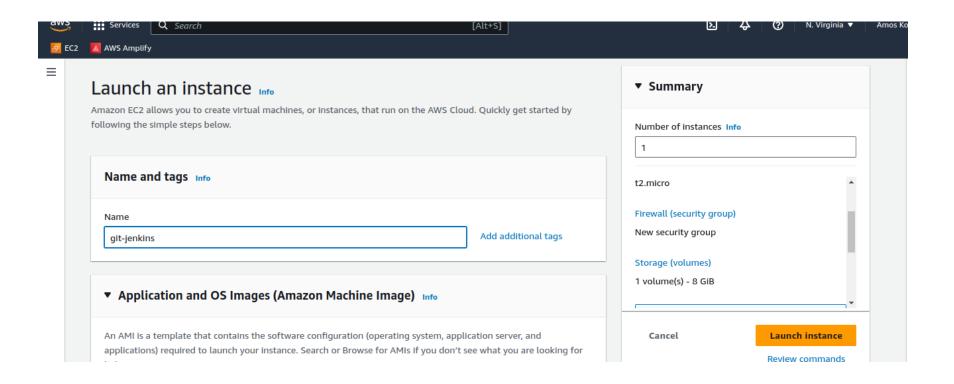
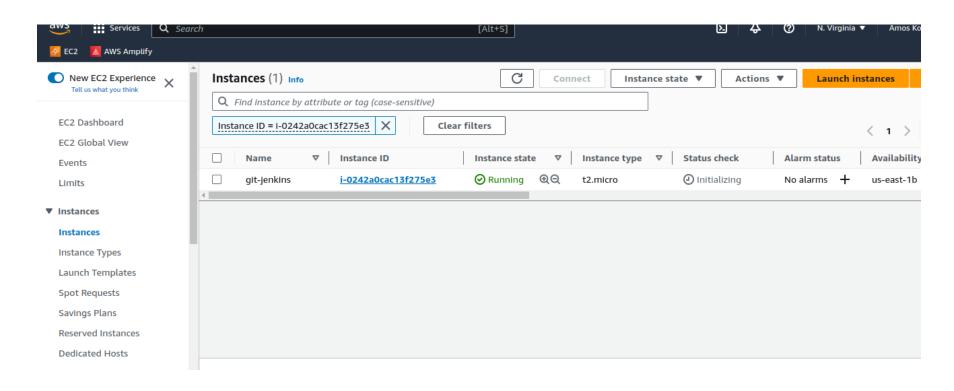
Git and jenkins project/DevOps

Created by Amos Koech Guided by Ashish Mittal

Launch an Instance



Git-jenkins instance running



Run the instance on terminal and install # yum install wget -y

```
ronix@ronix-koech:~$ ssh -i Downloads/my-new-key.pem ec2-user@54.147.55.92
The authenticity of host '54.147.55.92 (54.147.55.92)' can't be established.
ED25519 key fingerprint is SHA256:sv4GC45aACDMg8zmhkC13xdk34Got3BxlPFUvp2N4Mo.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])?    yes
Warning: Permanently added '54.147.55.92' (ED25519) to the list of known hosts.
Register this system with Red Hat Insights: insights-client --register
Create an account or view all your systems at https://red.ht/insights-dashboard
[ec2-user@ip-172-31-94-55 ~]$ sudo -i
[root@ip-172-31-94-55 ~]# yum install wget -y
Updating Subscription Management repositories.
Unable to read consumer identity
This system is not registered with an entitlement server. You can use subscription-manager to register.
Red Hat Enterprise Linux 9 for x86 64 - AppStream from RHUI (RPMs)
                                                                                                           48 MB/s | 22 MB
                                                                                                                              00:00
Red Hat Enterprise Linux 9 for x86 64 - BaseOS from RHUI (RPMs)
                                                                                                           42 MB/s | 13 MB
                                                                                                                              00:00
Red Hat Enterprise Linux 9 Client Configuration
                                                                                                           29 kB/s | 3.2 kB
                                                                                                                              00:00
Dependencies resolved.
-----
                         Architecture
                                                   Version
                                                                                     Repository
Installing:
                         x86 64
                                                  1.21.1-7.el9
                                                                                     rhel-9-appstream-rhui-rpms
                                                                                                                                 794 k
Transaction Summarv
Install 1 Package
Total download size: 794 k
Installed size: 3.1 M
Downloading Packages:
waet-1.21.1-7.el9.x86 64.rpm
                                                                                                           16 MB/s | 794 kB
```

