Advanced Operating Systems: Readings
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Reading assignments

Reading assignments should be completed prior to the lecture or lab that they correspond to. Full citations for books and papers may be found below.

Lecture 1: McKusick, et al: Chapter 2 (*Design Overview of FreeBSD*).
Lecture 2: McKusick, et al: Chapter 3 (*Kernel Subsystems*).
Lab 1: Gregg and Mauro: Chapters 1 (*Introduction to DTrace*) and 2 (*D Language*).
Lecture 4: McKusick, et al: Chapter 6 (*Memory Management*).
Lab 3: No reading assignment.
Lecture 5: McKusick, et al: Chapter 12 (*Inter-Process Communication*).
               Paper - Marinos, et al. 2014. (*L41 only*)
Lab 4: Paper - Rizzo 1997. (*L41 only*)

Course texts

Course texts provide instruction on statistics, operating-system design and implementation, and system tracing. You will be asked to read selected chapters from these, but will likely find other content in them useful as you proceed with the labs.


Research readings

Our research readings are drawn from various systems publications venues; these provide insight into types of research done with systems that are particularly relevant to our laboratory work, but also examples of practical systems research. Some readings are assigned prior to specific lectures or labs; others are for your (optional) enlightenment (and hopefully also enjoyment). Only selected readings are assigned for Part II students; please check the schedule above to confirm which you should read.

Tracing and performance analysis


Kernel structure and primitives


Paul Barham, Boris Dragovic, Keir Fraser, Steven Hand, Tim Harris, Alex Ho, Rolf Neugebauer, Ian Pratt, and Andrew Warfield. Xen and the Art of Virtualization. Proceedings of the 19th ACM Symposium on Operating Systems Principles (SOSP’03), ACM, October 2003. (Optional reading)


Network stacks


**Supplemental course texts**

The supplemental readings may be useful in refreshing or building up your basic knowledge and skills in support of our lectures and labs.


**Websites**

These websites may also be of use:

- FreeBSD Project: https://www.FreeBSD.org/
- FreeBSD Subversion Repository: https://svn.FreeBSD.org/
- DTrace on FreeBSD: https://wiki.freebsd.org/DTrace
- FreeBSD and Linux Kernel Cross-Reference: http://fxr.watson.org/
- FreeBSD Benchmark Advice: https://wiki.freebsd.org/BenchmarkAdvice