

# Operating System Lab

Lab 1 to lab 5

Operating Systems

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**SOFTWARE?**

**TYPES OF SOFTWARE?**

**SOFTWARE?**

**TYPES OF SOFTWARE?**

**SYSTEM SOFTWARE contains some instruction**

**Tell hardware**

**what to do  
how to do**

**APPLICATION SOFTWARE**

# **SYSTEM SOFTWARE**

**Tell hardware**

**what to do  
how to do**

# **SYSTEM SOFTWARE**

the low-level software that supports a computer's basic functions,

such as scheduling tasks and controlling peripherals.

# **SYSTEM SOFTWARE**

the low-level software that supports a computer's basic functions,

Pc

# **SYSTEM SOFTWARE**

the low-level software that supports a computer's basic functions,

Pc

Headphone/ speaker **active**

**Text editor**

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the low-level software that supports a computer's basic functions,

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Headphone/ speaker **active**

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the low-level software that supports a computer's basic functions,

Pc

Headphone/ speaker **active**

Text editor **active**

VLC for listening music **active**

Keyboard

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the low-level software that supports a computer's basic functions,

Pc

**Headphone/ speaker** **active**

**VLC for listening music** **active**

**Text editor** **active**

**Keyboard** **active**

**Memory used**

So many task  
Running  
Time table  
Scheduling

# Operating system and the Purpose of Operating Systems

## **Operating System:**

**An operating system is a set of Programs that manages all computer components and operations.**

- » **A computer can not do anything without operating system.**
- » **Operating System must be installed on every computer.**
- » **Users interact with the computer through operating system.**

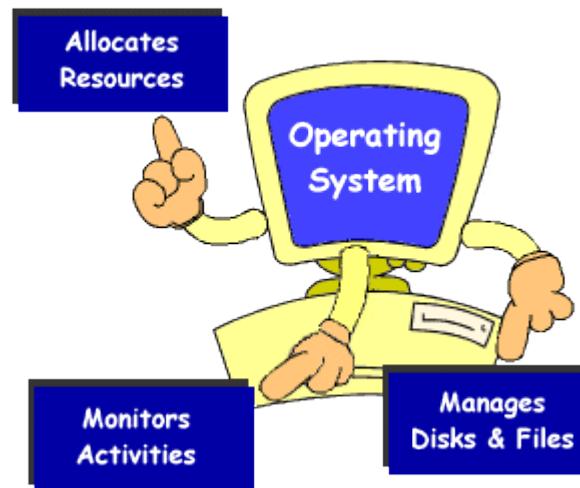
## **Most important Operating Systems**

- Microsoft Windows   ● Linux   ● Unix

# The Purpose of Operating Systems

Operating systems can be organized into three major types:

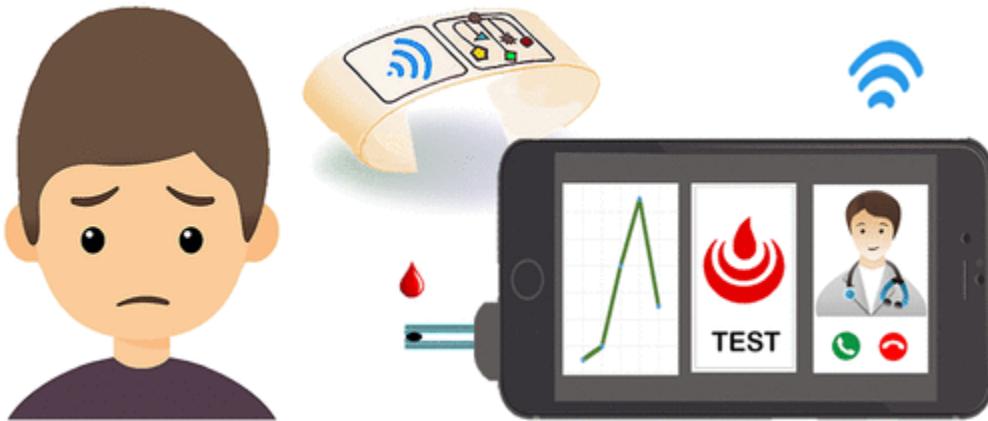
- ❑ real-time, single user/single-tasking,
- ❑ single-user/multitasking, and
- ❑ multi-user/multitasking.



# Real-Time Operating Systems

A real-time operating system is a very fast, relatively smart OS. Real-time OS are often also embedded OS.

Real-time applications are needed to run medical diagnostics equipment, life-support systems, machinery, scientific instruments, and industrial systems.



# **Single-User/Single-Tasking Operating Systems**

**An operating system that allows a single user to perform just one task at a time is a single-user/single tasking operating system.**

**MS-DOS is one example of a single-tasking OS, and the Palm O**



C:\Windows\System32\COMMAND.COM



Microsoft(R) Windows DOS  
(C)Copyright Microsoft Corp 1990-2001.  
C:\WINDOWS\SYSTEM32>

# Single-User/Multitasking Operating System

A single-user/multitasking operating system is one that allows a single user to perform two or more functions at once.

# Multi-User/Multitasking Operating Systems

A multi-user/multitasking operating system is an operating system that allows multiple users to use programs that are simultaneously running on a single network server; called a terminal server.

# Common Operating Systems

- MS-DOS
- Windows 95
- Windows 98
- Windows ME (Windows Millennium)
- Windows NT
- Windows 2000
- Windows XP
- Windows VISTA
- Windows 7
- Windows 8
- Windows 8.1



1.0 (1985)



3.1 (1992)



95 (1995)



XP (2001)



VISTA (2006)



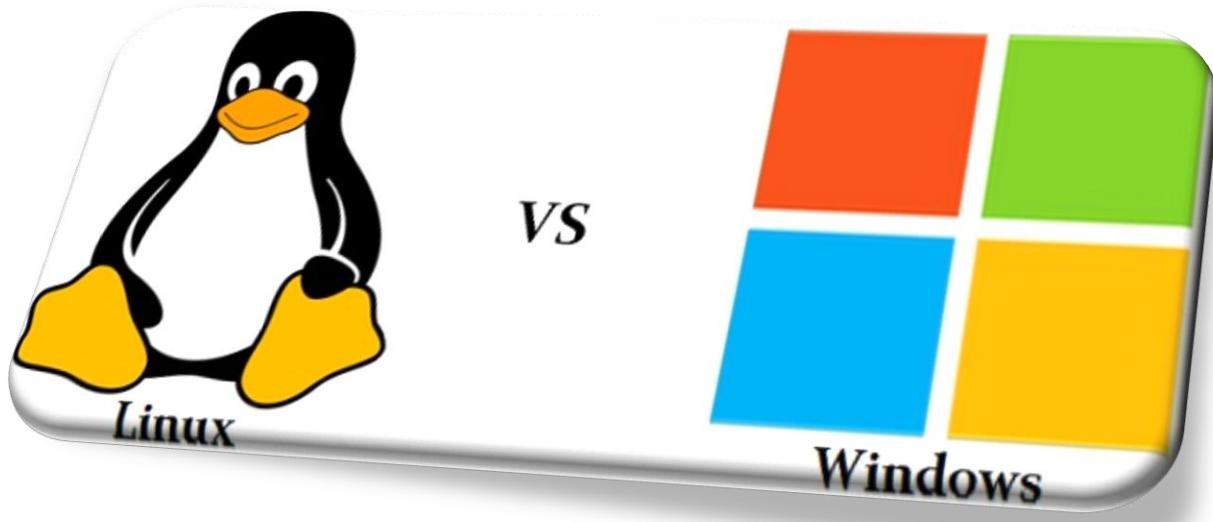
7 (2009)



8 (2012)



10 (2015)



# Operating system

cd : Change directory or display current directory path.

cls : Clear the window.

Mk= make director

dir : Display list of contents of current directory.

help : Display list of **commands** or help about a **command**.

notepad : display Notepad text editor.

color : Sets the text and background colors.

color 7

```
Color attributes are specified by TWO hex digits -- the first  
corresponds to the background; the second the foreground. Each digit  
can be any of the following values:
```

0 = Black	8 = Gray
1 = Blue	9 = Light Blue
2 = Green	A = Light Green
3 = Aqua	B = Light Aqua
4 = Red	C = Light Red
5 = Purple	D = Light Purple
6 = Yellow	E = Light Yellow
7 = White	F = Bright White

Command Prompt

Microsoft Windows [Version 10.0.17763.615]  
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\Computer Solution's>

**VirtualBox** is a piece of software published by Oracle. It allows you to emulate an operating system on your own PC and **use** it like it's running on real hardware. You'll discover tons of uses for virtual machines



Oracle VM VirtualBox Manager

Tools

New Settings Discard Show ▾

 ovs34-efi Powered Off	<b>General</b> Name: ubuntu-18.04 Operating System: Ubuntu (64-bit) Settings File Location: /Users/scr/VirtualBox/ubuntu-18.04	<b>Preview</b> 
 ubuntu-18.04 Running	<b>System</b> Base Memory: 4096 MB Boot Order: Optical, Hard Disk Acceleration: VT-x/AMD-V, Nested Paging, KVM Paravirtualization	
 win2016srv 2016 Running	<b>General</b> Name: win2016srv Operating System: Windows 2016 (64-bit) Settings File Location: /Users/scr/VirtualBox/win2016srv	<b>Preview</b> 
 centos7 Powered Off	<b>System</b> Base Memory: 8192 MB Boot Order: Hard Disk, Optical, Floppy Acceleration: VT-x/AMD-V, Nested Paging, PAE/NX	
 OracleLinux7 Running	<b>General</b> Name: OracleLinux7 Operating System: Oracle (64-bit) Settings File Location: /Users/scr/VirtualBox/OracleLinux7	<b>Preview</b> 
 OracleLinux6 Powered Off	<b>System</b> Base Memory: 8192 MB Processors: 2 Boot Order: Hard Disk, Optical Acceleration: VT-x/AMD-V, Nested Paging, PAE/NX, KVM Paravirtualization	
 ol7-vbox6 Powered Off		

Oracle VM VirtualBox Manager

New Settings Show Discard Details Snapshots

**Project X**

- Test Client 2** (Powered Off)
- Test Client 1** (Powered Off)
- Middleware and App VM** (Powered Off)
- Database VM** (Powered Off)

**Windows Platforms**

- Windows XP\_1** (Running)
- Windows 8 Enterprise (RTM)** (Running)
- Windows 7** (Running)
- Windows 7 (x64)** (Saved)

**Mobile Platforms**

- androVM\_vbox86t\_4.1.1\_r4-2012100...** (Saved)
- Chrome OS** (Powered Off)
- Android Jelly-bean** (Saved)

**General**

Name: Windows XP\_1  
Operating System: Windows XP  
Groups: Windows Platforms

**System**

Base Memory: 512 MB  
Boot Order: Floppy, CD/DVD-ROM, Hard Disk  
Acceleration: VT-x/AMD-V, Nested Paging

**Preview**

**General**

Name: Windows 8 Enterprise (RTM)  
Operating System: Windows 8 (64 bit)  
Groups: Windows Platforms

**System**

Base Memory: 2048 MB  
Boot Order: Floppy, CD/DVD-ROM, Hard Disk  
Acceleration: VT-x/AMD-V, Nested Paging

**Preview**

**General**

Name: Windows 7  
Operating System: Windows 7 (64 bit)  
Groups: Windows Platforms

**System**

Base Memory: 768 MB  
Boot Order: Floppy, CD/DVD-ROM, Hard Disk  
Acceleration: VT-x/AMD-V, Nested Paging

**Preview**



<b>DOS</b>	<b>WINDOWS</b>
Dos is a Single users operating system	Windows is a Multi user operating system
In Dos all commands are text based	In Windows commands can be given by clicking on the icons
Dos uses Command line interface	Windows used graphical user interface
Dos doesnot support networking	Windows does support networking
Server administration is not possible in Dos	Server administration is possible in Windows
While working in all the commands need to be remembered	In windows commands are readily available
Dos can open only one window at a time are text based Windows	Multiple windows can be opened at a time in windows

**Operating systems can be organized into three major types:**

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- ❑ real-time, single user/single-tasking,**
- ❑ single-user/multitasking, and**
- ❑ multi-user/multitasking.**

# **LAB# 01 Introduction to Operating Systems**

## **EXERCISE:**

- 1. Which OS do you consider better, Open Source or Closed Source and Why? Support your answer with valid arguments.**
  
- 2. List Some Open and Closed Source Operating Systems (other than mentioned in the manual).**

- 3. List Some Network Operating Systems (other than mentioned in the manual).**
- 4. Which Kernel is used in Android Operating System?**
- 5. List the Operating Systems you have used till date.**
- 6. Did you hear/read the term “Linux” before getting introduced to it in your OSDC Practical’s? If Yes, where exactly?**



ubuntu-18.04.2-desktop-amd64

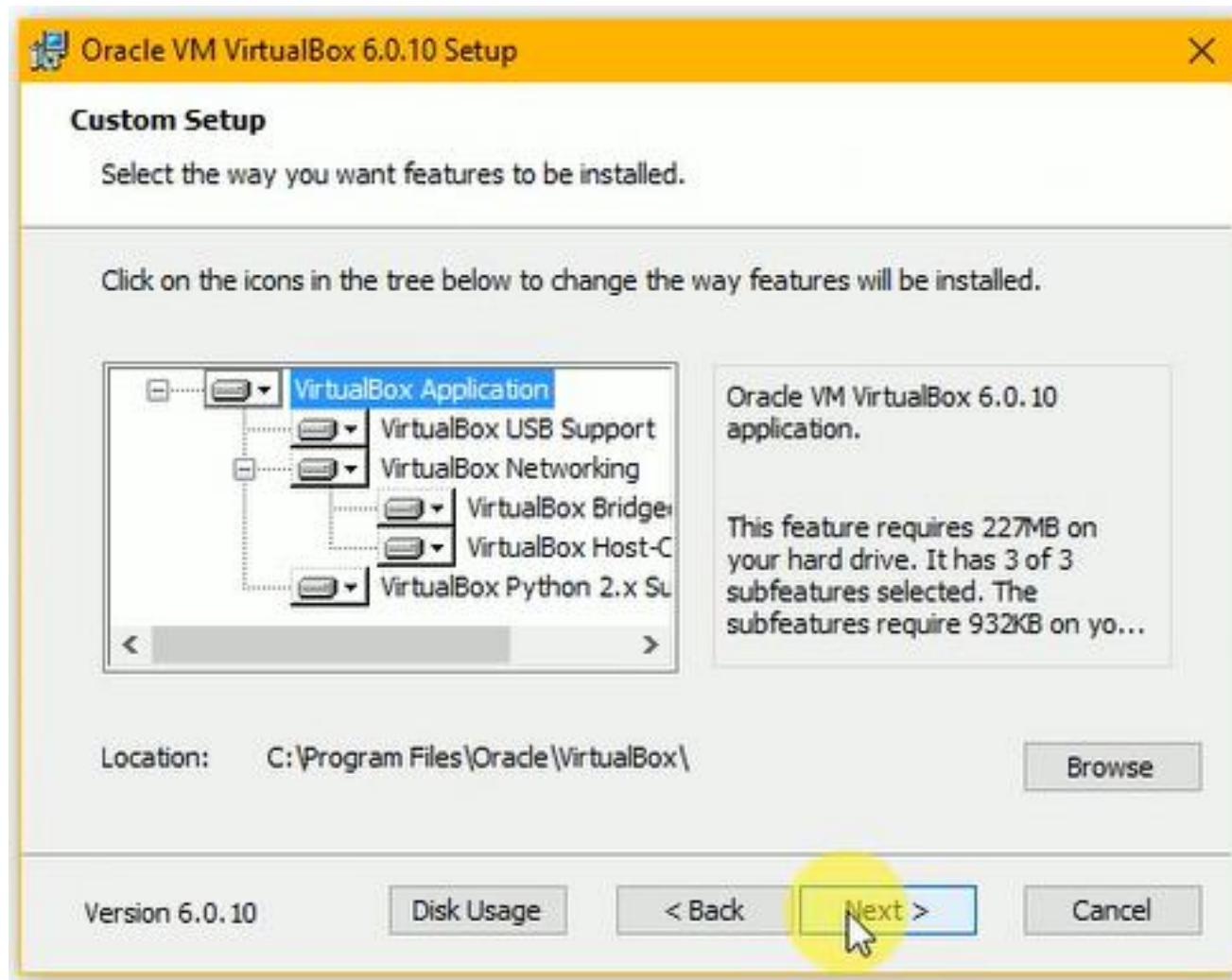


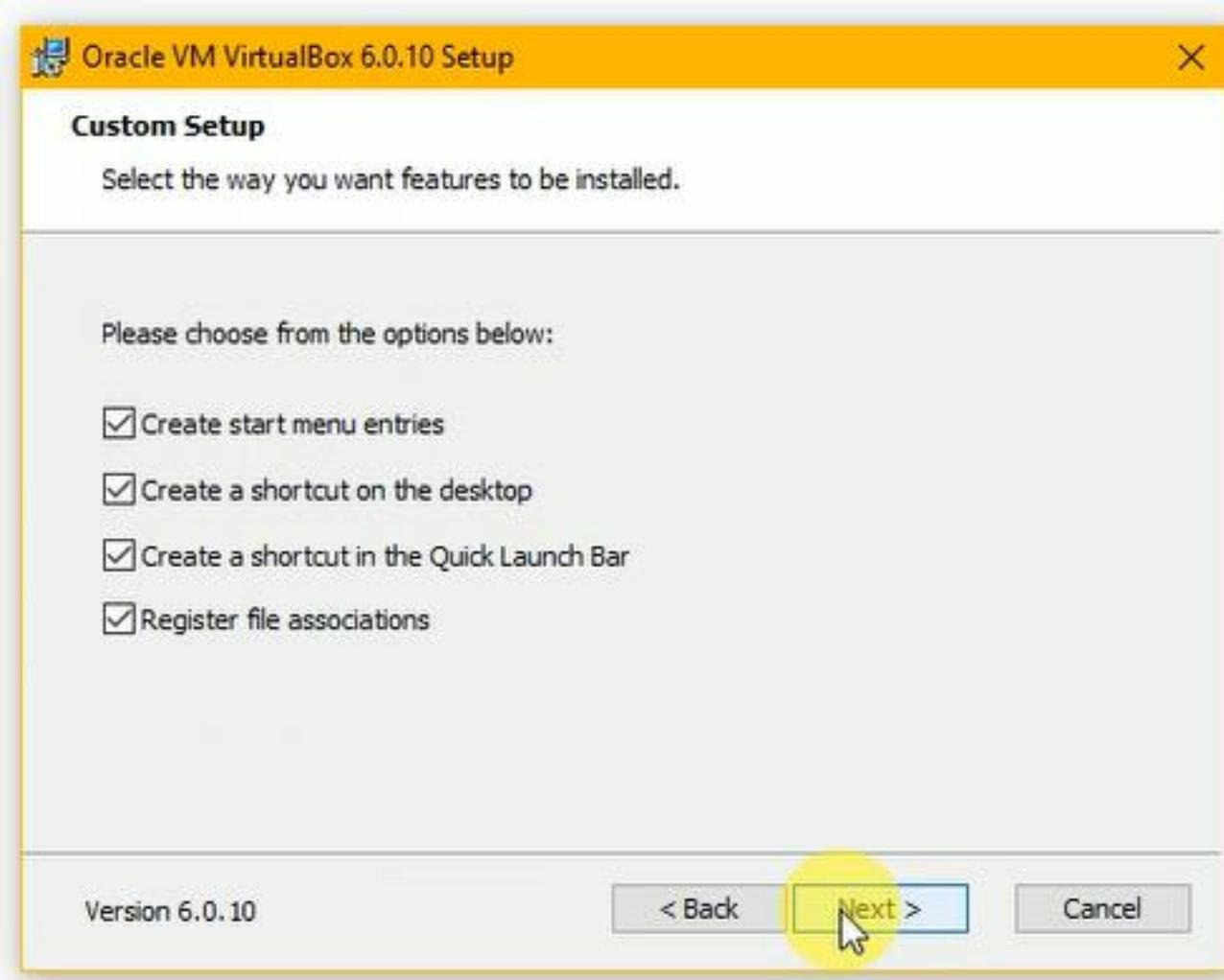
VirtualBox-6.0.10-132072-Win

Disc Image File

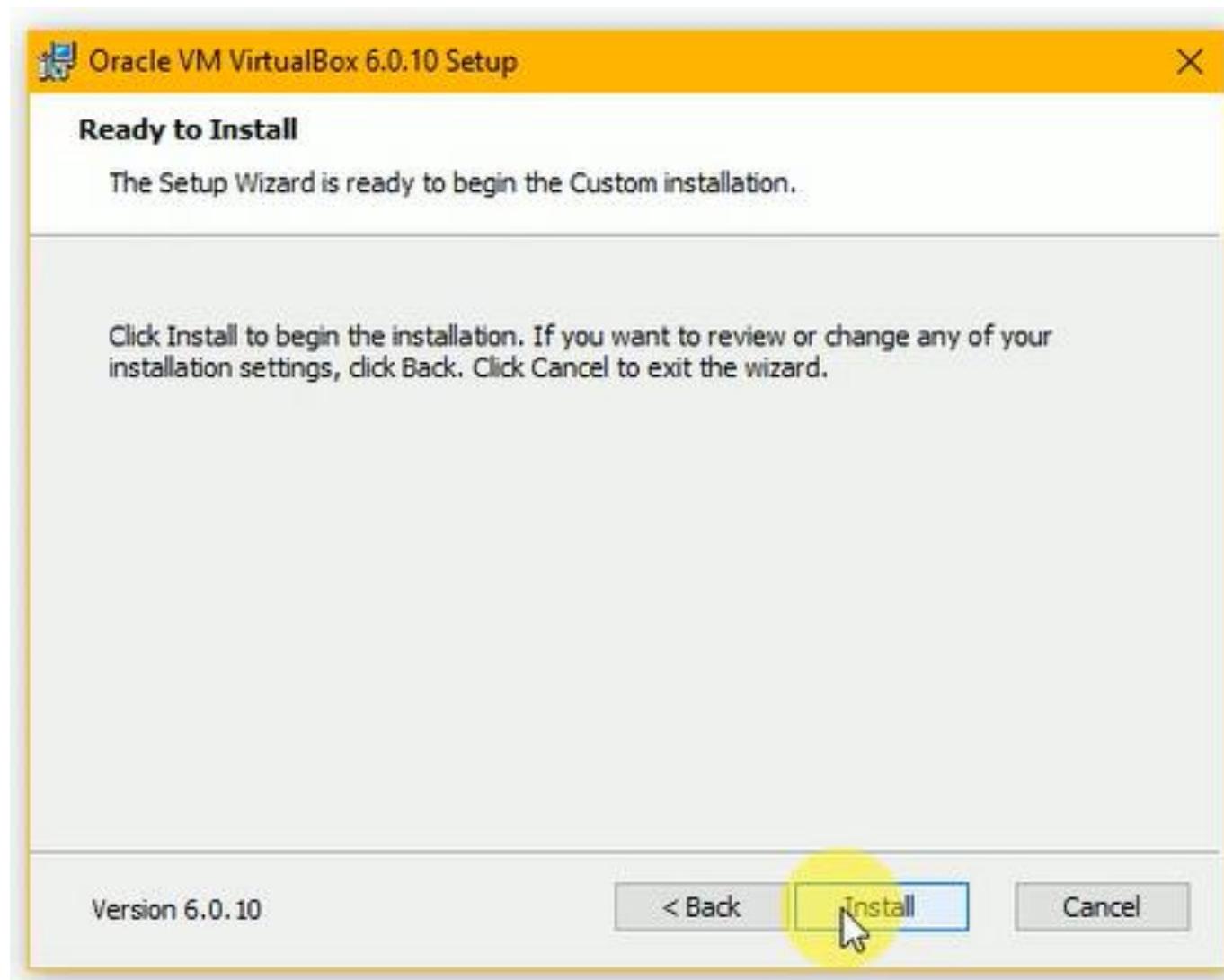
Application

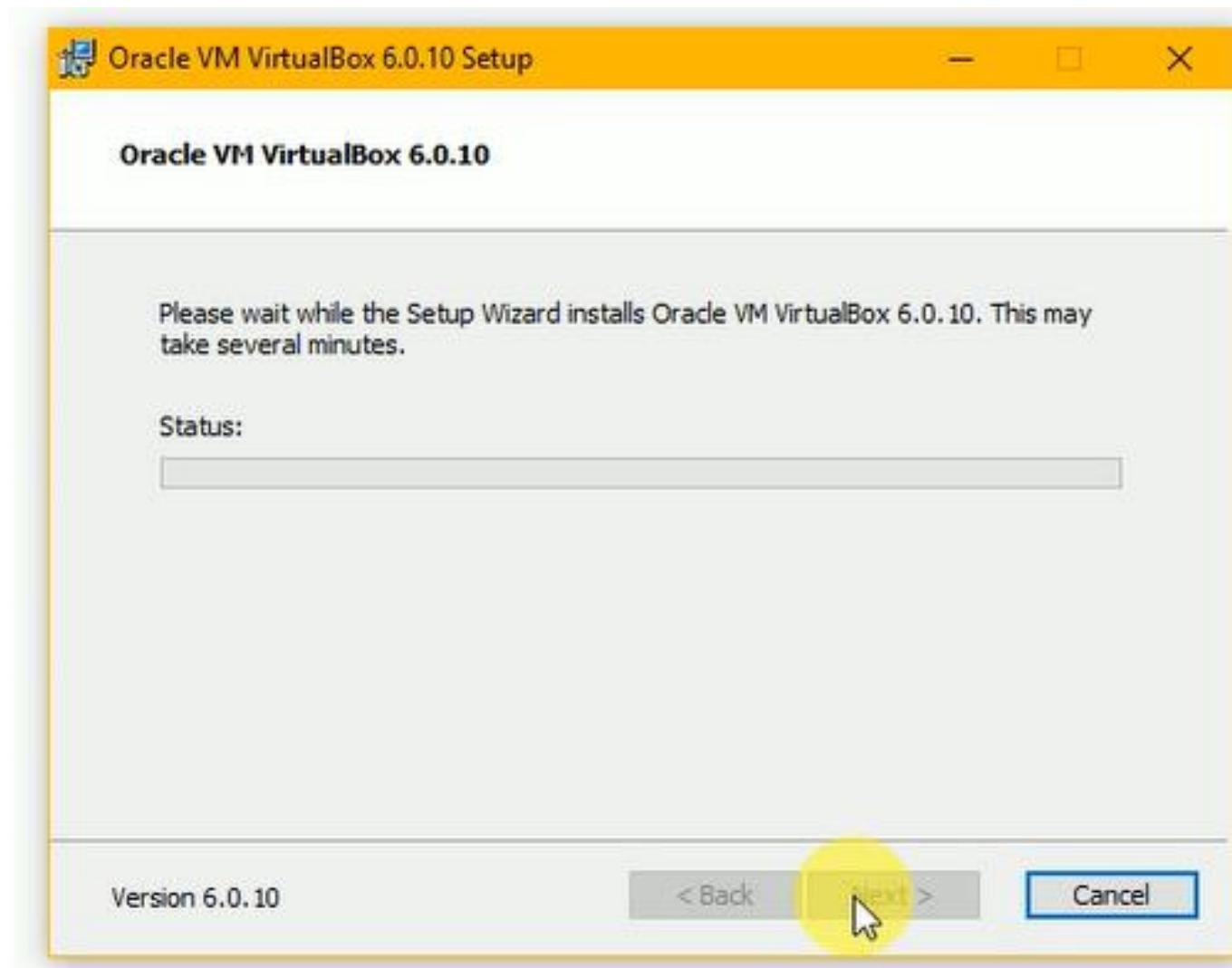


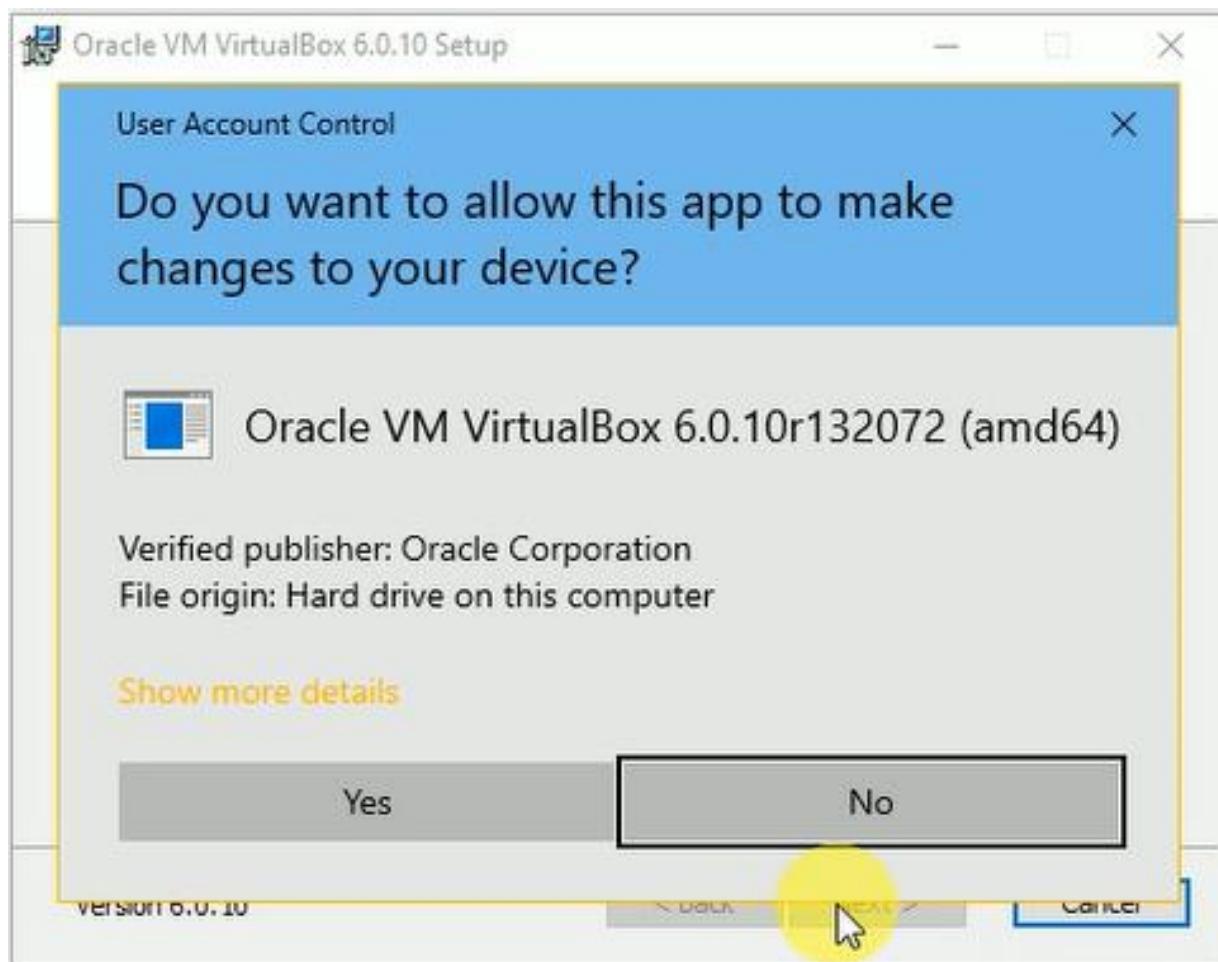


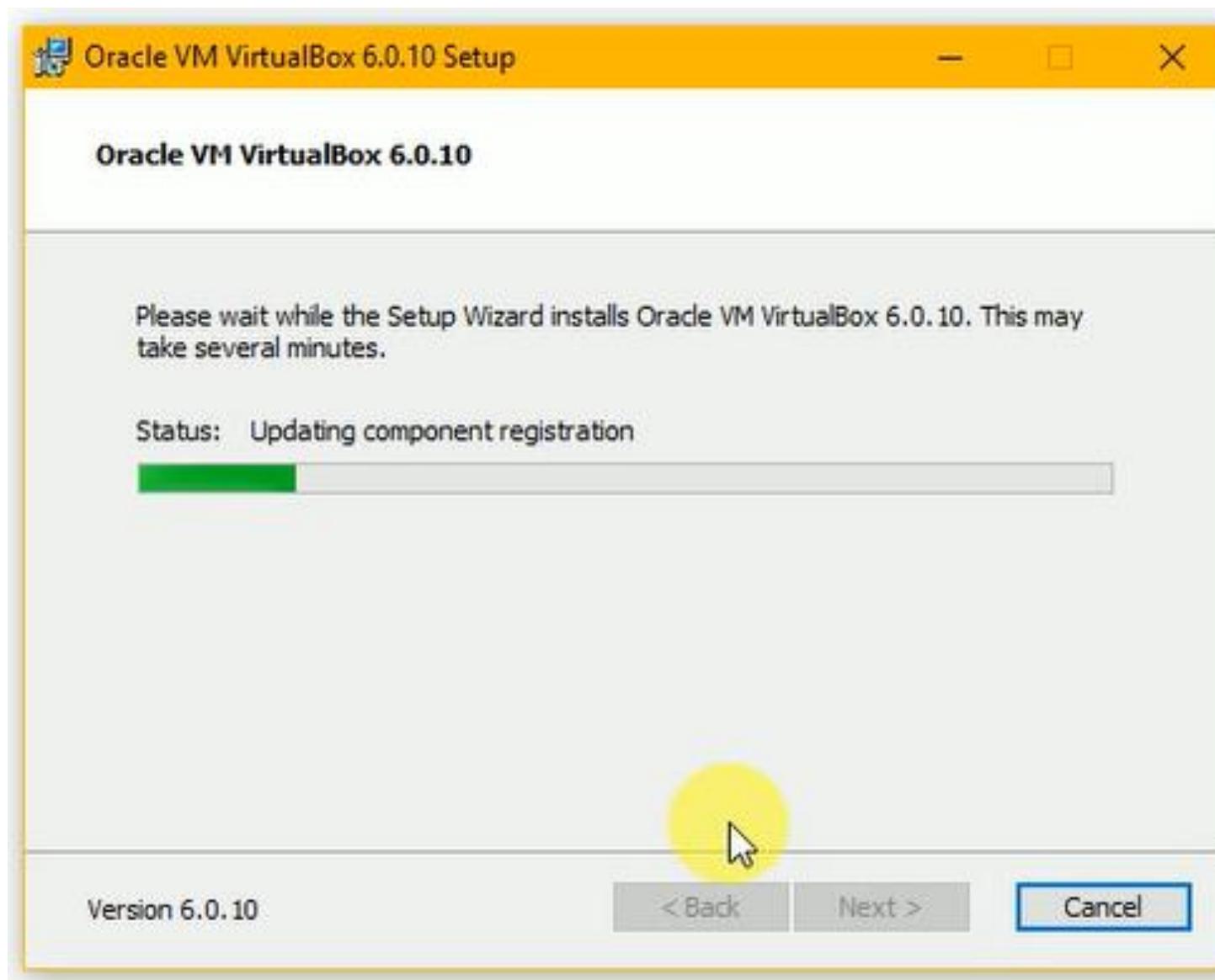


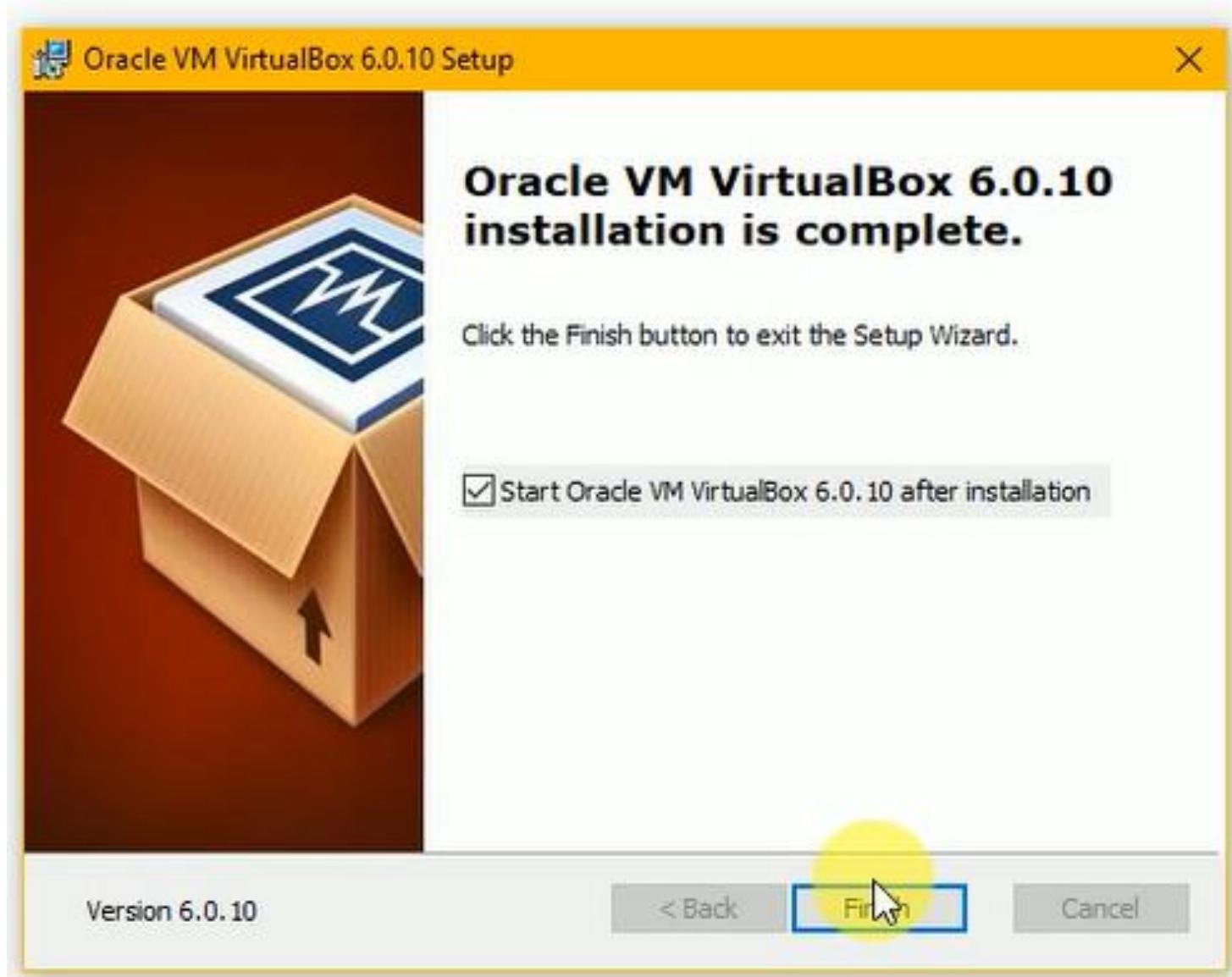












**Name of OS**

**RAM size for OS**

**Hard disk storage dedicated for it**

**Name of OS= Ubuntu**

**RAM size for OS**

**Hard disk storage dedicated for it**

**Name of OS= Ubuntu**

**RAM size for OS= 1 gb**

**Hard disk storage dedicated for it**

**Name of OS= Ubuntu**

**RAM size for OS= 1 gb**

**Hard disk storage dedicated for it = 5gb**

File Machine Help



Tools



Preferences



Import



Export



New



Add



ubuntu-18.04.2-desktop-amd64



## Welcome to VirtualBox!

The left part of application window contains global tools and lists all virtual machines and virtual machine groups on your computer. You can import, add and create new VMs using corresponding toolbar buttons. You can popup a tools of currently selected element using corresponding element button.

