

# VirtualBox VM Installation and Snapshot

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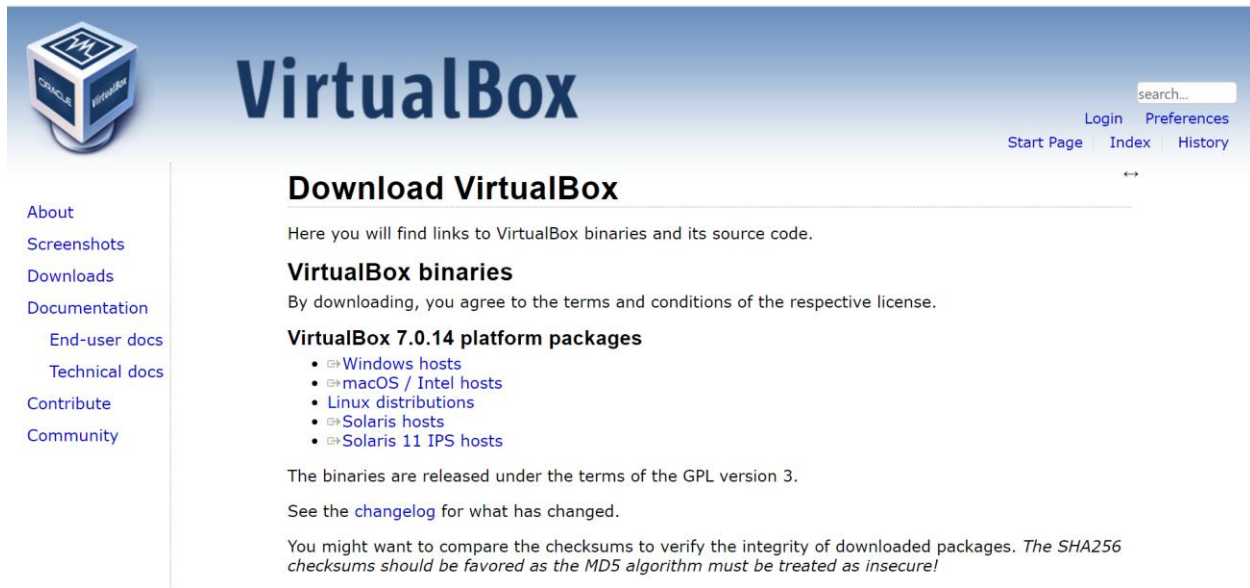
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Note: Instead of Installing Windows, I proceeded with the Installation of Kali Linux.

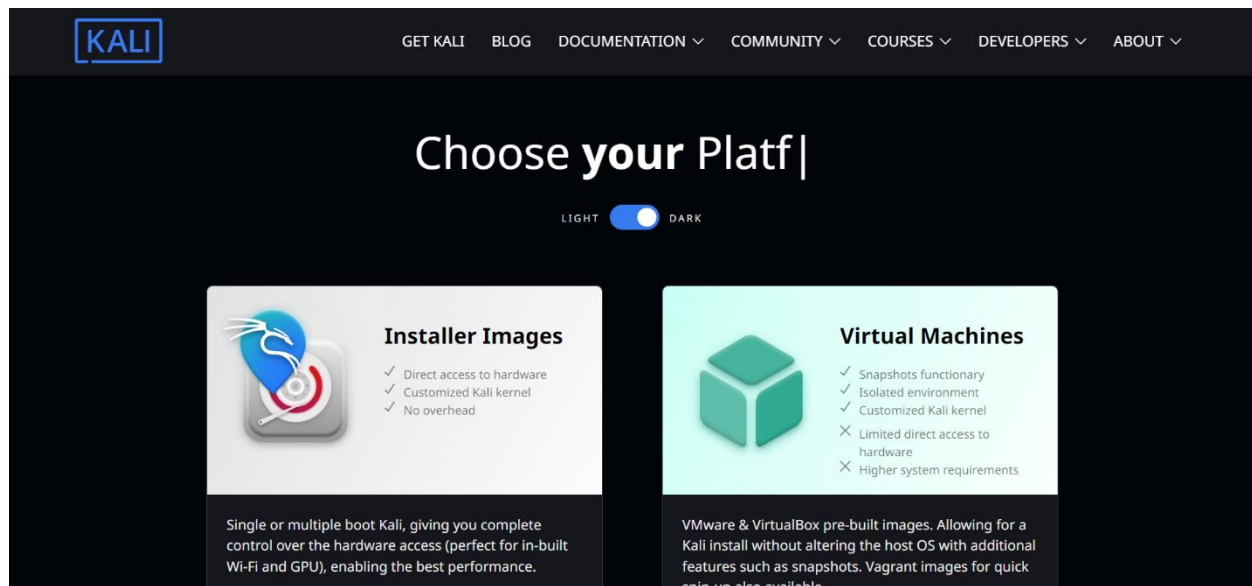
## Tasks 1 and 2: Creating a Kali Linux Virtual Machine and Initial Configuration.

