

# CONTAINER ORCHESTRATION AND INFRASTRUCTURE

## AUTOMATION LAB

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BATCH- 05

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### Installing Docker on Windows and Linux

#### On Windows-

Step1: Download the Docker Desktop

# Docker Desktop

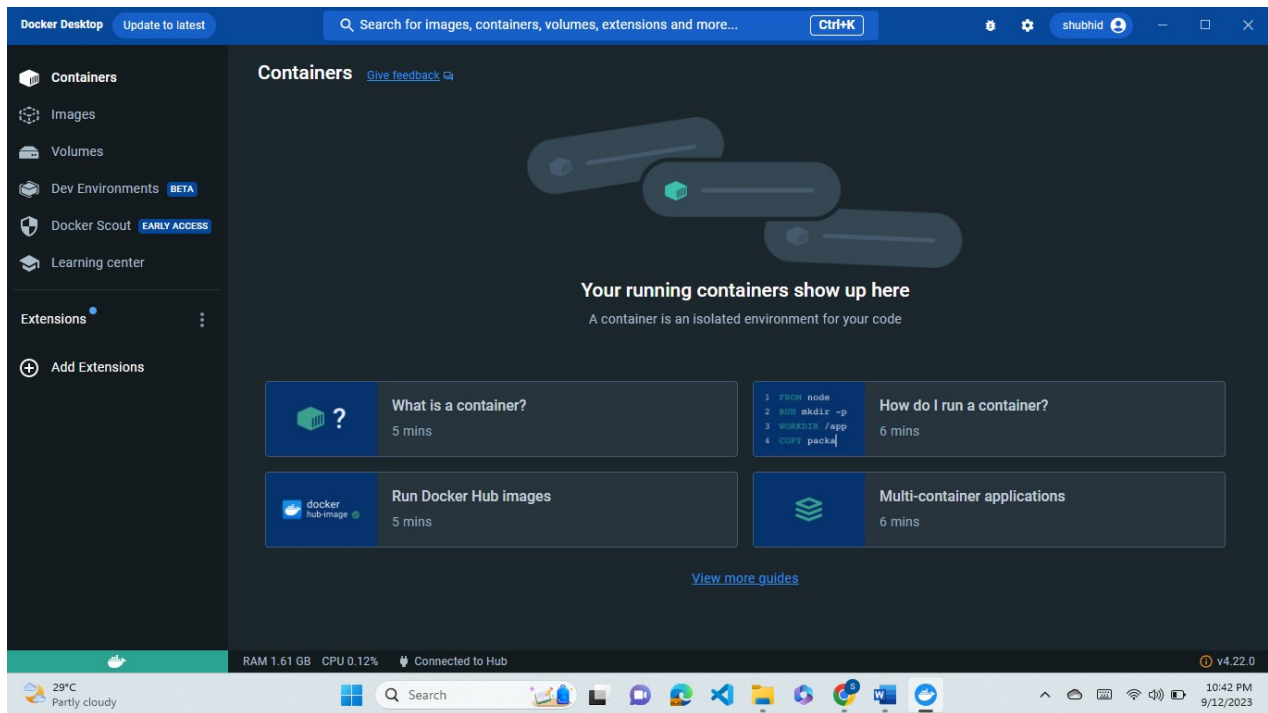
The fastest way to containerize applications on your  
desktop

[Download for Windows](#)

Also available for [Mac](#) and [Linux](#)

By downloading this, you agree to the terms of the [Docker Software End User License Agreement](#) and the [Docker Data Processing Agreement \(DPA\)](#).

Step 2: Docker Desktop is installed successfully.



