

Create a EC2 Amazon Instance

The screenshot shows the AWS Management Console 'Instances' page. At the top, there's a search bar and buttons for 'Connect', 'Instance state', 'Actions', and 'Launch instances'. Below this is a table of instances. One instance, 'Server1', is listed with ID 'i-0520ed90cc20830a4', state 'Running', type 't2.micro', and '2/2 checks passed'. Below the table, the details for 'Instance: i-0520ed90cc20830a4 (Server1)' are shown in a tabbed interface. The 'Details' tab is active, displaying a summary of the instance's configuration.

Instance summary		
Instance ID	Public IPv4 address	Private IPv4 addresses
i-0520ed90cc20830a4 (Server1)	13.233.212.173 open address	172.31.41.49
IPv6 address	Instance state	Public IPv4 DNS
-	Running	ec2-13-233-212-173.ap-south-1.compute.amazonaws.com open address
Private IPv4 DNS	Instance type	Elastic IP addresses

Install Docker

The screenshot shows a terminal window on an Amazon EC2 instance. The terminal displays the output of the 'docker' command, which shows the Docker daemon is installed and running. The output includes the Docker version (1.13.1) and the commit hash (c694b5a). Below this, the 'docker --help' command is run, showing the usage and options for the Docker CLI. The terminal also shows the 'docker --version' command output, which is 'Docker version 1.13.1, build c694b5a/1.13.1 (Linux; amd64)'. At the bottom of the terminal, the instance ID 'i-0520ed90cc20830a4 (Server1)' and its public and private IP addresses are displayed.

```
Dependency Installed:
containerd.x86_64 0:1.4.6-2.amzn2      libcgrouper.x86_64 0:0.41-21.amzn2      pigz.x86_64 0:2.3.4-1.amzn2.0.1      runc.x86_64 0:1.0.0-1.amzn2

Complete!
[root@ip-172-31-41-49 ec2-user]# docker
Usage: docker [OPTIONS] COMMAND

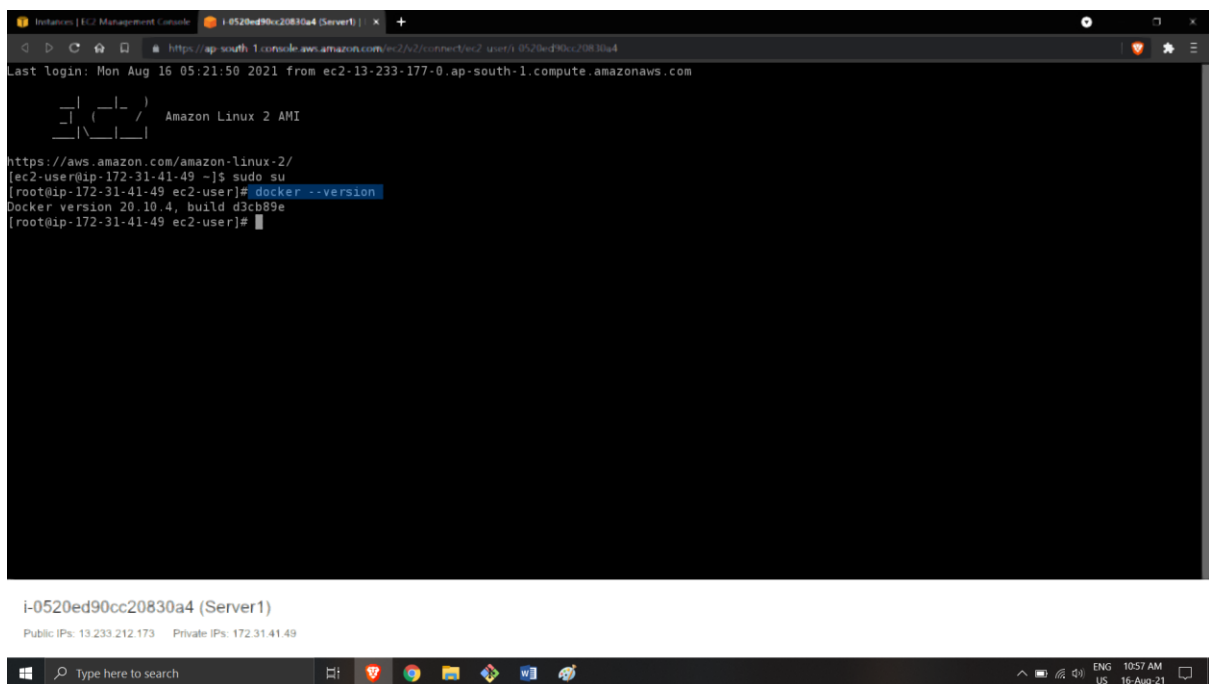
A self-sufficient runtime for containers

Options:
  --config string      Location of client config files (default "/root/.docker")
  -c, --context string  Name of the context to use to connect to the daemon (overrides DOCKER_HOST env var and default context set with "docker context use")
  -D, --debug           Enable debug mode
  -H, --host list       Daemon socket(s) to connect to
  -l, --log-level string Set the logging level ("debug"|"info"|"warn"|"error"|"fatal") (default "info")
  --tls                Use TLS; implied by --tlsverify
  --tlscacert string    Trust certs signed only by this CA (default "/root/.docker/ca.pem")
  --tlscert string       Path to TLS certificate file (default "/root/.docker/cert.pem")
  --tlskey string        Path to TLS key file (default "/root/.docker/key.pem")
  --tlsverify           Use TLS and verify the remote
  -v, --version         Print version information and quit

Management Commands:
  builder      Manage builds
  config        Manage Docker configs
  container     Manage containers
  context       Manage contexts
  image         Manage images
  manifest      Manage Docker image manifests and manifest lists
  network       Manage networks
  node          Manage Swarm nodes
  plugin        Manage plugins

i-0520ed90cc20830a4 (Server1)
Public IPs: 13.233.212.173   Private IPs: 172.31.41.49
```

