NETWORKING & SYSTEM ADMINISTRATION LAB

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<u>Aim</u>

Introduction to Hypervisors and VMs: KVM installation and commands.

Procedure

For the Ubuntu system, all packages required to run KVM are available on official upstream repositories. Install them using the commands:

sudo apt update

apt-get install qemu qemu-kvm libvirt-bin bridge-utils virt-manager virtviewer–y

Create Virtual Machine

• You can create virtual machine using virt-manager utility. Run the following command to start the virt-manager:

sudo virt-manager

<u>virsh help</u>   virsh help

virsh help list Sudo

virsh   nodeinfo

Virsh start vm

virsh start

virsh start testvm1

```
mca@U17:~$ sudo apt update
[sudo] password for mca:
Get:1 http://packages.microsoft.com/repos/vscode stable InRelease [3,959 B]
Get:2 http://dl.google.com/linux/chrome/deb stable InRelease [1,811 B]
Err:3 http://ppa.launchpad.net/jonathonf/python-3.6/ubuntu bionic InRelease
  403  Forbidden [IP: 185.125.190.52 80]
Hit:4 http://archive.ubuntu.com/ubuntu bionic InRelease
Get:5 http://packages.microsoft.com/repos/vscode stable/main amd64 Packages [305 kB]
Err:2 http://dl.google.com/linux/chrome/deb stable InRelease
  The following signatures couldn't be verified because the public key is not available: NO_PUBKEY 78BD65473CB3BD13
Hit:6 http://ppa.launchpad.net/pasgui/ppa/ubuntu bionic InRelease
Hit:7 http://ppa.launchpad.net/webupd8team/java/ubuntu bionic InRelease
Reading package lists... Done
E: Failed to fetch http://ppa.launchpad.net/jonathonf/python-3.6/ubuntu/dists/bionic/InRelease  403  Forbidden [IP: 185.125.190.52 80]
E: The repository 'http://ppa.launchpad.net/jonathonf/python-3.6/ubuntu bionic InRelease' is no longer signed.
N: Updating from such a repository can't be done securely, and is therefore disabled by default.
N: See apt-secure(8) manpage for repository creation and user configuration details.
W: GPG error: http://dl.google.com/linux/chrome/deb stable InRelease: The following signatures couldn't be verified because the public key is not available: NO_PUBKEY 78BD65473CB3BD13
E: The repository 'http://dl.google.com/linux/chrome/deb stable InRelease' is not signed.
N: Updating from such a repository can't be done securely, and is therefore disabled by default.
N: See apt-secure(8) manpage for repository creation and user configuration details.
mca@U17:~$ egrep -c '(vmx|svm)' /proc/cpuinfo
6
mca@U17:~$ apt-get install cpu-checker
E: Could not open lock file /var/lib/dpkg/lock - open (13: Permission denied)
E: Unable to lock the administration directory (/var/lib/dpkg/), are you root?
mca@U17:~$ apt-get install qemu qemu-kvm libvirt-bin bridge-utils virt-manager virt-viewer  -y
E: Could not open lock file /var/lib/dpkg/lock - open (13: Permission denied)
E: Unable to lock the administration directory (/var/lib/dpkg/), are you root?
mca@U17:~$ sudo kvm-ok
[sudo] password for mca:
INFO: /dev/kvm exists
KVM acceleration can be used
mca@U17:~$ sudo apt install cpu-checker
Reading package lists... Done
Building dependency tree
```



```
INFO: /dev/kvm exists
KVM acceleration can be used
mca@U17:~$ sudo apt install cpu-checker
Reading package lists... Done
Building dependency tree
Reading state information... Done
cpu-checker is already the newest version (0.7-0ubuntu7).
cpu-checker set to manually installed.
0 upgraded, 0 newly installed, 0 to remove and 7 not upgraded.
mca@U17:~$ sudo apt update
Get:1 http://dl.google.com/linux/chrome/deb stable InRelease [1,811 B]
Err:1 http://dl.google.com/linux/chrome/deb stable InRelease
  The following signatures couldn't be verified because the public key is not available: NO_PUBKEY 78BD65473CB3BD13
Hit:2 http://archive.ubuntu.com/ubuntu bionic InRelease
