

ORACLE®

# KVM on Oracle Database Appliance Installation Guide

Oracle Database Appliance

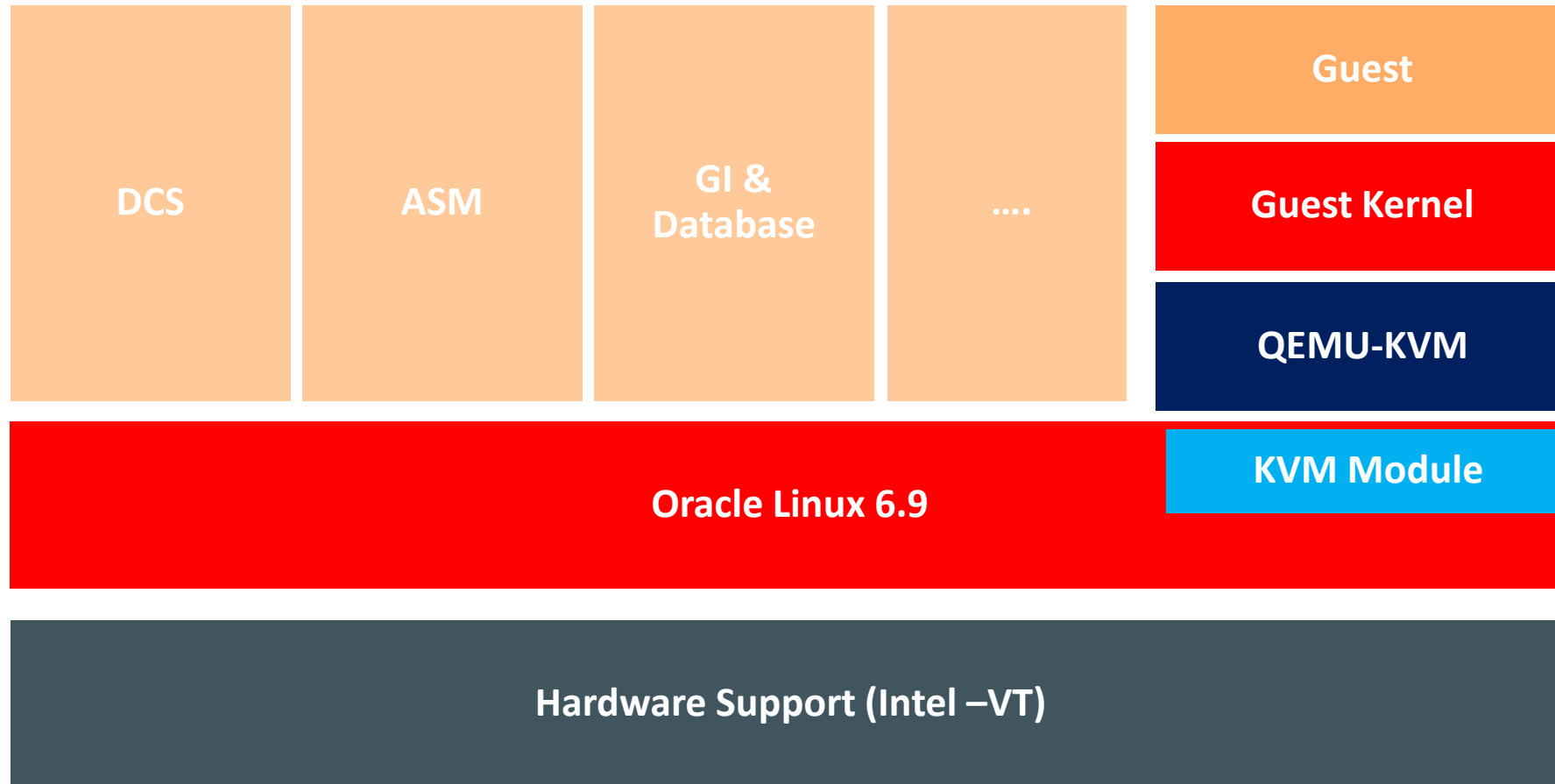
## Simple, Optimized, and Affordable

New appliance brings the benefits of Oracle Engineered Systems to all Oracle Database customers.



