

# Continuous Integration -Kom igång!

**Andreas Ek 2013-04-26 WP Meetup**

# Varför CI?

- Agilt utvecklingssätt kräver ständig transparens och leverans.
- Enklare och snabbare leverans / lansering
- Möjliggör minskad tid för nyckelpersoner
- Ökar förmågan hos "vanliga" utvecklare
- Tar bort repetitiva moment
- Höjer kvaliteten i dina projekt

# Agile Manifesto Principles

1. Our highest priority is to satisfy the customer through early and **continuous delivery** of valuable software.
2. Welcome changing requirements, even late in development. Agile processes harness change for the customer's competitive advantage.
3. **Deliver working software frequently**, from a couple of weeks to a couple of months, with a preference to the shorter timescale.
4. Business people and developers must work together **daily** throughout the project.
5. Build projects around motivated individuals. **Give them the environment** and support they need, and trust them to get the job done.
6. The most efficient and effective method of conveying information to and within a development team is face-to-face conversation.
7. **Working software** is the primary measure of progress.
8. Agile processes promote sustainable development. The sponsors, developers, and users should be able to maintain a constant pace indefinitely.
9. **Continuous attention** to technical excellence and good design enhances agility.
10. **Simplicity**--the art of maximizing the amount of work not done--is essential.
11. The best architectures, requirements, and designs emerge from self-organizing teams.
12. At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behavior accordingly.

# Vad är CI?

Continuous Integration

Kontinuerlig integration?

Kontinuerlig leverans?

Ständig transparens?

Automatiska produktinkrement?

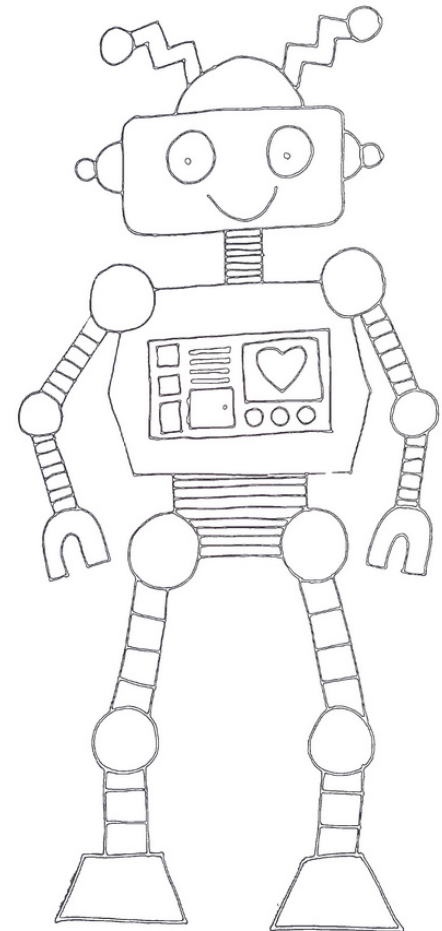
Byggscript?

Testautomatik?