### Step 1: Download and Install VirtualBox



Begin by downloading VirtualBox from the official website at <https://www.virtualbox.org/>. Once the download is complete, follow the installation instructions provided to install VirtualBox on your system.

### Step 2: Download Kali Linux ISO



Next, visit the official Kali Linux website at <https://www.kali.org/downloads/> and download the ISO file for your preferred version of Kali Linux.

### Step 3: Open VirtualBox

After installing VirtualBox, launch the application to begin setting up your virtual machine.

### Step 4: Create a New Virtual Machine

In VirtualBox, click the "New" button to create a new virtual machine.

### Step 5: Name and Operating System

Provide a name for your virtual machine, such as "Kali Linux". Select "Linux" as the Type and "Debian (64-bit)" as the Version.

### Step 6: Memory Allocation

Allocate at least 2GB of RAM to the virtual machine.

### Step 7: Hard Disk Creation

Choose "Create a virtual hard disk now" and proceed with creating a new virtual hard disk.

### Step 8: Hard Disk Type

Select "VDI (VirtualBox Disk Image)" as the type of virtual hard disk.

### Step 9: Hard Disk Allocation

Choose "Dynamically allocated" for the disk storage option.

### Step 10: File Location and Size

Specify a name and size for the virtual hard disk. The default size should be sufficient for most purposes.

### Step 11: Configure Settings

Click on "Settings" to configure additional options such as network settings and display resolution.

### Step 12: Add Kali Linux ISO

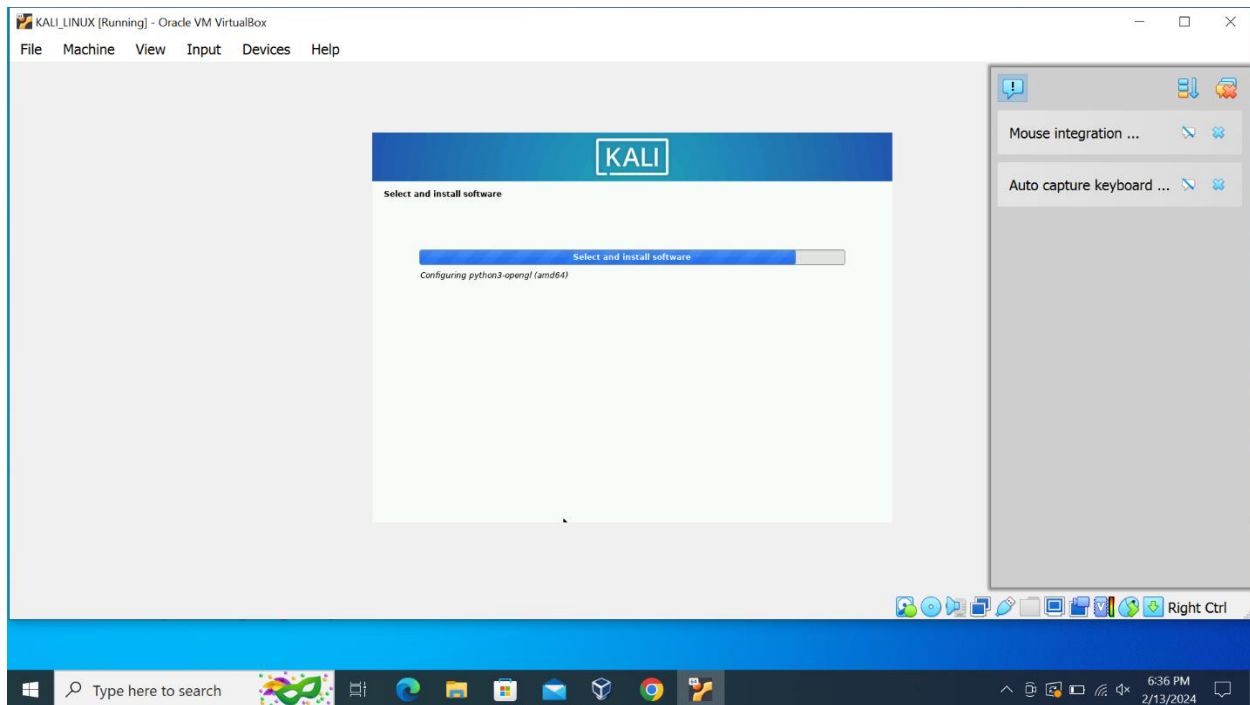
In the Settings window, navigate to the "Storage" tab and add the Kali Linux ISO file as a virtual optical disk.