Run sudo wgetand install java-11

```
Complete!
[root@ip-172-31-94-55 ~]#
[root@ip-172-31-94-55 ~]# sudo wget -0 /etc/yum.repos.d/jenkins.repo https://pkg.jenkins.io/redhat-stable/jenkins.repo
--2023-06-30 19:48:42-- https://pkg.jenkins.io/redhat-stable/jenkins.repo
Resolving pkg.jenkins.io (pkg.jenkins.io)... 146.75.34.133, 2a04:4e42:79::645
Connecting to pkg.jenkins.io (pkg.jenkins.io)|146.75.34.133|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 85
Saving to: '/etc/yum.repos.d/jenkins.repo'
/etc/yum.repos.d/jenkins.repo
                               85 --.-KB/s
                                                                                                                    in 0s
2023-06-30 19:48:42 (5.95 MB/s) - '/etc/yum.repos.d/jenkins.repo' saved [85/85]
[root@ip-172-31-94-55 ~]# sudo rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io.key
[root@ip-172-31-94-55 ~]# sudo yum install java-11-openjdk
Updating Subscription Management repositories.
Unable to read consumer identity
This system is not registered with an entitlement server. You can use subscription-manager to register.
Jenkins-stable
                                                                                                   190 kB/s | 26 kB
                                                                                                                     00:00
Dependencies resolved.
Package
                                      Architecture
                                                     Version
                                                                                          Repository
                                                                                                                          Size
Installing:
java-11-openjdk
                                      x86 64
                                                     1:11.0.19.0.7-4.el9
                                                                                          rhel-9-appstream-rhui-rpms
                                                                                                                         443 k
Installing dependencies:
```

Change directory and cd to yum.repos.id/

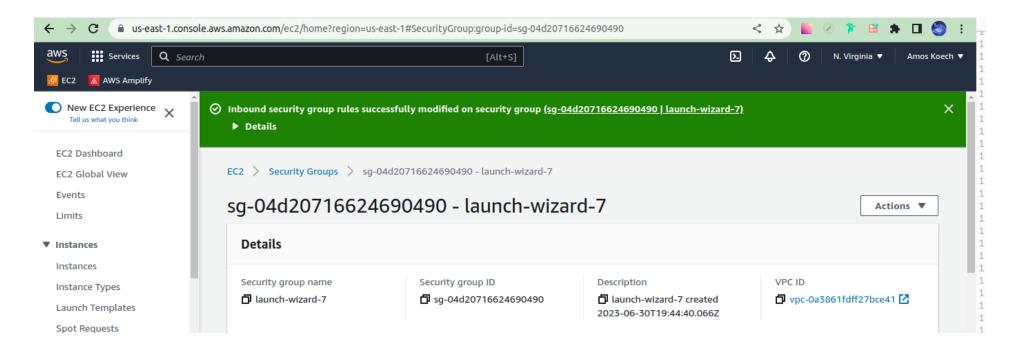
jtime		gshadow-				
liases			libuser.conf		rsyncd.conf	sysctl.conf
		host.conf	locale.conf	passwd	rsyslog.conf	
	DIR_COLORS	hostname	localtime	passwd-		
nacrontab	DIR COLORS.lightbgcolor	hosts	login.defs			system-release
sound.conf	dnf	init.d	logrotate.conf			system-release-cpe
	dracut.conf	inittab	logrotate.d			
		inputro	machine-id			
			magic		services	
ashrc	environment		makedumpfile.conf.sample	printcap	sestatus.conf	
	ethertypes	issue	man_db.conf	profile		
	exports		microcode_ctl		shadow	
hrony.conf	filesystems	issue.net	mke2fs.conf	protocols	shadow-	vconsole.conf
hrony.keys					shells	virc
				rc0.d		
	fstab		motd	rc1.d		wgetrc
	fuse.conf			rc2.d		
		kdump.conf	mtab	rc3.d		
ron.deny				rc4.d		xattr.conf
		krb5.conf	networks	rc5.d	subgid	
			nsswitch.conf	rc6.d	subgid-	
rontab	GREP_COLORS	ld.so.cache	nsswitch.conf.bak		subuid	
		ld.so.conf		rc.local	subuid-	yum.conf
	group		oddjobd.conf	redhat-release	sudo.conf	
sh.cshrc	group-	libaudit.conf		resolv.conf	sudoers	
sh.login	grub2.cfg					
					sudo-ldap.conf	
	gshadow		os-release	грс		

Change [gpgcheck=1 to gpcheck=0]

