

VM creation

The screenshot shows the Microsoft Azure portal interface. The main heading is 'CreateVm-canonical.ubuntu-24_04-lts-server-20251123125358 | Overview'. The deployment status is 'Your deployment is complete'. The deployment details show the name, subscription, resource group, start time, and correlation ID. The next steps section includes 'Setup auto-shutdown', 'Monitor VM health, performance and network dependencies', and 'Run a script inside the virtual machine'. A 'Deployment succeeded' notification is visible in the top right corner.

VM ssh

```
C:\Users\ryand\Desktop\sem5\COMP3184\assignment02>ssh -i virtual-machine-1_key.pem azureuser@52.226.164.188
Welcome to Ubuntu 24.04.3 LTS (GNU/Linux 6.14.0-1012-azure x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/pro

System information as of Sun Nov 23 18:12:06 UTC 2025

System load: 0.88          Processes:              115
Usage of /:   5.6% of 28.0GB Users logged in:                0
Memory usage: 39%          IPv4 address for eth0: 172.17.0.4
Swap usage:   0%

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

The list of available updates is more than a week old.
To check for new updates run: sudo apt update

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

azureuser@virtual-machine-1:~$
```

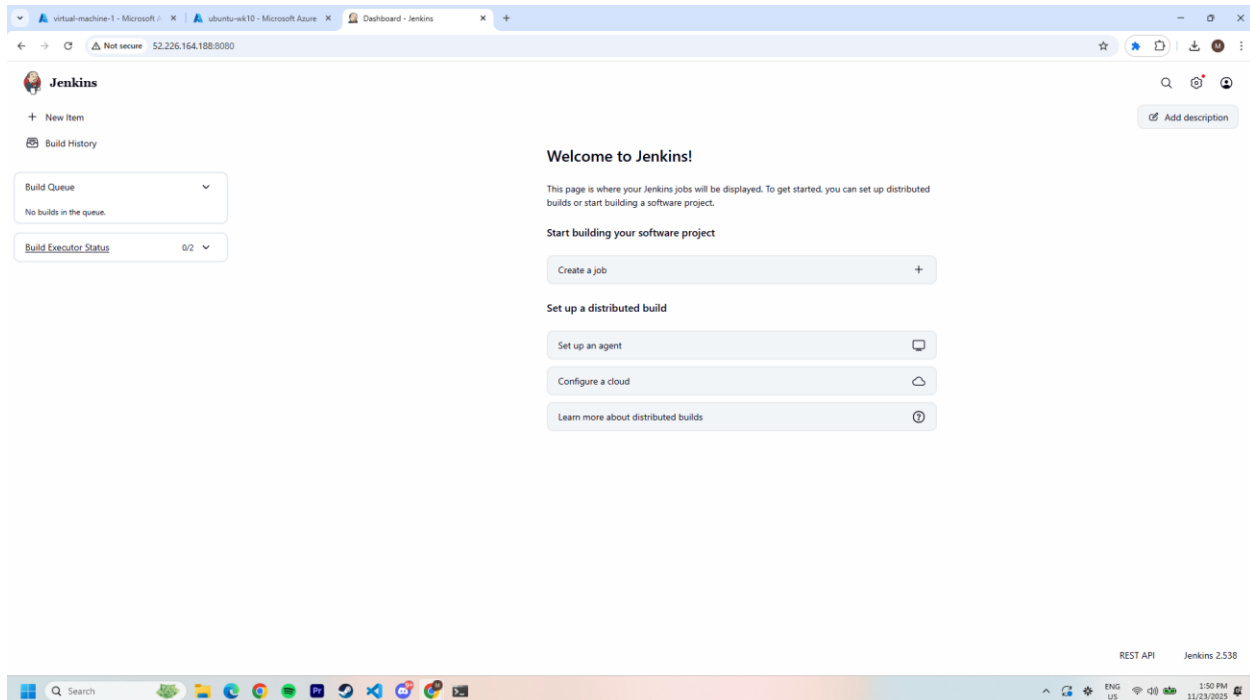
Java

```
azureuser@virtual-machine-1:~$ java -version
openjdk version "17.0.16" 2025-07-15
OpenJDK Runtime Environment (build 17.0.16+8-Ubuntu-0ubuntu124.04.1)
OpenJDK 64-Bit Server VM (build 17.0.16+8-Ubuntu-0ubuntu124.04.1, mixed mode, sharing)
azureuser@virtual-machine-1:~$
```