# Overview

## KVM on ODA Architecture



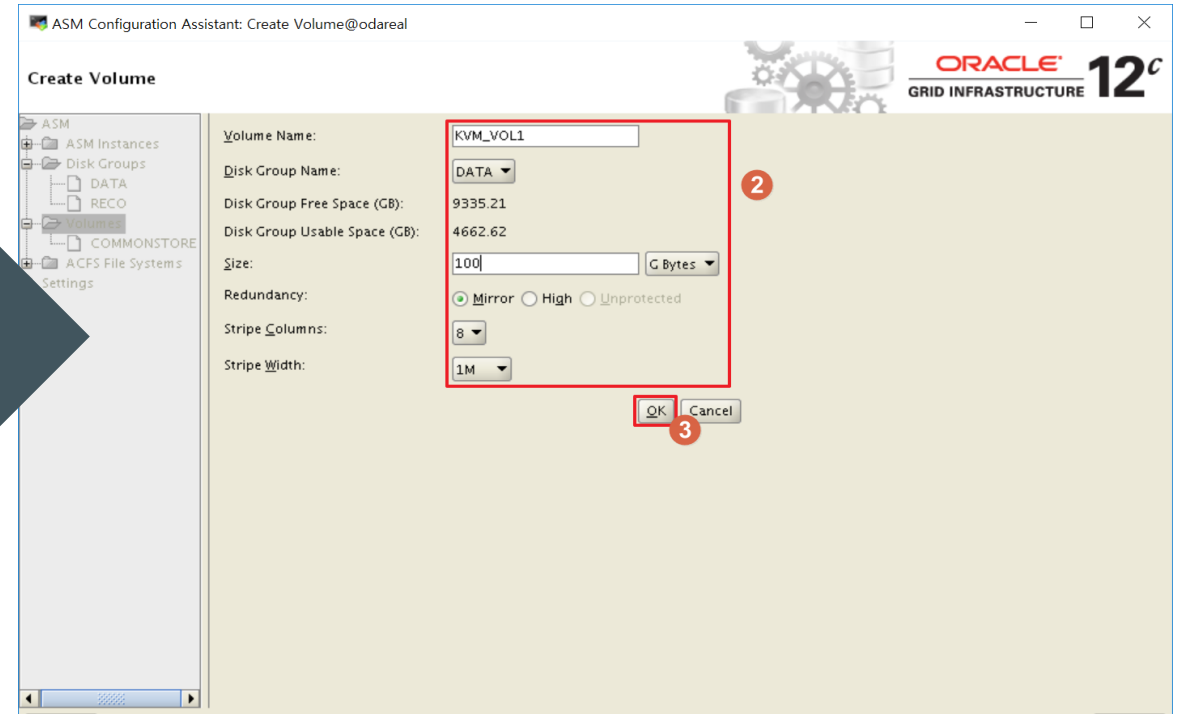
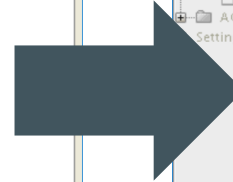
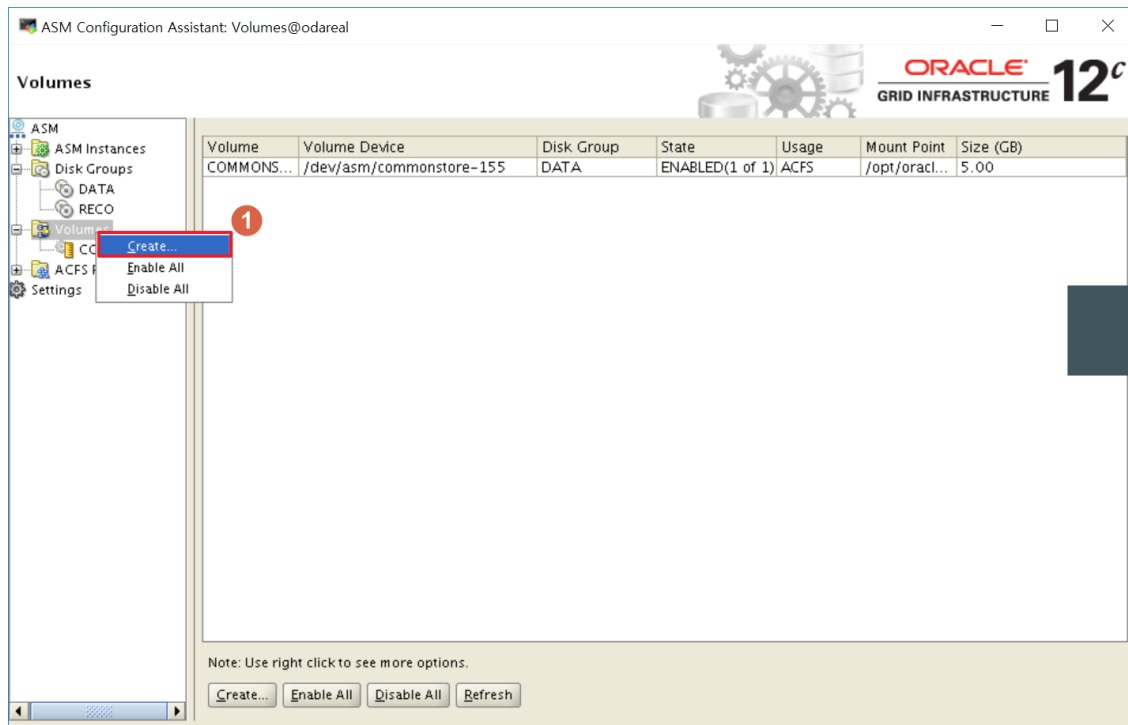
# Create Guest VM Storage for KVM(1)

## Create Mount Point

```
[root@odareal ~]# mkdir -p /KVM  
[root@odareal ~]# chown -R grid:asmdba /KVM  
[root@odareal ~]# su - grid  
[grid@odareal ~]# export DISPLAY="PC_IPADDRESS:0.0"  
[grid@odareal ~]# asmca
```

# Create Guest VM Storage for KVM(2)

## Create ASM Volume



# Create Guest VM Storage for KVM(3)

## Root Password

ASM Configuration Assistant: Settings@odareal

**Settings**

While configuring the software, certain operations have to be performed as "root" user. You can choose to have ASMCA perform these operations automatically by specifying inputs for one of the options below.

☒ Use "root" user credential **1**

Password:

☐ Use sudo

Program path:  

User Name:

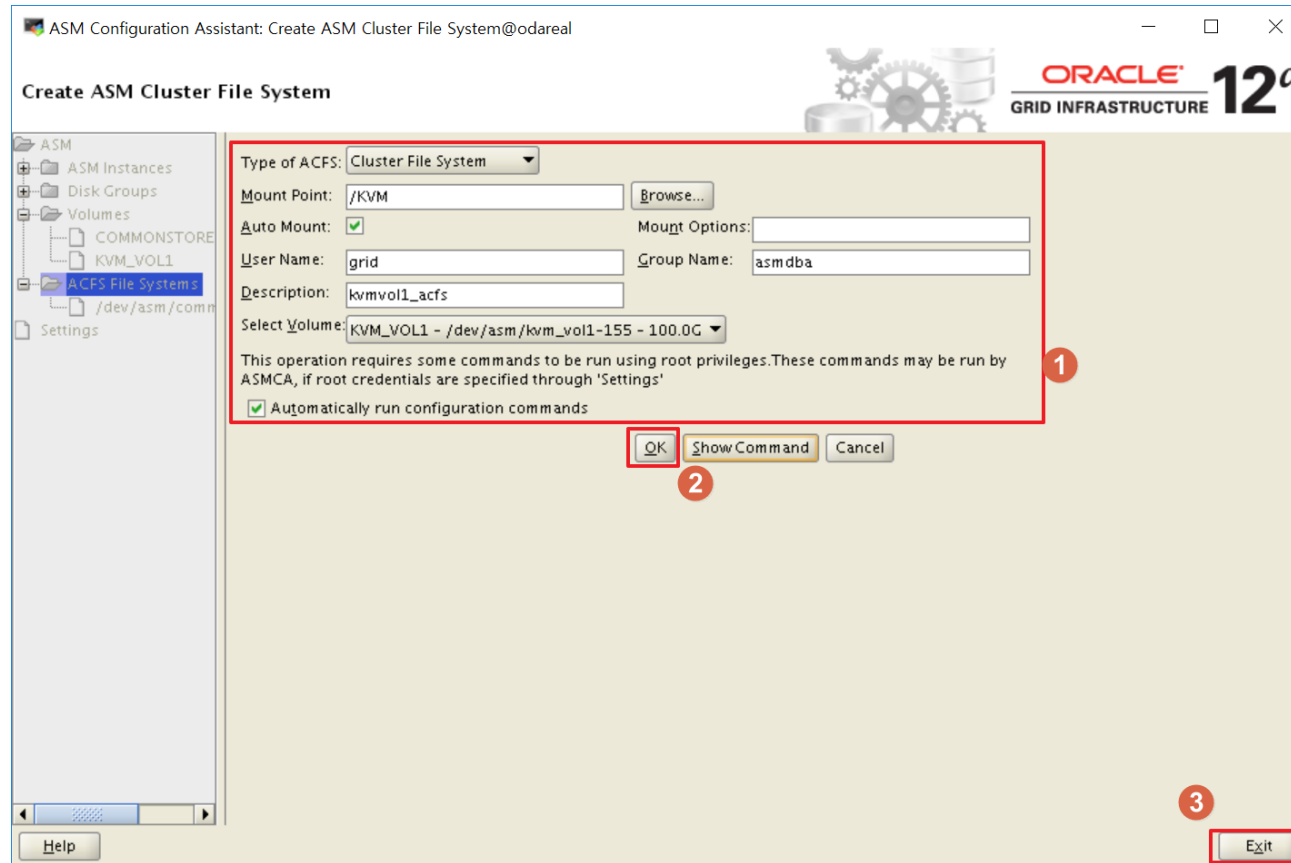
Password:

**2**

**Password : welcome1**

# Create Guest VM Storage for KVM(4)

## Create ACFS File System & Mount



# KVM Networking on ODA(1)

## Create Virtual Network

```
[root@odareal ~]# virt-manager
```

The image shows a sequence of three screenshots from the virt-manager application, illustrating the process of creating a new virtual network. The first screenshot shows the 'Virtual Machine Manager@odareal' window with the 'localhost (QEMU)' VM selected, marked with a red box and a green checkmark, and a red circle with the number '1'. A large blue arrow points from this window to the second screenshot. The second screenshot shows the 'odareal Connection Details' window with the 'Virtual Networks' tab selected. The 'default' network is listed, and the 'Add' button (a blue plus sign) is highlighted with a red box and a red circle with the number '2'. A large blue arrow points from this window to the third screenshot. The third screenshot shows the 'Create a new virtual network@odareal' dialog box. The dialog has a title bar and a main area with the heading 'Creating a new virtual network'. Below the heading, it says: 'This assistant will guide you through creating a new virtual network. You will be asked for some information about the virtual network you'd like to create, such as:'. There are three bullet points: 'A **name** for your new virtual network', 'The **IPv4 address** and **netmask** to assign', and 'The **address range** from which the **DHCP** server will allocate addresses for virtual machines'. Below these, it asks 'Whether to **forward** traffic to the physical network'. At the bottom right, there are three buttons: 'Cancel', 'Back', and 'Forward'. The 'Forward' button is highlighted with a red box and a red circle with the number '3'.

Virtual Machine Manager@odareal

File Edit View Help

New Open Run Pause Shutdown

Name CPU usage

localhost (QEMU)

1

odareal Connection Details

Overview Virtual Networks Storage Network Interfaces

default

Basic details

Name: default

Device: virbr0

State: Active

Autostart: On Boot

IPv4 configuration

Network: 192.168.122.0/24

DHCP start: 192.168.122.2

DHCP end: 192.168.122.254

Forwarding: NAT

2

Create a new virtual network@odareal

Creating a new virtual network

This assistant will guide you through creating a new virtual network. You will be asked for some information about the virtual network you'd like to create, such as:

- A **name** for your new virtual network
- The **IPv4 address** and **netmask** to assign
- The **address range** from which the **DHCP** server will allocate addresses for virtual machines

Whether to **forward** traffic to the physical network

3

Cancel Back Forward



# KVM Networking on ODA(2)

## Create Virtual Network

Create a new virtual network@odareal

### Naming your virtual network

Please choose a name for your virtual network:

Network Name:

**Example:** network1

5

Cancel Back Forward

Create a new virtual network@odareal

### Choosing an IPv4 address space

You will need to choose an IPv4 address space for the virtual network:

Network:

**Hint:** The network should be chosen from one of the IPv4 private address ranges. eg 10.0.0.0/8, 172.16.0.0/12, or 192.168.0.0/16

Netmask: 255.255.255.0  
Broadcast: 192.168.100.255  
Gateway: 192.168.100.1  
Size: 256 addresses  
Type: Private

7

Cancel Back Forward

Create a new virtual network@odareal

### Selecting the DHCP range

Please choose the range of addresses the DHCP server will allocate to virtual machines attached to the virtual network.

