Linux Command Cheat Sheet

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Part 4

Linux Compression and Archiving Command Cheat Sheet

Linux file compression commands reduce the size of files and directories by compressing them, so they are easier to store and transfer. Multiple files and directories can be grouped and stored as a single archive file with archiving commands.

Command	Description
tar	It is used to create and extract archives in tar format.
gzip	It is used to compress files and directories in gzip format.
gunzip	It is used to decompress files and directories in gzip format.
bzip2	Used to compress files and directories in bzip2 format.
bunzip2	Used to decompress files and directories in bzip2 format.
zip	Used to create and extract archives in zip format.
unzip	Used to extract archives in zip format.
rar	Used to create and extract archives in rar format.
unrar	Used to extract archives in rar format.
7z	Used to create and extract archives in 7z format.
un7z	Used to extract archives in 7z format.
ar	Used to create and extract archives in Unix ar format.
cpio	Used to create and extract archives in cpio format.
compress	Used to compress files in compress format.
uncompress	Used to decompress files in compress format.
xz	Used to compress files and directories in xz format, which is a high compression ratio format. The corresponding decompression command is "unxz".
lzma	Used to compress files and directories in lzma format, which also has a high compression ratio. The corresponding decompression command is "unlzma".
tar.bz2	Used to create and extract archives in tar formats that are compressed with bzip2. The corresponding decompression command is "tar -xjf".
tar.gz	Used to create and extract archives in tar formats that are compressed with gzip. The corresponding decompression command is "tar -xzf".
zcat	Used to view the contents of a file that has been compressed with gzip, without decompressing it.
bzcat	Used to view the contents of a file that has been compressed with bzip2, without decompressing it.
arj	Used to create and extract archives in arj format. The corresponding decompression command is "unarj".
cabextract	Used to extract files from archives in Microsoft Cabinet (CAB) format.
rpm2cpio	Used to convert RPM package files to cpio format, which can then be extracted using the "cpio" command.
p7zip	Used to create and extract archives in 7z format and other formats, with support for AES-256 encryption.

Linux Input/Output Redirection Command Cheat Sheet

Linux input/output redirection commands redirect commands and scripts. This command allows you to specify input and output locations. You can read input from a file instead of typing it rather than displaying it on the screen. The output of multiple commands can also be filtered and modified using redirection commands. They provide a powerful and flexible way to control Linux data flows.

Command	Description
">"	Used to redirect output to a file, creating a new file if it doesn't exist or overwriting the existing file if it does.
">>"	Used to redirect output to a file, but appending the output to the end of the file instead of overwriting it.
"<"	Used to redirect input from a file, with the contents of the file being used as input to the command.
"<<"	Used to redirect input from a "here document", which is a way to pass input to a command without using a file.
"&>"	Used to redirect both standard output and standard error to a file, creating a new file if it doesn't exist or overwriting the existing file if it does.
"&>>"	Used to redirect both standard output and standard error to a file, but appending the output to the end of the file instead of overwriting it.
"2>"	Used to redirect standard error to a file, creating a new file if it doesn't exist or overwriting the existing file if it does.
"2>>"	Used to redirect standard error to a file, but appending the output to the end of the file instead of overwriting it.
"|"	Used to redirect the output of one command as input to another command, creating a pipeline of commands.
"tee"	Used to redirect output to a file, while still displaying the output on the screen.
"<<<"	Used for here strings, which allow you to specify input directly in a variable.
"<>"	Used to open a file for both reading and writing.
">&"	Used to redirect standard output and standard error to a file descriptor.
"<()"	Used for command substitution, which allows the output of a command to be used as input for another command.
">()"	Used for process substitution, which allows the output of a command to be used as input for another command as a file.
"script"	Used to record a shell session to a file for later replay.
"/dev/null"	Used to discard output, effectively sending it into a "black hole".

