

Kernel Data Structures for Open Files

Per Process
(System segment of process)

	close on exec	
	flag	pointer
fd 0		
fd 1		
fd 2		
fd 3		
fd 4		
.		
.		
.		

Process structure

Per Open
(Open file table –
open file descriptions)

file status flags (read, write, etc)
current file offset
reference count: dup++, fork++, close--
v-node pointer

System wide structures

Per file, device
(Open file, device –
v-node table)

v-node info:
type
pointers to I/O functions
i-node info:
mode, owner, times
file size
pointers to data blocks
reference count: open++, close--