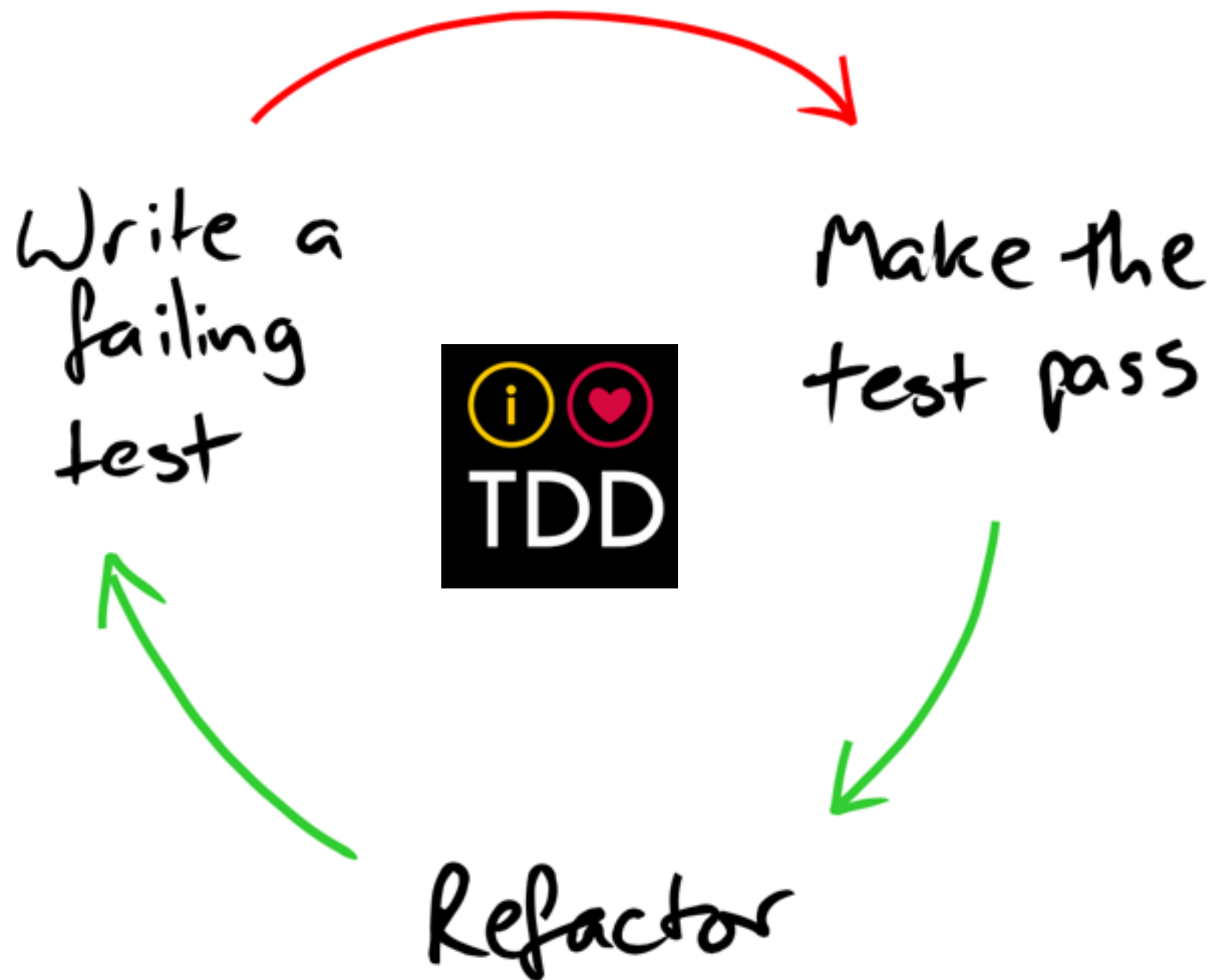


# Continuous Integration



# Problem

The screenshot shows the Google Play Console interface for an APK. The URL in the browser is <https://play.google.com/apps/publish/>. The page is titled "APK" and includes a "Switch to advanced mode" button. It features three main sections: "PRODUCTION" (Version 11009), "BETA TESTING", and "ALPHA TESTING". Below these is the "PRODUCTION CONFIGURATION" section, which includes a button to "Upload new APK to Production" and a lightbulb icon. The "CURRENT APK" section shows it was published on 16 May 2014 at 03:06:02. A red box highlights the "Supported devices" section, which shows 3572 devices and a "See list" link. The "Excluded devices" section shows 0 devices and a "Manage excluded devices" link. At the bottom, a table lists the current production version.