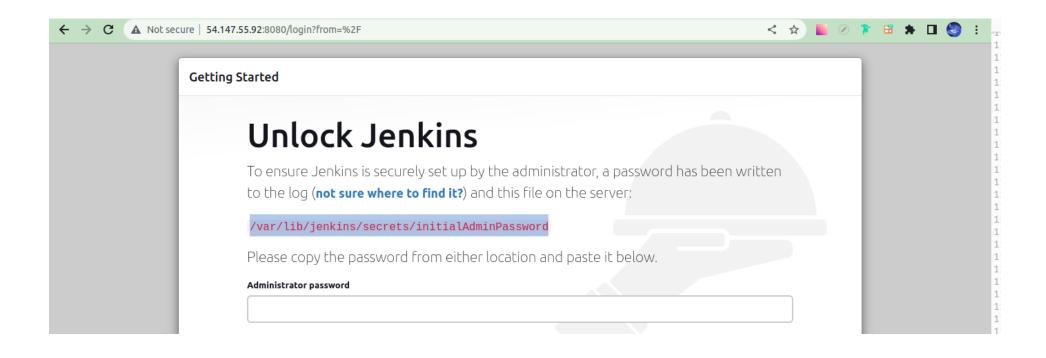
Start jenkins and check the jenkins status

```
[root@ip-172-31-94-55 ~]# systemctl start jenkins
[root@ip-172-31-94-55 ~]# systemctl status jenkins
jenkins.service - Jenkins Continuous Integration Server
    Loaded: loaded (/usr/lib/systemd/system/jenkins.service; disabled; preset: disabled)
    Active: active (running) since Fri 2023-06-30 19:55:10 UTC; 55s ago
  Main PID: 14851 (java)
     Tasks: 42 (limit: 4421)
    Memory: 353.8M
       CPU: 46.173s
    CGroup: /system.slice/jenkins.service
             —14851 /usr/bin/java -Djava.awt.headless=true -jar /usr/share/java/jenkins.war --webroot=/var/cache/jenkins/war --httpPort=8080
Jun 30 19:54:34 ip-172-31-94-55.ec2.internal jenkins[14851]: fde695f101a44b5a90c57965a960e3e8
Jun 30 19:54:34 ip-172-31-94-55.ec2.internal jenkins[14851]: This may also be found at: /var/lib/jenkins/secrets/initialAdminPassword
Jun 30 19:54:34 ip-172-31-94-55.ec2.internal jenkins[14851]: *****
Jun 30 19:54:34 ip-172-31-94-55.ec2.internal jenkins[14851]: *******************
Jun 30 19:55:10 ip-172-31-94-55.ec2.internal jenkins[14851]: 2023-06-30 19:55:10.878+0000 [id=29]
                                                                                                             ienkins.InitReactorRunnerS1#onAt>
                                                                                                  INFO
                                                                                                             hudson.lifecycle.Lifecycle#onRea>
Jun 30 19:55:10 ip-172-31-94-55.ec2.internal jenkins[14851]: 2023-06-30 19:55:10.901+0000 [id=22]
                                                                                                  INFO
Jun 30 19:55:10 ip-172-31-94-55.ec2.internal systemd[1]: Started Jenkins Continuous Integration Server.
Jun 30 19:55:10 ip-172-31-94-55.ec2.internal jenkins[14851]: 2023-06-30 19:55:10.996+0000 [id=44]
                                                                                                             h.m.DownloadService$Downloadable>
                                                                                                  INFO
Jun 30 19:55:10 ip-172-31-94-55.ec2.internal ienkins[14851]: 2023-06-30 19:55:10.997+0000 [id=44]
                                                                                                             hudson.util.Retrier#start: Perfo>
                                                                                                  INFO
lines 1-20/20 (END)
```

