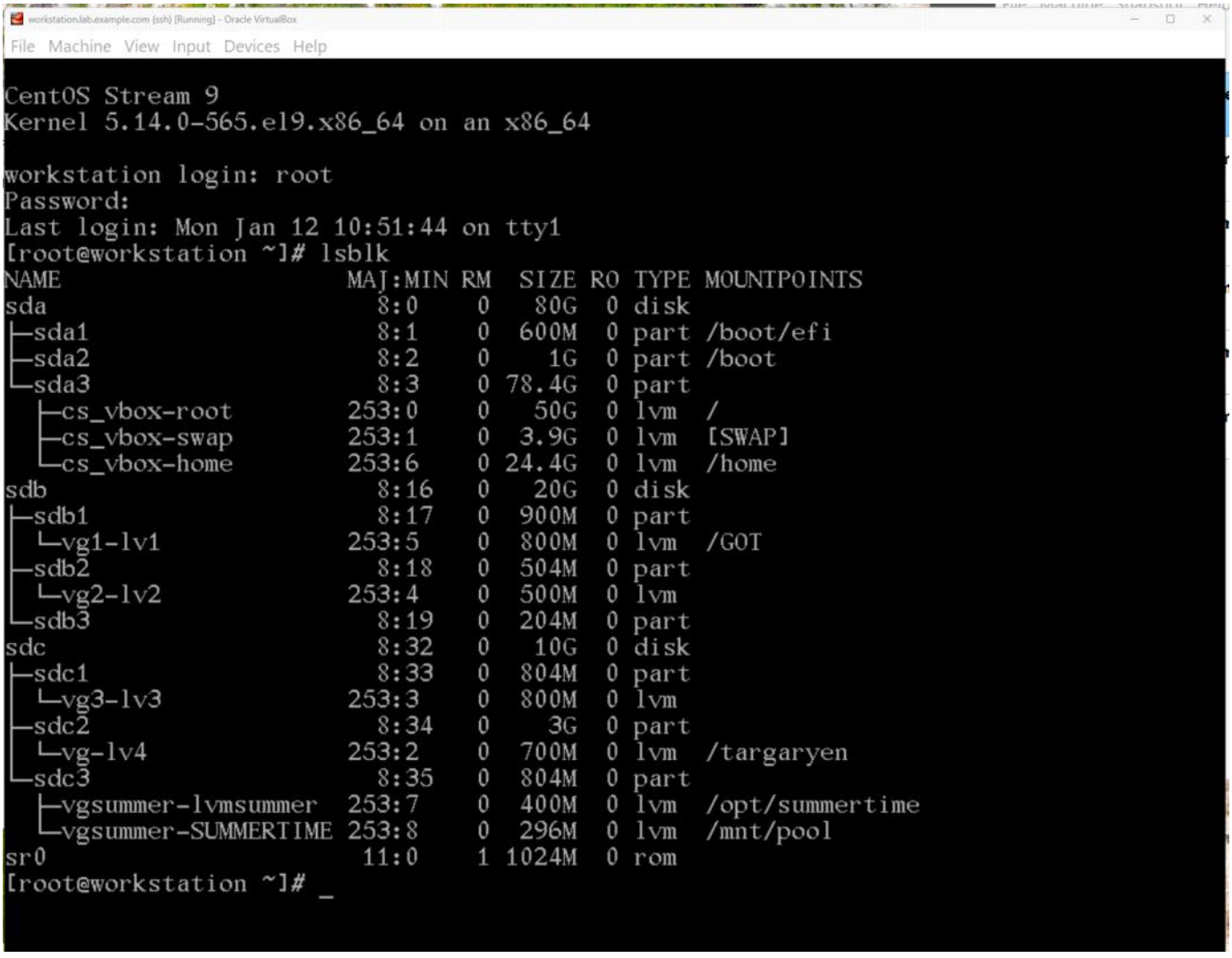
Create LVM

Wednesday, January 14, 2026 11:39 AM

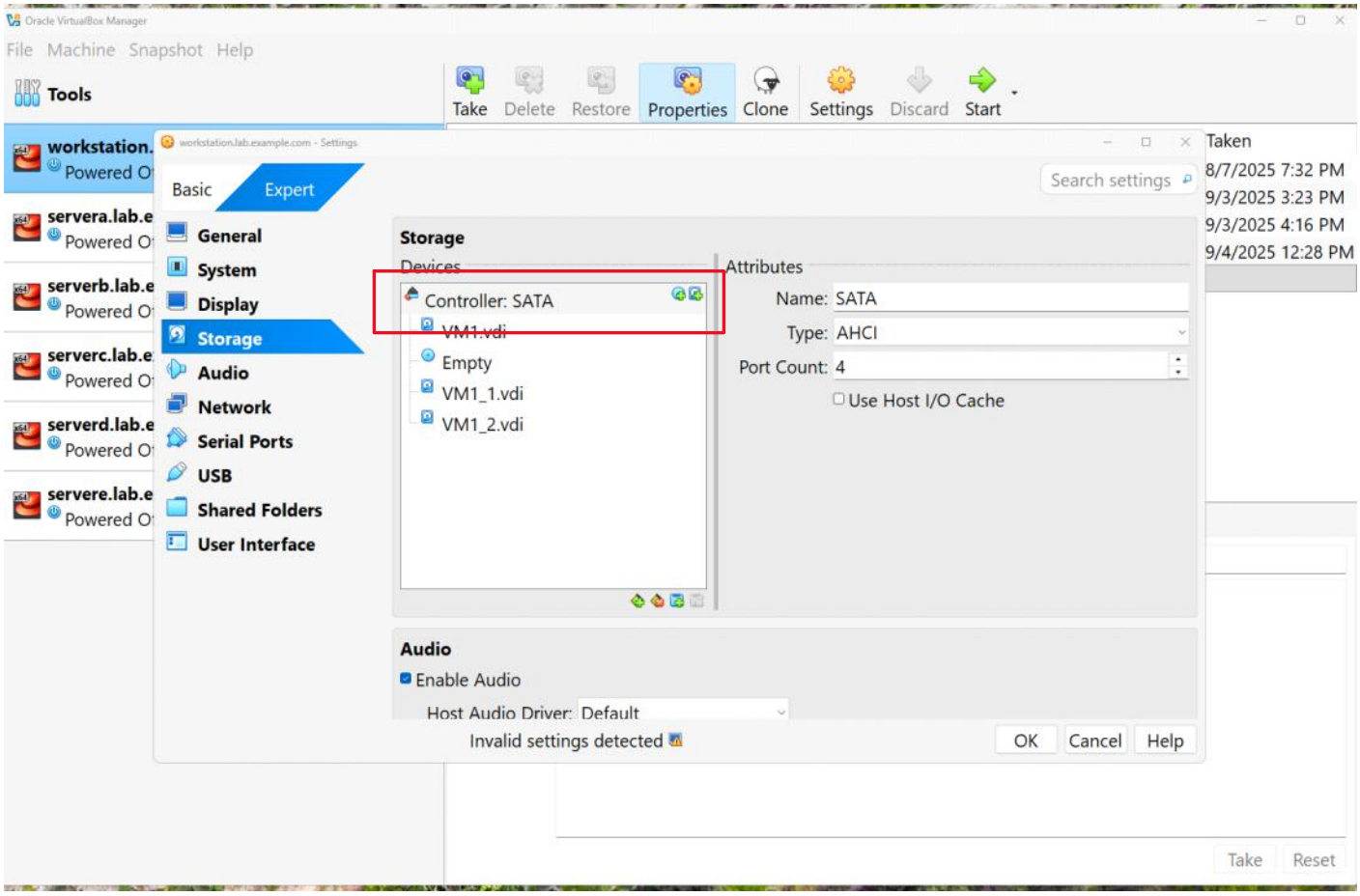
Logical Volume Verification (lsblk)

The lsblk command output confirms the configured disks, partitions, volume groups, and logical volumes, along with their associated mount points on the CentOS Stream 9 system.

