5 Pain Points of Agile Development

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“Individuals and interactions over processes and tools.”

— Manifesto for Agile Software Development, 2001
What We’ll Talk about Today

3 Key Trends and 5 Pain Points

- Global teams
- DVCS
- Agile processes

- Latency
- Administration
- Governance
- Workflow
- Integration
Delegate Poll

Which of these are your main development challenges?

Please select all that apply.

• Latency
• Workflow
• Governance
• Administrative Overheads
• Integration
Pain Point #1
Latency
Latency

- SCM latency means reduced developer productivity.
Two Key New Latency Problems

- Global teams
- Continuous Integration
  - CI can account for $>50\%$ of load on SCM servers.
Global Project Staffing

- Global development -> virtual teams
- Developer and infrastructure may be on different continents
- Team membership may change quickly
Prepare for the Staffing Shuffle

- Solve performance problems before you know the geographic configuration of the team
Accelrys

- Leading provider of scientific innovation lifecycle management software
- Hot standby
- Perforce proxies for global development teams
Pain Point #2
Workflow
Componentization

- Components are individually well-versioned
- How to track compatible versions across components?
- Track component versions separately, or can your SCM system do it?
DVCS Usage

- Git, Hg and other DVCS provide strong versioning within a software component
- Difficult to track versions across
  - Software components
  - Configuration data
  - Binary assets
Non-Code Assets

• Configuration files
• Binary assets

Save time: keep all needed resources in a common system.
NVIDIA

• Many teams using Perforce
  – Hardware
  – Software
  – Legal
• Many kinds of assets
  – Code
  – Hardware design
  – Office documents
Pain Point #3
Governance
Versioning: Legal issues

• Establish **prior use defence** against patent trolls
• Track compliance with open source and other third-party licences
• Code escrow
Build, Test, Release

- Do Developers, CI, and QA get the same build?
- Can you reconstruct a “historic” build?
- Is the environment versioned together with code and assets?
NYSE Euronext

- Track installed versions of all assets
  - Executables
  - Configuration
  - Scripts
- 198 projects
- 6600 releases/year
Pain Point #4
Administrative Overhead
Admin to User Ratio

- Large area of difference among SCM systems.
- Can range from 1:30 to 1:1000 or more
Key Admin Tasks

- Backup/recovery
- HA/DR
- Administration for replicas – build/test farms, analytics, other Agile needs
- Upgrades
- User and Permissions Management
Trend Micro

- Previous SCM system required a dedicated server per location
- Migration to Perforce
  - Increased performance
  - Reduced admin requirements
  - Perforce branching model enables sharing among projects
Pain Point #5: Integration Nightmares
Core vs. Context

• Administrators should not be rewriting basic code for essential integrations.
• Look for SCM with well-tested integrations for the rest of the ALM stack.
Essential ALM Package for 2013

- Agile Planning
- Issue Tracking
- Code Review
- Continuous Integration
- Build/Deploy
NetApp

- Build environments
- Test environments
- Data retention and distribution
How SCM Can Help

- Latency
- Workflow
- Governance
- Administration
- Integration

And > 5,500 Other Leading Companies
Delegate Poll

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Questions?