Go the instance and allow security group port:8080



Paste the ip:8080 on terminal



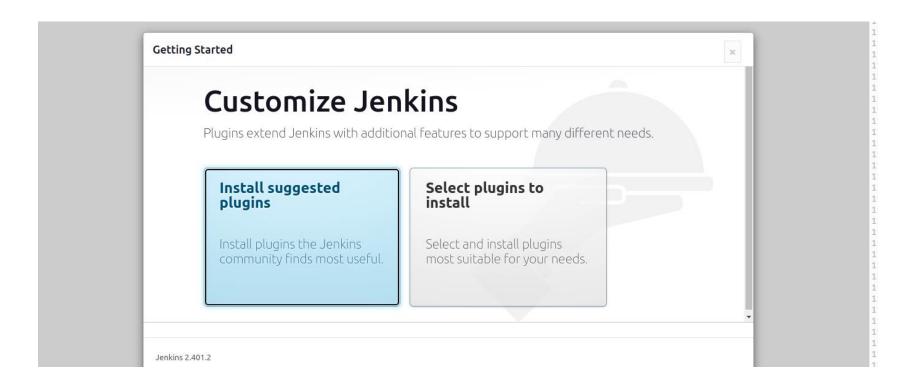
Copy and paste [link] starting with cat to display password

```
Jun 30 19:54:34 ip-172-31-94-55.ec2.internal jenkins[14851]: ******
Jun 30 19:55:10 ip-172-31-94-55.ec2.internal jenkins[14851]: 2023-06-30 19:55:10.878+0000 [id=29]
                                                                                                                     jenkins.InitReactorRunner$1#onAt>
                                                                                                         INFO
Jun 30 19:55:10 ip-172-31-94-55.ec2.internal jenkins[14851]: 2023-06-30 19:55:10.901+0000 [id=22]
                                                                                                         INFO
                                                                                                                     hudson.lifecvcle.Lifecvcle#onRea>
Jun 30 19:55:10 ip-172-31-94-55.ec2.internal systemd[1]: Started Jenkins Continuous Integration Server.
Jun 30 19:55:10 ip-172-31-94-55.ec2.internal jenkins[14851]: 2023-06-30 19:55:10.996+0000 [id=44]
                                                                                                         INFO
                                                                                                                     h.m.DownloadService$Downloadable>
                                                                                                                     hudson.util.Retrier#start: Perfo>
Jun 30 19:55:10 ip-172-31-94-55.ec2.internal jenkins[14851]: 2023-06-30 19:55:10.997+0000 [id=44]
                                                                                                         INFO
root@ip-172-31-94-55 ~]# systemctl enable jenkins
ynchronizing state of ienkins.service with SysV service script with /usr/lib/systemd/systemd-sysv-install.
xecuting: /usr/lib/systemd/systemd-sysv-install enable jenkins
reated symlink /etc/systemd/system/multi-user.target.wants/jenkins.service →/usr/lib/systemd/system/jenkins.service.
root@ip-172-31-94-55 ~]# jenkins --version
 .401.2
root@ip-172-31-94-55 ~|# cat /var/lib/jenkins/secrets/initialAdminPassword
fde695f101a44b5a90c57965a960e3e8
root@ip-172-31-94-55 ~]#
```

