TOP 10 ESSENTIAL SYSTEM MONITORING & TROUBLESHOOTING LINUX COMMANDS

1. top: Displays real-time system resource usage.

2. htop: Enhanced version of top, with a more user-friendly interface.

3. ps aux: Lists running processes with user, CPU, memory, etc.

4. df -h: Checks disk space usage, shown in human-readable format.

5. du -h --max-depth=3 /opt : Checks directory size. subdirectory 3 levels deep

6. ss: Similar to netstat, but more powerful for network statistics.

7. uptime – Displays system uptime and load averages.

8. netstat -tuln: Lists open network ports.

9. free -m: Shows available system memory.

10. iostat: Monitors disk I/O performance

   (install sysstat package).
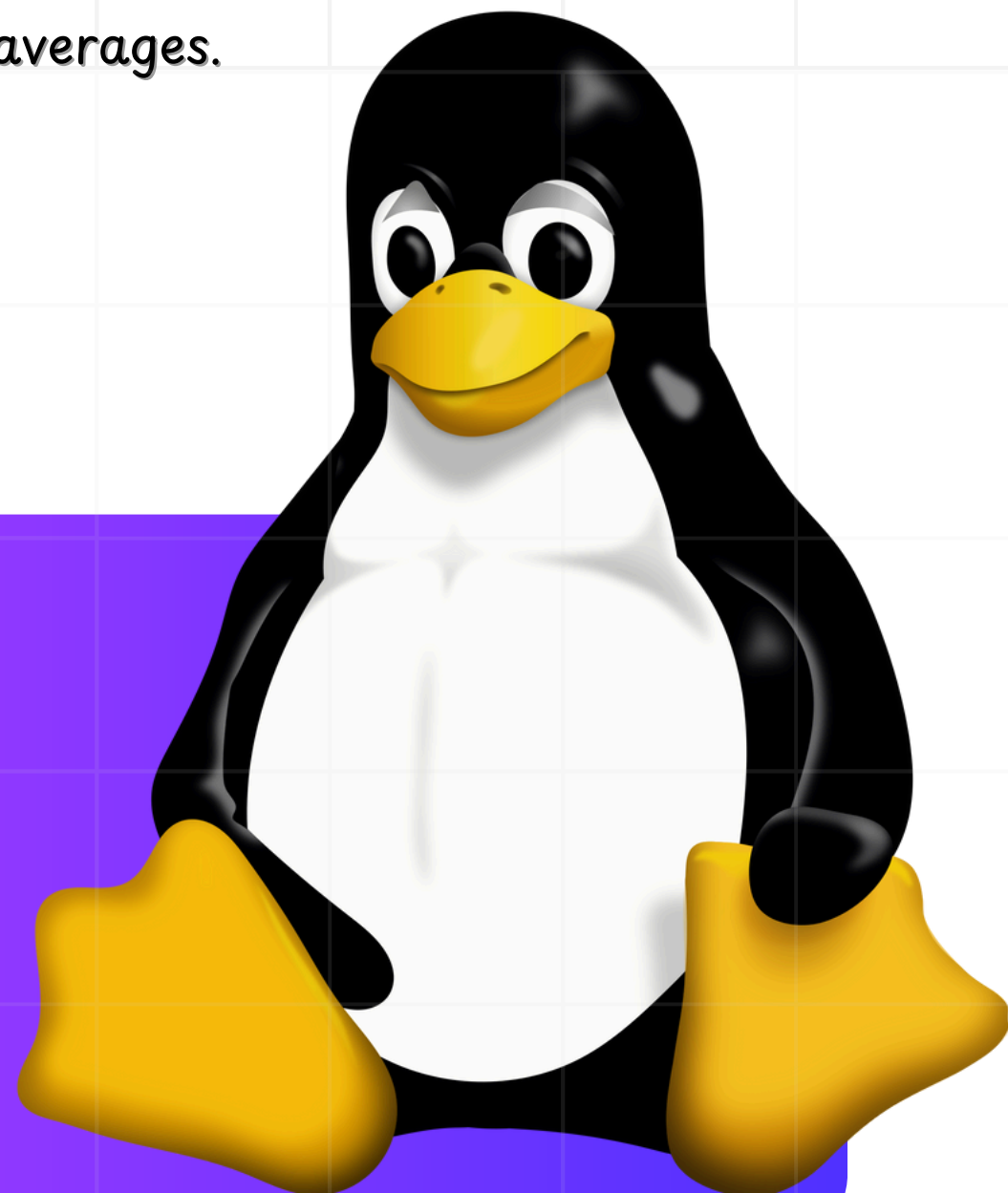
TOP 10 ESSENTIAL FILE & DIRECTORY MANAGEMENT COMMANDS

1. ln -s /path/to/file /path/to/link – Creates a symbolic link.