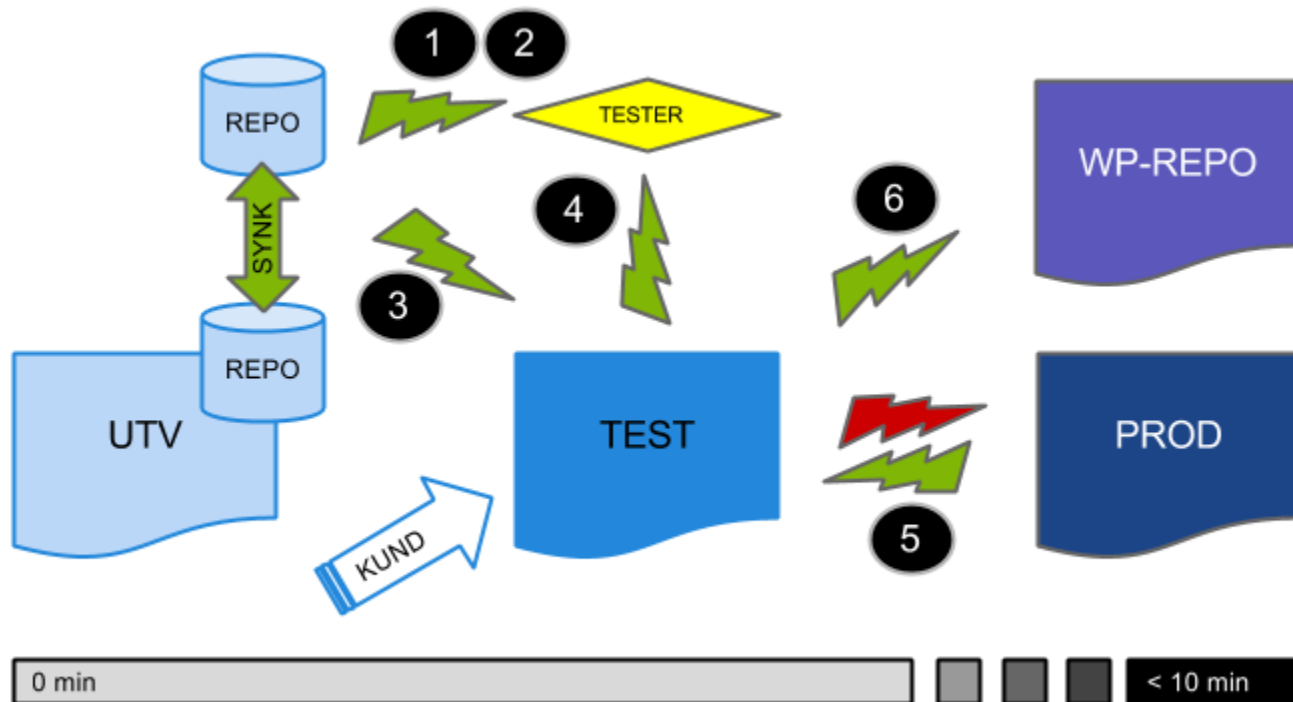
UI-testning?

Verktyg för TDD?

Namn på svenska?!



# Blueprint



# Utmaningar

Tar tid att bygga upp

Normal CI-uppsättning runt 40-80h

Projekt på 200h? 40%? No way!

