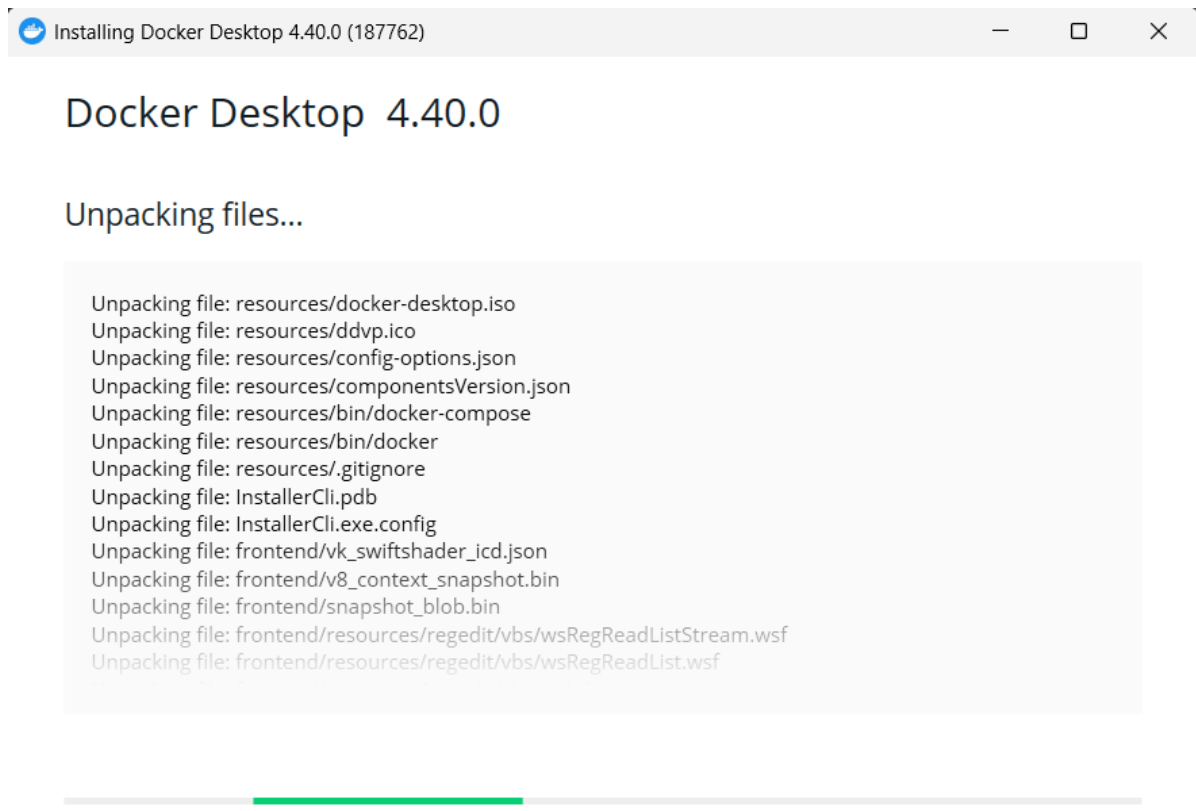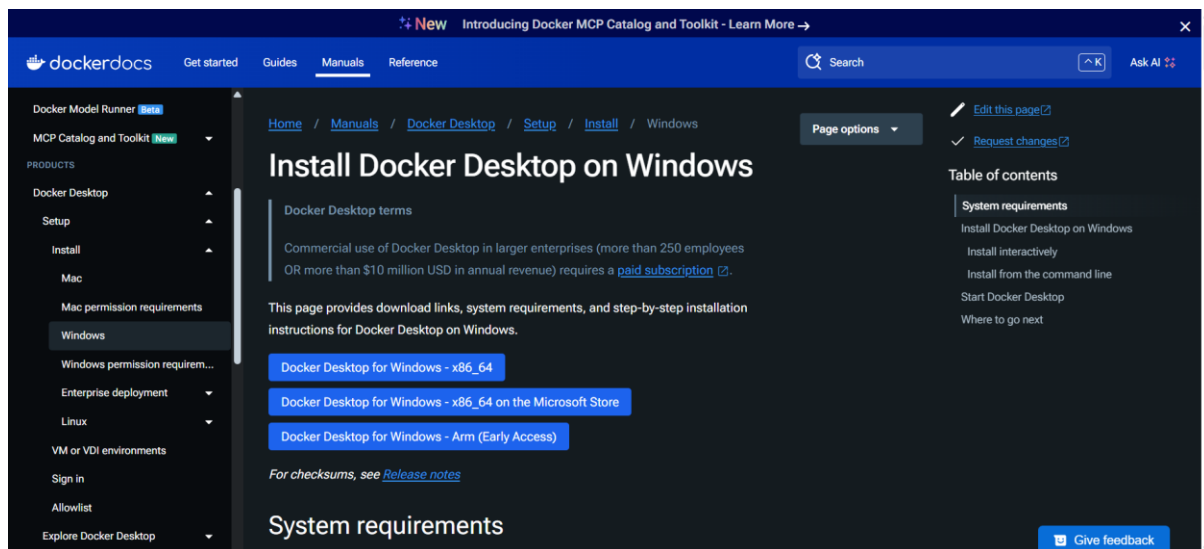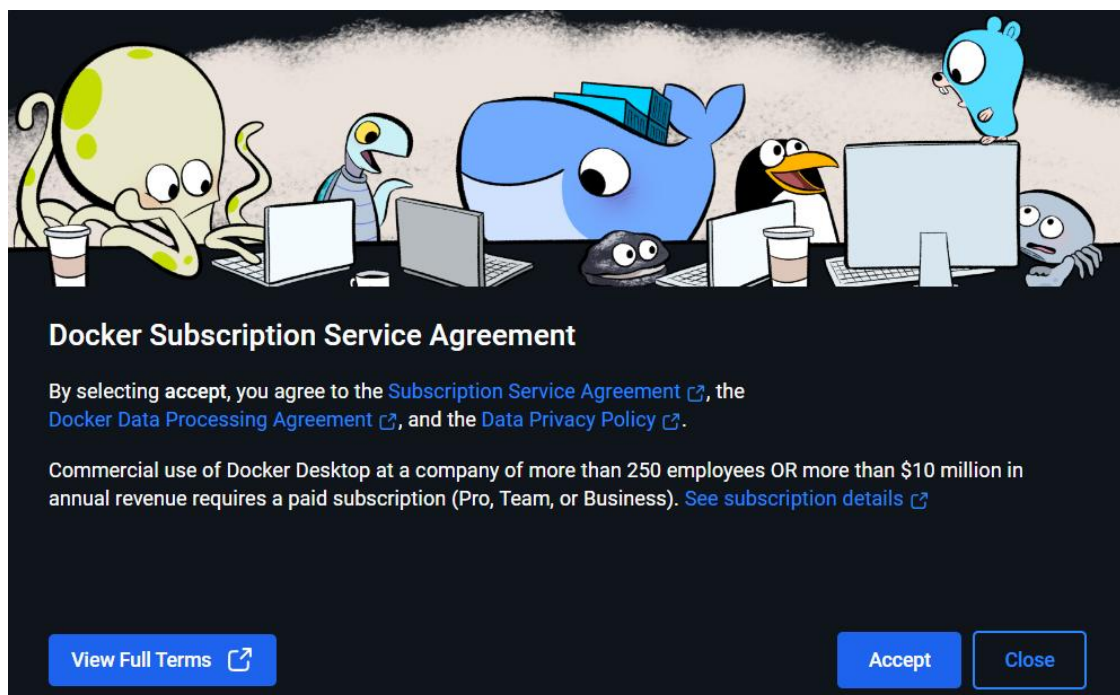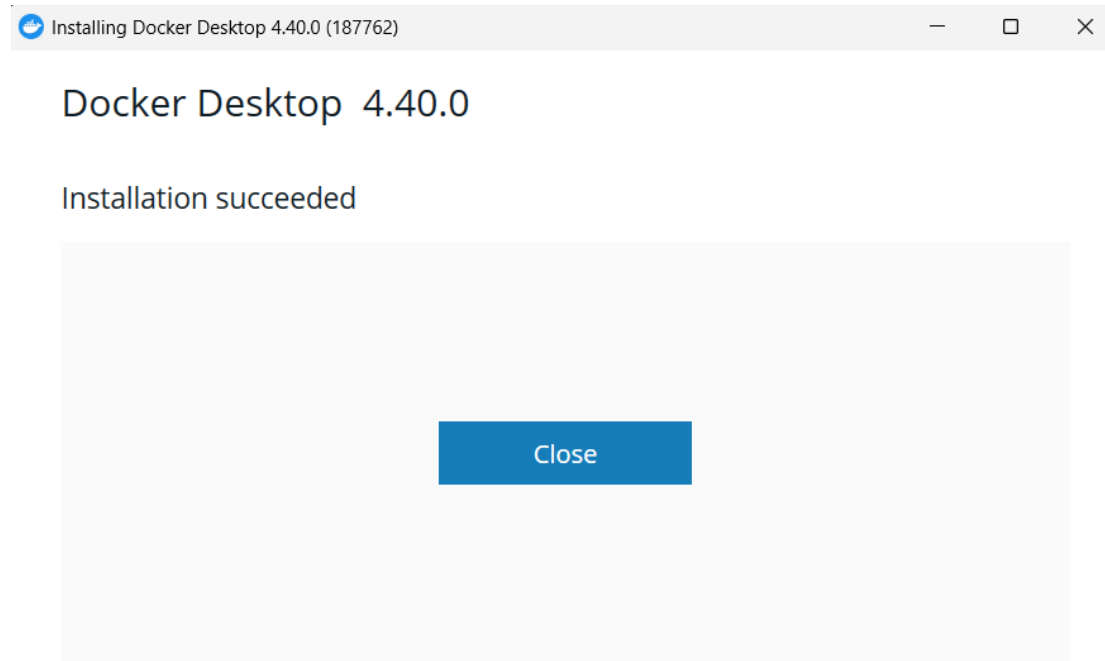Name – Tejas Sanjay Karekar
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1. Install Docker Desktop

