Jenkins Task

Task Description:

Launch jenkins and explore creating projects and users.

Techstacks needs to be used :

- AWS EC2
- Jenkins

```
ubuntu@ip-172-31-43-94:~$ sudo apt install openjdk-21-jre
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  adwaita-icon-theme alsa-topology-conf alsa-ucm-conf at-spi2-common at-spi2-core ca-certificates-java dconf-gsettings-backend
  dconf-service fontconfig fontconfig-config fonts-dejavu-core fonts-dejavu-extra fonts-dejavu-mono gsettings-desktop-schemas
  gtk-update-icon-cache hicolor-icon-theme humanity-icon-theme java-common libasound2-data libasound2t64 libatk-bridge2.0-0t64
  libatk-wrapper-java libatk-wrapper-java-jni libatk1.0-0t64 libatspi2.0-0t64 libavahi-client3 libavahi-common-data libavahi-common3
  libcairo-gobject2 libcairo2 libcolord2 libcups2t64 libdatrie1 libdconf1 libdeflate0 libdrm-amdgpu1 libdrm-intel1 libepoxy0
  libfontconfig1 libgbm1 libgdk-pixbuf-2.0-0 libgdk-pixbuf2.0-bin libgdk-pixbuf2.0-common libgif7 libgl1 libgl1-mesa-dri libglvnd0
  libglx-mesa0 libglx0 libgraphite2-3 libgtk-3-0t64 libgtk-3-bin libgtk-3-common libharfbuzz0b libice6 libjbig0 libjpeg-turbo8
  libjpeg8 liblcms2-2 liblerc4 libllvm20 libpango-1.0-0 libpangocairo-1.0-0 libpangoft2-1.0-0 libpciaccess0 libpcsclite1
  libpixman-1-0 librsvg2-2 librsvg2-common libsharpyuv0 libsm6 libthai-data libthai0 libtiff6 libvulkan1 libwayland-client0
  libwayland-cursor0 libwayland-egl1 libwayland-server0 libwebp7 libx11-xcb1 libxaw7 libxcb-dri3-0 libxcb-glx0 libxcb-present0
  libxcb-randr0 libxcb-render0 libxcb-shape0 libxcb-shm0 libxcb-sync1 libxcb-xfixes0 libxcomposite1 libxcursor1 libxdamage1
  libxfixes3 libxft2 libxi6 libxinerama1 libxkbfile1 libxmu6 libxpm4 libxrandr2 libxrender1 libxshmfence1 libxt6t64 libxtst6 libxv1
  libxxf86dga1 libxxf86vm1 mesa-libgallium mesa-vulkan-drivers openjdk-21-jre-headless session-migration ubuntu-mono x11-common
  x11-utils
Suggested packages:
  default-jre alsa-utils libasound2-plugins colord cups-common gvfs liblcms2-utils pcscd librsvg2-bin libnss-mdns
  fonts-ipafont-gothic fonts-ipafont-mincho fonts-wqy-microhei | fonts-wqy-zenhei fonts-indic mesa-utils
Recommended packages:
  luit
The following NEW packages will be installed:
  adwaita-icon-theme alsa-topology-conf alsa-ucm-conf at-spi2-common at-spi2-core ca-certificates-java dconf-gsettings-backend
  dconf-service fontconfig fontconfig-config fonts-dejavu-core fonts-dejavu-extra fonts-dejavu-mono gsettings-desktop-schemas
  gtk-update-icon-cache hicolor-icon-theme humanity-icon-theme java-common libasound2-data libasound2t64 libatk-bridge2.0-0t64
  libatk-wrapper-java libatk-wrapper-java-jni libatk1.0-0t64 libatspi2.0-0t64 libavahi-client3 libavahi-common-data libavahi-common3
  libcairo-gobject2 libcairo2 libcolord2 libcups2t64 libdatrie1 libdconf1 libdeflate0 libdrm-amdgpu1 libdrm-intel1 libepoxy0
  libfontconfig1 libgbm1 libgdk-pixbuf-2.0-0 libgdk-pixbuf2.0-bin libgdk-pixbuf2.0-common libgif7 libgl1 libgl1-mesa-dri libglvnd0
  libglx-mesa0 libglx0 libgraphite2-3 libgtk-3-0t64 libgtk-3-bin libgtk-3-common libharfbuzz0b libice6 libjbig0 libjpeg-turbo8
  libjpeg8 liblcms2-2 liblerc4 libllvm20 libpango-1.0-0 libpangocairo-1.0-0 libpangoft2-1.0-0 libpciaccess0 libpcsclite1
  libpixman-1-0 librsvg2-2 librsvg2-common libsharpyuv0 libsm6 libthai-data libthai0 libtiff6 libvulkan1 libwayland-client0
  libwayland-cursor0 libwayland-egl1 libwayland-server0 libwebp7 libx11-xcb1 libxaw7 libxcb-dri3-0 libxcb-glx0 libxcb-present0
  libxcb-randr0 libxcb-render0 libxcb-shape0 libxcb-shm0 libxcb-sync1 libxcb-xfixes0 libxcomposite1 libxcursor1 libxdamage1
  libxfixes3 libxft2 libxi6 libxinerama1 libxkbfile1 libxmu6 libxpm4 libxrandr2 libxrender1 libxshmfence1 libxt6t64 libxtst6 libxv1
  libxxf86dga1 libxxf86vm1 mesa-libgallium mesa-vulkan-drivers openjdk-21-jre openjdk-21-jre-headless session-migration ubuntu-mono
  x11-common x11-utils
0 upgraded, 117 newly installed, 0 to remove and 1 not upgraded.
Need to get 122 MB of archives.
```

```
Need to get 122 MB of archives.
After this operation, 568 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 libgdk-pixbuf2.0-common all 2.42.10+dfsg-3ubuntu3.2 [819
2 B]