Step 3: To upgrade the packages within your WSL distribution, type 'wsl --update' in command prompt

```
Microsoft Windows [Version 10.0.22621.2134]
(c) Microsoft Corporation. All rights reserved.

C:\Users\admin>wsl --update
Installing: Windows Subsystem for Linux
Windows Subsystem for Linux has been installed.

C:\Users\admin>
```

Step 4: Run the following command in the command prompt to check the docker version

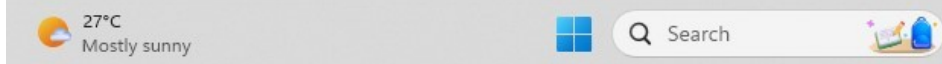
```
Microsoft Windows [Version 10.0.22621.1992]
(c) Microsoft Corporation. All rights reserved.

C:\Users\admin>docker version

Client:
 Cloud integration: v1.0.35-desktop+001
 Version:          24.0.5
 API version:      1.43
 Go version:       go1.20.6
 Git commit:       ced0996
 Built:           Fri Jul 21 20:36:24 2023
 OS/Arch:         windows/amd64
 Context:         default

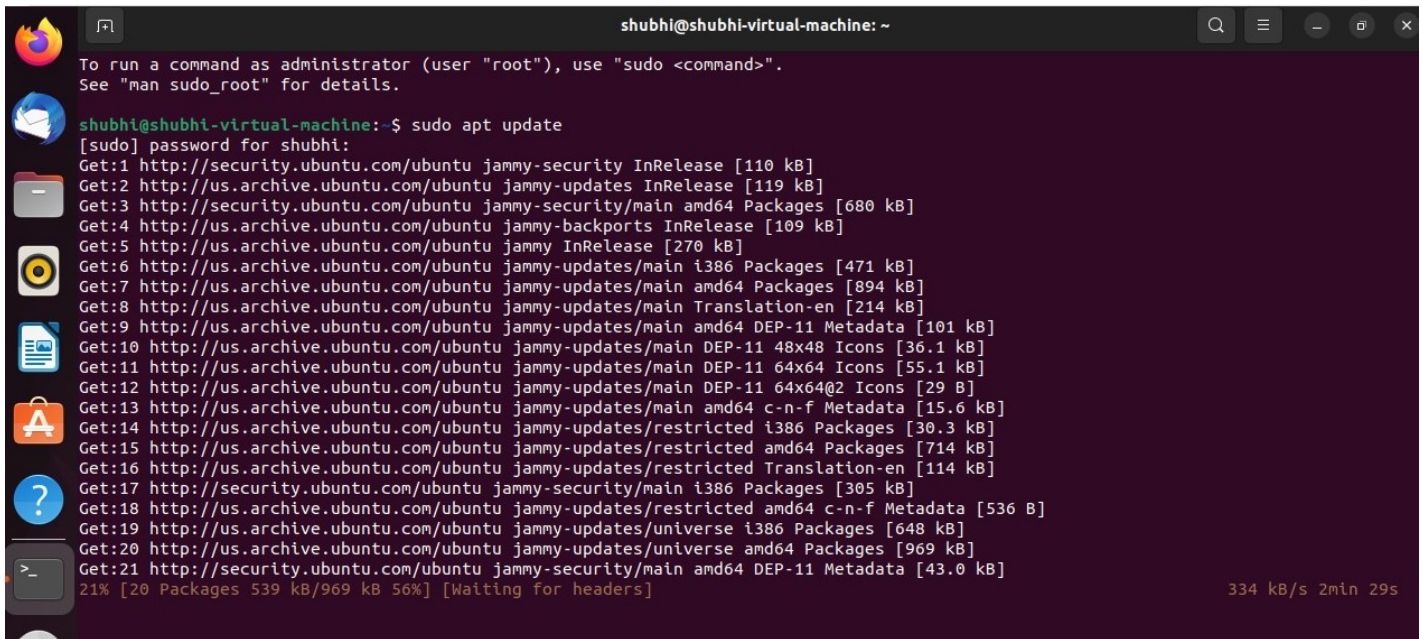
Server: Docker Desktop 4.22.0 (117440)
 Engine:
  Version:          24.0.5
  API version:      1.43 (minimum version 1.12)
  Go version:       go1.20.6
  Git commit:       a61e2b4
  Built:           Fri Jul 21 20:35:45 2023
  OS/Arch:         linux/amd64
  Experimental:     false
 containerd:
  Version:          1.6.21
  GitCommit:       3dce8eb055cbb6872793272b4f20ed16117344f8
 runc:
  Version:          1.1.7
  GitCommit:       v1.1.7-0-g860f061
 docker-init:
  Version:          0.19.0
  GitCommit:       de40ad0

C:\Users\admin>
```