Jenkins

```
azureuser@virtual-machine-1:~$ sudo systemctl start jenkins
azureuser@virtual-machine-1:~$ sudo systemctl enable jenkins
Synchronizing state of jenkins.service with SysV service script with /usr/lib/systemd/systemd-sysv-install.
Executing: /usr/lib/systemd/systemd-sysv-install enable jenkins
azureuser@virtual-machine-1:~$ 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 Sun 2025-11-23 18:42:59 UTC; 37s ago
     Main PID: 5035 (java)
       Tasks: 42 (Limit: 993)
      Memory: 278.8M (peak: 319.7M)
         CPU: 16.352s
    CGroup: /system.slice/jenkins.service
            └─5035 /usr/bin/java -Djava.awt.headless=true -jar /usr/share/java/jenkins.war --webroot=/var/cache/jenkins/war --httpPort=8080

Nov 23 18:42:52 virtual-machine-1 jenkins[5035]: [LF]> This may also be found at: /var/lib/jenkins/secrets/initialAdminPassword
Nov 23 18:42:52 virtual-machine-1 jenkins[5035]: [LF]>
Nov 23 18:42:52 virtual-machine-1 jenkins[5035]: [LF]> *****
Nov 23 18:42:52 virtual-machine-1 jenkins[5035]: [LF]> *****
Nov 23 18:42:52 virtual-machine-1 jenkins[5035]: [LF]> *****
Nov 23 18:42:59 virtual-machine-1 jenkins[5035]: 2025-11-23 18:42:59.659+0000 [id=30] INFO jenkins.InitReactorRunner$1$NonAttained: Completed initialization
Nov 23 18:42:59 virtual-machine-1 jenkins[5035]: 2025-11-23 18:42:59.694+0000 [id=23] INFO hudson.Lifecycle.LifecycleNonReady: Jenkins is fully up and running
Nov 23 18:42:59 virtual-machine-1 systemd[1]: Started jenkins.service - Jenkins Continuous Integration Server.
Nov 23 18:42:59 virtual-machine-1 jenkins[5035]: 2025-11-23 18:42:59.914+0000 [id=47] INFO h.m.DownloadService$Downloadable#load: Obtained the updated data file for hudson.tasks.Maven.MavenInsta
Nov 23 18:42:59 virtual-machine-1 jenkins[5035]: 2025-11-23 18:42:59.916+0000 [id=47] INFO hudson.util.Retrier$start: Performed the action check updates server successfully at the attempt #1
lines 1-20/20 (END)
```



Docker

```
NO VM guests are running outdated hypervisor (qemu) BIOS
azureuser@virtual-machine-1:~$ docker --version
Docker version 29.0.2, build 8108357
azureuser@virtual-machine-1:~$ |
```

Git

```
azureuser@virtual-machine-1:~$ sudo apt install git -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
git is already the newest version (1:2.43.0-1ubuntu7.3).
git set to manually installed.
0 upgraded, 0 newly installed, 0 to remove and 35 not upgraded.
azureuser@virtual-machine-1:~$ git --version
git version 2.43.0
azureuser@virtual-machine-1:~$ |
```

```
azureuser@virtual-machine-1:~$ cd COMP3104/
azureuser@virtual-machine-1:~/COMP3104$ cd
azureuser@virtual-machine-1:~$ cd COMP3104/
azureuser@virtual-machine-1:~/COMP3104$ ls
README.md      build          package.json  src    wk02  wk04  wk06  wk10
assignment02    package-lock.json  public       wk01  wk03  wk05  wk07  wk11
azureuser@virtual-machine-1:~/COMP3104$ cd assignment02/
azureuser@virtual-machine-1:~/COMP3104/assignment02$ ls
hello.txt
azureuser@virtual-machine-1:~/COMP3104/assignment02$ git status
On branch main
Your branch is up to date with 'origin/main'.

Untracked files:
  (use "git add <file>..." to include in what will be committed)
  ./

nothing added to commit but untracked files present (use "git add" to track)
azureuser@virtual-machine-1:~/COMP3104/assignment02$ cd ..
azureuser@virtual-machine-1:~/COMP3104$ git status
On branch main
Your branch is up to date with 'origin/main'.

Untracked files:
  (use "git add <file>..." to include in what will be committed)
  assignment02/

nothing added to commit but untracked files present (use "git add" to track)
azureuser@virtual-machine-1:~/COMP3104$ git add assignment02/
azureuser@virtual-machine-1:~/COMP3104$ git commit -m "added assignment02 from VM"
[main 5f05f13] added assignment02 from VM
1 file changed, 3 insertions(+)
create mode 100644 assignment02/hello.txt
azureuser@virtual-machine-1:~/COMP3104$ git push -u origin main
Username for 'https://github.com': A-Shalchian
Password for 'https://A-Shalchian@github.com':
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Compressing objects: 100% (3/3), done.
Writing objects: 100% (4/4), 405 bytes | 405.00 KiB/s, done.
Total 4 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/A-Shalchian/COMP3104
  703b05d..5f05f13  main -> main
branch 'main' set up to track 'origin/main'.
azureuser@virtual-machine-1:~/COMP3104$
```