
JAK PRZESTAĆ KLIKAĆ I ZACZĄĆ PISAĆ
CAŁY JENKINS JAKO KOD
Jędrzej Andrykowski
cinkciarz.pl

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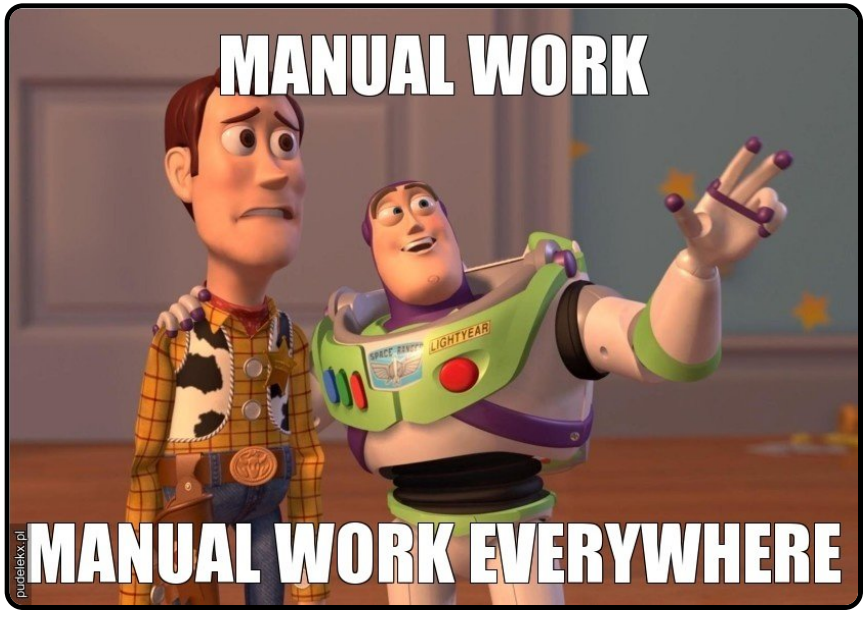
Jak

to najczęściej

jest?



1 Setup Jenkins

Instalacja

jenkins.io/doc/book/installing

Linux

Debian/Ubuntu

On Debian-based distributions, such as Ubuntu, you can install Jenkins through `apt`.

Recent versions are available in an apt repository. Older but stable LTS versions are in this apt repository.

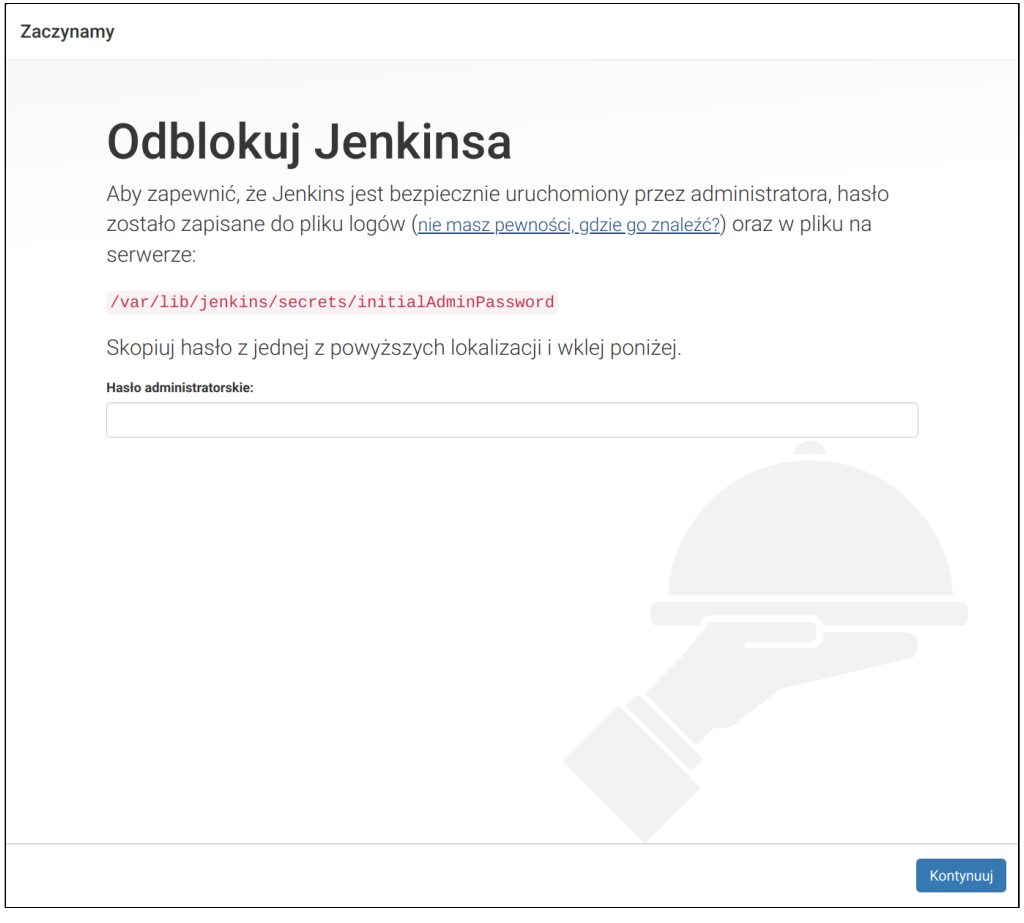
```
wget -q -O - https://pkg.jenkins.io/debian/jenkins.io.key | sudo apt-key add -
sudo sh -c 'echo deb http://pkg.jenkins.io/debian-stable binary/ > /etc/apt/sources.list.d/jenkins.list'
sudo apt-get update
sudo apt-get install jenkins
```

This package installation will:

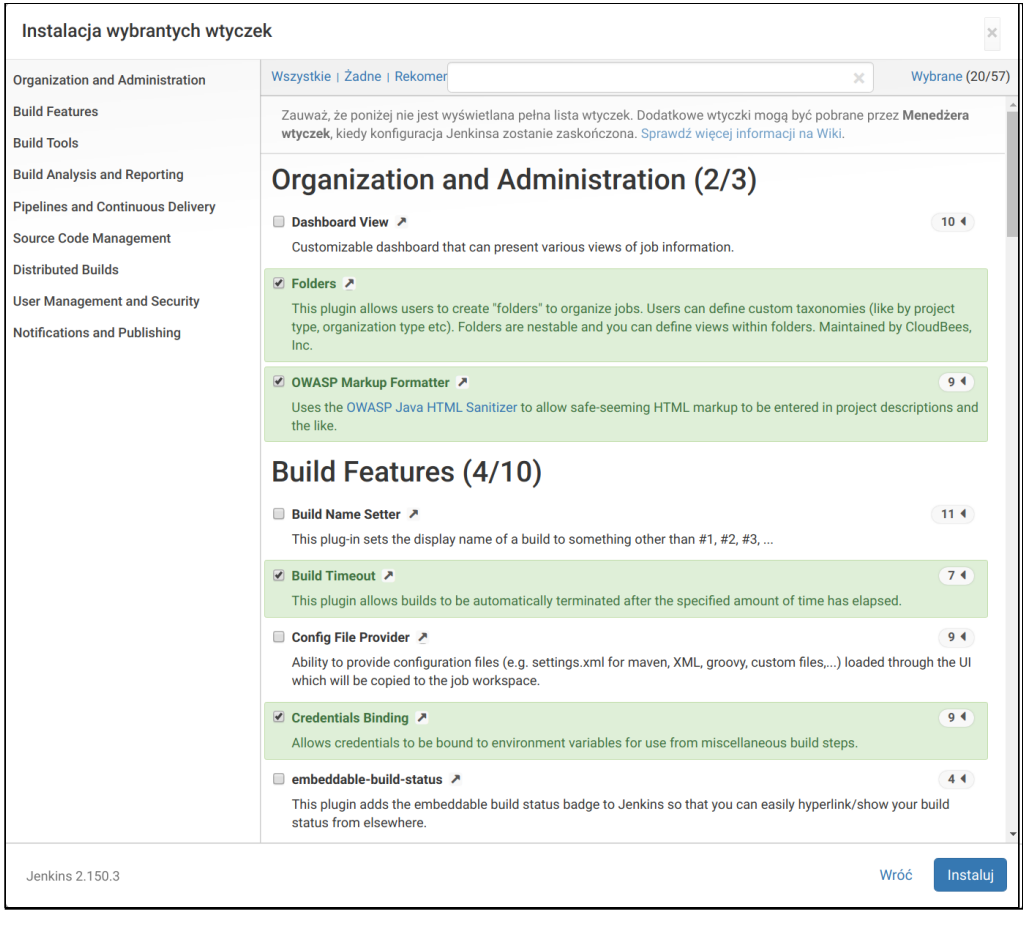
- Setup Jenkins as a daemon launched on start. See `/etc/init.d/jenkins` for more details.
- Create a 'jenkins' user to run this service.
- Direct console log output to the file `/var/log/jenkins/jenkins.log`. Check this file if you are troubleshooting Jenkins.
- Populate `/etc/default/jenkins` with configuration parameters for the launch, e.g `JENKINS_HOME`
- Set Jenkins to listen on port 8080. Access this port with your browser to start configuration.

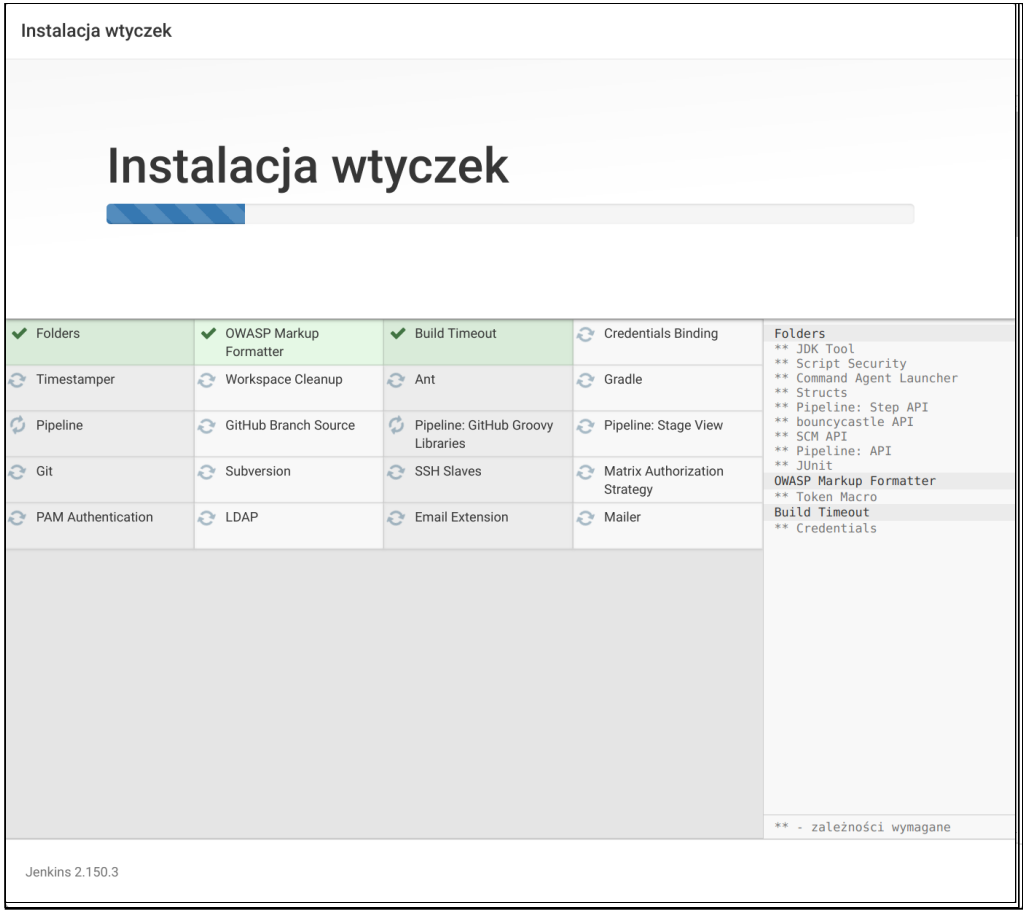
If your `/etc/init.d/jenkins` file fails to start Jenkins, edit the `/etc/default/jenkins` to replace the line `----HTTP_PORT=8080----` with `----HTTP_PORT=8081----` Here, "8081" was chosen but you can put another port available.

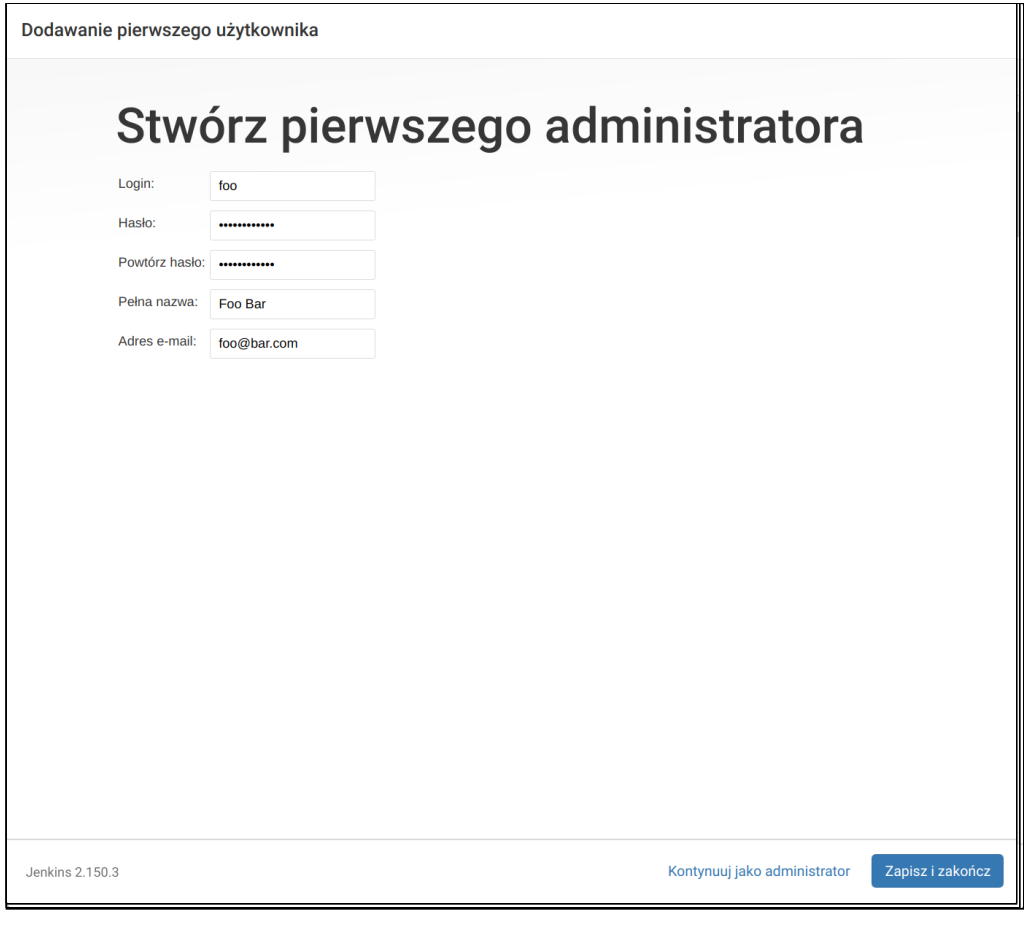
2 Setup Jenkins
Post-Instalacja

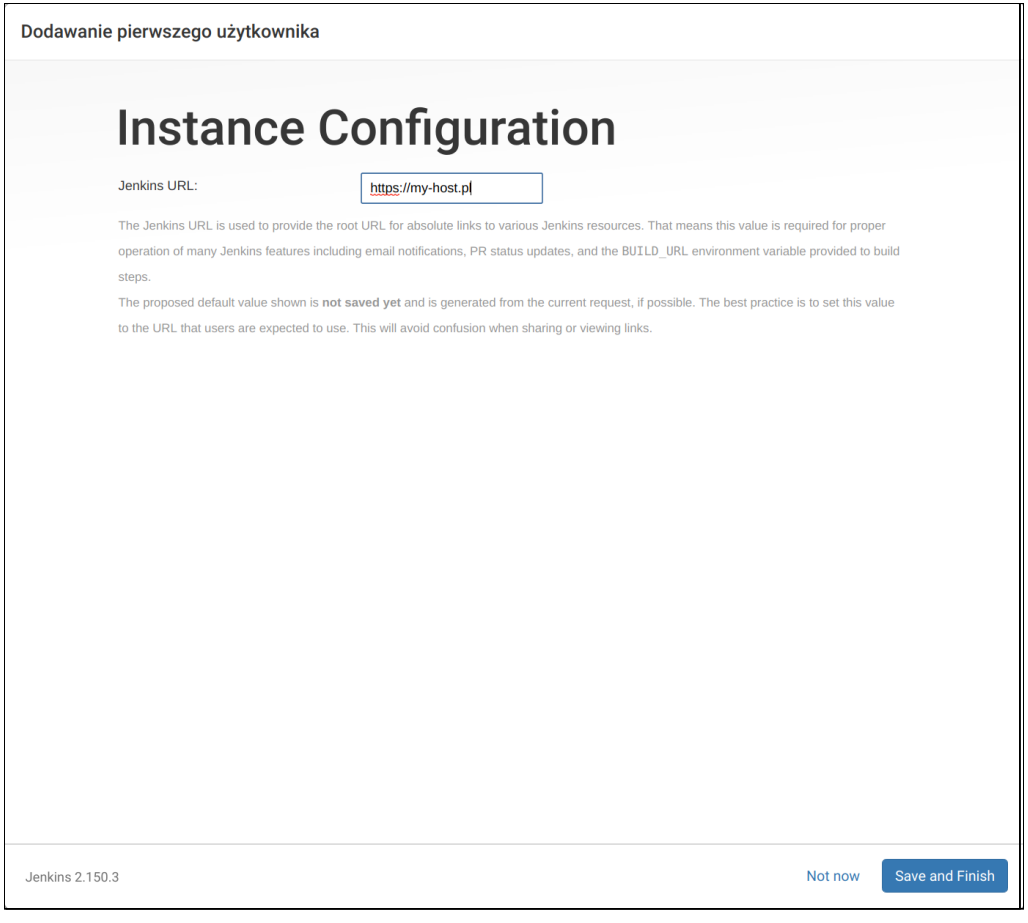

Zaczynamy
Odblokuj Jenkinsa
Aby zapewnić, że Jenkins jest bezpiecznie uruchomiony przez administratora, hasło zostało zapisane do pliku logów (nie masz pewności, gdzie go znaleźć?) oraz w pliku na serwerze:
/var/lib/jenkins/secrets/initialAdminPassword
Skopiuj hasło z jednej z powyższych lokalizacji i wklej poniżej.
Hasło administratorskie:
Kontynuuj

