

МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ  
НАЦІОНАЛЬНИЙ АЕРОКОСМІЧНИЙ УНІВЕРСИТЕТ ім. М. Є.  
Жуковського «Харківський авіаційний інститут»

Факультет радіоелектроніки, комп'ютерних систем та інфокомунікацій  
Кафедра комп'ютерних систем, мереж і кібербезпеки

Лабораторна робота №6  
З дисципліни: «Технології DevOps»

Виконав:

студент 5 курсу групи №555 ім

Напряму підготовки

125 Кібербезпека та захист інформації

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Прийняв:

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## 1. Runing Jenkins via Docker

```
PS C:\Users\sorlo> docker run -p 8080:8080 -p 5000:5000 -v jenkins_home:/var/jenkins_home jenkins/jenkins:lts-jdk11
Running from: /usr/share/jenkins/jenkins.war
```

### Checking administrator password

```
*****
*****
*****

Jenkins initial setup is required. An admin user has been created and a password generated.
Please use the following password to proceed to installation:

32fb327121d344649a767be41c7af636

This may also be found at: /var/jenkins_home/secrets/initialAdminPassword

*****
*****
*****
```

## 2. Configuring Admin password (administrator)

### Getting Started

## Unlock Jenkins

To ensure Jenkins is securely set up by the administrator, a password has been written to the log ([not sure where to find it?](#)) and this file on the server:

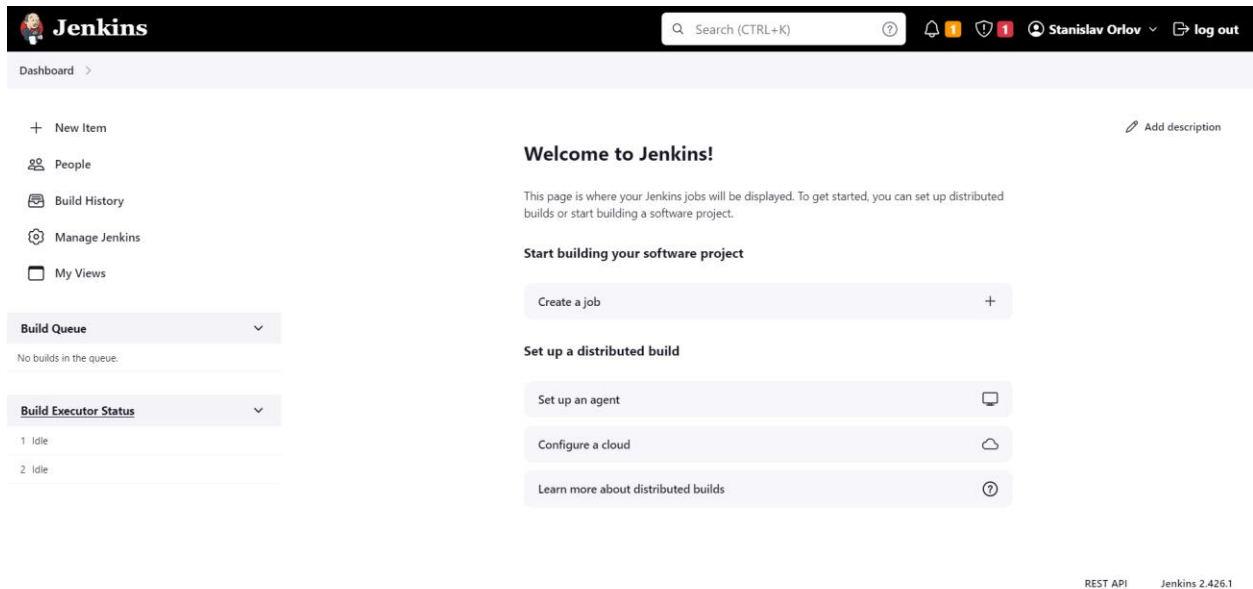
```
/var/jenkins_home/secrets/initialAdminPassword
```

Please copy the password from either location and paste it below.