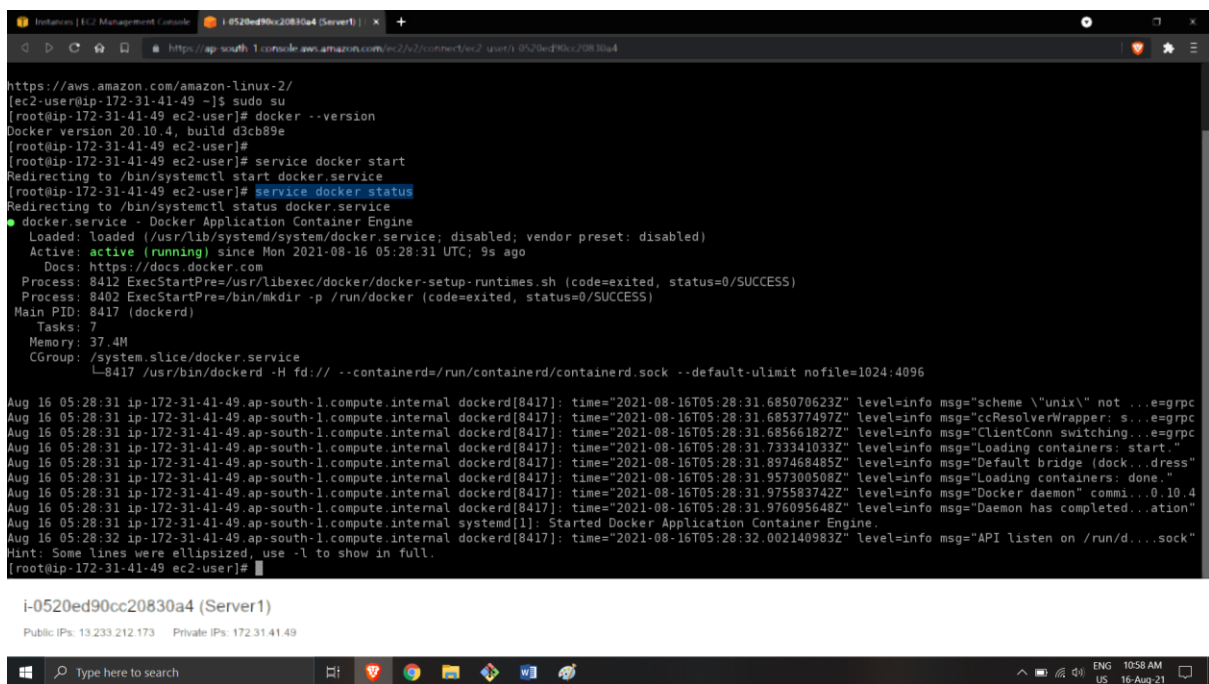
Docker Version



The screenshot shows a terminal window within the AWS Management Console. The terminal is connected to an Amazon Linux 2 AMI instance. The user has executed the command `docker --version`, which returns the output: `Docker version 20.10.4, build d3cb89e`. The terminal window also displays the AWS logo and the instance's public and private IP addresses.

```
https://aws.amazon.com/amazon-linux-2/
[ec2-user@ip-172-31-41-49 ~]$ sudo su
[root@ip-172-31-41-49 ec2-user]# docker --version
Docker version 20.10.4, build d3cb89e
[root@ip-172-31-41-49 ec2-user]#
```