Get:2 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble/main amd64 libjpeg-turbo8 amd64 2.1.5-2ubuntu2 [150 kB]
Get:3 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble/main amd64 libjpeg8 amd64 8c-2ubuntu11 [2148 B]
Get:4 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 libdeflate0 amd64 1.19-1build1.1 [43.9 kB]
Get:5 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble/main amd64 libjbig0 amd64 2.1-6.1ubuntu2 [29.7 kB]
Get:6 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble/main amd64 liblerc4 amd64 4.0.0+ds-4ubuntu2 [179 kB]
Get:7 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble/main amd64 libsharpyuv0 amd64 1.3.2-0.4build3 [15.8 kB]
Get:8 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble/main amd64 libwebp7 amd64 1.3.2-0.4build3 [230 kB]
Get:9 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 libtiff6 amd64 4.5.1+git230720-4ubuntu2.4 [199 kB]
Get:10 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 libgdk-pixbuf-2.0-0 amd64 2.42.10+dfsg-3ubuntu3.2 [147
kB]
Get:11 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 gtk-update-icon-cache amd64 3.24.41-4ubuntu1.3 [51.9 kB
]
Get:12 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble/main amd64 hicolor-icon-theme all 0.17-2 [9976 B]
Get:13 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble/main amd64 humanity-icon-theme all 0.6.16 [1282 kB]
Get:14 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble/main amd64 ubuntu-mono all 24.04-0ubuntu1 [151 kB]
Get:15 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble/main amd64 adwaita-icon-theme all 46.0-1 [723 kB]
Get:16 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble/main amd64 alsa-topology-conf all 1.2.5.1-2 [15.5 kB]
Get:17 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 libasound2-data all 1.2.11-1ubuntu0.1 [21.1 kB]
Get:18 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 libasound2t64 amd64 1.2.11-1ubuntu0.1 [399 kB]
Get:19 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 alsa-ucm-conf all 1.2.10-1ubuntu5.7 [66.4 kB]
Get:20 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble/main amd64 at-spi2-common all 2.52.0-1build1 [8674 B]
Get:21 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble/main amd64 libxi6 amd64 2:1.8.1-1build1 [32.4 kB]
Get:22 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble/main amd64 libatspi2.0-0t64 amd64 2.52.0-1build1 [80.5 kB]
Get:23 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble/main amd64 x11-common all 1:7.7+23ubuntu3 [21.7 kB]
Get:24 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble/main amd64 libxtst6 amd64 2:1.2.3-1.1build1 [12.6 kB]
Get:25 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 libdconf1 amd64 0.40.0-4ubuntu0.1 [39.6 kB]
Get:26 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 dconf-service amd64 0.40.0-4ubuntu0.1 [27.6 kB]
Get:27 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 dconf-gsettings-backend amd64 0.40.0-4ubuntu0.1 [22.1 k
B]
Get:28 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble/main amd64 session-migration amd64 0.3.9build1 [9034 B]
Get:29 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 gsettings-desktop-schemas all 46.1-0ubuntu1 [35.6 kB]
Get:30 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble/main amd64 at-spi2-core amd64 2.52.0-1build1 [56.6 kB]
Get:31 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble/main amd64 ca-certificates-java all 20240118 [11.6 kB]
Get:32 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble/main amd64 fonts-dejavu-mono all 2.37-8 [502 kB]
Get:33 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble/main amd64 fonts-dejavu-core all 2.37-8 [835 kB]
Get:34 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble/main amd64 fontconfig-config amd64 2.15.0-1.1ubuntu2 [37.3 kB]
```

```
ubuntu@ip-172-31-43-94:~$ java --version
openjdk 21.0.9 2025-10-21
OpenJDK Runtime Environment (build 21.0.9+10-Ubuntu-124.04)
OpenJDK 64-Bit Server VM (build 21.0.9+10-Ubuntu-124.04, mixed mode, sharing)
ubuntu@ip-172-31-43-94:~$ sudo wget -O /etc/apt/keyrings/jenkins-keyring.asc \
  https://pkg.jenkins.io/debian-stable/jenkins.io-2023.key
echo "deb [signed-by=/etc/apt/keyrings/jenkins-keyring.asc]" \
  https://pkg.jenkins.io/debian-stable binary/ | sudo tee \