Enable DHCP: ☒

Start:

End:

**Tip:** Unless you wish to reserve some addresses to allow static network configuration in virtual machines, these parameters can be left with their default values.

8

Cancel Back Forward

# KVM Networking on ODA(3)

## Create Virtual Network

Create a new virtual network@odareal

### Connecting to physical network

Please indicate whether this virtual network should be connected to the physical network.

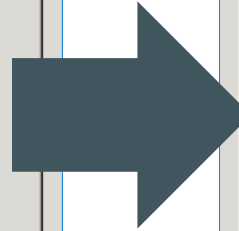
☐ Isolated virtual network

☒ Forwarding to physical network 10

Destination: Physical device btbond1

Mode: NAT

11



Create a new virtual network@odareal

### Ready to create network

**Summary**  
Network name: kvmtest

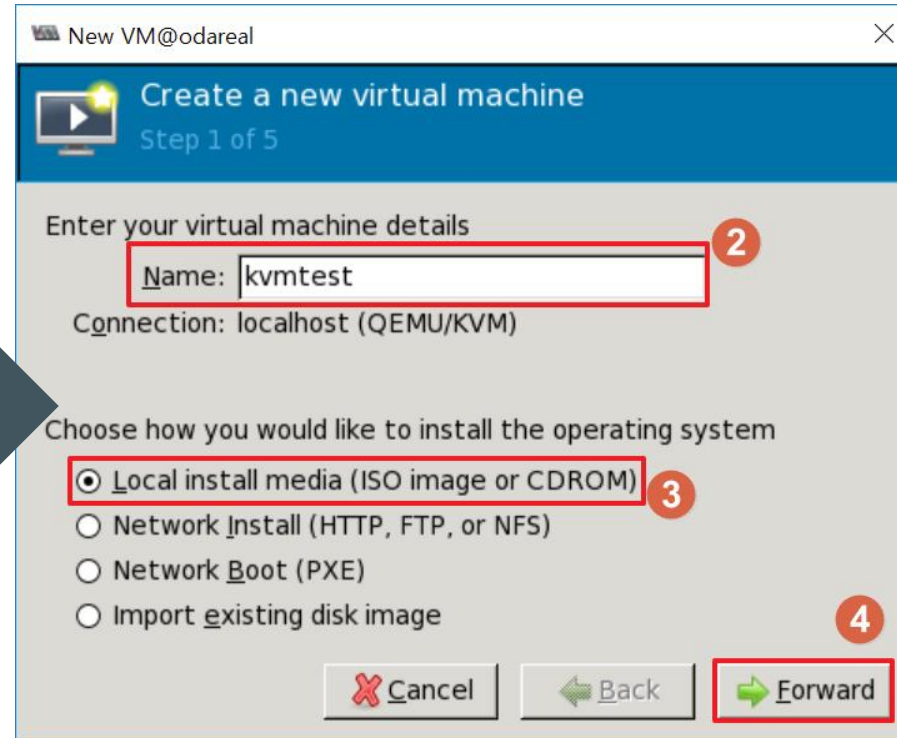
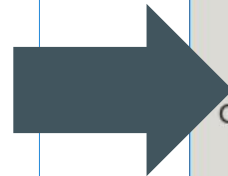
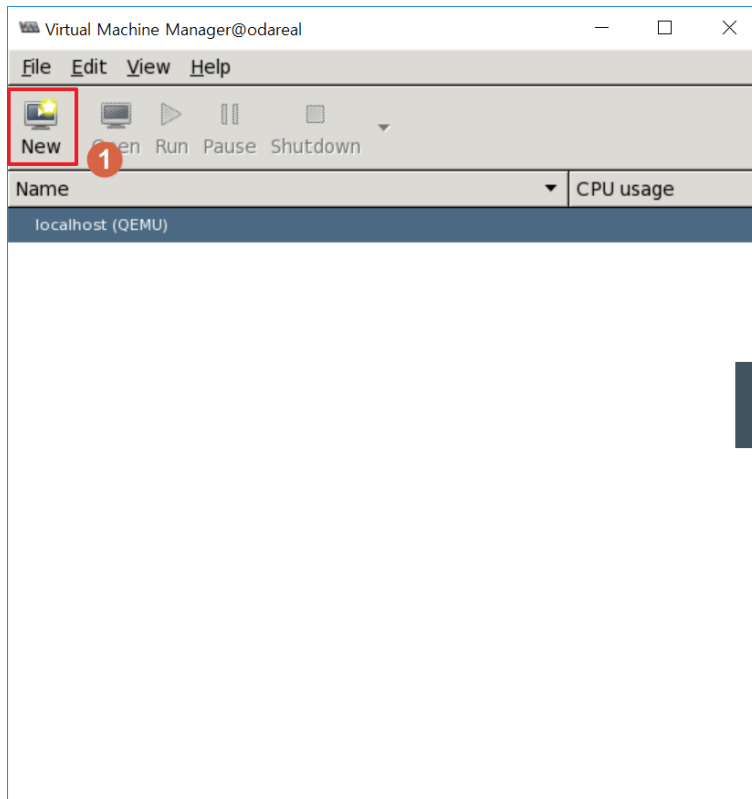
**IPv4 network**  
Network: 192.168.100.0/24  
Gateway: 192.168.100.1  
Netmask: 255.255.255.0