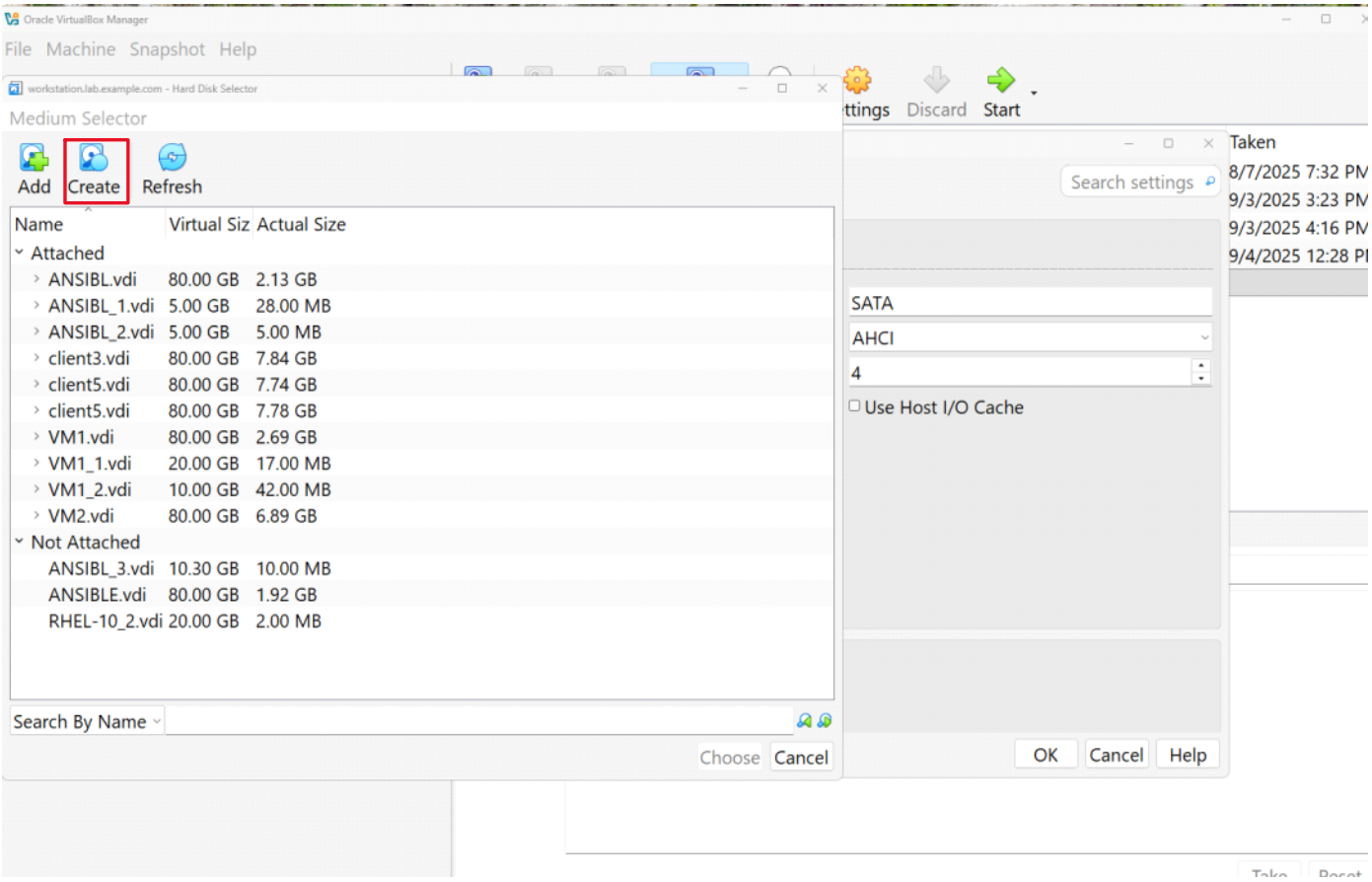


Virtual Disk Configuration (VirtualBox)

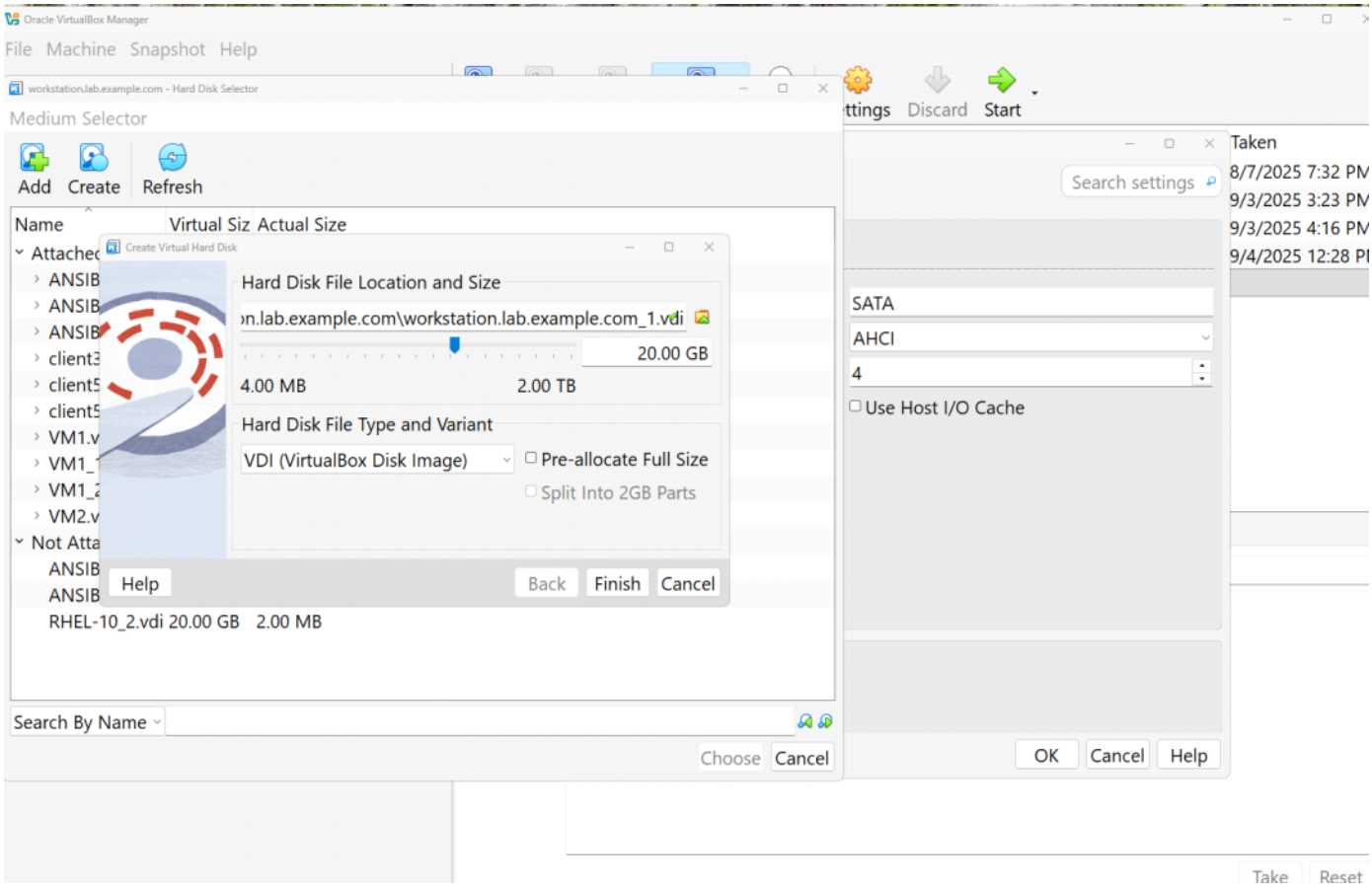
Multiple virtual disks are attached to the VM using a SATA controller to support logical volume management configuration.