2. ls -lah – Lists files with detailed info in human-readable form.

3. rm -rf /path/to/directory – Removes files or directories recursively (be careful).

4. rsync -avz source/ destination/ – Synchronizes files and directories.

5. tar -czvf archive.tar.gz /path – Creates a compressed archive.

6. find /path -name "file.txt" – Searches for a file by name.

7. grep -r "text" /path – Searches text within files recursively.

8. cp -r /source /destination – Copies directories recursively.

9. mv file /path/to/destination – Moves or renames files.

10. unzip archive.zip – Extracts a ZIP file.

TOP 10 ESSENTIAL NETWORK TROUBLESHOOTING COMMANDS

1. nslookup <domain> – Resolves domain to IP.

2. dig <domain> – Performs DNS lookups.

3. telnet <hostname> <port> – Checks open port connectivity.

4. netcat -z -v <hostname> <port> – Quick port checker (netcat required).

5. ss -tuln – Shows active sockets (better replacement for netstat).

6. ping <hostname/IP> – Checks connectivity.

7. curl -I <URL> – Fetches HTTP headers.

8. wget <URL> – Downloads files from the internet.

9. traceroute <hostname> – Traces network path.

10. ifconfig – Displays network interfaces (or ip addr).
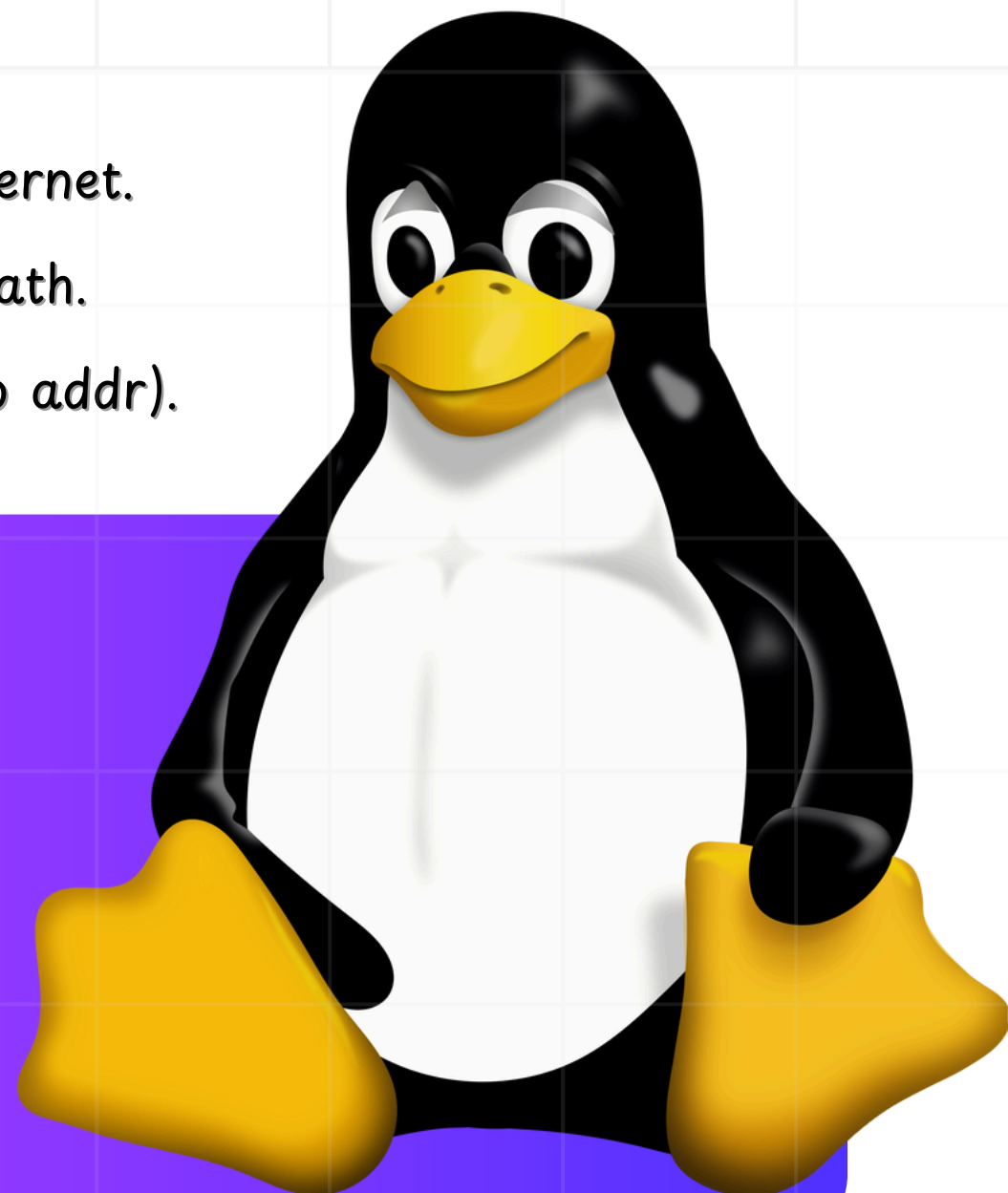
TOP 10 ESSENTIAL USER & PERMISSION MANAGEMENT COMMANDS

1. chmod 755 <file> – Sets file permissions.

