Environment basics

Uname -a —---> Check kernel and system info

```
ubuntu@ip-172-31-28-251:~$ uname -a
Linux ip-172-31-28-251 6.14.0-1018-aws #18~24.04.1-Ubuntu SMP Mon Nov 24 19:46:27 UTC 2025 x86_64 x86_64 x86_64 GNU/Linux
```

Cat /etc/os-release —> Check OS version

```
ubuntu@ip-172-31-28-251:~$ cat /etc/os-release
PRETTY_NAME="Ubuntu 24.04.3 LTS"
NAME="Ubuntu"
VERSION_ID="24.04"
VERSION="24.04.3 LTS (Noble Numbat)"
VERSION_CODENAME=noble
ID=ubuntu
ID_LIKE=debian
HOME_URL="https://www.ubuntu.com/"
SUPPORT_URL="https://help.ubuntu.com/"
BUG_REPORT_URL="https://bugs.launchpad.net/ubuntu/"
PRIVACY_POLICY_URL="https://www.ubuntu.com/legal/terms-and-policies/privacy-policy"
UBUNTU_CODENAME=noble
LOGO=ubuntu-logo
```

File sanity check:

This command sequence is a **filesystem sanity check**. It's used to verify that the filesystem is working correctly — specifically that you can **create directories, copy files, and read them**.

```
ubuntu@ip-172-31-28-251:~$ mkdir /tmp/runbook-demo
```

```
ubuntu@ip-172-31-28-251:/tmp$ cd runbook-demo/
ubuntu@ip-172-31-28-251:/tmp/runbook-demo$ ls
hosts-copy
ubuntu@ip-172-31-28-251:/tmp/runbook-demo$ cat hosts-copy
127.0.0.1 localhost

# The following lines are desirable for IPv6 capable hosts
::1 ip6-localhost ip6-loopback
fe00::0 ip6-localnet
ff00::0 ip6-mcastprefix
ff02::1 ip6-allnodes
ff02::2 ip6-allrouters
ff02::3 ip6-allhosts
ubuntu@ip-172-31-28-251:/tmp/runbook-demo$ ls -l
total 4
-rw-r--r-- 1 ubuntu ubuntu 221 Feb 18 14:17 hosts-copy
```

Process health check

This command shows CPU, memory, and process details of all running nginx processes.

```
ubuntu@ip-172-31-28-251:/tmp/runbook-demo$ ps -o pid,pcpu,pmem,comm -p $(pgrep nginx)
    PID %CPU %MEM COMMAND
   8442  0.0  0.1 nginx
   8443  0.0  0.4 nginx
   8444  0.0  0.4 nginx
ubuntu@ip-172-31-28-251:/tmp/runbook-demo$
```

Check overall memory usage -h means human readable output

free -h

```
ubuntu@ip-172-31-28-251:/tmp/runbook-demo$ free -h
               total        used        free      shared  buff/cache   available
Mem:           914Mi       343Mi       316Mi       2.7Mi       419Mi       570Mi
Swap:             0B          0B          0B
```

Check disk usage
df -h

```
ubuntu@ip-172-31-28-251:/tmp/runbook-demo$ df -h
Filesystem       Size  Used Avail Use% Mounted on
/dev/root         19G  2.2G   17G  12% /
tmpfs            458M     0  458M   0% /dev/shm
tmpfs            183M  888K  182M   1% /run
tmpfs            5.0M     0  5.0M   0% /run/lock
efivarfs         128K  3.8K  120K   4% /sys/firmware/efi/efivars
/dev/nvme0n1p16  881M   89M  730M  11% /boot
/dev/nvme0n1p15  105M  6.2M   99M   6% /boot/efi
tmpfs             92M   12K   92M   1% /run/user/1000
```

Check log directory size

sudo du -sh /var/log

```
ubuntu@ip-172-31-28-251:/tmp/runbook-demo$ sudo du -sh /var/log
28M     /var/log
ubuntu@ip-172-31-28-251:/tmp/runbook-demo$
```

Check listening ports

Sudo ss -tulpn | grep nginx

```
ubuntu@ip-172-31-28-251:/tmp/runbook-demo$ sudo ss -tulpn | grep nginx
tcp   LISTEN 0      511          0.0.0.0:80        0.0.0.0:*    users:(("nginx",pid=8444,fd=5),("nginx",pid=8443,fd=5),("nginx",pid=8442,fd=5))
tcp   LISTEN 0      511             [::]:80           [::]:*    users:(("nginx",pid=8444,fd=6),("nginx",pid=8443,fd=6),("nginx",pid=8442,fd=6))
```

Check nginx port connectivity locally

Curl -I localhost:80

```
ubuntu@ip-172-31-28-251:/tmp/runbook-demo$ curl -I localhost:80
HTTP/1.1 200 OK
Server: nginx/1.24.0 (Ubuntu)
Date: Wed, 18 Feb 2026 15:00:56 GMT
Content-Type: text/html
Content-Length: 615
Last-Modified: Tue, 17 Feb 2026 16:52:27 GMT
Connection: keep-alive
ETag: "69949ccb-267"
Accept-Ranges: bytes
```

```
journalctl

It is the standard way to view logs on systems that use systemd.

-u nginx

-u stands for Unit.

In systemd, services are referred to as "units."

This flag filters the logs so you only see entries created by the Nginx service.
Without this, you would see a messy mix of logs from the kernel, the firewall,
other apps, etc.
```

```
ubuntu@ip-172-31-28-251:/tmp/runbook-demo$ journalctl -u nginx -n 50
Feb 17 16:52:28 ip-172-31-28-251 systemd[1]: Starting nginx.service - A high performance web server and a reverse proxy server...
Feb 17 16:52:28 ip-172-31-28-251 systemd[1]: Started nginx.service - A high performance web server and a reverse proxy server.
Feb 17 17:11:54 ip-172-31-28-251 systemd[1]: Stopping nginx.service - A high performance web server and a reverse proxy server...
Feb 17 17:11:54 ip-172-31-28-251 systemd[1]: nginx.service: Deactivated successfully.
Feb 17 17:11:54 ip-172-31-28-251 systemd[1]: Stopped nginx.service - A high performance web server and a reverse proxy server.
-- Boot 53cebe3bab544aae9c0f47026d47b0cb --
Feb 18 13:52:54 ip-172-31-28-251 systemd[1]: Starting nginx.service - A high performance web server and a reverse proxy server...
Feb 18 13:52:54 ip-172-31-28-251 systemd[1]: Started nginx.service - A high performance web server and a reverse proxy server.
Feb 18 14:05:29 ip-172-31-28-251 systemd[1]: Stopping nginx.service - A high performance web server and a reverse proxy server...
Feb 18 14:05:29 ip-172-31-28-251 systemd[1]: Started nginx.service - A high performance web server and a reverse proxy server.
Feb 18 14:06:03 ip-172-31-28-251 systemd[1]: Stopping nginx.service - A high performance web server and a reverse proxy server...
ubuntu@ip-172-31-28-251:/tmp/runbook-demo$
```