VERSION	UPLOADED ON	STATUS	ACTIONS
11009 (1.1)	16 May 2014	In Prod	

# Problem



# What we need ?



# Continuous Integration

**Software development practice**

**What people do, not about what tools**

**Integrate frequently**

**Fast feedback**



# Jenkins



# Jenkins

An extensible open source continuous integration server

[BLOG](#)[CONNECT](#)[BUG TRACKER](#)[WIKI](#)[CI](#)[TUTORIALS](#)[ARCHIVES](#)[DONATION](#)[ABOUT](#)

## Jenkins User Conference 2015

Don't miss out on the latest from the Jenkins Community!

U.S. East - June 18-19

Europe - June 23-24

Israel - July 16

U.S. West - September 2-3

**Early Bird Ends May 15th - REGISTER NOW**



## Meet Jenkins

Find out what Jenkins is and get started.



## Use Jenkins

See how to get more out of your Jenkins.

## Download Jenkins

Release

Long-Term Support Release

### Java Web Archive (.war)

**Latest and greatest (1.614)**

[changelog](#) | [past releases](#) | [RC](#)

**upgrading from Hudson?**

### Or native package



Windows



Ubuntu/Debian



# Building





# Building Android app

Source code

JDK

Build tool

Android SDK

# Building Android app

Source code



JDK

Build tool



Android SDK



# Step to build

Source code

JDK

Build tool

Android SDK

# Source code



# GitHub





# Install git

<https://git-scm.com/>



The image shows the Git website homepage. At the top left is the Git logo (an orange diamond with a white 'g') followed by the text 'git --distributed-is-the-new-centralized'. To the right is a search bar with the placeholder text 'Search entire site...'. Below the logo, there are two paragraphs of text. The first paragraph describes Git as a 'free and open source' distributed version control system. The second paragraph describes Git as 'easy to learn' and having a 'tiny footprint with lightning fast performance'. To the right of the text is a diagram showing a network of nodes (represented as stacks of papers) connected by lines, illustrating the distributed nature of the system. Below the text, there is a section titled 'Learn Git in your browser for free with Try Git.' with a small icon of a cat. At the bottom, there are four sections: 'About' (with a gear icon), 'Documentation' (with a book icon), 'Downloads' (with a download arrow icon), and 'Community' (with a speech bubble icon). To the right of these sections is a large image of a computer monitor displaying the 'Latest source Release 2.4.1' and a button for 'Downloads for Mac'.

**git** --distributed-is-the-new-centralized

Search entire site...

Git is a **free and open source** distributed version control system designed to handle everything from small to very large projects with speed and efficiency.

Git is **easy to learn** and has a **tiny footprint with lightning fast performance**. It outclasses SCM tools like Subversion, CVS, Perforce, and ClearCase with features like **cheap local branching**, convenient **staging areas**, and **multiple workflows**.

 **Learn Git in your browser for free with Try Git.**

**About**  
The advantages of Git compared to other source control systems.

**Documentation**  
Command reference pages, Pro Git book content, videos and other material.

**Downloads**  
GUI clients and binary releases for all major platforms.

**Community**  
Get involved! Bug reporting, mailing list, chat, development and more.

Latest source Release  
**2.4.1**  
Release Notes (2015-05-13)  
Downloads for Mac

# Baby step with git

\$git init

\$git status

\$git add

\$git commit

# Create account

**GitHub**

[Explore](#) [Features](#) [Enterprise](#) [Blog](#) [Sign up](#) [Sign in](#)

# Build software better, together.

Powerful collaboration, code review, and code management for open source and private projects. Need private repositories?  
[Upgraded plans start at \\$7/mo.](#)

Use at least one lowercase letter, one numeral, and seven characters.

[Sign up for GitHub](#)

By clicking "Sign up for GitHub", you agree to our [terms of service](#) and [privacy policy](#). We will send you account related emails occasionally.

