Oracle Linux 9.0 as guest os on SUSE Linux Enterprise Server 15 SP4 (x86-64) KVM

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SUSE

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Introduction

This document provides details for installing Oracle Linux as a guest os on SUSE Linux Enterprise Server 15 SP4 KVM. SUSE supports KVM full virtualization on AMD64/Intel 64 and Arm AArch64 hosts, and on IBM Z. Details are provided for Intel(x86-64) versions of both Oracle Linux and SUSE Linux Enterprise Server 15 SP4. Similar steps apply to other platforms (x86, ia64, System z, etc.).

Official Oracle product documentation is available at: http://docs.oracle.com.

Hardware Requirements

Requirement	Minimum
CPU	1-GHz CPU
Physical Memory	4 GB
Swap space	Approx. twice the size of RAM
Disk space in /tmp	4 GB
Disk space for software files	4 GB

Software Requirements

SUSE

• SUSE Linux Enterprise Server 15 SP4 GM (x86-64)
(http://download.suse.de/install)

Oracle

• Oracle Linux 9.0 (OracleLinux-R9-U0-x86_64-dvd.iso)
(https://yum.oracle.com/oracle-linux-downloads.html)

Testing machine information

Dell Laptop Precision 5530
CPU: 6 * Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz
RAM: 32 GB
NIC: 2
Local HDD: 1TB + 512GB
OS: SUSE Linux Enterprise Server 15 SP4 GM (x86-64) - Kernel version: 5.14.21-150400.22-default

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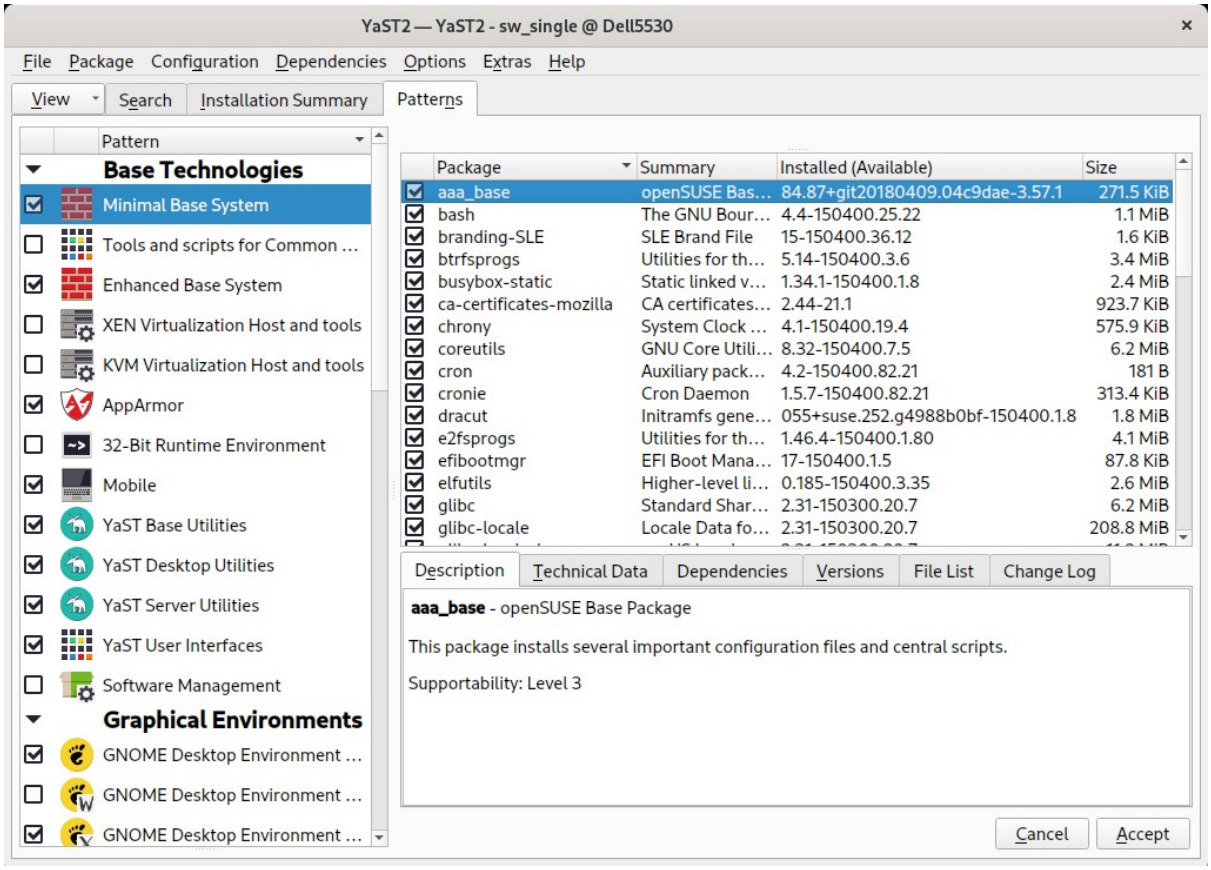
Setup

1. Installing SUSE Linux Enterprise Server 15 SP4 and KVM

1-1. Install SUSE Linux Enterprise Server 15 SP4 on the testing machine.To do so, follow the instructions in the official SUSE Linux Enterprise Server documentation at: https://www.suse.com/documentation/.

Figure 1-1 Software Installed as shown below



After the installation of SUSE Linux Enterprise Server, the following information about the operating system and the kernel version is displayed.

Figure 1-3 OS release information and kernel version

```
oracle@Dell5530:~> more /etc/os-release
NAME="SLES"
VERSION="15-SP4"
VERSION_ID="15.4"
PRETTY_NAME="SUSE Linux Enterprise Server 15 SP4"
ID="sles"
ID_LIKE="suse"
ANSI_COLOR="0;32"
CPE_NAME="cpe:/o:suse:sles:15:sp4"
DOCUMENTATION_URL="https://documentation.suse.com/"
oracle@Dell5530:~> uname -a
Linux Dell5530 5.14.21-150400.22-default #1 SMP PREEMPT_DYNAMIC Wed May 11 06:57:18 UTC 2022 (49db222/lp) x86_64 x86_64 x86_64 GNU/Linux
oracle@Dell5530:~>
```

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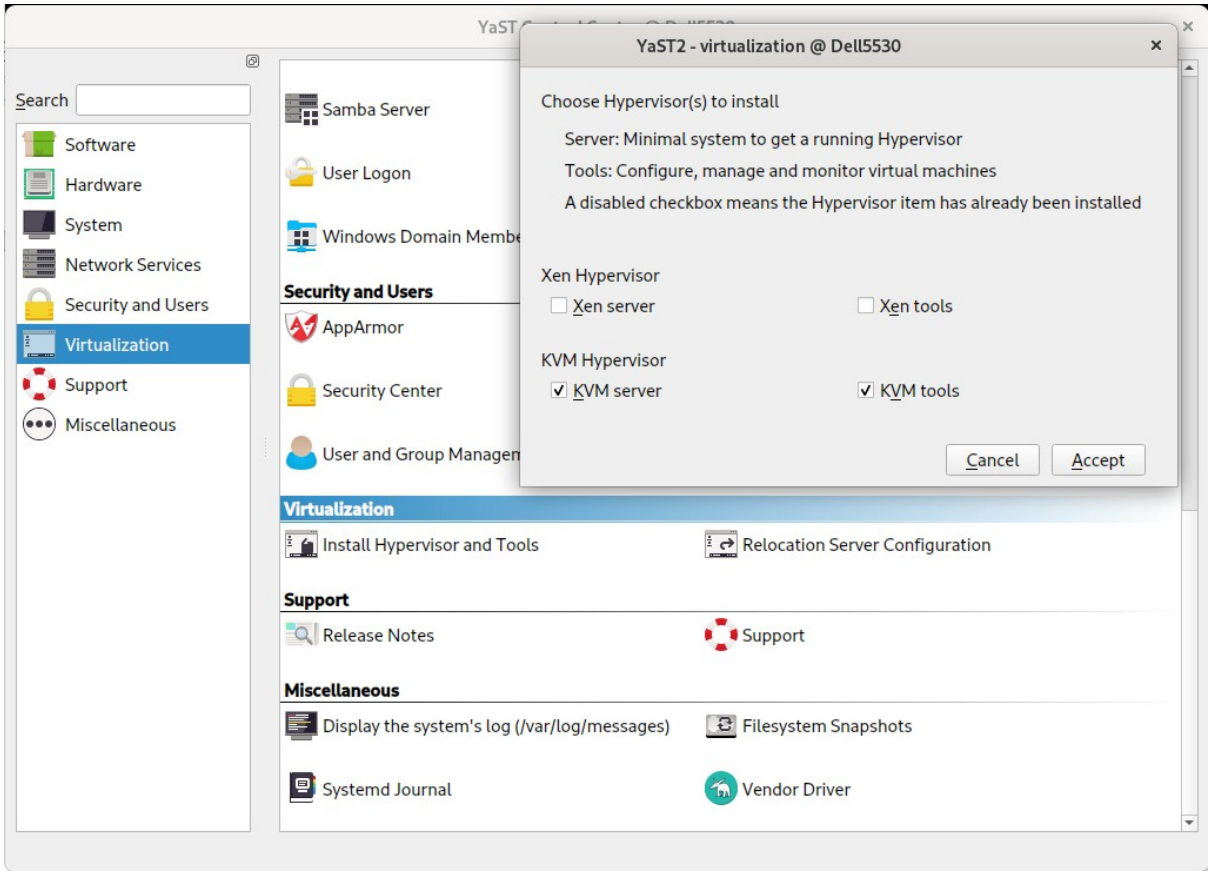
1-2. Installing KVM. Start YaST2 and choose **Virtualization** › **Install Hypervisor and Tools**. Select **KVM server** for a minimal installation of QEMU tools. Select **KVM tools** if a libvirt-based management stack is also desired. Confirm with **Accept**.

Figure 1-4 Installing KVM



To enable normal networking for the VM Guest, using a network bridge is recommended. YaST offers to automatically configure a bridge on the VM Host Server. Agree to do so by choosing **Yes**, otherwise choose **No**. After the setup has been finished, you can start setting up VM Guests. Rebooting the VM Host Server is not required.

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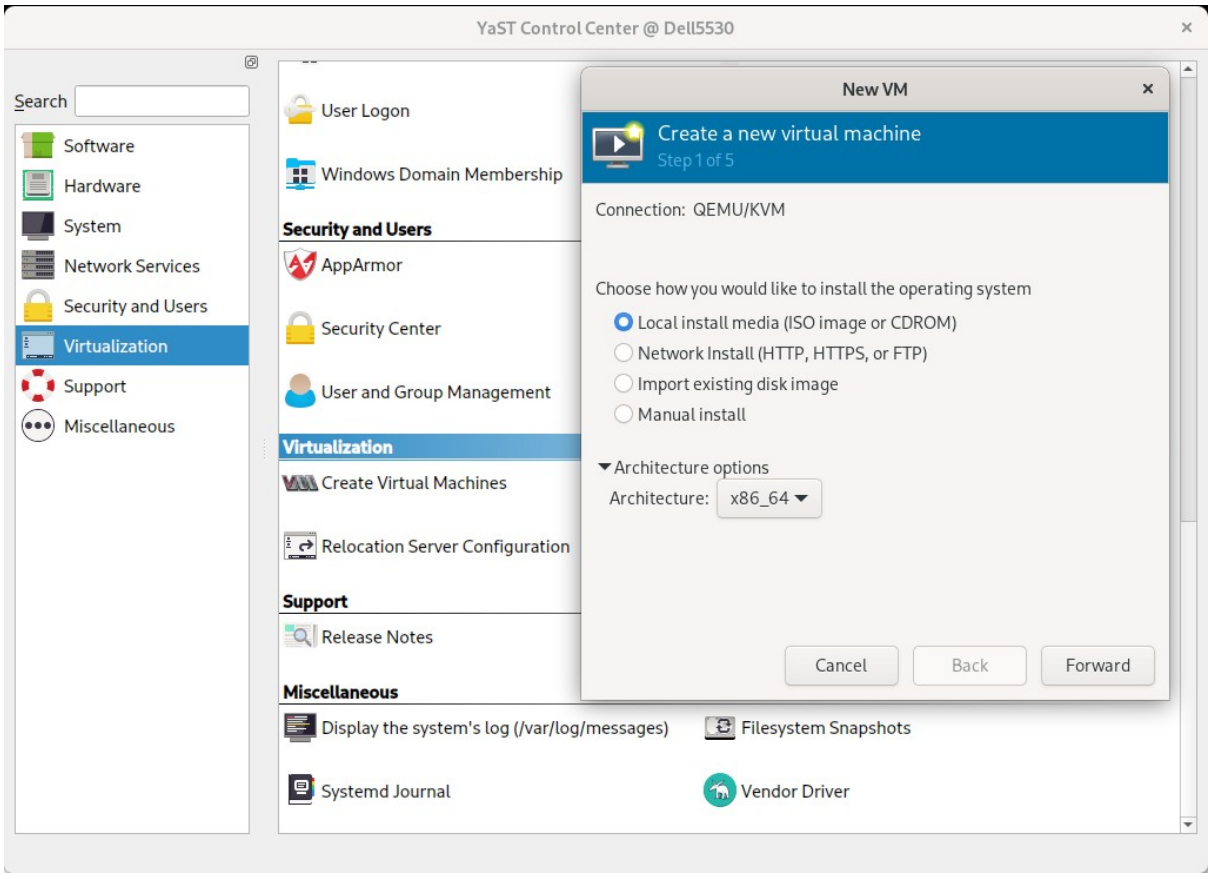
2. Guest Installation

2-1. Download Oracle Linux 9.0(OracleLinux-R9-U0-x86_64-dvd.iso) from:https://yum.oracle.com/oracle-linux-downloads.html. Alternative installation ISOs, "**OracleLinux-R9-U0-x86_64-boot-uek.iso**" and "**OracleLinux-R9-U0-x86_64-boot.iso**", that could be faster to download.

(*Note - There are several kinds of ISO images*:
***Full ISO**: contains everything needed to boot a system and install Oracle Linux.*
***UEK Boot ISO**: contains everything that is required to boot a system with Unbreakable Enterprise Kernel (UEK) and start an installation*
***Boot ISO**: contains everything that is required to boot a system with Red Hat compatible kernel (RHCK) and start an installation*
)

2-2. Create a new virtual machine.

1). Start the **New VM** wizard from YAST then choose an installation source.