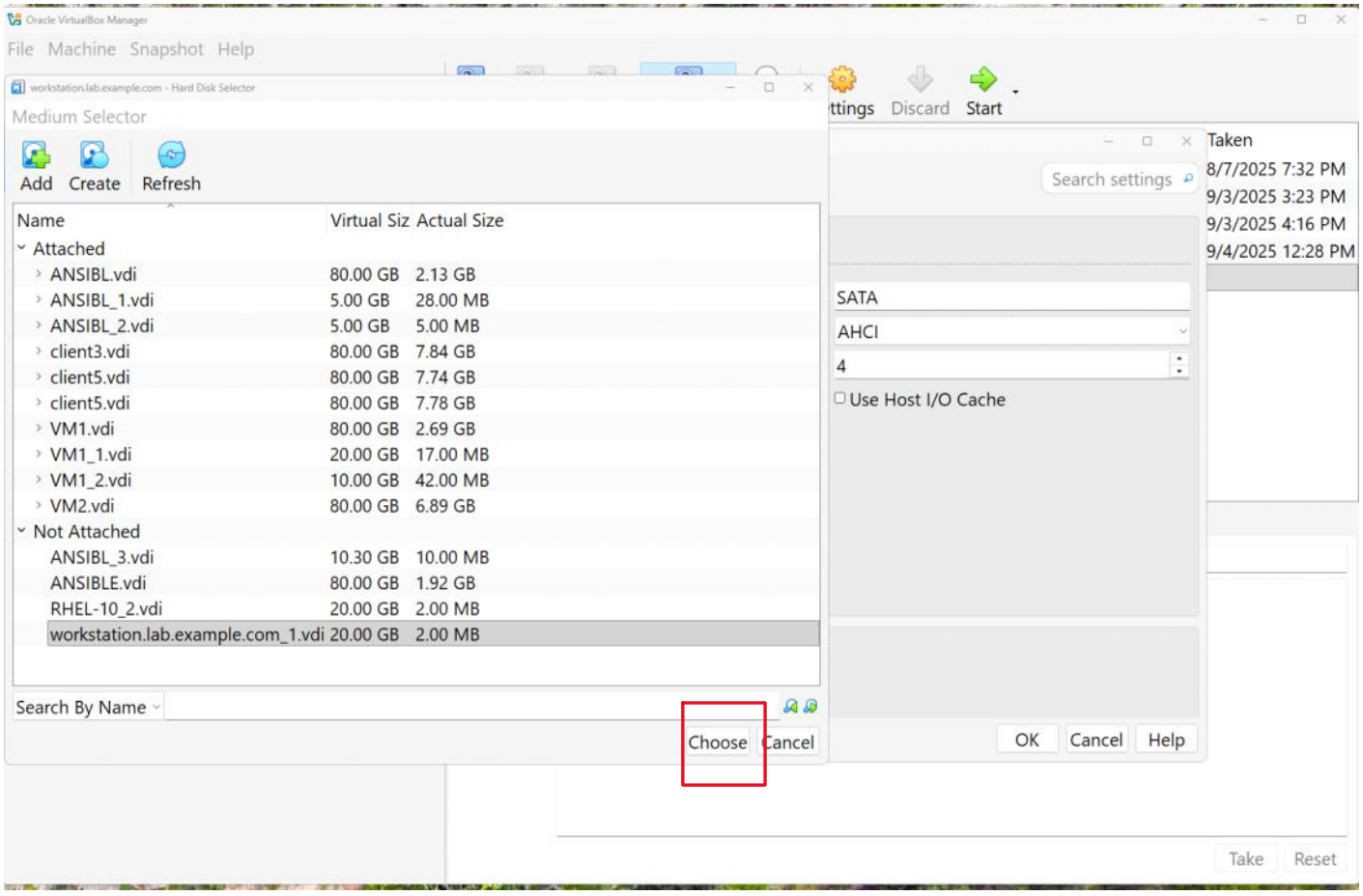
The **Create** button is used to add new virtual disks, which are attached to the virtual machine for LVM configuration.