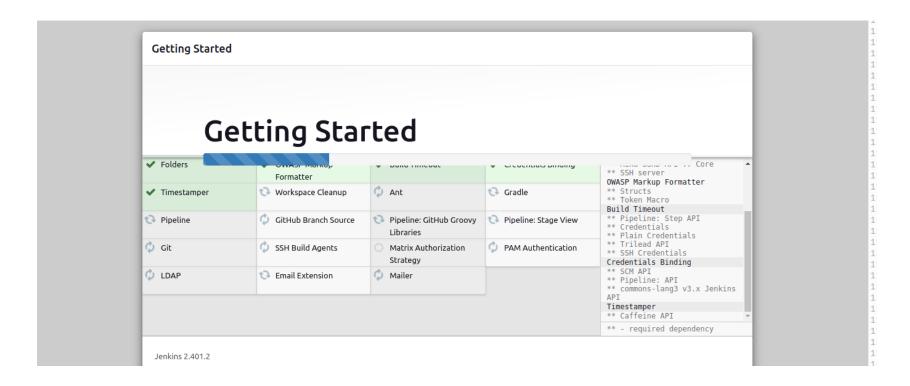
Paste password from terminal

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
Continue

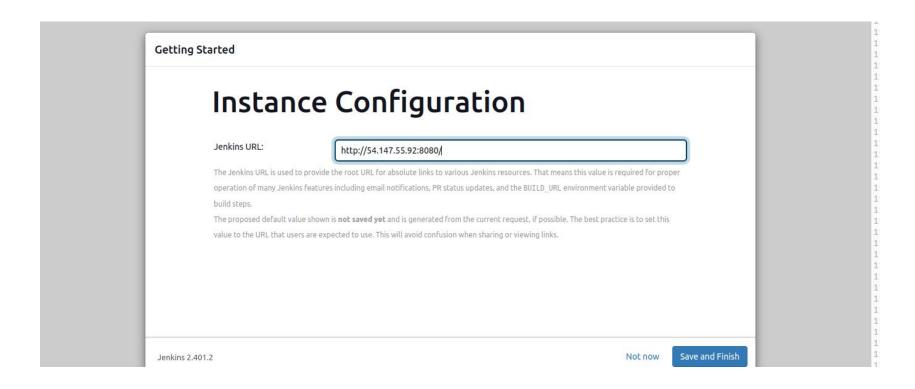
Install suggested plugins



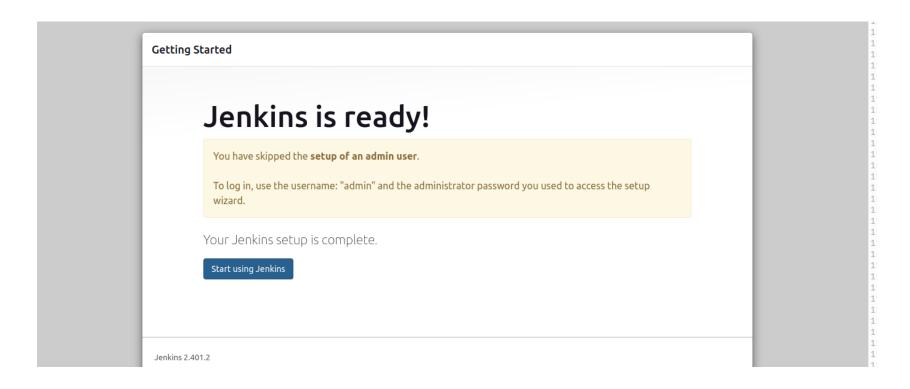
Start instaling



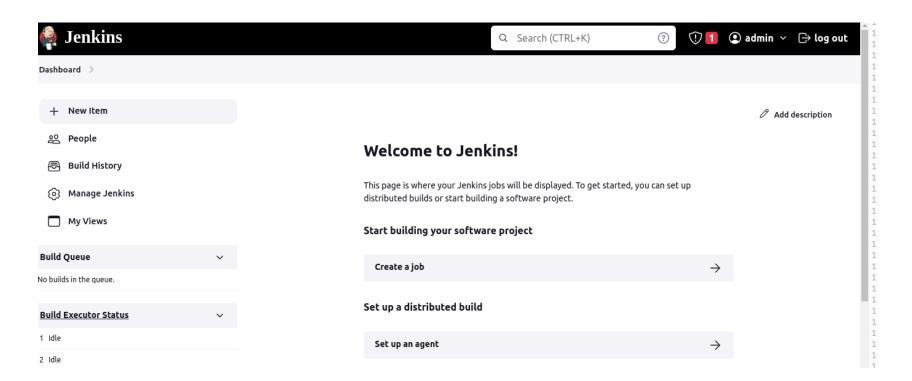