## On Linux-

Step 1: Open Linux terminal and write the command ‘sudo apt update’ for updating the existing list of packages.



```
shubhi@shubhi-virtual-machine: ~
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

shubhi@shubhi-virtual-machine:~$ sudo apt update
[sudo] password for shubhi:
Get:1 http://security.ubuntu.com/ubuntu jammy-security InRelease [110 kB]
Get:2 http://us.archive.ubuntu.com/ubuntu jammy-updates InRelease [119 kB]
Get:3 http://security.ubuntu.com/ubuntu jammy-security/main amd64 Packages [680 kB]
Get:4 http://us.archive.ubuntu.com/ubuntu jammy-backports InRelease [109 kB]
Get:5 http://us.archive.ubuntu.com/ubuntu jammy InRelease [270 kB]
Get:6 http://us.archive.ubuntu.com/ubuntu jammy-updates/main i386 Packages [471 kB]
Get:7 http://us.archive.ubuntu.com/ubuntu jammy-updates/main amd64 Packages [894 kB]
Get:8 http://us.archive.ubuntu.com/ubuntu jammy-updates/main Translation-en [214 kB]
Get:9 http://us.archive.ubuntu.com/ubuntu jammy-updates/main amd64 DEP-11 Metadata [101 kB]
Get:10 http://us.archive.ubuntu.com/ubuntu jammy-updates/main DEP-11 48x48 Icons [36.1 kB]
Get:11 http://us.archive.ubuntu.com/ubuntu jammy-updates/main DEP-11 64x64 Icons [55.1 kB]
Get:12 http://us.archive.ubuntu.com/ubuntu jammy-updates/main DEP-11 64x64@2 Icons [29 B]
Get:13 http://us.archive.ubuntu.com/ubuntu jammy-updates/main amd64 c-n-f Metadata [15.6 kB]
Get:14 http://us.archive.ubuntu.com/ubuntu jammy-updates/restricted i386 Packages [30.3 kB]
Get:15 http://us.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 Packages [714 kB]
Get:16 http://us.archive.ubuntu.com/ubuntu jammy-updates/restricted Translation-en [114 kB]
Get:17 http://security.ubuntu.com/ubuntu jammy-security/main i386 Packages [305 kB]
Get:18 http://us.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 c-n-f Metadata [536 B]
Get:19 http://us.archive.ubuntu.com/ubuntu jammy-updates/universe i386 Packages [648 kB]
Get:20 http://us.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 Packages [969 kB]
Get:21 http://security.ubuntu.com/ubuntu jammy-security/main amd64 DEP-11 Metadata [43.0 kB]
21% [20 Packages 539 kB/969 kB 56%] [Waiting for headers] 334 kB/s 2min 29s
```