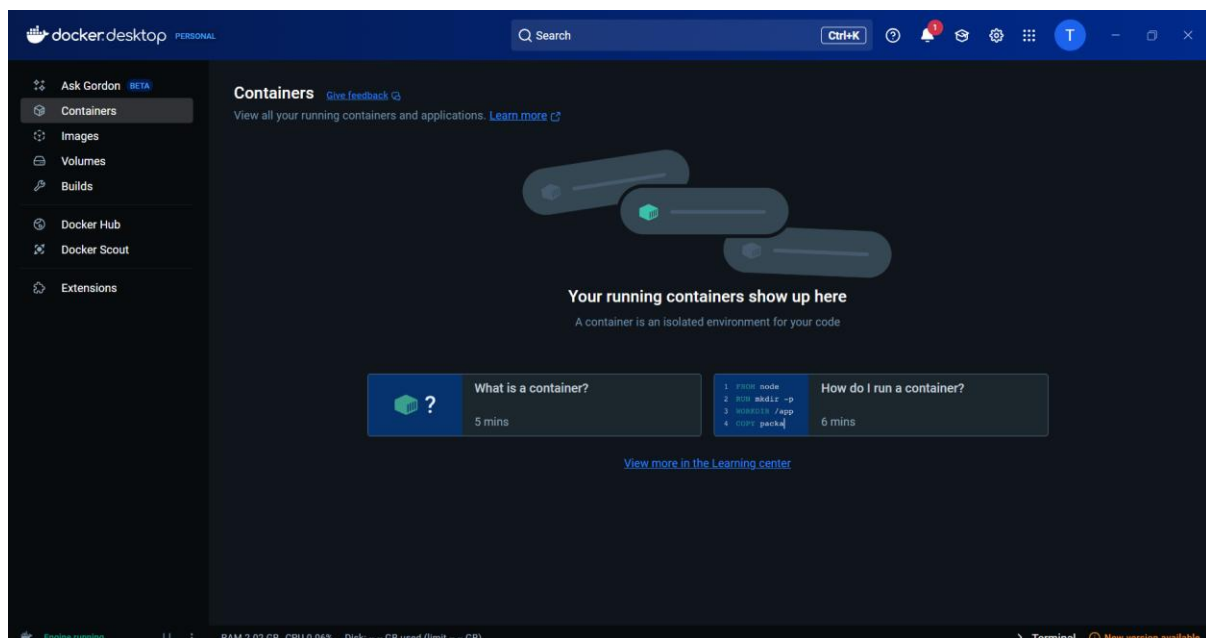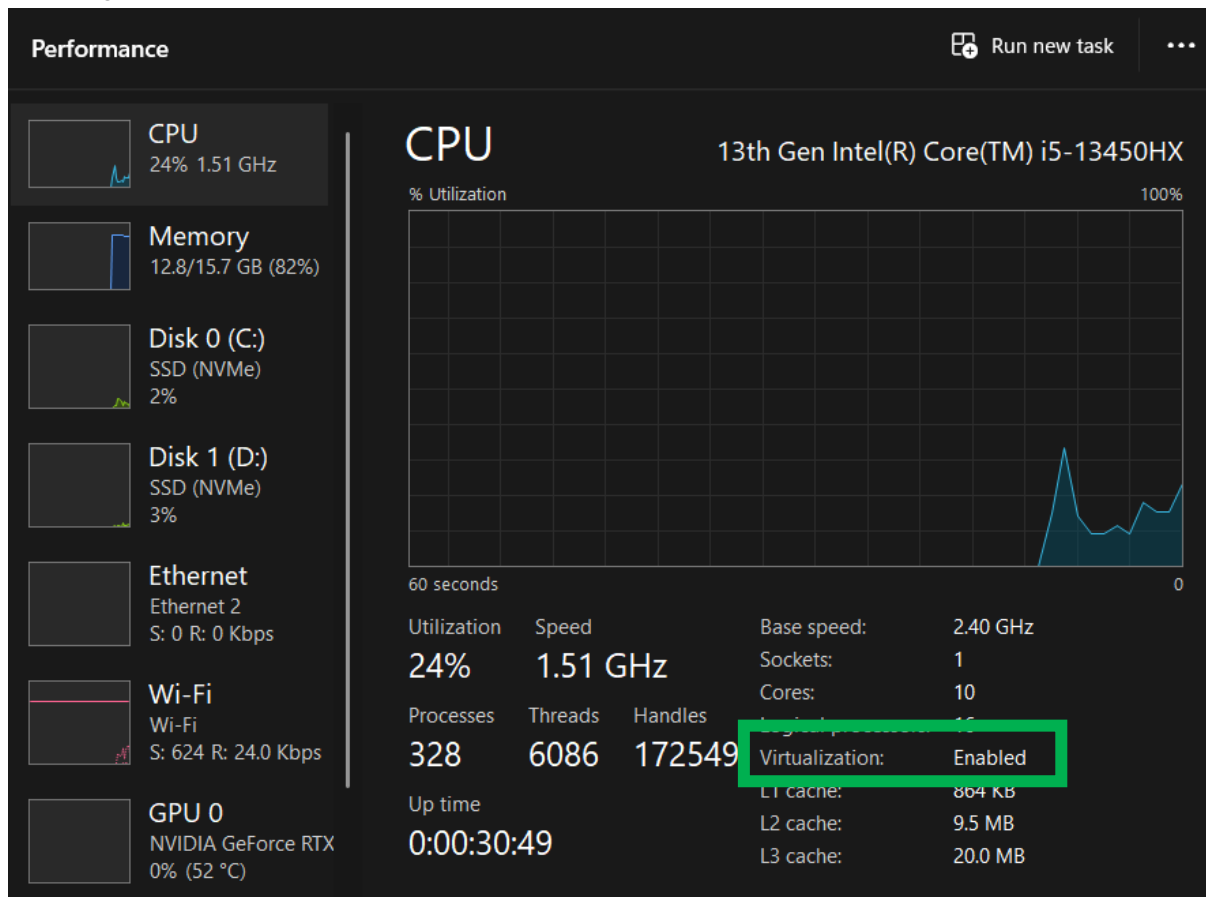Name – Tejas Sanjay Karekar
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2. Verify Docker and wsl Installation

```
Microsoft Windows [Version 10.0.26100.4061]
(c) Microsoft Corporation. All rights reserved.

C:\Windows\System32>docker -v
Docker version 28.0.4, build b8034c0

C:\Windows\System32>
```

```
C:\Windows\System32>wsl --version
WSL version: 2.4.13.0
Kernel version: 5.15.167.4-1
WSLg version: 1.0.65
MSRDC version: 1.2.5716
Direct3D version: 1.611.1-81528511
DXCore version: 10.0.26100.1-240331-1435.ge-release
Windows version: 10.0.26100.4061
```

3. Run a Docker Container

```
Microsoft Windows [Version 10.0.26100.4061]
(c) Microsoft Corporation. All rights reserved.