***Hur kan vi komma igång  
med CI på kortare tid?***



# Börja men med en sak i taget!

Versionshantering

Byggmotor

Analys

Unit Test

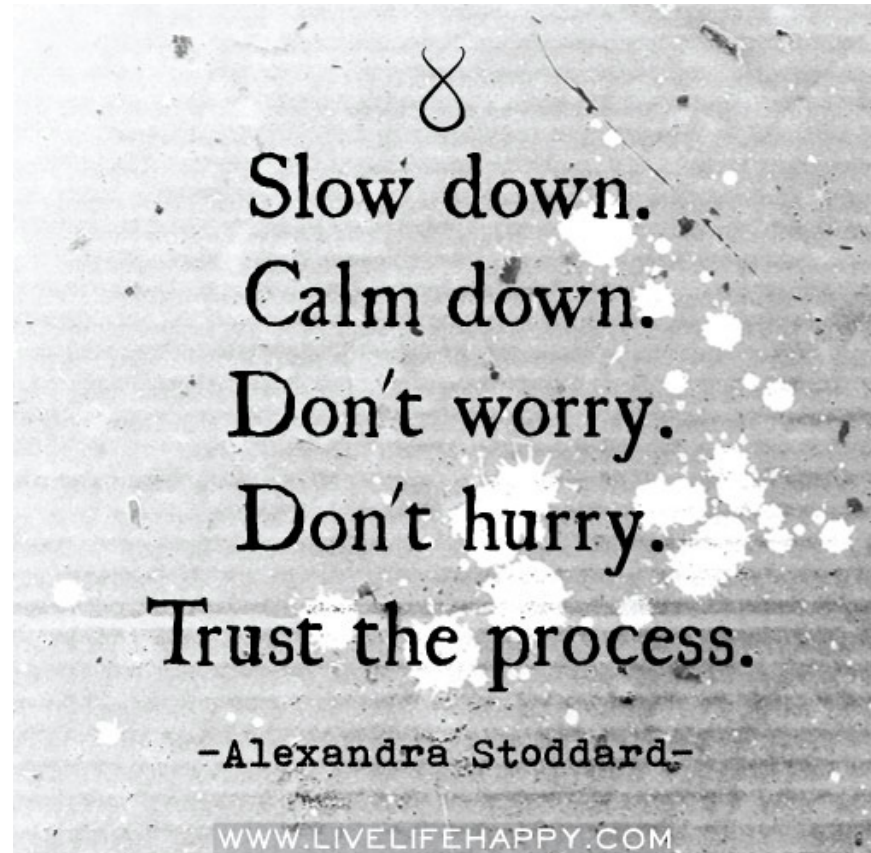
Lasttest

**UI-Test**

Leveranser

Pipeline

Support



# Demonstration





# Utvecklingsmiljö

Webbplats med WP och plugin

Exempel: Lånekalkylator

`http://calc.local`

### Calculator

[Leave a reply](#)

Please insert decimals using the dot notation, e.g. 5.9

**Loan balance (€)**

**Interest rate (%)**

**Loan term (years)**

**Period**

Select ▾

Calculate

This entry was posted in [Uncategorized](#) on [April 24, 2013](#). [Edit](#)

# CI-miljö



ubuntu®



**Jenkins**



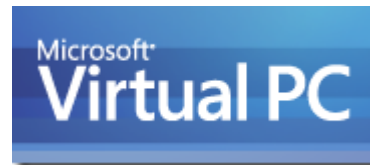
# 7 steg till UI-test

- Installation virtuell miljö (steg 1-3) \*
- Konfiguration (steg 4-5) \*
- UI Test Case (steg 6)
- CI-Jobb (steg 7)

\* Förberett i denna demo...



# Steg 1 - Installera virtuell server



# Steg 2 - Åtkomst virtuell server

**# Logga in som root:**

`sudo su`

**# Ta reda på dina IP-adresser:**

`ifconfig`

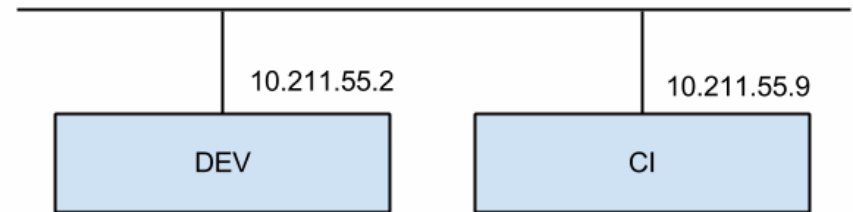
**# Installera openssh:**

`apt-get install -y openssh-server`

**# Modifiera hostfilen:**

`nano /etc/hosts`

`# exempel: 10.211.55.2 calc.local`



# Steg 3 - Installera tjänster

## # Lägg till Jenkinsrepo

```
wget -q -O - http://pkg.jenkins-ci.org/debian/jenkins-ci.org.key | sudo apt-key add -  
sh -c 'echo deb http://pkg.jenkins-ci.org/debian binary/ > /etc/apt/sources.list.d/jenkins.list'  
apt-get update && apt-get upgrade -y
```

## # Installera Java, Git, Xvfb, Firefox, Jenkins

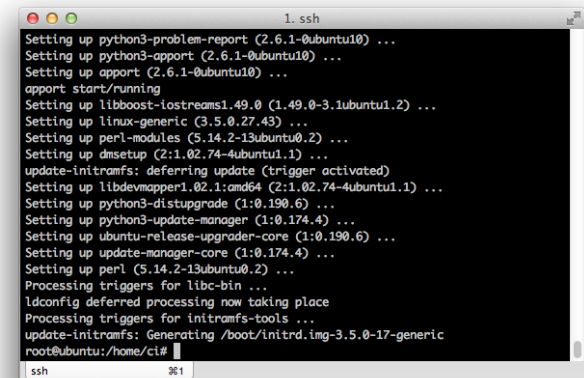
```
apt-get install -y default-jre git xvfb firefox jenkins
```