# Working with github

\$git remote

\$git push

\$git pull



Let's start with

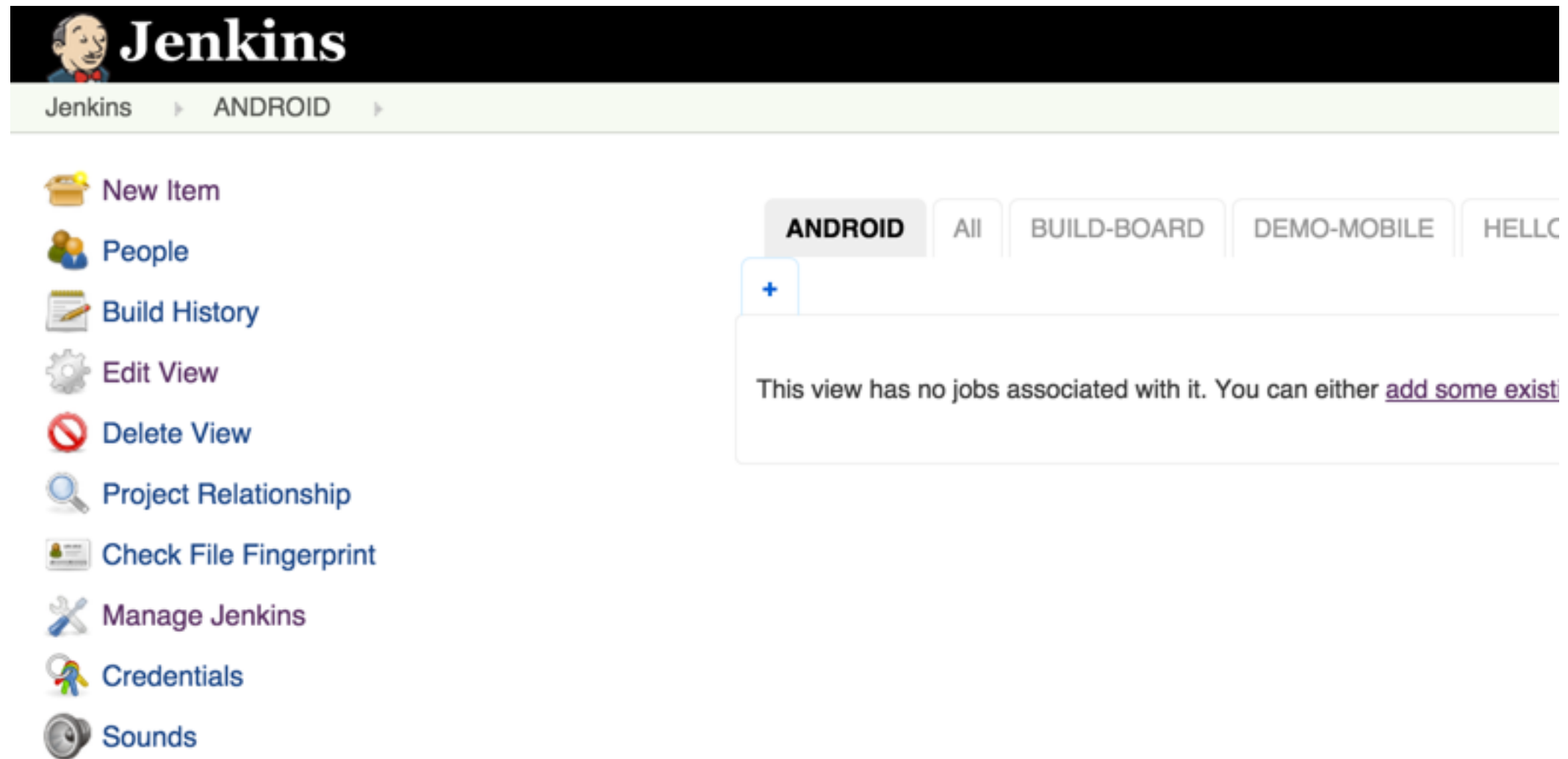


# Jenkins


# Start jenkins server

```
$java -jar jenkins.war
```


# Goto localhost:8080





# Create new job


 **Jenkins**


Jenkins > ANDROID >


 **New Item**


 People


 Build History


 Edit View


 Delete View

 Project Relationship

 Check File Fingerprint

 Manage Jenkins

 Credentials

 Sounds

Item name

☒ **Freestyle project**

This is the central feature of Jenkins. Jenkins will build your project for something other than software build.

☐ **Maven project**

Build a maven project. Jenkins takes advantage of your POM file.

☐ **External Job**

This type of job allows you to record the execution of a process you can use Jenkins as a dashboard of your existing automation.

☐ **Multi-configuration project**

Suitable for projects that need a large number of different configurations, etc.