### Step 13: Start the Virtual Machine

Start the virtual machine, and the Kali Linux ISO will boot, allowing you to proceed with the installation.

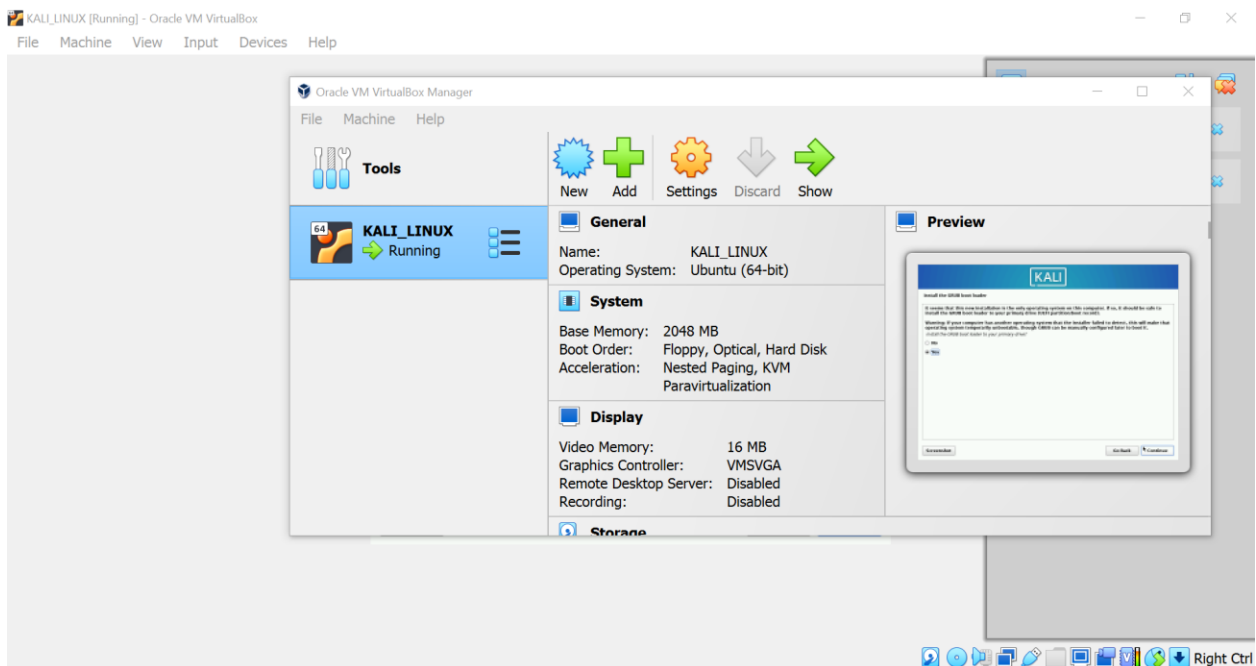
### Step 14: Install Kali Linux

Follow the on-screen instructions to install Kali Linux on the virtual hard disk. Customize the installation settings as needed.



