they were to success when they gave up.”

~ Thomas Edison
Software Release Management

Release management
Continuous integration & automation
Integration Environments
Platforms & Customization
Recall Version Control

- Allows many developers to work concurrently
  - Detects and isolates problems
- May branch code as needed

Centralized version control

Server

Repository

Working copy

Working copy

Working copy

Workstation/PC #1

Workstation/PC #2

Workstation/PC #3

http://redstack.wordpress.com/

homes.cs.washington.edu
Software Release Management

• Includes:
  • Executable program & configuration data
  • Documentation & release notes

• Helps:
  • Software quality
  • Optimize development and QA time

• Uses:
  • Build Tools
  • Automated Testing Tools
Continuous Integration

• Processes and tools
  • **builds** with every check-in
  • runs **automated tests**
  • analyzes the code **quality**

• Example tool: **Jenkins**
  • Open-source continuous integration
  • Automated testing & reporting of defects
Integration Environments

• Dev: Coding & Testing (unit, integration)
• QA: System testing
• Staging: User Acceptance (UAT), stress, performance
• Production: Don’t muck around!
Why Branch? Platform Example

- Enterprise Software can’t solve everyone’s problems with same functionality...
  - Address common things about all enterprises
  - Address verticals (business types)
  - Address specific company

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<thead>
<tr>
<th>Platform = Common Functionality</th>
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<tbody>
<tr>
<td>Universities</td>
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<tr>
<td>Duke</td>
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Recap

• Release Management using tools
• Continuous Integration
  • Automate builds and tests
• Integration Environments
  • Development  QA  Staging/UAT  Production

Platforms => Verticals => ... => Custom Solutions