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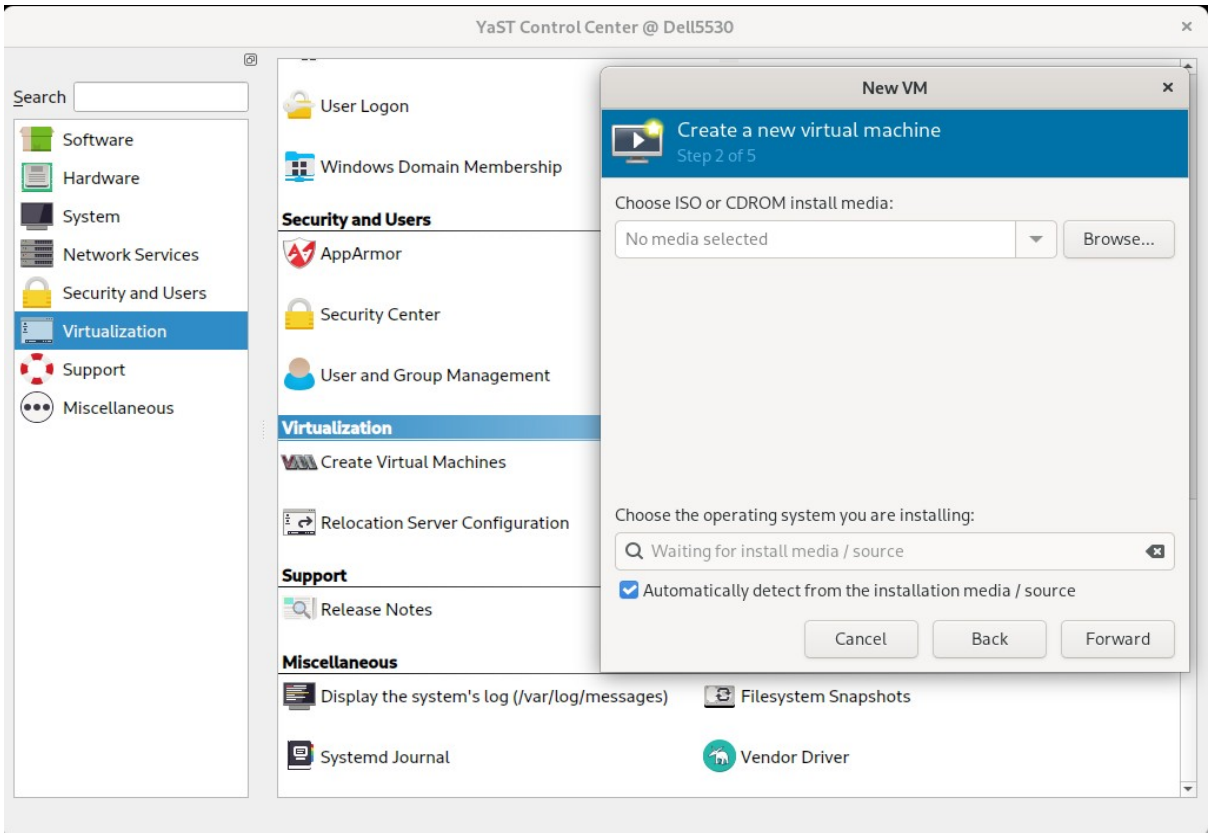
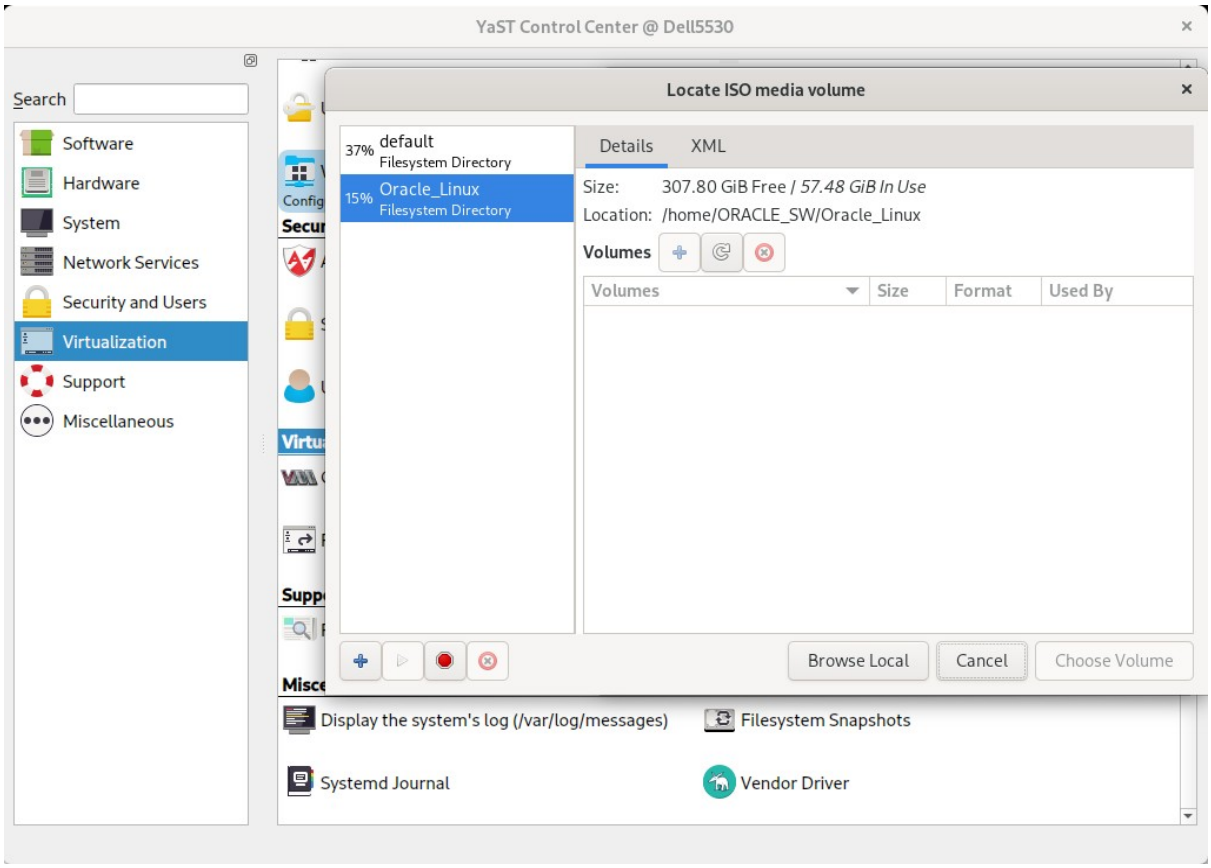
2). Choose Install media, click **Browse**.



Select media volume, click **Browse Local**.



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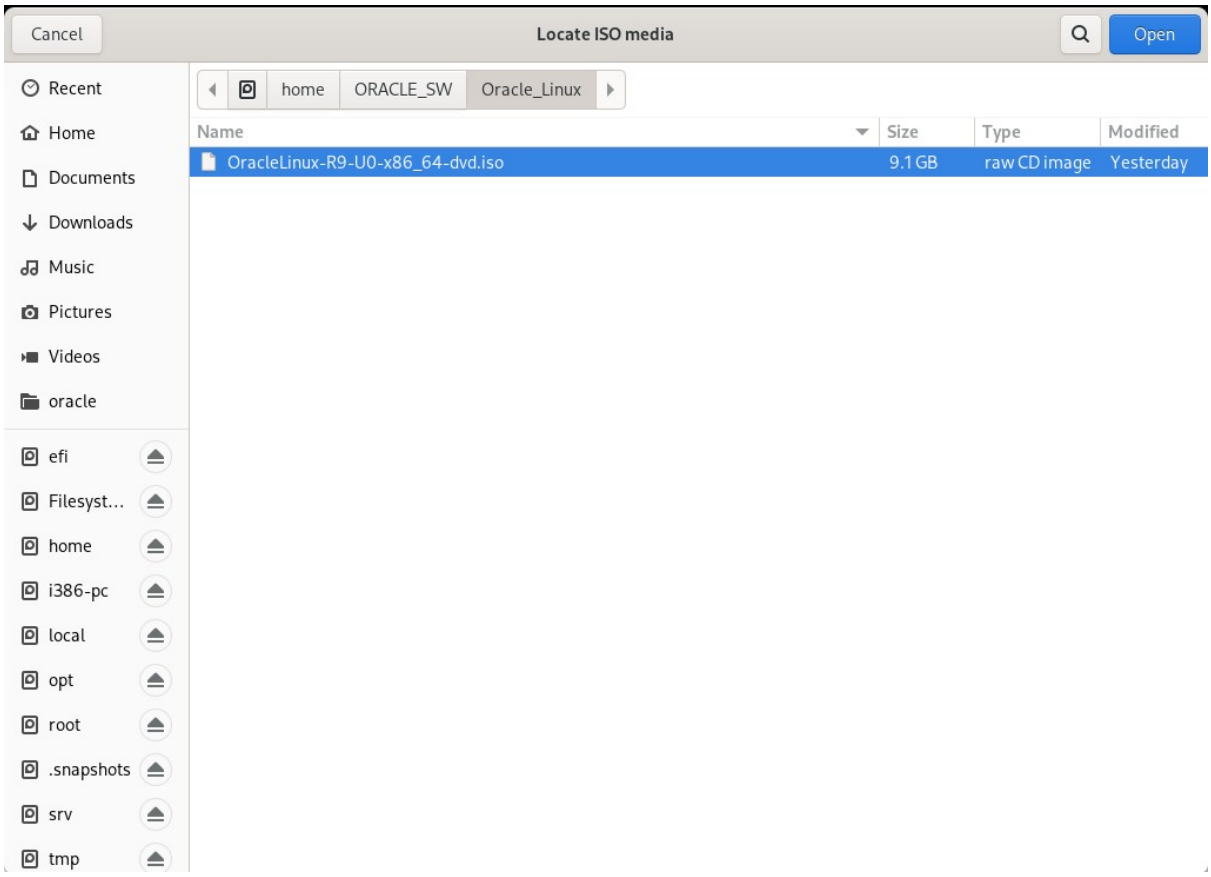
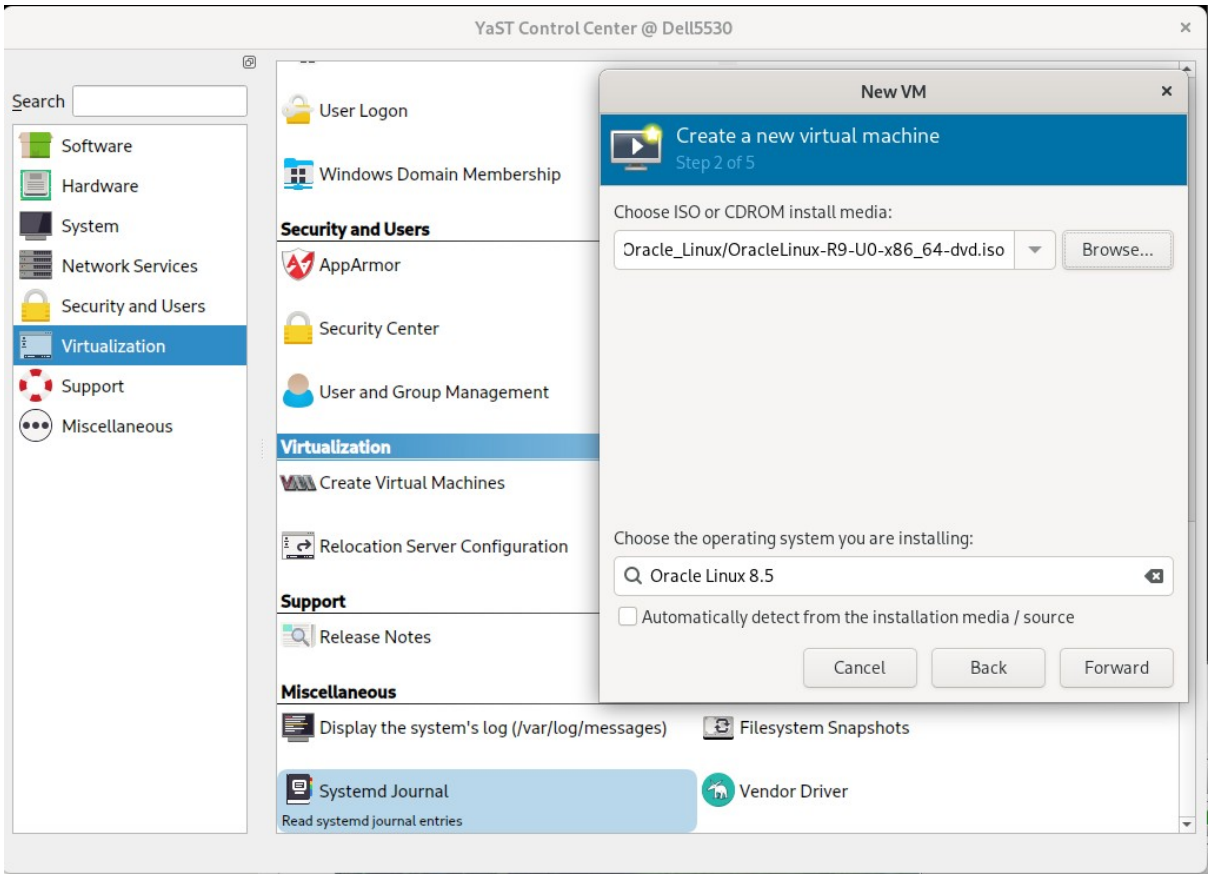
Specify the path on the VM Host Server to an ISO image containing the installation data.



3). Choose install media and operating system you are installing.



(**Note:** There is no Oracle Linux 9.0 in the options, select a distribution that is similar to the system you are installing.)

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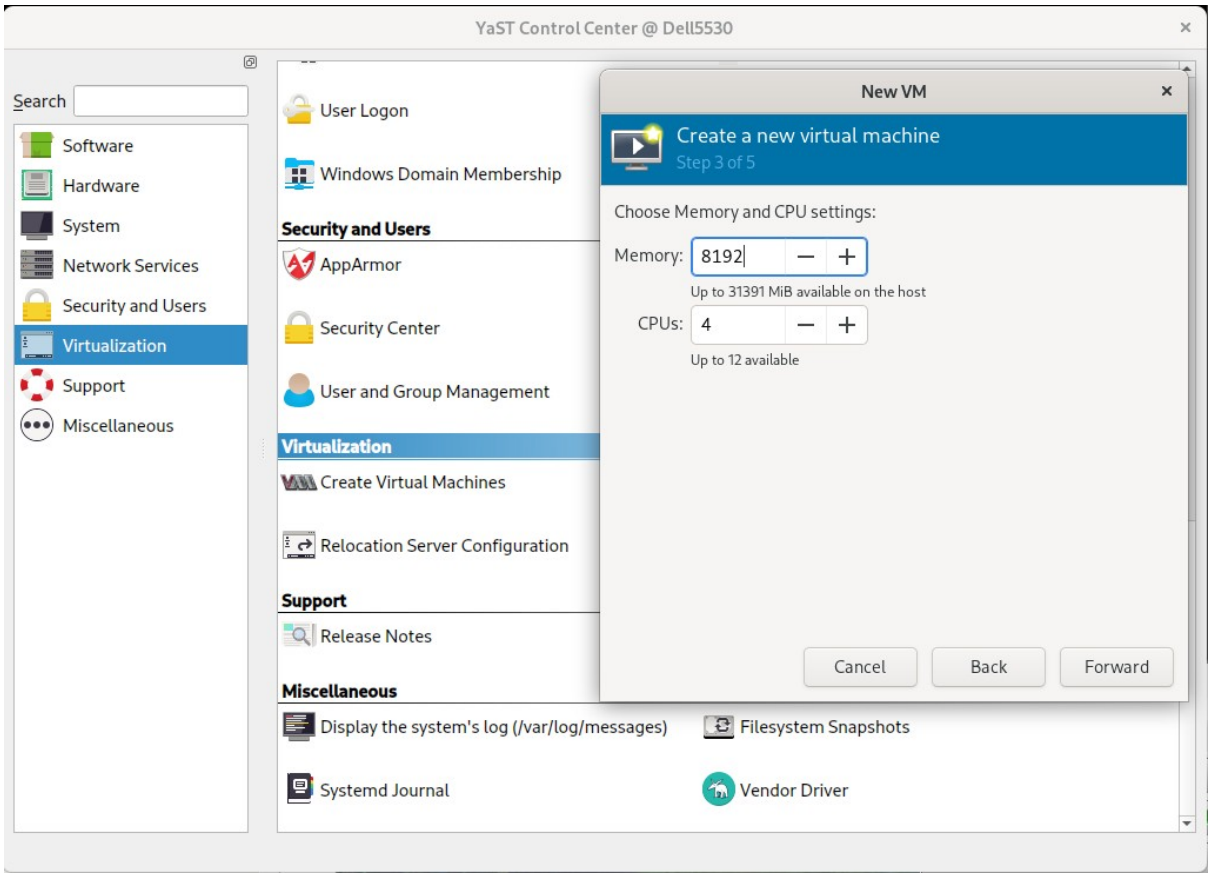
4). Choose Memory and CPU setting.