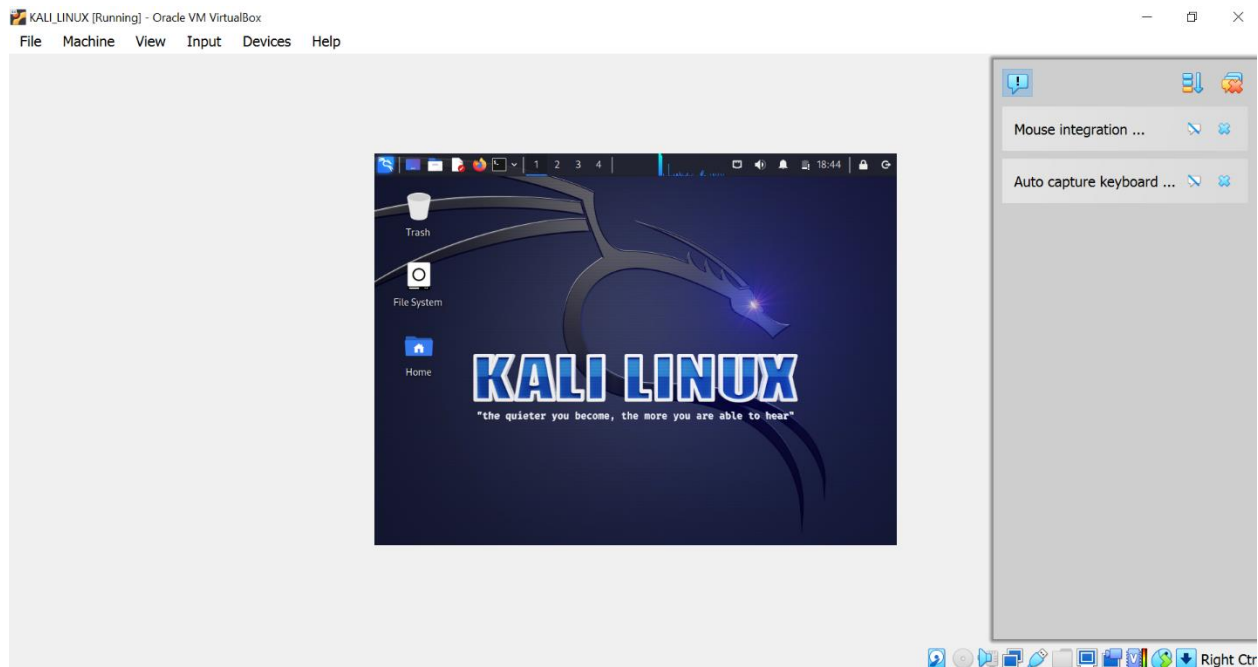
## Step 15: Configure Kali Linux

Once the installation is complete, log in to your Kali Linux virtual machine and configure it according to your preferences.



## Step 16: Finalization

Congratulations! You have successfully created a Kali Linux virtual machine using VirtualBox. Save any changes and configurations before exiting the virtual machine.



