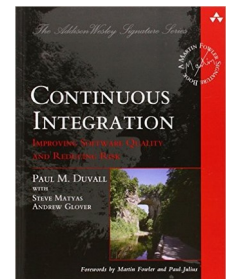
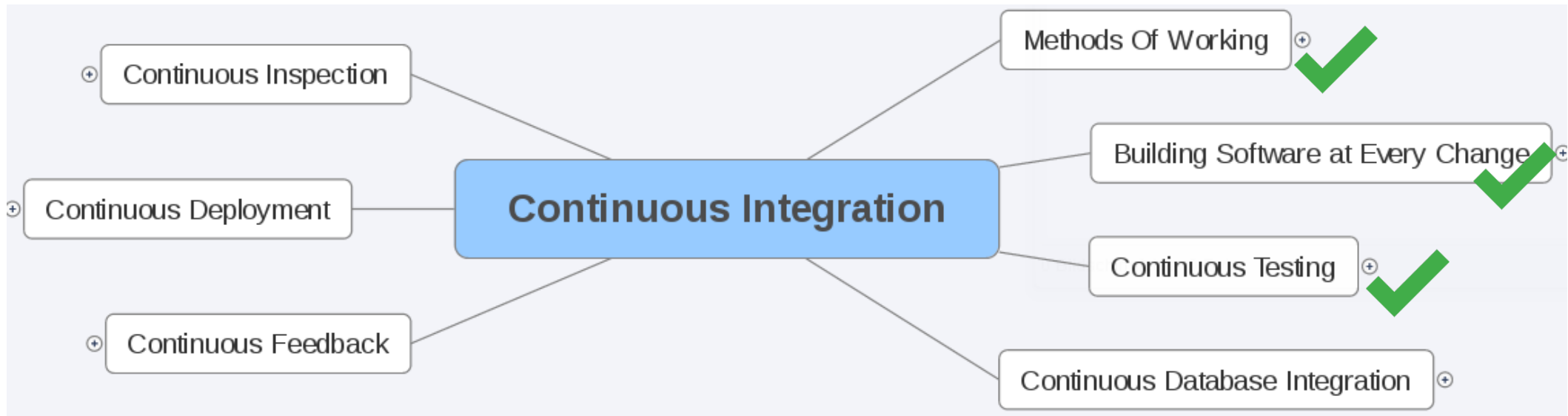