2. chown user:group <file> – Changes ownership.

3. usermod -aG <group> <user> – Adds user to a group.

4. passwd <user> – Sets/changes user password.

5. adduser <username> – Creates a new user.

6. deluser <username> – Removes a user.

7. groupadd <groupname> – Creates a new group.

8. groups <username> – Lists groups a user belongs to.

9. id <username> – Shows user's UID, GID, and groups.

10. sudo visudo – Configures sudo privileges securely.
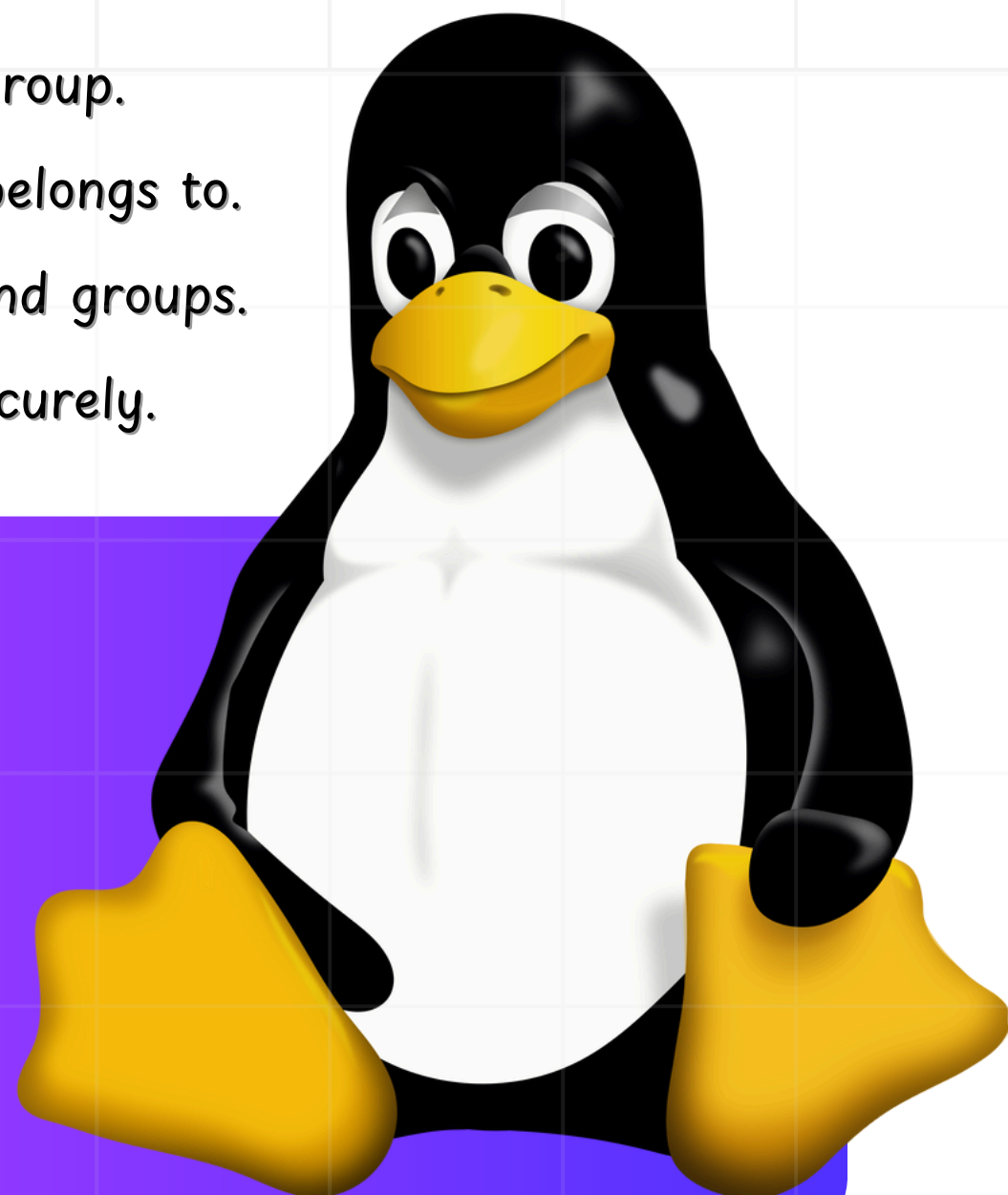
TOP 10 ESSENTIAL PACKAGE MANAGEMENT COMMANDS