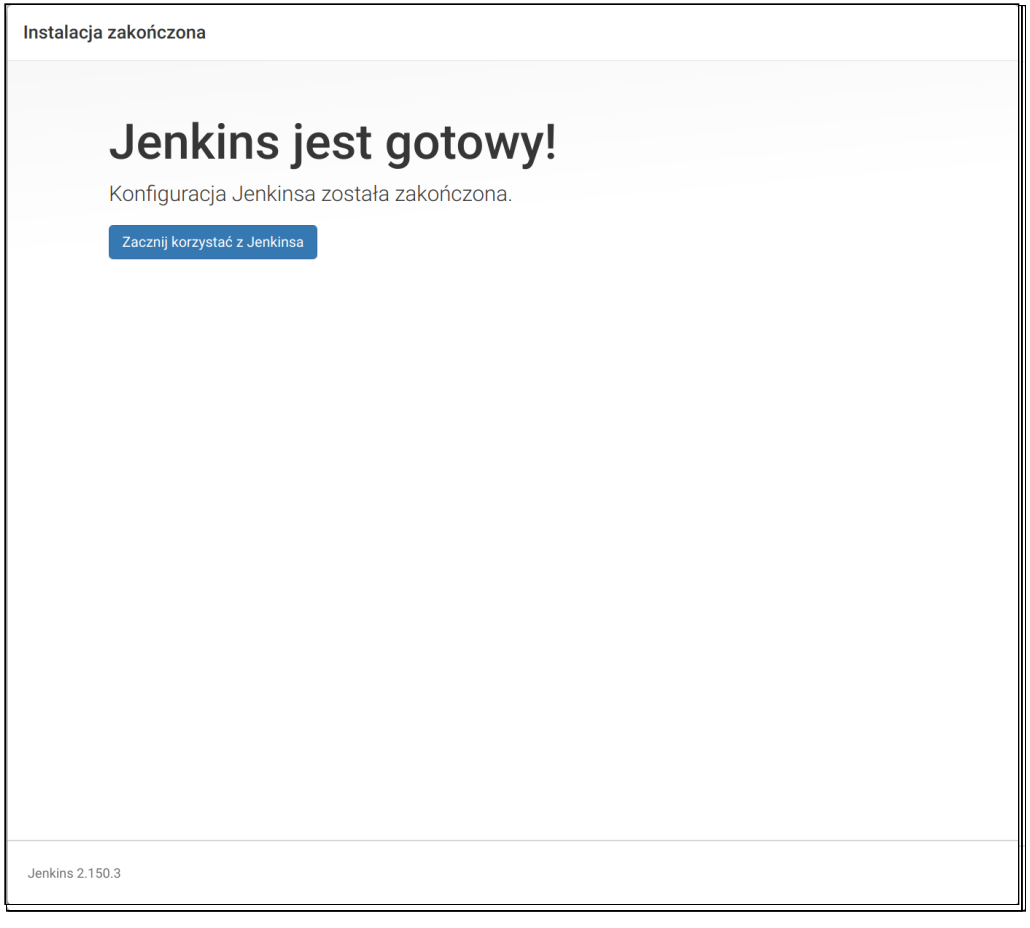

Zaczynamy
Dostosuj Jenkinsa
Wtyczki rozszerzające Jenkinsa o dodatkowe funkcjonalności, które zaspokajają wiele potrzeb.
Zainstaluj sugerowane wtyczki
Zainstaluj wtyczki, które społeczność Jenkinsa uznała za najbardziej przydatne.
Wybierz wtyczki do instalacji
Wybierz i zainstaluj wtyczki najbardziej dopasowane do Twoich potrzeb.
Jenkins 2.150.3

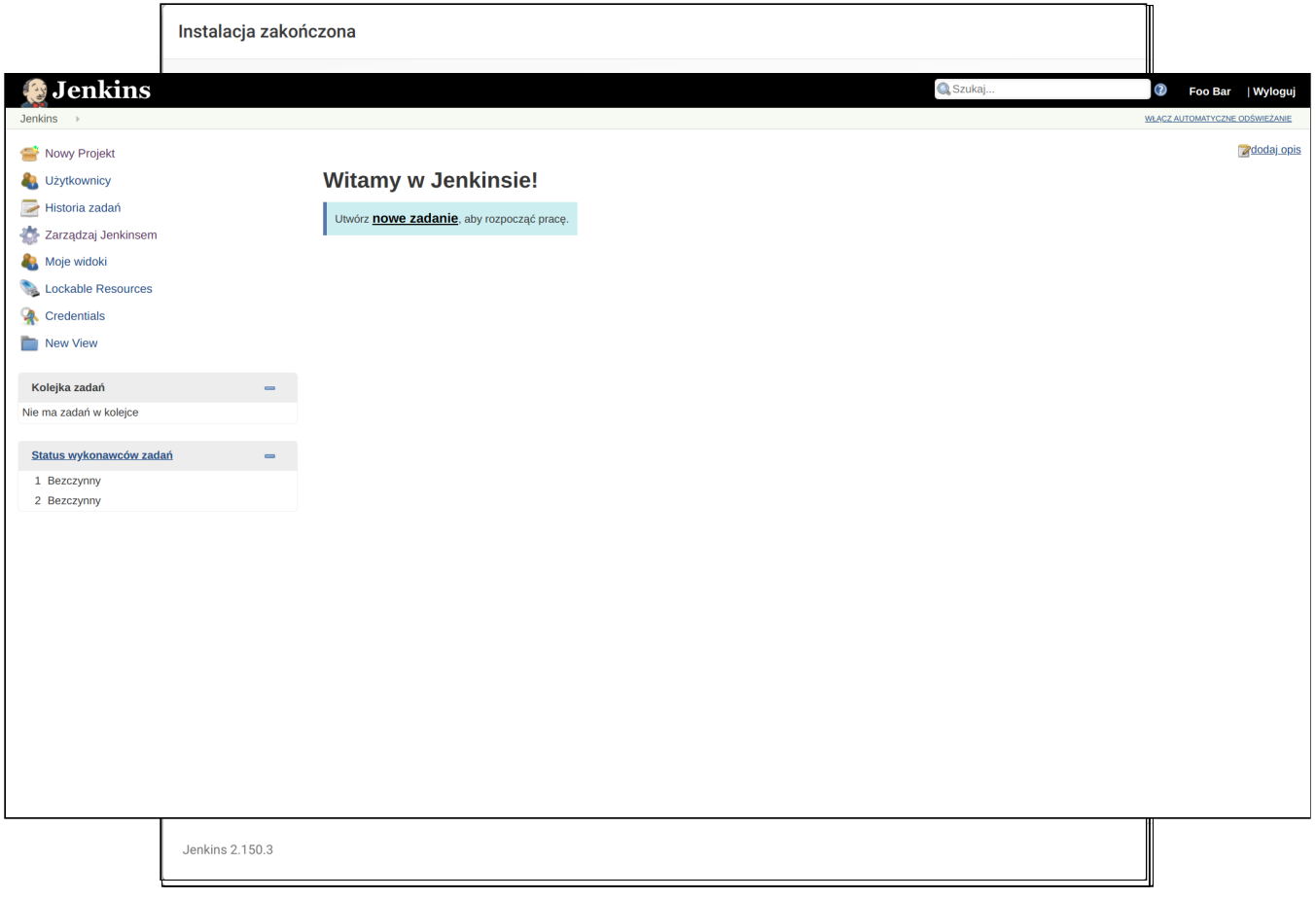

Instalacja wybrantych wtyczek
Organization and Administration
Build Features
Build Tools
Build Analysis and Reporting
Pipelines and Continuous Delivery
Source Code Management
Distributed Builds
User Management and Security
Notifications and Publishing
Wszystkie | Żadne | Rekomen
Wybrane (20/57)
Zauważ, że poniżej nie jest wyświetlana pełna lista wtyczek. Dodatkowe wtyczki mogą być pobrane przez Menedżera wtyczek, kiedy konfiguracja Jenkinsa zostanie zaskończona. Sprawdź więcej informacji na Wiki.
Organization and Administration (2/3)
Dashboard View
10
Customizable dashboard that can present various views of job information.
Folders
This plugin allows users to create "folders" to organize jobs. Users can define custom taxonomies (like by project type, organization type etc). Folders are nestable and you can define views within folders. Maintained by CloudBees, Inc.
OWASP Markup Formatter
9
Uses the OWASP Java HTML Sanitizer to allow safe-seeming HTML markup to be entered in project descriptions and the like.
Build Features (4/10)
Build Name Setter
11
This plug-in sets the display name of a build to something other than #1, #2, #3, ...
Build Timeout
7
This plugin allows builds to be automatically terminated after the specified amount of time has elapsed.
Config File Provider
9
Ability to provide configuration files (e.g. settings.xml for maven, XML, groovy, custom files,...) loaded through the UI which will be copied to the job workspace.
Credentials Binding
9
Allows credentials to be bound to environment variables for use from miscellaneous build steps.
embeddable-build-status
4
This plugin adds the embeddable build status badge to Jenkins so that you can easily hyperlink/show your build status from elsewhere.
Jenkins 2.150.3
Wróć
Instaluj


Instalacja wtyczek
Instalacja wtyczek
Folders
OWASP Markup Formatter
Build Timeout
Credentials Binding
Timestamper
Workspace Cleanup
Ant
Gradle
Pipeline
GitHub Branch Source
Pipeline: GitHub Groovy Libraries
Pipeline: Stage View
Git
Subversion
SSH Slaves
Matrix Authorization Strategy
PAM Authentication
LDAP
Email Extension
Mailer
Folders
** JDK Tool
** Script Security
** Command Agent Launcher
** Structs
** Pipeline: Step API
** bouncycastle API
** SCM API
** Pipeline: API
** JUnit
OWASP Markup Formatter
** Token Macro
Build Timeout
** Credentials
** - zależności wymagane
Jenkins 2.150.3

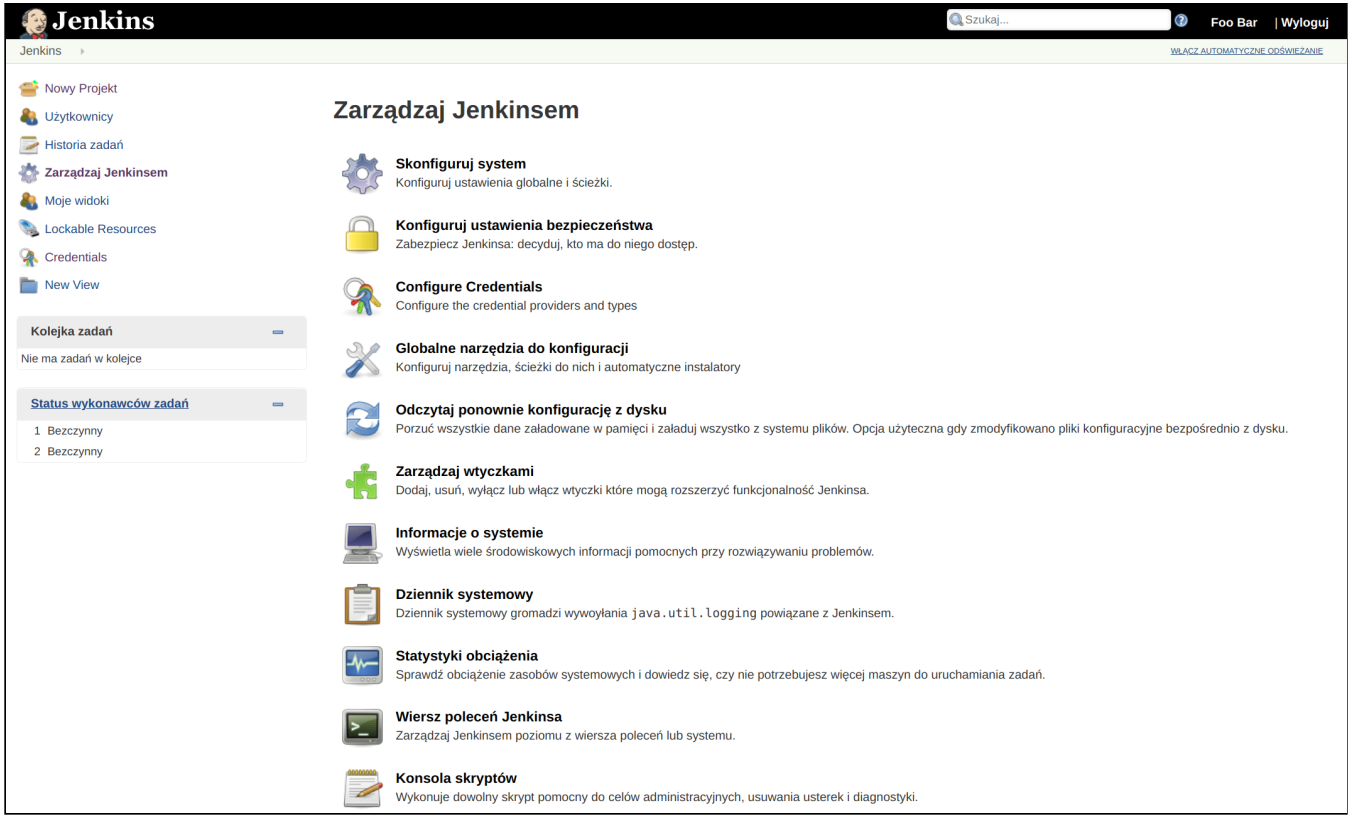

Dodawanie pierwszego użytkownika
Stwórz pierwszego administratora
Login:
foo
Hasło:
Powtórz hasło:
Pełna nazwa:
Foo Bar
Adres e-mail:
foo@bar.com
Jenkins 2.150.3
Kontynuuj jako administrator
Zapisz i zakończ

