OS course working group

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Agenda

- Address three problems

  - FreeBSD consumers need more people who have FreeBSD experience

  - More generally: declining teaching of operating systems

  - Influence academic research

- Goals

  - Discuss potential interactions with academia

  - Brainstorm common teaching material and models

Models

- Develop supporting material and teaching plans

  - "The undergraduate OS course"

  - "The graduate OS course"

  - OS hacking vs OS analysis

- Coordinate GSoC-like / internship programmes

- Training for people teaching OS courses

- Supplementary online videos for students on why operating systems are cool and lead to jobs

Potential contributions

- Goal: modular content addressing many formats and institutional variations

- Slides and other teaching material

- Reference exercises and project work

- Platform components (e.g., VMs)

- Training material

Brainstorming on student projects

- Schedulers: graphing, benchmarking, round-robin, I/O priority boost, priority inversion

- Storage: GEOM modules for I/O tracing, replay, DTrace probes, RAID module, write aggregation, I/O scheduler, CAS, stacked file system, encryption, fuse file systems

- Security: MAC framework policy, Capsicumisation, security audit and IDS, exploit-writing

- Networking: netgraph modules (e.g., error correction), tap/tun VPN, firewall, device driver, tracing

Action items

- Find existing FreeBSD-based teaching material

- Doc/masters students/etc to combine, cleani up, modulerise

- Create teaching wiki/web page/repo

- VM tools and templates

- Develop teaching plans, homework assignemnts, reading lists, etc.

- Gather contacts, arrange guest lectures, YouTube

- Prepare for translation

- Identify university partners who might help develop material

- Recognise evolving learning styles

- Conference "teaser" talks