1. apt-get update – Updates the package list (Debian/Ubuntu).
2. apt-get upgrade – Upgrades installed packages (Debian/Ubuntu).
3. apt-get remove <package> – Removes a package.
4. dnf update – For package management on newer RHEL/CentOS.
5. rpm -qa – Lists all installed RPM packages (CentOS/RHEL).
6. apt-cache search <package> – Searches for a package (Debian/Ubuntu).
7. yum list installed – Lists installed packages (CentOS/RHEL).
8. yum install <pkg> – Installs a package (CentOS/RHEL).
9. yum update – Updates packages (CentOS/RHEL).
10. dpkg -l – Lists installed packages (Debian/Ubuntu).
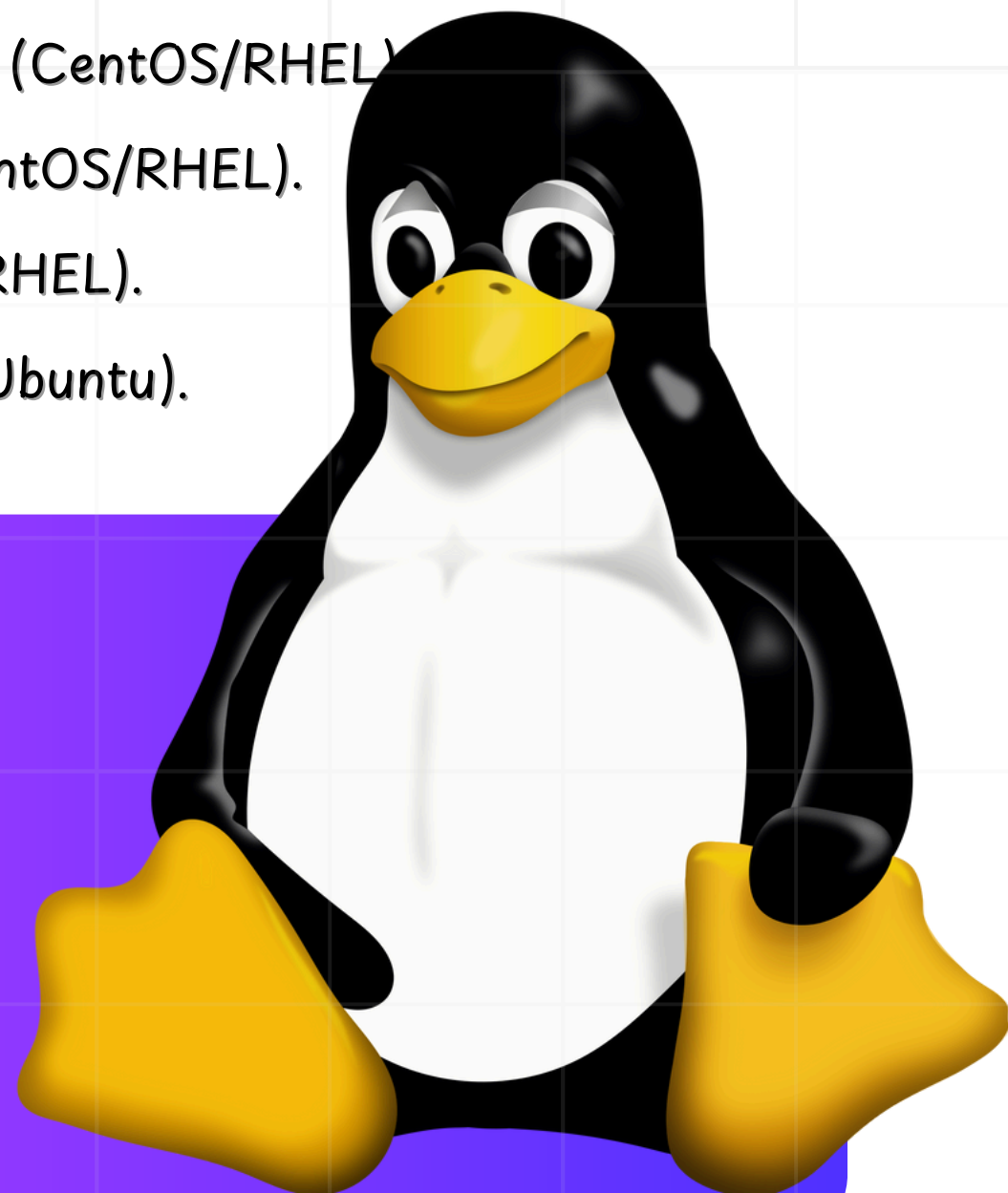
TOP 10 ESSENTIAL LOG MANAGEMENT COMMANDS

1. tail -f /path/to/logfile – Continuously monitors log file updates.

