File in Linux

[mckernel]

Virtual address space of mcexec

[mckernel]

mcexec mmap

mcexec text

mcexec data/bss

mcexec heap

mcexec stack

Physical memory

Virtual address space of McKernel process

App text

App data/bss

App heap

App mmap

App stack

Not used
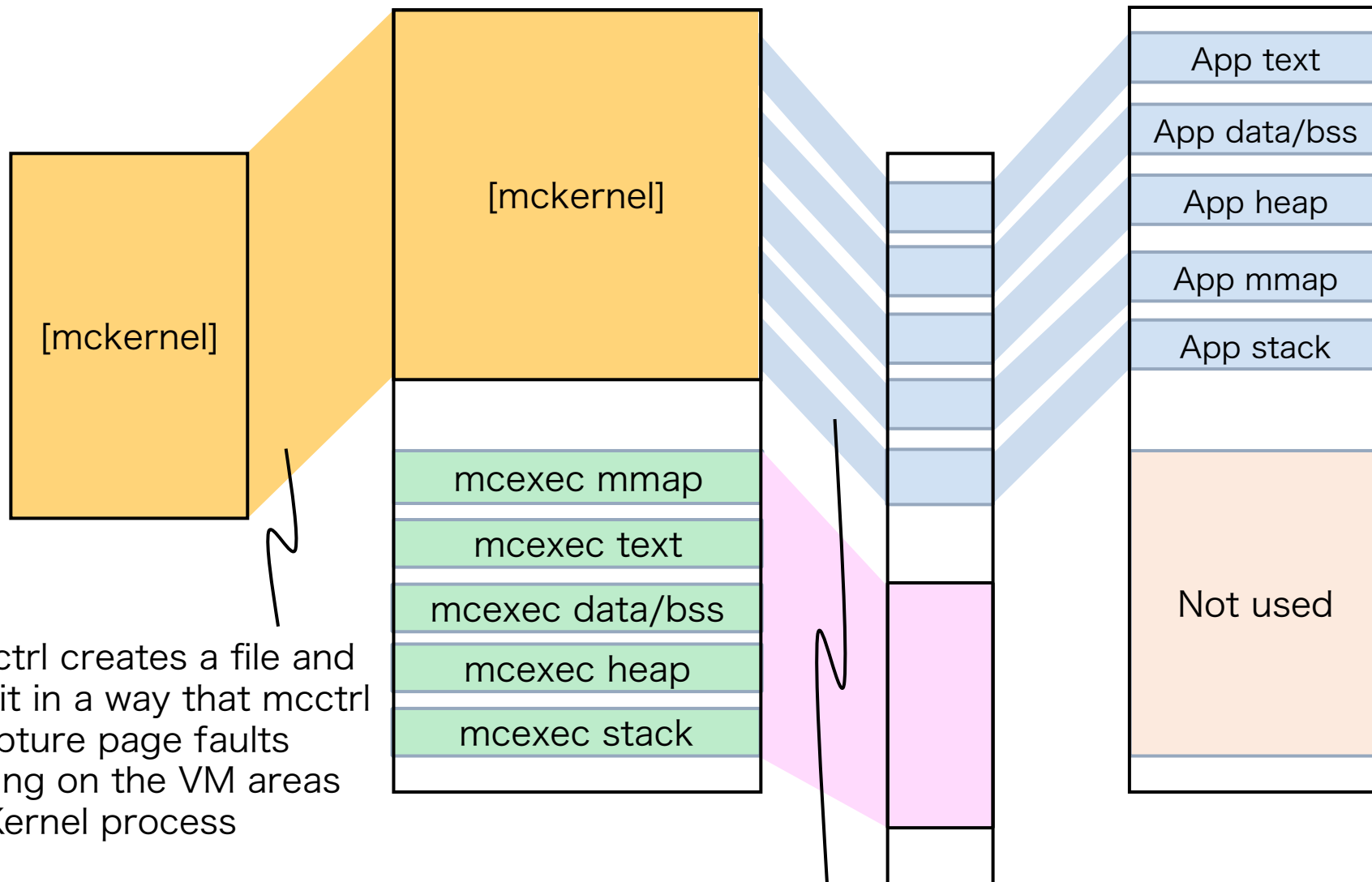
(1) mcctrl creates a file and mmap it in a way that mcctrl can capture page faults occurring on the VM areas of McKernel process

(2) mcctrl asks McKernel to obtain physical page if needed and then copy page table entry of McKernel process to page table of mcexec