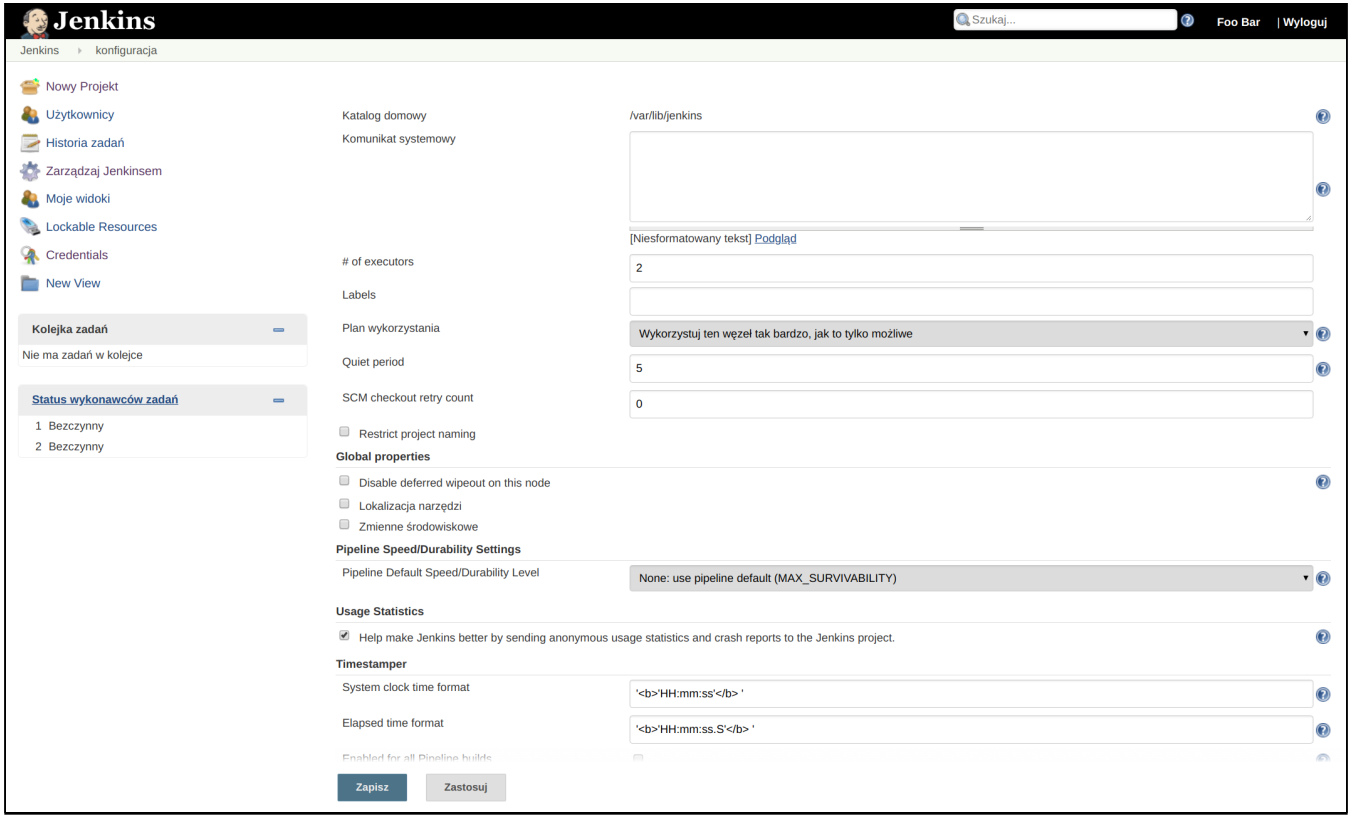

Dodawanie pierwszego użytkownika
Instance Configuration
Jenkins URL:
https://my-host.pl
The Jenkins URL is used to provide the root URL for absolute links to various Jenkins resources. That means this value is required for proper operation of many Jenkins features including email notifications, PR status updates, and the BUILD_URL environment variable provided to build steps.
The proposed default value shown is not saved yet and is generated from the current request, if possible. The best practice is to set this value to the URL that users are expected to use. This will avoid confusion when sharing or viewing links.
Jenkins 2.150.3
Not now
Save and Finish

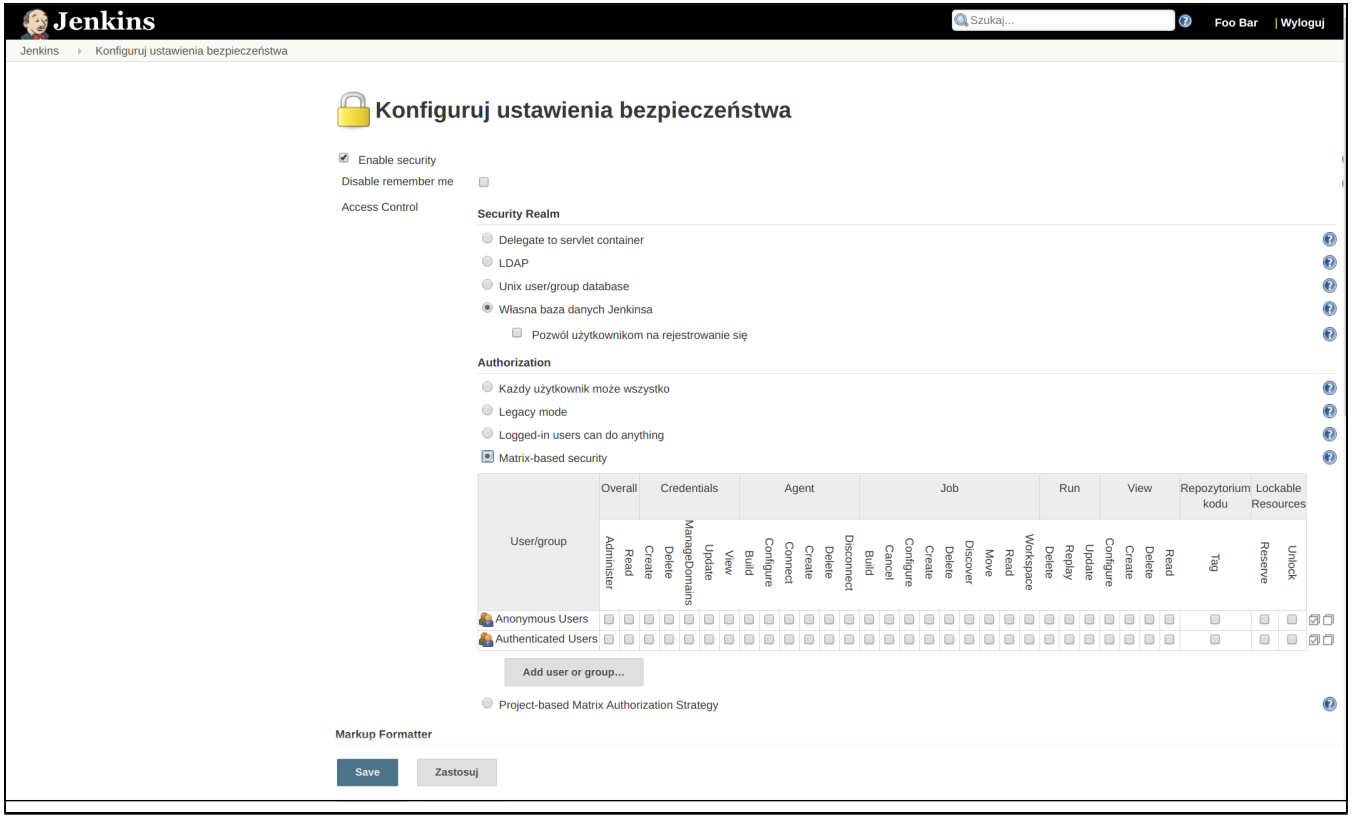

Instalacja zakończona
Jenkins jest gotowy!
Konfiguracja Jenkinsa została zakończona.
Zacznij korzystać z Jenkinsa
Jenkins 2.150.3

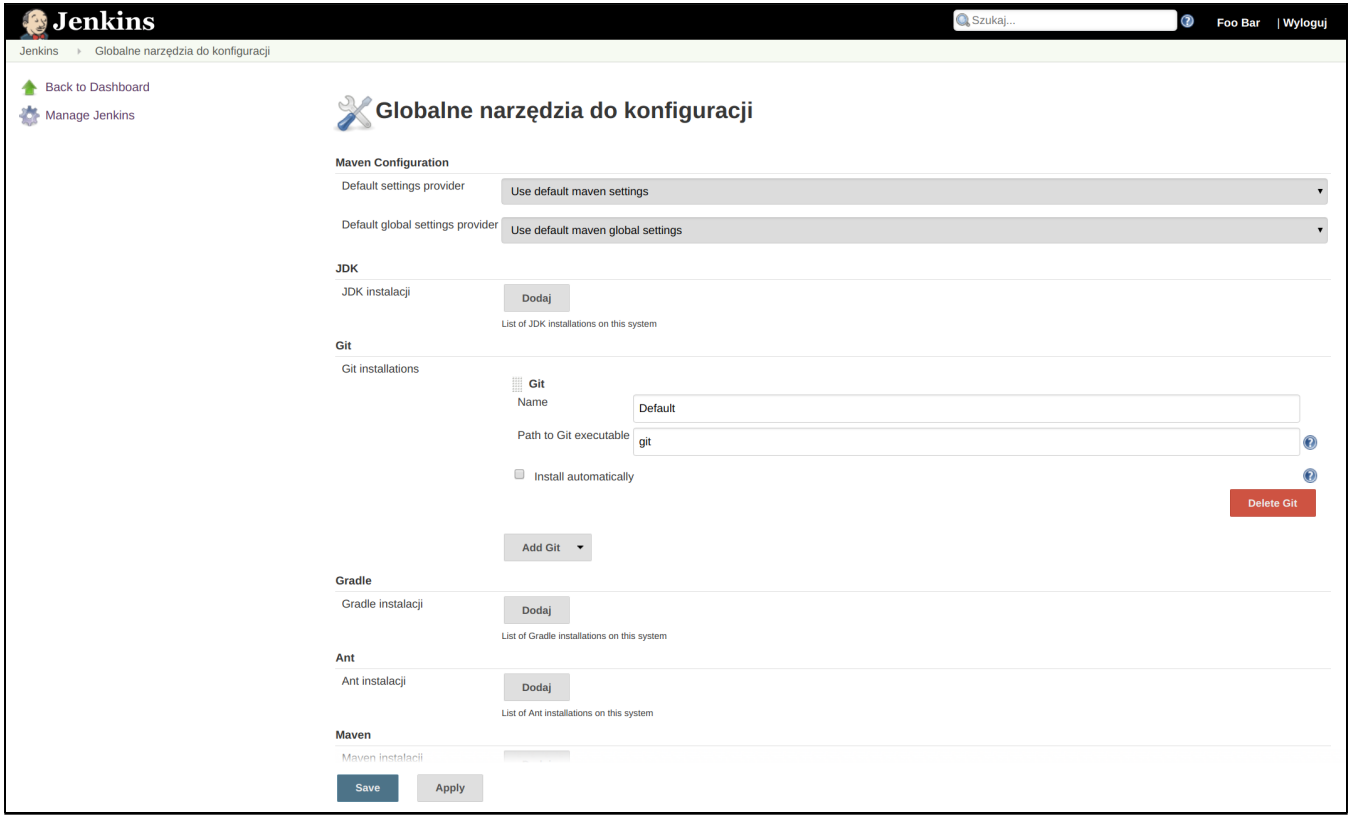

Instalacja zakończona
Jenkins
Szukaj...
Foo Bar
| Wyloguj
Jenkins
WŁĄCZ AUTOMATYCZNE ODŚWIEŻANIE
Nowy Projekt
Użytkownicy
Historia zadań
Zarządzaj Jenkinsem
Moje widoki
Lockable Resources
Credentials
New View
dodaj opis
Witamy w Jenkinsie!
Utwórz nowe zadanie, aby rozpocząć pracę.
Kolejka zadań
Nie ma zadań w kolejce
Status wykonawców zadań
1 Bezczynny
2 Bezczynny
Jenkins 2.150.3

3 Setup Jenkins
Konfiguracja

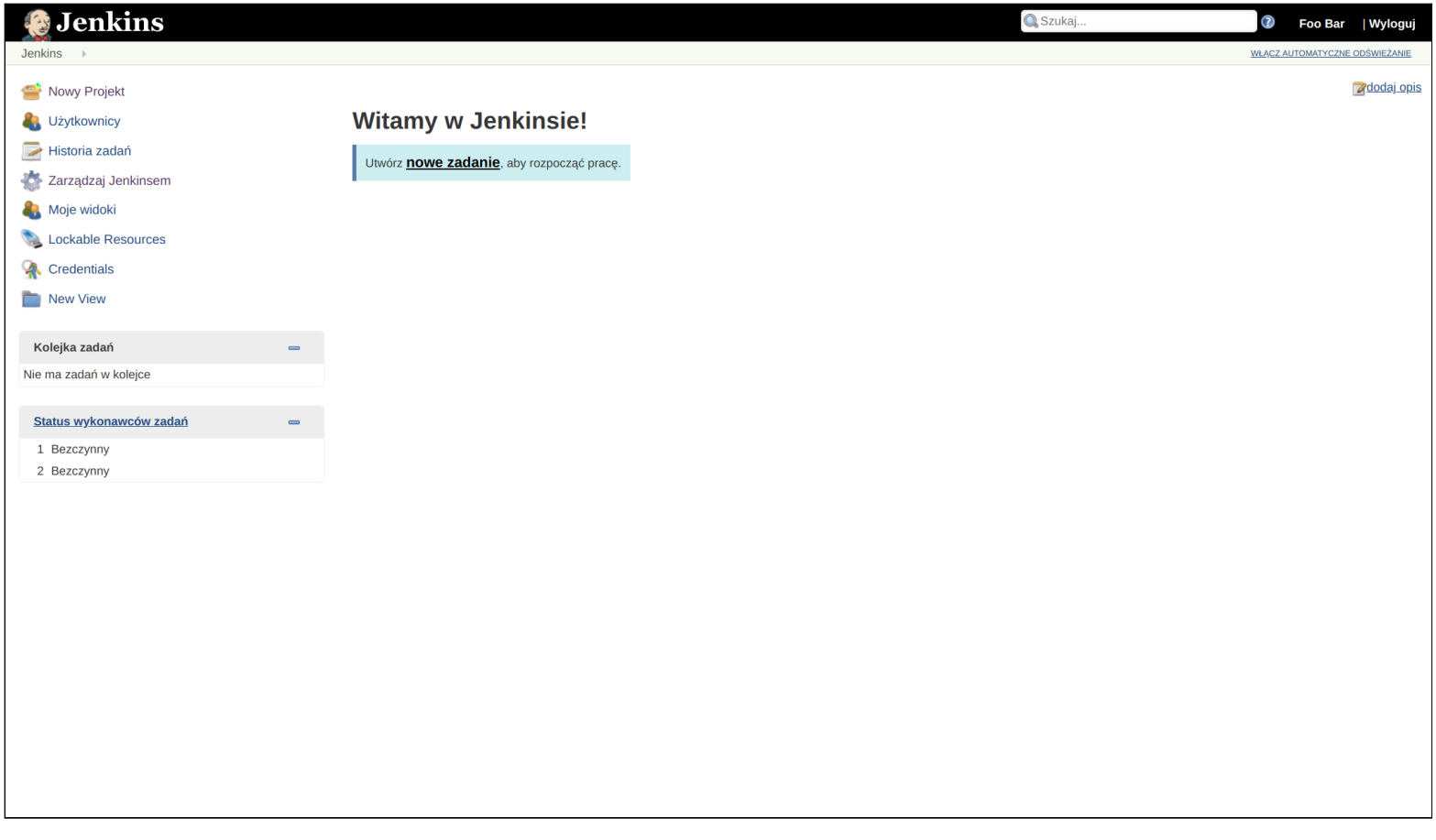

Jenkins
Szukaj...
Foo Bar
| Wyloguj
Jenkins
WŁĄCZ AUTOMATYCZNE ODŚWIEŻANIE
Nowy Projekt
Użytkownicy
Historia zadań
Zarządzaj Jenkinsem
Moje widoki
Lockable Resources
Credentials
New View
Kolejka zadań
Nie ma zadań w kolejce
Status wykonawców zadań
1 Bezczynny
2 Bezczynny
Zarządzaj Jenkinsem
Skonfiguruj system
Konfiguruj ustawienia globalne i ścieżki.
Konfiguruj ustawienia bezpieczeństwa
Zabezpiecz Jenkinsa: decyduj, kto ma do niego dostęp.
Configure Credentials
Configure the credential providers and types
Globalne narzędzia do konfiguracji
Konfiguruj narzędzia, ścieżki do nich i automatyczne instalatory
Odczytaj ponownie konfigurację z dysku
Porzuć wszystkie dane załadowane w pamięci i załaduj wszystko z systemu plików. Opcja użyteczna gdy zmodyfikowano pliki konfiguracyjne bezpośrednio z dysku.
Zarządzaj wtyczkami
Dodaj, usuń, wyłącz lub włącz wtyczki które mogą rozszerzyć funkcjonalność Jenkinsa.
Informacje o systemie
Wyświetla wiele środowiskowych informacji pomocnych przy rozwiązywaniu problemów.
Dziennik systemowy
Dziennik systemowy gromadzi wywoływania java.util.logging powiązane z Jenkinsem.
Statystyki obciążenia
Sprawdź obciążenie zasobów systemowych i dowiedz się, czy nie potrzebujesz więcej maszyn do uruchamiania zadań.
Wiersz poleceń Jenkinsa
Zarządzaj Jenkinsem poziomu z wiersza poleceń lub systemu.
Konsola skryptów
Wykonuje dowolny skrypt pomocny do celów administracyjnych, usuwania usterek i diagnostyki.