2. head -n 20 /path/to/logfile – Shows the first 20 lines of a log.

3. less /path/to/logfile – Opens log files for scrolling/searching.

4. grep "error" /path/to/logfile – Searches logs for "error" entries.

5. journalctl -xe – Views system logs.

6. logger "message" – Writes a custom message to the syslog.

7. dmesg – Shows kernel logs.

8. logrotate – Rotates logs (configuration required).

9. last – Shows last login history.

10. who – Displays who is logged into the system.
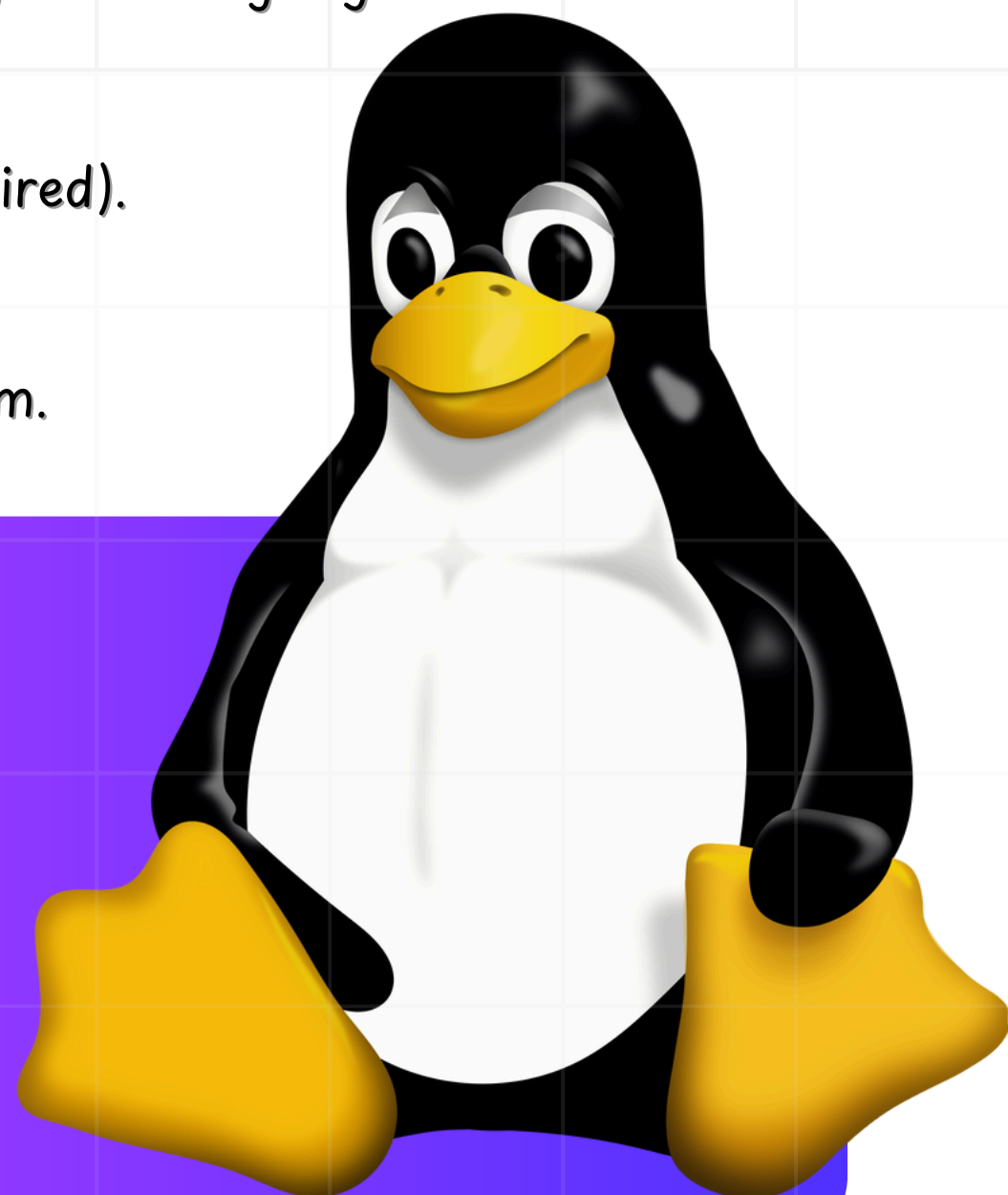
TOP 10 ESSENTIAL AUTOMATION & SCHEDULING COMMANDS

1. crontab -e – Edits cron jobs.