Docker service status

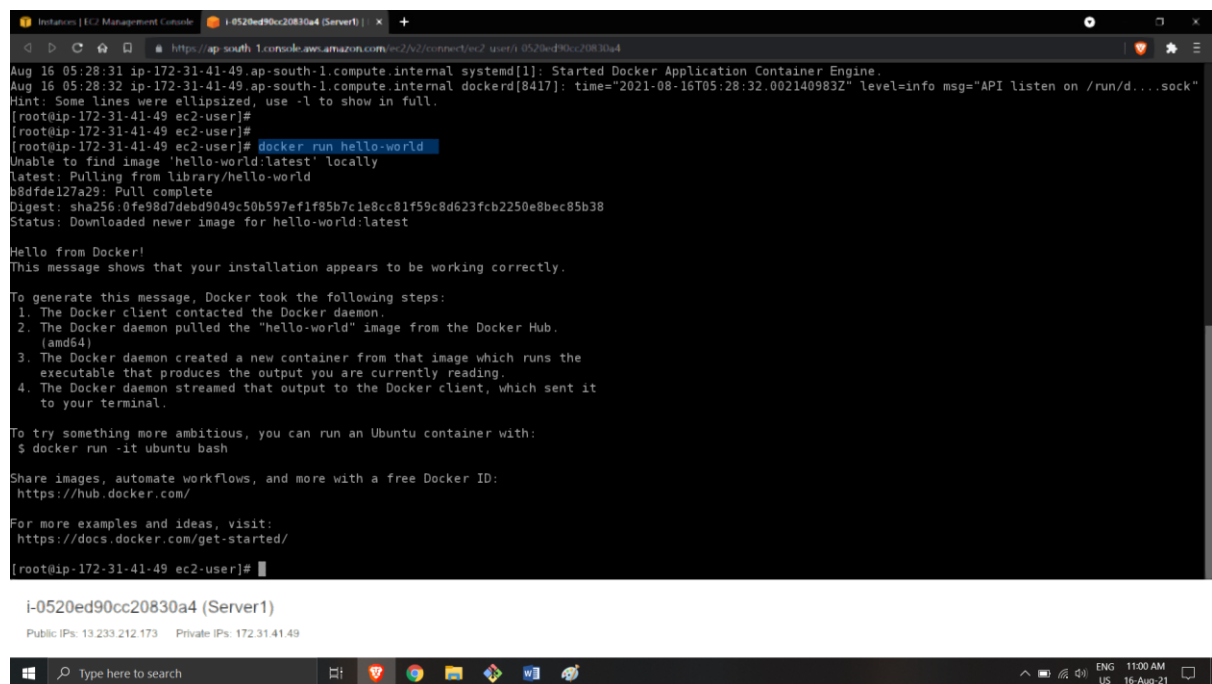


The screenshot shows a terminal window within the AWS Management Console. The user has executed the command `service docker status`, which returns the output: `docker.service - Docker Application Container Engine`. The terminal window also displays the AWS logo and the instance's public and private IP addresses.

```
https://aws.amazon.com/amazon-linux-2/
[ec2-user@ip-172-31-41-49 ~]$ sudo su
[root@ip-172-31-41-49 ec2-user]# docker --version
Docker version 20.10.4, build d3cb89e
[root@ip-172-31-41-49 ec2-user]# service docker status
Redirecting to /bin/systemctl start docker.service
Redirecting to /bin/systemctl status docker.service
● docker.service - Docker Application Container Engine
   Loaded: loaded (/usr/lib/systemd/system/docker.service; disabled; vendor preset: disabled)
   Active: active (running) since Mon 2021-08-16 05:28:31 UTC; 9s ago
     Docs: https://docs.docker.com
   Process: 8412 ExecStartPre=/usr/libexec/docker/docker-setup-runtimes.sh (code=exited, status=0/SUCCESS)
   Process: 8402 ExecStartPre=/bin/mkdir -p /run/docker (code=exited, status=0/SUCCESS)
   Main PID: 8417 (dockerd)
     Tasks: 7
    Memory: 37.4M
   CGroup: /system.slice/docker.service
           └─8417 /usr/bin/dockerd -H fd:// --containerd=/run/containerd/containerd.sock --default-ulimit nfile=1024:4096

Aug 16 05:28:31 ip-172-31-41-49.ap-south-1.compute.internal dockerd[8417]: time="2021-08-16T05:28:31.685070623Z" level=info msg="scheme \"unix\" not ...=grpc
