Jenkins Task

Task Description:

Launch jenkins and explore creating projects and users.

Techstacks needs to be used :

- AWS EC2
- Jenkins

1- Creating AWS EC2 instance

| | my-jenkin-server | i-044e0450e4bd6a27f | ⊘ Running ⊕ ⊖ | t2.micro | ⊘ 2/2 checks passed | **View alarms +** |

2- AWZ amazon Linux 2023 AMI
3- Inbound rules configured

Inbound rules (4)   ⟳ (Manage tags) (**Edit inbound rule**

🔍 Search   ⟨ **1** ⟩

	Name ▽	Security group rule ID ▽	IP version ▽	Type ▽	Protocol
☐	–	sgr-046f8858cbd05302e	IPv4	Custom TCP	TCP
☐	–	sgr-02bc4c80f3677b566	IPv4	SSH	TCP
☐	–	sgr-033d6c4dfcb5b9846	IPv4	HTTPS	TCP
☐	–	sgr-0c0ba95c0ed1842c0	IPv4	HTTP	TCP

4- After connecting the EC2 instance

```
      ,       #_
     ~\_   ####_          Amazon Linux 2023
    ~~  \_#####\
    ~~      \###|
    ~~        \#/ ___      https://aws.amazon.com/linux/amazon-linux-2023
     ~~       V~' '->
      ~~~         /
        ~~._.   _/
          _/ _/
        _/m/'
[ec2-user@ip-172-31-4-7 ~]$ sudo yum update -y
Last metadata expiration check: 0:08:16 ago on Tue Nov 26 21:44:29 2024.
Dependencies resolved.
Nothing to do.
Complete!
[ec2-user@ip-172-31-4-7 ~]$ sudo yum update
```