2. crontab -l – Lists user's cron jobs.

3. at 10:00 – Schedules one-time tasks.

4. systemctl start <service> – Starts a service.

5. systemctl stop <service> – Stops a service.

6. systemctl status <service> – Shows the service status.

7. systemctl enable <service> – Enables service at boot.

8. systemctl disable <service> – Disables service at boot.

9. service <service> restart – Restarts a service.

10. watch -n 5 <command> – Runs a command

    repeatedly every 5 seconds.
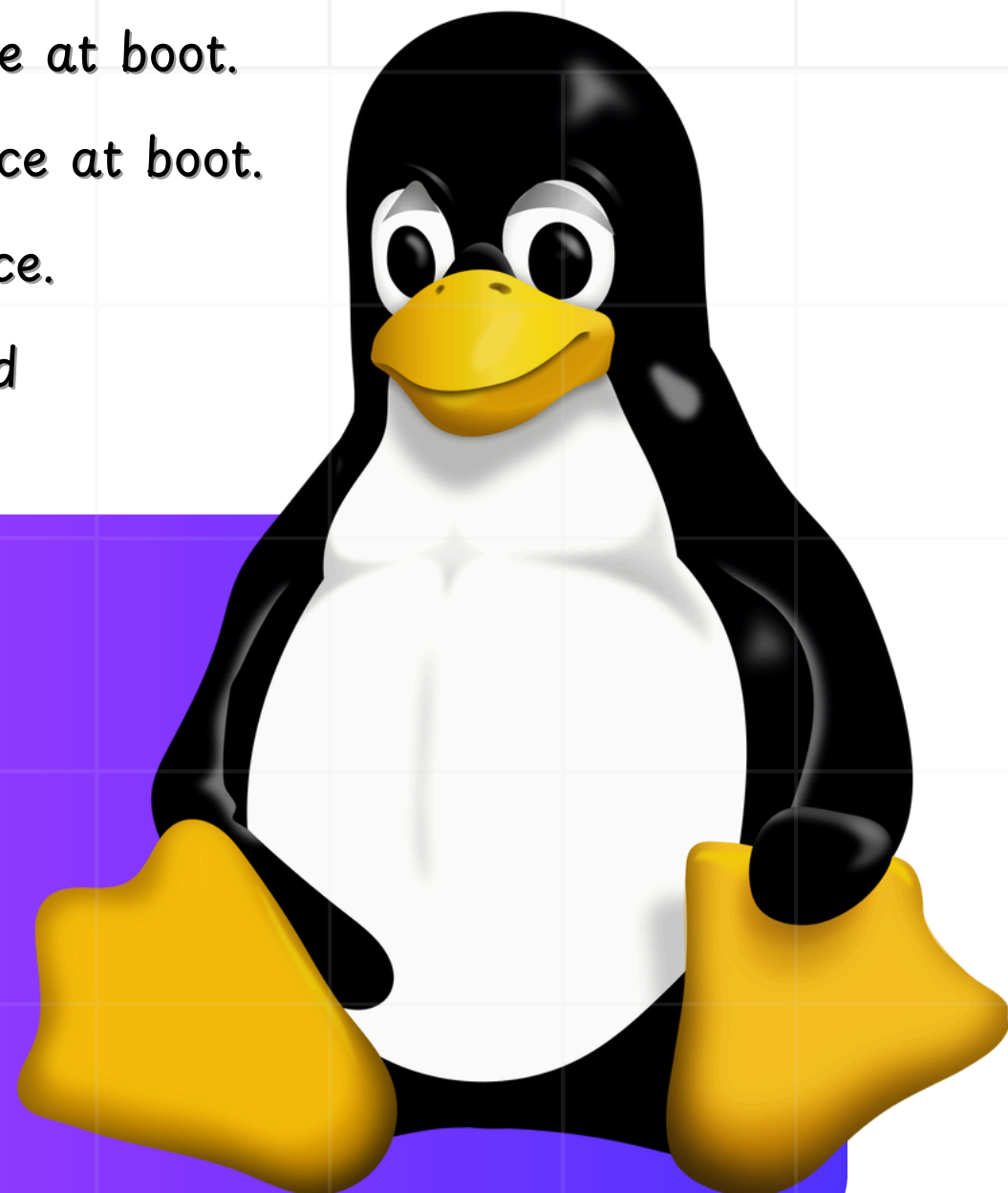
TOP 10 ESSENTIAL SECURITY & CONNECTIVITY COMMANDS

1. ssh user@hostname – SSH into a remote server.

2. scp file user@hostname:/path – Copies files over SSH.

3. iptables -L – Lists firewall rules.