Continuous Integration – Follow Up

@SandraParsick
mail@sandra-parsick.de

Continuous Integration



Building Software at Every Change

Automate Builds

Create a Consistent Directory Structure

Use a CI Server

Perform Single Command Builds

Fail Builds Fast

Run Manual Integration Builds

Seperate Scripts From Your IDE

Build for Any Environment

Run Fast Builds

Centralize Software Assets

Use a Dedicated Integration Build Machine

Stage Builds

Building Software at Every Change – Build Tools

Automated Build

Seperate Scripts
From Your IDE

Create a Consistent
Directory Structure

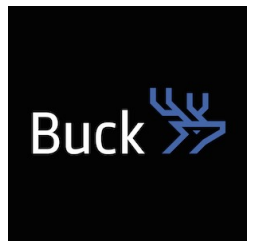
Run
Fast Builds

Fail
Builds Fast

Build for
Any Environment

Perform Single
Command Builds

MavenTM

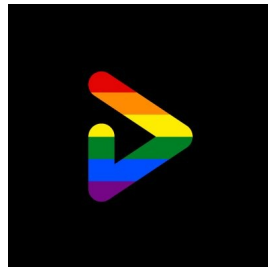


Building Software at Every Change – Integration Server

Use a Dedicated
Integration Build Machine

Use a
CI Server

Stage Builds



Building Software at Every Change

– Version Control Systems

Centralize Software Assets



Building Software at Every Change - VCS Managment System

Centralize Software Assets



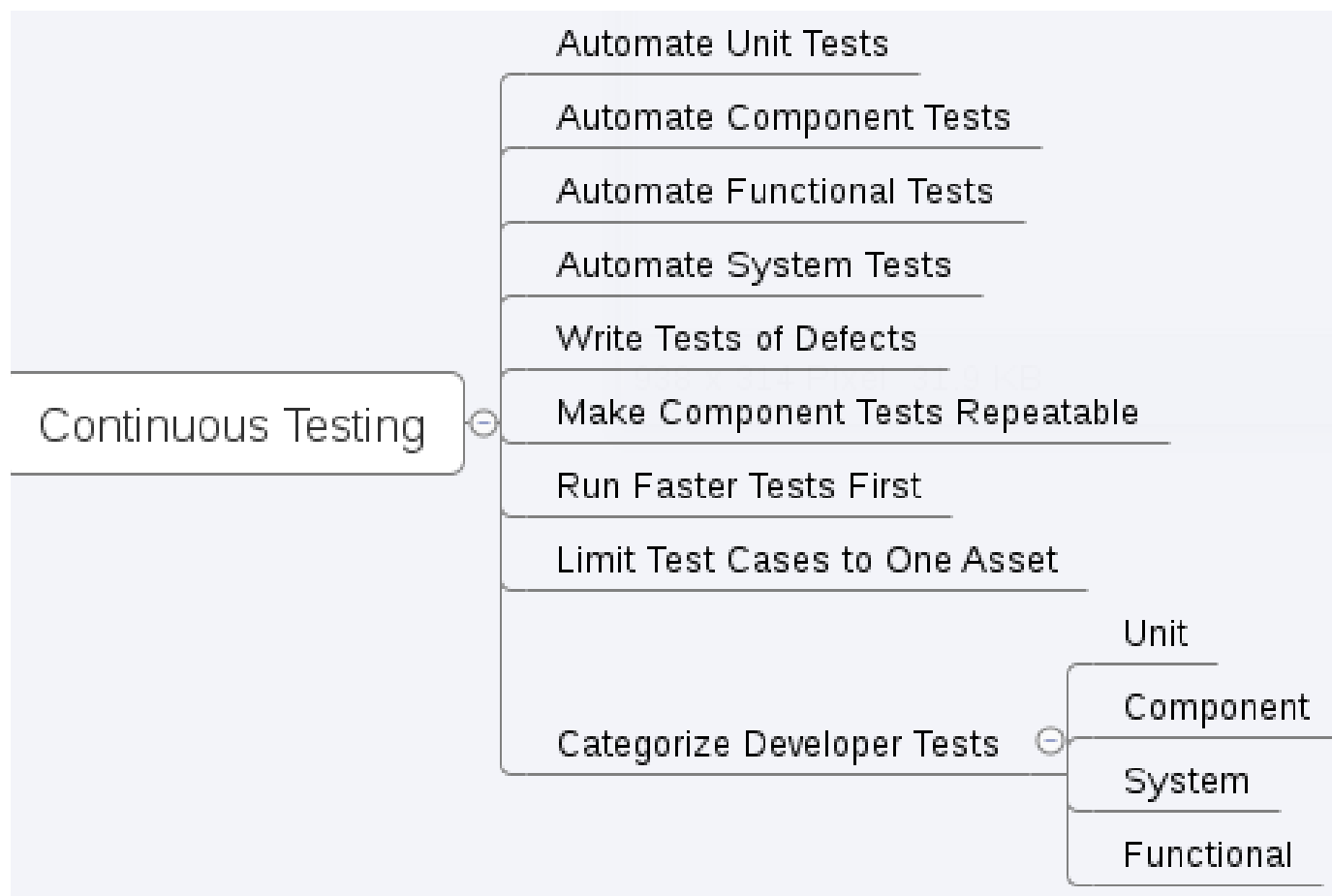
Building Software at Every Change - Repository Managment System