Aug 16 05:28:31 ip-172-31-41-49.ap-south-1.compute.internal dockerd[8417]: time="2021-08-16T05:28:31.685377497Z" level=info msg="ccResolverWrapper: s...=grpc
Aug 16 05:28:31 ip-172-31-41-49.ap-south-1.compute.internal dockerd[8417]: time="2021-08-16T05:28:31.685661827Z" level=info msg="ClientConn switching...=grpc
Aug 16 05:28:31 ip-172-31-41-49.ap-south-1.compute.internal dockerd[8417]: time="2021-08-16T05:28:31.733341033Z" level=info msg="Loading containers: start."
Aug 16 05:28:31 ip-172-31-41-49.ap-south-1.compute.internal dockerd[8417]: time="2021-08-16T05:28:31.897469495Z" level=info msg="Default bridge (dock...dress"
Aug 16 05:28:31 ip-172-31-41-49.ap-south-1.compute.internal dockerd[8417]: time="2021-08-16T05:28:31.957300508Z" level=info msg="Loading containers: done."
Aug 16 05:28:31 ip-172-31-41-49.ap-south-1.compute.internal dockerd[8417]: time="2021-08-16T05:28:31.975583742Z" level=info msg="Docker daemon" commi...0.10.4
Aug 16 05:28:31 ip-172-31-41-49.ap-south-1.compute.internal dockerd[8417]: time="2021-08-16T05:28:31.976095648Z" level=info msg="Daemon has completed...ation"
Aug 16 05:28:31 ip-172-31-41-49.ap-south-1.compute.internal systemd[1]: Started Docker Application Container Engine.
Aug 16 05:28:32 ip-172-31-41-49.ap-south-1.compute.internal dockerd[8417]: time="2021-08-16T05:28:32.002140983Z" level=info msg="API listen on /run/d....sock"
Hint: Some lines were ellipsized, use -l to show in full.
[root@ip-172-31-41-49 ec2-user]#
```