Instance config:save and continue



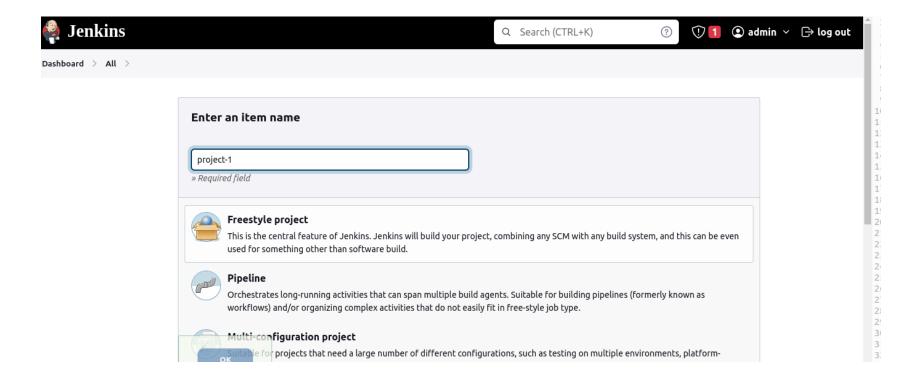
Welcome to jenkins:start using jenkins



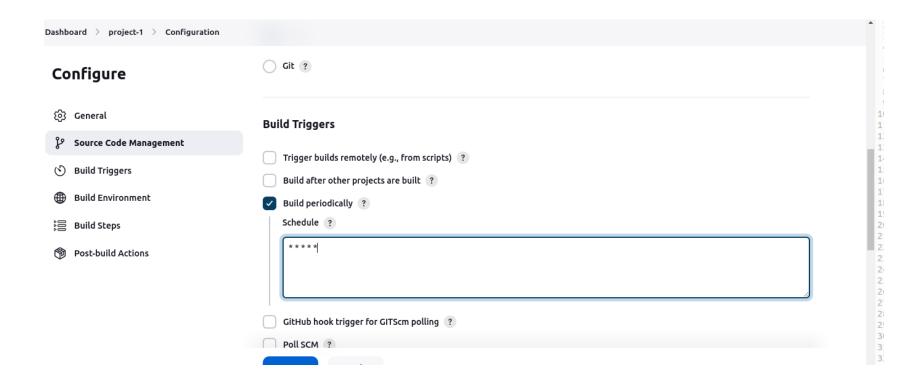
Create a job



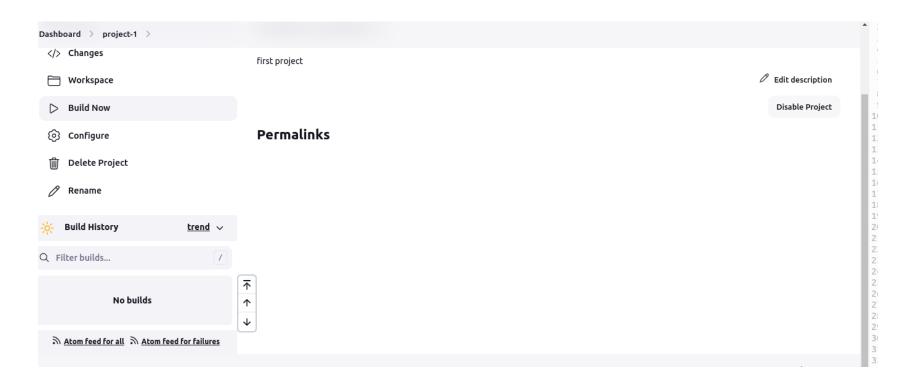
Enter job/project-1



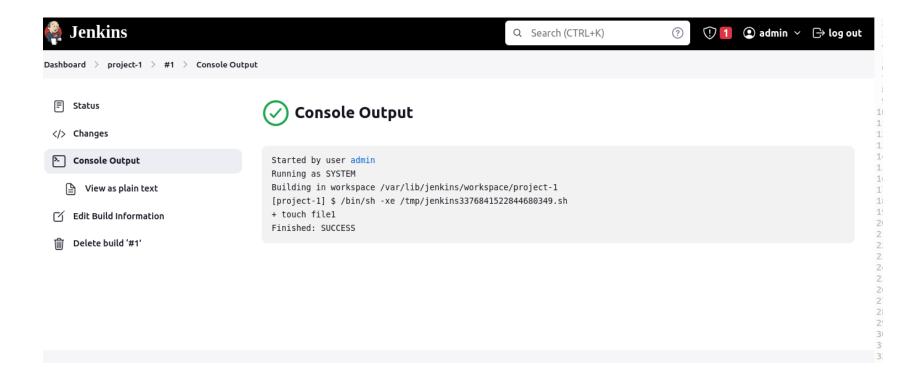
Build triggers[use crontab] to build periodically