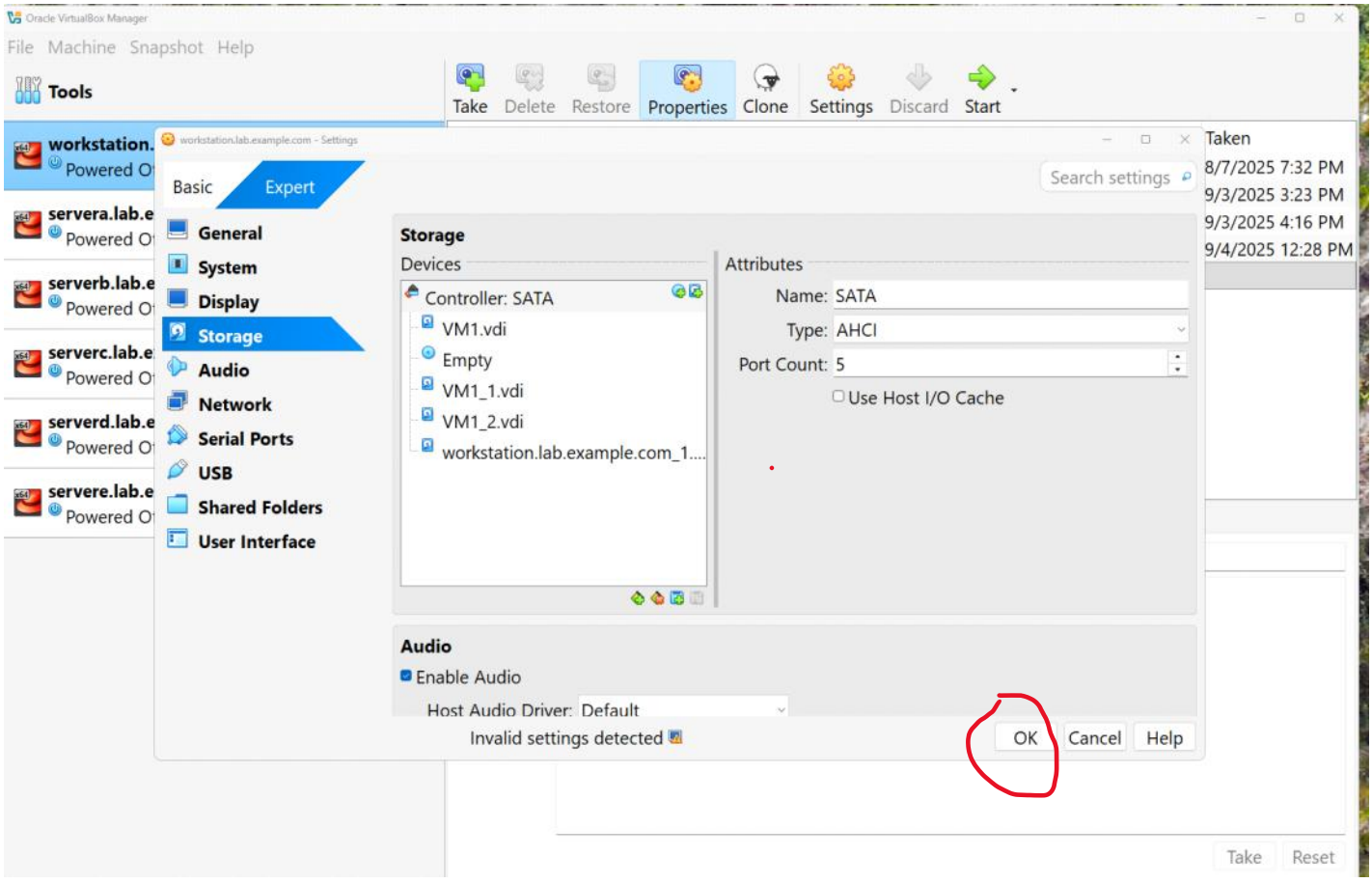
Created a new 20 GB virtual disk in VirtualBox to use as dedicated storage for an LVM configuration.



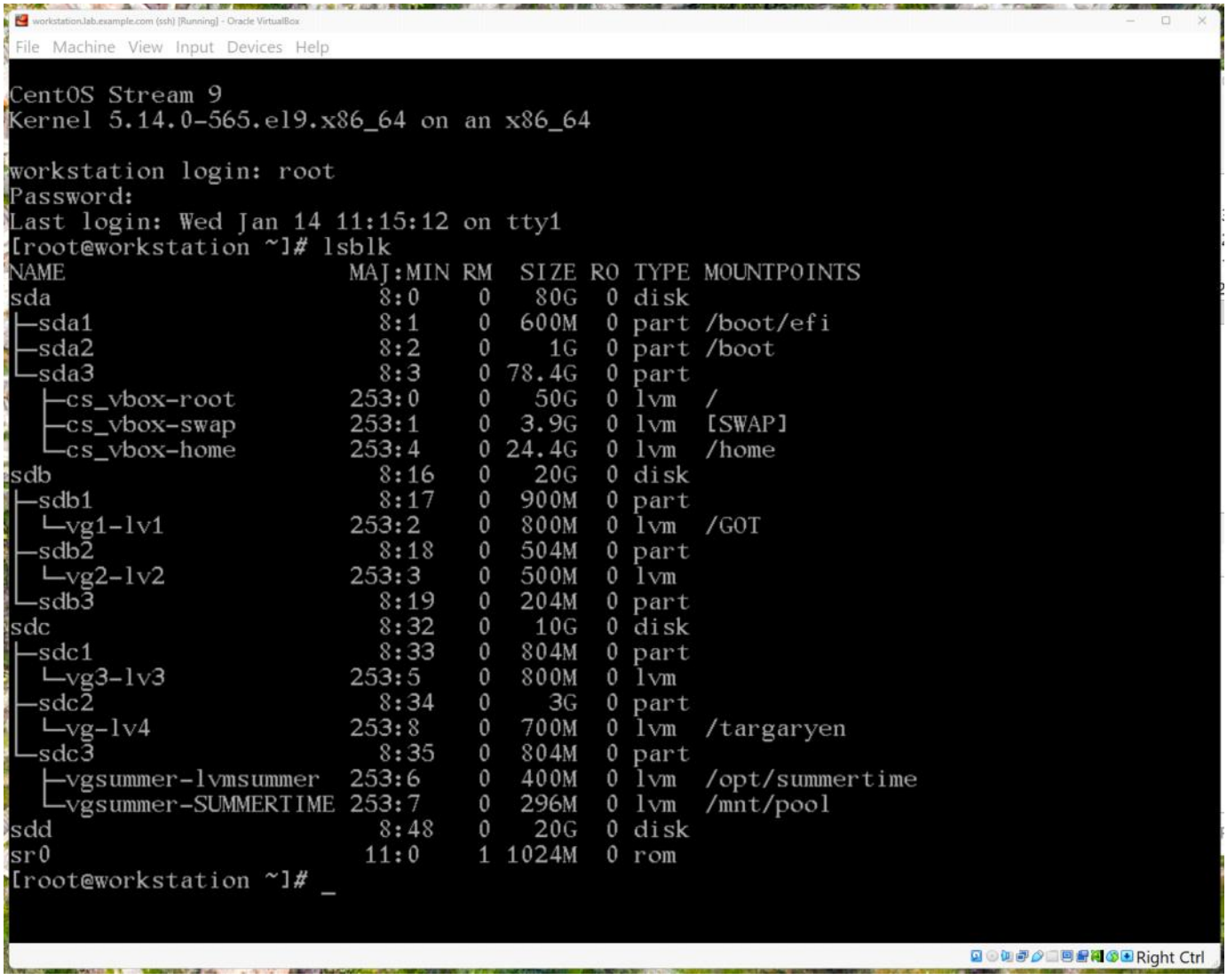
Selected the newly created 20 GB virtual disk and clicked **Choose** to attach it to the virtual machine for LVM use.



