

Beautiful Builds and Continuous Delivery Patterns

with Roy Osherove, 2 day

The Problem

Being able to deliver fast, and get feedback fast, is a necessary requirement for any kind of agility in software development. But most of our builds, if we have any, look like pieces of gum and string hanging together, held together with some spit. Many projects are barely able to deliver something every month.. We will cover:

Objectives

In this workshop we will learn common patterns and anti patterns for automating the build process, making builds fast, and continuously deliver, while still being able to maintain and understand our builds scripts and process, based on <http://beautifulbuilds.com>

1. Understand how automated build scripts and continuous integration servers work best together
2. Know how to choose the right tools for build scripts and CI based on common and future build requirements, such as auto scaling, amount of projects, ease of maintenance etc.
3. Learn common solutions and patterns for making builds faster, maintainable and coherent
4. Understand database migrations and upgrades
5. Understand advanced features of CI systems such as branch builds, gated commits, artifact sharing, build chaining, and when to use them
6. Learn to create a holistic view of the build process, build environments, and the delivery process

Materials

All students get a PDF of all the slides in the course, in downloadable form.

Agenda - Day I (09:00-16:00)

This day is dedicated to understanding all the tools and abilities at your disposal. Without knowing what is possible, you limit yourself to only using what you know, instead of what you need.

- 1.** High Level Concepts and Actors
 - 1.** Mid Level Concepts and Actors
 - 1.** Low Level Concepts and Actors
- 2.** Build Architecture
- 3.** Triggering Build Configurations
- 4.** Build Chains
- 5.** Source Control Interactions
- 6.** Notifications
- 7.** Build Process Patterns
- 8.** Database Migrations and Upgrade Patterns
- 9.** Build Architecture and Delivery Environments
- 10.** Remote Agents
- 11.** Agent Parameters
- 12.** Build Assets Patterns

Agenda - Day 2 (09:00-16:00)

This day is dedicated to learning patterns of delivery based on the tools we learned on the first day.

13. Deployment Patterns

1. Heroku
2. XCopy
3. Remote Manipulator
4. Remote Executor
5. Multi Stage Handoff
6. Shipping Skeleton
7. Continuous Deployment

14. Database Delivery

1. Migrations
2. Merges
3. Handpicking

15. Optimizations

1. Cumulative Builds
2. Parallel Builds
3. Incremental Builds

16. Testing Your Builds

17. Testing Web Apps

About Roy Osherove

Roy Osherove is the chief scientist at Bouvet.no, and the author of The Art Of Unit Testing and Notes to a software team leader. He is also one of the original ALT.NET organizers. He is now in the process of writing a book on Beautiful Builds.

He consults and trains teams worldwide on the gentle art of unit testing, test-driven development and how to lead software teams. He frequently speaks at international conferences on these topics and others.