Hello-World in Docker



The screenshot shows the AWS Management Console for an EC2 instance named 'i-0520ed90cc20830a4 (Server1)'. The terminal window displays the output of the 'docker run hello-world' command. The output indicates that Docker is installed and running, and it has pulled the 'hello-world' image from the Docker Hub. The message 'Hello from Docker!' is displayed, followed by a detailed explanation of the steps taken to generate this message. The steps are: 1. The Docker client contacted the Docker daemon. 2. The Docker daemon pulled the "hello-world" image from the Docker Hub. (amd64) 3. The Docker daemon created a new container from that image which runs the executable that produces the output you are currently reading. 4. The Docker daemon streamed that output to the Docker client, which sent it to your terminal. The message also suggests trying something more ambitious, such as running an Ubuntu container with 'docker run -it ubuntu bash'. It provides a link to the Docker Hub for sharing images and automating workflows, and a link to the Docker documentation for more examples and ideas.

```
Aug 16 05:28:31 ip-172-31-41-49.ap-south-1.compute.internal systemd[1]: Started Docker Application Container Engine.
Aug 16 05:28:32 ip-172-31-41-49.ap-south-1.compute.internal dockerd[8417]: time="2021-08-16T05:28:32.002140983Z" level=info msg="API listen on /run/d....sock"
Hint: Some lines were ellipsized, use -l to show in full.
[root@ip-172-31-41-49 ec2-user]#
[root@ip-172-31-41-49 ec2-user]#
[root@ip-172-31-41-49 ec2-user]# docker run hello-world
Unable to find image 'hello-world:latest' locally
latest: Pulling from library/hello-world
b8dfde127a29: Pull complete
Digest: sha256:0fe98d7debd9049c50b597ef1f85b7c1e8cc81f59c8d623fcb2250e8bec85b38
Status: Downloaded newer image for hello-world:latest

Hello from Docker!
This message shows that your installation appears to be working correctly.

To generate this message, Docker took the following steps:
1. The Docker client contacted the Docker daemon.
2. The Docker daemon pulled the "hello-world" image from the Docker Hub.
   (amd64)
3. The Docker daemon created a new container from that image which runs the
   executable that produces the output you are currently reading.
4. The Docker daemon streamed that output to the Docker client, which sent it
   to your terminal.

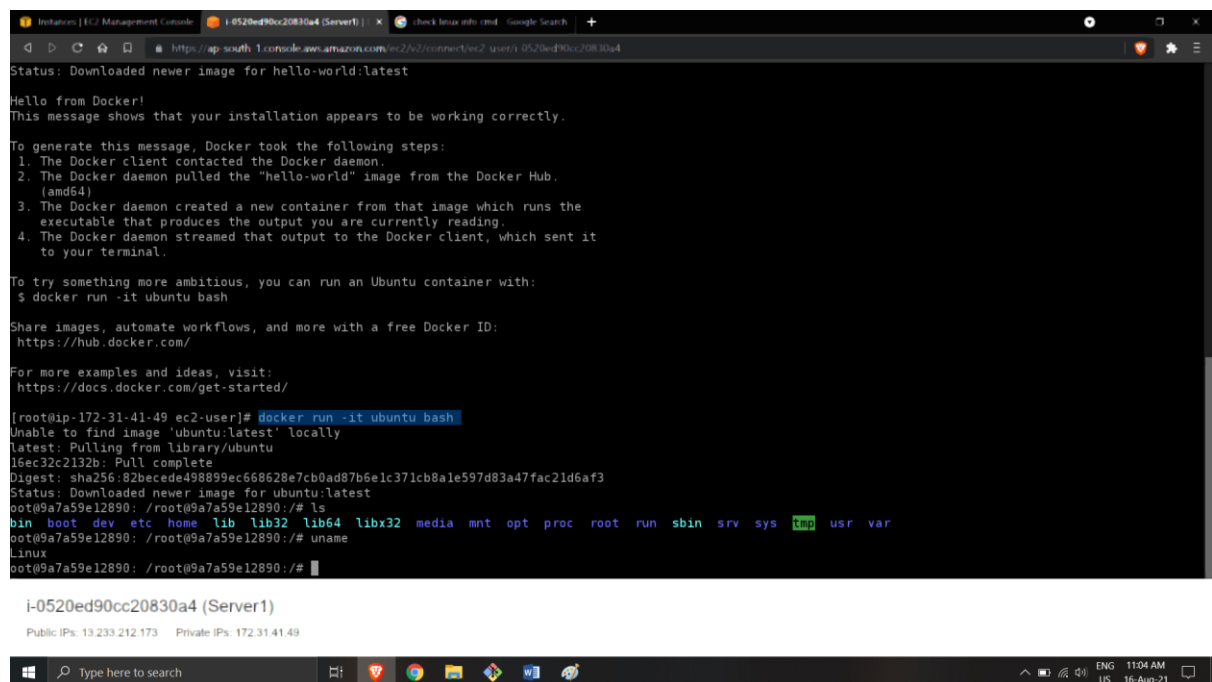
To try something more ambitious, you can run an Ubuntu container with:
$ docker run -it ubuntu bash

Share images, automate workflows, and more with a free Docker ID:
https://hub.docker.com/

For more examples and ideas, visit:
https://docs.docker.com/get-started/

[root@ip-172-31-41-49 ec2-user]#
```