Centralize Software Assets

 Nexus Repository Manager


JFrog Artifactory

 **archiva**TM



Continuous Testing

Automate Unit Tests

JUnit

**Spock
Framework**

AssertJ

TestNG

Continuous Testing

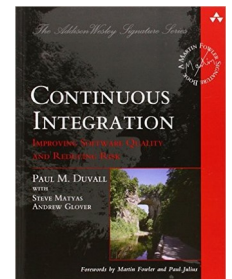
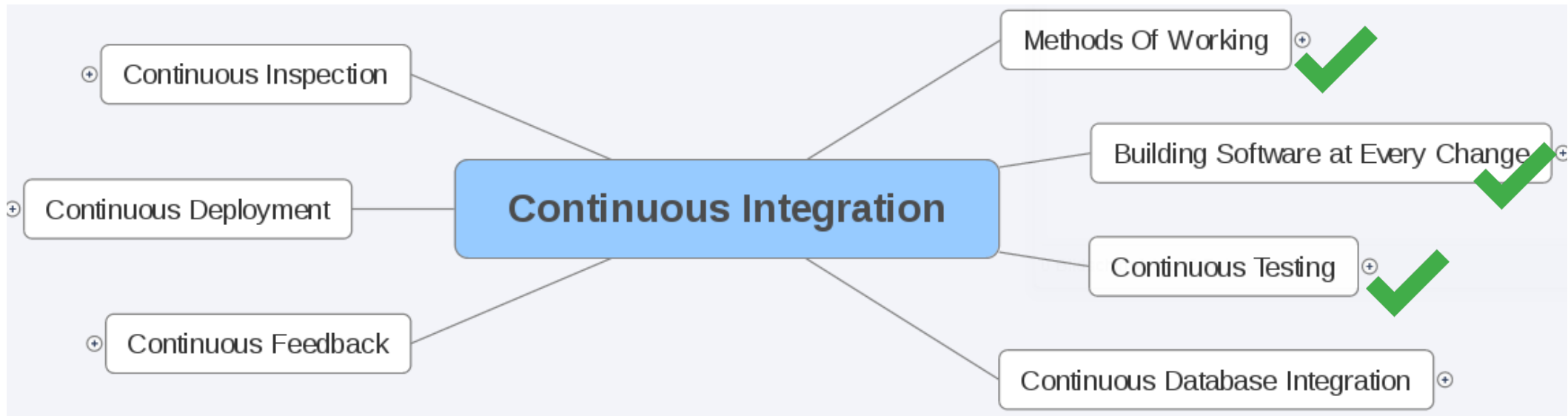
Automate Functional Tests

 *Cucumber*



livingdoc

Continuous Integration



Continuous Database Integration

```
graph LR; A[Continuous Database Integration] --- B[Automate Database Integration]; A --- C[Use a Local Database Sandbox]; A --- D[Use a Version Control Repository to Share Database Assets]; A --- E[Give Developers Capability to Modify the Database]; A --- F[Make DBA Part of Development Team];
```