You can press the **F1** key to get instant help, or visit [www.virtualbox.org](http://www.virtualbox.org) for more information and latest news.



Folder

## Oracle VM VirtualBox Manager

File Machine Help



Preferences Import Export New Add

### Welcome to VirtualBox!

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Oracle VM VirtualBox Manager



File Machine Help



Tools

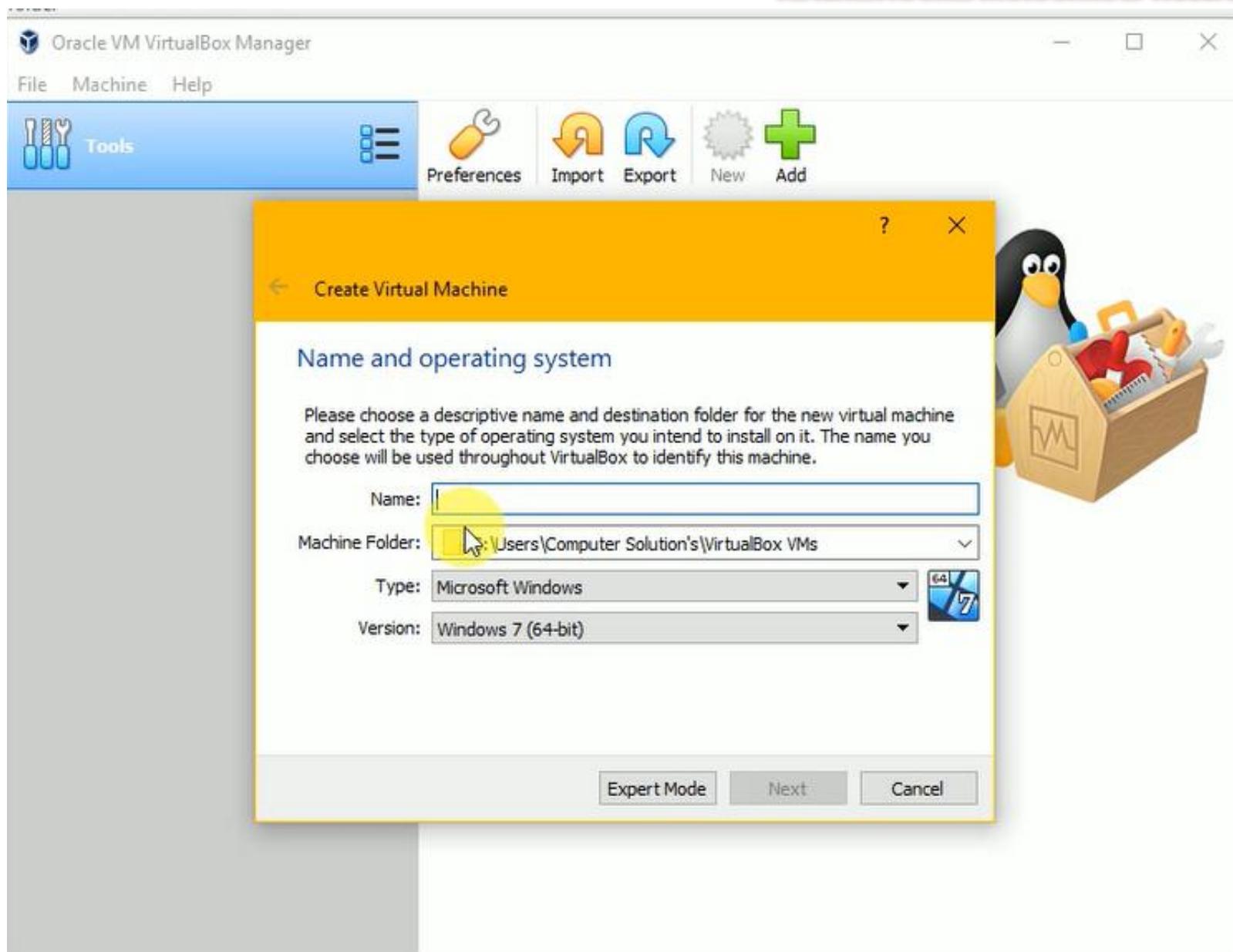


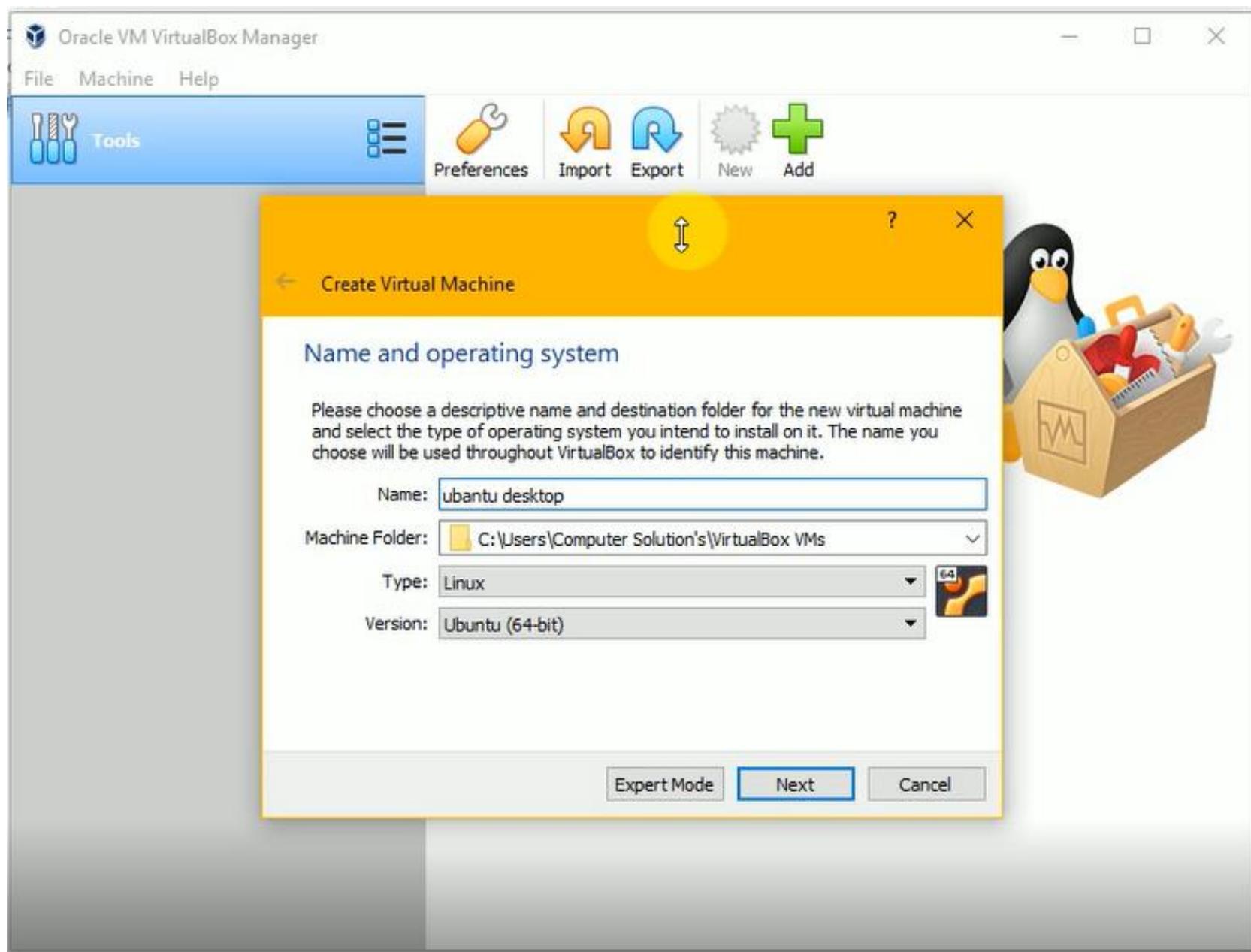
## Welcome to VirtualBox!

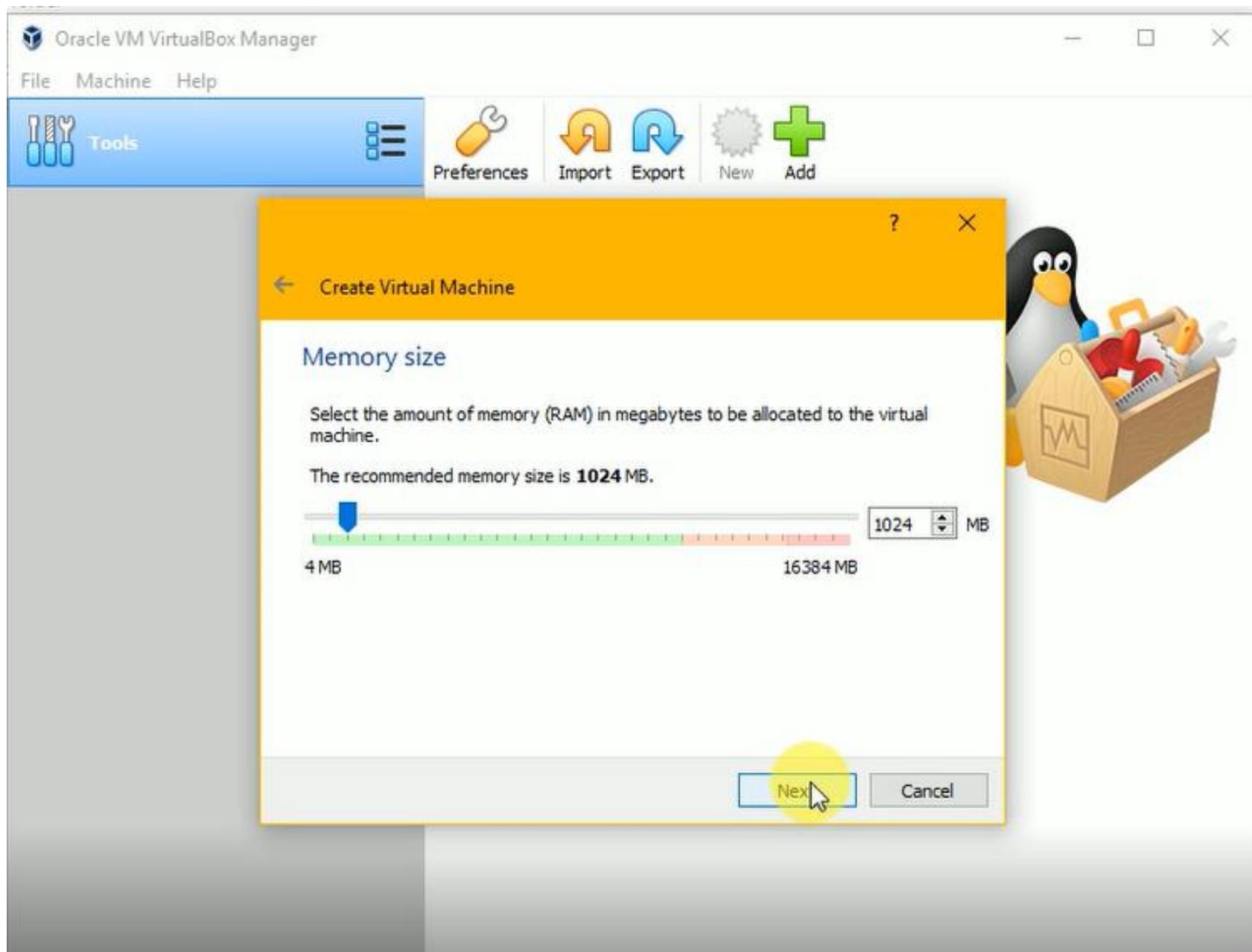
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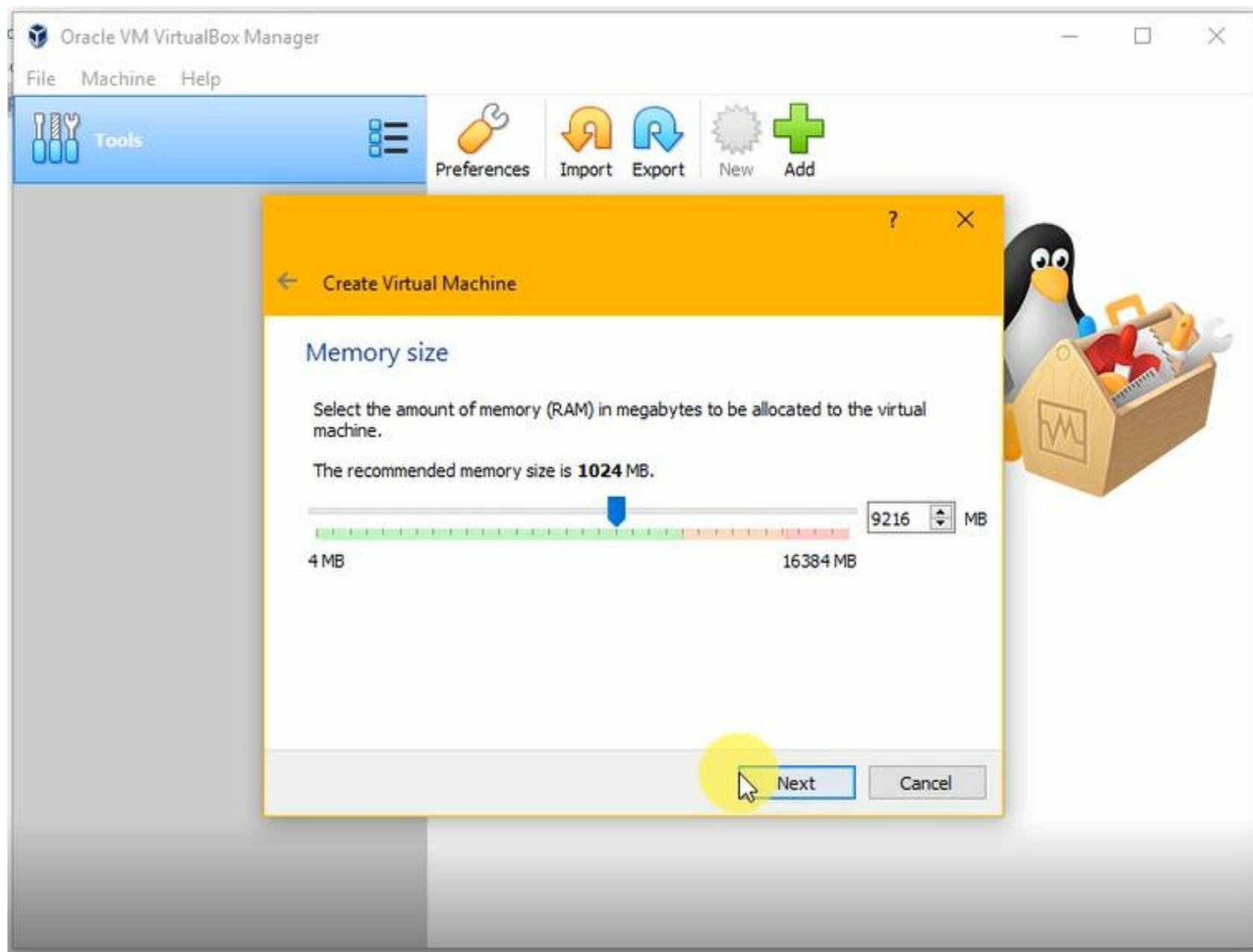
You can press the **F1** key to get instant help, or visit [www.virtualbox.org](http://www.virtualbox.org) for more information and latest news.

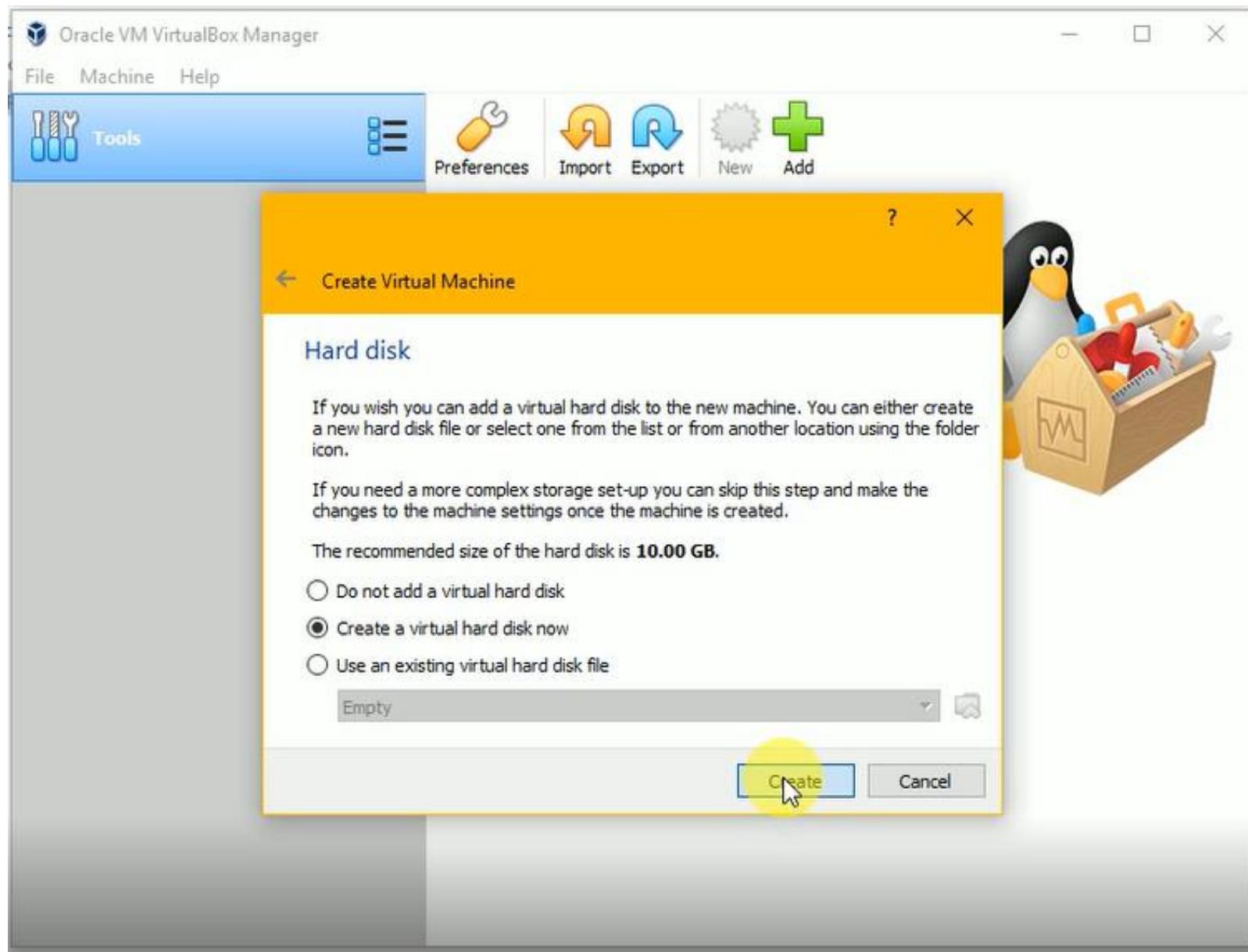


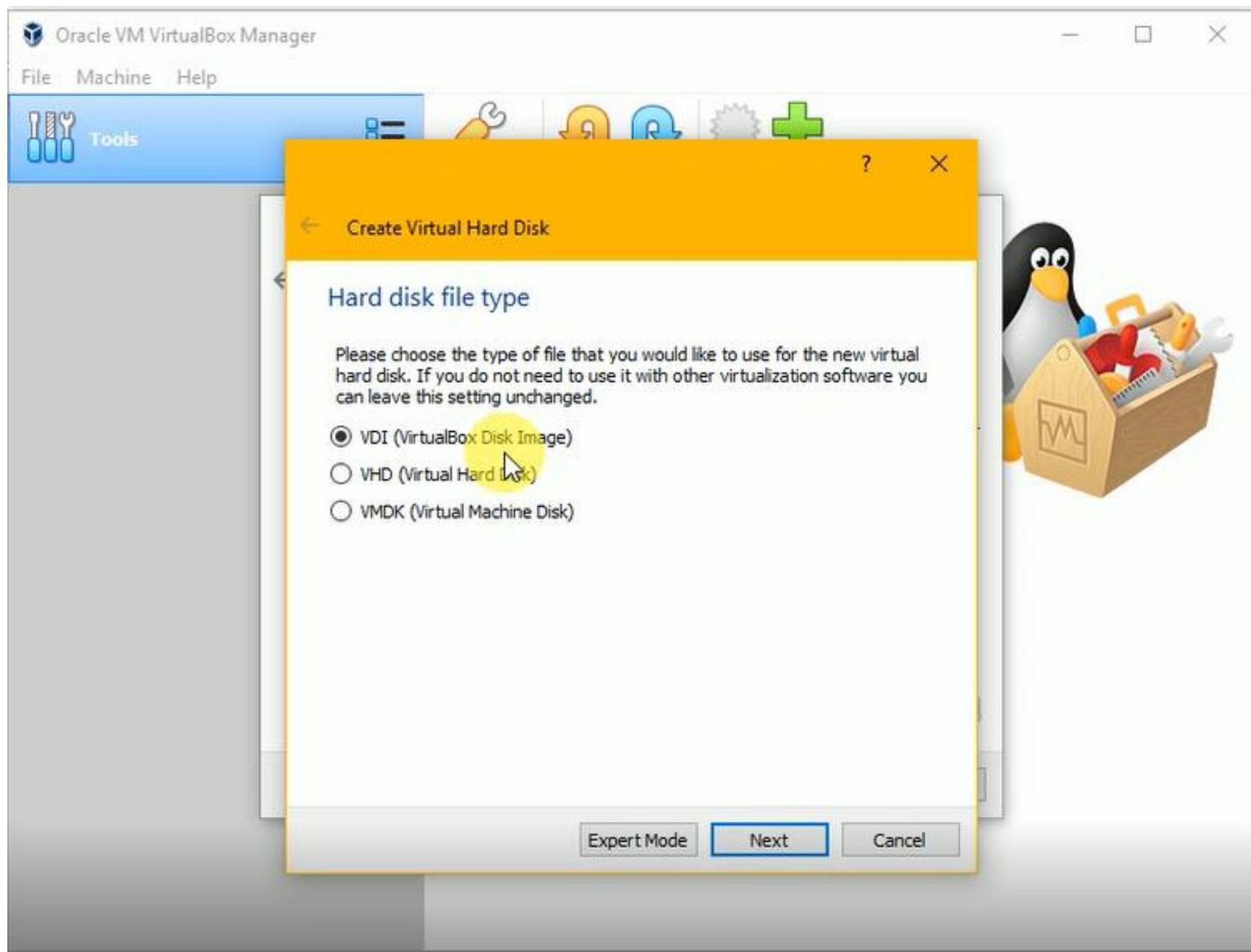












## Oracle VM VirtualBox Manager

File Machine Help



Tools



?



← Create Virtual Hard Disk

## Storage on physical hard disk

Please choose whether the new virtual hard disk file should grow as it is used (dynamically allocated) or if it should be created at its maximum size (fixed size).

A **dynamically allocated** hard disk file will only use space on your physical hard disk as it fills up (up to a maximum **fixed size**), although it will not shrink again automatically when space on it is freed.

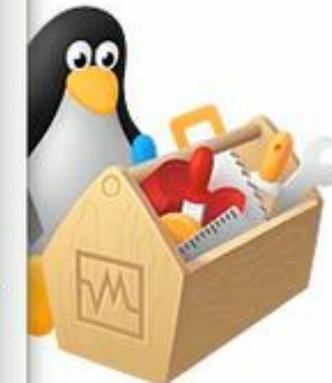
A **fixed size** hard disk file may take longer to create on some systems but is often faster to use.