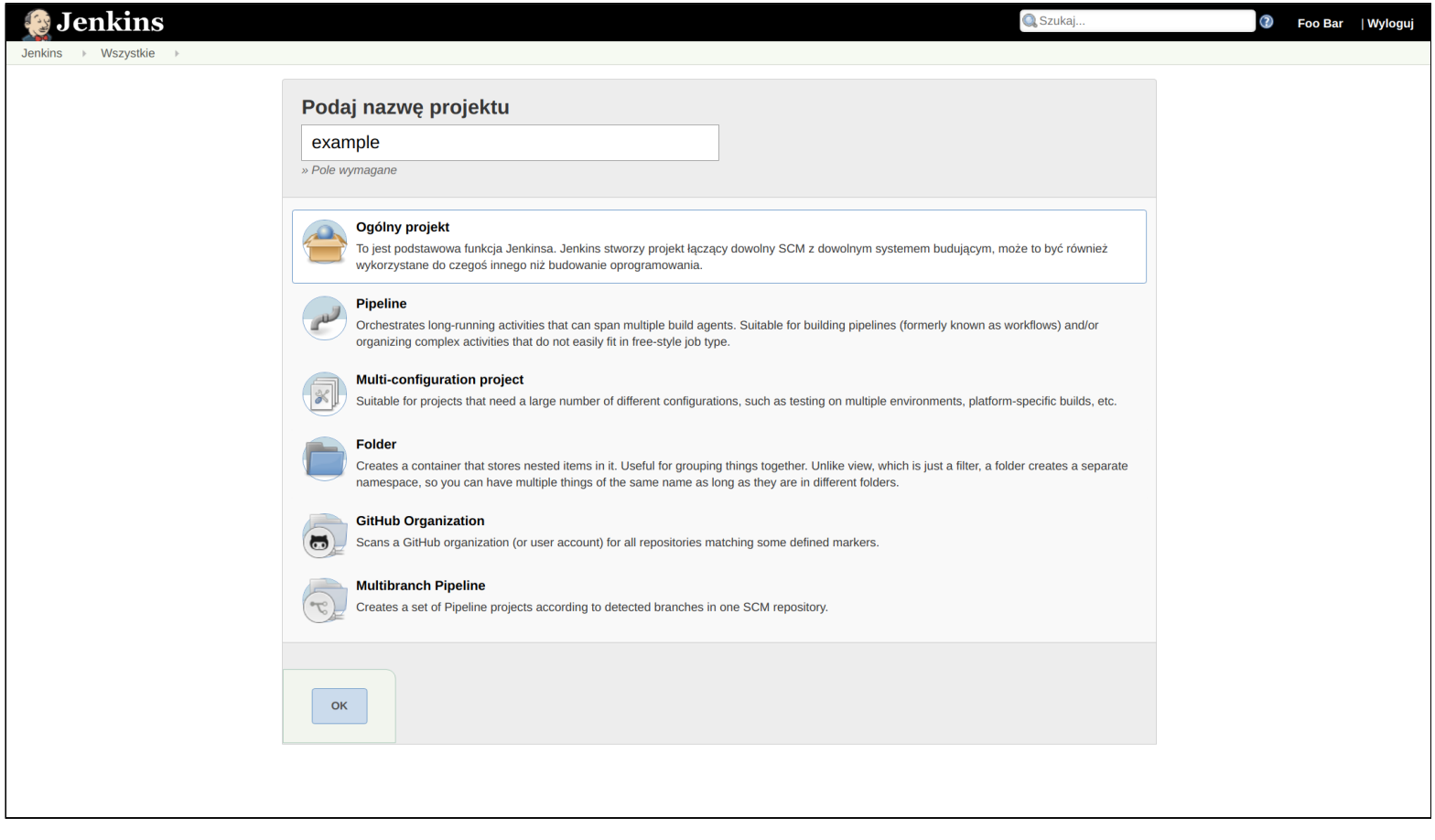

Jenkins
Szukaj...
Foo Bar
| Wyloguj
Jenkins
konfiguracja
Nowy Projekt
Użytkownicy
Historia zadań
Zarządzaj Jenkinsem
Moje widoki
Lockable Resources
Credentials
New View
Kolejka zadań
Nie ma zadań w kolejce
Status wykonawców zadań
1 Bezczynny
2 Bezczynny
Katalog domowy
/var/lib/jenkins
Komunikat systemowy
[Niesformatowany tekst] Podgląd
# of executors
2
Labels
Plan wykorzystania
Wykorzystuj ten węzeł tak bardzo, jak to tylko możliwe
Quiet period
5
SCM checkout retry count
0
Restrict project naming
Global properties
Disable deferred wipeout on this node
Lokalizacja narzędzi
Zmienne środowiskowe
Pipeline Speed/Durability Settings
Pipeline Default Speed/Durability Level
None: use pipeline default (MAX_SURVIVABILITY)
Usage Statistics
Help make Jenkins better by sending anonymous usage statistics and crash reports to the Jenkins project.
Timestamper
System clock time format
''HH:mm:ss' '
Elapsed time format
''HH:mm:ss.S' '
Zapisz
Zastosuj

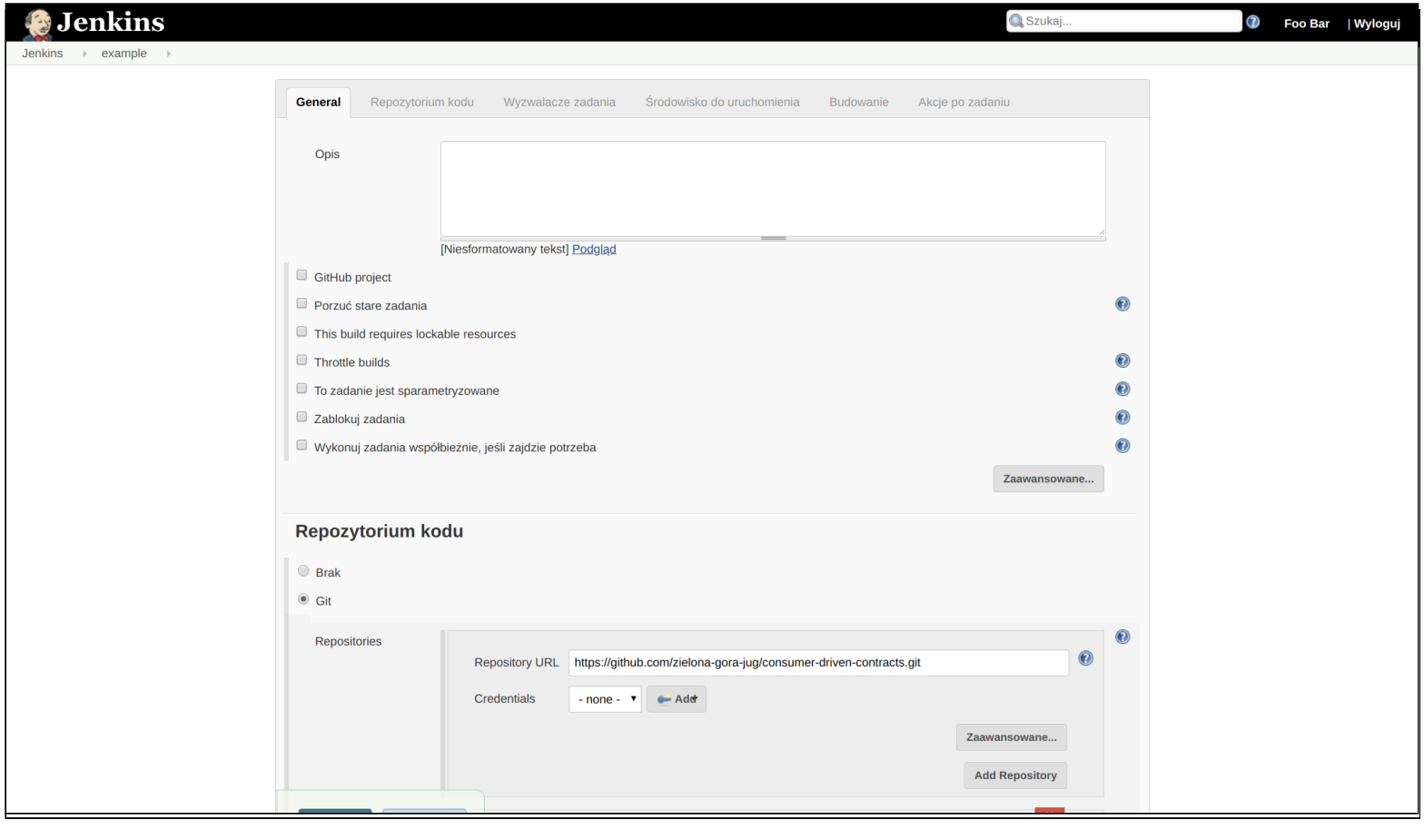

Jenkins
Szukaj...
Foo Bar
| Wyloguj
Jenkins
Konfiguruj ustawienia bezpieczeństwa
Konfiguruj ustawienia bezpieczeństwa
Enable security
Disable remember me
Access Control
Security Realm
Delegate to servlet container
LDAP
Unix user/group database
Własna baza danych Jenkinsa
Pozwól użytkownikom na rejestrowanie się
Authorization
Każdy użytkownik może wszystko
Legacy mode
Logged-in users can do anything
Matrix-based security
User/group
Overall
Credentials
Agent
Job
Run
View
Repozytorium kodu
Lockable Resources
Administer
Read
Create
Delete
ManageDomains
Update
View
Build
Configure
Connect
Create
Delete
Disconnect
Build
Cancel
Configure
Create
Delete
Discover
Move
Read
Workspace
Delete
Replay
Update
Configure
Create
Delete
Read
Tag
Reserve
Unlock
Anonymous Users
Authenticated Users
Add user or group...
Project-based Matrix Authorization Strategy
Markup Formatter
Save
Zastosuj

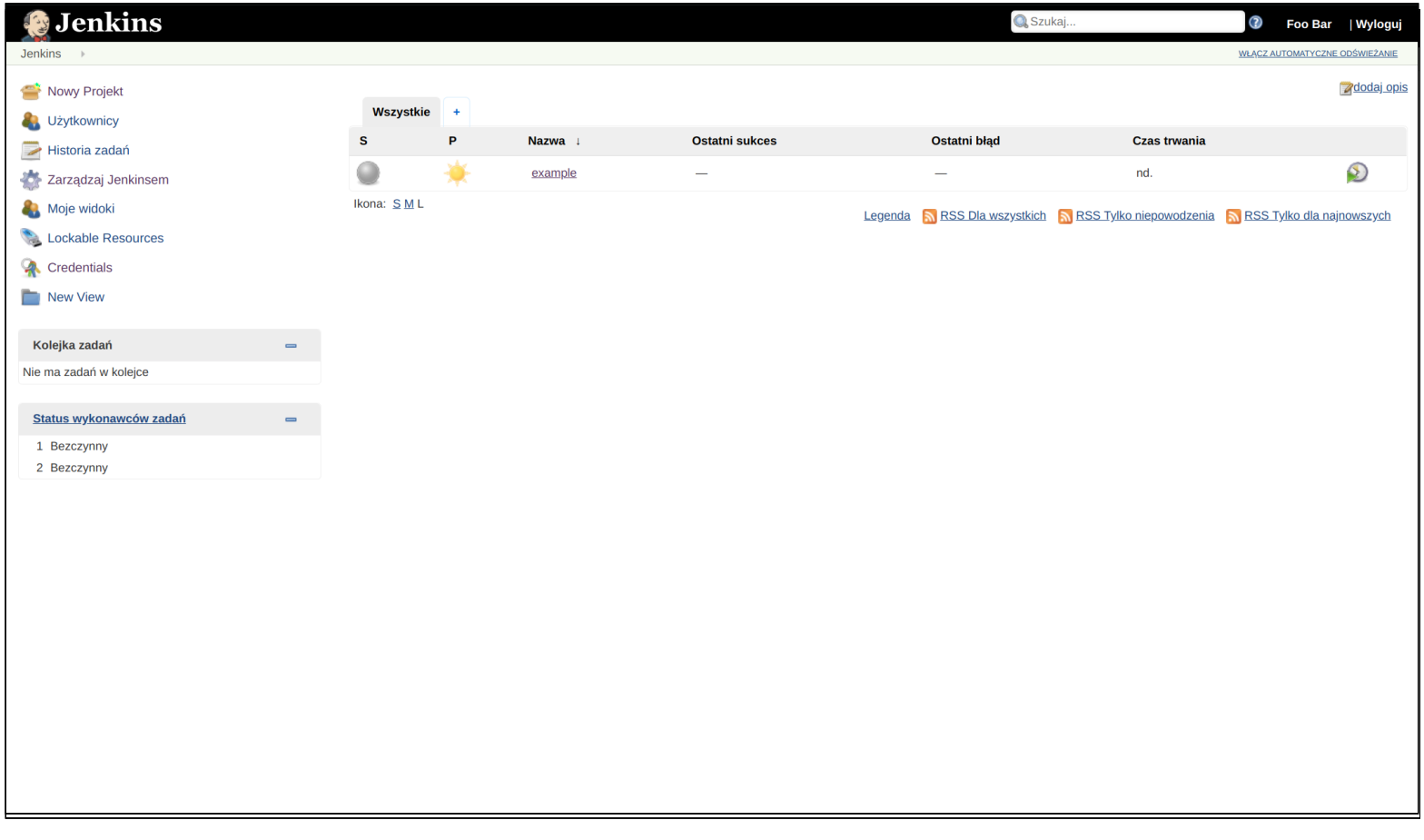

Jenkins
Szukaj...
Foo Bar
| Wyloguj
Jenkins
Globalne narzędzia do konfiguracji
Back to Dashboard
Manage Jenkins
Globalne narzędzia do konfiguracji
Maven Configuration
Default settings provider
Use default maven settings
Default global settings provider
Use default maven global settings
JDK
JDK instalacji
Dodaj
List of JDK installations on this system
Git
Git installations
Git
Name
Default
Path to Git executable
git
Install automatically
Delete Git
Add Git
Gradle
Gradle instalacji
Dodaj
List of Gradle installations on this system
Ant
Ant instalacji
Dodaj
List of Ant installations on this system
Maven
Maven instalacji
Save
Apply

4 Setup Jenkins
Konfiguracja zadań


Jenkins
Szukaj...
Foo Bar
| Wyloguj
Jenkins
WŁĄCZ AUTOMATYCZNE ODŚWIEŻANIE
Nowy Projekt
Użytkownicy
Historia zadań
Zarządzaj Jenkinsem
Moje widoki
Lockable Resources
Credentials
New View
dodaj opis
Witamy w Jenkinsie!
Utwórz nowe zadanie, aby rozpocząć pracę.
Kolejka zadań
Nie ma zadań w kolejce
Status wykonawców zadań
1 Bezczynny
2 Bezczynny

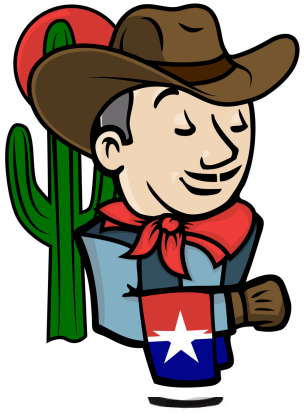

Jenkins
Szukaj...
Foo Bar
| Wyloguj
Jenkins
Wszystkie
Podaj nazwę projektu
example
» Pole wymagane
Ogólny projekt
To jest podstawowa funkcja Jenkinsa. Jenkins stworzy projekt łączący dowolny SCM z dowolnym systemem budującym, może to być również wykorzystane do czegoś innego niż budowanie oprogramowania.
Pipeline
Orchestrates long-running activities that can span multiple build agents. Suitable for building pipelines (formerly known as workflows) and/or organizing complex activities that do not easily fit in free-style job type.
Multi-configuration project
Suitable for projects that need a large number of different configurations, such as testing on multiple environments, platform-specific builds, etc.
Folder
Creates a container that stores nested items in it. Useful for grouping things together. Unlike view, which is just a filter, a folder creates a separate namespace, so you can have multiple things of the same name as long as they are in different folders.
GitHub Organization
Scans a GitHub organization (or user account) for all repositories matching some defined markers.
Multibranch Pipeline
Creates a set of Pipeline projects according to detected branches in one SCM repository.
OK

