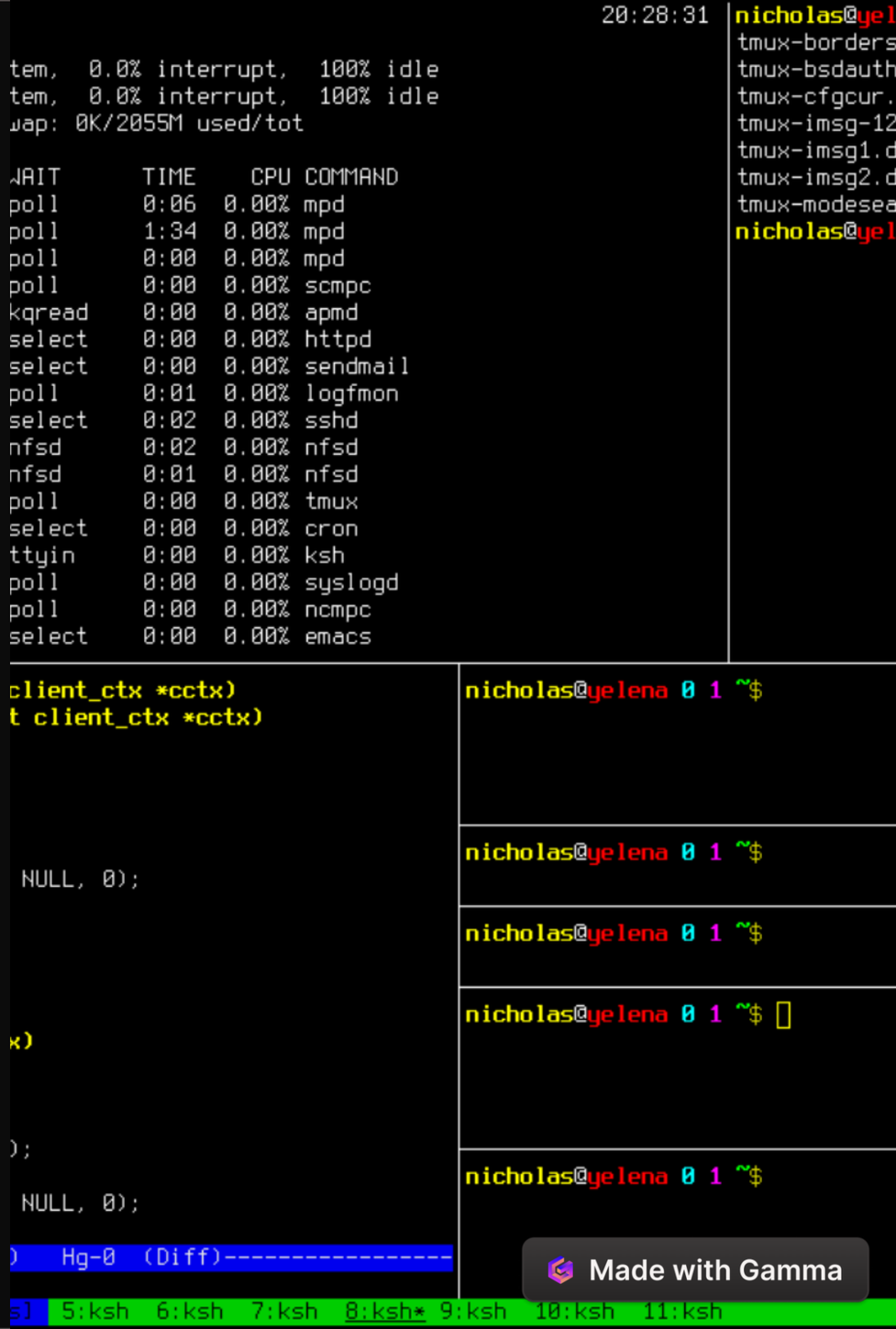
Basic Disk-Related Commands in Linux

As a Linux user, you need to have a good understanding of disk space and usage. In this presentation, we explore two simple yet powerful disk-related commands, du and df, that will help you manage your disk space effectively.

d **by dummy**



Using the du Command

What is du command?

The du command stands for “ disk usage” and it is used to estimate disk space usage of a file or directory.

How to use du command?

Syntax: du [options] [pathname]. For example: du -sh /home/username/mydir/

What are its key features?

