System Calls in Linux

Welcome to the world of system calls in Linux! In this presentation, we will explore what system calls are, why they are important, and how they work in the Linux operating system.

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Types of System Calls

Process Control

Manage processes and their execution.

File Management

Perform operations on files and directories.

Device Management

Control input/output devices.

Communication

Facilitate inter-process communication.

Examples of System Calls

1 Fork()

Create a new process by duplicating the existing one.

2 Read()

Read data from a file descriptor.

3 Write()

Write data to a file descriptor.

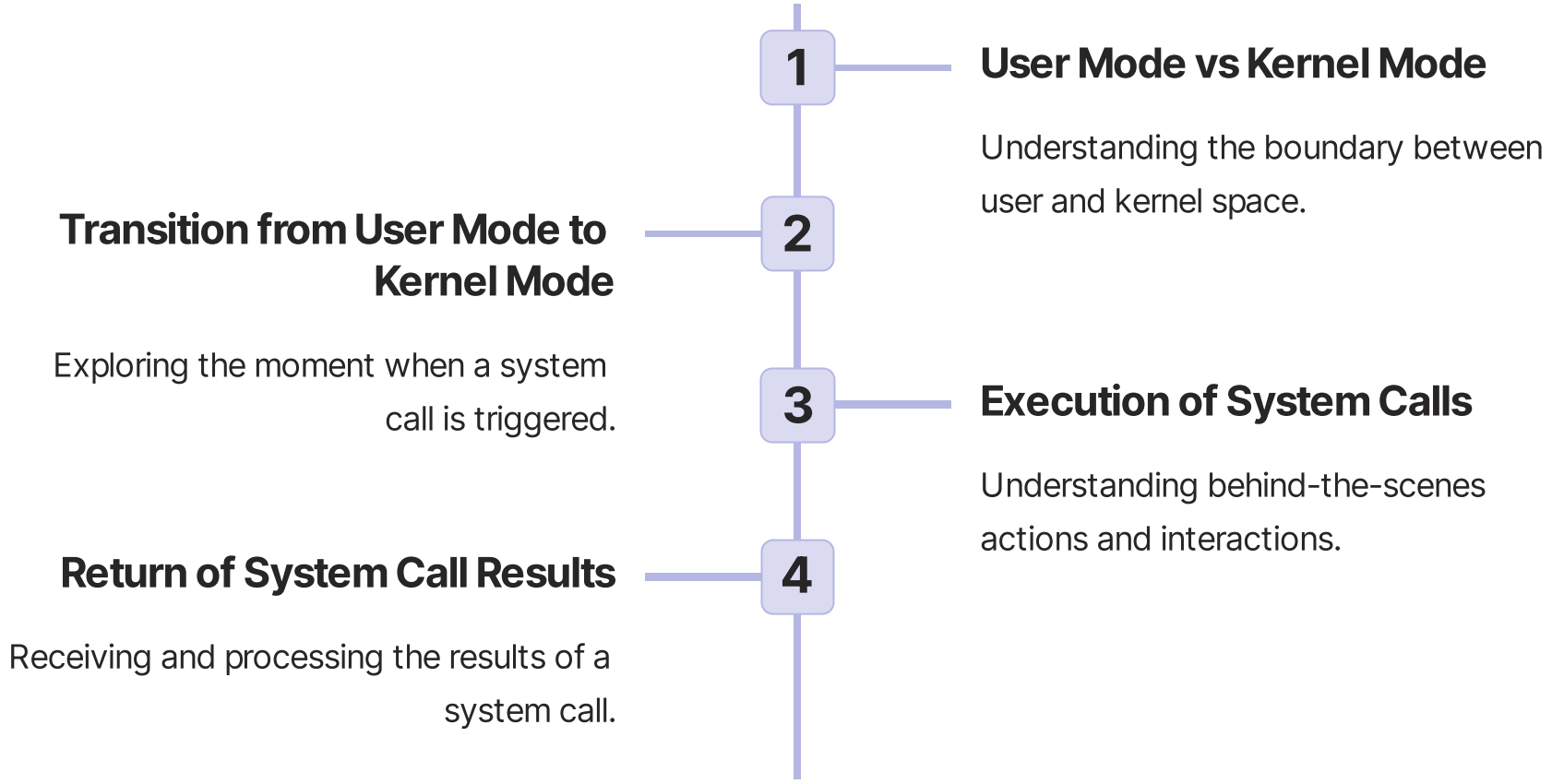
4 Open()

Open a file or create a new one.

5 Close()

Close a file descriptor.

How System Calls Work



Benefits of Using System Calls

Efficient Resource Utilization

Optimal usage of system resources like memory and CPU.

Enhanced Security

Protecting system integrity and preventing unauthorized access.

Flexibility and Compatibility

Ability to work with different hardware and software configurations.

Conclusion

Recap of System Calls

Reviewing the key concepts and types of system calls in Linux.

Importance of Understanding System Calls

Realizing how deep knowledge of system calls can benefit software developers and system administrators.

Future Developments and Advancements

Discussing the evolution of system calls and their role in shaping future technologies.