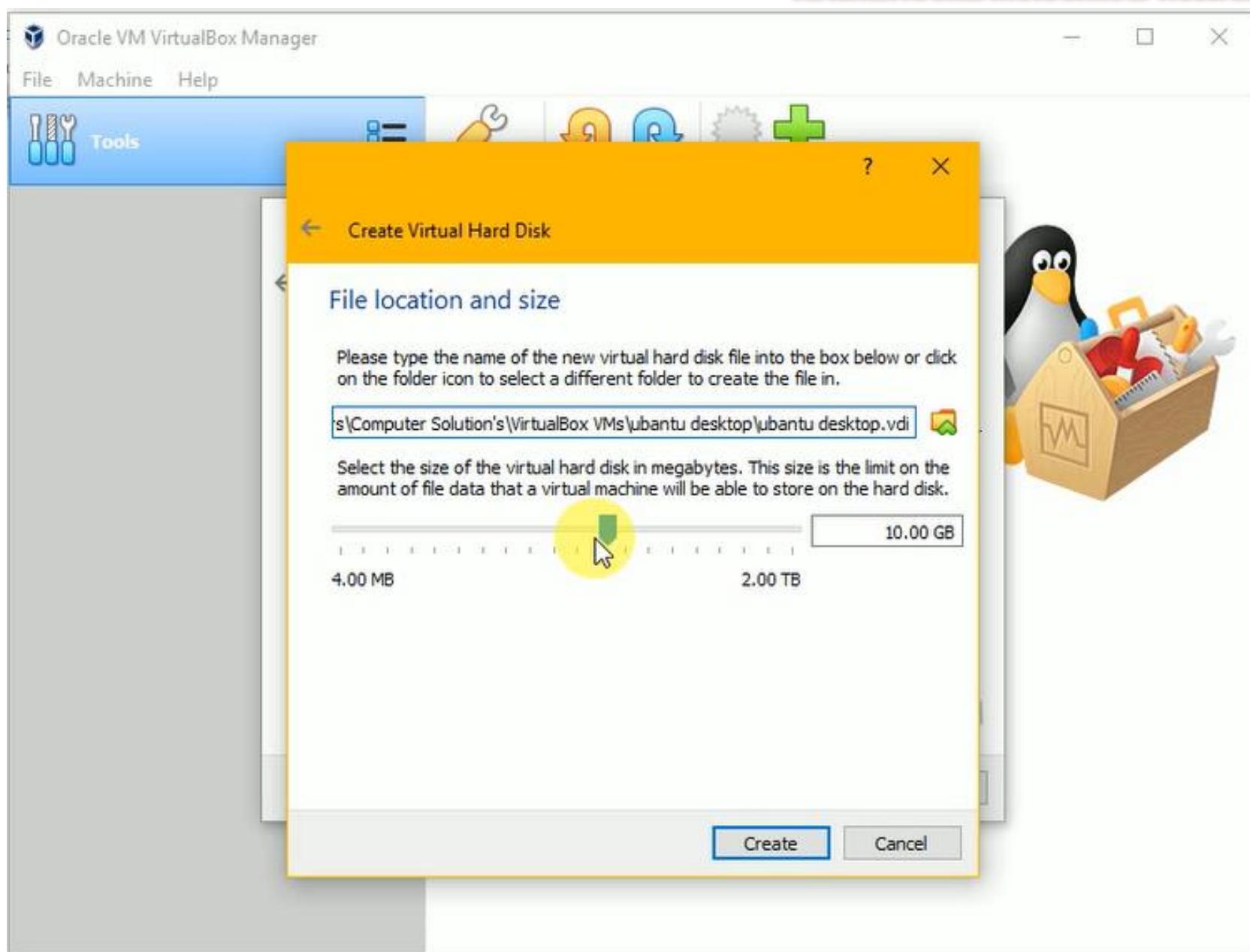
- Dynamically allocated  
 Fixed size

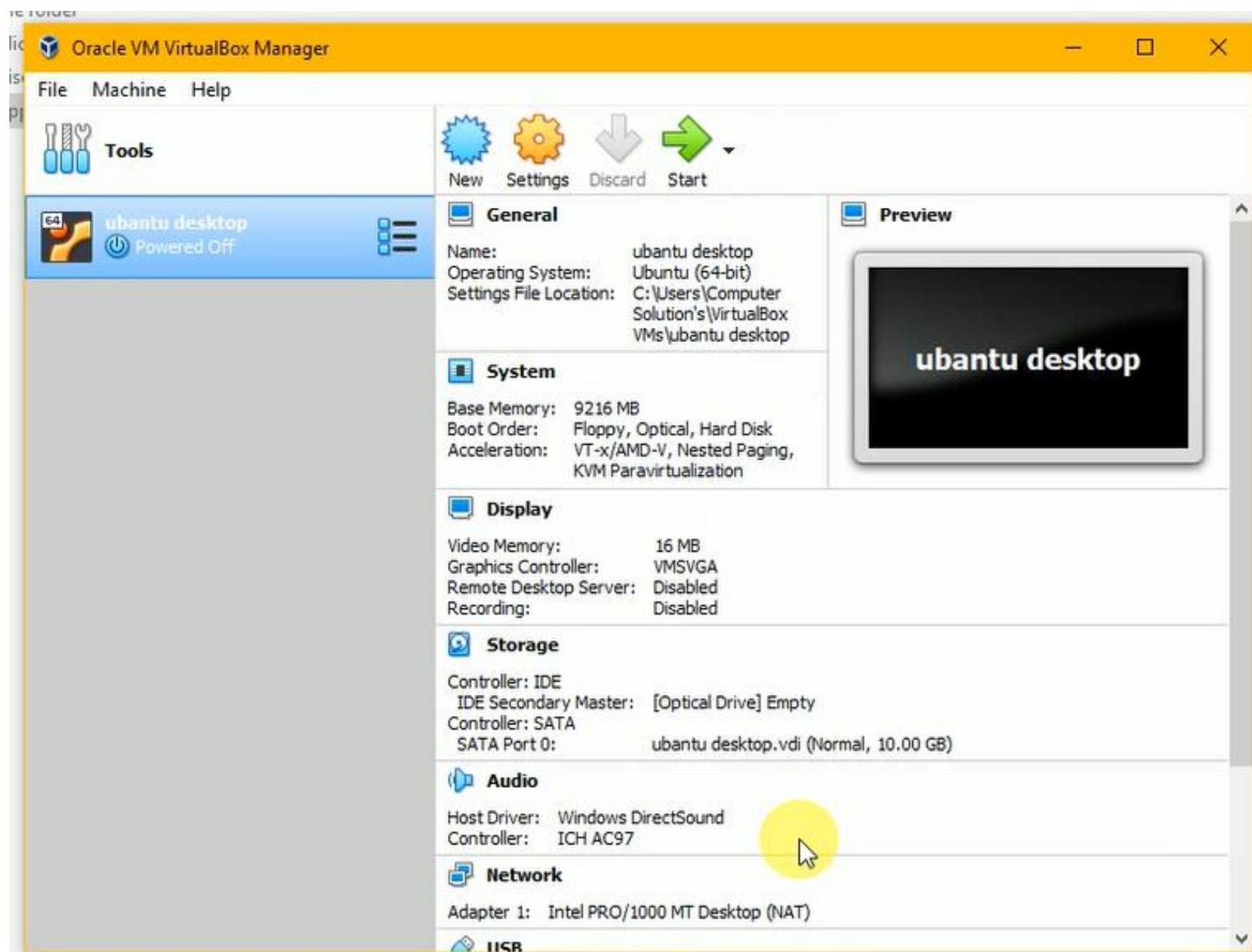


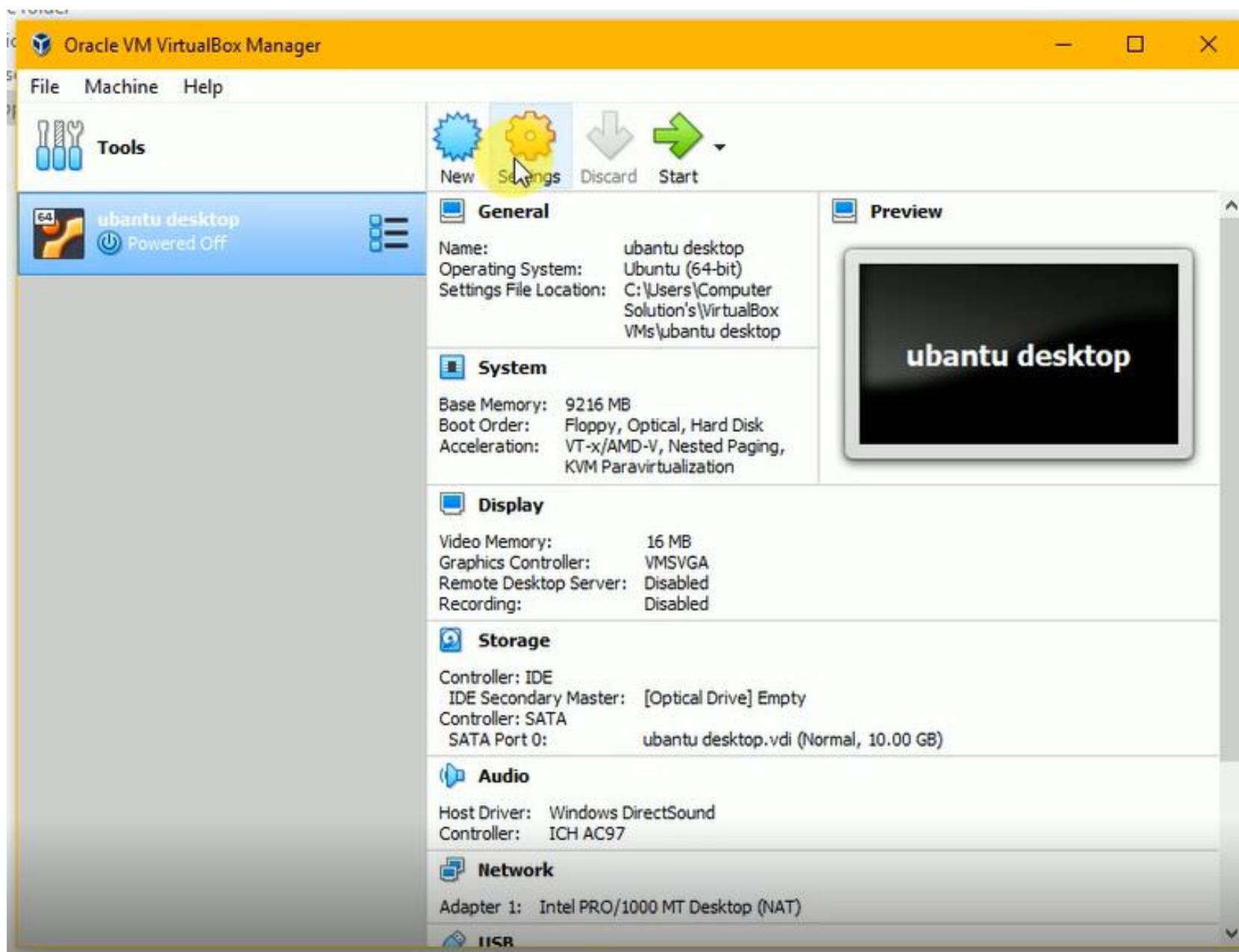
Next

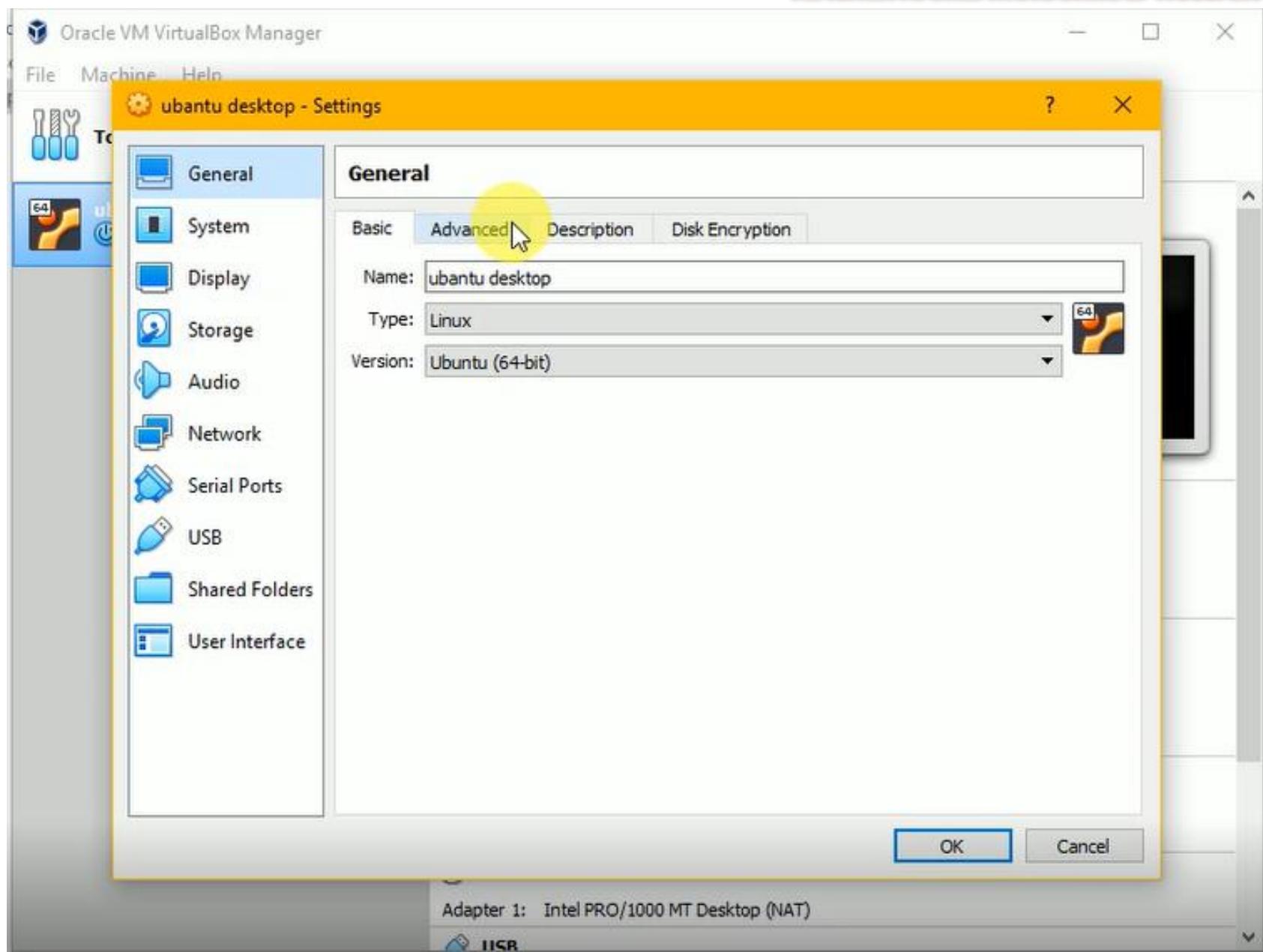
Cancel

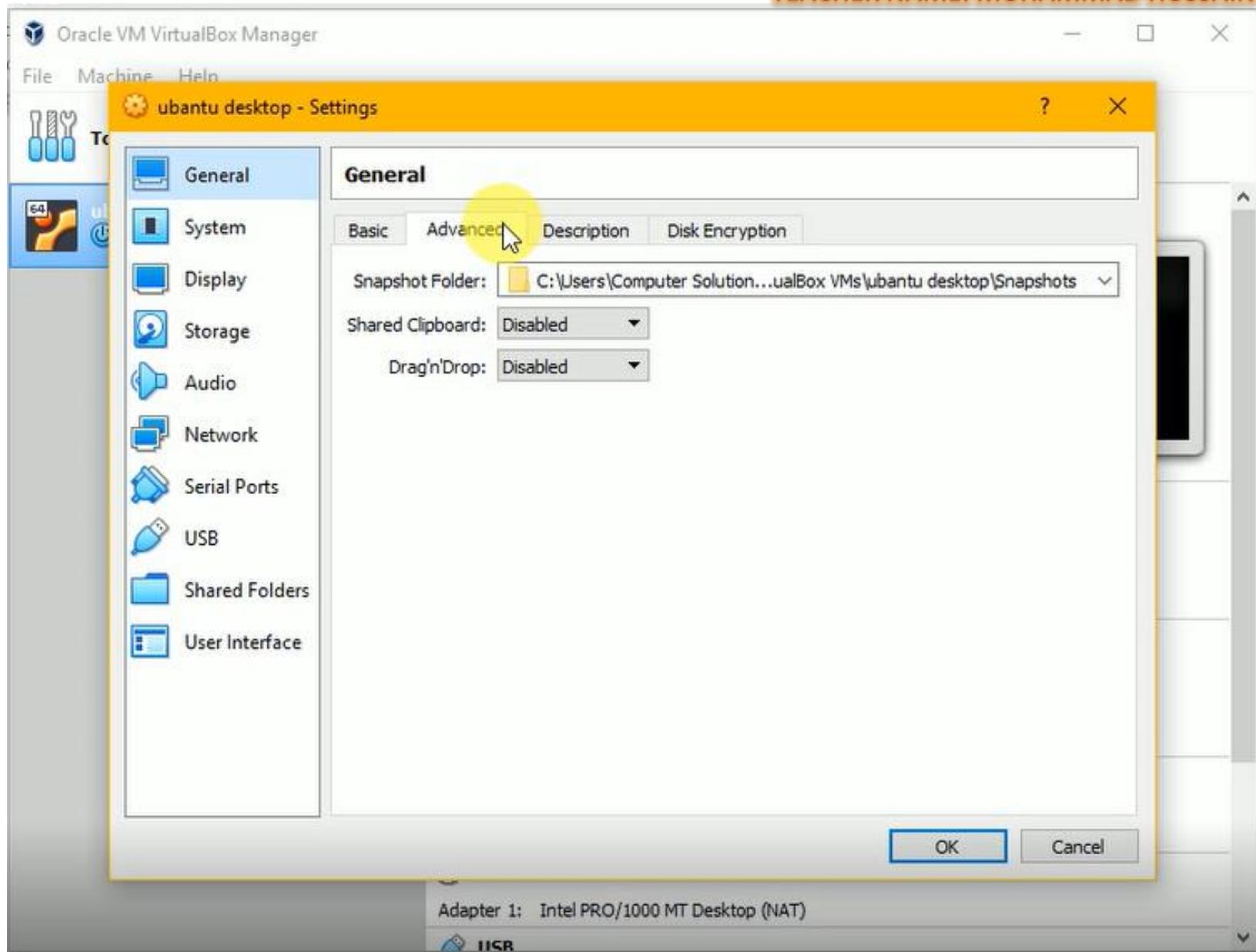


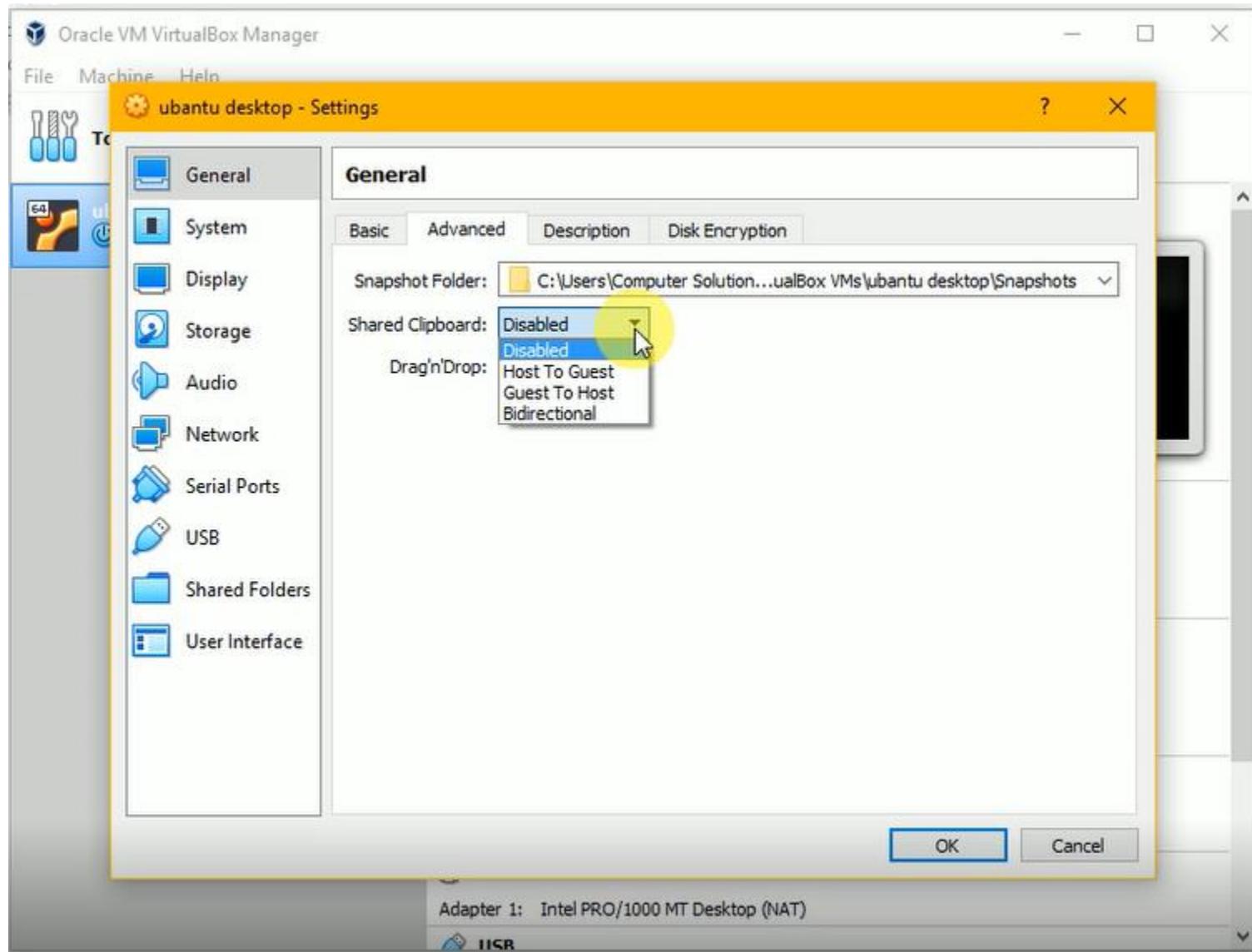


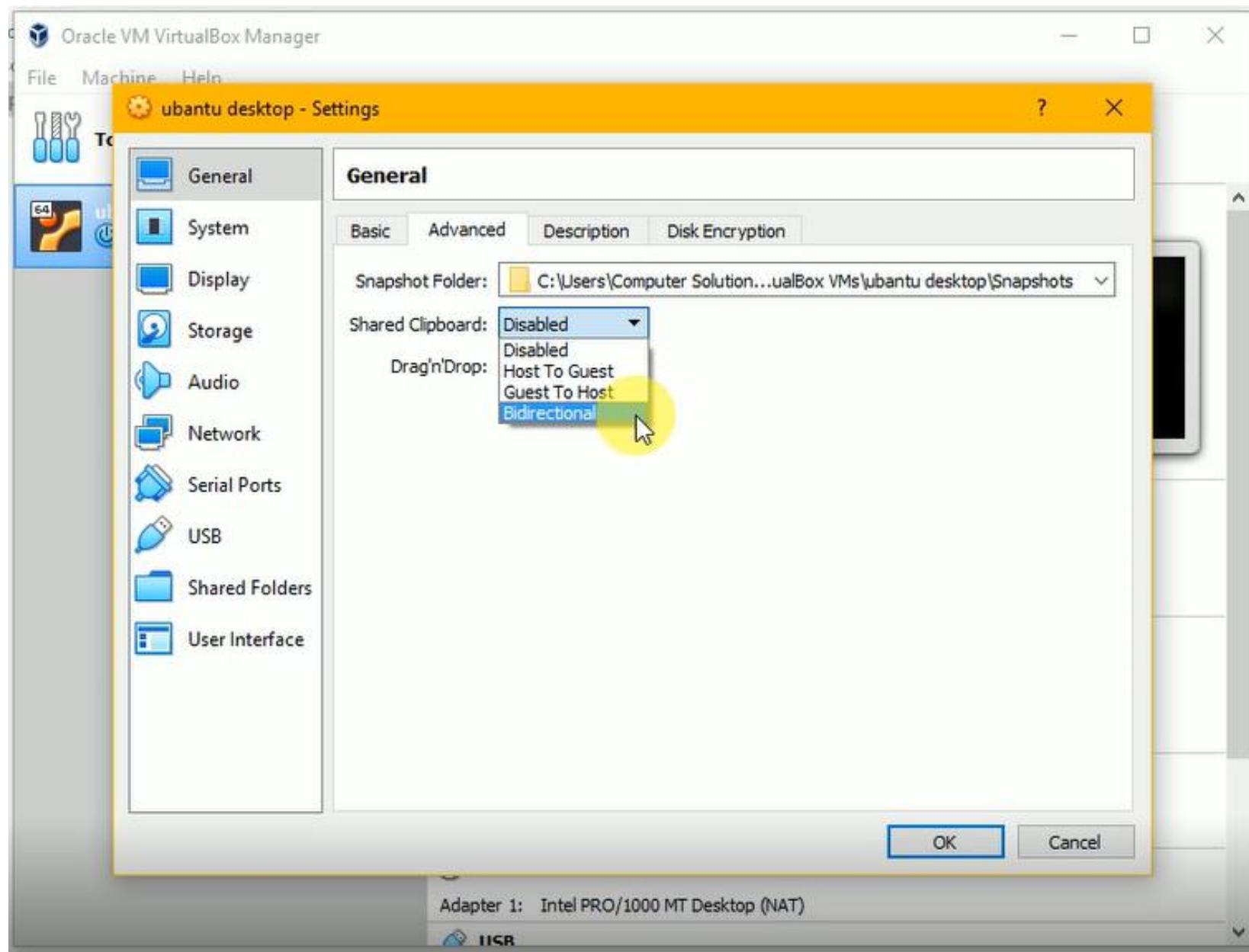


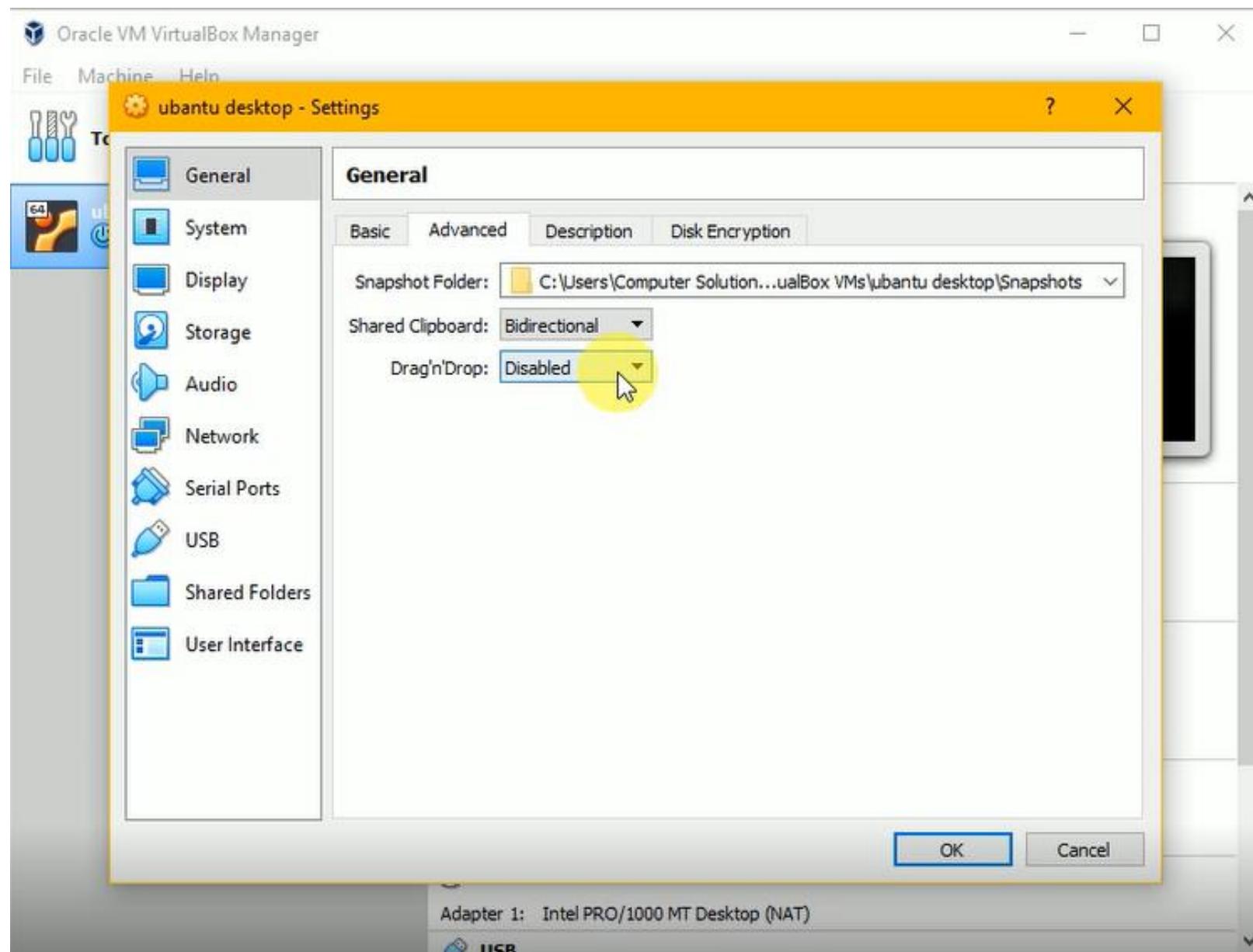


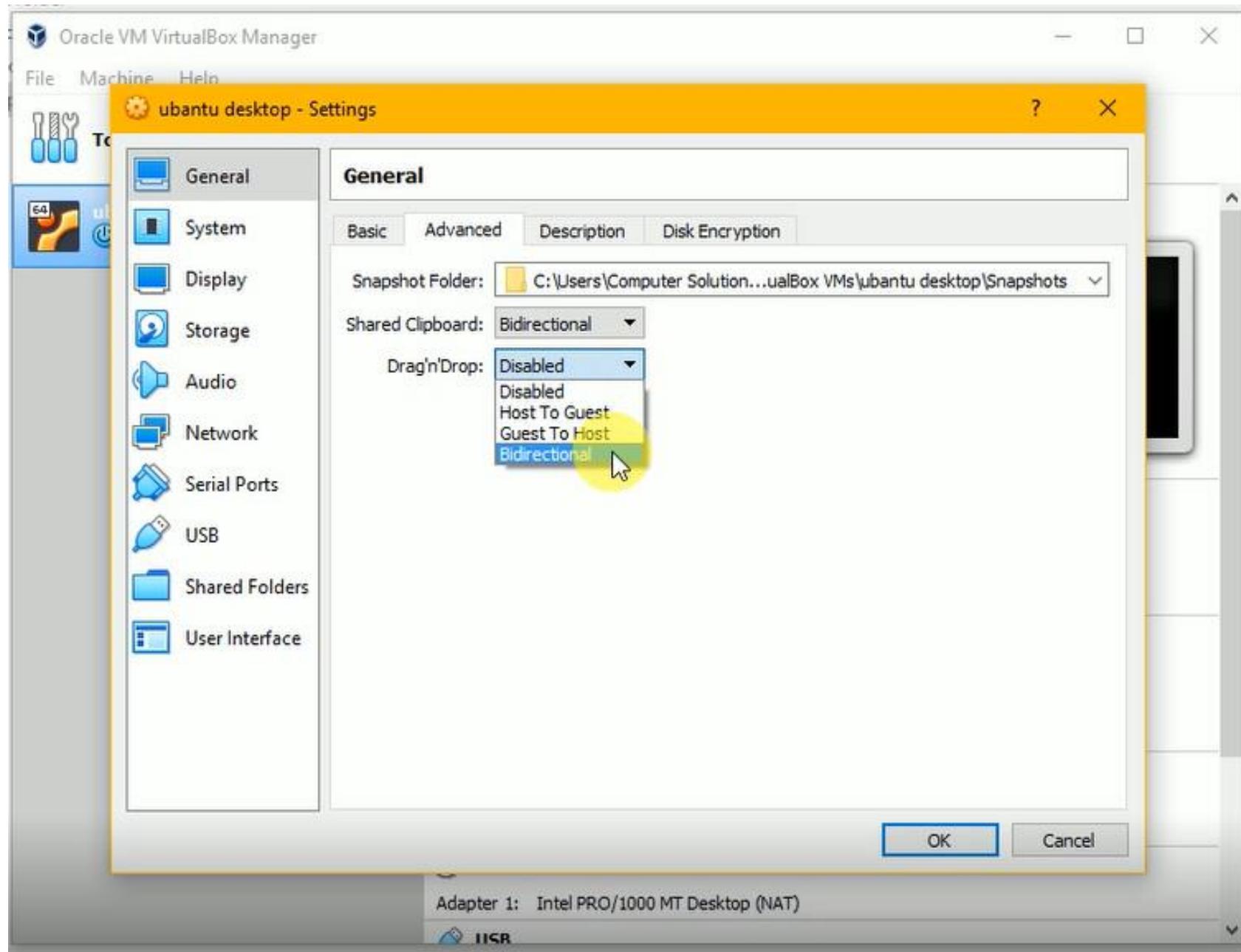


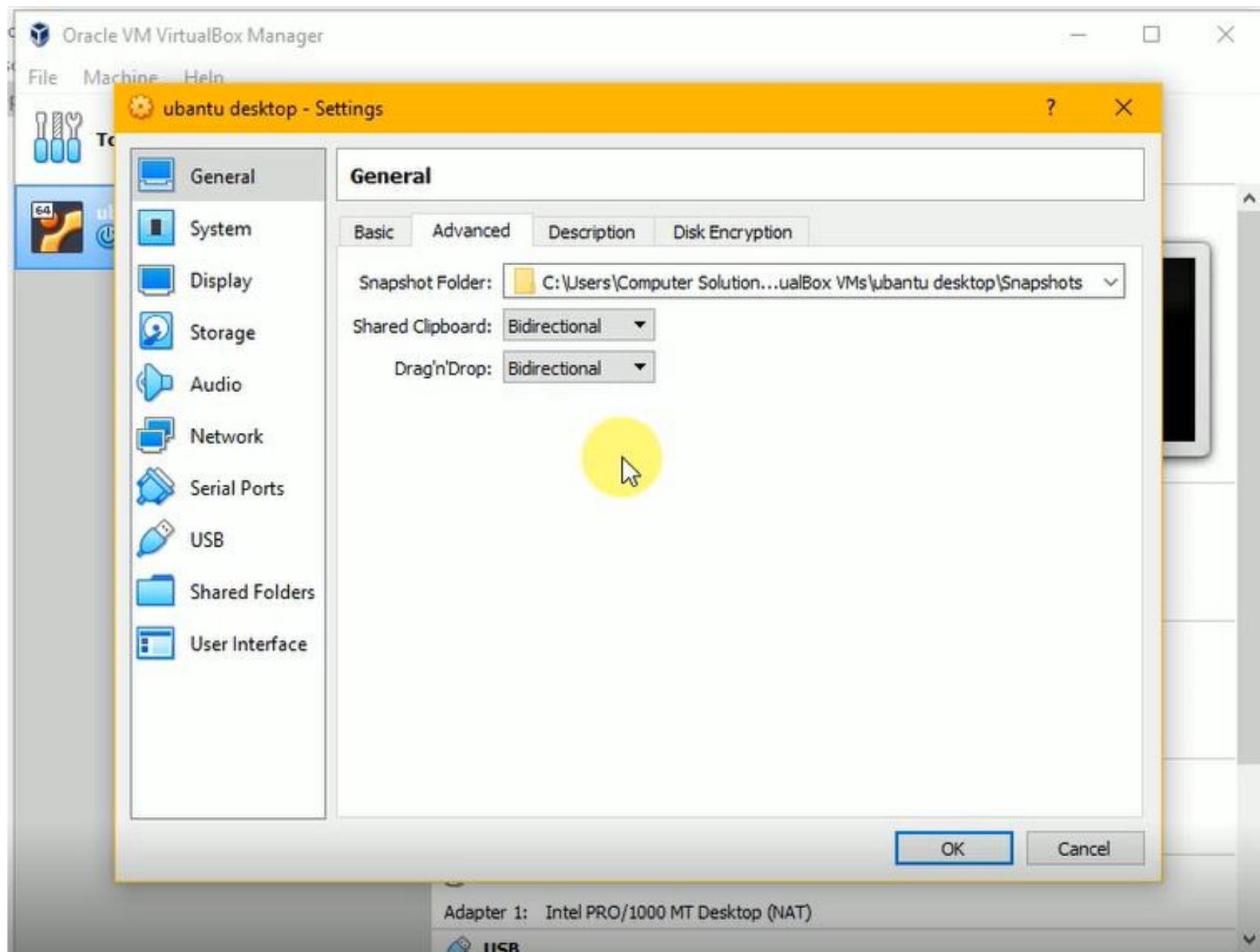




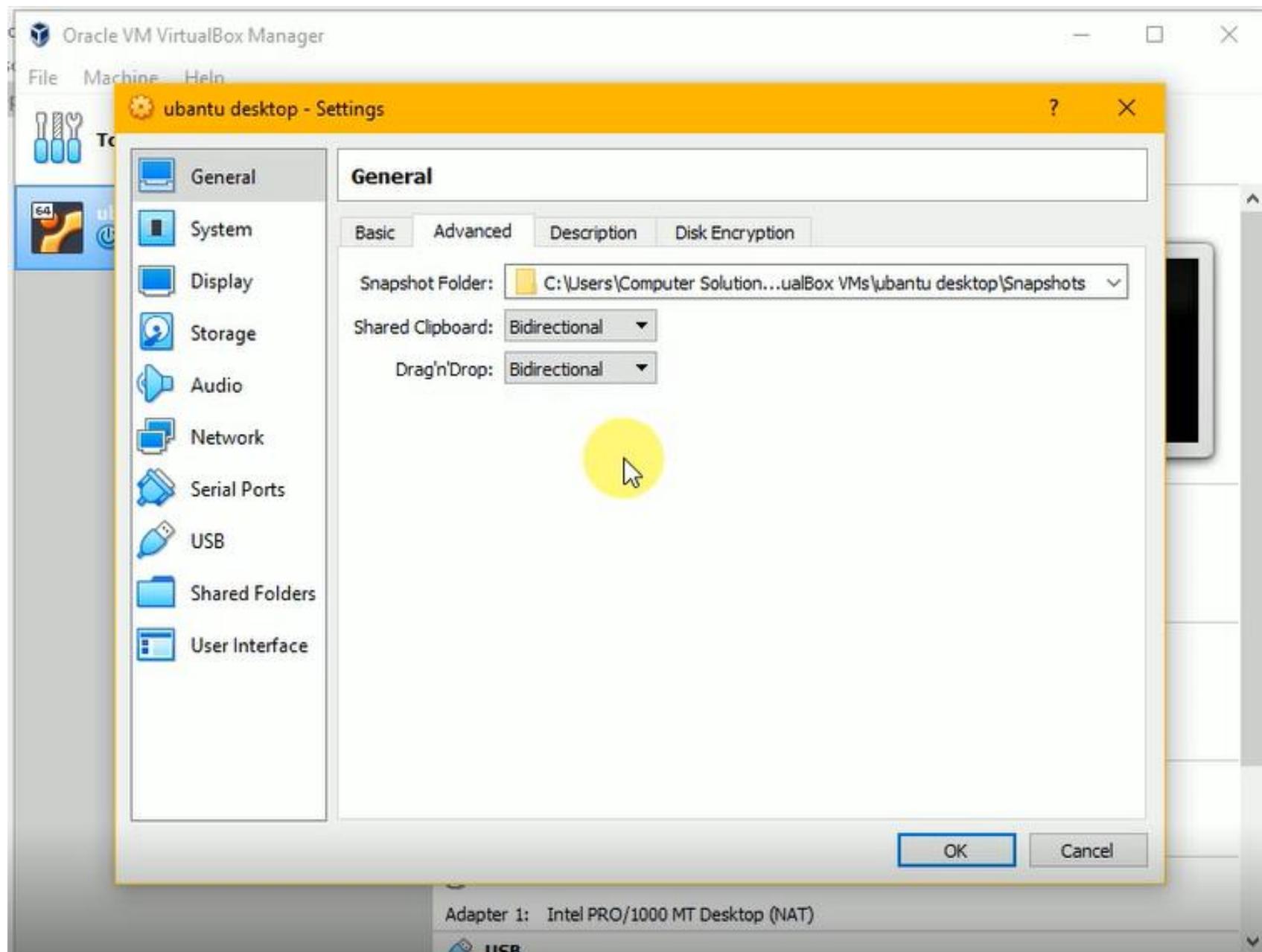


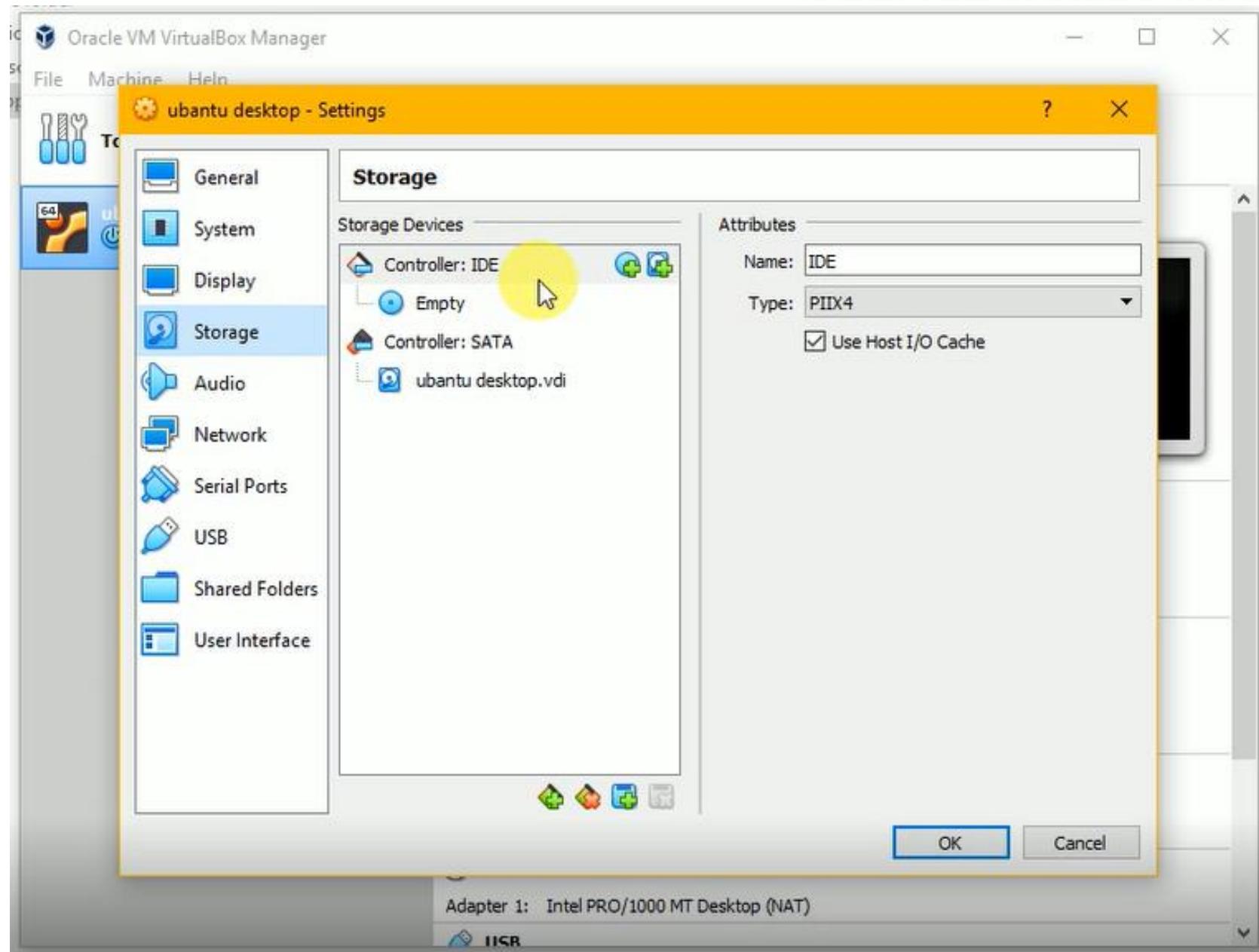


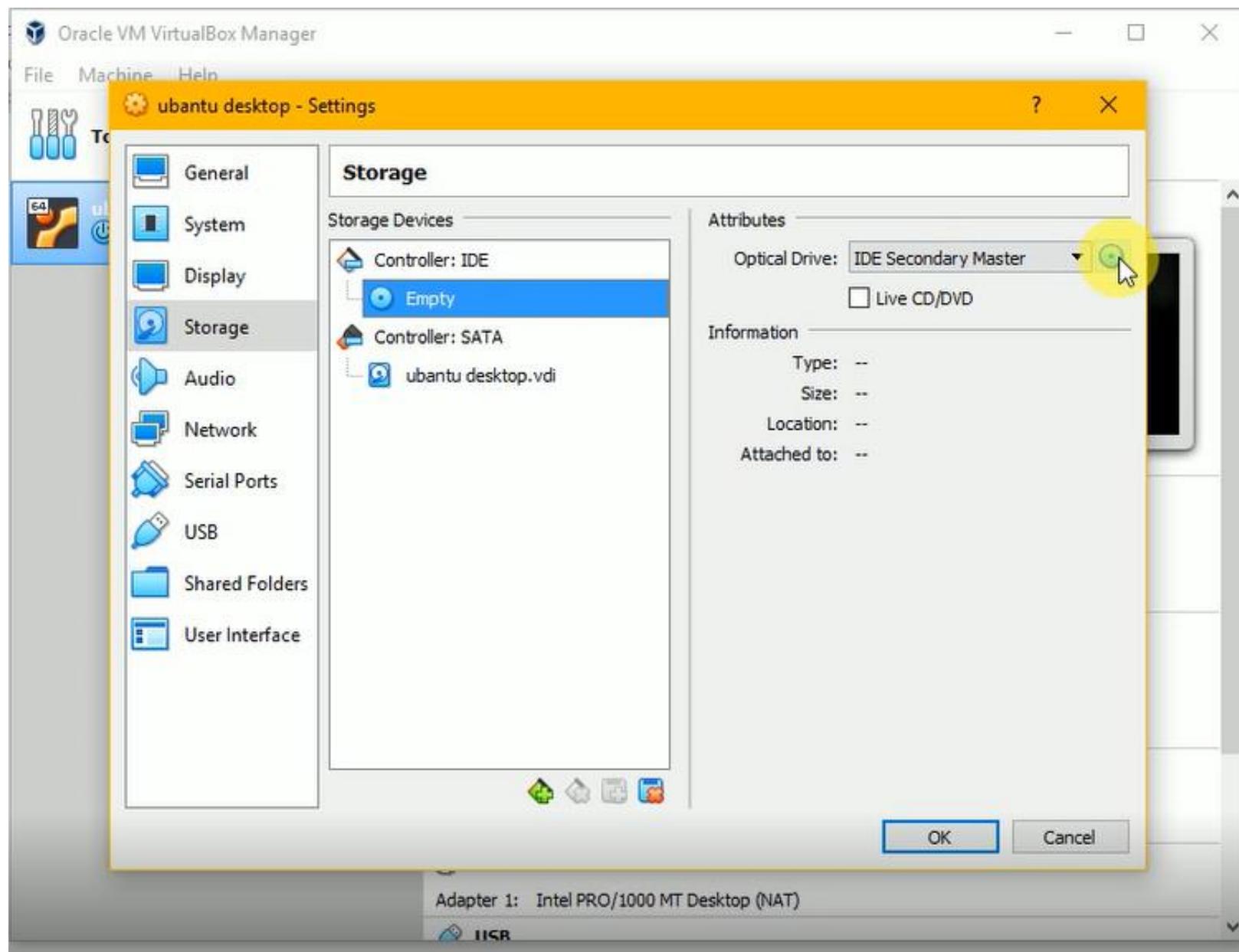


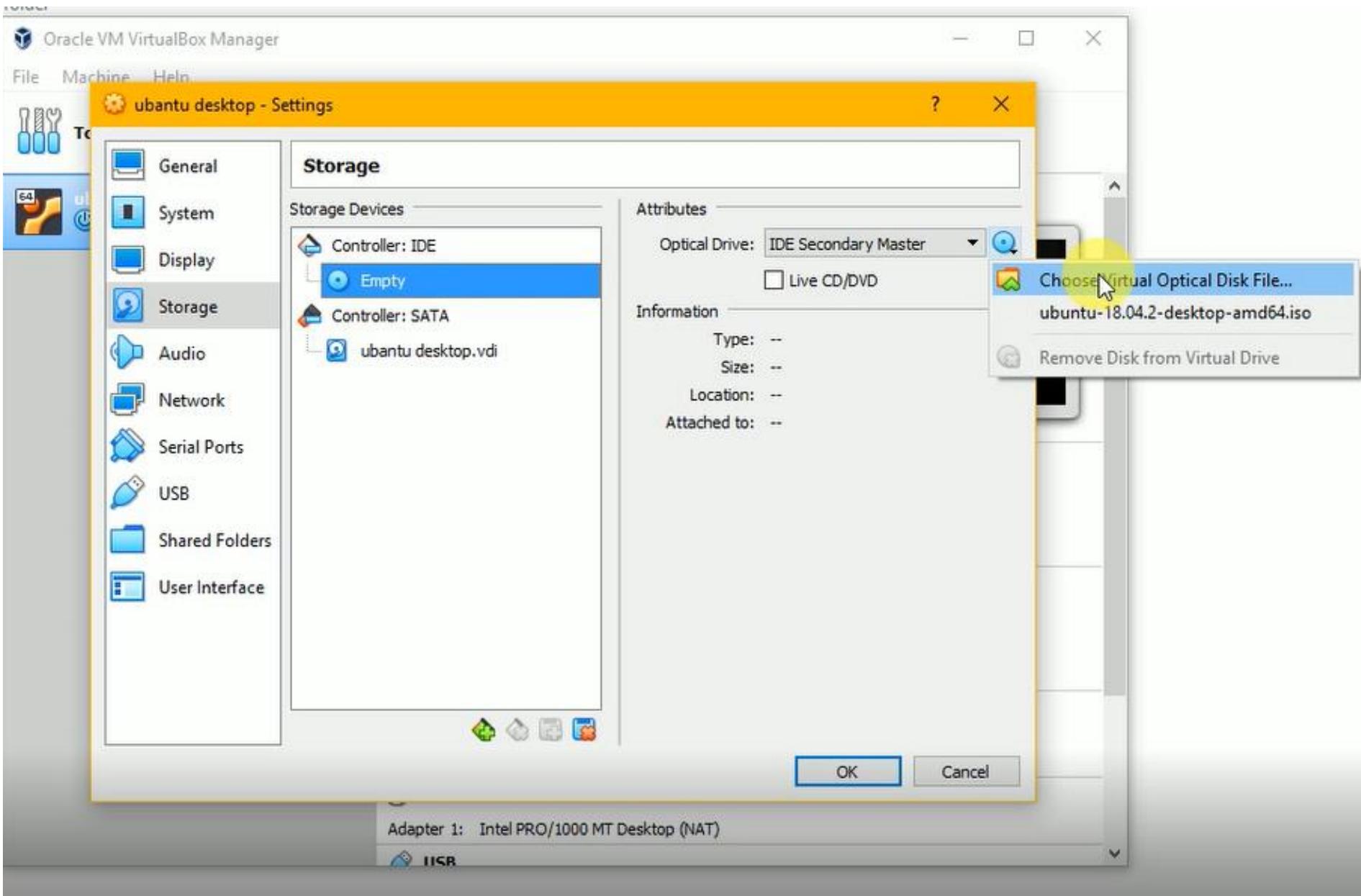


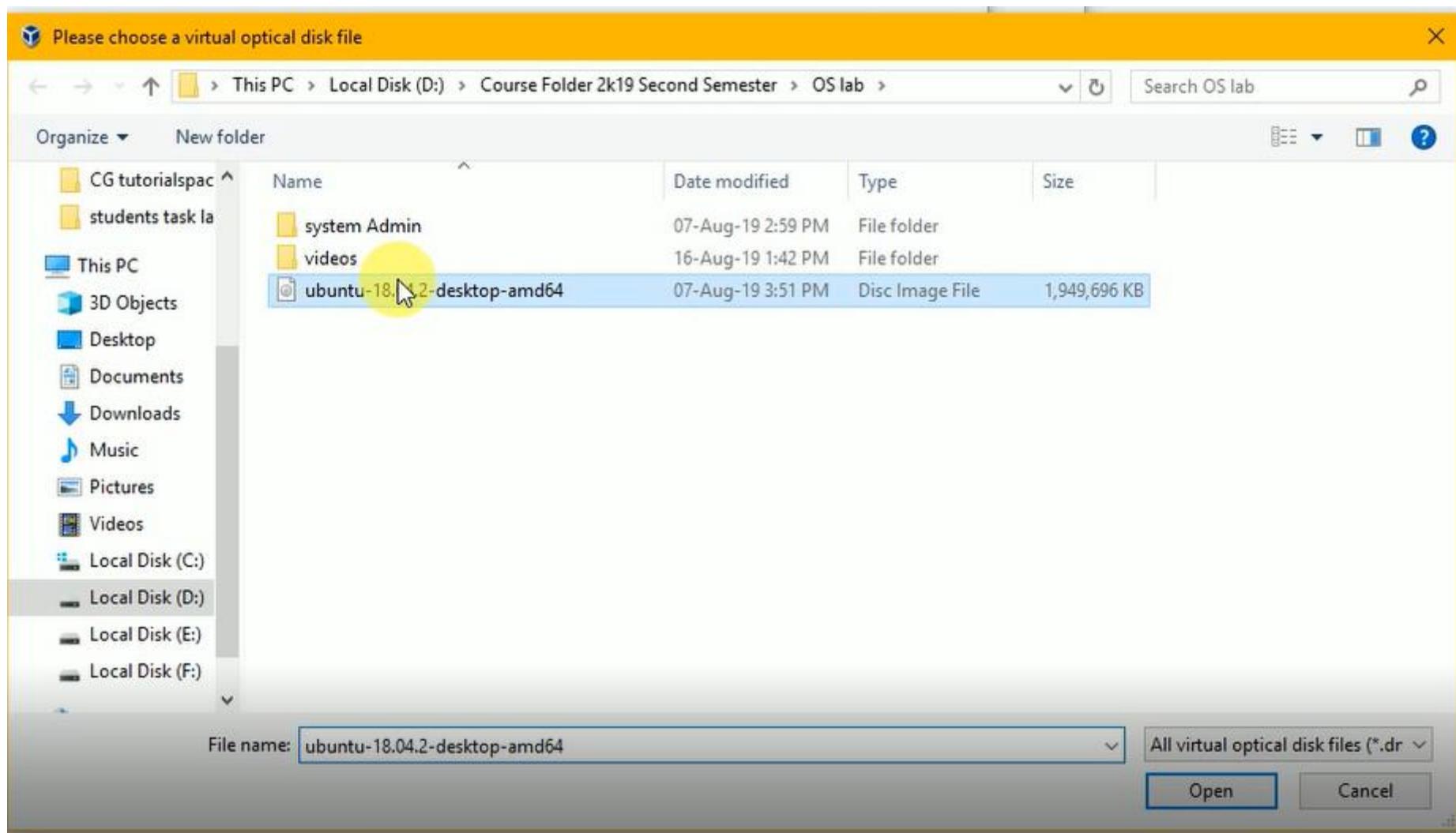
**Need ISO file for start installation**

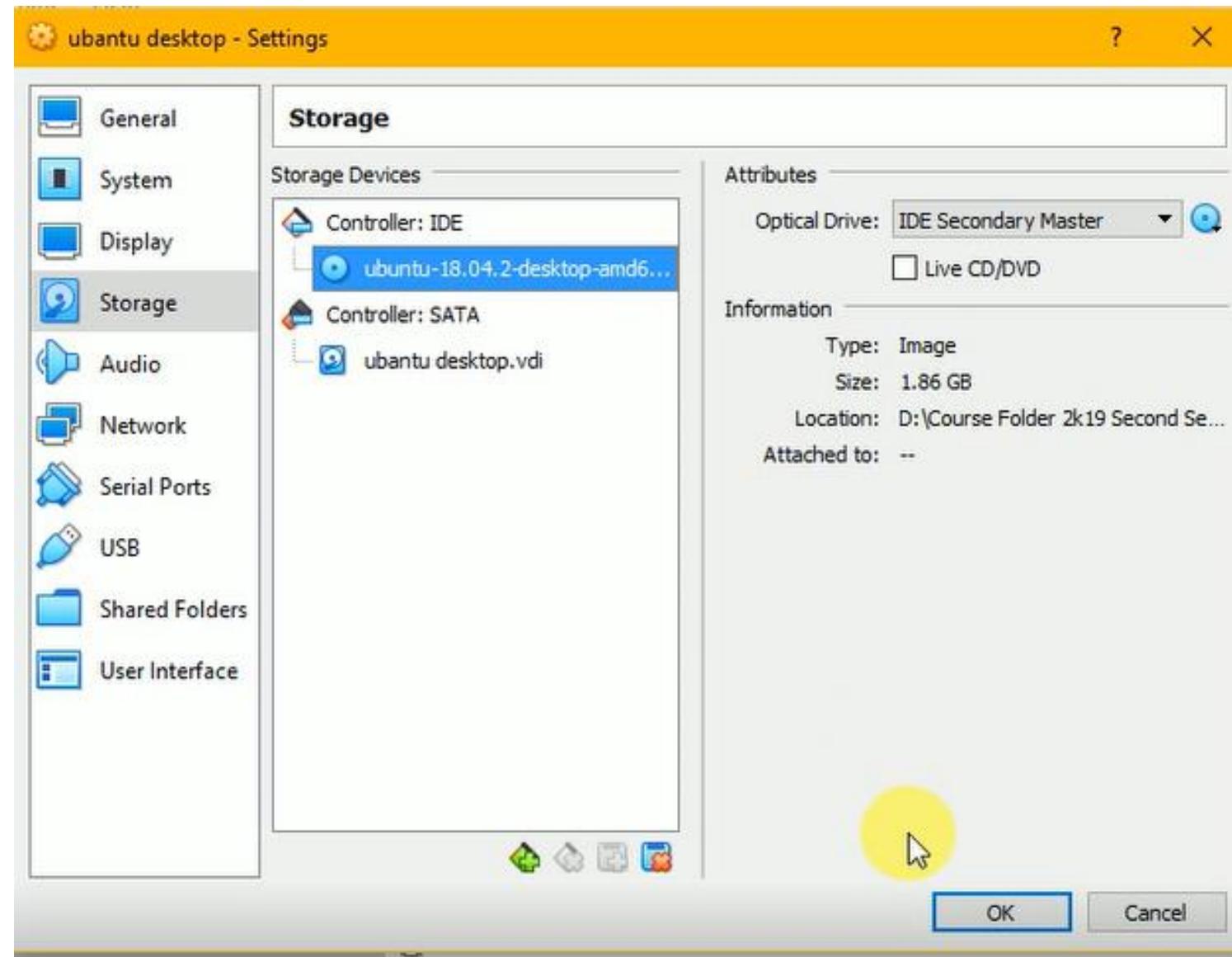












[File](#) [Machine](#) [Help](#)

Tools



### Preview



### General

Name: ubuntu desktop  
Operating System: Ubuntu (64-bit)  