5- Run Jenkins repo to download and install Jenkins on EC2

```
[ec2-user@ip-172-31-4-7 ~]$ sudo wget -O /etc/yum.repos.d/jenkins.repo \
    https://pkg.jenkins.io/redhat-stable/jenkins.repo
--2024-11-26 21:56:44--  https://pkg.jenkins.io/redhat-stable/jenkins.repo
Resolving pkg.jenkins.io (pkg.jenkins.io)... 146.75.78.133, 2a04:4e42:83::645
Connecting to pkg.jenkins.io (pkg.jenkins.io)|146.75.78.133|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 85
```

```
[ec2-user@ip-172-31-4-7 ~]$ sudo rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io-2023.key
[ec2-user@ip-172-31-4-7 ~]$ sudo yum upgrade
```

```
[ec2-user@ip-172-31-4-7 ~]$ sudo yum upgrade
Jenkins-stable                                                                        175 kB/s |  30 kB     00:00
Dependencies resolved.
Nothing to do.
Complete!
```

```
[ec2-user@ip-172-31-4-7 ~]$ sudo dnf install java-17-amazon-corretto -y
Last metadata expiration check: 0:00:22 ago on Tue Nov 26 21:57:35 2024.
Dependencies resolved.
===================================================================================================================
 Package                        Architecture      Version                        Repository          Size
===================================================================================================================
Installing:
 java-17-amazon-corretto        x86_64            1:17.0.13+11-1.amzn2023.1       amazonlinux         213 k
Installing dependencies:
 alsa-lib                       x86_64            1.2.7.2-1.amzn2023.0.2          amazonlinux         504 k
 cairo                          x86_64            1.17.6-2.amzn2023.0.1           amazonlinux         684 k
 dejavu-sans-fonts              noarch            2.37-16.amzn2023.0.2            amazonlinux         1.3 M
 dejavu-sans-mono-fonts         noarch            2.37-16.amzn2023.0.2            amazonlinux         467 k
 dejavu-serif-fonts             noarch            2.37-16.amzn2023.0.2            amazonlinux         1.0 M
 fontconfig                     x86_64            2.13.94-2.amzn2023.0.2          amazonlinux         273 k
 fonts-filesystem               noarch            1:2.0.5-12.amzn2023.0.2         amazonlinux         9.5 k
 freetype                       x86_64            2.13.2-5.amzn2023.0.1           amazonlinux         423 k
 giflib                         x86_64            5.2.1-9.amzn2023.0.1            amazonlinux          49 k
 google-noto-fonts-common       noarch            20201206-2.amzn2023.0.2         amazonlinux          15 k
 google-noto-sans-vf-fonts      noarch            20201206-2.amzn2023.0.2         amazonlinux         492 k
 graphite2                      x86_64            1.3.14-7.amzn2023.0.2           amazonlinux          97 k
 harfbuzz                       x86_64            7.0.0-2.amzn2023.0.1            amazonlinux         868 k
 java-17-amazon-corretto-headless  x86_64         1:17.0.13+11-1.amzn2023.1       amazonlinux          91 M
 javapackages-filesystem        noarch            6.0.0-7.amzn2023.0.6            amazonlinux          12 k
```

```
Verifying          : dejavu-serif-fonts-2.37-16.amzn2023.0.2.noarch                                          5/35
Verifying          : fontconfig-2.13.94-2.amzn2023.0.2.x86_64                                                 6/35
Verifying          : fonts-filesystem-1:2.0.5-12.amzn2023.0.2.noarch                                          7/35
Verifying          : freetype-2.13.2-5.amzn2023.0.1.x86_64                                                    8/35
Verifying          : giflib-5.2.1-9.amzn2023.0.1.x86_64                                                       9/35
Verifying          : google-noto-fonts-common-20201206-2.amzn2023.0.2.noarch                                10/35
Verifying          : google-noto-sans-vf-fonts-20201206-2.amzn2023.0.2.noarch                               11/35
Verifying          : graphite2-1.3.14-7.amzn2023.0.2.x86_64                                                  12/35
Verifying          : harfbuzz-7.0.0-2.amzn2023.0.1.x86_64                                                    13/35
Verifying          : java-17-amazon-corretto-1:17.0.13+11-1.amzn2023.1.x86_64                                14/35
Verifying          : java-17-amazon-corretto-headless-1:17.0.13+11-1.amzn2023.1.x86_64                       15/35
Verifying          : javapackages-filesystem-6.0.0-7.amzn2023.0.6.noarch                                     16/35
Verifying          : langpacks-core-font-en-3.0-21.amzn2023.0.4.noarch                                       17/35
Verifying          : libICE-1.1.1-3.amzn2023.0.1.x86_64                                                      18/35
Verifying          : libSM-1.2.4-3.amzn2023.0.1.x86_64                                                       19/35
Verifying          : libX11-1.8.10-2.amzn2023.0.1.x86_64                                                     20/35
Verifying          : libX11-common-1.8.10-2.amzn2023.0.1.noarch                                              21/35
Verifying          : libXau-1.0.11-6.amzn2023.0.1.x86_64                                                     22/35
Verifying          : libXext-1.3.6-1.amzn2023.0.1.x86_64                                                     23/35
Verifying          : libXi-1.8.2-1.amzn2023.0.1.x86_64                                                       24/35
Verifying          : libXinerama-1.1.5-6.amzn2023.0.1.x86_64                                                 25/35
Verifying          : libXrandr-1.5.4-3.amzn2023.0.1.x86_64                                                   26/35
Verifying          : libXrender-0.9.11-6.amzn2023.0.1.x86_64                                                 27/35
Verifying          : libXt-1.3.0-3.amzn2023.0.1.x86_64                                                       28/35
Verifying          : libXtst-1.2.5-1.amzn2023.0.1.x86_64                                                     29/35
Verifying          : libbrotli-1.0.9-4.amzn2023.0.2.x86_64                                                   30/35
Verifying          : libjpeg-turbo-2.1.4-2.amzn2023.0.5.x86_64                                               31/35
```

```
[ec2-user@ip-172-31-4-7 ~]$ sudo yum install jenkins -y
Last metadata expiration check: 0:02:54 ago on Tue Nov 26 21:57:35 2024.
Dependencies resolved.
================================================================================================================
 Package                  Architecture              Version                     Repository                Size
================================================================================================================
Installing:
 jenkins                  noarch                    2.479.1-1.1                 jenkins                   91 M

Transaction Summary
================================================================================================================
Install  1 Package

Total download size: 91 M
Installed size: 92 M
Downloading Packages:
jenkins-2.479.1-1.1.noarch.rpm              25% [===============-           ] 4.3 MB/s |  23 MB     00:15 ETA
```

```
Transaction Summary
================================================================================================================
Install  1 Package

Total download size: 91 M
Installed size: 92 M
Downloading Packages:
jenkins-2.479.1-1.1.noarch.rpm                                              17 MB/s |  91 MB     00:05
----------------------------------------------------------------------------------------------------------------
Total                                                                       17 MB/s |  91 MB     00:05
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing        :                                                                                        1/1
  Running scriptlet: jenkins-2.479.1-1.1.noarch                                                             1/1
  Installing       : jenkins-2.479.1-1.1.noarch                                                             1/1
  Running scriptlet: jenkins-2.479.1-1.1.noarch                                                             1/1
  Verifying        : jenkins-2.479.1-1.1.noarch                                                             1/1

Installed:
  jenkins-2.479.1-1.1.noarch
```

```
[ec2-user@ip-172-31-4-7 ~]$ sudo systemctl enable jenkins
Created symlink /etc/systemd/system/multi-user.target.wants/jenkins.service → /usr/lib/systemd/system/jenkins.service.
[ec2-user@ip-172-31-4-7 ~]$
```