**DHCP**  
Start address: 192.168.100.128  
End address: 192.168.100.254

**Forwarding**  
Connectivity: NAT to btbond1 12

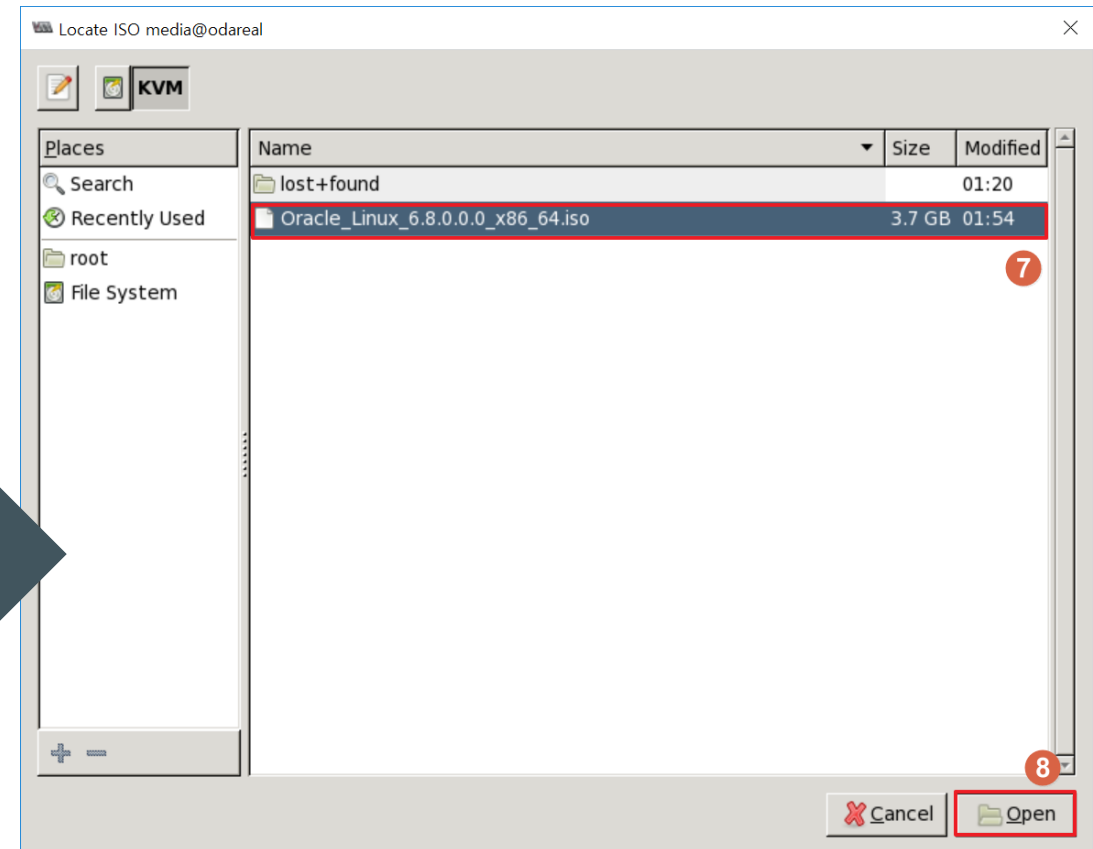
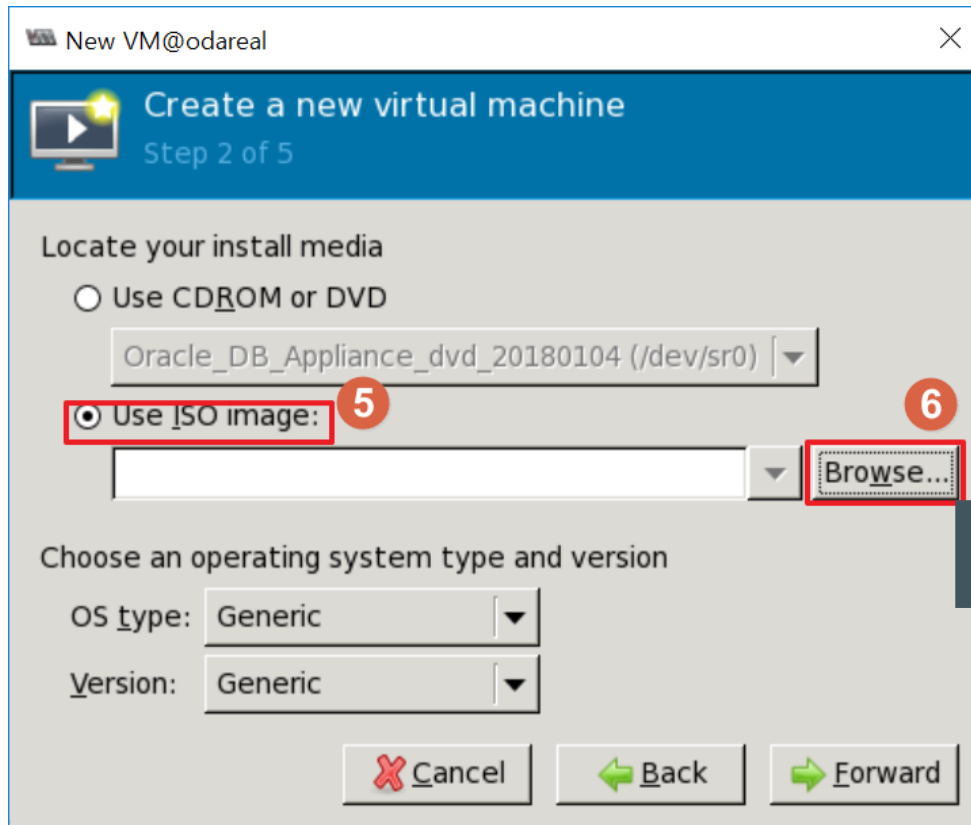
# Deploy a KVM Guest on ODA(1)