Settings File Location: C:\Users\Computer Solution's\VirtualBox VMs\ubuntu desktop

### System

Base Memory: 9216 MB  
Boot Order: Floppy, Optical, Hard Disk  
Acceleration: VT-x/AMD-V, Nested Paging, KVM Paravirtualization

### Display

Video Memory: 16 MB  
Graphics Controller: VMSVGA  
Remote Desktop Server: Disabled  
Recording: Disabled

### Storage

Controller: IDE  
IDE Secondary Master: [Optical Drive] ubuntu-18.04.2-desktop-amd64.iso (1.86 GB)  
Controller: SATA  
SATA Port 0: ubuntu desktop.vdi (Normal, 10.00 GB)

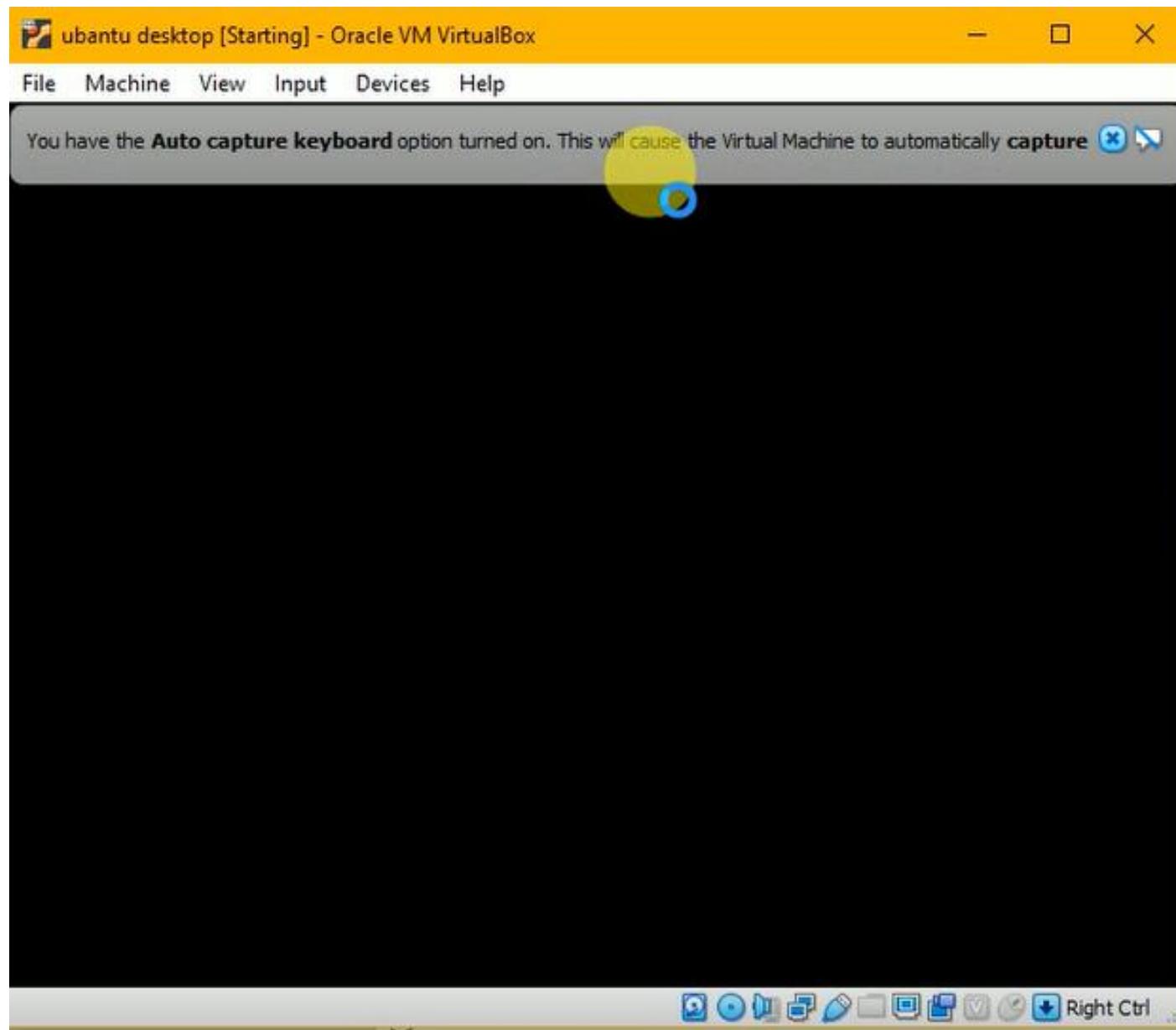
### Audio

Host Driver: Windows DirectSound  
Controller: ICH AC97

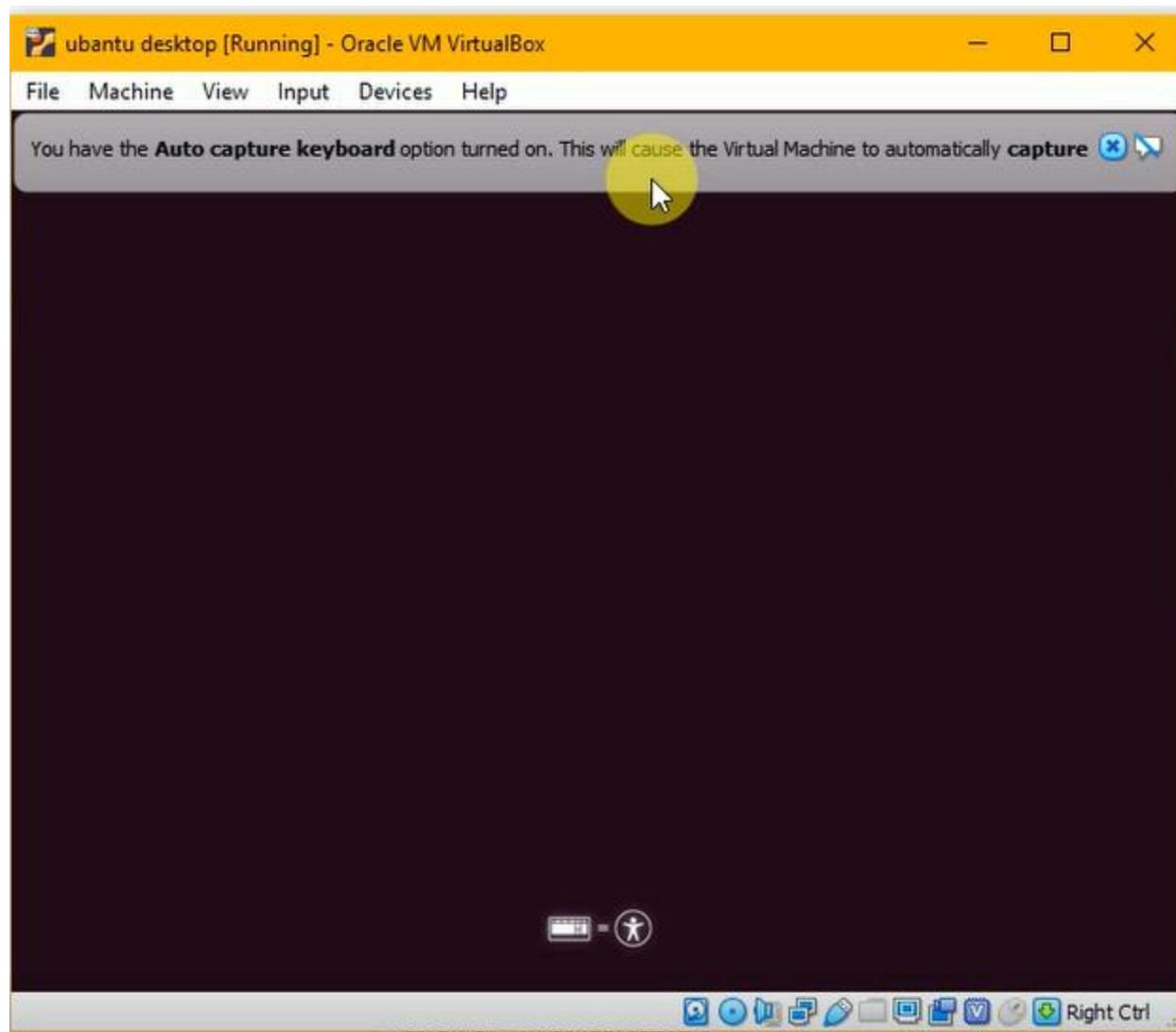
### Network

Adapter 1: Intel PRO/1000 MT Desktop (NAT)

### IISR

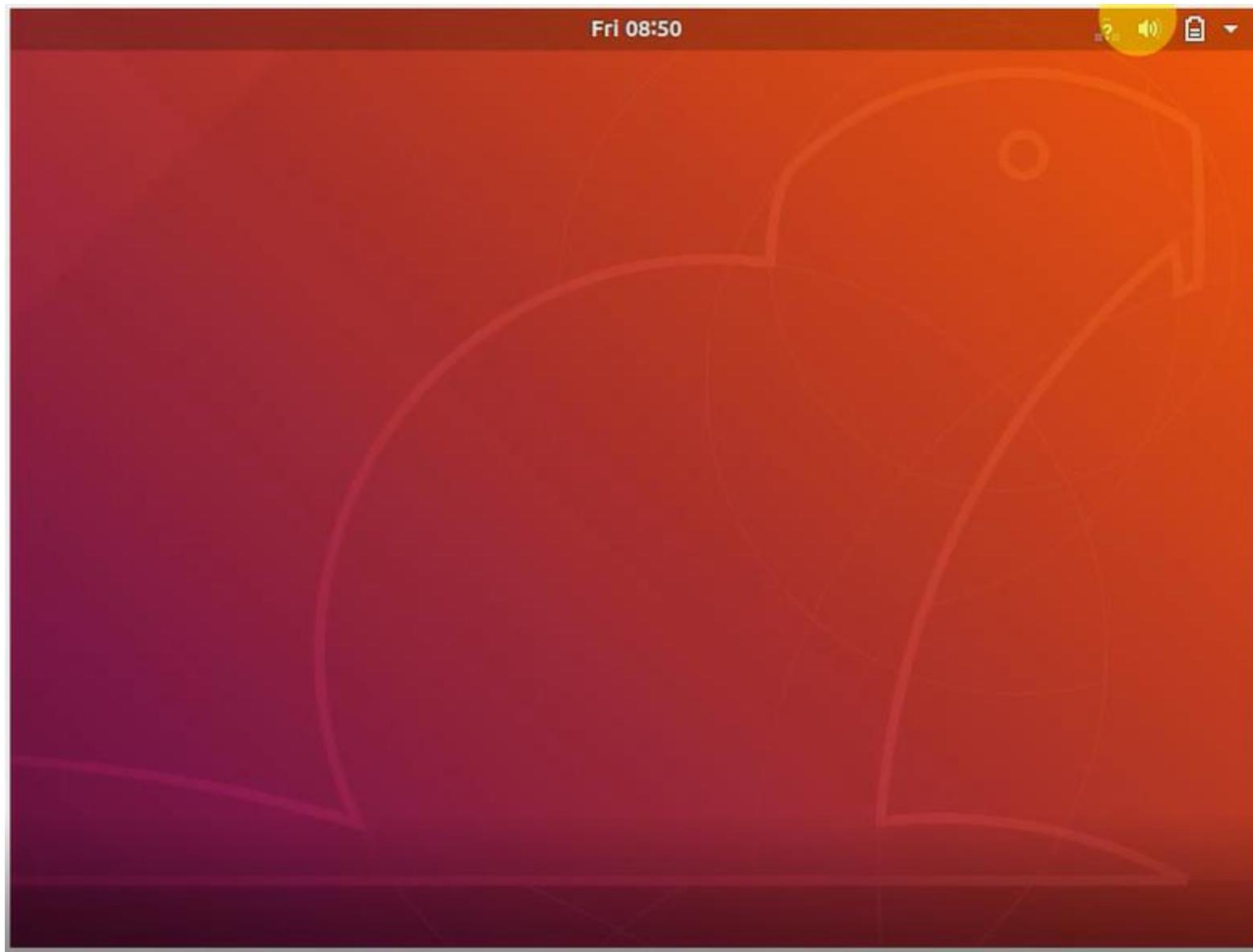


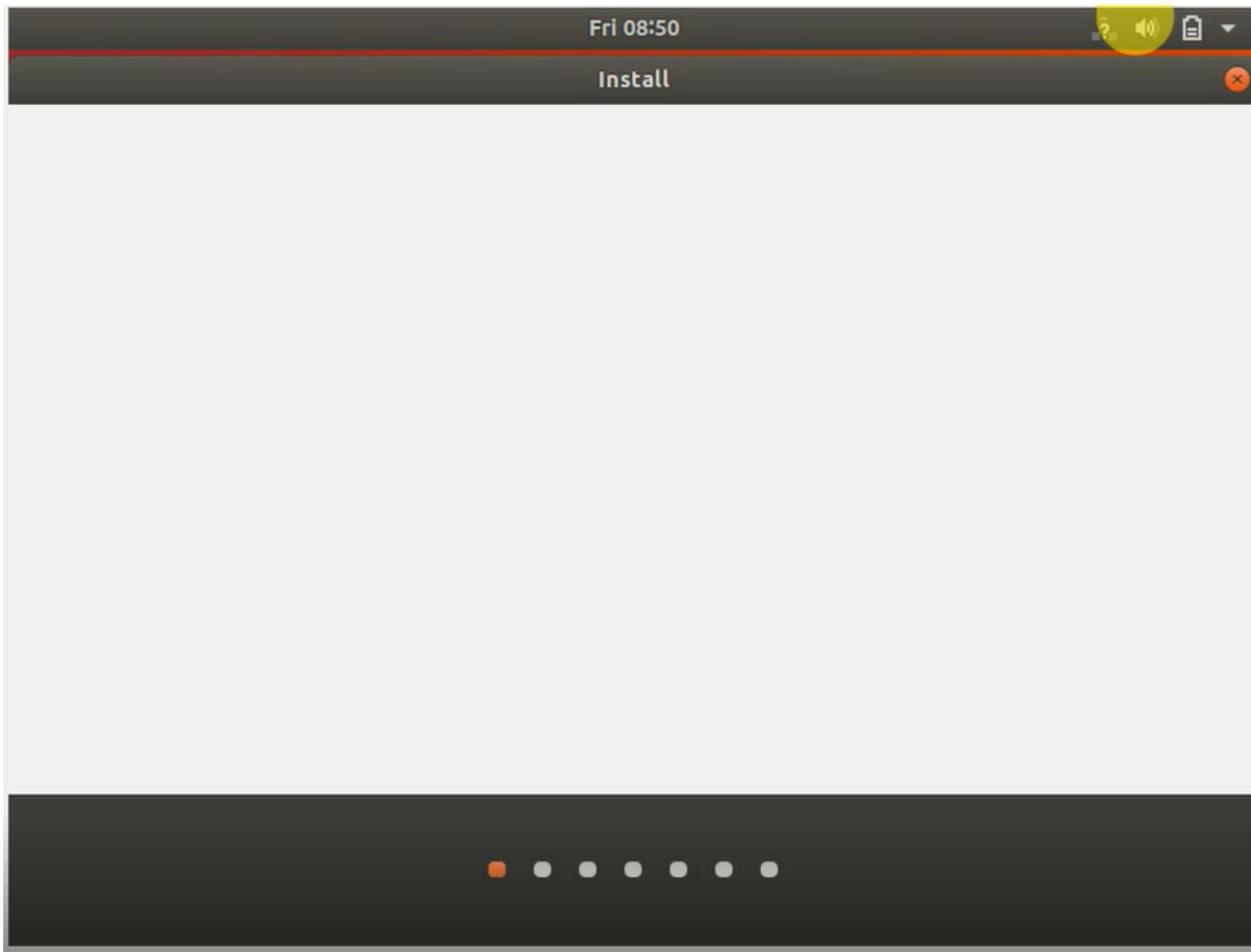






The Ubuntu logo, featuring the word "ubuntu" in a lowercase sans-serif font with a small orange icon above the letter "u", followed by five white dots.