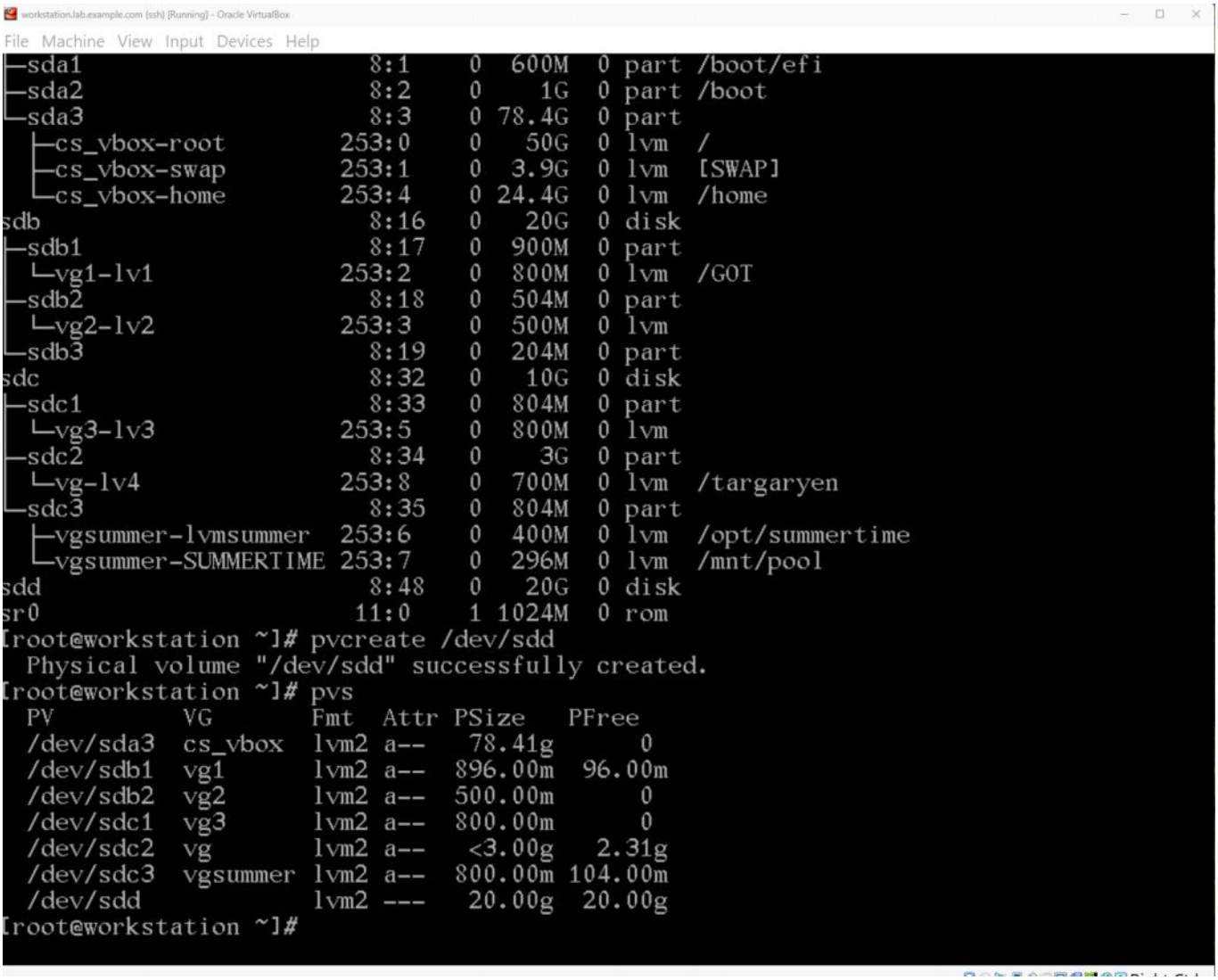
Confirmed the storage configuration by clicking **OK**, finalizing the attachment of the new disk to the virtual machine.



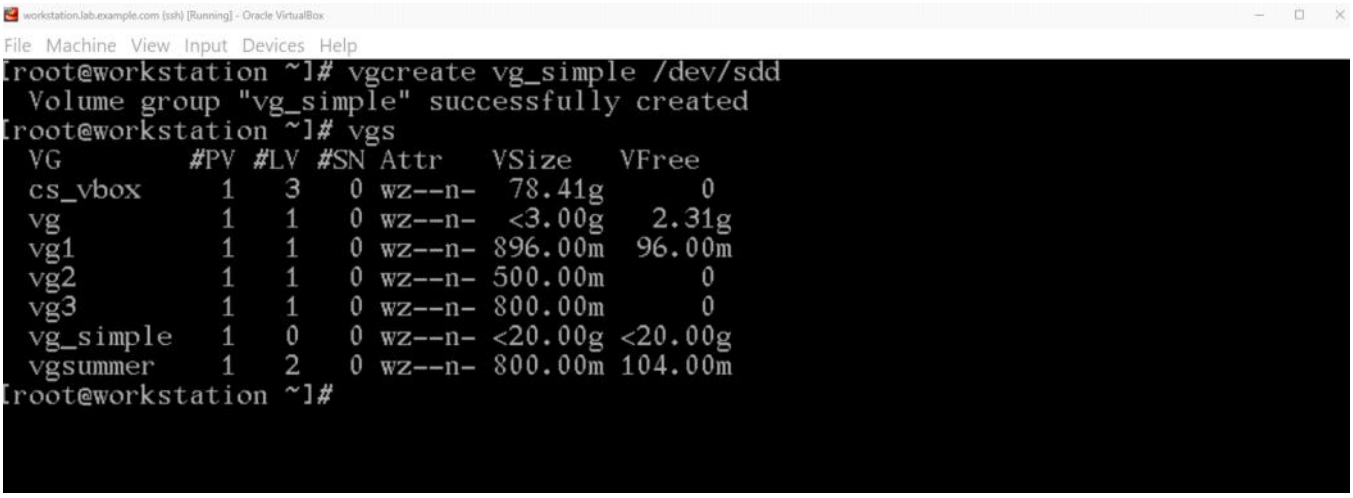
Verified the newly attached disk using lsblk, confirming the system detects additional storage devices available for LVM configuration.