Administrator password

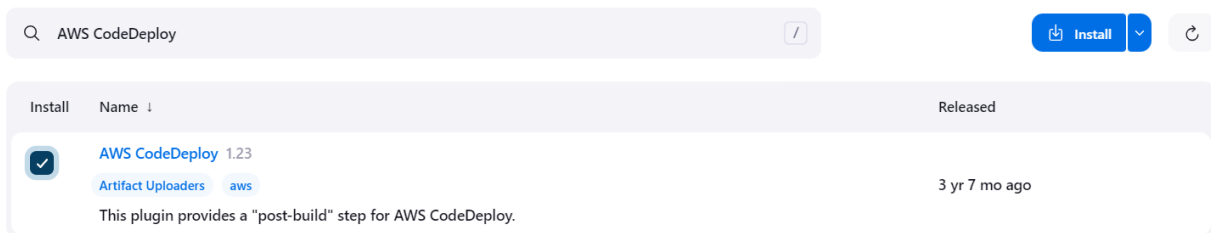
Continue

### 3. Start Jenkins



The screenshot shows the Jenkins Dashboard. At the top, there's a header with the Jenkins logo, a search bar, and user information (Stanislav Orlov). The main content area is divided into a left sidebar and a main panel. The sidebar contains links for 'New Item', 'People', 'Build History', 'Manage Jenkins', and 'My Views'. Below these are two expandable sections: 'Build Queue' (showing 'No builds in the queue') and 'Build Executor Status' (showing two idle executors). The main panel has a 'Welcome to Jenkins!' message, followed by instructions on how to start building a software project. It includes buttons for 'Create a job', 'Set up an agent', 'Configure a cloud', and 'Learn more about distributed builds'. At the bottom right, it says 'REST API' and 'Jenkins 2.426.1'.

### 4. Install AWS plugins for Jenkins

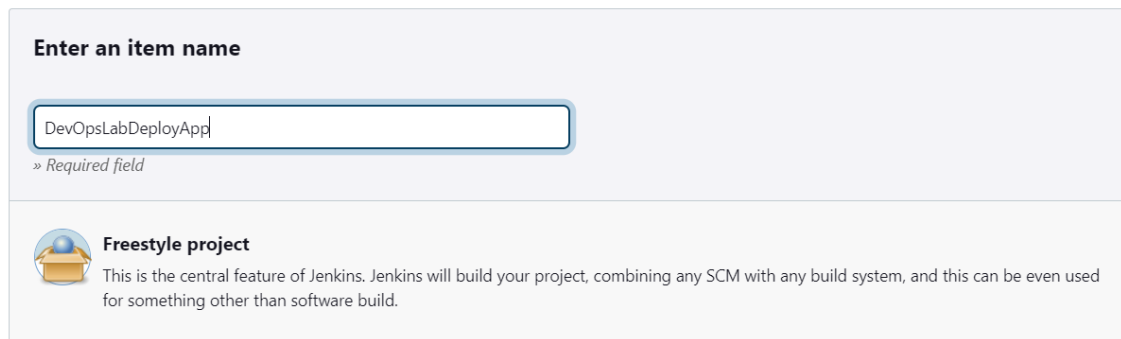


The screenshot shows the Jenkins plugin search results for 'AWS CodeDeploy'. The search bar at the top contains 'AWS CodeDeploy'. Below the search bar, there's a table of results. The first result is 'AWS CodeDeploy 1.23', which is marked as installed with a checkmark. It has tags for 'Artifact Uploaders' and 'aws'. The description says 'This plugin provides a "post-build" step for AWS CodeDeploy.' The release date is '3 yr 7 mo ago'. There are buttons for 'Install', 'Uninstall', and 'Refresh'.

The following GitHub plugins were installed:

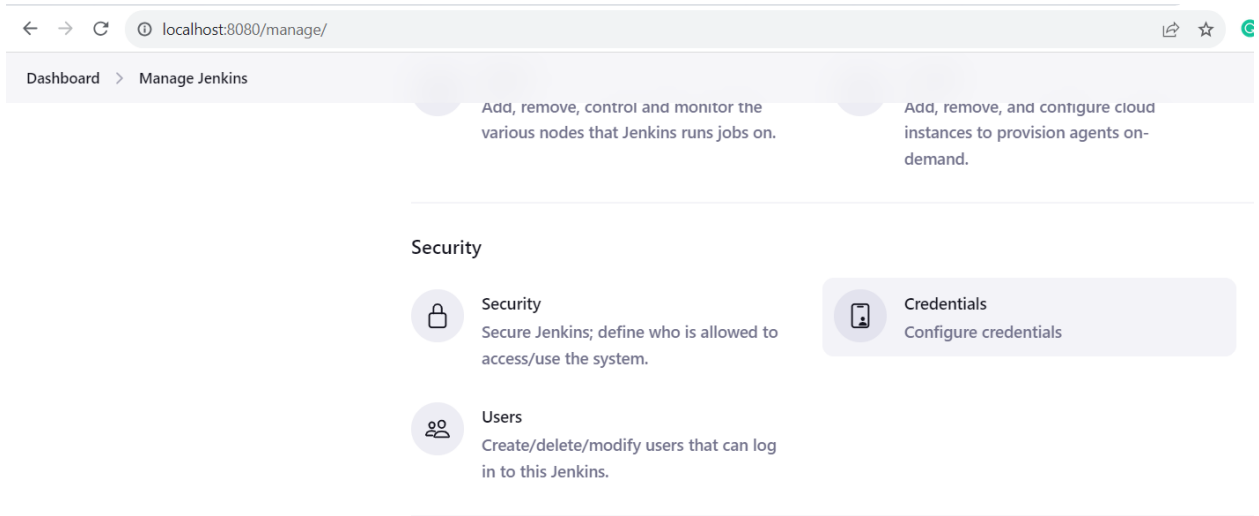
- AWS CodeBuild
- Http Request
- File Operations

### 5. Creating a new Project under Jenkins

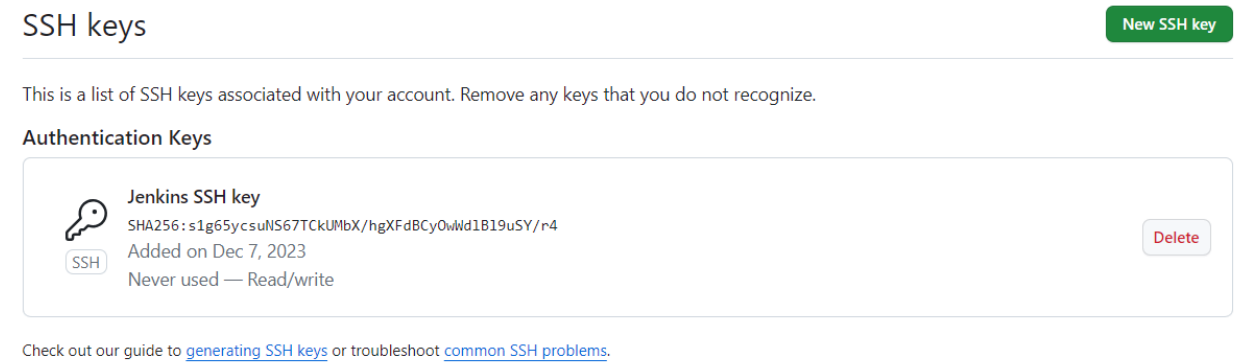


The screenshot shows the 'Enter an item name' dialog in Jenkins. It has a text input field with the value 'DevOpsLabDeployApp'. Below the input field, it says '» Required field'. Below the input field, there's a section for 'Freestyle project' with a description: 'This is the central feature of Jenkins. Jenkins will build your project, combining any SCM with any build system, and this can be even used for something other than software build.'

