

Functionality	Windows API (WinAPI)	Linux System Calls	Notes							
File I/O										
Open a file	CreateFile	open	CreateFile is an all-purpose function for creating/opening files, devices, etc. open uses flags like O_CREAT for similar behaviors.							
Read from a file	ReadFile	read								
Write to a file	WriteFile	write								
Close a handle	CloseHandle	close	On Linux, file descriptors are integers.							
Get file metadata	GetFileAttributes	stat								
Process Management										
Create a new process	CreateProcess	fork and exec	This is a classic difference: fork clones the parent, then exec replaces the child's program. posix_spawn is a more modern alternative that combines these.							
Wait for a process	WaitForSingleObject	waitpid	WaitForSingleObject is for waiting on a variety of object types, while waitpid is specifically for processes.							
Terminate a process	TerminateProcess	kill	kill sends a signal to a process, and the SIGKILL signal forcibly terminates it.							
Memory Management										
Allocate virtual memory	VirtualAlloc	mmap	mmap is also used for mapping files into memory.							
Free virtual memory	VirtualFree	munmap								