Build now:project-1



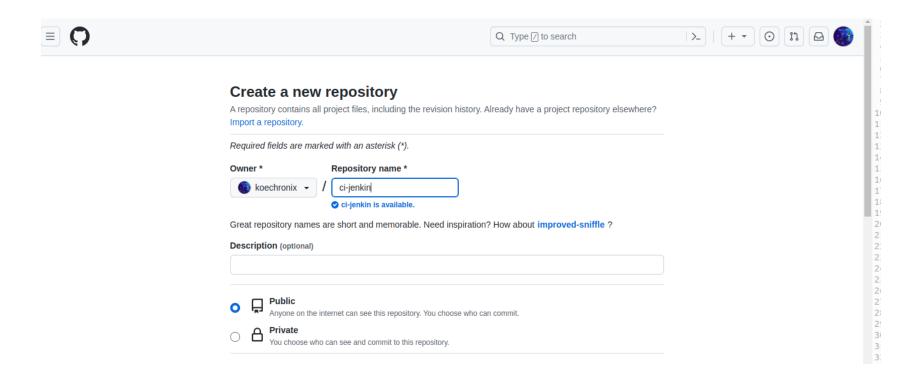
SUCCESS build for project-1



Project-2:intall git to link up with instance

```
[root@ip-172-31-94-55 ~]# yum install qit
Updating Subscription Management repositories.
Unable to read consumer identity
This system is not registered with an entitlement server. You can use subscription-manager to register.
Last metadata expiration check: 0:18:45 ago on Fri 30 Jun 2023 07:53:46 PM UTC.
Dependencies resolved.
                                                           Version
                                                                                           Repository
......
Installing:
                                                                                           rhel-9-appstream-rhui-rpms
                                                                                                                                    66 k
                                     x86 64
                                                           2.39.3-1.el9 2
Installing dependencies:
                                     noarch
                                                           1:27.2-8.el9 2.1
                                                                                           rhel-9-appstream-rhui-rpms
                                                                                                                                    9.6 k
                                     x86 64
                                                           2.39.3-1.el9 2
                                                                                           rhel-9-appstream-rhui-rpms
                                                                                                                                    4.3 M
git-core-doc
                                     noarch
                                                           2.39.3-1.el9 2
                                                                                           rhel-9-appstream-rhui-rpms
                                                                                                                                    2.9 M
perl-AutoLoader
                                                           5.74-480.el9
                                                                                           rhel-9-appstream-rhui-rpms
                                                                                                                                    23 k
                                     noarch
                                                                                                                                    185 k
perl-B
                                     x86 64
                                                           1.80-480.el9
                                                                                           rhel-9-appstream-rhui-rpms
perl-Carp
                                     noarch
                                                           1.50-460.el9
                                                                                           rhel-9-appstream-rhui-rpms
                                                                                                                                    31 k
                                                                                                                                    24 k
                                     noarch
                                                           0.66-480.el9
                                                                                           rhel-9-appstream-rhui-rpms
                                     x86 64
                                                           2.174-462.el9
                                                                                           rhel-9-appstream-rhui-rpms
                                                                                                                                    59 k
perl-Data-Dumper
perl-Digest
                                     noarch
                                                           1.19-4.el9
                                                                                           rhel-9-appstream-rhui-rpms
                                                                                                                                    29 k
perl-Digest-MD5
                                     x86 64
                                                           2.58-4.el9
                                                                                           rhel-9-appstream-rhui-rpms
                                                                                                                                    39 k
perl-DynaLoader
                                     x86 64
                                                                                                                                    27 k
                                                           1.47-480.el9
                                                                                           rhel-9-appstream-rhui-rpms
perl-Encode
                                     x86 64
                                                           4:3.08-462.el9
                                                                                           rhel-9-appstream-rhui-rpms
                                                                                                                                    1.7 M
perl-Errno
                                                                                           rhel-9-appstream-rhui-rpms
                                                                                                                                    17 k
                                     x86 64
                                                           1.30-480.el9
                                     noarch
                                                           1:0.17029-7.el9
                                                                                           rhel-9-appstream-rhui-rpms
                                                                                                                                    46 k
perl-Exporter
                                     noarch
                                                           5.74-461.el9
                                                                                           rhel-9-appstream-rhui-rpms
                                                                                                                                    34 k
perl-Fcntl
                                     x86 64
                                                           1.13-480.el9
                                                                                           rhel-9-appstream-rhui-rpms
                                                                                                                                    23 k
 perl-File-Basename
                                     noarch
                                                           2.85-480.el9
                                                                                           rhel-9-appstream-rhui-rpms
```

Create a repository on github



Create directory and initialize empty repo

```
[root@ip-172-31-94-55 ~]# mkdir d1
[root@ip-172-31-94-55 ~]# cd d1
[root@ip-172-31-94-55 d1]# git init
hint: Using 'master' as the name for the initial branch. This default branch name
hint: is subject to change. To configure the initial branch name to use in all
hint: of your new repositories, which will suppress this warning, call:
hint:
hint: Names commonly chosen instead of 'master' are 'main', 'trunk' and
hint: 'development'. The just-created branch can be renamed via this command:
hint: git branch -m <name>
Initialized empty Git repository in /root/d1/.git/
[root@ip-172-31-94-55 d1]#
```

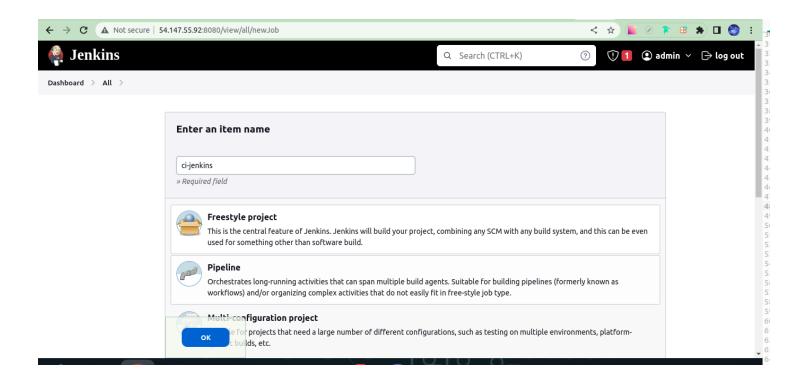
Vi.index.html and write something

```
Welcome to Devops where we learn CI
```

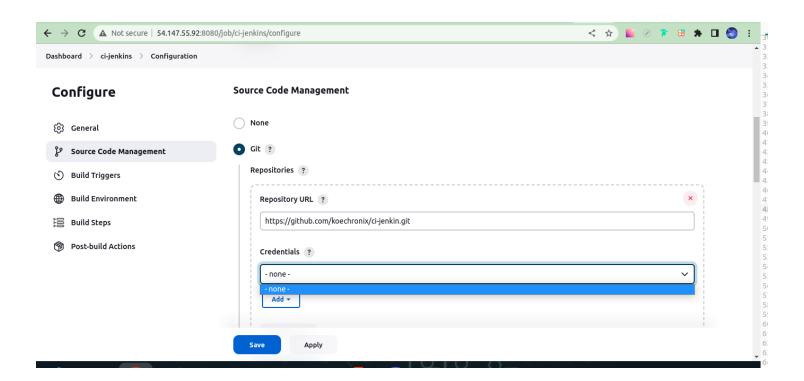
git remote add origin[repo link] git push origin master :username[your github username] password[PAT]