## KVM Deploying Guest VMs with ISO



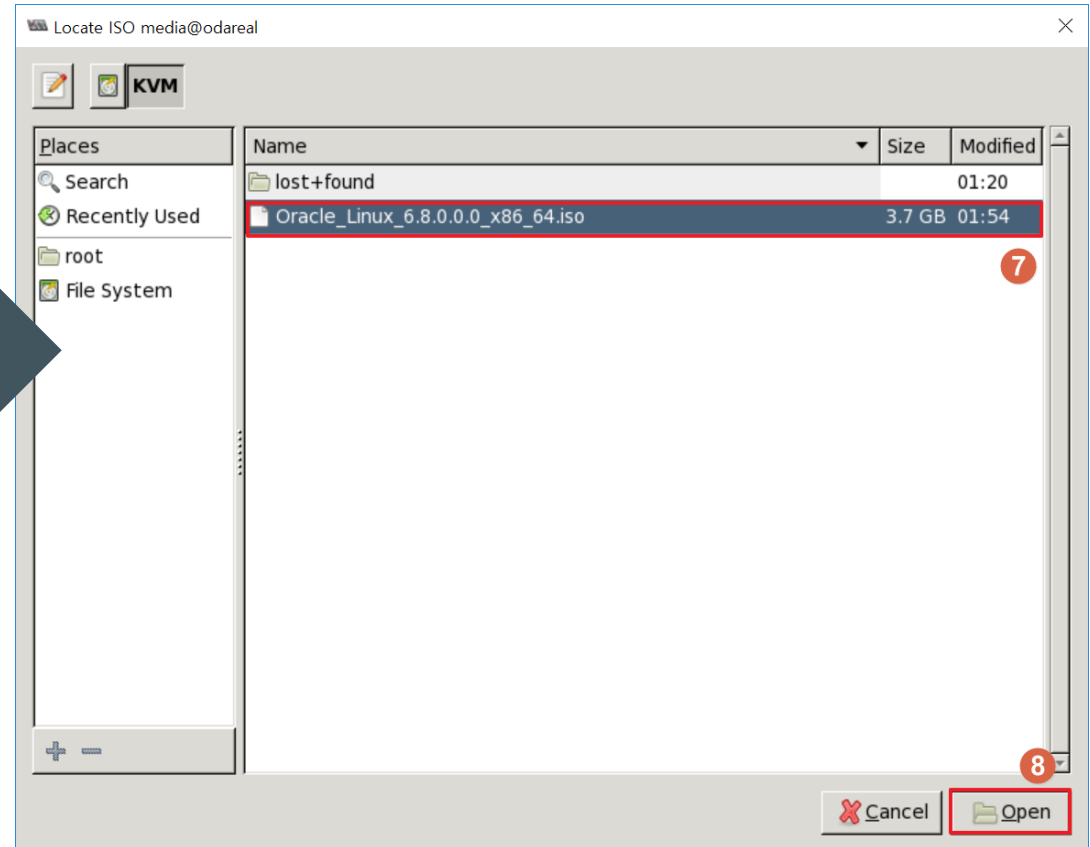
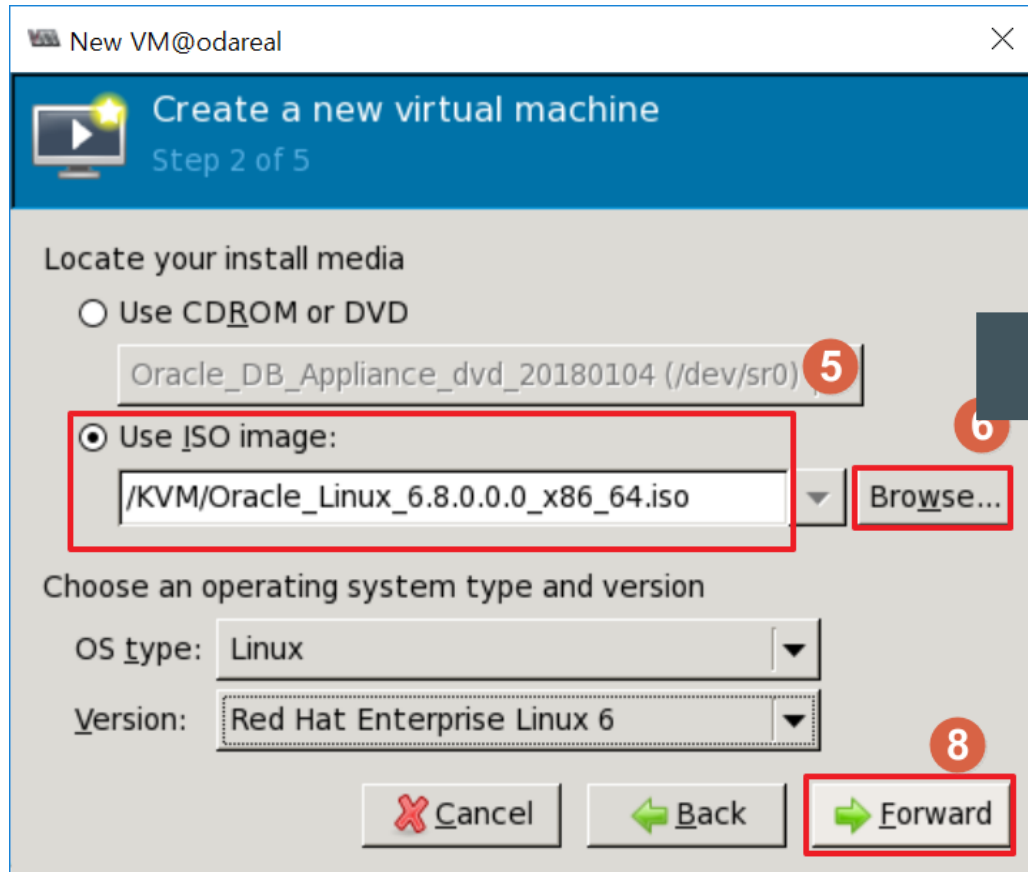
# Deploy a KVM Guest on ODA(2)