  /etc/apt/sources.list.d/jenkins.list > /dev/null
sudo apt update
sudo apt install jenkins
--2025-12-11 16:24:19--  https://pkg.jenkins.io/debian-stable/jenkins.io-2023.key
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: 3175 (3.1K) [application/pgp-keys]
Saving to: '/etc/apt/keyrings/jenkins-keyring.asc'

/etc/apt/keyrings/jenkins-keyring 100%[=====================================================================>]  3.10K  --.-KB/s    in 0s

2025-12-11 16:24:19 (49.2 MB/s) - '/etc/apt/keyrings/jenkins-keyring.asc' saved [3175/3175]

Hit:1 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble InRelease
Hit:2 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble-updates InRelease
Hit:3 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble-backports InRelease
Ign:4 https://pkg.jenkins.io/debian-stable binary/ InRelease
Get:5 https://pkg.jenkins.io/debian-stable binary/ Release [2044 B]
Get:6 https://pkg.jenkins.io/debian-stable binary/ Release.gpg [833 B]
Hit:7 http://security.ubuntu.com/ubuntu noble-security InRelease
Get:8 https://pkg.jenkins.io/debian-stable binary/ Packages [30.3 kB]
Fetched 33.2 kB in 0s (66.4 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
1 package can be upgraded. Run 'apt list --upgradable' to see it.
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
```

```
ubuntu@ip-172-31-43-94:~$ sudo systemctl status jenkins
● jenkins.service - Jenkins Continuous Integration Server
     Loaded: loaded (/usr/lib/systemd/system/jenkins.service; enabled; preset: enabled)
     Active: active (running) since Thu 2025-12-11 16:25:32 UTC; 40s ago
   Main PID: 14637 (java)
      Tasks: 41 (limit: 1008)
     Memory: 299.2M (peak: 328.2M)
        CPU: 19.084s
     CGroup: /system.slice/jenkins.service
             └─14637 /usr/bin/java -Djava.awt.headless=true -jar /usr/share/java/jenkins.war --webroot=/var/cache/jenkins/war --httpP

Dec 11 16:25:28 ip-172-31-43-94 jenkins[14637]: [LF> This may also be found at: /var/lib/jenkins/secrets/initialAdminPassword
Dec 11 16:25:28 ip-172-31-43-94 jenkins[14637]: [LF>

ubuntu@ip-172-31-43-94:~$ cd /var/lib
ubuntu@ip-172-31-43-94:/var/lib$ ls
PackageKit   ca-certificates-java   dpkg            landscape   pam          shells.state   tpm                      update-manager
amazon       chrony                 git             libuuid     plymouth     shim-signed    ubuntu-advantage         update-notifier
app-info     cloud                  grub            logrotate   polkit-1     snapd          ubuntu-release-upgrader  usb_modeswitch
apport       command-not-found      hibinit-agent   man-db      private      sudo           ucf                      vim
apt          dbus                   ieee-data       misc        python       swcatalog      udisks2                  xml-core
boltd        dhcpcd                 jenkins         os-prober   sgml-base    systemd        unattended-upgrades
ubuntu@ip-172-31-43-94:/var/lib$ cd jenkins
ubuntu@ip-172-31-43-94:/var/lib/jenkins$ ls
config.xml                    jenkins.telemetry.Correlator.xml   nodeMonitors.xml   secret.key                   secrets    userContent
hudson.model.UpdateCenter.xml jobs                               plugins            secret.key.not-so-secret     updates    users
ubuntu@ip-172-31-43-94:/var/lib/jenkins$ cat secret.key
c53193733a54c64415575dc25beb9af11e84a3cbd9f1a45062ab07603ec25615ubuntu@ip-172-31-43-94:/var/lib/jenkins$
ubuntu@ip-172-31-43-94:/var/lib/jenkins$ cd secrets
-bash: cd: secrets: Permission denied
ubuntu@ip-172-31-43-94:/var/lib/jenkins$ sudo cd secrets
sudo: cd: command not found
sudo: "cd" is a shell built-in command, it cannot be run directly.
sudo: the -s option may be used to run a privileged shell.
sudo: the -D option may be used to run a command in a specific directory.
ubuntu@ip-172-31-43-94:/var/lib/jenkins$ sudo su
root@ip-172-31-43-94:/var/lib/jenkins# cd secrets
root@ip-172-31-43-94:/var/lib/jenkins/secrets# ls
hudson.model.User.DIRNAMES   initialAdminPassword   jenkins.model.Jenkins.crumbSalt   master.key
root@ip-172-31-43-94:/var/lib/jenkins/secrets# cat initialAdminPassword
c697c51aea7048a892e2c54ae671d68d
```
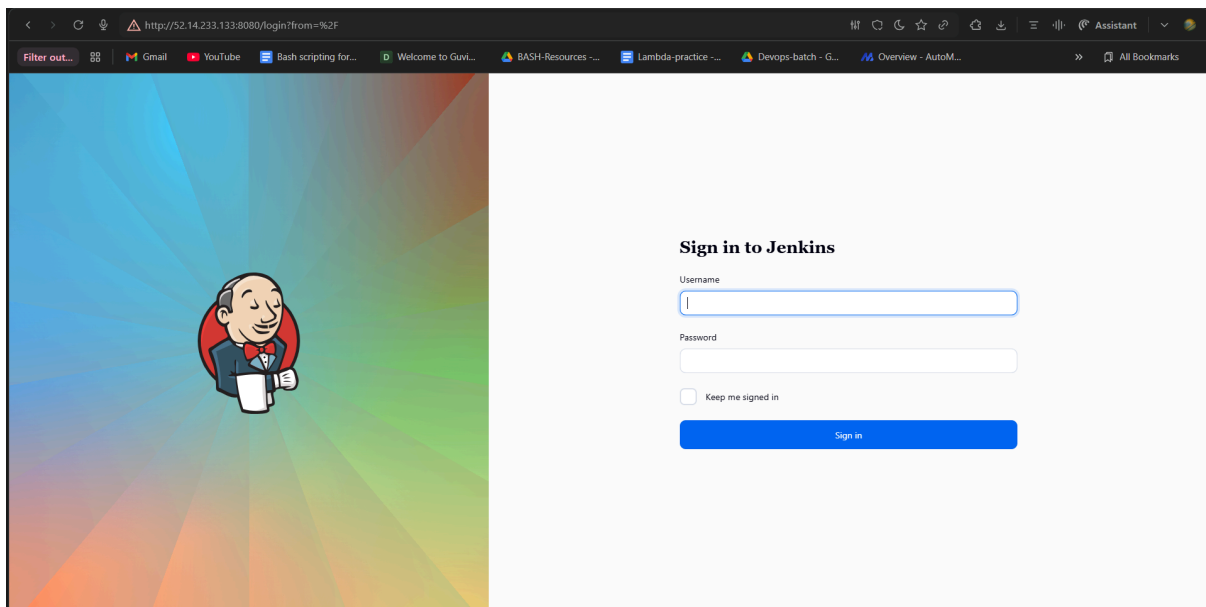
New Item

