Agenda for today

Hochschule **RheinMain**

- Discussion of chapter on virtual machines (04A-vms)

Feedback: some questions (1)

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- Define "Virtual Machine"
- Which types of virtualisation can be distinguished? What are the differences, what are the commonalities?
- What is the difference between a Hypervisor and a Virtual Machine Monitor? (Is there any?)
- Why does a Hypervisor have to run in privileged mode?
- Explain the Trap & Emulate approach to virtualisation.
- When is an ISA deemed to be "T & E virtualisable"?
- Does this apply to the x86 ISA? If not, then how does VMware work?
- How do binary translation and para-virtualisation work? What is the difference between them?

Feedback: some questions (2)

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- What is a *shadow page table* and why is it needed?
- How is a shadow page table kept in sync with the real page table?
- Which possible device models may exist in virtual machines? What are their pros and cns?
- What is the problem with hardwares that do DMA? What can a HW architecture do to avoid it?
- What was the purpose of Intel introducing VT-x? How did they do it?