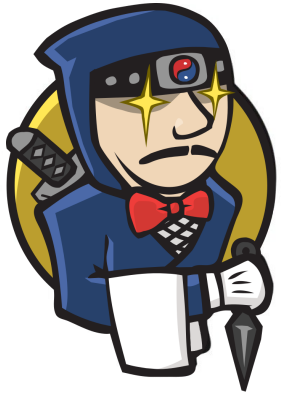

Jenkins
Szukaj...
Foo Bar
| Wyloguj
Jenkins
example
General
Repozytorium kodu
Wyzwalacze zadania
Środowisko do uruchomienia
Budowanie
Akcje po zadaniu
Opis
[Niesformatowany tekst] Podgląd
GitHub project
Porzuć stare zadania
This build requires lockable resources
Throttle builds
To zadanie jest sparametryzowane
Zablokuj zadania
Wykonuj zadania współbieżnie, jeśli zajdzie potrzeba
Zaawansowane...
Repozytorium kodu
Brak
Git
Repositories
Repository URL
https://github.com/zielona-gora-jug/consumer-driven-contracts.git
Credentials
- none -
Add
Zaawansowane...
Add Repository


Jenkins
Szukaj...
Foo Bar
| Wyloguj
Jenkins
WŁĄCZ AUTOMATYCZNE ODŚWIEŻANIE
Nowy Projekt
Użytkownicy
Historia zadań
Zarządzaj Jenkinsem
Moje widoki
Lockable Resources
Credentials
New View
dodaj opis
Wszystkie
+
S
P
Nazwa ↓
Ostatni sukces
Ostatni błąd
Czas trwania
example
—
—
nd.
Ikona: S M L
Legenda
RSS Dla wszystkich
RSS Tylko niepowodzenia
RSS Tylko dla najnowszych
Kolejka zadań
Nie ma zadań w kolejce
Status wykonawców zadań
1 Bezczynny
2 Bezczynny

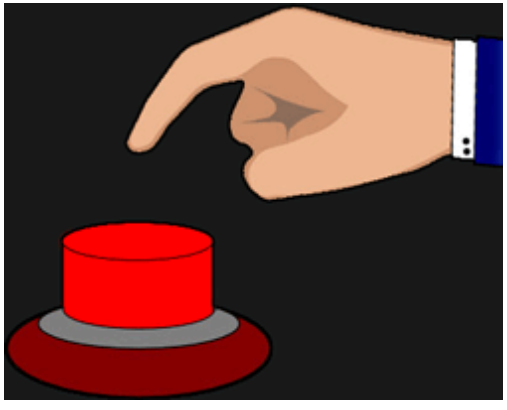

Westfield Stratford City
ASPERS
CASINO
Westfield Stratford City
sky POKER
skypoker.com

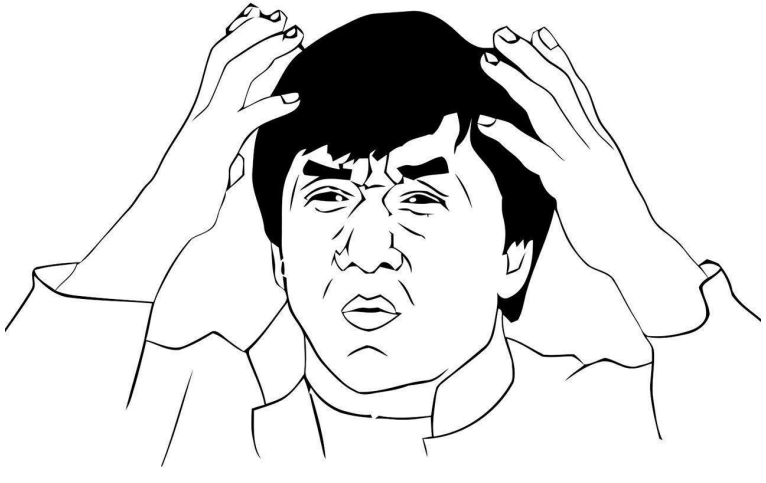

Westfield Stratford City
CASINO
MAKE GIFS AT GIFSOUP.COM






UP TO DATE DOCUMENTATION
NOW THERE IS SOMETHING I HAVEN'T SEEN IN A LONG TIME.

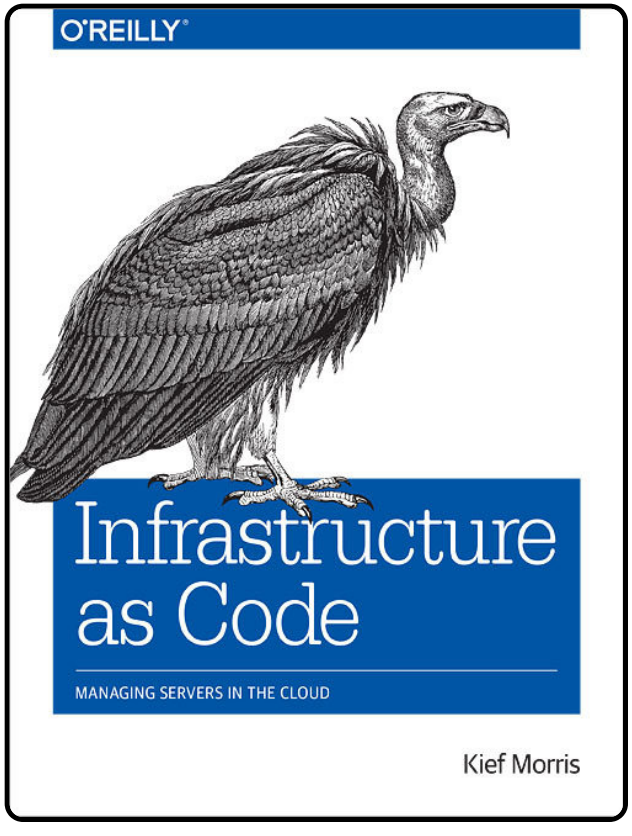




Co

można

zrobić?



Linux

Debian/Ubuntu

On Debian-based distributions, such as Ubuntu, you can install Jenkins through `apt`.

Recent versions are available in an apt repository. Older but stable LTS versions are in this apt repository.

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wget -q -O - https://pkg.jenkins.io/debian/jenkins.io.key | sudo apt-key add -
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- Set Jenkins to listen on port 8080. Access this port with your browser to start configuration.

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```yaml
- name: Add Jenkins key
  apt_key:
    url: https://pkg.jenkins.io/debian/jenkins.io.key
    state: present
  become: true

- name: Add Jenkins repository
  apt_repository:
    repo: deb http://pkg.jenkins.io/debian-stable binary/
    state: present
    filename: jenkins
  become: true

- name: Update cache
  apt:
    update_cache: yes
  become: true

- name: Install Jenkins
  apt:
    name: jenkins
  become: true
```

TERRAFORM

VCS

VCS

Identyfikowalność

VCS

Identyfikowalność

Wersjonowanie

VCS

Identyfikowalność

Wersjonowanie

Korelacja

VCS

Identyfikowalność

Wersjonowanie

Korelacja

Widoczność

VCS

Identyfikowalność

Wersjonowanie

Korelacja

Widoczność

Wykonalność

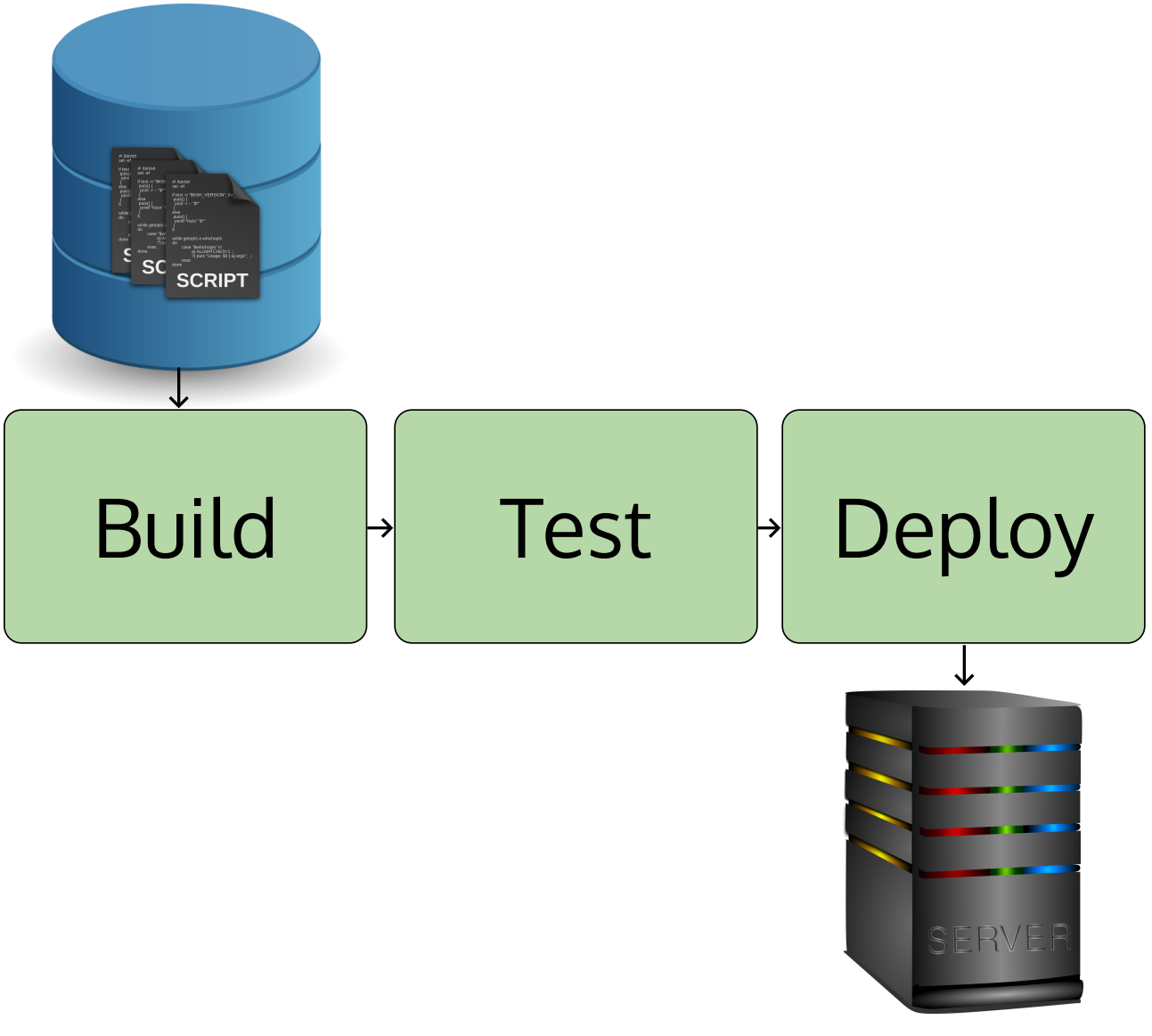
```
$ cat goss.yaml
package:
  jenkins:
    installed: true
service:
  jenkins:
    enabled: true
    running: true
http:
  {{ .Vars.jenkins_host }}/login:
    status: 200
```

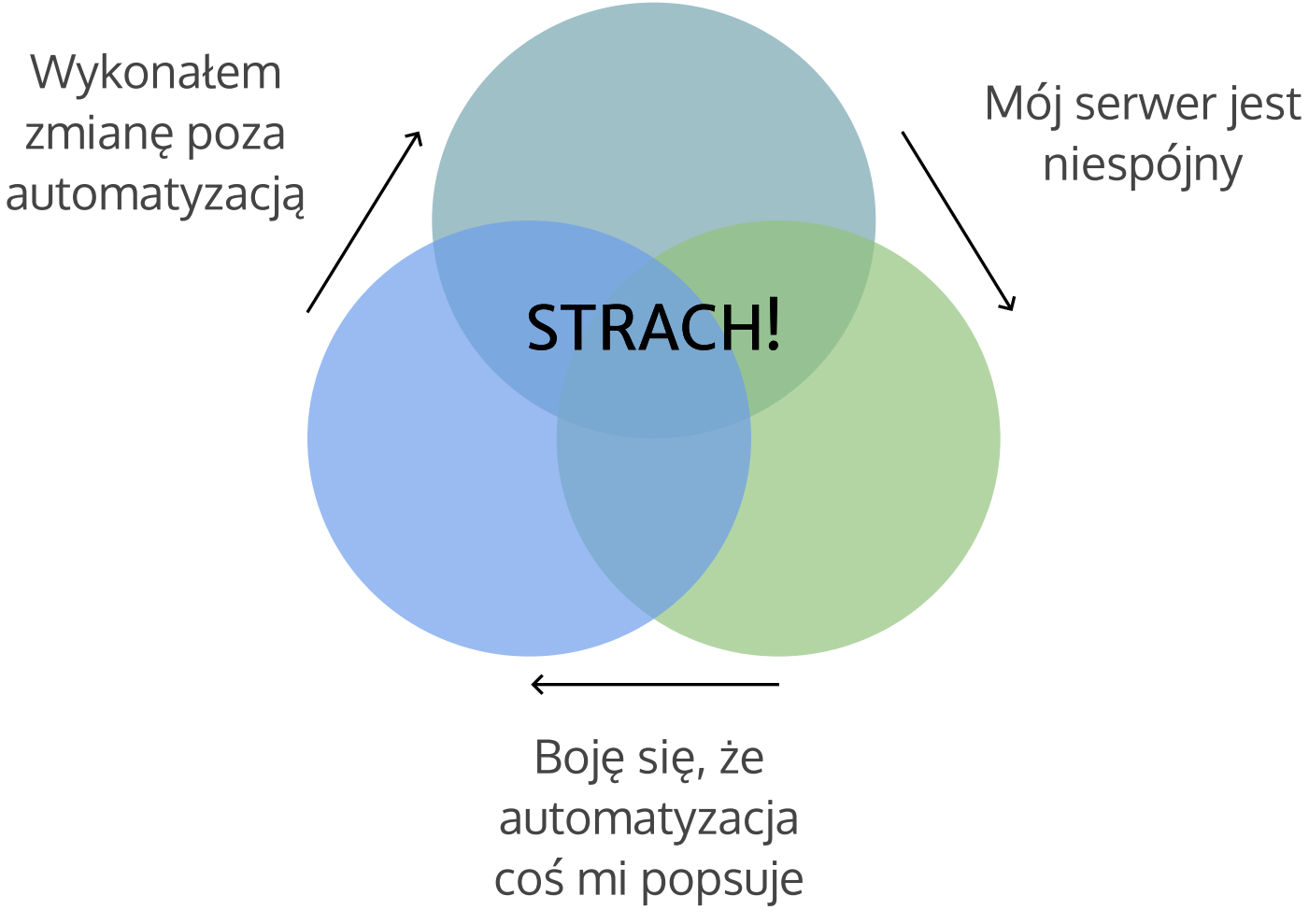
```
$ cat goss.yaml
package:
  jenkins:
    installed: true
service:
  jenkins:
    enabled: true
    running: true
http:
  {{ .Vars.jenkins_host }}/login:
    status: 200


$ goss --vars vars.yaml validate --format documentation

Service: jenkins: enabled: matches expectation: [true]
Service: jenkins: running: matches expectation: [true]
Package: jenkins: installed: matches expectation: [true]
HTTP: http://localhost:8080/login: status:
Expected
    <int>: 503
to equal
    <int>: 200