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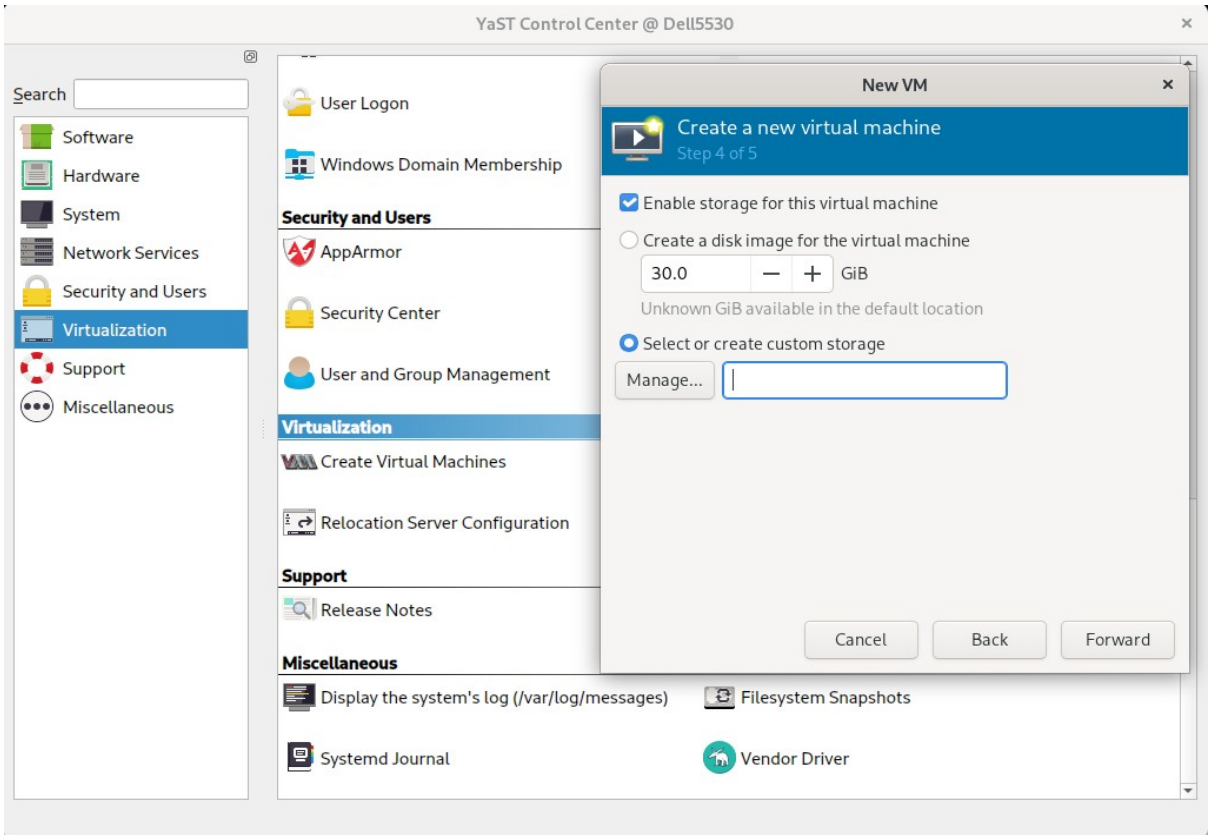
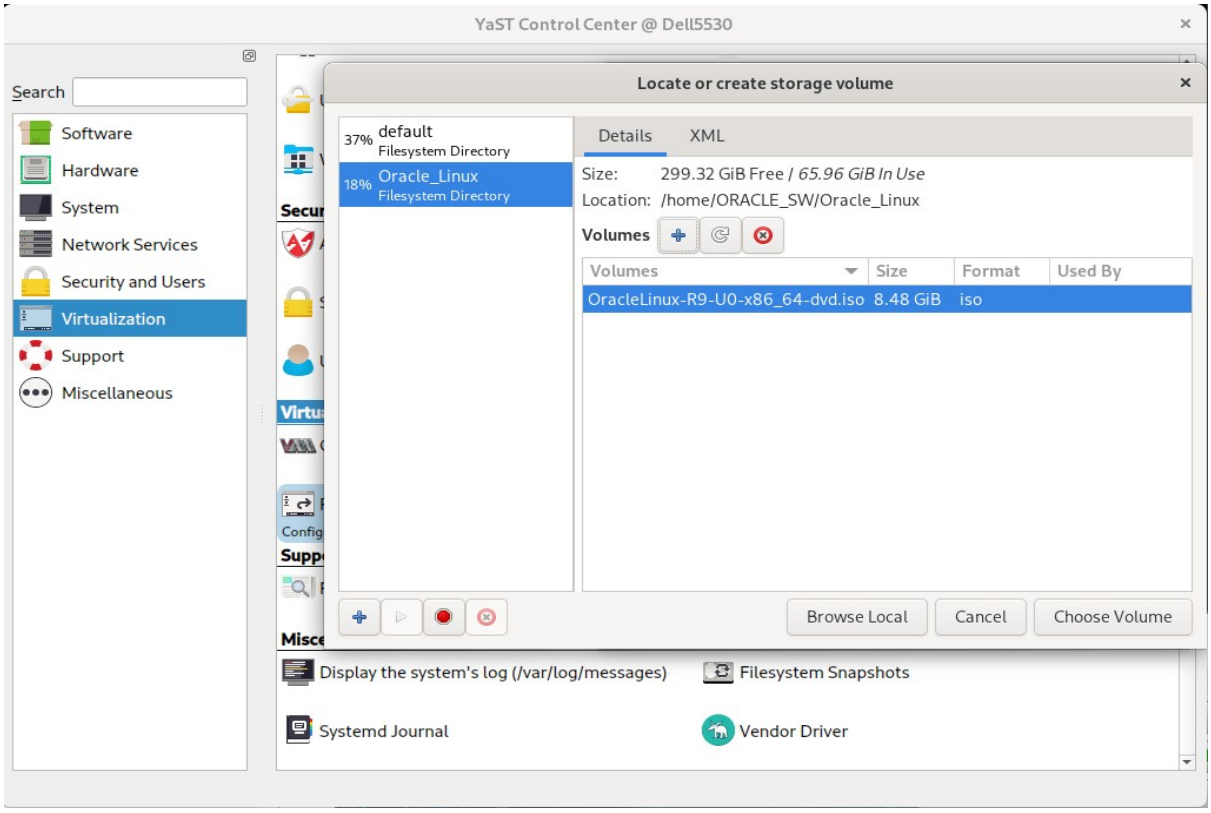
5). Create a disk image for the virtual machine. Select **Select or create custom storage** then click **Manage...**.



Select the file system directory used to store virtual machine image file. Click the “+” on the right of **Volumes**.



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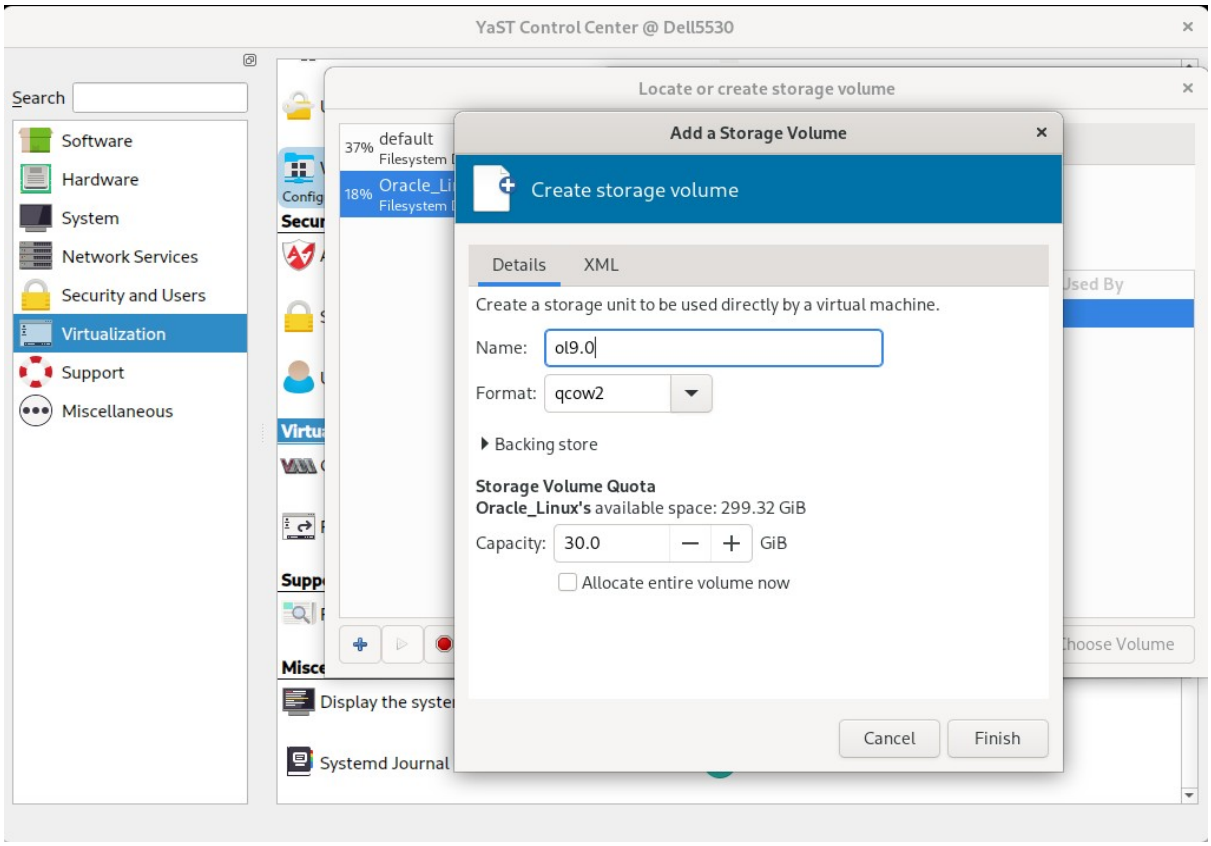
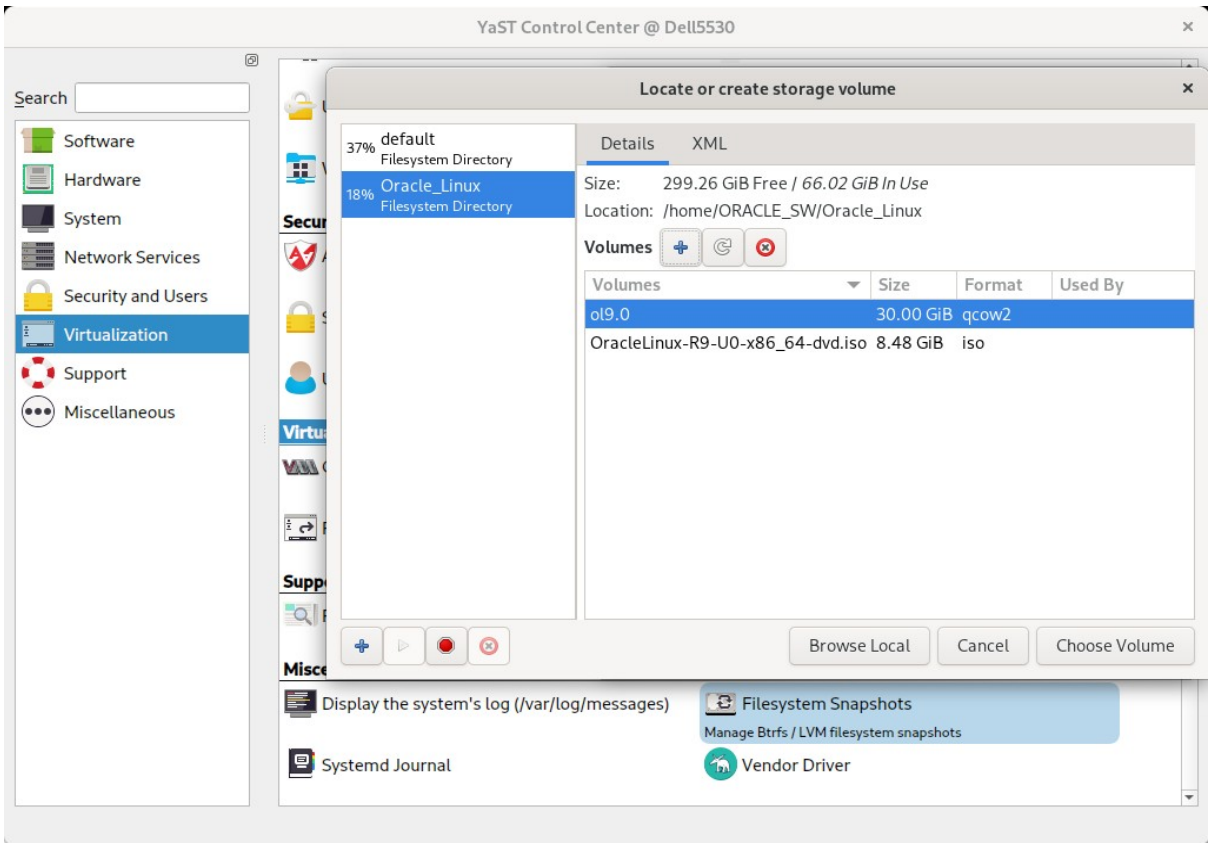
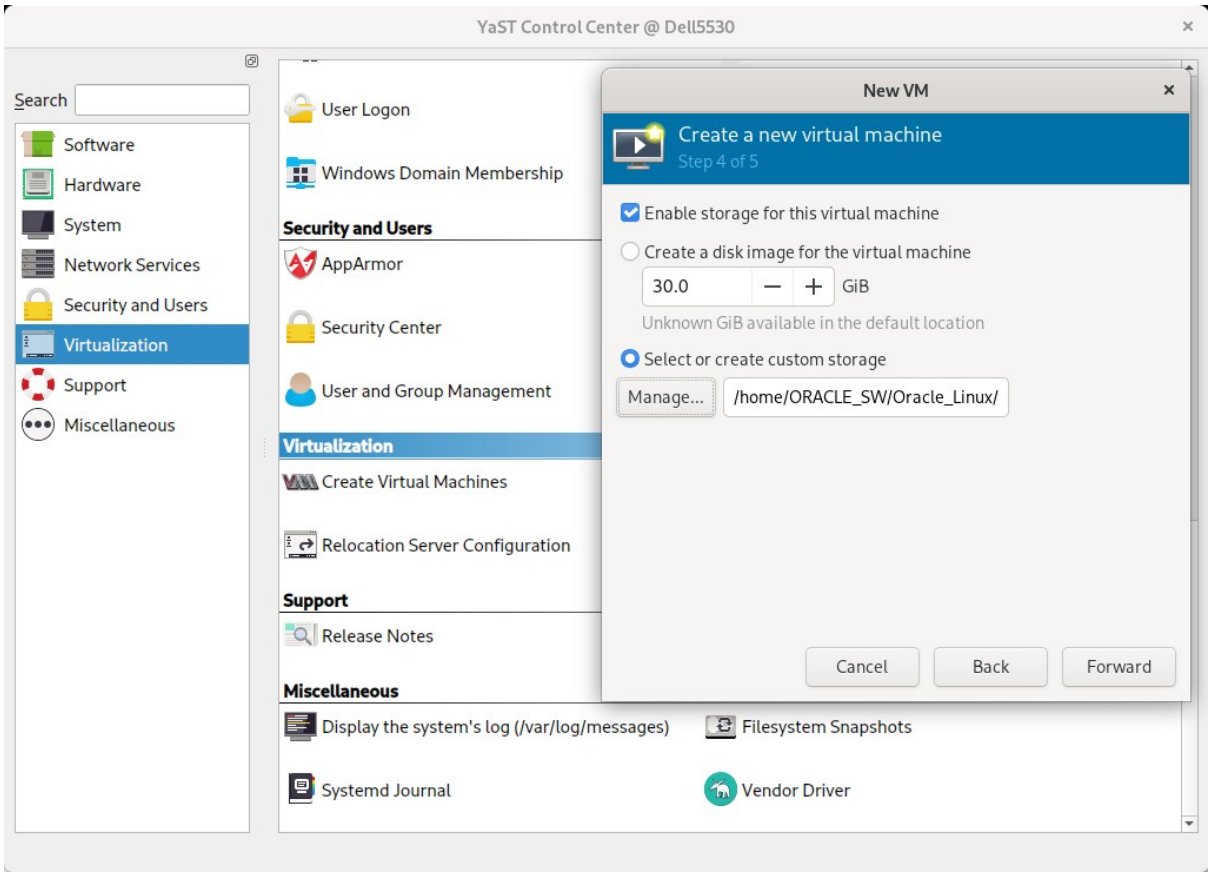
Create storage volume.