4. ufw status – Shows firewall status (Ubuntu).

5. fail2ban-client status – Manages IP banning.

6. passwd – Changes the password.

7. openssl passwd -6 – Encrypts a password.

8. sshd -T – Tests the SSH config file.

9. ssh-keygen – Creates a new SSH key pair.

10. firewalld --list-all – Lists zones and rules (CentOS/RHEL)
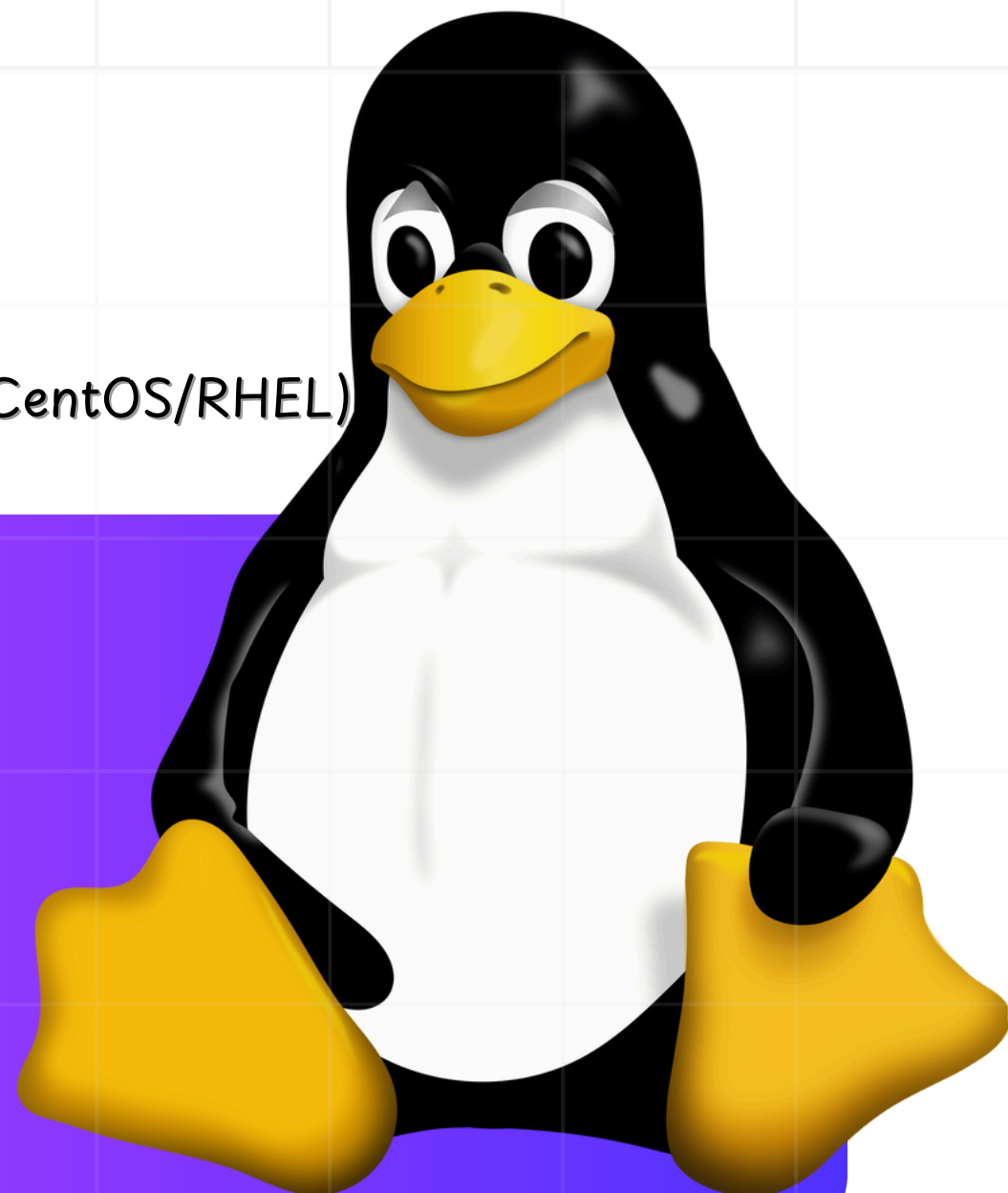
TOP 10 ESSENTIAL DISK & FILESYSTEM MANAGEMENT COMMANDS

1. fdisk -l – Lists all partitions.

2. mount /dev/sdX /mnt – Mounts a device.

3. umount /mnt – Unmounts a device.

4. df -h – Checks filesystem disk space.

5. du -sh <directory> – Shows the directory size.

6. mount -o remount,rw /dev/sdX – Remounts a filesystem as read/write.

7. mkfs -t ext4 /dev/sdX – Formats a partition as ext4.