Total Duration: 1.404s
Count: 4, Failed: 1, Skipped: 0
```


SCRIPT
Build
Test
Deploy
SERVER


Wykonałem zmianę poza automatyzacją
Mój serwer jest niespójny
STRACH!
Boję się, że automatyzacja coś mi popsuje

Wykc
zmiar
autom

wer jest
ójny

Boję się, że
automatyzacja
coś mi popsuje

Jak

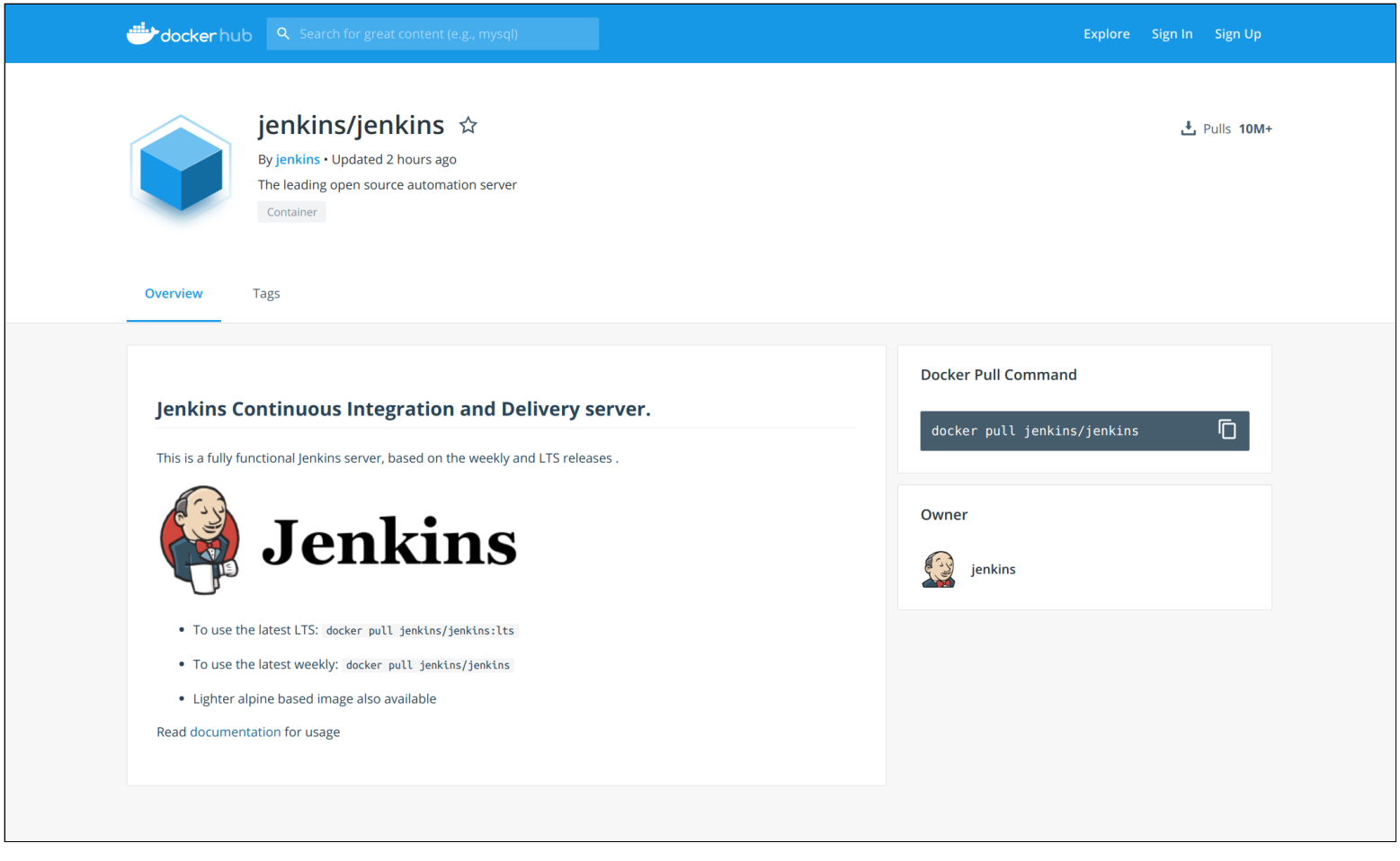
to można

zrobić?

1 Setup Jenkins

Instalacja

https://hub.docker.com/r/jenkins/jenkins/

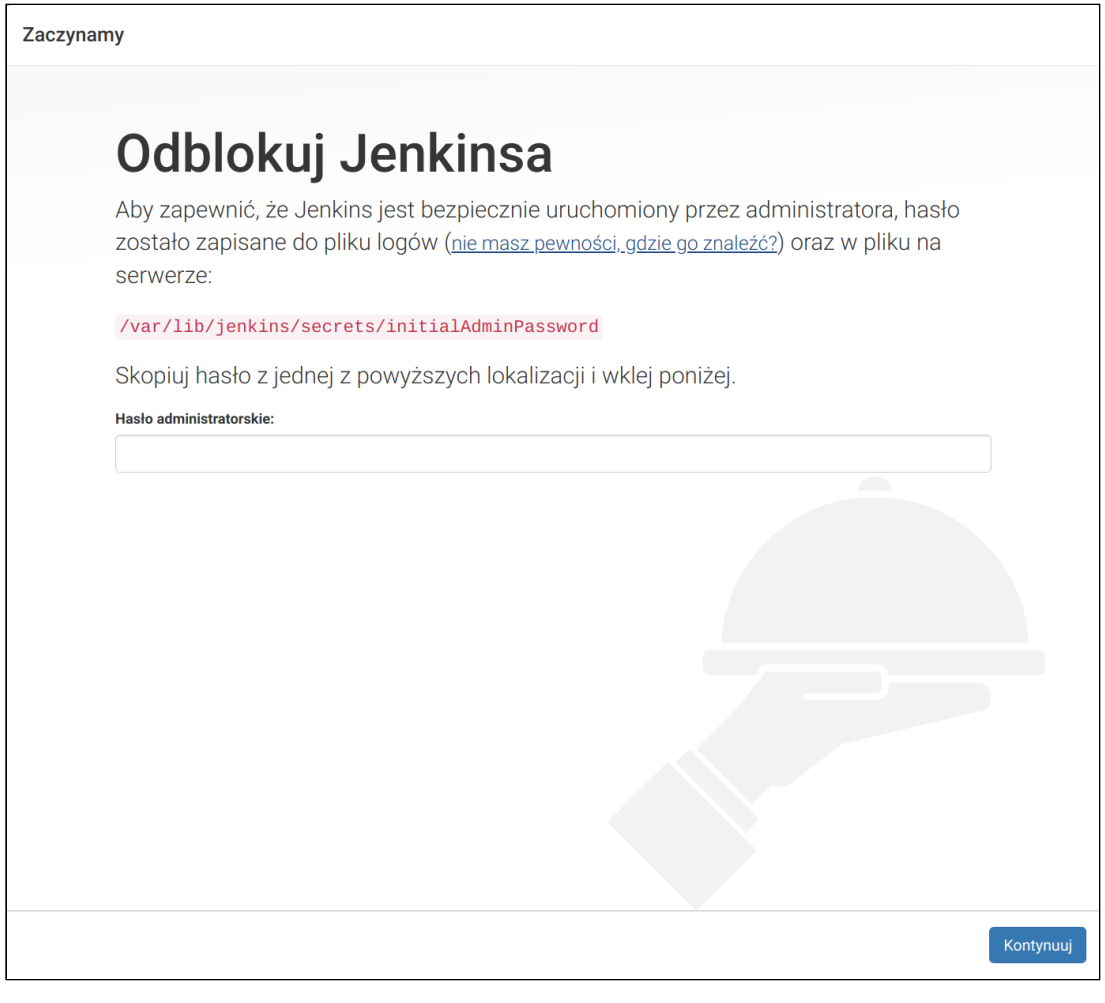


Uruchomienie obrazu docker

docker-compose.yaml

```
version: '3.7'
services:
  jenkins:
    image: "jenkins/jenkins"
    ports:
     - "8080:8080"
    volumes:
     - "./jenkins_home:/var/jenkins_home"
```

```
$ docker-compose up
```


Zaczynamy
Odblokuj Jenkinsa
Aby zapewnić, że Jenkins jest bezpiecznie uruchomiony przez administratora, hasło zostało zapisane do pliku logów (nie masz pewności, gdzie go znaleźć?) oraz w pliku na serwerze:
/var/lib/jenkins/secrets/initialAdminPassword
Skopiuj hasło z jednej z powyższych lokalizacji i wklej poniżej.
Hasło administratorskie:
Kontynuuj

Instalowanie dodatkowych pakietów

Dockerfile

```
FROM jenkins/jenkins
USER root
RUN apt-get update && apt-get install -y maven
USER jenkins
```

docker-compose.yaml

```
version: '3.7'
services:
  jenkins:
    image: "jenkins"
    build: .
    ports:
     - "8080:8080"
    volumes:
     - "./jenkins_home:/var/jenkins_home"
```

```
$ docker-compose up --build
```

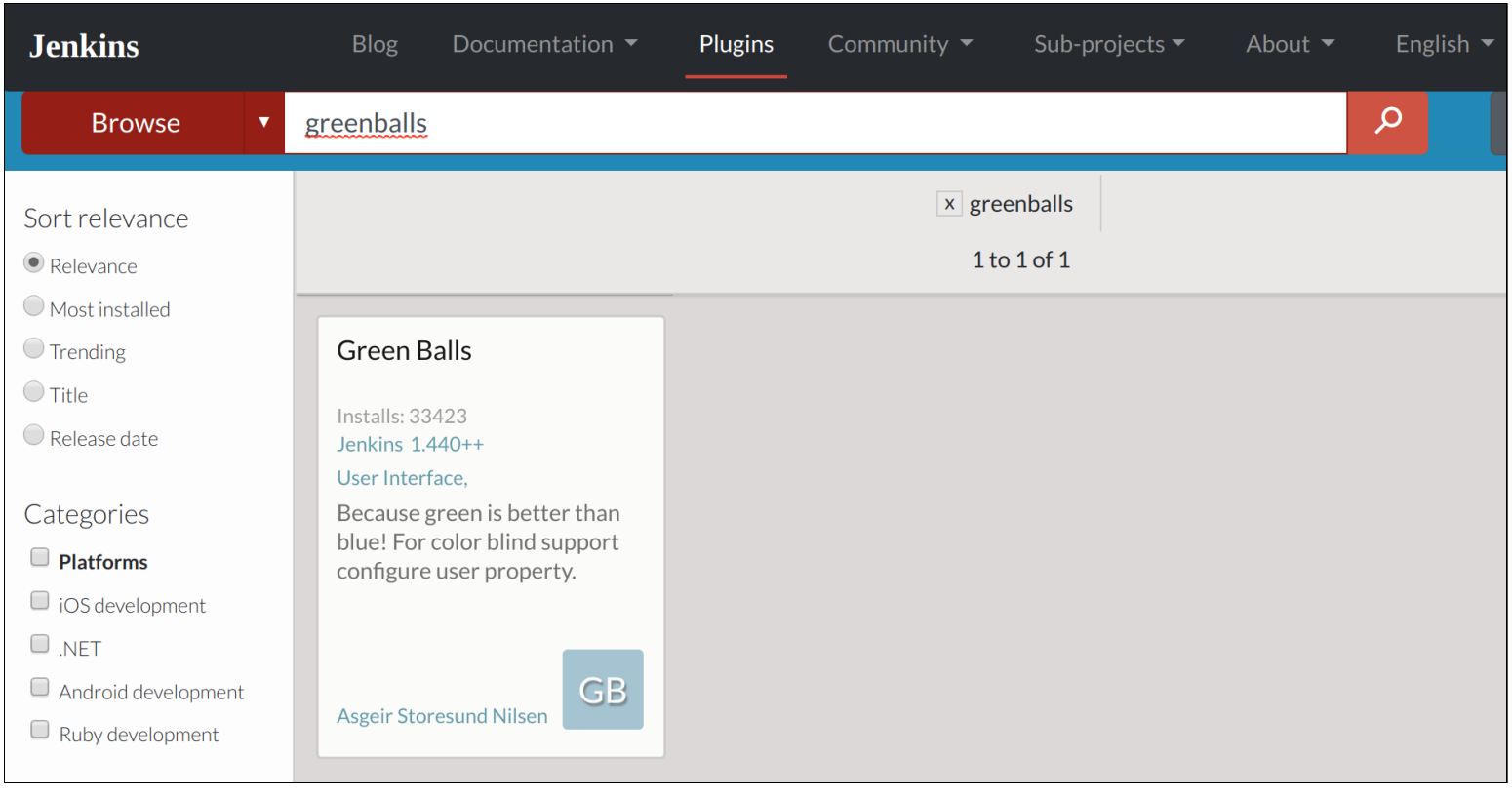
2 Setup Jenkins
Post-Instalacja

Wyłączenie WizardSetup

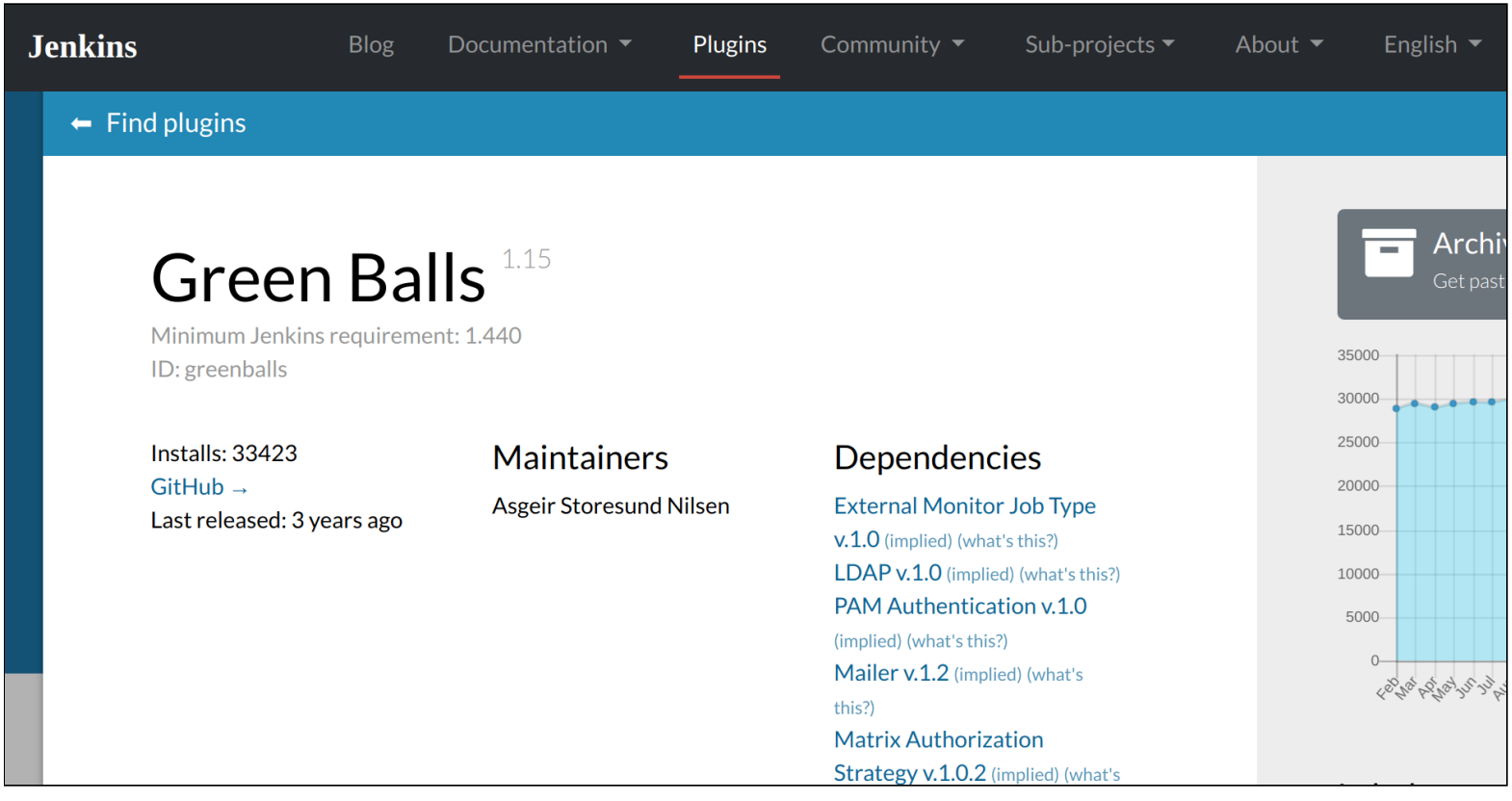
docker-compose.yaml