[root@ip-172-31-94-55 d1]# vi index.html [root@ip-172-31-94-55 d1]# git add . [root@ip-172-31-94-55 d1]# git commit -m "CI pipeline" [master (root-commit) 7a54a91] CI pipeline Committer: root <root@ip-172-31-94-55.ec2.internal> our name and email address were configured automatically based on your username and hostname. Please check that they are accurate. You can suppress this message by setting them explicitly. Run the following command and follow the instructions in your editor to edit your configuration file: git config --global --edit After doing this, you may fix the identity used for this commit with: git commit --amend --reset-author 1 file changed, 1 insertion(+) create mode 100644 index.html [root@ip-172-31-94-55 d1]# git remote add origin https://github.com/koechronix/ci-jenkin.git [root@ip-172-31-94-55 d1]# git push origin master Username for 'https://github.com': koechronix Password for 'https://koechronix@github.com':

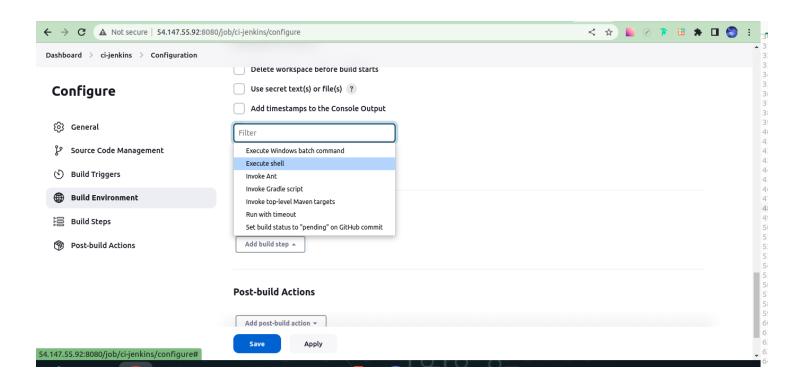
Build new job/new item[CI jenkins]



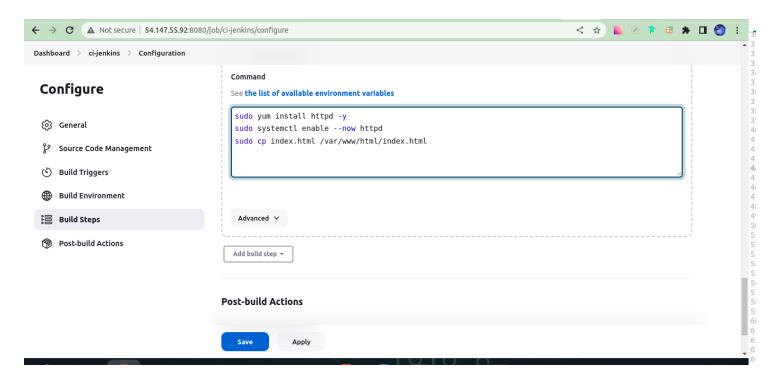
Configure:source code mgt: Git[paste link]



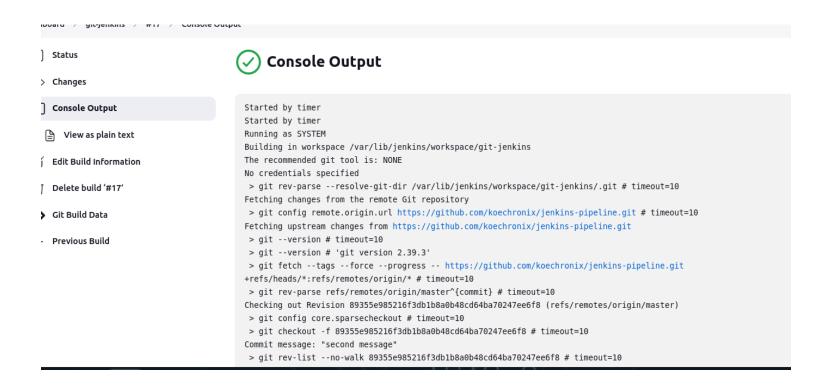
Execute shell to add commands



Add command then apply and save then build now



Success:linked with github



File1:ip/index.html on website



Welcome Amos to CI pipeline in jenkins The pipeline is working on perfectly

File2:ip/amos.html



Enjoying DevOps

• Thank you