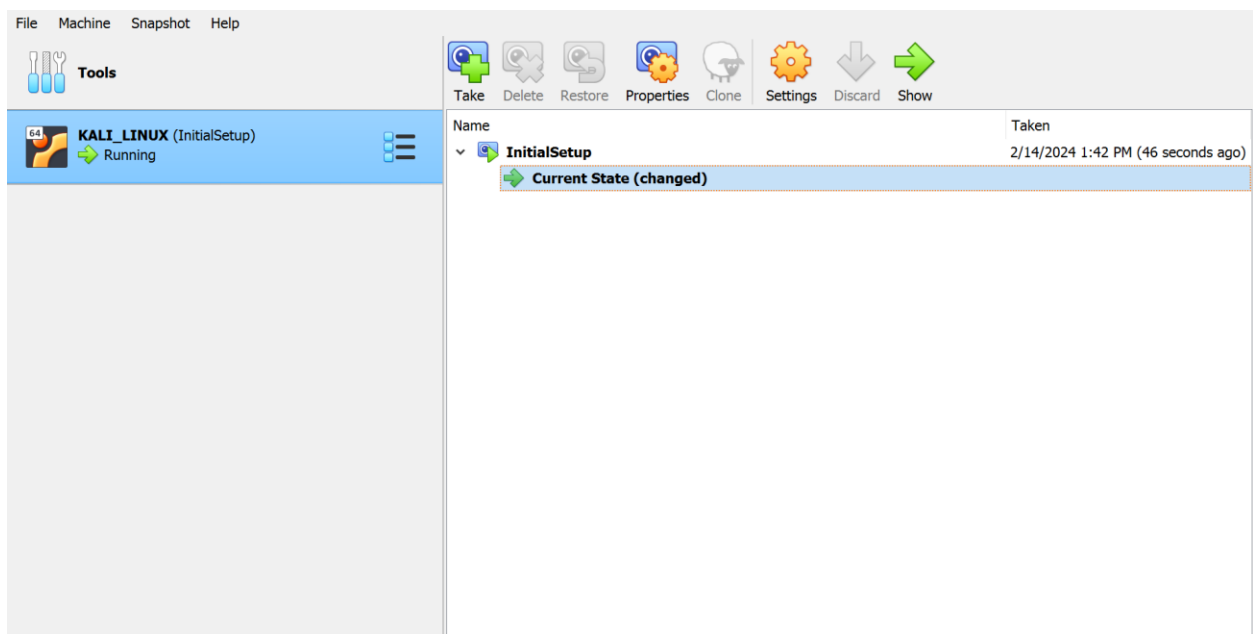
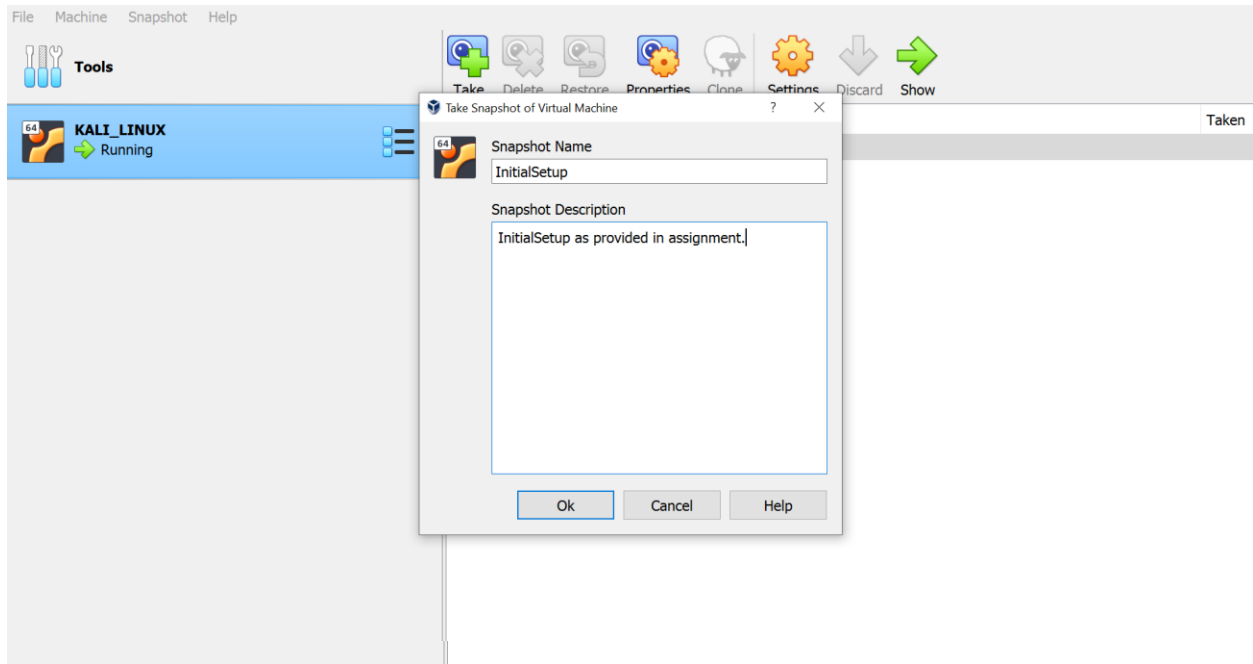
## Task 3: Taking a Snapshot