Select the “**ol9.0**” and click **Choose Volume**.



Click **Forward** to continue.



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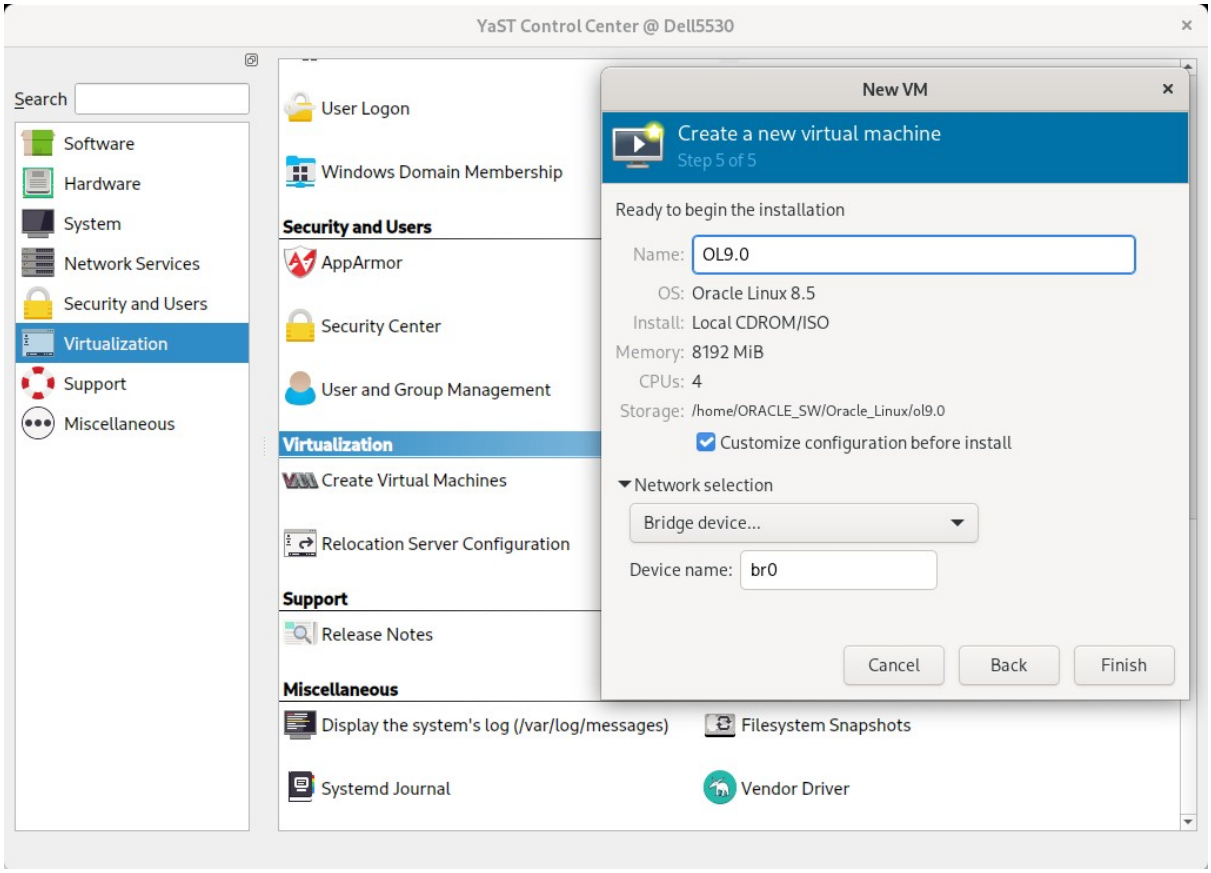
6). Ready to begin the installation.



Select **Customize configuration before install**, then click **Finish**.

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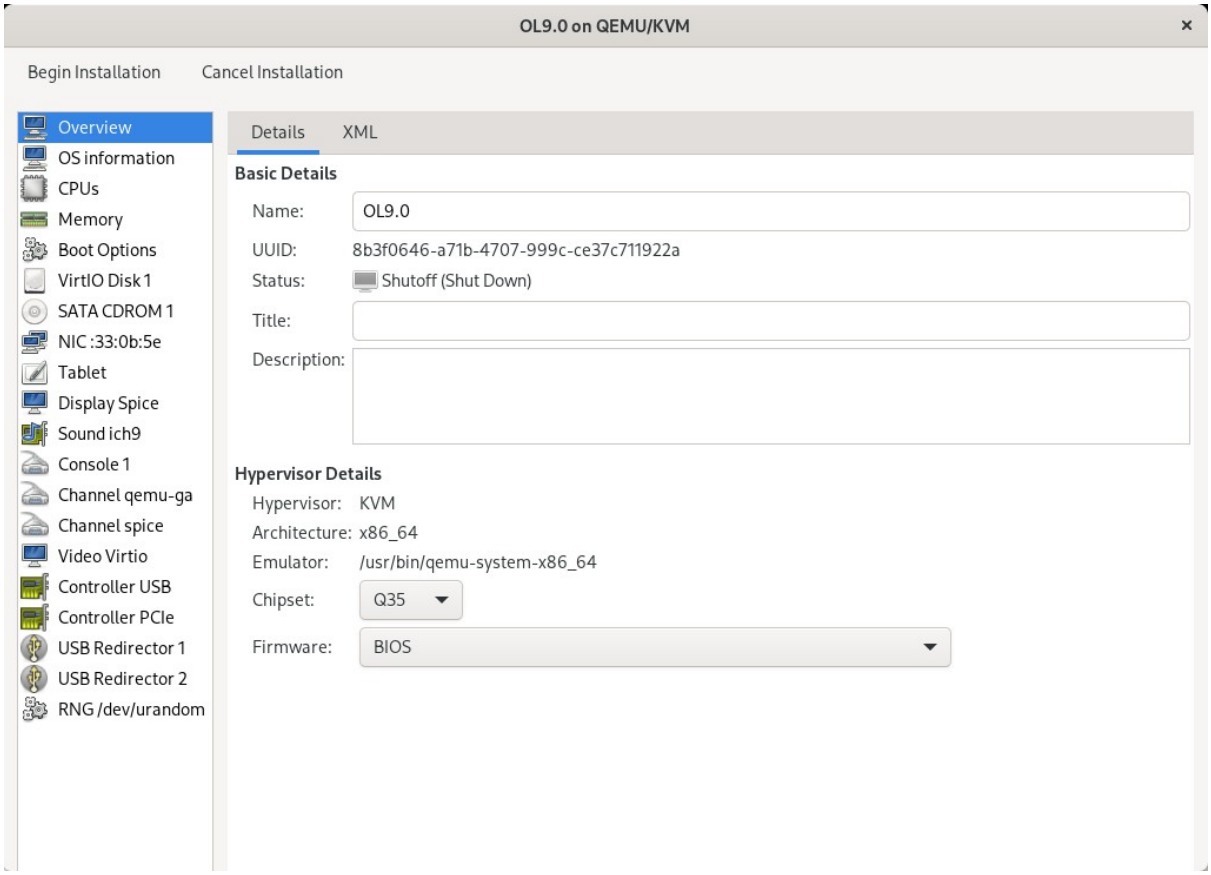
7). VM Guest configuration dialog as shown below.



When you are done configuring, click **Begin Installation**.

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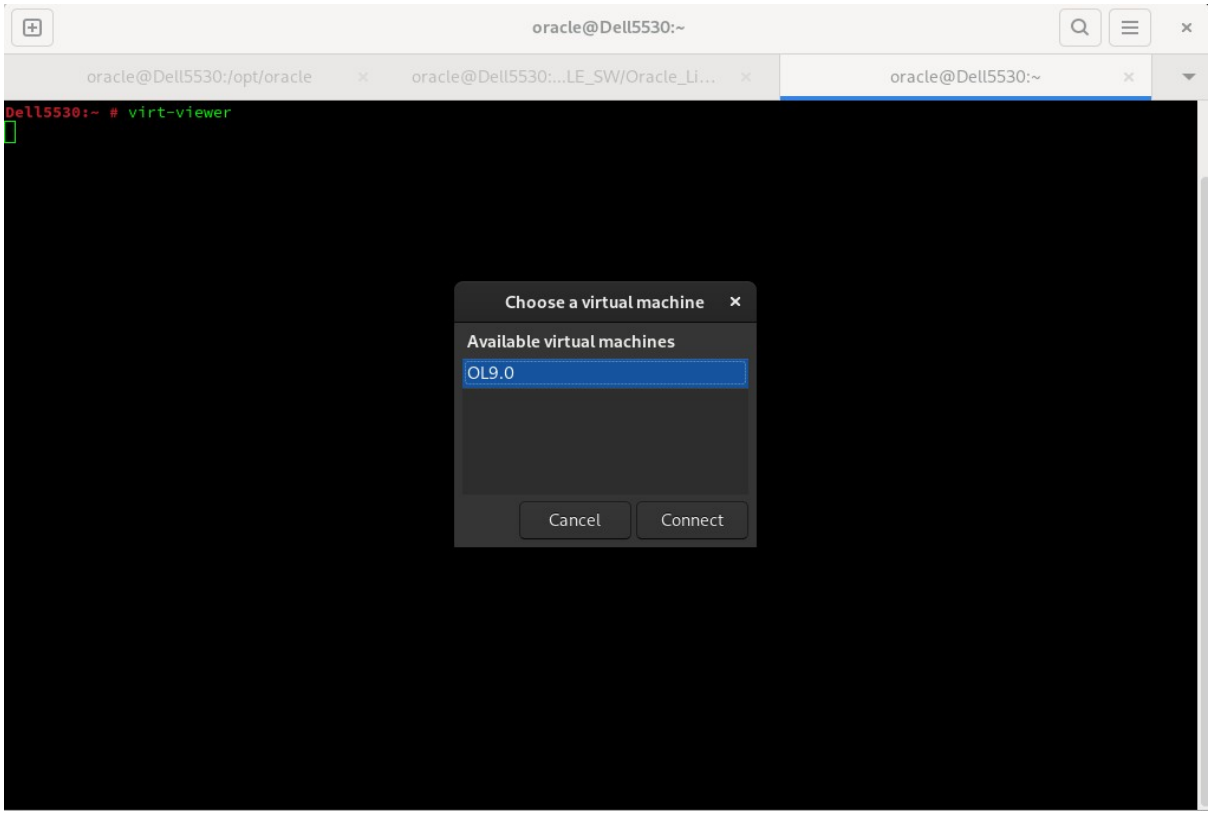
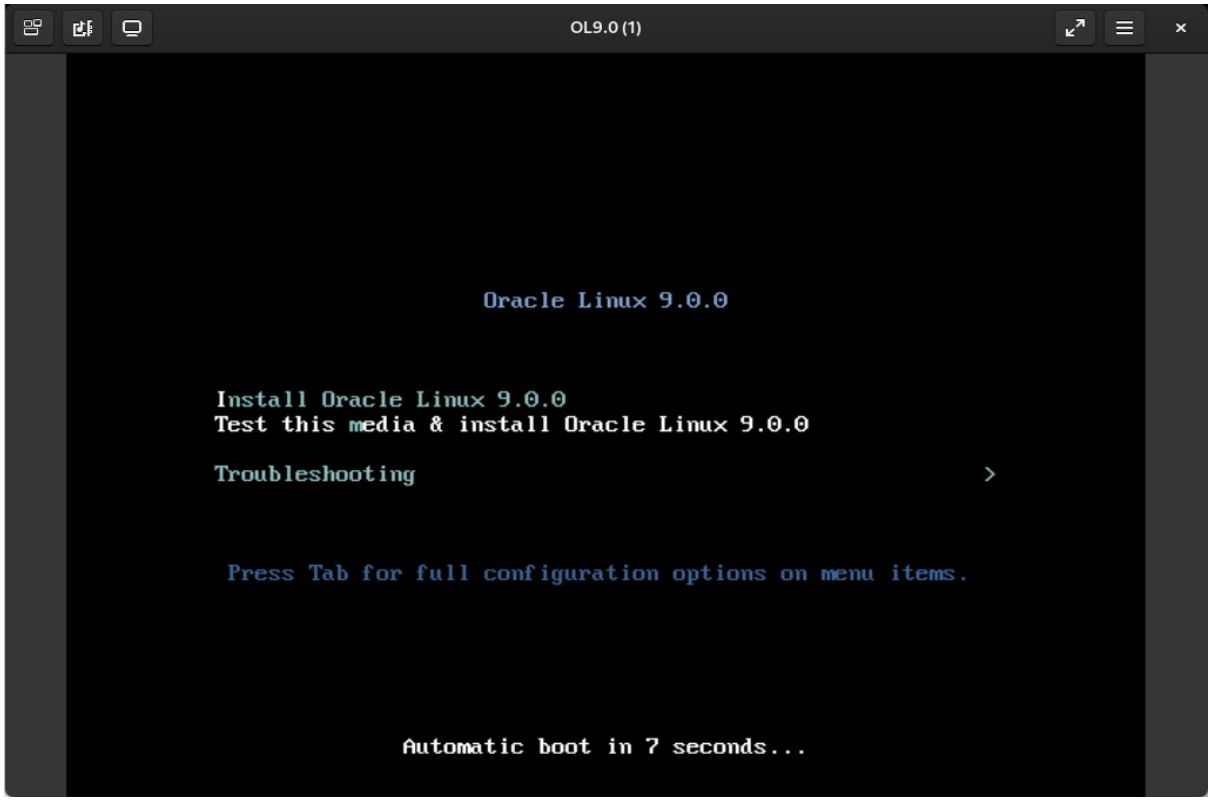
2-3. Installing guest OS(Oracle Linux).

1). Opening a Graphical Console through virt-viewer.



