VMMs today

VMs are used everywhere

- Popularized by cloud computing

- Used to solve different problems

VMMs are a hot topic in industry and academia

- Industry commitment
  Software   : *VMware, Xen, VirtualBox, ...*
  Hardware : *Intel VT, AMD-V*

- Academia - lots of related projects and papers

Why would you do such a crazy thing?

- **Software compatibility**
  VMMs can run pretty much all software (since they can pretty much all OSes)

- **Resource utilization**
  Machines today are powerful, want to multiplex their hardware

- **Isolation**
  Seemingly total data isolation between virtual machines

- **Encapsulation**
  Virtual machines are not tied to physical machines

- **Many other cool applications**
  Debugging, emulation, security, speculation, fault tolerance…