Automate Database Integration

Use a Local Database Sandbox

Use a Version Control Repository to Share Database Assets

Give Developers Capability to Modify the Database

Make DBA Part of Development Team

Continuous Database Integration

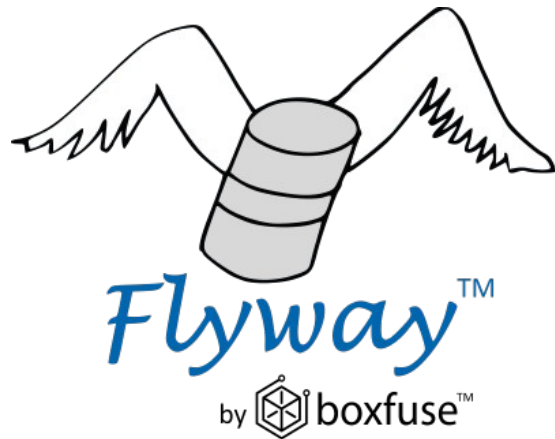
Use a
Local Database Sandbox





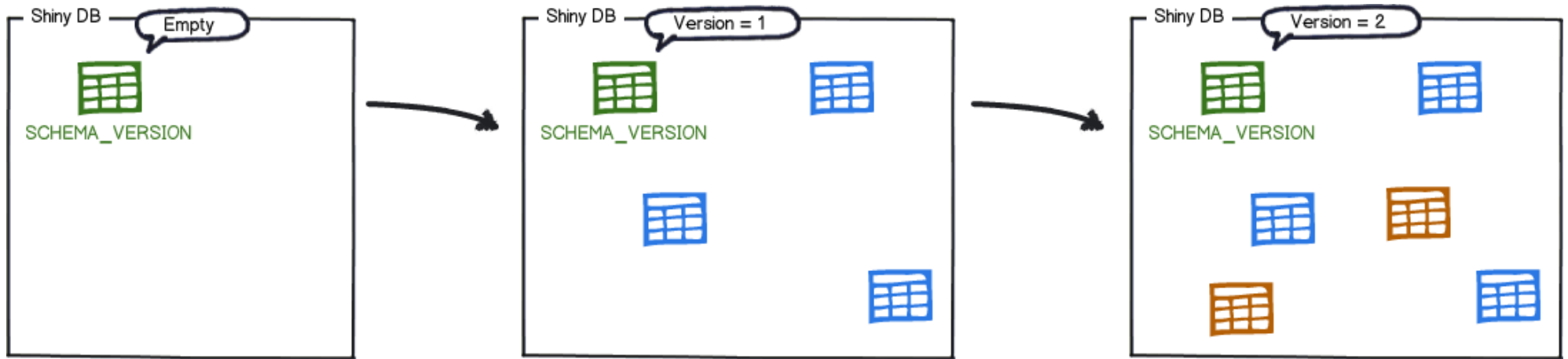
Continuous Database Integration

Automate
Database Integration



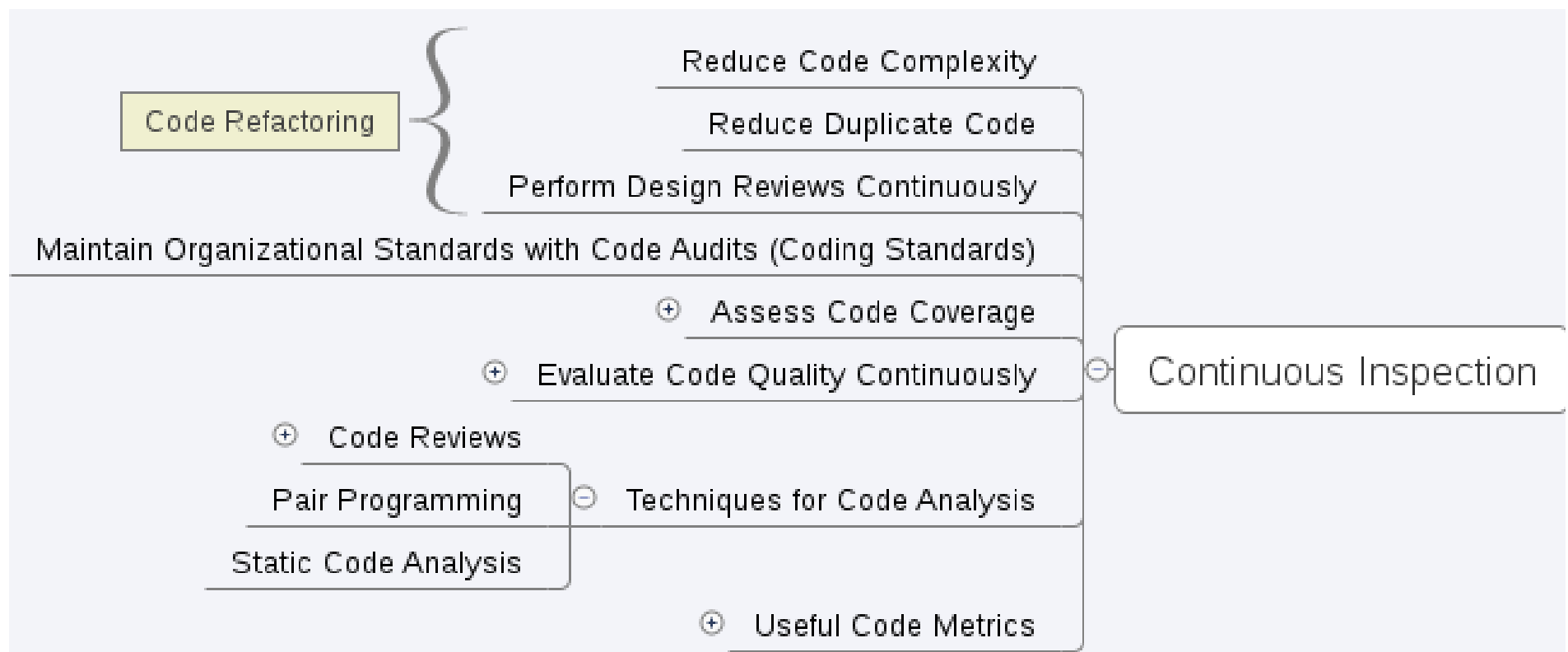


Flyway



schema_version

version_rank	installed_rank	version	description	type	script	checksum	installed_by	installed_on	execution_time	success
1	1	1	Initial Setup	SQL	V1__Initial_Setup.sql	1996767037	axel	2010-05-04 22:23:00.0	546	true
2	2	2	First Changes	SQL	V2__First_Changes.sql	1279644856	axel	2010-05-06 09:18:00.0	127	true



Continuous Inspection

Maintain Organizational Standards
with Code Audits (Coding Standards)