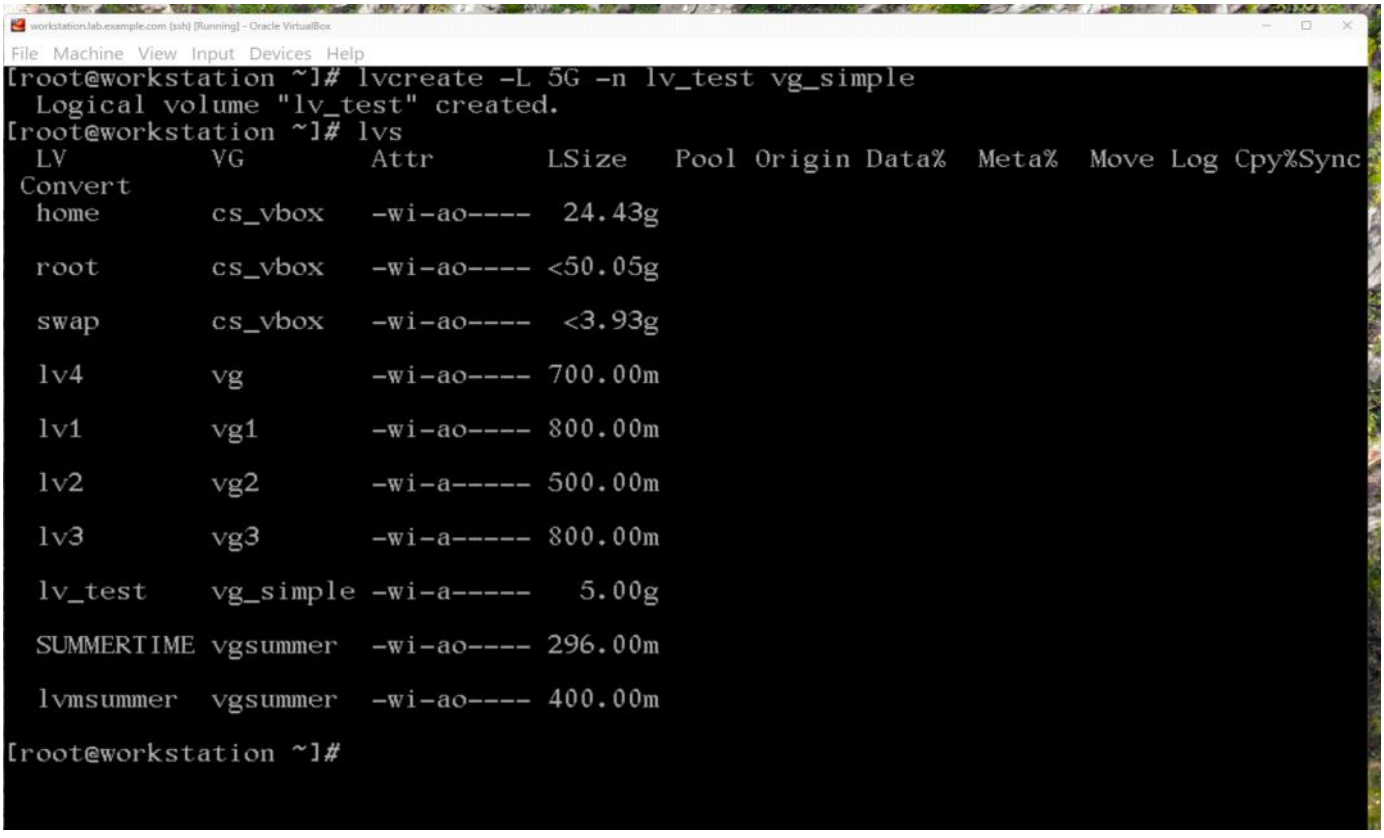
Initialized the new disk as a Physical Volume using pvcreate and verified it with pvs, confirming the 20 GB disk is ready for LVM use.



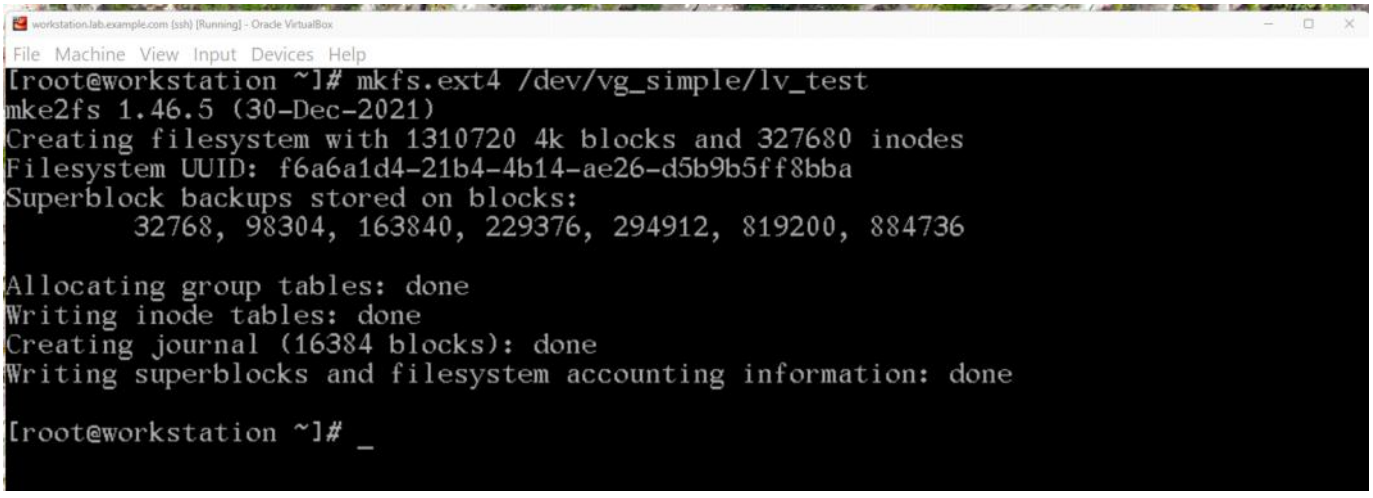
Created a new volume group named vg_simple from the physical volume and verified its available space using vgs.



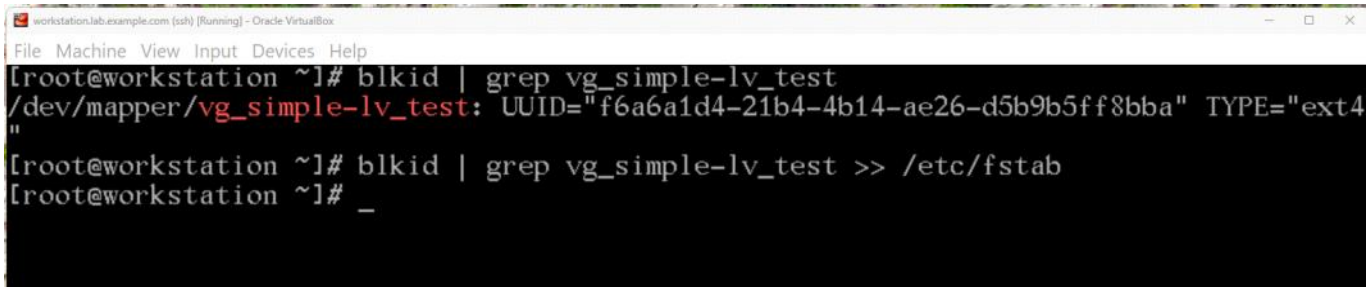
Created a 5 GB logical volume named lv_test within the vg_simple volume group and verified it using lvs.