Run Ubuntu bash



The screenshot shows the AWS Management Console for an EC2 instance named 'i-0520ed90cc20830a4 (Server1)'. The terminal window displays the output of the 'docker run -it ubuntu bash' command. The output indicates that Docker is installed and running, and it has pulled the 'ubuntu:latest' image from the Docker Hub. The message 'Hello from Docker!' is displayed, followed by a detailed explanation of the steps taken to generate this message. The steps are: 1. The Docker client contacted the Docker daemon. 2. The Docker daemon pulled the "hello-world" image from the Docker Hub. (amd64) 3. The Docker daemon created a new container from that image which runs the executable that produces the output you are currently reading. 4. The Docker daemon streamed that output to the Docker client, which sent it to your terminal. The message also suggests trying something more ambitious, such as running an Ubuntu container with 'docker run -it ubuntu bash'. It provides a link to the Docker Hub for sharing images and automating workflows, and a link to the Docker documentation for more examples and ideas. The terminal output shows the user has successfully run the command and is now in the Ubuntu bash shell. The user has run 'ls' and 'uname' commands, and the output is displayed.

```
Status: Downloaded newer image for hello-world:latest

Hello from Docker!
This message shows that your installation appears to be working correctly.

To generate this message, Docker took the following steps:
1. The Docker client contacted the Docker daemon.
2. The Docker daemon pulled the "hello-world" image from the Docker Hub.
   (amd64)
3. The Docker daemon created a new container from that image which runs the
   executable that produces the output you are currently reading.
4. The Docker daemon streamed that output to the Docker client, which sent it
   to your terminal.

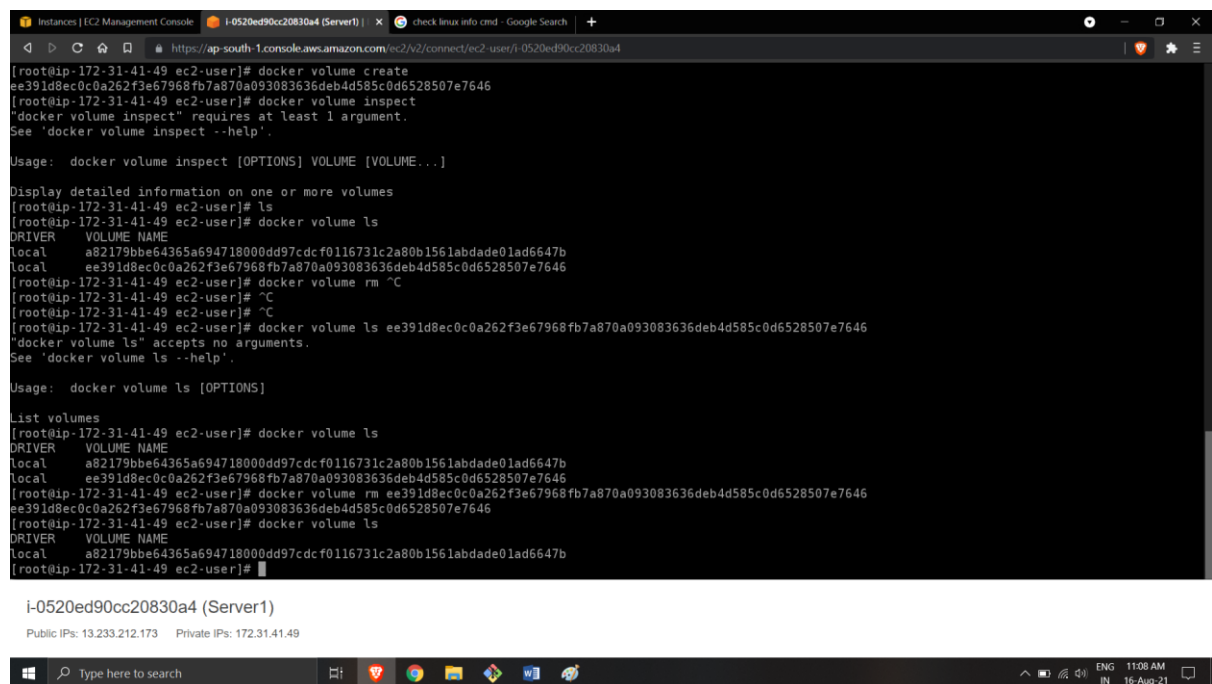
To try something more ambitious, you can run an Ubuntu container with:
$ docker run -it ubuntu bash

Share images, automate workflows, and more with a free Docker ID:
https://hub.docker.com/

For more examples and ideas, visit:
https://docs.docker.com/get-started/

[root@ip-172-31-41-49 ec2-user]# docker run -it ubuntu bash
Unable to find image 'ubuntu:latest' locally
latest: Pulling from library/ubuntu
15ec32c2132b: Pull complete
Digest: sha256:82becede498809ec668628e7cb0ad87b6e1c371cb8a1e597d83a47fac21d6af3
Status: Downloaded newer image for ubuntu:latest
oot@9a7a59e12890: /root@9a7a59e12890:/# ls
bin boot dev etc home lib lib32 lib64 libx32 media mnt opt proc root run sbin srv sys tmp usr var
oot@9a7a59e12890: /root@9a7a59e12890:/# uname
Linux
oot@9a7a59e12890: /root@9a7a59e12890:/#
```