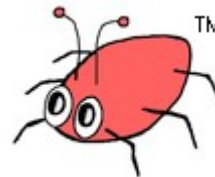


NetBeans



Continuous Inspection

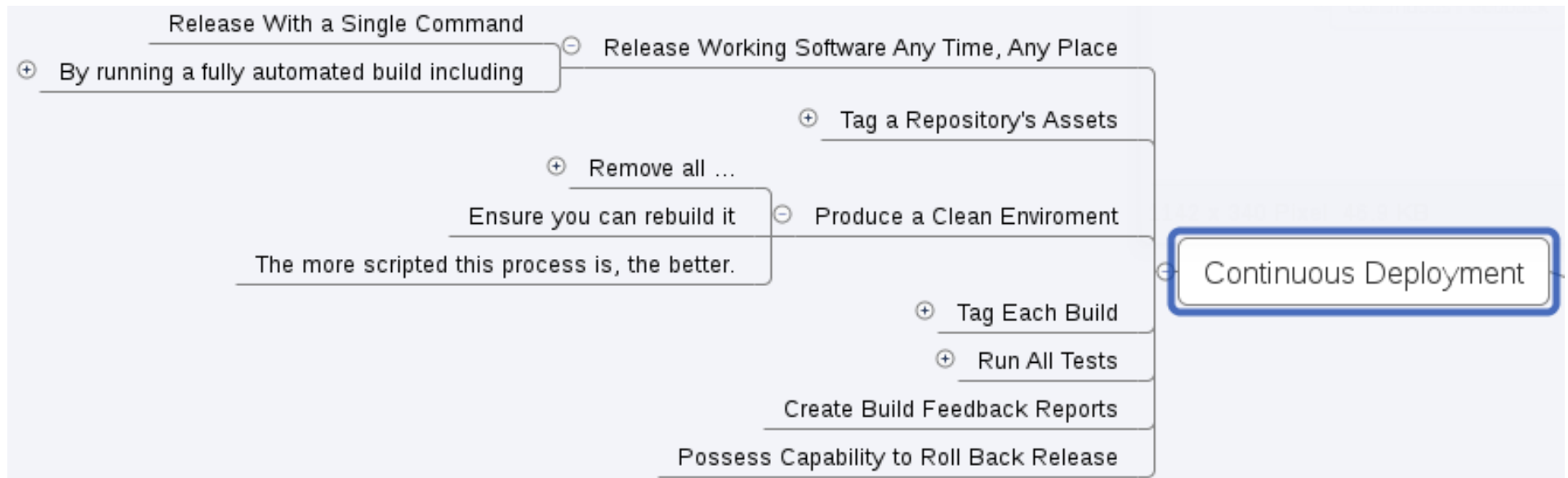
Evaluate Code Quality Continuously



JaCoCo

COVERITY®

sonarqube 



Continuous Deployment

Produce a Clean Enviroment -
Ensure you can rebuild it





Deploy Application Playbook

```
- hosts: application-server
  vars:
    tomcat_app_base: /opt/tomcat/webapps
    webapp_source_path: ./demo-app-ansible-deploy-1.0-SNAPSHOT.war
    webapp_target_name: demo

  tasks:
    - name: stop tomcat
      # service: name=tomcat state=stopped
      command: service tomcat stop

    - name: wait tomcat shutdown
      wait_for: port=8080 state=stopped timeout=60

    - name: cleanup {{ webapp_target_name }}