C:\Windows\System32>docker run --detach --publish 80:80 --name webserver nginx
Unable to find image 'nginx:latest' locally
latest: Pulling from library/nginx
d3dc5ec71e9d: Pull complete
3e544d53ce49: Pull complete
d38f2ef2d6f2: Pull complete
913115292750: Pull complete
40a6e9f4e456: Pull complete
254e724d7786: Pull complete
4f21ed9ac0c0: Pull complete
Digest: sha256:c15da6c91de8d2f436196f3a768483ad32c258ed4e1beb3d367a27ed67253e66
Status: Downloaded newer image for nginx:latest
a551f90bafefdbd23a47feb9345b53cac410089fa4dc64e20d52f5b8fe1638b8

C:\Windows\System32>
```

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Welcome to nginx!

If you see this page, the nginx web server is successfully installed and working. Further configuration is required.

For online documentation and support please refer to nginx.org.
Commercial support is available at nginx.com.

Thank you for using nginx.
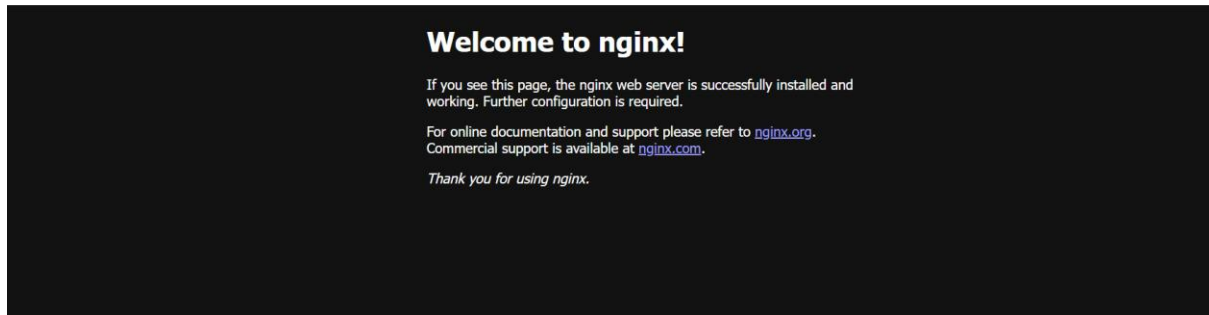
4. Docker Commands to Manage Containers

```
Administrator: Command Prompt
C:\Windows\System32>docker image ls
REPOSITORY    TAG        IMAGE ID        CREATED        SIZE
nginx         latest     c15da6c91de8    4 weeks ago    279MB

C:\Windows\System32>docker container ls
CONTAINER ID    IMAGE    COMMAND                CREATED         STATUS          PORTS                    NAMES
a551f90bafef    nginx    "/docker-entrypoint.…"  2 minutes ago   Up 2 minutes    0.0.0.0:80->80/tcp       webserver

C:\Windows\System32>docker info
Client:
 Version:    28.0.4
 Context:    desktop-linux
 Debug Mode: false
 Plugins:
  ai: Docker AI Agent - Ask Gordon (Docker Inc.)
    Version:  v1.1.3
    Path:     C:\Program Files\Docker\cli-plugins\docker-ai.exe
  buildx: Docker Buildx (Docker Inc.)
    Version:  v0.22.0-desktop.1
    Path:     C:\Program Files\Docker\cli-plugins\docker-buildx.exe
  cloud: Docker Cloud (Docker Inc.)
    Version:  0.2.20
    Path:     C:\Program Files\Docker\cli-plugins\docker-cloud.exe
  compose: Docker Compose (Docker Inc.)
    Version:  v2.34.0-desktop.1
    Path:     C:\Program Files\Docker\cli-plugins\docker-compose.exe
  debug: Get a shell into any image or container (Docker Inc.)
    Version:  0.0.38
    Path:     C:\Program Files\Docker\cli-plugins\docker-debug.exe
  desktop: Docker Desktop commands (Beta) (Docker Inc.)
```

```
    Version:  v0.1.6
    Path:     C:\Program Files\Docker\cli-plugins\docker-desktop.exe
  dev: Docker Dev Environments (Docker Inc.)
    Version:  v0.1.2
    Path:     C:\Program Files\Docker\cli-plugins\docker-dev.exe
  extension: Manages Docker extensions (Docker Inc.)
