

Common Linux Troubleshooting tasks

System Access:

- **Server not reachable:**
 - `ping servername`: Check if the server responds to pings (basic connectivity).
 - `nslookup servername`: Check DNS resolution (server name to IP address).
- **Cannot ssh as root/user:**
 - `/etc/ssh/sshd_conf`: Check SSH configuration for permitted users/ports.
 - `/var/log/secure`: Check secure log for failed login attempts.
- **Firewall:**
 - `service iptables status` (Debian/Ubuntu) or `systemctl status firewallld` (RedHat/CentOS): Check firewall status.

System Performance:

- **System running slow:**
 - `top`: Monitor CPU and memory usage for resource hogs.
 - `free -m`: Check free memory.
 - `df -h`: Check disk usage for overloaded partitions.
- **Out of memory:**
 - `free -m`: Check free memory.
 - Consider adding swap space or optimising memory usage in applications.

Processes:

- **List processes:**
 - `ps aux`: List all processes with detailed information.
- **Kill a process:**
 - `kill <PID>`: Terminate a process by its process ID (PID).
 - `kill -9 <PID>`: Forcefully terminate a process (use with caution).

Networking:

- **Unable to receive IP Address:**
 - Check DHCP server configuration (if using DHCP).
- **IP assigned but no reachability:**
 - `ifconfig` (older systems) or `ip a`: Check network interface configuration and IP address.

File System:

- **Check disk usage:**
 - `df -h`: Check disk usage for overloaded partitions.

- **Permissions issue:**

- `ls -l`: Check file/directory permissions.
- `chmod u+x filename`: Change file permissions (example: add execute permission for user).

Logs:

- **System logs:**

- `/var/log/messages`: General system messages.
- `/var/log/auth.log`: Authentication logs (login attempts).
- Specific services might have their own log files (e.g., Apache logs).

- Use `tail /var/log/messages` to view log updates in real-time.

Package Management:

- **Update packages:**

- `apt-get update && apt-get upgrade` (Debian/Ubuntu)
- `yum update` (RedHat/CentOS)

- **Install packages:**

- `apt-get install <package_name>` (Debian/Ubuntu)
- `yum install <package_name>` (RedHat/CentOS)