

Feature Branches vs. CI

(Как скрестить ежа с ужом?)

Evgeniy Koshkin, TeamCity developer



How we test our products?

- Integration Tests
- Dogfooding
- EAP
- QA

Internal TeamCity installation

- VCS changes count per day – 1000+
- Build count per day – 1500+
- Maximum test count per build – 41714
- Registered build agents count – 126
- Average build duration – 1 h (max 6 h)
- Average time spending in queue – 1 h

TeamCity Team

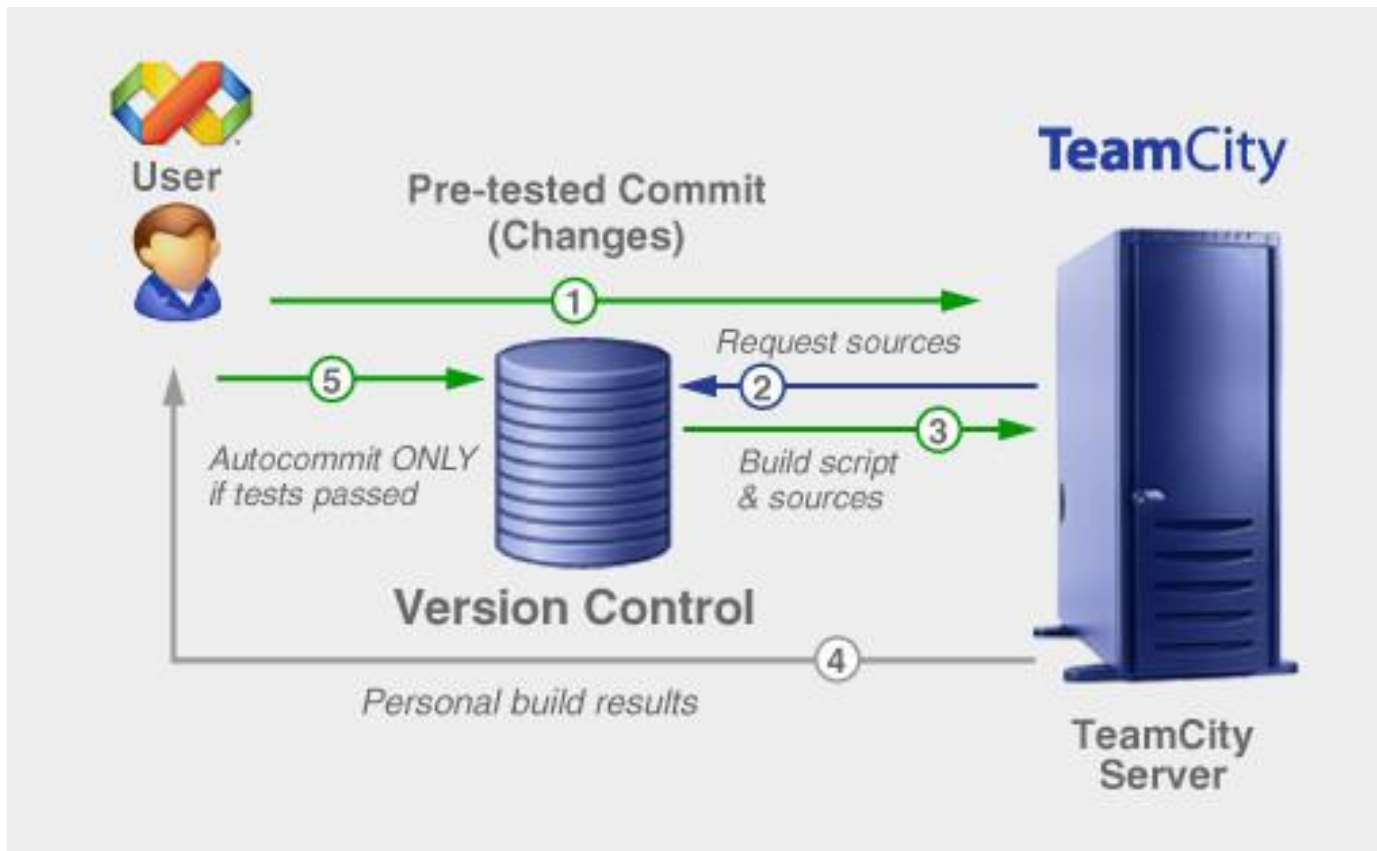
- Perforce, Subversion, TFS, Git, Hg
- Nightly deploy to production
- Are global changes even possible?