    Version:  v0.2.27
    Path:     C:\Program Files\Docker\cli-plugins\docker-extension.exe
  init: Creates Docker-related starter files for your project (Docker Inc.)
    Version:  v1.4.0
    Path:     C:\Program Files\Docker\cli-plugins\docker-init.exe
  sbom: View the packaged-based Software Bill Of Materials (SBOM) for an image (Anchore Inc.)
    Version:  0.6.0
    Path:     C:\Program Files\Docker\cli-plugins\docker-sbom.exe
  scout: Docker Scout (Docker Inc.)
    Version:  v1.17.0
    Path:     C:\Program Files\Docker\cli-plugins\docker-scout.exe

Server:
 Containers: 1
  Running: 1
  Paused: 0
  Stopped: 0
 Images: 1
 Server Version: 28.0.4
 Storage Driver: overlayfs
  driver-type: io.containerd.snapshotter.v1
 Logging Driver: json-file
 Cgroup Driver: cgroupfs
 Cgroup Version: 1
```

```
Plugins:
 Volume: local
 Network: bridge host ipvlan macvlan null overlay
 Log: awslogs fluentd gcplogs gelf journald json-file local splunk syslog
CDI spec directories:
 /etc/cdi
 /var/run/cdi
Swarm: inactive
Runtimes: runc io.containerd.runc.v2 nvidia
Default Runtime: runc
Init Binary: docker-init
containerd version: 753481ec61c7c8955a23d6ff7bc8e4daed455734
runc version: v1.2.5-0-g59923ef
init version: de40ad0
Security Options:
 seccomp
  Profile: unconfined
Kernel Version: 5.15.167.4-microsoft-standard-WSL2
Operating System: Docker Desktop
OSType: linux
Architecture: x86_64
CPUs: 16
Total Memory: 7.606GiB
Name: docker-desktop
ID: 16060805-513f-4eb3-8642-52b93d52d0d3
Docker Root Dir: /var/lib/docker
Debug Mode: false
HTTP Proxy: http.docker.internal:3128
HTTPS Proxy: http.docker.internal:3128
No Proxy: hubproxy.docker.internal
```

```
No Proxy: hubproxy.docker.internal
Labels:
 com.docker.desktop.address=npipe://\\.\pipe\docker_cli
Experimental: false
Insecure Registries:
 hubproxy.docker.internal:5555
 ::1/128
 127.0.0.0/8
Live Restore Enabled: false

WARNING: No blkio throttle.read_bps_device support
WARNING: No blkio throttle.write_bps_device support
WARNING: No blkio throttle.read_iops_device support
WARNING: No blkio throttle.write_iops_device support
WARNING: DOCKER_INSECURE_NO_IPTABLES_RAW is set
WARNING: daemon is not using the default seccomp profile
```

```
C:\Windows\System32>docker inspect a551f90bafefdbd23a47feb9345b53cac410089fa4dc64e20d52f5b8fe1638b8
[
    {
        "Id": "a551f90bafefdbd23a47feb9345b53cac410089fa4dc64e20d52f5b8fe1638b8",
        "Created": "2025-05-14T19:18:34.130724402Z",
        "Path": "/docker-entrypoint.sh",
        "Args": [
            "nginx",
            "-g",
            "daemon off;"
        ],
        "State": {
            "Status": "running",
            "Running": true,
            "Paused": false,
            "Restarting": false,
            "OOMKilled": false,
            "Dead": false,
            "Pid": 449,
            "ExitCode": 0,
            "Error": "",
            "StartedAt": "2025-05-14T19:18:34.791242565Z",
            "FinishedAt": "0001-01-01T00:00:00Z"
        },
        "Image": "sha256:c15da6c91de8d2f436196f3a768483ad32c258ed4e1beb3d367a27ed67253e66",
        "ResolvConfPath": "/var/lib/docker/containers/a551f90bafefdbd23a47feb9345b53cac410089fa4dc64e20d52f5b8fe1638b8/resolv.
