

# Day 05 – Linux Troubleshooting Drill

**Goal:** Run a focused troubleshooting drill on a real Linux server and document a repeatable runbook.

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## Target Service / Process

- **Service:** SSH
  - **Process:** sshd(listener)
  - **PID:** 1035
  - **Host:** AWS EC2 – Ubuntu 22.04 LTS
  - **Why chosen:** Always running on servers, clear logs, uses CPU/memory/network.
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## Environment Basics (2 commands)

### 1) `uname -a`

```
uname -a
```

**Observation:** Confirms kernel version and architecture; useful for kernel- specific issues.

### 2) OS Release

```
cat /etc/os-release
```

**Observation:** Verifies distribution and version (LTS = stable for production).

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## Filesystem Sanity (2 commands)

### 3) Create temp directory

```
mkdir /tmp/runbook-demo
```

**Observation:** Directory creation succeeded filesystem is writable.

### 4) Copy test file

```
cp /etc/hosts /tmp/runbook-demo/hosts-copy && ls -l /tmp/runbook-demo
```

**Observation:** File copy succeeded; no permission or IO errors detected.

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## Snapshot: CPU & Memory (2+ commands)

### 5) Overall system view

```
top
```

**Observation:** Load average ~0.09, no CPU spikes; system is healthy.

### 6) Process- specific usage

```
ps -o pid,pcpu,pmem,comm -p 1035
```

**Observation:** `sshd` consuming negligible CPU and <1% memory.

### 7) Memory summary

```
free -h
```

**Observation:** Adequate free RAM available; no swap usage.

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## Snapshot: Disk & IO (2 commands)

### 8) Disk usage

```
df -h
```

**Observation:** Root filesystem has sufficient free space.

### 9) Log directory size

```
du -sh /var/log
```

**Observation:** Log size within normal limits; no disk pressure from logs.

*(Optional)*

```
vmstat 1 5
```

**Observation:** No significant IO wait observed.

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## Snapshot: Network (2 commands)

### 10) Listening ports

```
ss -tulpn | grep ssh
```

**Observation:** SSH listening on port 22 as expected.

### 11) Connectivity check

```
curl -I http://localhost
```

**Observation:** Localhost networking functional.

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## Logs Reviewed (2 commands)

### 12) SSH service logs

```
journalctl -u ssh -n 50
```

**Observation:** No recent errors or warnings related to SSH.

### 13) Authentication logs

```
tail -n 50 /var/log/auth.log
```

**Observation:** No failed login attempts or authentication issues found.

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## Quick Findings

- SSH service is healthy and stable.
- No CPU, memory, disk, or network bottlenecks detected.
- Logs indicate normal operation.