Among the important uses of snapshots in computing is data backing, system recovery, testing as well as development. Specific points of systems or data are captured so that they can be restored to stable configurations quickly when this is required because of failure or mistakes. In developing and testing contexts, this provides a safe environment for experimentation without affecting production systems and makes it easier to roll back if necessary. Snapshots also help with data analysis by ensuring that results are reproducible and version control by tracking changes and providing an ability to return to previous states. Consequently, snapshots ensure the integrity of data, stability of a system, and efficient development processes overall.

### Snapshot Creation

While running Windows VM, go to "Machine" > "Take Snapshot."

Name the snapshot (e.g., "InitialSetup").





## Task 4: Making Changes and Taking Another Snapshot

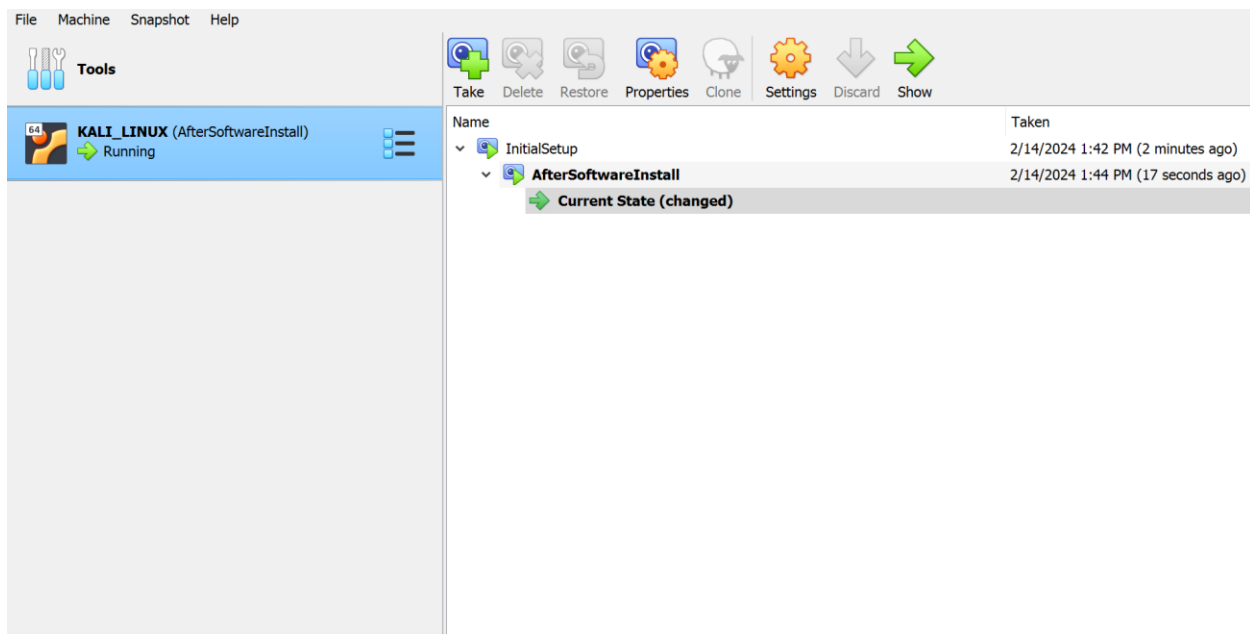
Snapshotting is crucial in case of any major changes as it acts like a parachute to help roll back in case of any problem in the future. It also allows for controlled testing without interfering with normal operations. Additionally, this contributes to maintaining compliance matters by documenting system states before making changes. This encourages team collaboration and makes everybody involved make informed decisions. By and large, it reduces risks, guarantees system stability, and promotes effective change management processes.

### Step 1

Modify VM (install software, change settings, create files).