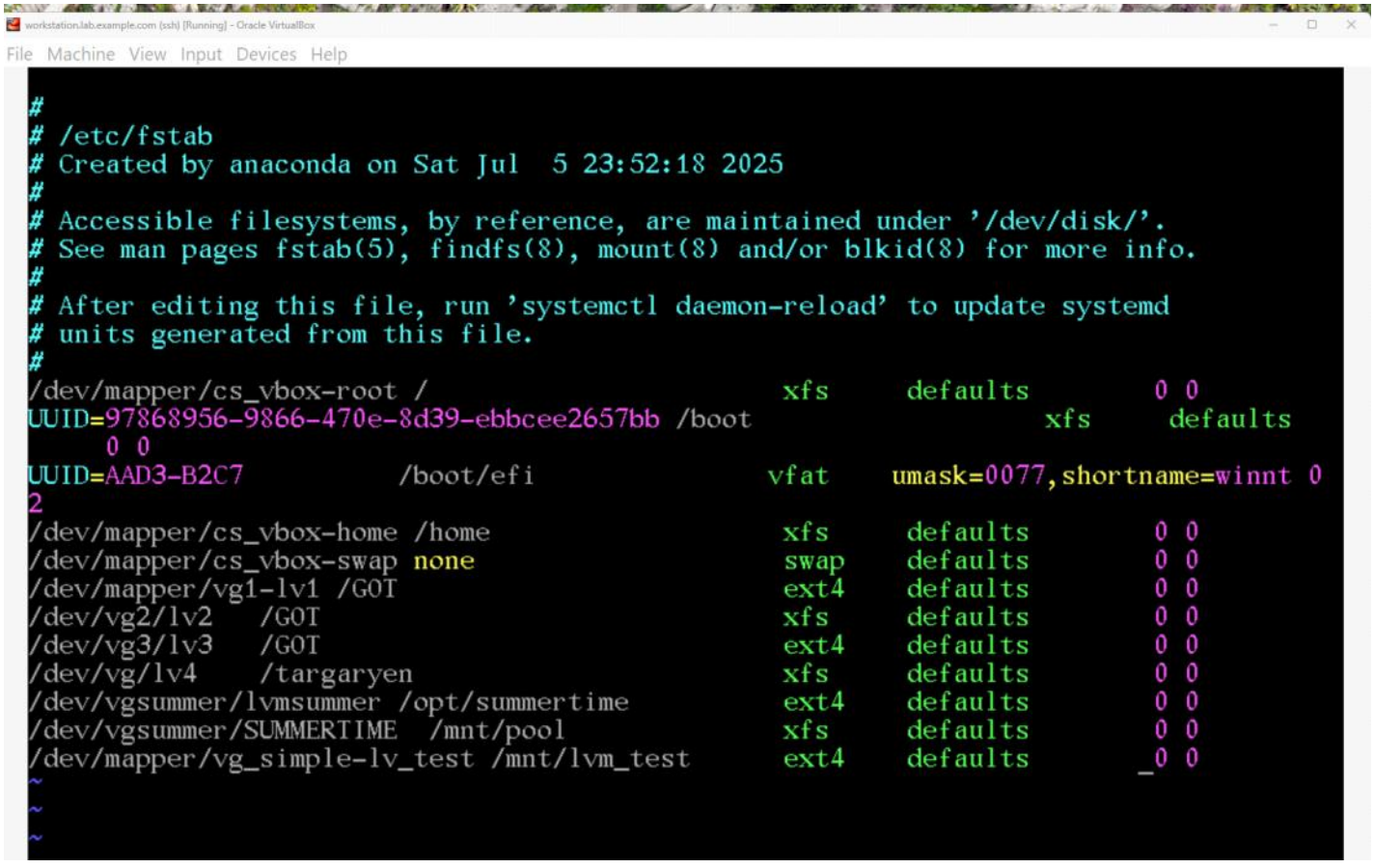
Formatted the logical volume lv_test with the ext4 filesystem, preparing it for mounting and data storage.



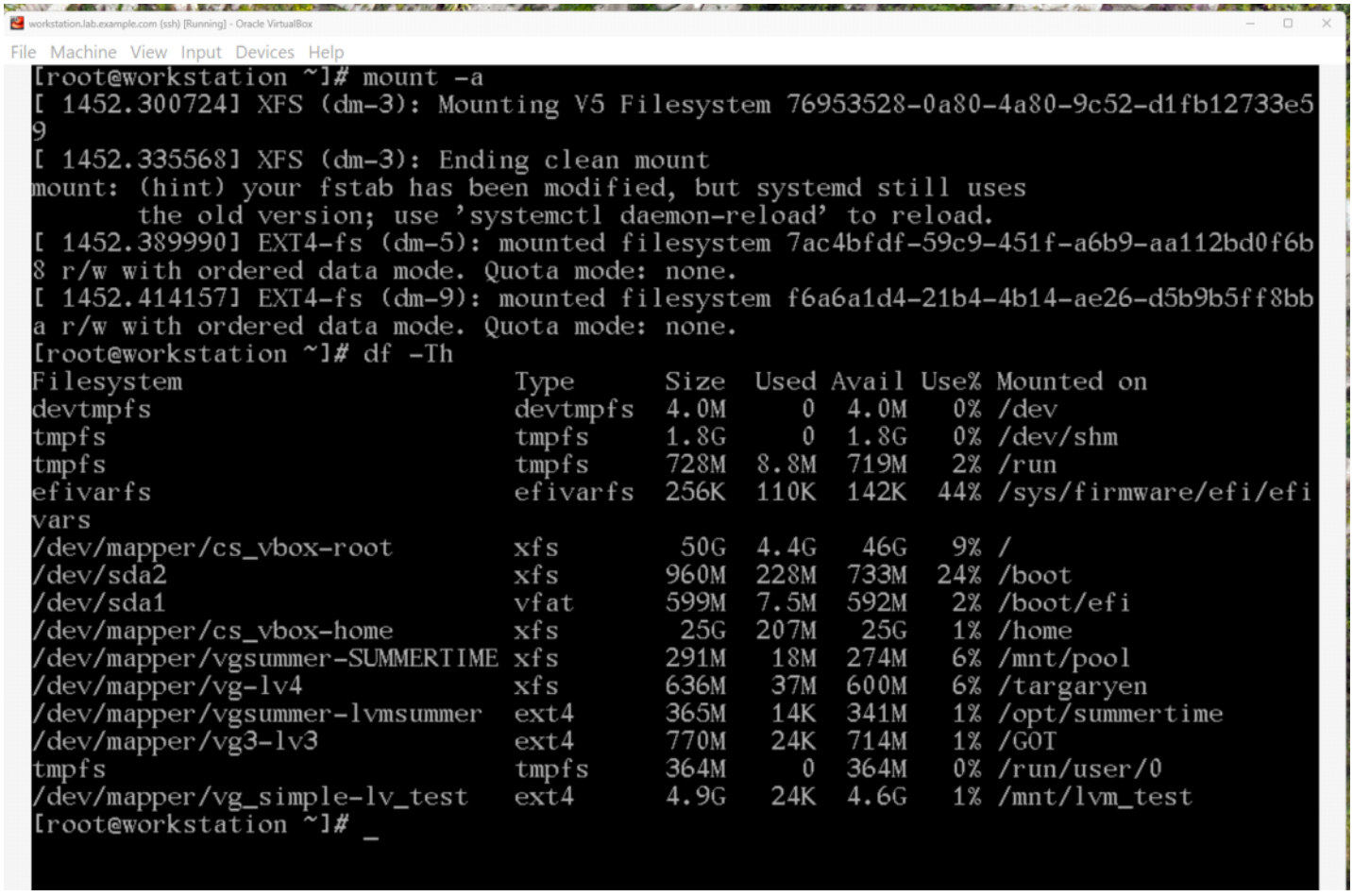
Retrieved the UUID of the logical volume and added it to /etc/fstab to enable persistent mounting across reboots.



