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| **Task** | **Alpine Linux** | **Debian Linux** | **Arch Linux** |
| **Package Manager** | apk | apt | pacman |
| **Update Package List** | apk update | apt update | pacman -Sy |
| **Upgrade System** | apk upgrade | apt upgrade | pacman -Syu |
| **Install Package** | apk add <package> | apt install <package> | pacman -S <package> |
| **Remove Package** | apk del <package> | apt remove <package> | pacman -R <package> |
| **Search for Package** | apk search <package> | apt search <package> | pacman -Ss <package> |
| **Show Package Info** | apk info <package> | apt show <package> | pacman -Qi <package> |
| **List Installed Packages** | apk info | dpkg -l or apt list --installed | pacman -Q |
| **Update Repository** | apk update | apt update | pacman -Sy |
| **Install Dependencies** | Automatically handled by apk add | Automatically handled by apt install | Automatically handled by pacman -S |
| **Clean Package Cache** | apk cache clean | apt clean or apt autoclean | pacman -Scc |
| **System Info** | cat /etc/os-release | cat /etc/os-release | cat /etc/os-release |
| **Reboot** | reboot | reboot | reboot |
| **Shutdown** | poweroff | shutdown now | shutdown now |
| **Create User** | adduser <username> | adduser <username> | useradd <username> |
| **Delete User** | deluser <username> | deluser <username> | userdel <username> |
| **Add User to Group** | addgroup <group> <username> | usermod -aG <group> <username> | gpasswd -a <username> <group> |
| **Change Password** | passwd <username> | passwd <username> | passwd <username> |
| **Disk Partitioning** | fdisk or parted | fdisk or parted | fdisk or parted |
| **Mount Partition** | mount <device> <mount\_point> | mount <device> <mount\_point> | mount <device> <mount\_point> |
| **Check Disk Usage** | df -h | df -h | df -h |
| **View Logs** | dmesg, cat /var/log/\* | journalctl, cat /var/log/\* | journalctl, cat /var/log/\* |
| **Network Info** | ifconfig, ip addr | ifconfig, ip addr | ifconfig, ip addr |
| **Ping a Host** | ping <hostname> | ping <hostname> | ping <hostname> |
| **Check Running Processes** | ps aux | ps aux | ps aux |
| **Stop a Process** | kill <PID> | kill <PID> | kill <PID> |
| **Start a Service** | rc-service <service> start | systemctl start <service> | systemctl start <service> |
| **Stop a Service** | rc-service <service> stop | systemctl stop <service> | systemctl stop <service> |
| **Enable a Service** | rc-update add <service> default | systemctl enable <service> | systemctl enable <service> |
| **Disable a Service** | rc-update del <service> default | systemctl disable <service> | systemctl disable <service> |
| **List Services** | rc-service | systemctl list-units | systemctl list-units |
| **Check Service Status** | rc-service <service> status | systemctl status <service> | systemctl status <service> |

**Advanced cmd:**

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| **Task** | **Alpine Linux** | **Debian Linux** | **Arch Linux** |
| **List Active Services** | rc-service | systemctl list-units --type=service | systemctl list-units --type=service |
| **View System Logs (with specific service)** | rc-service <service> log | journalctl -u <service> | journalctl -u <service> |
| **Show Kernel Version** | uname -r | uname -r | uname -r |
| **Check System Information** | apk info | lsb\_release -a | lsb\_release -a |
| **Show Hardware Information** | apk add lshw && lshw | lshw | lshw |
| **Show Disk Partition Information** | fdisk -l | fdisk -l | fdisk -l |
| **Show Mounted Filesystems** | mount | mount | mount |
| **Change Hostname** | hostname <new-hostname> | hostnamectl set-hostname <new-hostname> | hostnamectl set-hostname <new-hostname> |