## KVM Deploying Guest VMs with ISO



# Deploy a KVM Guest on ODA(3)

## KVM Deploying Guest VMs with ISO



# Deploy a KVM Guest on ODA(4)

## KVM Deploying Guest VMs with ISO

New VM@odareal

Create a new virtual machine  
Step 3 of 5

Choose Memory and CPU settings

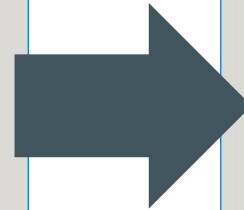
Memory (RAM): 8192 MB  
Up to 385379 MB available on the host

CPUs: 4  
Up to 72 available

9

10

Cancel Back Forward



New VM@odareal

Create a new virtual machine  
Step 4 of 5

☒ Enable storage for this virtual machine

☐ Create a disk image on the computer's hard drive  
8.0 GB

☒ Allocate entire disk now

☒ Select managed or other existing storage

Browse... /KVM/kvmtest.img

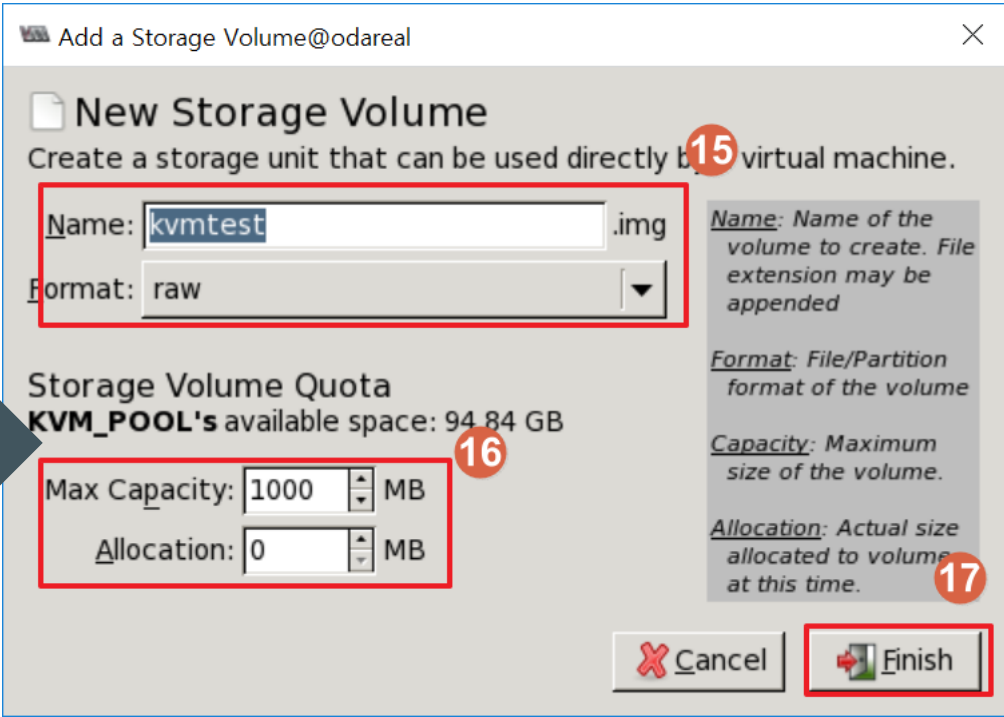
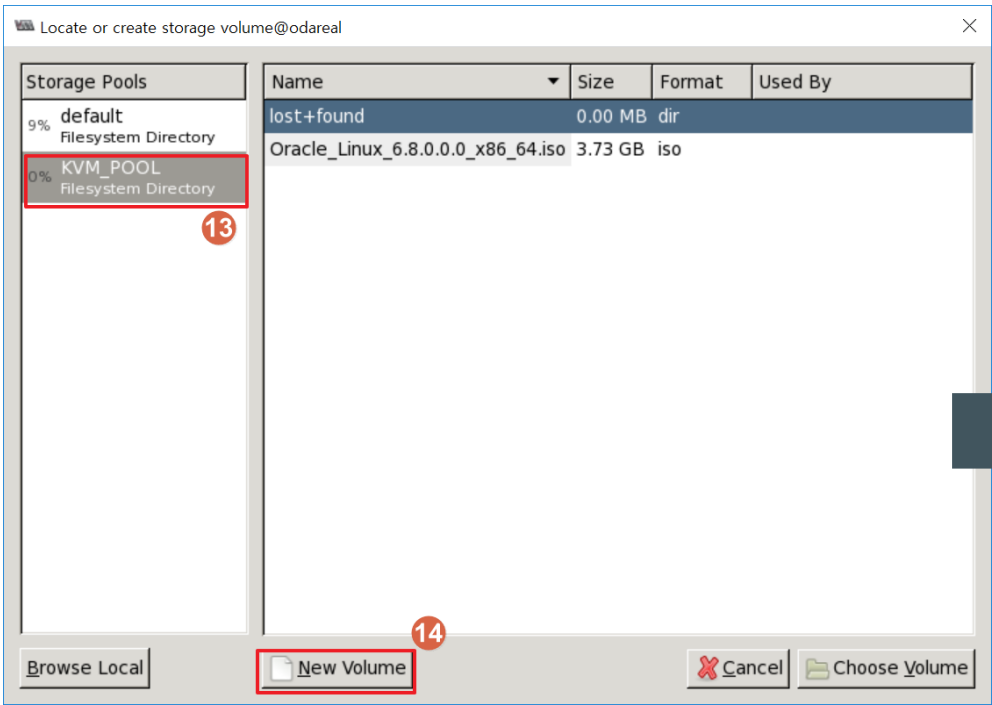
11