Feature toggles

```
if (TeamCityProperties.getBoolean("teamcity.vcs.cleanSources.forEachIncludeRule")) {  
    for (SCheckedOutDir checkedOutDir : versionsInfo.getCurrentCheckoutDirsOnAgent()) {  
        cleanRootDir(builder, checkedOutDir.getRule());  
    }  
} else {  
    builder.delete("", false, false);  
}
```

- Branching by abstraction
- New behavior can be easily disabled, sometimes on the fly
- Same toggles are used in production
- Increases code complexity
- Requires careful planning of your commits

Remote Run



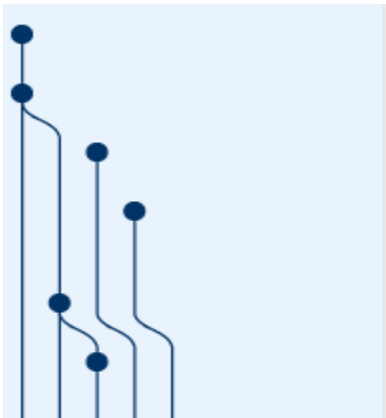
.NET Products Team (a long time ago)


- Subversion (no FB)
- 33000+ tests (R#)
- Build duration 3 – 4 h (R#)
- Who broke the build?
- 42
- 'Remote Run' pain

‘Mixed Changes’ Problem Workarounds

- Higher priority for personal builds
- Incremental builds
- Dedicated build agents pool

.NET Products Team (our days)



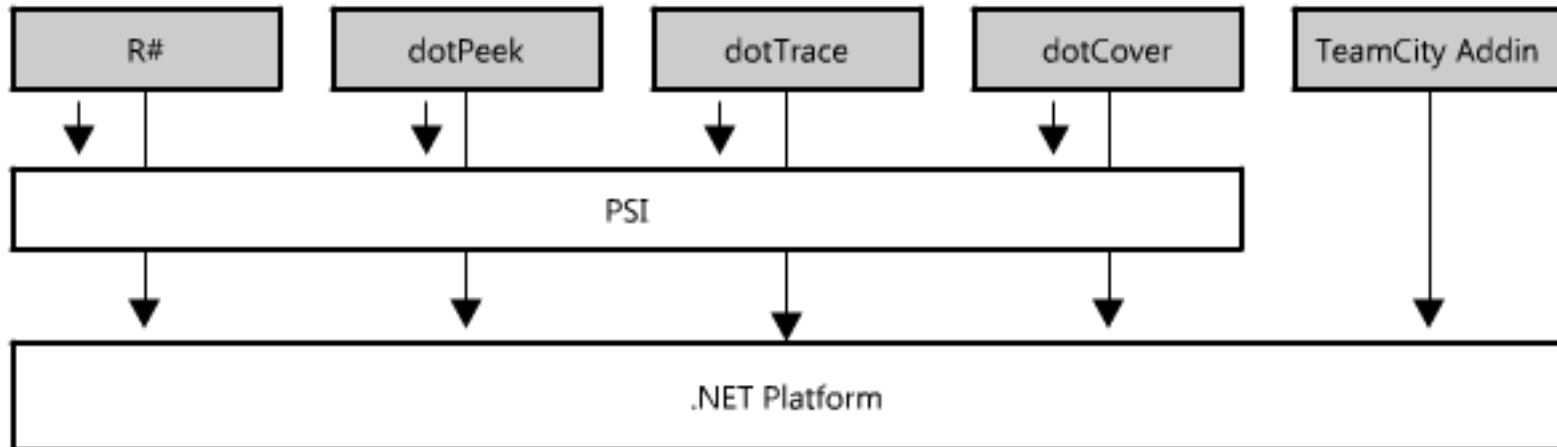
<code>default Merge!</code>	Sergey Kuks
<code>Merge with RSRP-276214</code> 	Sergey Kuks
<code>Nullref fixed</code>	Sergey Kuks
<code>PdbPe...tCache don't watch every two sec for ext. source mapping</code>	kirill.skrygan
<code>RSRP-276214 Merge with default</code>	Sergey Kuks
<code>+ navigation to IPsiSourceFileWithLocation</code>	Sergey Kuks
<code>+ misc files project * provider for web generated files</code>	

- Hg
- Feature Branches
- Green builds!

Feature Branches Support in TeamCity

- Status of all pushed branches
- Track test history per branch
- Track statistic per branch
- Changes from sub-repos (v8.0)

Shared .NET Platform

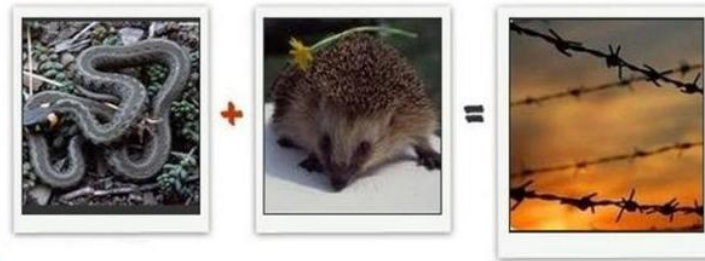


Made with lovelycharts.com

Thank you!



13.



14.



15.