Hit:3 http://packages.microsoft.com/repos/vscode stable InRelease
Err:4 http://ppa.launchpad.net/jonathonf/python-3.6/ubuntu bionic InRelease
  403  Forbidden [IP: 185.125.190.52 80]
Hit:5 http://ppa.launchpad.net/pasgui/ppa/ubuntu bionic InRelease
Hit:6 http://ppa.launchpad.net/webupd8team/java/ubuntu bionic InRelease
Reading package lists... Done
W: GPG error: http://dl.google.com/linux/chrome/deb stable InRelease: The following signatures couldn't be verified because the public key is not available: NO_PUBKEY 78BD65473CB3BD13
E: The repository 'http://dl.google.com/linux/chrome/deb stable InRelease' is not signed.
N: Updating from such a repository can't be done securely, and is therefore disabled by default.
N: See apt-secure(8) manpage for repository creation and user configuration details.
E: Failed to fetch http://ppa.launchpad.net/jonathonf/python-3.6/ubuntu/dists/bionic/InRelease  403  Forbidden [IP: 185.125.190.52 80]
E: The repository 'http://ppa.launchpad.net/jonathonf/python-3.6/ubuntu bionic InRelease' is no longer signed.
N: Updating from such a repository can't be done securely, and is therefore disabled by default.
N: See apt-secure(8) manpage for repository creation and user configuration details.
mca@U17:~$ sudo apt install qemu-kvm libvirt-daemon-system libvirt-clients bridge-utils
Reading package lists... Done
Building dependency tree
Reading state information... Done
qemu-kvm is already the newest version (1:2.11+dfsg-1ubuntu7.4).
The following additional packages will be installed:
  augeas-lenses dmeventd ebtables libaugeas0 libdevmapper-event1.02.1 liblvm2app2.2 liblvm2cmd2.02 libnetcf1 libvirt-daemon
  libvirt-daemon-driver-storage-rbd libvirt0 libxml2-utils lvm2
```



```
mca@U17:~$ sudo apt install qemu-kvm libvirt-daemon-system libvirt-clients bridge-utils virt-manager
[sudo] password for mca:
Reading package lists... Done
Building dependency tree
Reading state information... Done
bridge-utils is already the newest version (1.5-15ubuntu1).
libvirt-clients is already the newest version (4.0.0-1ubuntu8).
libvirt-daemon-system is already the newest version (4.0.0-1ubuntu8).
qemu-kvm is already the newest version (1:2.11+dfsg-1ubuntu7.4).
The following additional packages will be installed:
  gir1.2-appindicator3-0.1 gir1.2-gtk-vnc-2.0 gir1.2-libosinfo-1.0 gir1.2-libvirt-glib-1.0 gir1.2-spiceclientglib-2.0
  gir1.2-spiceclientgtk-3.0 libgovirt-common libgovirt2 libgtk-vnc-2.0-0 libgvnc-1.0-0 libosinfo-1.0-0 libphodav-2.0-0 libphodav-2.0-common
  libspice-client-glib-2.0-8 libspice-client-gtk-3.0-5 libusbredirhost1 libvirt-glib-1.0-0 osinfo-db python-dbus python-gi python-gi-cairo
  python-ipaddr python-libvirt python-libxml2 spice-client-glib-usb-acl-helper virt-viewer virtinst
Suggested packages:
  libosinfo-l10n gstreamer1.0-plugins-bad gstreamer1.0-libav python-dbus-dbg python-dbus-doc ssh-askpass python-guestfs
The following NEW packages will be installed:
  gir1.2-appindicator3-0.1 gir1.2-gtk-vnc-2.0 gir1.2-libosinfo-1.0 gir1.2-libvirt-glib-1.0 gir1.2-spiceclientglib-2.0
  gir1.2-spiceclientgtk-3.0 libgovirt-common libgovirt2 libgtk-vnc-2.0-0 libgvnc-1.0-0 libosinfo-1.0-0 libphodav-2.0-0 libphodav-2.0-common
  libspice-client-glib-2.0-8 libspice-client-gtk-3.0-5 libusbredirhost1 libvirt-glib-1.0-0 osinfo-db python-dbus python-gi python-gi-cairo
  python-ipaddr python-libvirt python-libxml2 spice-client-glib-usb-acl-helper virt-manager virt-viewer virtinst
0 upgraded, 28 newly installed, 0 to remove and 7 not upgraded.
Need to get 2,892 kB of archives.
After this operation, 18.3 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
```

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```
mca@U17:~$ sudo virt-manager
mca@U17:~$
```