DCSLAB

System Programming
Lab #9

2020-05-20

sp-tas

Lab Assignment #4 : Kernel Lab

- Download skeleton code & pdf from eTL
  - kernellab-handout.tar, kernellab-handout.pdf
- Hand In #1 – Setup (Done)
  - capture your development environment
  - Upload your capture image eTL
    - 압축파일 양식 : [학번]_이름]_kernellab_setup.tar (or .zip etc) **(including below files)**
      - filename for part #1 : [학번]_[이름]_kernellab_ptree.jpg (or .png, etc)
      - filename for part #2: [학번]_[이름]_kernellab_paddr.jpg (or .png, etc)
- Hand In #2 – Your Implementation
  - Upload your files eTL
    - 압축파일 양식 : [학번]_[이름]_kernellab.tar (or .zip, etc)
    - Ex) 2020-12345_홍길동_kernellab.tar
  - A zip file should include
  - (1) a tarball of your implementation directory (2) report
    - tarball 양식 : kernellab-[학번].tar.gz eg) kernellab-2020-12345.tar.gz
    - Report 양식 : [학번]_[이름]_kernellab_report.pdf (or .hwp, .txt etc)
- Please, READ the Hand-out and Lab material thoroughly!

Lab Assignment #4 : Kernel Lab

- Step 1. Setup (Done)
  - (part #0) Load my own kernel module
- Step 2. Implementation
  - (part #1) Tracing process tree from process id
  - (part #2) Finding physical address using virtual address

- Assigned : May 6
- Deadline for Step 1. Setup : May 13, 23:59:59 (Delay NOT allowed)
- Deadline for Step 2. Implementation : May 27, 23:59:59
- Delay policy : Same as before

- Lab sessions will be
  - 5/6: Kernel lab part #0, #1
  - 5/13: Kernel lab part #2
  - 5/20 : Kernel lab Q&A session ← TODAY

Today's Lab

- Frequently asked questions

FAQ

- 1. mmap fails in app
  - Try using different PADDRs
  - PADDR must be 4KB-aligned (ex. 0x1234**000**)
  - Please report the value used to TA
- 2. Accessing user buffer data in kernel
  - Recommended: use copy_from_user()
- 3. Flushing kernel data to user
  - Recommended: use copy_to_user()