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Introduction to Process Management

Mastering Process Management in Linux Simplifies System Operations.

DEFINITION

> Process management in Linux refers to how the operating system handles running programs. It involves creating, scheduling, and terminating processes to ensure efficient system performance.

KEY CONCEPTS

Process

A process is an instance of a running program, including its code and current activity.

PID

The Process ID (PID) is a unique identifier assigned to each process for tracking.

Scheduling

Scheduling determines the order in which processes run, optimizing CPU usage and responsiveness.

Foreground vs Background

Foreground processes interact with the user, while background processes run without user interaction.

Zombie Process

A zombie process is a finished process that still has an entry in the process table.

EXAMPLES

→ Using 'ps' command to list running processes.

→ Killing a process with 'kill <PID>'.

→ Running a script in the background with './script.sh &'.

MEMORY TIPS

★ Remember 'PID' as 'Process ID' to easily recall its purpose.

★ Think of 'zombie' processes as 'dead but not forgotten' to remember their state.

★ Use 'FG' for ForeGround and 'BG' for BackGround to distinguish process types.

COMMON MISTAKES

✗ Confusing foreground and background processes.

✗ Neglecting to check for zombie processes.

✗ Forgetting to use the correct PID when terminating processes.

QUICK RECAP

Process management is essential for running programs efficiently in Linux. Understanding PIDs, scheduling, and process types helps in managing system resources effectively.