

Figure 3: Multi-user Labtainers with multiple instances of Labtainers.

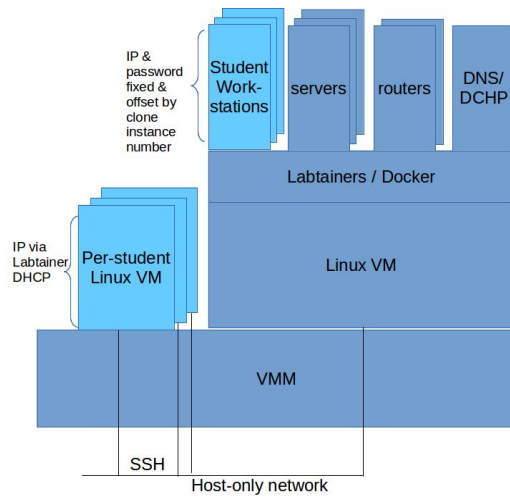


Figure 4: Multi-user Labtainers via SSH.

Both of the multiuser modes require a host-only network defined by the VMM. This network should be defined before it is allocated to any VM, and the DHCP server on the host-only network should be disabled within the VMM.

### 12.0.1 Multi-user Labtainers, one Labtainer VM per student

In this approach, each student is assumed to have been allocated an individual VM upon which Labtainers is installed. The student has access to that VM, e.g., via ssh or a vSphere client. Each student VM runs a single per-student workstation Labtainer component. The remaining containers, e.g., vulnerable servers, all run on a single VM, which we refer to herein as the “server VM”. Provisioning a lab to run in this mode is summarized below.

- Allocate the host-only network to each Labtainers VM. Be sure to disable the IPv4 networking for this network on each Labtainers VM, and set the network interface to promiscuous mode (within the Linux host as well). For example:

```
sudo ifconfig ethx 0.0.0.0
sudo ifconfig ethx promisc
```