6- Verification of Jenkins service

```
[ec2-user@ip-172-31-4-7 ~]$ sudo systemctl start jenkins
```

```
[ec2-user@ip-172-31-4-7 ~]$ sudo systemctl status jenkins
● jenkins.service - Jenkins Continuous Integration Server
     Loaded: loaded (/usr/lib/systemd/system/jenkins.service; enabled; preset: disabled)
     Active: active (running) since Tue 2024-11-26 22:01:43 UTC; 8s ago
   Main PID: 26840 (java)
      Tasks: 46 (limit: 1111)
     Memory: 347.8M
        CPU: 14.631s
     CGroup: /system.slice/jenkins.service
             └─26840 /usr/bin/java -Djava.awt.headless=true -jar /usr/share/java/jenkins.war --webroot=/var/cache/jenkins/war --httpPort=8080

Nov 26 22:01:37 ip-172-31-4-7.us-east-2.compute.internal jenkins[26840]: This may also be found at: /var/lib/jenkins/secrets/initialAdminPassword
Nov 26 22:01:37 ip-172-31-4-7.us-east-2.compute.internal jenkins[26840]: *************************************************************
Nov 26 22:01:37 ip-172-31-4-7.us-east-2.compute.internal jenkins[26840]: *************************************************************
Nov 26 22:01:37 ip-172-31-4-7.us-east-2.compute.internal jenkins[26840]: *************************************************************
Nov 26 22:01:43 ip-172-31-4-7.us-east-2.compute.internal jenkins[26840]: 2024-11-26 22:01:43.389+0000 [id=30]          INFO        jenkins.InitReactorRunner$1#o
Nov 26 22:01:43 ip-172-31-4-7.us-east-2.compute.internal jenkins[26840]: 2024-11-26 22:01:43.414+0000 [id=23]          INFO        hudson.lifecycle.Lifecycle#onE
Nov 26 22:01:43 ip-172-31-4-7.us-east-2.compute.internal systemd[1]: Started jenkins.service - Jenkins Continuous Integration Server.
Nov 26 22:01:43 ip-172-31-4-7.us-east-2.compute.internal jenkins[26840]: 2024-11-26 22:01:43.789+0000 [id=46]          INFO        h.m.DownloadService$Downloadab
Nov 26 22:01:43 ip-172-31-4-7.us-east-2.compute.internal jenkins[26840]: 2024-11-26 22:01:43.790+0000 [id=46]          INFO        hudson.util.Retrier#start: Per
Nov 26 22:01:48 ip-172-31-4-7.us-east-2.compute.internal jenkins[26840]: 2024-11-26 22:01:48.509+0000 [id=68]          WARNING     h.n.DiskSpaceMonitorDescrip
```

7- Connect to Jenkins via your browser

http:// 18.219.18.7:8080 from your browser

Sign in [Jenkins]   ×   +

→   C   ⌂   ⚠ Not secure   18.219.18.7:8080/login?from=%2F

▶ Surah Ash-Shams |...   🔵 OWASP Top 10: The...   📓 Zen Class   🔲 FortiGate-7000 | For...   💬 WhatsApp   🌐 Training – Training_...   ◀ How to Import an E...   🗀 MI

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/lib/jenkins/secrets/initialAdminPassword`

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

Administrator password

[   ]

```
[ec2-user@ip-172-31-4-7 ~]$ sudo cat /var/lib/jenkins/secrets/initialAdminPassword
235b613d0b8f4ef09f4602d7b8eeb2d6
[ec2-user@ip-172-31-4-7 ~]$
```

235b613d0b8f4ef09f4602d7b8eeb2d6

ams |...   🌐 OWASP Top 10: The...   📧 Zen Class   🟥 FortiGate-7000 | For...   🟢 WhatsApp   🌐 Training – Training_...   🐟 How to Import an

Getting Started

Customize Jenkins

Plugins extend Jenkins with additional features to support many different needs

Install suggested plugins

Install plugins the Jenkins community finds most useful.

Select plugins to install

Select and install plugins most suitable for your needs.

Getting Started

Getting Started

✓ Folders	✓ OWASP Markup Formatter	↻ Build Timeout	↻ Credentials Binding	`** Ionicons API`
				`Folders`
				`OWASP Markup Formatter`
				`** ASM API`
				`** JSON Path API`
				`** Structs`
				`** Pipeline: Step API`
				`** Token Macro`
				`Build Timeout`

↻ Timestamper	↻ Workspace Cleanup	↻ Ant	↻ Gradle	
↻ Pipeline	↻ GitHub Branch Source	↻ Pipeline: GitHub Groovy Libraries	↻ Pipeline Graph View	
↺ Git	↻ SSH Build Agents	↻ Matrix Authorization Strategy	○ PAM Authentication	
○ LDAP	↻ Email Extension	○ Mailer	○ Dark Theme	

Getting Started

kkacc

Password

••••••••••••

Confirm password

••••••••••••

Full name

Umer

E-mail address

kkacc19@hotmail.com

Instance Configuration

Jenkins URL:

http://18.219.18.7:8080/

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 is ready!

Your Jenkins setup is complete.

Start using Jenkins

Search (CTRL+K)

Umer

log out

+ New Item

Build History

Manage Jenkins

My Views

Build Queue

No builds in the queue.

Build Executor Status 0/2

Built-In Node (offline)

Welcome to Jenkins!

This page is where your Jenkins jobs will be displayed. To get started, you can set up distributed builds or start building a software project.

Start building your software project

Create a job +

Set up a distributed build

Set up an agent

Configure a cloud

Learn more about distributed builds

REST API   Jenkins 2.479.1