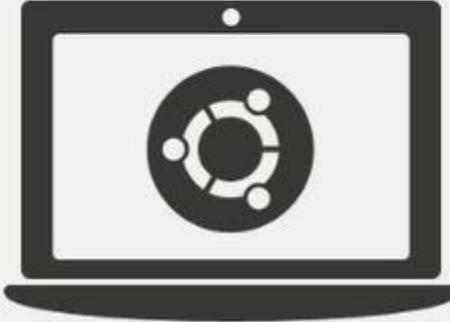
Fri 08:50

Install

# Welcome

English

Español  
Esperanto  
Euskara  
Français  
Gaeilge  
Galego  
Hrvatski  
Íslenska  
Italiano  
Kurdî  
Latviski  
Lietuviškai  
Magyar  
Nederlands  
No localization (UTF-8)  
Norsk bokmål

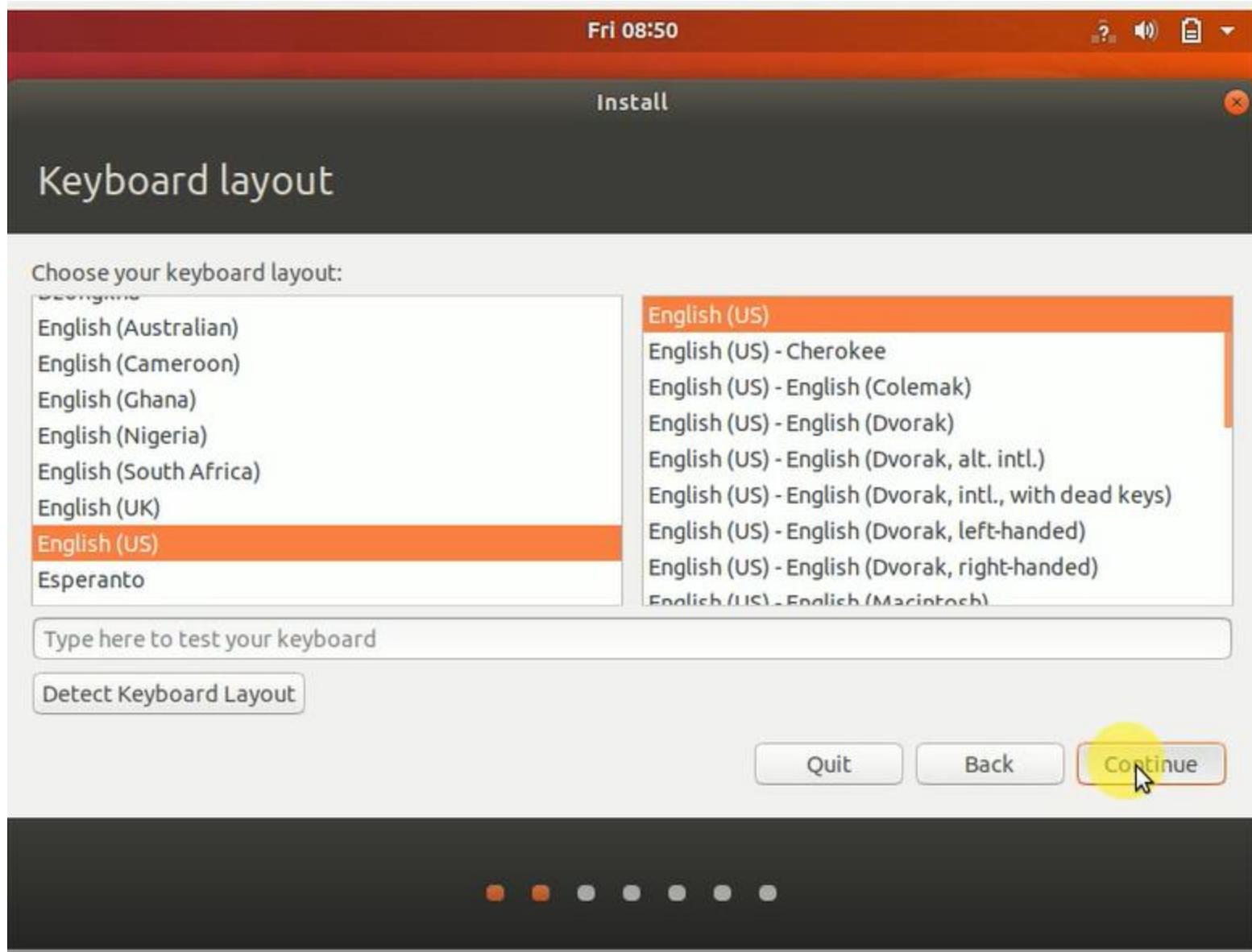


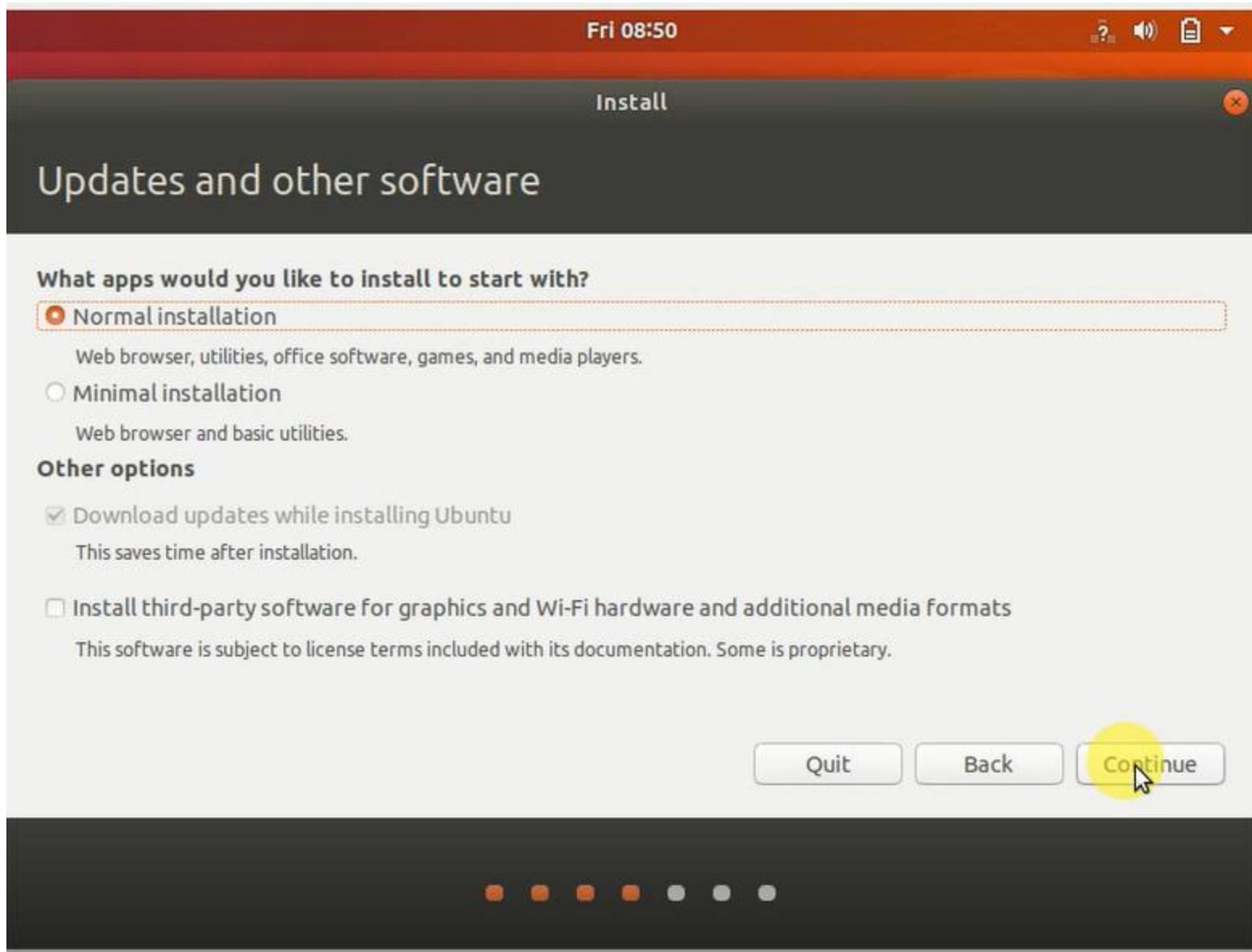
Try Ubuntu

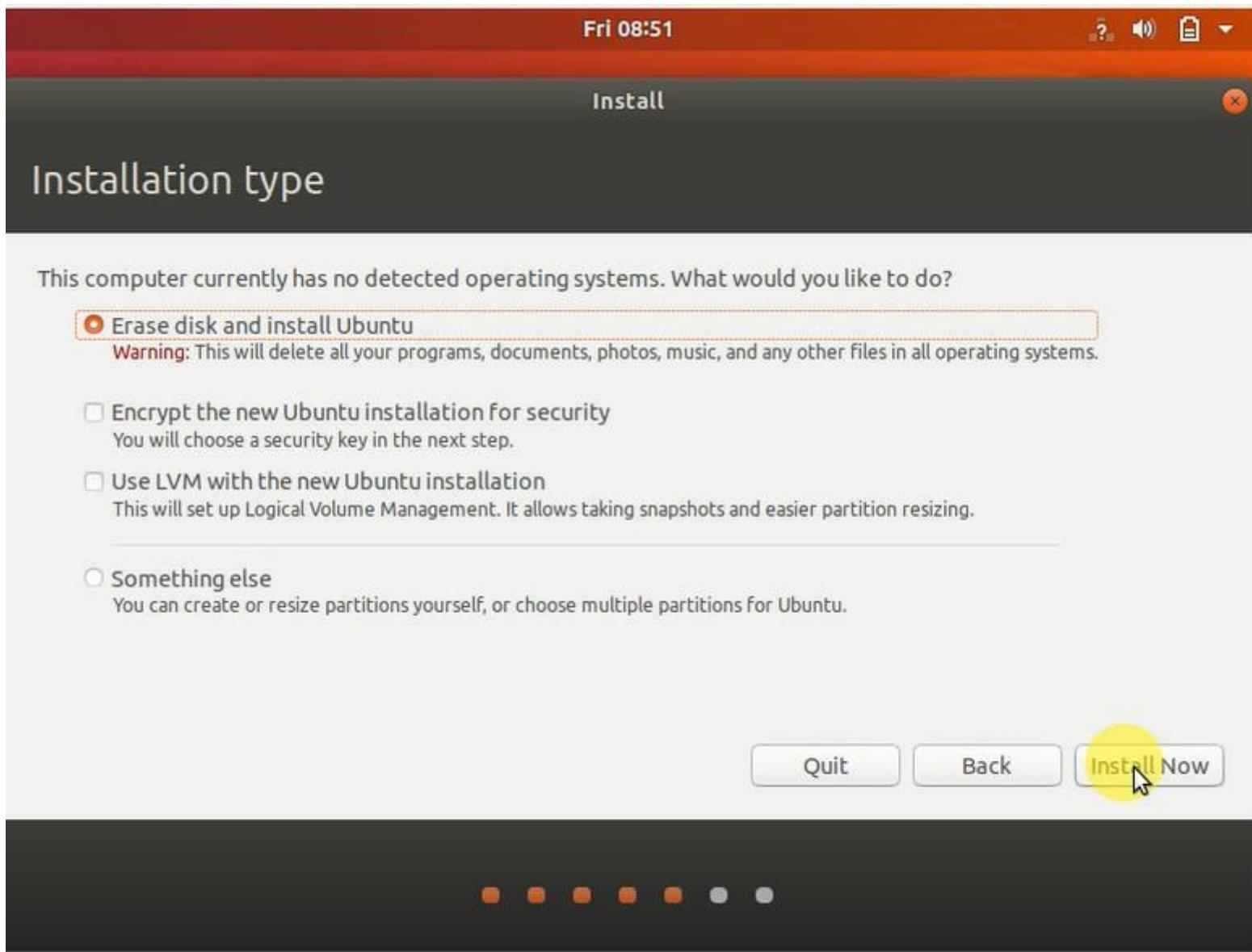
Install Ubuntu

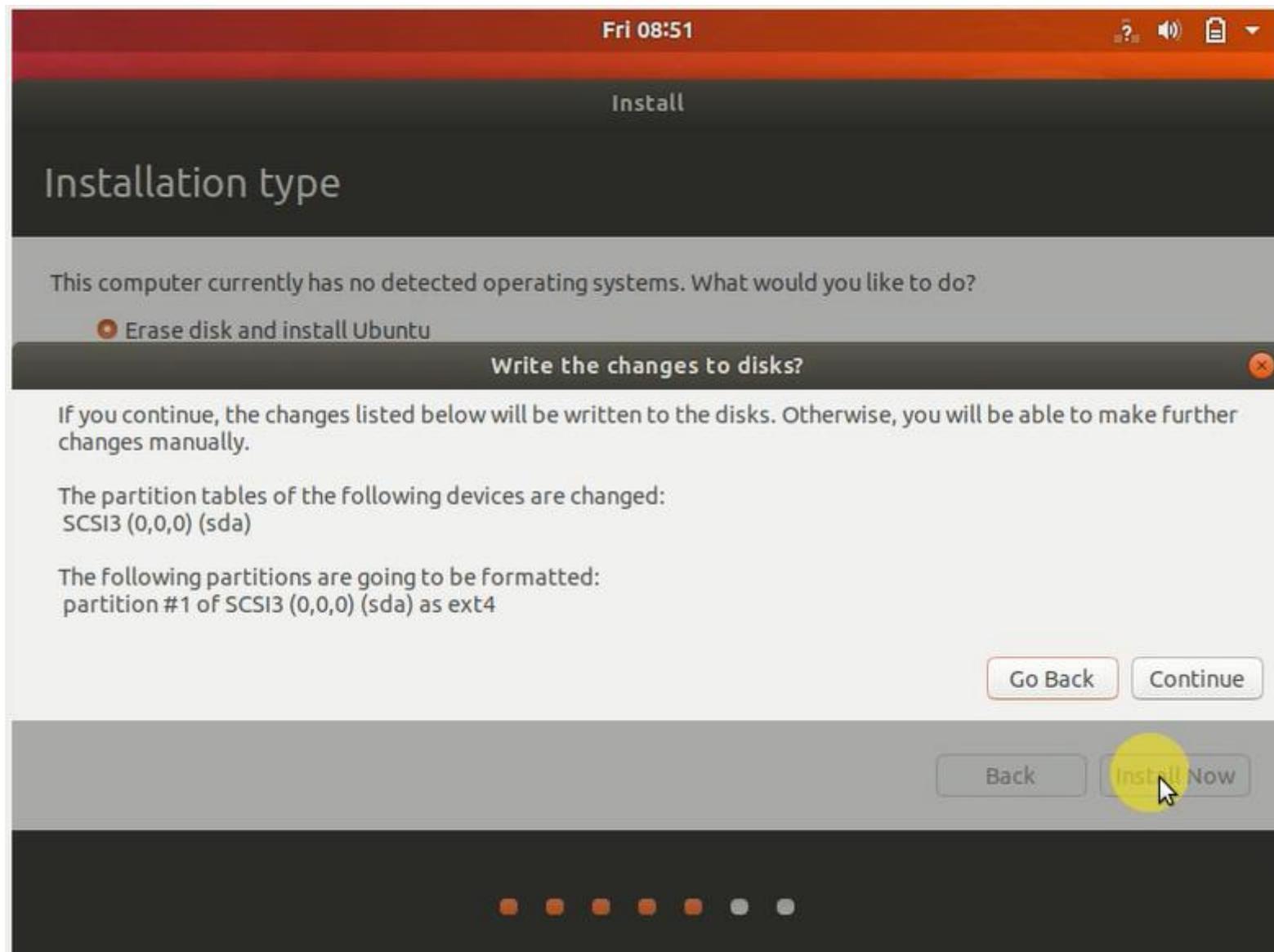
You can try Ubuntu without making any changes to your computer, directly from this CD.

Or if you're ready, you can install Ubuntu alongside (or instead of) your current operating system. This shouldn't take too long.









Fri 08:51

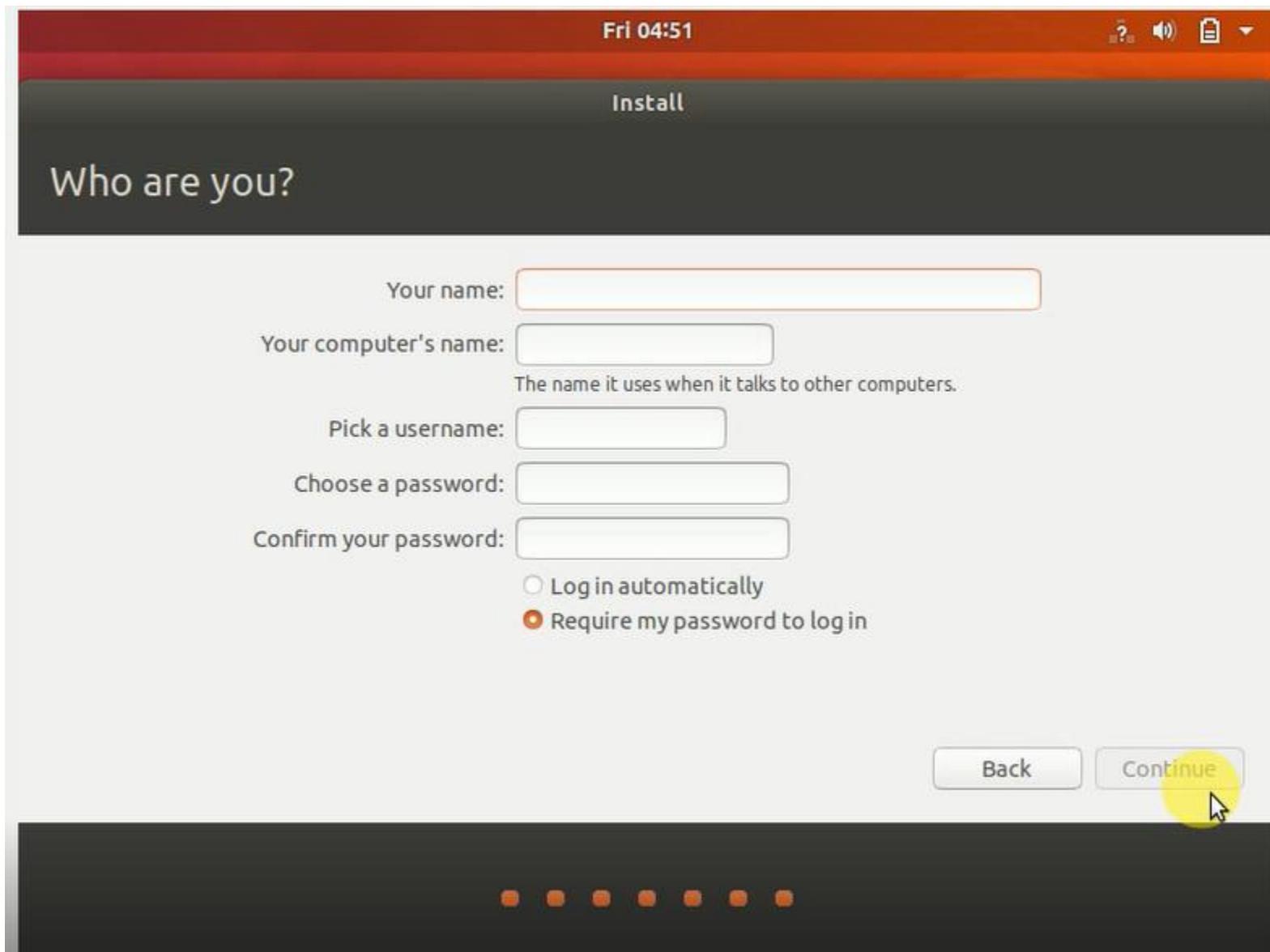
Install

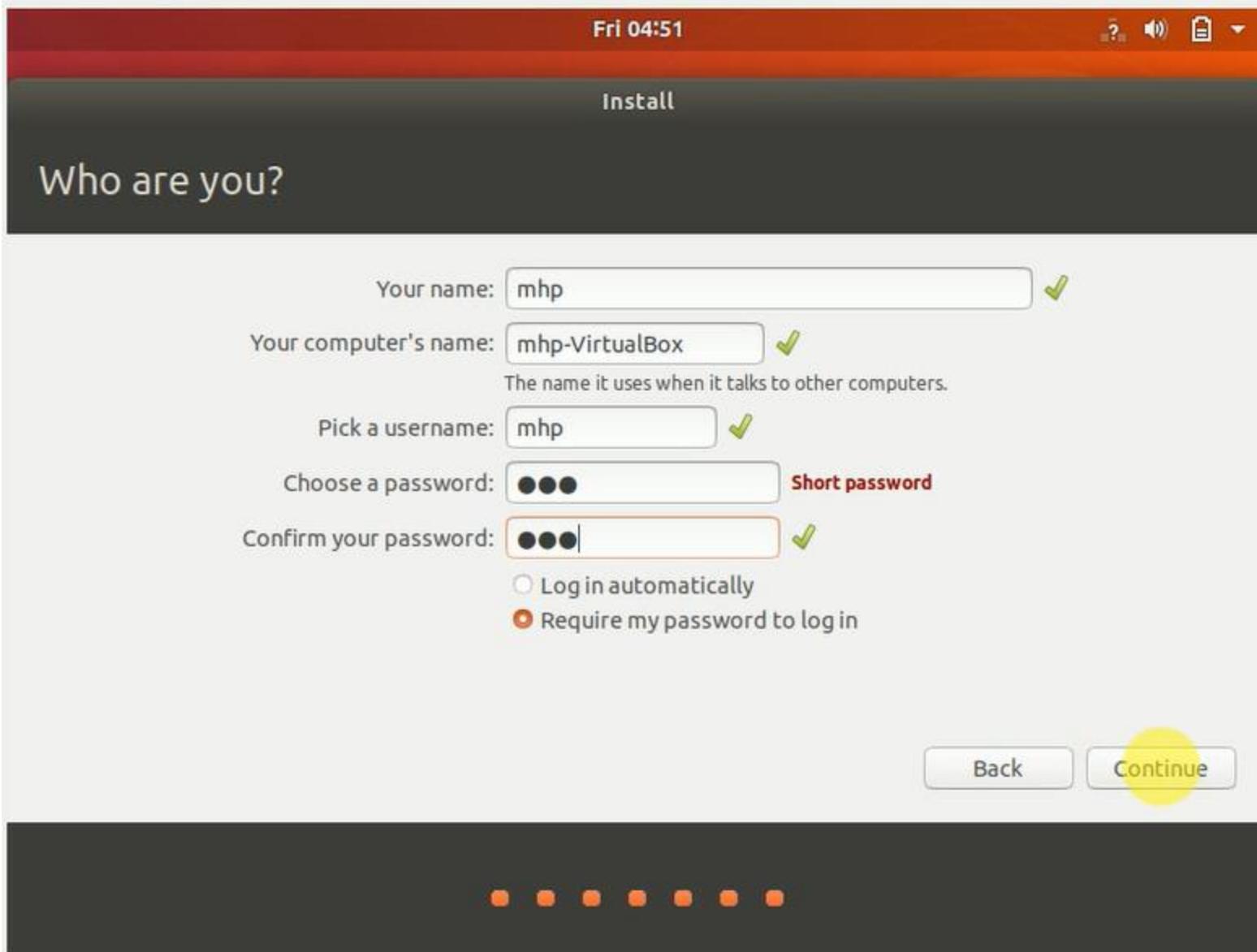
Where are you?

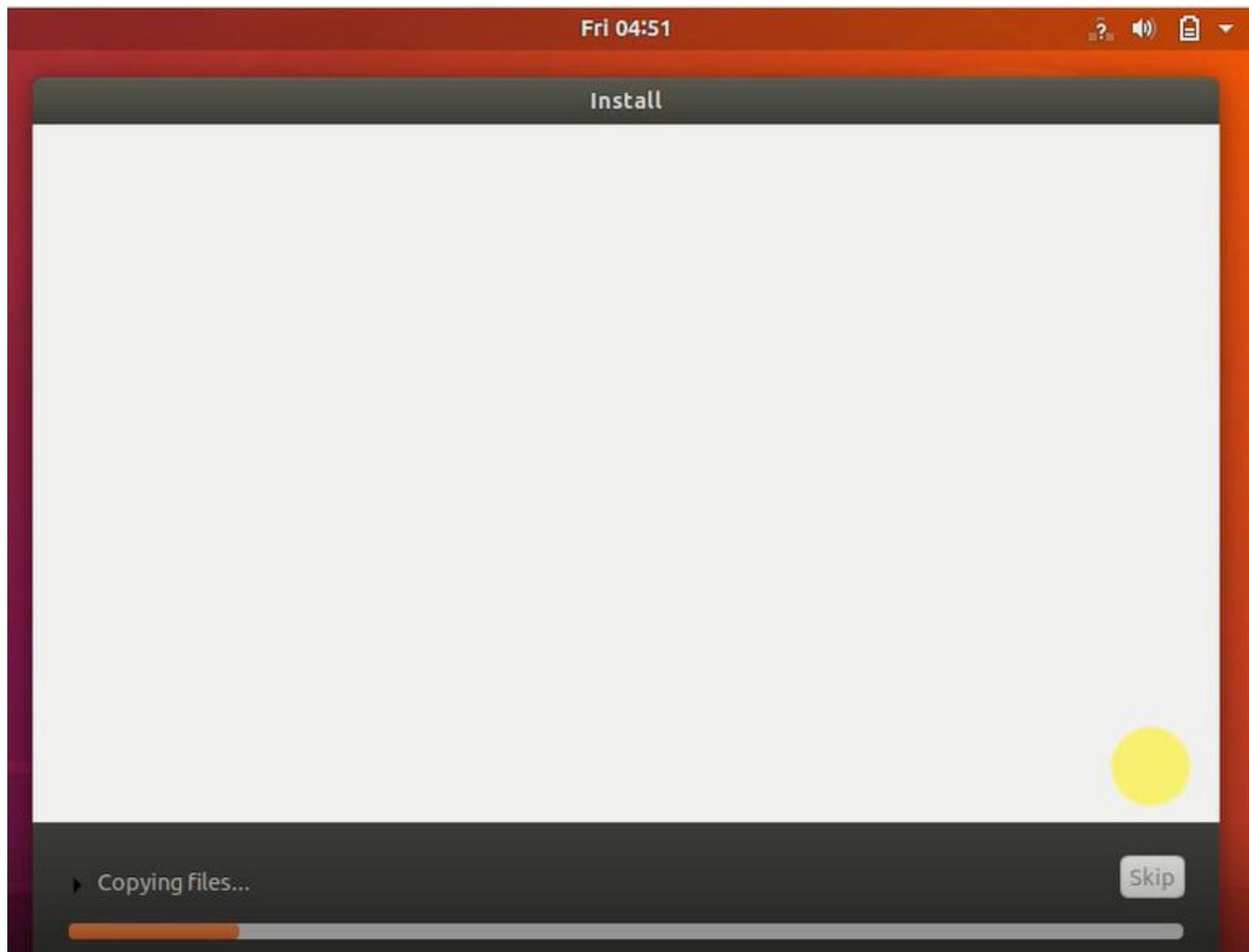
New York

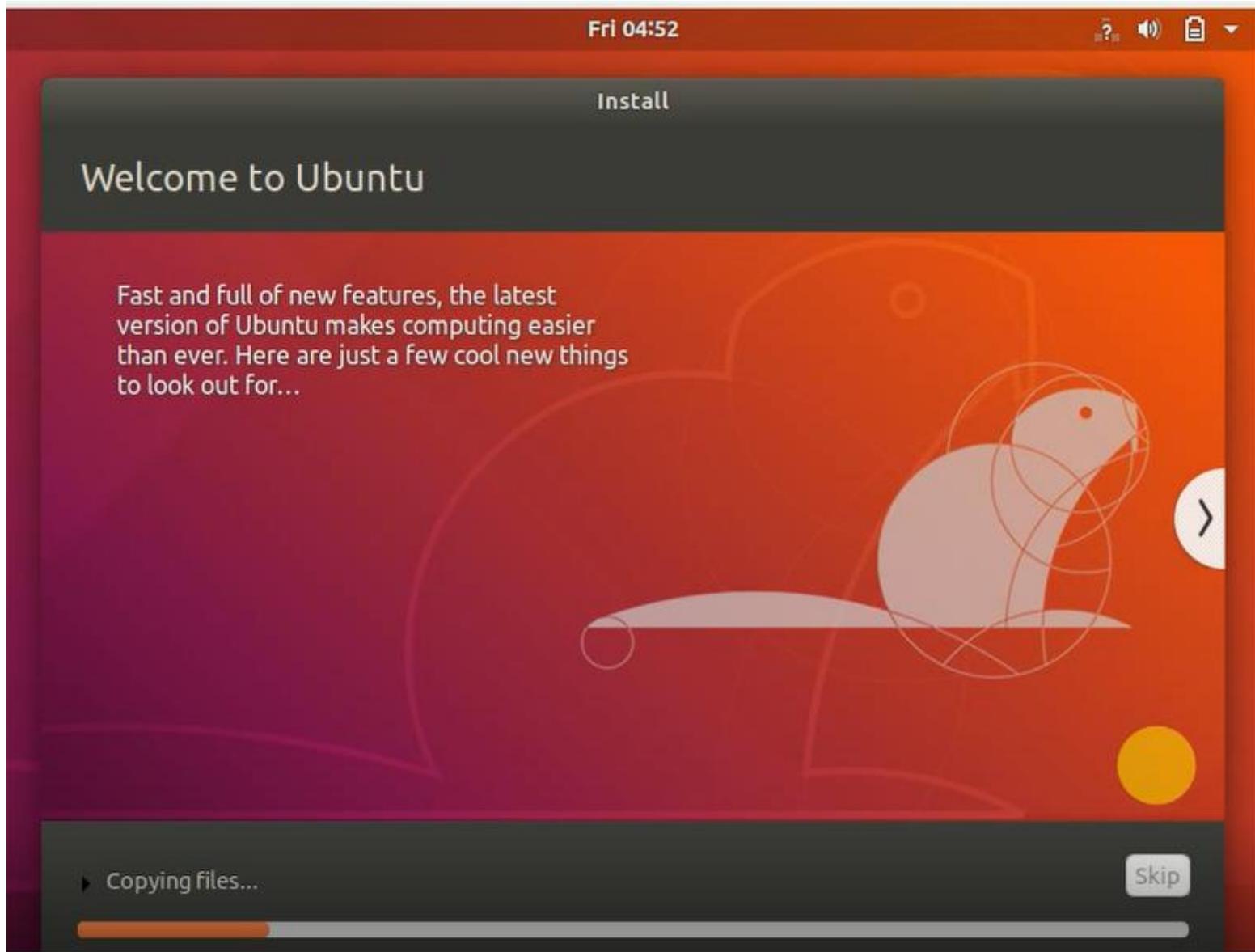
Back Continue

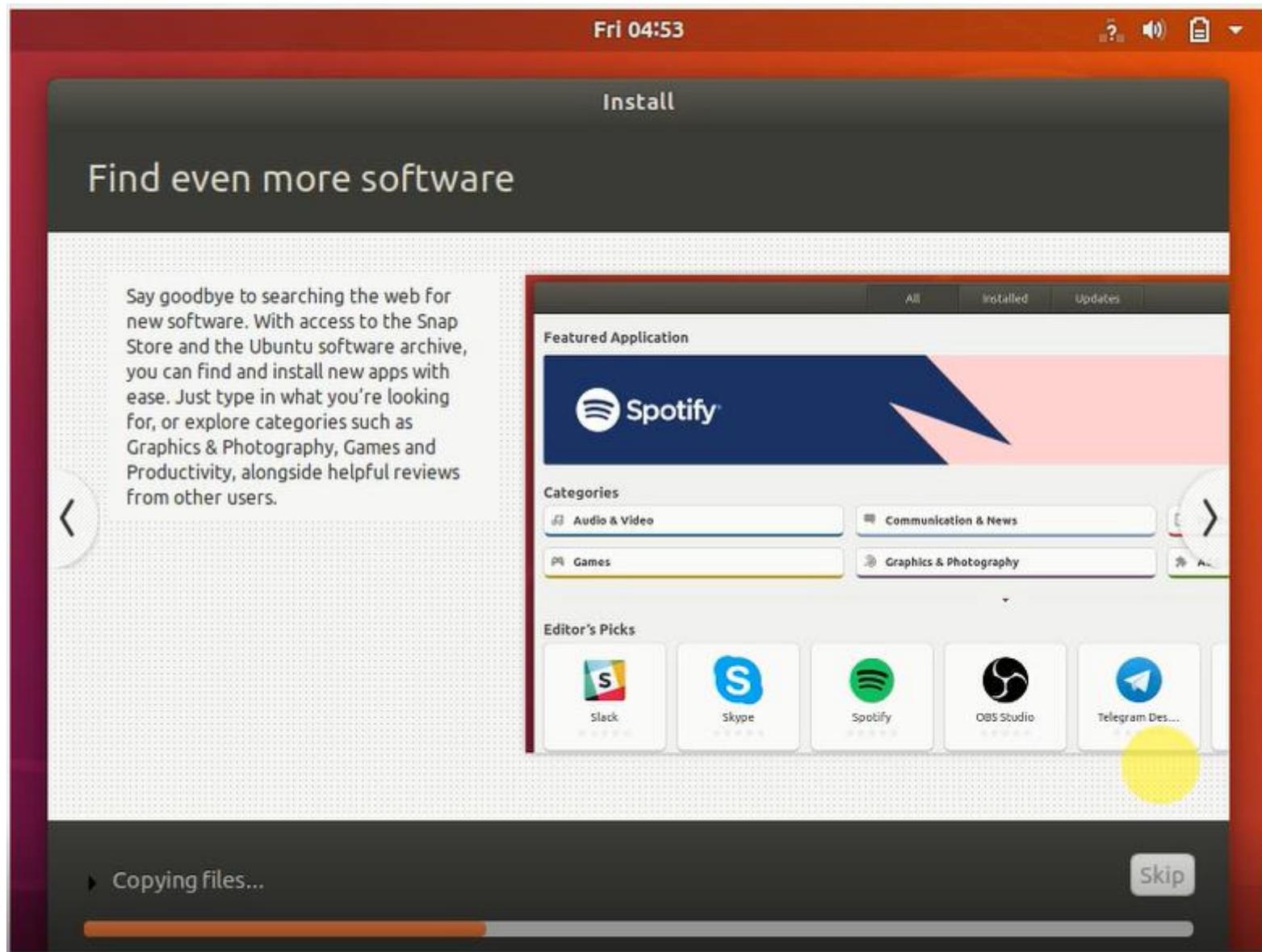
• • • • • • •











Fri 04:55

Install

## Have fun with your photos

Shotwell is a handy photo manager that is ready for your gadgets. Connect a camera or a phone to transfer your photos, then it's easy to share them and keep them safe. If you're feeling creative, you can try lots of photo apps from the Ubuntu Software Center.