Step 2: Now write the command ‘sudo apt upgrade -y’ to upgrade installed packages on your system with the "-y" flag being used to automatically answer "yes" to any prompts that may appear during the upgrade process.



```
Reading state information... Done
27 packages can be upgraded. Run 'apt list --upgradable' to see them.
shubhi@shubhi-virtual-machine:~$ sudo apt upgrade -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Calculating upgrade... Done
#
# You can verify the status of security fixes using the 'pro fix' command.
# E.g., a recent Ruby vulnerability can be checked with: 'pro fix USN-6219-1'
# For more detail see: https://ubuntu.com/security/notices/USN-6219-1
#
The following packages have been kept back:
  gjs libgjs0g
The following packages will be upgraded:
  apt apt-utils ghostscript ghostscript-x gir1.2-javascriptcoregtk-4.0 gir1.2-webkit2-4.0 initramfs-tools initramfs-tools-bin
  initramfs-tools-core intel-microcode libapt-pkg6.0 libgs9 libgs9-common libjavascriptcoregtk-4.0-18 libldap-2.5-0 libldap-common
  libsmbclient libtiff5 libwbclient0 libwebkit2gtk-4.0-37 linux-firmware samba-lsmbd vim-common vim-tiny xxd
25 upgraded, 0 newly installed, 0 to remove and 2 not upgraded.
13 standard LTS security updates
Need to get 256 MB/306 MB of archives.
After this operation, 2,705 kB of additional disk space will be used.
Get:1 http://us.archive.ubuntu.com/ubuntu jammy-updates/main amd64 vim-tiny amd64 2:8.2.3995-1ubuntu2.11 [708 kB]
Get:2 http://us.archive.ubuntu.com/ubuntu jammy-updates/main amd64 xxd amd64 2:8.2.3995-1ubuntu2.11 [54.1 kB]
Get:3 http://us.archive.ubuntu.com/ubuntu jammy-updates/main amd64 vim-common all 2:8.2.3995-1ubuntu2.11 [81.5 kB]
Get:4 http://us.archive.ubuntu.com/ubuntu jammy-updates/main amd64 initramfs-tools all 0.140ubuntu13.4 [9,042 B]
Get:5 http://us.archive.ubuntu.com/ubuntu jammy-updates/main amd64 initramfs-tools-core all 0.140ubuntu13.4 [47.8 kB]
Get:6 http://us.archive.ubuntu.com/ubuntu jammy-updates/main amd64 initramfs-tools-bin amd64 0.140ubuntu13.4 [9,300 B]
Get:7 http://us.archive.ubuntu.com/ubuntu jammy-updates/main amd64 linux-firmware all 20220329.git681281e4-0ubuntu3.18 [255 MB]
43% [7 linux-firmware 41.6 MB/255 MB 16%] 4,066 kB/s 52s
```

Step 3: Install docker through the terminal using ‘sudo apt install -y docker.io’ command.

```
update-initramfs: Generating /boot/initrd.img-6.2.0-26-generic
shubhi@shubhi-virtual-machine:~$ sudo apt install -y docker.io
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  bridge-utils containerd git git-man liberror-perl pigz runc ubuntu-fan
Suggested packages:
  ifupdown aufs-tools btrfs-progs cgroupfs-mount | cgroup-lite debootstrap docker-doc rinse zfs-fuse | zfsutils git-daemon-run
  | git-daemon-sysvinit git-doc git-email git-gui gitk gitweb git-cvs git-mediawiki git-svn
The following NEW packages will be installed:
  bridge-utils containerd docker.io git git-man liberror-perl pigz runc ubuntu-fan
0 upgraded, 9 newly installed, 0 to remove and 2 not upgraded.
Need to get 77.8 MB of archives.
After this operation, 314 MB of additional disk space will be used.
Get:1 http://us.archive.ubuntu.com/ubuntu jammy/universe amd64 pigz amd64 2.6-1 [63.6 kB]
Get:2 http://us.archive.ubuntu.com/ubuntu jammy/main amd64 bridge-utils amd64 1.7-1ubuntu3 [34.4 kB]
Get:3 http://us.archive.ubuntu.com/ubuntu jammy-updates/main amd64 runc amd64 1.1.7-0ubuntu1-22.04.1 [4,249 kB]
6% [3 runc 1,124 kB/4,249 kB 26%] 59.9 kB/s 21min 19s
```

Step 4: Write the following command to ensure docker is successfully installed on your system and also to check its version- ‘sudo docker info’



shubhi@shubhi-virtual-machine:~\$ sudo docker info

Client:

Context: default  
Debug Mode: false



Server:

Containers: 0  
Running: 0  
Paused: 0  
Stopped: 0  
Images: 0



Server Version: 20.10.25

Storage Driver: overlay2  
Backing Filesystem: extfs  
Supports d\_type: true  
Native Overlay Diff: true  
userxattr: false



Logging Driver: json-file  
Cgroup Driver: systemd  
Cgroup Version: 2



Plugins:

Volume: local  
Network: bridge host ipvlan macvlan null overlay  
Log: awslogs fluentd gcplogs gelf journald json-file local logentries splunk syslog



Swarm: inactive



Runtimes: io.containerd.runc.v2 io.containerd.runtime.v1.linux runc

Default Runtime: runc

Init Binary: docker-init



containerd version:

runc version:

init version:

Security Options:

apparmor  
seccomp