## # Buggfix för Selenium

```
ln -s /usr/lib/firefox/firefox /usr/bin/firefox-bin
```

## # Lägg in Selenium standalone

```
wget http://selenium.googlecode.com/files/selenium-server-standalone-2.32.0.jar  
mkdir -p /var/lib/selenium  
mv selenium-server-standalone-2.32.0.jar /var/lib/selenium/selenium.jar
```



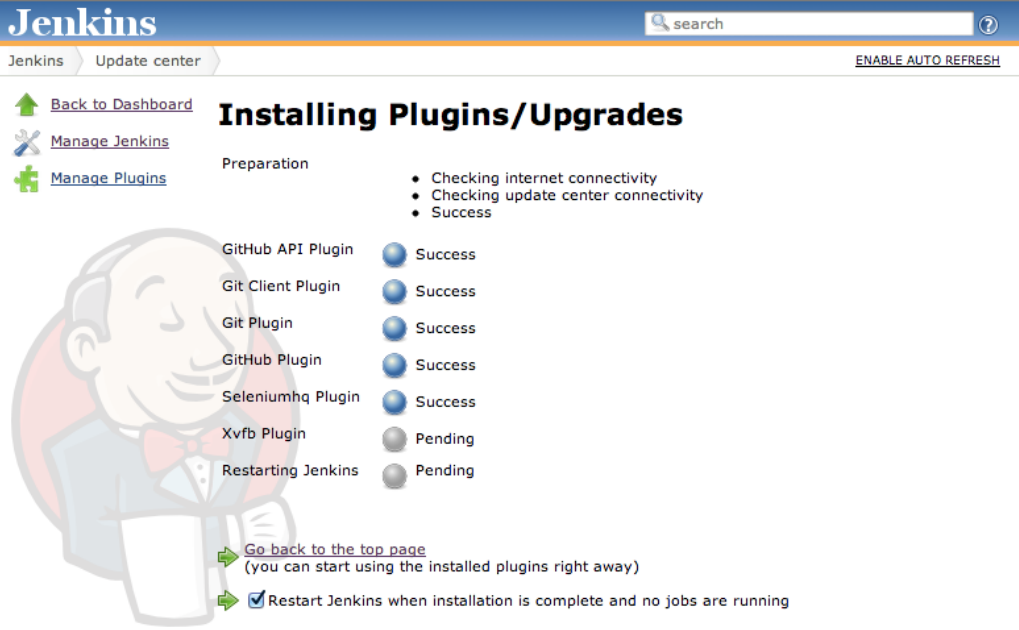
# Steg 4 - Jenkins Plugins

Installera plugins på Jenkins port 8080!

Manage Jenkins -> Manage Plugins

- Github Plugin
- Xvfb Plugin
- Seleniumhq Plugin

Install + Restart



**Jenkins**  [?](#)

[Jenkins](#) [Update center](#) [ENABLE AUTO REFRESH](#)

[Back to Dashboard](#) **Installing Plugins/Upgrades**

[Manage Jenkins](#)

[Manage Plugins](#)

Preparation

- Checking internet connectivity
- Checking update center connectivity
- Success

GitHub API Plugin	Success
Git Client Plugin	Success
Git Plugin	Success
GitHub Plugin	Success
Seleniumhq Plugin	Success
Xvfb Plugin	Pending
Restarting Jenkins	Pending

[Go back to the top page](#)  
(you can start using the installed plugins right away)

☒ Restart Jenkins when installation is complete and no jobs are running

[Help us localize this page](#) Page generated: Apr 25, 2013 10:31:45 AM [REST API](#) [Jenkins ver. 1.512](#)

# Steg 5 - Globala inställningar

Ställ in Jenkins globalt

Manage Jenkins -> Configure System

- Git
- xvfb path: /usr/bin
- Git Plugin Global: Name / Email
- Selenium RC: /var/lib/selenium/selenium.jar

Spara!