Included software

- Shotwell Photo Manager

Supported software

- GIMP Image Editor
- Pitivi Video Editor

Cape Town.jpeg (~/Pictures) - Shotwell

File Edit View Photo Help

Exposure: 0

Contrast: 0

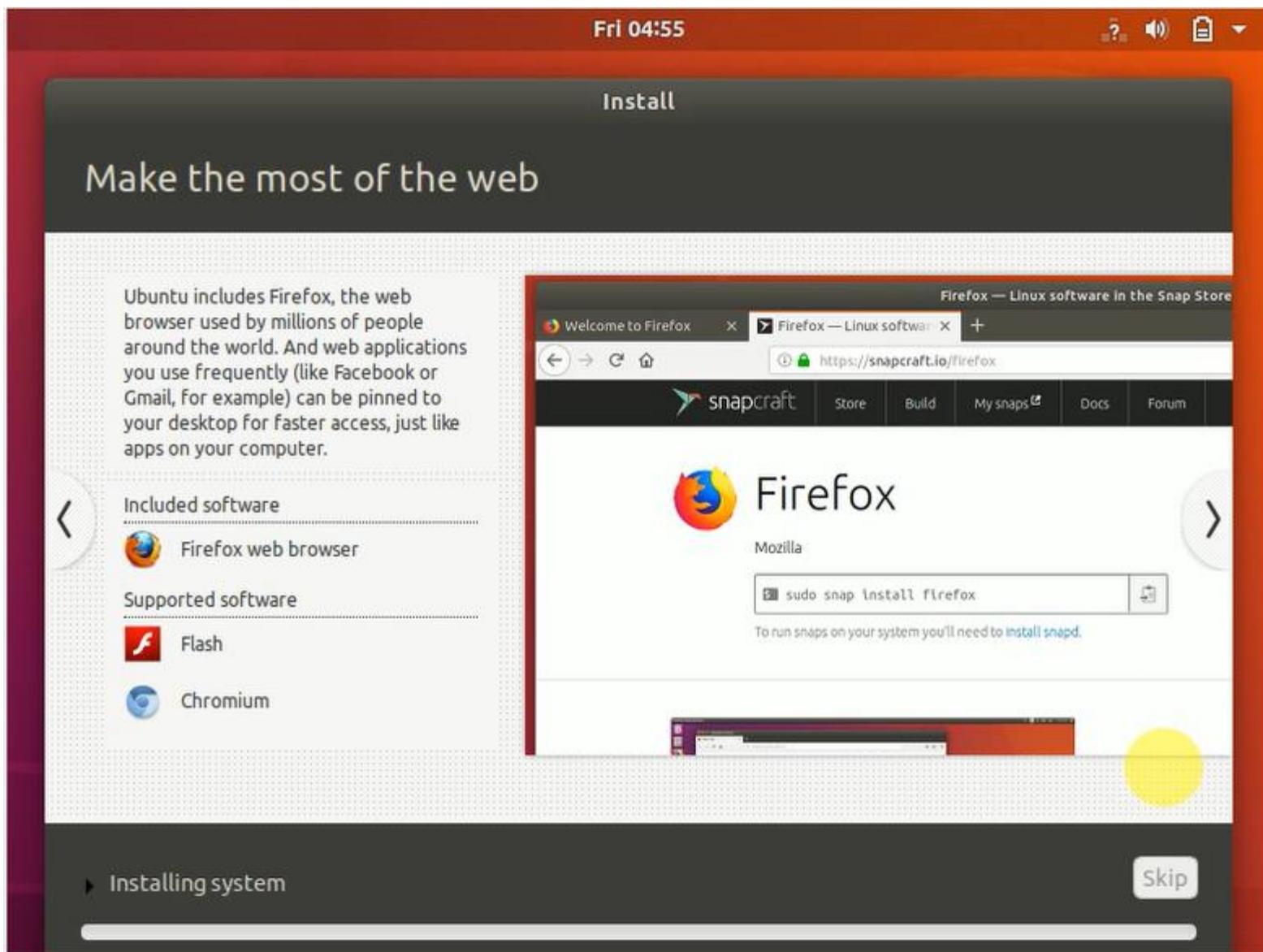
Saturation: 0

Tint: 0

Temperature: 0

Installing system

Skip



Fri 04:56

Install

## Everything you need for the office

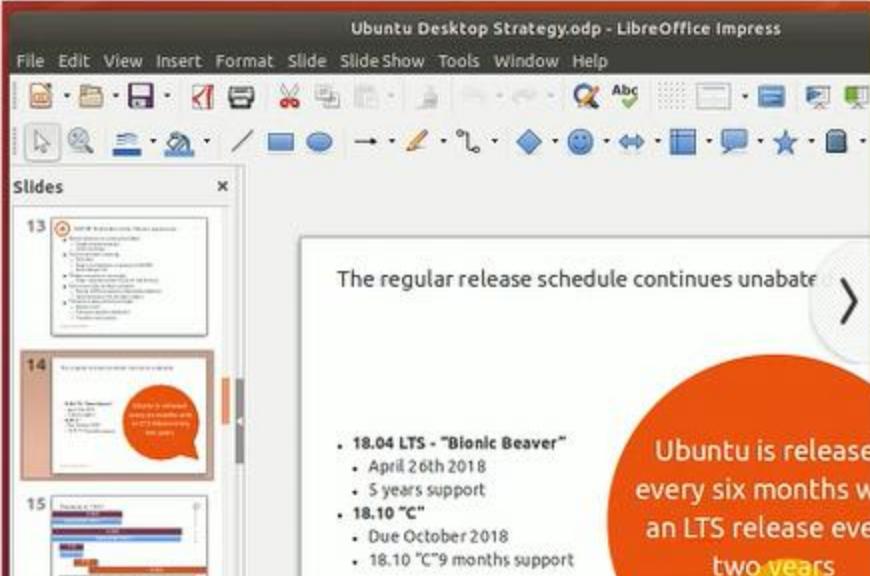
LibreOffice is a free office suite packed with everything you need to create documents, spreadsheets and presentations. Compatible with Microsoft Office file formats, it gives you all the features you need, without the price tag.

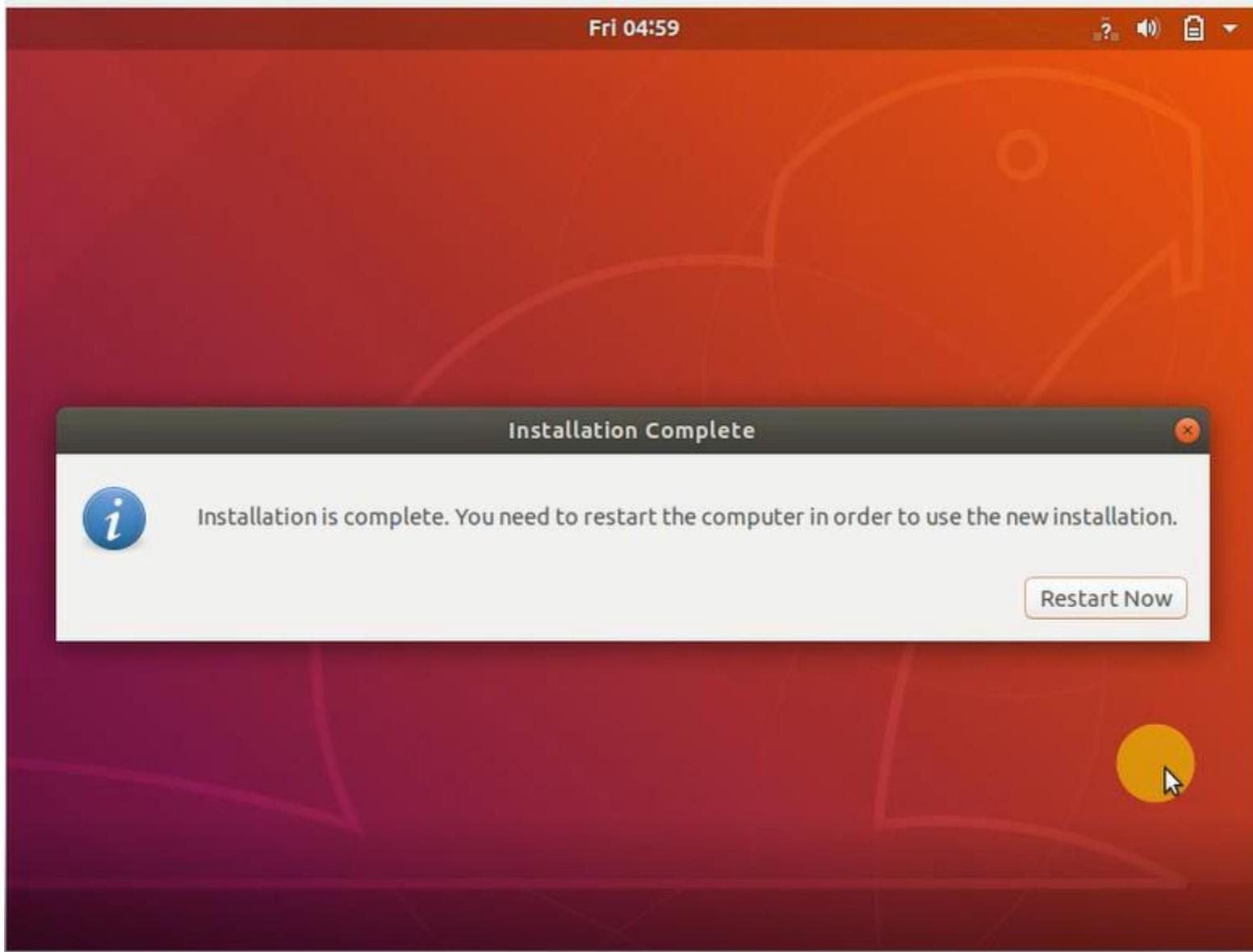
Included software

-  LibreOffice Writer
-  LibreOffice Calc
-  LibreOffice Impress

Configuring hardware...

Skip

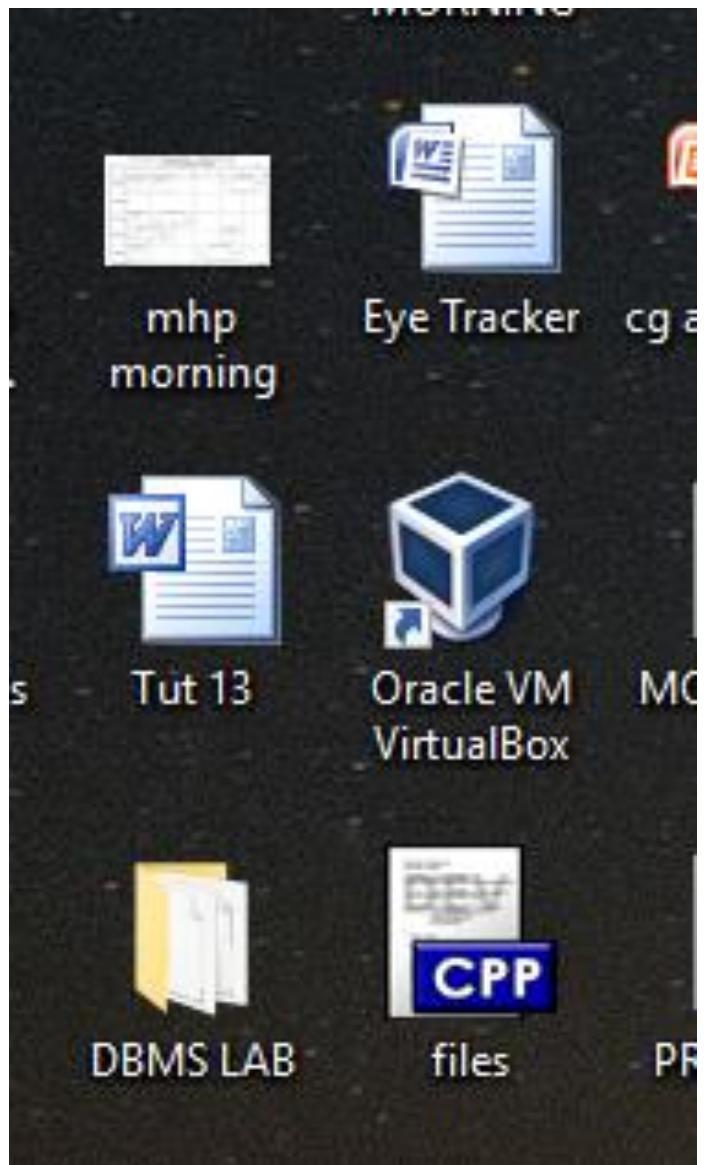






• • • •

Please remove the installation medium, then press ENTER:



Oracle VM VirtualBox Manager

File Machine Help

Tools

New Settings Discard Start

**ubuntu desktop**  
Powered Off

**General**

Name: ubuntu desktop  
Operating System: Ubuntu (64-bit)  
Settings File Location: C:\Users\Computer Solution's\VirtualBox VMs\ubuntu desktop

**System**

Base Memory: 9216 MB  
Boot Order: Floppy, Optical, Hard Disk  
Acceleration: VT-x/AMD-V, Nested Paging, KVM Paravirtualization

**Display**

Video Memory: 16 MB  
Graphics Controller: VMSVGA  
Remote Desktop Server: Disabled  
Recording: Disabled

**Storage**

Controller: IDE  
IDE Secondary Master: [Optical Drive] ubuntu-18.04.2-desktop-amd64.iso (1.86 GB)  
Controller: SATA  
SATA Port 0: ubuntu desktop.vdi (Normal, 10.00 GB)

**Audio**

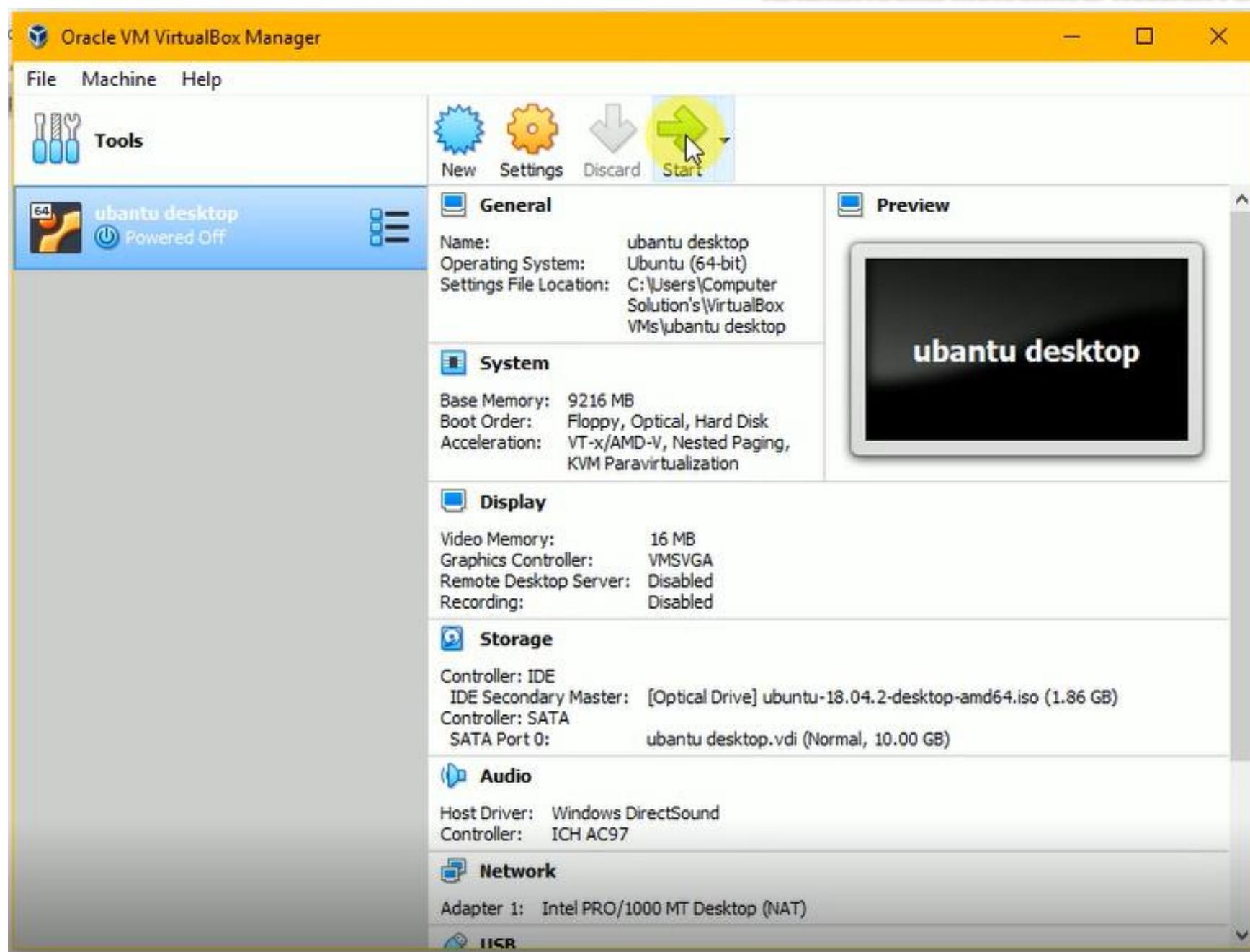
Host Driver: Windows DirectSound  
Controller: ICH AC97

**Network**

Adapter 1: Intel PRO/1000 MT Desktop (NAT)

IISR

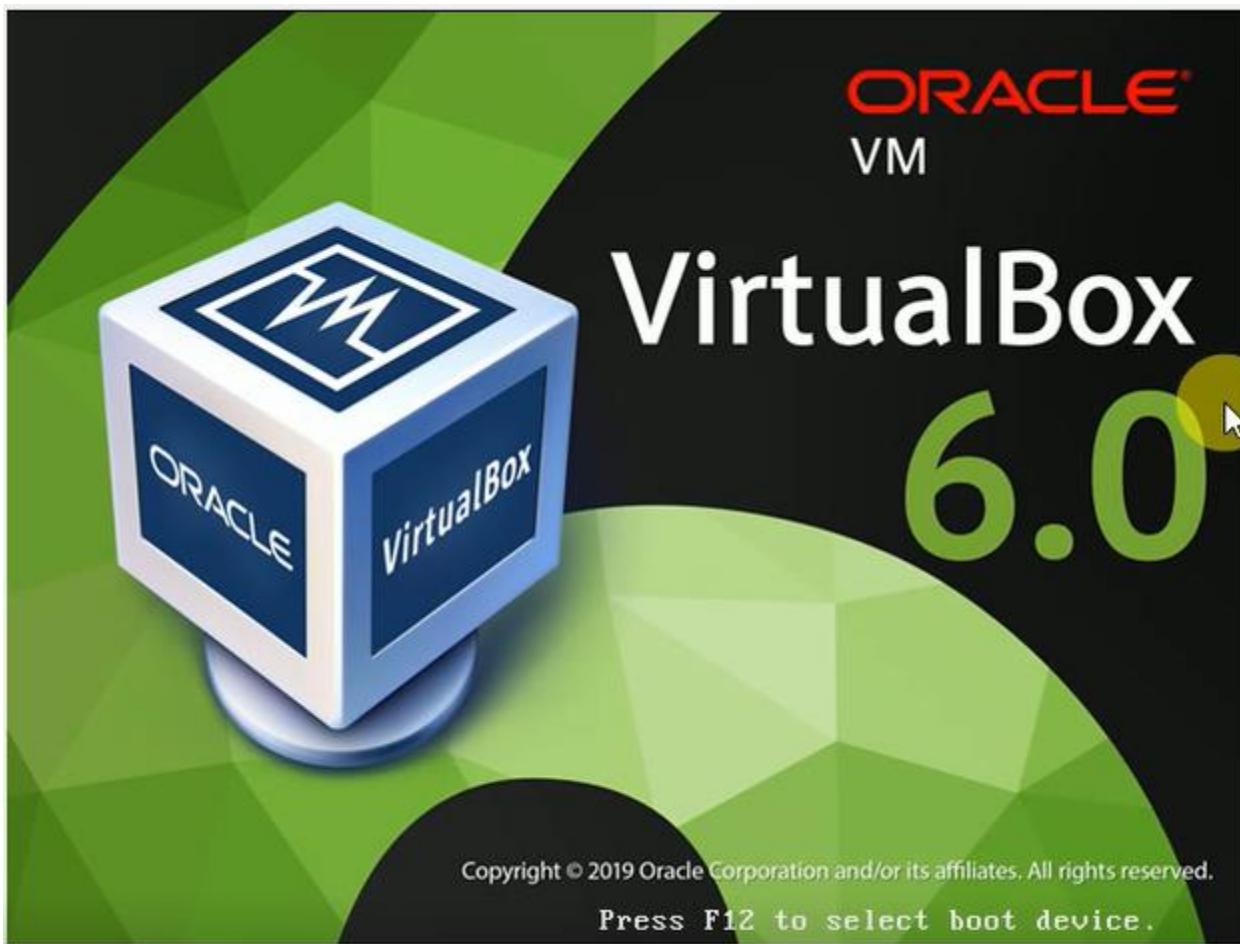
Preview





• • • •

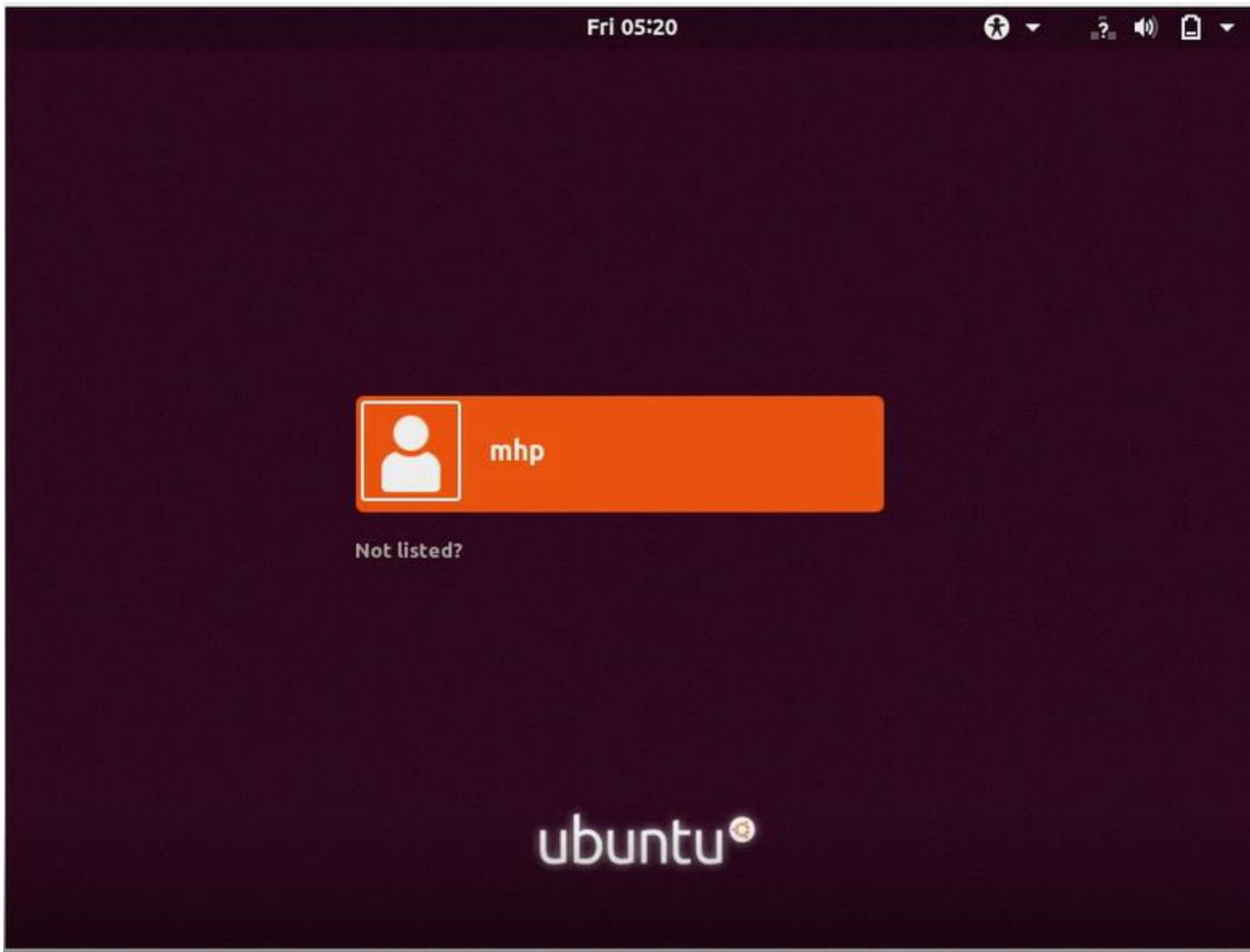
Please remove the installation medium, then press ENTER:

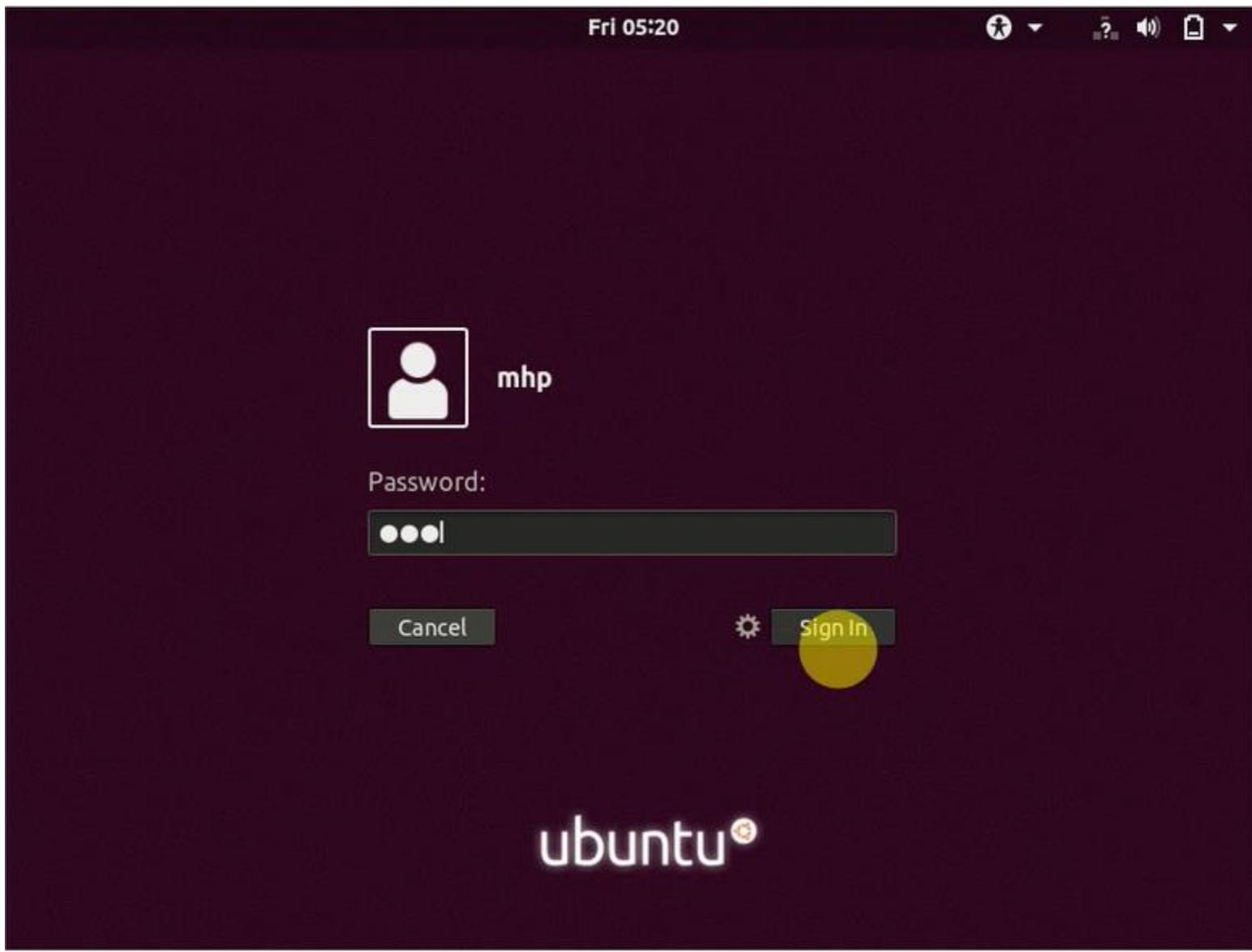


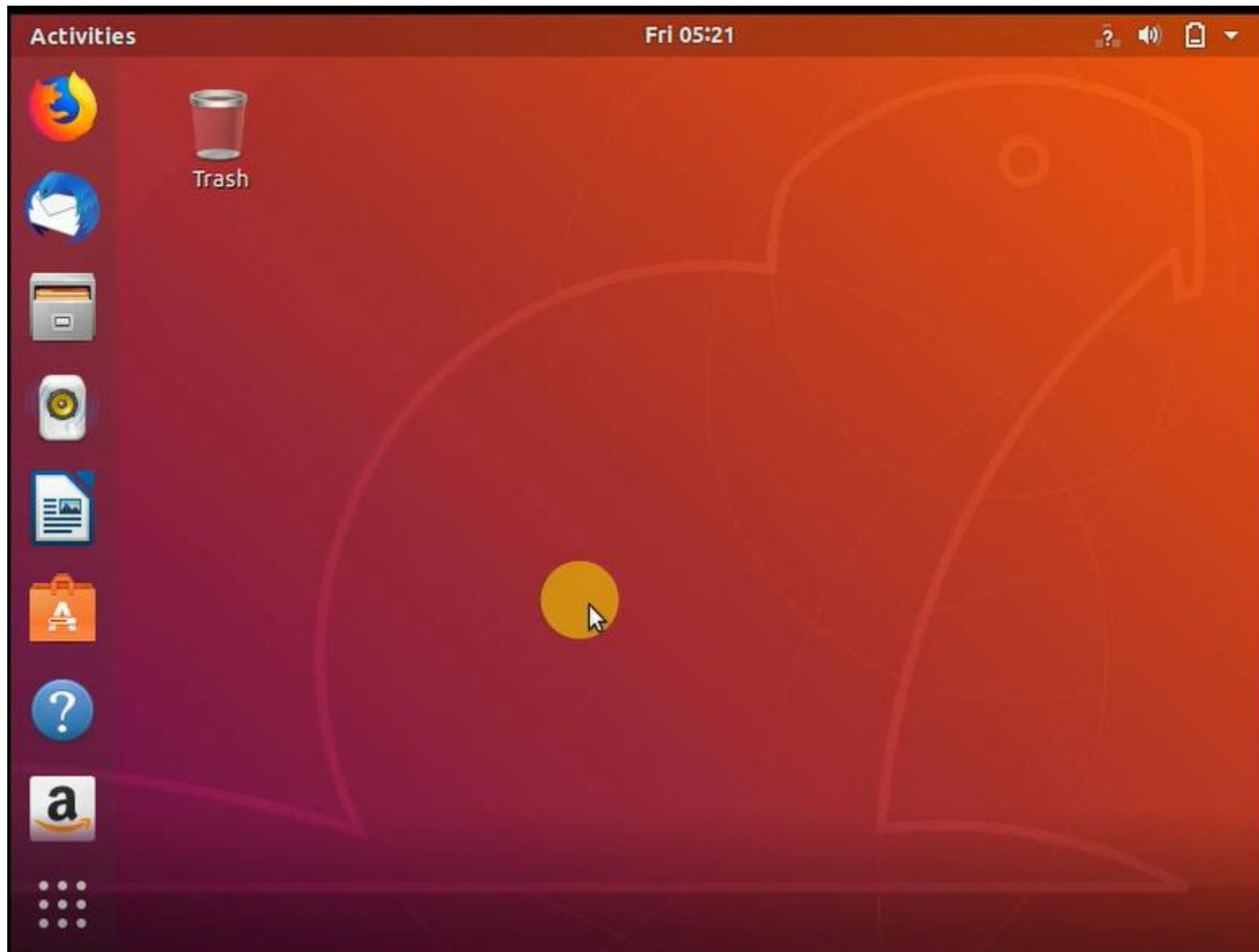
```
[ 1.891295] [drm:umw_host_log [umwgfx]] *ERROR* Failed to send log
[ 1.903804] [drm:umw_host_log [umwgfx]] *ERROR* Failed to send log
/dev/sda1: clean, 137332/655360 files, 1151576/2620928 blocks
```

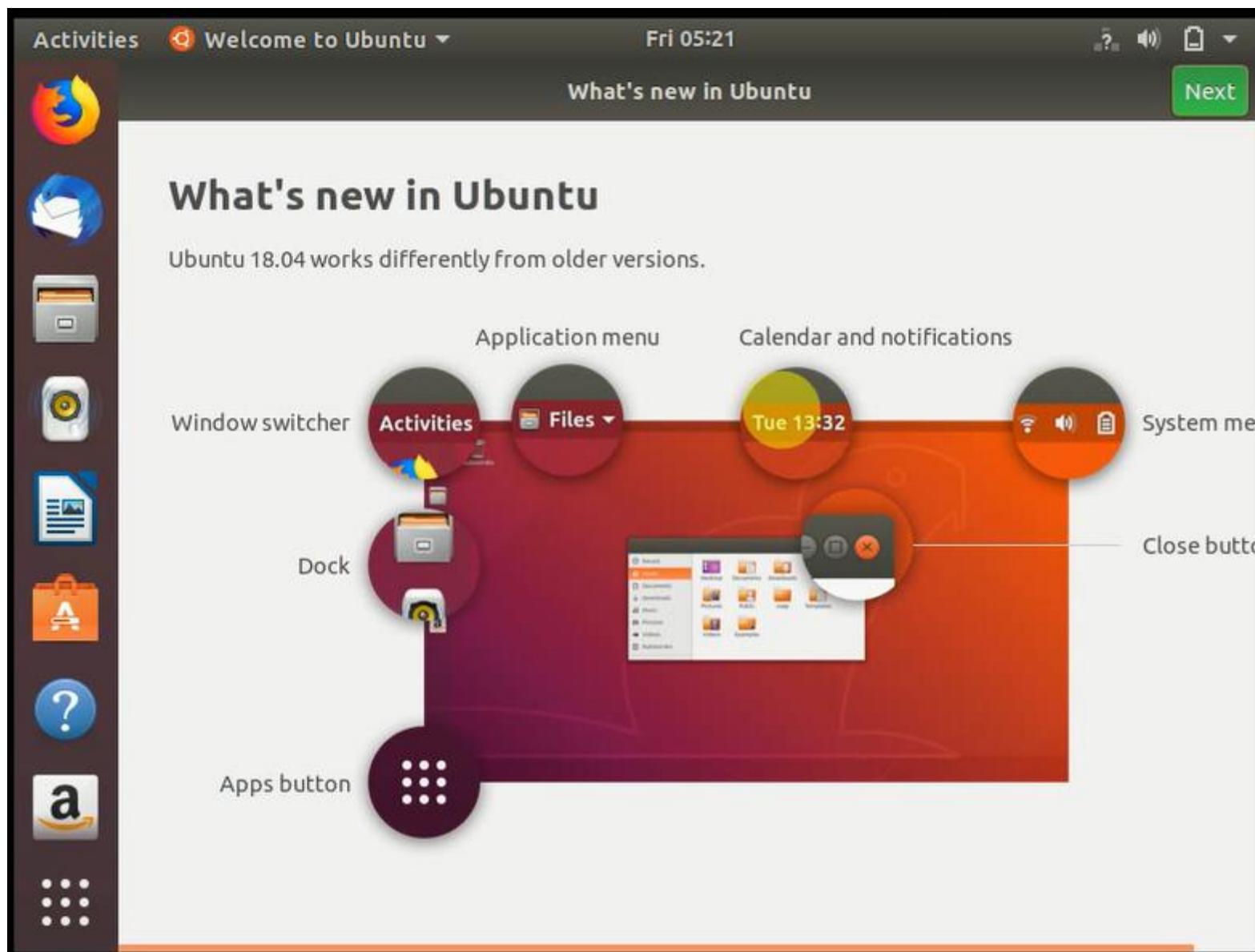
ubuntu®  
.....