Select **Install Oracle Linux 9.0.0**



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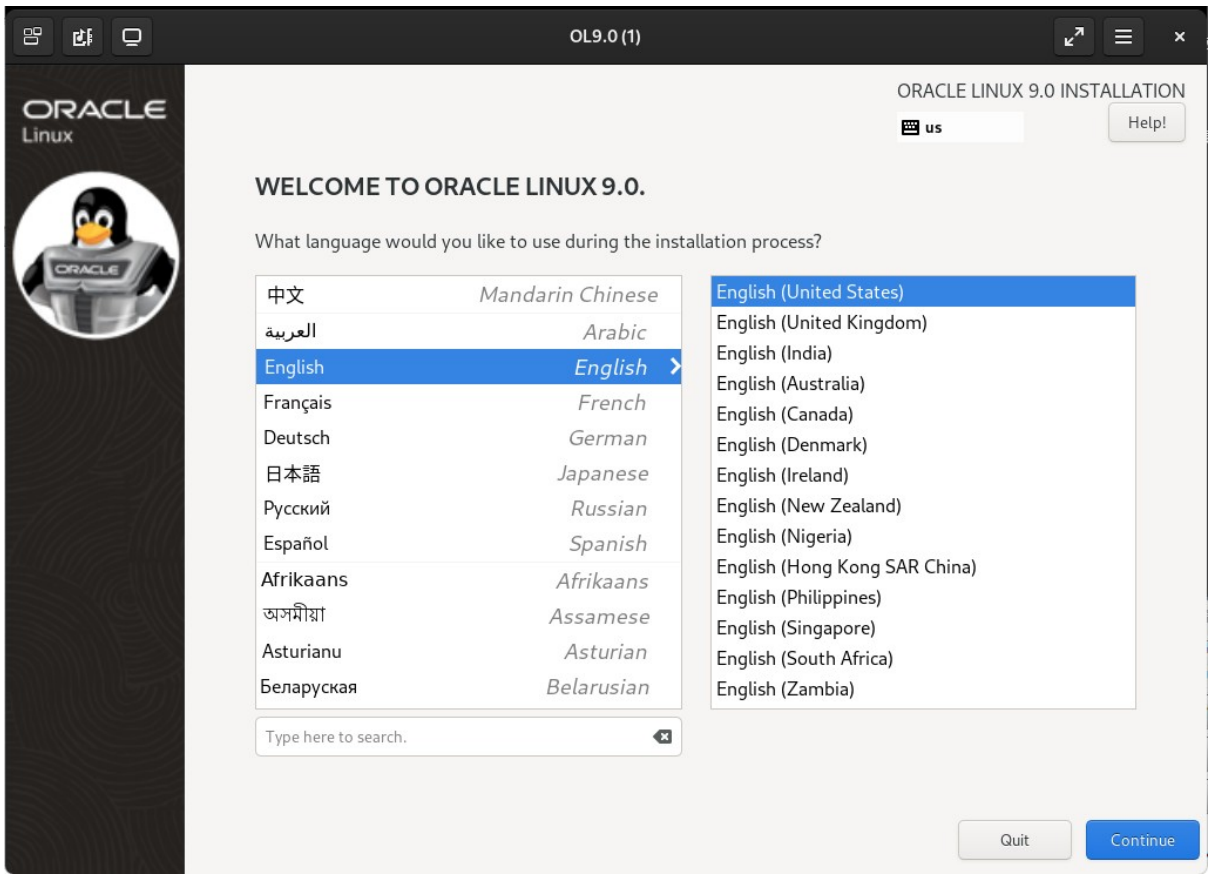
2). Installing Oracle Linux as guest os – Welcome Screen.



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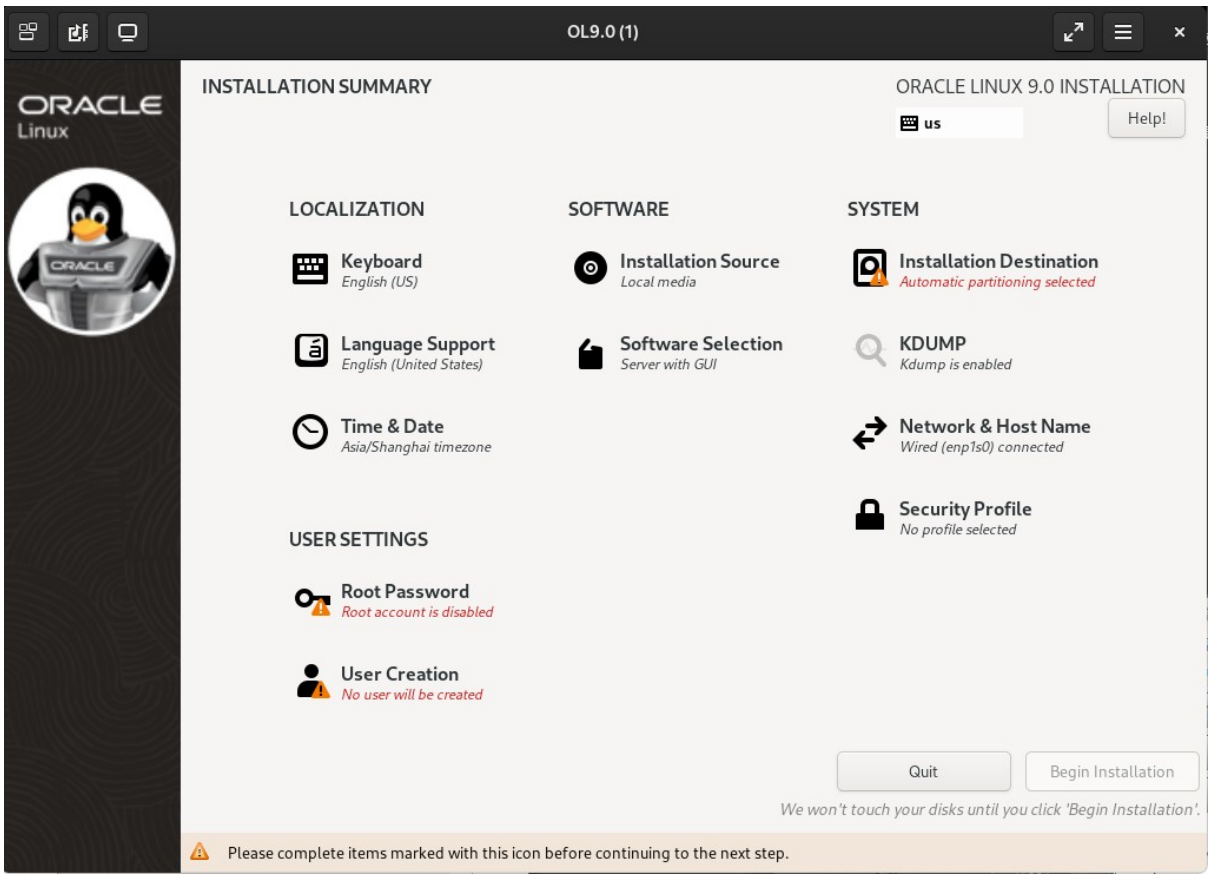
3). Installation summary.



Selecting any of the menu options opens additional screens for configuring the options. As a minimum, you must visit the options with a warning icon next to them. However, going through all the options is recommended so that you can see the various configuration settings that are available for the installation. You can change the installation configuration options as much as you like. The installation does not begin until you click **Begin Installation**. As you visit the configuration options, pay attention to any warning messages that are displayed at the bottom of the screen

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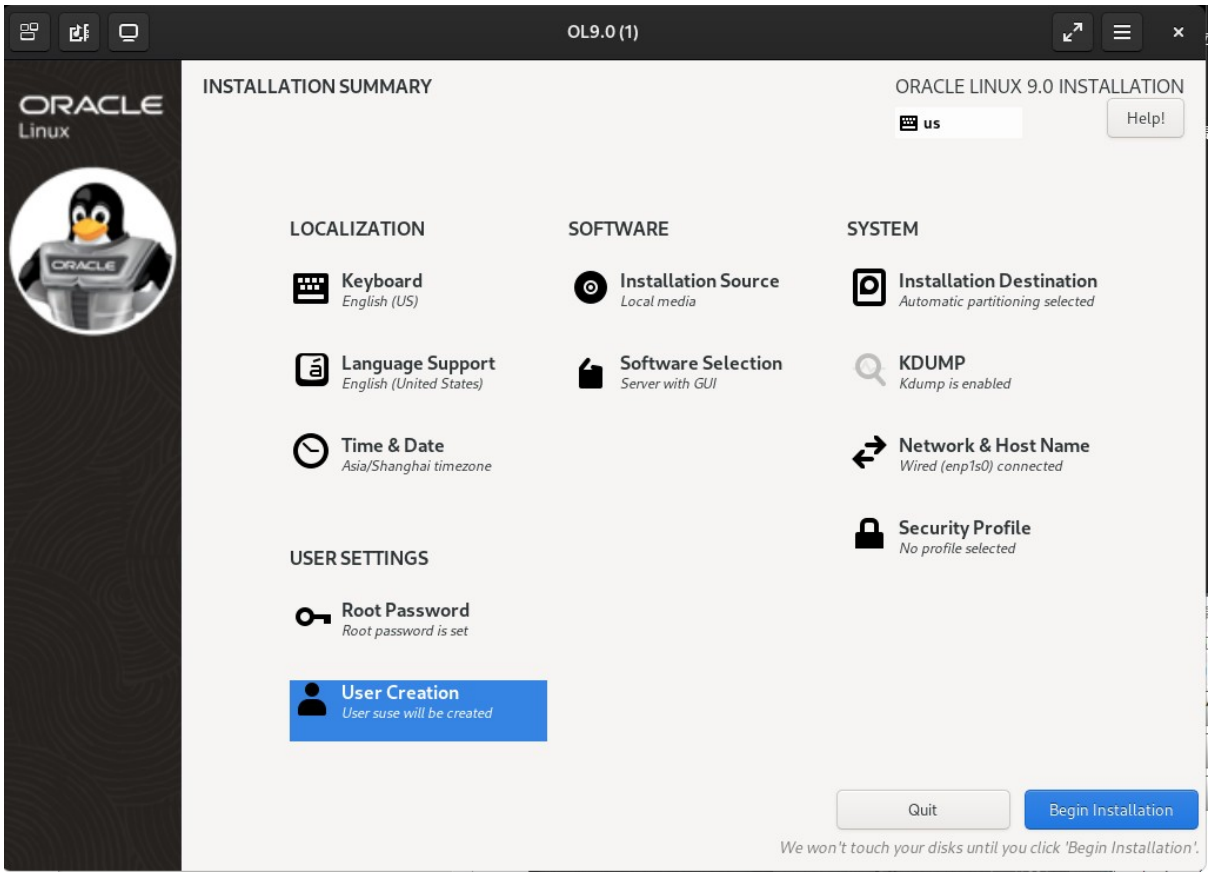

Click **Begin Installation** to continue.

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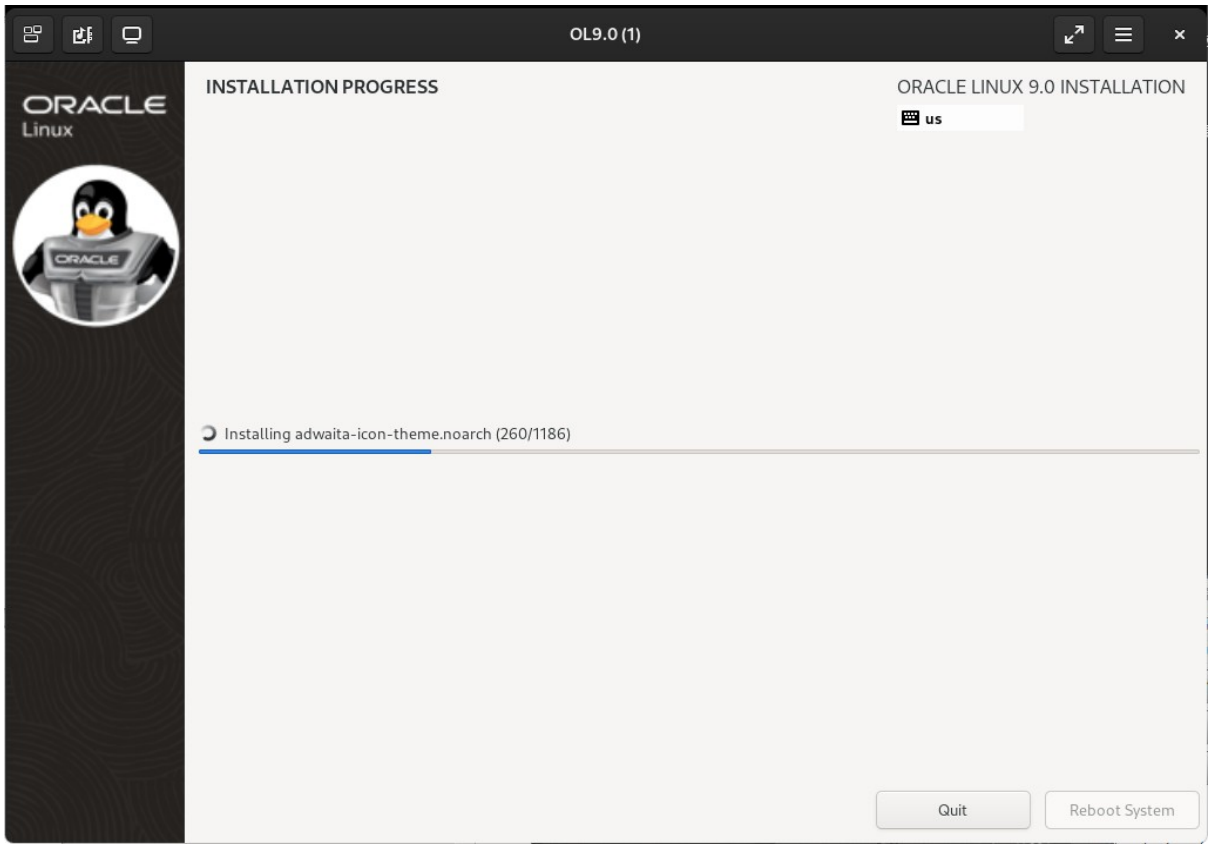
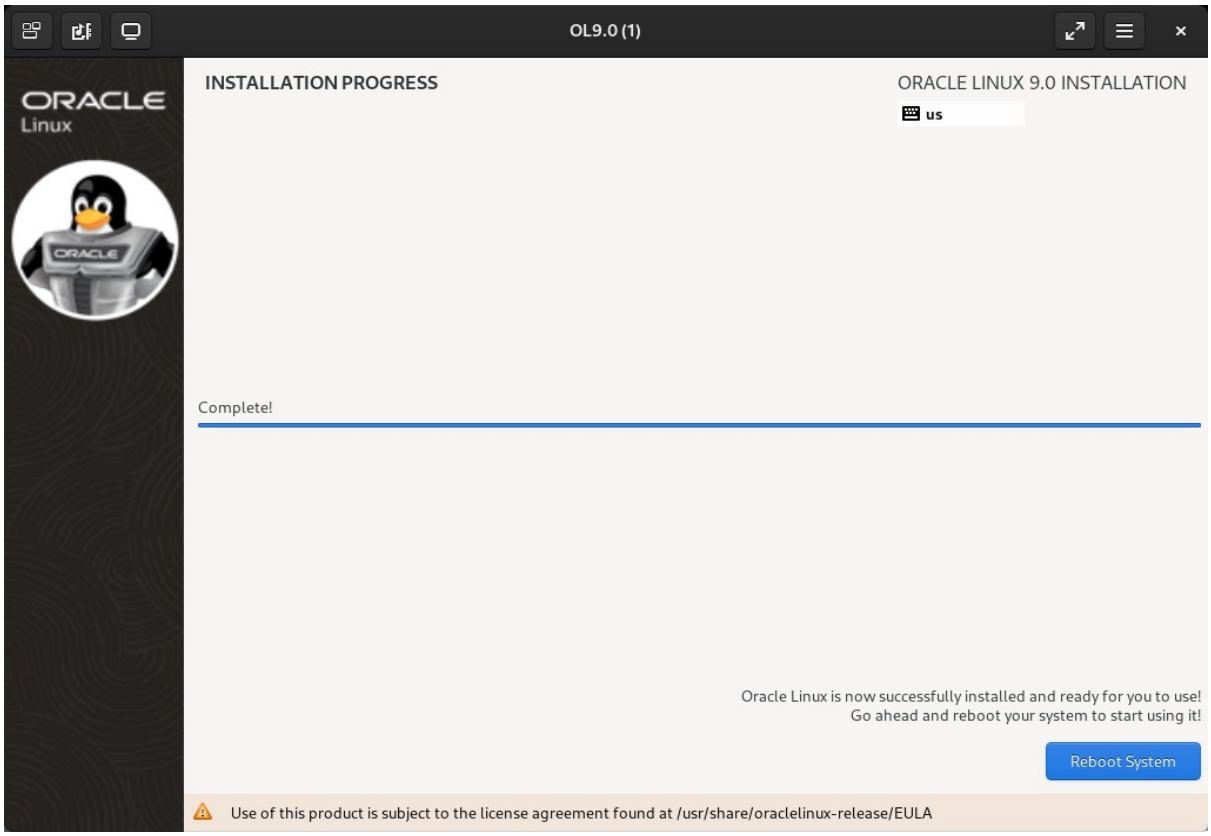
4). Installation Progress



Wait for the installation to complete and click **Reboot System**.