☐ **Copy existing Item**

Copy from



# Source control management

## Source Code Management

- ☐ None
- ☐ CVS
- ☐ CVS Projectset
- ☒ Git

Repositories

Repository URL

git@github.com:up1/android\_ci\_demo.git

 **Please enter Git repository.**

Credentials

- none -

 Add

# Add build step

## Build

---

### Execute shell

Command `./gradlew :App:connectedAndroidTest`

See [the list of available environment variables](#)

Add build step ▼

# Config ANDROID\_HOME

## Windows

```
set ANDROID_HOME= <your path>
```

## Mac

```
export ANDROID_HOME= <your path>
```

# Add build step

## Build

### Execute shell

Command

```
export ANDROID_HOME=/Users/somkiat/data/software/android-sdk-macosx  
./gradlew :App:connectedAndroidTest
```

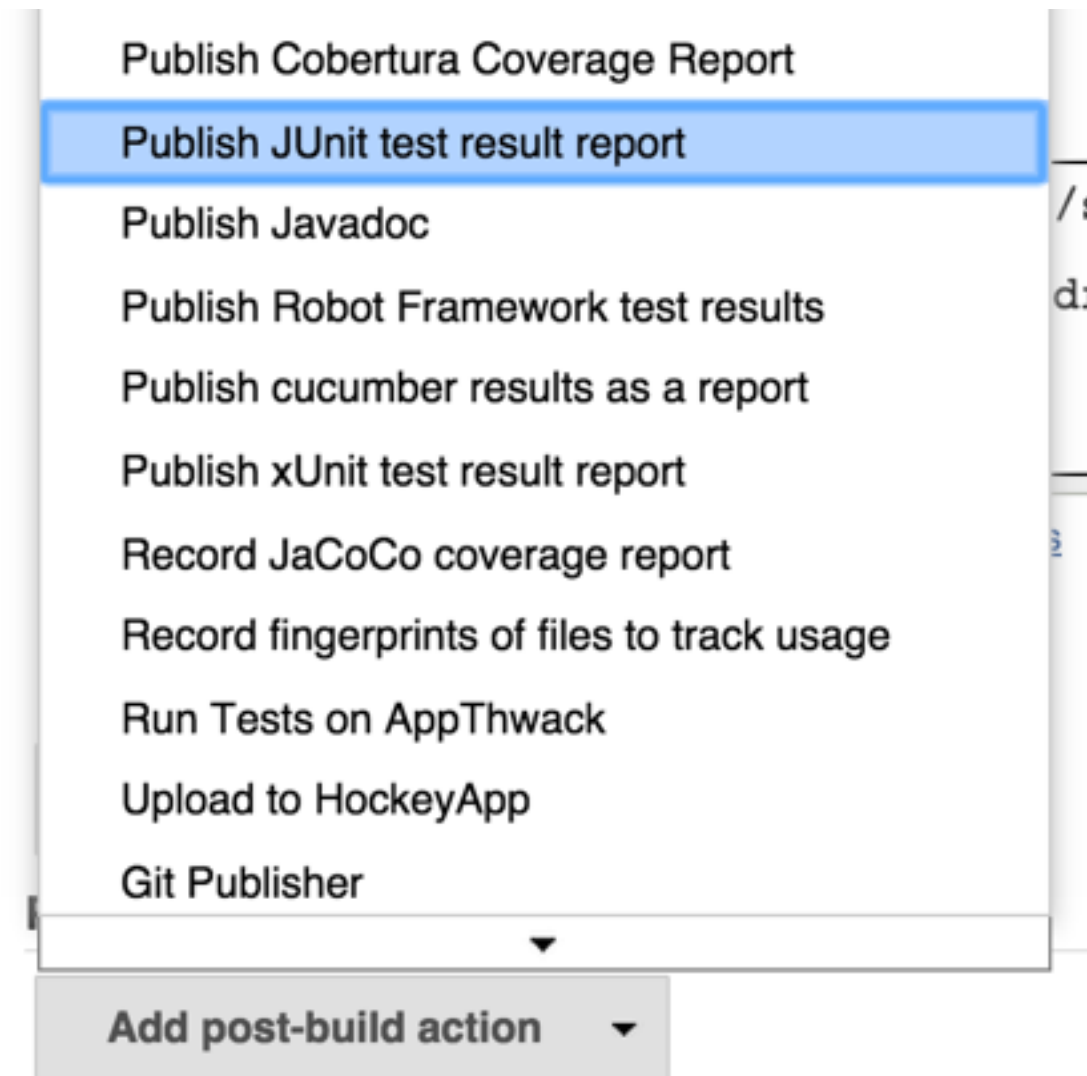
See [the list of available environment variables](#)

Add build step ▼



# Post build action

Generate report of each build



# Publish JUnit test result report

## Post-build Actions

### Publish JUnit test result report

Test report XMLs

app/build/outputs/androidTest-results/connected/\*.xml

[Fileset 'includes'](#) setting that specifies the generated raw XML report files, such as 'myr reports/\*.xml'. Basedir of the fileset is [the workspace root](#).