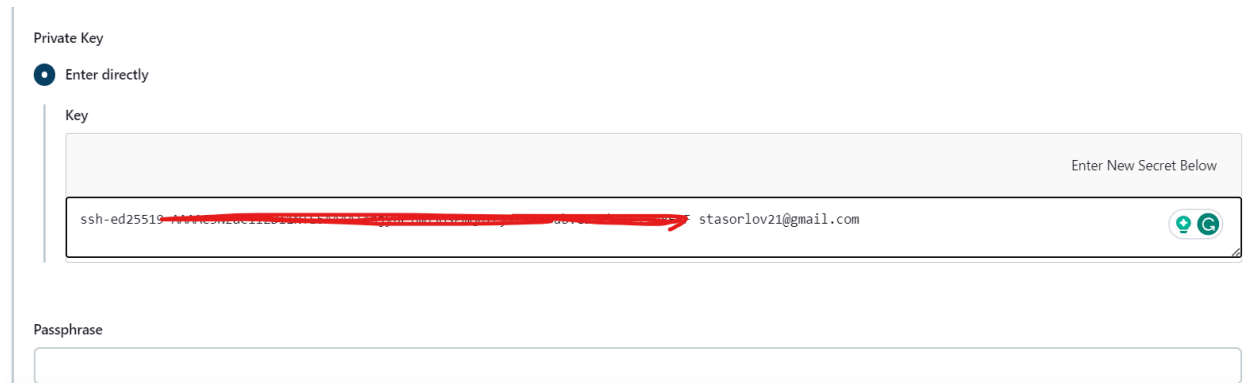
## 6. Manage Git Credentials



## Adding SSH Key on GitHub:



## Adding SSH key to Jenkins:



## 7. GitHub project

<https://github.com/stanislaworlov/DevOpsLabDeployApp>

☒ GitHub project

Project url ?

Advanced ▾

☐ This project is parameterized ?

☐ Throttle builds ?

☐ Execute concurrent builds if necessary ?

Advanced ▾

Repository URL ?

Credentials ?

+ Add ▾

Advanced ▾

Add Repository

Branches to build ?

Branch Specifier (blank for 'any') ?

Add Branch

## Build Triggers

- ☐ Trigger builds remotely (e.g., from scripts) ?
- ☐ Build on NuGet updates
- ☐ Build after other projects are built ?
- ☐ Build periodically ?
- ☒ GitHub hook trigger for GITScm polling ?
- ☐ Poll SCM ?

## Build Steps

≡ .NET: Build project (build) ?

.NET SDK ?

DotNet 7

Project or Solution ?

TodoAppWeb.sln

Targets ?

Configuration ?


Release

Work Directory ?

☐ Continue On Error ?

Save

Apply

 **Jenkins**

Search (CTRL+K) ?

Dashboard > DevOpsLabDeployApp > #13

Status

</> Changes

Console Output

Edit Build Information

Delete build '#13'

Git Build Data

Previous Build

#13 (Dec 9, 2023, 3:11:46 PM)

</>

No changes.

Started by user

Stanislav Orlov

Revision:

4489a19e1bfc4ae6970198e74b0476ea448d6f55

Repository:

[https://github.com/stanislavorlov/todo\\_app\\_dotnet\\_back-end.git](https://github.com/stanislavorlov/todo_app_dotnet_back-end.git)

•

refs/remotes/origin/master

## 8. Configuring Build steps for AWS

EC2 > Instances > Launch an instance

# Launch an instance

Info

Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.

### Name and tags

Info

Name

MyJenkinsTestServer

Add additional tags

Instance summary for i-05c6f30cf293303b8 (MyJenkinsTestServer)

Info

Updated less than a minute ago

Refresh

Connect

Instance state ▼

Actions ▼

<div>Instance ID</div> <div> i-05c6f30cf293303b8 (MyJenkinsTestServer)</div>	<div>Public IPv4 address</div> <div> 52.91.140.121 <a href="#">open address</a></div>	<div>Private IPv4 addresses</div> <div> 172.31.20.2</div>
<div>IPv6 address</div> <div>–</div>	<div>Instance state</div> <div> <b>Running</b></div>	<div>Public IPv4 DNS</div> <div> ec2-52-91-140-121.compute-1.amazonaws.com <a href="#">open address</a></div>

## 9. Adding Webhook

stanislavorlov / DevOpsLabDeployApp

Type to search

<> Code

Issues

Pull requests

Actions

Projects

Wiki

Security

Insights

Settings

General

Access

Collaborators

Moderation options

Code and automation

Branches

Tags

Rules

Actions

Webhooks

Environments

Webhooks / Add webhook

We'll send a POST request to the URL below with details of any subscribed events. You can also specify which data format you'd like to receive (JSON, x-www-form-urlencoded, etc). More information can be found in [our developer documentation](#).

Payload URL \*

https://52.91.140.121:8080/github-webhook/

Content type

application/json

Secret



## **Висновки**

У ході виконання лабораторної роботи оволодів основними навичками роботи з системою безперервної інтеграції та доставки. Створив базовий пайплайн для перевірки початкового коду та виконання тестів.