| **Add a New Repository** | echo "http://dl-cdn.alpinelinux.org/alpine/edge/main" >> /etc/apk/repositories | echo "deb http://deb.debian.org/debian stable main" >> /etc/apt/sources.list | echo "[archlinuxfr]" >> /etc/pacman.conf && echo "SigLevel = Never" >> /etc/pacman.conf |
| **Update All Packages** | apk update && apk upgrade | apt update && apt upgrade | pacman -Syu |
| **Install Package Without Dependencies** | apk add --no-cache <package> | apt install --no-install-recommends <package> | pacman -S --assume-installed <package> |
| **Force Package Reinstallation** | apk add --force <package> | apt install --reinstall <package> | pacman -S <package> --overwrite '\*' |
| **Create a Symlink** | ln -s <target> <symlink> | ln -s <target> <symlink> | ln -s <target> <symlink> |
| **Remove a Symlink** | rm <symlink> | rm <symlink> | rm <symlink> |
| **Check for Broken Packages** | apk check | dpkg --configure -a | pacman -Qdt |
| **Clear System Logs** | rm -rf /var/log/\* | journalctl --vacuum-time=7d | journalctl --vacuum-time=7d |
| **Search Installed Packages** | apk info -v | `dpkg -l | grep <package>` |
| **Show Disk Usage (detailed)** | du -ah | du -ah | du -ah |
| **Show Disk Usage (summary)** | du -sh | du -sh | du -sh |
| **Disk I/O Monitoring** | iostat -x | iostat -x | iostat -x |
| **Show Network Interfaces** | ip link show | ip link show | ip link show |
| **Show Routing Table** | ip route | ip route | ip route |
| **Test Network Speed** | apk add speedtest-cli && speedtest-cli | apt install speedtest-cli && speedtest-cli | pacman -S speedtest-cli && speedtest-cli |
| **Configure Static IP** | Edit /etc/network/interfaces | Edit /etc/network/interfaces | Edit /etc/netctl/<profile> |
| **View Active Network Connections** | ss -tuln | ss -tuln | ss -tuln |
| **Change Permissions** | chmod <permissions> <file> | chmod <permissions> <file> | chmod <permissions> <file> |
| **Change Ownership** | chown <user>:<group> <file> | chown <user>:<group> <file> | chown <user>:<group> <file> |
| **Set File Attributes** | chattr +<attribute> <file> | chattr +<attribute> <file> | chattr +<attribute> <file> |
| **Show File Attributes** | lsattr | lsattr | lsattr |
| **Create a Swap File** | fallocate -l <size> /swapfile && mkswap /swapfile && swapon /swapfile | dd if=/dev/zero of=/swapfile bs=1M count=2048 && mkswap /swapfile && swapon /swapfile | fallocate -l <size> /swapfile && mkswap /swapfile && swapon /swapfile |
| **Enable Swap at Boot** | echo "/swapfile none swap sw 0 0" >> /etc/fstab | echo "/swapfile none swap sw 0 0" >> /etc/fstab | echo "/swapfile none swap sw 0 0" >> /etc/fstab |
| **Show System Boot Time** | uptime | uptime | uptime |
| **Check Service Logs** | rc-service <service> log | journalctl -u <service> | journalctl -u <service> |
| **View System Boot Logs** | dmesg | journalctl -b | journalctl -b |
| **Check and Repair Filesystem** | fsck /dev/sda1 | fsck /dev/sda1 | fsck /dev/sda1 |
| **Show Hardware Information** | lspci | lspci | lspci |
| **Show USB Devices** | lsusb | lsusb | lsusb |
| **Monitor System Resources** | top | top | top |
| **Show Network Statistics** | netstat -tulnp | netstat -tulnp | netstat -tulnp |
| **Download File Using Curl** | curl -O <url> | curl -O <url> | curl -O <url> |
| **Download File Using Wget** | wget <url> | wget <url> | wget <url> |
| **Check SSL/TLS Connections** | openssl s\_client -connect <host>:<port> | openssl s\_client -connect <host>:<port> | openssl s\_client -connect <host>:<port> |
| **Show Running Services** | rc-service | systemctl | systemctl |
| **Change Runlevel (for SysVinit)** | init <level> | init <level> | init <level> |
| **Start a Service (SysVinit)** | /etc/init.d/<service> start | /etc/init.d/<service> start | /etc/init.d/<service> start |
| **Stop a Service (SysVinit)** | /etc/init.d/<service> stop | /etc/init.d/<service> stop | /etc/init.d/<service> stop |