12

Cancel Back Forward

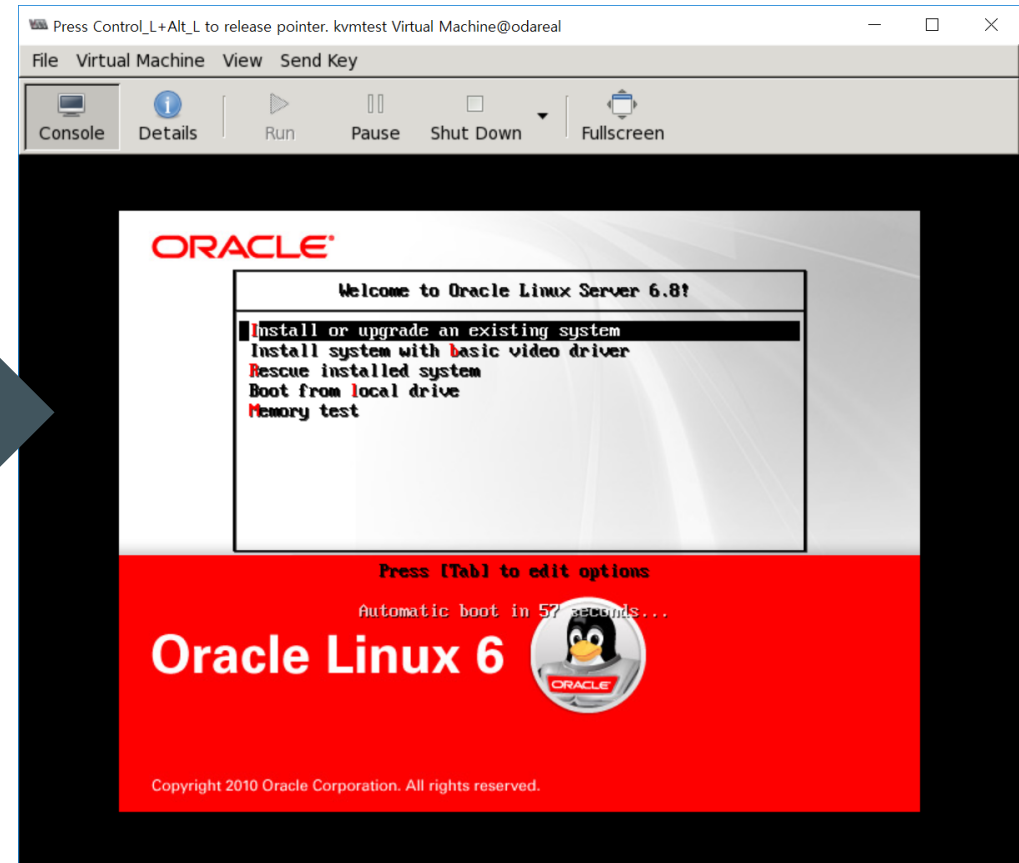
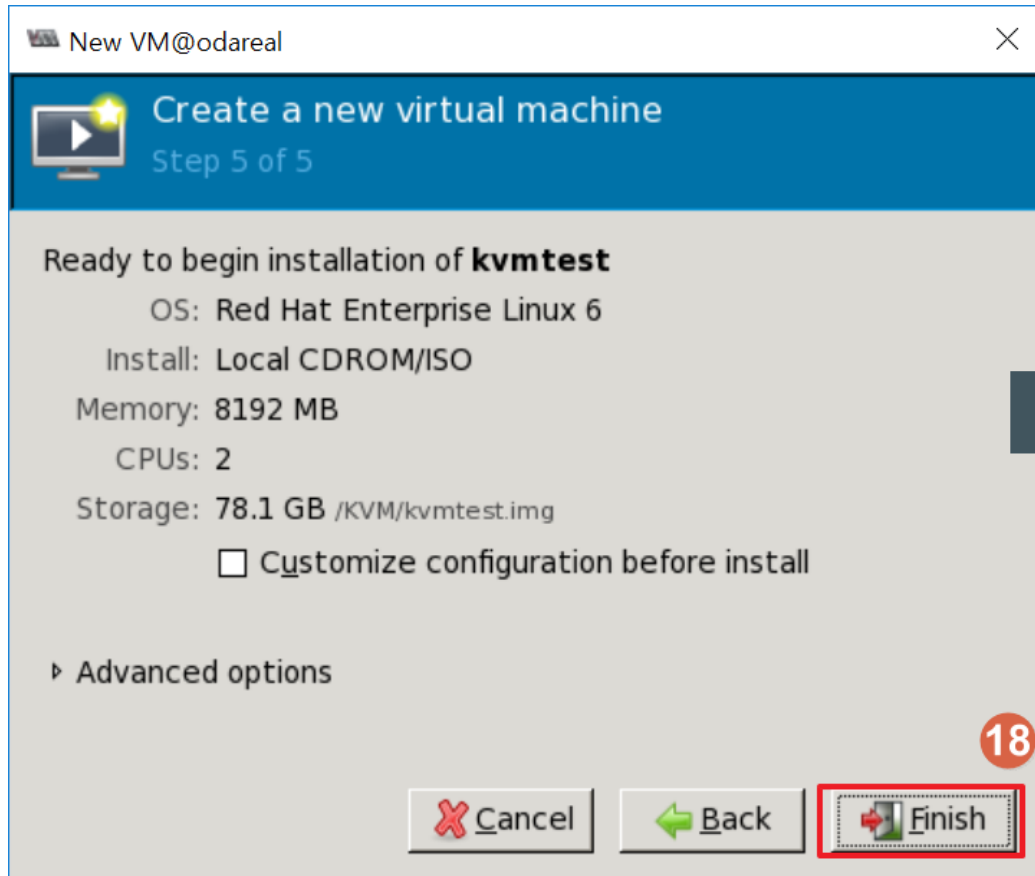
# Deploy a KVM Guest on ODA(5)

## KVM Deploying Guest VMs with ISO



# Deploy a KVM Guest on ODA(6)

## KVM Deploying Guest VMs with ISO





# Questions?



# **Hardware and Software**

## **Engineered to Work Together**

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