## Xvfb installation

Xvfb installation installations

Xvfb installation

Name

Directory in which to find Xvfb executable

☐ Install automatically

Delete Xvfb installation

Add Xvfb installation

List of Xvfb installation installations on this system



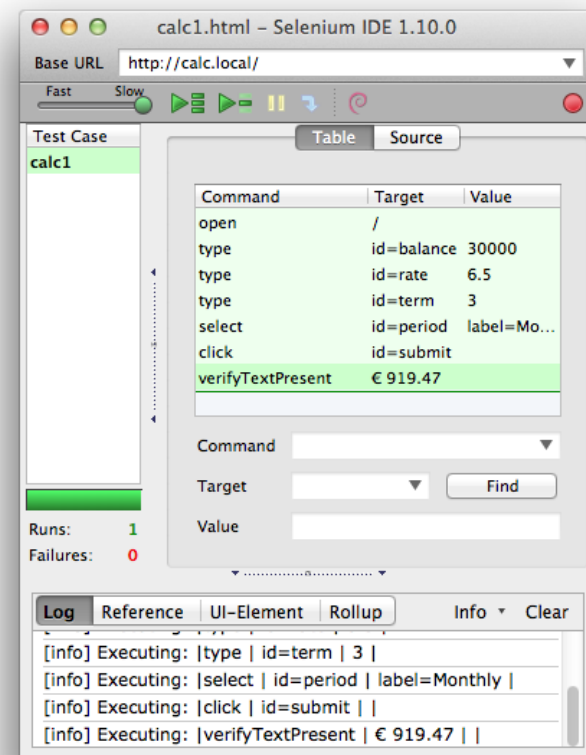
# Steg 6 - Testcase

Firefox!

Installera Selenium IDE

Skapa ett UI-testcase

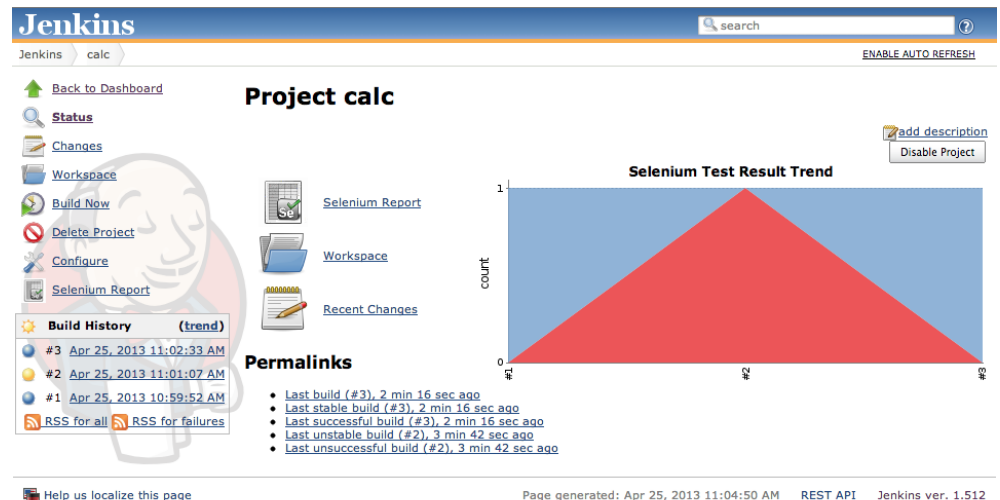
Spara i projektet som filer



# Steg 7 - Skapa ett jobb

- Koppla github
- Start xvfb
- Koppla browser, testcase, url och resultat
- Koppla post-build med Selenium Report

Spara!