### Step 2

While the VM is running, take another snapshot and name it (e.g., "AfterSoftwareInstall").



## Task 5: Reverting to a Snapshot

Reverting to a snapshot is useful when you need to quickly return to a stable state after experiencing unexpected issues or errors during system changes or updates.

### Step 1: Select Virtual Machine

From the list of virtual machines on the left side of the VirtualBox Manager window, select the virtual machine you want to revert to.

## Step 2: Access Snapshots

With the virtual machine selected, locate and click on the "Snapshots" tab in the upper-right corner of the VirtualBox Manager window.

## Step 3: View Snapshots

In the Snapshots tab, you'll see a list of available snapshots for the selected virtual machine. Each snapshot is represented by a name and a timestamp.

## Step 4: Choose Snapshot

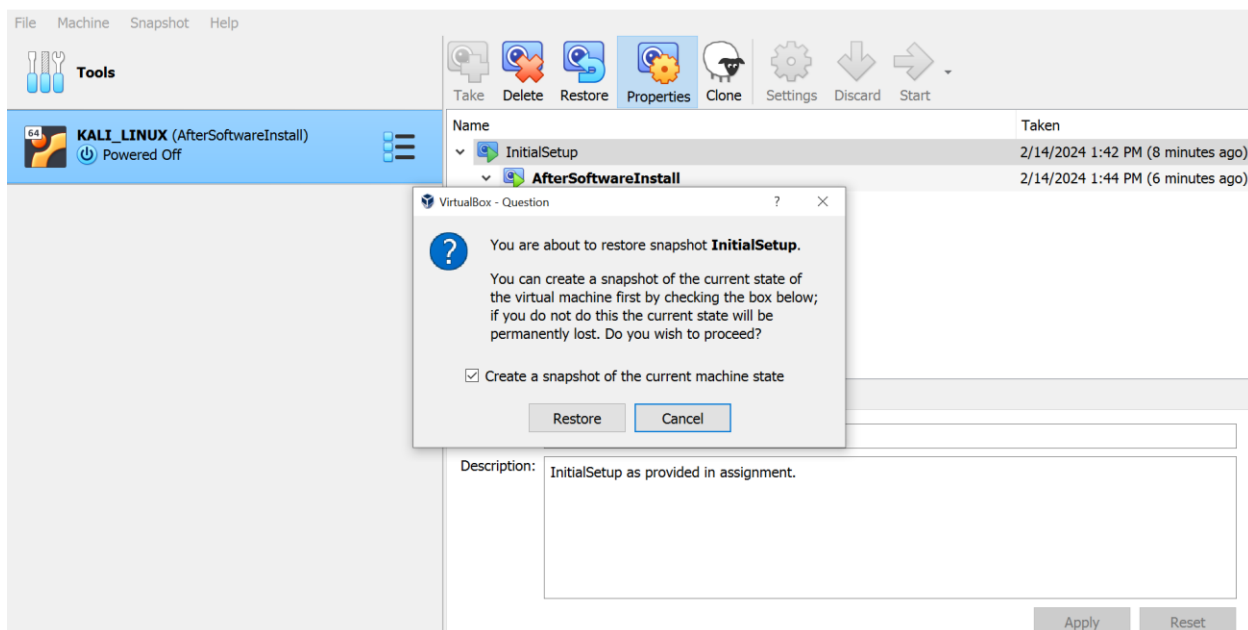
Identify the snapshot to which you want to revert. Click on the snapshot to select it.

## Step 5: Revert Snapshot

After selecting the desired snapshot, right-click on it to open the context menu. From the menu, choose "Restore Snapshot."

## Step 6: Confirmation

VirtualBox will prompt you to confirm the restoration of the snapshot. Review the information to ensure you're reverting to the correct snapshot, then click "Restore."



### Step 7: Reverting Process

VirtualBox will begin reverting the virtual machine to the selected snapshot. Depending on the size of the snapshot and the performance of your system, this process may take some time.

### Step 8: Completion

Once the reverting process is complete, VirtualBox will notify you. The virtual machine will now be restored to the state captured by the selected snapshot.