The Oracle Linux OCI KVM Image makes it easier to deploy virtual machines that use native OCI (Oracle Cloud Infrastructure) resources. Rather than having to map those resources, such as block storage and virtual network interfaces, into virtual machines manually, the image presents tools that automates the entire process.

I. Prerequisites

   To use this image, it must be deployed on an OCI Compute Instance.

   - Import the image into the appropriate Compartment
     - The image format is QCOW2
     - The image mode is Native
   - Launch an OCI Compute Instance using the image
     - Currently only the BM.Standard1.36 and the BM.Standard2.52 shapes are fully supported
     - VM shapes will be added in a future release

   A familiarity with managing virtual machine guests using libvirt, in particular virsh and virt-install, is useful.

II. Preparing to Create a New Virtual Machine

   Prior to creating a new virtual machine, take note of what resources are required. In particular: the number of CPUs, amount of memory, size of root disk, and subnet. Each guest requires a dedicated OCI Block Storage device and OCI VNIC. Create and attach these resources as necessary.

III. Installing a Virtual Machine

   - Allocate block storage

     See https://cloud.oracle.com/en_US/infrastructure/ storage for details

- Allocate a VNIC

    See https://cloud.oracle.com/infrastructure/
compute and
    https://cloud.oracle.com/en_US/networking for
details

  - Choose a VNIC and storage device (Optional)

    By default, oci-kvm(1) will choose a block storage
device and a VNIC and assign both to a virtual machine
automatically. This is good for cases where there is
only one VNIC and one block storage device available.
It is also good for cases where there may be multiple
VNICs or block storage devices but they are
functionally identical, such as when all block storage
devices are the same size or all VNICs are on the same
subnet. If a specific VNIC or block storage device is
desired, choose one now.

    Choosing a Block Storage Device

        - Run 'oci-iscsi-config --show' to show details
for all attached storage
        - Choose a device and note the 'Attached device'
field
        - Add '/dev/' in front of the device name to get
the device path (e.g. /dev/sdb)

    Choosing a VNIC

        - Inspect the VNIC configuration for the
instance
        - Choose an appropriate VNIC and note the
private IP address

  - Install the VM

    oci-kvm(1) directly understands only a few
options: -D/--domain, -d/--disk, -n/--net, and -V. The
-D/--domain option is required, and specifies the name

of guest being created. If a particular block storage
device is desired, specify -d/--disk along with the
path to the device. If a particular VNIC is desired,
specify -n/--net along with the private IP address of
the desired VNIC. Every argument that appears after
the -V option is provided directly to virt-install(1).

   A typical invocation looks like:

      oci-kvm create -D my_guest -V --vcpus 4 --memory
8192 --boot cdrom,hd --location /mnt/OracleLinux-R7-U5-
Server-x86_64-dvd.iso --nographics --console
pty,target_type=serial --console pty,target_type=virtio
--noautoconsole --os-variant=rhel7 --extra-args
"console=tty0 console=ttyS0,115200n8 serial"

   This examples creates an Oracle Linux 7.5 guest,
configured to use a serial console for console output.
It is also possible to use other options, such as VNC
for console output. If a graphical option is used, it
will be necessary to appropriately configure the OCI
Security List for the subnet this image is attached to.

IV. Removing a Virtual Machine

   Prior to removing a virtual machine, it must first be
stopped. To stop a running virtual machine, issue:

    virsh destroy <guest>

   Once the VM has stopped, it can be permanently
destroyed by issuing:

    oci-kvm destroy -D <guest>

   Invoking this command will undefine the virtual
machine in libvirt as well as clean up any host
resources that were created for it. The OCI resources
that were allocated to the virtual machine are made
available for re-use by new VMs.

V.   Notes

   – On shapes that have an active physical NIC 1, attaching a KVM guest to VLAN 0 is currently not supported (it is fully supported to attach KVM guests to the other VLANs on either physical NIC)

VI.   Notable changes from V1.3

   – Full support for vnic creation via oci-network-config --create-vnic and block device creation via oci-iscsi-config --create-volume
   – Virtual Function network interface are now fully configured using the native Oracle Linux systemd LSB networking (ifcfg network config files)
   – Updated to oci-utils version 0.6
   – Updated to the Oracle Linux 7.5 May 2018 base image