Docker Volume Create, ls, rm



The screenshot shows the AWS Management Console for an EC2 instance named 'i-0520ed90cc20830a4 (Server1)'. The terminal window displays the following commands and output:

```
[root@ip-172-31-41-49 ec2-user]# docker volume create
ee391d8ec0c0a262f3e67968fb7a870a093083636deb4d585c0d6528507e7646
[root@ip-172-31-41-49 ec2-user]# docker volume inspect
"docker volume inspect" requires at least 1 argument.
See 'docker volume inspect --help'.

Usage: docker volume inspect [OPTIONS] VOLUME [VOLUME...]

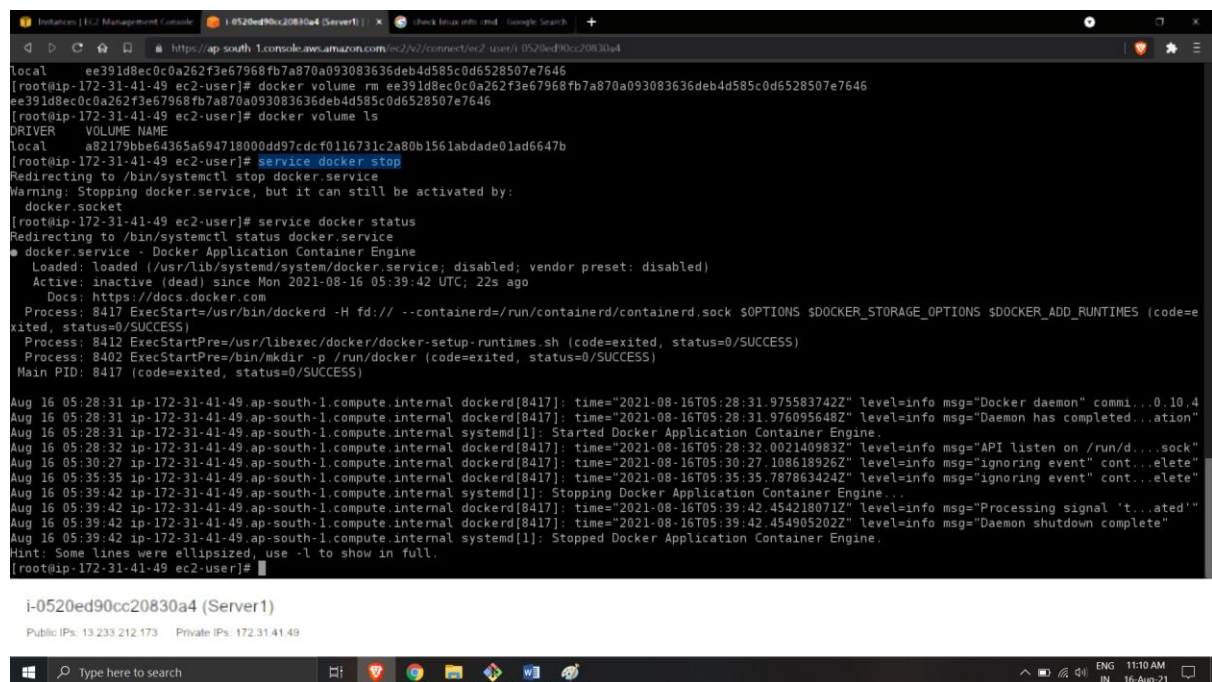
Display detailed information on one or more volumes
[root@ip-172-31-41-49 ec2-user]# ls
[root@ip-172-31-41-49 ec2-user]# docker volume ls
DRIVER      VOLUME NAME
local       a82179bbe64365a694718000dd97cdcfc0116731c2a80b1561abdade01ad6647b
local       ee391d8ec0c0a262f3e67968fb7a870a093083636deb4d585c0d6528507e7646
[root@ip-172-31-41-49 ec2-user]# docker volume rm ^C
[root@ip-172-31-41-49 ec2-user]# ^C
[root@ip-172-31-41-49 ec2-user]# docker volume ls ee391d8ec0c0a262f3e67968fb7a870a093083636deb4d585c0d6528507e7646
"docker volume ls" accepts no arguments.
See 'docker volume ls --help'.

Usage: docker volume ls [OPTIONS]

List volumes
[root@ip-172-31-41-49 ec2-user]# docker volume ls
DRIVER      VOLUME NAME
local       a82179bbe64365a694718000dd97cdcfc0116731c2a80b1561abdade01ad6647b
local       ee391d8ec0c0a262f3e67968fb7a870a093083636deb4d585c0d6528507e7646
[root@ip-172-31-41-49 ec2-user]# docker volume rm ee391d8ec0c0a262f3e67968fb7a870a093083636deb4d585c0d6528507e7646
ee391d8ec0c0a262f3e67968fb7a870a093083636deb4d585c0d6528507e7646
[root@ip-172-31-41-49 ec2-user]# docker volume ls
DRIVER      VOLUME NAME
local       a82179bbe64365a694718000dd97cdcfc0116731c2a80b1561abdade01ad6647b
[root@ip-172-31-41-49 ec2-user]#
```

The instance details show Public IPs: 13.233.212.173 and Private IPs: 172.31.41.49.