8. e2fsck -f /dev/sdX – Checks/repairs a filesystem.

9. blkid – Shows UUID of block devices.

10. lsblk – Lists block devices in a tree format.
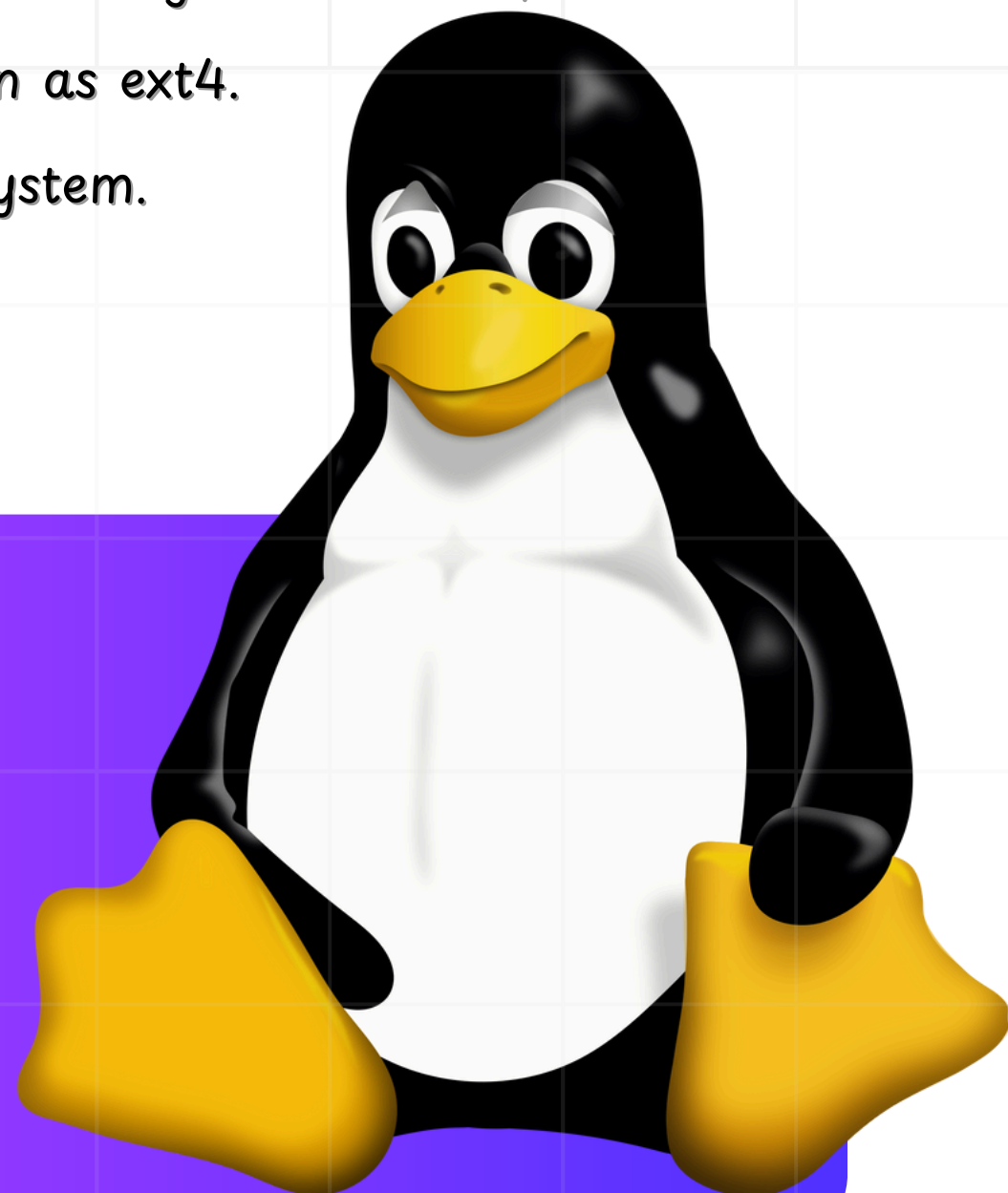
TOP 10 ESSENTIAL TEXT PROCESSING & FILE MANAGEMENT COMMANDS

1. cat file – Displays file content.

2. head -n 10 file – Shows the first 10 lines.

3. tail -n 10 file – Shows the last 10 lines.

4. less file – Views file with scrolling/searching capability.

5. awk '{print $1}' file – Prints the first column of each line.

6. sed 's/old/new/g' file – Replaces text in a file.

7. cut -d: -f1 /etc/passwd – Extracts fields by delimiter.

8. sort file – Sorts file lines.

9. uniq file – Filters out repeated lines.

10. wc -l file – Counts lines in a file.