☐ Retain long standard output/error

Health report amplification factor

1.0

1% failing tests scores as 99% health. 5% failing tests scores as 95%

# See report

## Project 01-APP-BUILD

 [add description](#)

[Disable Project](#)



[Workspace](#)

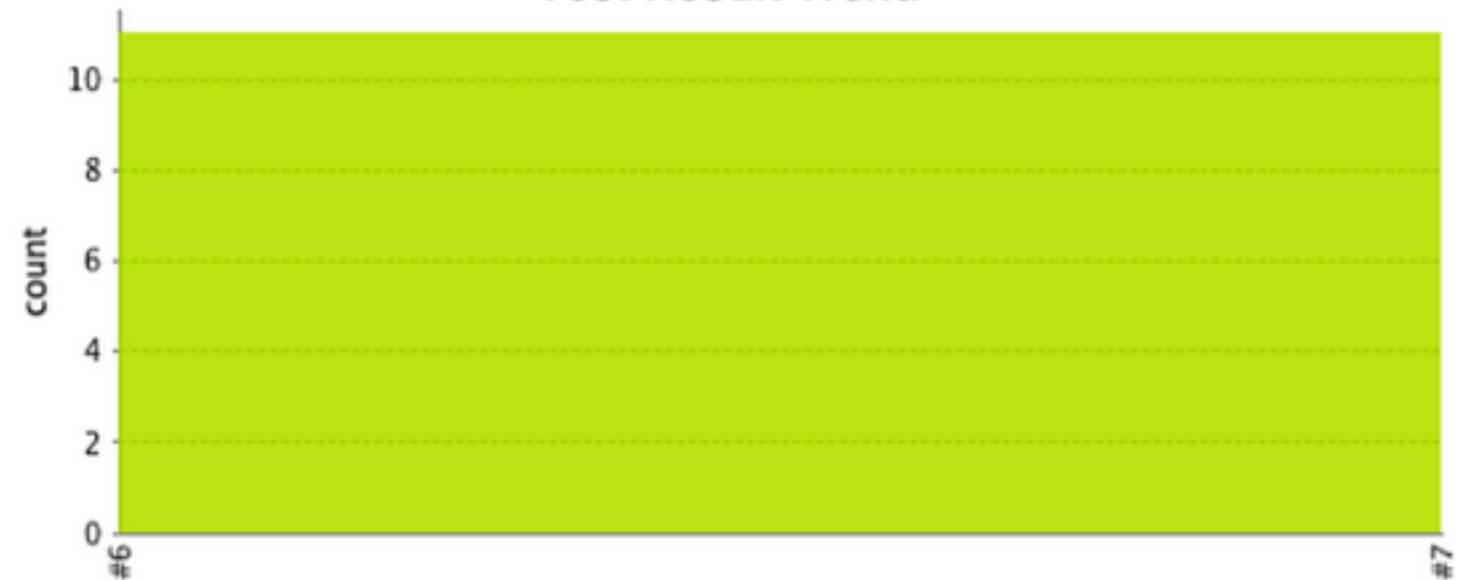


[Recent Changes](#)



[Latest Test Result](#) (no failures)

### Test Result Trend



[\(just show failures\)](#) [enlarge](#)

### Permalinks

- [Last build \(#7\), 43 sec ago](#)
- [Last stable build \(#7\), 43 sec ago](#)
- [Last successful build \(#7\), 43 sec ago](#)
- [Last failed build \(#4\), 13 min ago](#)
- [Last unsuccessful build \(#4\), 13 min ago](#)

# Auto build ?

Build trigger => check every minute

## Build Triggers

- ☐ Build after other projects are built
- ☐ Build periodically
- ☒ Poll SCM

Schedule

\* \* \* \* \*

 Do you really mean "every minute" when you say "\* \* \* \* \*"? Perhaps  
" \* \* \* \* " to poll once per hour

Ignore post-commit hooks ☐

# Try it by yourself