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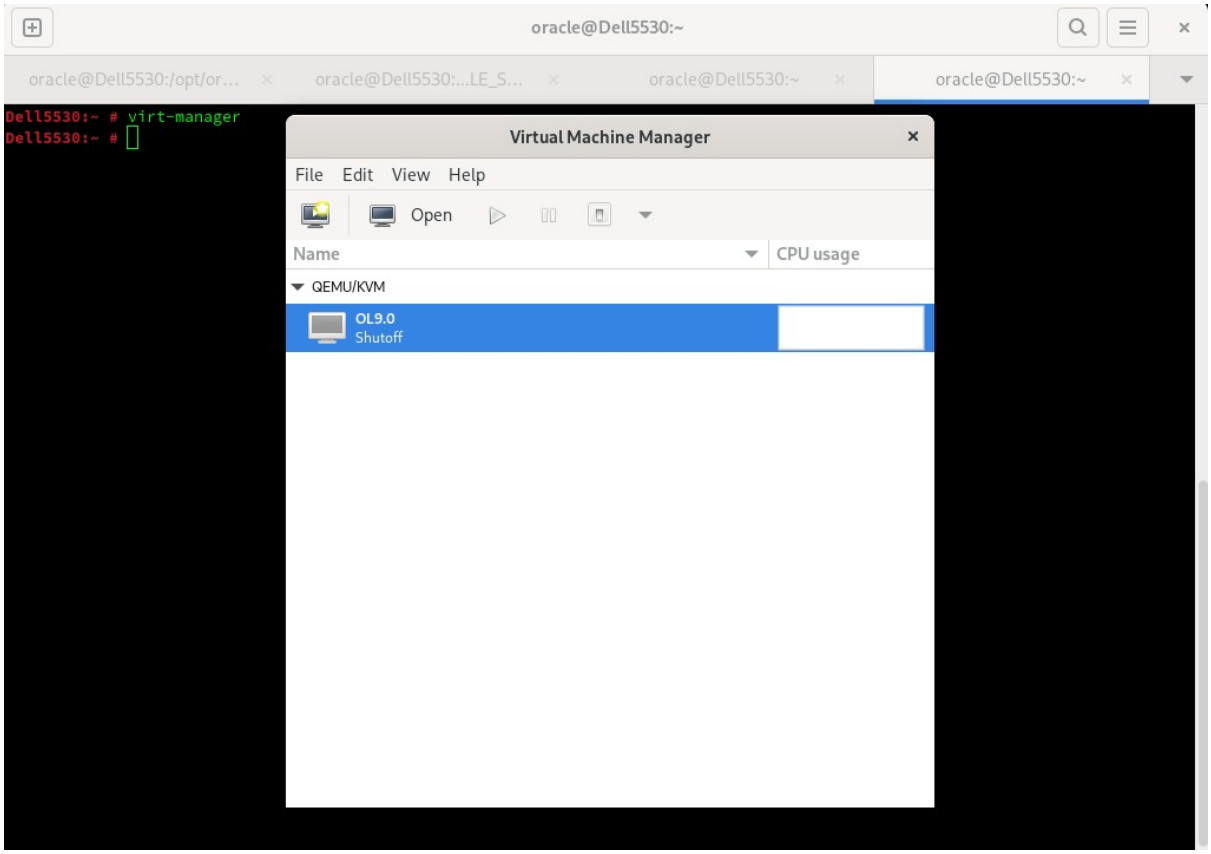
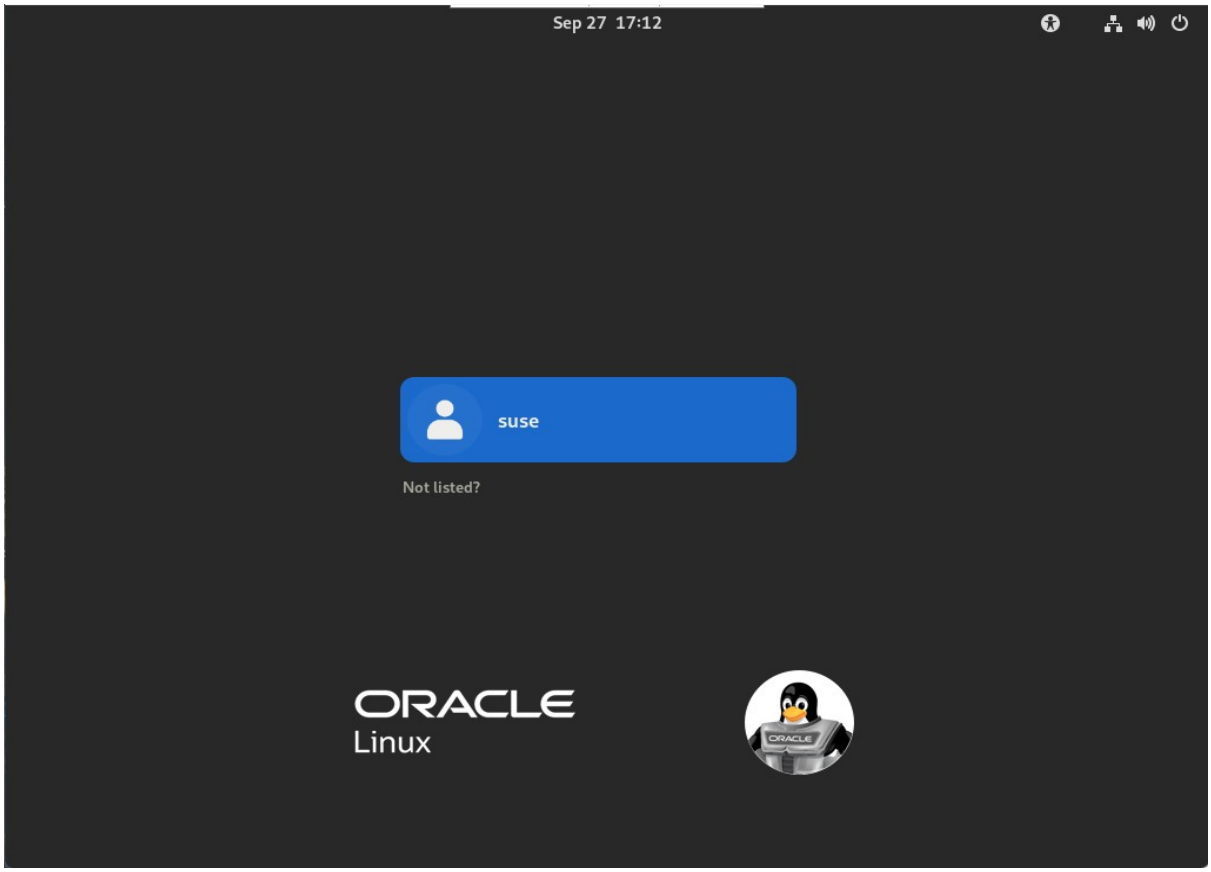
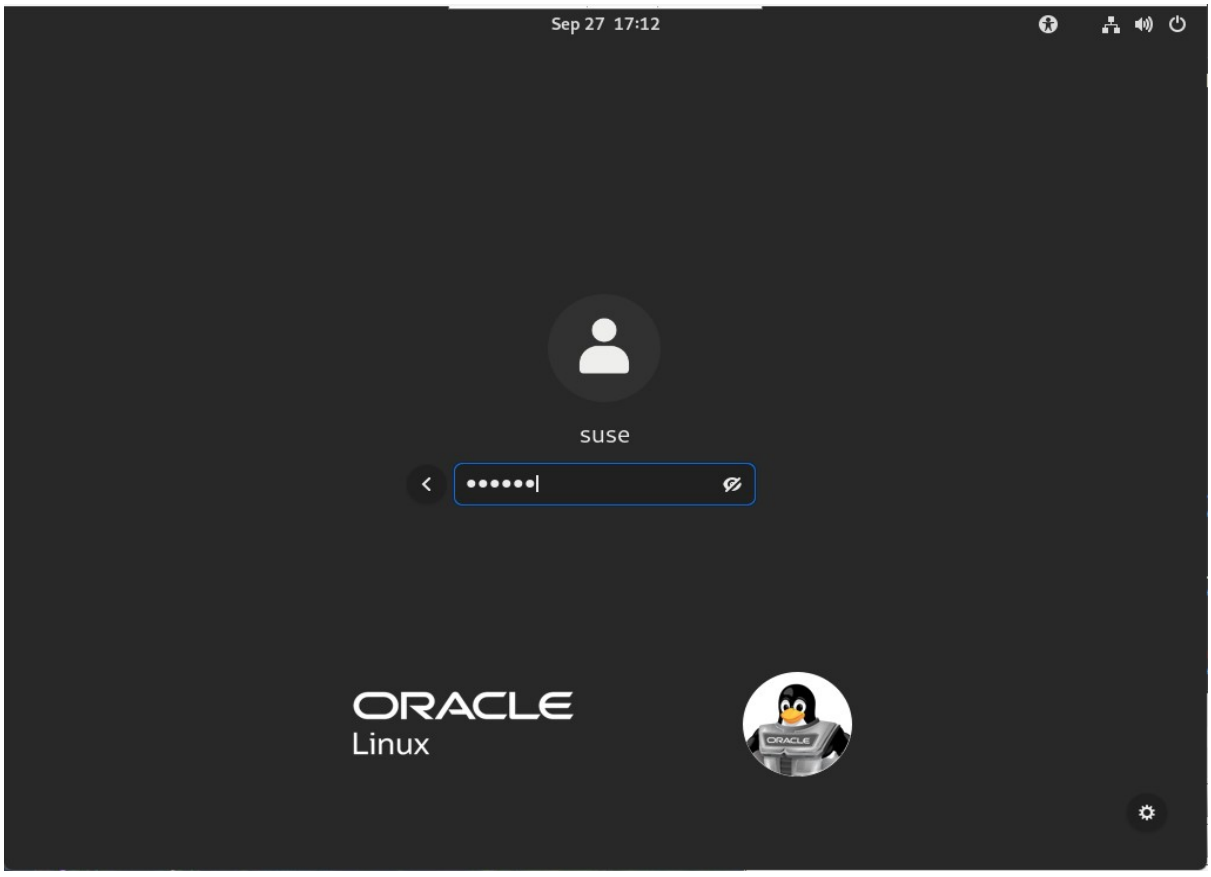
2-4. Connect to the virtual machine and log in to Guest OS - Oracle Linux

1). Opening a Graphical Console through Virtual Machine Manager.