Linux System Monitoring Command Cheat Sheet

In Linux, system monitoring commands are used to monitor and analyze system performance. Using these commands, you can find out details about your system's resources, such as CPU usage, memory usage, disk usage, network activity, and running processes. Administrators can identify system bottlenecks, troubleshoot problems, and optimize performance by using system monitoring commands.

Command	Description
top	Provides a real-time view of the system's performance, including CPU usage, memory usage, and running processes.
ps	Displays a list of running processes and their status, including their process ID (PID), memory usage, and CPU usage.
htop	Similar to top, but provides a more user-friendly interface with more options for sorting and filtering processes.
free	Displays information about the system's memory usage, including total, used, and available memory.
vmstat	Provides a detailed report on the system's virtual memory statistics, including CPU usage, paging, and disk I/O.
iostat	Displays input/output statistics for disks and other storage devices, including throughput and disk utilization.
netstat	Shows the status of network connections, including current TCP/IP connections and open ports.
iftop	Monitors network traffic in real-time, showing the amount of data sent and received on each network interface.
sar	Collects and reports system activity information, including CPU usage, memory usage, and I/O statistics, over a specified period of time.
dstat	Provides real-time performance monitoring of the system's CPU, disk, network, and other resources.
mpstat	Displays information about the system's CPU usage, including individual CPU statistics.
uptime	Shows how long the system has been running, the number of users currently logged in, and the system load averages.
atop	Displays system resource utilization by process, user, and CPU usage history.
nmon	Displays system resource utilization in real-time with a graphical interface.
pidstat	Displays statistics about the utilization of CPU, memory, and I/O by processes.
tcpdump	Captures and analyzes network traffic.
strace	Traces system calls and signals of a running process.
lsof	Lists open files and the processes that have opened them.

Linux System Backup and Restore Command Cheat Sheet

Using the System Backup and Restore commands in Linux, you can create a backup copy of important data and configurations if your system fails, data is lost, or one of your configurations is corrupted. Users can use these commands to create a backup of their system, which they can restore in case of failure or disaster.

Command	Description
rsync	This command syncs files and directories between two different locations, either locally or remotely. This is an extremely powerful command that can backup entire systems.
dd	Used to create disk images or clone disks. You can also go back up and restore operations.
dump and restore	By running this command, you will be able to backup and restore your file system. This command is commonly used in the event of a system failure for disaster recovery.
cpio	It is used to create and extract archives. Backups and restores of file systems are frequently performed with it.
ddrescue	A tool for copying data from one device to another, while attempting to recover as much data as possible from errors.
fsarchiver	A tool for creating and restoring file system archives. It can be used for backing up and restoring individual file systems.
partclone	This command is used to create and restore partition images. It supports a wide range of file systems and can be used to backup and restore entire partitions.
tar	This command is used to create compressed archives of files and directories. It also allows you to extract files from a compressed archive.
gzip	This command is used to compress files and directories to reduce their size.
bzip2	This command is used to compress files and directories with a higher compression ratio than gzip.
zip/unzip	This command is used to compress and decompress files and directories in the ZIP format.
duplicity	Using this command, you can backup and restore Linux files and directories encrypted. It uses GnuPG for encryption and supports many cloud storage services.

borgbackup	This command is a specialized tool for creating and restoring deduplicated and compressed backups of entire file systems, and supports encryption and remote backups over SSH.
TimeShift	This is a backup and restore tool that creates snapshots of the system at regular intervals. It can be used to restore the system to a previous state in case of any issues.
Amanda	This is a network backup solution that can be used to backup multiple systems over a network. It supports multiple backup methods and can be used to create full system backups.
Bacula	This is a network backup and restore solution that supports multiple platforms and backup methods. It can be used to backup and restore entire systems and individual files.
Mondo Rescue	This is a complete backup and restore solution for Linux systems. It can create bootable recovery CDs or DVDs and can be used to backup and restore entire systems.
Clonezilla	This utility provides a complete solution for backups and restores of Linux systems. It allows both local and remote backups, as well as creating full system images.