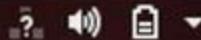






## Activities

Fri 05:52

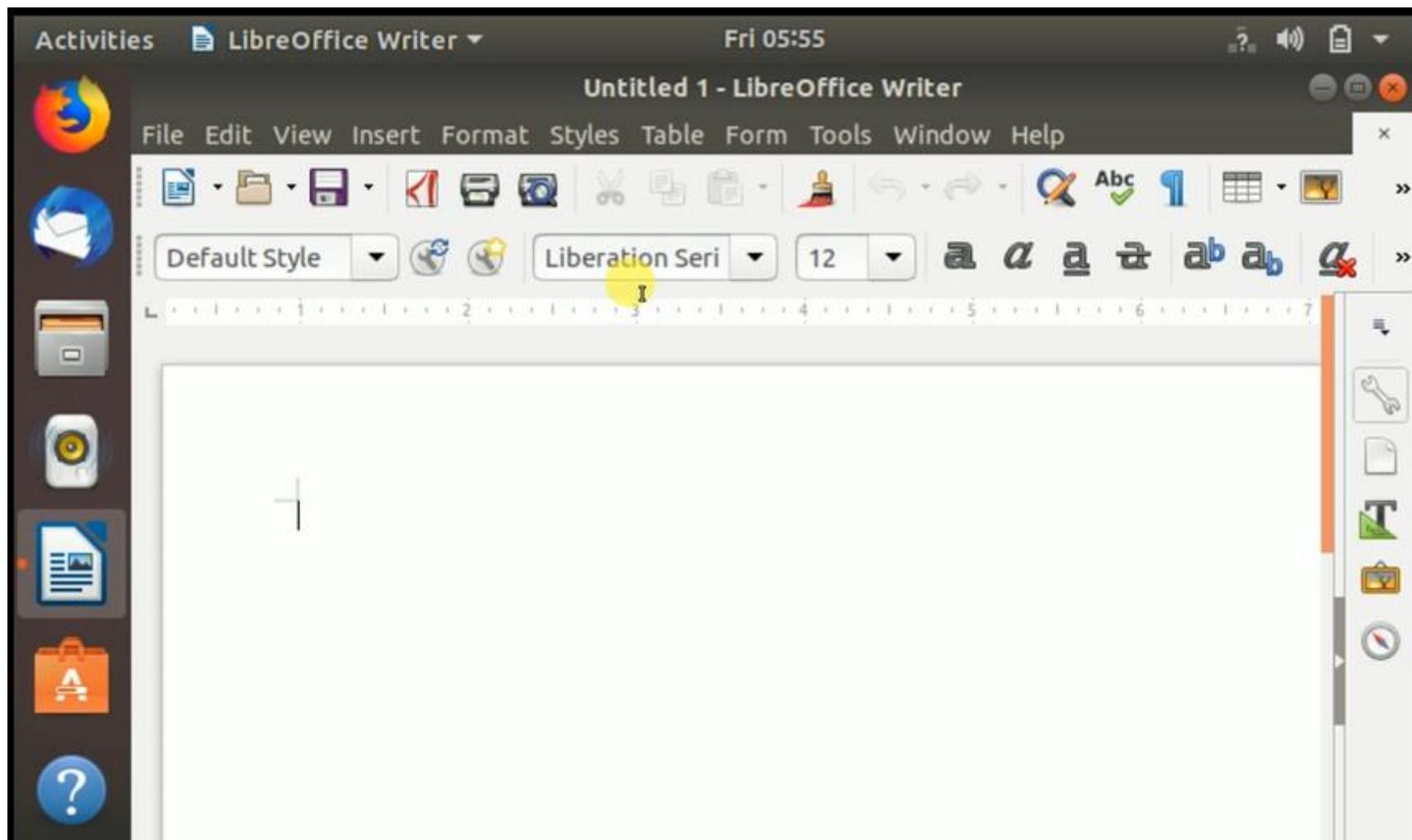


Trash









Activities LibreOffice Impress Fri 05:53

Select a Template

Search... Filter Presentations All Categories

Alizarin Beehive Blue Curve Blueprint Plans

Bright Blue Classy Red DNA Focus

Import

Help Open Cancel

Slide 1 of 1 | Default | 0.00 / 0.00 | 0.00 X 0.00

The screenshot displays the LibreOffice Impress application interface. At the top, the title bar shows 'LibreOffice Impress' and the system time 'Fri 05:53'. Below the title bar is a search bar labeled 'Search...' and a 'Filter' button. To the right of the filter are two dropdown menus: 'Presentations' and 'All Categories'. The main area is titled 'Select a Template' and contains a grid of eight template previews. Each preview includes a small image of the template design, the template name, and a brief description. The 'Blueprint Plans' template is highlighted with a blue border, indicating it is selected. At the bottom of the dialog are buttons for 'Import', 'Help', 'Open', and 'Cancel'. The status bar at the bottom shows slide information ('Slide 1 of 1'), document status ('Default'), and file sizes ('0.00 / 0.00'). On the left side of the screen, there is a vertical docked panel with various icons representing other applications like Firefox, Mail, and Files.

Activities LibreOffice Impress Fri 05:54

Untitled 1 - LibreOffice Impress

File Edit View Insert Format Slide Slide Show Tools Window Help

Slides x

1

2

3

Click to add Title

• Click to add Text

Recording... 00:17:38

Slide 2 of 3 | Standard | 10.25 / -1.09 | 0.00 x 0.00

This screenshot shows a LibreOffice Impress presentation window titled "Untitled 1 - LibreOffice Impress". The main slide, labeled "Slide 2 of 3", features a blue background with a white rectangular area for text. Inside this area, the placeholder text "Click to add Title" is centered above a bulleted list starting with "• Click to add Text". To the right of the text area, there is a yellow pencil and a pink sticky note. A recording interface at the bottom of the slide indicates it is currently being recorded, with a timer showing 00:17:38. The LibreOffice interface includes a toolbar with various icons for file operations, drawing tools, and slide navigation. On the left, a sidebar lists three slides numbered 1, 2, and 3. The status bar at the bottom provides information about the slide's dimensions (10.25 / -1.09) and resolution (0.00 x 0.00).

Activities LibreOffice Impress Fri 05:55 abc.odp - LibreOffice Impress

File Edit View Insert Format Slide **Slide Show** Tools Window Help

- Start from First Slide F5
- Start from Current Slide Shift+F5
- Rehearse Timings
- Custom Slide Show...
- Slide Show Settings...

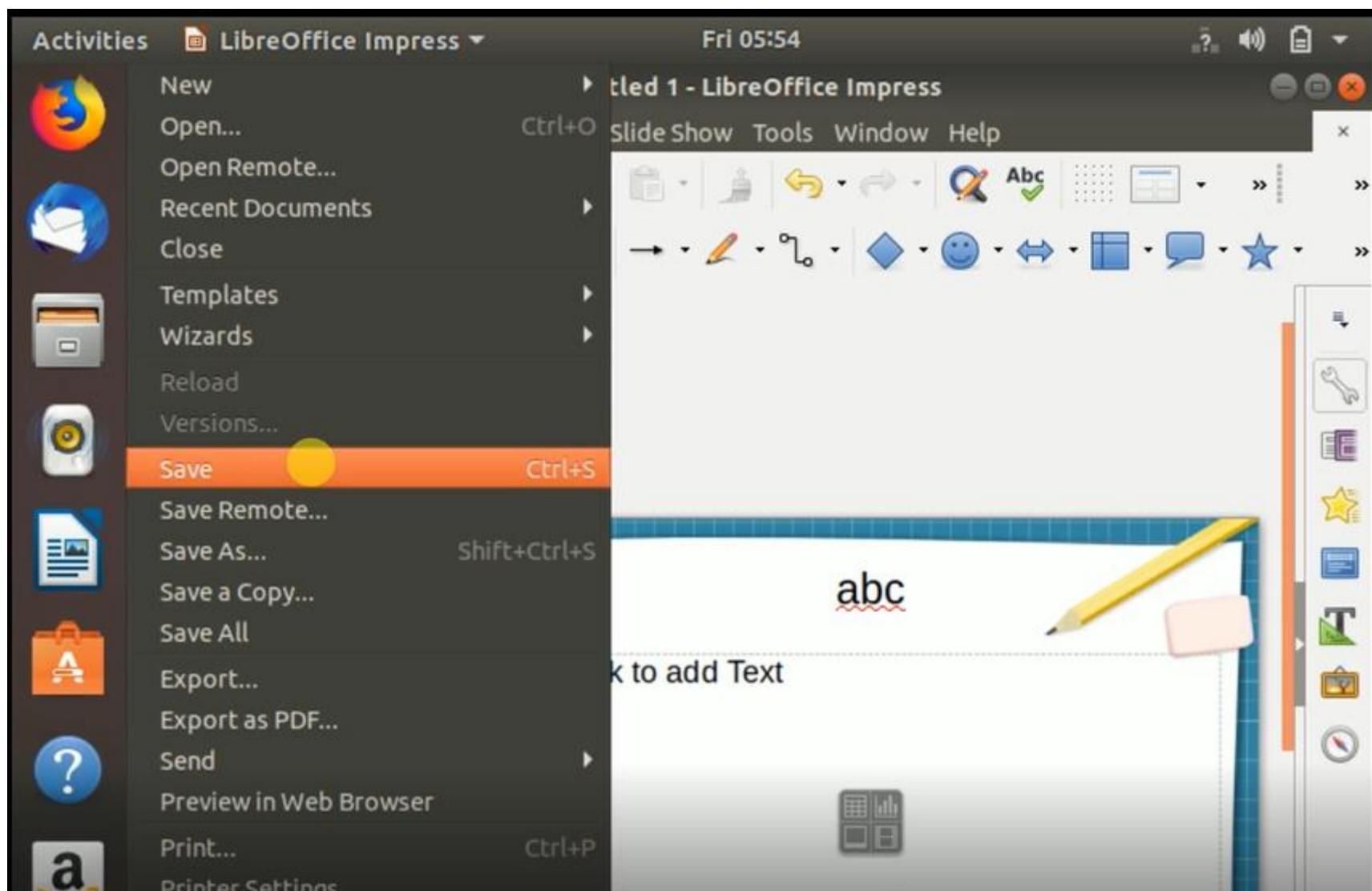
Slides

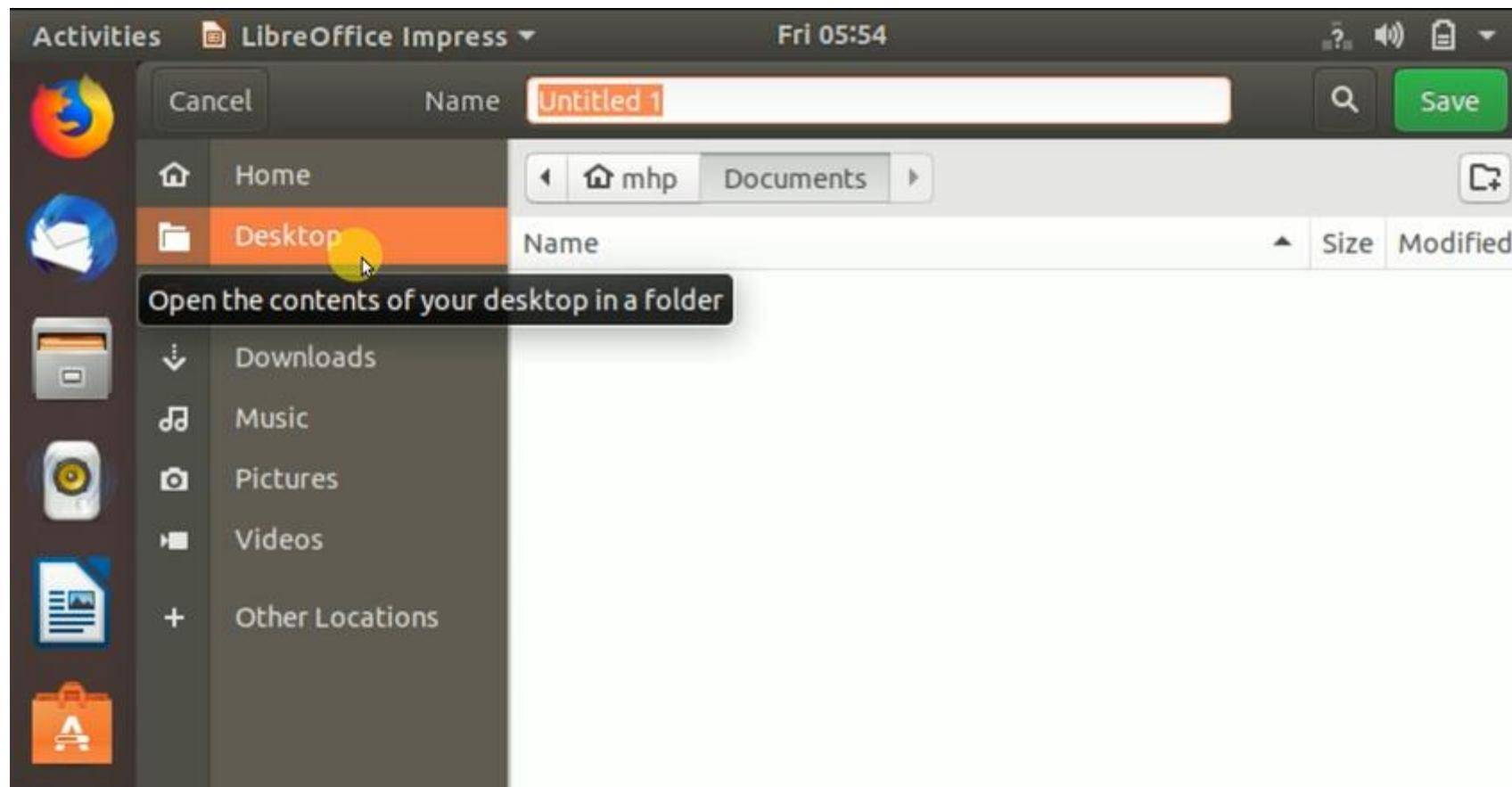
- 1
- 2
- 3

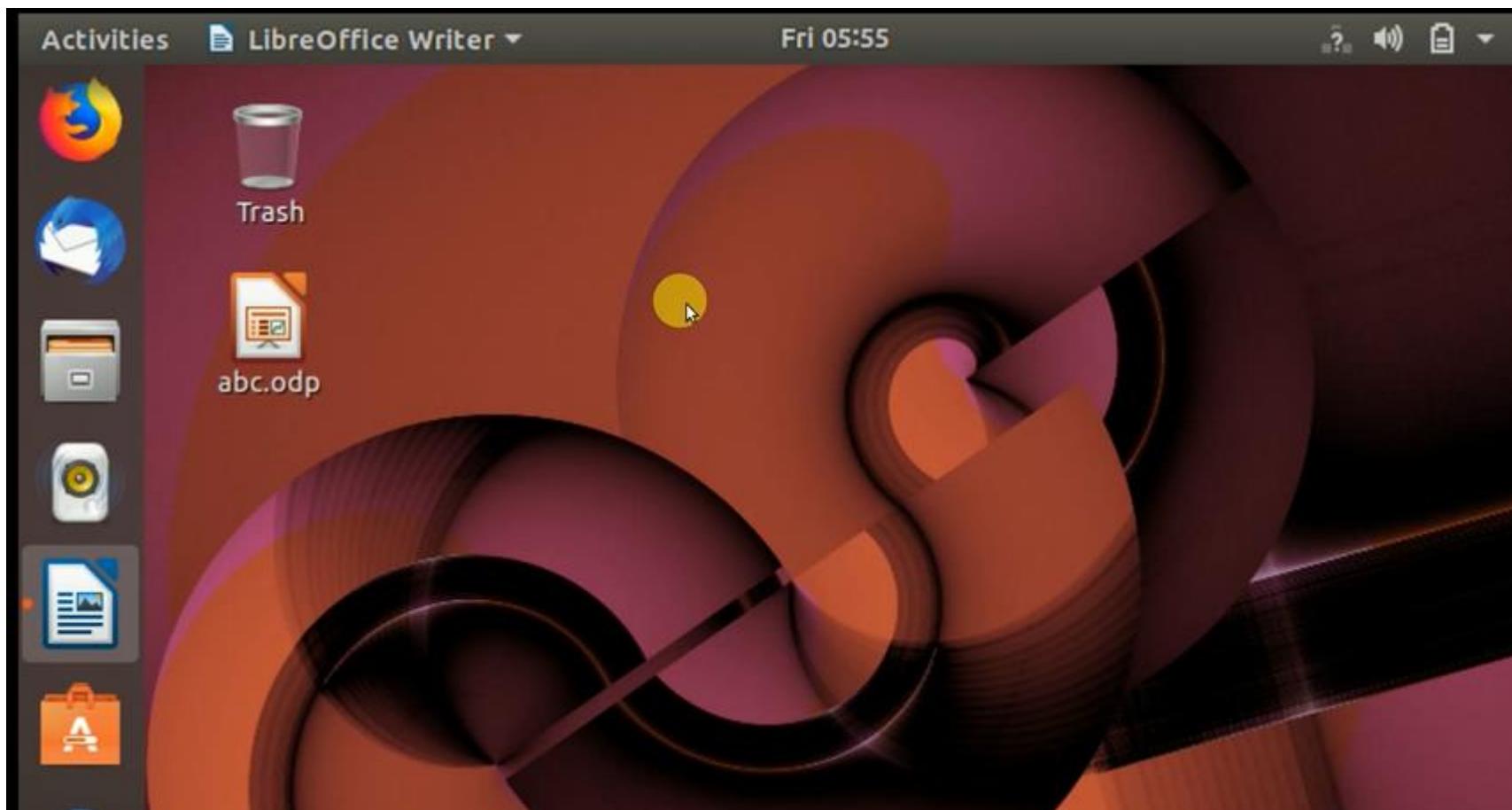
abc

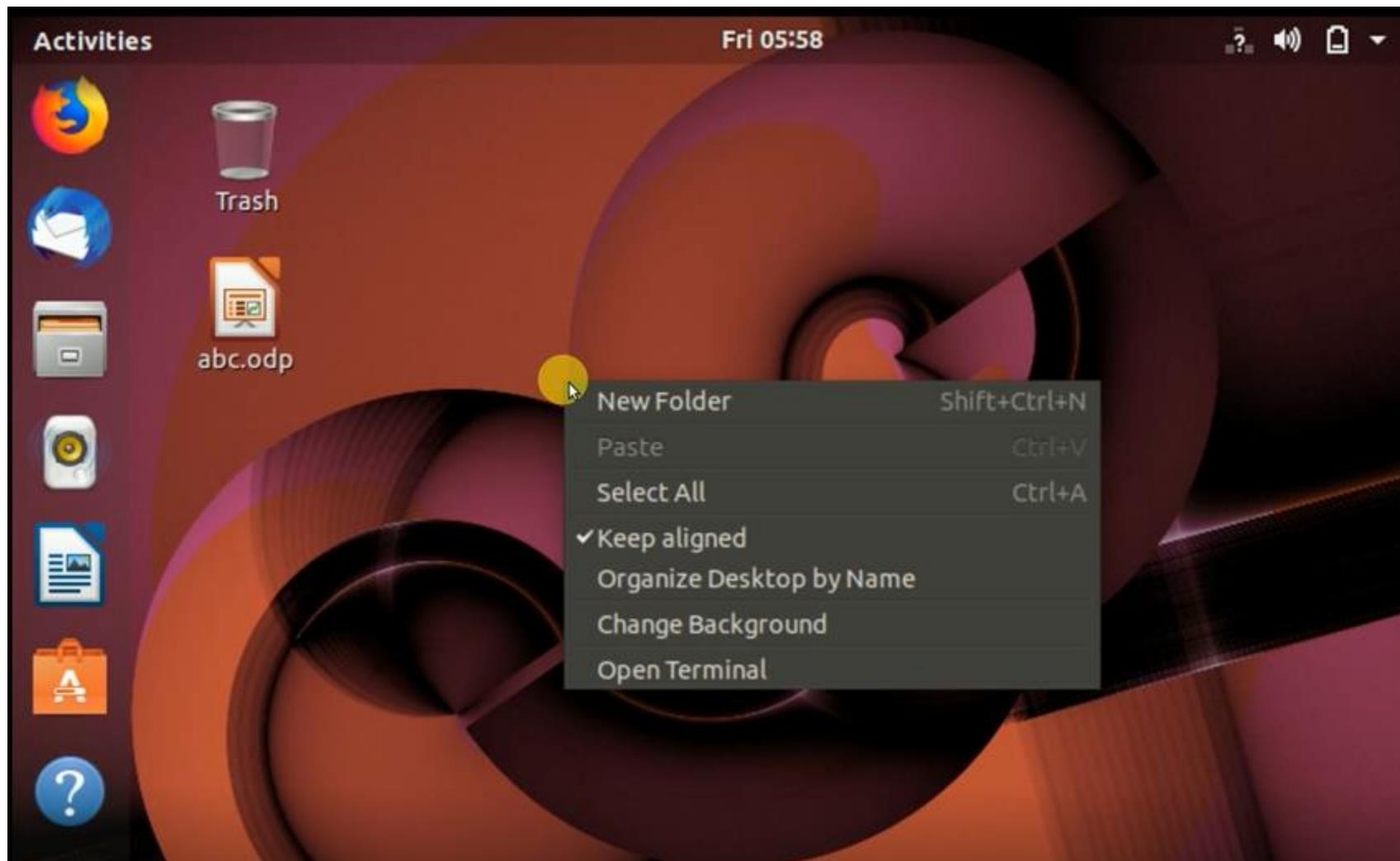
• Click to add Text

Recording... 00:19:39

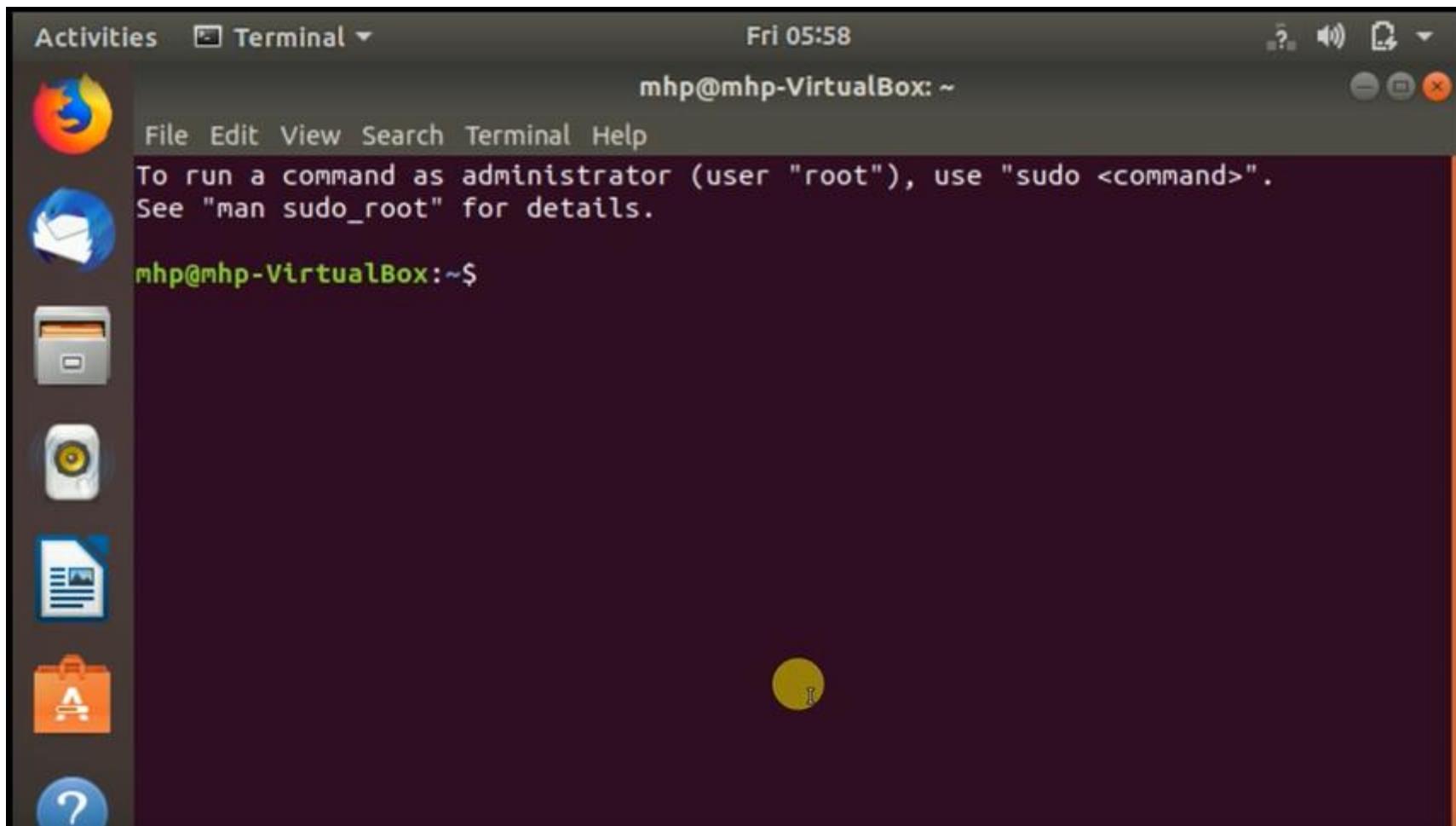


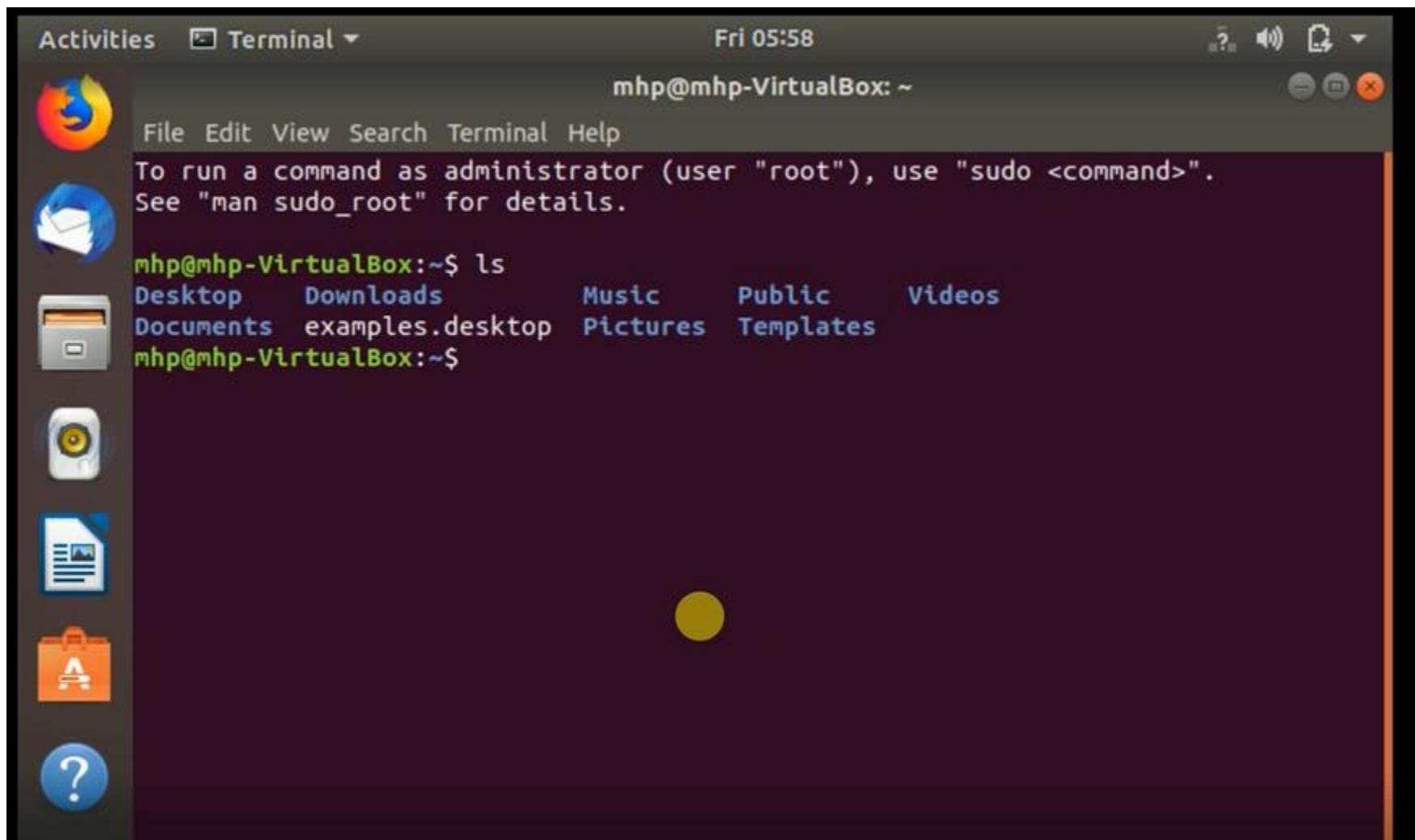












# How to make folder in ubuntu

# **How to make folder in ubuntu**

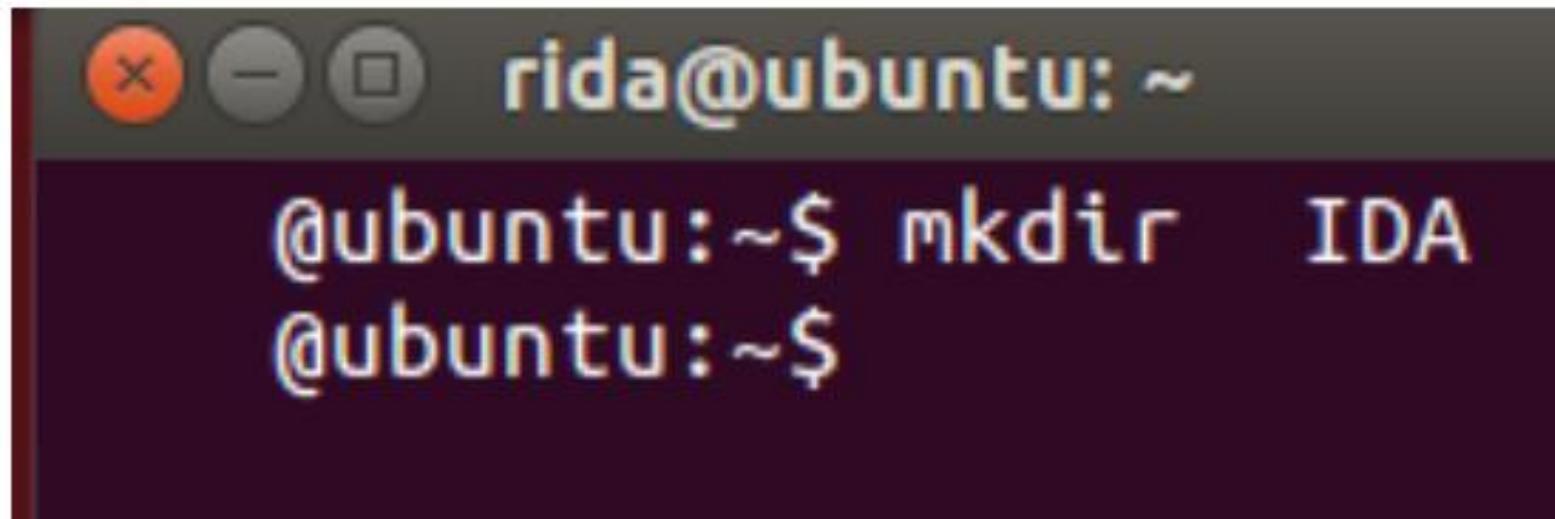
## **Directory**

# **How to make folder in ubuntu**

**Directory**

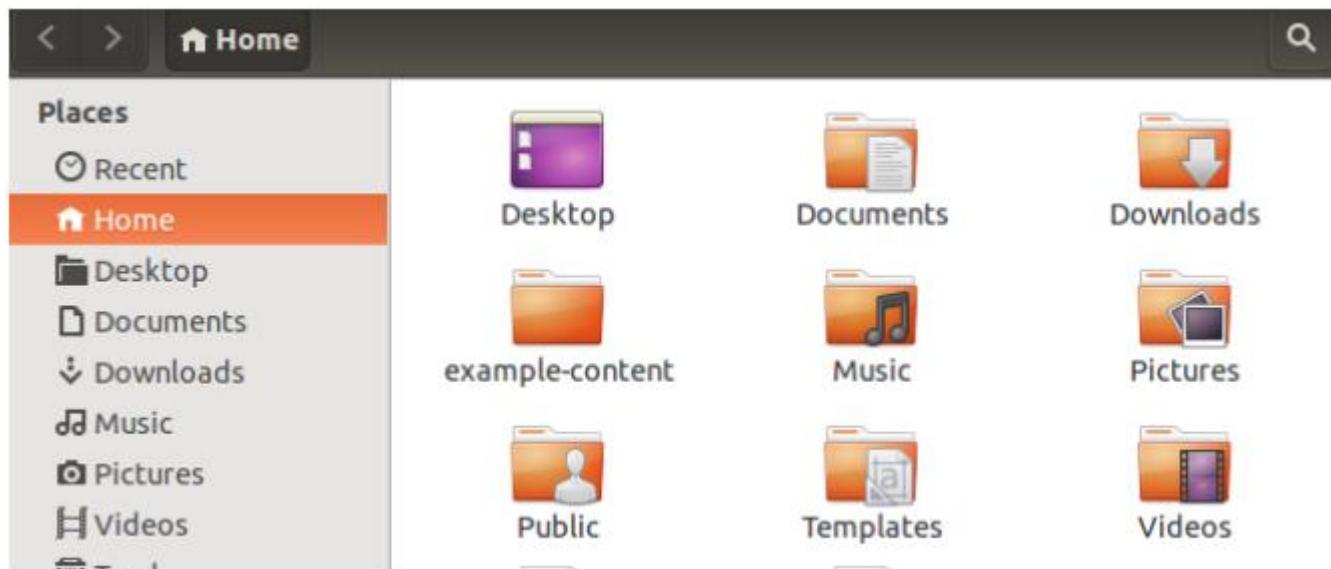
**mkdir imran**

## MAKE DIRECTORY: -



A screenshot of a terminal window on an Ubuntu desktop environment. The window title bar shows the user's name, "rida@ubuntu: ~". The terminal prompt is "@ubuntu:~\$". The user has entered the command "mkdir IDA" and pressed enter. The output shows the directory "IDA" was created successfully. The terminal window has standard window controls (close, minimize, maximize) at the top left.

```
rida@ubuntu: ~
@ubuntu:~$ mkdir IDA
@ubuntu:~$
```