# Kör!

## Jenkins


Jenkins calc #3

[Back to Project](#)  
[Status](#)  
[Changes](#)  
**[Console Output](#)**  
[View as plain text](#)  
[Edit Build Information](#)  
[Delete Build](#)  
[Git Build Data](#)  
[No Tags](#)  
[Selenium Report](#)  
[Previous Build](#)

### Console Output

```
Started by user anonymous
Building in workspace /var/lib/jenkins/jobs/calc/workspace
Checkout:workspace / /var/lib/jenkins/jobs/calc/workspace - hudson.remoting.LocalChannel@40fbd0ee
Using strategy: Default
Last Built Revision: Revision 1e089d6c3897afea99c4c60705964edd02e48a8e (origin/master, origin/HEAD)
Fetching changes from 1 remote Git repository
Fetching upstream changes from origin
Seen branch in repository origin/HEAD
Seen branch in repository origin/master
Commencing build of Revision 38a793da6eld3a0a6974160408837efef2fc4b8a (origin/HEAD, origin/master)
Checking out Revision 38a793da6eld3a0a6974160408837efef2fc4b8a (origin/HEAD, origin/master)
Warning : There are multiple branch changesets here
Xvfb starting$ /usr/bin/Xvfb :2 -screen 0 1024x768x24 -fbdir /var/lib/jenkins/2013-04-25_11-02-335182788596461955308xvfb
java -jar /var/lib/selenium/selenium.jar -htmlSuite *firefox http://calc.local
/var/lib/jenkins/jobs/calc/workspace/build/ui/suite1.html /var/lib/jenkins/jobs/calc/workspace/build/log/selenium.html
[workspace] $ java -jar /var/lib/selenium/selenium.jar -htmlSuite *firefox http://calc.local
/var/lib/jenkins/jobs/calc/workspace/build/ui/suite1.html /var/lib/jenkins/jobs/calc/workspace/build/log/selenium.html
Apr 25, 2013 11:02:35 AM org.opengrid.selenium.GridLauncher main
INFO: Launching a standalone server
11:02:36.021 INFO - Java: Oracle Corporation 23.7-b01
11:02:36.032 INFO - OS: Linux 3.5.0-17-generic amd64
11:02:36.058 INFO - v2.32.0, with Core v2.32.0. Built from revision 6c40c18
11:02:36.248 INFO - RemoteWebDriver instances should connect to: http://127.0.0.1:4444/wd/hub
11:02:36.249 INFO - Version Jetty/5.1.x
11:02:36.250 INFO - Started HttpContext[/selenium-server/driver,/selenium-server/driver]
11:02:36.251 INFO - Started HttpContext[/selenium-server,/selenium-server]
11:02:36.251 INFO - Started HttpContext[/,/]
11:02:36.273 INFO - Started org.opengrid.jetty.jetty.servlet.ServletHandler@43c332b8
11:02:36.274 INFO - Started HttpContext[/wd,/wd]
11:02:36.280 INFO - Started SocketListener on 0.0.0.0:4444
11:02:36.280 INFO - Started org.opengrid.jetty.jetty.Server@f41bf9f
jar:file:/var/lib/selenium/selenium.jar!/customProfileDirCUSTFFCHROME
11:02:36.558 INFO - Preparing Firefox profile...
11:02:37.628 INFO - Launching Firefox...
11:02:38.610 INFO - Checking Resource aliases
11:02:41.511 INFO - Checking Resource aliases
11:02:41.515 INFO - Received posted results
calc1.html
<a href="calc1.html">calc1</a></td></tr>
</tbody></table>

11:02:42.136 INFO - Killing Firefox...
Xvfb stopping
Publishing Selenium report...
Test failures: 0
Test totals : 1
-----
Command Passes : 1
Command Failures : 0
Command Errors : 0
Finished: SUCCESS
```



# Skript, dokument, plugin



# GitHub

<https://github.com/EkAndreas/wpmeetup>

# Tack!



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