Multi-KVM
Multi-KVM is a proposal to allow multiple, independent KVM modules to be loaded, unloaded, and run concurrently on the same Linux host to:

- Upgrade and rollback KVM without disrupting running VMs.
- Enable running KVM modules with different parameters on the same host.
- Facilitate easier A/B testing for KVM.
Design Proposal

Isolation
- Hide KVM internals from kernel at-large
- https://lore.kernel.org/lkml/20230916003118.2540661-1-seanjc@google.com

Multi-KVM
- Collapse kvm_intel.ko and kvm_amd.ko into kvm.ko
- Expose multiple kvmN.ko modules and /dev/kvmN devices
- “N” is defined via a Kconfig string (null/off by default)

VAC
- Extract shared system resources out of KVM into a new “base module” (VAC)
- VAC = Virtualization Acceleration Code (Unupgradable Units Module)

User Space
- No user space VMM changes required, e.g. symlinks (/dev/kvm → /dev/kvmN), bind mounts, etc.
- User space ultimately controls deployment, usage, lifecycles, etc.
Key Feedback

- Hiding KVM internals from the rest of the kernel
- Base module name / namespace
- Collapsing x86 vendor modules into kvm.ko
- ???