**System.out.print(" Kind for kind");**

```
System.out.print(" devil for devil");
```

```
System.out.print(" geeks for geeks");
```

```
System.out.print(" Kind for kind");
```

```
Echo " Kind for kind";
```

```
System.out.print(" Kind for kind");
```

**Echo " Kind for kind"**

```
cout<<"Kind for kind"
```

# ECHO

**echo command in linux is used to display line of text/string that are passed as an argument . This is a built in command that is mostly used in shell scripts and batch files to output status text to the screen or a file.**

**Syntax :**

**echo [string]**

Inspiron-15-3567: ~



File Edit View Search Terminal Help

Inspiron-15-3567:~\$

Inspiron-15-3567: ~

File Edit View Search Terminal Help

```
Inspiron-15-3567:~$ echo "Geeks for Geeks"
```

-Inspiron-15-3567: ~

File Edit View Search Terminal Help

[**Inspiron-15-3567:~\$** echo "Geeks for Geeks"

Geeks for Geeks

**-Inspiron-15-3567:~\$**

```
raghvendra@raghvendra-Inspiron-15-3567: ~
File Edit View Search Terminal Help
raghvendra@raghvendra-Inspiron-15-3567:~$ echo -e "Geeks \bfor \bGeeks"
GeeksforGeeks
raghvendra@raghvendra-Inspiron-15-3567:~$ █
```

#### NOTE

**-e here enables the interpretation of backslash escapes**

- 1. \b : it removes all the spaces in between the text**

\c : suppress trailing new line with backspace interpreter '-e' to continue without emitting new line.

```
File Edit View Search Terminal Help
raghvendra@raghvendra-Inspiron-15-3567:~$ echo -e "Geeks \cfor Geeks"
Geeks  raghvendra@raghvendra-Inspiron-15-3567:~$ █
```

**\n : this option creates new line from where it is used.**

```
File Edit View Search Terminal Help
raghvendra@raghvendra-Inspiron-15-3567:~$ echo -e "Geeks \nfor \nGeeks"
Geeks
for
Geeks
raghvendra@raghvendra-Inspiron-15-3567:~$ █
```

**\t** : this option is used to create horizontal tab spaces.

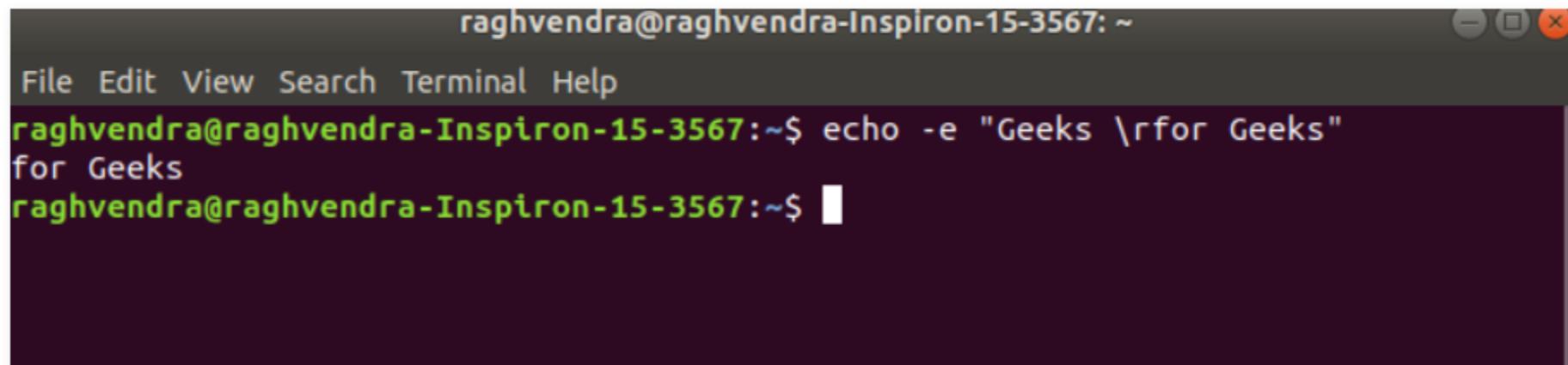
File Edit View Search Terminal Help

```
raghvendra@raghvendra-Inspiron-15-3567:~$ echo -e "Geeks \tfor \tGeeks"
Geeks      for      Geeks
raghvendra@raghvendra-Inspiron-15-3567:~$ █
```

\r : carriage return with backspace interpreter '-e' to have specified carriage return in output.

Example :

```
echo -e "Geeks \rfor Geeks"
```

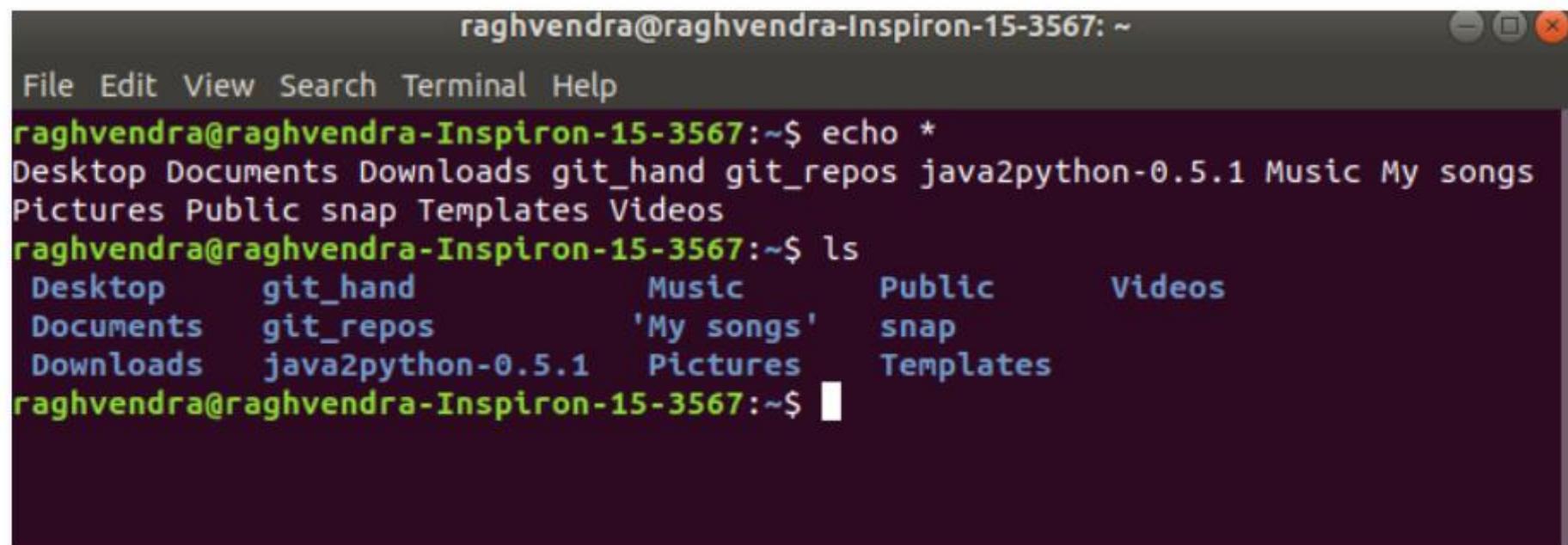


A screenshot of a terminal window titled "raghvendra@aghvendra-Inspiron-15-3567: ~". The window has standard Linux-style window controls (minimize, maximize, close) in the top right corner. The terminal interface includes a menu bar with "File", "Edit", "View", "Search", "Terminal", and "Help". The main area displays the command "echo -e "Geeks \rfor Geeks"" followed by its output "for Geeks". The prompt "raghvendra@aghvendra-Inspiron-15-3567:~\$" is visible at the bottom, along with a small terminal icon.

**echo \*** : this command will print all files/folders, similar to ls command .

Example :

```
echo *
```



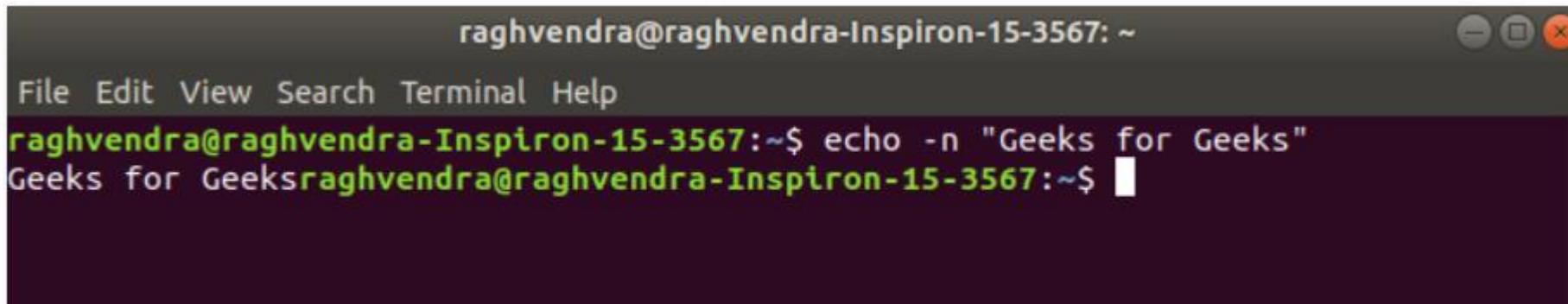
The screenshot shows a terminal window with a dark background and light-colored text. At the top, it displays the user's name, computer name, and the tilde symbol (~). Below the title bar is a menu bar with options: File, Edit, View, Search, Terminal, and Help. The main area of the terminal shows two command-line sessions. The first session starts with the command 'echo \*' followed by a list of directory names: Desktop, Documents, Downloads, git\_hand, git\_repos, java2python-0.5.1, Music, My songs, Pictures, Public, snap, Templates, and Videos. The second session starts with the command 'ls' followed by the same list of directory names. The terminal window has a standard window frame with minimize, maximize, and close buttons in the top right corner.

```
raghvendra@raghvendra-Inspiron-15-3567: ~
File Edit View Search Terminal Help
raghvendra@raghvendra-Inspiron-15-3567:~$ echo *
Desktop Documents Downloads git_hand git_repos java2python-0.5.1 Music My songs
Pictures Public snap Templates Videos
raghvendra@raghvendra-Inspiron-15-3567:~$ ls
Desktop      git_hand          Music        Public       Videos
Documents    git_repos         'My songs'   snap
Downloads    java2python-0.5.1 Pictures     Templates
raghvendra@raghvendra-Inspiron-15-3567:~$ █
```

**-n** this option is used to omit echoing trailing newline

Example :

```
echo -n "Geeks for Geeks"
```



A screenshot of a terminal window titled "raghvendra@aghvendra-Inspiron-15-3567: ~". The window has a dark background and light-colored text. At the top, there is a menu bar with "File", "Edit", "View", "Search", "Terminal", and "Help". Below the menu, the terminal prompt is shown in green: "raghvendra@aghvendra-Inspiron-15-3567:~\$". The user then types the command "echo -n "Geeks for Geeks"" and presses enter. The output "Geeks for Geeks" is displayed in white text. After the output, the prompt appears again: "raghvendra@aghvendra-Inspiron-15-3567:~\$". The window has standard operating system window controls (minimize, maximize, close) in the top right corner.

# **Search 5 commands**

```
dave@howtogeek:~$ echo '$my_name'  
$my_name
```

```
dave@howtogeek:~$ echo '$my_name'  
$my_name  
dave@howtogeek:~$ echo "$my_name"  
dave
```

```
dave@howtogeek:~$ echo '$my_name'  
$my_name  
dave@howtogeek:~$ echo "$my_name"  
dave  
dave@howtogeek:~$ echo my_name  
my_name
```

```
dave@howtogeek:~$ echo '$my_name'  
$my_name  
dave@howtogeek:~$ echo "$my_name"  
dave  
dave@howtogeek:~$ echo my_name  
my_name  
dave@howtogeek:~$ echo $my_name  
dave
```

```
dave@howtogeek:~$ echo '$my_name'  
$my_name  
dave@howtogeek:~$ echo "$my_name"  
dave  
dave@howtogeek:~$ echo my_name  
my_name  
dave@howtogeek:~$ echo $my_name  
dave  
dave@howtogeek:~$ █
```

**echo “ Welcome to table ! ”**

**echo “ Welcome to table ! ”**

**echo “ Enter Table Number ”**

**echo “ Welcome to table ! ”**

**echo “ Enter Table Number ”**

**read num**

```
echo " Welcome to table ! "
echo " Enter Table Number "
read num
echo " Enter Table start "
```

```
echo " Welcome to table ! "
echo " Enter Table Number "
read num
echo " Enter Table start "
read start
```

```
echo " Welcome to table ! "
echo " Enter Table Number "
read num
echo " Enter Table start "
read start
echo " Enter Table end "
```

```
echo " Welcome to table ! "
echo " Enter Table Number "
read num
echo " Enter Table start "
read start
echo " Enter Table end "
read end
```

```
echo " Welcome to table ! "
echo " Enter Table Number "
read num
echo " Enter Table start "
read start
echo " Enter Table end "
read end
for( c=$start; c<=$end ; c++ )
```

```
echo " Welcome to table ! "
echo " Enter Table Number "
read num
echo " Enter Table start "
read start
echo " Enter Table end "
read end
for(c=$start; c<=$end ; c++)
do
```

```
echo " Welcome to table ! "
echo " Enter Table Number "
read num
echo " Enter Table start "
read start
echo " Enter Table end "
read end
for(c=$start; c<=$end ; c++)
do
echo "$num * $c=$((num*c))"
```

```
echo " Welcome to table ! "
echo " Enter Table Number "
read num
echo " Enter Table start "
read start
echo " Enter Table end "
read end
for((c=$start; c<=$end ; c++))
do
    echo "$num * $c=$((num*c))"
```

**done**

File Edit View Search Tools Documents



Open



Save



hello.sh x ten\_line\_code.sh x rid

```
#Ten Line Code
echo " ! Welcome to Table Program ! "
echo "Enter table number"
read num
echo "Enter table start"
read start
echo "Enter table end"
read end
for ((c = $start; c <= $end; c++ ))
do
    echo "$num * $c = ${((num*c))}"
done
```



naveen@naveen-VirtualBox: ~  
naveen@naveen-VirtualBox:~\$ chmod 755



naveen@naveen-VirtualBox: ~

```
naveen@naveen-VirtualBox:~$ chmod 755 idaa_10code.sh
naveen@naveen-VirtualBox:~$ ./idaa_10code.sh
```

naveen@naveen-VirtualBox: ~

```
naveen@naveen-VirtualBox:~$ chmod 755 idaa_10code.sh
```

```
naveen@naveen-VirtualBox:~$ ./ idaa_10code.sh
```

```
! Welcome to Table Program !
```

```
Enter table number
```

```
2
```

```
Enter table start
```

```
1
```

```
Enter table end
```

```
10
```

```
2 * 1 = 2
```

```
2 * 2 = 4
```

```
2 * 3 = 6
```

```
2 * 4 = 8
```

```
2 * 5 = 10
```

```
2 * 6 = 12
```

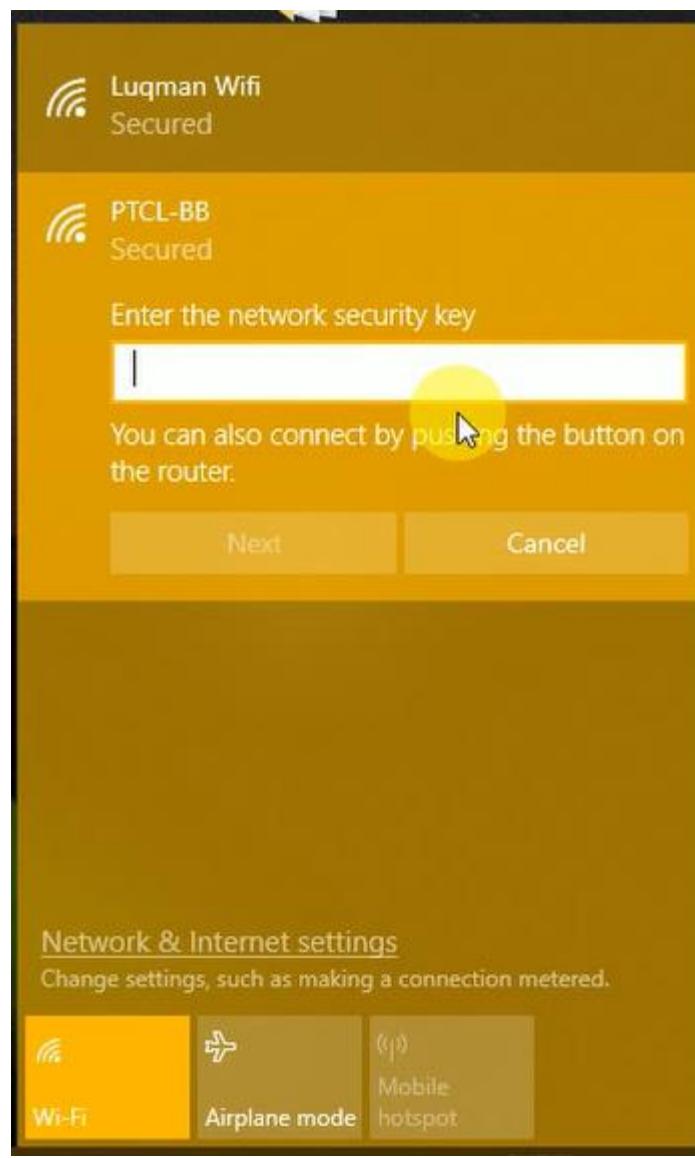
```
2 * 7 = 14
```

```
2 * 8 = 16
```

```
2 * 9 = 18
```

```
2 * 10 = 20
```

```
naveen@naveen-VirtualBox:~$ █
```





```
Command Prompt
Microsoft Windows [Version 10.0.17763.678]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\Computer Solution's>
```

## C:\ Command Prompt

Microsoft Windows [Version 10.0.17763.678]  
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\Computer Solution's>color a

```
cmd Command Prompt - netsh wlan show all
Microsoft Windows [Version 10.0.17763.678]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\Computer Solution's>color a
kC:\Users\Computer Solution's>
C:\Users\Computer Solution's>netsh wlan show all
Interface list

```

```
C:\ Command Prompt - netsh wlan show all
-----
Number of SSIDs      : 1
SSID name            : "Comp_lab2"
Network type          : Infrastructure
Radio type             : [ Any Radio Type ]
Vendor extension       : Not present

Security settings
-----
Authentication        : WPA2-Personal
Cipher                : CCMP
Authentication        : WPA2-Personal
Cipher                : GCMP
Security key          : Present

Cost settings
-----
Cost                  : Unrestricted
Congested             : No
Approaching Data Limit : No
Over Data Limit        : No
Roaming               : No
Cost Source            : Default

Profile AndroidAP5217 on interface Wi-Fi:
=====
Applied: All User Profile
```

```
===== SHOW NETWORKS MODE=BSSID =====
```

Interface name : Wi-Fi

There are 2 networks currently visible.

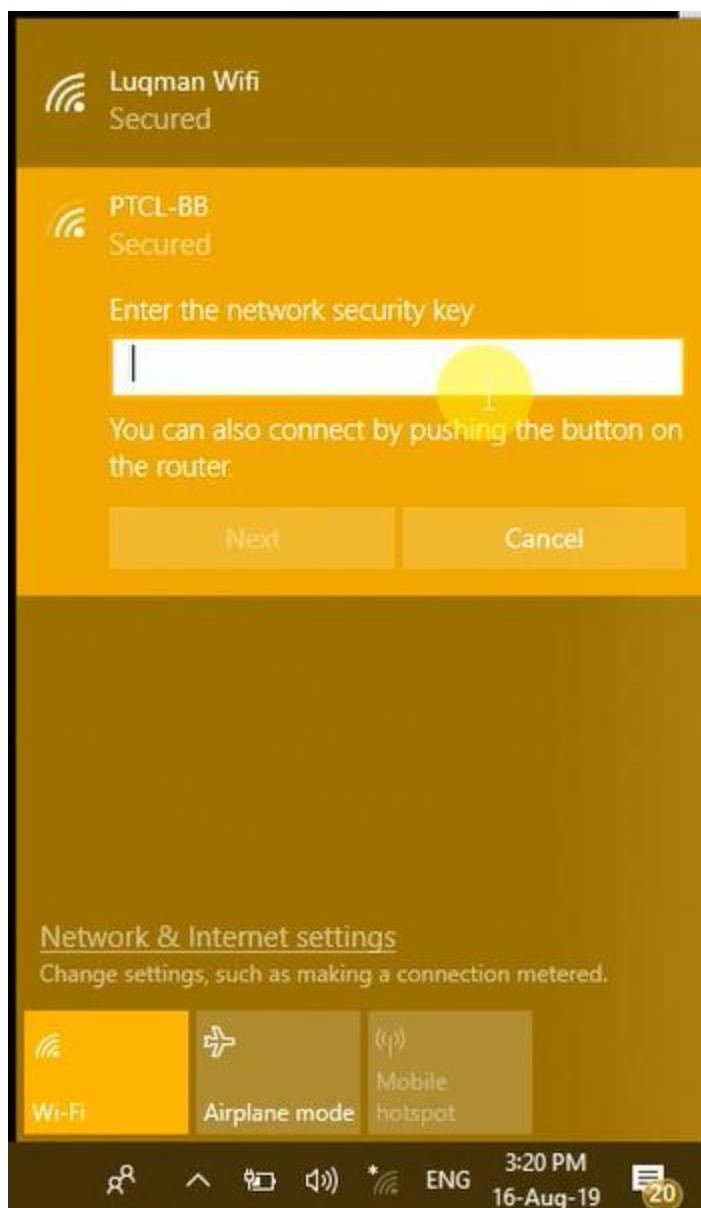
SSID 1 : PTCL-BB

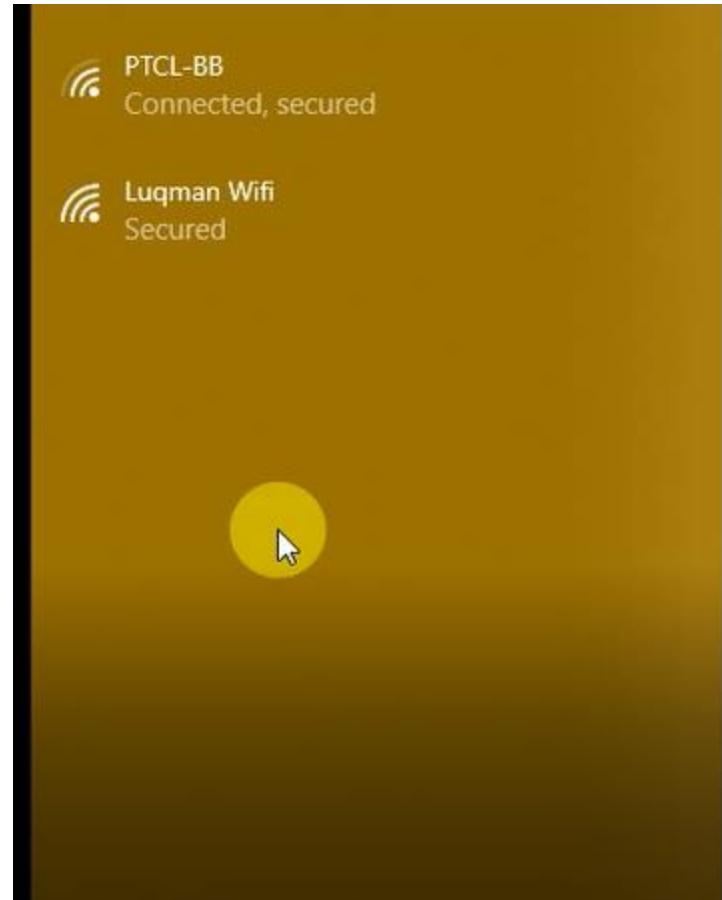
Network type	:	Infrastructure
Authentication	:	WPA2-Personal
Encryption	:	CCMP
BSSID 1	:	34:bf:90:23:7d:b1
Signal	:	66%
Radio type	:	802.11n
Channel	:	11
Basic rates (Mbps)	:	6.5 16 19.5 117
Other rates (Mbps)	:	18 19.5 24 36 39 48 54 156

SSID 2 : Luqman Wifi

Network type	:	Infrastructure
Authentication	:	WPA2-Personal
Encryption	:	CCMP
BSSID 1	:	04:95:e6:7a:1a:e8
Signal	:	91%
Radio type	:	802.11n
Channel	:	5
Basic rates (Mbps)	:	6.5 16 19.5 117
Other rates (Mbps)	:	18 19.5 24 36 39 48 54 156

```
===== SHOW INTERFACE CAPABILITIES =====
```





netsh wlan show all

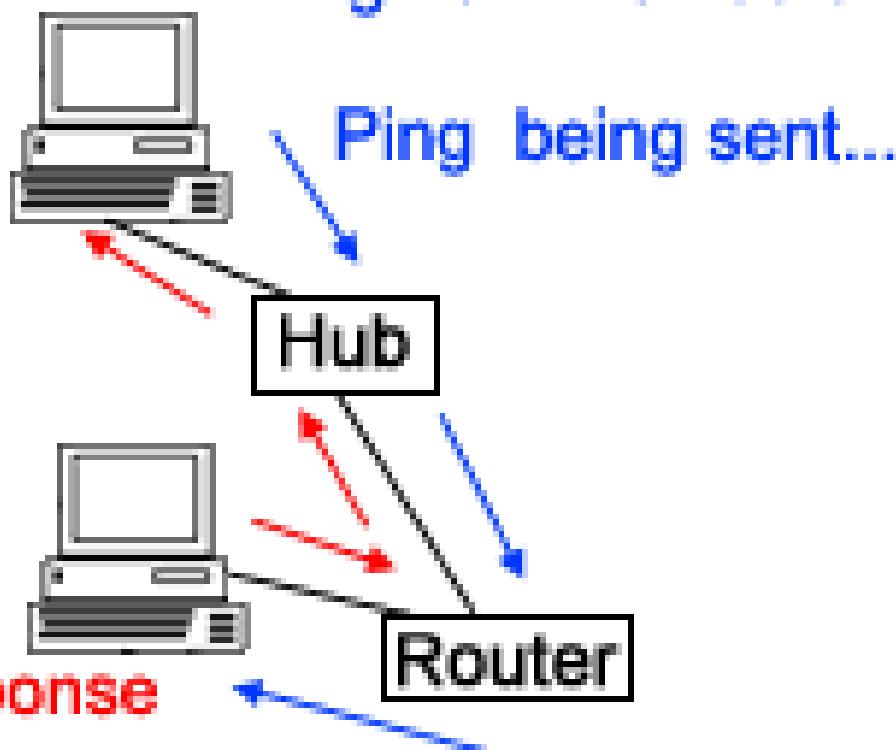
ping

# Example of Ping/Pong

Step 3:  
Pong received

Step 1:  
Ping 204.228.150.3

Step 2:  
Ping received  
Pong back response



# Ping

Packet Internet Groper

Response time from client to  
server

# Speedtest.net

Speedtest.net by Ookla - X Zong Pakistan X shafeeque X

www.speedtest.net

OOKLA SPEEDTEST PINGTEST AWARDS The Global Standard in Internet Metrics

SPEEDTEST ADVERTISE BECOME A HOST MY RESULTS SUPPORT SETTINGS LOGIN CREATE ACCOUNT

Ping-46 ms Download speed 6.00 Mbps Upload Speed 11.59 Mbps

PING 46 ms DOWNLOAD SPEED 6.00 Mbps UPLOAD SPEED 11.59 Mbps

NEW SERVER TEST AGAIN SHARE THIS RESULT

Are you on Zong Telecom? Take our Broadband Internet Survey!

45.116.233.37 Zong Telecom Rate Your ISP

Karachi Hosted by Zong (CMPak)



# Speedtest.net

Speedtest.net by Ookla - Z shafeequ

www.speedtest.net

OOKLA SPEEDTEST PINGTEST AWARDS The Global Standard in Internet Speed

SPEEDTEST ADVERTISE BECOME A HOST MY RESULTS SUPPORT SETTINGS LOGIN CREATE ACCOUNT

**Ping-46 ms**

**Download speed  
6.00 Mbps**

**Upload Speed  
11.59 Mbps**

**PING 46 ms**

**DOWNLOAD SPEED 6.00 Mbps**

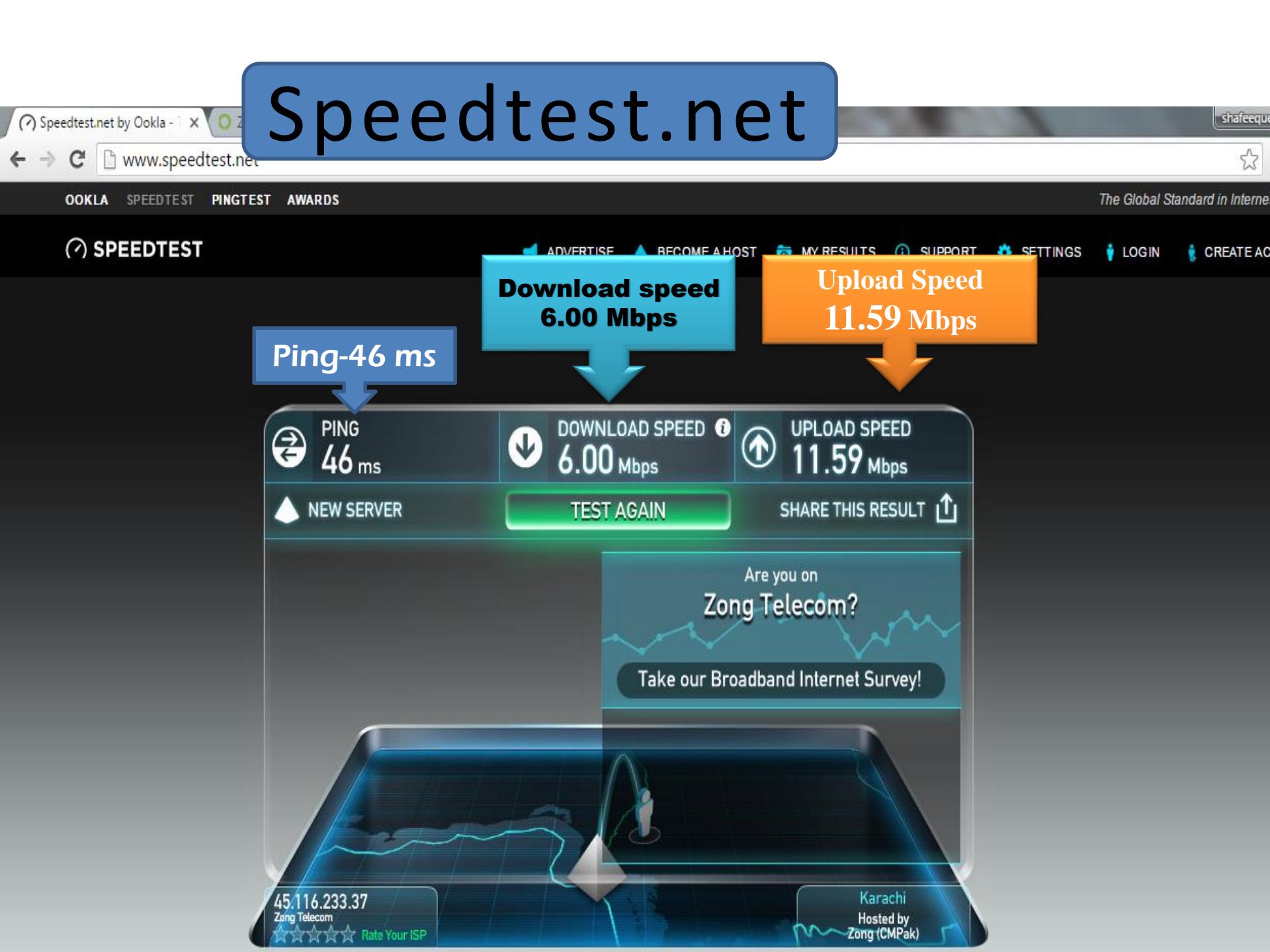
**UPLOAD SPEED 11.59 Mbps**

**NEW SERVER TEST AGAIN SHARE THIS RESULT**

Are you on  
**Zong Telecom?**  
Take our Broadband Internet Survey!

45.116.233.37  
Zong Telecom  
Rate Your ISP

Karachi  
Hosted by  
Zong (CMPak)



**Ping Test - check your latency (network delays) to many servers over the world using one of the most accurate and popular tool over the Internet.**

**ping is method to measure minimum time needed to send smallest possible amount of data and receive response.**