```
version: '3.7'
services:
  jenkins:
    image: "jenkins"
    build: .
    environment:
      JAVA_OPTS: "-Djenkins.install.runSetupWizard=false"
    ports:
     - "8080:8080"
    volumes:
     - "./jenkins_home:/var/jenkins_home"
```

https://plugins.jenkins.io/



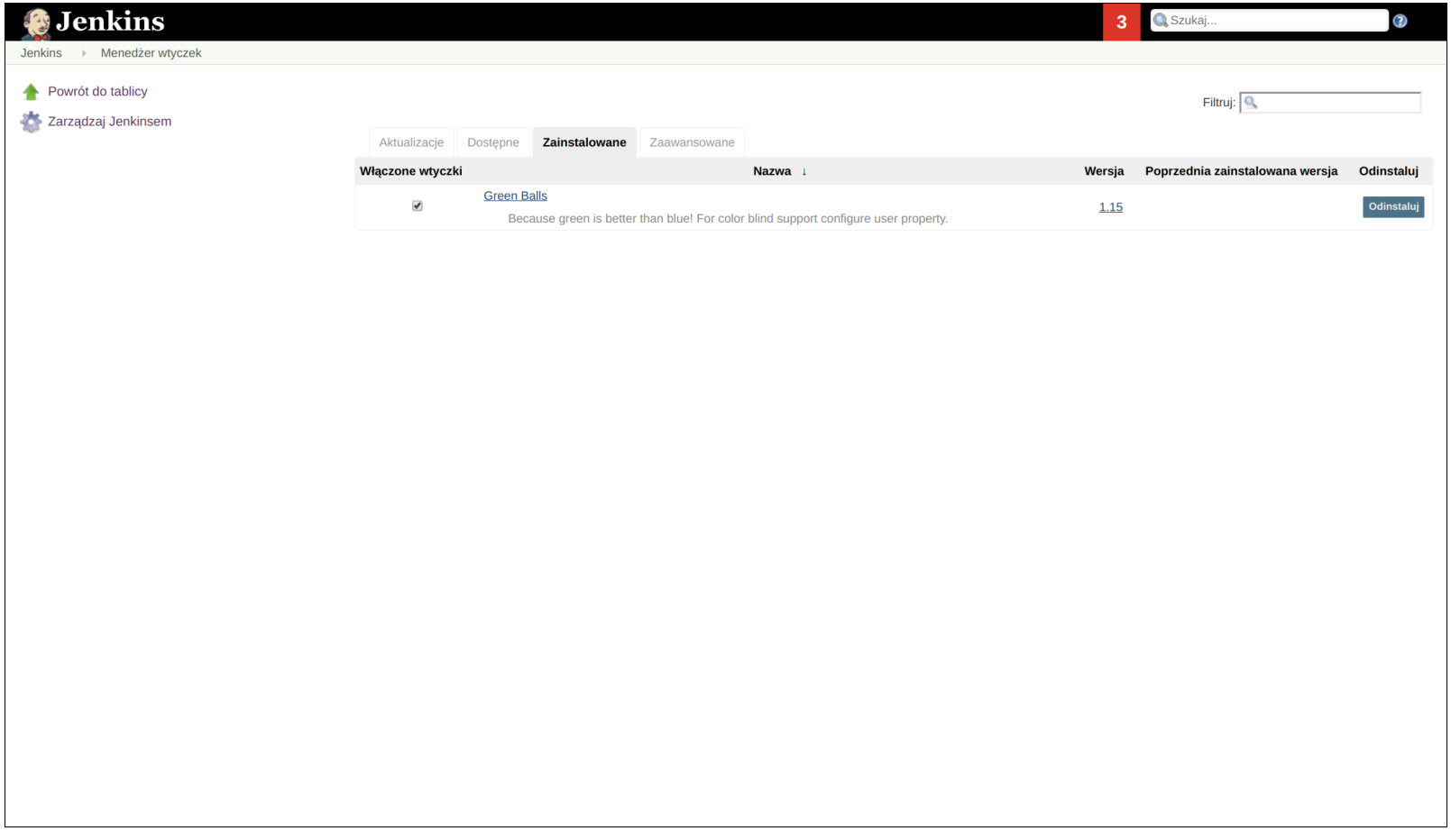
https://plugins.jenkins.io/



Instalowanie pluginów

Dockerfile

```
FROM jenkins/jenkins
RUN /usr/local/bin/install-plugins.sh greenballs
USER root
RUN apt-get update && apt-get install -y maven
USER jenkins
```


Jenkins
3
Szukaj...
Jenkins
Menedżer wtyczek
Powrót do tablicy
Zarządzaj Jenkinsem
Filtruj:
Aktualizacje
Dostępne
Zainstalowane
Zaawansowane
Włączone wtyczki
Nazwa ↓
Wersja
Poprzednia zainstalowana wersja
Odinstaluj
Green Balls
Because green is better than blue! For color blind support configure user property.
1.15
Odinstaluj

3 Setup Jenkins
Konfiguracja

https://github.com/jenkinsci/configuration-as-code-plugin

Jenkins Configuration as Code Plugin

build passing | plugin v1.6 | chat on gitter

View the wiki page. See presentation slides from Jenkins World 2018.

Join our Jenkins Configuration as Code (JCasC) office hours meeting scheduled for every second Wednesday. Use the Hangout on Air link from our Gitter chat channel. As an alternative, use the link from the invitation. See previous meeting minutes.

Konfiguracja

conf-as-code.yaml

```
jenkins:
  systemMessage: "IaC Jenkins"
  securityRealm:
    local:
      allowsSignup: false
      users:
        - id: "${JENKINS_USER}"
          password: "${JENKINS_PASS}"
```

Instalowanie CasC

Dockerfile

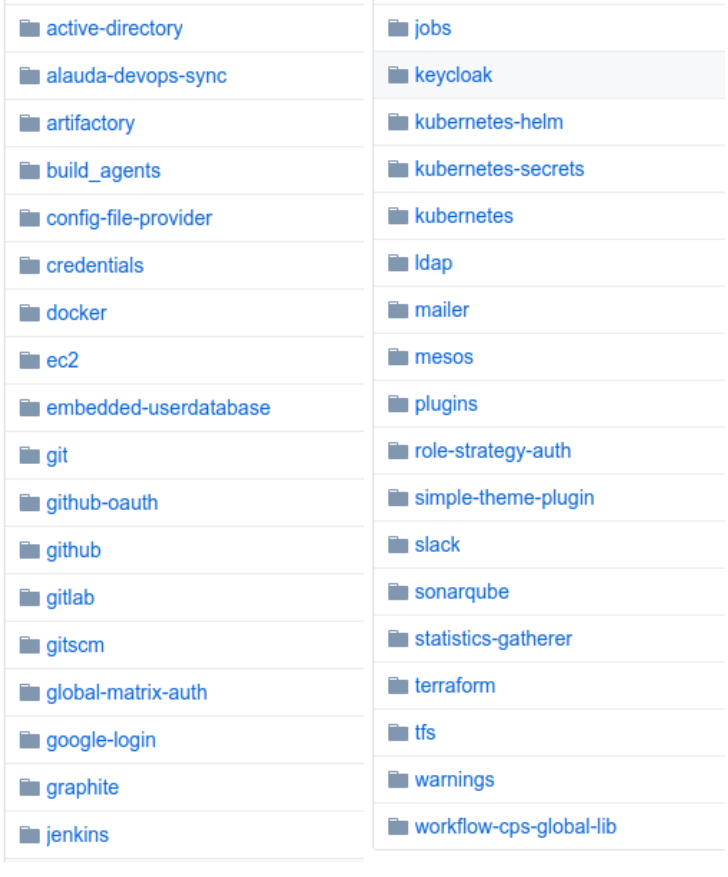
```
FROM jenkins/jenkins
RUN /usr/local/bin/install-plugins.sh greenballs
RUN /usr/local/bin/install-plugins.sh configuration-as-code
RUN /usr/local/bin/install-plugins.sh configuration-as-code-support
USER root
RUN apt-get update && apt-get install -y maven
USER jenkins
```

Podanie lokalizacji plików konfiguracyjnych

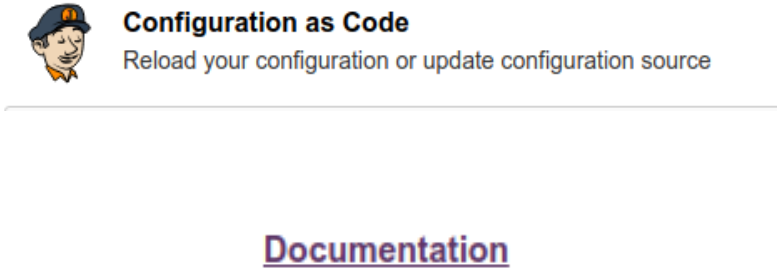
docker-compose.yaml

```
version: '3.7'
services:
  jenkins:
    image: "jenkins"
    build: .
    environment:
      JAVA_OPTS: "-Djenkins.install.runSetupWizard=false"
      CASC_JENKINS_CONFIG: "/var/jenkins_home/casc_configs"
      JENKINS_USER: "${JENKINS_USER}"
      JENKINS_PASS: "${JENKINS_PASS}"
    ports:
     - "8080:8080"
    volumes:
     - "./jenkins_home:/var/jenkins_home"
     - "./configuration:/var/jenkins_home/casc_configs"
```

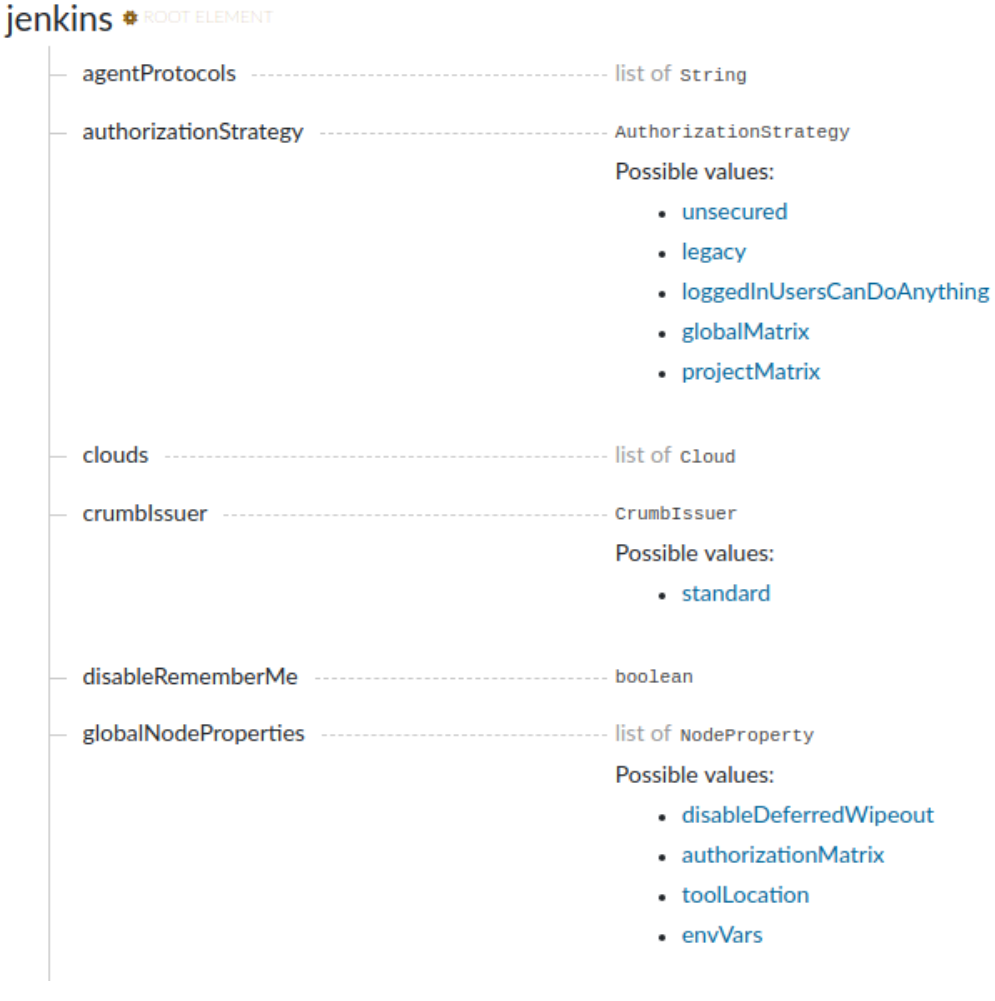
W jaki sposób pisać pliki konfiguracyjne?



W jaki sposób pisać pliki konfiguracyjne?



W jaki sposób pisać pliki konfiguracyjne?



Bezpieczeństwo

Dockerfile

```
FROM jenkins/jenkins
RUN /usr/local/bin/install-plugins.sh greenballs
RUN /usr/local/bin/install-plugins.sh configuration-as-code
RUN /usr/local/bin/install-plugins.sh configuration-as-code-support
RUN /usr/local/bin/install-plugins.sh matrix-auth
USER root
RUN apt-get update && apt-get install -y maven
USER jenkins
```

Zablokowanie możliwość konfigurowania

conf-as-code.yaml

```
jenkins:
  systemMessage: "IaC Jenkins"
  authorizationStrategy:
    globalMatrix:
      grantedPermissions:
        - "Overall/Read:authenticated"
        - "Job/Build:authenticated"
        - "Job/Cancel:authenticated"
        - "Job/Read:authenticated"
  securityRealm:
    local:
      allowsSignup: false
      users:
        - id: "${JENKINS_USER}"
          password: "${JENKINS_PASS}"
```

ImmutableServer

Kief Morris
13 June 2013

Automated configuration tools (such as CFEngine, Puppet, or Chef) allow you to specify how servers should be configured, and bring new and existing machines into compliance. This helps to avoid the problem of fragile SnowflakeServers. Such tools can create PhoenixServers that can be torn down and rebuilt at will. An Immutable Server is the logical conclusion of this approach, a server that once deployed, is never modified, merely replaced with a new updated instance.

Automated configuration tools are usually used with ConfigurationSynchronization where you leave a server running for a potentially long period of time, repeatedly applying configuration to bring it into line with the latest specification. In theory servers can be allowed to run indefinitely, and they'll be kept completely consistent and up to date. In practice it's not possible to manage a server's configuration completely, so there is considerable scope for configuration drift, and unexpected changes to running servers.

4 Setup Jenkins
Konfiguracja zadań

https://github.com/jenkinsci/job-dsl-plugin

Jenkins Job DSL / Plugin

The Jenkins "Job DSL / Plugin" is made up of two parts: The Domain Specific Language (DSL) itself that allows users to describe jobs using a Groovy-based language, and a Jenkins plugin which manages the scripts and the updating of the Jenkins jobs which are created and maintained as a result.

Background

Jenkins is a wonderful system for managing builds, and people love using its UI to configure jobs. Unfortunately, as the number of jobs grows, maintaining them becomes tedious, and the paradigm of using a UI falls apart. Additionally, the common pattern in this situation is to copy jobs to create new ones, these "children" have a habit of diverging from their original "template" and consequently it becomes difficult to maintain consistency between these jobs.

The Jenkins job-dsl-plugin attempts to solve this problem by allowing jobs to be defined with the absolute minimum effort in a programmatic form. The goal is for your team to be able to define all the jobs they wish to be related to their project, declaring their intent for the jobs programmatically, and leaving the common elements in each of them hidden behind the DSL.

For example, your project might require a unit test job, a nightly SonarQube build, an integration test job, and a promotion job. Permission to run the release job should be limited to certain users. Here's the example DSL script:

Job DSL

seed.groovy

```
job('example') {
    triggers {
        scm('*/15 * * * *')
    }
    steps {
        shell("echo 'Hello world!'")
    }
}
```

Dockerfile

```
FROM jenkins/jenkins
RUN /usr/local/bin/install-plugins.sh greenballs
RUN /usr/local/bin/install-plugins.sh configuration-as-code
RUN /usr/local/bin/install-plugins.sh configuration-as-code-support
RUN /usr/local/bin/install-plugins.sh matrix-auth
RUN /usr/local/bin/install-plugins.sh job-dsl
USER root
RUN apt-get update && apt-get install -y maven
USER jenkins
```

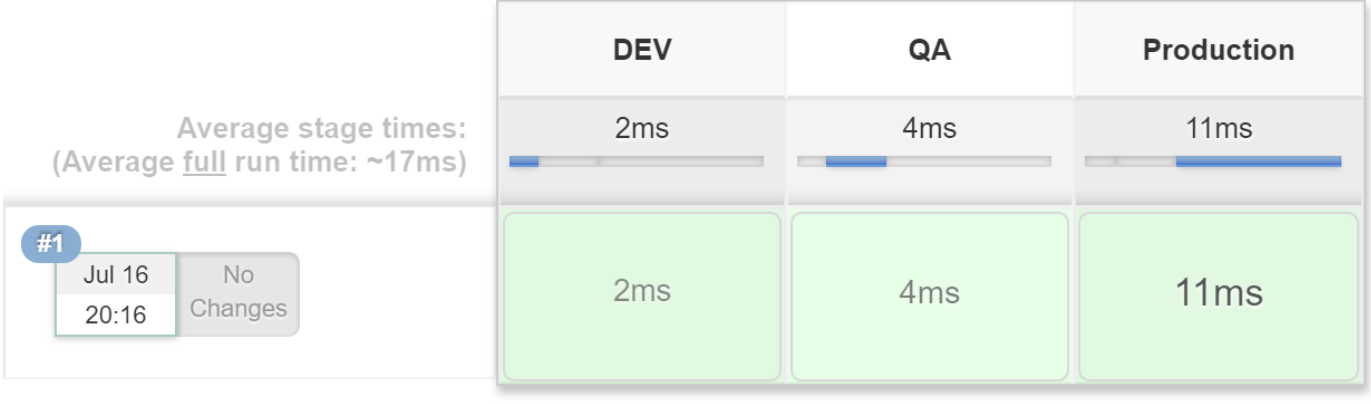
Konfiguracja Job DSL

conf-as-code-jobs.yaml