        "HostnamePath": "/var/lib/docker/containers/a551f90bafefdbd23a47feb9345b53cac410089fa4dc64e20d52f5b8fe1638b8/hostname"
        "HostsPath": "/var/lib/docker/containers/a551f90bafefdbd23a47feb9345b53cac410089fa4dc64e20d52f5b8fe1638b8/hosts",
        "LogPath": "/var/lib/docker/containers/a551f90bafefdbd23a47feb9345b53cac410089fa4dc64e20d52f5b8fe1638b8/a551f90bafefdbc
```

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```
"Name": "/webserver",
"RestartCount": 0,
"Driver": "overlayfs",
"Platform": "linux",
"MountLabel": "",
"ProcessLabel": "",
"AppArmorProfile": "",
"ExecIDs": null,
"HostConfig": {
    "Binds": null,
    "ContainerIDFile": "",
    "LogConfig": {
        "Type": "json-file",
        "Config": {}
    },
    "NetworkMode": "bridge",
    "PortBindings": {
        "80/tcp": [
            {
                "HostIp": "",
                "HostPort": "80"
            }
        ]
    },
    "RestartPolicy": {
        "Name": "no",
        "MaximumRetryCount": 0
    },
    "AutoRemove": false,
    "VolumeDriver": "",
```
```
"VolumesFrom": null,
"ConsoleSize": [
    49,
    211
],
"CapAdd": null,
"CapDrop": null,
"CgroupnsMode": "host",
"Dns": [],
"DnsOptions": [],
"DnsSearch": [],
"ExtraHosts": null,
"GroupAdd": null,
"IpcMode": "private",
"Cgroup": "",
"Links": null,
"OomScoreAdj": 0,
"PidMode": "",
"Privileged": false,
"PublishAllPorts": false,
"ReadonlyRootfs": false,
"SecurityOpt": null,
"UTSMode": "",
"UsernsMode": "",
"ShmSize": 67108864,
"Runtime": "runc",
"Isolation": "",
"CpuShares": 0,
"Memory": 0,
"NanoCpus": 0
```

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```
            "Ports": {
                "80/tcp": [
                    {
                        "HostIp": "0.0.0.0",
                        "HostPort": "80"
                    }
                ]
            },
            "HairpinMode": false,
            "LinkLocalIPv6Address": "",
            "LinkLocalIPv6PrefixLen": 0,
            "SecondaryIPAddresses": null,
            "SecondaryIPv6Addresses": null,
            "EndpointID": "53b1bfc814fbb1eaa32b3cc21ae93a047c4b3d9268a1b4587b5fbd26e4e13d90",
            "Gateway": "172.17.0.1",
            "GlobalIPv6Address": "",
            "GlobalIPv6PrefixLen": 0,
            "IPAddress": "172.17.0.2",
            "IPPrefixLen": 16,
            "IPv6Gateway": "",
            "MacAddress": "fa:1e:ec:49:22:13",
            "Networks": {
                "bridge": {
                    "IPAMConfig": null,
                    "Links": null,
                    "Aliases": null,
                    "MacAddress": "fa:1e:ec:49:22:13",
                    "DriverOpts": null,
                    "GwPriority": 0,
                    "NetworkID": "8aac36f04d81daaa9261b8a98540a42f50902643a24feda92e098e9834f4aa48",
```

```
                    "GlobalIPv6Address": "",
                    "GlobalIPv6PrefixLen": 0,
                    "DNSNames": null
                }
            }
        },
        "ImageManifestDescriptor": {
            "mediaType": "application/vnd.oci.image.manifest.v1+json",
            "digest": "sha256:88b3388ea06c7262e410a3ab5c05dc4088b7b39dea569addd8c30766f4f47440",
            "size": 2292,
            "annotations": {
                "com.docker.official-images.bashbrew.arch": "amd64",
                "org.opencontainers.image.base.digest": "sha256:5accafaaf0f2c0a3ee5f2dcd9a5f2ef7ed3089fe4ac6a9fc9b1cf163965713",
                "org.opencontainers.image.base.name": "debian:bookworm-slim",
                "org.opencontainers.image.created": "2025-04-28T21:42:34Z",
                "org.opencontainers.image.revision": "eaf8875a1967d24cea6ed8b37109075e39ed9e43",
                "org.opencontainers.image.source": "https://github.com/nginx/docker-nginx.git#eaf8875a1967d24cea6ed8b37109075e",
                "org.opencontainers.image.url": "https://hub.docker.com/_/nginx",
                "org.opencontainers.image.version": "1.27.5"
            },
            "platform": {
                "architecture": "amd64",
                "os": "linux"
            }
        }
    }
]
```