Enter an item name

`task`

Select an item type

Freestyle project
Classic, general-purpose job type that checks out from up to one SCM, executes build steps serially, followed by post-build steps like archiving artifacts and sending email notifications.

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.

Multibranch Pipeline
Creates a set of Pipeline projects according to detected branches in one SCM repository.

Organization Folder
Creates a set of multibranch project subfolders by scanning for repositories.

OK

Status
Changes
Workspace
Build Now
Configure
Delete Project
Rename

Builds

Filter

Today
#1 4:48 PM

✓ **task**   Edit description

test

Permalinks

- Last build (#1), 15 sec ago
- Last stable build (#1), 15 sec ago
- Last successful build (#1), 15 sec ago
- Last completed build (#1), 15 sec ago

Status
Changes
Console Output
Edit Build Information
Delete build '#1'
Timings

✓ **Console Output**   Download   Copy   View as plain text

```
Started by user Sheersh Sinha
Running as SYSTEM
Building in workspace /var/lib/jenkins/workspace/task
[task] $ /bin/bash /tmp/jenkins10719610564893877354.sh
[0;34m
          JENKINS FREESTYLE JOB - AUTOMATION DEMO

[0m

[1;33m[STEP 1][0m Creating project directory structure...
[0;32m Directories created[0m

[1;33m[STEP 2][0m Generating Jenkinsfile...
[0;32m Jenkinsfile created[0m

[1;33m[STEP 3][0m Creating build configuration file...
[0;32m Configuration file created[0m

[1;33m[STEP 4][0m Creating build log...
[0;32m Build log created[0m

[1;33m[STEP 5][0m Creating congratulations message...
[0;32m Success message created[0m

[1;33m[STEP 6][0m Generating project summary...
/tmp/jenkins10719610564893877354.sh: line 116: warning: here-document at line 113 delimited by end-of-file (wanted `EOF')
Finished: SUCCESS
```