```
jobs:
  - script: >
      job('example') {
        triggers {
          scm('*/15 * * * *')
        }
        steps {
          shell("echo 'Hello world!'")
        }
      }
```

https://github.com/jenkinsci/pipeline-plugin

Stage View



Permalinks

- Last build (#1), 2 hr 14 min ago
- Last stable build (#1), 2 hr 14 min ago
- Last successful build (#1), 2 hr 14 min ago

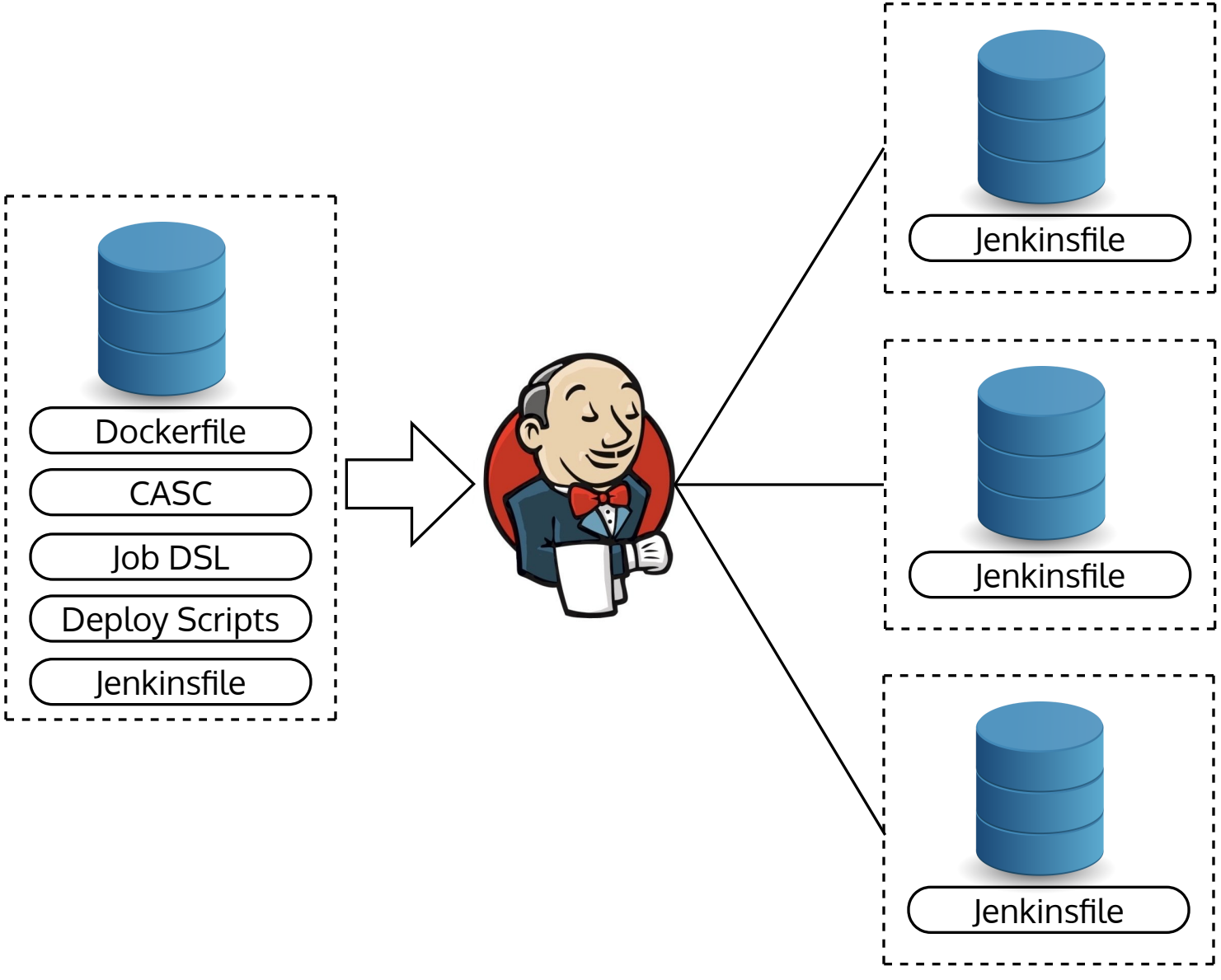
Deklaratywny pipeline

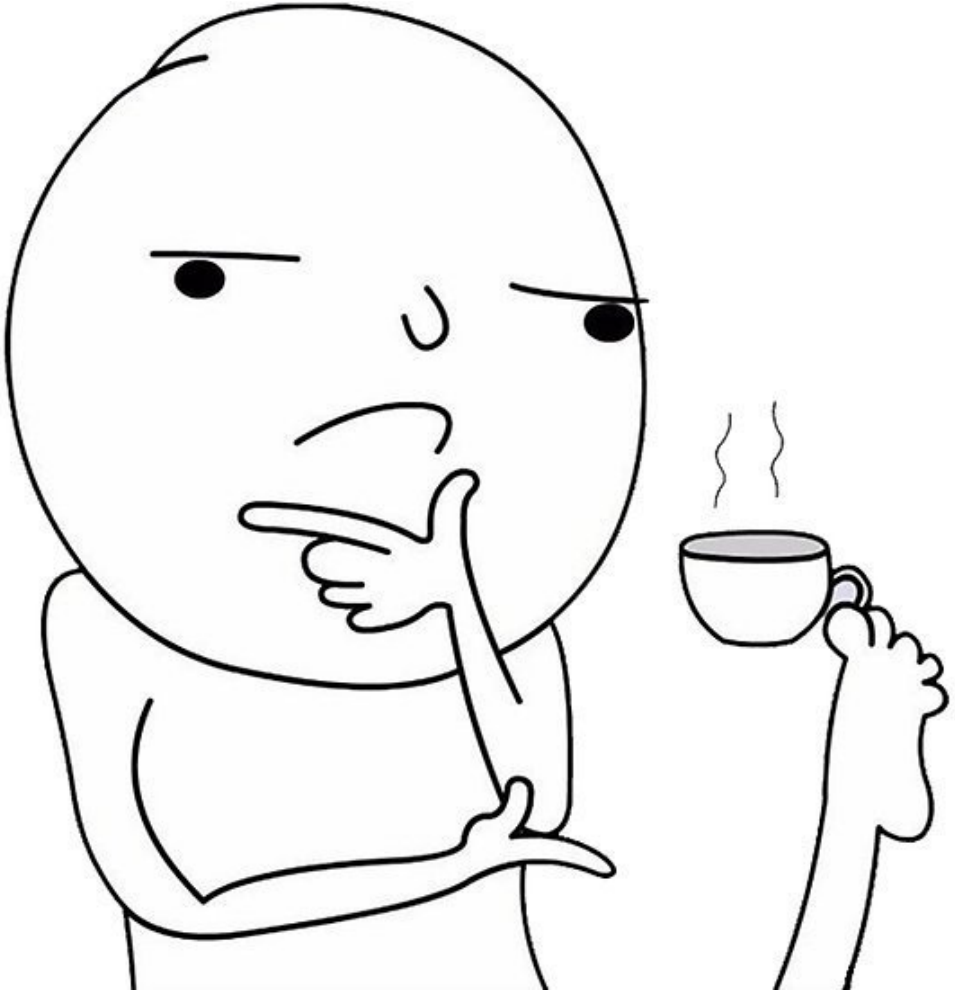
Jenkinsfile

```
pipeline {
    agent any
    stages {
        stage('Stage 1') {
            steps {
                echo 'Hello world!'
            }
        }
    }
}
```

Dockerfile

```
FROM jenkins/jenkins
RUN /usr/local/bin/install-plugins.sh greenballs
RUN /usr/local/bin/install-plugins.sh configuration-as-code
RUN /usr/local/bin/install-plugins.sh configuration-as-code-support
RUN /usr/local/bin/install-plugins.sh matrix-auth
RUN /usr/local/bin/install-plugins.sh job-dsl
RUN /usr/local/bin/install-plugins.sh workflow-aggregator
USER root
RUN apt-get update && apt-get install -y maven
USER jenkins
```


Dockerfile
CASC
Job DSL
Deploy Scripts
Jenkinsfile
Jenkinsfile
Jenkinsfile
Jenkinsfile



Technology Radar

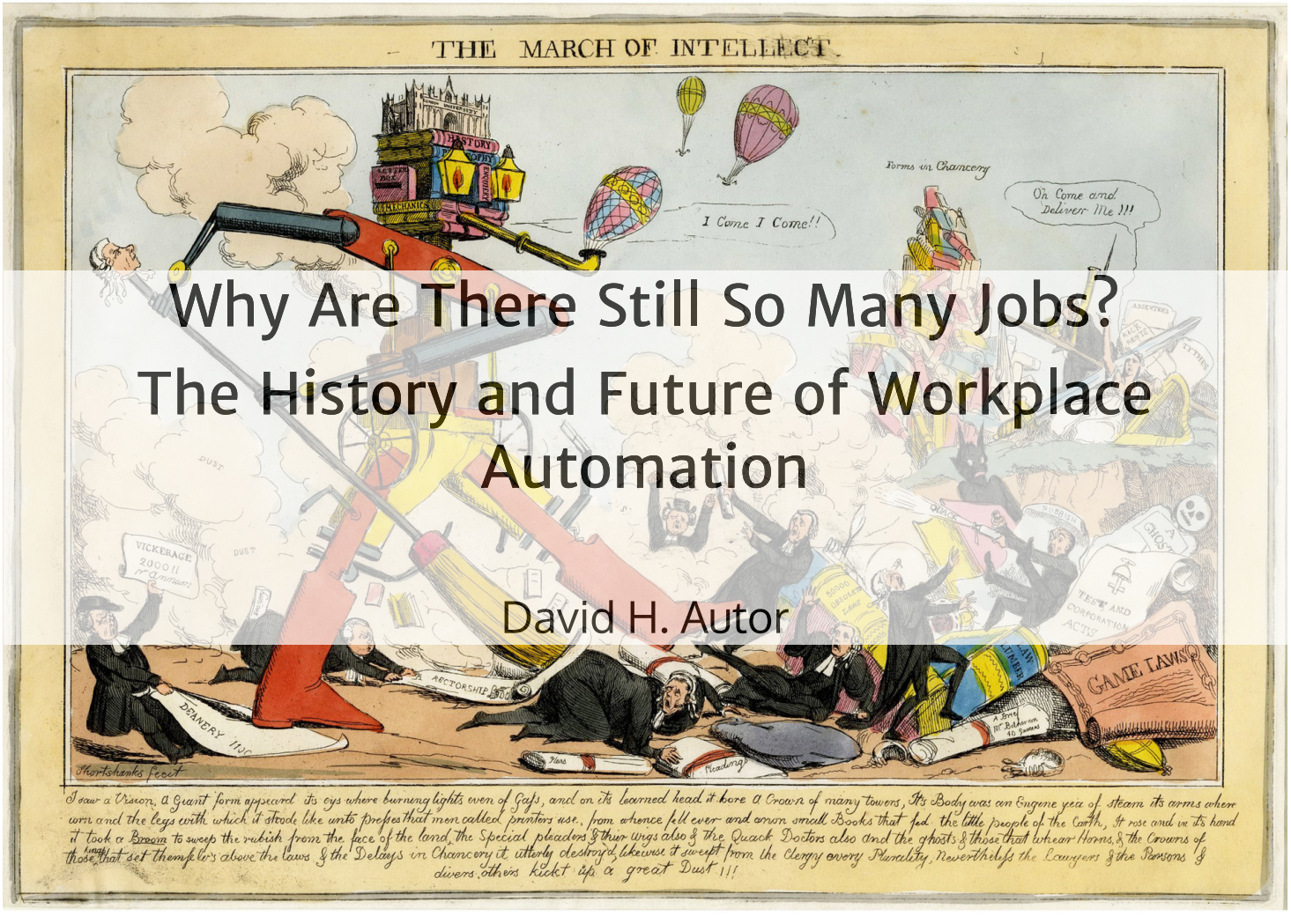
JAN 2011

ADOPT

The large number of hosts and devices in a modern datacenter or cloud deployment have made manually installing and configuring infrastructure unwise. Infrastructure as code is an approach whereby infrastructure configuration is scripted or described by files that are stored in version control, and changes are pushed out to the datacenter in a controlled manner. This parallels the discipline of source control and build promotion used in software development, hence 'as code'. The two front-running open source tools for infrastructure automation are Chef and Puppet. They both use a textual DSL to script automation. Using this approach provides consistent and repeatable environment changes, reducing the manual effort involved, especially in troubleshooting environmental differences.

THE MARCH OF INTELLECT.

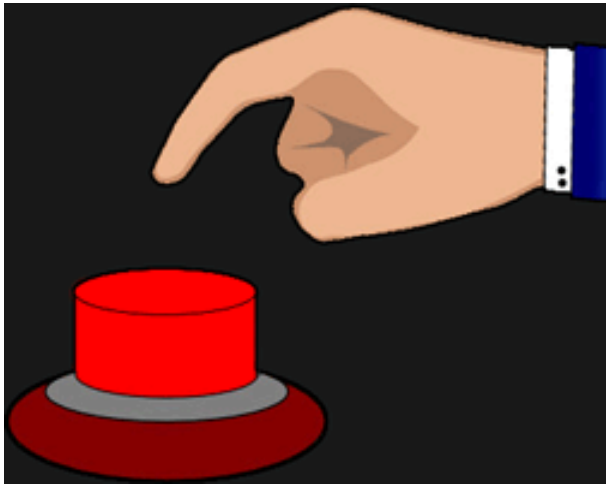
I saw a Vision, a Gigant form appeared its eys where burning lights even of Gods, and on its learned head it bore a Crown of many towers, Its Body was an Engene yea of steam its arms where iron and the legs with which it strode like unto those that men called printers use, from whence fell ever and anon small Books that fed the little people of the Earth, It rose and in its hand it took a Broom to sweep the rubish from the face of the land, the Special pleaders & their wigs also & the Quack Doctors also and the ghosts & those that wear Horns, & the Crowns of those that set themselves above the laws & the Delays in Chancery it utterly destroyed, likewise it swept from the Clergy every Plurality, Nevertheless the Lawyers & the Parsons & divers others kickt up a great Dust !!!

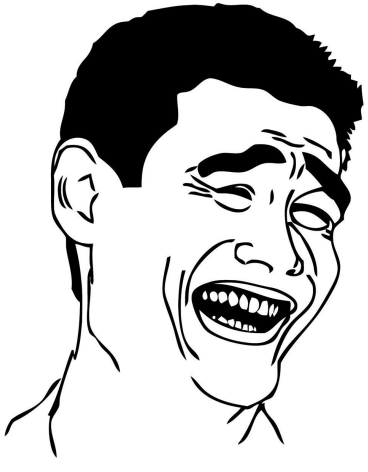


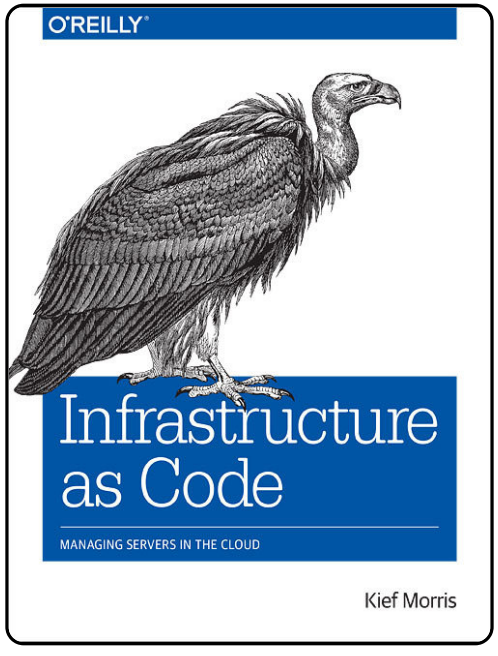
Why Are There Still So Many Jobs? The History and Future of Workplace Automation

David H. Autor


IT







https://github.com/zielona-gora-jug/jenkins-iac
https://jenkins.io
https://hub.docker.com/r/jenkins/jenkins/
https://plugins.jenkins.io/
https://github.com/jenkinsci/configuration-as-code-plugin
https://github.com/jenkinsci/job-dsl-plugin
https://github.com/jenkinsci/pipeline-plugin

Dziękins!