Cubbli and Virtual Machines

It is possible to run virtual machines (VM) inside Cubbli hosts, including virtual machines running Windows OS. However, please consider the following options first:

- You can access and use Windows 7, Windows 10 and Cubbli Linux virtual hosts from University's virtual desktop (VDI) service. Please see Virtual desktops (VDI) and VMware for instructions.
- You need a license to run Windows. University's Windows license might or might not allow this, depending on the situation. You should contact helpdesk before installing Windows yourself, unless you have a license of your own.
- If you need a maintained virtual machine to run services of your own, you should ask helpdesk for a virtual machine hosted inside University's VM infrastructure instead of a local Cubbli host.

Virtual machines inside Cubbli hosts should be used for:

- Development, where there is a need to create and delete and maintain multiple virtual machines (Cubbli development is done like this).
- If you need to run operating system (OS) instances of your own, where the OS isn't maintained by University's IT department.
- If you have a need for VM in a laptop, when network isn't available.

Cubbli can also be run inside a virtual machine. It should work fine in all modern hypervisors, including VMWare, Hyper-V, Xen, KVM and Virtualbox.

We recommend you use KVM+Qemu hypervisor in Cubbli. Virtual machines extensions (VT-x) should be enabled in BIOS and sudo rights are needed for installation. If you don't have access to BIOS and sudo access, you should contact helpdesk for instructions. Hypervisor installation can be done remotely by helpdesk, but BIOS changes need local access to machine.

Using KVM+Qemu as hypervisor and virt-manager as GUI

- KVM and Qemu and virt-manager can be installed from default Cubbli repositories.
- They are automatically updated, including automated security updates
- Virtual machines can easily be accessed from other Cubbli hosts over ssh
- You can use *virsh* command line tool for virtual machine management
- You don't need 3rd party kernel modules. Secure boot can be used on the host machine.
- All software is under OS license.
- Link to virt-manager home page, including screenshots

~~Using Virtualbox as hypervisor and GUI (DO NOT!)~~

- ~~Virtualbox needs to be installed separately and maintained manually.~~
- ~~You need Oracle virtual box extensions for VMs to work properly. This requires that you personally accept Oracle VM box extensions license to use it. The license doesn't allow IT department to install it for you.~~
- ~~Virtualbox needs 3rd party kernel modules to work properly. This rules out using secure boot.~~
- ~~Download virtualbox and virtual box extensions from https://www.virtualbox.org/wiki/Downloads~~