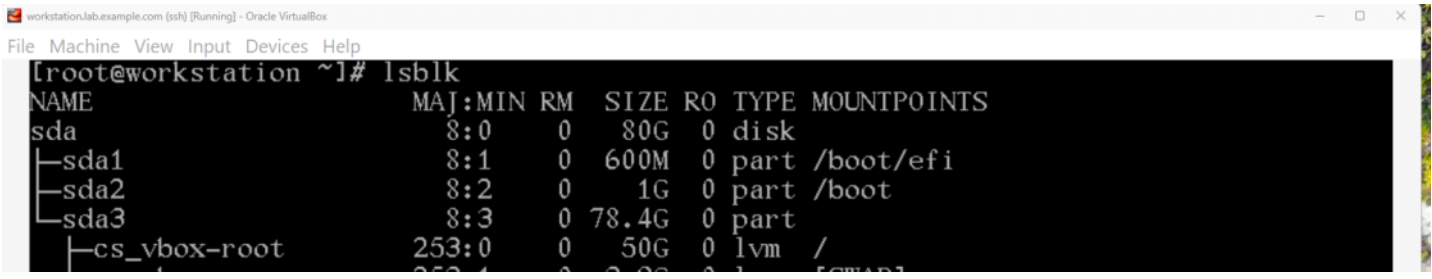
Added the logical volume vg_simple-lv_test to /etc/fstab to ensure it mounts automatically at /mnt/lvm_test on system boot.

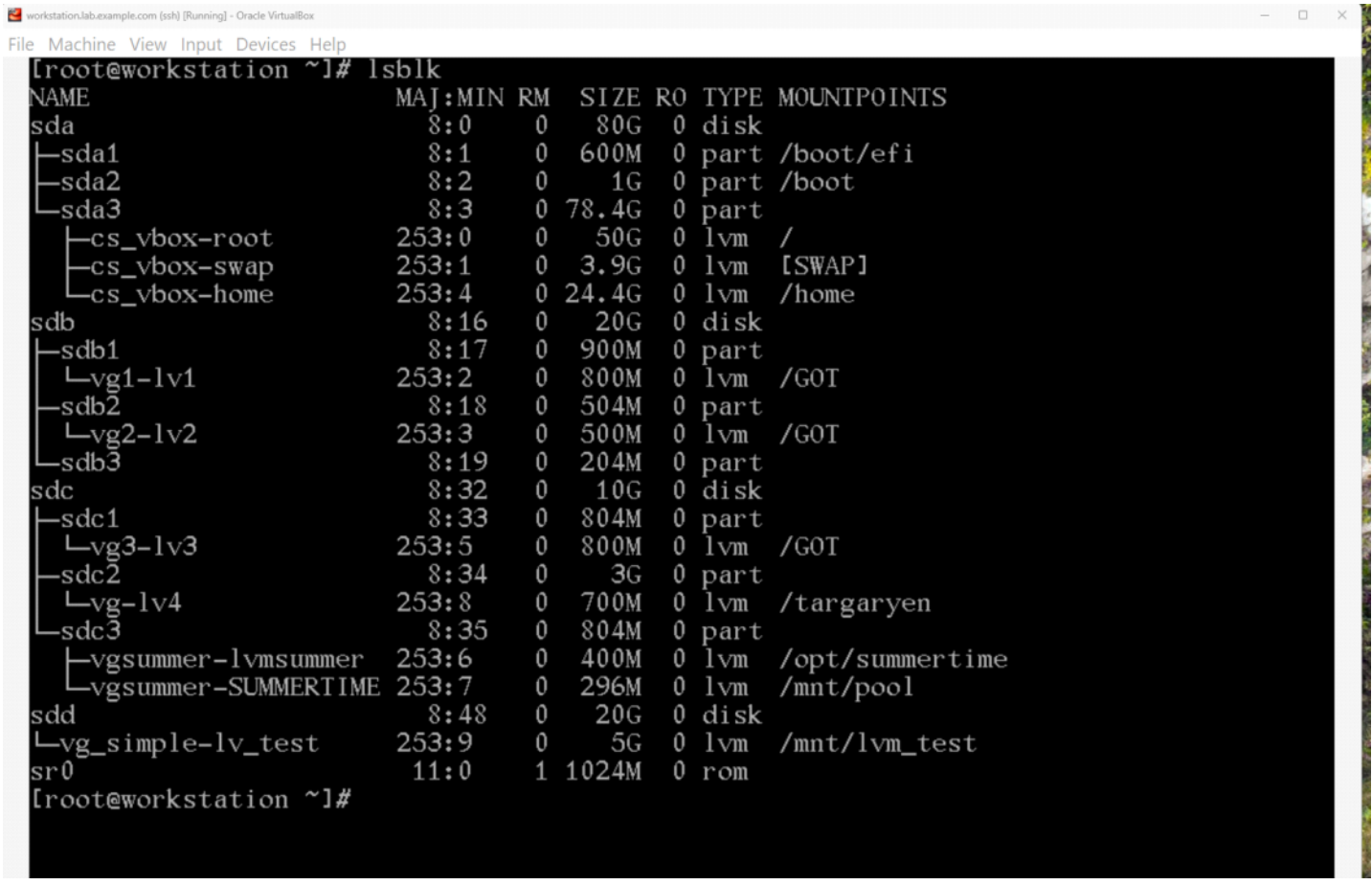


Ran mount -a to apply the /etc/fstab configuration and verified that the new logical volume is mounted successfully using df -Th.



Verified the complete LVM setup with lsblk, confirming the logical volume vg_simple-lv_test is created from the new disk and mounted at /mnt/lvm_test.




workstation.lab.example.com (ssh) [Running] - Oracle VirtualBox
File Machine View Input Devices Help
[root@workstation ~]# lsblk
NAME MAJ:MIN RM SIZE RO TYPE MOUNTPOINTS
sda 8:0 0 80G 0 disk
├─sda1 8:1 0 600M 0 part /boot/efi
├─sda2 8:2 0 1G 0 part /boot
└─sda3 8:3 0 78.4G 0 part
├─cs_vbox-root 253:0 0 50G 0 lvm /
├─cs_vbox-swap 253:1 0 3.9G 0 lvm [SWAP]
└─cs_vbox-home 253:4 0 24.4G 0 lvm /home
sdb 8:16 0 20G 0 disk
├─sdb1 8:17 0 900M 0 part
│ └─vg1-lv1 253:2 0 800M 0 lvm /GOT
├─sdb2 8:18 0 504M 0 part
│ └─vg2-lv2 253:3 0 500M 0 lvm /GOT
└─sdb3 8:19 0 204M 0 part
sdc 8:32 0 10G 0 disk
├─sdc1 8:33 0 804M 0 part
│ └─vg3-lv3 253:5 0 800M 0 lvm /GOT
├─sdc2 8:34 0 3G 0 part
│ └─vg-lv4 253:8 0 700M 0 lvm /targaryen
└─sdc3 8:35 0 804M 0 part
├─vgsummer-lvmsummer 253:6 0 400M 0 lvm /opt/summertime
└─vgsummer-SUMMERTIME 253:7 0 296M 0 lvm /mnt/pool
sdd 8:48 0 20G 0 disk
└─vg_simple-lv_test 253:9 0 5G 0 lvm /mnt/lvm_test
sr0 11:0 1 1024M 0 rom
[root@workstation ~]#