Docker service Stop



The screenshot shows the AWS Management Console for the same EC2 instance. The terminal window displays the following commands and output:

```
local       ee391d8ec0c0a262f3e67968fb7a870a093083636deb4d585c0d6528507e7646
[root@ip-172-31-41-49 ec2-user]# docker volume rm ee391d8ec0c0a262f3e67968fb7a870a093083636deb4d585c0d6528507e7646
ee391d8ec0c0a262f3e67968fb7a870a093083636deb4d585c0d6528507e7646
[root@ip-172-31-41-49 ec2-user]# docker volume ls
DRIVER      VOLUME NAME
local       a82179bbe64365a694718000dd97cdcfc0116731c2a80b1561abdade01ad6647b
[root@ip-172-31-41-49 ec2-user]# service docker stop
Redirecting to /bin/systemctl stop docker.service
Warning: Stopping docker.service, but it can still be activated by:
  docker.socket
[root@ip-172-31-41-49 ec2-user]# service docker status
Redirecting to /bin/systemctl status docker.service
● docker.service - Docker Application Container Engine
   Loaded: loaded (/usr/lib/systemd/system/docker.service; disabled; vendor preset: disabled)
   Active: inactive (dead) since Mon 2021-08-16 05:39:42 UTC; 22s ago
     Docs: https://docs.docker.com
   Process: 8417 ExecStart=/usr/bin/dockerd -H fd:// --containerd=/run/containerd/containerd.sock $OPTIONS $DOCKER_STORAGE_OPTIONS $DOCKER_ADD_RUNTIMES (code=exited, status=0/SUCCESS)
   Process: 8412 ExecStartPre=/usr/libexec/docker/docker-setup-runtimes.sh (code=exited, status=0/SUCCESS)
   Process: 8402 ExecStartPre=/bin/mkdir -p /run/docker (code=exited, status=0/SUCCESS)
   Main PID: 8417 (code=exited, status=0/SUCCESS)

Aug 16 05:28:31 ip-172-31-41-49.ap-south-1.compute.internal dockerd[8417]: time="2021-08-16T05:28:31.975583742Z" level=info msg="Docker daemon" commit=0.10.4
Aug 16 05:28:31 ip-172-31-41-49.ap-south-1.compute.internal dockerd[8417]: time="2021-08-16T05:28:31.976095648Z" level=info msg="Daemon has completed initialization"
Aug 16 05:28:31 ip-172-31-41-49.ap-south-1.compute.internal systemd[1]: Started Docker Application Container Engine.
Aug 16 05:28:32 ip-172-31-41-49.ap-south-1.compute.internal dockerd[8417]: time="2021-08-16T05:28:32.002140983Z" level=info msg="API listen on /run/docker.sock"
Aug 16 05:30:27 ip-172-31-41-49.ap-south-1.compute.internal dockerd[8417]: time="2021-08-16T05:30:27.108619926Z" level=info msg="ignoring event" container=delete
Aug 16 05:35:35 ip-172-31-41-49.ap-south-1.compute.internal dockerd[8417]: time="2021-08-16T05:35:35.787863423Z" level=info msg="ignoring event" container=delete
Aug 16 05:39:42 ip-172-31-41-49.ap-south-1.compute.internal systemd[1]: Stopping Docker Application Container Engine...
Aug 16 05:39:42 ip-172-31-41-49.ap-south-1.compute.internal dockerd[8417]: time="2021-08-16T05:39:42.454218071Z" level=info msg="Processing signal 'terminated'"
Aug 16 05:39:42 ip-172-31-41-49.ap-south-1.compute.internal dockerd[8417]: time="2021-08-16T05:39:42.454905202Z" level=info msg="Daemon shutdown complete"
Aug 16 05:39:42 ip-172-31-41-49.ap-south-1.compute.internal systemd[1]: Stopped Docker Application Container Engine.
Hint: Some lines were ellipsized, use -l to show in full.
[root@ip-172-31-41-49 ec2-user]#
```

The instance details show Public IPs: 13.233.212.173 and Private IPs: 172.31.41.49.