      file: name={{tomcat_app_base}}/{{ webapp_target_name }} state=absent

    - name: delete previous backup
      file: path={{ tomcat_app_base }}/{{ webapp_target_name }}.war.previous state=absent

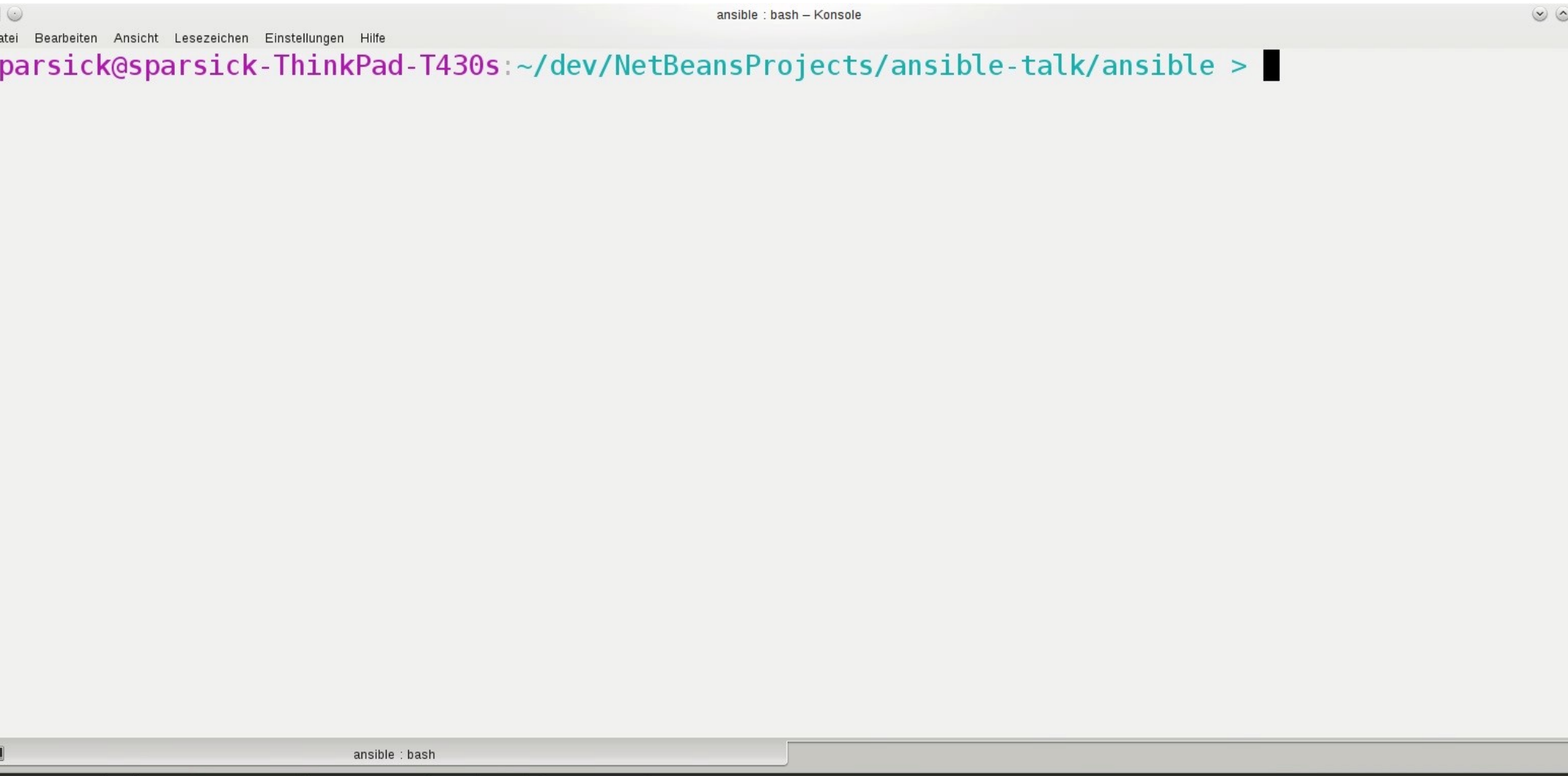
    - name: create new backup
      command: mv {{ tomcat_app_base }}/{{ webapp_target_name }}.war {{ tomcat_app_base }}/{{ webapp_target_name }}.war.previous
      ignore_errors: yes

    - name: copy webapp {{ webapp_source_path }} to {{ webapp_target_name }}
      copy: src={{ webapp_source_path }} dest={{ tomcat_app_base }}/{{ webapp_target_name }}.war mode=660

    - name: start tomcat
      #service: name=tomcat state=started
      command: service tomcat start

    - name: wait for tomcat to start
      wait_for: port=8080 timeout=60
```

