

## KVM

"KVM (for Kernel-based Virtual Machine) is a full virtualization solution for Linux on x86 hardware containing virtualization extensions (Intel VT or AMD-V). It consists of a loadable kernel module, `kvm.ko`, that provides the core virtualization infrastructure and a processor specific module, `kvm-intel.ko` or `kvm-amd.ko`. KVM also requires a modified QEMU although work is underway to get the required changes upstream. Using KVM, one can run multiple virtual machines running unmodified Linux or Windows images. Each virtual machine has private virtualized hardware: a network card, disk, graphics adapter, etc."

<http://www.linux-kvm.org/>

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For the front-end, please see: [Kimchi](#)

### Big picture steps

1. Install Linux OS as a base -> Later ClearOS7 but for now [Fedora LXDE 20](#)
2. Install virt-manager: [https://fedoraproject.org/wiki/Getting\\_started\\_with\\_virtualization](https://fedoraproject.org/wiki/Getting_started_with_virtualization)
  - later [Kimchi](#)
3. Use SPICE protocol with [SPICE guest tools](#)

If you need to scale to a large number of VMs

### ClearOS guides

- [http://www.clearcenter.com/support/documentation/clearos\\_guides/install\\_virtualization\\_using\\_kvm](http://www.clearcenter.com/support/documentation/clearos_guides/install_virtualization_using_kvm)
- [http://www.clearcenter.com/support/documentation/clearos\\_guides/install\\_virtualization\\_using\\_virtual\\_box](http://www.clearcenter.com/support/documentation/clearos_guides/install_virtualization_using_virtual_box)
- [http://www.clearcenter.com/support/documentation/clearos\\_guides/install\\_graphical\\_desktop\\_for\\_clearos](http://www.clearcenter.com/support/documentation/clearos_guides/install_graphical_desktop_for_clearos)

### Related links

- <http://www.virtualizationsoftware.com/top-5-enterprise-type-1-hypervisors/>
- <http://community.spiceworks.com/topic/376890-xen-and-kvm-who-is-using-what-and-why>
- <http://serverfault.com/questions/222010/difference-between-xen-pv-xen-kvm-and-hvm>
- [http://wiki.xen.org/wiki/Virtualization\\_Spectrum#What\\_about\\_KVM.3F](http://wiki.xen.org/wiki/Virtualization_Spectrum#What_about_KVM.3F)
- [<http://www.infoworld.com/article/2608955/virtualization/after-xen-and-kvmmeet-a-new-linux-hypervisorjailhouse.html>][Jailhouse](#)]
- <https://major.io/2014/06/22/performance-benchmarks-kvm-vs-xen/>