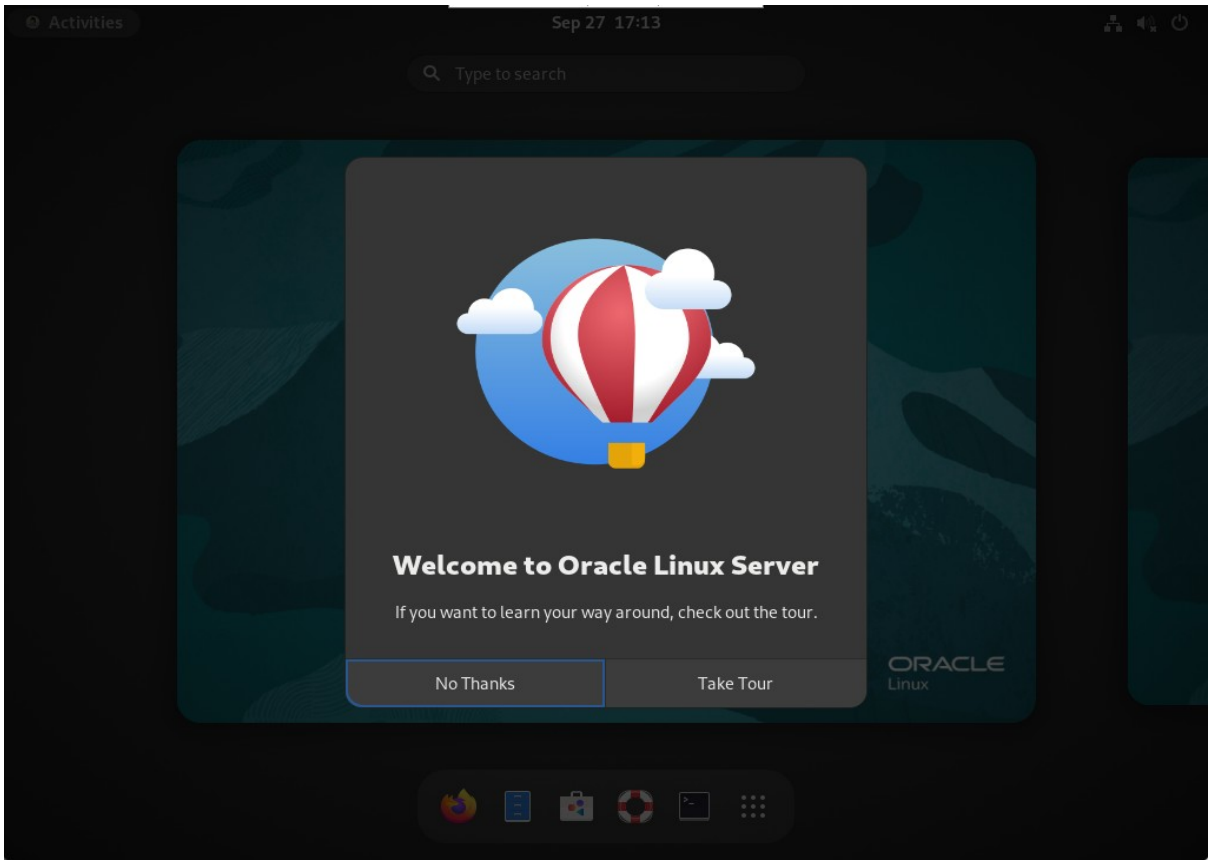


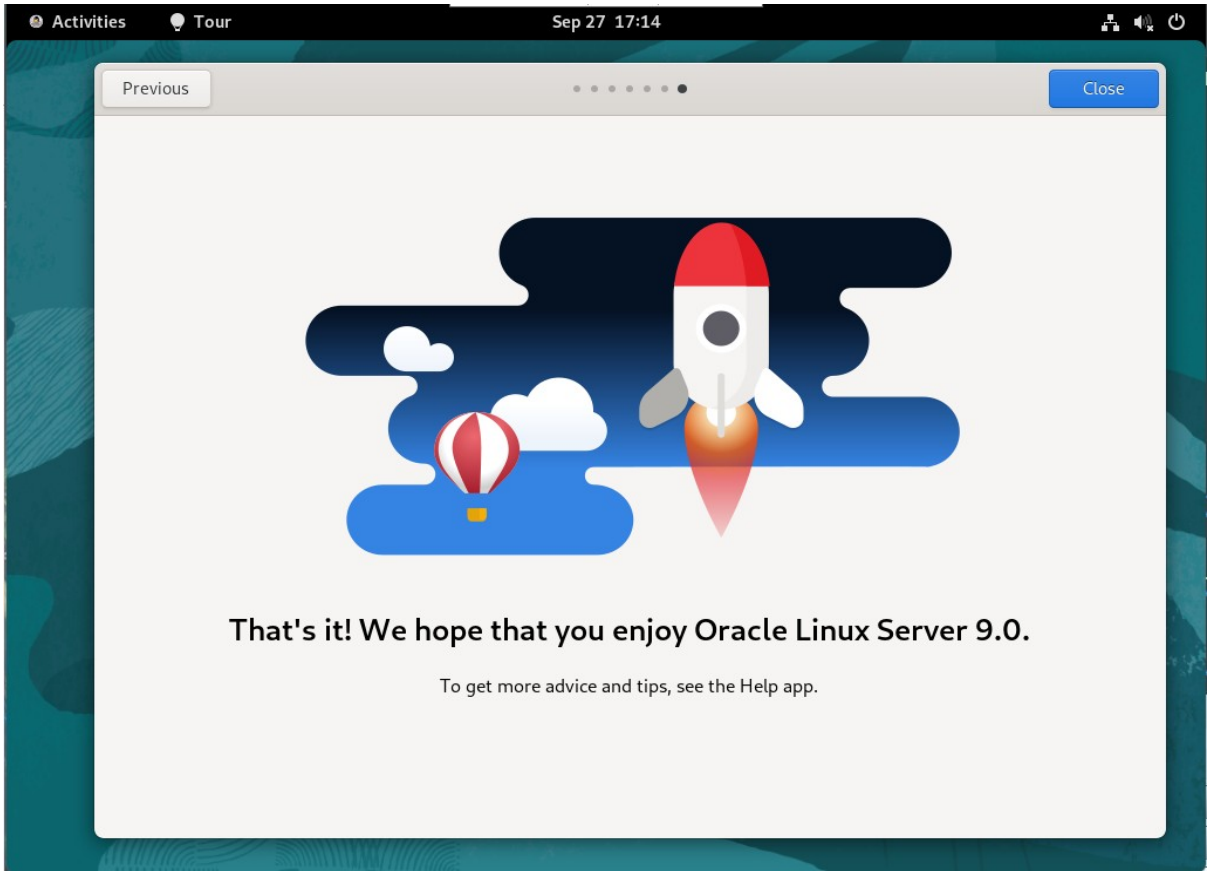
2). Running VM guest. Oracle Linux 9.0 Login Srceen as shown below.





3). Start **Take Tour** to see some tips.





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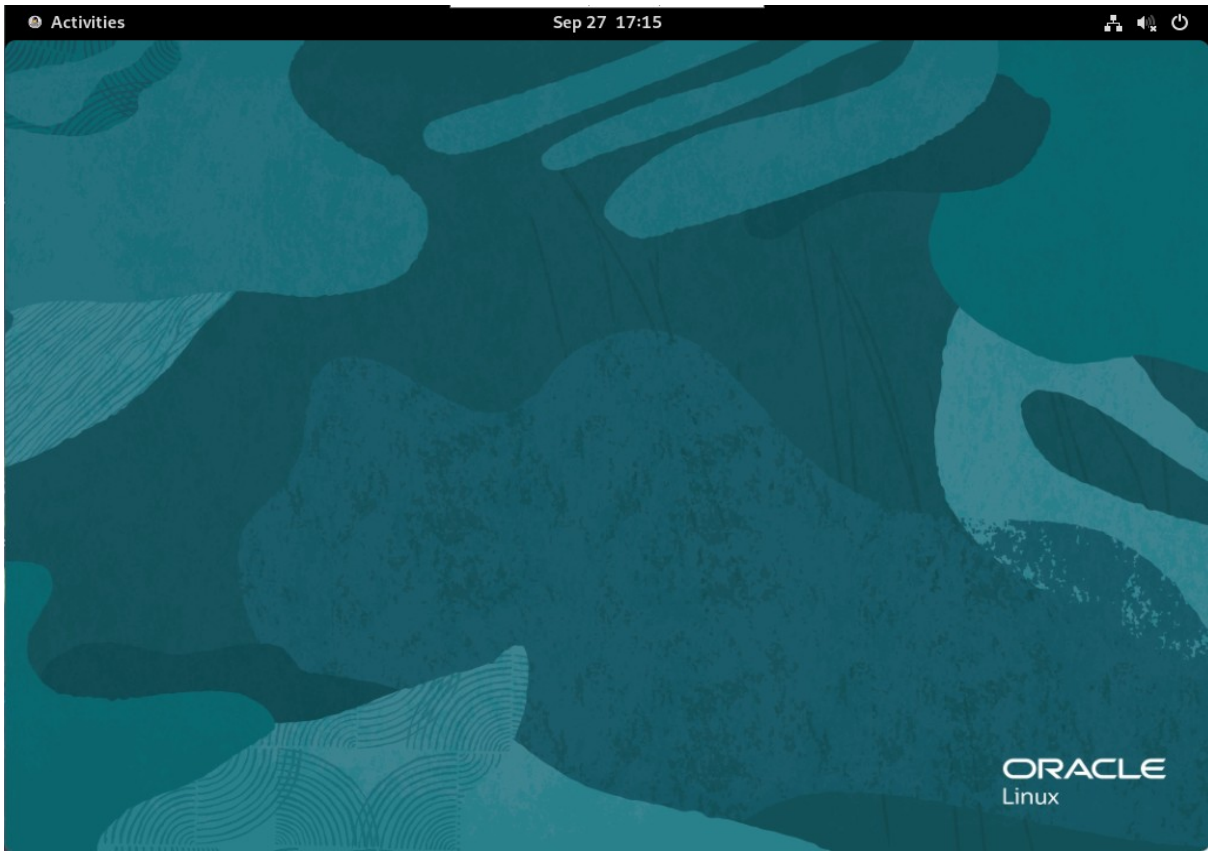
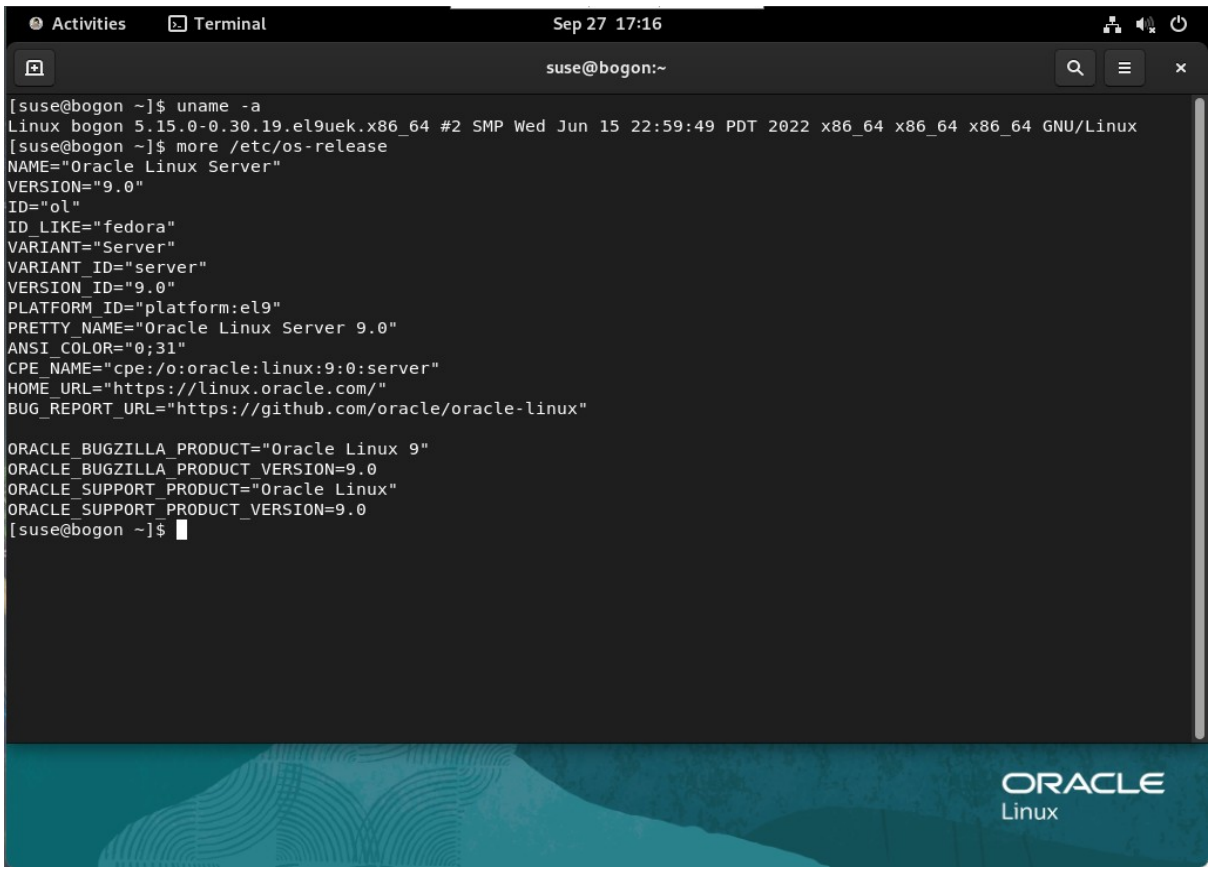
4). After that, Oracle Linux 9.0 Desktop as shown below.



Checking the OS release information and kernel version.



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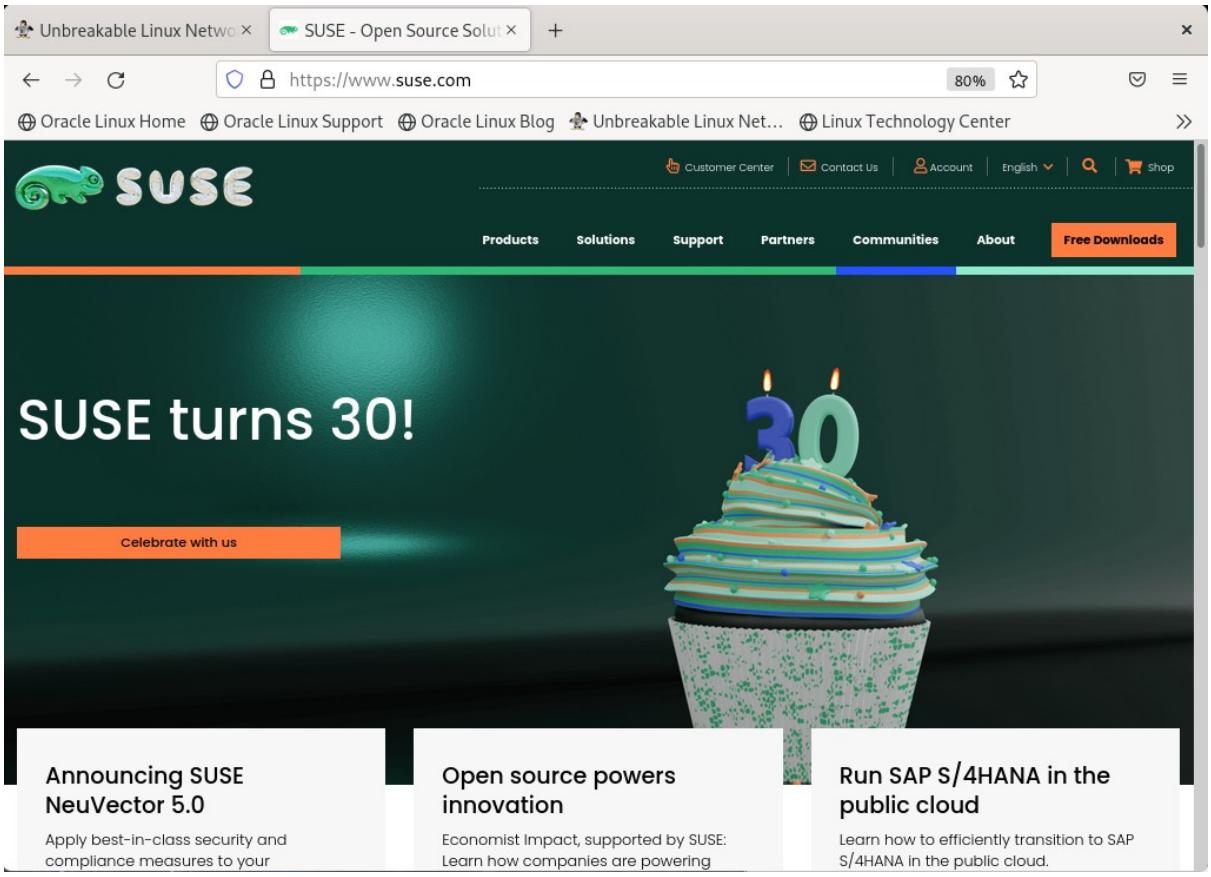
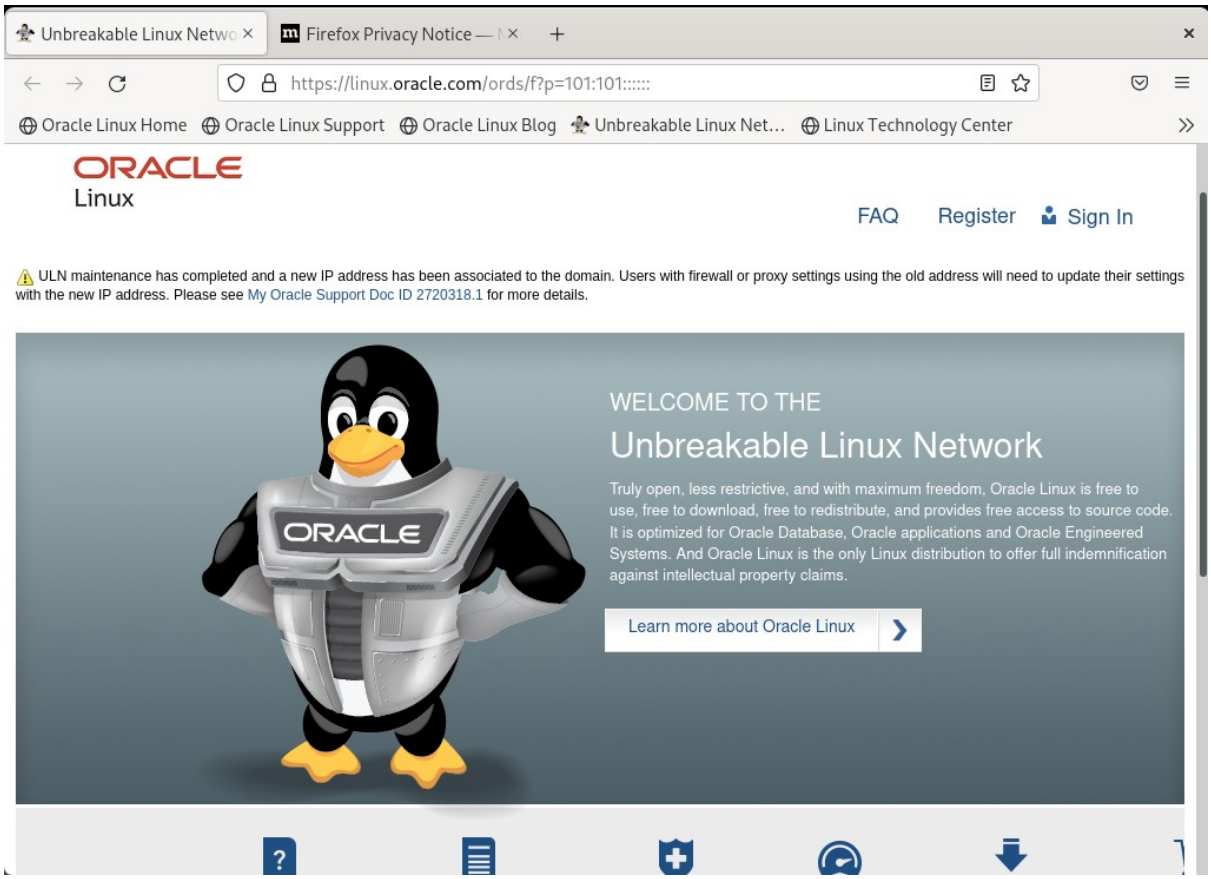
5). Verify network connectivity - open browser and visit external website.





