Before overflowing the buffer

Unallocated stack space
... (Buffer)
SFP
RIP
Pointer (last byte > 0x00)
Parent routine's stack
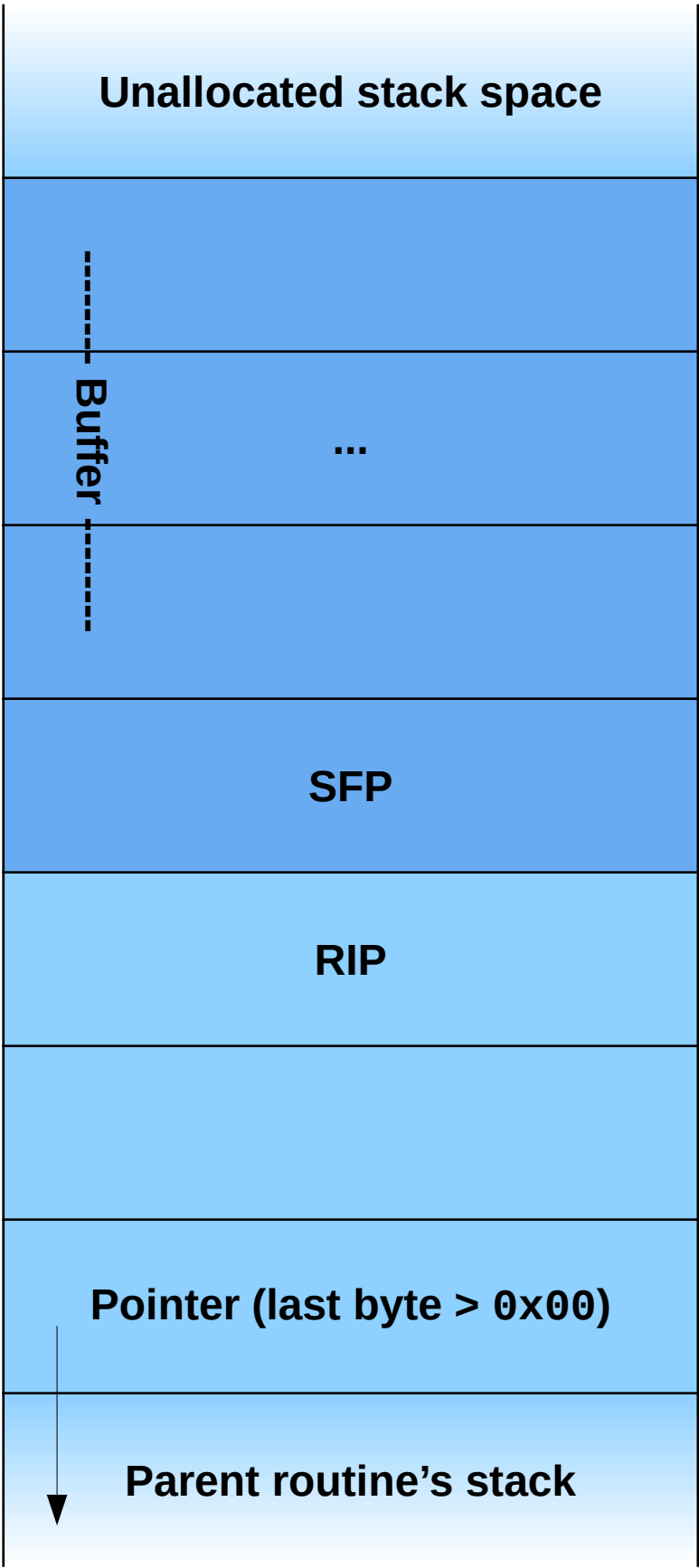
Current stack frame

Previous stack frame

After overflowing the buffer

Unallocated stack space
NOP sled
...
Shellcode
Shellcode
&ret
&ret
Pointer (last byte 0x00)
Parent routine's stack