The du command can display sizes of individual files as well as directories, and you can sort the output based on the sizes to get a better analysis of disk usage.

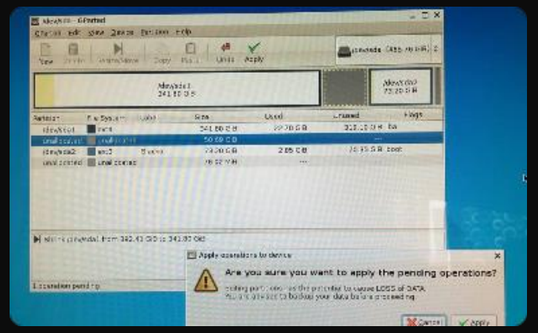
Using the df Command

What is df command?

The df command stands for “ disk free” and it is used to display information about total and available disk space on a file system.

How to use df command?

Syntax: df [options] [file system]. For example: df -h



What are its key features?

The df command displays information about the file system containing each file name argument and the space available on that file system. This command is often used with several options to display disk usage in a human-readable format.

du vs df: What's the Difference?

1

Scope of Analysis

The du command calculates disk usage based on files and directories that are given as arguments. In contrast, the df command displays information about all mounted filesystems and can be used to investigate the overall disk space usage of your system

2

Output Format

The du command generates a list of the sizes of the files and directories you specify or, if you do not specify any files or directories, the current directory and its subdirectories. The df command, on the other hand, displays the amount of used and available disk space on a file system. It can display the information in different formats, such as human-readable or in bytes.

3

Real-Time vs Batch Processing

The du command is usually run on a specific file or directory, while the df command is designed for system-wide monitoring of disk space usage. You can run df at any time and it will give you the current disk usage of all mounted filesystems. The du command is ideal for on-the-spot analysis while the df command is best for monitoring overall disk usage over time.

Sorting Output with du Command

1

Sort by size

Use the -s option to sort output in order of total file sizes in each directory. You can also use --sort option to specify different sorting methods.

2

Limit search depth

You can limit the search depth of your analysis with the --max-depth flag, which tells du to analyze files and directories only to a certain level of depth.

3

Exclude specific files and directories

If you want to exclude specific files or directories from your analysis, use the --exclude flag followed by the name of the file or directory you want to ignore.

df Command: Useful Tips

Check Disk Usage

Use the df -h command to obtain a summary of the disk space utilization of all mounted file systems in the human-readable format.

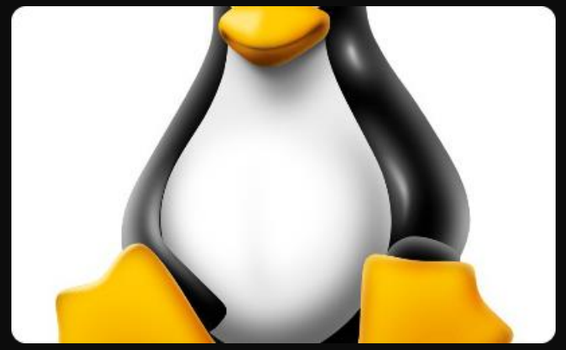
Display Inodes

The df -i option is used to view the number of inodes used and those available on a file system.

Specific File System Usage

You can display the information for a specific file system using the df command with the name of the mount point for that file system.

Keeping Your Disk Space Clean



Automate Maintenance

Consider using an automated tool to regularly clean your disk. For example, Janitor is a cleaning tool for Linux that runs automatically and removes temporary files, cache, installation remnants, logs, and old backups.

Regular manual cleaning

Be mindful of the files you're storing on your computer. Clean up old and duplicate files periodically. Consider shredding or deleting sensitive data that is no longer needed.

Emptying your trash

Emptying your trash regularly is an easy way to free up disk space. Make sure to check that the contents of your trash can be safely deleted.

Conclusion

Importance of Disk Space Management

Effective management of disk space is key to the optimal performance of your Linux system. The du and df commands are powerful tools that can help you monitor and analyze your disk space usage and keep your system well-organized.

Regular Maintenance is Key!

Take a proactive approach to disk management by regularly monitoring and optimizing your disk space usage. This will not only improve performance but also prevent data loss and other recurring issues.

Further Learning

Keep exploring the different commands and features of Linux to enhance your skill set and become a more proficient Linux user. Always keep learning!