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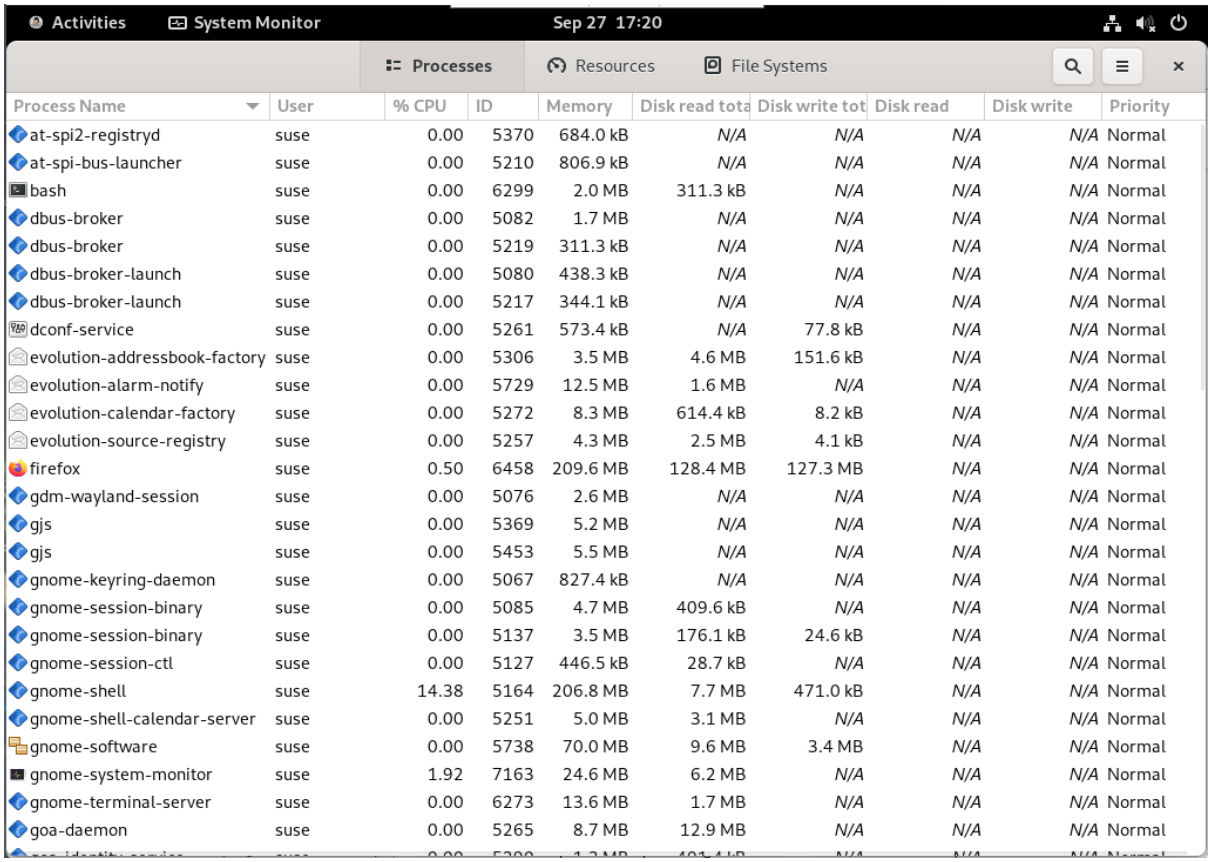
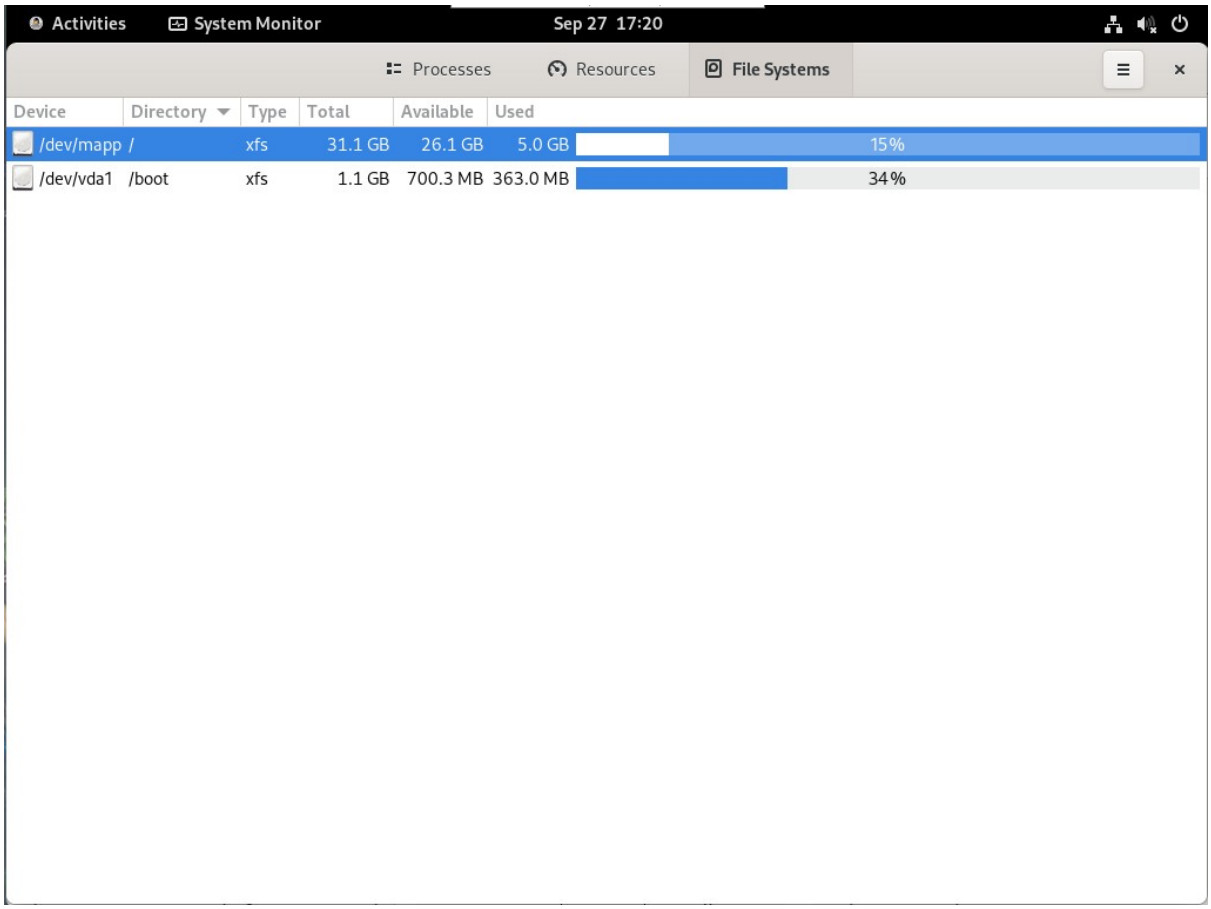
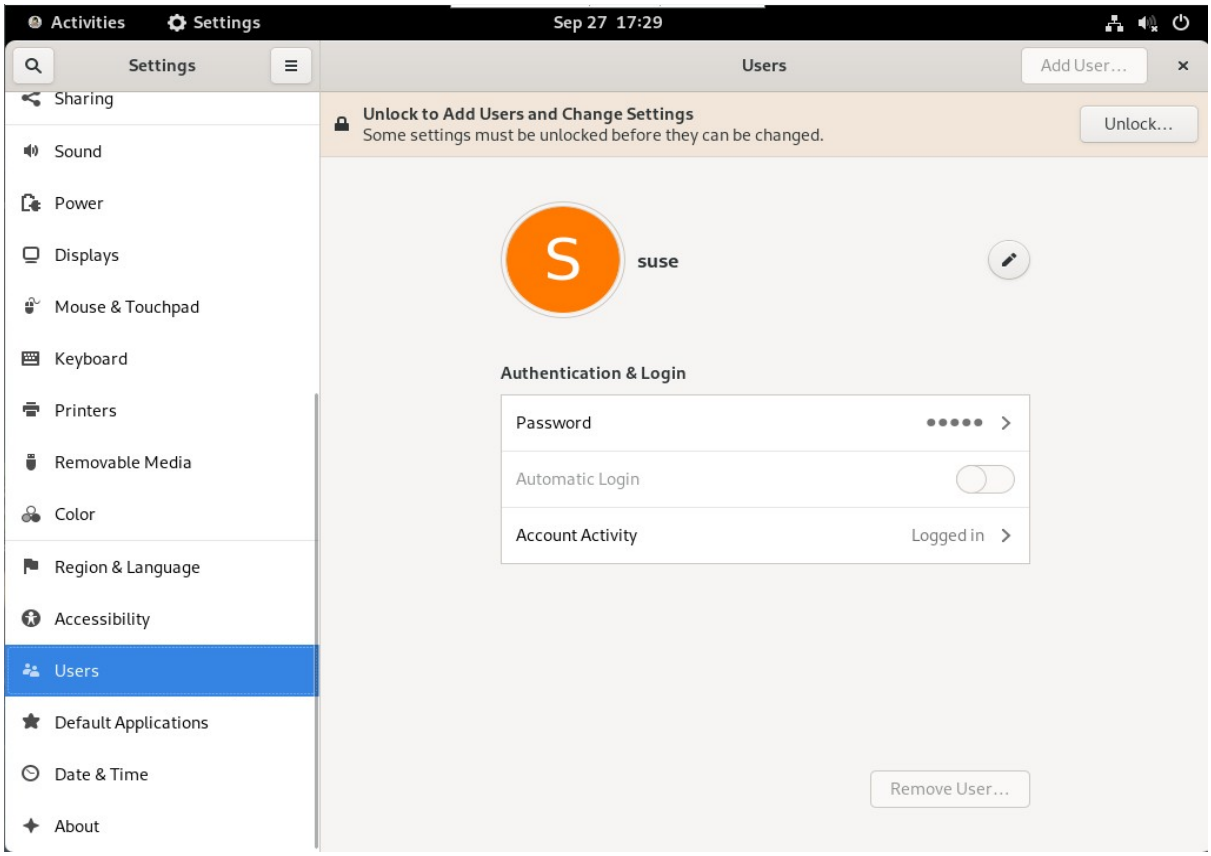
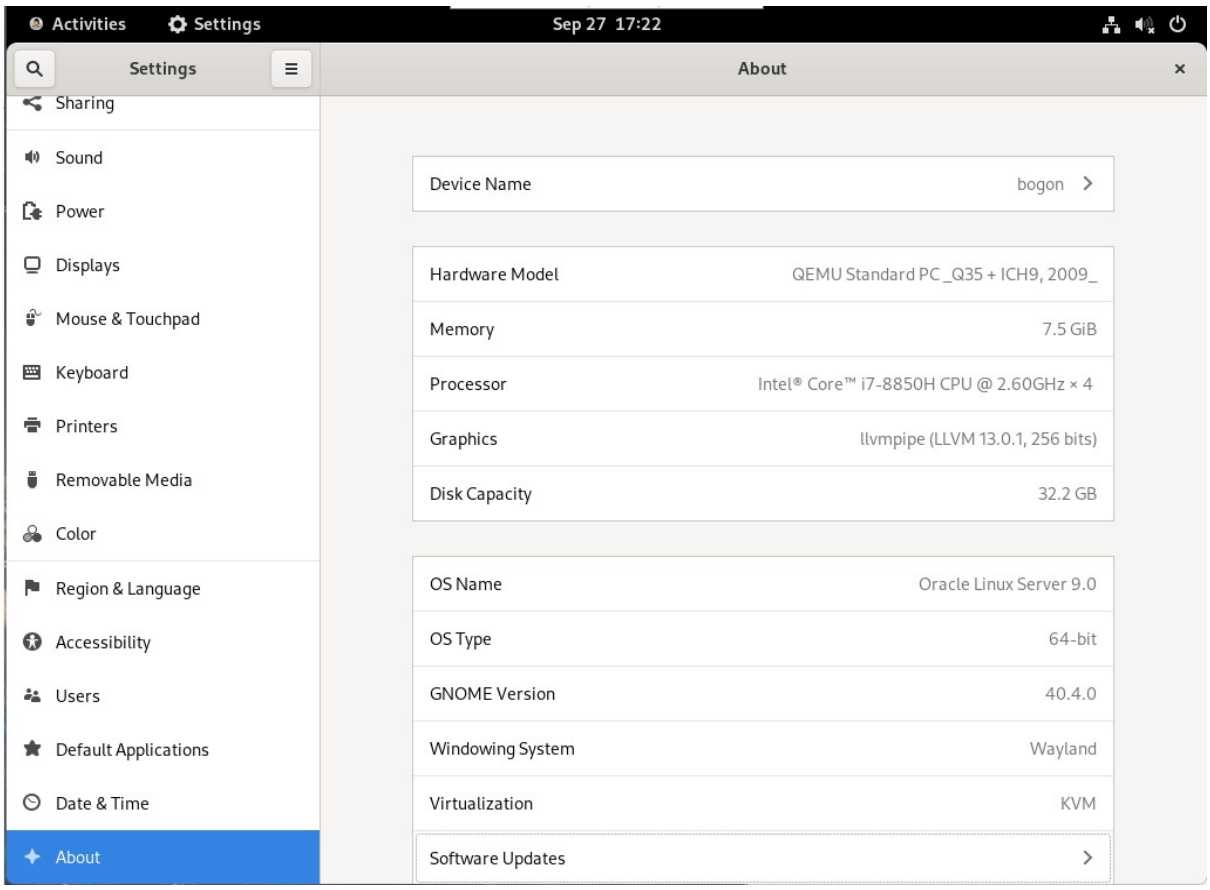
6). Start the monitor to view the system resources.




Activities
System Monitor
Sep 27 17:20
Processes
Resources
File Systems
Device
Directory
Type
Total
Available
Used
/dev/mapp /
xfs
31.1 GB
26.1 GB
5.0 GB
15%
/dev/vda1
/boot
xfs
1.1 GB
700.3 MB
363.0 MB
34%

7). System Settings as shown below.





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