Deploy Application Playbook

A screenshot of a terminal window titled "ansible : bash – Konsole". The window has a menu bar with "Datei", "Bearbeiten", "Ansicht", "Lesezeichen", "Einstellungen", and "Hilfe". The prompt shows the user "sparsick@sparsick-ThinkPad-T430s" in a directory "~/dev/NetBeansProjects/ansible-talk/ansible". The prompt ends with a black cursor.

```
ansible : bash – Konsole  
sparsick@sparsick-ThinkPad-T430s:~/dev/NetBeansProjects/ansible-talk/ansible > |
```

ansible : bash

Javaaktuell

04-2016 | Winter | www.ijug.eu

Praxis. Wissen. Networking. Das Magazin für Entwickler
Aus der Community – für die Community

Java ist vielseitig



D: 4,90 EUR A: 5,60 EUR CH: 9,80 CHF Bestellnr.: 530 EUR ISSN 2191-4977



JUnit 5
Das nächste große
Release steht vor
der Tür

Ansible
Konfigurationsmana-
gement auch für
Entwickler

Spring Boot Starter
Komfortable Modula-
risierung und Konfi-
guration



Software organisieren



Ansible – warum Konfigurations- management auch für Entwickler interessant sein kann

Sandra Parsick

Download



<http://bit.ly/2cZ0lrZ>

Without Feedback, None of the Other Aspects of CI is useful.

- ⊕ The Right Information Must Be Sent to The Right Person at The Right Time and In The Right Way

Beware of Information Overload

Continuous Feedback is reducing the time between a defect is introduced, discovered, and fixed

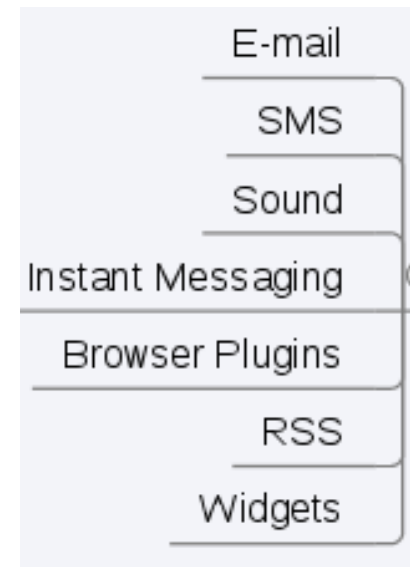
Continuous Feedback

Continuous Feedback

The Right Way



CI-Eye





CI-Eye

Product_Alpha - Release



Product_Alpha - Smoke



Product_Zappa - Integration



Product_Zappa - Acceptance



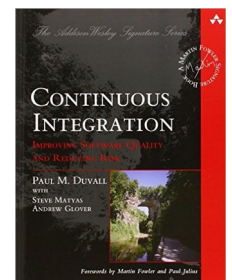
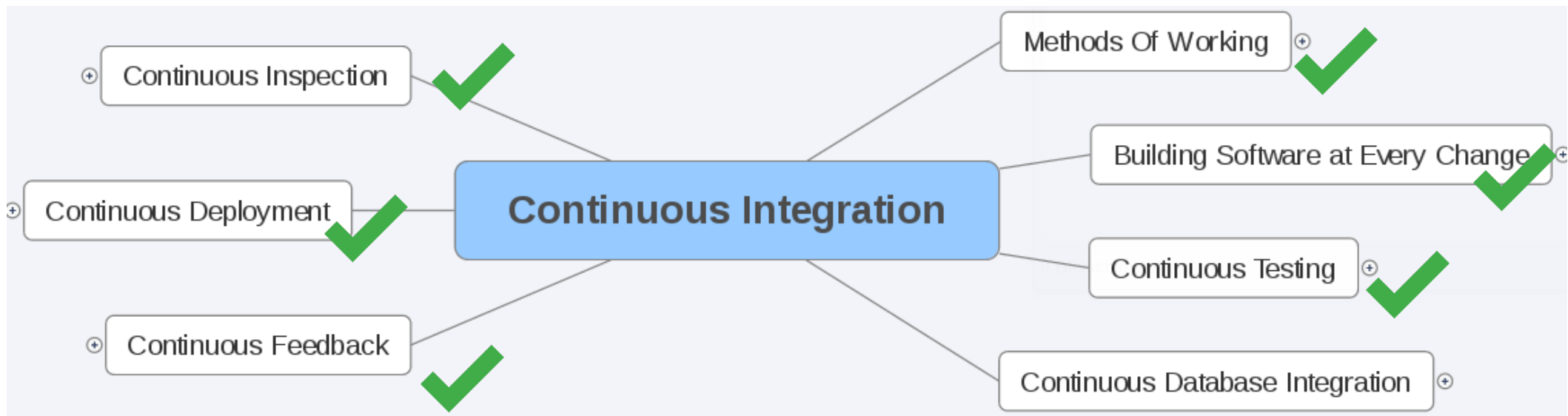
Product_Alpha - Acceptance

Product_Alpha - Integration

Product_Zappa - Release

Product_Zappa - Smoke

Continuous Integration



Vielen Dank!

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Xing: <https://www.xing.com/profile/SandraParsick>

Blog: <http://blog.sandra-parsick.de>

E-Mail: mail@sandra-parsick.de